

# World Class Rigging Products

Product Catalogue | 2025/2026

OCEAN® Brand  
Global Distribution  
*Securing the world*



**OCEAN®**







## LIFTING & GENERAL PURPOSE CHAIN

|                                        |    |                                                |         |
|----------------------------------------|----|------------------------------------------------|---------|
| G80 & G100 Overhead Lifting Chain..... | 7  | G80 Midlink Chain.....                         | 10      |
| G70 Transport Chain.....               | 8  | G80 Lashing, Long Link & Short Link Chain..... | 11      |
| G80 Long Link Chain.....               | 8  | G50 Stainless Steel.....                       | 12      |
| G30 Proof Coil Chain.....              | 9  | Chain Sling Charts.....                        | 12 - 13 |
| G43 High Test Chain.....               | 10 |                                                |         |

6



## LASHING EQUIPMENT

|                                    |              |                                      |    |
|------------------------------------|--------------|--------------------------------------|----|
| Lever Load Binders.....            | 16           | Ratchet Straps.....                  | 21 |
| Ratchet Binders.....               | 17 - 18 - 19 | Ratchet Buckles.....                 | 22 |
| Tie Down Cargo Straps.....         | 19           | Tie Down Webbing & Wire J Hooks..... | 23 |
| Truck Winch & Weld-On D-Rings..... | 20           |                                      |    |

15



## OCEAN G80 & G100 STEEL LIFTING COMPONENTS

|                                                   |         |                                                    |         |
|---------------------------------------------------|---------|----------------------------------------------------|---------|
| G80 Master Links.....                             | 25      | G100 Trigger, Load Pin, and Pin & Sleeve Kits..... | 41 - 42 |
| G80 Connecting Links & Hooks.....                 | 26 - 30 | G80 Weld-On Bucket Hooks & Lifting Points.....     | 43 - 45 |
| G80 Trigger, Load Pin, and Pin & Sleeve Kits..... | 31      | Lifting Eye Key Points.....                        | 46 - 47 |
| G80 Insulated Swivels & Coupling Components.....  | 32 - 34 | Swivel Hoist Rings.....                            | 48 - 51 |
| G100 Master Links.....                            | 34      |                                                    |         |
| G100 Connecting Links & Hooks.....                | 36 - 41 |                                                    |         |

24



## RIGGING HARDWARE & EQUIPMENT

|                                             |         |                                                |           |
|---------------------------------------------|---------|------------------------------------------------|-----------|
| Shackles.....                               | 53 - 69 | Twin Clevis & Quick Links, Snap & S Hooks..... | 92 - 93   |
| Turnbuckles.....                            | 70 - 79 | Swivels.....                                   | 94 - 100  |
| Eye Bolts, Eye Nuts, & Pad Eyes.....        | 80 - 87 | Wire Rope & Synthetic Blocks.....              | 101 - 111 |
| DNV Master Links & Quad Assemblies.....     | 88 - 89 | Load Cells.....                                | 112 - 114 |
| Pear Links, Master Links & Round Rings..... | 90 - 91 | Hooks.....                                     | 115 - 126 |

52



## HOIST & LIFTING ACCESSORIES

|                                          |           |                                         |           |
|------------------------------------------|-----------|-----------------------------------------|-----------|
| Manual Chain Blocks & Lever Pullers..... | 128 - 143 | Vertical & Horizontal Plate Clamps..... | 149 - 150 |
| Wire Rope Winches.....                   | 144       | Cable Socks & Synthetic Rope Grabs..... | 150 - 151 |
| Permanent Magnet Lifters.....            | 145 - 146 | Concrete Lifters.....                   | 152       |
| Trolleys & Beam Clamps.....              | 147 - 148 | Drum Lifters.....                       | 153       |

127



## FALL ARREST

|                                             |           |
|---------------------------------------------|-----------|
| Carabiners, O-Ring & Fall Arrest Hooks..... | 155 - 157 |
|---------------------------------------------|-----------|

154





## TOOLS

|                              |     |
|------------------------------|-----|
| Hand Swagers & Cutters ..... | 159 |
| Bolt Cutters .....           | 160 |

158



## MARINE

|                                                       |           |
|-------------------------------------------------------|-----------|
| Swivel Forerunners .....                              | 163       |
| Stud-Link & Open Link Chain .....                     | 165-167   |
| Kenter Shackles, Chain Stoppers<br>& Pear Links ..... | 168 - 171 |
| Triangle Plates, Recessed & Split Links .....         | 172 - 173 |
| Round Rings and Lobster Swivels .....                 | 174       |
| Cleats & Hinges .....                                 | 175 - 176 |
| Oar Locks and Knives .....                            | 176 - 177 |

|                                                    |           |
|----------------------------------------------------|-----------|
| Bait Bags and Jars .....                           | 177-178   |
| Stenhouse Slips, & Washers .....                   | 178       |
| Anchors .....                                      | 179-188   |
| Marine Hardware, Grapnels<br>& Chain Chasers ..... | 189 - 193 |
| Fenders & Deck Equipment .....                     | 194-215   |

162



## SLINGS

|                                     |           |
|-------------------------------------|-----------|
| Wire Rope Slings - Bright .....     | 217 - 218 |
| Wire Rope Slings - Galvanized ..... | 219 - 221 |
| Wire Rope Sling Chart .....         | 222 - 223 |
| Web Slings .....                    | 224 - 225 |

|                         |           |
|-------------------------|-----------|
| Polyester Webbing ..... | 226       |
| Round Slings .....      | 227 - 229 |
| Twin Path .....         | 230       |

219



## ROPE (SYNTHETIC & FIBER)

|                               |           |
|-------------------------------|-----------|
| Manila Rope .....             | 233 - 234 |
| Dyneema Rope .....            | 235 - 238 |
| Soft Shackles - Dyneema ..... | 239       |
| Polypropylene Ropes .....     | 240 - 242 |
| Sail Twine .....              | 242       |

|                                          |           |
|------------------------------------------|-----------|
| Nylon Rope .....                         | 243 - 245 |
| Sash Cord .....                          | 246       |
| Nylon & Polyester Double Braid .....     | 247 - 248 |
| Fid, Pushers, Needles & Sail Palms ..... | 251 - 252 |

233



## WIRE ROPE END TERMINATIONS

|                                                       |           |
|-------------------------------------------------------|-----------|
| Rigging Equipment .....                               | 256 - 258 |
| Die Lube .....                                        | 259       |
| Wire Rope Sleeves, Ferrules,<br>Stops & Buttons ..... | 260 - 266 |
| Marlin Spikes .....                                   | 266       |
| Thimbles .....                                        | 267 - 271 |
| Choker Buttons & Hooks .....                          | 272       |

|                                                         |           |
|---------------------------------------------------------|-----------|
| Go-No-Go Gauges & Cable Joiners .....                   | 272 - 273 |
| Wire Rope Clips .....                                   | 274 - 276 |
| Spelter Sockets .....                                   | 277 - 281 |
| Socket Lock, Broom Degreaser<br>& Socketing Putty ..... | 282 - 283 |
| Swage, & Wedge Sockets .....                            | 284 - 287 |

254



## WIRE ROPE

|                                                  |           |
|--------------------------------------------------|-----------|
| Wire Rope Lubricant .....                        | 289       |
| 7x7 & 7x19 GAC & PVC GAC .....                   | 292 - 293 |
| 7x7, 7x19, 6x19, 6x26 Stainless Steel Wire ..... | 294       |
| 7x7 & 7x19 PVC Stainless Steel Wire .....        | 295       |
| 1x7 Stainless Seizing Wire .....                 | 295       |
| 6x19 & 6x24 Fiber Core .....                     | 296 - 297 |

|                                                   |           |
|---------------------------------------------------|-----------|
| 6x26 Regular Swaged Wire Rope .....               | 297       |
| 6x19, 6x26, 6x36 IWRC .....                       | 298 - 302 |
| 8x26, 18x19, 19x7, 6x25,<br>6x37 Wire Ropes ..... | 303 - 305 |
| 35x7, 8x19, 8x36 Wire Ropes .....                 | 306 - 309 |

291

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## CERTIFICATIONS | MEMBERSHIPS | APPROVAL PROGRAMS

### DNV GL 2.7-1 - Type approval certificate(s) (S-8676, TAS000010N):



A worldwide accredited registrar and classification society. This type approval certificate requires a site audit of our manufacturing process for 2.7-1 Offshore Container Wire Rope Lifting Sling Sets. As well as compliance with; DNV GL 2.7-1 Containers, EN 12079-2, and EN 13414-1. Providing Oceanside authority to act on behalf of DNV to manufacture 2.7-1 offshore lifting sets for use with offshore containers.



### HSE Achilles Green Band Approval Program - Offshore Oil & Gas Industry

A joint qualification system for supplier register and pre-qualification used by companies in the oil and gas industry. Approval of this system requires an in-depth QHSE audit. Providing clients/customers documented evidence of our Quality and HSE management system.

### AWRF Member (Associated Wire Rope Fabricators (AWRF))



An authoritative representative body for 400+ independent fabricators, manufacturers and distributors of lifting and load securement devices. Providing solutions for wire rope, chain, hardware fittings, synthetic ropes, hoists, and rigging hardware as well as peer support, best practice advice, training library and technical reference material (ASME).

# OCEAN<sup>®</sup> BRAND

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## INSPECTION & TEST CERTIFICATE

|                                                                                          |  |       |       |                                            |       |       |                                                                                      |                      |       |       |    |                        |         |  |  |                |  |  |  |          |  |  |
|------------------------------------------------------------------------------------------|--|-------|-------|--------------------------------------------|-------|-------|--------------------------------------------------------------------------------------|----------------------|-------|-------|----|------------------------|---------|--|--|----------------|--|--|--|----------|--|--|
| Certificate Number                                                                       |  |       |       |                                            |       |       |                                                                                      |                      |       |       |    |                        | 0051853 |  |  | Invoice Number |  |  |  | OCEAN-12 |  |  |
| Date                                                                                     |  |       |       | 11/14/2023                                 |       |       |                                                                                      | Factory Order Number |       |       |    | 2023/002700-001        |         |  |  |                |  |  |  |          |  |  |
| Purchase Order                                                                           |  |       |       | PO306019                                   |       |       |                                                                                      |                      |       |       |    |                        |         |  |  |                |  |  |  |          |  |  |
| Quantity                                                                                 |  |       |       |                                            |       |       |                                                                                      |                      |       |       |    |                        | 975     |  |  | Batch Number   |  |  |  | 1GH      |  |  |
| Part Number                                                                              |  |       |       | 3-X-10CSH                                  |       |       |                                                                                      | Surface finish       |       |       |    | Powder Coated          |         |  |  |                |  |  |  |          |  |  |
| Description                                                                              |  |       |       | Hook, clevis sling, Gr100, 10mm 3/8" Ocean |       |       |                                                                                      |                      |       |       |    |                        |         |  |  |                |  |  |  |          |  |  |
| Working Load Limit (Pounds)                                                              |  |       |       | 8,800                                      |       |       |                                                                                      | Hardness HRC         |       |       |    | 37、38、38               |         |  |  |                |  |  |  |          |  |  |
| Min Breaking force (Pounds)                                                              |  |       |       | 35,200                                     |       |       |                                                                                      | Fatigue Test         |       |       |    | 20,000 cycles @1.5 WLL |         |  |  |                |  |  |  |          |  |  |
| Actual Breaking Force (tonne)                                                            |  |       |       | 16.49T、16.42T、16.15T、16.2T                 |       |       |                                                                                      | Magnetic Flux Test   |       |       |    | 100%                   |         |  |  |                |  |  |  |          |  |  |
| Steel Code                                                                               |  | C     | Si    | Mn                                         | Cr    | Ni    | Mo                                                                                   | S                    | P     | Al    | Ti | Cu                     |         |  |  |                |  |  |  |          |  |  |
| 23MnNiMoCr54                                                                             |  | 0.220 | 0.180 | 1.270                                      | 0.520 | 1.010 | 0.530                                                                                | 0.009                | 0.010 | 0.031 | /  | /                      |         |  |  |                |  |  |  |          |  |  |
| Manufactured and Inspected in accordance with EN1677                                     |  |       |       |                                            |       |       |                                                                                      |                      |       |       |    |                        |         |  |  |                |  |  |  |          |  |  |
| Exceeds requirements of related ASME B30 Standards                                       |  |       |       |                                            |       |       |                                                                                      |                      |       |       |    |                        |         |  |  |                |  |  |  |          |  |  |
| Manufactured in accordance with Quality Management System approved to ISO 9001 and 14001 |  |       |       |                                            |       |       |                                                                                      |                      |       |       |    |                        |         |  |  |                |  |  |  |          |  |  |
| QA Signature: Gary Sullivan                                                              |  |       |       |                                            |       |       |  |                      |       |       |    |                        |         |  |  |                |  |  |  |          |  |  |

## World Class Rigging Products



## LIFTING & GENERAL PURPOSE CHAIN

|                                                 |         |
|-------------------------------------------------|---------|
| G80 & G100 Overhead Lifting Chain.....          | 7       |
| G70 Transport Chain.....                        | 8       |
| G80 Long Link Chain .....                       | 8       |
| G30 Proof Coil Chain .....                      | 9       |
| G43 High Test Chain .....                       | 10      |
| G80 Midlink Chain.....                          | 10      |
| G80 Lashing, Long Link & Short Link Chain ..... | 11      |
| G50 Stainless Steel .....                       | 12      |
| Chain Sling Charts .....                        | 12 - 13 |



## CHAIN - OVERHEAD LIFTING, GRADE 80, OCEAN® BRAND

- Material: Grade 80, Alloy Steel
- Standard: EN 818-2 ASTM A391/A391M
- Finish: Black
- Design Factor: 4:1
- Identification: OC8, Batch Code



| Trade Size (in) | WLL (lb) | Dimensions (mm) |               |              | Weight / 100 ft (lb) | Qty. / Drum (ft) | Full Drum Price / ft | Cut Lengths Price / ft | Part Number |
|-----------------|----------|-----------------|---------------|--------------|----------------------|------------------|----------------------|------------------------|-------------|
|                 |          | Dia.            | Inside Length | Inside Width |                      |                  |                      |                        |             |
| 9/32            | 3500     | 7               | 21            | 9 – 10.5     | 70                   | 800              | 3.87                 | 4.64                   | 28-7MM80LB  |
| 5/16            | 4500     | 8               | 24            | 10 – 12      | 92                   | 550              | 4.81                 | 5.77                   | 28-8MM80LB  |
| 3/8             | 7100     | 10              | 30            | 12.5 – 15    | 142                  | 400              | 7.30                 | 8.76                   | 6-3/8"G80   |
| 1/2             | 12 000   | 13              | 39            | 16.3 – 20    | 244                  | 200              | 11.81                | 14.17                  | 6-1/2"G80   |
| 5/8             | 18 100   | 16              | 48            | 20 – 24      | 356                  | 150              | 20.02                | 24.02                  | 6-5/8"G80   |
| 3/4             | 28 300   | 20              | 60            | 25 – 30      | 562                  | 100              | 30.52                | 36.62                  | 6-3/4"G80   |
| 7/8             | 34 200   | 22              | 66            | 28 – 33      | 720                  | 164              | 41.20                | 49.44                  | 6-7/8"G80   |
| 1               | 47 700   | 26              | 78            | 35 – 39      | 990                  | 100              | 57.10                | 68.52                  | 6-1"G80     |
| 1-1/4           | 72 300   | 32              | 96            | 40 – 42      | 1580                 | 100              | 93.92                | 112.70                 | 6-1-1/4"G80 |

Coming soon, G70, G80 and G100 Chain will be marked with OC, Grade, and PIC in intervals of every second link.

## CHAIN - OVERHEAD LIFTING, GRADE 100, OCEAN® BRAND

- Material: Grade 100, Alloy Steel
- Standard: EN 818-2, ASTM A973
- Finish: Blue Powder Coat
- Design Factor: 4:1
- Identification: OC10, Batch Code



| Trade Size (in) | WLL (lb) | Dimensions (mm) |               |              | Weight / 100 ft (lb) | Qty. / Drum (ft) | Full Drum Price / ft | Cut Lengths Price / ft | Part Number  |
|-----------------|----------|-----------------|---------------|--------------|----------------------|------------------|----------------------|------------------------|--------------|
|                 |          | Dia.            | Inside Length | Inside Width |                      |                  |                      |                        |              |
| 9/32            | 4300     | 7.4             | 22.1          | 10.4         | 74                   | 500              | 5.59                 | 6.70                   | 44-9/32"G100 |
| 5/16            | 5700     | 8.4             | 25.7          | 12.7         | 104                  | 500              | 7.02                 | 8.42                   | 44-5/16"G100 |
| 3/8             | 8800     | 10.2            | 31            | 14.5         | 148                  | 500              | 9.90                 | 11.88                  | 44-3/8"G100  |
| 1/2             | 15 000   | 13.2            | 40.1          | 19.1         | 250                  | 300              | 17.42                | 20.90                  | 44-1/2"G100  |
| 5/8             | 22 600   | 16.3            | 49            | 22.1         | 379                  | 200              | 26.80                | 32.16                  | 44-5/8"G100  |
| 3/4             | 35 300   | 20.3            | 61.5          | 27.7         | 598                  | 100              | 42.10                | 50.52                  | 44-3/4"G100  |
| 7/8             | 42 700   | 22.4            | 68.6          | 32.5         | 775                  | 100              | 59.90                | 71.88                  | 44-7/8"G100  |
| 1               | 59 700   | 26              | 78            | 37           | 984                  | 100              | 104.62               | 125.54                 | 44-1"G100    |

Coming soon, G70, G80 and G100 Chain will be marked with OC, Grade, and PIC in intervals of every second link.

## CHAIN - TRANSPORT, GRADE 70, OCEAN® BRAND

- Material: Grade 70, Carbon Steel
- Standard: EN 12195-3, ASTM A413
- Finish: Yellow Chromate
- Design Factor: 4:1
- Identification: OC7 Batch Code



| Size (in) | WLL (lb) | Dimensions (mm) |              | Wt. / 100 ft (lb) | Qty. / Drum (ft) | Full Drum Price / ft | Cut Length Price / ft | Part Number |
|-----------|----------|-----------------|--------------|-------------------|------------------|----------------------|-----------------------|-------------|
|           |          | Inside Length   | Inside Width |                   |                  |                      |                       |             |
| 1/4       | 3150     | 31.5            | 9.7          | 62                | 800              | 2.82                 | 3.38                  | 73-1/4"G7   |
| 5/16      | 4700     | 32.8            | 11.2         | 101               | 550              | 3.83                 | 4.59                  | 73-5/16"G7  |
| 3/8       | 6600     | 35.0            | 14.0         | 138               | 400              | 5.12                 | 6.14                  | 73-3/8"G7   |
| 1/2       | 11 300   | 45.5            | 18.3         | 235               | 200              | 8.77                 | 10.52                 | 73-1/2"G7   |

Coming soon, G70, G80 and G100 Chain will be marked with OC, Grade, and PIC in intervals of every second link.

Compliant with National Safety Code Standard (NSC) 10 Part 1. Division 3, Section 11 (4)

"On and after January 1, 2011 a person shall not use a tie down or a component of a tie down to secure cargo to a vehicle unless it is marked by the manufacturer with respect to its working load limit."

The Tag is for 3/8" grade 70 chain which is now required for all tie down chains to meet the national safety standard. These chains are made in our shop to your requirements.



## CHAIN - ALLOY LONG-LINK, GRADE 80, OCEAN® BRAND

- Material: Grade 80, Alloy Steel
- Finish: Painted Yellow
- Design Factor: 4:1



| Size (mm) | Break Load (lb) | Dimensions (mm) |              | Weight / 100 ft (lb) | Qty. / Drum (ft) | Full Drum Price / ft | Cut Length Price / ft | Part Number |
|-----------|-----------------|-----------------|--------------|----------------------|------------------|----------------------|-----------------------|-------------|
|           |                 | Inside Length   | Inside Width |                      |                  |                      |                       |             |
| 9         | 22 930          | 57              | 16           | 94                   | 919              | 5.20                 | 6.24                  | 44-9MMLLC   |
| 11        | 34 175          | 66              | 18           | 141                  | 656              | 7.65                 | 9.18                  | 44-11MMLLC  |
| 13        | 47 620          | 81              | 22           | 181                  | 492              | 8.76                 | 10.51                 | 44-13MMLLC  |
| 16        | 72 315          | 100             | 26           | 289                  | 328              | 13.25                | 15.90                 | 44-16MMLLC  |
| 28        | 221 345         | 150             | 39           | 941                  | 164              | 49.10                | 58.92                 | 44-28MMLLC  |

To prevent the possibility of serious bodily harm: DO NOT EXCEED the working load limit of chain or components. NOT USE FOR OVERHEAD LIFTING OR HOISTING. DO NOT USE if the chain or components are visibly distorted or worn.



## CHAIN - PROOF COIL, GRADE 30

- Material: Grade 30, Mild Carbon Steel
- Finish: Galvanized, ASTM A413
- Design Factor: 4:1



| Trade Size (in) | WLL (lb) | Dimensions (inches) |               |              | Weight / 100 ft (lb) | Qty. / Drum (ft) | Full Drum Price / ft | Cut Length Price / ft | Part Number |
|-----------------|----------|---------------------|---------------|--------------|----------------------|------------------|----------------------|-----------------------|-------------|
|                 |          | Dia.                | Inside Length | Inside Width |                      |                  |                      |                       |             |
| 3/16            | 800      | 0.22                | 0.98          | 0.30         | 40                   | 750              | 1.80                 | 2.16                  | 6-3/16"30G  |
| 1/4             | 1300     | 0.28                | 1.24          | 0.38         | 66                   | 800              | 2.55                 | 3.06                  | 6-1/4"30G   |
| 5/16            | 2000     | 0.32                | 1.29          | 0.44         | 86                   | 550              | 3.75                 | 4.50                  | 6-5/16"30G  |
| 3/8             | 2400     | 0.37                | 1.45          | 0.63         | 142                  | 400              | 4.95                 | 5.94                  | 6-3/8"30G   |
| 1/2             | 4500     | 0.51                | 2.05          | 0.87         | 242                  | 200              | 7.20                 | 8.64                  | 6-1/2"30G   |
| 5/8             | 6900     | 0.63                | 2.20          | 0.79         | 357                  | 150              | 8.50                 | 10.20                 | 6-5/8"30G   |
| 3/4             | 10 600   | 0.79                | 2.76          | 0.98         | 560                  | 100              | 17.84                | 21.44                 | 6-3/4"30G   |
| 1               | 13 950   | 0.98                | 3.58          | 1.25         | 924                  | 50               | 34.90                | 41.88                 | 6-1"30G     |

## CHAIN - PROOF COIL, GRADE 30

- Material: Grade 30, Mild Carbon Steel
- Finish: Self Coloured, ASTM A413
- Design Factor: 4:1



| Trade Size (in) | WLL (lb) | Dimensions (inches) |               |              | Wt. / 100 ft (lb) | Qty. / Drum (ft) | Full Drum Price / ft | Cut Length Price / ft | Part Number |
|-----------------|----------|---------------------|---------------|--------------|-------------------|------------------|----------------------|-----------------------|-------------|
|                 |          | Dia.                | Inside Length | Inside Width |                   |                  |                      |                       |             |
| 1/4             | 1300     | 0.28                | 1.24          | 0.38         | 66                | 800              | 1.70                 | 2.04                  | 6-1/4"30B   |
| 5/16            | 2000     | 0.30                | 1.29          | 0.44         | 86                | 550              | 2.60                 | 2.99                  | 6-5/16"30B  |
| 3/8             | 2400     | 0.39                | 1.45          | 0.63         | 142               | 400              | 3.80                 | 4.56                  | 6-3/8"30B   |
| 1/2             | 4500     | 0.49                | 2.05          | 0.87         | 242               | 200              | 7.30                 | 8.28                  | 6-1/2"30B   |
| 5/8             | 6900     | 0.61                | 2.20          | 0.79         | 357               | 150              | 10.68                | 12.28                 | 6-5/8"30B   |

## CHAIN - SELF COLOURED, HIGH TEST, GRADE 43

- Material: Grade 43, Carbon Steel
- Finish: Self Colored, ASTM A413
- Design Factor: 4:1



| Trade Size (in) | WLL (lb) | Dimensions (inches) |      |      | Weight / 100 ft (lb) | Qty. / Drum (ft) | Full Drum Price / ft | Part Number |
|-----------------|----------|---------------------|------|------|----------------------|------------------|----------------------|-------------|
|                 |          | Dia.                | I.L. | I.W. |                      |                  |                      |             |
| 3/8             | 5400     | 0.38                | 1.36 | 0.58 | 132                  | 400              | 3.71                 | 44-3/8"G43  |
| 1/2             | 9200     | 0.53                | 1.70 | 0.75 | 237                  | 200              | 6.50                 | 44-1/2"G43  |

## CHAIN - MID-LINK FISHING, GRADE 80

- **High Strength alloy steel with grade 80 strengths**
- Material: Grade 80, Alloy Steel
- Finish: Self Colour
- Design Factor: 4:1



| Size (in) | WLL (lb) | Dimenions (inches) |              | Wt. / 100 ft (lb) | Qty. / Drum (ft) | Full Drum Price / ft | Cut Length Price / ft | Part Number |
|-----------|----------|--------------------|--------------|-------------------|------------------|----------------------|-----------------------|-------------|
|           |          | Inside Legth       | Inside Width |                   |                  |                      |                       |             |
| 1/2       | 11 900   | 2.05               | 0.83         | 230               | 200              | 10.30                | 12.36                 | 73-1/2"CML  |
| 5/8       | 18 100   | 2.52               | 0.94         | 340               | 150              | 12.99                | 15.58                 | 73-5/8"CML  |
| 3/4       | 25 500   | 3.00               | 1.16         | 510               | 100              | 18.68                | 22.41                 | 73-3/4"CML  |
| 7/8       | 34 162   | 3.46               | 1.20         | 631               | 100              | 34.27                | 41.12                 | 73-7/8"CML  |

To prevent the possibility of serious bodily harm: DO NOT EXCEED the working load limit of chain or components. NOT USE FOR OVERHEAD LIFTING OR HOISTING. DO NOT USE if the chain or components are visibly distorted or worn.

## CHAIN - LONG-LINK LASHING, GRADE 80

- Material: Grade 80
- Finish: Galvanized
- Design Factor: 4:1



| Trade Size (in) | Break Load (lb) | Dimensions (mm) |               |              | Wt. / 100 ft (lb) | Qty. / Drum (ft) | Price / ft | Part Number |
|-----------------|-----------------|-----------------|---------------|--------------|-------------------|------------------|------------|-------------|
|                 |                 | Dia.            | Inside Length | Inside Width |                   |                  |            |             |
| 1/2             | 40 000          | 13.5            | 82            | 27           | 222               | 400              | 11.25      | 6-13.5MMGLC |

## CHAIN - ALLOY LONG-LINK, GRADE 80, TRYGG®

- Material: Grade 80, Alloy Steel
- Finish: Self Coloured
- Design Factor: 4:1



| Size (mm) | Break Load (lb) | Dimensions (mm) |              | Weight / 100 ft (lb) | Qty. / Drum (ft) | Full Drum  | Cut Length | Part Number  |
|-----------|-----------------|-----------------|--------------|----------------------|------------------|------------|------------|--------------|
|           |                 | Inside Length   | Inside Width |                      |                  | Price / ft | Price / ft |              |
| 11        | 34 170          | 66              | 18           | 141                  | 656              | 5.67       | 6.80       | 155-11MMLSCC |

## CHAIN - ALLOY SHORT-LINK, GRADE 80, TRYGG®

- Material: Grade 80, Alloy Steel
- Finish: Self Coloured
- Design Factor: 4:1



| Size (in) | Break Load (lb) | Dimensions (mm) |              | Weight / 100 ft (lb) | Qty. / Drum (ft) | Full Drum  | Part Number |
|-----------|-----------------|-----------------|--------------|----------------------|------------------|------------|-------------|
|           |                 | Inside Length   | Inside Width |                      |                  | Price / ft |             |
| 5/8       | 72 315          | 48              | 22           | 382                  | 328              | 14.86      | 155-16MMSLC |



## CHAIN - STAINLESS, GRADE 50

- **Rated for Overhead Lifting**
- Material: Grade 50, 316L Stainless Steel
- Finish: Stainless Steel
- Design Factor: 4:1



| Trade Size (in) | WLL (lb) | Dimensions (mm) |               |              | Qty. / Drum (ft) | Price / ft | Part Number |
|-----------------|----------|-----------------|---------------|--------------|------------------|------------|-------------|
|                 |          | Dia.            | Inside Length | Inside Width |                  |            |             |
| 3/16            | 1308     | 5.4             | 24.7          | 7.6          | 800              | 14.08      | 6-3/16G50SS |
| 9/32            | 2200     | 7.0             | 22            | 10.5         | 800              | 22.92      | 6-9/32G50SS |
| 5/16            | 2700     | 8               | 24            | 10           | 550              | 25.87      | 6-5/16G50SS |
| 3/8             | 4400     | 10              | 30            | 14.5         | 400              | 35.46      | 6-3/8G50SS  |
| 1/2             | 7300     | 13              | 39            | 19           | 200              | 55.68      | 6-1/2G50SS  |
| 5/8             | 11240    | 16              | 46            | 21           | 250              | 83.06      | 6-5/8G50SS  |

## CHAIN SLINGS - SLING CHART, CHAIN

### GRADE 80 / GRADE 100 CHAIN SLINGS MADE TO ORDER!

Simply call and tell us what size, type and grade you are looking for and we will get back to you right away with a competitive price. Chain slings are fully certified and proof tested.

See Chain sling charts below for Working Load Limits.



#### First Symbol (basic type)

- S - Single chain sling
- C - Single choker chain sling with a standard end link on each end, no hooks
- D - Double branch chain sling
- T - Triple branch chain sling
- Q - Quadruple branch chain sling
- A - Proceeds symbol if shortening clutches are used



#### Second Symbol (type of master/end link)

- O - Oblong master link of standard dimensions
- P - Pear shaped master link



#### Third Symbol (type of hook)

- S - Sling hook
- G - Grab hook
- F - Foundry hook

To prevent the possibility of serious bodily harm: DO NOT EXCEED the working load limit of chain or components. NOT USE FOR OVERHEAD LIFTING OR HOISTING. DO NOT USE if the chain or components are visibly distorted or worn.

## GRADE 80 CHAIN SLING - Working Load Limits Rated in Pounds

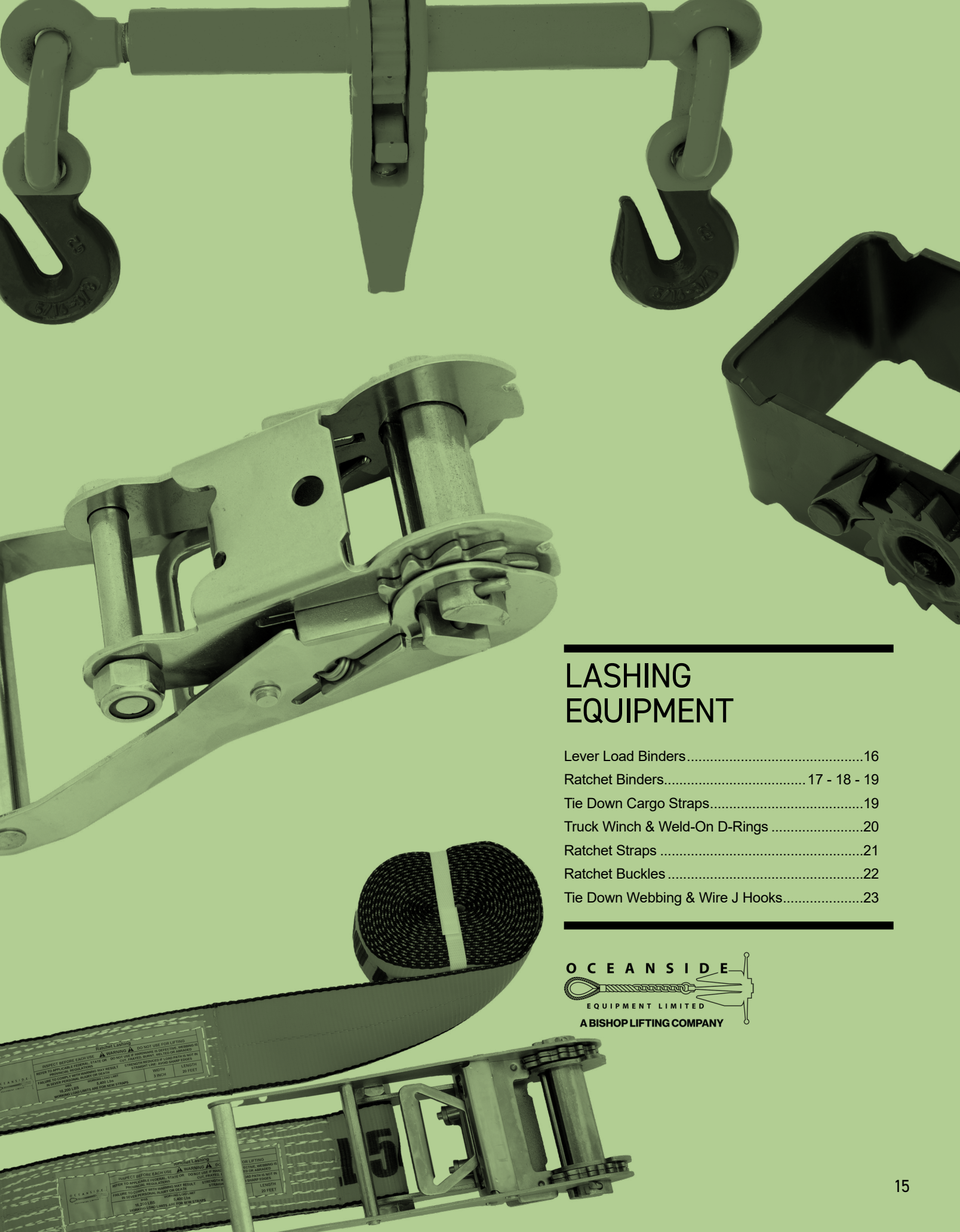
| Chain Grade<br>80 Size |    | Single Leg (lb)                                                                   | Two Leg (lb)                                                                      |                                                                                   |                                                                                   | Three & Four Leg (lb)                                                              |                                                                                     |                                                                                     |
|------------------------|----|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                        |    |  |  |  |  |  |  |  |
| Inch                   | mm | 90°                                                                               | 60°                                                                               | 45°                                                                               | 30°                                                                               | 60°                                                                                | 45°                                                                                 | 30°                                                                                 |
| 1/4-9/32               | 7  | 3500                                                                              | 6100                                                                              | 4900                                                                              | 3500                                                                              | 9100                                                                               | 7400                                                                                | 5200                                                                                |
| 5/16                   | 8  | 4500                                                                              | 7800                                                                              | 6400                                                                              | 4500                                                                              | 11700                                                                              | 9500                                                                                | 6800                                                                                |
| 3/8                    | 10 | 7100                                                                              | 12300                                                                             | 10000                                                                             | 7100                                                                              | 18400                                                                              | 15100                                                                               | 10600                                                                               |
| 1/2                    | 13 | 12000                                                                             | 20800                                                                             | 17000                                                                             | 12000                                                                             | 31200                                                                              | 25500                                                                               | 18000                                                                               |
| 5/8                    | 16 | 18100                                                                             | 31300                                                                             | 25600                                                                             | 18100                                                                             | 47000                                                                              | 38400                                                                               | 27100                                                                               |
| 3/4                    | 20 | 28300                                                                             | 49000                                                                             | 40000                                                                             | 28300                                                                             | 73500                                                                              | 60000                                                                               | 42400                                                                               |
| 7/8                    | 22 | 34200                                                                             | 59200                                                                             | 48400                                                                             | 34200                                                                             | 88900                                                                              | 72500                                                                               | 51300                                                                               |
| 1                      | 26 | 47700                                                                             | 82600                                                                             | 67400                                                                             | 47700                                                                             | 123900                                                                             | 101200                                                                              | 71500                                                                               |
| 1-1/4                  | 32 | 72300                                                                             | 125200                                                                            | 102200                                                                            | 72300                                                                             | 187800                                                                             | 153400                                                                              | 108400                                                                              |

## GRADE 100 CHAIN SLING - Working Load Limits Rated in Pounds

| Chain Grade<br>100 Size |    | Single Leg (lb)                                                                     | Two Leg (lb)                                                                        |                                                                                     |                                                                                     | Three & Four Leg (lb)                                                                |                                                                                       |                                                                                       |
|-------------------------|----|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                         |    |  |  |  |  |  |  |  |
| Inch                    | mm | 90°                                                                                 | 60°                                                                                 | 45°                                                                                 | 30°                                                                                 | 60°                                                                                  | 45°                                                                                   | 30°                                                                                   |
| 1/4-9/32                | 7  | 4300                                                                                | 7400                                                                                | 6100                                                                                | 4300                                                                                | 11200                                                                                | 9100                                                                                  | 6400                                                                                  |
| 5/16                    | 8  | 5700                                                                                | 9900                                                                                | 8100                                                                                | 5700                                                                                | 14800                                                                                | 12100                                                                                 | 8500                                                                                  |
| 3/8                     | 10 | 8800                                                                                | 15200                                                                               | 12400                                                                               | 8800                                                                                | 22900                                                                                | 18700                                                                                 | 13200                                                                                 |
| 1/2                     | 13 | 15000                                                                               | 26000                                                                               | 21200                                                                               | 15000                                                                               | 39000                                                                                | 31800                                                                                 | 22500                                                                                 |
| 5/8                     | 16 | 22600                                                                               | 39100                                                                               | 32000                                                                               | 22600                                                                               | 58700                                                                                | 47900                                                                                 | 33900                                                                                 |
| 3/4                     | 20 | 35300                                                                               | 61100                                                                               | 49900                                                                               | 35300                                                                               | 91700                                                                                | 74900                                                                                 | 52950                                                                                 |
| 7/8                     | 22 | 42700                                                                               | 74000                                                                               | 60400                                                                               | 42700                                                                               | 110900                                                                               | 90600                                                                                 | 64000                                                                                 |
| 1                       | 26 | 59700                                                                               | 103400                                                                              | 84400                                                                               | 59700                                                                               | 155100                                                                               | 126000                                                                                | 89550                                                                                 |

[illegible]





## LASHING EQUIPMENT

|                                      |              |
|--------------------------------------|--------------|
| Lever Load Binders.....              | 16           |
| Ratchet Binders.....                 | 17 - 18 - 19 |
| Tie Down Cargo Straps.....           | 19           |
| Truck Winch & Weld-On D-Rings .....  | 20           |
| Ratchet Straps .....                 | 21           |
| Ratchet Buckles .....                | 22           |
| Tie Down Webbing & Wire J Hooks..... | 23           |

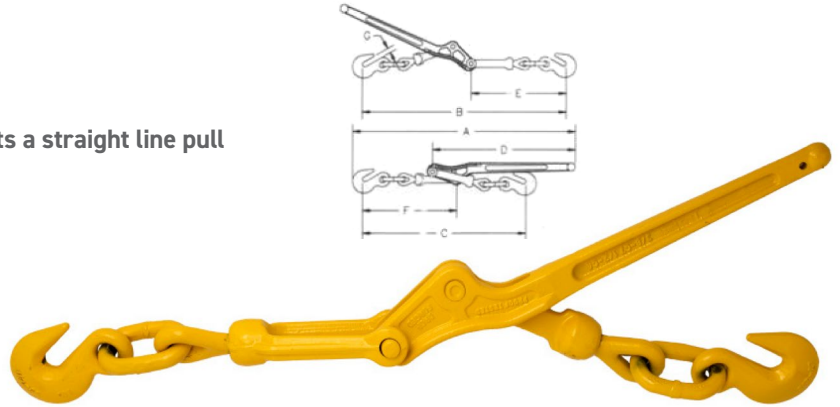


## LOADBINDER - LEVER

Ball & Socket swivel joint at hook assembly permits a straight line pull

Before use, oil ball & socket for longer life

- Material: Forged Steel, Quenched & Tempered
- Standard: EN 12195-3
- Finish: Painted Yellow
- Design Factor: 3.5:1
- Identification: Trademark, Size/WLL, Batch Code



| Chain Size (in) | WLL (lb) | Ult. Tension (lb) | Weight (lb) | Inside Measures (in) |       |       |       |       |       |      | Qty./ Box | Price / ea. | Part Number  |
|-----------------|----------|-------------------|-------------|----------------------|-------|-------|-------|-------|-------|------|-----------|-------------|--------------|
| A               | B        | C                 | D           | E                    | F     | G     |       |       |       |      |           |             |              |
| 1/4 - 5/16      | 2600     | 9100              | 3.3         | 18.50                | 17.18 | 14.43 | 11.50 | 8.25  | 8.12  | 0.37 | 10        | 44.37       | 6-1/4-5/16LB |
| 5/16 - 3/8      | 5400     | 19 250            | 7.02        | 24.13                | 22.13 | 17.88 | 16.00 | 10.38 | 10.38 | 0.50 | 5         | 59.21       | 6-5/16-3/8LB |
| 3/8 - 1/2       | 9200     | 33 000            | 12.47       | 28.75                | 25.75 | 21.25 | 18.69 | 12.31 | 12.38 | 0.63 | 5         | 104.51      | 6-3/8-1/2LB  |

## LOADBINDER - LEVER, BX

### BX-600 / BX-800

Load Binder Lever with Kickback Resistance

Ball & Socket swivel joint at hook assembly permits a straight line pull.

Before use, oil ball & socket for longer life.

- Material: Forged Steel, Quenched & Tempered
- Standard: EN 12195-3
- Finish: Painted Yellow
- Design Factor: 3.5:1
- Identification: Trademark, Size/WLL, Batch Code



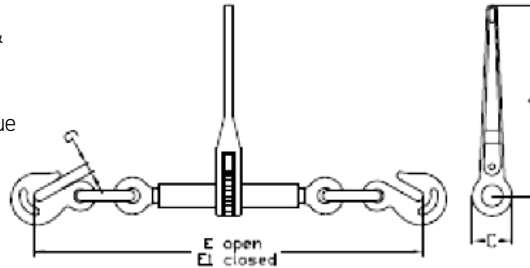
| Binder Number | Chain Size (in) | WLL (lb) | Lever Length (in) | Take up (in) | Weight (lb) | Qty./ Box | Price / ea. | Part Number |
|---------------|-----------------|----------|-------------------|--------------|-------------|-----------|-------------|-------------|
| BX-600        | 5/16            | 4700     | 12-1/2            | 4-1/2        | 8.6         | 5         | 84.08       | 6-BX600     |
| BX-600        | 3/8             | 5400     |                   |              |             |           |             |             |
| BX-800        | 3/8             | 6600     | 16                | 4-1/2        | 13.4        | 4         | 125.83      | 6-BX800     |
| BX-800        | 1/2             | 9200     |                   |              |             |           |             |             |

Failure to use binders properly may result in serious injury or death. DO NOT operate load binder while standing on the load. Keep yourself out of the path of the moving handle and loose chain lying on the handle. You must be familiar with regulations regarding size and number of chain systems required for securing loads. Always consider the safety of nearby workers as well as yourself when using load binder. While under tension, load binder must not bear against an object, as this will cause side load. Do not use handle extender. Do not attempt to open or close the binder with more than one person. Load binders not stored with both hooks secured could potentially back out under road vibrations.

## LOADBINDER - RATCHET, HS

**Matches the Working Load Limit of Grade 100 Chain for both sizes**

- Material: Forged Steel, Quenched & Tempered, Gr 100
- Standard: EN 12195-3, WSTDA-T-6
- Finish: Powder Coated Yellow & Blue
- Design Factor: 3:1
- Identification: Trademark, Size/WLL, Batch Code

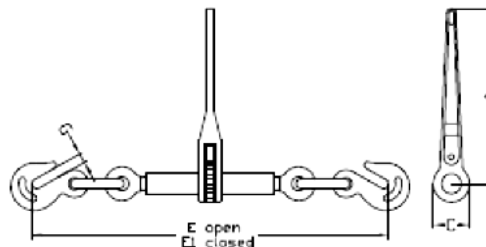


| Chain Size (in) | WLL (lb) | Proof Load (lb) | Weight (lb) | Dimensions (in) |      |       |       |      | Qty. / box | Price / ea. | Part Number    |
|-----------------|----------|-----------------|-------------|-----------------|------|-------|-------|------|------------|-------------|----------------|
| A               | C        | E1              | E           | G               |      |       |       |      |            |             |                |
| 5/16 - 3/8      | 8800     | 17 600          | 10.95       | 13.98           | 2.56 | 23.54 | 29.88 | 0.50 | 4          | 96.08       | 6-5/16-3/8RBHS |
| 3/8 - 1/2       | 15 000   | 30 000          | 11.69       | 13.98           | 2.56 | 24.75 | 30.95 | 0.65 | 5          | 106.07      | 6-3/8-1/2RBHS  |

- Meets or exceeds DOT and CVSA Cargo Securement Tie-Down Guideline

## LOADBINDER - RATCHET

- Material: Forged Alloy Steel, Quenched & Tempered
- Standard: EN 12195-3, WSTDA-T-6
- Finish: Painted Yellow
- Design Factor: 3.5:1
- Identification: Trademark, Size/WLL, Batch Code

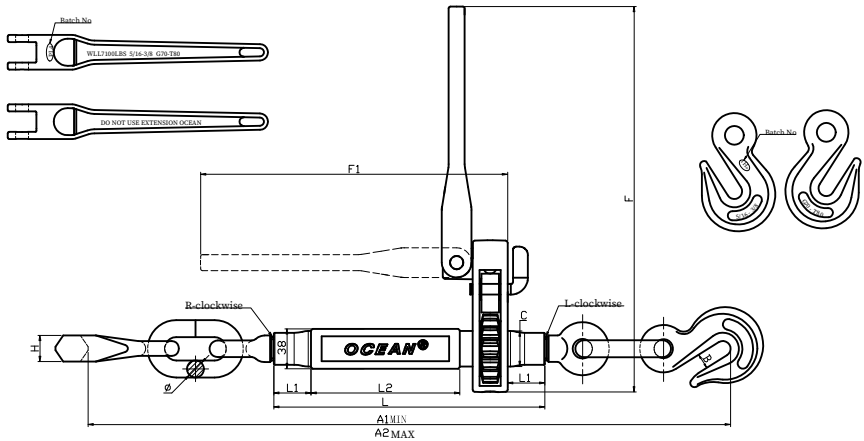


| Chain Size (in) | WLL (lb) | Proof Load (lb) | Weight each (lb) | Dimensions (in) |      |       |       |      | Pcs / box | Price / ea. | Part Number  |
|-----------------|----------|-----------------|------------------|-----------------|------|-------|-------|------|-----------|-------------|--------------|
| A               | C        | E1              | E                | G               |      |       |       |      |           |             |              |
| 5/16 - 3/8      | 6600     | 13 200          | 10.56            | 13.98           | 2.56 | 23.54 | 29.88 | 0.50 | 5         | 83.12       | 6-5/16-3/8RB |
| 3/8 - 1/2       | 9200     | 18 400          | 11.24            | 13.98           | 2.56 | 23.74 | 30.24 | 0.65 | 5         | 88.65       | 6-3/8-1/2RB  |
| 1/2 - 5/8       | 13 000   | 26 000          | 15.83            | 13.98           | 2.56 | 27.17 | 33.86 | 0.73 | 4         | 101.12      | 6-1/2-5/8RB  |
| 5/8 - 3/4       | 20 000   | 40 000          | 28.60            | 13.98           | 2.56 | 29.29 | 31.61 | 0.93 | 2         | 296.18      | 6-5/8-3/4RB  |

Failure to use binders properly may result in serious injury or death. DO NOT operate load binder while standing on the load. Keep yourself out of the path of the moving handle and loose chain lying on the handle. You must be familiar with regulations regarding size and number of chain systems required for securing loads. Always consider the safety of nearby workers as well as yourself when using load binder. While under tension, load binder must not bear against an object, as this will cause side load. Do not use handle extender. Do not attempt to open or close the binder with more than one person. Load binders not stored with both hooks secured could potentially back out under road vibrations.

NEW LOADBINDER - FOLDING BINDER - RATCHET

- Material: Forged Alloy Steel, Quenched & Tempered
- Standard: EN 12195-3, WSTDA-T-6
- Finish: Painted Yellow
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code



| Chain Size (in) | WLL (lb) | Proof Load (lb) | Weight (lb) | Dimensions (in) |      |       |      |      |       |       |      |      |       |       | Qty. / Box | Price / ea. | Part Number  |
|-----------------|----------|-----------------|-------------|-----------------|------|-------|------|------|-------|-------|------|------|-------|-------|------------|-------------|--------------|
|                 |          |                 |             | B               | C    | L     | L1   | L2   | F     | F1    | Φ    | H    | A1    | A2    |            |             |              |
| 5/16-3/8        | 7 100    | 14 200          | 11.24       | 0.51            | 1.34 | 10.04 | 1.38 | 5.51 | 14.25 | 11.22 | 0.55 | 0.89 | 22.64 | 28.94 | 4          | 94.22       | 6-5/16-3/8FB |
| 3/8-1/2         | 12 000   | 24 000          | 13.00       | 0.67            | 1.34 | 10.04 | 1.38 | 5.51 | 14.25 | 11.22 | 0.63 | 0.96 | 23.43 | 29.92 | 4          | 110.14      | 6-3/8-1/2FB  |
| 1/2-5/8         | 18 100   | 36 200          | 16.09       | 0.75            | 1.44 | 10.24 | 1.38 | 5.51 | 14.25 | 11.22 | 0.79 | 1.12 | 26.38 | 32.87 | 2          | 165.52      | 6-1/2-5/8FB  |



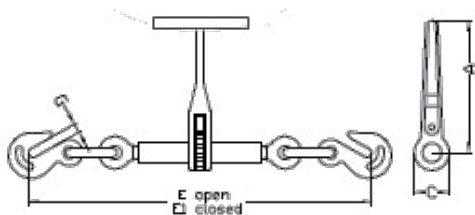
Failure to use binders properly may result in serious injury or death. DO NOT operate load binder while standing on the load. Keep yourself out of the path of the moving handle and loose chain lying on the handle. You must be familiar with regulations regarding size and number of chain systems required for securing loads. Always consider the safety of nearby workers as well as yourself when using load binder. While under tension, load binder must not bear against an object, as this will cause side load. Do not use handle extender. Do not attempt to open or close the binder with more than one person. Load binders not stored with both hooks secured could potentially back out under road vibrations.



## LOADBINDER - RATCHET, T-HANDLE

Matches the Working Load Limit of Grade 100 Chain

- Material: Forged Steel, Quenched & Tempered
- Standard: EN 12195-3, WSTDA-T-6
- Finish: Painted Yellow & Blue
- Design Factor: 3:1
- Identification: Trademark, Size/WLL



| Chain Size (in) | WLL (lb) | Proof Load (lb) | Weight each (lb) | Dimensions (in) |      |       |       |      | Pcs / box | Price / ea. | Part Number     |
|-----------------|----------|-----------------|------------------|-----------------|------|-------|-------|------|-----------|-------------|-----------------|
| A               | C        | E1              | E                | G               |      |       |       |      |           |             |                 |
| 5/16 - 3/8      | 8800     | 17 600          | 12.30            | 8.86            | 2.56 | 22.64 | 28.94 | 0.50 | 4         | 117.88      | 6-5/16-3/8RBHST |

Failure to use binders properly may result in serious injury or death. DO NOT operate load binder while standing on the load. Keep yourself out of the path of the moving handle and loose chain lying on the handle. You must be familiar with regulations regarding size and number of chain systems required for securing loads. Always consider the safety of nearby workers as well as yourself when using load binder. While under tension, load binder must not bear against an object, as this will cause side load.

**Do not use handle extender. Do not attempt to open or close the binder with more than one person.**

## TIE DOWN CARGO STRAP - CHAIN ASSEMBLY

- Material: Grade 70, Carbon Steel, Polyester
- Standard: EN 12195-2,3,WSTDA-T-1
- Finish: UV Protection, Yellow Chromate
- Design Factor: 3:1
- Identification: Trademark, Size/WLL



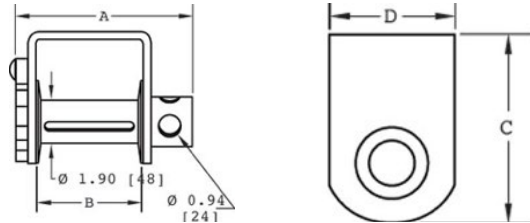
| Size       |             | WLL (lb) | Price / ea. | Part Number  |
|------------|-------------|----------|-------------|--------------|
| Width (in) | Length (ft) |          |             |              |
| 3          | 30          | 5400     | 42.12       | 126-3"X30"WC |

Compliant with National Safety Code Standard (NSC) 10 Part 1. Division 3, Section 11 (4)

"On and after January 1, 2011 a person shall not use a tie down or a component of a tie downtown secure cargo to a vehicle unless it is marked by the manufacturer with respect to its working load limit."

## WINCH - TRUCK, #5820

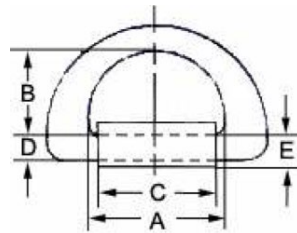
- Designed for use with 3" strapping
- Material: Steel Plate
- Finish: Black Painted
- Design Factor: 3:1



| Type  | Dimensions (in) |      |      |      | Weight (lb) | Price / ea. | Part Number |
|-------|-----------------|------|------|------|-------------|-------------|-------------|
|       | A               | B    | C    | D    |             |             |             |
| #5820 | 7.75            | 4.88 | 7.58 | 4.00 | 10.7        | 63.40       | 6-#5820TW   |

## RING - WELD-ON D-RING TIE DOWN

- Rated in Metric Ton(s)



| Size (mm) | MBS (t) | Dimensions (mm) |    |     |    |    | Weight (kg) | Price / ea. | Part Number |
|-----------|---------|-----------------|----|-----|----|----|-------------|-------------|-------------|
|           |         | A               | B  | C   | D  | E  |             |             |             |
| 27        | 50      | 155             | 90 | 130 | 27 | 32 | 4.41        | 104.26      | 6-DRING     |

## TIE DOWN CARGO STRAP - RATCHET

- **WLL marked along entire length of webbing.**
- Material: Grade 70, Carbon Steel, Polyester
- Standard: EN 12195-2,3, WSTDA-T-1
- Finish: UV Protection, Yellow Chromate
- Design Factor: 3:1
- Identification: Trademark, Size/WLL



| Size       |             | MBS (lb) | WLL (lb) | Price / ea. | Part Number   |
|------------|-------------|----------|----------|-------------|---------------|
| Width (in) | Length (ft) |          |          |             |               |
| 2          | 10          | 10 000   | 3335     | 20.74       | 126-2"X10'RWH |
| 2          | 15          | 10 000   | 3335     | 22.55       | 126-2"X15'RWH |
| 2          | 20          | 10 000   | 3335     | 24.32       | 126-2"X20'RWH |
| 2          | 25          | 10 000   | 3335     | 26.10       | 126-2"X25'RWH |
| 2          | 30          | 10 000   | 3335     | 29.05       | 126-2"X30'RWH |

## TIE DOWN CARGO STRAP - RATCHET

- **WLL marked along entire length of webbing.**
- Material: Grade 70, Carbon Steel, Polyester
- Standard: EN 12195-2,3, WSTDA-T-1
- Finish: UV Protection, Yellow Chromate
- Design Factor: 3:1
- Identification: Trademark, Size/WLL



| Size       |             | MBS (lb) | WLL (lb) | Price / ea. | Part Number    |
|------------|-------------|----------|----------|-------------|----------------|
| Width (in) | Length (ft) |          |          |             |                |
| 3          | 20          | 16 200   | 5400     | 73.00       | 126-3"X20' RWH |
| 3          | 30          | 16 200   | 5400     | 80.76       | 126-3"X30'RWH  |

# BUCKLE - RATCHET

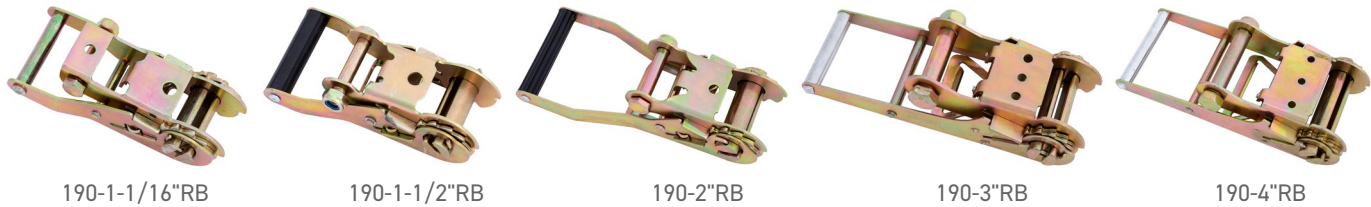
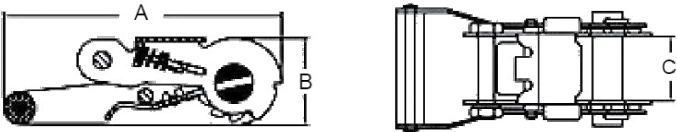
- Material: 304 Stainless Steel
- Finish: Stainless Steel



| For Webbing (in) | MBS (lb) | Price / ea. | Part Number |
|------------------|----------|-------------|-------------|
| 1                | 3300     | 24.80       | 6-1"SSRB    |

# BUCKLE - RATCHET

- Finish: Zinc plated



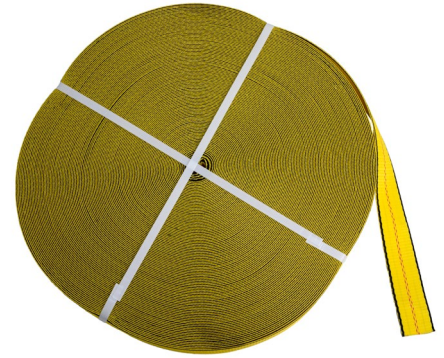
Pictures are for illustration only, actual product may differ.

| For Webbing (in) | MBS (lb) | Dimensions (mm) |    |     | Price / ea. | Part Number   |
|------------------|----------|-----------------|----|-----|-------------|---------------|
|                  |          | A               | B  | C   |             |               |
| 1                | 3300     | 130             | 42 | 36  | 5.50        | 190-1-1/16"RB |
| 1                | 6600     | 155             | 49 | 40  | 11.60       | 190-1-1/2"RB  |
| 2                | 12 000   | 230             | 57 | 52  | 11.90       | 190-2"RB      |
| 3                | 22 000   | 320             | 80 | 78  | 42.50       | 190-3"RB      |
| 4                | 22 000   | 320             | 80 | 102 | 54.65       | 190-4"RB      |



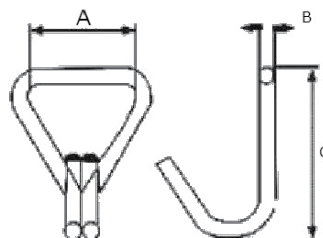
## WEBBING - TIE DOWN MATERIAL, POLYESTER

| Size (in) | MBS (lb) | Carton Packaging Qty (ft) | Price / Reel | Part Number    |
|-----------|----------|---------------------------|--------------|----------------|
| 1         | 3300     | 328.08                    | 41.05        | 190-1"TDW3300  |
| 1         | 6600     | 328.08                    | 80.60        | 190-1"TDW6600  |
| 2         | 12 000   | 328.08                    | 160.00       | 190-2"TDW12000 |
| 3         | 18 000   | 328.08                    | 245.00       | 190-3"TDW18000 |
| 4         | 24 000   | 328.08                    | 350.00       | 190-4"TDW24000 |



## HOOK - WIRE, DOUBLE J

| Size (in) | MBS (lb) | Dimensions (mm) |      |     | Price / ea. | Part Number   |
|-----------|----------|-----------------|------|-----|-------------|---------------|
|           |          | A               | B    | C   |             |               |
| 1 1/16    | 3300     | 27              | 7    | 56  | .80         | 190-1-1/16"WH |
| 1 1/2     | 6600     | 36              | 9.3  | 60  | 1.86        | 190-1-1/2"WH  |
| 2         | 12 000   | 52              | 11.4 | 86  | 2.50        | 190-2"WH      |
| 3         | 22 000   | 76              | 16   | 130 | 8.25        | 190-3"WH      |
| 4         | 22 000   | 102             | 16   | 130 | 10.49       | 190-4"WH      |





## OCEAN G80 & G100 STEEL LIFTING COMPONENTS

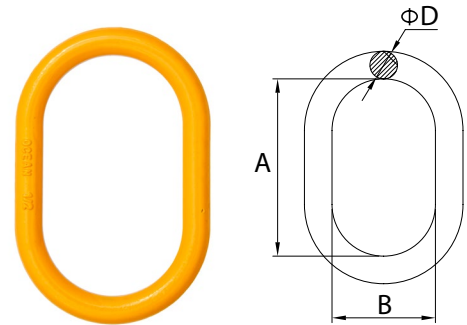
|                                                        |         |
|--------------------------------------------------------|---------|
| G80 Master Links .....                                 | 25      |
| G80 Connecting Links & Hooks .....                     | 26 - 30 |
| G80 Trigger, Load Pin,<br>and Pin & Sleeve Kits .....  | 31      |
| G80 Insulated Swivels<br>& Coupling Components .....   | 32 - 34 |
| G100 Master Links .....                                | 35      |
| G100 Connecting Links & Hooks .....                    | 36 - 41 |
| G100 Trigger, Load Pin,<br>and Pin & Sleeve Kits ..... | 41 - 42 |
| G80 Weld-On Bucket Hooks<br>& Lifting Points .....     | 43 - 45 |
| Lifting Eye Key Points .....                           | 46 - 47 |
| Swivel Hoist Rings .....                               | 48 - 51 |

# OCEAN®

Ocean® Brand grade 80 and 100 rigging products are manufactured in accordance with Quality Management System approved to ISO 9001 and 14001. All Ocean® Brand products are manufactured and Inspected in accordance with EN 1677 and Exceeds requirements of related ASME B30 Standards. To Ensure the quality of Ocean® Brand Products they are 100% Magnetic Flux tested, batch samples are fatigue tested for 20,000 cycles @ 1.5 times the working load limit, hardness is tested and destruction tests to ensure proper breaking loads. All testing is traceable back with a batch code embossed on the product.

## LINK - MASTER LINK, GRADE 80, OCEAN® BRAND

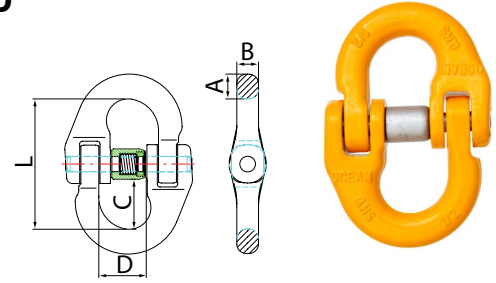
- Material: Alloy Steel, Grade 80
- Standard: EN 1677-4 / ASTM A952/952M
- Finish: Powder Coated, Yellow
- Design Factor: 5:1
- Identification: Trademark, Size/WLL,
- Batch Code, Grade



| Trade Size (in) | WLL (lb) | Chain Size (in) |       | I.L. (in) | I.W. (in) | Dia. (in) | Wt. / ea. (lb) | Qty. / Box | Price / ea. | Part Number |
|-----------------|----------|-----------------|-------|-----------|-----------|-----------|----------------|------------|-------------|-------------|
|                 |          | 1-Leg           | 2-Leg |           |           |           |                |            |             |             |
| 1/2"            | 7 400    | 5/16"           | 7/32" | 4.72      | 2.76      | 0.55      | 1.1            | 50         | 29.98       | 3-1/2"ML    |
| 5/8"            | 9 000    | 3/8"            | 5/16" | 5.51      | 3.15      | 0.67      | 1.6            | 30         | 45.40       | 3-5/8"ML    |
| 3/4"            | 12 300   | 1/2"            |       | 5.91      | 3.54      | 0.85      | 2.4            | 20         | 61.71       | 3-3/4"ML    |
| 7/8"            | 15 200   | 1/2"            | 3/8"  | 6.30      | 3.74      | 0.87      | 3.5            | 16         | 78.09       | 3-7/8"ML    |
| 1"              | 26 000   | 5/8"            |       | 7.48      | 4.33      | 0.98      | 5.1            | 7          | 96.50       | 3-1"ML      |
| 1-1/8"          | 30 000   | 5/8"            | 1/2"  | 7.09      | 4.13      | 1.10      | 5.9            | 8          | 119.41      | 3-1-1/8"ML  |
| 1-1/4"          | 39 100   | 3/4"            |       | 7.87      | 4.72      | 1.18      | 7.6            | 5          | 148.19      | 3-1-1/4"ML  |
| 1-3/8"          | 42 000   | 7/8"            | 5/8"  | 9.45      | 5.51      | 1.34      | 11.7           | 4          | 272.17      | 3-1-3/8"ML  |
| 1-1/2"          | 61 100   | 1"              |       | 9.84      | 5.91      | 1.50      | 15.8           | 3          | 362.89      | 3-1-1/2"ML  |

## LINK - CONNECTING LINK, GRADE 80, OCEAN® BRAND

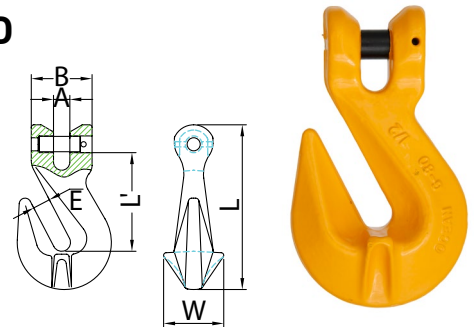
- Material: Alloy Steel, Grade 80
- Standard: EN 1677-1/ ASTM A952/952M
- Finish: Powder Coated, Yellow
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, Grade



| Grade 80 Chain (in) | WLL (lb) | Dimensions (in) |      |      |      |      | Wt. / ea. (lb) | Qty. / Box | Price / ea. | Part Number |
|---------------------|----------|-----------------|------|------|------|------|----------------|------------|-------------|-------------|
|                     |          | A               | B    | C    | D    | L    |                |            |             |             |
| 9/32"               | 4 500    | 0.39            | 0.34 | 0.91 | 0.73 | 2.30 | 0.33           | 150        | 15.43       | 3-7-8CL     |
| 3/8"                | 7 100    | 0.52            | 0.45 | 1.04 | 1.00 | 2.72 | 0.71           | 50         | 18.07       | 3-10CL      |
| 1/2"                | 12 000   | 0.67            | 0.62 | 1.42 | 1.18 | 3.54 | 1.68           | 35         | 31.20       | 3-13CL      |
| 5/8"                | 18 100   | 0.75            | 0.75 | 1.50 | 1.43 | 3.94 | 2.73           | 20         | 50.20       | 3-16CL      |
| 3/4"                | 28 300   | 0.93            | 0.87 | 1.77 | 1.67 | 4.76 | 4.21           | 12         | 90.70       | 3-18-20CL   |
| 7/8"                | 34 200   | 1.11            | 0.94 | 2.38 | 1.94 | 6.06 | 7.82           | 6          | 150.01      | 3-22CL      |
| 1"                  | 47 700   | 1.22            | 1.20 | 2.56 | 2.18 | 6.54 | 10.80          | 3          | 249.44      | 3-26CL      |
| 1-1/4"              | 72 300   | 1.54            | 1.42 | 3.15 | 2.75 | 8.07 | 20.28          | 2          | 458.14      | 3-32CL      |

## HOOK - CLEVIS GRAB HOOK, GRADE 80, OCEAN® BRAND

- Material: Alloy Steel, Grade 80
- Standard: EN 1677-1/ ASTM A952/952M
- Finish: Powder Coated, Yellow
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, Grade

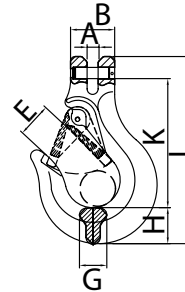


| Grade 80 Chain (in) | WLL (lb) | Dimensions (in) |      |      |      |       |      |      | Wt. / ea. (lb) | Qty. / Box | Price / ea. | Part Number |
|---------------------|----------|-----------------|------|------|------|-------|------|------|----------------|------------|-------------|-------------|
|                     |          | E               | A    | B    | W    | L     | L*   | M    |                |            |             |             |
| 9/32"               | 4 500    | 0.41            | 0.37 | 1.54 | 1.36 | 3.50  | 2.09 | 2.09 | 0.71           | 70         | 14.07       | 3-7-8CGH    |
| 3/8"                | 7 100    | 0.51            | 0.49 | 1.83 | 1.81 | 5.04  | 2.95 | 2.80 | 1.61           | 30         | 27.05       | 3-10CGH     |
| 1/2"                | 12 000   | 0.65            | 0.59 | 2.09 | 2.26 | 6.44  | 3.62 | 3.78 | 3.53           | 15         | 58.40       | 3-13CGH     |
| 5/8"                | 18 100   | 0.75            | 0.73 | 2.74 | 2.91 | 7.22  | 3.90 | 4.45 | 6.17           | 8          | 81.85       | 3-16CGH     |
| 3/4"                | 28 300   | 0.94            | 0.91 | 3.19 | 2.91 | 8.62  | 4.84 | 5.63 | 11.02          | 4          | 178.30      | 3-18-20CGH  |
| 7/8"                | 34 200   | 1.06            | 1.06 | 3.58 | 3.54 | 10.00 | 5.51 | 6.30 | 13.89          | 4          | 251.47      | 3-22CGH     |
| 1"                  | 47 700   | 1.18            | 1.18 | 4.61 | 4.02 | 12.17 | 7.36 | 7.13 | 31.96          | 2          | 797.98      | 3-26CGH     |
| 1-1/4"              | 72 300   | 1.61            | 1.38 | 5.91 | 5.12 | 14.88 | 8.39 | 8.66 | 52.90          | 1          | 2187.46     | 3-32CGH     |



## HOOK - CLEVIS SLING HOOK, GRADE 80, OCEAN® BRAND

- Material: Alloy Steel, Grade 80
- Standard: EN 1677-5/ ASTM A952/952M
- Finish: Powder Coated, Yellow
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, Grade

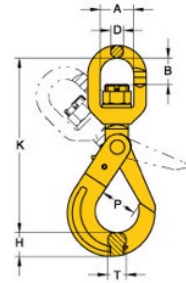


| Grade 80 Chain (in) | WLL (lb) | Spare Latch Kit |           | Dimensions (in) |      |      |      |      |       |       | Wt. / ea. (lb) | Qty. / Box | Price / ea. | Part Number |
|---------------------|----------|-----------------|-----------|-----------------|------|------|------|------|-------|-------|----------------|------------|-------------|-------------|
|                     |          | Price / ea.     | Part #    | A               | B    | E    | G    | H    | K     | L     |                |            |             |             |
| 9/32"               | 4 500    | 9.49            | 3-7-8LK   | 0.37            | 1.77 | 1.02 | 0.75 | 0.91 | 3.84  | 5.43  | 1.3            | 30         | 26.00       | 3-7-8CSH    |
| 3/8"                | 7 100    | 12.98           | 3-10LK    | 0.47            | 1.71 | 1.30 | 0.91 | 1.14 | 4.72  | 6.87  | 2.6            | 15         | 46.58       | 3-10CSH     |
| 1/2"                | 12 000   | 20.20           | 3-13LK    | 0.59            | 2.24 | 1.57 | 1.10 | 1.50 | 5.79  | 8.39  | 5.1            | 8          | 63.94       | 3-13CSH     |
| 5/8"                | 18 100   | 27.18           | 3-16LK    | 0.73            | 2.64 | 1.73 | 1.54 | 1.65 | 6.65  | 9.65  | 8.4            | 6          | 135.51      | 3-16CSH     |
| 3/4"                | 28 300   | 33.12           | 3-18-20LK | 0.98            | 3.94 | 2.13 | 1.85 | 2.01 | 7.48  | 12.76 | 14.8           | 4          | 289.08      | 3-18-20CSH  |
| 7/8"                | 34 200   | 42.10           | 3-22LK    | 0.98            | 3.58 | 2.60 | 1.97 | 2.44 | 8.39  | 12.60 | 20.21          | 2          | 349.04      | 3-22CSH     |
| 1"                  | 47 700   | 56.91           | 3-26LK    | 1.18            | 4.61 | 3.35 | 2.36 | 2.95 | 9.91  | 15.31 | 32.99          | 2          | 490.24      | 3-26CSH     |
| 1-1/4"              | 72 300   | 105.24          | 3-32LK    | 1.38            | 5.91 | 4.06 | 2.60 | 3.46 | 12.48 | 18.90 | 59.51          | 1          | 1345.51     | 3-32CSH     |



## HOOK - SELF LOCKING SWIVEL HOOK, GRADE 80, OCEAN® BRAND

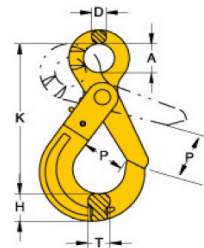
- Material: Alloy Steel, Grade 80
- Standard: EN 1677-3/ ASTM A952/952M
- Finish: Powder Coated, Yellow
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, Grade



| Grade 80 Chain (in) | WLL (lb) | Dimensions (in) |      |      |      |       |      |      | Wt. / ea. (lb) | Qty. / Box | Brass Bushing |             |
|---------------------|----------|-----------------|------|------|------|-------|------|------|----------------|------------|---------------|-------------|
|                     |          | A               | B    | D    | H    | K     | P    | T    |                |            | Price / ea.   | Part Number |
| 1/4-5/16            | 4 500    | 1.42            | 1.14 | 0.51 | 0.94 | 7.32  | 1.34 | 0.79 | 2.6            | 12         | 96.16         | 3-7-8SSLH   |
| 3/8                 | 7 100    | 1.8             | 1.49 | 0.62 | 1.19 | 8.9   | 1.77 | 1.02 | 4.4            | 7          | 143.61        | 3-10SSLH    |
| 1/2                 | 12 000   | 1.81            | 1.86 | 0.83 | 1.57 | 11    | 2.01 | 1.26 | 9              | 4          | 243.79        | 3-13SSLH    |
| 5/8                 | 18 100   | 2.36            | 2.16 | 0.91 | 1.93 | 13    | 2.44 | 1.3  | 15.9           | 3          | 375.04        | 3-16SSLH    |
| 3/4                 | 28 300   | 2.91            | 3.23 | 1.02 | 2.36 | 15.28 | 2.76 | 2.09 | 24.9           | 2          | 865.93        | 3-18-20SSLH |
| 7/8                 | 34 200   | 3.82            | 3.94 | 1.3  | 2.48 | 17.99 | 3.14 | 2.24 | 39.5           | 1          | 1550.67       | 3-22SSLH    |

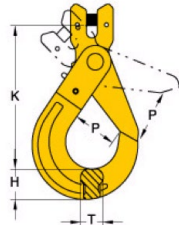
## HOOK - SELF LOCKING EYE HOOK, GRADE 80, OCEAN® BRAND

- Material: Alloy Steel, Grade 80
- Standard: EN 1677-3/ ASTM A952/952M
- Finish: Powder Coated, Yellow
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, Grade



| Grade 80 Chain (in) | WLL (lb) | Dimensions (in) |      |      |       |      |      | Wt. / ea. (lb) | Qty. / Box | Price / ea. | Part Number |
|---------------------|----------|-----------------|------|------|-------|------|------|----------------|------------|-------------|-------------|
|                     |          | A               | D    | H    | K     | P    | T    |                |            |             |             |
| 1/4 - 5/16          | 4 500    | 0.98            | 0.43 | 1.02 | 5.35  | 1.34 | 0.79 | 1.8            | 20         | 47.53       | 3-7-8SLEH   |
| 3/8                 | 7 100    | 1.26            | 0.51 | 1.24 | 6.57  | 1.73 | 1.02 | 3.3            | 15         | 74.16       | 3-10SLEH    |
| 1/2                 | 12 000   | 1.57            | 0.63 | 1.65 | 8.15  | 2.01 | 1.18 | 6.6            | 8          | 139.83      | 3-13SLEH    |
| 5/8                 | 18 100   | 1.97            | 0.83 | 2.2  | 9.92  | 2.36 | 1.3  | 12.5           | 4          | 294.95      | 3-16SLEH    |
| 3/4                 | 28 300   | 2.36            | 0.91 | 2.56 | 11.42 | 2.76 | 2.09 | 22.2           | 2          | 509.43      | 3-18-20SLEH |
| 7/8                 | 34 200   | 2.76            | 0.94 | 2.8  | 12.56 | 3.15 | 2.24 | 24             | 2          | 788.65      | 3-22SLEH    |

## HOOK - SELF LOCKING CLEVIS HOOK, GRADE 80, OCEAN® BRAND

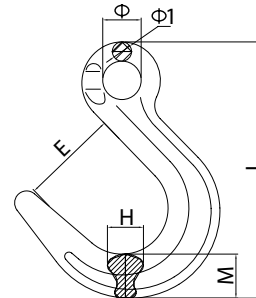


- Material: Alloy Steel, Grade 80
- Standard: EN 1677-3/ ASTM A952/952M
- Finish: Powder Coated, Yellow
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, Grade

| Grade 80 Chain (in) | WLL (lb) | Dimensions (in) |      |      |      |      | Wt. / ea. (lb) | Qty. / Box | Price / ea. | Part Number |
|---------------------|----------|-----------------|------|------|------|------|----------------|------------|-------------|-------------|
| A                   | P        | T               | H    | K    |      |      |                |            |             |             |
| 1/4 - 5/16          | 4 500    | 0.37            | 1.34 | 0.79 | 0.94 | 4.65 | 2.07           | 25         | 48.22       | 3-7-8SLCH   |
| 3/8                 | 7 100    | 0.49            | 1.73 | 1.02 | 1.18 | 5.59 | 3.1            | 15         | 78.01       | 3-10SLCH    |
| 1/2                 | 12 000   | 0.59            | 2.05 | 1.26 | 1.56 | 7.01 | 6.2            | 8          | 157.20      | 3-13SLCH    |
| 5/8                 | 18 100   | 0.73            | 2.36 | 1.30 | 1.97 | 8.31 | 12.3           | 4          | 318.13      | 3-16SLCH    |
| 3/4                 | 28 300   | 0.98            | 2.76 | 2.09 | 2.64 | 9.84 | 19.8           | 2          | 494.51      | 3-18-20SLCH |

## HOOK - FOUNDRY EYE HOOK, GRADE 80, OCEAN® BRAND

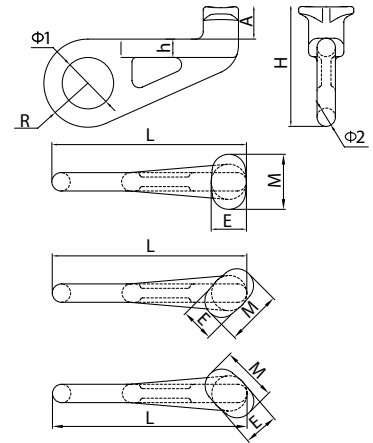
- Material: Alloy Steel, Grade 80
- Standard: EN 1677-1/ ASTM A952/952M
- Finish: Powder Coated, Yellow
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, Grade



| Grade<br>80 Chain<br>(in) | WLL (lb) | Dimensions (in) |      |      |      |      |       | Wt. / ea.<br>(lb) | Qty. /<br>Box | Price /<br>ea. | Part Number |
|---------------------------|----------|-----------------|------|------|------|------|-------|-------------------|---------------|----------------|-------------|
|                           |          | E               | H    | M    | Φ    | Φ1   | L     |                   |               |                |             |
| 3/8"                      | 7 100    | 2.87            | 0.98 | 1.18 | 1.24 | 0.59 | 7.76  | 3.00              | 12            | 39.17          | 3-3/8FEH    |
| 1/2"                      | 12 000   | 3.54            | 1.30 | 1.54 | 1.73 | 0.75 | 9.37  | 5.66              | 8             | 87.65          | 3-1/2FEH    |
| 5/8"                      | 18 100   | 4.13            | 1.46 | 1.65 | 1.93 | 0.87 | 10.87 | 8.73              | 4             | 125.36         | 3-5/8FEH    |
| 3/4"                      | 28 300   | 4.49            | 1.81 | 2.24 | 2.36 | 1.02 | 12.83 | 16.13             | 3             | 243.23         | 3-3/4FEH    |

## HOOK - CONTAINER HOOK, GRADE 80, OCEAN® BRAND

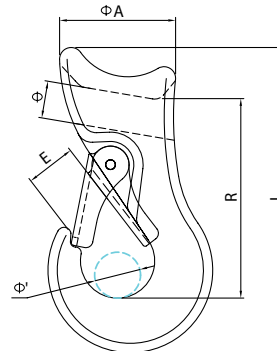
- Material: Alloy Steel, Grade 80
- Standard: EN 1677-1/ ASTM A952/952M
- Finish: Powder Coated, Yellow
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, Grade
- Rated in Metric Ton(s)
- not compatible with Yoke



| WLL (t) | Type     | Dimensions (in) |      |      |      |      |      |      |      |       | Wt. / ea. (lb) | Qty. / Box | Price / ea. | Part Number |
|---------|----------|-----------------|------|------|------|------|------|------|------|-------|----------------|------------|-------------|-------------|
|         |          | A               | M    | H    |      | E    | R    | Φ1   | Φ2   | L     |                |            |             |             |
| 12.5    | Left 45  | 1.81            | 2.95 | 6.54 | 0.98 | 1.89 | 2.36 | 2.76 | 0.98 | 10.43 | 9.09           | 6          | 178.78      | 3-8-06745LT |
| 12.5    | Right 45 | 1.81            | 2.95 | 6.54 | 0.98 | 1.89 | 2.36 | 2.76 | 0.98 | 10.43 | 9.09           | 6          | 178.78      | 3-8-06745RH |

## HOOK - SLIDING CHOKER HOOKS, GRADE 80, OCEAN® BRAND

- Material: Alloy Steel, Grade 80
- Standard: EN 1677-1/ ASTM A952/952M
- Finish: Powder Coated, Yellow
- Design Factor: 5:1
- Identification: Trademark, Size/WLL, Batch Code, Grade
- Based on degree of angle, loads will change.



| WLL (lb) | Wire Rope Dia. (in) | Latch Kit   |             | Dimensions (in) |      |      |      |      |      | Wt. / ea. (lb) | Qty. / Box | Price / ea. | Part Number |
|----------|---------------------|-------------|-------------|-----------------|------|------|------|------|------|----------------|------------|-------------|-------------|
|          |                     | Price / ea. | Part Number | Φ               | Φ'   | A    | E    | L    | R    |                |            |             |             |
| 3 800    | 3/8-1/2             | 11.35       | 3-9-13LK    | 0.67            | 0.71 | 1.97 | 0.71 | 5.20 | 3.43 | 1.50           | 25         | 47.69       | 3-9-13SCH   |
| 5 800    | 9/16-5/8            | 12.64       | 3-14-16LK   | 0.87            | 0.75 | 2.50 | 0.75 | 5.94 | 3.98 | 2.67           | 20         | 74.86       | 3-14-16SCH  |



## HOOK - KIT, SELF-LOCKING RECESSED TRIGGER KIT, GRADE 80/100, OCEAN® BRAND

For Grade 80/100 Self-Locking Recessed Hooks



| Grade 80/100 Chain (in) | Price / ea. | Part Number |
|-------------------------|-------------|-------------|
| 1/4-5/16                | 16.84       | 3-7-8TK     |
| 3/8                     | 23.23       | 3-10TK      |
| 1/2                     | 45.40       | 3-13TK      |
| 5/8                     | 67.04       | 3-16TK      |
| 3/4                     | 97.62       | 3-18-20TK   |
| 7/8                     | 140.30      | 3-22TK      |
| 1                       | 232.12      | 3-26TK      |

## HOOK - KIT, CLEVIS, LOAD PIN KIT, GRADE 80, OCEAN® BRAND

Grade 80 Material only



| Grade 80 Chain (in) | WLL (lb) | Price / ea. | Part Number |
|---------------------|----------|-------------|-------------|
| 9/32                | 4 500    | 12.26       | 3-7-8LPK    |
| 3/8                 | 7 100    | 16.78       | 3-10LPK     |
| 1/2                 | 12 000   | 25.84       | 3-13LPK     |
| 5/8                 | 18 100   | 45.02       | 3-16LPK     |
| 3/4                 | 28 300   | 56.22       | 3-18-20LPK  |
| 7/8                 | 34 200   | 66.87       | 3-22LPK     |
| 1                   | 47 700   | 78.60       | 3-26LPK     |
| 1 1/4               | 72 300   | 91.55       | 3-32LPK     |

## LINK - KIT, CONNECTING, PIN & SLEEVE KIT, GRADE 80, OCEAN® BRAND



| Grade 80 Chain (in) | WLL (lb) | Price / ea. | Part Number |
|---------------------|----------|-------------|-------------|
| 1/4 - 5/16          | 4 500    | 8.21        | 3-7-8CLP    |
| 3/8                 | 7 100    | 11.91       | 3-10CLP     |
| 1/2                 | 12 000   | 15.61       | 3-13CLP     |
| 5/8                 | 18 100   | 23.44       | 3-16CLP     |
| 3/4                 | 28 300   | 39.11       | 3-18-20CLP  |
| 7/8                 | 34 200   | 53.26       | 3-22CLP     |
| 1                   | 47 700   | 78.65       | 3-26CLP     |
| 1 1/4               | 72 300   | 128.67      | 3-32CLP     |

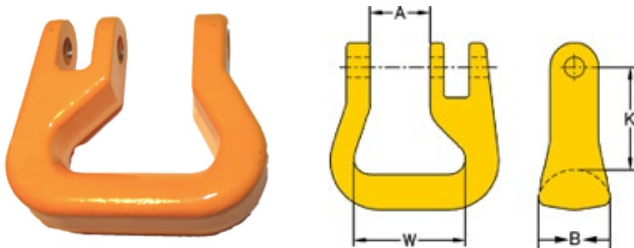
## LINK - COUPLING, HALF LINK & PIN, GRADE 80, OCEAN® BRAND



- Material: Alloy Steel, Grade 80
- Standard: EN 1677-1
- Finish: Powder Coated, Yellow
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, Grade
- Pin & Sleeve included.

| Grade 80 Chain (in) | WLL (lb) | Dimensions (in) |      |      |      | Wt./ea. (lb) | Qty. / Box | Price / ea. | Part Number |
|---------------------|----------|-----------------|------|------|------|--------------|------------|-------------|-------------|
|                     |          | A               | D    | K    | L    |              |            |             |             |
| 9/32                | 4500     | 0.81            | 0.35 | 0.94 | 1.10 | 0.2          | 200        | 10.52       | 3-9/32CLH   |
| 3/8                 | 7 100    | 1.10            | 0.50 | 1.12 | 1.3  | 0.4          | 100        | 12.50       | 3-3/8CLH    |
| 1/2                 | 12 000   | 1.18            | 0.62 | 1.26 | 1.77 | 0.9          | 40         | 21.03       | 3-1/2CLH    |
| 5/8                 | 18 100   | 1.42            | 0.75 | 1.63 | 1.97 | 1.3          | 25         | 31.38       | 3-5/8CLH    |
| 3/4                 | 28 300   | 1.73            | 0.87 | 1.75 | 2.36 | 2.4          | 20         | 62.83       | 3-3/4CLH    |

## LINK - COUPLING, ROUND SLING, GRADE 80, OCEAN® BRAND

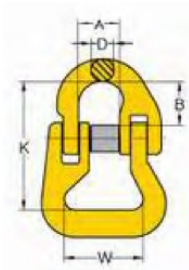


- Material: Alloy Steel, Grade 80
- Standard: EN 1677-1
- Finish: Powder Coated, Yellow
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, Grade

| Grade 80 Chain (in) | WLL (lb) | Dimensions (in) |      |      |      | Wt./ea. (lb) | Qty. / Box | Price / ea. | Part Number |
|---------------------|----------|-----------------|------|------|------|--------------|------------|-------------|-------------|
|                     |          | A               | B    | K    | W    |              |            |             |             |
| 9/32                | 4500     | 0.81            | 0.94 | 1.30 | 1.57 | 0.4          | 100        | 18.07       | 3-9/32CRS   |
| 3/8                 | 7100     | 1.10            | 1.14 | 1.65 | 1.85 | 0.9          | 50         | 23.87       | 3-3/8CRS    |
| 1/2                 | 12 000   | 1.18            | 1.38 | 2.01 | 2.09 | 1.5          | 25         | 37.28       | 3-1/2CRS    |
| 5/8                 | 18 100   | 1.42            | 1.73 | 2.48 | 2.64 | 2.9          | 15         | 68.21       | 3-5/8CRS    |
| 3/4                 | 28 300   | 1.73            | 2.05 | 2.87 | 3.17 | 4.6          | 10         | 92.91       | 3-3/4CRS    |

## LINK - COUPLING & PIN, GRADE 80, OCEAN® BRAND

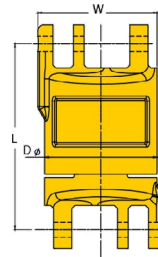
- Material: Alloy Steel, Grade 80
- Standard: EN 1677-1 / ASTM A952/952M
- Finish: Powder Coated, Yellow
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, Grade



| Grade 80 Chain (in) | WLL (lb) | Dimensions (in) |      |      |      |      | Wt./ea. (lb) | Qty. / Box | Price / ea. | Part Number |
|---------------------|----------|-----------------|------|------|------|------|--------------|------------|-------------|-------------|
|                     |          | A               | B    | D    | K    | W    |              |            |             |             |
| 1/2                 | 12 000   | 1.19            | 1.38 | 0.62 | 3.74 | 2.09 | 2.4          | 25         | 65.41       | 3-016-13    |
| 5/8                 | 18 100   | 1.42            | 1.51 | 0.75 | 4.53 | 2.64 | 4.4          | 12         | 112.22      | 3-016-16    |
| 3/4                 | 28 300   | 1.65            | 1.81 | 0.87 | 6.20 | 3.15 | 7.1          | 8          | 168.26      | 3-016-20    |

## SWIVEL - COUPLING, INSULATED BLANK SWIVEL, GRADE 80, OCEAN® BRAND

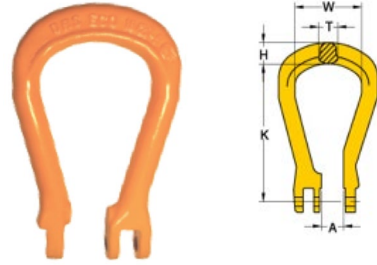
- Material: Alloy Steel, Grade 80
- Standard: EN 1677-1 / ASTM A952/952M
- Finish: Powder Coated, Yellow
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, Grade
- Contain load pins



| WLL (lb) | Grade 80 Chain (in) | Dimensions (in) |      |      | Wt./ea. (lb) | Qty. / Box | Price / ea. | Part Number |
|----------|---------------------|-----------------|------|------|--------------|------------|-------------|-------------|
|          |                     | L               | D    | W    |              |            |             |             |
| 4500     | 9/32                | 2.99            | 1.89 | 1.97 | 1.9          | 36         | 354.63      | 3-9/32BSI   |
| 7100     | 3/8                 | 3.66            | 2.28 | 2.44 | 2.6          | 16         | 553.55      | 3-3/8BSI    |
| 12 000   | 1/2                 | 4.80            | 2.91 | 3.09 | 5.5          | 8          | 753.35      | 3-1/2BSI    |
| 18 100   | 5/8                 | 5.60            | 3.54 | 3.74 | 9.7          | 4          | 962.11      | 3-5/8BSI    |
| 28 300   | 3/4                 | 6.25            | 4.13 | 4.33 | 15.3         | 3          | 1251.60     | 3-3/4BSI    |

## LINK - COUPLING, MASTER LINK, GRADE 80, OCEAN® BRAND

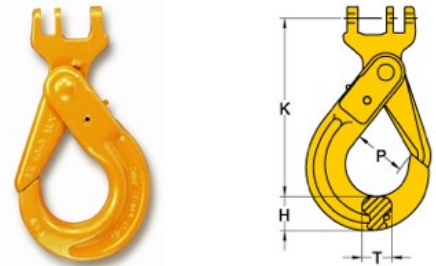
- Material: Alloy Steel, Grade 80
- Standard: EN 1677-1 / ASTM A952/952M
- Finish: Powder Coated, Yellow
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, Grade
- Contain load pins



| Grade 80 Chain (in) | WLL (lb) | Dimensions (in) |      |      |      |      | Wt./ea. (lb) | Qty. / Box | Price / ea. | Part Number |
|---------------------|----------|-----------------|------|------|------|------|--------------|------------|-------------|-------------|
|                     |          | A               | H    | K    | T    | W    |              |            |             |             |
| 9/32                | 4500     | 0.81            | 0.59 | 3.94 | 0.59 | 1.97 | 0.7          | 45         | 31.33       | 3-9/32MLC   |
| 3/8                 | 7100     | 1.10            | 0.91 | 5.00 | 0.75 | 2.56 | 1.5          | 20         | 45.72       | 3-3/8MLC    |
| 1/2                 | 12 000   | 1.18            | 0.94 | 5.71 | 0.91 | 2.83 | 2.2          | 15         | 60.75       | 3-1/2MLC    |
| 5/8                 | 18 100   | 1.43            | 1.02 | 6.85 | 0.98 | 3.15 | 3.5          | 12         | 80.47       | 3-5/8MLC    |
| 3/4                 | 28 300   | 1.73            | 1.42 | 8.11 | 1.22 | 4.09 | 6.6          | 5          | 162.93      | 3-3/4MLC    |

## HOOK - COUPLING, SELF-LOCKING, GRADE 80, OCEAN® BRAND

- Material: Alloy Steel, Grade 80
- Standard: EN 1677-1/ ASTM A952/952M
- Finish: Powder Coated, Yellow
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, Grade



| Grade 80 Chain (in) | WLL (lb) | Dimensions (in) |       |      |      | Wt./ea. (lb) | Qty. / Box | Price / ea. | Part Number |
|---------------------|----------|-----------------|-------|------|------|--------------|------------|-------------|-------------|
|                     |          | H               | K     | P    | T    |              |            |             |             |
| 9/32                | 4500     | 0.94            | 5.35  | 1.34 | 0.79 | 1.8          | 20         | 50.20       | 3-9/32CSLH  |
| 3/8                 | 7 100    | 1.19            | 6.06  | 1.77 | 1.02 | 3.1          | 12         | 73.54       | 3-3/8CSLH   |
| 1/2                 | 12 000   | 1.57            | 7.95  | 2.13 | 1.19 | 6.4          | 6          | 146.12      | 3-1/2CSLH   |
| 5/8                 | 18 100   | 1.93            | 9.53  | 2.44 | 1.30 | 11.9         | 4          | 272.03      | 3-5/8CSLH   |
| 3/4                 | 28 300   | 2.56            | 10.12 | 2.76 | 2.09 | 22.3         | 2          | 479.10      | 3-3/4CSLH   |

## LINK - KIT, CONNECTING, PIN & SLEEVE KIT, GRADE 80, FOR OCEAN® BRAND COUPLING SERIES

For Coupling assemblies, Grade 80 Material only

| Size (in)  | WLL (lb) | Price / ea. | Part Number |
|------------|----------|-------------|-------------|
| 1/4 - 5/16 | 4500     | 8.90        | 3-9/32CLP   |
| 3/8        | 7100     | 12.26       | 3-3/8CLP    |
| 1/2        | 12 000   | 16.10       | 3-1/2CLP    |
| 5/8        | 18 100   | 24.14       | 3-5/8CLP    |
| 3/4        | 28 300   | 40.23       | 3-3/4CLP    |





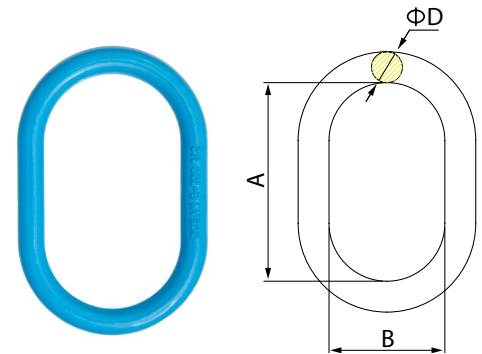
# OCEAN®

## OCEAN G80 and OCEAN G100

Ocean® Brand grade 80 and 100 rigging products are manufactured in accordance with Quality Management System approved to ISO 9001 and 14001. All Ocean® Brand products are manufactured and Inspected in accordance with EN 1677 and Exceeds requirements of related ASME B30 Standards. To Ensure the quality of Ocean® Brand Products they are 100% Magnetic Flux tested, batch samples are fatigue tested for 20,000 cycles @ 1.5 times the working load limit, hardness is tested and destruction tests to ensure proper breaking loads. All testing is traceable back with a batch code embossed on the product.

## LINK - MASTER LINK, GRADE 100, OCEAN® BRAND

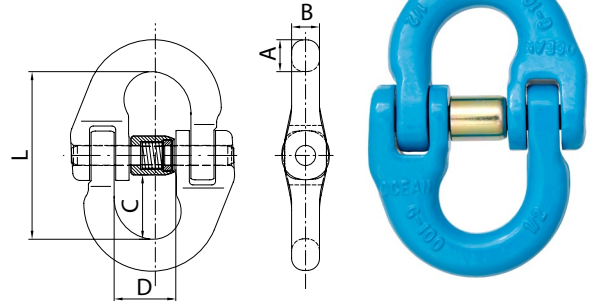
- Material: Alloy Steel, Grade 100
- Standard: EN 1677-4 / ASTM A952/952M
- Finish: Powder Coated, Blue
- Design Factor: 5:1
- Identification: Trademark, Size/WLL, Batch Code, Grade



| Trade Size (in) | WLL (lb) | Chain Size (in) |       | I.L. (in) | I.W. (in) | Dia. (in) | Wt. / ea. (lb) | Qty. / Box | Price / ea. | Part Number  |
|-----------------|----------|-----------------|-------|-----------|-----------|-----------|----------------|------------|-------------|--------------|
|                 |          | 1-Leg           | 2-Leg |           |           |           |                |            |             |              |
| 1/2"            | 7 400    | 5/16"           | 7/32" | 4.72      | 2.76      | 0.55      | 1.1            | 50         | 33.18       | 3-X-1/2"ML   |
| 5/8"            | 9 000    | 3/8"            | 5/16" | 5.51      | 3.15      | 0.67      | 1.6            | 30         | 47.83       | 3-X-5/8"ML   |
| 3/4"            | 12 300   | 1/2"            |       | 5.91      | 3.54      | 0.85      | 2.4            | 20         | 69.54       | 3-X-3/4"ML   |
| 7/8"            | 15 200   | 1/2"            | 3/8"  | 6.30      | 3.74      | 0.87      | 3.5            | 16         | 81.93       | 3-X-7/8"ML   |
| 1"              | 26 000   | 5/8"            |       | 7.48      | 4.33      | 0.98      | 5.1            | 7          | 111.46      | 3-X-1"ML     |
| 1-1/8"          | 30 000   | 5/8"            | 1/2"  | 7.09      | 4.13      | 1.10      | 5.9            | 8          | 129.50      | 3-X-1-1/8"ML |
| 1-1/4"          | 39 100   | 3/4"            |       | 7.87      | 4.72      | 1.18      | 7.6            | 5          | 184.37      | 3-X-1-1/4"ML |
| 1-3/8"          | 42 000   | 7/8"            | 5/8"  | 9.45      | 5.51      | 1.34      | 11.7           | 4          | 317.60      | 3-X-1-3/8"ML |
| 1-1/2"          | 61 100   | 1"              |       | 9.84      | 5.91      | 1.50      | 15.8           | 3          | 383.01      | 3-X-1-1/2"ML |

## LINK - CONNECTING LINK, GRADE 100, OCEAN® BRAND

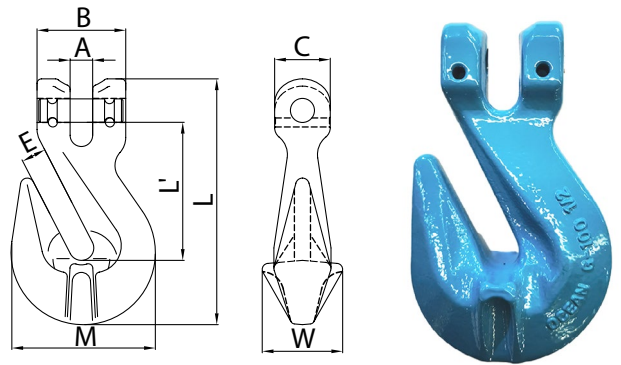
- Material: Alloy Steel, Grade 100
- Standard: EN 1677-1 / ASTM A952/952M
- Finish: Powder Coated, Blue
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, Grade



| Grade 100 Chain (in) | WLL (lb) | Dimensions (in) |      |      |      |      | Wt. / ea. (lb) | Qty. / Box | Price / ea. | Part Number |
|----------------------|----------|-----------------|------|------|------|------|----------------|------------|-------------|-------------|
|                      |          | A               | B    | C    | D    | L    |                |            |             |             |
| 9/32"                | 5 700    | 0.39            | 0.34 | 0.91 | 0.73 | 2.30 | 0.33           | 150        | 17.85       | 3-X-7-8CL   |
| 3/8"                 | 8 800    | 0.52            | 0.45 | 1.04 | 1.00 | 2.72 | 0.71           | 50         | 18.92       | 3-X-10CL    |
| 1/2"                 | 15 000   | 0.67            | 0.62 | 1.42 | 1.18 | 3.54 | 1.68           | 35         | 39.68       | 3-X-13CL    |
| 5/8"                 | 22 600   | 0.75            | 0.75 | 1.50 | 1.43 | 3.94 | 2.73           | 20         | 50.20       | 3-X-16CL    |
| 3/4"                 | 35 300   | 0.93            | 0.87 | 1.77 | 1.67 | 4.76 | 4.21           | 12         | 101.25      | 3-X-18-20CL |
| 7/8"                 | 42 700   | 1.11            | 0.94 | 2.38 | 1.94 | 6.06 | 7.82           | 6          | 158.21      | 3-X-22CL    |
| 1"                   | 59 700   | 1.22            | 1.20 | 2.56 | 2.18 | 6.54 | 10.80          | 3          | 256.90      | 3-X-26CL    |
| 1-1/4"               | 90 400   | 1.54            | 1.42 | 3.15 | 2.75 | 8.07 | 20.28          | 2          | 486.67      | 3-X-32CL    |

## HOOK - CLEVIS GRAB HOOK, GRADE 100, OCEAN® BRAND

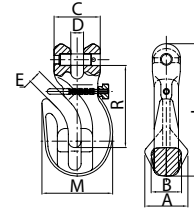
- Material: Alloy Steel, Grade 100
- Standard: EN 1677-1 / ASTM A952/952M
- Finish: Powder Coated, Blue
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, Grade



| Grade 100 Chain (in) | WLL (lb) | Dimensions (in) |      |      |      |      |      |      |       | Wt. / ea. (lb) | Qty. / Box | Price / ea. | Part Number  |
|----------------------|----------|-----------------|------|------|------|------|------|------|-------|----------------|------------|-------------|--------------|
|                      |          | A               | B    | C    | E    | M    | W    | L*   | L     |                |            |             |              |
| 9/32"                | 5 700    | 0.37            | 1.42 | 0.94 | 0.43 | 2.13 | 1.32 | 2.09 | 3.66  | 0.75           | 70         | 20.73       | 3-X-7-8CGH   |
| 3/8"                 | 8 800    | 0.49            | 1.81 | 1.16 | 0.53 | 2.83 | 1.65 | 2.87 | 5.00  | 1.81           | 30         | 31.47       | 3-X-10CGH    |
| 1/2"                 | 15 000   | 0.59            | 2.32 | 1.46 | 0.59 | 3.78 | 2.11 | 3.62 | 6.46  | 3.86           | 15         | 63.68       | 3-X-13CGH    |
| 5/8"                 | 22 600   | 0.73            | 2.76 | 1.81 | 0.75 | 4.53 | 2.91 | 4.06 | 7.40  | 6.35           | 8          | 111.29      | 3-X-16CGH    |
| 3/4"                 | 35 300   | 0.94            | 3.35 | 2.05 | 0.98 | 5.71 | 3.43 | 4.84 | 8.78  | 10.67          | 4          | 202.20      | 3-X-18-20CGH |
| 7/8"                 | 42 700   | 1.06            | 3.94 | 2.40 | 1.06 | 6.26 | 3.54 | 5.55 | 10.24 | 18.29          | 4          | 349.55      | 3-X-22CGH    |
| 1"                   | 59 700   | 1.18            | 4.33 | 2.76 | 1.34 | 7.48 | 4.33 | 7.36 | 12.60 | 30.24          | 2          | 873.40      | 3-X-26CGH    |

## HOOK - CLEVIS GRAB HOOK WITH PIN, GRADE 100, OCEAN® BRAND

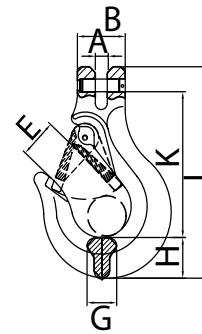
- Material: Alloy Steel, Grade 100
- Standard: EN 1677-1 / ASTM A952/952M
- Finish: Powder Coated, Blue
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, Grade



| Grade 100 Chain (in) | WLL (lb) | Dimensions (in) |      |      |      |      |      |      |      | Wt. / ea. (lb) | Qty. / Box | Price / ea. | Part Number    |
|----------------------|----------|-----------------|------|------|------|------|------|------|------|----------------|------------|-------------|----------------|
|                      |          | A               | B    | C    | R    | D    | E    | L    | M    |                |            |             |                |
| 5/16"                | 5 700    | 1.40            | 0.98 | 1.50 | 2.60 | 0.39 | 0.41 | 4.29 | 2.20 | 1.37           | 70         | 59.42       | 3-X-5/16"CGHSP |
| 3/8"                 | 8 800    | 1.73            | 1.26 | 1.81 | 3.23 | 0.47 | 0.51 | 5.28 | 2.72 | 2.56           | 30         | 96.34       | 3-X-3/8"CGHSP  |
| 1/2"                 | 15 000   | 2.24            | 1.57 | 2.34 | 4.21 | 0.59 | 0.61 | 6.91 | 3.66 | 5.73           | 15         | 157.34      | 3-X-1/2"CGHSP  |

## HOOK - CLEVIS SLING HOOK, GRADE 100, OCEAN® BRAND

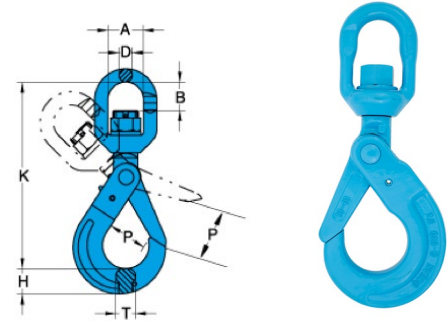
- Material: Alloy Steel, Grade 100
- Standard: EN 1677-5 / ASTM A952/952M
- Finish: Powder Coated, Blue
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, Grade



| Grade 100 Chain (in) | WLL (lb) | Spare Latch Kit |           | Dimensions (in) |      |      |      |      |      |       | Wt./ ea. (lb) | Qty./ Box | Price/ ea. | Part Number  |
|----------------------|----------|-----------------|-----------|-----------------|------|------|------|------|------|-------|---------------|-----------|------------|--------------|
|                      |          | Price/ ea.      | Part #    | A               | B    | E    | G    | H    | K    | L     |               |           |            |              |
| 9/32"                | 5 700    | 9.03            | 3-7-8LK   | 0.37            | 1.77 | 1.02 | 0.75 | 0.91 | 3.84 | 5.43  | 1.3           | 30        | 31.71      | 3-X-7-8CSH   |
| 3/8"                 | 8 800    | 12.36           | 3-10LK    | 0.47            | 1.71 | 1.30 | 0.91 | 1.14 | 4.72 | 6.87  | 2.6           | 15        | 59.15      | 3-X-10CSH    |
| 1/2"                 | 15 000   | 19.23           | 3-13LK    | 0.59            | 2.24 | 1.57 | 1.10 | 1.50 | 5.79 | 8.39  | 5.1           | 8         | 85.52      | 3-X-13CSH    |
| 5/8"                 | 22 600   | 25.88           | 3-16LK    | 0.73            | 2.64 | 1.73 | 1.54 | 1.65 | 6.65 | 9.65  | 8.4           | 6         | 184.24     | 3-X-16CSH    |
| 3/4"                 | 35 300   | 31.55           | 3-18-20LK | 0.98            | 3.94 | 2.13 | 1.85 | 2.01 | 7.48 | 12.76 | 14.8          | 4         | 327.40     | 3-X-18-20CSH |
| 7/8"                 | 42 700   | 40.09           | 3-X-22LK  | 1.06            | 3.94 | 2.56 | 1.97 | 2.44 | 8.43 | 12.83 | 26.7          | 2         | 657.30     | 3-X-22CSH    |
| 1"                   | 59 700   | 54.20           | 3-X-26LK  | 1.20            | 4.65 | 2.83 | 2.36 | 2.87 | 9.72 | 15.08 | 35.5          | 2         | 1066.40    | 3-X-26CSH    |

## HOOK - SWIVEL SELF LOCKING HOOK BRASS BUSHING, GRADE 100, OCEAN® BRAND

- Material: Alloy Steel, Grade 100
- Standard: EN 1677-3 / ASTM A952/952M
- Finish: Powder Coated, Blue
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, Grade



| Grade 100 Chain<br>(in) | WLL (lb) | Dimensions (in) |      |      |      |       |      |      | Wt. / ea.<br>(lb) | Qty. /<br>Box | Brass Bushing |               |
|-------------------------|----------|-----------------|------|------|------|-------|------|------|-------------------|---------------|---------------|---------------|
|                         |          | A               | B    | D    | H    | K     | P    | T    |                   |               | Price / ea.   | Part Number   |
| 1/4-5/16                | 5 700    | 1.42            | 1.14 | 0.51 | 0.94 | 7.32  | 1.34 | 0.79 | 2.6               | 12            | 112.47        | 3-X-7-8SSLH   |
| 3/8                     | 8 800    | 1.8             | 1.49 | 0.62 | 1.19 | 8.9   | 1.77 | 1.02 | 4.4               | 7             | 164.80        | 3-X-10SSLH    |
| 1/2                     | 15 000   | 1.81            | 1.86 | 0.83 | 1.57 | 11    | 2.01 | 1.26 | 9                 | 4             | 287.75        | 3-X-13SSLH    |
| 5/8                     | 22 600   | 2.36            | 2.16 | 0.91 | 1.93 | 13    | 2.44 | 1.3  | 15.9              | 3             | 426.80        | 3-X-16SSLH    |
| 3/4                     | 35 300   | 2.91            | 3.23 | 1.02 | 2.36 | 15.28 | 3.54 | 2.09 | 24.9              | 2             | 889.90        | 3-X-18-20SSLH |
| 7/8                     | 42 700   | 3.82            | 3.94 | 1.3  | 2.48 | 17.99 | 3.14 | 2.15 | 39.5              | 1             | 1835.80       | 3-X-22SSLH    |
| 1                       | 59 700   | 4.84            | 4.53 | 2.09 | 2.72 | 21.06 | 3.90 | 2.20 | 69.3              | 1             | 3320.00       | 3-X-26SSLH    |

## HOOK - SWIVEL SELF LOCKING HOOK BALL BEARING, GRADE 100, OCEAN® BRAND

- Material: Alloy Steel, Grade 100
- Standard: EN 1677-3 / ASTM A952/952M
- Finish: Powder Coated, Blue
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, Grade

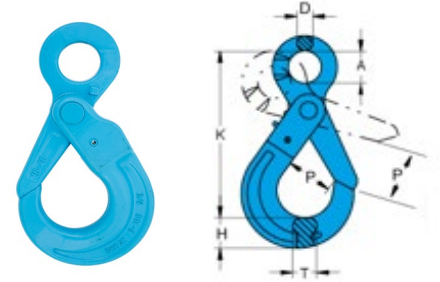


| Grade 100<br>Chain (in) | WLL (lb) | Dimensions (in) |      |      |      |       |      |      | Wt. / ea.<br>(lb) | Qty. /<br>Box | Ball Bearing |               |
|-------------------------|----------|-----------------|------|------|------|-------|------|------|-------------------|---------------|--------------|---------------|
|                         |          | A               | B    | D    | H    | K     | P    | T    |                   |               | Price / ea.  | Part Number   |
| 3/8                     | 8 800    | 1.8             | 1.49 | 0.62 | 1.19 | 8.9   | 1.77 | 1.02 | 4.4               | 7             | 180.70       | 3-X-10SWBB    |
| 1/2                     | 15 000   | 1.81            | 1.86 | 0.83 | 1.57 | 11    | 2.01 | 1.26 | 9                 | 4             | 349.04       | 3-X-13SWBB    |
| 5/8                     | 22 600   | 2.36            | 2.16 | 0.91 | 1.93 | 13    | 2.44 | 1.3  | 15.9              | 3             | 594.20       | 3-X-16SWBB    |
| 3/4                     | 35 300   | 2.91            | 3.23 | 1.02 | 2.36 | 15.28 | 3.54 | 2.09 | 24.9              | 2             | 931.20       | 3-X-18-20SWBB |
| 7/8                     | 42 700   | 3.82            | 3.94 | 1.3  | 2.48 | 17.99 | 3.14 | 2.15 | 39.5              | 1             | 1849.07      | 3-X-22SWBB    |
| 1                       | 59 700   | 4.84            | 4.53 | 2.09 | 2.72 | 21.06 | 3.90 | 2.20 | 69.3              | 1             | 3553.00      | 3-X-26SWBB    |



## HOOK - SELF LOCKING EYE HOOK, GRADE 100, OCEAN® BRAND

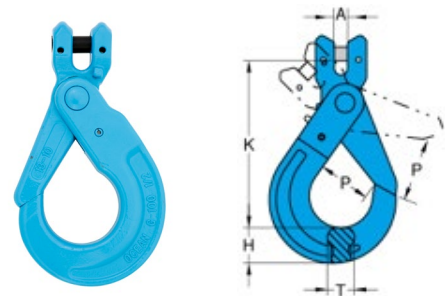
- Material: Alloy Steel, Grade 100
- Standard: EN 1677-3 / ASTM A952/952M
- Finish: Powder Coated, Blue
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, Grade



| Grade 100 Chain (in) | WLL (lb) | Dimensions (in) |      |      |       |      |      | Wt. / ea. (lb) | Qty. / Box | Price / ea. | Part Number   |
|----------------------|----------|-----------------|------|------|-------|------|------|----------------|------------|-------------|---------------|
|                      |          | A               | D    | H    | K     | P    | T    |                |            |             |               |
| 1/4 - 5/16           | 5700     | 0.98            | 0.43 | 1.02 | 5.35  | 1.34 | 0.79 | 1.8            | 20         | 55.16       | 3-X-7-8SLEH   |
| 3/8                  | 8800     | 1.26            | 0.51 | 1.24 | 6.57  | 1.73 | 1.02 | 3.3            | 15         | 87.08       | 3-X-10SLEH    |
| 1/2                  | 15 000   | 1.57            | 0.63 | 1.65 | 8.15  | 2.01 | 1.18 | 6.6            | 8          | 160.93      | 3-X-13SLEH    |
| 5/8                  | 22 600   | 1.97            | 0.83 | 2.2  | 9.92  | 2.36 | 1.42 | 12.5           | 4          | 307.50      | 3-X-16SLEH    |
| 3/4                  | 35 300   | 2.36            | 0.91 | 2.56 | 11.42 | 2.76 | 2.09 | 22.2           | 2          | 563.00      | 3-X-18-20SLEH |
| 7/8                  | 42 700   | 2.76            | 0.94 | 2.8  | 12.56 | 3.15 | 1.93 | 24             | 2          | 789.06      | 3-X-22SLEH    |

## HOOK - SELF LOCKING CLEVIS HOOK, GRADE 100, OCEAN® BRAND

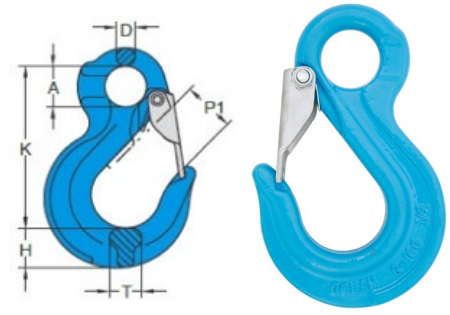
- Material: Alloy Steel, Grade 100
- Standard: EN 1677-3 / ASTM A952/952M
- Finish: Powder Coated, Blue
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, Grade



| Grade 100 Chain (in) | WLL (lb) | Dimensions (in) |      |      |      |       | Wt. / ea. (lb) | Qty. / Box | Price / ea. | Part Number   |
|----------------------|----------|-----------------|------|------|------|-------|----------------|------------|-------------|---------------|
|                      |          | A               | P    | T    | H    | K     |                |            |             |               |
| 1/4 - 5/16           | 5700     | 0.37            | 1.34 | 0.79 | 0.94 | 4.65  | 2.07           | 25         | 55.80       | 3-X-7-8SLCH   |
| 3/8                  | 8800     | 0.49            | 1.73 | 1.02 | 1.18 | 5.59  | 3.1            | 12         | 85.00       | 3-X-10SLCH    |
| 1/2                  | 15 000   | 0.59            | 2.05 | 1.26 | 1.56 | 7.01  | 6.2            | 8          | 170.26      | 3-X-13SLCH    |
| 5/8                  | 22 600   | 0.73            | 2.36 | 1.30 | 1.97 | 8.31  | 12.3           | 4          | 327.45      | 3-X-16SLCH    |
| 3/4                  | 35 300   | 0.98            | 2.76 | 2.09 | 2.64 | 9.84  | 19.8           | 2          | 583.20      | 3-X-18-20SLCH |
| 7/8                  | 42 700   | 0.98            | 3.15 | 2.24 | 2.56 | 12.60 | 24             | 2          | 835.60      | 3-X-22SLCH    |

## HOOK - EYE SLING HOOKS, GRADE 100, OCEAN® BRAND

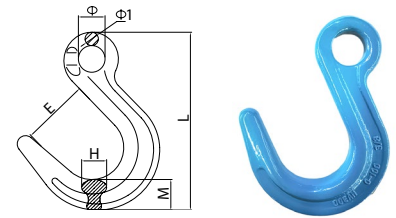
- Material: Alloy Steel, Grade 100
- Standard: EN 1677-5 / ASTM A952/952M
- Finish: Powder Coated, Blue
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, Grade



| Grade 100 Chain (in) | WLL (lb) | Dimensions (in) |      |      |      |      |      | Wt. / ea. (lb) | Qty. / Box | Price / ea. | Part Number |
|----------------------|----------|-----------------|------|------|------|------|------|----------------|------------|-------------|-------------|
|                      |          | D               | P1   | A    | T    | K    | H    |                |            |             |             |
| 9/32                 | 5 700    | 0.47            | 1.10 | 0.98 | 0.79 | 3.88 | 0.89 | 1.10           | 50         | 27.97       | 3-X-7-8ESH  |
| 3/8                  | 8 800    | 0.57            | 1.42 | 1.26 | 0.91 | 4.76 | 1.20 | 2.20           | 25         | 41.94       | 3-X-10ESH   |
| 1/2                  | 15 000   | 0.73            | 1.57 | 1.57 | 1.12 | 6.02 | 1.48 | 4.63           | 12         | 74.93       | 3-X-13ESH   |
| 5/8                  | 22 600   | 0.87            | 1.77 | 1.97 | 1.46 | 7.28 | 1.81 | 6.80           | 6          | 146.00      | 3-X-16ESH   |

## HOOK - FOUNDRY EYE HOOKS, GRADE 100, OCEAN® BRAND

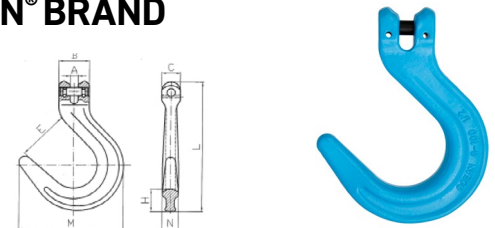
- Material: Alloy Steel, Grade 100
- Standard: EN 1677-1 / ASTM A952/952M
- Finish: Powder Coated, Blue
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, Grade



| Grade 100 Chain (in) | WLL (lb) | Dimensions (in) |      |      |      |      |       | Wt. / ea. (lb) | Qty. / Box | Price / ea. | Part Number |
|----------------------|----------|-----------------|------|------|------|------|-------|----------------|------------|-------------|-------------|
|                      |          | E               | H    | M    | Φ    | Φ1   | L     |                |            |             |             |
| 3/8"                 | 8 800    | 2.87            | 0.98 | 1.18 | 1.24 | 0.59 | 7.83  | 3.00           | 12         | 61.68       | 3-X-3/8FEH  |
| 1/2"                 | 15 000   | 3.54            | 1.30 | 1.54 | 1.73 | 0.75 | 9.37  | 5.66           | 8          | 118.78      | 3-X-1/2FEH  |
| 5/8"                 | 22 600   | 4.13            | 1.46 | 1.65 | 1.93 | 0.87 | 10.98 | 8.73           | 4          | 187.55      | 3-X-5/8FEH  |
| 3/4"                 | 35 300   | 4.49            | 1.81 | 2.24 | 2.36 | 1.02 | 12.99 | 16.09          | 3          | 340.80      | 3-X-3/4FEH  |

## HOOK - FOUNDRY CLEVIS HOOKS, GRADE 100, OCEAN® BRAND

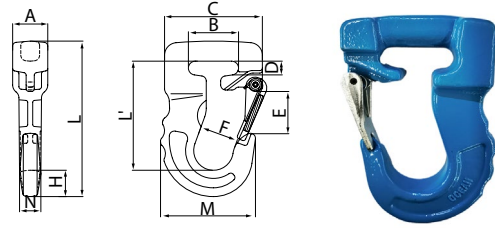
- Material: Alloy Steel, Grade 100
- Standard: EN 1677-1 / ASTM A952/952M
- Finish: Powder Coated, Blue
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, Grade



| Grade 100 Chain (in) | WLL (lb) | Dimensions (in) |      |      |      |      |      |      |       | Wt. / ea. (lb) | Qty. / Box | Price / ea. | Part Number |
|----------------------|----------|-----------------|------|------|------|------|------|------|-------|----------------|------------|-------------|-------------|
|                      |          | A               | B    | C    | E    | M    | N    | H    | L     |                |            |             |             |
| 3/8                  | 8 800    | 0.49            | 1.89 | 1.16 | 2.83 | 6.02 | 0.98 | 1.22 | 7.56  | 3.13           | 12         | 66.31       | 3-X-3/8FCH  |
| 1/2                  | 15 000   | 0.59            | 2.32 | 1.38 | 3.46 | 7.32 | 1.30 | 1.54 | 9.13  | 6.35           | 8          | 125.32      | 3-X-1/2FCH  |
| 5/8                  | 22 600   | 0.73            | 2.76 | 1.81 | 4.06 | 8.58 | 1.57 | 1.97 | 11.18 | 11.24          | 4          | 204.43      | 3-X-5/8FCH  |

## HOOK - WEB AND ROUND SLING HOOK, GRADE 100, OCEAN® BRAND

- Material: Alloy Steel, Grade 100
- Standard: EN 1677-1 / ASTM A952/952M
- Finish: Powder Coated, Blue
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, Grade



| Size<br>(t) | WLL<br>(lb) | Dimensions (in) |      |      |      |      |      |      |      |      |      |      | Wt./<br>ea.<br>(lb) | Qty. /<br>Box | Price /<br>ea. | Part<br>Number |
|-------------|-------------|-----------------|------|------|------|------|------|------|------|------|------|------|---------------------|---------------|----------------|----------------|
|             |             | A               | B    | C    | D    | M    | E    | F    | L    | L*   | H    | N    |                     |               |                |                |
| 1           | 2200        | 1.10            | 1.57 | 3.07 | 0.43 | 2.98 | 1.26 | 1.22 | 4.88 | 3.43 | 0.83 | 0.67 | 1.61                | 30            | 49.64          | 3-X-032-01     |
| 2           | 4400        | 1.38            | 1.75 | 3.58 | 0.49 | 3.54 | 1.57 | 1.54 | 5.83 | 4.06 | 1.06 | 0.83 | 2.80                | 15            | 79.29          | 3-X-032-02     |
| 3           | 6600        | 1.77            | 2.13 | 4.45 | 0.61 | 4.33 | 1.57 | 1.85 | 6.89 | 4.53 | 1.30 | 1.02 | 5.07                | 10            | 142.76         | 3-X-032-03     |
| 4           | 8800        | 2.20            | 3.01 | 5.24 | 0.83 | 5.47 | 1.97 | 2.36 | 8.78 | 5.79 | 1.59 | 1.26 | 10.14               | 5             | 259.12         | 3-X-032-04     |
| 5           | 11000       | 2.20            | 3.01 | 5.24 | 0.83 | 5.47 | 1.97 | 2.36 | 8.78 | 5.79 | 1.59 | 1.26 | 10.14               | 5             | 259.12         | 3-X-032-05     |
| 6           | 13200       | 2.20            | 3.01 | 5.24 | 0.83 | 5.47 | 1.97 | 2.36 | 8.78 | 5.79 | 1.59 | 1.26 | 10.14               | 5             | 259.12         | 3-X-032-06     |

## HOOK - KIT, SELF-LOCKING RECESSED TRIGGER KIT, GRADE 80/100, OCEAN® BRAND



For Grade 80/100 Self-Locking Recessed Hooks

| Grade 80/100<br>Chain (in) | Price / ea. | Part Number |
|----------------------------|-------------|-------------|
| 1/4-5/16                   | 16.84       | 3-7-8TK     |
| 3/8                        | 23.23       | 3-10TK      |
| 1/2                        | 45.40       | 3-13TK      |
| 5/8                        | 67.04       | 3-16TK      |
| 3/4                        | 97.62       | 3-18-20TK   |
| 7/8                        | 140.30      | 3-22TK      |
| 1                          | 232.12      | 3-26TK      |

## HOOK - KIT, CLEVIS, LOAD PIN KIT, GRADE 100, OCEAN® BRAND

Grade 100 Material only



| Grade 100 Chain (in) | WLL (lb) | Price / ea. | Part Number  |
|----------------------|----------|-------------|--------------|
| 9/32                 | 5 700    | 12.26       | 3-X-7-8LPK   |
| 3/8                  | 8 800    | 16.79       | 3-X-10LPK    |
| 1/2                  | 15 000   | 25.84       | 3-X-13LPK    |
| 5/8                  | 22 600   | 45.02       | 3-X-16LPK    |
| 3/4                  | 35 300   | 56.22       | 3-X-18-20LPK |
| 7/8                  | 42 700   | 66.88       | 3-X-22LPK    |
| 1                    | 59 700   | 78.60       | 3-X-26LPK    |

## LINK - KIT, CONNECTING, PIN & SLEEVE KIT, GRADE 100, OCEAN® BRAND

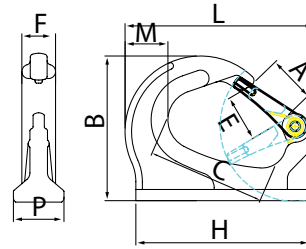
For Coupling assemblies, Grade 100 Material only



| Grade 100 Chain (in) | WLL (lb) | Price / ea. | Part Number  |
|----------------------|----------|-------------|--------------|
| 1/4 - 5/16           | 5 700    | 8.21        | 3-X-7-8CLP   |
| 3/8                  | 8 800    | 11.92       | 3-X-10CLP    |
| 1/2                  | 15 000   | 15.61       | 3-X-13CLP    |
| 5/8                  | 22 600   | 23.45       | 3-X-16CLP    |
| 3/4                  | 35 300   | 39.12       | 3-X-18-20CLP |
| 7/8                  | 42 700   | 53.27       | 3-X-22CLP    |
| 1                    | 59 700   | 78.65       | 3-X-26CLP    |
| 1 1/4                | 94 000   | 128.67      | 3-X-32CLP    |

## HOOK - WELD ON BUCKET HOOK, GRADE 80, OCEAN® BRAND

- Material: Alloy Steel, Grade 80
- Standard: EN 1677-1
- Finish: Powder Coated, Yellow
- Design Factor: 5:1
- Identification: Trademark, Size/WLL, Batch Code, Grade
- Rated in Metric Ton(s)



| WLL<br>(t) | Latch Kit      |                | Dimensions (in) |      |      |      |      |       |      |      |       | Weld<br>Bead<br>X<br>(mm) | Wt.<br>(lb) | Price /<br>ea. | Part<br>Number |
|------------|----------------|----------------|-----------------|------|------|------|------|-------|------|------|-------|---------------------------|-------------|----------------|----------------|
|            | Price /<br>ea. | Part<br>Number | A               | B    | C    | E    | F    | H     | M    | P    | L     |                           |             |                |                |
| 3          | 35.27          | 3-3TWOHL       | 1.18            | 4.17 | 2.95 | 1.18 | 0.94 | 4.57  | 1.18 | 1.42 | 5.04  | 10                        | 2.80        | 81.85          | 3-3TWOH        |
| 5          | 48.26          | 3-5TWOHL       | 1.54            | 5.24 | 3.86 | 1.42 | 1.10 | 6.30  | 1.69 | 1.71 | 6.69  | 10                        | 5.95        | 169.99         | 3-5TWOH        |
| 8          | 48.72          | 3-8TWOHL       | 1.42            | 5.39 | 3.90 | 1.36 | 1.54 | 6.54  | 1.97 | 2.01 | 6.89  | 12                        | 7.71        | 220.08         | 3-8TWOH        |
| 10         | 56.82          | 3-10TWOHL      | 1.93            | 6.65 | 5.51 | 1.93 | 1.50 | 8.07  | 2.17 | 2.09 | 8.74  | 15                        | 11.46       | 327.40         | 3-10TWOH       |
| 20         | 134.23         | 3-20TWOHL      | 2.48            | 7.56 | 3.23 | 2.48 | 2.01 | 11.50 | 3.07 | 3.35 | 11.50 | 15                        | 25.35       | 490.25         | 3-20TWOH       |

### Welding Instructions

The welding should only be carried out by qualified welder according to Standards, e.g. EN 287 or AWS.

### Support Material

- The support material ST 52-3.
- Prior to welding, the contact areas must be free from impurities, oil, paint, rust, scale, etc., for example by grinding.
- If the surface is at all corroded, all rust must be completely removed from the weld area. Painted surface must be prepared in the same way.
- The steel support member must have a carbon content of no less than 0.25% and no more than 0.40%.
- The hook must be positioned that the weld is loaded only in shear. No bending moment can be permitted on weld seam.
- In ambient temperature of 10°C and below, pre-heating of the weld area prior to welding must be carried out.

### Seam Welding

- The welds must be sufficiently strong to take the required loads.
- A minimum weld-seam width must be maintained to give adequate weld strength (see table).
- The gauging points on the supports guarantee the gap necessary for the root pass (approx. 3mm).

- Start both, the root pass and final weld pass from the centre of the support to be welded.
- Before starting the final weld pass, clean well the root pass to avoid inclusions.
- The complete welding operation must be carried out continuously so that the parts do not have time to cool.

### MIG Arc Welding

- Wire diameter 0.8 - 1.2 as per DIN 8559-SG 3.
- Important: do not weld in the open air during bad weather.

### Manual Electric: Direct Current Supply Welding:

- Electrodes according to EN ISO 2560-A - E 42 6 B 3 2, AWS A 5.5: E 8018-G.
- Electrode: root pass & final weld pass, type E5154 B10 as per DIN 1913, used in accordance with the manufacturers.

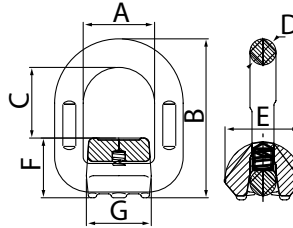
### Alternating current supply welding:

- Electrode as per DIN 1913, modified for alternating current use.
- HV welding and final weld pass, type E5155 B10.



## RING - WELD ON LIFTING POINT, GRADE 80, OCEAN® BRAND

- Material: Alloy Steel, Grade 80
- Standard: EN 1677-1
- Finish: Powder Coated, Yellow
- Design Factor: 5:1
- Identification: Trademark, Size/WLL, Batch Code, Grade
- Rated in Metric Ton(s)



| WLL (t) | Dimensions (in) |      |      |      |      |      |      | Wt. (lb) | Qty. / Box | Price / ea. | Part Number |
|---------|-----------------|------|------|------|------|------|------|----------|------------|-------------|-------------|
|         | A               | B    | C    | D    | E    | F    | G    |          |            |             |             |
| 1       | 1.61            | 3.15 | 1.38 | 0.51 | 1.50 | 1.32 | 1.46 | 1.04     | 45         | 25.05       | 3-057-1T    |
| 3       | 1.81            | 3.78 | 1.65 | 0.67 | 1.69 | 1.46 | 1.73 | 1.52     | 25         | 40.50       | 3-057-3T    |
| 5       | 2.17            | 4.76 | 1.89 | 0.87 | 2.40 | 1.97 | 1.97 | 3.22     | 12         | 67.68       | 3-057-5T    |
| 8       | 2.76            | 5.67 | 2.44 | 1.04 | 2.78 | 2.13 | 2.60 | 5.55     | 10         | 82.04       | 3-057-8T    |
| 10      | 3.35            | 6.61 | 3.07 | 1.10 | 2.99 | 2.46 | 3.07 | 7.91     | 8          | 110.25      | 3-057-10T   |
| 15      | 3.82            | 7.36 | 3.39 | 1.34 | 3.54 | 2.83 | 3.54 | 12.76    | 5          | 224.35      | 3-057-15T   |

### Welding Instructions

The welding should only be carried out by qualified welder according to Standards, e.g. EN 287 or AWS

### Support Material:

- Material of the welding block is S355J2+N (1.0577+N, St 52-3N, B.S. 4360.50D, AISI 1019 etc.).
- Prior to welding, the contact areas must be free from impurities, oil, paint, rust, scale, etc., for example by grinding. If the surface is at all corroded, all rust must be completely removed from the weld area.
- Painted surface must be prepared in the same way.
- The steel support member must have a carbon content of no less than 0.25% and no more than 0.40%.
- In ambient temperature of 10°C and below, pre-heating of the weld area prior to welding must be carried out.

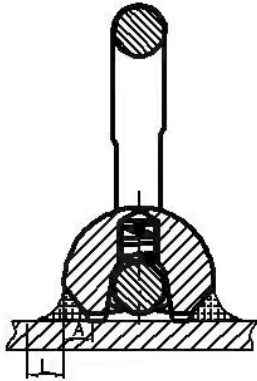
### Seam Welding:

- The welds must be sufficiently strong to take the required loads.
- The distance lugs assist in achieving the required root weld (approx. 3 mm).
- A minimum weld-seam width must be maintained to give adequate weld strength (see table).
- Start both, the root pass and final weld pass from the centre of the support to be welded.
- Before starting the final weld pass, clean well the root pass to avoid inclusions.

- The complete welding operation must be carried out continuously so that the parts do not have time to cool.
- Do not weld at the yellow powder coated tempered load ring.
- After welding, ensure bail pivots full 180° without interfering with the weld.

### Effects of Temperature:

- The lifting points for weld on, types DAA, can together with the load (e.g. weld construction) be annealed.
- Temperature < 600° C, stress-release without reduction of WLL.
- The complete construction can be annealed stress release at < 600°C without reduction of WLL.
- Do not rapidly cool the weld.
- A thorough inspection of the weld should be performed. No cracks, pitting, inclusions, notches or undercuts are allowed. If doubt exists, use a suitable NDT method, such as magnetic particle or liquid penetrant to verify.
- If repair is required, grind out the defect and re-weld using the original qualified procedure.



| Part Number | WLL (t) | Thickness A (mm) | Weld Size L (mm) |
|-------------|---------|------------------|------------------|
| 3-057-1T    | 1       | 7.5              | 10               |
| 3-057-3T    | 3       | 7.6              | 12               |
| 3-057-5T    | 5       | 12.7             | 18               |
| 3-057-8T    | 8       | 16.4             | 20               |
| 3-057-10T   | 10      | 15.8             | 22               |
| 3-057-15T   | 15      | 20.6             | 25               |

| Item Number | Weld Size A (mm) | Weld Size L (mm) |
|-------------|------------------|------------------|
| 3-057-1T    | 7.5              | 10               |
| 3-057-3T    | 7.6              | 12               |
| 3-057-5T    | 12.7             | 18               |
| 3-057-8T    | 16.4             | 20               |
| 3-057-10T   | 15.8             | 22               |
| 3-057-15T   | 20.6             | 25               |



## WARNING!



### For welding

Pay attention to the following points during welding:

- The welding should be carried out by a qualified welder acc. to DIN EN 287-1. or applicable standards.
- Material of welding block is St 52-3 (1.0570).
- The connecting surfaces must be free from dirt, oil, colour, etc.
- Do not weld at the red, powder coated tempered load ring.
- The complete construction can be annealed stress-free for several times at 600°C without reduction of WLL.
- The welding spot has to be suitable for the corresponding force introduction.
- The distance lugs assist in achieving the required root weld (approx. 3 mm).

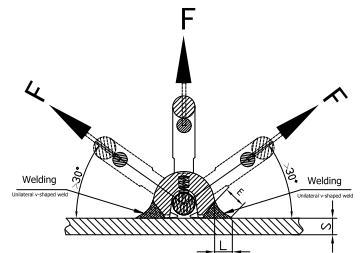
### Important

By the arrangement of weld (continuous HV), the following requirements are fulfilled:

### DIN 18800 for steel building prescribes

At outdoor sites or in case of special danger of corrosion, the welds should only be designed as continuous, fillet welds. The HV weld at the LBS assures a connection via the whole cross section of the material. This corresponds to the closed weld showing no signs of corrosion.

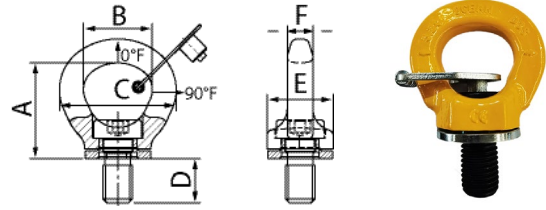
|         |                                      |                              |         |  |
|---------|--------------------------------------|------------------------------|---------|--|
|         |                                      |                              |         |  |
|         |                                      |                              |         |  |
| 15T     | 18                                   | 28                           | 25      |  |
| 8T      | 14                                   | 24                           | 20      |  |
| 5T      | 12                                   | 22                           | 18      |  |
| 3T      | 10                                   | 15                           | 12      |  |
| 2T      | 8                                    | 15                           | 12      |  |
| 1T      | 6                                    | 12                           | 10      |  |
| CODE No | (S)<br>Min thickness<br>of baseplate | (E)<br>welding<br>bead width | L (Min) |  |



Welding and using schematic diagram of D ring

## SWIVEL - LIFTING EYE KEY POINT - UNC THREAD, GRADE 80, OCEAN® BRAND

- Material: Alloy Steel, Grade 80
- Standard: EN 1677-1, Bolt: ANSI B18.3.1M, ISO 4762
- Finish: Powder Coated, Yellow
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, Grade
- Rated in Metric Ton(s)

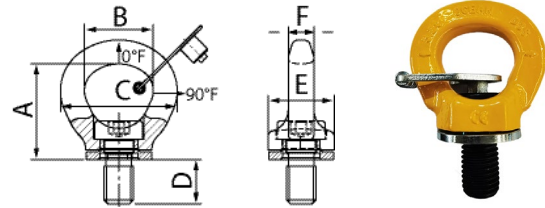


| # of Leg       |             |         |    |      |     |       |        |        |       |        |        |
|----------------|-------------|---------|----|------|-----|-------|--------|--------|-------|--------|--------|
| Load Direction |             | 0°      | 0° | 90°  | 90° | 0-45° | 45-60° | unsym. | 0-45° | 45-60° | unsym. |
| Part No.       | Thread (in) | WLL (t) |    |      |     |       |        |        |       |        |        |
| 3-292K-003     | 5/16        | 1       | 2  | 0.3  | 0.6 | 0.42  | 0.3    | 0.3    | 0.63  | 0.45   | 0.3    |
| 3-292K-004     | 3/8         | 1       | 2  | 0.4  | 0.8 | 0.56  | 0.4    | 0.4    | 0.8   | 0.6    | 0.4    |
| 3-292K-007     | 1/2         | 2       | 4  | 0.75 | 1.5 | 1     | 0.75   | 0.75   | 1.5   | 1.1    | 0.75   |
| 3-292K-015     | 5/8         | 4       | 8  | 1.5  | 3   | 2.1   | 1.5    | 1.5    | 3.1   | 2.2    | 1.5    |
| 3-292K-023     | 3/4         | 6       | 12 | 2.3  | 4.6 | 3.2   | 2.3    | 2.3    | 4.8   | 3.4    | 2.3    |
| 3-292K-025     | 7/8         | 6       | 12 | 2.3  | 4.6 | 3.2   | 2.3    | 2.3    | 4.8   | 3.4    | 2.3    |
| 3-292K-032     | 1           | 8       | 16 | 3.2  | 6.4 | 4.5   | 3.2    | 3.2    | 6.7   | 4.8    | 3.2    |
| 3-292K-045     | 1 1/4       | 12      | 24 | 4.5  | 9   | 6.3   | 4.5    | 4.5    | 9.4   | 6.7    | 4.5    |
| 3-292K-070     | 1 1/2       | 16      | 32 | 7    | 14  | 9.8   | 7      | 7      | 14.7  | 10.5   | 7      |
| 3-292K-090     | 1 3/4       | 24      | 48 | 9    | 18  | 12.6  | 9      | 9      | 18.9  | 13.5   | 9      |
| 3-292K-120     | 2           | 32      | 64 | 12   | 24  | 16.8  | 12     | 12     | 25    | 18     | 12     |

| WLL (t) |      | Thread |           | Dimensions (in) |      |      |      |      |      | Torque (Nm) | Wt./ea. (lb) | Price / ea. | Part Number |
|---------|------|--------|-----------|-----------------|------|------|------|------|------|-------------|--------------|-------------|-------------|
| 0°      | 90°  | Size   | Pitch UNC | A               | B    | C    | D    | E    | F    |             |              |             |             |
| 0.8     | 0.3  | 5/16   | 18        | 1.50            | 1.02 | 1.78 | 0.45 | 0.98 | 0.31 | 6~10        | 0.24         | 41.49       | 3-292K-003  |
| 1       | 0.4  | 3/8    | 16        | 1.50            | 1.02 | 1.78 | 0.55 | 0.98 | 0.31 | 6~10        | 0.26         | 44.10       | 3-292K-004  |
| 2       | 0.75 | 1/2    | 13        | 1.71            | 1.26 | 2.13 | 0.67 | 1.30 | 0.39 | 10~15       | 0.44         | 57.29       | 3-292K-007  |
| 4       | 1.5  | 5/8    | 11        | 2.05            | 1.48 | 2.50 | 0.94 | 1.42 | 0.55 | 20~30       | 0.77         | 66.34       | 3-292K-015  |
| 6       | 2.3  | 3/4    | 10        | 2.48            | 1.75 | 3.09 | 1.18 | 1.87 | 0.81 | 50~70       | 1.45         | 96.46       | 3-292K-023  |
| 8       | 3.2  | 7/8    | 9         | 2.91            | 2.03 | 3.62 | 1.39 | 2.09 | 0.79 | 120~150     | 2.42         | 107.00      | 3-292K-025  |
| 12      | 4.5  | 1      | 8         | 3.62            | 2.56 | 4.65 | 1.77 | 2.68 | 0.94 | 200~250     | 4.56         | 161.40      | 3-292K-032  |
| 16      | 7    | 1 1/4  | 7         | 4.13            | 2.99 | 5.35 | 2.24 | 3.23 | 1.18 | 280~400     | 8.82         | 265.51      | 3-292K-045  |

## SWIVEL - LIFTING EYE KEY POINT, METRIC THREAD, GRADE 80, OCEAN® BRAND

- Material: Alloy Steel, Grade 80
- Standard: EN 1677-1, Bolt: ANSI B18.3.1M, ISO 4762
- Finish: Powder Coated, Yellow
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, Grade
- Rated in Metric Ton(s)



| # of Leg<br>Load<br>Direction<br>Part No. |  | Thread (mm) | WLL (t) |         |          |          |            |             |             |              |               |               |
|-------------------------------------------|-----------------------------------------------------------------------------------|-------------|---------|---------|----------|----------|------------|-------------|-------------|--------------|---------------|---------------|
|                                           |                                                                                   |             | 1<br>0° | 2<br>0° | 1<br>90° | 2<br>90° | 2<br>0-45° | 2<br>45-60° | 2<br>unsym. | 3-4<br>0-45° | 3-4<br>45-60° | 3-4<br>unsym. |
| 3-291K-003                                |                                                                                   | M8          | 1       | 2       | 0.3      | 0.6      | 0.42       | 0.3         | 0.3         | 0.63         | 0.45          | 0.3           |
| 3-291K-004                                |                                                                                   | M10         | 1       | 2       | 0.4      | 0.8      | 0.56       | 0.4         | 0.4         | 0.8          | 0.6           | 0.4           |
| 3-291K-007                                |                                                                                   | M12         | 2       | 4       | 0.75     | 1.5      | 1          | 0.75        | 0.75        | 1.5          | 1.1           | 0.75          |
| 3-291K-015                                |                                                                                   | M16         | 4       | 8       | 1.5      | 3        | 2.1        | 1.5         | 1.5         | 3.1          | 2.2           | 1.5           |
| 3-291K-023                                |                                                                                   | M20         | 6       | 12      | 2.3      | 4.6      | 3.2        | 2.3         | 2.3         | 4.8          | 3.4           | 2.3           |
| 3-291K-032                                |                                                                                   | M24         | 8       | 16      | 3.2      | 6.4      | 4.5        | 3.2         | 3.2         | 6.7          | 4.8           | 3.2           |
| 3-291K-045                                |                                                                                   | M30         | 12      | 24      | 4.5      | 9        | 6.3        | 4.5         | 4.5         | 9.4          | 6.7           | 4.5           |
| 3-291K-070                                |                                                                                   | M36         | 16      | 32      | 7        | 14       | 9.8        | 7           | 7           | 14.7         | 10.5          | 7             |
| 3-291K-090                                |                                                                                   | M42         | 24      | 48      | 9        | 18       | 12.6       | 9           | 9           | 18.9         | 13.5          | 9             |
| 3-291K-120                                |                                                                                   | M48         | 32      | 64      | 12       | 24       | 16.8       | 12          | 12          | 25           | 18            | 12            |
| 3-291K-140                                |                                                                                   | M56         | 34      | 68      | 16       | 32       | 22.4       | 16          | 16          | 32           | 24            | 16            |
| 3-291K-150                                |                                                                                   | M64         | 36      | 72      | 18       | 36       | 25.2       | 18          | 18          | 36           | 27            | 18            |

OCEAN G80 & G100 STEEL LIFTING COMPONENTS

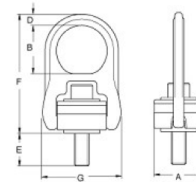
| WLL (t) |      | Thread |           | Dimensions (in) |      |       |      |      |      | Torque (Nm) | Wt./ea. (lb) | Price / ea. | Part Number |
|---------|------|--------|-----------|-----------------|------|-------|------|------|------|-------------|--------------|-------------|-------------|
| 0°      | 90°  | Size   | Pitch UNC | A               | B    | C     | D    | E    | F    |             |              |             |             |
| 0.8     | 0.3  | M8     | 1.25      | 38.0            | 26.0 | 45.3  | 11.5 | 25.0 | 8.0  | 6~10        | 0.11         | 41.49       | 3-291K-003  |
| 1       | 0.4  | M10    | 1.5       | 38.0            | 26.0 | 45.3  | 14.0 | 25.0 | 8.0  | 6~10        | 0.12         | 44.10       | 3-291K-004  |
| 2       | 0.75 | M12    | 1.75      | 43.5            | 32.0 | 54.0  | 17.0 | 33.0 | 10.0 | 10~15       | 0.20         | 50.35       | 3-291K-007  |
| 4       | 1.5  | M16    | 2         | 52.0            | 37.5 | 63.5  | 24.0 | 36.0 | 14.0 | 20~30       | 0.35         | 58.35       | 3-291K-015  |
| 6       | 2.3  | M20    | 2.5       | 63.0            | 44.5 | 78.5  | 30.0 | 47.5 | 20.6 | 50~70       | 0.66         | 83.13       | 3-291K-023  |
| 8       | 3.2  | M24    | 3         | 74.0            | 51.6 | 92.0  | 35.3 | 53.0 | 20.0 | 120~150     | 1.10         | 101.78      | 3-291K-032  |
| 12      | 4.5  | M30    | 3.5       | 92.0            | 65.0 | 118.0 | 45.0 | 68.0 | 24.0 | 200~250     | 2.07         | 152.00      | 3-291K-045  |
| 16      | 7    | M36    | 4         | 105.0           | 76.0 | 136.0 | 56.8 | 82.0 | 30.0 | 280~400     | 4            | 252.60      | 3-291K-070  |



- All swivel Hoist Rings meet or exceed all the requirements of ASME B30.26
- Hoist Ring Bail are designed by forged alloy steel, quenched and tempered
- Each forged part and cap screw have batch coding and are linked to test certificate sheet
- Hoist rings are 360° swivel with 180° pivot function
- Bolt galvanized alternative phosphate treatment
- 20,000 cycle fatigue rated to 1.5 times WLL
- Rated 100% at 90° angle
- 100% magnaflux crack detection
- Self aligns in direction of load

## SWIVEL - HOIST RING, UNC THREAD, GRADE 80, OCEAN® BRAND

- Material: Alloy Steel, Grade 80
- Standard: ASME B30.26, Bolt: ASTM A574
- Finish: Dacromet Coating
- Design Factor: 5:1
- Identification: Trademark, Size/WLL, Batch Code, Grade

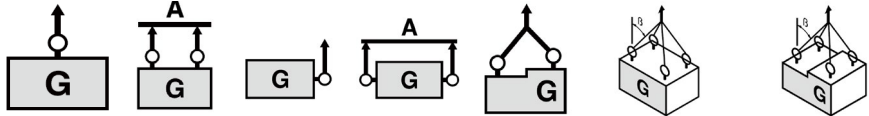


| WLL<br>(lb) | Thread Size      | Torque<br>ft.<br>(lb) | Dimensions (in) |      |      |      |       |      | Wt./<br>ea.<br>(lb) | Swivel Hoist Ring |                |
|-------------|------------------|-----------------------|-----------------|------|------|------|-------|------|---------------------|-------------------|----------------|
|             |                  |                       | A               | B    | D    | E    | F     | G    |                     | Price<br>/ ea.    | Part<br>Number |
| 800         | 5/16"-18 x 2     | 7                     | 1.57            | 1.61 | 0.35 | 0.71 | 4.02  | 2.56 | 0.9                 | 56.03             | 3-204-004      |
| 1000        | 3/8"-16 x 2      | 12                    | 1.57            | 1.61 | 0.35 | 0.71 | 4.02  | 2.56 | 0.9                 | 60.75             | 3-204-005      |
| 2500        | 1/2"-13 x 2.5    | 28                    | 2.56            | 2.32 | 0.59 | 0.75 | 6.26  | 4.13 | 3.7                 | 133.38            | 3-204-010      |
| 2500        | 1/2"-13 x 3.0    | 28                    | 2.56            | 2.32 | 0.59 | 1.26 | 6.26  | 4.13 | 3.7                 | 147.24            | 3-204-010L     |
| 4000        | 5/8"-11 x 2.5    | 60                    | 2.56            | 2.32 | 0.59 | 0.74 | 6.26  | 4.13 | 4.0                 | 147.24            | 3-204-019      |
| 4000        | 5/8"-11 x 3.25   | 60                    | 2.56            | 2.32 | 0.59 | 1.69 | 6.26  | 4.13 | 4.0                 | 172.01            | 3-204-019L     |
| 5000        | 3/4"-10 x 2.75   | 100                   | 2.56            | 2.32 | 0.59 | 1.18 | 6.26  | 4.13 | 4.0                 | 157.84            | 3-204-021      |
| 5000        | 3/4"-10 x 3.25   | 100                   | 2.56            | 2.32 | 0.59 | 1.65 | 6.26  | 4.13 | 4.2                 | 176.67            | 3-204-021L     |
| 7000        | 3/4"-10 x 3.0    | 100                   | 3.35            | 2.87 | 0.87 | 0.79 | 8.03  | 5.28 | 9.0                 | 307.26            | 3-204-030      |
| 7000        | 3/4"-10x3.75     | 100                   | 3.35            | 2.87 | 0.87 | 1.75 | 8.03  | 5.28 | 9.1                 | 339.20            | 3-204-030L     |
| 8000        | 7/8"-9 x 3.5     | 160                   | 3.35            | 2.87 | 0.87 | 1.43 | 8.03  | 5.28 | 9.3                 | 340.31            | 3-204-042      |
| 8000        | 7/8"-9 x 4.25    | 160                   | 3.35            | 2.87 | 0.87 | 2.37 | 8.03  | 5.28 | 9.7                 | 343.83            | 3-204-042L     |
| 10 000      | 1"-8 x 3.5       | 230                   | 3.35            | 2.87 | 0.87 | 1.36 | 8.03  | 5.28 | 9.5                 | 352.09            | 3-204-045      |
| 10 000      | 1"-8 x 4.5       | 230                   | 3.35            | 2.87 | 0.87 | 2.36 | 8.03  | 5.28 | 9.7                 | 389.00            | 3-204-045L     |
| 15 000      | 1-1/4"-7x4.5     | 470                   | 3.95            | 3.15 | 1.0  | 2.25 | 8.58  | 6.30 | 14.5                | 465.20            | 3-204-070      |
| 24 000      | 1-1/2" - 6 x 6.5 | 800                   | 4.72            | 4.29 | 1.38 | 2.17 | 12.09 | 8.66 | 36.4                | 983.16            | 3-204-125      |
| 30 000      | 2" - 4.5 x 6.5   | 1100                  | 4.72            | 4.29 | 1.38 | 3.01 | 12.09 | 8.66 | 38.6                | 1017.80           | 3-204-135      |

- Minimum Ultimate Load is 5 times the Working Load Limit
- Proof Load is 2.5 times the Working load Limit
- The depth of thread needs to be a minimum of 1 times the thread diameter for steel, 1.25 times for cast iron, 2 times for aluminium



## SWIVEL - HOIST RING, UNC THREAD (OCEAN), GRADE 80



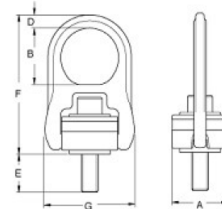
| # of Leg       |             |          | 1     | 2     | 1     | 2     | 2      | 3-4    | 3-4    |        |
|----------------|-------------|----------|-------|-------|-------|-------|--------|--------|--------|--------|
| Load Direction |             |          | 0°    | 0°    | 90°   | 90°   | 45-60° | unsym. | 45-60° | unsym. |
| Item No.       | Thread (in) | WLL (lb) |       |       |       |       |        |        |        |        |
| 3-204-004      | 5/16        | 800      | 800   | 1600  | 800   | 1600  | 800    | 800    | 1200   | 800    |
| 3-204-005      | 3/8         | 1000     | 1000  | 2000  | 1000  | 2000  | 1000   | 1000   | 1500   | 1000   |
| 3-204-010      | 1/2         | 2500     | 2500  | 5000  | 2500  | 5000  | 2500   | 2500   | 3750   | 2500   |
| 3-204-010L     | 1/2         | 2500     | 2500  | 5000  | 2500  | 5000  | 2500   | 2500   | 3750   | 2500   |
| 3-204-019      | 5/8         | 4000     | 4000  | 8000  | 4000  | 8000  | 4000   | 4000   | 6000   | 4000   |
| 3-204-019L     | 5/8         | 4000     | 4000  | 8000  | 4000  | 8000  | 4000   | 4000   | 6000   | 4000   |
| 3-204-021      | 3/4         | 5000     | 5000  | 10000 | 5000  | 10000 | 5000   | 5000   | 7500   | 5000   |
| 3-204-021L     | 3/4         | 5000     | 5000  | 10000 | 5000  | 10000 | 5000   | 5000   | 7500   | 5000   |
| 3-204-030      | 3/4         | 7000     | 7000  | 14000 | 7000  | 14000 | 7000   | 7000   | 10500  | 7000   |
| 3-204-042      | 7/8         | 8000     | 8000  | 16000 | 8000  | 16000 | 8000   | 8000   | 12000  | 8000   |
| 3-204-042L     | 7/8"        | 8000     | 8000  | 16000 | 8000  | 16000 | 8000   | 8000   | 12000  | 8000   |
| 3-204-045      | 1"          | 10000    | 10000 | 20000 | 10000 | 20000 | 10000  | 10000  | 15000  | 10000  |
| 3-204-045L     | 1"          | 10000    | 10000 | 20000 | 10000 | 20000 | 10000  | 10000  | 15000  | 10000  |
| 3-204-070      | 1-1/4"      | 15000    | 15000 | 30000 | 15000 | 30000 | 15000  | 15000  | 22500  | 15000  |
| 3-204-125      | 1-1/2"      | 24000    | 24000 | 48000 | 24000 | 48000 | 24000  | 24000  | 36000  | 24000  |
| 3-204-135      | 2"          | 30000    | 30000 | 60000 | 30000 | 60000 | 30000  | 30000  | 45000  | 30000  |



- All Swivel Hoist Rings meet or exceed all the requirements of ASME B30.26
- Bolts are metric thread ASME / ANSI B18.3.1 M
- Hoist Ring Bail are designed by forged alloy steel, quenched and tempered
- Each forged part and cap screw have batch coding and are linked to test certificate sheet
- Hoist rings are 360° swivel with 180° pivot function
- Bolt galvanized alternative phosphate treatment
- 20,000 cycle fatigue rated to 1.5 times WLL
- Rated 100% at 90° angle
- 100% magnaflux crack detection
- Self-aligns in direction of load

## SWIVEL - HOIST RING, METRIC THREAD, GRADE 80, OCEAN® BRAND

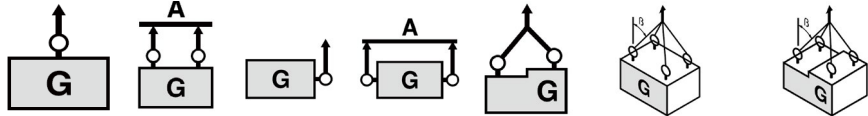
- Material: Alloy Steel, Grade 80
- Standard: ASME B30.26, Bolt: ASTM A574
- Finish: Dacromet Coated
- Design Factor: 5:1
- Identification: Trademark, Size/WLL, Batch Code, Grade
- Rated in Metric Ton(s)



| WLL<br>(t) | Thread Size    | Torque<br>(Nm) | Dimensions (mm) |     |    |    |     |     | Wt./<br>ea.<br>(kg) | Swivel Hoist Ring |                |
|------------|----------------|----------------|-----------------|-----|----|----|-----|-----|---------------------|-------------------|----------------|
|            |                |                | A               | B   | D  | E  | F   | G   |                     | Price /ea.        | Part<br>Number |
| 0.40       | M8-1.25 x 50   | 10             | 40              | 41  | 9  | 17 | 102 | 65  | 0.4                 | 56.03             | 3-203-004      |
| 0.45       | M10-1.50 x 45  | 16             | 40              | 41  | 9  | 11 | 102 | 65  | 0.5                 | 60.75             | 3-203-005      |
| 0.45       | M10-1.50 x 60  | 16             | 40              | 41  | 9  | 26 | 102 | 65  | 0.5                 | 84.49             | 3-203-005L     |
| 1.05       | M12-1.75 x 60  | 38             | 65              | 64  | 15 | 15 | 158 | 105 | 1.7                 | 133.38            | 3-203-010      |
| 1.05       | M12-1.75 x 75  | 38             | 65              | 64  | 15 | 30 | 158 | 105 | 1.7                 | 147.24            | 3-203-010L     |
| 1.90       | M16-2.00 x 65  | 81             | 65              | 64  | 15 | 20 | 158 | 105 | 1.8                 | 147.24            | 3-203-019      |
| 1.90       | M16-2.00 x 80  | 81             | 65              | 64  | 15 | 35 | 158 | 105 | 1.8                 | 172.01            | 3-203-019L     |
| 2.15       | M20-2.50 x 70  | 136            | 65              | 64  | 15 | 25 | 158 | 105 | 1.9                 | 157.84            | 3-203-021      |
| 2.15       | M20-2.50 x 90  | 136            | 65              | 64  | 15 | 45 | 158 | 105 | 2.1                 | 176.67            | 3-203-021L     |
| 3.00       | M20-2.50 x 80  | 136            | 85              | 79  | 19 | 25 | 204 | 134 | 4.2                 | 307.26            | 3-203-030      |
| 4.20       | M24-3.00 x 80  | 312            | 85              | 79  | 19 | 26 | 204 | 134 | 4.2                 | 352.09            | 3-203-042      |
| 4.20       | M24-3.00 x 105 | 312            | 85              | 79  | 19 | 56 | 204 | 134 | 4.3                 | 389.00            | 3-203-042L     |
| 7.00       | M30-3.50 x 135 | 637            | 100             | 100 | 25 | 81 | 241 | 160 | 6.7                 | 465.20            | 3-203-070      |
| 11.00      | M36-4.00 x 160 | 1005           | 120             | 111 | 30 | 76 | 286 | 194 | 15.5                | 986.83            | 3-203-110      |
| 12.50      | M42-4.50 x 175 | 1005           | 120             | 111 | 30 | 65 | 286 | 194 | 16.5                | 983.16            | 3-203-125      |
| 13.50      | M48-5.00 x 190 | 1350           | 120             | 111 | 30 | 70 | 286 | 194 | 16.8                | 1017.80           | 3-203-135      |

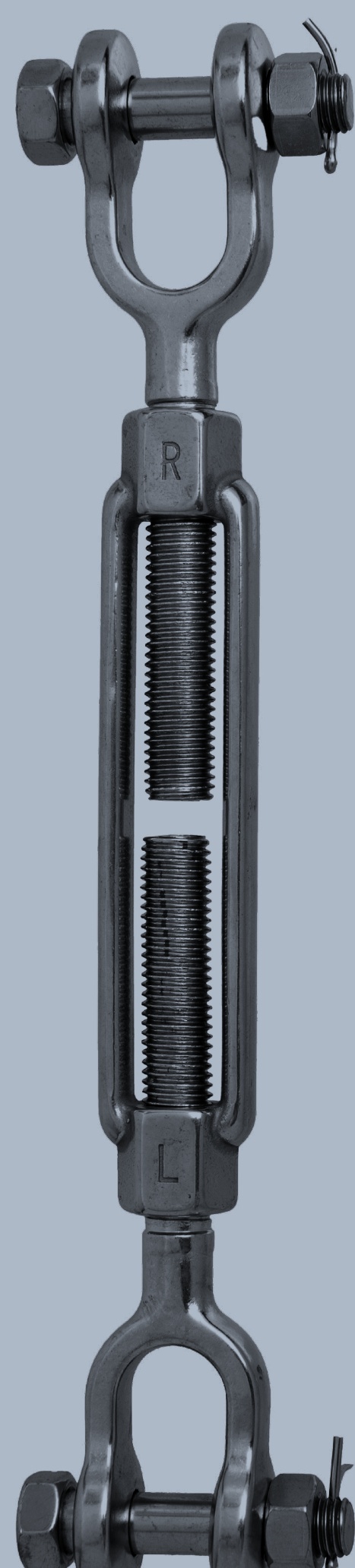
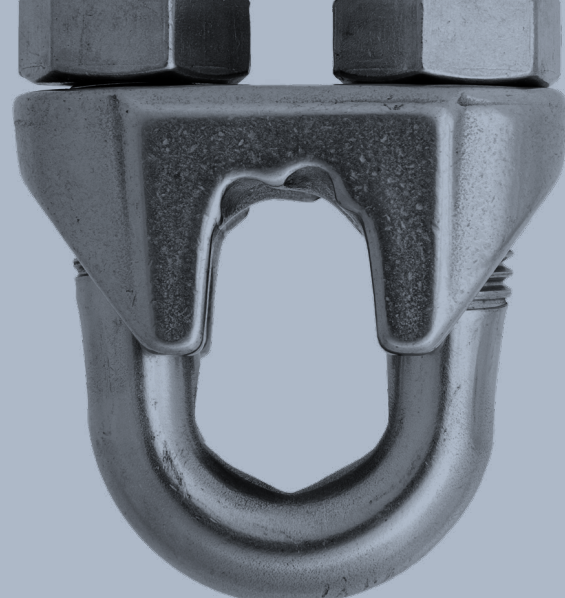
- Minimum Ultimate Load is 5 times the Working Load Limit
- Proof Load is 2.5 times the Working load Limit
- The depth of thread needs to be a minimum of 1 times the thread diameter for steel, 1.25 times for cast iron, 2 times for aluminum

## SWIVEL - HOIST RING, UNC THREAD (OCEAN), GRADE 80



| # of Leg<br>Load<br>Direction |             |         | 1<br>0° | 2<br>0° | 1<br>90° | 2<br>90° | 2<br>45-60° | 3-4<br>unsym. | 3-4<br>45-60° | 3-4<br>unsym. |
|-------------------------------|-------------|---------|---------|---------|----------|----------|-------------|---------------|---------------|---------------|
| Item No.                      | Thread (in) | WLL (T) |         |         |          |          |             |               |               |               |
| 3-203-004                     | M 8         | 0.40    | 0.40    | 0.80    | 0.40     | 0.8      | 0.40        | 0.40          | 0.60          | 0.40          |
| 3-203-005                     | M 10        | 0.45    | 0.45    | 0.90    | 0.45     | 0.9      | 0.45        | 0.45          | 0.68          | 0.45          |
| 3-203-010                     | M 12        | 1.05    | 1.05    | 2.10    | 1.05     | 2.1      | 1.05        | 1.05          | 1.58          | 1.05          |
| 3-203-010L                    | M 12        | 1.05    | 1.05    | 2.10    | 1.05     | 2.1      | 1.05        | 1.05          | 1.58          | 1.05          |
| 3-203-019                     | M 16        | 1.90    | 1.90    | 3.80    | 1.90     | 3.8      | 1.90        | 1.90          | 2.85          | 1.90          |
| 3-203-019L                    | M 16        | 1.90    | 1.90    | 3.80    | 1.90     | 3.8      | 1.90        | 1.90          | 2.85          | 1.90          |
| 3-203-021                     | M 20        | 2.15    | 2.15    | 4.30    | 2.15     | 4.3      | 2.15        | 2.15          | 3.23          | 2.15          |
| 3-203-021L                    | M 20        | 2.15    | 2.15    | 4.30    | 2.15     | 4.3      | 2.15        | 2.15          | 3.23          | 2.15          |
| 3-203-030                     | M 20        | 3.00    | 3.00    | 6.00    | 3.00     | 6        | 3.00        | 3.00          | 4.50          | 3.00          |
| 3-203-042                     | M 24        | 4.20    | 4.20    | 8.40    | 4.20     | 8.4      | 4.20        | 4.20          | 6.30          | 4.20          |
| 3-203-042L                    | M 24        | 4.20    | 4.20    | 8.40    | 4.20     | 8.4      | 4.20        | 4.20          | 6.30          | 4.20          |
| 3-203-070                     | M 30        | 7.00    | 7.00    | 14.00   | 7.00     | 14       | 7.00        | 7.00          | 10.50         | 7.00          |
| 3-203-110                     | M 36        | 11.00   | 11.00   | 22.00   | 11.00    | 22       | 11.00       | 11.00         | 16.50         | 11.00         |
| 3-203-125                     | M 42        | 12.50   | 12.50   | 25.00   | 12.50    | 25       | 12.50       | 12.50         | 18.75         | 12.50         |
| 3-203-135                     | M 48        | 13.50   | 13.50   | 27.00   | 13.50    | 27       | 13.50       | 13.50         | 20.25         | 13.50         |

Rated in Metric Ton(s)



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## RIGGING HARDWARE & EQUIPMENT

|                                            |           |
|--------------------------------------------|-----------|
| Shackles.....                              | 53 - 69   |
| Turnbuckles.....                           | 70 - 79   |
| Eye Bolts, Eye Nuts, & Pad Eyes.....       | 80 - 87   |
| DNV Master Links & Quad Assemblies.....    | 88 - 89   |
| Pear Links, Master Links & Round Rings.... | 90 - 91   |
| Twin Clevis & Quick Links,                 |           |
| Snap & S Hooks.....                        | 92 - 93   |
| Swivels.....                               | 94 - 100  |
| Wire Rope & Synthetic Blocks.....          | 101 - 111 |
| Load Cells.....                            | 112 - 114 |
| Hooks.....                                 | 115 - 126 |





## SHACKLE - DEE (CHAIN) TRAWLING, WITH SQUARE HEAD SCREW PIN

### Dimensions approximate.

Commercial grade trawling chain shackles are inexpensive shackles used for trawling applications, NOT for bearing critical loads.

Not for overhead lifting, Non load rated Shackle.

\*Pin Size: Large diameter size available while quantities last.

- Material: Mild Steel
- Finish: Self Coloured Black



### Small Pin Diameter:

| Shackle Size (in) | Qty. / Bag | Inside Length (in) | Inside Width (in) | Pin Diameter (in) | Tolerance + / - (in) |       | Wt./ea. (lb) | Price / ea. | Part Number |
|-------------------|------------|--------------------|-------------------|-------------------|----------------------|-------|--------------|-------------|-------------|
|                   |            |                    |                   |                   | Length               | Width |              |             |             |
| 3/8               | 300        | 1 1/4              | 11/16             | 3/8               | 1/8                  | 1/16  | 0.26         | 1.12        | 6-3/8"SCTD  |
| 1/2               | 150        | 1 5/8              | 13/16             | 1/2               | 1/8                  | 1/16  | 0.49         | 1.54        | 6-1/2"SCTD  |
| 5/8               | 70         | 2                  | 1 1/16            | 5/8               | 1/8                  | 1/16  | 1.10         | 3.46        | 6-5/8"SCTD  |

## SHACKLE - DEE (CHAIN) TRAWLING, WITH SQUARE HEAD SCREW PIN

High tensile steel D-trawl shackles with square head pin.  
Not for overhead lifting.

- Material: High Tensile Steel
- Finish: Painted Yellow
- Design Factor: 4:1
- Identification: Size/WLL
- Rated in Metric Ton(s)



| WLL (t) | Size (in) | Price / ea. | Part Number   |
|---------|-----------|-------------|---------------|
| 2       | 1/2       | 9.09        | 6-1/2S2131SH  |
| 3-1/4   | 5/8       | 17.83       | 6-5/8S2131SH  |
| 4-3/4   | 3/4       | 18.98       | 6-3/4S2131SH  |
| 6-1/2   | 7/8       | 35.46       | 6-7/8S2131SH  |
| 8-1/2   | 1         | 53.83       | 6-1S2131SH    |
| 9-1/2   | 1 1/8     | 68.02       | 6-11/8S2131SH |
| 12      | 1 1/4     | 99.70       | 6-11/4S2131SH |



SHACKLE - DEE (CHAIN), WITH SCREW PIN

- Material: High Tensile Steel
- Finish: Body:Galvanized, Pin: Yellow Painted
- Design Factor: 6:1
- Identification: Size/WLL
- Rated in Metric Ton(s)



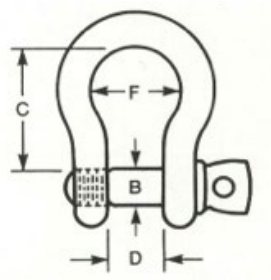
| Size<br>(in) | WLL<br>(t) | Wt./ea.<br>(lb) | Dimensions (in) |      |       |            |      |            | Price<br>/ ea. | Part Number |
|--------------|------------|-----------------|-----------------|------|-------|------------|------|------------|----------------|-------------|
|              |            |                 | Gap             | Pin  | Stock | In. Length | Palm | Pin Length |                |             |
| 1/4          | 1/2        | 0.12            | 0.47            | 0.31 | 0.25  | 0.88       | 0.61 | 1.38       | 2.66           | 6-1/4"SP    |
| 5/16         | 3/4        | 0.17            | 0.53            | 0.38 | 0.31  | 1.03       | 0.75 | 1.66       | 3.73           | 6-5/16"SP   |
| 3/8          | 1          | 0.25            | 0.66            | 0.44 | 0.38  | 1.25       | 0.91 | 2.03       | 4.90           | 6-3/8"SP    |
| 1/2          | 2          | 0.70            | 0.81            | 0.63 | 0.50  | 1.63       | 1.19 | 2.69       | 7.35           | 6-1/2"SP    |
| 5/8          | 3-1/4      | 1.24            | 1.06            | 0.75 | 0.63  | 2.00       | 1.56 | 3.34       | 13.84          | 6-5/8"SP    |
| 3/4          | 4-3/4      | 2.18            | 1.25            | 0.88 | 0.81  | 2.38       | 1.88 | 3.97       | 25.03          | 6-3/4"SP    |
| 7/8          | 6-1/2      | 3.28            | 1.44            | 1.00 | 0.97  | 2.81       | 2.13 | 4.50       | 36.32          | 6-7/8"SP    |
| 1            | 8-1/2      | 4.80            | 1.69            | 1.13 | 1.00  | 3.19       | 2.38 | 5.07       | 52.45          | 6-1"SP      |

SEE WARNING AND APPLICATION INFORMATION AT END OF SHACKLE SECTION

## SHACKLE - COMMERCIAL BOW, ANCHOR, WITH SCREW PIN

- Material: Mild Steel
- Finish: Galvanized

Commercial grade shackles are inexpensive shackles used for non critical applications.  
NOT for overhead lifting, NOT for bearing critical loads.

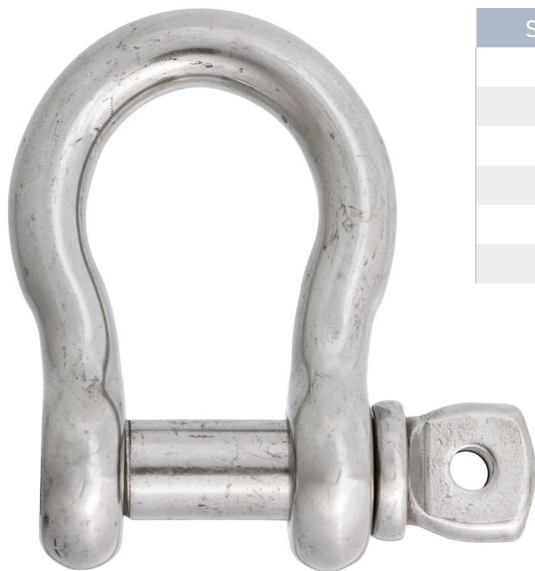


| Nominal Size<br>(in) | Weight / ea.<br>(lb) | Body Dia.<br>(in) | Dimensions (in) |      |      |      | Price<br>/ ea. | Part Number |
|----------------------|----------------------|-------------------|-----------------|------|------|------|----------------|-------------|
|                      |                      |                   | B               | C    | D    | F    |                |             |
| 3/16                 | 0.04                 | 0.20              | 0.21            | 0.92 | 0.38 | 0.61 | 0.90           | 6-3/16"GCS  |
| 1/4                  | 0.08                 | 0.23              | 0.28            | 1.15 | 0.51 | 0.70 | 1.17           | 6-1/4"GCS   |
| 5/16                 | 0.14                 | 0.30              | 0.36            | 1.27 | 0.55 | 0.82 | 1.54           | 6-5/16"GCS  |
| 3/8                  | 0.26                 | 0.37              | 0.44            | 1.56 | 0.60 | 0.97 | 2.54           | 6-3/8"GCS   |
| 7/16                 | 0.36                 | 0.42              | 0.46            | 1.67 | 0.72 | 1.00 | 3.98           | 6-7/16"GCS  |
| 1/2                  | 0.64                 | 0.50              | 0.60            | 1.95 | 0.77 | 1.32 | 4.58           | 6-1/2"GCS   |
| 5/8                  | 1.16                 | 0.60              | 0.75            | 2.37 | 1.12 | 1.70 | 9.00           | 6-5/8"GCS   |
| 3/4                  | 1.96                 | 0.75              | 0.82            | 2.90 | 1.29 | 1.93 | 15.30          | 6-3/4"GCS   |
| 7/8                  | 3.16                 | 0.87              | 0.98            | 3.31 | 1.42 | 2.20 | 21.19          | 6-7/8"GCS   |
| 1                    | 4.20                 | 1.00              | 1.06            | 3.75 | 1.58 | 2.73 | 27.56          | 6-1"GCS     |

SEE WARNING AND APPLICATION INFORMATION AT END OF SHACKLE SECTION

## SHACKLE - BOW, ANCHOR, WITH SCREW PIN

- Material: 316 Stainless Steel, Forged
- Finish: Stainless Steel
- Design Factor: 4:1
- Identification: Size/WLL
- Rated in Metric Ton(s)



| Size (in) | WLL (t) | Qty. / Box | Price / ea. | Part Number |
|-----------|---------|------------|-------------|-------------|
| 1/4       | 1/2     | 300        | 6.12        | 6-1/4"SSFB  |
| 5/16      | 3/4     | 250        | 8.40        | 6-5/16"SSFB |
| 3/8       | 1       | 150        | 13.39       | 6-3/8"SSFB  |
| 1/2       | 2       | 60         | 22.29       | 6-1/2"SSFB  |
| 5/8       | 3-1/4   | 40         | 52.57       | 6-5/8"SSFB  |
| 3/4       | 4-3/4   | 20         | 93.08       | 6-3/4"SSFB  |

## SHACKLE - BOW, ANCHOR, WITH SCREW PIN

- Material: 304 Stainless Steel
- Finish: Stainless Steel
- Identification: Size



| Size (in) | Qty. / Box | Price / ea. | Part Number  |
|-----------|------------|-------------|--------------|
| 1/4       | 300        | 4.79        | 6-1/4"SSBOW  |
| 5/16      | 300        | 5.54        | 6-5/16"SSBOW |
| 3/8       | 150        | 8.04        | 6-3/8"SSBOW  |
| 1/2       | 100        | 18.40       | 6-1/2"SSBOW  |
| 5/8       | 50         | 44.67       | 6-5/8"SSBOW  |
| 3/4       | 30         | 66.03       | 6-3/4"SSBOW  |

SEE WARNING AND APPLICATION INFORMATION AT END OF SHACKLE SECTION







## SHACKLE - BOW, ANCHOR, WITH SCREW YELLOW PIN®

Trademark - Yellow Pin® Shackle - Registration Number: TMA 862,758

### Identification / Marking:

Shackle Body:

- Name or trademark of manufacturer "OCEAN"
- Size
- WLL (Working Load Limit)

Shackle Bolt:

- Name of trademark of manufacturer "OC"
- Grade, material type "HS"
- Powder Coated "Yellow Pin®" for instant recognition

Additional Identification:

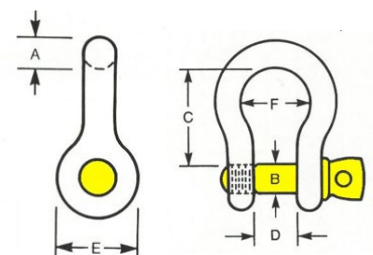
- Shackle Production Code
  - Traceable to certificate & material

### Manufacturing/Design Information:

- Manufactured to Federal Specification RR-C-271D, Type IVA, Grade A, Class 2.
- Meet and/or exceeds ASME B30.26
- Safety/Design Factor: 6:1
- Material: High Tensile Steel, Forged
  - Quenched and Tempered, Grade 6.

### Coating / Protection:

- Hot dip galvanized & yellow pin powder coated.



### Rated in Metric Ton(s)

| Size (in) | WLL (t) | Dimensions (in) |      |       |      |      |      | Weight/ea. (lb) | Qty. / Box | Price / ea. | Part Number |
|-----------|---------|-----------------|------|-------|------|------|------|-----------------|------------|-------------|-------------|
| A         | B       | C               | D    | E     | F    |      |      |                 |            |             |             |
| 3/16      | 1/3     | 0.19            | 0.25 | 0.88  | 0.38 | 0.56 | 0.60 | 0.06            | 1000       | 2.18        | 6-3/16"SPB  |
| 1/4       | 1/2     | 0.25            | 0.31 | 1.13  | 0.47 | 0.61 | 0.78 | 0.10            | 500        | 2.70        | 6-1/4"SPB   |
| 5/16      | 3/4     | 0.31            | 0.38 | 1.22  | 0.53 | 0.75 | 0.84 | 0.19            | 300        | 3.15        | 6-5/16"SPB  |
| 3/8       | 1       | 0.38            | 0.44 | 1.44  | 0.66 | 0.91 | 1.03 | 0.31            | 200        | 4.13        | 6-3/8"SPB   |
| 7/16      | 1 1/2   | 0.44            | 0.50 | 1.69  | 0.75 | 1.06 | 1.16 | 0.38            | 150        | 5.46        | 6-7/16"SPB  |
| 1/2       | 2       | 0.50            | 0.63 | 1.88  | 0.81 | 1.19 | 1.31 | 0.72            | 80         | 6.99        | 6-1/2"SPB   |
| 5/8       | 3 1/4   | 0.63            | 0.75 | 2.38  | 1.06 | 1.50 | 1.69 | 1.37            | 40         | 11.97       | 6-5/8"SPB   |
| 3/4       | 4 3/4   | 0.75            | 0.88 | 2.81  | 1.25 | 1.81 | 2.00 | 2.35            | 25         | 19.16       | 6-3/4"SPB   |
| 7/8       | 6 1/2   | 0.88            | 1.00 | 3.31  | 1.44 | 2.09 | 2.28 | 3.62            | 15         | 28.07       | 6-7/8"SPB   |
| 1         | 8 1/2   | 1.00            | 1.13 | 3.75  | 1.69 | 2.38 | 2.69 | 5.03            | 10         | 39.99       | 6-1"SPB     |
| 1-1/8     | 9 1/2   | 1.16            | 1.25 | 4.25  | 1.81 | 2.69 | 2.91 | 7.41            | 6          | 59.79       | 6-1-1/8"SPB |
| 1-1/4     | 12      | 1.29            | 1.38 | 4.69  | 2.03 | 3.00 | 3.25 | 9.50            | 5          | 80.18       | 6-1-1/4"SPB |
| 1-3/8     | 13 1/2  | 1.42            | 1.50 | 5.25  | 2.25 | 3.31 | 3.63 | 13.53           | 4          | 108.70      | 6-1-3/8"SPB |
| 1-1/2     | 17      | 1.54            | 1.63 | 5.75  | 2.38 | 3.63 | 3.88 | 17.20           | 3          | 139.05      | 6-1-1/2"SPB |
| 1-3/4     | 25      | 1.84            | 2.00 | 7.00  | 2.88 | 4.19 | 5.00 | 27.78           | 2          | 240.26      | 6-1-3/4"SPB |
| 2         | 35      | 2.08            | 2.25 | 7.75  | 3.25 | 4.81 | 5.75 | 45.00           | 2          | 384.54      | 6-2"SPB     |
| 2-1/2     | 55      | 2.71            | 2.75 | 10.50 | 4.13 | 5.69 | 7.25 | 85.75           | 1          | 746.50      | 6-2-1/2"SPB |

Note: Each production code represents the forging batch. All pins and bodies are interchangeable for that batch. Pin and Bodies are not interchangeable between alternate batches.



## SHACKLE - BOW, ANCHOR, WITH BOLT AND NUT YELLOW PIN®

Trademark - Yellow Pin® Shackle - Registration Number: TMA 862,758

### Identification / Marking:

Shackle Body:

- Name or trademark of manufacturer "OCEAN"
- Size
- WLL (Working Load Limit).

Shackle Bolt:

- Name of trademark of manufacturer "OC"
- Grade, material type "HS"
- Powder Coated "Yellow Pin®" for instant recognition

Additional Identification:

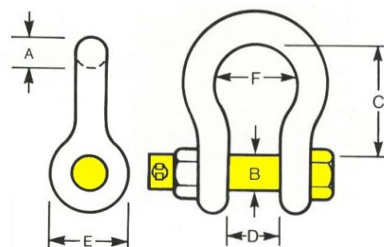
- Shackle Production Code
  - Traceable to certificate & material

### Manufacturing/Design Information:

- Manufactured to Federal Specification RR-C-271D, Type IVA, Grade A, Class 3.
- Meet and/or exceeds ASME B30.26
- Safety/Design Factor: 6:1
- Material: High Tensile Steel, Forged
  - Quenched and Tempered, Grade 6.

### Coating / Protection:

- Hot dip galvanized & yellow pin powder coated.



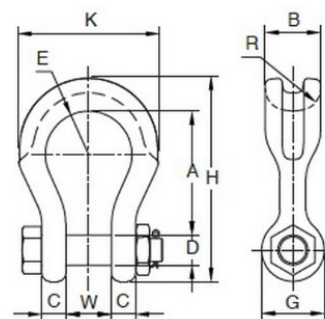
| Size (in) | WLL (t) | Dimensions (in) |      |       |      |      |      | Pin length (in) | Wt./ ea. (lb) | Qty. / Box | Price / ea. | Part Number |
|-----------|---------|-----------------|------|-------|------|------|------|-----------------|---------------|------------|-------------|-------------|
| A         | B       | C               | D    | E     | F    |      |      |                 |               |            |             |             |
| 1/4       | 1/2     | 0.25            | 0.31 | 1.13  | 0.47 | 0.61 | 0.78 | 1.56            | 0.11          | 500        | 3.05        | 6-1/4"SA    |
| 5/16      | 3/4     | 0.31            | 0.38 | 1.22  | 0.53 | 0.75 | 0.84 | 1.82            | 0.22          | 300        | 3.70        | 6-5/16"SA   |
| 3/8       | 1       | 0.38            | 0.44 | 1.44  | 0.66 | 0.91 | 1.03 | 2.17            | 0.33          | 200        | 5.03        | 6-3/8"SA    |
| 7/16      | 1-1/2   | 0.44            | 0.50 | 1.69  | 0.75 | 1.06 | 1.16 | 2.51            | 0.49          | 150        | 6.00        | 6-7/16"SA   |
| 1/2       | 2       | 0.50            | 0.64 | 1.88  | 0.81 | 1.19 | 1.31 | 2.80            | 0.79          | 80         | 7.63        | 6-1/2"SA    |
| 5/8       | 3 1/4   | 0.63            | 0.77 | 2.38  | 1.06 | 1.50 | 1.69 | 3.56            | 1.68          | 40         | 13.55       | 6-5/8"SA    |
| 3/4       | 4 3/4   | 0.75            | 0.89 | 2.81  | 1.25 | 1.81 | 2.00 | 4.15            | 2.72          | 25         | 21.08       | 6-3/4"SA    |
| 7/8       | 6 1/2   | 0.88            | 1.02 | 3.31  | 1.44 | 2.09 | 2.28 | 4.82            | 3.95          | 15         | 30.29       | 6-7/8"SA    |
| 1         | 8 1/2   | 1.00            | 1.15 | 3.75  | 1.69 | 2.38 | 2.69 | 5.39            | 5.66          | 10         | 44.08       | 6-1"SA      |
| 1-1/8     | 9 1/2   | 1.13            | 1.25 | 4.25  | 1.81 | 2.69 | 2.91 | 5.90            | 8.27          | 6          | 59.75       | 6-1-1/8"SA  |
| 1-1/4     | 12      | 1.29            | 1.40 | 4.69  | 2.03 | 3.00 | 3.25 | 6.69            | 11.71         | 5          | 80.18       | 6-1-1/4"SA  |
| 1-3/8     | 13 1/2  | 1.42            | 1.53 | 5.25  | 2.25 | 3.31 | 3.63 | 7.21            | 15.83         | 4          | 126.73      | 6-1-3/8"SA  |
| 1-1/2     | 17      | 1.53            | 1.66 | 5.75  | 2.38 | 3.63 | 3.88 | 7.73            | 20.80         | 3          | 149.70      | 6-1-1/2"SA  |
| 1-3/4     | 25      | 1.84            | 2.04 | 7.00  | 2.88 | 4.19 | 5.00 | 9.68            | 33.91         | 2          | 276.95      | 6-1-3/4"SA  |
| 2         | 35      | 2.08            | 2.30 | 7.75  | 3.25 | 4.81 | 5.75 | 10.81           | 52.25         | 2          | 431.32      | 6-2"SA      |
| 2-1/2     | 55      | 2.71            | 2.80 | 10.50 | 4.13 | 5.69 | 7.25 | 13.58           | 98.25         | 1          | 810.30      | 6-2-1/2"SA  |

Note: Each production code represents the forging batch. All pins and bodies are interchangeable for that batch. Pin and Bodies are not interchangeable between alternate batches.

SEE WARNING AND APPLICATION INFORMATION AT END OF SHACKLE SECTION

## SHACKLE - WIDE BODY SLING, WITH BOLT AND NUT, YOKE® BRAND

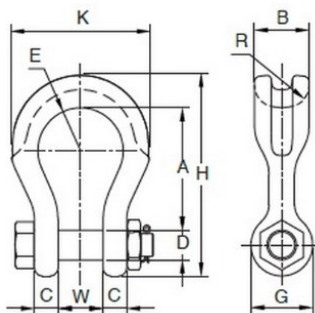
- Material: Forged Alloy Steel with Alloy Pins/Bolts
- Standard: RR-C-271F, EN 13889
- Finish: Body: Powder Coated Blue, Bolt/Pin: Galvanized
- Design Factor: 5.4:1 (Ultimate Load)
- Identification: Trademark, Size/WLL, Batch Code
- 100% Magnaflux crack detection during manufacturing
- 20,000 cycle fatigue rated to 1.5 times working load limit



| Size (in) | WLL (t) | Dimensions (in) |      |      |      |      |      |      |      |      |      | Wt./ea. (lb) | Price / ea. | Part Number |
|-----------|---------|-----------------|------|------|------|------|------|------|------|------|------|--------------|-------------|-------------|
| A         | B       | C               | D    | E    | G    | H    | K    | R    | W    |      |      |              |             |             |
| 1         | 12.5    | 4.64            | 2.12 | 0.91 | 1.14 | 1.61 | 2.40 | 7.64 | 5.51 | 1.38 | 1.73 | 8.4          | 279.25      | 28-809-26   |
| 1-1/4     | 18      | 5.83            | 2.52 | 1.18 | 1.42 | 2.00 | 2.68 | 9.37 | 6.77 | 1.50 | 2.13 | 15           | 405.49      | 28-809-32   |

## SHACKLE - WIDE BODY SLING, WITH BOLT AND NUT GREEN PIN®

- Material: Bow and pin alloy steel, Grade 8, quenched and tempered
- Standard: RR-C-271F, EN 13889
- Finish: Bow: Painted Silver, Bolt: Painted Green
- Design Factor: 5:1
- Identification: Trademark, Size/WLL, Batch Code
- Temperature Range: -20°C up to +200°C
- Van Beest is certified by DNV to DNV 2.7-1
- Van Beest mill in Holland is approved to DNV, ABS, Lloyd's & Germanischer Lloyd

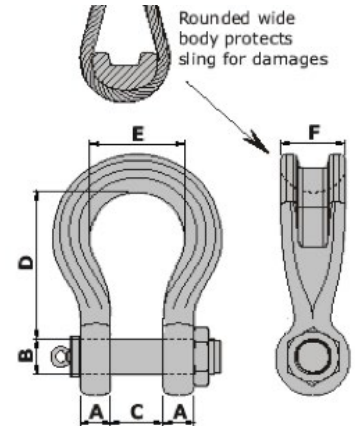


| Item   | WLL<br>(t) | Dimensions (mm) |     |    |    |     |     |     |     |    | Wt./ea.<br>(kg) | Price<br>/ ea. | Part Number |
|--------|------------|-----------------|-----|----|----|-----|-----|-----|-----|----|-----------------|----------------|-------------|
|        |            | A               | B   | C  | D  | E   | G   | H   | K   | W  |                 |                |             |
| P-6033 | 55         | 240             | 100 | 55 | 57 | 160 | 115 | 389 | 270 | 90 | 30              | 4750.24        | 25-55SS     |

SEE WARNING AND APPLICATION INFORMATION AT END OF SHACKLE SECTION

## SHACKLE - SLING PROTECTOR, WITH BOLT AND NUT, GN®

- Material: Bow and pin alloy steel, quenched and tempered
- Standard: RR-C-271F, EN 13889
- Finish: Bow: Painted Grey
- Design Factor: 5:1
- Identification: Trademark, Size/WLL, Batch Code
- Certification: MPI, US, Witness DNV, Lloyd's, ABS, BV, etc. (on request)
- Temperature Range: -20°C up to +200°C
- Charpy impact testing performed at -40°C

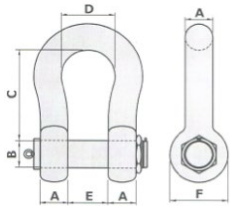


### Rated in Metric Ton(s)

| WLL<br>(t) | Dimensions (mm) |     |     |      |     |     | Wt./ea.<br>(kg) | Price<br>/ ea.        | Part Number |
|------------|-----------------|-----|-----|------|-----|-----|-----------------|-----------------------|-------------|
|            | A               | B   | C   | D    | E   | F   |                 |                       |             |
| 75         | 70              | 70  | 105 | 290  | 185 | 120 | 45              | 5806.83               | 116-75WBS   |
| 125        | 80              | 80  | 130 | 365  | 220 | 150 | 120             | 10111.82              | 116-125WBS  |
| 150        | 90              | 95  | 140 | 390  | 250 | 170 | 160             | 14817.58              | 116-150WBS  |
| 200        | 105             | 105 | 150 | 480  | 275 | 205 | 230             | 17965.80              | 116-200WBS  |
| 250        | 110             | 120 | 170 | 550  | 300 | 240 | 320             | Pricing on<br>Request | 116-250WBS  |
| 300        | 140             | 134 | 185 | 600  | 350 | 265 | 340             |                       | 116-300WBS  |
| 400        | 160             | 160 | 220 | 600  | 370 | 320 | 620             |                       | 116-400WBS  |
| 500        | 170             | 180 | 250 | 650  | 450 | 340 | 800             |                       | 116-500WBS  |
| 600        | 180             | 200 | 275 | 720  | 490 | 370 | 960             |                       | 116-600WBS  |
| 700        | 200             | 215 | 300 | 750  | 540 | 400 | 1250            |                       | 116-700WBS  |
| 800        | 220             | 230 | 325 | 780  | 555 | 420 | 1400            |                       | 116-800WBS  |
| 900        | 238             | 250 | 350 | 850  | 585 | 440 | 2100            |                       | 116-900WBS  |
| 1000       | 240             | 270 | 380 | 850  | 615 | 460 | 2200            |                       | 116-1000WBS |
| 1250       | 260             | 300 | 430 | 930  | 645 | 530 | 2800            |                       | 116-1250WBS |
| 1500       | 280             | 320 | 460 | 950  | 680 | 560 | 3300            | 116-1500WBS           |             |
| 2000       | 320             | 385 | 500 | 1050 | 680 | 600 | 4800            | 116-2000WBS           |             |

SEE WARNING AND APPLICATION INFORMATION AT END OF SHACKLE SECTION

## SHACKLE - BOW, WITH BOLT AND NUT, GN®



### Type H9 & H10

- Material:  $\leq 120$  t: Forged High Tensile Steel.  
 $> 120$  t: Forged High Alloy Steel Bow and pin alloy steel, quenched and tempered
- Standard: RR-C-271F, EN 13889
- Finish: Painted Gray

- Design Factor:  $\leq 85$  t: 6:1.  $> 85$  t: 5:1.
- Identification: Trademark, Size/WLL, Batch Code
- Temperature Range:  $-40^{\circ}\text{C}$  up to  $+200^{\circ}\text{C}$
- Charpy impact testing performed at  $-40^{\circ}\text{C}$
- Rated in Metric Ton(s)

Tolerance  $\pm 5\%$

| WLL (t) | Design Factor | Dimensions (mm) |     |     |     |     |     | Wt./ea. (kg) | Price / ea.        | Part Number |
|---------|---------------|-----------------|-----|-----|-----|-----|-----|--------------|--------------------|-------------|
| A       | B             | C               | D   | E   | F   |     |     |              |                    |             |
| 25      | 6:1           | 45              | 50  | 178 | 126 | 74  | 104 | 13           | Pricing on Request | 116-25SA    |
| 35      | 6:1           | 50              | 57  | 197 | 138 | 83  | 119 | 18           |                    | 116-35SA    |
| 42.5    | 6:1           | 57              | 65  | 220 | 160 | 95  | 134 | 26           |                    | 116-42.5SA  |
| 55      | 6:1           | 65              | 70  | 260 | 180 | 105 | 145 | 35           |                    | 116-55SA    |
| 85      | 6:1           | 75              | 83  | 330 | 190 | 127 | 163 | 53           |                    | 116-85SA    |
| 120     | 5:1           | 89              | 95  | 381 | 238 | 150 | 200 | 110          | 5545.58            | 116-120SA   |
| 150     | 5:1           | 102             | 108 | 400 | 275 | 170 | 230 | 160          | 8775.43            | 116-150SA   |
| 200     | 5:1           | 120             | 125 | 500 | 290 | 180 | 260 | 235          | 13146.30           | 116-200SA   |
| 250     | 5:1           | 125             | 140 | 540 | 305 | 200 | 260 | 285          | Pricing on Request | 116-250SA   |
| 300     | 5:1           | 135             | 150 | 600 | 305 | 200 | 305 | 340          |                    | 116-300SA   |
| 400     | 5:1           | 165             | 175 | 650 | 325 | 225 | 350 | 560          |                    | 116-400SA   |
| 500     | 5:1           | 175             | 185 | 700 | 350 | 250 | 370 | 685          |                    | 116-500SA   |
| 600     | 5:1           | 195             | 205 | 700 | 375 | 275 | 405 | 880          |                    | 116-600SA   |
| 700     | 5:1           | 205             | 215 | 700 | 400 | 300 | 435 | 980          |                    | 116-700SA   |
| 800     | 5:1           | 210             | 220 | 700 | 400 | 300 | 435 | 1100         |                    | 116-800SA   |
| 900     | 5:1           | 220             | 230 | 700 | 420 | 320 | 465 | 1280         |                    | 116-900SA   |
| 1000    | 5:1           | 230             | 240 | 700 | 420 | 340 | 480 | 1460         |                    | 116-1000SA  |

### Cold Temperature application – General Information

There has been a lot of discussion in recent months about cold temperature shackles. There is a misconception that if a shackle complies with DNV 2.7-1 it is certified for cold temperature use and conforms to CAPP requirements. Use web site

(<http://exchange.dnv.com/publishing/StdCert/Standard2-7-1.pdf>) to obtain a copy of DNV 2.7-1. DNV rules are written for the world not just the cold areas therefore why would a shackle used in the tropics have to have a cold temperature rating. DNV's material requirement is to have a minimum Charpy impact testing at the design working temperature see section 8.4. Make sure the shackle you are using has actually been tested at the working temperature you are using them. Most areas of Canada are going to require a temperature of minus  $40^{\circ}\text{C}$  and achieving a 42 jewel impact result. These parameters and results should be stated on

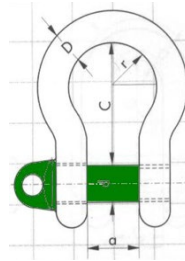
documentation, identification marking should link all documentation to the individual product. Based on EN10204 (3.1 or 3.2) primary and incoming material can be tested for standard compliance (section 4). Both of these standards are a requirement for CAPP. Be informed to make sure your inspection and documentation matches your client's expectations. We have two manufacturers who comply with DNV for Cold temperature results at  $-40^{\circ}\text{C}$ , Van Beest (Polar shackle) and GN Rope Fittings. Also has shackles certified to DNV standards however not for cold temperature applications. We are able for an additional charge perform extra 3<sup>rd</sup> party laboratory testing on our stock lots should additional testing be required, these would be added as an appendix to the manufacturer's certificate of compliance and EN 10204 certificate that can be traced to the lot production.



- Made in Holland
- All shackles can be supplied with 3.1-B certificates
- Van Beest is certified by DNV to DNV 2.7-1
- Van Beest mill in Holland is approved to DNV, ABS, Lloyd's & Germanischer Lloyd

## SHACKLE - BOW, ANCHOR, WITH SCREW GREEN PIN®

- Material: High Tensile Steel, Grade 6, quenched and tempered
- Standard: RR-C-271F, EN 13889
- Finish: Bow: Galvanized, Pin: Painted Green
- Design Factor: 6:1
- Identification: Trademark, Size/WLL, Batch Code
- Temperature Range: -40°C up to +200°C
- Rated in Metric Ton(s)



| Item   | WLL (t) | Size (in) | A (mm) | C (mm) | D (mm) | d (mm) | 2r (mm) | Wt./ea. (kg) | Price / ea. | Part Number |
|--------|---------|-----------|--------|--------|--------|--------|---------|--------------|-------------|-------------|
| G-4161 | 0.33    | 3/16      | 9.5    | 22     | 5      | 6      | 16      | 0.02         | 9.31        | 25-.33SP    |
| G-4161 | 0.5     | 1/4       | 12     | 29     | 7      | 8      | 20      | 0.06         | 9.60        | 25-.5SP     |
| G-4161 | 0.75    | 5/16      | 13.5   | 32     | 9      | 10     | 21      | 0.11         | 10.78       | 25-.75SP    |
| G-4161 | 1       | 3/8       | 17     | 36.5   | 10     | 11     | 26      | 0.15         | 12.78       | 25-1SP      |
| G-4161 | 1.5     | 7/16      | 18.5   | 43     | 11     | 12     | 29      | 0.21         | 16.25       | 25-1.5SP    |
| G-4161 | 2       | 1/2       | 22     | 51     | 13.5   | 16     | 32      | 0.37         | 27.17       | 25-2SP      |
| G-4161 | 3.25    | 5/8       | 27     | 64     | 16     | 19     | 43      | 0.65         | 42.45       | 25-3.25SP   |
| G-4161 | 4.75    | 3/4       | 31     | 76     | 19     | 22     | 51      | 1.06         | 63.69       | 25-4.75SP   |
| G-4161 | 6.5     | 7/8       | 36     | 83     | 22     | 25     | 58      | 1.56         | 95.69       | 25-6.5SP    |
| G-4161 | 8.5     | 1         | 43     | 95     | 25     | 28     | 68      | 2.32         | 121.12      | 25-8.5SP    |
| G-4161 | 9.5     | 1 1/8     | 47     | 108    | 28     | 32     | 75      | 3.28         | 192.62      | 25-9.5SP    |
| G-4161 | 12      | 1 1/4     | 51     | 115    | 32     | 35     | 83      | 4.51         | 254.47      | 25-12SP     |
| G-4161 | 13.5    | 1 3/8     | 57     | 133    | 35     | 38     | 92      | 5.93         | 286.05      | 25-13.5SP   |
| G-4161 | 17      | 1 1/2     | 60     | 146    | 38     | 42     | 99      | 7.89         | 416.05      | 25-17SP     |
| G-4161 | 25      | 1 3/4     | 74     | 178    | 45     | 50     | 126     | 13.40        | 689.54      | 25-25SP     |
| G-4161 | 35      | 2         | 83     | 197    | 50     | 57     | 138     | 18.85        | 884.67      | 25-35SP     |
| G-4161 | 55      | 2-1/2     | 105    | 266.5  | 65     | 70     | 180     | 37.86        | 1794.40     | 25-55SP     |

SEE WARNING AND APPLICATION INFORMATION AT END OF SHACKLE SECTION

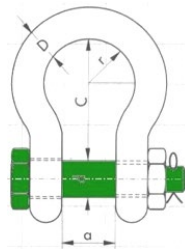




- Made in Holland
- All shackles can be supplied with 3.1-B certificates
- Van Beest is certified by DNV to DNV 2.7-1
- Van Beest mill in Holland is approved to DNV, ABS, Lloyd's & Germanischer Lloyd

## SHACKLE - BOW, ANCHOR, WITH BOLT AND NUT GREEN PIN®

- Material: High Tensile Steel, Grade 6, quenched and tempered
- Standard: RR-C-271F, EN 13889
- Finish: Bow: Galvanized, Bolt: Painted Green
- Design Factor: 6:1
- Identification: Trademark, Size/WLL, Batch Code
- Temperature Range: -40°C up to +200°C
- Rated in Metric Ton(s)



| Item   | WLL (t) | Size (in) | a (mm) | C (mm) | D (mm) | d-pin (mm) | 2r (mm) | Wt./ea. (kg) | Price / ea. | Part Number |
|--------|---------|-----------|--------|--------|--------|------------|---------|--------------|-------------|-------------|
| G-4163 | 0.75    | 5/16      | 13.5   | 32     | 9      | 10         | 22      | 0.11         | 12.58       | 25-.75SA    |
| G-4163 | 1       | 3/8       | 17     | 36.5   | 10     | 11         | 26      | 0.16         | 14.12       | 25-1SA      |
| G-4163 | 1.5     | 7/16      | 19     | 43     | 11     | 13         | 14.5    | 0.22         | 16.22       | 25-1.5SA    |
| G-4163 | 2       | 1/2       | 22     | 51     | 13.5   | 16         | 32      | 0.44         | 28.29       | 25-2SA      |
| G-4163 | 3.25    | 5/8       | 27     | 64     | 16     | 19         | 43      | 0.79         | 46.69       | 25-3.25SA   |
| G-4163 | 4.75    | 3/4       | 31     | 76     | 19     | 22         | 51      | 1.26         | 70.43       | 25-4.75SA   |
| G-4163 | 6.5     | 7/8       | 36     | 83     | 22     | 25         | 58      | 1.88         | 98.18       | 25-6.5SA    |
| G-4163 | 8.5     | 1         | 43     | 95     | 25     | 28         | 68      | 2.78         | 134.98      | 25-8.5SA    |
| G-4163 | 9.5     | 1 1/8     | 47     | 108    | 28     | 32         | 75      | 3.87         | 189.86      | 25-9.5SA    |
| G-4163 | 12      | 1 1/4     | 51     | 115    | 32     | 35         | 83      | 5.26         | 291.79      | 25-12SA     |
| G-4163 | 13.5    | 1 3/8     | 57     | 133    | 35     | 38         | 92      | 6.94         | 322.00      | 25-13.5SA   |
| G-4163 | 17      | 1 1/2     | 60     | 146    | 38     | 42         | 99      | 8.79         | 438.67      | 25-17SA     |
| G-4163 | 25      | 1 3/4     | 74     | 178    | 45     | 50         | 126     | 14.99        | 708.75      | 25-25SA     |
| G-4163 | 35      | 2         | 83     | 197    | 50     | 57         | 138     | 20.65        | 875.28      | 25-35SA     |
| G-4163 | 42.5    | 2 1/4     | 95     | 222    | 57     | 65         | 160     | 28.3         | 1452.77     | 25-42.5SA   |
| G-4163 | 55      | 2 1/2     | 105    | 260    | 65     | 70         | 180     | 41.05        | 1823.69     | 25-55SA     |
| G-4163 | 85      | 3         | 127    | 330    | 75     | 83         | 190     | 62.24        | 2691.52     | 25-85SA     |

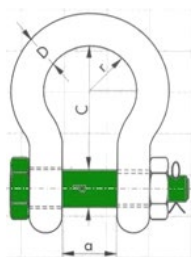
SEE WARNING AND APPLICATION INFORMATION AT END OF SHACKLE SECTION



- Made in Holland
- All shackles can be supplied with 3.1-B certificates
- Van Beest is certified by DNV to DNV 2.7-1
- Van Beest mill in Holland is approved to DNV, ABS, Lloyd's & Germanischer Lloyd

## SHACKLE - SUPER BOW, ANCHOR, WITH BOLT AND NUT GREEN PIN®

- Material: High Strength Alloy Steel, Grade 8, quenched and tempered
- Standard: RR-C-271F, EN 13889
- Finish: Bow: Galvanized, Bolt: Painted Green
- Design Factor: 5:1
- Identification: Trademark, Size/WLL, Batch Code
- Temperature Range: -20°C up to +200°C
- Rated in Metric Ton(s)



| Item   | WLL (t) | Trade Size (in) | a (mm) | C (mm) | D (mm) | d (mm) | 2r (mm) | Wt./ea. (kg) | Price / ea. | Part Number   |
|--------|---------|-----------------|--------|--------|--------|--------|---------|--------------|-------------|---------------|
| G-5263 | 30      | 1-1/2           | 60     | 146    | 38     | 42     | 99      | 8.79         | 956.12      | 25-30SUPERSA  |
| G-5263 | 40      | 1-3/4           | 74     | 178    | 45     | 50     | 126     | 15           | 1507.03     | 25-40SUPERSA  |
| G-5263 | 55      | 2               | 83     | 197    | 57     | 57     | 138     | 22           | 2165.13     | 25-55SUPERSA  |
| G-5263 | 85      | 2-1/2           | 105    | 260    | 70     | 70     | 180     | 42           | 3339.99     | 25-85SUPERSA  |
| G-5263 | 120     | 3               | 127    | 329    | 83     | 83     | 190     | 70           | 5149.19     | 25-120SUPERSA |
| G-5263 | 150     | 3-3/4           | 147    | 400    | 95     | 95     | 238     | 112          | 10535.62    | 25-150SUPERSA |

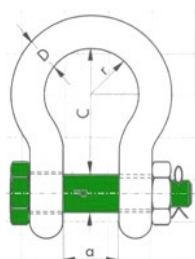
SEE WARNING AND APPLICATION INFORMATION AT END OF SHACKLE SECTION



- Made in Holland
- All shackles can be supplied with 3.1-B certificates
- Van Beest is certified by DNV to DNV 2.7-1
- Van Beest mill in Holland is approved to DNV, ABS, Lloyd's & Germanischer Lloyd

## SHACKLE - WIDE MOUTH BOW, WITH BOLT AND NUT GREEN PIN®

- Material: High Strength Alloy Steel, Grade 8, quenched and tempered
- Standard: RR-C-271F, EN 13889
- Finish: Bow: Galvanized, Bolt: Painted Green
- Design Factor: 6:1
- Identification: Trademark, Size/WLL, Batch Code
- Temperature Range: -20°C up to +200°C
- Rated in Metric Ton(s)



| Item   | WLL (t)<br>(towing) | Size<br>(in) | a<br>(mm) | C<br>(mm) | D<br>(mm) | d - pin<br>(mm) | 2r<br>(mm) | Wt./ea.<br>(kg) | Price<br>/ ea. | Part Number |
|--------|---------------------|--------------|-----------|-----------|-----------|-----------------|------------|-----------------|----------------|-------------|
| G-4463 | 22                  | 1-1/2        | 106       | 216       | 38        | 42              | 159        | 12.5            | 1048.14        | 25-22WMTS   |
| G-4463 | 30                  | 1-3/4        | 127       | 248       | 45        | 50              | 175        | 18              | 1450.44        | 25-30WMTS   |

Van Beest Wide Mouth **Towing** Shackle to be used with correct loading across pin

| Item   | WLL (t)<br>(lifting) | Size<br>(in) | a<br>(mm) | C<br>(mm) | D<br>(mm) | d - pin<br>(mm) | 2r<br>(mm) | Wt./ea.<br>(kg) | Price<br>/ ea. | Part Number |
|--------|----------------------|--------------|-----------|-----------|-----------|-----------------|------------|-----------------|----------------|-------------|
| G-4263 | 16                   | 1-1/2        | 106       | 216       | 38        | 42              | 159        | 12.5            | 1048.14        | 25-16WMS    |
| G-4263 | 25                   | 1-3/4        | 127       | 248       | 45        | 50              | 175        | 18              | 1450.44        | 25-25WMS    |
| G-4263 | 30                   | 2            | 146       | 273       | 50        | 57              | 207        | 25              | 2169.83        | 25-30WMS    |

Van Beest Wide Mouth **Lifting** Shackle to be used with correct loading across pin

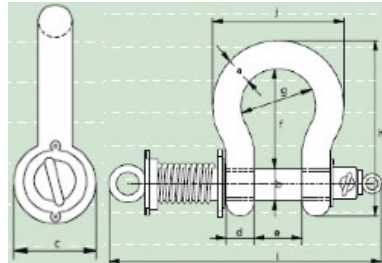
SEE WARNING AND APPLICATION INFORMATION AT END OF SHACKLE SECTION



- Made in Holland
- All shackles can be supplied with 3.1-B certificates
- Van Beest is certified by DNV to DNV 2.7-1
- Van Beest mill in Holland is approved to DNV, ABS, Lloyd's & Germanischer Lloyd

## SHACKLE - ROV SPRING RELEASE BOW, POLAR, WITH GREEN PIN®

- Material: Alloy Steel, Grade 8, Polar, quenched and tempered
- Standard: RR-C-271F, EN 13889
- Finish: Bow: Painted White, Bolt: Painted Green
- Design Factor: 5:1
- Identification: Trademark, Size/WLL, Batch Code
- Temperature Range: -40°C up to +200°C
- Rated in Metric Ton(s)
- Note: For in-line use only! This shackle is assembled with rope slings and monkey's fist for size starting from WLL 42.5 up to and including 150T a special mounting tool (tensioner) is required to assemble the shackle.



| Item   | WLL (t) | Dimensions (mm) |     |     |     |     |     |     |     |     |     | Wt./ea. (kg) |
|--------|---------|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------------|
|        |         | a               | b   | c   | d   | e   | f   | g   | h   | i   | j   |              |
| P-5367 | 12      | 32              | 35  | 72  | 32  | 51  | 115 | 83  | 201 | 262 | 147 | 6            |
| P-5367 | 13.5    | 35              | 38  | 80  | 35  | 57  | 133 | 92  | 227 | 275 | 162 | 7            |
| P-5367 | 17      | 38              | 42  | 88  | 38  | 60  | 146 | 99  | 249 | 330 | 175 | 14           |
| P-5367 | 25      | 45              | 50  | 103 | 45  | 74  | 178 | 126 | 300 | 352 | 216 | 16           |
| P-5367 | 35      | 50              | 57  | 116 | 50  | 83  | 197 | 138 | 334 | 373 | 238 | 21           |
| P-5367 | 42.5    | 57              | 65  | 130 | 57  | 95  | 222 | 160 | 377 | 442 | 274 | 32           |
| P-5367 | 55      | 65              | 70  | 145 | 65  | 105 | 260 | 180 | 433 | 470 | 310 | 43           |
| P-5367 | 85      | 75              | 83  | 162 | 73  | 127 | 329 | 190 | 527 | 579 | 340 | 71           |
| P-5367 | 120     | 95              | 95  | 208 | 91  | 147 | 399 | 238 | 646 | 674 | 428 | 131          |
| P-5367 | 150     | 105             | 108 | 238 | 102 | 169 | 410 | 275 | 688 | 699 | 485 | 171          |

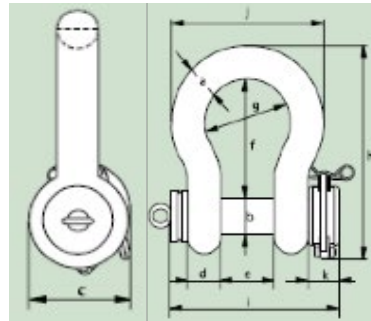




- Made in Holland
- All shackles can be supplied with 3.1-B certificates
- Van Beest is certified by DNV to DNV 2.7-1
- Van Beest mill in Holland is approved to DNV, ABS, Lloyd's & Germanischer Lloyd

## SHACKLE - ROV LOCKING CLAMP RELEASE BOW, POLAR, WITH GREEN PIN®

- Material: Alloy Steel, Grade 8, Polar, quenched and tempered
- Standard: RR-C-271F, EN 13889
- Finish: Bow: Painted White, Bolt: Painted Green
- Design Factor: 6:1
- Identification: Trademark, Size/WLL, Batch Code
- Temperature Range: -60°C up to +200°C
- Rated in Metric Ton(s)
- Note: It is up to the user to attach the locking clamp with wire ropes etc. and attaching loops or monkey's fists. Van Beest supplies the shackle body, the shackle pin and locking clamp with spring pin.



| Item   | WLL (t) | Dimensions (mm) |    |     |    |     |     |     |     |     |     |    | Wt./ea. (kg) |
|--------|---------|-----------------|----|-----|----|-----|-----|-----|-----|-----|-----|----|--------------|
|        |         | a               | b  | c   | d  | e   | f   | g   | h   | i   | j   | k  |              |
| P-5365 | 17      | 38              | 42 | 88  | 38 | 60  | 146 | 99  | 250 | 217 | 175 | 48 | 8.19         |
| P-5365 | 25      | 45              | 50 | 103 | 45 | 74  | 178 | 126 | 300 | 250 | 216 | 48 | 14.22        |
| P-5365 | 55      | 65              | 70 | 145 | 65 | 105 | 260 | 180 | 433 | 330 | 310 | 48 | 39.59        |
| P-5365 | 85      | 75              | 83 | 162 | 73 | 127 | 329 | 190 | 527 | 380 | 340 | 48 | 62           |





## ⚠ SHACKLE - WARNINGS AND APPLICATIONS

Side and symmetrical loading data applies to screw pin and bolt nut cotter shackles only!

Side and symmetrical loading not permitted on round pin shackles.

### Angles of Side Load

0° - In-Line - 100 % of rated WLL (Working Load Limit)

45° - From In-Line - 70% of rated WLL

90° - From In-Line - 50% of rated WLL

### Symmetrical Loading

Shackles symmetrically loaded with two legs at a maximum angle of 120° can be used to full Working Load Limit.

- For permanent or long term installation always use nut and cotter.
- Shackle must be large enough to avoid pinching or bunching of synthetic slings.
- Diameter of shackle must be greater than wire rope diameter if no thimble in eye.
- Mouse screw pin when used in long term or high vibration applications.

### Shackles should be inspected before use to ensure that:

- All markings are legible.
- The body and pin are both identifiable as being of the same size, type and make.
- The threads of the pin and the body are undamaged.
- Never use a safety bolt type shackle without using the cotter pin.
- The body and the pin are not distorted or worn.

- The body and pin are free from nicks, gouges, cracks and corrosion
- Shackles may not be heat treated as this may affect their Working Load Limit.
- Never modify, repair or reshape a shackle by welding, heating or bending as this will affect the Working Load Limit.

### Assembly

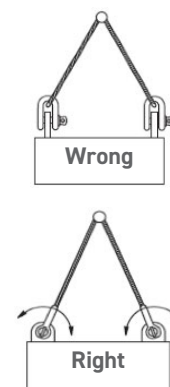
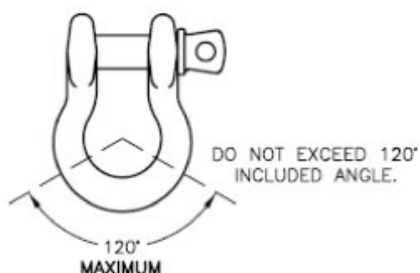
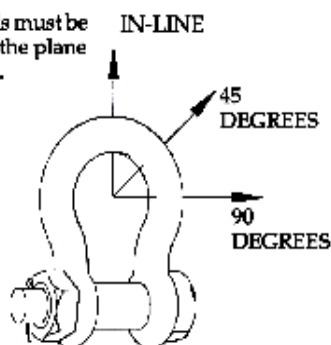
Ensure that the pin is correctly screwed into the shackle eye, i.e. tighten hand tight, and then secure using a wrench or other suitable tool so that the collar of the pin is fully seated on the shackle eye. Ensure that the pin is of the correct length so that it penetrates the full depth of the screwed eye and allows the collar of the pin to seat on the surface of the shackle eye.

Incorrect seating of the pin may be due to a bent pin, too tight fitting thread or misalignment of the pin holes. Do not use the shackle under these circumstances. Never replace a shackle pin except with one of the same size, type and make as it may not be suitable for the loads imposed.

Select the correct type of shackle and its Working Load Limit for the particular application. Should extreme circumstances or shock loading be applicable, this must be taken into account on selecting the correct shackle. Please note that commercial shackles are not to be used for lifting applications.

Make sure that the shackle is supporting the load correctly, i.e. along the axis of the shackle body centerline, avoid introduction of bending loads, unstable loads and do not overload.

Angle loads must be applied in the plane of the bow.



### IMPROPER USE OR CARE OF SHACKLES CAN RESULT IN BODILY INJURY OR PROPERTY DAMAGE!

- TO AVOID INJURY OR PROPERTY DAMAGE;
- DO NOT EXCEED THE WLL (WORKING LOAD LIMIT)
- DO NOT SHOCK LOAD
- DO NOT SIDE LOAD - CENTRE LINE OF THE LOAD MUST COINCIDE WITH CENTRE LINE OF SHACKLE
- DO NOT REPLACE PIN OR BOLT WITH OTHER THAN ORIGINAL EQUIPMENT
- INSPECT BEFORE USE FOR WEAR, DEFORMATION, AND PIN ENGAGEMENT
- INSPECT SHACKLES BEFORE EACH USE AS OUTLINES IN ASME B30.26

## TURNBUCKLE - JAW & JAW, GALVANIZED

®Trademark - Yellow Attached End Fitting Turnbuckle Design - Registration - ®TMA 796,844

### Manufacturing/Design Information:

- Manufactured to: Federal Specification FF-T791B, ASTM F1145, Type 1, Form 1 - Class 7 (G)
- Meet and/or exceeds: ASME B30.26
- Safety/Design Factor: 5:1
- Forged – Quenched and Tempered (Ends), Normalizing (Body)

### Coating / Protection:

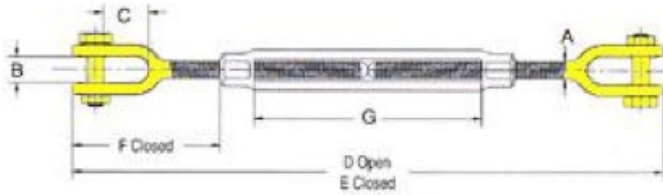
- Hot dip galvanized & yellow powder coated

### Identification / Marking:

- Name or trademark of manufacturer "OCEAN / OC"
- Size or rated load
- "Yellow" for instant recognition
- Additional Identification:  
Production Code – Traceable to certificate & material



- Ends: Sizes 1/4" through 1/2" c/w nut & bolt
- Sizes 5/8" through 2-3/4" c/w pin & cotter
- Body/Thread: All sizes provided with Lock Nuts

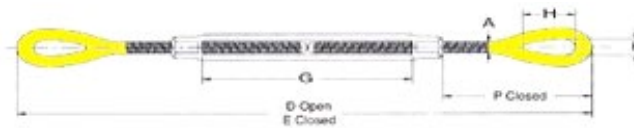
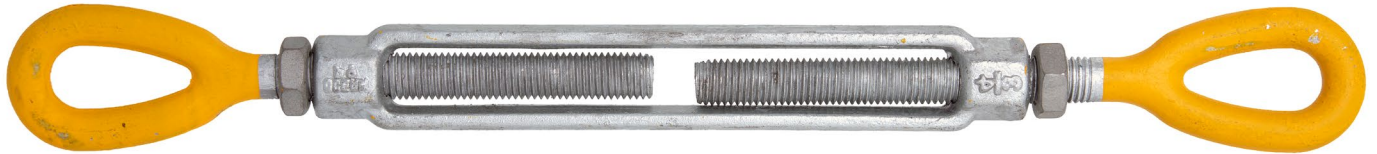


| Thread Dia & Take Up (in x in) | WLL (lb) | Wt./ea. (lb) | Dimensions (in) |          |          |       |       |       |       | Pin Dia. | Price / ea. | Part Number    |
|--------------------------------|----------|--------------|-----------------|----------|----------|-------|-------|-------|-------|----------|-------------|----------------|
| A                              | B        | C            | D Open          | E Closed | F Closed | G     |       |       |       |          |             |                |
| 1/4 x 4                        | 500      | 0.36         | 0.25            | 0.41     | 0.62     | 11.90 | 7.90  | 1.58  | 4.00  | 0.24     | 9.21        | 6-1/4X4JJ      |
| 5/16 x 4 1/2                   | 800      | 0.52         | 0.31            | 0.47     | 0.87     | 13.90 | 9.40  | 1.98  | 4.50  | 0.24     | 10.42       | 6-5/16X4 1/2JJ |
| 3/8 x 6                        | 1200     | 0.81         | 0.38            | 0.50     | 0.87     | 17.38 | 11.38 | 2.12  | 6.00  | 0.31     | 13.28       | 6-3/8X6JJ      |
| 1/2 x 6                        | 2200     | 1.50         | 0.50            | 0.63     | 1.06     | 19.00 | 13.00 | 2.75  | 6.00  | 0.39     | 19.59       | 6-1/2X6JJ      |
| 1/2 x 9                        | 2200     | 1.74         | 0.50            | 0.63     | 1.06     | 25.00 | 16.00 | 2.75  | 9.00  | 0.39     | 22.58       | 6-1/2X9JJ      |
| 1/2 x 12                       | 2200     | 2.40         | 0.50            | 0.63     | 1.06     | 31.00 | 19.00 | 2.75  | 12.00 | 0.39     | 32.11       | 6-1/2X12JJ     |
| 5/8 x 6                        | 3500     | 2.72         | 0.63            | 0.75     | 1.31     | 20.88 | 14.88 | 3.50  | 6.00  | 0.5      | 32.53       | 6-5/8X6JJ      |
| 5/8 x 9                        | 3500     | 3.24         | 0.63            | 0.75     | 1.31     | 26.88 | 17.88 | 3.50  | 9.00  | 0.5      | 38.15       | 6-5/8X9JJ      |
| 5/8 x 12                       | 3500     | 3.74         | 0.63            | 0.75     | 1.31     | 32.88 | 20.88 | 3.50  | 12.00 | 0.5      | 43.72       | 6-5/8X12JJ     |
| 3/4 x 6                        | 5200     | 4.11         | 0.75            | 0.94     | 1.50     | 22.60 | 16.60 | 4.18  | 6.00  | 0.62     | 44.96       | 6-3/4X6JJ      |
| 3/4 x 9                        | 5200     | 5.10         | 0.75            | 0.94     | 1.50     | 28.60 | 19.60 | 4.18  | 9.00  | 0.62     | 47.76       | 6-3/4X9JJ      |
| 3/4 x 12                       | 5200     | 6.65         | 0.75            | 0.94     | 1.50     | 34.60 | 22.60 | 4.18  | 12.00 | 0.62     | 62.70       | 6-3/4X12JJ     |
| 3/4 x 18                       | 5200     | 7.00         | 0.75            | 0.94     | 1.50     | 46.60 | 28.60 | 4.18  | 18.00 | 0.62     | 78.25       | 6-3/4X18JJ     |
| 7/8 x 12                       | 7200     | 8.17         | 0.88            | 1.13     | 1.75     | 36.32 | 24.32 | 4.85  | 12.00 | 0.75     | 94.80       | 6-7/8X12JJ     |
| 7/8 x 18                       | 7200     | 10.78        | 0.88            | 1.13     | 1.75     | 48.32 | 30.32 | 4.85  | 18.00 | 0.75     | 101.81      | 6-7/8X18JJ     |
| 1 x 6                          | 10 000   | 10.18        | 1.00            | 1.19     | 2.06     | 26.06 | 20.06 | 5.53  | 6.00  | 0.88     | 90.42       | 6-1X6JJ        |
| 1 x 12                         | 10 000   | 12.00        | 1.00            | 1.19     | 2.06     | 38.06 | 26.06 | 5.53  | 12.00 | 0.88     | 131.95      | 6-1X12JJ       |
| 1 x 18                         | 10 000   | 14.00        | 1.00            | 1.19     | 2.06     | 50.06 | 32.06 | 5.53  | 18.00 | 0.88     | 161.67      | 6-1X18JJ       |
| 1 x 24                         | 10 000   | 17.00        | 1.00            | 1.19     | 2.06     | 62.06 | 38.06 | 5.53  | 24.00 | 0.88     | 190.50      | 6-1X24JJ       |
| 1-1/4 x 12                     | 15 200   | 20.59        | 1.25            | 1.75     | 2.81     | 42.54 | 29.54 | 7.21  | 12.00 | 1.1      | 240.69      | 6-1-1/4X12JJ   |
| 1-1/4 x 18                     | 15 200   | 24.25        | 1.25            | 1.75     | 2.81     | 53.54 | 35.54 | 7.21  | 18.00 | 1.1      | 271.80      | 6-1-1/4X18JJ   |
| 1-1/4 x 24                     | 15 200   | 28.20        | 1.25            | 1.75     | 2.81     | 68.04 | 41.54 | 7.21  | 24.00 | 1.1      | 289.68      | 6-1-1/4X24JJ   |
| 1-1/2 x 12                     | 21 400   | 32.6         | 1.50            | 2.06     | 2.81     | 45.68 | 33.68 | 8.93  | 12.00 | 1.38     | 361.90      | 6-1-1/2X12JJ   |
| 1 1/2 x 18                     | 21 400   | 36.75        | 1.50            | 2.06     | 2.81     | 58.50 | 37.50 | 7.88  | 18.00 | 1.38     | 377.83      | 6-1-1/2X18JJ   |
| 1-1/2 x 24                     | 21 400   | 41.60        | 1.50            | 2.06     | 2.81     | 70.50 | 43.50 | 7.88  | 24.00 | 1.38     | 466.80      | 6-1-1/2X24JJ   |
| 1-3/4 x 18                     | 28 000   | 53.50        | 1.75            | 2.60     | 3.35     | 59.16 | 41.16 | 9.36  | 18.00 | 1.65     | 615.94      | 6-1-3/4X18JJ   |
| 1-3/4 x 24                     | 28 000   | 63.36        | 1.75            | 2.60     | 3.35     | 71.18 | 47.18 | 9.36  | 24.00 | 1.65     | 698.50      | 6-1-3/4X24JJ   |
| 2 x 24                         | 37 000   | 92.25        | 2.00            | 2.62     | 3.69     | 76.72 | 52.72 | 11.86 | 24.00 | 2        | 1192.15     | 6-2X24JJ       |
| 2-1/2 x 24                     | 60 000   | 165.00       | 2.50            | 3.06     | 4.44     | 82.18 | 58.18 | 13.56 | 24.00 | 2.16     | 2945.33     | 6-2 1/2X24JJ   |
| 2-3/4 x 24                     | 75 000   | 198.00       | 2.75            | 3.68     | 4.19     | 85.50 | 61.50 | 15.22 | 24.00 | 2.75     | 3312.15     | 6-2-3/4X24JJ   |

## TURNBUCKLE - EYE & EYE, GALVANIZED

Conforms to Federal Specification FF-T-791B, ASTM F1145, Type 1, Form 1 – Class 4 (D)

®Trademark - Yellow Attached End Fitting Turnbuckle Design - Registration - ®TMA 796,844

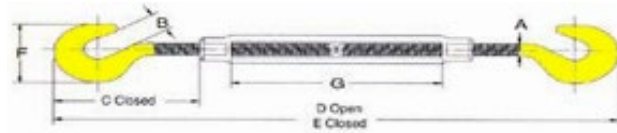
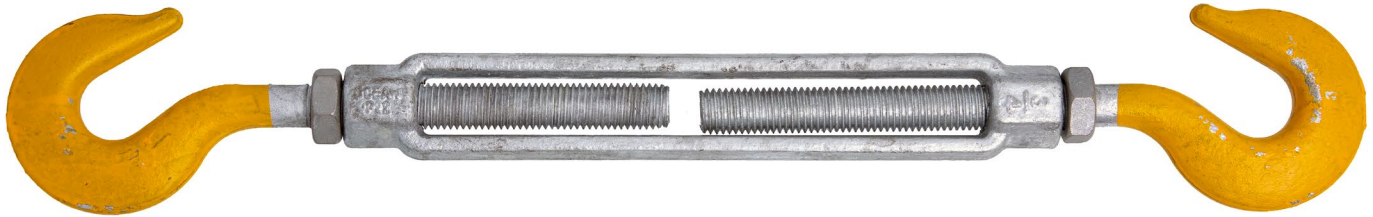


| Thread Dia<br>& Take Up<br>(in x in) | WLL<br>(lb) | Wt./<br>ea.<br>(lb) | Dimensions (in) |           |             |       |      |      |             | Price<br>/ ea. | Part Number   |
|--------------------------------------|-------------|---------------------|-----------------|-----------|-------------|-------|------|------|-------------|----------------|---------------|
|                                      |             |                     | A               | D<br>Open | E<br>Closed | G     | H    | K    | P<br>Closed |                |               |
| 5/16 x 4 1/2                         | 800         | 0.47                | 0.31            | 14.12     | 9.62        | 4.50  | 0.94 | 0.44 | 2.09        | 9.10           | 6-5/16X41/2EE |
| 3/8 x 6                              | 1200        | 0.75                | 0.38            | 18.16     | 12.16       | 6.00  | 1.12 | 0.53 | 2.52        | 11.42          | 6-3/8X6EE     |
| 1/2 x 6                              | 2200        | 1.60                | 0.50            | 19.96     | 13.96       | 6.00  | 1.44 | 0.72 | 3.23        | 17.80          | 6-1/2X6EE     |
| 1/2 x 9                              | 2200        | 1.83                | 0.50            | 25.96     | 16.96       | 9.00  | 1.44 | 0.72 | 3.23        | 21.62          | 6-1/2X9EE     |
| 1/2 x 12                             | 2200        | 2.14                | 0.50            | 32.08     | 19.08       | 12.00 | 1.44 | 0.72 | 3.23        | 28.56          | 6-1/2X12EE    |
| 5/8 x 6                              | 3500        | 2.75                | 0.63            | 21.68     | 15.68       | 6.00  | 1.75 | 0.88 | 3.90        | 29.29          | 6-5/8X6EE     |
| 5/8 x 9                              | 3500        | 3.13                | 0.63            | 27.68     | 18.68       | 9.00  | 1.75 | 0.88 | 3.90        | 33.97          | 6-5/8X9EE     |
| 5/8 X 12                             | 3500        | 3.42                | 0.63            | 34.93     | 21.68       | 12.00 | 1.75 | 0.88 | 3.90        | 37.91          | 6-5/8X12EE    |
| 3/4 x 9                              | 5200        | 4.61                | 0.75            | 29.62     | 20.62       | 9.00  | 2.09 | 1.00 | 4.69        | 43.53          | 6-3/4X9EE     |
| 3/4 x 12                             | 5200        | 5.43                | 0.75            | 35.62     | 23.62       | 12.00 | 2.09 | 1.00 | 4.69        | 53.38          | 6-3/4X12EE    |
| 3/4 x 18                             | 5200        | 7.83                | 0.75            | 47.64     | 29.64       | 18.00 | 2.09 | 1.00 | 5.09        | 69.60          | 6-3/4X18EE    |
| 7/8 x 12                             | 7200        | 8.10                | 0.88            | 36.82     | 24.82       | 12.00 | 2.38 | 1.25 | 5.10        | 65.41          | 6-7/8X12EE    |
| 1 x 12                               | 10 000      | 11.93               | 1.00            | 39.97     | 27.72       | 12.00 | 3.00 | 1.44 | 6.36        | 76.31          | 6-1X12EE      |

## TURNBUCKLE - HOOK & HOOK, GALVANIZED

Conforms to Federal Specification FF-T-791B, ASTM F1145, Type 1, Form 1 - Class 5 (E)

®Trademark - Yellow Attached End Fitting Turnbuckle Design - Registration - ®TMA 796,844



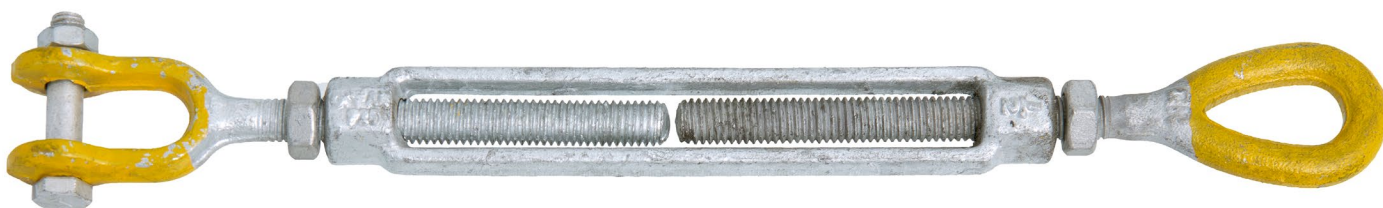
| Thread Dia<br>& Take Up<br>(in x in) | WLL<br>(lb) | Wt./ea.<br>(lb) | Dimensions (in) |      |          |        |          |      |       | Price<br>/ ea. | Part Number   |
|--------------------------------------|-------------|-----------------|-----------------|------|----------|--------|----------|------|-------|----------------|---------------|
|                                      |             |                 | A               | B    | C Closed | D Open | E Closed | F    | G     |                |               |
| 5/16 x 4 1/2                         | 700         | 0.47            | 0.31            | 0.50 | 1.94     | 13.81  | 9.31     | 1.50 | 4.50  | 9.10           | 6-5/16X41/2HH |
| 3/8 x 6                              | 1000        | 0.75            | 0.38            | 0.56 | 2.30     | 17.72  | 11.72    | 1.77 | 6.00  | 11.42          | 6-3/8X6HH     |
| 1/2 x 6                              | 1500        | 1.60            | 0.50            | 0.66 | 2.94     | 19.38  | 13.38    | 2.28 | 6.00  | 17.80          | 6-1/2X6HH     |
| 1/2 x 9                              | 1500        | 1.83            | 0.50            | 0.66 | 2.94     | 25.38  | 16.38    | 2.28 | 9.00  | 21.62          | 6-1/2X9HH     |
| 5/8 x 6                              | 2250        | 2.75            | 0.63            | 0.84 | 3.69     | 21.25  | 15.25    | 2.81 | 6.00  | 28.56          | 6-5/8X6HH     |
| 5/8 x 9                              | 2250        | 3.13            | 0.63            | 0.84 | 3.69     | 27.25  | 18.25    | 2.81 | 9.00  | 33.97          | 6-5/8X9HH     |
| 3/4 x 9                              | 3000        | 4.61            | 0.75            | 0.98 | 4.52     | 29.28  | 20.28    | 3.33 | 9.00  | 43.53          | 6-3/4X9HH     |
| 3/4 x 12                             | 3000        | 5.43            | 0.75            | 0.98 | 4.52     | 35.28  | 23.28    | 3.33 | 12.00 | 53.38          | 6-3/4X12HH    |
| 7/8 x 12                             | 4000        | 8.10            | 0.88            | 1.13 | 5.19     | 37.00  | 25.00    | 3.78 | 12.00 | 65.41          | 6-7/8X12HH    |
| 1 x 12                               | 5000        | 11.93           | 1.00            | 1.25 | 5.84     | 38.69  | 26.69    | 4.25 | 12.00 | 76.31          | 6-1X12HH      |



## TURNBUCKLE - JAW & EYE, GALVANIZED

Conforms to Federal Specification FF-T-791B, ASTM F1145, Type 1, Form 1 - Class 8 (H)

®Trademark - Yellow Attached End Fitting Turnbuckle Design - Registration - ®TMA 796,844



| Thread<br>Dia<br>&<br>Take Up<br>(in x in) | WLL<br>(lb) | Wt./<br>ea.<br>(lb) | Dimensions (in) |      |      |           |             |             |       |      |      |             | Price<br>/ ea. | Part<br>Number |
|--------------------------------------------|-------------|---------------------|-----------------|------|------|-----------|-------------|-------------|-------|------|------|-------------|----------------|----------------|
|                                            |             |                     | A               | B    | C    | D<br>Open | E<br>Closed | F<br>Closed | G     | H    | K    | P<br>Closed |                |                |
| 3/8 x 6                                    | 1200        | 0.76                | 0.38            | 0.50 | 0.87 | 17.77     | 11.77       | 2.12        | 6.00  | 1.12 | 0.53 | 2.52        | 12.58          | 6-3/8X6JE      |
| 1/2 x 6                                    | 2200        | 1.53                | 0.50            | 0.63 | 1.06 | 19.48     | 13.48       | 2.75        | 6.00  | 1.44 | 0.72 | 3.23        | 18.82          | 6-1/2X6JE      |
| 1 1/2 x 24                                 | 21 400      | 41.60               | 1.50            | 2.06 | 2.81 | 70.50     | 43.50       | 7.88        | 24.00 | 4.09 | 2.12 | 8.62        | 651.80         | 6-1-1/2X24JE   |
| 1 3/4 x 24                                 | 28 000      | 63.36               | 1.75            | 2.60 | 3.35 | 71.18     | 47.18       | 9.36        | 24.00 | 4.65 | 2.38 | 9.03        | 1058.50        | 6-1-3/4X24JE   |

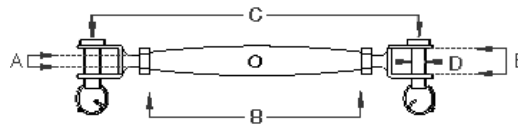
## TURNBUCKLE - BOTTLE TYPE (CLOSED) GALVANIZED



| Break Load (lb) | Thread Dia. & Take Up (in x in) | Price / ea. | Part Number |
|-----------------|---------------------------------|-------------|-------------|
| 4500            | 3/8 x 6                         | 27.71       | 6-3/8"BT    |
| 6200            | 1/2 x 9                         | 39.90       | 6-1/2"BT    |
| 9700            | 5/8 x 9                         | 77.50       | 6-5/8"BT    |
| 13 500          | 3/4 x 9                         | 122.60      | 6-3/4"BT    |
| 19 200          | 7/8 x 12                        | 155.90      | 6-7/8"BT    |
| 24 800          | 1 x 13                          | 212.80      | 6-1"BT      |
| 45 000          | 1 1/4 x 15                      | 390.14      | 6-1-1/4"BT  |

- Material: Steel
- Finish: Galvanized

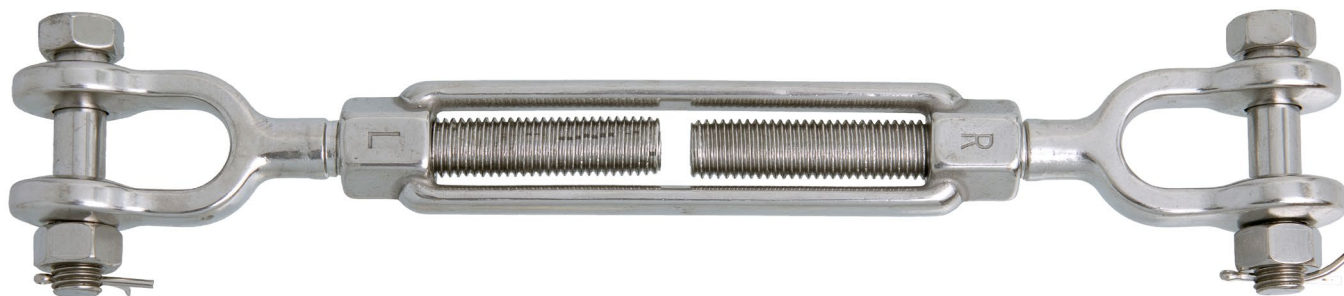
## TURNBUCKLE - JAW & JAW, BOTTLE TYPE (CLOSED) STAINLESS STEEL



| A Size (in) | Thread Dia. & Take Up (in) |       |      |      | WLL (lb) | Wt./ea. (lb) | Price / ea. | Part Number |
|-------------|----------------------------|-------|------|------|----------|--------------|-------------|-------------|
|             | B                          | C     | D    | E    |          |              |             |             |
| 1/4         | 3.72                       | 5.64  | 0.20 | 0.25 | 440      | 0.20         | 26.48       | 6-1/4"BTSS  |
| 5/16        | 4.20                       | 6.50  | 0.31 | 0.37 | 840      | 0.35         | 47.18       | 6-5/16"BTSS |
| 3/8         | 4.87                       | 7.75  | 0.37 | 0.43 | 1260     | 0.55         | 65.50       | 6-3/8"BTSS  |
| 1/2         | 5.75                       | 9.50  | 0.50 | 0.50 | 2000     | 1.50         | 94.57       | 6-1/2"BTSS  |
| 5/8         | 7.50                       | 13.00 | 0.62 | 0.68 | 3500     | 2.30         | 181.48      | 6-5/8"BTSS  |
| 3/4         | 11.00                      | 16.75 | 0.75 | 0.88 | 5000     | 5.80         | 309.40      | 6-3/4"BTSS  |

- Material: 316 Stainless Steel
- Finish: Stainless Steel

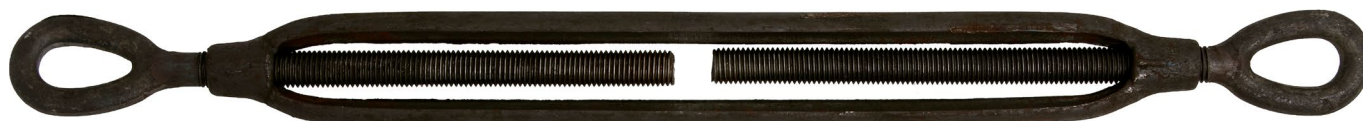
## TURNBUCKLE - JAW & JAW, STAINLESS STEEL



| WLL (lb) | Thread Dia. & Take Up (in x in) | Price / ea. | Part Number   |
|----------|---------------------------------|-------------|---------------|
| 460      | 1/4 x 4                         | 22.36       | 6-1/4X4SSJJ   |
| 780      | 5/16 x 4 1/2                    | 37.91       | 6-5/16X4.5SSJ |
| 1160     | 3/8 x 6                         | 57.35       | 6-3/8X6SSJJ   |
| 2150     | 1/2 x 6                         | 66.56       | 6-1/2X6SSJJ   |
| 3500     | 5/8 x 6                         | 146.76      | 6-5/8X6SSJJ   |
| 5140     | 3/4 x 6                         | 219.39      | 6-3/4X6SSJJ   |

- Material: 304 Stainless Steel
- Finish: Stainless Steel
- Design Factor: 4:1

## TURNBUCKLE - EYE & EYE, LASHING



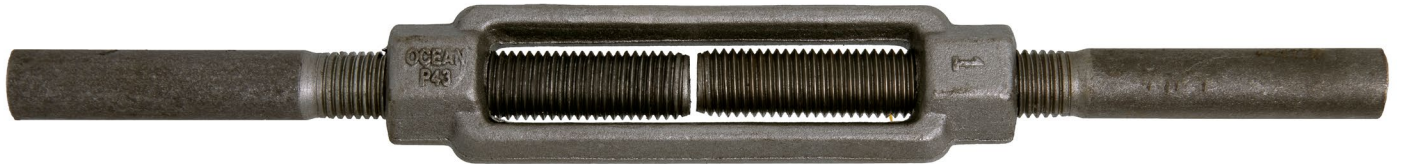
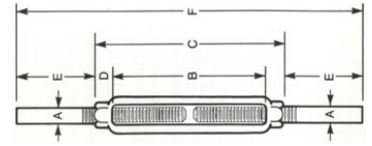
| WLL (lb) | Thread Dia. & Take Up (in x in) | Price / ea. | Part Number  |
|----------|---------------------------------|-------------|--------------|
| 3620     | 3/4 x 18                        | 38.45       | 6-3/4X18BLEE |

- Material: Steel
- Finish: Self-Coloured, Black
- Design Factor: 6:1

## TURNBUCKLE - STUB END

Conforms to Federal Specification FFT-T-791B, Type 1, Form 1 Class 3

- Standard: FF-T-791B
- Finish: Self-Coloured
- Design Factor: 5:1



| Thread Dia.<br>& Take Up (in x in) | WLL<br>(lb) | Wt./ea.<br>(lb) | Dimensions (in) |       |       |      |      |       | Price<br>/ ea. | Part Number   |
|------------------------------------|-------------|-----------------|-----------------|-------|-------|------|------|-------|----------------|---------------|
|                                    |             |                 | A               | B     | C     | D    | E    | F     |                |               |
| 1/2 x 6                            | 2200        | 1.25            | 0.50            | 6.00  | 7.50  | 0.75 | 4.25 | 16.00 | 14.21          | 6-1/2X6SET    |
| 5/8 x 6                            | 3500        | 2.11            | 0.63            | 6.00  | 7.88  | 0.94 | 4.06 | 16.00 | 27.26          | 6-5/8X6SET    |
| 3/4 x 6                            | 5200        | 3.27            | 0.75            | 6.00  | 8.25  | 1.13 | 4.38 | 17.00 | 31.42          | 6-3/4X6SET    |
| 7/8 x 6                            | 7200        | 4.78            | 0.88            | 6.00  | 8.63  | 1.31 | 4.69 | 18.00 | 49.52          | 6-7/8X6SET    |
| 1 x 6                              | 10 000      | 6.36            | 1.00            | 6.00  | 9.00  | 1.50 | 5.00 | 19.00 | 63.58          | 6-1X6SET      |
| 1 1/4 x 6                          | 15 200      | 10.18           | 1.25            | 6.00  | 9.13  | 1.56 | 5.44 | 20.00 | 97.45          | 6-1-1/4X6SET  |
| 1 1/2 x 12                         | 21 400      | 20.44           | 1.50            | 12.00 | 15.75 | 1.88 | 5.38 | 26.50 | 146.06         | 6-1-1/2X12SET |

## TURNBUCKLE - STUB END, BODY ONLY

Conforms to Federal Specification FFT-T-791B, Type 1, Form 1 Class 3

| WLL (lb) | Size<br>(in x in) | Price / ea. | Part Number   |
|----------|-------------------|-------------|---------------|
| 1200     | 3/8 x 6           | 9.25        | 6-3/8X6TBSC   |
| 2200     | 1/2 x 6           | 10.43       | 6-1/2X6TBSC   |
| 3500     | 5/8 x 6           | 13.84       | 6-5/8X6TBSC   |
| 5200     | 3/4 x 6           | 20.43       | 6-3/4X6TBSC   |
| 7200     | 7/8 x 6           | 47.50       | 6-7/8X6TBSC   |
| 10 000   | 1 x 6             | 52.72       | 6-1X6TBSC     |
| 15 200   | 1 1/4 x 6         | 63.10       | 6-1-1/4X6TBSC |
| 21 400   | 1 1/2 x 6         | 146.06      | 6-1-1/2X6TBSC |



- Standard: FF-T-791B
- Finish: Self-Coloured
- Design Factor: 5:1

## TURNBUCKLE - HEAVY DUTY, GN®



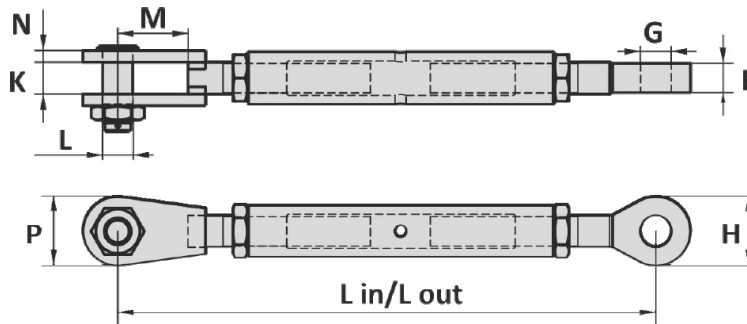
- Material: High tensile steel
- Finish: Painted
- Design Factor: 5:1
- Temperature Range: -20°C up to +200°C
- Certification: Certificate of Conformity (on request)
- Rated in Metric Ton(s)
- Non-standard sizes or custom product available on request

| WLL<br>(ton) | Jaw-Jaw<br>Dimensions (mm) |       | Eye-Eye<br>Dimensions (mm) |       | Jaw-Eye<br>Dimensions (mm) |       | Thread   | Price                 | Part<br>Number |
|--------------|----------------------------|-------|----------------------------|-------|----------------------------|-------|----------|-----------------------|----------------|
|              | L in                       | L out | L in                       | L out | L in                       | L out |          |                       |                |
| 13.5         | 935                        | 1260  | 840                        | 1165  | 890                        | 1215  | Tr 55x8  | Pricing on<br>Request | 116-TB13.5     |
| 17           | 1010                       | 1360  | 920                        | 1270  | 965                        | 1315  | Tr 65x8  |                       | 116-TB17       |
| 25           | 1085                       | 1415  | 975                        | 1305  | 1030                       | 1360  | Tr 70x8  |                       | 116-TB25       |
| 30           | 1160                       | 1530  | 1020                       | 1390  | 1090                       | 1460  | Tr 75x8  |                       | 116-TB30       |
| 35           | 1250                       | 1650  | 1100                       | 1500  | 1175                       | 1575  | Tr 80x8  |                       | 116-TB35       |
| 45           | 1300                       | 1780  | 1170                       | 1650  | 1235                       | 1715  | Tr 90x8  |                       | 116-TB45       |
| 55           | 1380                       | 1890  | 1270                       | 1780  | 1325                       | 1835  | Tr 100x8 |                       | 116-TB55       |
| 70           | 1480                       | 2025  | 1390                       | 1940  | 1435                       | 1985  | Tr 110x8 |                       | 116-TB70       |
| 85           | 1565                       | 2200  | 1515                       | 2150  | 1540                       | 2175  | Tr 120x8 |                       | 116-TB85       |
| 100          | 1630                       | 2360  | 1600                       | 2330  | 1615                       | 2345  | Tr 130x8 |                       | 116-TB100      |
| 120          | 1745                       | 2340  | 1735                       | 2330  | 1740                       | 2335  | Tr 140x8 |                       | 116-TB120      |
| 160          | 1870                       | 2470  | 1860                       | 2460  | 1865                       | 2465  | Tr 160x8 |                       | 116-TB160      |
| 200          | 2020                       | 2640  | 2000                       | 2620  | 2010                       | 2630  | Tr 180x8 |                       | 116-TB200      |
| 250          | 2170                       | 2840  | 2210                       | 2880  | 2190                       | 2860  | Tr 200x8 |                       | 116-TB250      |

**Tolerance: Forged parts ± 5%, machined parts ± 1 mm**



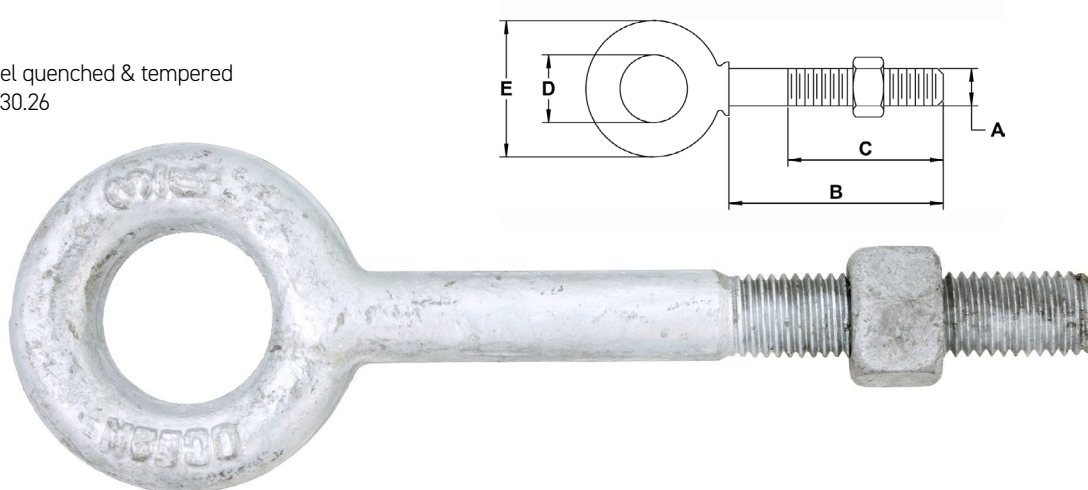
## TURNBUCKLE - HEAVY DUTY, GN® (CONTINUED)



| WLL<br>(ton) | Dimensions (mm) |     |     |     |     |     |     |     | Wt. J-J<br>(kg) | Wt. E-E<br>(kg) | Wt. J-E<br>(kg) |
|--------------|-----------------|-----|-----|-----|-----|-----|-----|-----|-----------------|-----------------|-----------------|
|              | K               | N   | M   | L   | P   | F   | H   | G   |                 |                 |                 |
| 13.5         | 55              | 20  | 122 | 51  | 120 | 50  | 120 | 53  | 45              | 36              | 41              |
| 17           | 65              | 28  | 130 | 63  | 140 | 55  | 140 | 65  | 72              | 55              | 62              |
| 25           | 76              | 30  | 145 | 70  | 140 | 70  | 140 | 72  | 83              | 60              | 73              |
| 30           | 80              | 35  | 160 | 72  | 150 | 70  | 150 | 74  | 100             | 68              | 85              |
| 35           | 90              | 40  | 175 | 80  | 170 | 80  | 170 | 82  | 140             | 96              | 117             |
| 45           | 100             | 45  | 175 | 90  | 190 | 90  | 190 | 93  | 177             | 117             | 146             |
| 55           | 110             | 50  | 175 | 100 | 210 | 100 | 210 | 103 | 232             | 156             | 194             |
| 70           | 110             | 55  | 175 | 108 | 230 | 100 | 230 | 111 | 293             | 200             | 245             |
| 85           | 130             | 75  | 175 | 127 | 270 | 125 | 270 | 130 | 441             | 270             | 363             |
| 100          | 140             | 90  | 175 | 140 | 290 | 125 | 290 | 143 | 607             | 364             | 485             |
| 120          | 155             | 90  | 190 | 152 | 340 | 140 | 340 | 155 | 740             | 490             | 615             |
| 160          | 170             | 100 | 210 | 178 | 380 | 160 | 380 | 181 | 967             | 614             | 791             |
| 200          | 190             | 110 | 250 | 190 | 400 | 170 | 400 | 193 | 1380            | 720             | 1050            |
| 250          | 210             | 120 | 280 | 250 | 520 | 190 | 520 | 253 | 1825            | 832             | 1345            |

## EYE BOLT - REGULAR WITH NUT

- Material: Forged carbon steel quenched & tempered
- Standard: EN 4278, ASME B30.26
- Finish: Hot dip galvanized
- Design Factor: 5:1
- Identification: Size/Ocean



| Dia. & Length<br>(in) | WLL (lb) | Weight<br>/ 100 pcs. (lb) | Dimensions (in) |      |       |      |      | Price /<br>ea. | Part Number   |
|-----------------------|----------|---------------------------|-----------------|------|-------|------|------|----------------|---------------|
|                       |          |                           | A               | C    | B     | D    | E    |                |               |
| 3/8 x 2 1/2           | 1550     | 23.30                     | 0.38            | 1.50 | 2.50  | 0.75 | 1.50 | 5.02           | 6-3/8X21/2EBG |
| 3/8 x 4 1/2           | 1550     | 29.50                     | 0.38            | 2.50 | 4.50  | 0.75 | 1.50 | 5.27           | 6-3/8X41/2EBG |
| 3/8 x 6               | 1550     | 35.20                     | 0.38            | 2.50 | 6.00  | 0.75 | 1.50 | 5.69           | 6-3/8X6EBG    |
| 1/2 x 3 1/4           | 2600     | 50.30                     | 0.50            | 1.50 | 3.25  | 1.00 | 2.00 | 7.66           | 6-1/2X31/4EBG |
| 1/2 x 6               | 2600     | 66.10                     | 0.50            | 3.00 | 6.00  | 1.00 | 2.00 | 8.46           | 6-1/2X6EBG    |
| 1/2 x 8               | 2600     | 82.00                     | 0.50            | 3.00 | 8.00  | 1.00 | 2.00 | 10.13          | 6-1/2X8EBG    |
| 1/2 x 10              | 2600     | 88.00                     | 0.50            | 3.00 | 10.00 | 1.00 | 2.00 | 11.45          | 6-1/2X10EBG   |
| 5/8 x 4               | 5200     | 103.10                    | 0.62            | 2.00 | 4.00  | 1.25 | 2.50 | 11.13          | 6-5/8X4EBG    |
| 5/8 x 6               | 5200     | 118.20                    | 0.62            | 3.00 | 6.00  | 1.25 | 2.50 | 13.13          | 6-5/8X6EBG    |
| 5/8 x 8               | 5200     | 135.10                    | 0.62            | 3.00 | 8.00  | 1.25 | 2.50 | 14.35          | 6-5/8X8EBG    |
| 5/8 x 10              | 5200     | 153.60                    | 0.62            | 3.00 | 10.00 | 1.25 | 2.50 | 17.30          | 6-5/8X10EBG   |
| 5/8 x 12              | 5200     | 167.10                    | 0.62            | 4.00 | 12.00 | 1.25 | 2.50 | 19.11          | 6-5/8X12EBG   |
| 3/4 x 4 1/2           | 7200     | 168.60                    | 0.75            | 2.00 | 4.25  | 1.50 | 3.00 | 19.04          | 6-3/4X41/2EBG |
| 3/4 x 6               | 7200     | 184.50                    | 0.75            | 3.00 | 6.00  | 1.50 | 3.00 | 20.34          | 6-3/4X6EBG    |
| 3/4 x 8               | 7200     | 207.90                    | 0.75            | 3.00 | 8.00  | 1.50 | 3.00 | 21.22          | 6-3/4X8EBG    |
| 3/4 x 10              | 7200     | 235.00                    | 0.75            | 3.00 | 10.00 | 1.50 | 3.00 | 25.79          | 6-3/4X10EBG   |
| 3/4 x 12              | 7200     | 257.50                    | 0.75            | 4.00 | 12.00 | 1.50 | 3.00 | 27.09          | 6-3/4X12EBG   |
| 1 x 12                | 13 300   | 540.00                    | 1.00            | 4.00 | 12.00 | 2.00 | 4.00 | 55.89          | 6-1X12EBG     |

SEE WARNING AND APPLICATION INFORMATION FOR EYE BOLTS.

## EYE BOLT - SCREW

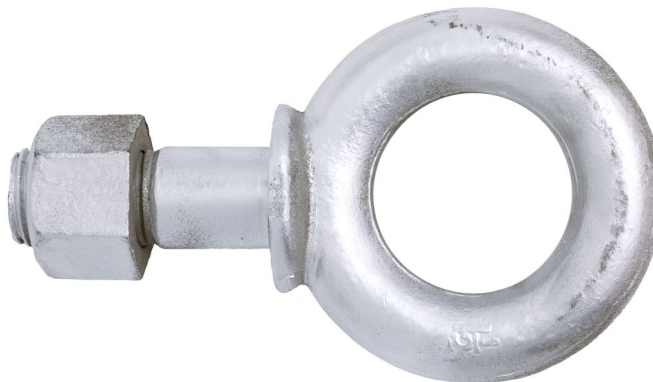
| Size (in)    | Thread Length (in) | Eye I.D (in) | Price / ea. | Part Number   |
|--------------|--------------------|--------------|-------------|---------------|
| 1/4 x 2      | 1.50               | 0.47         | 3.61        | 6-1/4X2SC     |
| 5/16 x 2 1/4 | 1.70               | 0.60         | 4.32        | 6-5/16X21/4SC |
| 3/8 x 2 1/2  | 1.90               | 0.72         | 5.28        | 6-3/8X21/2SC  |
| 1/2 x 3 1/4  | 2.45               | 0.98         | 8.49        | 6-1/2X31/4SC  |
| 5/8 x 4      | 3.00               | 1.17         | 11.29       | 6-5/8X4SC     |



- **Non Load Rated**
- **For use in wood**
- Material: Forged
- Standard: EN 4278, ASME B30.26
- Finish: Hot dip galvanized
- Identification: Size

## EYE BOLT - SHOULDER WITH NUT, UNC

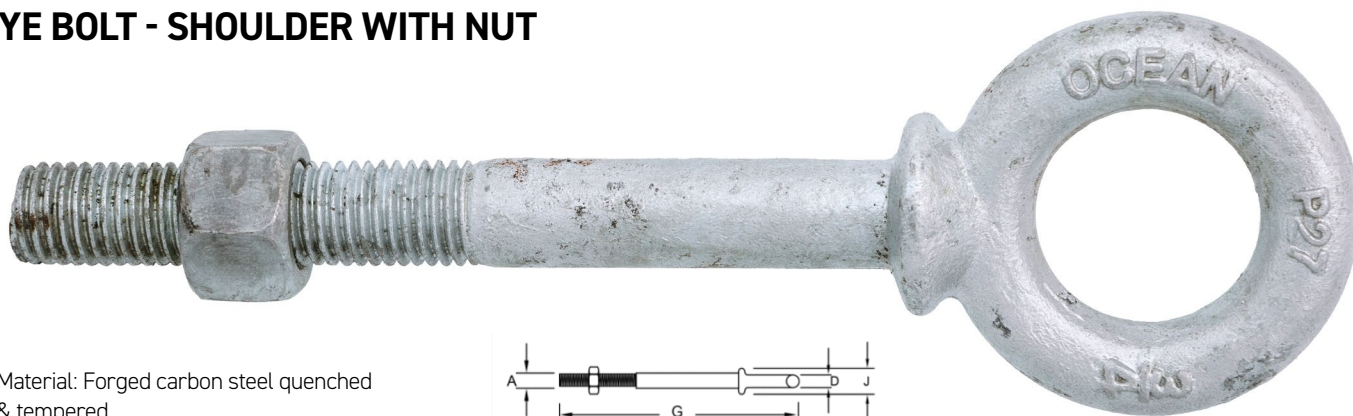
| Size (in) | Shank Length (in) | Thread Length (in) | Price / ea. | Part Number   |
|-----------|-------------------|--------------------|-------------|---------------|
| 1 1/2     | 3 1/2             | 2                  | 145.63      | 6-11/2x31/2GS |



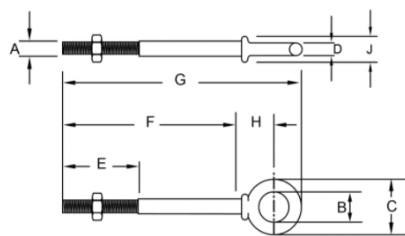
- Material: Forged carbon steel quenched & tempered
- Standard: EN 4278
- Finish: Hot dip galvanized
- Identification: Size

SEE WARNING AND APPLICATION INFORMATION FOR EYE BOLTS.

## EYE BOLT - SHOULDER WITH NUT



- Material: Forged carbon steel quenched & tempered
- Standard: EN 4278
- Finish: Hot dip galvanized
- Design Factor: 5:1
- Identification: Size/Ocean



| Size (in)    | WLL (lb) | Weight / 100 pcs. (lb) | Dimensions (in) |      |      |      |      |       |       |      |      | Price / ea. | Part Number   |
|--------------|----------|------------------------|-----------------|------|------|------|------|-------|-------|------|------|-------------|---------------|
| 1/4 x 2      | 650      | 6.6                    | A               | B    | C    | D    | E    | F     | G     | H    | J    | 2.96        | 6-1/4X2GS     |
| 1/4 x 4      | 650      | 9.1                    | 0.25            | 0.50 | 0.88 | 0.19 | 2.50 | 4.00  | 4.94  | 0.50 | 0.47 | 3.91        | 6-1/4X4GS     |
| 5/16 x 2 1/4 | 1200     | 12.5                   | 0.31            | 0.62 | 1.12 | 0.25 | 1.50 | 2.25  | 3.50  | 0.69 | 0.56 | 3.91        | 6-5/16X21/4GS |
| 5/16 x 4 1/4 | 1200     | 18.8                   | 0.31            | 0.62 | 1.12 | 0.25 | 2.50 | 4.25  | 5.50  | 0.69 | 0.56 | 4.81        | 6-5/16X41/4GS |
| 3/8 x 2 1/2  | 1550     | 21.4                   | 0.38            | 0.75 | 1.38 | 0.31 | 1.50 | 2.50  | 3.97  | 0.78 | 0.66 | 4.80        | 6-3/8X21/2GS  |
| 3/8 x 4 1/2  | 1550     | 25.3                   | 0.38            | 0.75 | 1.38 | 0.31 | 2.50 | 4.50  | 5.97  | 0.78 | 0.66 | 5.54        | 6-3/8X41/2GS  |
| 1/2 x 3 1/4  | 2600     | 42.6                   | 0.50            | 1.00 | 1.75 | 0.38 | 1.50 | 3.25  | 5.12  | 1.00 | 0.91 | 7.24        | 6-1/2X31/4GS  |
| 1/2 x 6      | 2600     | 56.8                   | 0.50            | 1.00 | 1.75 | 0.38 | 3.00 | 6.00  | 7.88  | 1.00 | 0.91 | 8.29        | 6-1/2X6GS     |
| 5/8 x 4      | 5200     | 68.6                   | 0.62            | 1.25 | 2.25 | 0.50 | 2.00 | 4.00  | 6.44  | 1.31 | 1.12 | 10.12       | 6-5/8X4GS     |
| 5/8 x 6      | 5200     | 102.4                  | 0.62            | 1.25 | 2.25 | 0.50 | 3.00 | 6.00  | 8.44  | 1.31 | 1.12 | 11.66       | 6-5/8X6GS     |
| 3/4 x 4 1/2  | 7200     | 144.5                  | 0.75            | 1.50 | 2.75 | 0.62 | 2.00 | 4.50  | 7.44  | 1.56 | 1.38 | 15.87       | 6-3/4X41/2GS  |
| 3/4 x 6      | 7200     | 167.5                  | 0.75            | 1.50 | 2.75 | 0.62 | 3.00 | 6.00  | 8.94  | 1.56 | 1.38 | 16.28       | 6-3/4X6GS     |
| 7/8 x 5      | 10 600   | 225.0                  | 0.88            | 1.75 | 3.25 | 0.75 | 2.50 | 5.00  | 8.46  | 1.84 | 1.56 | 26.73       | 6-7/8X5GS     |
| 1 x 6        | 13 300   | 366.3                  | 1.00            | 2.00 | 3.75 | 0.88 | 3.00 | 6.00  | 9.97  | 2.09 | 1.81 | 38.55       | 6-1X6GS       |
| 1 x 9        | 13 300   | 422.5                  | 1.00            | 2.00 | 3.75 | 0.88 | 4.00 | 9.00  | 12.97 | 2.09 | 1.81 | 49.89       | 6-1X9GS       |
| 1 1/4 x 8    | 21 000   | 650                    | 1.25            | 2.50 | 4.50 | 1.00 | 4.00 | 8.00  | 12.72 | 2.47 | 2.28 | 73.87       | 6-11/4X8GS    |
| 1 1/4 x 12   | 21 000   | 795                    | 1.25            | 2.50 | 4.50 | 1.00 | 4.00 | 12.00 | 16.72 | 2.47 | 2.28 | 94.25       | 6-11/4X12GS   |
| 1 1/2 x 15   | 24 000   | 1425                   | 1.50            | 3.00 | 5.50 | 1.25 | 6.00 | 15.00 | 20.75 | 3.00 | 2.75 | 197.66      | 6-11/2X15GS   |

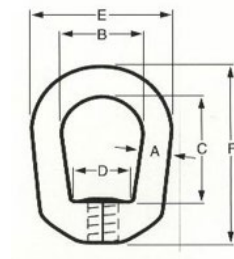
SEE WARNING AND APPLICATION INFORMATION FOR EYE BOLTS.

## EYE BOLT - SHOULDER WITH NUT



| WLL (lb) | Size (in)    | Price / ea. | Part Number   |
|----------|--------------|-------------|---------------|
| 500      | 1/4 x 2      | 15.11       | 6-1/4x2EBSS   |
| 500      | 1/4 x 4      | 19.07       | 6-1/4x4EBSS   |
| 798      | 5/16 x 2 1/4 | 23.59       | 6-516X214EBSS |
| 798      | 5/16 x 4 1/4 | 28.34       | 6-516x414EBSS |
| 1196     | 3/8 x 2 1/2  | 29.13       | 6-3/8X212EBSS |
| 1196     | 3/8 x 4 1/4  | 37.01       | 6-3/8X414EBSS |
| 2195     | 1/2 x 3 1/4  | 38.67       | 6-1/2X314EBSS |
| 2195     | 1/2 x 6      | 42.76       | 6-1/2X6EBSS   |
| 3493     | 5/8 x 4      | 59.15       | 6-5/8X4EBSS   |
| 3493     | 5/8 x 6      | 69.19       | 6-5/8X6EBSS   |
| 5189     | 3/4 x 4 1/2  | 91.61       | 6-3/4X412EBSS |
| 5189     | 3/4 x 6      | 110.07      | 6-3/4X6EBSS   |
| 7185     | 7/8 x 5      | 196.54      | 6-7/8X5EBSS   |
| 8675     | 1 x 6        | 372.20      | 6-1X6EBSS     |
| 8675     | 1 x 9        | 417.98      | 6-1X9EBSS     |

- Material: Forged 304 Stainless Steel
- Standard: EN 4278
- Finish: Stainless Steel
- Design Factor: 5:1
- Identification: Size



## EYE NUT

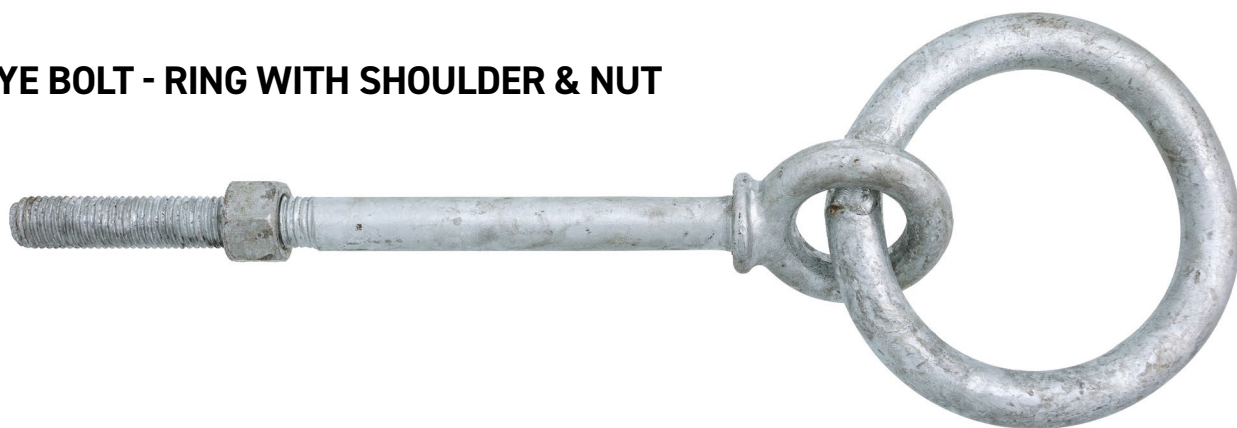
| Tap Size (in) | WLL (lb) | Dimensions (in) |      |      |      |      |      | Price / ea. | Part Number |
|---------------|----------|-----------------|------|------|------|------|------|-------------|-------------|
|               |          | A               | B    | C    | D    | E    | F    |             |             |
| 1/2           | 2150     | 0.500           | 1.25 | 1.50 | 1.04 | 1.98 | 2.50 | 17.60       | 6-1/2SSEN   |

- Material/Finish: 304 Stainless Steel
- Standard: DIN 582
- Design Factor: 5:1
- Identification: Size/WLL

SEE WARNING AND APPLICATION INFORMATION FOR EYE BOLTS.



## EYE BOLT - RING WITH SHOULDER & NUT



- Material/Finish: 304 Stainless Steel & Hot Dip Galvanized

| Size (in)   | Ring Stock (in) | ID of Ring (in) | Max. Load (lb) | Stainless Steel (304 grade) |               | Galvanized  |               |
|-------------|-----------------|-----------------|----------------|-----------------------------|---------------|-------------|---------------|
|             |                 |                 |                | Price / ea.                 | Part Number   | Price / ea. | Part Number   |
| 3/8 x 4 1/2 | 3/8             | 2               | 600            | 33.39                       | 6-3/8X412BRSS | 13.28       | 6-3/8X41/2BGR |
| 3/8 x 6     | 3/8             | 2               | 600            | 37.14                       | 6-3/8X6BRSS   | 16.34       | 6-3/8X6BGR    |
| 1/2 x 6     | 1/2             | 2 1/2           | 1100           | 59.31                       | 6-1/2X6BRSS   | 28.49       | 6-1/2X6BGR    |
| 1/2 x 8     | 1/2             | 2 1/2           | 1100           | 64.46                       | 6-1/2X8BRSS   | 40.10       | 6-1/2X8BGR    |
| 3/4 x 10    | 3/4             | 3 3/4           | 2600           | 240.90                      | 6-3/4X10BRSS  | 100.84      | 6-3/4X10BGR   |

## EYE BOLT - SHOULDER MACHINE, IMPERIAL

- Material: Forged Steel
- Standard: EN 4278, ASME B30.26
- Finish: Self-Coloured
- Design Factor: 5:1
- Identification: Size/Ocean



| WLL (lb) | Shank (in) |        | Eye (in) |      | Weight / 100 pcs. (lb) | Price / ea. | Part Number   |
|----------|------------|--------|----------|------|------------------------|-------------|---------------|
|          | Dia.       | Length | I.D.     | O.D. |                        |             |               |
| 650      | 1/4        | 1      | 0.75     | 1.13 | 4.9                    | 2.87        | 6-1/4X1EB     |
| 1200     | 5/16       | 1-1/8  | 0.88     | 1.38 | 8.5                    | 3.19        | 6-5/16X11/8EB |
| 1550     | 3/8        | 1-1/4  | 1.00     | 1.62 | 14.0                   | 3.99        | 6-3/8X11/4EB  |
| 2600     | 1/2        | 1-1/2  | 1.19     | 1.95 | 29.5                   | 6.17        | 6-1/2X11/2EB  |
| 5200     | 5/8        | 1-3/4  | 1.38     | 2.38 | 58.0                   | 9.16        | 6-5/8X13/4EB  |
| 7200     | 3/4        | 2      | 1.50     | 2.76 | 88.5                   | 12.62       | 6-3/4X2EB     |
| 10 600   | 7/8        | 2-1/4  | 1.75     | 3.25 | 129.0                  | 15.49       | 6-7/8X21/4EB  |
| 13 300   | 1          | 2-1/2  | 2.00     | 3.76 | 198.5                  | 23.11       | 6-1X21/2EB    |
| 21 000   | 1-1/4      | 3      | 2.50     | 4.50 | 396.0                  | 51.68       | 6-11/4X3EB    |
| 24 000   | 1-1/2      | 3-1/2  | 3.00     | 5.50 | 654.0                  | 90.80       | 6-11/2X31/2EB |

SEE WARNING AND APPLICATION INFORMATION FOR EYE BOLTS.

## EYE BOLT - SHOULDER MACHINE, METRIC

- Material: Forged Steel
- Standard: EN 4278, ASME B30.26
- Finish: Self-Coloured
- Design Factor: 5:1
- Identification: Size/Ocean

| WLL<br>(kg) | Thread Size<br>& Pitch | Shank (mm) |        | Eye I.D.<br>(mm) | Weight / ea.<br>(kg) | Price /<br>ea. | Part Number |
|-------------|------------------------|------------|--------|------------------|----------------------|----------------|-------------|
|             |                        | Dia.       | Length |                  |                      |                |             |
| 200         | M6x1.0                 | 6          | 25.5   | 18.43            | 0.03                 | 9.02           | 6-6MEB      |
| 400         | M8x1.25                | 8          | 31.75  | 15.51            | 0.05                 | 10.22          | 6-8MEB      |
| 640         | M10x1.5                | 10         | 31.75  | 24.76            | 0.07                 | 12.43          | 6-10MEB     |
| 1000        | M12x1.75               | 12         | 38     | 23.94            | 0.11                 | 15.23          | 6-12MEB     |
| 1800        | M16x2.0                | 16         | 44.5   | 29.5             | 0.25                 | 23.57          | 6-16MEB     |
| 2500        | M20x2.5                | 20         | 51     | 36.51            | 0.42                 | 35.24          | 6-20MEB     |
| 4808        | M22x2.5                | 22         | 57     | 43.69            | 0.58                 | 52.91          | 6-22MEB     |
| 4000        | M24x3.0                | 24         | 63.5   | 49.36            | 1.05                 | 60.87          | 6-24MEB     |
| 9525        | M32x3.0                | 32         | 76     | 61.58            | 1.80                 | 151.85         | 6-32MEB     |



## EYE PAD

Reference local welding specifications for proper welding procedures.

- Material: Steel
- Finish: Self colored
- Identification: Type

| Size | I.D.<br>Eye<br>(in) | O.D.<br>Eye<br>(in) | Dia. of Shoul-<br>der (in) | Overall<br>Height<br>(in) | Wt./ 100<br>pcs (lb) | Price /<br>ea. | Part Number |
|------|---------------------|---------------------|----------------------------|---------------------------|----------------------|----------------|-------------|
| 2    | 3/4                 | 1 1/2               | 1 1/16                     | 1 5/8                     | 17.25                | 5.92           | 6-#2PESC    |
| 4    | 1                   | 2 1/8               | 1 7/16                     | 2 11/32                   | 50.00                | 9.80           | 6-#4PESC    |
| 5    | 1 1/4               | 2 5/8               | 1 3/4                      | 2 3/4                     | 82.50                | 11.97          | 6-#5PESC    |



SEE WARNING AND APPLICATION INFORMATION FOR EYE BOLTS.

EYE NUT

**Note:** Order by tap size, marking on eye nut is body stock diameter

- Material: Forged
- Standard: EN 4278, ASME B30.26
- Finish: Galvanized
- Design Factor: 5:1
- Identification: Size ("A" Dia.)
- Thread oversized for galvanized threads



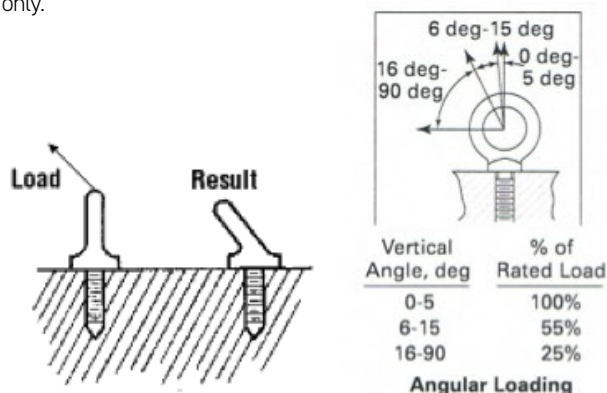
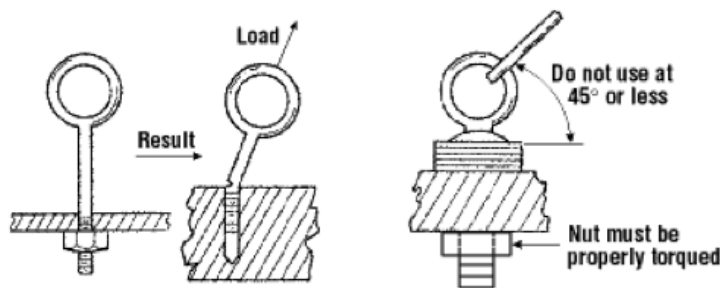
| Std Tap Size (in) | Dimensions (in) |       |        |         |       |         | Wt. / ea. (lb) | WLL (lb) | Price / ea. | Part Number |
|-------------------|-----------------|-------|--------|---------|-------|---------|----------------|----------|-------------|-------------|
|                   | A               | B     | C      | D       | E     | F       |                |          |             |             |
| 1/4               | 1/4             | 3/4   | 1 1/16 | 21/32   | 1 1/4 | 1 11/16 | 0.09           | 520      | 3.08        | 6-1/4EN     |
| 5/16              | 1/4             | 3/4   | 1 1/16 | 21/32   | 1 1/4 | 1 11/16 | 0.09           | 850      | 3.08        | 6-5/16EN    |
| 3/8               | 5/16            | 1     | 1 1/4  | 3/4     | 1 5/8 | 2 1/16  | 0.18           | 1250     | 3.35        | 6-3/8EN     |
| 1/2               | 3/8             | 1 1/4 | 1 1/2  | 1       | 2     | 2 1/2   | 0.28           | 2250     | 5.53        | 6-1/2EN     |
| 5/8               | 1/2             | 1 1/2 | 2      | 1 3/16  | 2 1/2 | 3 3/16  | 0.58           | 3600     | 8.15        | 6-5/8EN     |
| 3/4               | 5/8             | 1 3/4 | 2 3/8  | 1 3/8   | 3     | 3 7/8   | 1.00           | 5200     | 14.15       | 6-3/4EN     |
| 7/8               | 3/4             | 2     | 2 5/8  | 1 5/8   | 3 1/2 | 4 5/16  | 1.70           | 7200     | 19.27       | 6-7/8EN     |
| 1                 | 7/8             | 2 1/4 | 3 1/16 | 1 7/8   | 4     | 5       | 2.75           | 10 000   | 30.78       | 6-1EN       |
| 1 1/4             | 1               | 2 1/2 | 3 1/2  | 1 15/16 | 4 1/2 | 5 3/4   | 3.85           | 15 500   | 49.90       | 6-1-1/4EN   |



## EYE BOLTS FORGED - WARNINGS AND APPLICATION INSTRUCTIONS

### How should you select the right bolt?

- Eye Bolts are marked with their thread size NOT with their rated capacities. Make sure you select the correct eyebolt based on its type and capacity for the lift you are conducting.
- Use plain or regular eye bolts (non-shoulder) or ring bolts for vertical loading only.
- Angle loading on non-shoulder bolts will bend or break them.
- Use shoulder eye bolts for vertical or angle loading.

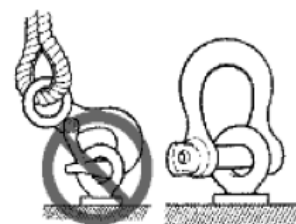


### How should you use eye bolts safely?

- Orient the eye bolt in line with the slings. If the load is applied sideways, the eye bolt may bend.
- Pack washers between the shoulder and the load surface to ensure that the eye bolt firmly contacts the surface. Ensure that the nut is properly torqued.
- Engage at least 90% of threads in receiving a hole when using shims or washers.
- Attach only one sling leg to each eye bolt.
- Inspect and clean the eye bolt threads and the hole.
- Screw the eye bolt on all the way down and properly seat.
- Ensure the tapped hole for a screw eye bolt (body bolts) has a minimum depth of one-and-a-half times the bolt diameter.
- Install the shoulder at right angles to the axis of the hole. The shoulder should be in full contact with the surface of the object being lifted.
- Use a spreader bar with regular (non-shoulder) eye bolts to keep the lift angle at 90° to the horizontal.
- Use eye bolts at a horizontal angle greater than 45°. Sling strength at 45° is 71% of vertical sling capacity. Eye bolt strength at 45° horizontal angle drops down to 25% of vertical lifting capacity.
- Use a swivel hoist ring for angled lifts. The swivel hoist ring will adjust to any sling angle by rotating around the bolt and the hoisting eye pivots 180°.

### What should you avoid when using eye bolts?

- Do not run a sling through a pair of eye bolts: this will reduce the effective angle of lift and will put more strain on the rigging.
- Do not force the slings through eye bolts. This force may alter the load and the angle of loading.
- Do not use eye bolts that have been ground, machined or stamped.
- Do not use bars, grips or wrenches to tighten eye bolts.
- Do not paint an eye bolt. The paint could cover up flaws.
- Do not force hooks or other fittings into the eye; they must fit freely.
- Do not shock load eye bolts.
- Do not use a single eye bolt to lift a load that is free to rotate.
- Do not use eye bolts that have worn threads or other flaws.
- Do not insert the point of a hook in an eye bolt. Use a shackle.



- Loads may slip or fall if proper eye bolt assembly and lifting procedures are not followed  
- A falling load can seriously injure or kill  
- Read and understand all instructions and follow warnings and safety instructions





### Certified to DNV 2.7-1, type approval no. S-7732

For offshore container lifting and cold weather use with Charpy V-notch impact Value's of > 42 Joule At -40°C. All DNV links are specially heat treated after proof testing to minimize the risk of hydrogen embrittlement and stress corrosion cracking. Every link is batch coded for certificate recognition.

## LINK - MASTER LINK, DNV 2.7-1+

- Material: Triple Alloy Steel
- Standard: EN 1677-4, ASME B30.26, DNV 2.7-1
- Finish: Painted Orange
- Design Factor: 5:1(Wire Sling)
- Identification: Trademark, Size/WLL, Batch Code
- Rated in Metric Ton(s)



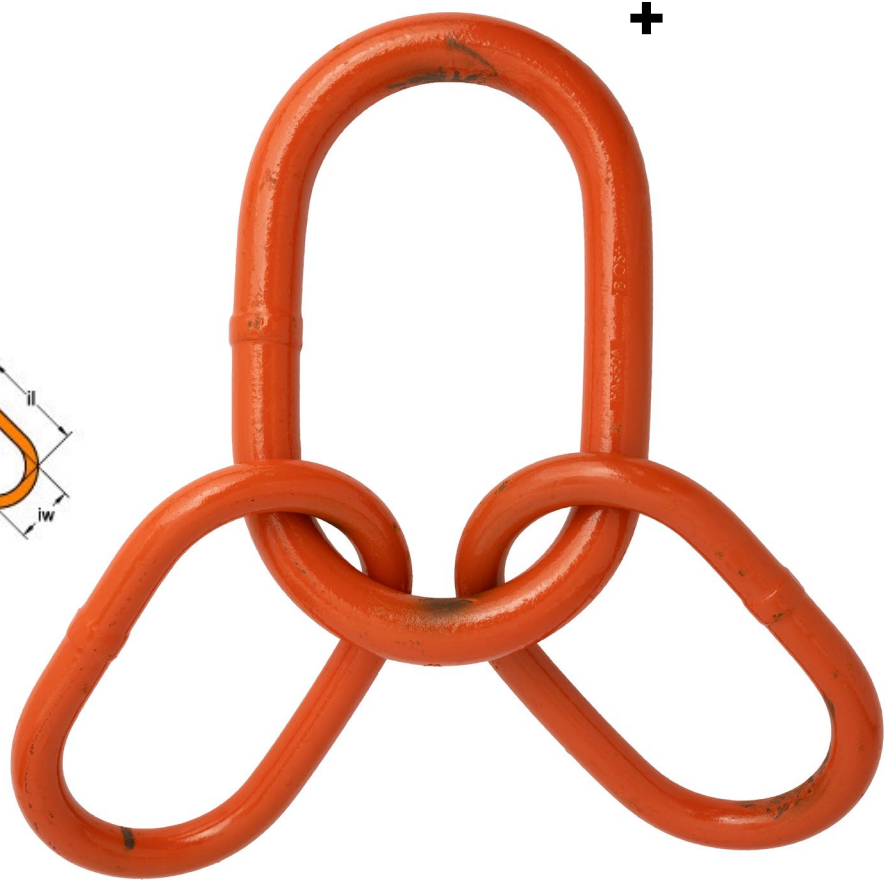
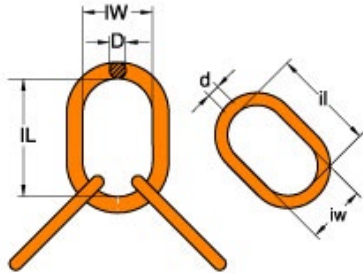
Tolerance - Material: +/-5%, Dia. +/- 2.5mm, Internal Width and Length: +10%

| Type       | Dimensions (mm) |               |              | WLL<br>5:1 (t) | Wt. / ea.<br>(kg) | Price / ea. | Part Number |
|------------|-----------------|---------------|--------------|----------------|-------------------|-------------|-------------|
|            | Dia.            | Inside Leghth | Inside Width |                |                   |             |             |
| OML160DNV  | 16.0            | 150           | 75           | 4.10           | 0.68              | 57.28       | 2-MA16MLS   |
| OML220DNV  | 22.0            | 270           | 140          | 7.0            | 2.28              | 124.71      | 2-MA22MLS   |
| OML250DNV  | 25.5            | 270           | 140          | 9.3            | 3.11              | 138.11      | 2-MA25MLS   |
| OML280DNV  | 28.0            | 270           | 140          | 14.5           | 3.78              | 148.23      | 2-MA28MLS   |
| OML320DNV  | 32.0            | 270           | 140          | 19.0           | 5.02              | 202.29      | 2-MA32MLS   |
| OML360DNV  | 36.0            | 270           | 140          | 26.0           | 6.46              | 251.96      | 2-MA36MLS   |
| OML400DNV  | 40.0            | 280           | 155          | 30.5           | 8.46              | 396.99      | 2-MA40MLS   |
| OML450DNV  | 45.0            | 320           | 175          | 40.0           | 12.18             | 512.51      | 2-MA45MLS   |
| OML500DNVS | 50.0            | 350           | 195          | 51.0           | 16.54             | 740.80      | 2-MA50MLS   |
| OML650DNV  | 65.0            | 410           | 220          | 75.0           | 33.02             | 1673.76     | 2-MA65ML    |
| OML750DNV  | 75.0            | 450           | 250          | 100.0          | 48.98             | 3939.97     | 2-MA75ML    |
| OML900DNV  | 90              | 510           | 300          | 150.0          | 86.0              | 12601.60    | 2-MA90ML    |



## LINK - MASTER LINK ASSEMBLY, DNV 2.7-1+

- Material: Triple pAlloy Steel
- Standard: EN 1677-4, ASME B30.26, DNV 2.7-1
- Finish: Painted Orange
- Design Factor: 5:1 (Wire Sling)
- Identification: Trademark, Size/WLL, Batch Code
- Rated in Metric Ton(s)



Tolerance - Material: +/-5%, Dia. +/- 2.5mm, Internal Width and Length: +10%

| Type       | Dimensions (mm) |     |     |      |     |     | WLL<br>5:1 (t) | Wt./ea.<br>(kg) | Price / ea. | Part Number |
|------------|-----------------|-----|-----|------|-----|-----|----------------|-----------------|-------------|-------------|
|            | D               | IL  | IW  | d    | il  | iw  |                |                 |             |             |
| OSA160DNV  | 16              | 150 | 75  | 14.5 | 125 | 60  | 4.1            | 1.3             | 144.40      | 2-MA16QA    |
| OSA220SDNV | 22.0            | 162 | 90  | 22   | 162 | 90  | 11.0           | 4.41            | 299.65      | 2-MA22QASS  |
| OSA250DNVS | 25.5            | 270 | 140 | 22   | 162 | 90  | 9.30           | 6.05            | 318.60      | 2-MA25QAS   |
| OSA260DNVS | 28.0            | 270 | 140 | 22   | 162 | 90  | 14.5           | 5.89            | 348.99      | 2-MA26QAS   |
| OSA320DNV  | 32.0            | 270 | 140 | 28   | 200 | 110 | 19.0           | 10.92           | 516.01      | 2-MA32QAS   |
| OSA360DNV  | 36.0            | 270 | 140 | 28   | 200 | 110 | 26.0           | 12.35           | 724.68      | 2-MA36QAS   |
| OSA400DNV  | 40.0            | 280 | 155 | 32   | 270 | 140 | 30.5           | 18.5            | 819.94      | 2-MA40QAS   |
| OSA450DNV  | 45.0            | 320 | 175 | 36   | 270 | 140 | 40.0           | 25.09           | 1,408.43    | 2-MA45QAS   |
| OSA500DNVS | 50.0            | 350 | 195 | 45   | 320 | 175 | 51.0           | 40.89           | 2,276.47    | 2-MA50QAS   |
| OSA650DNV  | 65.0            | 410 | 220 | 50   | 350 | 195 | 75.0           | 66.1            | 4,694.76    | 2-MA65QA    |
| OSA750DNV  | 75.0            | 450 | 250 | 65   | 410 | 220 | 100.0          | 115.02          | 9,057.10    | 2-MA75QA    |
| OSA900DNV  | 90.0            | 510 | 300 | 70   | 400 | 200 | 150.0          | 164.1           | 24,182.97   | 2-MA90QA    |

LINK - PEAR, WELDLESS SLING

- Standard: RR-C-271F
- Finish: Galvanized
- Design Factor: 5:1
- Identification: Trademark, Size/WLL, Batch Code



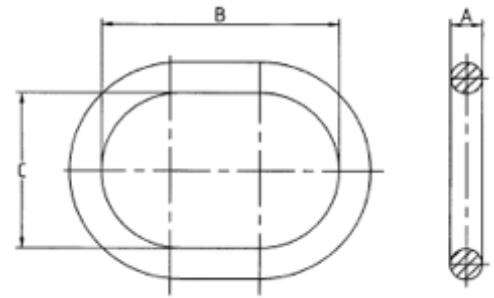
| Size (in) | WLL (lb) | Weight (lb) | Inside Length (in) | I. Width Sm. End (in) | I. Width Lg. End (in) | Price / ea. | Part Number |
|-----------|----------|-------------|--------------------|-----------------------|-----------------------|-------------|-------------|
| 3/8       | 1800     | 0.13        | 2-1/4              | 3/4                   | 1-1/2                 | 5.64        | 6-3/8"PLG   |
| 1/2       | 2900     | 0.55        | 3                  | 1                     | 2                     | 8.36        | 6-1/2"PLG   |
| 5/8       | 4200     | 1.10        | 3-3/4              | 1-1/4                 | 2-1/2                 | 12.13       | 6-5/8"PLG   |
| 3/4       | 6000     | 1.95        | 4-1/2              | 1-1/2                 | 3                     | 23.59       | 6-3/4"PLG   |
| 7/8       | 8300     | 2.78        | 5-1/4              | 1-3/4                 | 3-1/2                 | 33.44       | 6-7/8"PLG   |
| 1         | 10 800   | 4.30        | 6                  | 2                     | 4                     | 51.17       | 6-1"PLG     |
| 1 1/4     | 16 750   | 8.50        | 7-3/4              | 2-1/2                 | 5                     | 95.53       | 6-1-1/4"PLG |

## LINK - MASTER LINK, LARGE

### Made in Holland

- Material: High Alloy Steel
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code
- Rated in Metric Ton(s)

\*More sizes available from 105 to 1500 tonne WLL



| MBL (t) | WLL (t) | Dia. (mm) | In. Length (mm) | In. Width (mm) | Wt./ea. (kg) | Price / ea.        | Part Number |
|---------|---------|-----------|-----------------|----------------|--------------|--------------------|-------------|
| 525     | 105     | 80        | 450             | 250            | 56           | Pricing on Request | 116-ML105T  |
| 1250    | 250     | 115       | 600             | 400            | 163          |                    | 116-ML250T  |
| 2000    | 500     | 175       | 800             | 400            | 603          |                    | 116-ML500T  |
| 4000    | 1000    | 240       | 900             | 400            | 1226         |                    | 116-ML1000T |
| 6000    | 1500    | 270       | 1000            | 400            | 1712         |                    | 116-ML1500T |

## RING - ROUND, WELDLESS

- Standard: RR-C-271F
- Finish: Painted Yellow
- Design Factor: 6:1
- Identification: Trademark, Size/WLL, Batch Code

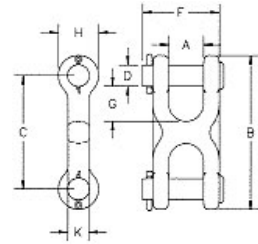


| Size (in)   | WLL (lb) | Weight (lb) | Dimension (in) |       |       | Price / ea. | Part Number   |
|-------------|----------|-------------|----------------|-------|-------|-------------|---------------|
|             |          |             | Dia.           | I.D.  | O.D.  |             |               |
| 7/8 x 4     | 7200     | 2.72        | 7/8            | 4.00  | 5.75  | 44.29       | 6-7/8X4RR     |
| 7/8 x 5 1/2 | 5600     | 3.47        | 7/8            | 5.50  | 7.25  | 67.73       | 6-7/8X5-1/2RR |
| 1 x 4       | 10 800   | 3.69        | 1              | 4.00  | 6.00  | 65.70       | 6-1X4RR       |
| 1 1/8 x 6   | 10 400   | 6.60        | 1 1/8          | 6.00  | 8.25  | 72.97       | 6-1-1/8X6RR   |
| 1 1/4 x 5   | 17 000   | 8.36        | 1 1/4          | 5.00  | 7.50  | 125.34      | 6-1-1/4X6RR   |
| 1 1/4 x 10  | 17 000   | 12.65       | 1 1/4          | 10.00 | 12.50 | 142.09      | 6-1-1/4X10RR  |

## LINK - TWIN CLEVIS

**Not for overhead lifting - Not for grade 80 or grade 100 material**

- Material: Body: Heat Treated Carbon Steel, Pins: Alloy Steel
- Standard: EN 12195-3
- Finish: Zinc & Painted
- Design Factor: 4:1
- Identification: Size/WLL



| Size Chain<br>(in) | WLL (lb) | Dimensions (in) |      |      |      |      |      |      |      | Price /<br>ea. | Part Number   |
|--------------------|----------|-----------------|------|------|------|------|------|------|------|----------------|---------------|
|                    |          | A               | B    | C    | D    | F    | G    | H    | K    |                |               |
| 1/4 - 5/16         | 4700     | 0.47            | 2.50 | 1.16 | 0.38 | 1.31 | 0.43 | 0.94 | 0.50 | 6.38           | 6-1/4-5/16TCL |
| 3/8                | 6600     | 0.53            | 2.81 | 1.81 | 0.44 | 1.80 | 0.50 | 1.00 | 0.56 | 7.35           | 6-3/8TCL      |
| 7/16 - 1/2         | 11 250   | 0.65            | 3.62 | 2.31 | 0.56 | 2.24 | 0.63 | 1.31 | 0.81 | 14.32          | 6-7/16-1/2TCL |

## LINK - QUICK

- Finish: Zinc & Stainless Steel



| Size<br>(in) | Wt. /<br>ea. (lb) | Inside<br>Length<br>(mm) | Inside<br>Width<br>(mm) | Opening<br>(mm) | WLL (lb) | Zinc Plated    |                | Stainless Steel - 304SS |                |                |
|--------------|-------------------|--------------------------|-------------------------|-----------------|----------|----------------|----------------|-------------------------|----------------|----------------|
|              |                   |                          |                         |                 |          | Price /<br>ea. | Part<br>Number | WLL (lb)                | Price /<br>ea. | Part<br>Number |
| 1/8          | 0.006             | 30                       | 10                      | 4               | 200      | 0.48           | 6-1/8"QL       | 330                     | 1.79           | 6-1/8"SSQL     |
| 3/16         | 0.031             | 38                       | 13                      | 6               | 520      | 0.66           | 6-3/16"QL      | 600                     | 2.23           | 6-3/16"SSQL    |
| 1/4          | 0.066             | 45                       | 15                      | 9               | 750      | 0.84           | 6-1/4"QL       | 950                     | 2.96           | 6-1/4"SSQL     |
| 5/16         | 0.132             | 58                       | 18                      | 10              | 1525     | 1.61           | 6-5/16"QL      | 1350                    | 5.59           | 6-5/16"SSQL    |
| 3/8          | 0.220             | 70                       | 20                      | 11              | 1800     | 2.76           | 6-3/8"QL       | 1700                    | 7.76           | 6-3/8"SSQL     |
| 7/16         | 0.242             | 81                       | 23                      | 15              | 2550     | 3.75           | 6-7/16"QL      | -                       | -              | -              |
| 1/2          | 0.781             | 85                       | 23                      | 16              | 3300     | 4.24           | 6-1/2"QL       | 2975                    | 15.83          | 6-1/2"SSQL     |

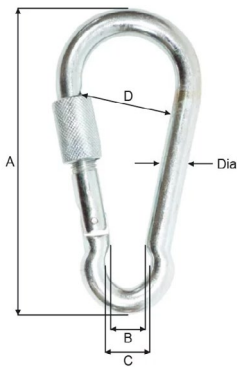
## HOOK - "S"



- Finish: Zinc

| Size | Length (mm) | Opening (mm) | Inside (mm) | Price / ea. | Part Number |
|------|-------------|--------------|-------------|-------------|-------------|
| 4    | 35          | 6.0          | 11          | 0.65        | 6-4MMEGH    |
| 5    | 46          | 6.5          | 13          | 0.68        | 6-5MMEGH    |
| 6    | 54          | 7.0          | 15.5        | 1.00        | 6-6MMEGH    |
| 7    | 65          | 10.5         | 18.5        | 1.25        | 6-7MMEGH    |
| 8    | 75          | 12.5         | 22.5        | 1.67        | 6-8MMEGH    |
| 10   | 90          | 15.0         | 28          | 2.97        | 6-10MMEGH   |

## HOOK - CARABINER, FISHING, SCREW LOCK



- Finish: Stainless Steel
- Material: 316 Stainless Steel

| Size dia. (mm) | Size dia. (inch) | WLL (lb) | Weight / 100 pcs (lb) | Dimensions (mm) |    |    |    | Price / ea. | Part Number    |
|----------------|------------------|----------|-----------------------|-----------------|----|----|----|-------------|----------------|
| A              | B                | C        | D                     |                 |    |    |    |             |                |
| 6              | 1/4"             | 265      | 6.39                  | 60              | 7  | 9  | 8  | 9.09        | 6-6X60SHSSSL   |
| 8              | 5/16"            | 500      | 15.87                 | 80              | 9  | 13 | 8  | 10.91       | 6-8X80SHSSSL   |
| 11             | 7/16"            | 990      | 42.01                 | 120             | 13 | 19 | 15 | 21.70       | 6-11X120SHSSSL |

## HOOK - SNAP

- Finish: Zinc & Stainless Steel
- Design Factor: 2.5:1



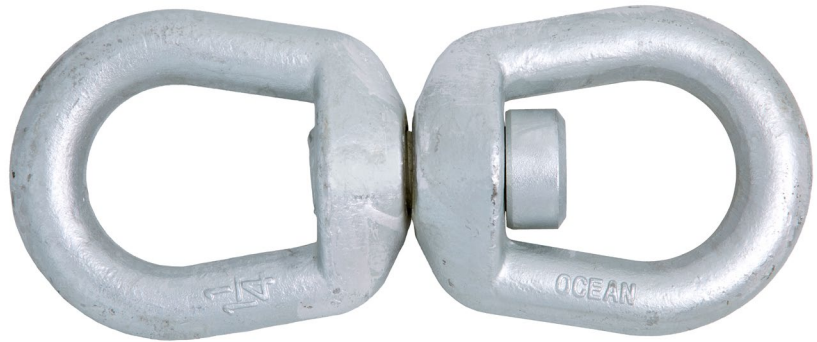
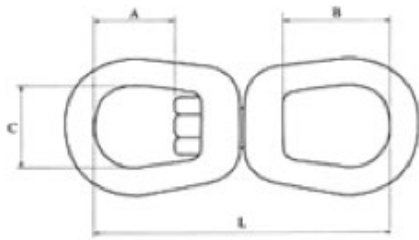
| Size (mm) | O.L. |      | Wire Dia. |      | Wt. / ea. (lb) | Zinc plated |             |            | Stainless Steel - 304SS |             |              |
|-----------|------|------|-----------|------|----------------|-------------|-------------|------------|-------------------------|-------------|--------------|
|           | (mm) | (in) | (mm)      | (in) |                | WLL (lb)    | Price / ea. | Part #     | WLL (lb)                | Price / ea. | Part #       |
| 5 x 50    | 50   | 2.00 | 5         | 3/16 | 0.022          | 200         | 0.64        | 6-5X50SH   | 220                     | 2.18        | 6-5X50SHSS   |
| 6 x 60    | 60   | 2.36 | 6         | 1/4  | 0.062          | 240         | 0.72        | 6-6X60SH   | 260                     | 2.52        | 6-6X60SHSS   |
| 7 x 70    | 70   | 2.75 | 7         | 9/32 | 0.099          | 360         | 1.30        | 6-7X70SH   | 396                     | 3.60        | 6-7X70SHSS   |
| 8 x 80    | 80   | 3.16 | 8         | 5/16 | 0.154          | 460         | 1.30        | 6-8X80SH   | 500                     | 4.23        | 6-8X80SHSS   |
| 10 x 100  | 100  | 4.00 | 10        | 3/8  | 0.317          | 700         | 1.97        | 6-10X100SH | 770                     | 7.51        | 6-10X100SHSS |
| 12 x 140  | 140  | 5.50 | 12        | 1/2  | 0.595          | 760         | 4.15        | 6-12X140SH | 1150                    | 16.61       | 6-12X140SHSS |
| 14 x 180  | 180  | 7.00 | 14        | 9/16 | 0.750          | 1120        | 10.27       | 6-14X180SH | -                       | -           | -            |



## SWIVEL - EYE & EYE

- Material: Forged Steel, quenched and tempered
- Standard: RR-C-271F, Type VII, Class 2
- Finish: Hot Dip Galvanized
- Design Factor: 5:1
- Identification: Trademark, Size/WLL

These swivels are positioning devices and are not intended to rotate under load.

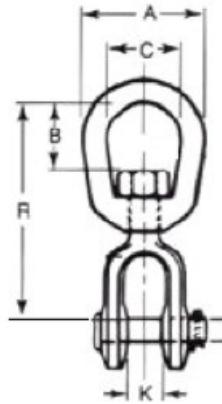


| Rope<br>(in) | WLL<br>(lb) | Wt./ea.<br>(lb) | Dimensions (in) |      |      |       | Price<br>/ ea. | Part Number  |
|--------------|-------------|-----------------|-----------------|------|------|-------|----------------|--------------|
|              |             |                 | A               | B    | C    | L     |                |              |
| 3/8          | 2250        | 0.71            | 0.94            | 1.50 | 1.25 | 4.31  | 8.27           | 6-3/8SWLEE   |
| 1/2          | 3600        | 1.32            | 1.31            | 2.00 | 1.50 | 5.44  | 13.34          | 6-1/2SWLEE   |
| 5/8          | 5200        | 2.49            | 1.56            | 2.38 | 1.75 | 6.56  | 20.53          | 6-5/8SWLEE   |
| 3/4          | 7200        | 4.02            | 1.75            | 2.43 | 2.00 | 7.19  | 33.10          | 6-3/4SWLEE   |
| 1            | 12 500      | 8.95            | 2.31            | 3.25 | 2.50 | 9.63  | 107.62         | 6-1SWLEE     |
| 1 1/4        | 18 000      | 16.37           | 2.89            | 3.89 | 3.13 | 11.44 | 275.83         | 6-1-1/4SWLEE |
| 1 1/2        | 45 200      | 45.79           | 4.40            | 6.11 | 3.95 | 17.51 | 744.43         | 6-1-1/2SWLEE |

## SWIVEL - JAW & EYE

- Material: Forged Steel, quenched and tempered
- Standard: RR-C-271F, Type VII, Class 2
- Finish: Hot Dip Galvanized
- Design Factor: 5:1
- Identification: Trademark, Size/WLL

These swivels are positioning devices and are not intended to rotate under load.



| Rope<br>(in) | WLL<br>(lb) | Wt./ea.<br>(lb) | Dimensions (in) |      |      |      |       |        | Price<br>/ ea. | Part Number  |
|--------------|-------------|-----------------|-----------------|------|------|------|-------|--------|----------------|--------------|
|              |             |                 | A               | B    | C    | K    | R     | Length |                |              |
| 3/8          | 2250        | 0.66            | 2.00            | 0.94 | 1.25 | 0.63 | 3.63  | 4.75   | 9.58           | 6-3/8SWLJE   |
| 1/2          | 3600        | 1.34            | 2.50            | 1.31 | 1.50 | 0.75 | 4.50  | 6.06   | 18.42          | 6-1/2SWLJE   |
| 5/8          | 5200        | 2.48            | 3.00            | 1.56 | 1.75 | 0.94 | 5.31  | 7.31   | 22.52          | 6-5/8SWLJE   |
| 3/4          | 7200        | 3.88            | 3.50            | 1.75 | 2.00 | 1.13 | 6.06  | 8.31   | 37.86          | 6-3/4SWLJE   |
| 1            | 12 500      | 9.84            | 4.50            | 2.31 | 2.40 | 1.75 | 8.56  | 11.69  | 115.66         | 6-1SWLJE     |
| 1 1/4        | 18 000      | 15.75           | 5.69            | 2.89 | 3.13 | 2.06 | 9.44  | 13.13  | 361.20         | 6-1-1/4SWLJE |
| 1 1/2        | 45 200      | 54.75           | 7.00            | 3.88 | 4.00 | 2.88 | 14.25 | 20.84  | 892.40         | 6-1-1/2SWLJE |

SWIVEL - EYE & EYE

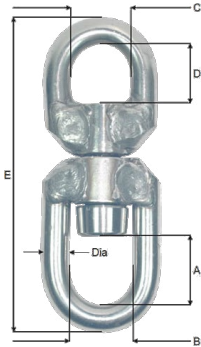
- Material: 304 Stainless Steel
- Finish: Stainless Steel
- Design Factor: Non-Load Rated

| Size (in) | Price / ea. | Part Number |
|-----------|-------------|-------------|
| 1/4       | 5.48        | 6-1/4SWEES  |
| 5/16      | 12.03       | 6-5/16SWEES |
| 3/8       | 22.57       | 6-3/8SWEES  |
| 1/2       | 51.49       | 6-1/2SWEES  |
| 5/8       | 100.44      | 6-5/8SWEES  |
| 3/4       | 136.60      | 6-3/4SWEES  |



SWIVEL - EYE & EYE

- Material: 304 Stainless Steel
- Standard: RR-C-271F
- Finish: Stainless Steel
- Design Factor: 5:1
- Identification: Size/WLL
- Rated in Metric Ton(s)



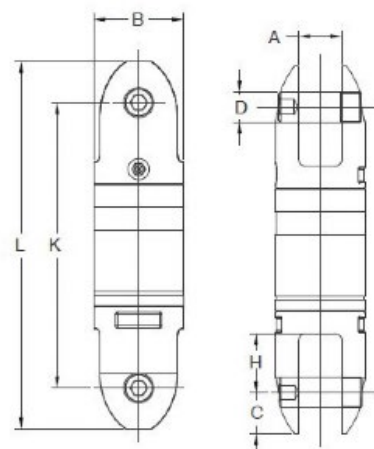
| Size (mm) | WLL (t) | Wt./ea. (kg) | Dimensions (mm) |    |    |    |     | Price / ea. | Part Number |
|-----------|---------|--------------|-----------------|----|----|----|-----|-------------|-------------|
|           |         |              | A               | B  | C  | D  | E   |             |             |
| 32        | 12.0    | 8.15         | 60              | 50 | 50 | 98 | 350 | 621.70      | 6-32SWEES   |



## SWIVEL - BULLET STYLE, ANGULAR CONTACT BEARING

- Minimum Ultimate Load is 5 times the Working Load Limit
- Proof Load is 2 times the Working Load Limit
- Rated in Metric Ton(s)

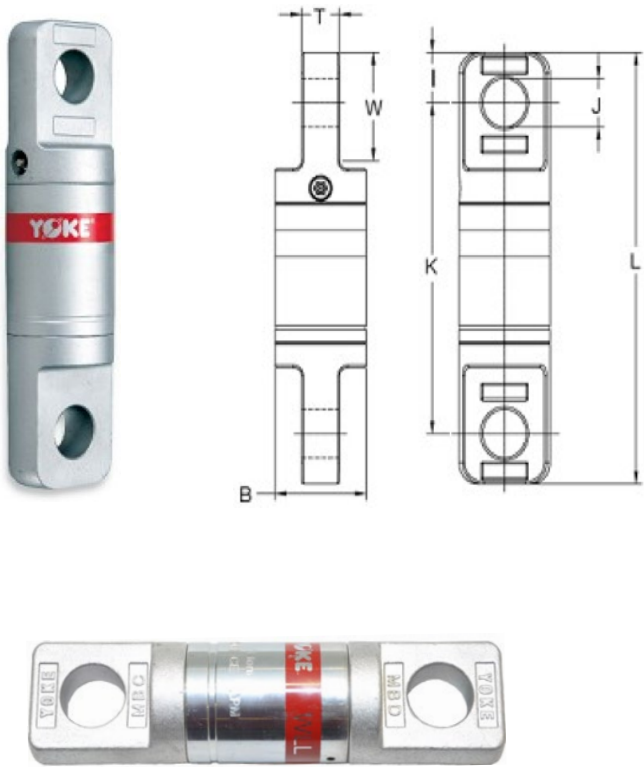
- All Swivels are manufactured using the highest grade of material available
- Tested to 2 times the Working Load Limit with certification
- Zinc plated for corrosion resistance and longer life
- Grease fittings for superior performance
- Designed for low starting torque and high rotation speed
- 20,000 cycle fatigue rated to 1.5 times WLL
- 100% Magnaflux crack detection
- All parts with batch number for quality certified and traceability
- Rated in Metric Ton(s)



| Wire Size (in) | WLL (t) | Dimensions (in) |       |       |      |      |      |      | Wt./ea. (lb) | Price / ea. | Part Number |
|----------------|---------|-----------------|-------|-------|------|------|------|------|--------------|-------------|-------------|
|                |         | B               | K     | L     | C    | A    | D    | H    |              |             |             |
| 7/8            | 10      | 4.00            | 12.50 | 16.00 | 1.80 | 1.70 | 1.50 | 2.10 | 41.1         | 1,794.58    | 28-301-10   |
| 1              | 15      | 4.30            | 12.50 | 16.00 | 1.80 | 2.00 | 1.50 | 2.20 | 45.5         | 2,062.50    | 28-301-15   |
| 1.25           | 25      | 5.20            | 14.70 | 19.50 | 2.40 | 2.50 | 2.00 | 2.70 | 80.0         | 5,309.92    | 28-301-25   |

SWIVEL - EYE & EYE, ANGULAR CONTACT BEARING

- Minimum Ultimate Load is 5 times the Working Load Limit
- Proof Load is 2 times the Working Load Limit
- Rated in Metric Ton(s)
- All Swivels are manufactured using the highest grade of material available
- Tested to 2 times the Working Load Limit with certification
- Zinc plated for corrosion resistance and longer life
- Grease fittings for superior performance
- Designed for low starting torque and high rotation speed
- 20,000 cycle fatigue rated to 1.5 times WLL
- 100% Magnaflux crack detection
- All parts with batch number for quality certified and traceability
- Rated in Metric Ton(s)

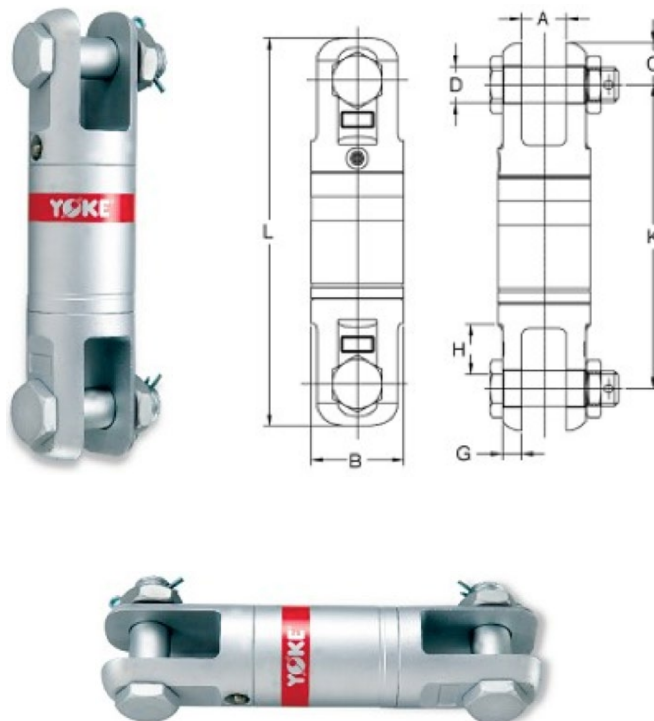


| Wire Size (in) | WLL (t) | Dimensions (in) |       |       |      |      |      |      | Wt./ea. (lb) | Price / ea. | Part Number |
|----------------|---------|-----------------|-------|-------|------|------|------|------|--------------|-------------|-------------|
|                |         | B               | K     | L     | I    | T    | J    | W    |              |             |             |
| 1/2            | 3       | 2.00            | 6.20  | 8.43  | 1.10 | 0.80 | 1.10 | 2.00 | 4.6          | 578.70      | 28-306-03   |
| 3/4            | 8.5     | 3.00            | 9.80  | 12.80 | 1.50 | 1.30 | 1.50 | 3.20 | 16.1         | 979.60      | 28-306-085  |
| 7/8            | 10      | 4.00            | 12.20 | 16.30 | 2.10 | 1.70 | 2.00 | 3.50 | 37.4         | 2,119.30    | 28-306-10   |



# SWIVEL - JAW & JAW, ANGULAR CONTACT BEARING

- Minimum Ultimate Load is 5 times the Working Load Limit
- Proof Load is 2 times the Working Load Limit
- Rated in Metric Ton(s)
- All Swivels are manufactured using the highest grade of material available
- Tested to 2 times the Working Load Limit with certification
- Zinc plated for corrosion resistance and longer life
- Grease fittings for superior performance
- Designed for low starting torque and high rotation speed
- 20,000 cycle fatigue rated to 1.5 times WLL
- 100% Magnaflux crack detection
- All parts with batch number for quality certified and traceability
- Rated in Meric Ton(s)

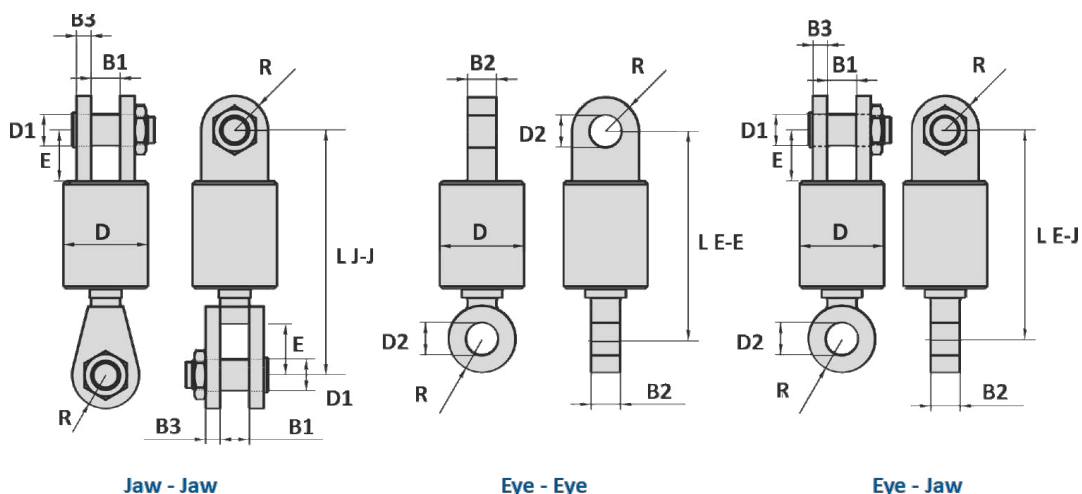


| Wire Size (in) | WLL (t) | Dimensions (in) |       |       |      |      |      |      |      | Wt./ea. (lb) | Price / ea. | Part Number |
|----------------|---------|-----------------|-------|-------|------|------|------|------|------|--------------|-------------|-------------|
|                |         | B               | K     | L     | C    | A    | D    | G    | H    |              |             |             |
| 7/8            | 10      | 4.00            | 12.40 | 16.20 | 1.90 | 1.70 | 1.50 | 1.00 | 2.10 | 43.0         | 2,015.05    | 28-303-10   |
| 1 1/4          | 25      | 5.20            | 14.70 | 20.00 | 2.60 | 2.40 | 2.00 | 1.20 | 2.80 | 87.0         | 5,450.09    | 28-303-25   |

## SWIVEL - CLOSED BODY SWIVEL, GN®

Made in Holland

- Material: High Tensile Steel
- Finish: Painted
- Design Factor: 5:1
- Temperature Range: -20°C up to +200°C
- Certification: Certificate of Conformity (on request)  
3.1 material certificate EN 10204 (on request)
- Rated in Metric Ton(s)



Jaw - Jaw

Eye - Eye

Eye - Jaw

| WLL<br>(ton) | Dimensions (mm) |     |     |     |     |     |     |          |          |          | Wt.<br>J-J<br>(kg) | Wt.<br>E-E<br>(kg) | Wt.<br>E-J<br>(kg) | Price | Part Number |
|--------------|-----------------|-----|-----|-----|-----|-----|-----|----------|----------|----------|--------------------|--------------------|--------------------|-------|-------------|
|              | B1              | B2  | B3  | D1  | D2  | D   | E   | L<br>J-J | L<br>E-E | L<br>E-J | R                  |                    |                    |       |             |
| 17           | 65              | 55  | 28  | 63  | 65  | 170 | 130 | 480      | 410      | 480      | 70                 | 59                 | 44                 | 55    | 116-17CBS   |
| 25           | 76              | 70  | 30  | 70  | 72  | 190 | 145 | 565      | 450      | 535      | 70                 | 84                 | 64                 | 77    | 116-25CBS   |
| 35           | 90              | 80  | 40  | 80  | 82  | 250 | 175 | 690      | 540      | 645      | 85                 | 168                | 133                | 156   | 116-35CBS   |
| 55           | 110             | 100 | 50  | 100 | 103 | 270 | 175 | 800      | 690      | 785      | 105                | 274                | 213                | 254   | 116-55CBS   |
| 70           | 110             | 100 | 55  | 108 | 111 | 290 | 170 | 810      | 700      | 810      | 115                | 323                | 252                | 275   | 116-70CBS   |
| 85           | 130             | 120 | 75  | 127 | 130 | 350 | 175 | 870      | 830      | 855      | 135                | 529                | 404                | 448   | 116-85CBS   |
| 120          | 155             | 140 | 90  | 152 | 155 | 430 | 190 | 890      | 920      | 925      | 170                | 851                | 663                | 734   | 116-120CBS  |
| 150          | 170             | 160 | 100 | 178 | 181 | 470 | 210 | 1003     | 960      | 1038     | 190                | 1170               | 892                | 990   | 116-150CBS  |
| 200          | 190             | 170 | 110 | 190 | 193 | 530 | 250 | 1150     | 1060     | 1180     | 220                | 1726               | 1224               | 1424  | 116-200CBS  |
| 250          | 210             | 190 | 120 | 250 | 253 | 600 | 280 | 1240     | 1170     | 1300     | 260                | 2587               | 1737               | 2090  | 116-250CBS  |
| 300          | 250             | 190 | 175 | 290 | 293 | 750 | 300 | 1350     | 1280     | 1440     | 300                | 4320               | 2769               | 3438  | 116-300CBS  |

Pricing on  
Request

## BLOCK - TRY NET

- **Roller Bearing and Grease Nipple**
- Finish: Galvanized
- Design Factor: 4:1
- Identification: Trademark, Size/WLL
- Rated in Metric Ton(s)

| WLL (t) | Size (in) | Wt. (lb) | Price / ea. | Part Number |
|---------|-----------|----------|-------------|-------------|
| 5       | 6         | 24       | 391.00      | 6-6"TNB     |
| 10      | 8         | 56       | 638.12      | 6-8"TNB     |



## BLOCK - YARDING



- **Roller Bearing and Grease Nipple**
- Material: Steel
- Finish: Painted, Red
- Design Factor: 4:1
- Identification: Size/WLL
- Rated in Metric Ton(s)

| Wire size (in) | WLL (t) | Size (in) | Qty. / box | Wt. (lb) | Price / ea. | Part Number |
|----------------|---------|-----------|------------|----------|-------------|-------------|
| 1/4 - 5/16     | 1.5     | 3         | 10         | 3        | 49.35       | 6-3"YB      |
| 3/8            | 3       | 4         | 10         | 6        | 77.25       | 6-4"YB      |
| 1/2            | 4.5     | 5         | 5          | 9        | 125.60      | 6-5"YB      |
| 9/16           | 6       | 6         | 2          | 14       | 192.15      | 6-6"YB      |
| 5/8            | 8       | 8         | 2          | 32       | 337.44      | 6-8"YB      |

A potential hazard exists when lifting or dragging heavy loads with tackle block assemblies. Failure to design and use tackle block systems properly may cause a load to slip or fall, the result could be serious injury or death. A tackle block system should be rigged by a qualified person as defined by ANSI/ASME B30.

BLOCK - CHAIN

- **Roller Bearing and Grease Nipple**
- **Roller for 3/8" chain**
- Material: Steel
- Standard: EN 13157
- Finish: Painted
- Design Factor: 4:1
- Identification: Trademark, Size/WLL
- Rated in Metric Ton(s)

| WLL (t) | Wt. (lb) | Price / ea. | Part Number |
|---------|----------|-------------|-------------|
| 5       | 9        | 127.76      | 6-CBE14     |



BLOCK - GIN



- **Ball bearing, with hook and latch**
- **For Manila Rope**
- Material: Steel
- Standard: BS 1692
- Finish: Painted
- Design Factor: 3:1
- Identification: Trademark, Size/WLL

| Sheave Size (in) | WLL (lb) | Rope Dia. (in) | Rim Width (in) | Wt. (lb) | Price / ea. | Part Number |
|------------------|----------|----------------|----------------|----------|-------------|-------------|
| 12               | 1000     | 1              | 1 3/8          | 12.7     | 149.00      | 6-12"GB     |

A potential hazard exists when lifting or dragging heavy loads with tackle block assemblies. Failure to design and use tackle block systems properly may cause a load to slip or fall, the result could be serious injury or death. A tackle block system should be rigged by a qualified person as defined by ANSI/ASME B30.

## BLOCK - SHEAVE BRONZE BRUSHED

- Material: Steel
- Standard: EN 13157
- Finish: Painted
- Design Factor: 4:1

| Sheave Dia. (in) | Bore dia. (mm) | Wire Dia. (in) | Qty. / box | Price / ea. | Part Number |
|------------------|----------------|----------------|------------|-------------|-------------|
| 5                | 24             | 1/2            | 13         | 40.36       | 6-5"SBB     |
| 6                | 32.5           | 5/8            | 5          | 60.84       | 6-6"SBB     |
| 8                | 35             | 7/8            | 5          | 112.25      | 6-8"SBB     |



## BLOCK - SINGLE OR DOUBLE SHEAVE, WOODEN, WITH HOOK

For use with fibre rope

- Standard: EN 13157
- Finish: Galvanized
- Design Factor: 4:1
- Identification: Trademark, Size/WLL

| Shell Size (in) | Rope Dia. (in) | Sheave Size (in) |       |     | Wt. (lb) | SINGLE BLOCKS |             |             | DOUBLE BLOCKS |             |             |
|-----------------|----------------|------------------|-------|-----|----------|---------------|-------------|-------------|---------------|-------------|-------------|
|                 |                | O.D.             | Rim   | Pin |          | WLL (lb)      | Price / ea. | Part Number | WLL (lb)      | Price / ea. | Part Number |
| 3               | 3/8            | 1 3/4            | 1/2   | 3/8 | 1        | 500           | 35.00       | 6-3"SWBH    | 800           | 56.82       | 6-3"DWBH    |
| 4               | 1/2            | 2 1/4            | 5/8   | 3/8 | 2        | 1000          | 46.85       | 6-4"SWBH    | 1400          | 82.50       | 6-4"DWBH    |
| 5               | 5/8            | 3                | 3/4   | 3/8 | 2.5      | 1200          | 66.40       | 6-5"SWBH    | 1800          | 113.55      | 6-5"DWBH    |
| 6               | 3/4            | 3 1/2            | 1     | 1/2 | 4        | 1800          | 92.67       | 6-6"SWBH    | 2500          | 176.95      | 6-6"DWBH    |
| 8               | 1              | 4 3/4            | 1 1/8 | 5/8 | 9.5      | 2800          | 169.02      | 6-8"SWBH    | 3800          | 291.37      | 6-8"DWBH    |

A potential hazard exists when lifting or dragging heavy loads with tackle block assemblies. Failure to design and use tackle block systems properly may cause a load to slip or fall, the result could be serious injury or death. A tackle block system should be rigged by a qualified person as defined by ANSI/ASME B30.



BLOCK - SNATCH, SINGLE SHEAVE, WOODEN, WITH HOOK

For use with fibre rope, opens for easy access

- Standard: EN 13157
- Finish: Galvanized
- Design Factor: 4:1
- Identification: Trademark, Size/WLL

| Rope Dia.<br>(in) | WLL<br>(lb) | Sheave Size<br>(in) | Wt.<br>(lb) | Price /<br>ea. | Part Number |
|-------------------|-------------|---------------------|-------------|----------------|-------------|
| 7/8               | 2400        | 6                   | 8           | 179.00         | 6-7/8X6SB   |
| 1 1/8             | 4800        | 8                   | 12          | 229.50         | 6-11/8X8SB  |



BLOCK - PULLEY



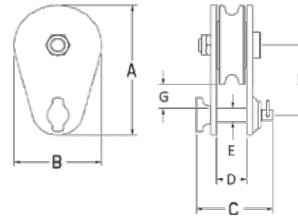
- For use with fibre rope
- Material: Stainless Steel
- Finish: Stainless Steel
- Design Factor: 4:1
- Identification: Trademark, Size/WLL

| Rope Dia.<br>(in) | Break Load<br>(lb) | Diameter<br>(in) | Price / ea. | Part Number |
|-------------------|--------------------|------------------|-------------|-------------|
| 3/8               | 1900               | 1 1/4            | 19.30       | 6-PBSS3/8   |
| 5/8               | 3200               | 2                | 36.30       | 6-PBSS5/8   |

A potential hazard exists when lifting or dragging heavy loads with tackle block assemblies. Failure to design and use tackle block systems properly may cause a load to slip or fall, the result could be serious injury or death. A tackle block system should be rigged by a qualified person as defined by ANSI/ASME B30.

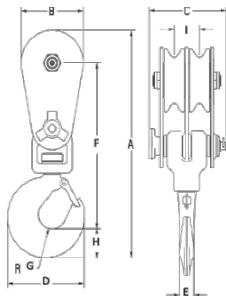
## BLOCK - SNATCH, SINGLE SHEAVE, LIGHT DUTY, TAIL BOARD, OCEAN® BRAND

- Material: Manufactured from the highest quality tensile steel, forged swivel tees, yokes and end fittings.
- Finish: Light blue body for quick recognition
- Identification: Manufacturer, Rated Load, Rope Size(s)
- Furnished with Bronze Bushings and Grease Nipples
- Blocks open for easy wire installation.
- Design Factor: 4:1
- Standard: EN 13157
- Rated in Metric Load(s)



| Wire Dia.<br>(in) | Sheave Dia.<br>(in) | WLL<br>(t) | Dimensions (in) |      |      |      |      |      |      | N.W.<br>(lb) | Price /<br>ea. | Part Number   |
|-------------------|---------------------|------------|-----------------|------|------|------|------|------|------|--------------|----------------|---------------|
| A                 | B                   | C          | D               | E    | F    | G    |      |      |      |              |                |               |
| 5/16 - 3/8        | 3                   | 2          | 4.87            | 3.00 | 2.64 | 1.04 | 0.50 | 2.62 | 0.87 | 3            | 61.72          | 6-3"406SB     |
| 3/8 - 1/2         | 4 1/2               | 4          | 7.75            | 4.25 | 3.13 | 1.56 | 0.75 | 4.25 | 1.63 | 8            | 135.00         | 6-4-1/2"406SB |
| 5/8 - 3/4         | 6                   | 8          | 9.87            | 6.00 | 4.19 | 1.80 | 1.00 | 5.12 | 1.62 | 15           | 258.24         | 6-6"406SB     |
| 3/4 - 7/8         | 6                   | 12         | 9.87            | 6.00 | 4.19 | 1.80 | 1.00 | 5.12 | 1.62 | 24           | 297.00         | 6-6"406SBL    |
| 1 - 1-1/8         | 8                   | 15         | 13.56           | 8.12 | 6.00 | 2.55 | 1.25 | 6.75 | 2.37 | 35           | 495.00         | 6-8"406SB     |

## BLOCK - SNATCH, DOUBLE SHEAVE, LIGHT DUTY, WITH HOOK, OCEAN® BRAND

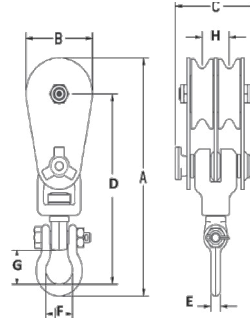


- Material: Manufactured from the highest quality tensile steel, forged swivel tees, yokes and end fittings
- Finish: Yellow end fittings, light blue body for quick recognition
- Identification: Manufacturer, Rated Load, Rope Size(s)
- Furnished with Bronze Bushings and Grease Nipples
- Blocks open for easy wire installation.
- Design Factor: 4:1
- Standard: EN 13157
- Rated in Metric Load(s)

| Wire Dia.<br>(in) | Sheave Dia.<br>(in) | WLL<br>(t) | Dimensions (in) |      |      |      |      |       |      |      |      | N.W.<br>(lb) | Price /<br>ea. | Part Number   |
|-------------------|---------------------|------------|-----------------|------|------|------|------|-------|------|------|------|--------------|----------------|---------------|
| A                 | B                   | C          | D               | E    | F    | G    | H    | I     |      |      |      |              |                |               |
| 3/8 - 1/2         | 4 1/2               | 4          | 14.77           | 4.24 | 5.25 | 5.24 | 1.00 | 10.78 | 0.94 | 1.87 | 1.72 | 20           | 367.90         | 6-4-1/2"408SB |
| 5/8 - 3/4         | 6                   | 12         | 21.12           | 6.00 | 6.13 | 7.86 | 1.56 | 15.50 | 1.44 | 2.62 | 2.62 | 49           | 577.20         | 6-6"408SB     |
| 5/8 - 3/4         | 8                   | 12         | 23.18           | 8.12 | 6.13 | 7.86 | 1.56 | 16.50 | 1.44 | 2.62 | 2.03 | 59           | 699.90         | 6-8"408SB     |

## BLOCK - SNATCH, DOUBLE SHEAVE, LIGHT DUTY, WITH SHACKLE, OCEAN® BRAND

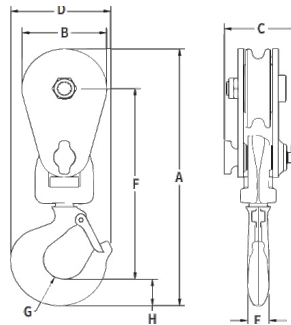
- Material: Manufactured from the highest quality tensile steel, forged swivel tees, yokes and end fittings
- Finish: Light blue body for quick recognition
- Identification: Manufacturer, Rated Load, Rope Size(s)
- Furnished with Bronze Bushings and Grease Nipples
- Blocks open for easy wire installation.
- Design Factor: 4:1
- Standard: EN 13157
- Rated in Metric Load(s)



| Wire Dia.<br>(in) | Sheave Dia.<br>(in) | WLL<br>(t) | Dimensions<br>(in) |      |      |       |      |      |      |      | N.W.<br>(lb) | Price /<br>ea. | Part Number   |
|-------------------|---------------------|------------|--------------------|------|------|-------|------|------|------|------|--------------|----------------|---------------|
|                   |                     |            | A                  | B    | C    | D     | E    | F    | G    | H    |              |                |               |
| 3/8 - 1/2         | 4 1/2               | 4          | 14.03              | 4.24 | 5.25 | 11.22 | 0.62 | 1.70 | 2.01 | 1.72 | 20           | 374.78         | 6-4-1/2"409SB |
| 5/8 - 3/4         | 6                   | 12         | 21.12              | 6.00 | 6.13 | 16.36 | 1.50 | 3.12 | 3.12 | 2.03 | 49           | 610.28         | 6-6"409SB     |
| 5/8 - 3/4         | 8                   | 12         | 23.17              | 8.12 | 6.13 | 17.36 | 1.50 | 3.12 | 3.12 | 2.03 | 59           | 710.40         | 6-8"409SB     |



## BLOCK - SNATCH, SINGLE SHEAVE, ALLOY, WITH HOOK, OCEAN® BRAND

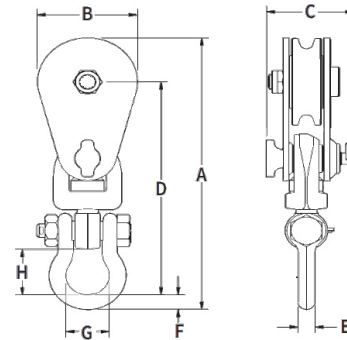


- Material: Manufactured from the highest quality alloy steel, forged swivel tees, yokes and end fittings
- Finish: Yellow for quick recognition
- Identification: Manufacturer, Rated Load, Rope Size(s)
- Furnished with Bronze Bushings and Grease Nipples
- Blocks open for easy wire installation
- Design Factor: 4:1
- Standard: EN 13157
- Rated in Metric Load(s)

| Wire Dia. |           | Sheave Dia.<br>(in) | WLL<br>(t) | Dimensions<br>(in) |       |      |      |      |       |      |      | N.W.<br>(lb) | Price /<br>ea. | Part Number |
|-----------|-----------|---------------------|------------|--------------------|-------|------|------|------|-------|------|------|--------------|----------------|-------------|
| (mm)      | (in)      |                     |            | A                  | B     | C    | D    | E    | F     | G    | H    |              |                |             |
| 19-22     | 3/4 - 7/8 | 10                  | 12         | 24.02              | 10.12 | 4.19 | 7.88 | 1.56 | 16.34 | 1.44 | 2.62 | 61           | 1,024.35       | 6-10"416SB  |

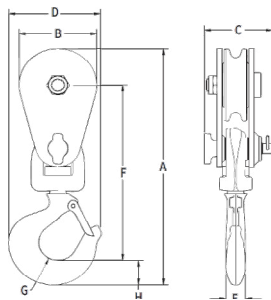
## BLOCK - SNATCH, SINGLE SHEAVE, ALLOY, WITH SHACKLE, OCEAN® BRAND

- Material: Manufactured from the highest quality alloy steel, forged swivel tees, yokes and end fittings
- Finish: Yellow for quick recognition
- Identification: Manufacturer, Rated Load, Rope Size(s)
- Furnished with Bronze Bushings and Grease Nipples
- Blocks open for easy wire installation.
- Design Factor: 4:1
- Standard: EN 13157
- Rated in Metric Load(s)



| Wire Dia. |           | Sheave Dia.<br>(in) | WLL<br>(t) | Dimensions<br>(in) |       |      |       |      |      |      |      | N.W.<br>(lb) | Price / ea. | Part Number |
|-----------|-----------|---------------------|------------|--------------------|-------|------|-------|------|------|------|------|--------------|-------------|-------------|
| (mm)      | (in)      |                     |            | A                  | B     | C    | D     | E    | F    | G    | H    |              |             |             |
| 19-22     | 3/4 - 7/8 | 10                  | 12         | 23.06              | 10.12 | 4.19 | 16.75 | 1.25 | 1.25 | 3.00 | 3.47 | 57           | 1,071.06    | 6-10"417SB  |

## BLOCK - SNATCH, SINGLE SHEAVE, LIGHT DUTY, WITH HOOK, OCEAN® BRAND

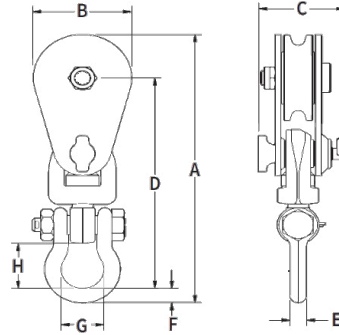


- Material: Manufactured from the highest quality tensile steel, forged swivel tees, yokes and end fittings.
- Finish: Yellow end fittings, light blue body for quick recognition
- Identification: Manufacturer, Rated Load, Rope Size(s)
- Furnished with Bronze Bushings and Grease Nipples
- Blocks open for easy wire installation.
- Design Factor: 4:1
- Standard: EN 13157
- Rated in Metric Load(s)

| Wire Dia.<br><br>(in) | Sheave Dia.<br><br>(in) | WLL<br><br>(t) | Dimensions<br>(in) |      |      |      |      |       |      |      | N.W.<br><br>(lb) | Price / ea. | Part Number   |
|-----------------------|-------------------------|----------------|--------------------|------|------|------|------|-------|------|------|------------------|-------------|---------------|
|                       |                         |                | A                  | B    | C    | D    | E    | F     | G    | H    |                  |             |               |
| 5/16 - 3/8            | 3                       | 2              | 9.30               | 3.00 | 2.64 | 3.65 | 0.60 | 6.05  | 1.09 | 0.96 | 5                | 73.46       | 6-3"418SB     |
| 3/8 - 1/2             | 4 1/2                   | 4              | 14.50              | 4.24 | 3.13 | 4.88 | 1.30 | 9.00  | 1.60 | 1.55 | 12               | 139.10      | 6-4-1/2"418SB |
| 5/8 - 3/4             | 6                       | 8              | 18.50              | 6.00 | 4.19 | 6.40 | 1.52 | 10.60 | 2.15 | 2.00 | 27               | 269.52      | 6-6"418SB     |
| 5/8 - 3/4             | 8                       | 8              | 20.25              | 8.12 | 4.19 | 6.40 | 1.52 | 11.00 | 2.15 | 2.00 | 37               | 317.50      | 6-8"418SB     |

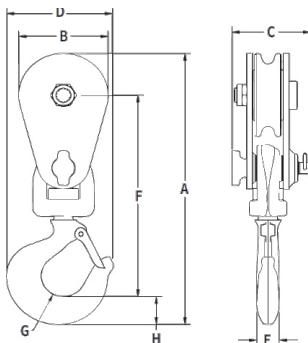
## BLOCK - SNATCH, SINGLE SHEAVE, LIGHT DUTY, WITH SHACKLE, OCEAN® BRAND

- Material: Manufactured from the highest quality tensile steel, forged swivel tees, yokes and end fittings
- Finish: Yellow end fittings, light blue body for quick recognition
- Identification: Manufacturer, Rated Load, Rope Size(s)
- Furnished with Bronze Bushings and Grease Nipples
- Blocks open for easy wire installation
- Design Factor: 4:1
- Standard: EN 13157
- Rated in Metric Load(s)



| Wire Dia.<br>(in) | Sheave Dia.<br>(in) | WLL<br>(t) | Dimensions<br>(in) |      |      |       |      |      |      |      | N.W.<br>(lb) | Price /<br>ea. | Part Number   |
|-------------------|---------------------|------------|--------------------|------|------|-------|------|------|------|------|--------------|----------------|---------------|
| A                 | B                   | C          | D                  | E    | F    | G     | H    |      |      |      |              |                |               |
| 5/16 - 3/8        | 3                   | 2          | 9.27               | 3.00 | 2.64 | 7.27  | 0.50 | 0.50 | 1.32 | 1.56 | 5            | 75.82          | 6-3"419SB     |
| 3/8 - 1/2         | 4 1/2               | 4          | 13.38              | 4.24 | 3.13 | 10.57 | 0.62 | 0.69 | 1.70 | 2.00 | 12           | 139.05         | 6-4-1/2"419SB |
| 5/8 - 3/4         | 6                   | 8          | 18.93              | 6.00 | 4.19 | 14.68 | 1.25 | 1.25 | 3.00 | 3.47 | 27           | 281.60         | 6-6"419SB     |
| 5/8 - 3/4         | 8                   | 8          | 20.99              | 8.12 | 4.19 | 15.68 | 1.25 | 1.25 | 3.00 | 3.47 | 34           | 334.00         | 6-8"419SB     |

## BLOCK - SNATCH, SINGLE SHEAVE, WITH HOOK, OCEAN® BRAND



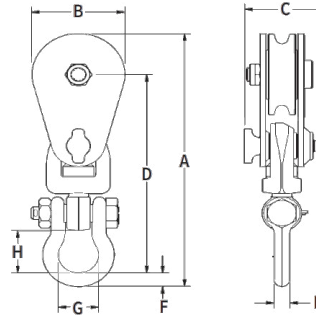
- Material: Manufactured from the highest quality tensile steel, forged swivel tees, yokes and end fittings
- Finish: Yellow end fittings, light blue body for quick recognition
- Identification: Manufacturer, Rated Load, Rope Size(s)
- Furnished with Bronze Bushings and Grease Nipples
- Blocks open for easy wire installation
- Design Factor: 4:1
- Standard: EN 13157
- Rated in Metric Load(s)

| Wire Dia. |           | Sheave Dia.<br>(in) | WLL<br>(t) | Dimensions<br>(in) |      |      |      |      |       |      |      | N.W.<br>(lb) | Price /<br>ea. | Part<br>Number |
|-----------|-----------|---------------------|------------|--------------------|------|------|------|------|-------|------|------|--------------|----------------|----------------|
| (mm)      | (in)      |                     |            | A                  | B    | C    | D    | E    | F     | G    | H    |              |                |                |
| 19-22     | 3/4 - 7/8 | 8                   | 15         | 23.50              | 8.12 | 5.09 | 8.34 | 1.76 | 16.51 | 1.50 | 2.93 | 51           | 629.10         | 6-8"420SBS     |
| 26-28     | 1 - 1 1/8 | 8                   | 15         | 23.50              | 8.12 | 5.90 | 8.34 | 1.76 | 16.51 | 1.50 | 2.93 | 58           | 629.10         | 6-8"420SB      |



## BLOCK - SNATCH, SINGLE SHEAVE, WITH SHACKLE, OCEAN® BRAND

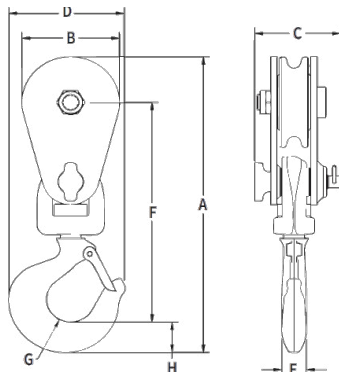
- Material: Manufactured from the highest quality tensile steel, forged swivel tees, yokes and end fittings
- Finish: Yellow end fittings, light blue body for quick recognition
- Identification: Manufacturer, Rated Load, Rope Size(s)
- Furnished with Bronze Bushings and Grease Nipples
- Blocks open for easy wire installation
- Design Factor: 4:1
- Standard: EN 13157
- Rated in Metric Load(s)



| Wire Dia. |           | Sheave Dia. | WLL | Dimensions (in) |      |      |       |      |      |      |      | N.W. | Price / ea. | Part Number |
|-----------|-----------|-------------|-----|-----------------|------|------|-------|------|------|------|------|------|-------------|-------------|
| (mm)      | (in)      | (in)        | (t) | A               | B    | C    | D     | E    | F    | G    | H    | (lb) |             |             |
| 19-22     | 3/4 - 7/8 | 8           | 15  | 23.50           | 8.12 | 5.09 | 17.19 | 1.50 | 1.75 | 3.12 | 3.12 | 63   | 662.96      | 6-8"421SB   |
| 26-28     | 1 - 1 1/8 | 8           | 15  | 23.50           | 8.12 | 5.25 | 17.19 | 1.50 | 1.75 | 3.12 | 3.12 | 59   | 662.56      | 6-8"421SBL  |



## BLOCK - SNATCH, SINGLE SHEAVE, LARGE, SUPER DUTY, WITH HOOK, OCEAN® BRAND

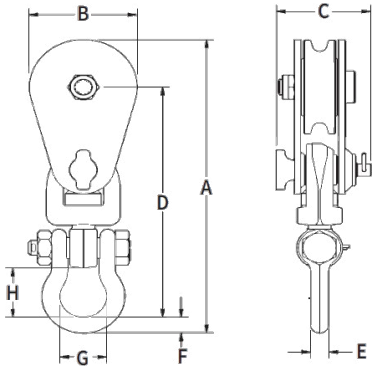


- Material: Manufactured from the highest quality tensile steel, forged swivel tees, yokes and end fittings
- Finish: Yellow end fittings, light blue body for quick recognition
- Identification: Manufacturer, Rated Load, Rope Size(s)
- Furnished with Bronze Bushings and Grease Nipples
- Blocks open for easy wire installation
- Design Factor: 4:1
- Standard: EN 13157
- Rated in Metric Load(s)

| Wire Dia. |           | Sheave Dia. | WLL | Dimensions (in) |      |      |      |      |       |      |      | N.W. | Price / ea. | Part Number |
|-----------|-----------|-------------|-----|-----------------|------|------|------|------|-------|------|------|------|-------------|-------------|
| (mm)      | (in)      | (in)        | (t) | A               | B    | C    | D    | E    | F     | G    | H    | (lb) |             |             |
| 25-29     | 1 - 1-1/8 | 8           | 20  | 25.84           | 8.12 | 6.00 | 9.39 | 2.00 | 18.43 | 1.50 | 3.38 | 102  | 1,819.50    | 6-8"430SB   |

BLOCK - SNATCH, SINGLE SHEAVE, LARGE, SUPER DUTY,  
WITH SHACKLE, OCEAN® BRAND

- Material: Manufactured from the highest quality tensile steel, forged swivel tees, yokes and end fittings.
- Finish: Yellow end fittings, light blue body for quick recognition
- Identification: Manufacturer, Rated Load, Rope Size(s)
- Furnished with Bronze Bushings and Grease Nipples
- Blocks open for easy wire installation.
- Design Factor: 4:1
- Standard: EN 13157
- Rated in Metric Load(s)



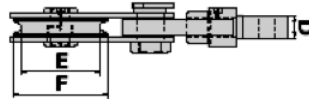
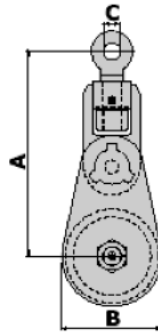
| Wire Dia. |           | Sheave Dia.<br>(in) | WLL<br>(t) | Dimensions<br>(in) |       |      |       |      |      |      |      | N.W.<br>(lb) | Price /<br>ea. | Part<br>Number |
|-----------|-----------|---------------------|------------|--------------------|-------|------|-------|------|------|------|------|--------------|----------------|----------------|
| (mm)      | (in)      |                     |            | A                  | B     | C    | D     | E    | F    | G    | H    |              |                |                |
| 25-29     | 1 - 1 1/8 | 8                   | 20         | 26.57              | 8.12  | 6.00 | 19.76 | 2.00 | 2.75 | 3.72 | 4.00 | 110          | 1,906.00       | 6-8"431SB      |
| 25-28     | 1 - 1 1/8 | 18                  | 25         | 41.36              | 18.25 | 7.13 | 29.12 | 2.00 | 3.12 | 3.50 | 4.81 | 322          | 5,207.00       | 6-18"431SB     |
| 25-28     | 1 - 1 1/8 | 20                  | 30         | 52.40              | 20.25 | 8.31 | 38.34 | 2.50 | 3.94 | 5.62 | 7.06 | 418          | 9,982.99       | 6-20"431SB     |

A potential hazard exists when lifting or dragging heavy loads with tackle block assemblies. Failure to design and use tackle block systems properly may cause a load to slip or fall, the result could be serious injury or death. A tackle block system should be rigged by a qualified person as defined by ANSI/ASME B30.

## BLOCK - SNATCH, SINGLE SHEAVE, HEAVY DUTY, WITH EYE, GN®

Made in Holland

- Sheave with Bronze Bearing
- Shackles, available from stock, must be ordered separately
- Material: Constructed of HD mild steel
- Standard: EN 13157
- Design Factor: 4:1
- Finish: Painted
- Rated in Metric Ton(s)



\*Tolerance:

Forged parts +/- 5%

Machined parts +/- 1mm

| Wire Dia. |       | WLL Eye Pull | A    | B    | C   | D   | E   | F    | Wt. (kg) | Price / ea.        | Part Number  |
|-----------|-------|--------------|------|------|-----|-----|-----|------|----------|--------------------|--------------|
| (in)      | (mm)  | (t)          |      |      |     |     |     |      |          |                    |              |
| 1         | 22-25 | 17           | 490  | 160  | 44  | 57  | 110 | 150  | 49       | Pricing on Request | 116-6"SB     |
| 1 1/8     | 25-28 | 25           | 602  | 220  | 53  | 70  | 150 | 200  | 80       |                    | 116-8"SB     |
| 1 1/4     | 28-32 | 25           | 632  | 270  | 53  | 70  | 190 | 250  | 93       | 8,095.50           | 116-10"SB    |
| 1 1/4     | 28-32 | 25           | 662  | 320  | 53  | 70  | 240 | 300  | 109      | Pricing on Request | 116-12"SB    |
| 1 1/4     | 28-32 | 25           | 692  | 370  | 53  | 70  | 290 | 350  | 116      |                    | 116-14"SB    |
| 1 1/2     | 32-38 | 35           | 835  | 470  | 60  | 80  | 380 | 450  | 211      | 17,183.25          | 116-18"SB    |
| 1 1/2     | 32-38 | 35           | 865  | 520  | 60  | 80  | 430 | 500  | 238      | Pricing on Request | 116-20"SB    |
| 1 1/2     | 32-38 | 35           | 925  | 625  | 60  | 80  | 535 | 605  | 284      |                    | 116-24"SB    |
| 1 5/8     | 38-42 | 55           | 1040 | 625  | 73  | 100 | 520 | 605  | 460      | 29,415.75          | 116-24"55TSB |
| 1 7/8     | 44-48 | 85           | 1212 | 780  | 85  | 120 | 630 | 750  | 890      | Pricing on Request | 116-30"SB    |
| 2         | 50-55 | 120          | 1327 | 880  | 100 | 140 | 740 | 860  | 1200     |                    | 116-34"SB    |
| 2 1/2     | 60-70 | 150          | 1427 | 930  | 113 | 160 | 760 | 910  | 1530     |                    | 116-36"SB    |
| 3         | 75-85 | 200          | 1630 | 1080 | 135 | 170 | 870 | 1060 | 2285     |                    | 116-42"SB    |
| 3 1/2     | 88-93 | 250          | 1785 | 1190 | 145 | 190 | 970 | 1170 | 3015     |                    | 116-46"SB    |

A potential hazard exists when lifting or dragging heavy loads with tackle block assemblies. Failure to design and use tackle block systems properly may cause a load to slip or fall, the result could be serious injury or death. A tackle block system should be rigged by a qualified person as defined by ANSI/ASME B30.



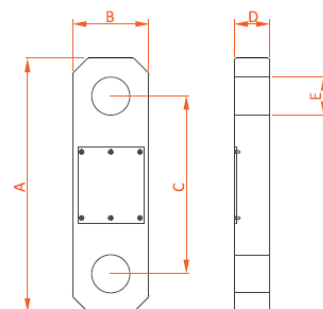
- Since 1992, Wirop Industrial Co., Ltd. has been providing the load testing equipment worldwide. Wirop is a specialist in test beds across many different rigging and lifting gears. All these products have been part of many different fields including oil and gas, marine, and construction.
- Ever since its establishment in 1979 with continuous integration, Wirop is now extending its product line and commercializing its load monitoring products to the market. We implement the new generation

of load monitoring systems. Networking the load with our modern-day computerized products. We are proud to be able to offer this load monitor system to global market. All the load monitoring products are designed, developed and manufactured by our motivated and mixed discipline engineering team.

## LOAD CELL - WIRELESS KIT

### Load Cell Kit includes:

- Load Cell (wireless)
- Handheld Reader (wireless)
- Carrying Case (< 75 t only, >= 75 t are in wooden crates)
- Instruction Manual(s)
- Certification (Calibration & Warranty)



| Capacity (t) | Accuracy (%) | Weight (kg) | Dimensions (mm) |     |     |     |     | Price     | Part Number (kits) |
|--------------|--------------|-------------|-----------------|-----|-----|-----|-----|-----------|--------------------|
|              |              |             | A               | B   | C   | D   | E   |           |                    |
| 5            | 0.3          | 2.9         | 275             | 104 | 196 | 48  | 27  | 8,789.45  | 176-5TLC           |
| 12           | 0.3          | 4.7         | 303             | 115 | 204 | 48  | 38  | 10,359.29 | 176-12TLC          |
| 35           | 0.3          | 11.4        | 410             | 132 | 248 | 69  | 60  | 13,323.00 | 176-35TLC          |
| 50           | 0.3          | 14.7        | 465             | 166 | 273 | 79  | 72  | 16,054.00 | 176-50TLC          |
| 100          | 0.3          | 42.0        | 615             | 213 | 335 | 122 | 99  | 27,008.00 | 176-100TLC         |
| 150          | 0.3          | 55.7        | 690             | 242 | 370 | 124 | 112 | 34,644.90 | 176-150TLC         |

- The wireless load link transmits the load value to a computer or handset device via radio channel. Aerospace grade aluminum alloy tension link provides high corrosion resistance capability and high level of robust design for rugged environment.
- The wireless communication distance ranges from 500 m to 600 m or even longer using IEEE 802.15.4 networking definition in license free band.
- Wirop engineering team has the leading power saving technology in the load monitoring industry. Talented engineering team has developed in medical grade noise filter technology coupled with ultra-low voltage operating system without losing high accuracy. The continuous reading battery life reaches 925 hours at data rate of 1 Hz.

|                        | Wireless Load Link        | Cable Load Link |
|------------------------|---------------------------|-----------------|
| Material:              | Aerospace grade aluminium |                 |
| Battery:               | AA battery x 4            |                 |
| Operating hours:       | 280-950                   |                 |
| Safety factor:         | 5 times                   |                 |
| Data rate:             | 1-10 Hz                   |                 |
| System Range:          | 500 ~ 600 m               |                 |
| Frequency:             | 2.4 GHz                   |                 |
| Operating temp:        | -10°C ~ 60°C              |                 |
| Storage temp:          | -10°C ~ 70°C              |                 |
| Sensitivity:           | 1.5 mV / V or above       |                 |
| Input resistance:      | 430 ± 30 Ω                |                 |
| Zero balance:          | ± 2%                      |                 |
| Max Excitation:        | 12 V                      |                 |
| Temp effect on zero:   | 0.03% / 10°C              |                 |
| Temp effect on output: | 0.05% / 10°C              |                 |
| Safety overload:       | 150%                      |                 |







### Software Packages:

Wirop provides different software platforms for users to capture the load data. Currently, we provide Wi-Load, CertiPro, and Centre of Gravity. All the software packages work on Windows PC platform Win7, Win8, and Win10.

## LOAD CELL - SOFTWARE PACKAGES

| Software Package      | Price    | Part Number (kits) |
|-----------------------|----------|--------------------|
| Wi-Load Data Logging  | 2,872.00 | 176-DLSW           |
| Certificate Generator | 2,872.00 | 176-CGSW           |
| Centre of Gravity     | 2,872.00 | 176-COGSW          |

### Readers:

Wirop developed two type of reading device, Mobile handset and the USB reader. The Mobile Handset reads the load data and records the peak, average, and displays the current load. The Mobile handset simultaneously monitors four wirop load cells. The USB reader sends the load data to the Windows based computers. The USB reader works with any software packages developed by Wirop IT team and provides different functionality for the customers.

### Wireless Handset and Cable Handset:

USB reader coupled with Certificate Generator software package read and record the load of a single loadcell against time. It plots the graph showing load vs. time. The interface is similar to Wirop Testbed operating software. It helps the user to generate the test certificate instantly.

- Reading up to four Wirop wireless load cells at once.
- Showing the load in different units. kg, t, lb, kN.
- Recording the peak load of each load cell.
- Pre-set Zero.
- Peak Recoding
- Summing multiple load value.
- Wireless range up to 500-600 m in free space.
- Battery: Four AA batteries.
- Operating Temperature: -10°C ~ 50°C



### USB Reader:

USB reader connects the loadcells with the computer.



### The Wi-Load Data Logging software package:

is a user friendly, vibrant, and versatile wireless load cell monitoring package. Wi-load allows the user to instantly read load values from multiple load cells. It is capable of monitoring up to 96 load cells via live data. The logging data are saved in excel format, or CSV data file which can be opened for analysis.

### The Certificate Generator software package:

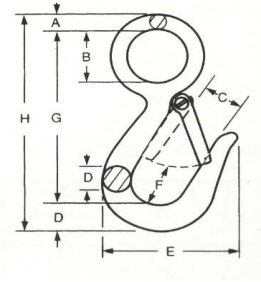
USB reader coupled with Certificate Generator software package read and record the load of a single loadcell against time. It plots the graph showing load vs. time. The interface is similar to Wirop Testbed operating software. It helps the user to generate the test certificate instantly.

### Centre of Gravity software package:

Wirop provides compression loadcells. Capacity ranges from 2.5 t to 100 t. The Compression loadcell coupled with the Centre of Gravity software package. The center of gravity can be easily found.

## HOOK - SNAP, WITH LATCH

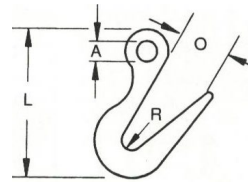
- Material: Mild Steel
- Finish: Galvanized
- Design Factor: 4:1
- Identification: Trademark, Size/WLL



| Size (in) | WLL (lb) | Wt. (lb) | Dimensions (in) |      |      |      |      |      | Price / ea. | Part Number |
|-----------|----------|----------|-----------------|------|------|------|------|------|-------------|-------------|
| A         | B        | C        | D               | E    | F    |      |      |      |             |             |
| 7/16      | 750      | 0.23     | 0.25            | 0.75 | 0.75 | 0.44 | 2.25 | 0.75 | 5.96        | 6-7/16GSH   |
| 9/16      | 1000     | 0.48     | 0.34            | 1.12 | 0.81 | 0.56 | 2.69 | 0.88 | 9.69        | 6-9/16GSH   |

## HOOK - SORTING, WITH HANDLE

- Material: Steel
- Finish: Powder Coated
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code
- Rated in Metric Ton(s)



| WLL Tip (t) | WLL Bottom (t) | Wt. (lb) | Dimensions (in) |      |      |      | Price / ea. | Part Number |
|-------------|----------------|----------|-----------------|------|------|------|-------------|-------------|
| A           | R              | L        | O               |      |      |      |             |             |
| 2           | 7 1/2          | 6.25     | 1.38            | .625 | 9.69 | 2.81 | 136.16      | 6-2TSH      |

## HOOK - LANYARD, WITH DOUBLE LOCK

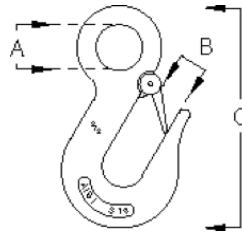
- Material: Mild Steel
- Finish: Zinc

| Break Load (lb) | Price / ea. | Part Number |
|-----------------|-------------|-------------|
| 5000            | 11.31       | 6-DLLH      |



## HOOK - EYE, SLIP, WITH LATCH

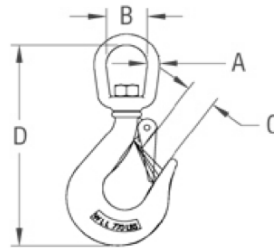
- Material: AISI Stainless Steel 316
- Finish: Stainless Steel
- Design Factor: 4:1
- Identification: Size/WLL



| Chain Size (in) | WLL (lb) | Wt. / ea. (lb) | Dimensions (in) |      |      | Price / ea. | Part Number |
|-----------------|----------|----------------|-----------------|------|------|-------------|-------------|
|                 |          |                | A               | B    | C    |             |             |
| 3/8             | 2000     | 0.92           | 0.72            | 0.79 | 4.75 | 70.39       | 6-3/8SSESH  |
| 1/2             | 3000     | 1.90           | 0.93            | 1.06 | 6.00 | 132.64      | 6-1/2SSESH  |

## HOOK - SWIVEL EYE, WITH LATCH

- Material: AISI Stainless Steel 316
- Finish: Stainless Steel
- Design Factor: 4:1
- Identification: Size/WLL



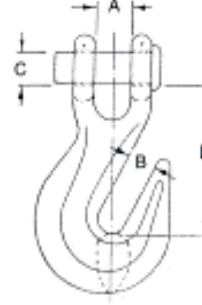
| Size (in) | WLL (lb) | Dimensions (in) |      |      |      | Weight / ea. (lb) | Price / ea. | Part Number  |
|-----------|----------|-----------------|------|------|------|-------------------|-------------|--------------|
|           |          | A               | B    | C    | D    |                   |             |              |
| 1/4       | 770      | 0.25            | 0.83 | 0.75 | 4.55 | 0.40              | 31.15       | 6-1/4"SSSWH  |
| 5/16      | 1430     | 0.35            | 1.07 | 0.76 | 5.17 | 0.70              | 49.10       | 6-5/16"SSSWH |

## HOOK - CLEVIS, GRAB, GRADE 70

For use with Grade 70 or lower chains

Not for use with grade 80 chain and chain slings used in overhead lifting

- Material: Forged Alloy Steel, Quenched & Tempered
- Standard: EN 12195-3
- Finish: Gold Chromated
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, G70



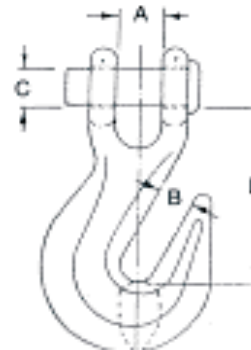
| Chain Size (in) | WLL (lb) | Dimensions (in) |      |      |      | Wt. / ea. (lb) | Qty. / box | Price / ea. | Part Number |
|-----------------|----------|-----------------|------|------|------|----------------|------------|-------------|-------------|
|                 |          | A               | B    | C    | D    |                |            |             |             |
| 1/4             | 3150     | 0.36            | 0.40 | 0.38 | 1.97 | 0.40           | 100        | 4.60        | 6-1/4"CGH   |
| 5/16            | 4700     | 0.40            | 0.44 | 0.44 | 2.26 | 0.79           | 50         | 7.50        | 6-5/16"CGH  |
| 3/8             | 6600     | 0.48            | 0.50 | 0.47 | 2.63 | 1.00           | 50         | 9.66        | 6-3/8"CGH   |
| 7/16            | 8750     | 0.66            | 0.56 | 0.56 | 2.75 | 1.31           | 40         | 17.14       | 6-7/16"CGH  |
| 1/2             | 11 300   | 0.77            | 0.69 | 0.62 | 3.19 | 2.10           | 25         | 21.03       | 6-1/2"CGH   |

## HOOK - CLEVIS, GRAB, WITH LATCH, GRADE 70

For use with Grade 70 or lower chains

Not for use with grade 80 chain and chain slings used in overhead lifting.

- Material: Forged Alloy Steel, Quenched & Tempered
- Standard: EN 12195-3
- Finish: Gold Chromated
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, G70



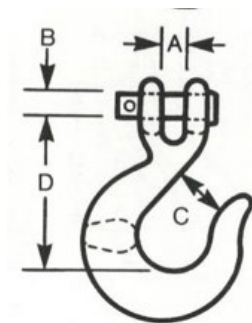
| Chain Size (in) | WLL (lb) | Dimensions (in) |      |      |      | Wt. / ea. (lb) | Qty. / box | Price / ea. | Part Number |
|-----------------|----------|-----------------|------|------|------|----------------|------------|-------------|-------------|
|                 |          | A               | B    | C    | D    |                |            |             |             |
| 1/4             | 3150     | 0.36            | 0.40 | 0.38 | 1.97 | 0.40           | 100        | 9.46        | 6-1/4"CGHL  |
| 5/16            | 4700     | 0.40            | 0.44 | 0.44 | 2.26 | 0.79           | 50         | 11.18       | 6-5/16"CGHL |
| 3/8             | 6600     | 0.48            | 0.50 | 0.47 | 2.63 | 1.00           | 50         | 13.79       | 6-3/8"CGHL  |
| 1/2             | 11 300   | 0.75            | 0.66 | 0.63 | 3.19 | 2.10           | 25         | 25.09       | 6-1/2"CGHL  |

## HOOK - CLEVIS, SLIP, GRADE 70

For use with Grade 70 or lower chains

Not for use with grade 80 chain and chain slings used in overhead lifting

- Material: Forged Alloy Steel, Quenched & Tempered
- Standard: EN 12195-3
- Finish: Gold Chromated
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, G70



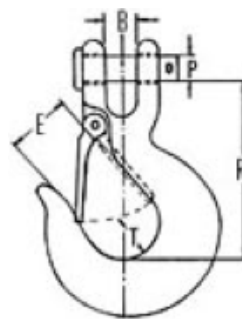
| Chain Size<br>(in) | WLL<br>(lb) | Dimensions (in) |      |      |      | Wt. /<br>ea.<br>(lb) | Qty. /<br>Box | Price /<br>ea. | Part Number |
|--------------------|-------------|-----------------|------|------|------|----------------------|---------------|----------------|-------------|
|                    |             | A               | B    | C    | D    |                      |               |                |             |
| 1/4                | 3150        | 0.44            | 0.37 | 0.91 | 2.60 | 0.50                 | 100           | 5.91           | 6-1/4"CSH   |
| 5/16               | 4700        | 0.50            | 0.43 | 1.10 | 2.85 | 0.75                 | 50            | 8.08           | 6-5/16"CSH  |
| 3/8                | 6600        | 0.59            | 0.47 | 1.30 | 3.25 | 1.20                 | 50            | 12.61          | 6-3/8"CSH   |
| 1/2                | 11 300      | 0.70            | 0.63 | 1.47 | 3.90 | 2.80                 | 20            | 27.57          | 6-1/2"CSH   |
| 5/8                | 13 500      | 0.91            | 0.75 | 2.00 | 4.90 | 4.75                 | 10            | 44.01          | 6-5/8"CSH   |

## HOOK - CLEVIS, SLIP, WITH LATCH, GRADE 70

For use with Grade 70 or lower chains

Not for use with grade 80 chain and chain slings used in over head lifting

- Material: Forged Alloy Steel, Quenched & Tempered
- Standard: EN 12195-3
- Finish: Gold Chromated
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, G70

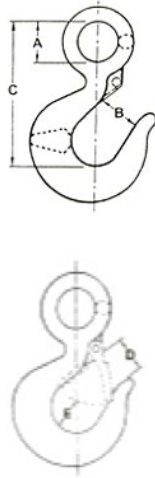


| Chain Size<br>(in) | WLL<br>(lb) | Dimensions (in) |      |      |      | Wt. /<br>ea.<br>(lb) | Qty. /<br>box | Price /<br>ea. | Part Number |
|--------------------|-------------|-----------------|------|------|------|----------------------|---------------|----------------|-------------|
|                    |             | B               | E    | P    | R    |                      |               |                |             |
| 1/4                | 3150        | 0.44            | 0.73 | 0.38 | 2.44 | 0.50                 | 100           | 6.43           | 6-1/4"CSHL  |
| 5/16               | 4700        | 0.58            | 1.03 | 0.42 | 2.83 | 0.75                 | 50            | 8.51           | 6-5/16"CSHL |
| 3/8                | 6600        | 0.59            | 1.29 | 0.47 | 3.33 | 1.20                 | 50            | 13.83          | 6-3/8"CSHL  |
| 1/2                | 11 300      | 0.75            | 1.38 | 0.63 | 4.00 | 2.80                 | 20            | 29.61          | 6-1/2"CSHL  |
| 5/8                | 13 500      | 0.93            | 2.00 | 0.75 | 4.94 | 4.75                 | 10            | 56.39          | 6-5/8"CSHL  |



## HOOK - EYE, HOIST, WITH LATCH

- Material: Forged Alloy & Carbon Steel, Quenched & Tempered
- Standard: EN 1677-5,-2
- Finish: Powder Coated (Yellow)
- Design Factor: 5:1
- Identification: Trademark, Size/Load, BatchCode, (Alloy)
- Rated in Metric Ton(s)



| WLL (t) |       | Qty. / box | Dimensions (in) |      |       |      |      | Wt. / ea. (lb) | Carbon      |             | Alloy       |             |
|---------|-------|------------|-----------------|------|-------|------|------|----------------|-------------|-------------|-------------|-------------|
| Carbon  | Alloy |            | A               | B    | C     | D    | E    |                | Price / ea. | Part Number | Price / ea. | Part Number |
| 3/4     | 1     | 80         | 0.75            | 0.94 | 3.22  | 0.88 | 0.81 | 0.5            | 6.55        | 6-3/4TCEH   | 5.75        | 6-1TAEH     |
| 1       | 1 1/2 | 50         | 0.91            | 1.03 | 3.66  | 0.97 | 0.81 | 0.8            | 6.87        | 6-1TCEH     | 7.43        | 6-1-1/2TAEH |
| 1-1/2   | 2     | 40         | 1.12            | 1.06 | 4.09  | 1.00 | 0.84 | 1.1            | 12.34       | 6-1-1/2TCEH | 11.50       | 6-2TAEH     |
| 2       | 3     | 40         | 1.25            | 1.22 | 4.69  | 1.12 | 1.19 | 1.7            | 15.12       | 6-2TCEH     | 15.65       | 6-3TAEH     |
| 3       | 4 1/2 | 30         | 1.56            | 1.50 | 5.78  | 1.34 | 1.38 | 3.6            | 31.15       | 6-3TCEH     | 31.90       | 6-4-1/2TAEH |
| 5       | 7     | 10         | 2.00            | 1.88 | 7.38  | 1.69 | 1.78 | 6.7            | 62.79       | 6-5TCEH     | 63.53       | 6-7TAEH     |
| 7 1/2   | 11    | 5          | 2.44            | 2.25 | 9.06  | 2.06 | 2.12 | 13.0           | 113.85      | 6-7-1/2TCEH | 116.46      | 6-11TAEH    |
| 10      | 15    | 5          | 2.84            | 2.50 | 10.06 | 2.27 | 2.56 | 18.5           | 192.54      | 6-10TCEH    | 212.47      | 6-15TAEH    |
| 15      | 22    | 2          | 3.50            | 3.30 | 12.53 | 3.02 | 2.88 | 33.8           | 420.70      | 6-15TCEH    | 479.25      | 6-22TAEH    |
|         | 30    | 1          | 3.50            | 4.00 | 14.06 | 3.25 | 3.44 | 60.0           |             |             | 1319.53     | 6-30TAEH    |

**NOTE: Proof Load is 2.5 times the working load limit for 3/4TC~22TA, 22TA~30TA is 2 times - Hooks Average straightening load (ultimate load) is five times the WLL for 0.75TC~22TA, 30TA is 4.5 times WLL. (1 tonne = 2204 lb)**

**SEE WARNING AND APPLICATION INFORMATION FOR HOOKS**

## HOOK - SWIVEL EYE, HOIST, WITH LATCH

- Material: Forged Alloy & Carbon Steel, Quenched & Tempered
- Standard: EN 1677-5,-2
- Finish: Powder Coated (Yellow)
- Design Factor: 5:1
- Identification: Trademark, Size/Load, Batch Code, (Alloy)
- Rated in Metric Ton(s)



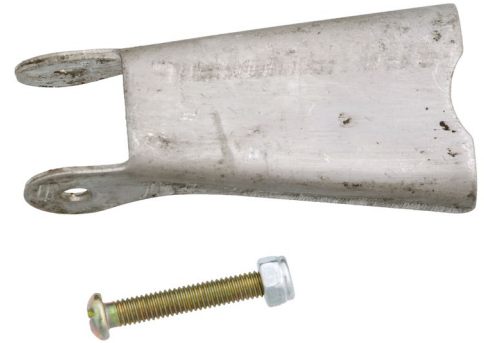
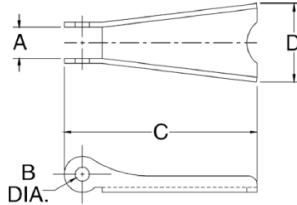
| WLL (t) |       | ID Ball Width (in) | Throat Opening no Latch (in) | Throat Opening with Latch (in) | Weight / ea. (lb) | Qty. / box | Carbon      |              | Alloy       |              |
|---------|-------|--------------------|------------------------------|--------------------------------|-------------------|------------|-------------|--------------|-------------|--------------|
| Carbon  | Alloy |                    |                              |                                |                   |            | Price / ea. | Part Number  | Price / ea. | Part Number  |
| 3/4     | 1     | 1 1/4              | 15/16                        | 7/8                            | 0.78              | 50         | 11.03       | 6-3/4TSWLH   | 10.86       | 6-1TASWH     |
| 1       | 1 1/2 | 1 1/2              | 1 1/32                       | 31/32                          | 1.32              | 50         | 13.49       | 6-1TSWLH     | 17.14       | 6-1-1/2TASWH |
| 1 1/2   | 2     | 1 3/4              | 1 1/16                       | 1                              | 2.02              | 30         | 22.20       | 6-1-1/2TSWLH | 27.85       | 6-2TASWH     |
| 2       | 3     | 1 3/4              | 1 7/32                       | 1 1/8                          | 2.57              | 20         | 24.34       | 6-2TSWLH     | 30.34       | 6-3TASWH     |
| 3       | 4 1/2 | 2                  | 1 1/2                        | 1 11/32                        | 4.89              | 10         | 45.95       | 6-3TSWLH     | 49.26       | 6-4-1/2TASWH |
| 5       | 7     | 2 1/2              | 1 7/8                        | 1 11/16                        | 10.29             | 5          | 101.47      | 6-5TSWLH     | 125.14      | 6-7TASWH     |
|         | 11    | 2 3/4              | 2 1/4                        | 2 1/16                         | 18.62             | 5          |             |              | 197.02      | 6-11TASWH    |
|         | 15    | 3 1/8              | 2 1/2                        | 2 1/4                          | 25.43             | 2          |             |              | 307.78      | 6-15TASWH    |
|         | 22    | 4 1/16             | 3 3/8                        | 3 1/8                          | 47.25             | 1          |             |              | 698.64      | 6-22TASWH    |
|         | 30    | 4 1/16             | 4                            | 3 1/4                          | 70.50             | 1          |             |              | 1102.30     | 6-30TASWH    |

**NOTE: Proof Load is 2 times the working load limit for 3/4TC~15TC and 30TA, 1TA~22TA is 2.5 times – Hooks Average straightening load (ultimate load) is five times the WLL for 0.75TC~15TC, 1TA~22TA is 4.5 times WLL and 30TA is 4 times WLL. (1 tonne = 2204 lb)**

**SEE WARNING AND APPLICATION INFORMATION FOR HOOKS**

## HOOK - LATCH KIT

- Stainless Steel Latch kits for Hoist Hooks
- Rated in Metric Ton(s)



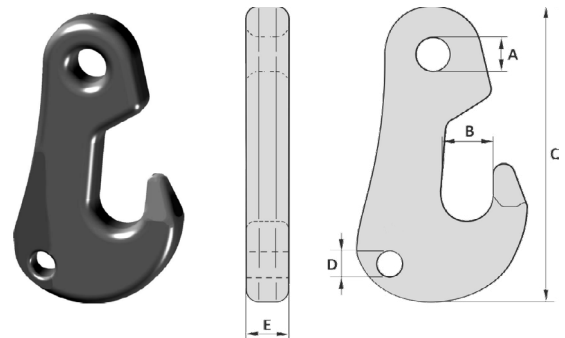
| Hook Size (t) |         | Dimensions (in) |      |      |      | Wt./<br>ea.(lb) | Price /<br>ea. | Part Number   |
|---------------|---------|-----------------|------|------|------|-----------------|----------------|---------------|
| Carbon        | Alloy   | A               | B    | C    | D    |                 |                |               |
| 3/4           | 1       | 0.38            | 0.16 | 1.44 | 0.59 | 0.02            | 2.92           | 6-3/4TLK      |
| 1             | 1 1/2   | 0.38            | 0.16 | 1.60 | 0.59 | 0.02            | 3.71           | 6-1TLK        |
| 1 1/2         | 2       | 0.47            | 0.19 | 1.84 | 0.82 | 0.03            | 3.93           | 6-1-1/2TLK    |
| 2             | 3       | 0.47            | 0.19 | 2.00 | 0.92 | 0.03            | 3.87           | 6-2TLK        |
| 3             | 4-1/2   | 0.56            | 0.17 | 2.41 | 1.00 | 0.06            | 6.02           | 6-3TLK        |
| 5             | 7       | 0.58            | 0.20 | 2.97 | 1.21 | 0.11            | 7.40           | 6-5TLK        |
| 7 1/2 - 10    | 11 - 15 | 0.59            | 0.27 | 3.66 | 1.50 | 0.17            | 16.53          | 6-7-1/2-10TLK |
| 15            | 22      | 0.83            | 0.39 | 4.94 | 1.90 | 0.39            | 25.46          | 6-15C-22ATLK  |
| 20            | 30      | 0.94            | 0.52 | 5.88 | 2.56 | 0.63            | 63.67          | 6-20C-30ATLK  |

## HOOK - ANCHOR LINE HOOK, GN®



- Material: Cast steel
- Finish: Galvanized
- Design Factor: 4:1
- Temperature Range: -20°C up to +200°C
- Certification: Certificate of Conformity (on request)
- Rated in Metric Ton(s)

| WLL<br>(ton) | MBL<br>(ton) | Dimensions (mm) |     |     |    |     | Weight<br>(kg) | Price              |
|--------------|--------------|-----------------|-----|-----|----|-----|----------------|--------------------|
|              |              | A               | B   | C   | D  | E   |                |                    |
| 15           | 60           | 38              | 58  | 343 | 32 | 45  | 11             | Pricing on Request |
| 20           | 80           | 40              | 74  | 343 | 32 | 60  | 14             |                    |
| 25           | 100          | 52              | 86  | 440 | 38 | 65  | 26             |                    |
| 50           | 200          | 80              | 112 | 618 | 45 | 90  | 67             |                    |
| 80           | 320          | 90              | 130 | 709 | 62 | 110 | 116            |                    |



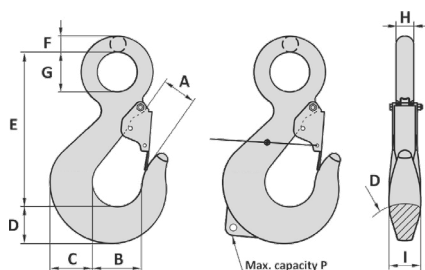
Tolerance: ± 5%

## HOOK - EYE, ROV, WITH LATCH, GN®



### Made in Holland

- Material: Alloy steel
- Finish: Painted
- Design Factor: 4:1
- Temperature Range: -40°C up to +200°C
- Certification: Certificate of Conformity (on request)
- 3.1 material certificate EN 10204 (on request)
- Rated in Metric Ton(s)
- Spare latches available on request.



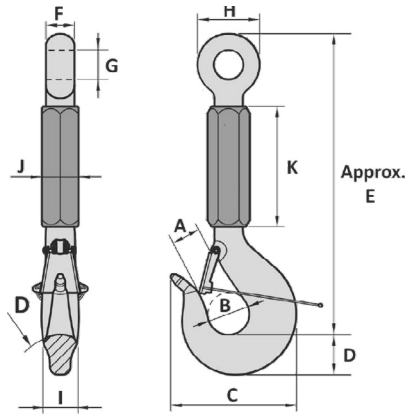
| WLL<br>(ton) | MBL<br>(ton) | Dimensions (mm) |     |     |     |      |     |     |     |     | P<br>(ton) | Wt.<br>(kg) | Price                 | Part Number |
|--------------|--------------|-----------------|-----|-----|-----|------|-----|-----|-----|-----|------------|-------------|-----------------------|-------------|
| A            | B            | C               | D   | E   | F   | G    | H   | I   |     |     |            |             |                       |             |
| 8            | 32           | 54              | 68  | 53  | 48  | 203  | 25  | 50  | 25  | 38  |            | 3.7         | Pricing on<br>Request | -           |
| 12.5         | 50           | 71              | 86  | 68  | 51  | 253  | 32  | 64  | 32  | 48  |            | 7.6         |                       | -           |
| 16           | 64           | 81              | 96  | 76  | 68  | 284  | 36  | 72  | 36  | 53  |            | 10          |                       | -           |
| 20           | 80           | 91              | 107 | 86  | 76  | 319  | 40  | 81  | 40  | 61  |            | 13          |                       | 116-SH20T   |
| 28           | 112          | 71              | 112 | 96  | 83  | 354  | 38  | 95  | 38  | 63  |            | 17          |                       | 116-SH28    |
| 31           | 125          | 81              | 125 | 106 | 92  | 389  | 43  | 100 | 43  | 70  |            | 23          |                       | 116-SH31T   |
| 40           | 160          | 93              | 140 | 116 | 103 | 457  | 48  | 130 | 48  | 80  |            | 34          |                       | 116-SH40T   |
| 50           | 200          | 106             | 158 | 135 | 116 | 495  | 54  | 130 | 54  | 89  |            | 49          |                       | 116-SH50T   |
| 63           | 250          | 119             | 176 | 151 | 130 | 565  | 60  | 150 | 60  | 99  |            | 63          |                       | 116-SH63T   |
| 80           | 320          | 131             | 198 | 168 | 145 | 690  | 67  | 170 | 67  | 110 |            | 99          |                       | 116-SH80T   |
| 100          | 400          | 151             | 225 | 195 | 172 | 725  | 79  | 175 | 79  | 125 | 4.75       | 160         |                       | 116-SH100T  |
| 150          | 600          | 173             | 250 | 225 | 199 | 765  | 86  | 130 | 86  | 160 | 6.5        | 260         |                       | 116-SH150T  |
| 200          | 800          | 200             | 275 | 260 | 237 | 850  | 102 | 150 | 102 | 180 | 8.5        | 417         |                       | 116-SH200T  |
| 250          | 1000         | 233             | 310 | 290 | 269 | 928  | 120 | 170 | 120 | 200 | 9.5        | 576         |                       | 116-SH250T  |
| 300          | 1200         | 264             | 350 | 330 | 310 | 1052 | 140 | 190 | 140 | 220 | 12         | 820         |                       | 116-SH300T  |
| 400          | 1600         | 303             | 400 | 380 | 344 | 1195 | 170 | 210 | 170 | 240 | 17         | 1125        |                       | 116-SH400   |
| 500          | 2000         | 370             | 450 | 410 | 390 | 1360 | 200 | 215 | 200 | 320 | 17         | 1840        | -                     |             |

Tolerance: Forged parts ± 5%, machined parts ± 1 mm

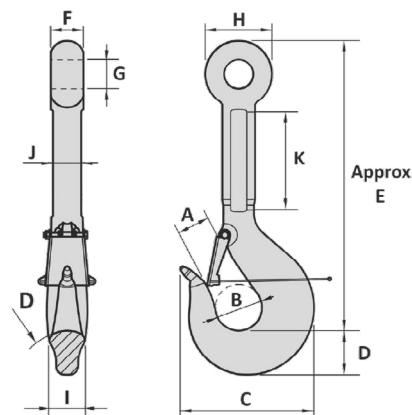
## HOOK - ROV SHANK HOOK, GN®



- Material: Alloy steel
- Finish: Painted
- Design Factor: 4:1
- Temperature Range: -40°C up to +200°C
- Certification: Certificate of Conformity (on request)
- 3.1 material certificate EN 10204 (on request)
- Rated in Metric Ton(s)
- Spare latches available on request.



Tvæ for hook WLL 5.4 ton ≤ WLL 80 ton



Tvæ for hook WLL 100 ton ≤ WLL 400 ton

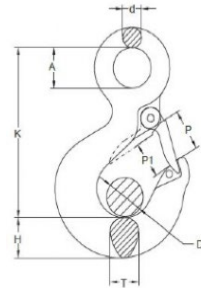


| WLL<br>(ton) | Dimensions (mm) |     |     |     |      |     |     |     |     |     |     | Max. Tip<br>Capacity<br>ton | Wt.<br>(kg) | Price                 |
|--------------|-----------------|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----------------------------|-------------|-----------------------|
|              | A               | B   | C   | D   | E    | F   | G   | H   | I   | J   | K   |                             |             |                       |
| 6.5          | 40              | 55  | 182 | 50  | 400  | 30  | 28  | 60  | 45  | 50  | 225 |                             | 8           | Pricing on<br>Request |
| 8.5          | 54              | 68  | 208 | 55  | 450  | 30  | 31  | 75  | 50  | 56  | 228 |                             | 11          |                       |
| 12           | 63              | 80  | 254 | 70  | 480  | 41  | 40  | 78  | 55  | 61  | 227 |                             | 16          |                       |
| 17           | 71              | 90  | 297 | 85  | 514  | 48  | 44  | 88  | 60  | 67  | 226 |                             | 22          |                       |
| 25           | 92              | 110 | 344 | 100 | 574  | 56  | 52  | 105 | 70  | 78  | 233 |                             | 34          |                       |
| 35           | 108             | 130 | 395 | 120 | 628  | 58  | 60  | 124 | 85  | 96  | 230 |                             | 56          |                       |
| 42.5         | 69              | 100 | 316 | 95  | 780  | 70  | 70  | 150 | 75  | 85  | 330 |                             | 47          |                       |
| 55           | 81              | 112 | 343 | 106 | 808  | 80  | 78  | 162 | 85  | 100 | 350 |                             | 62          |                       |
| 63           | 91              | 125 | 376 | 118 | 950  | 85  | 86  | 180 | 95  | 110 | 360 |                             | 92          |                       |
| 85           | 104             | 140 | 418 | 132 | 893  | 100 | 86  | 200 | 106 | 120 | 290 |                             | 111         |                       |
| 100          | 140             | 175 | 472 | 150 | 831  | 110 | 100 | 228 | 120 | 120 | 240 | 4.75                        | 178         |                       |
| 125          | 145             | 180 | 509 | 170 | 890  | 124 | 110 | 260 | 140 | 140 | 240 | 4.75                        | 249         |                       |
| 160          | 157             | 190 | 614 | 190 | 953  | 138 | 135 | 300 | 160 | 150 | 250 | 6.5                         | 362         |                       |
| 200          | 176             | 224 | 688 | 230 | 998  | 148 | 135 | 350 | 175 | 150 | 250 | 8.5                         | 496         |                       |
| 250          | 194             | 250 | 780 | 256 | 1063 | 175 | 145 | 370 | 200 | 160 | 250 | 8.5                         | 671         |                       |
| 300          | 210             | 280 | 755 | 255 | 1153 | 190 | 155 | 360 | 220 | 170 | 300 | 9.5                         | 790         |                       |
| 400          | 234             | 315 | 855 | 305 | 1253 | 210 | 185 | 420 | 240 | 190 | 300 | 9.5                         | 1064        |                       |



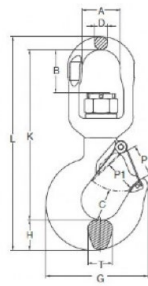
## HOOK - EYE, HOIST, GRADE 100, YOKE® BRAND

- Material: Alloy Steel, Grade 100
- Standard: EN 1677-5 / ASTM A952/952M
- Finish: Powder Coated, Blue
- Design Factor: 5:1
- Identification: Trademark, Size/WLL, Batch Code, Grade
- Rated in Metric Ton(s)



| WLL<br>(t) | Latch Kits |             | Dimensions (in) |      |      |      |      |      |      |      | Wt./<br>ea.<br>(lb) | Price<br>/ ea. | Part Number |
|------------|------------|-------------|-----------------|------|------|------|------|------|------|------|---------------------|----------------|-------------|
|            | Price/ea.  | Part Number | A               | D    | d    | H    | K    | P    | P1   | T    |                     |                |             |
| 2          | 22.63      | 28-2TLK     | 1.14            | 0.79 | 0.51 | 1.02 | 4.17 | 1.10 | 0.79 | 0.83 | 1.5                 | 40.23          | 28-2TEHH    |
| 3          | 22.63      | 28-3TLK     | 1.26            | 0.98 | 0.59 | 1.14 | 4.80 | 1.22 | 0.98 | 0.95 | 2.0                 | 56.21          | 28-3TEHH    |
| 5          | 31.46      | 28-5TLK     | 1.57            | 1.22 | 0.71 | 1.46 | 5.87 | 1.45 | 1.22 | 1.22 | 4.4                 | 106.57         | 28-5TEHH    |
| 7          | 50.29      | 28-7TLK     | 2.00            | 1.54 | 0.95 | 1.85 | 7.56 | 1.81 | 1.54 | 1.46 | 8.8                 | 196.21         | 28-7TEHH    |

## HOOK - SWIVEL, HOIST, GRADE 100, YOKE® BRAND



- Material: Alloy Steel, Grade 100
- Standard: EN 1677-5 / ASTM A952/952M
- Finish: Powder Coated, Blue
- Design Factor: 5:1
- Identification: Trademark, Size/WLL, Batch Code, Grade
- Rated in Metric Ton(s)

| WLL<br>(t) | Latch Kits |          | Dimensions (in) |      |      |      |       |      |       |       |      |      |      | Wt./<br>ea.<br>(lb) | Price / ea. | Part Number |
|------------|------------|----------|-----------------|------|------|------|-------|------|-------|-------|------|------|------|---------------------|-------------|-------------|
|            | Price/ea.  | Part #   | A               | B    | C    | D    | G     | H    | K     | L     | P    | P1   | T    |                     |             |             |
| 3          | 22.63      | 28-3TLK  | 1.62            | 1.38 | 1.16 | 0.63 | 4.02  | 1.13 | 7.73  | 8.36  | 1.22 | 0.98 | 0.95 | 3.3                 | 150.13      | 28-3TSWLHH  |
| 5          | 31.46      | 28-5TLK  | 1.83            | 1.73 | 1.53 | 0.83 | 5.14  | 1.41 | 8.32  | 10.58 | 1.42 | 1.22 | 1.22 | 7.0                 | 228.22      | 28-5TSWLHH  |
| 22         | 96.63      | 28-22TLK | 4.83            | 4.55 | 2.81 | 1.64 | 10.91 | 3.00 | 18.42 | 23.58 | 3.39 | 3.19 | 2.69 | 73.5                | 2,620.83    | 28-22TSWLHH |
| 30         | 124.25     | 28-30TLK | 4.83            | 4.24 | 3.44 | 1.64 | 13.90 | 3.60 | 19.67 | 25.63 | 3.50 | 3.27 | 3.00 | 101                 | 4,186.43    | 28-30TSWLHH |



## What makes the Sea Catch so revolutionary?

The Sea Catch Toggle Release is the simplest and most innovative design in quick release history. It is a device designed exclusively for safe release of a line or object under load.

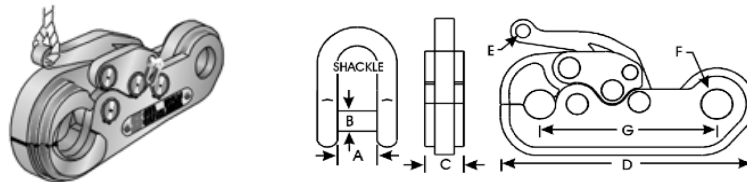
Its multi-purpose design offers a combination of features never seen before in a quick release: multi directional releasing capabilities, on-load and off-load releasing, a hitch pin safety lock to prevent inadvertent release, lanyard-style release for maximum user safety, parts made from aerospace-grade stainless plate, easy connection to common shackles, no springs, and a user friendly size.

The design anticipates reality: heavy sea conditions, corrosive marine environments, quick release kickback, inadvertent release, and the occasional shock and lock ups of unanticipated overload. The key to its success is the combination of a proven toggle linkage principal, low

friction, computer generated parts, and a lot of thinking about its many uses and applications.

Quick releases have to be specific. Movie special effects, tug-tow operations, rescue launch deployment, anchors – each release poses a very different challenge. Sea Catch meets these challenges with models ranging from 1 to 600 ton capacities. Since 1994, Sea Catches have played significant roles in safe releasing operations in 14 major industries around the world. Some units have exceeded 5,000 cycles and are still in service. All feedback has been positive, nothing but praise from engineers and users worldwide.

Releasing an object under load need not be a daunting task any longer. Release yourself of unnecessary hazards.



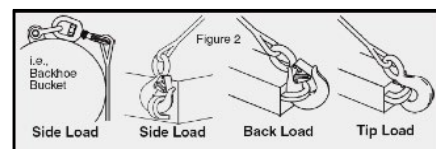
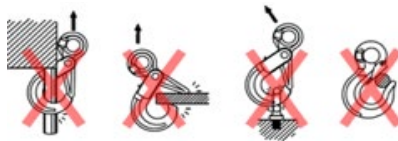
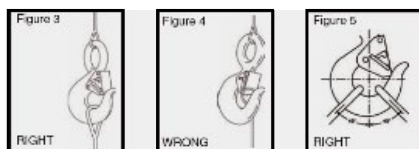
| Model No. | Shackle Size (in) | Dimensions (in) |      |      |       |      |      |       | WLL (lb) | Break Load (lb) | Weight / ea. (lb) |
|-----------|-------------------|-----------------|------|------|-------|------|------|-------|----------|-----------------|-------------------|
|           |                   | A               | B    | C    | D     | E    | F    | G     |          |                 |                   |
| TR3       | 1/4               | 0.47            | 0.31 | 0.41 | 2.85  | 0.18 | 0.37 | 1.96  | 1302     | 6510            | 0.31              |
| TR5       | 7/16              | 0.75            | 0.50 | 0.69 | 4.50  | 0.25 | 0.55 | 3.13  | 3323     | 16 618          | 1.3               |
| TR7       | 5/8               | 1.06            | 0.75 | 1.00 | 6.62  | 0.38 | 0.81 | 4.56  | 7042     | 35 210          | 4                 |
| TR8       | 3/4               | 1.25            | 0.87 | 1.19 | 7.68  | 0.43 | 0.93 | 5.53  | 9574     | 47 870          | 6.3               |
| TR10      | 1                 | 1.69            | 1.13 | 1.63 | 9.75  | 0.56 | 1.21 | 6.87  | 15 840   | 79 200          | 12.5              |
| TR11      | 1 3/8             | 2.25            | 1.50 | 2.12 | 13.15 | 0.75 | 1.63 | 9.15  | 28 000   | 140 000         | 32                |
| TR12      | 1 1/2             | 2.38            | 1.62 | 2.25 | 14.25 | 0.81 | 1.78 | 9.92  | 32 860   | 164300          | 40                |
| TR15      | 1 3/4             | 2.88            | 2    | 2.75 | 17.56 | 1    | 2.16 | 12.21 | 50 200   | 251 000         | 69                |
| TR16      | 2                 | 3.25            | 2.25 | 3.13 | 19.73 | 1.12 | 2.46 | 13.75 | 63 380   | 316 900         | 108               |
| TR17      | 2 1/2             | 4.15            | 2.75 | 3.88 | 24.13 | 1.37 | 3.01 | 16.81 | 94 740   | 473 700         | 197               |
| TR18      | 3                 | 5               | 3.25 | 4.75 | 30.79 | 1.75 | 3.85 | 21.43 | 154 240  | 771 200         | 360               |

## HOOKS EYE HOIST - WARNINGS AND APPLICATION INSTRUCTIONS

### Operating Practices:

#### Personnel using hooks shall be aware of the following:

1. Never use a hook with a throat opening that has been increased, or with a tip that has been bent out of plane from the hook body. A latch will not work properly on a hook that has been worn or bent.
2. Any hook that has a crack, nick, or gouge must be removed from service.
3. Never repair, alter, re-work, or re-shape a hook by welding, heating, burning or bending.
4. Do not swivel hooks under load.
5. It shall be determined that the load to be applied does not exceed the lesser of the load rating of the hook or the load rating of the equipment of which the hook is a part.
6. Shack loading shall be avoided.
7. Load shall be centered in the base (bowl/saddle) of the hook to prevent point loading of the hook.
8. When multileg slings are placed in the base (bowl/saddle) of the hook, the maximum included angle between sling legs shall be 90 deg or as determined by the hook manufacturer. The maximum sling leg angle with respect to the hook centerline for any rigging arrangement shall be 45 deg.
9. A collector ring, such as a link or shackle, should be used when more than two legs are placed in a hook for angles greater than 45 deg with respect to the hook centerline.
10. Hooks shall not be used in such a manner as to place a side load, back load, or tip load on the hook.
11. When using a device to close the throat opening of the hook, care shall be taken that the load is not carried by the closing device.
12. Hands, fingers, and body shall be kept from between hook and load.
13. The use of the hook with latches does not preclude the inadvertent detachment of a slack sling or a load from the hook. Hook latches aid in the retention of loose slings under slack rigging conditions only and are not intended to be antifouling devices during load handling or rigging. Visual verification of proper hook engagement is required in all cases.
14. Self-Locking hooks shall be locked during use.
15. When a latch is equipped with a lock open device to facilitate rigging, the latch shall be closed during operation.
16. When a hook is equipped with a latch, the load shall not restrict the closure of the latch.
17. The need for a latch or mousing on any hook is a function of the application of the hook and shall be determined by a qualified person.



**NEVER side load, back load or tip load!**

- Loads may disengage from hook if proper procedures are not followed
- A falling load can cause serious injury or death
- Not for personnel lifting

- The hook must always support the load, the load must never be supported by the latch
- Never exceed the hooks working load limit (WLL)
- Perform periodic visual inspection by trained personnel in compliance with the schedule in ANSI B30.10



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## HOISTS & LIFTING ACCESSORIES

|                                           |           |
|-------------------------------------------|-----------|
| Manual Chain Blocks & Lever Pullers ..... | 128 - 143 |
| Wire Rope Winches .....                   | 144       |
| Permanent Magnet Lifters .....            | 145 - 146 |
| Trolleys & Beam Clamps .....              | 147 - 148 |
| Vertical & Horizontal Plate Clamps .....  | 149 - 150 |
| Cable Socks & Synthetic Rope Grabs.....   | 150 - 151 |
| Concrete Lifters.....                     | 152       |
| Drum Lifters.....                         | 153       |

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**OCEAN SIDE**  
  
EQUIPMENT LIMITED  
A BISHOP LIFTING COMPANY





## PRINCIPLE OF OVERLOAD PROTECTION

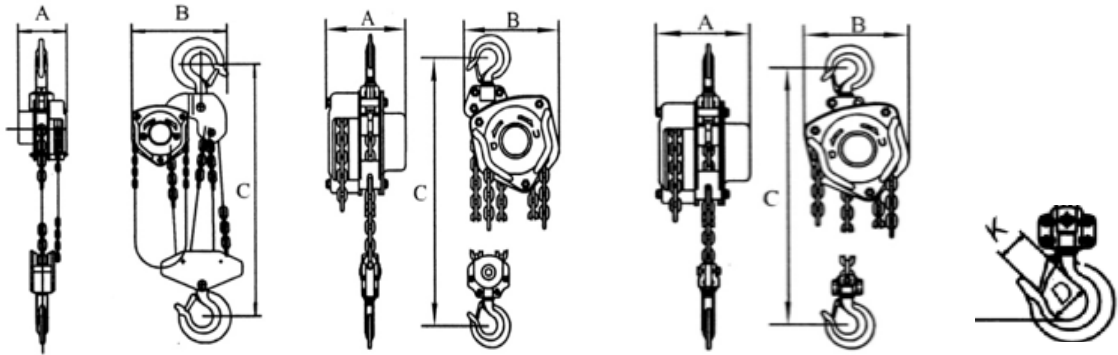
The principle of overload protection brake engagement is the same on both lever pullers and chain blocks. The unit has an adjustable friction disk when engaged produces a friction force between the disk and the hand wheel or lever. This is adjusted at the factory. Each unit is tested twice. The first is a normal proof load test, and the second load is used to set the friction disk brake engagement. For example on a 1.5 ton lever block, the block is pulled to 1.5 times the WLL,  $1.5 \text{ ton} \times 1.5 = 2.25 \text{ ton}$  as a normal proof load test. The block is then taken to 1.3 times the WLL to set the friction brake.  $1.5 \text{ ton} \times 1.3 = 1.95 \text{ ton}$ . If the unit is taken above this load the friction disk will engage and the unit will not lift. Proof loading for this block would be  $1.25 \times 1.5 \text{ ton} = 1.875 \text{ ton}$ .

- Standard lift from stock 3 & 6 meter - "custom chain length available on request"
- Standard: EN 13157, ASME B30.16
- Identification: Trademark, Size/WLL, Date, Serial No.
- Finish: Painted Yellow





## BLOCK - CHAIN HOIST, 619, OCEAN® BRAND®



| WLL (t)                   |     | 0.5       | 1       | 1.5       | 2       | 3       | 5        | 10       | 20       |
|---------------------------|-----|-----------|---------|-----------|---------|---------|----------|----------|----------|
| Part Number               |     | 6-0.5TCB3 | 6-1TCB3 | 6-1.5TCB3 | 6-2TCB3 | 6-3TCB3 | 6-5TCB3  | 6-10TCB3 | N/A      |
| Price 3 m (10 ft) of Lift | ea. | 262.55    | 313.10  | 466.46    | 482.10  | 598.29  | 790.05   | 1,581.96 | -        |
| Part Number               |     | 6-0.5TCB6 | 6-1TCB6 | 6-1.5TCB6 | 6-2TCB6 | 6-3TCB6 | 6-5TCB6  | 6-10TCB6 | 6-20TCB6 |
| Price 6 m (20 ft) of Lift | ea. | 357.66    | 423.15  | 572.00    | 591.29  | 792.30  | 1,144.75 | 2,105.25 | 5,271.00 |
| Number of falls           |     | 1         | 1       | 1         | 1       | 2       | 2        | 4        | 8        |
| Dimensions (mm)           | A   | 131       | 140     | 161       | 161     | 161     | 186      | 207      | 209      |
|                           | B   | 127       | 158     | 174       | 187     | 199     | 253      | 398      | 625      |
|                           | C   | 270       | 317     | 399       | 414     | 465     | 636      | 798      | 890      |
|                           | D   | 35        | 35.5    | 45        | 42.5    | 50      | 64       | 85       | 110      |
|                           | K   | 30        | 28      | 36        | 33.5    | 40      | 50       | 64       | 81       |
| Net Weight / 3 m of lift  | kg  | 10        | 12      | 19        | 20      | 27      | 45.5     | 83       | 173      |
| Running test load         | Kn  | 7.5       | 15      | 22.5      | 30      | 45      | 75       | 150      | 235.2    |
| Effort to lift rated load | N   | 231       | 309     | 320       | 360     | 340     | 414      | 414      | 435X2    |
| Load chain diameter       | mm  | 6         | 6       | 8         | 8       | 8       | 10       | 10       | 10       |
| Chain weight kg/m         | kg  | 1.7       | 1.7     | 2.3       | 2.3     | 3.7     | 5.6      | 9.7      | 19.4     |

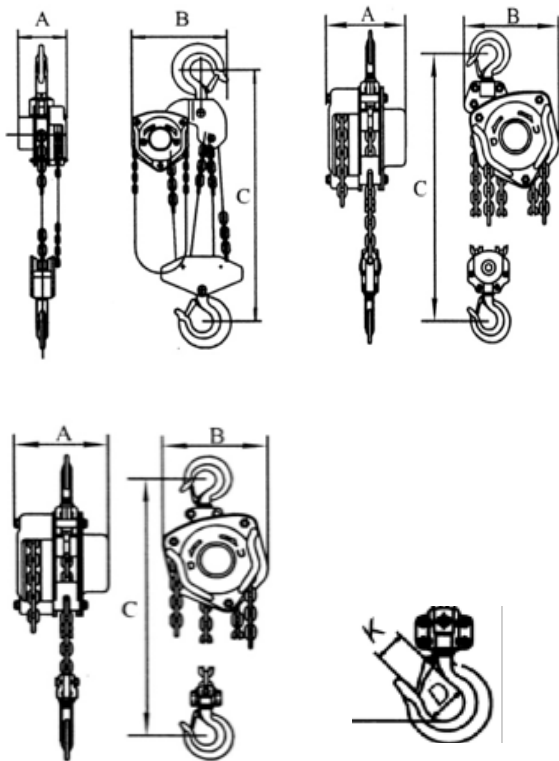
Rated in Metric Ton(s)

**WARNING - Read and understand all warnings, maintenance, and operation instructions (supplied with every unit).**

## NON-OVERLOAD PROTECTION

- Marking: Rated load, Direction of motion, Name of Manufacturer, Manufacturer's model or serial number. Product safety/warning information
- Standard lift from stock 6 meter - "custom chain length available on request"
- Standard: EN 13157, ASME B30.16
- Finish: Painted Orange
- Identification: Trademark, Size/WLL, Date, Serial No.
- Rated in Metric Ton(s)

## BLOCK - CHAIN HOIST, 619, OCEAN® BRAND® (NOP)

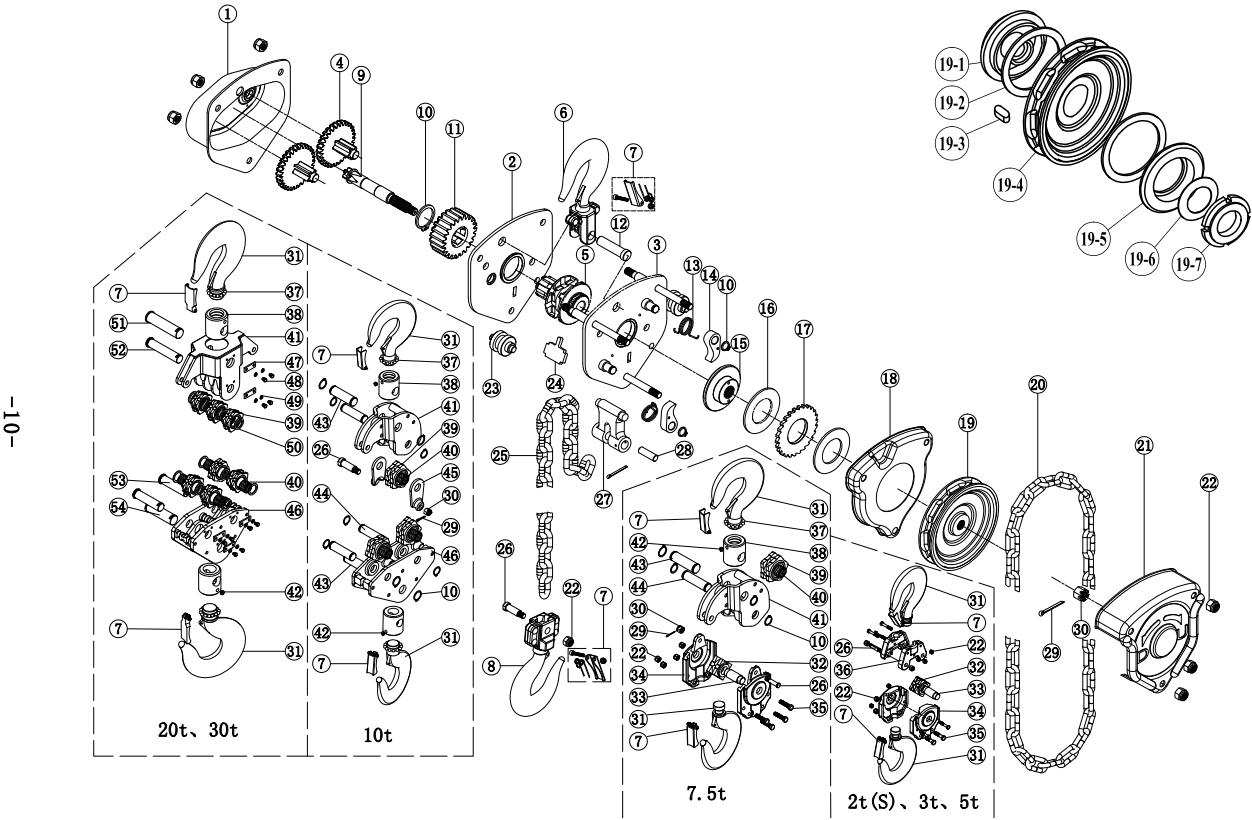


| WLL (t)                   |     | 1           | 1.5           | 2           | 3           |
|---------------------------|-----|-------------|---------------|-------------|-------------|
| Part Number               |     | 6-1TCB6-NOP | 6-1.5TCB6-NOP | 6-2TCB6-NOP | 6-3TCB6-NOP |
| Price 6 m (20 ft) of Lift | ea. | 375.15      | 467.50        | 521.97      | 716.15      |
| Number of falls           |     | 1           | 1             | 1           | 2           |
| Dimensions (mm)           | A   | 140         | 161           | 161         | 161         |
|                           | B   | 158         | 174           | 187         | 199         |
|                           | C   | 317         | 399           | 414         | 465         |
|                           | D   | 35.5        | 45            | 42.5        | 50          |
|                           | K   | 28          | 36            | 33.5        | 40          |
| Net Weight / 6 m of lift  | kg  | 17          | 26            | 27          | 41          |
| Running test load         | Kn  | 15          | 22.5          | 30          | 45          |
| Effort to lift rated load | N   | 309         | 320           | 360         | 340         |
| Load chain diameter       | mm  | 6           | 8             | 8           | 8           |
| Chain weight kg/m         | kg  | 1.7         | 2.3           | 2.3         | 4.6         |

**WARNING - Read and understand all warnings, maintenance, and operation instructions (supplied with every unit).**



CHAIN HOIST PARTS BREAKDOWN



Top and Bottom hook assembly sold as complete kit only

| #  | Description          | #  | Description       | #  | Description      | #  | Description       |
|----|----------------------|----|-------------------|----|------------------|----|-------------------|
| 1  | Bent plate           | 13 | Hook pin          | 25 | Pawl             | 37 | Move wheel        |
| 2  | End anchor pin       | 14 | Hand chain        | 26 | Spring ring      | 38 | Move wheel pin    |
| 3  | End anchor           | 15 | Disk gear         | 27 | Ratchet disk     | 39 | Bottom hook frame |
| 4  | Chain pin            | 16 | Driving shaft     | 28 | Friction plate   | 40 | Row               |
| 5  | Load chain (sold/ft) | 17 | Splined gear      | 29 | Brake cover      | 41 | Hook frame bar    |
| 6  | Stripper             | 18 | Steel bushing     | 30 | Hand wheel       | 42 | Lock screw        |
| 7  | Bottom hook as.      | 19 | Right side plate  | 31 | Cotter pin       | 43 | Top hook pin      |
| 8  | Safe clip            | 20 | Guide roller      | 32 | Hand wheel cover | 44 | Bunton            |
| 9  | Bearing race         | 21 | Roller            | 33 | Hook             | 45 | Screw             |
| 10 | Left side plate      | 22 | Load sheave       | 34 | Spring           | 46 | Stripper          |
| 11 | Stay                 | 23 | Top hook assembly | 35 | Rivet            | 47 | Sling plate       |
| 12 | Brake seat           | 24 | Double spring     | 36 | Top hook frame   | 48 | Bottom hook pin   |

## AVAILABLE SPARE PARTS FOR CHAIN HOIST BLOCK 619

| #  | Description        | 1/2 t |              | 1 t   |            | 1-1/2 t |               |
|----|--------------------|-------|--------------|-------|------------|---------|---------------|
| 2  | End anchor pin     | 1.48  | 6-0.5TCBEAP  | 2.06  | 6-1TCBEAP  | 2.47    | 6-1.5TCBEAP   |
| 4  | Chain pin          | 9.20  | 6-0.5TCBCP   | 9.71  | 6-1TCBCP   | 12.18   | 6-1.5TCBCP    |
| 5  | Load chain (\$/ft) | 12.54 | 6-0.5-1TCBCH |       |            | 18.65   | 6-1.5T-3TCBCH |
| 7  | Bottom hook as.    | 48.53 | 6-0.5TCBBHA  | 50.34 | 6-1TCBBHA  | 59.09   | 6-1.5TCBBHA   |
| 8  | Safe clip          | 6.74  | 6-0.5TCBSC   | 6.74  | 6-1TCBSC   | 7.67    | 6-1.5TCBSC    |
| 13 | Hook pin           | 8.50  | 6-0.5TCBHP   | 8.50  | 6-1TCBHP   | 12.18   | 6-1.5TCBHP    |
| 14 | Hand chain         | 6.18  | 6-HAND CHAIN |       |            |         |               |
| 22 | Load sheave        | 45.23 | 6-0.5&1TLS   |       |            | 59.11   | 6-1.5&2TLS    |
| 23 | Top hook assem.    | 38.62 | 6-0.5TCBTHA  | 45.76 | 6-1TCBTHA  | 57.19   | 6-1.5TCBTHA   |
| 24 | Double spring      | 2.89  | 6-0.5TCBDS   | 2.95  | 6-1TCBDS   | 3.71    | 6-1.5TCBDS    |
| 25 | Pawl               | 7.32  | 6-0.5TCBP    | 7.33  | 6-1TCBP    | 12.18   | 6-1.5TCBP     |
| 26 | Spring ring        | 2.50  | 6-0.5TCBSR   | 3.71  | 6-1TCBSR   | 4.86    | 6-1.5TCBSR    |
| 28 | Friction plate     | 12.14 | 6-0.5TCBFP   | 12.18 | 6-1TCBFP   | 15.25   | 6-1.5TCBFP    |
| 31 | Cotter pin         | 1.64  | 6-0.5TCBCP31 | 2.06  | 6-1TCBCP31 | 2.47    | 6-1.5TCBCP31  |

| #  | Description        | 2 t   |               | 3 t    |            | 5 t    |              | 10 t   |            |
|----|--------------------|-------|---------------|--------|------------|--------|--------------|--------|------------|
| 2  | End anchor pin     | 2.47  | 6-2TCBEAP     | 3.62   | 6-3TCBEAP  | 3.62   | 6-5TCBEAP    | 3.62   | 6-5TCBEAP  |
| 4  | Chain pin          | 12.18 | 6-2TCBCP      | 12.18  | 6-3TCBCP   | 12.18  | 6-5TCBCP     | 12.18  | 6-5TCBCP   |
| 5  | Load chain (\$/ft) | 18.65 | 6-1.5T-3TCBCH |        |            | 36.13  | 6-5T-10TCBCH |        |            |
| 7  | Bottom hook as.    | 75.96 | 6-2TCBBHA     | 108.04 | 6-3TCBBHA  | 181.98 | 6-5TCBBHA    | 427.36 | 6-10TCBBHA |
| 8  | Safe clip          | 8.57  | 6-2TCBSC      | 8.57   | 6-3TCBSC   | 10.72  | 6-5TCBSC     | 18.47  | 6-10TCBSC  |
| 13 | Hook pin           | 12.18 | 6-2TCBHP      | 14.65  | 6-3TCBHP   | 24.34  | 6-5TCBHP     | 24.34  | 6-5TCBHP   |
| 14 | Hand chain         | 6.18  | 6-HAND CHAIN  |        |            |        |              |        |            |
| 22 | Load sheave        | 59.11 | 6-1.5&2TLS    |        |            | 77.33  | 6-3&5TLS     |        |            |
| 23 | Top hook assem.    | 68.99 | 6-2TCBTHA     | 90.12  | 6-3TCBTHA  | 173.60 | 6-5TCBTHA    | 382.52 | 6-10TCBTHA |
| 24 | Double spring      | 3.71  | 6-2TCBDS      | 3.94   | 6-3TCBDS   | 3.94   | 6-5TCBDS     | 3.94   | 6-5TCBDS   |
| 25 | Pawl               | 12.18 | 6-2TCBP       | 14.60  | 6-3TCBP    | 14.60  | 6-5TCBP      | 14.60  | 6-5TCBP    |
| 26 | Spring ring        | 4.86  | 6-2TCBSR      | 4.86   | 6-3TCBSR   | 7.34   | 6-5TCBSR     | 7.34   | 6-5TCBSR   |
| 28 | Friction plate     | 15.25 | 6-2TCBFP      | 18.47  | 6-3TCBFP   | 18.47  | 6-5TCBFP     | 18.47  | 6-5TCBFP   |
| 31 | Cotter pin         | 2.47  | 6-2TCBCP31    | 3.30   | 6-3TCBCP31 | 3.30   | 6-5TCBCP31   | 3.30   | 6-5TCBCP31 |

Rated in Metric Ton(s)



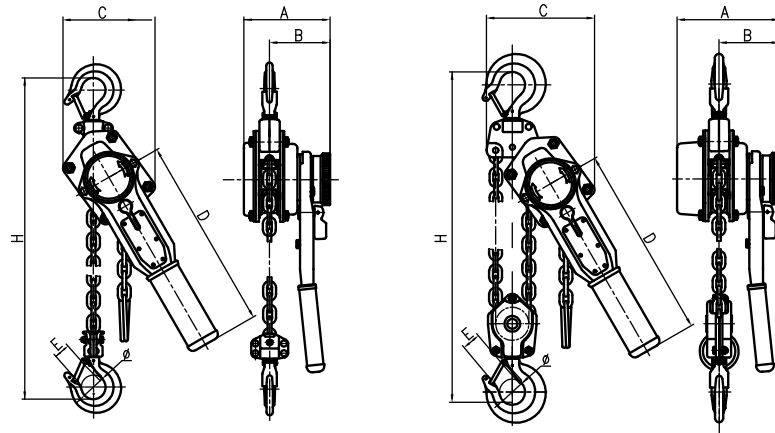
**The Subsea Lever Hoist is our premium line hoist with the following advantages:**

- The driving shaft is fixed by a simple support structure. The gear transmission is more stable and effective.
- The hand wheel is steel with higher strength and reliable operation. No preload required.
- The surface treatment of change over gear, brake seat, brake steel bushing and fused brake disc are Cr-free Dacromet (better corrosion resistance).
- Fused brake disc is a whole part and includes friction disk and ratchet. This provides exceptional performance and long life.
- The performance of our maintenance free bearing is close to rolling bearing with better corrosion resistance.
- The hooks are alloy steel and passed heat treatment.
- Compact and higher strength lever is suited for narrow space operation. The material of handle and sleeve is special elastomer.
- Higher strength and higher temperature resistance. Grade 80 load chain comes with Cr-free Dacromet finish. Brake seat and driving shaft are connected by involute splines, brake effect is higher and the parts are easily disassembled.
- Standard parts made of stainless steel.

**LEVER HOIST - PULLER, 816, OCEAN® BRAND®, SUBSEA**

- Patented
- Standard: EN 13157, ASME B30.21
- Finish: Painted White
- Identification: Trademark, Size/WLL, Date, Serial No.
- Rated in Metric Ton(s)





| WLL (t)                         |    | L3-1.5        | L3-3        | L3-6        |
|---------------------------------|----|---------------|-------------|-------------|
| Capacity                        | kg | 1500          | 3000        | 6000        |
| Part Number                     |    | 6-1.5TSS-L3LP | 6-3TSS-L3LP | 6-6TSS-L3LP |
| Price                           |    | 1,076.00      | 1,577.99    | 2,654.20    |
| Lift                            | m  | 1.5           | 1.5         | 1.5         |
| Test Load                       | kg | 1875          | 3750        | 7500        |
| Pull on lever to lift full load | N  | 295           | 380         | 390         |
| No. of load chain falls         |    | 1             | 1           | 2           |
| Diameter of load chain          | mm | 7 x 21        | 10 x 30     | 10 x 30     |
| Min. distance between hooks     | mm | 400           | 460         | 600         |
| Length of lever handle          | mm | 378           | 418         | 418         |
| Dimensions<br>mm                | A  | 173           | 204         | 204         |
|                                 | B  | 99            | 114         | 114         |
|                                 | C  | 145           | 203         | 243         |
|                                 | Φ  | 42.5          | 55          | 65          |
|                                 | E  | 2.9           | 40          | 46          |
| Net weight                      | kg | 10.9          | 20.5        | 32          |

**WARNING** - Read and understand all warnings, maintenance, and operation instructions (supplied with every unit).

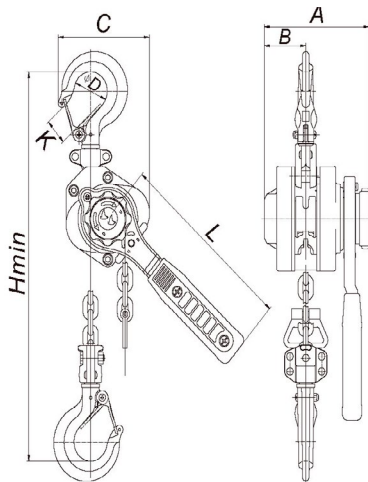
## LIGHT WEIGHT ALUMINUM LEVER HOIST

The Light Weight Aluminum Lever Hoist is one of our premium line hoist with the following advantages:

- Aluminum Material, Light weight. Load chain sprocket made of heat treated alloy steel with precision machining. Chain guides provide smooth chain operation. Rubber grips used to prevent hand sliding during operation. Double regulating wheel structure and double pawl guarantee safe and reliable brake operation. Suitable for high altitude and small space operation. The existing brake separation technology can be quickly adjusted to a suitable working position. The hooks are alloy steel, heat treated and includes cast safety latch. Grade 80 load chain is accorded with EN818-7 standard. No overload protection.

## LEVER HOIST - PULLER, HSH-AL, OCEAN® BRAND®, LIGHT WEIGHT ALUMINUM

- Patented
- Standard: EN 13157, ASME B30.21
- Finish: Aluminum
- Identification: Trademark, Size/WLL, Date, Serial No.
- Rated in Metric Ton(s)
- Standard lift from stock, "custom chain length available on request"



| WLL (t)                          |        | 0.25        | 0.5        | 0.75          | 1.5           |
|----------------------------------|--------|-------------|------------|---------------|---------------|
| Part Number                      |        | 6-0.25TLPAL | 6-0.5TLPAL | 6-0.75TLPAL   | 6-1.5TLPAL    |
| Price                            | ea.    | 254.75      | 269.20     | 430.29        | 511.75        |
| Standard lift                    | m      | 1           | 1          | 1.5           | 1.5           |
| Strands of load chain            |        | 1           | 1          | 1             | 1             |
| Dimensions (mm)                  | A      | 94.5        | 100        | 126           | 142           |
|                                  | B      | 35          | 39         | 50            | 63.5          |
|                                  | C      | 84          | 99         | 110           | 133           |
|                                  | D      | 34          | 34         | 40            | 45            |
|                                  | H min  | 230         | 265        | 315           | 340           |
|                                  | L      | 163         | 163        | 208           | 238           |
|                                  | K      | 24          | 24         | 26            | 31            |
| Net Weight per standard lift     | kg     | 1.9         | 2.7        | 4.8           | 7             |
| Running test load                | kN     | 3.1         | 6.1        | 9.2           | 18.4          |
| Force to lift rated load         | N (kg) | 206 (21)    | 255 (26)   | 303 (31)      | 362 (37)      |
| Load chain diameter              | mm     | 4           | 5          | 5.6           | 7.1           |
| Chain weight kg/m                | kg/m   | 0.36        | 0.55       | 0.68          | 1.2           |
| Load Chain Part Number.          |        | 6-4X12LCH   | 6-5X15LCH  | 6-5.6X15.6LCH | 6-7.1X19.9LCH |
| Price                            | ft.    | 18.90       | 14.75      | 14.75         | 23.50         |
| Top Hook Assembly Part Number    |        | 6-0.25TTHA  | 6-0.5TTHA  | 6-0.75TTHA    | 6-1.5TTHA     |
| Price                            | ea.    | 20.32       | 23.30      | 34.31         | 43.55         |
| Bottom Hook Assembly Part Number |        | 6-0.25TBHA  | 6-0.5TBHA  | 6-0.75TBHA    | 6-1.5TBHA     |
| Price                            | ea.    | 22.00       | 26.39      | 39.58         | 46.63         |
| Latch Kits Part Number           |        | 6-0.25TLK   | 6-0.5TLK   | 6-0.75TLK     | 6-1.5TLK      |
| Price                            | ea.    | 3.08        | 3.08       | 3.52          | 4.40          |
| Friction Disk Part Number        |        | 6-0.25TFDAL | 6-0.5TFDAL | 6-0.75TFDAL   | 6-1.5TFDAL    |
| Price                            | ea.    | 7.92        | 7.92       | 8.79          | 8.79          |

## PRINCIPLE OF OVERLOAD PROTECTION



The principle of overload protection brake engagement is the same on both lever pullers and chain blocks. The unit has an adjustable friction disk when engaged produces a friction force between the disk and the hand wheel or lever. This is adjusted at the factory. Each unit is tested twice. The first is a normal proof load test, and the second load is used to set the friction disk brake engagement. For example on a 1.5 ton lever block, the block is pulled to 1.5 times the WLL,  $1.5 \text{ ton} \times 1.5 = 2.25 \text{ ton}$  as a normal proof load test. The block is then taken to 1.3 times the WLL to set the friction brake.  $1.5 \text{ ton} \times 1.3 = 1.95 \text{ ton}$ . If the unit is taken above this load the friction disk will engage and the unit will not lift. Proof loading for this block would be  $1.25 \times 1.5 \text{ ton} = 1.875 \text{ ton}$ .

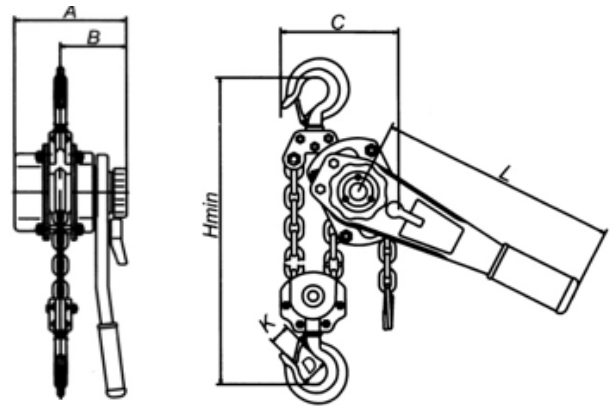
- Standard lift from stock - 1.5 & 3 meter - "custom chain length available on request".





## LEVER HOIST - PULLER, 622, OCEAN® BRAND®

- **Patented**
- Standard: EN 13157, ASME B30.21
- Finish: Painted Yellow
- Identification: Trademark, Size/WLL, Date, Serial No.
- Rated in Metric Ton(s)



| WLL (t)                  |     | 0.75       | 1.5       | 3       | 6        | 9        |
|--------------------------|-----|------------|-----------|---------|----------|----------|
| Part Number              |     | 6-0.75TLP  | 6-1.5TLP  | 6-3TLP  | 6-6TLP   | 6-9TLP   |
| Price (1.5 m of Lift)    | ea. | 313.50     | 381.99    | 627.00  | 1,093.30 | 1,561.40 |
| Part Number              |     | 6-0.75TLP3 | 6-1.5TLP3 | 6-3TLP3 | -        | -        |
| Price (3 m of Lift)      | ea. | 336.00     | 417.35    | 768.92  | -        | -        |
| Strands of load chain    |     | 1          | 1         | 1       | 2        | 3        |
| Dimensions (mm)          | A   | 148        | 172       | 200     | 200      | 200      |
|                          | B   | 90         | 98        | 115     | 115      | 115      |
|                          | C   | 136        | 160       | 180     | 235      | 320      |
|                          | H   | 325        | 380       | 480     | 620      | 700      |
|                          | L   | 280        | 410       | 410     | 410      | 410      |
|                          | K   | 34         | 38        | 48      | 52       | 58       |
| Net Weight / 3 m of lift | kg  | 7          | 11        | 21      | 31       | 46       |
| Running test load        | Kn  | 11.0       | 22.0      | 37.5    | 75.0     | 112.5    |
| Force to lift rated load | N   | 140        | 220       | 320     | 340      | 360      |
| Load chain diameter      | mm  | 6          | 8         | 10      | 10       | 10       |
| Chain weight kg/m        | kg  | 0.8        | 1.4       | 2.2     | 4.4      | 6.6      |

**WARNING** - Read and understand all warnings, maintenance, and operation instructions (supplied with every unit).

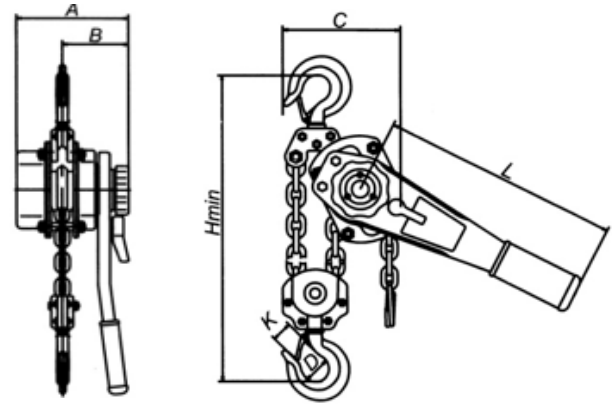
## NON-OVERLOAD PROTECTION

- Marking: Rated load, Direction of motion, Name of Manufacturer, Manufacturer's model or serial number. Product safety/ warning information
- Standard lift from stock - 3 meter - "custom chain length available on request"
- Lever Puller rated in Metric Ton = Tons of 1000kgs. (2200 pounds / 9.81kN)



## LEVER HOIST - PULLER, 622, OCEAN® BRAND® (NOP)

- **Patented**
- Standard: EN 13157, ASME B30.21
- Finish: Painted Orange
- Identification: Trademark, Size/WLL, Date, Serial No.
- Rated in Metric Ton(s)

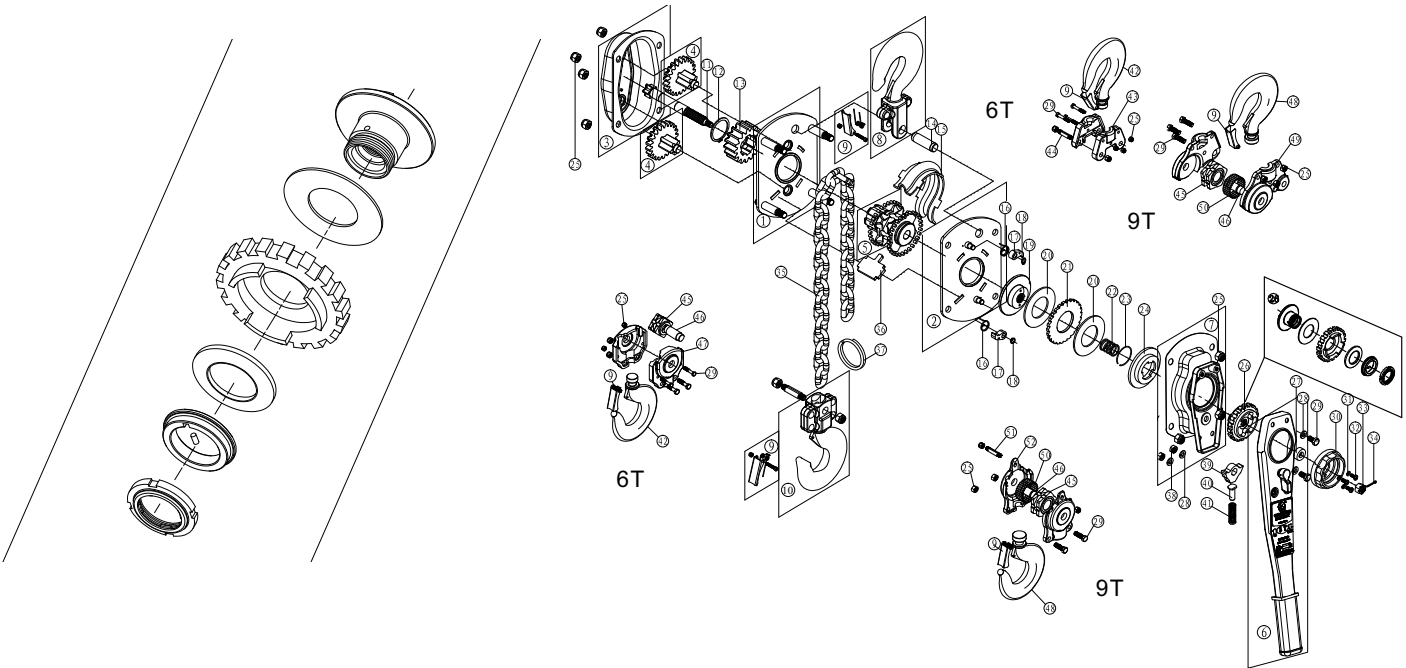


| WLL (t)                  |     | 0.75           | 1.5           | 3           | 6         |
|--------------------------|-----|----------------|---------------|-------------|-----------|
| Part Number              |     | 6-0.75TLP3-NOP | 6-1.5TLP3-NOP | 6-3TLP3-NOP | 6-6TLPNOP |
| Price                    | ea. | 305.45         | 360.95        | 562.80      | 993.95    |
| Standard lift            | m   | 3              | 3             | 3           | 1.5       |
| Strands of load chain    |     | 1              | 1             | 1           | 2         |
| Dimensions (mm)          | A   | 148            | 172           | 200         | 200       |
|                          | B   | 90             | 98            | 115         | 115       |
|                          | C   | 136            | 160           | 180         | 235       |
|                          | H   | 325            | 380           | 480         | 620       |
|                          | L   | 280            | 410           | 410         | 410       |
|                          | K   | 34             | 38            | 48          | 52        |
| Net Weight / 3 m of lift | kg  | 7              | 11            | 21          | 31        |
| Running test load        | kN  | 11.0           | 22.0          | 37.5        | 75.0      |
| Force to lift rated load | N   | 140            | 220           | 320         | 340       |
| Load chain diameter      | mm  | 6              | 8             | 10          | 10        |
| Chain weight kg/m        | kg  | 0.8            | 1.4           | 2.2         | 4.4       |

**WARNING** - Read and understand all warnings, maintenance, and operation instructions (supplied with every unit).

LEVER HOIST PARTS BREAKDOWN

| #  | Description            | #  | Description        | #  | Description       | #  | Description    | #  | Description          |
|----|------------------------|----|--------------------|----|-------------------|----|----------------|----|----------------------|
| 1  | Gear assembly          | 14 | Snap ring          | 27 | Hand wheel        | 40 | Castle nut     | 53 | 6t top hook frame    |
| 2  | Disk gear assy.        | 15 | Disk hub           | 28 | Load chain        | 41 | Split pin      | 54 | Move wheel pin       |
| 3  | Drive shaft            | 16 | Free spring        | 29 | Chain ring        | 42 | Lock nut       | 55 | Move wheel           |
| 4  | Splined gear           | 17 | Friction disk      | 30 | Name plate        | 43 | Wire snap ring | 56 | 6t bottom hook frame |
| 5  | Gear side plate assy.  | 18 | Ratchet disk       | 31 | Top hook assy.    | 44 | Screw          | 57 | Nut                  |
| 6  | Load sheave            | 19 | Female thread grip | 32 | Top hook shaft    | 45 | Lock washer    | 58 | Screw                |
| 7  | Guide plate            | 20 | Brake cover assy.  | 33 | Bottom hook assy. | 46 | Rivet          | 59 | Nut                  |
| 8  | Roller                 | 21 | Change over gear   | 34 | Chain pin         | 47 | Snap ring      | 60 | Screw                |
| 9  | Bearing race           | 22 | Lever handle assy. | 35 | Hex nut           | 48 | 6t hook        | 61 | Safe clip assembly   |
| 10 | Stripper               | 23 | Change over pawl   | 36 | Lock washer       | 49 | Nut            |    |                      |
| 11 | Lever side plate assy. | 24 | Spring seat        | 37 | Hex nut           | 50 | Screw          |    |                      |
| 12 | Pawl spring            | 25 | Change over spring | 38 | Lock washer       | 51 | 6t pin         |    |                      |
| 13 | Pawl                   | 26 | Bushing            | 39 | Screw             | 52 | Nut            |    |                      |



## Available Spare Parts for Lever Hoist

| #  | Description          | 3/4 tonne |               | 1-1/2 tonne |               | 3 tonne |              | 6 tonne |              |
|----|----------------------|-----------|---------------|-------------|---------------|---------|--------------|---------|--------------|
| 6  | Load sheave          | 38.26     | 6-0.75TLBLS   | 56.56       | 6-1.5TLBLS    | 108.49  | 6-3-6TLBLS   | 108.49  | 6-3-6TLBLS   |
| 12 | Pawl spring          | 7.26      | 6-0.75TLBPS   | 9.20        | 6-1.5TLBPS    | 18.30   | 6-3TLBPS     | 18.30   | 6-3TLBPS     |
| 13 | Pawl                 | 9.49      | 6-0.75TPAWL   | 18.96       | 6-1.5TPAWL    | 23.75   | 6-3TPAWL     | 23.75   | 6-6TPAWL     |
| 14 | Snap ring            | 2.47      | 6-0.75TLBSR   | 3.13        | 6-1.5TLBSR    | 4.62    | 6-3TLBSR     | 4.62    | 6-3TLBSR     |
| 16 | Free spring          | 12.13     | 6-0.75TLBFS   | 19.39       | 6-1.5TLBFS    | 24.24   | 6-3TLBFS     | 24.24   | 6-3TLBFS     |
| 17 | Friction disk        | 8.90      | 6-0.75TFD     | 14.84       | 6-1.5TFD      | 23.75   | 6-3TFD       | 23.75   | 6-6TFD       |
| 19 | Female thread grip   | 21.92     | 6-0.75TLBFTG  | 27.37       | 6-1.5TLBFTG   | 36.50   | 6-3TLBFTG    | 36.50   | 6-3TLBFTG    |
| 20 | Brake cover assembly | 37.43     | 6-0.75TLBBCA  | 69.42       | 6-1.5TLBBCA   | 76.67   | 6-3TLBBCA    | 76.67   | 6-3TLBBCA    |
| 23 | Change over pawl     | 12.78     | 6-0.75TLBCOP  | 18.13       | 6-1.5TLBCOP   | 27.37   | 6-3TLBCOP    | 27.37   | 6-3TLBCOP    |
| 24 | Spring seat          | 5.52      | 6-0.75TLBSS   | 9.07        | 6-1.5TLBSS    | 9.07    | 6-3TLBSS     | 9.07    | 6-3TLBSS     |
| 25 | Change over spring   | 5.44      | 6-0.75TLBCOS  | 9.07        | 6-1.5TLBCOS   | 9.07    | 6-3TLBCOS    | 9.07    | 6-3TLBCOS    |
| 26 | Bushing              | 3.62      | 6-0.75TLBB    | 5.43        | 6-1.5TLBB     | 7.26    | 6-3TLBB      | 7.26    | 6-3TLBB      |
| 28 | Load chain           | 12.54     | 6-0.5-1TCBCH  | 18.65       | 6-1.5T-3TCBCH | 36.13   | 6-5T-10TCBCH | 36.13   | 6-5T-10TCBCH |
| 29 | Chain ring           | 7.26      | 6-0.75TLBCR   | 14.51       | 6-1.5TLBCR    | 18.13   | 6-3TLBCR     | 18.13   | 6-3TLBCR     |
| 30 | Name plate           | 7.26      | 6-0.75TLBNP   | 9.73        | 6-1.5TLBNP    | 12.18   | 6-3TLBNP     | 12.18   | 6-3TLBNP     |
| 31 | Top hook assembly    | 42.52     | 6-0.75TLBTHA  | 51.95       | 6-1.5TLBTHA   | 97.94   | 6-3TLBTHA    | 239.40  | 6-6TLBTHA    |
| 32 | Top hook shaft       | 12.18     | 6-0.75TLBTHS  | 19.39       | 6-1.5TLBTHS   | 29.18   | 6-3TLBTHS    | 29.18   | 6-3TLBTHS    |
| 33 | Bottom hook assembly | 46.54     | 6-0.75TLBBHA  | 71.68       | 6-1.5TLBBHA   | 97.81   | 6-3TLBBHA    | 236.94  | 6-6TLBBHA    |
| 34 | Chain pin            | 7.26      | 6-0.75TLBCP   | 10.97       | 6-1.5TLBCP    | 14.60   | 6-3TLBCP     | 14.60   | 6-6TLBCP     |
| 35 | Hex nut              | 3.62      | 6-0.75TLBHN   | 4.37        | 6-1.5TLBHN    | 4.37    | 6-3TLBHN     | 4.37    | 6-3TLBHN     |
| 36 | Lock washer          | 0.83      | 6-0.75TLBLW   | 1.24        | 6-1.5TLBLW    | 1.49    | 6-3TLBLW     | 1.49    | 6-3TLBLW     |
| 37 | Hex nut              | 3.62      | 6-0.75TLBHNN  | 4.37        | 6-1.5TLBHNN   | 4.86    | 6-3TLBHNN    | 4.86    | 6-3TLBHNN    |
| 38 | Lock washer          | 0.83      | 6-0.75TLBLW38 | 1.24        | 6-1.5TLBLW38  | 1.49    | 6-3TLBLW38   | 1.49    | 6-3TLBLW38   |
| 39 | Screw                | 2.06      | 6-0.75TLBS    | 2.47        | 6-1.5TLBS     | 3.22    | 6-3TLBS      | 3.22    | 6-3TLBS      |
| 40 | Castle nut           | 2.47      | 6-0.75TLBCN   | 4.86        | 6-1.5TLBCN    | 7.26    | 6-3TLBCN     | 7.26    | 6-3TLBCN     |
| 41 | Split pin            | 1.24      | 6-0.75TLBSP   | 2.06        | 6-1.5TLBSP    | 2.47    | 6-3TLBSP     | 2.47    | 6-3TLBSP     |
| 42 | Lock nut             | 1.24      | 6-0.75TLBLN   | 2.06        | 6-1.5TLBLN    | 2.47    | 6-3TLBLN     | 2.47    | 6-3TLBLN     |
| 43 | Wire snap ring       | 4.81      | 6-0.75TWSR    | 4.81        | 6-1.5TWSR     | 5.81    | 6-3TWSR      | 5.81    | 6-3TWSR      |
| 44 | Screw                | 4.81      | 6-0.75TLBSS44 | 4.81        | 6-1.5TLBSS44  | 4.81    | 6-3TLBSS44   | 4.81    | 6-3TLBSS44   |
| 45 | Lock washer          | 0.83      | 6-0.75TLBLW45 | 1.24        | 6-1.5TLBLW45  | 3.08    | 6-3TLBLW45   | 3.08    | 6-3TLBLW45   |
| 46 | Rivet                | 4.25      | 6-0.75TLBR    | 4.73        | 6-1.5TLBR     | 5.26    | 6-3TLBR      | 5.26    | 6-3TLBR      |
| 47 | Snap ring            | 2.47      | 6-0.75TLBSR47 | 3.08        | 6-1.5TLBSR47  | 7.85    | 6-3TLBSR47   | 7.85    | 6-3TLBSR47   |
| 61 | Safe clip assembly   | 7.42      | 6-0.75TSCA    | 9.55        | 6-1.5TSCA     | 11.87   | 6-3TSCA      | 11.87   | 6-6TSCA      |



# WINCH - WIRE ROPE, SPARE PIN

- Each new unit comes with a Spare Shear Pin located in the handle of the winch.



| For Size (t) | Spare Replacement Shear Pins |                     |
|--------------|------------------------------|---------------------|
|              | Price / ea.                  | Part Number         |
| 0.8          | 16.45                        | 6-0.8T#16SAFETYBOLT |
| 1.6          | 16.45                        | 6-1.6T#16SAFETYBOLT |
| 3.2          | 16.45                        | 6-3.2T#16SAFETYBOLT |

# WINCH - WIRE ROPE

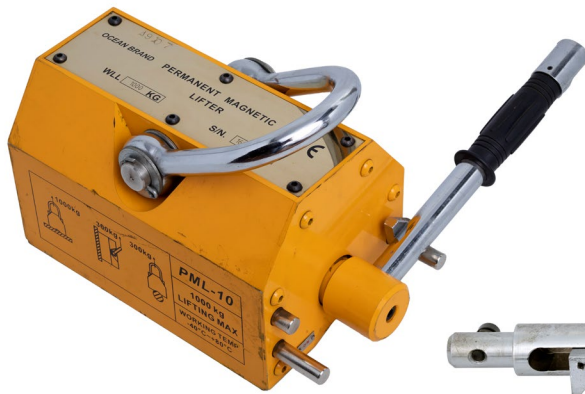
- **Complete with: wire, hook and handle.**
- Safe, reliable, and efficient, these units are suitable for many applications.
- One man operated, using a telescopic handle, they work in any position and over any height of lift.
- Can replace conventional winches and other hoists for many applications.
- Proof load to the WLL, and use only properly sized dry galvanized wire rope provided with units.
- Standard: EN 13157
- Identification: Trademark, Size/WLL, Date
- Rated in Metric Ton(s)



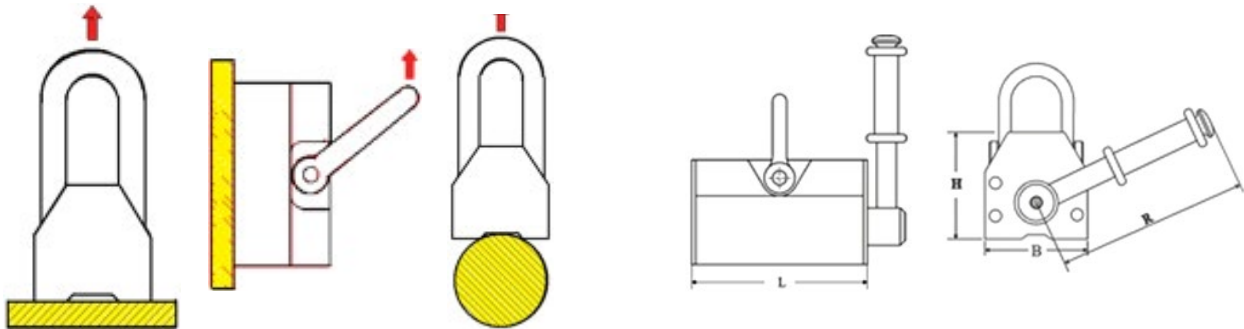
| Capacity lifting (t) | Capacity pulling (t) | Rope dia. (mm) | Weight / each (kg) | Size (mm)       | Drive Step | c/w std wire pulling length (m) | Spare Replacement Handles |                 | Price / ea. | Part Number |
|----------------------|----------------------|----------------|--------------------|-----------------|------------|---------------------------------|---------------------------|-----------------|-------------|-------------|
|                      |                      |                |                    |                 |            |                                 | Price / ea.               | Part Number     |             |             |
| 0.8                  | 1.3                  | 8              | 6                  | 428 x 64 x 235  | 1          | 20 m                            | 71.90                     | 6-0.8TWRWHANDLE | 599.00      | 6-0.8TWRW   |
| 1.6                  | 2.6                  | 11             | 12                 | 545 x 97 x 286  | 1          | 20 m                            | 123.59                    | 6-1.6TWRWHANDLE | 895.00      | 6-1.6TWRW   |
| 3.2                  | 5.2                  | 16             | 23                 | 660 x 116 x 350 | 2          | 20 m                            | 123.59                    | 6-3.2TWRWHANDLE | 1,450.00    | 6-3.2TWRW   |

**WARNING - Read and understand all warnings, maintenance, and operation instructions (supplied with every unit).**

## PERMANENT MAGNET LIFTER



- Standard: EN 13155 & ASME B30.20
- Finish: Painted Yellow, Zinc
- Identification: Trademar, WLL, Serial No.
- Certification: Load Test



| Horizontal Load Capacity (kg) | Horizontal [Max.] Break-away Force (kg) | Round Bar or Vertical Capacity (kg) | Dimensions (mm) |     |     |     | Wt. (kg) | Spare Handle Only |             | Spare Shackle Only |              | Magnet Lifter |             |
|-------------------------------|-----------------------------------------|-------------------------------------|-----------------|-----|-----|-----|----------|-------------------|-------------|--------------------|--------------|---------------|-------------|
|                               |                                         |                                     | L               | B   | H   | R   |          | Price / ea.       | Part Number | Price / ea.        | Part Number  | Price / ea.   | Part Number |
| 100                           | 350                                     | 30                                  | 92              | 66  | 70  | 145 | 3        | 112.06            | 6-PML-01RH  | 97.52              | 6-PML-100RS  | 580.42        | 6-PML-100   |
| 300                           | 1050                                    | 100                                 | 165             | 88  | 96  | 176 | 10       | 115.88            | 6-PML-03RH  | 109.70             | 6-PML-300RS  | 1075.65       | 6-PML-300   |
| 600                           | 2100                                    | 200                                 | 236             | 118 | 120 | 219 | 23       | 142.82            | 6-PML-06 RH | 134.14             | 6-PML-600RS  | 1853.00       | 6-PML-600   |
| 1000                          | 3500                                    | 300                                 | 264             | 172 | 168 | 285 | 54       | 214.33            | 6-PML-10RH  | 162.54             | 6-PML-1000RS | 3333.45       | 6-PML-1000  |
| 2000                          | 7000                                    | 600                                 | 378             | 223 | 216 | 462 | 130      | 287.81            | 6-PML-20RH  | 219.46             | 6-PML-2000RS | 7380.45       | 6-PML-2000  |

- Do not use this lifting device above the working load limit for the application, this information is attached to each magnet.
- Operating temperature maximum 80°C.
- Other sizes available on request.

SEE WARNING AND APPLICATION INFORMATION - NEXT PAGE

## PERMANENT MAGNET LIFTER - WARNINGS AND APPLICATION INSTRUCTIONS

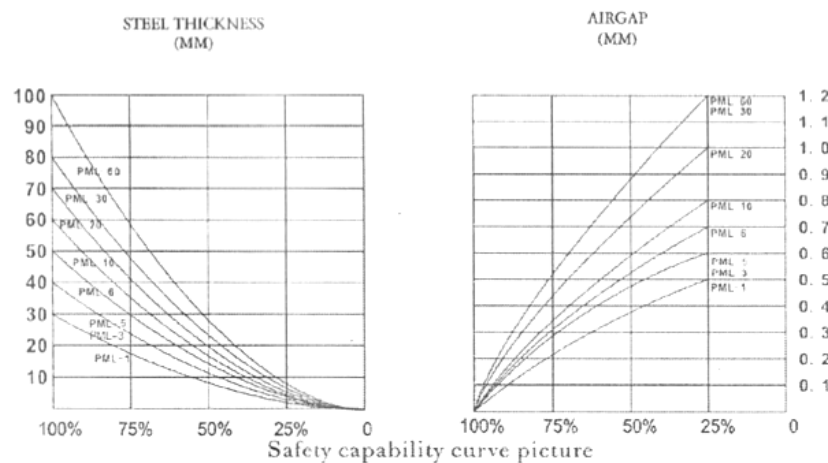
Prior to operation, clear away rust and any debris from the components surface. The centerline of lifter must overlap with centerline of component then place the magnetic lifting hoist on the face of component, turn the handle from "OFF" to "ON" and confirm unit is holding. Make sure the security key on the handle is automatically locked, and then start to hoist for trial lift.

**Air Gap** – These lifting magnets create high magnetic forces which permit the magnet to clamp materials through the air gap but these air gaps do however decrease the magnetic performance due to the fact that they provide a barrier between the contact surfaces. Air gaps can happen in a variety of ways, such as dust, paint, and mill scale. Inadequately machined surfaces will also make up an air gap. The lifting magnet will need to be down rated in capacity according to the adhesive force / air gap as shown in the diagram below.

**Material Thickness** – When lifting magnets are used to lift materials which are thinner than the recommended minimum thickness, the clamping force of the magnet will be considerably lower. See below diagram for detailed information.

Full lifting capacity is only achieved when the lifting magnet has complete contact with the item being lifted. Performance will be affected if the surface of the materials to be lifted contains holes or is uneven. A trial lift must be carried out in these situations to establish correct lifting prior to transporting the load. Some materials will have differing abilities to carry magnetism. Apart from mild steel, a reduction factor needs to be applied so that the clamping force can be effectively calculated.

| Model    | Flat Material                |                        |                                 | Round Material               |                  |                                 | Tear off Force<br>(kg) |
|----------|------------------------------|------------------------|---------------------------------|------------------------------|------------------|---------------------------------|------------------------|
|          | Maximum Capacity SWL<br>(kg) | Min. Thickness<br>(mm) | Max. Length of Material<br>(mm) | Maximum Capacity SWL<br>(kg) | Diameter<br>(mm) | Max. Length of Material<br>(mm) |                        |
| PML-100  | 100                          | 30                     | 2000                            | 30                           | 200-300          | 2 000                           | 350                    |
| PML-300  | 300                          | 40                     | 2500                            | 100                          | 200-300          | 2 500                           | 1050                   |
| PML-600  | 600                          | 50                     | 3000                            | 200                          | 200-400          | 3 000                           | 2100                   |
| PML-1000 | 1000                         | 60                     | 3500                            | 300                          | 200-400          | 3 500                           | 3500                   |
| PML-2000 | 2000                         | 70                     | 3500                            | 600                          | 200-400          | 3 500                           | 7000                   |

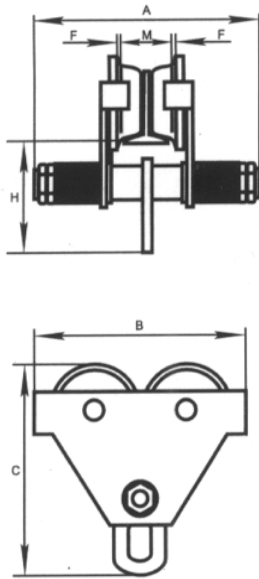


\*\*\* Read and understand Operating Instructions  
(supplied with every unit) before using this product \*\*\*

| Reduction of capacity for material type | % of capacity |
|-----------------------------------------|---------------|
| Temperature < 80°C                      | 100%          |
| Humidity < 80%                          | 100%          |
| Low Carbon Steel                        | 100%          |
| St 52                                   | 95%           |
| Alloy Steel                             | 80%           |
| High Carbon Steel                       | 70%           |
| Cast Iron                               | 45%           |
| Nickel                                  | 45%           |
| Austenitic Stainless Steel              | 0%            |
| Brass                                   | 0%            |
| Aluminium                               | 0%            |

## TROLLEYS - BEAM, PUSH TRAVEL

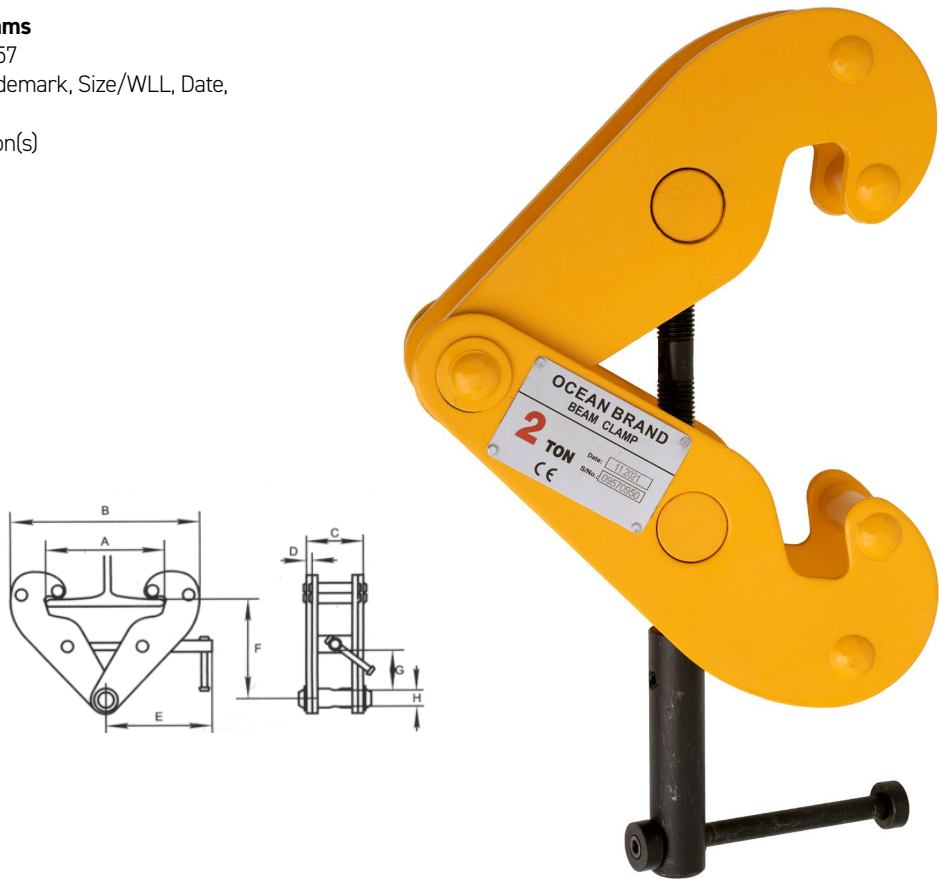
- For use on 'I' Beams
- Standard: EN 13157
- Identification: Trademark, Size/WLL, Date, Serial No.
- Rated in Metric Ton(s)



| WLL (t) | I-Beam Width (mm) | Min. Radius Curve (m) | N.W. (kg) | A (mm) | B (mm) | C (mm) | H (mm) | Price / ea. | Part Number |
|---------|-------------------|-----------------------|-----------|--------|--------|--------|--------|-------------|-------------|
| 0.5     | 64-140            | 0.6                   | 7         | 230    | 212    | 198.5  | 113    | 157.45      | 6-0.5TT     |
| 1       | 64-140            | 0.8                   | 12        | 254    | 255    | 231.5  | 128    | 249.45      | 6-1TT       |
| 1.5     | 76-165            | 1.1                   | 18        | 276    | 277    | 265    | 145    | 308.95      | 6-1.5TT     |
| 2       | 76-165            | 1.1                   | 22        | 294    | 302    | 278    | 152    | 379.60      | 6-2TT       |
| 3       | 76-203            | 1.4                   | 30        | 344    | 344    | 338    | 186    | 575.40      | 6-3TT       |
| 5       | 88-203            | 1                     | 55        | 360    | 378    | 393    | 219    | 966.29      | 6-5TT       |
| 10      | 125-203           | 1.3                   | 93        | 403    | 455    | 490    | 275.5  | 1,529.86    | 6-10TT      |

CLAMP - BEAM

- For use on 'I' Beams
- Standard: EN 13157
- Identification: Trademark, Size/WLL, Date, Serial No.
- Rated in Metric Ton(s)



| WLL<br>(t) | Adj. Beam<br>Width<br>(mm) | N.W. /<br>(kg) | Dimensions (mm) |           |           |     |    |     |           |           |    |    | Price /<br>ea. | Part Number |
|------------|----------------------------|----------------|-----------------|-----------|-----------|-----|----|-----|-----------|-----------|----|----|----------------|-------------|
|            |                            |                | A<br>Max.       | B<br>Min. | B<br>Max. | C   | D  | E   | F<br>Min. | F<br>Max. | G  | H  |                |             |
| 1          | 75-220                     | 4              | 260             | 180       | 360       | 64  | 5  | 215 | 102       | 155       | 25 | 22 | 122.21         | 6-1TBC      |
| 2          | 75-220                     | 5              | 260             | 180       | 360       | 74  | 6  | 215 | 102       | 155       | 25 | 22 | 144.84         | 6-2TBC      |
| 3          | 80-320                     | 9              | 354             | 235       | 490       | 103 | 8  | 260 | 140       | 225       | 45 | 24 | 218.32         | 6-3TBC      |
| 5          | 80-320                     | 11             | 354             | 235       | 490       | 110 | 10 | 260 | 140       | 225       | 45 | 28 | 228.97         | 6-5TBC      |
| 10         | 90-320                     | 15             | 365             | 320       | 505       | 120 | 12 | 280 | 170       | 235       | 50 | 40 | 367.42         | 6-10TBC     |

WARNING

OVERLOADING AND IMPROPER USE CAN RESULT IN INJURY!  
To avoid injury:

- DO NOT exceed working load limit, load rating or capacity
- DO NOT use to lift people, or loads over people
- Use only alloy chain and attachments for overhead lifting



## PCD VERTICAL PLATE CLAMPS

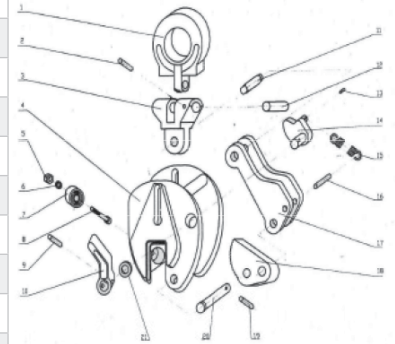
### PCD Plate clamp with safety lock

- Universal eye for lifting in any direction
- Standard: EN 13155
- Lock open, lock closed
- Equipped with a pre-tension mechanisms ensuring the clamp does not slip when lifting force is applied and when load is being lowered
- Tagged with manufacturer, capacity, date and serial number
- Rated in Metric Ton(s)
- Minimum W.L.L is 10% of the maximum W.L.L.

| WLL (t) | Jaw Opening | Dimensions (mm) |    |     |     | N.W. / (kg) | Price / ea. | Part Number |
|---------|-------------|-----------------|----|-----|-----|-------------|-------------|-------------|
|         |             | T               | U  | V   | L   |             |             |             |
| 1       | 0~20        | 300             | 50 | 145 | 66  | 5           | 308.64      | 6-1TPCD     |
| 2       | 0~25        | 385             | 68 | 175 | 75  | 8           | 436.65      | 6-2TPCD     |
| 3.2     | 0~30        | 430             | 75 | 215 | 102 | 15          | 643.00      | 6-3.2TPCD   |
| 5       | 0~50        | 500             | 68 | 232 | 112 | 23          | 693.00      | 6-5TPCD     |
| 8       | 0~45        | 600             | 88 | 290 | 125 | 37          | On Request  | 6-8TPCD     |



| Model    | Jaw Opening (mm) | Load Capacity (kg) | T (mm) | U (mm) | V (mm) | L (mm) | Net Weight (kg) |
|----------|------------------|--------------------|--------|--------|--------|--------|-----------------|
| PCD 0.5T | 0~15             | 500                | 205    | 30     | 105    | 48     | 2               |
| PCD 1T   | 0~20             | 1000               | 300    | 50     | 145    | 66     | 5               |
| PCD 2T   | 0~25             | 2000               | 385    | 68     | 175    | 75     | 8               |
| PCD 3.2T | 0~30             | 3200               | 430    | 75     | 215    | 102    | 15              |
| PCD 5T   | 0~50             | 5000               | 500    | 68     | 232    | 112    | 23              |
| PCD 8T   | 0~45             | 8000               | 600    | 88     | 290    | 125    | 37              |
| PCD 12T  | 50~90            | 12000              | 700    | 90     | 420    | 128    | 50              |
| PCD 16T  | 60~100           | 16000              | 710    | 100    | 445    | 140    | 65              |
| PCD 20T  | 0~80             | 20000              | 948    | 100    | 563    | 140    | 160             |
| PCD 30T  | 10~90            | 30000              | 944    | 100    | 568    | 142    | 167             |



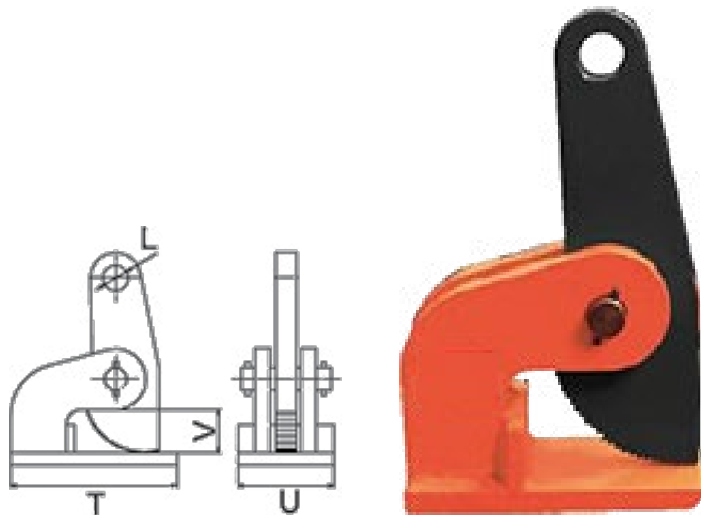
| Part                            | 1 tonne     |           | 2 tonne     |           | 3.2 tonne   |             | 5 tonne   |           | 8 tonne    |           |
|---------------------------------|-------------|-----------|-------------|-----------|-------------|-------------|-----------|-----------|------------|-----------|
|                                 | Price / ea. | Part #    | Price / ea. | Part #    | Price / ea. | Part #      | Price ea. | Part #    | Price ea.  | Part #    |
| Pad Assembly # 5, 6, 7, 8       | 45.20       | 6-1TPCPA  | 50.19       | 6-2TPCPA  | 67.90       | 6-3.2TPCPA  | 73.14     | 6-5TPCPA  | On Request | 6-8TPCPA  |
| Pivoting Shackle Pin # 12       | 25.09       | 6-1TPCPSP | 33.42       | 6-2TPCPSP | 41.74       | 6-3.2TPCPSP | 48.73     | 6-5TPCPSP | On Request | 6-8TPCPSP |
| Function Block # 14             | 13.37       | 6-1TPCFB  | 20.11       | 6-2TPCFB  | 25.09       | 6-3.2TPCFB  | 30.45     | 6-5TPCFB  | On Request | 6-8TPCFB  |
| Pulling Spring # 15             | 8.39        | 6-1TPCPS  | 13.38       | 6-2TPCPS  | 16.71       | 6-3.2TPCPS  | 22.86     | 6-5TPCPS  | On Request | 6-8TPCPS  |
| Roll Pin # 16                   | 1.73        | 6-1TPCRIN | 1.73        | 6-2TPCRIN | 1.73        | 6-3.2TPCRIN | 1.78      | 6-5TPCRIN | On Request | 6-8TPCRIN |
| Connecting Plate & Jaw # 17, 18 | 83.60       | 6-1TPCJA  | 108.57      | 6-2TPCJA  | 180.31      | 6-3.2TPCJA  | 217.61    | 6-5TPCJA  | On Request | 6-8TPCJA  |
| Roll Pin # 19                   | 1.73        | 6-1TPCRP  | 1.73        | 6-2TPCRP  | 1.73        | 6-3.2TPCRP  | 1.78      | 6-5TPCRP  | On Request | 6-8TPCRP  |
| Jaw Pin # 20                    | 25.09       | 6-1TPCJP  | 33.42       | 6-2TPCJP  | 41.80       | 6-3.2TPCJP  | 48.74     | 6-5TPCJP  | On Request | 6-8TPCJP  |

## INSPECTION, CARE & USE

- DO NOT lift loads less than 10% of working load limit of clamp
- DO NOT lift plates with a temperature greater than 100°C
- DO NOT use to lift stainless steel lead or copper

## CLAMP - PLATE, HORIZONTAL LIFTING CLAMP

- Intended to be used in pairs, sets of pairs, or in a tripod arrangement for transporting steel plate horizontally
- For handling inherently stacked nundles of sheets and steel plates
- Fastened to suitable slings and attached at three or more points on the load being handled
- Larger jaw opening
- With long load, we recommend using a spreader beam
- Able with latch handle for pretension on material and then release on material
- Standard: EN 13155
- Finish: Painted Blue
- Identification: Trademark, Size/WLL, Serial No, Date
- Rated in Metric Ton(s)



| WLL (t) | Weight (kg) | Opening (mm) | T (mm) | U (mm) | V (mm) | L (mm) | Price / ea. | Part Number |
|---------|-------------|--------------|--------|--------|--------|--------|-------------|-------------|
| 2       | 7.5         | 0 - 60       | 180    | 80     | 68     | 25     | 281.60      | 6-2THPC     |
| 3       | 10          | 0 - 60       | 220    | 90     | 80     | 30     | 326.85      | 6-3THPC     |
| 5       | 20          | 0 - 100      | 220    | 110    | 123    | 45     | 591.82      | 6-5THPC     |
| 10      | 28          | 0 - 100      | 220    | 125    | 120    | 45     | 838.05      | 6-10THPC    |

## CABLE SOCK - T-TYPE

- Double weave construction for medium to heavy pulling applications in underground installations.



| Type  | Line Capacity (mm) | WLL (kg) | Length of braid (mm) | Grip to end of loop (mm) | Price / ea. | Part Number |
|-------|--------------------|----------|----------------------|--------------------------|-------------|-------------|
| MG-10 | 7-12               | 300      | 330                  | 85                       | 80.40       | 6-MG10T     |
| MG-15 | 13-18              | 400      | 330                  | 85                       | 94.90       | 6-MG15T     |

## CABLE SOCK - K-TYPE

- Double weave construction for medium to heavy pulling applications in underground installations.
- Comes with swivel head which is ideal for connecting to shackles.



| Type  | Line Capacity (mm) | WLL (kg) | Length of braid to grip (mm) | Grip to end of swivel (mm) | Price / ea. | Part Number |
|-------|--------------------|----------|------------------------------|----------------------------|-------------|-------------|
| LS-6  | 19-35              | 1100     | 630                          | 180                        | 191.50      | 6-LSK       |
| MS-6  | 25-50              | 2000     | 760                          | 200                        | 275.00      | 6-MSK       |
| MXS-7 | 38-60              | 2000     | 950                          | 210                        | 316.16      | 6-MXSK      |
| XS-8  | 50-75              | 2500     | 1020                         | 240                        | 350.05      | 6-XSK       |

## ROPE GRAB - PULLER

- **Recommended for fibre rope.**

Easy-to-use rope grab can be used with a variety fiber ropes. The large handle eye openings for easy opening, attaching and releasing to prevent lock-ups. Made of forged steel, its ideal for a variety of utility jobs.

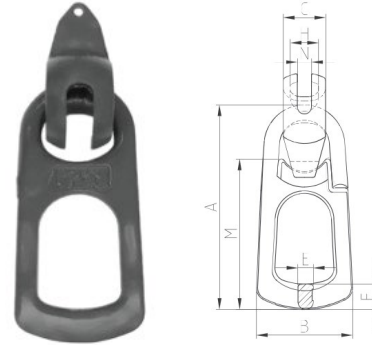


| Size (in) | Max rope size (in) | Min rope size (in) | MBL (lb) | Weight / each (lb) | Price / ea. | Part Number   |
|-----------|--------------------|--------------------|----------|--------------------|-------------|---------------|
| 1/2 - 3/4 | 3/4                | 1/2                | 8000     | 4                  | 268.90      | 6-1/2"-3/4"RP |

## LIFTING CLUTCH

The concrete lifting clutch is used for lifting and transporting precast concrete elements with cast in spherical head anchors. The capacity loads are axial with a breakage design factor of 5. Designed to increase safety when lifting, shifting, or moving prefabricated concrete products, provided they are connected to the head of the correct anchor.

- Finish: Electro galvanized
- 100% Magnaflux Crack Detection
- Material: Alloy Steel
- Design factor: 5:1.
- Identification: Manufacturer, Batch Code, WLL
- Rated in metric tons.



## CONCRETE PRE-CAST LIFTING CLUTCHES

| WLL<br>Metric Ton | MBL<br>Metric Ton | Weight/ ea.<br>Kgs | Dimensions (mm) |      |    |       |    |    |      | Price/<br>ea. | Part Number   |
|-------------------|-------------------|--------------------|-----------------|------|----|-------|----|----|------|---------------|---------------|
|                   |                   |                    | A               | B    | C  | M     | E  | N  | H    |               |               |
| 1.5T-2.5T         | 12.5              | 1.5                | 193             | 91.5 | 41 | 145   | 14 | 16 | 28   | 77.49         | 3-1.5T-2.5TLC |
| 3T-5T             | 25                | 3.1                | 236             | 118  | 57 | 170   | 16 | 22 | 38.5 | 174.16        | 3-3T-5TLC     |
| 6T-10T            | 50                | 9                  | 332             | 160  | 73 | 245.5 | 27 | 30 | 48.5 | 353.69        | 3-6T-10TLC    |

## SPHERICAL HEAD PLATE ANCHOR

The Plate Anchors are standard anchors fitted with a welded base plate. They are designed to a load force in the range of 2.5t, 5.0t and 10.0t. These types of anchors are mostly used in thin panels.

- Finish: Hot Dip Galv
- Material: 2.5T - Alloy Steel, 5T and 10T - Carbon Steel
- Design Factor: 3:1
- Identification: Trademark, WLL, Batch Code, Pin Length
- Rated in metric tons.

## LIFTING ANCHOR WITH PLATE

| WLL<br>Metric Ton | Pin Length<br>mm | Plate Size mm | Price/ea. | Part Number     |
|-------------------|------------------|---------------|-----------|-----------------|
| 2.5T              | 55               | 70x70x6       | 4.07      | 3-2.5TX55MMSPA  |
| 2.5T              | 85               | 70x70x6       | 4.28      | 3-2.5TX85MMSPA  |
| 2.5T              | 120              | 70x70x6       | 4.69      | 3-2.5TX120MMSPA |
| 5T                | 85               | 90x90x8       | 8.69      | 3-5TX85MMSPA    |
| 5T                | 110              | 90x90x8       | 9.80      | 3-5TX110MMSPA   |
| 10T               | 115              | 90x90x10      | 15.66     | 3-10TX115MMSPA  |



DRUM LIFTER

- For use on metal drums
- Rated in Metric Ton(s)



| Capacity<br>(t) | Chain size<br>(mm) | Length of lift chain<br>(mm) | Net Weight<br>(kg) | Price / ea. | Part Number |
|-----------------|--------------------|------------------------------|--------------------|-------------|-------------|
| 1               | 6 x 18             | 500                          | 3.6                | 157.41      | 6-DRUMLIFT  |





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## FALL ARREST

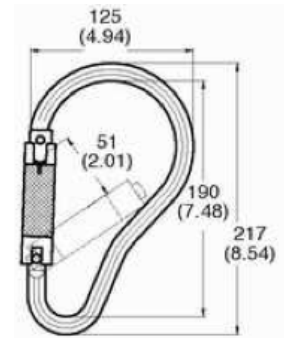
Carabiners, O-Ring & Fall Arrest Hooks.. 155 - 157

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## LINK - CARABINER, SELF-LOCKING, WITH CAPTIVE PIN, N-259G

- Material: Steel
- Standard: CSA Z259.12, EN 362, AMSI Z359
- Finish: Yellow Zinc
- Identification: Trademark, Batch Code, Size/WLL

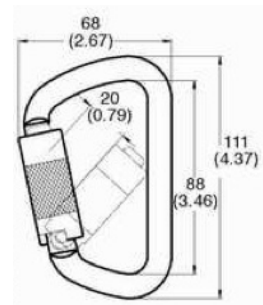


Captive Pin

| Size            | Min. Break Load | Proof Load | Gate Opening | Net Weight | Price | Part Number |
|-----------------|-----------------|------------|--------------|------------|-------|-------------|
| 125 mm x 217 mm | 5000 lb         | 3600 lb    | 51 mm        | 774 g      | 67.76 | 28-N-259GCP |

## LINK - CARABINER, SELF-LOCKING, WITH CAPTIVE PIN, N-252G

- Material: Steel
- Standard: CSA Z259.12, EN 362, AMSI Z359
- Finish: Yellow Zinc
- Identification: Trademark, Batch Code, Size/WLL

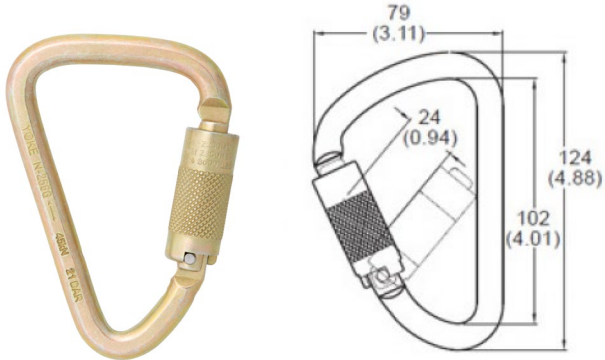


Captive Pin

| Size           | Min. Break Load | Proof Load | Gate Opening | Net Weight | Price/ea. | Part Number |
|----------------|-----------------|------------|--------------|------------|-----------|-------------|
| 68 mm x 111 mm | 5000 lb         | 3600 lb    | 20 mm        | 250 g      | 26.89     | 28-N-252GCP |

## LINK - CARABINER, SELF-LOCKING, WITH CAPTIVE PIN, N-256G

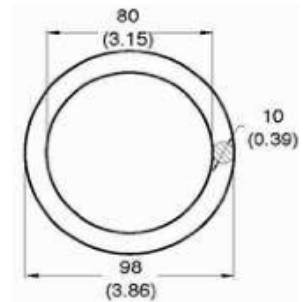
- Material: Steel
- Standard: CSA Z259.12, EN 362, AMSI Z359
- Finish: Yellow Zinc
- Identification: Trademark, Batch Code, Size/WLL



| Size           | Min. Break Load | Proof Load | Gate Opening | Net Weight | Price / ea. | Part Number |
|----------------|-----------------|------------|--------------|------------|-------------|-------------|
| 79 mm x 124 mm | 5000 lb         | 3600 lb    | 24 mm        | 279 g      | 33.00       | 28-N-256GCP |

## LINK - O-RING, N-489

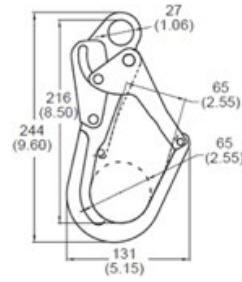
- Material: Forged Steel, Heat Treated
- Standard: CSA Z259.12, EN 362, AMSI Z359
- Finish: Yellow Zinc
- Identification: Trademark, Batch Code, Size/WLL



| Size          | Min. Break Load | Proof Load | Net Weight | Price / ea. | Part Number |
|---------------|-----------------|------------|------------|-------------|-------------|
| 10 mm x 80 mm | 5000 lb         | 3600 lb    | 198 g      | 14.13       | 28-N-489    |

## HOOK - REBAR, N-3630

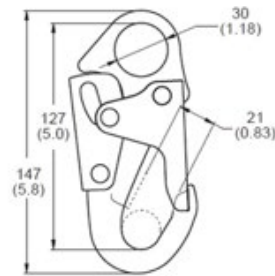
- Material: Forged Steel, Heat Treated
- Standard: CSA Z259.12, EN 362, AMSI Z359
- Finish: Yellow Zinc
- Identification: Trademark, Batch Code, Size/WLL



| Size (in) | Min. Break Load | Proof Load | Net Weight | Price / ea. | Part Number |
|-----------|-----------------|------------|------------|-------------|-------------|
| 2 1/4     | 5000 lb         | 3600 lb    | 788 g      | 61.67       | 28-N-3630   |

## HOOK - SNAP, N-3610

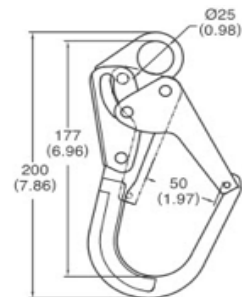
- Material: Forged Steel, Heat Treated
- Standard: CSA Z259.12, EN 362, AMSI Z359
- Finish: Yellow Zinc
- Identification: Trademark, Batch Code, Size/WLL



| Lock Type   | Min. Break Load | Proof Load | Net Weight | Price / ea. | Part Number |
|-------------|-----------------|------------|------------|-------------|-------------|
| Double Lock | 5000 lb         | 3600 lb    | 390 g      | 24.15       | 28-N-3610   |

## HOOK - REBAR, N-3620

- Material: Forged Steel, Heat Treated
- Standard: CSA Z259.12, EN 362, AMSI Z359
- Finish: Zinc Plated
- Identification: Trademark, Batch Code, Size/WLL



| For Rebar Size (in) | Min. Break Load | Proof Load | Net Weight | Price / ea. | Part Number |
|---------------------|-----------------|------------|------------|-------------|-------------|
| 1 3/4               | 5000 lb         | 3600 lb    | 543 g      | 54.38       | 28-N-3620   |



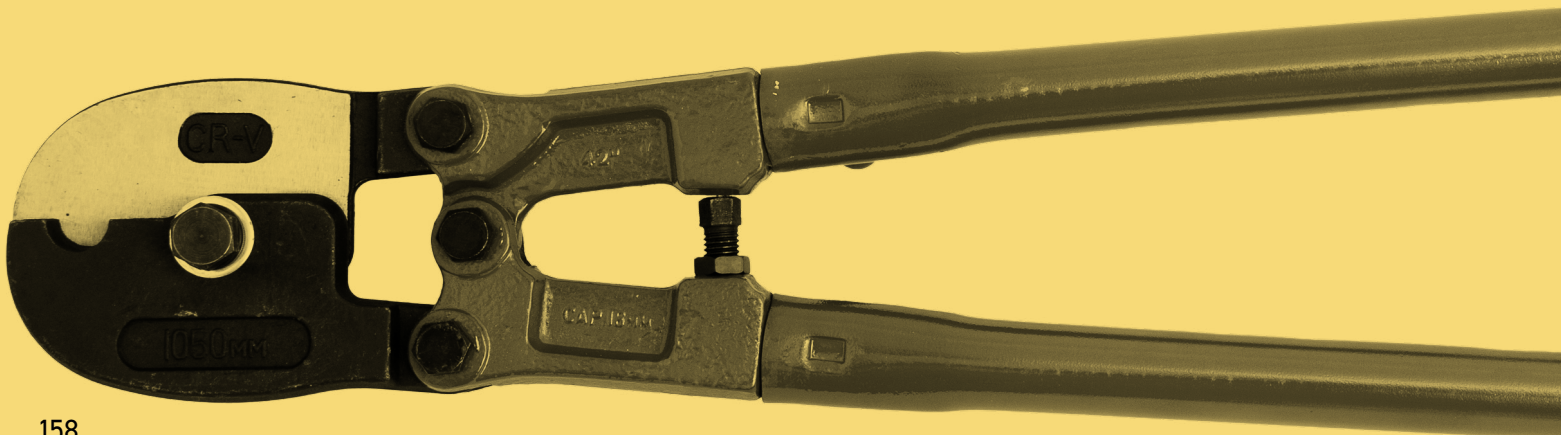
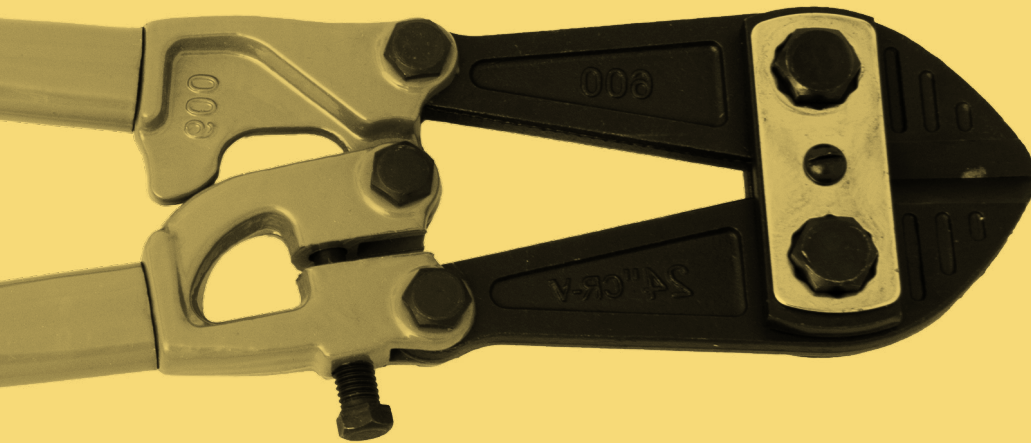
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## TOOLS

Hand Swagers & Cutters .....159

Bolt Cutters .....160

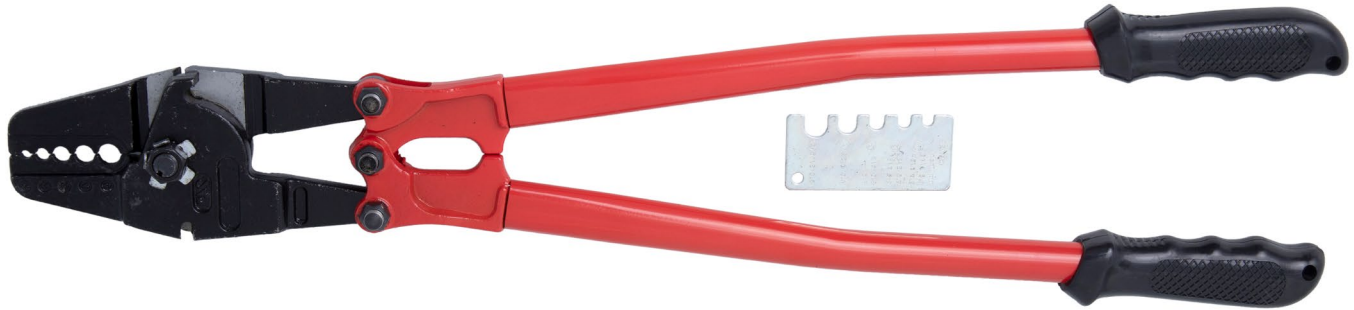
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## TOOL - SWAGER CUTTER

- Blades drop forged with high quality alloy steel body with heat treatment, cutting edges induction quenched, good cutting by 2 grade lever principal. Used to cut up to 6mm wire rope and press 1/16" to 3/16" aluminium oval sleeves.



| Size (in) | Replacement Head |             | Unit        |             |
|-----------|------------------|-------------|-------------|-------------|
|           | Price / ea.      | Part Number | Price / ea. | Part Number |
| 24        | 69.46            | 6-24SH      | 223.65      | 6-24S       |

## TOOL - WIRE CUTTER

- Used with 2 grade lever principal for easy cutting, used for cutting steel wires.



| Size (in) | Steel Bar cut max. (mm) | Wire cut max. (mm) | Replacement Head ONLY |             | Unit        |             |
|-----------|-------------------------|--------------------|-----------------------|-------------|-------------|-------------|
|           |                         |                    | Price / ea.           | Part Number | Price / ea. | Part Number |
| 42        | 13                      | 22                 | 159.95                | 6-42WCSJ    | 419.70      | 6-42WC      |

# TOOL - BOLT CUTTER

- Exceeds Fed Spec GGG-C-470D type II 3&4 – Alloy steel blades. Rubber grip steel tubular handles. Toggle joint that transforms 50 pounds of hand pressure to 4,000 pounds pressure on cutting edges of the jaws. Adjustment bolt to align cutting heads. Blades are drop forged with cutting edges induction quenched.
- Maximum hardness of material to be cut HRC40.



| Size (in) | Replacement Head ONLY |             | Bolt Cutter Unit |             |
|-----------|-----------------------|-------------|------------------|-------------|
|           | Price / ea.           | Part Number | Price / ea.      | Part Number |
| 12        | 26.11                 | 6-12BCSH    | 54.99            | 6-12BC      |
| 14        | 31.86                 | 6-14BCSH    | 66.01            | 6-14BC      |
| 18        | 39.33                 | 6-18BCSH    | 76.61            | 6-18BC      |
| 24        | 49.79                 | 6-24BCSH    | 103.90           | 6-24BC      |
| 30        | 61.98                 | 6-30BCSH    | 153.21           | 6-30BC      |
| 36        | -                     | -           | 192.53           | 6-36BC      |
| 42        | -                     | -           | 257.20           | 6-42BC      |



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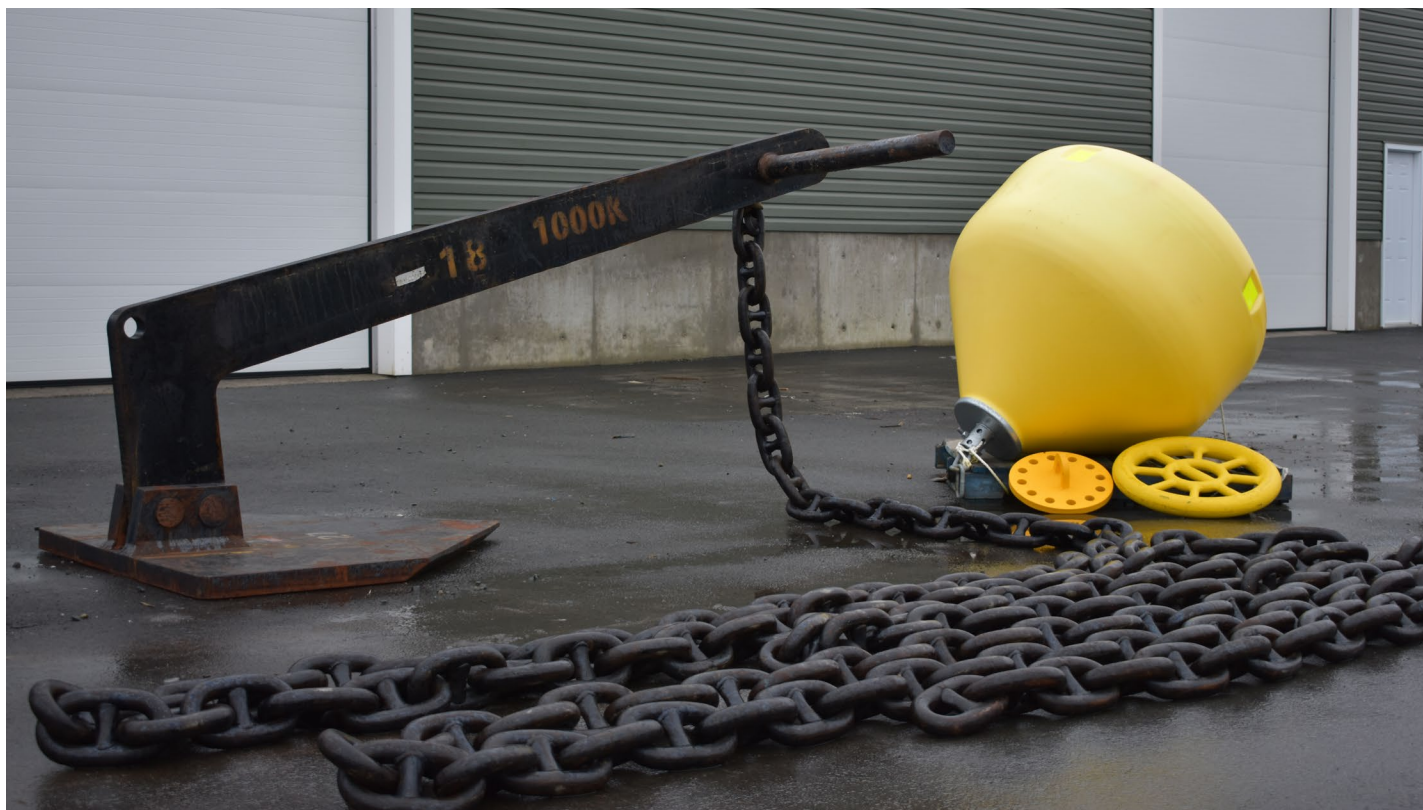
## MARINE

|                                                       |           |
|-------------------------------------------------------|-----------|
| Swivel Forerunners .....                              | 163       |
| Stud-Link & Open Link Chain .....                     | 165-167   |
| Kenter Shackles, Chain Stoppers<br>& Pear Links ..... | 168 - 171 |
| Triangle Plates, Recessed & Split Links ..            | 172 - 173 |
| Round Rings and Lobster Swivels .....                 | 174       |
| Cleats & Hinges .....                                 | 177       |
| Oar Locks and Knives .....                            | 176 - 177 |
| Bait Bags and Jars .....                              | 177 -178  |
| Stenhouse Slips, & Washers .....                      | 178       |
| Anchors .....                                         | 179 - 188 |
| Marine Hardware, Grapnels<br>& Chain Chasers .....    | 189 - 193 |
| Fenders & Deck Equipment .....                        | 194-215   |





## AQUACULTURE GEAR AVAILABLE FROM STOCK



## SWIVEL - SHORT BOW

| Type                     | Price / ea.   | Part Number   |
|--------------------------|---------------|---------------|
| 1-1/8" short bow swivels | <b>368.25</b> | 6-1-1/8"SBSWL |



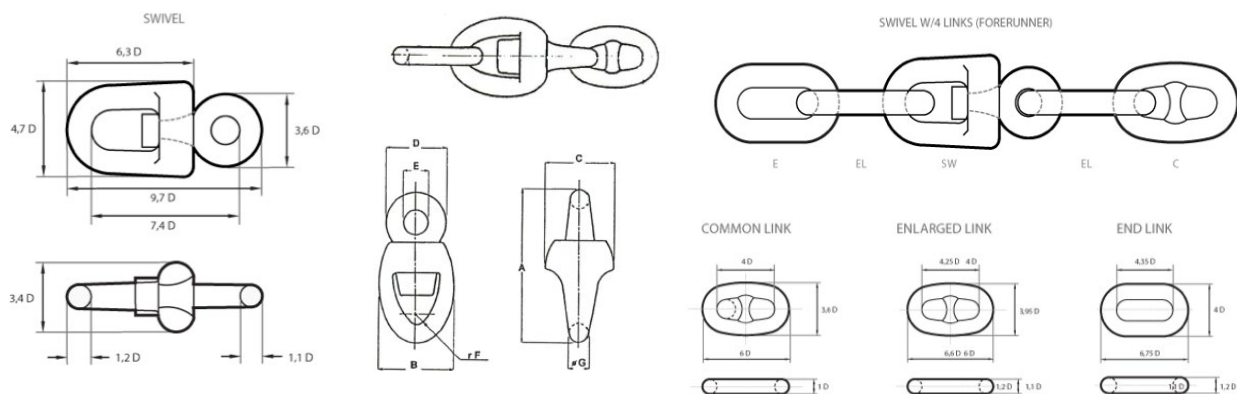
## SWIVEL - FORERUNNER, ASSEMBLY, WITH LINKS

- Material: Grade 3
- Standard: ISO 1704
- Finish: Black Bitumen
- Identification: Size/WLL, Batch Code
- Cert



| Chain Dia.<br>mm | Dimensions (mm) |     |     |     |     |    |    | Weight<br>(lb) | Proof Load<br>(lb) | Break Load<br>(lb) | Price / ea.      | Part Number |
|------------------|-----------------|-----|-----|-----|-----|----|----|----------------|--------------------|--------------------|------------------|-------------|
|                  | A               | B   | C   | D   | E   | F  | G  |                |                    |                    |                  |             |
| 17-19            | 173             | 76  | 76  | 66  | 27  | 19 | 19 | 5.0            | 47 210             | 67 443             | <b>1,400.15</b>  | 20-19MMSFR  |
| 21-22            | 198             | 90  | 90  | 30  | 30  | 22 | 22 | 7.1            | 63 171             | 90 148             | <b>1,535.59</b>  | 20-22MMSFR  |
| 24-29            | 258             | 102 | 102 | 44  | 44  | 25 | 25 | 14.3           | 101 164            | 144 327            | <b>1,570.39</b>  | 20-28MMSFR  |
| 30-35            | 290             | 160 | 124 | 116 | 116 | 25 | 36 | 46.3           | 147 250            | 210 421            | <b>2,739.95</b>  | 20-34MMSFR  |
| 36-42            | 373             | 202 | 146 | 145 | 145 | 32 | 46 | 87.1           | 182 545            | 260 778            | <b>3,052.92</b>  | 20-38MMSFR  |
| 43-48            | 430             | 230 | 165 | 183 | 183 | 36 | 60 | 145.5          | 263 251            | 376 105            | <b>8,098.27</b>  | 20-46MMSFR  |
| 49-58            | 516             | 278 | 200 | 212 | 212 | 39 | 65 | 229.2          | 382 625            | 546 286            | <b>10,377.75</b> | 20-56MMSFR  |
| 59-67            | 575             | 307 | 230 | 235 | 235 | 46 | 68 | 313.1          | 491 657            | 702 078            | <b>11,804.00</b> | 20-64MMSFR  |





| Chain size<br>(mm) | Dimensions (mm) |     |     |     |     |    |     | Weight<br>(kg) | Proof Load<br>(lb) | Break Load<br>(lb) |
|--------------------|-----------------|-----|-----|-----|-----|----|-----|----------------|--------------------|--------------------|
|                    | A               | B   | C   | D   | E   | F  | G   |                |                    |                    |
| 13-16              | 137             | 62  | 62  | 52  | 20  | 12 | 16  | 1.35           | 33,280             | 47,606             |
| 17-19              | 173             | 76  | 76  | 66  | 27  | 19 | 19  | 2.25           | 47,210             | 67,443             |
| 21-22              | 198             | 90  | 90  | 30  | 30  | 22 | 22  | 3.20           | 63,171             | 90,148             |
| 24-29              | 258             | 102 | 102 | 44  | 44  | 25 | 25  | 6.5            | 101,164            | 144,327            |
| 30-35              | 290             | 160 | 124 | 116 | 116 | 25 | 36  | 21             | 147,250            | 210,421            |
| 36-42              | 373             | 202 | 146 | 145 | 145 | 32 | 46  | 39.5           | 182,545            | 260,778            |
| 43-48              | 430             | 230 | 165 | 183 | 183 | 36 | 60  | 66             | 263,251            | 376,105            |
| 49-58              | 516             | 278 | 200 | 212 | 212 | 39 | 65  | 104            | 382,625            | 546,286            |
| 59-67              | 575             | 307 | 230 | 235 | 235 | 46 | 68  | 142            | 491,657            | 702,078            |
| 68-73              | 650             | 345 | 260 | 256 | 256 | 50 | 79  | 208            | 628,140            | 897,028            |
| 75-79              | 757             | 370 | 325 | 281 | 281 | 62 | 94  | 276            | 731,948            | 1,045,798          |
| 81-86              | 760             | 420 | 272 | 310 | 310 | 57 | 95  | 336            | 847,218            | 1,210,216          |
| 87-92              | 800             | 430 | 290 | 320 | 320 | 60 | 98  | 376            | 958,299            | 1,369,125          |
| 94-98              | 882             | 460 | 333 | 354 | 354 | 66 | 118 | 557            | 1,079,960          | 1,542,815          |
| 100-102            | 918             | 480 | 348 | 368 | 368 | 69 | 122 | 612            | 1,150,708          | 1,644,184          |
| 105-111            | 1000            | 530 | 378 | 400 | 400 | 74 | 133 | 797            | 1,337,828          | 1,911,309          |
| 114                | 1026            | 542 | 390 | 417 | 417 | 76 | 137 | 871            | 1,404,609          | 2,007,624          |

Reference Material

## CHAIN - OPEN LINK

- Sold in 90 ft shots
- Material: Grade 2
- Standard: ISO 1704
- Finish: Black Bitumen
- Identification: Size/WLL, Batch Code



| Diameter (in) | Weight / 90 ft shot (lb) | Inside Length (in) | Inside Width (in) | Break Load (lb) | Price / ea. | Part Number |
|---------------|--------------------------|--------------------|-------------------|-----------------|-------------|-------------|
| 3/4           | 445                      | 3                  | 1.11              | 42 000          | 2,122.00    | 6-3/4G20L   |
| 1 1/8         | 990                      | 4.33               | 1.70              | 91 100          | 3,712.00    | 6-1-1/8G20L |
| 1 1/4         | 1256                     | 5                  | 1.97              | 128 714         | 4,280.00    | 6-1-1/4G20L |

## CHAIN - STUD LINK ANCHOR

- Sold in 90 ft shots
- Material: Grade 2, 3
- Standard: ISO 1704
- Finish: Black Bitumen
- Identification: Size/WLL, Batch Code
- Certification: Lloyd's Certificate (on request)



| Dia. (in) | Dia. (mm) | Grade | Weight / 15 fathom (lb) | Break Load (lb) | Price / ea. | Part Number |
|-----------|-----------|-------|-------------------------|-----------------|-------------|-------------|
| 7/8       | 22        | 2     | 660                     | 64 400          | 3,597.00    | 6-7/8G2SL   |
| 1         | 25        | 2     | 860                     | 83 600          | 4,687.00    | 6-1G2SL     |
| 1 1/8     | 28        | 2     | 1080                    | 105 000         | 5,886.00    | 6-1-1/8G2SL |
| 1 1/4     | 32        | 2     | 1350                    | 129 000         | 7,357.50    | 6-1-1/4G2SL |
| 1 1/2     | 38        | 3     | 1940                    | 262 000         | 10,573.00   | 6-1-1/2G3SL |
| 1 5/8     | 42        | 3     | 2240                    | 306 000         | 12,208.00   | 26-42MMU3SL |
| 2         | 51        | 3     | 3360                    | 454 000         | 18,312.00   | 6-2G3SL     |
| 2 1/2     | 64        | 3     | 5270                    | 692 000         | 28,721.50   | 6-2-1/2G3SL |

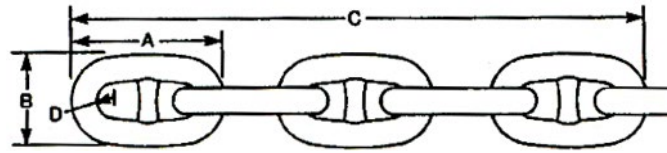
To prevent the possibility of serious bodily harm: DO NOT EXCEED the working load limit of chain or components. NOT USE FOR OVERHEAD LIFTING OR HOISTING. DO NOT USE if the chain or components are visibly distorted or worn.

## CHAIN - STUD LINK ANCHOR

- Reference Chart estimate formulated values
- Sizes available up to 210 mm
- See page 183 for in-stock Stud Link Anchor Chain



| Chain size |      | Link Length |         | 5 Links | Grip Radius | Weight / 15 fathom shot (approx.) (lb) | No. of links / 15 fathom shot (lb) | Grade 2         |                 | Grade 3         |                 | Grade 4         |                 |
|------------|------|-------------|---------|---------|-------------|----------------------------------------|------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| (in)       | (mm) | A (in)      | B (in)  | C (in)  | D (in)      |                                        |                                    | Proof Test (lb) | Break Test (lb) | Proof Test (lb) | Break Test (lb) | Proof Test (lb) | Break Test (lb) |
| 5/8        | 16   | 3-3/4       | 2-1/4   | 13-3/4  | 3/8         | 365                                    | 432                                | 23,745          | 33,220          | 33,220          | 47,465          | 53105           | 67365           |
| 3/4        | 19   | 4-1/2       | 2-5/8   | 16-1/2  | 1/2         | 480                                    | 357                                | 34,000          | 47,600          | 47,600          | 68,000          | 74466           | 94462           |
| 13/16      | 20   | 4-7/8       | 2-7/8   | 17-7/8  | 17/32       | 570                                    | 329                                | 39,800          | 55,700          | 55,700          | 79,500          | 82356           | 104470          |
| 7/8        | 22   | 5-1/4       | 3-1/8   | 19-1/4  | 37/64       | 660                                    | 305                                | 46,000          | 64,400          | 64,400          | 91,800          | 99274           | 125931          |
| 15/16      | 24   | 5-5/8       | 3-5/16  | 20-5/8  | 5/8         | 760                                    | 285                                | 52,600          | 73,700          | 73,700          | 105,000         | 117697          | 149301          |
| 1          | 25   | 6           | 3-9/16  | 22      | 21/32       | 860                                    | 267                                | 59,700          | 83,600          | 83,600          | 119,500         | 127467          | 161694          |
| 1-1/16     | 27   | 6-3/8       | 3-3/4   | 23-3/8  | 11/16       | 970                                    | 251                                | 67,200          | 94,100          | 94,100          | 135,000         | 148111          | 187881          |
| 1-1/8      | 28   | 6-3/4       | 4       | 24-3/4  | 25/32       | 1080                                   | 237                                | 75,000          | 105,000         | 105,000         | 150,000         | 158980          | 201670          |
| 1-3/16     | 30   | 7-1/8       | 4-1/4   | 26-1/8  | 25/32       | 1220                                   | 225                                | 83,400          | 116,500         | 116,500         | 167,000         | 181804          | 230622          |
| 1-1/4      | 32   | 7-1/2       | 4-1/2   | 27-1/2  | 25/32       | 1350                                   | 213                                | 92,200          | 129,000         | 129,000         | 184,000         | 206057          | 261387          |
| 1-5/16     | 33   | 7-7/8       | 4-3/4   | 28-7/8  | 7/8         | 1490                                   | 203                                | 101,500         | 142,000         | 142,000         | 203,000         | 218714          | 277442          |
| 1-3/8      | 34   | 8-1/4       | 4-15/16 | 30-1/4  | 7/8         | 1630                                   | 195                                | 111,000         | 155,000         | 155,000         | 222,000         | 231721          | 293942          |
| 1-7/16     | 36   | 8-5/8       | 5-3/16  | 31-5/8  | 15/16       | 1780                                   | 187                                | 120,500         | 169,000         | 169,000         | 241,000         | 258777          | 328263          |
| 1-1/2      | 38   | 9           | 5-3/8   | 33      | 63/64       | 1940                                   | 179                                | 131,000         | 183,500         | 183,500         | 262,000         | 287207          | 364327          |
| 1-9/16     | 40   | 9-3/8       | 5-5/8   | 34-3/8  | 1-1/32      | 2090                                   | 171                                | 142,000         | 198,500         | 198,500         | 284,000         | 316991          | 402109          |
| 1-5/8      | 42   | 9-3/4       | 5-7/8   | 35-3/4  | 1-1/16      | 2240                                   | 165                                | 153,000         | 214,000         | 214,000         | 306,000         | 348112          | 441587          |
| 1-11/16    | 43   | 10-1/8      | 6-1/16  | 37-1/8  | 1-3/32      | 2410                                   | 159                                | 166,500         | 229,000         | 229,000         | 327,000         | 364168          | 461954          |
| 1-3/4      | 44   | 10-1/2      | 6-5/16  | 38-1/2  | 1-5/32      | 2590                                   | 153                                | 176,000         | 247,000         | 247,000         | 352,000         | 380551          | 482736          |
| 1-13/16    | 46   | 10-7/8      | 6-1/2   | 39-7/8  | 1-3/16      | 2790                                   | 147                                | 188,500         | 264,000         | 264,000         | 377,000         | 414289          | 525533          |
| 1-7/8      | 48   | 11-1/4      | 6-3/4   | 41-1/4  | 1-1/4       | 2980                                   | 143                                | 201,000         | 281,000         | 281,000         | 402,000         | 449307          | 569955          |
| 1-15/16    | 50   | 11-5/8      | 7       | 42-5/8  | 1-9/32      | 3180                                   | 139                                | 214,000         | 299,000         | 299,000         | 427,000         | 485587          | 615976          |
| 2          | 51   | 12          | 7-3/16  | 44      | 1-5/16      | 3360                                   | 133                                | 227,000         | 318,000         | 318,000         | 454,000         | 504195          | 639580          |
| 2-1/16     | 52   | 12-3/8      | 7-7/16  | 45-3/8  | 1-3/8       | 3570                                   | 129                                | 241,000         | 337,000         | 337,000         | 482,000         | 523110          | 663575          |
| 2-1/8      | 54   | 12-3/4      | 7-5/8   | 46-3/4  | 1-27/64     | 3790                                   | 125                                | 255,000         | 357,000         | 357,000         | 510,000         | 561858          | 712727          |
| 2-3/16     | 56   | 13-1/8      | 7-7/8   | 48-1/8  | 1-15/32     | 4020                                   | 123                                | 269,000         | 377,000         | 377,000         | 538,000         | 601811          | 763409          |
| 2-1/4      | 58   | 13-1/2      | 8-1/8   | 49-1/2  | 1-1/2       | 4250                                   | 119                                | 284,000         | 396,000         | 396,000         | 570,000         | 642952          | 815596          |
| 2-5/16     | 59   | 13-7/8      | 8-5/16  | 50-7/8  | 1-17/32     | 4490                                   | 117                                | 299,000         | 418,000         | 418,000         | 598,000         | 663961          | 842247          |
| 2-3/8      | 60   | 14-1/4      | 8-9/16  | 52-1/4  | 1-9/16      | 4730                                   | 113                                | 314,000         | 440,000         | 440,000         | 628,000         | 685261          | 869266          |
| 2-7/16     | 62   | 14-5/8      | 8-3/4   | 53-5/8  | 1-5/8       | 4960                                   | 111                                | 330,000         | 462,000         | 462,000         | 660,000         | 728720          | 924394          |
| 2-1/2      | 64   | 15          | 9       | 55      | 1-5/8       | 5270                                   | 107                                | 346,000         | 484,000         | 484,000         | 692,000         | 773310          | 980958          |
| 2-9/16     | 66   | 15-3/8      | 9-1/4   | 56-3/8  | 1-11/16     | 5540                                   | 105                                | 363,000         | 507,000         | 507,000         | 726,000         | 819012          | 1038932         |
| 2-5/8      | 67   | 15-3/4      | 9-7/16  | 57-3/4  | 1-11/16     | 5820                                   | 103                                | 379,000         | 530,000         | 530,000         | 758,000         | 842275          | 1068442         |
| 2-11/16    | 68   | 16-1/8      | 9-11/16 | 59-1/8  | 1-3/4       | 6110                                   | 99                                 | 396,000         | 554,000         | 554,000         | 792,000         | 865809          | 1098295         |
| 2-3/4      | 70   | 16-1/2      | 9-7/8   | 60-1/2  | 1-13/16     | 6410                                   | 97                                 | 413,000         | 578,000         | 578,000         | 826,000         | 913681          | 1159021         |
| 2-13/16    | 71   | 16-7/8      | 10-1/8  | 61-7/8  | 1-27/32     | 6710                                   | 95                                 | 431,000         | 603,000         | 603,000         | 861,000         | 938014          | 1189889         |
| 2-7/8      | 73   | 17-1/4      | 10-3/8  | 63-1/4  | 1-7/8       | 7020                                   | 93                                 | 449,000         | 628,000         | 628,000         | 897,000         | 987464          | 1252617         |
| 2-15/16    | 75   | 17-5/8      | 10-9/16 | 64-5/8  | 1-7/8       | 7330                                   | 91                                 | 467,000         | 654,000         | 654,000         | 934,000         | 1037943         | 1316650         |



| Chain size |      | Link Length |          | 5 Links | Grip Radius | Weight / 15 fathom shot (aprox.) (lb) | No. of links / 15 fathom shot (lb) | Grade 2         |                 | Grade 3         |                 | Grade 4         |                 |
|------------|------|-------------|----------|---------|-------------|---------------------------------------|------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| (in)       | (mm) | A (in)      | B (in)   | C (in)  | D (in)      |                                       |                                    | Proof Test (lb) | Break Test (lb) | Proof Test (lb) | Break Test (lb) | Proof Test (lb) | Break Test (lb) |
| 3          | 76   | 18          | 10-13/16 | 66      | 2           | 7650                                  | 89                                 | 485000          | 679000          | 679000          | 970000          | 1063562         | 1349148         |
| 3-1/16     | 78   | 18-3/8      | 11       | 67-3/8  | 2           | 7980                                  | 87                                 | 504000          | 705000          | 705000          | 1008000         | 1115549         | 1415094         |
| 3-1/8      | 79   | 18-3/4      | 11-1/4   | 68-3/4  | 2-1/16      | 8320                                  | 85                                 | 523000          | 732000          | 732000          | 1046000         | 1141911         | 1448536         |
| 3-3/16     | 81   | 19-1/8      | 11-1/2   | 70-1/8  | 2-1/16      | 8660                                  | 85                                 | 542000          | 759000          | 759000          | 1084000         | 1195364         | 1516341         |
| 3-1/4      | 83   | 19-1/2      | 11-11/16 | 71-1/2  | 2-1/8       | 9010                                  | 83                                 | 562000          | 787000          | 787000          | 1124000         | 1249771         | 1585357         |
| 3-5/16     | 84   | 19-7/8      | 11-15/16 | 72-7/8  | 2-1/8       | 9360                                  | 81                                 | 582000          | 814000          | 814000          | 1163000         | 1277326         | 1620312         |
| 3-3/8      | 86   | 20-1/4      | 12-1/8   | 74-1/4  | 2-3/16      | 9730                                  | 79                                 | 602000          | 843000          | 843000          | 1204000         | 1333129         | 1691099         |
| 3-7/16     | 87   | 20-5/8      | 12-3/8   | 75-5/8  | 2-3/16      | 10100                                 | 77                                 | 622000          | 871000          | 871000          | 1244000         | 1361372         | 1726925         |
| 3-1/2      | 90   | 21          | 12-5/8   | 77      | 2-5/16      | 10500                                 | 77                                 | 643000          | 900000          | 900000          | 1285000         | 1447439         | 1836103         |
| 3-5/8      | 92   | 21-3/4      | 12-15/16 | 79-3/4  | 2-5/16      | 11300                                 | 73                                 | 685000          | 958000          | 958000          | 1369000         | 1505908         | 1910272         |
| 3-3/4      | 95   | 22-1/2      | 13-3/8   | 82-1/2  | 2-15/32     | 12000                                 | 71                                 | 728000          | 1019000         | 1019000         | 1455000         | 1595203         | 2023544         |
| 3-7/8      | 98   | 23-1/4      | 14       | 85-1/4  | 2-15/32     | 12900                                 | 69                                 | 772000          | 1080000         | 1080000         | 1543000         | 1686351         | 2139167         |
| 4          | 102  | 24          | 14-3/8   | 88      | 2-5/8       | 13700                                 | 67                                 | 816000          | 1143000         | 1143000         | 1673200         | 1810655         | 2296849         |
| 4-1/8      | 105  | 24-3/4      | 14-11/16 | 90-3/4  | 2-11/16     | 14560                                 | 65                                 | 861800          | 1206600         | 1206600         | 1723700         | 1905881         | 2417646         |
| 4-1/4      | 109  | 25-1/2      | 15-3/16  | 93-1/2  | 2-3/4       | 15350                                 | 63                                 | 908300          | 1271800         | 1271800         | 1816800         | 2035396         | 2581937         |
| 4-3/8      | 111  | 26-1/4      | 15-9/16  | 96-1/4  | 2-7/8       | 16200                                 | 61                                 | 955700          | 1338000         | 1338000         | 1911300         | 2101202         | 2665413         |
| 4-1/2      | 114  | 27          | 16       | 99      | 2-15/16     | 17100                                 | 59                                 | 1003700         | 1405300         | 1405300         | 2007500         | 2201169         | 2792224         |
| 4-5/8      | 117  | 27-3/4      | 16-7/16  | 101.75  | 3           | 18000                                 | 57                                 | 1052600         | 1473600         | 1473600         | 2105200         | 2302592         | 2920880         |
| 4-3/4      | 120  | 28-1/2      | 16-7/8   | 104.5   | 3-1/16      | 18900                                 | 57                                 | 1102100         | 1542900         | 1542900         | 2204200         | 2405405         | 3051301         |
| 4-13/16    | 122  | 28-11/16    | 17       | 105.87  | 3-1/8       | 19400                                 | 57                                 | 1127300         | 1578200         | 1578200         | 2254600         | 2474689         | 3139189         |
| 4-7/8      | 124  | 29-1/4      | 17-3/8   | 107.25  | 3-3/16      | 19900                                 | 55                                 | 1152500         | 1613400         | 1613400         | 2304900         | 2544546         | 3227803         |
| 5          | 127  | 30          | 17-13/16 | 110     | 3-1/4       | 20900                                 | 53                                 | 1203300         | 1684600         | 1684600         | 2406600         | 2650361         | 3362032         |
| 5-1/8      | 130  | 30-3/4      | 18-1/4   | 112.75  | 3-5/16      | 22000                                 | 52                                 | 1254700         | 1756600         | 1756600         | 2509400         | 2757359         | 3497761         |
| 5-3/16     | 132  | 31-1/8      | 18-7/16  | 114.12  | 3-3/8       | 22500                                 | 51                                 | 1280600         | 1792900         | 1792900         | 2561300         | 2829316         | 3589040         |
| 5-7/16     | 139  | 32-5/8      | 19-3/8   | 119.62  | 3-1/2       | 24500                                 | 49                                 | 1385700         | 1940000         | 1940000         | 2771400         | 3084812         | 3913141         |
| 5-5/8      | 144  | 33-3/4      | 20       | 123.75  | 3-11/16     | 26100                                 | 47                                 | 1465800         | 2052100         | 2052100         | 2931500         | 3270456         | 4148634         |
| 5-13/16    | 148  | 34-15/16    | 20-3/4   | 127.87  | 3-3/4       | 27600                                 | 46                                 | 1546800         | 2165500         | 2165500         | 3093600         | 3420635         | 4339139         |
| 6          | 152  | 36          | 21-3/8   | 130     | 3-7/8       | 29100                                 | 45                                 | 1628700         | 2280200         | 2280200         | 3257400         | 3572132         | 4531316         |

A potential hazard exists when lifting or dragging heavy loads with tackle block assemblies. Failure to design and use tackle block systems properly may cause a load to slip or fall, the result could be serious injury or death. A tackle block system should be rigged by a qualified person as defined by ANSI/ASME B30.

## SHACKLE - KENTER SHACKLE, JOINING LINK

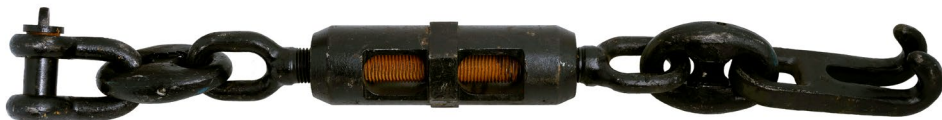
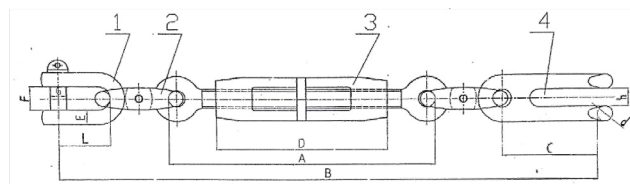
- Material: Grade 2, 3
- Standard: ISO 1704
- Certification: Lloyd's Certificate (on request)
- Identification: Size/WLL, Batch Code
- Finish: Black Bitumen



| Size (in) | Grade | Price / ea. | Part Number |
|-----------|-------|-------------|-------------|
| 7/8       | 2     | 413.75      | 6-7/8"KS2   |
| 1         | 2     | 455.40      | 6-1"KS2     |
| 1-1/8     | 2     | 477.20      | 6-1-1/8"KS2 |
| 1-1/4     | 2     | 613.95      | 6-1-1/4"KS2 |
| 1-1/2     | 2     | 770.00      | 6-1-1/2"KS2 |
| 1-1/2     | 3     | 991.72      | 6-1-1/2"KS3 |
| 1-5/8     | 3     | 1,170.36    | 26-42MMU3KS |
| 2         | 3     | 1,815.30    | 6-2"KS3     |
| 2-1/4     | 3     | 2,673.00    | 6-2-1/4"KS3 |
| 2-1/2     | 3     | 3,285.79    | 6-2-1/2"KS3 |

## TURNBUCKLE - CHAIN STOPPER ASSEMBLY, DEVIL'S CLAW

- Material: Grade 3
- Standard: ISO 1704
- Finish: Black Bitumen
- Identification: Size/WLL
- Rated in Metric Ton(s)

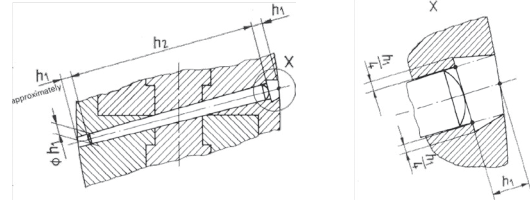
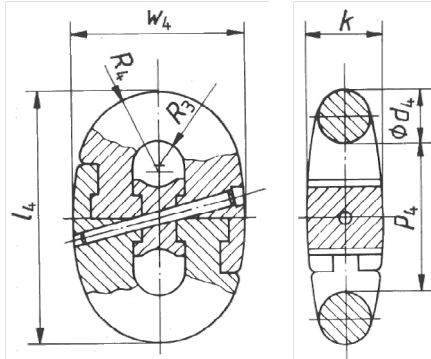


| Chain Size         |            | MPF<br>(t) | MBF<br>(t) | Dimensions (mm) |           |     |     |       |    |    |    |    |    |       |           | Price / ea.    | Part<br>Number |
|--------------------|------------|------------|------------|-----------------|-----------|-----|-----|-------|----|----|----|----|----|-------|-----------|----------------|----------------|
| (in)               | (mm)       |            |            | B<br>Min.       | B<br>Max. | A   | D   | C     | E  | F  | G  | h  | d  | L     |           |                |                |
| 3/4 -<br>7/8       | 19 -<br>22 | 29.3       | 41.7       | 876             | 1067      | 438 | 279 | 134.5 | 25 | 43 | 34 | 27 | 26 | 95.5  | 9,266.00  | 20-19-22MMDCCS |                |
| 15/16 -<br>1 1/4   | 24 -<br>32 | 58.6       | 83.6       | 1186            | 1415      | 589 | 380 | 229   | 32 | 52 | 44 | 37 | 33 | 117.5 | 11,135.60 | 20-24-32MMDCCS |                |
| 1 5/16 -<br>1 5/8  | 33 -<br>41 | 83.3       | 118.9      | 1346            | 1613      | 604 | 406 | 264   | 38 | 60 | 55 | 46 | 45 | 142.5 | 12,280.00 | 20-33-41MMDCCS |                |
| 1 11/16 -<br>2 3/8 | 43 -<br>60 | 83.3       | 118.9      | 1454            | 1721      | 612 | 406 | 355   | 41 | 73 | 55 | 65 | 65 | 150   | 14,331.00 | 20-43-60MMDCCS |                |



## SHACKLE - KENTER SHACKLE, JOINING LINK

- Pricing on availability
- Sizes available up to 162 mm
- See page 184 for in-stock Kenter Shackles
- Measurements are in millimeter(s)



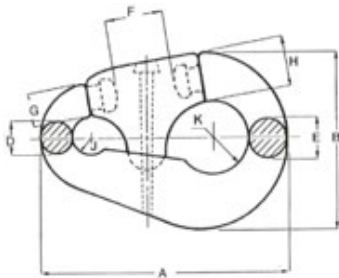
| Nominal Size<br>(d common<br>link = d4) | l4  | p4  | w4  | h1 | h2  | k  | R3   | R4 |
|-----------------------------------------|-----|-----|-----|----|-----|----|------|----|
| 12.5                                    | 75  | 50  | 53  | 4  | 45  | 19 | 8.5  | 23 |
| 14                                      | 84  | 56  | 59  | 6  | 45  | 21 | 9.5  | 26 |
| 16                                      | 96  | 64  | 67  |    | 55  | 24 | 10.5 | 29 |
| 17.5                                    | 105 | 70  | 74  |    | 60  | 27 | 12   | 32 |
| 19                                      | 114 | 76  | 80  |    | 65  | 29 | 13   | 35 |
| 20.5                                    | 123 | 82  | 86  | 10 | 70  | 31 | 14   | 38 |
| 22                                      | 132 | 88  | 92  |    | 75  | 33 | 15   | 40 |
| 24                                      | 144 | 96  | 101 |    | 80  | 36 | 16   | 44 |
| 26                                      | 156 | 104 | 109 |    | 85  | 40 | 17.5 | 48 |
| 28                                      | 168 | 112 | 118 | 12 | 95  | 43 | 19   | 51 |
| 30                                      | 180 | 120 | 126 |    | 100 | 46 | 20   | 55 |
| 32                                      | 192 | 128 | 134 |    | 110 | 49 | 21.5 | 59 |
| 34                                      | 204 | 136 | 143 |    | 115 | 52 | 23   | 62 |
| 36                                      | 216 | 144 | 151 | 16 | 120 | 55 | 24   | 66 |
| 38                                      | 228 | 152 | 160 |    | 130 | 58 | 25   | 70 |
| 40                                      | 240 | 160 | 168 |    | 140 | 61 | 27   | 73 |
| 42                                      | 252 | 168 | 176 |    | 140 | 64 | 28   | 77 |
| 44                                      | 264 | 176 | 185 | 16 | 150 | 67 | 29   | 81 |
| 46                                      | 276 | 184 | 193 |    | 160 | 70 | 31   | 84 |

| Nominal Size<br>(d common<br>link = d4) | l4  | p4  | w4  | h1 | h2  | k   | R3 | R4  |
|-----------------------------------------|-----|-----|-----|----|-----|-----|----|-----|
| 48                                      | 288 | 192 | 202 | 16 | 160 | 73  | 32 | 88  |
| 50                                      | 300 | 200 | 210 |    | 170 | 76  | 34 | 92  |
| 52                                      | 312 | 208 | 218 |    | 180 | 79  | 35 | 95  |
| 54                                      | 324 | 216 | 227 |    | 180 | 82  | 36 | 99  |
| 56                                      | 336 | 224 | 235 | 20 | 190 | 85  | 38 | 102 |
| 58                                      | 348 | 232 | 244 |    | 200 | 88  | 39 | 106 |
| 60                                      | 360 | 240 | 252 |    | 200 | 91  | 40 | 110 |
| 62                                      | 372 | 248 | 260 |    | 220 | 94  | 42 | 113 |
| 64                                      | 384 | 256 | 269 | 25 | 220 | 97  | 43 | 117 |
| 66                                      | 396 | 264 | 277 |    | 220 | 100 | 44 | 121 |
| 68                                      | 408 | 272 | 286 |    | 220 | 103 | 46 | 124 |
| 70                                      | 420 | 280 | 294 |    | 240 | 106 | 47 | 128 |
| 73                                      | 438 | 292 | 307 | 30 | 260 | 111 | 49 | 134 |
| 76                                      | 456 | 304 | 319 |    | 260 | 115 | 51 | 139 |
| 78                                      | 468 | 312 | 328 |    | 260 | 119 | 52 | 143 |
| 81                                      | 486 | 324 | 340 |    | 280 | 123 | 54 | 148 |
| 84                                      | 504 | 336 | 353 | 35 | 280 | 128 | 57 | 154 |
| 87                                      | 522 | 348 | 365 |    | 300 | 132 | 58 | 159 |
| 90                                      | 540 | 360 | 378 |    | 300 | 137 | 60 | 165 |
| 92                                      | 552 | 368 | 386 |    | 320 | 140 | 62 | 168 |
| 95                                      | 570 | 380 | 399 | 40 | 320 | 144 | 64 | 174 |
| 97                                      | 582 | 388 | 407 |    | 340 | 147 | 65 | 178 |
| 100                                     | 600 | 400 | 420 |    | 340 | 152 | 67 | 183 |
| 102                                     | 612 | 408 | 428 |    | 360 | 155 | 68 | 187 |
| 105                                     | 630 | 420 | 441 | 40 | 360 | 160 | 70 | 192 |
| 107                                     | 642 | 428 | 449 |    | 360 | 163 | 72 | 196 |
| 111                                     | 666 | 444 | 466 |    | 380 | 169 | 74 | 203 |
| 114                                     | 684 | 456 | 479 |    | 380 | 173 | 76 | 207 |

Reference Materials

LINK - CONNECTING, PEAR, ANCHOR JOINING

- See page 201 for schematics
- Material: Grade 3
- Standard: ISO 1704
- Finish: Black Bitumen
- Identification: Size/WLL, Batch Code
- Certification: ABS Certificate (on request)

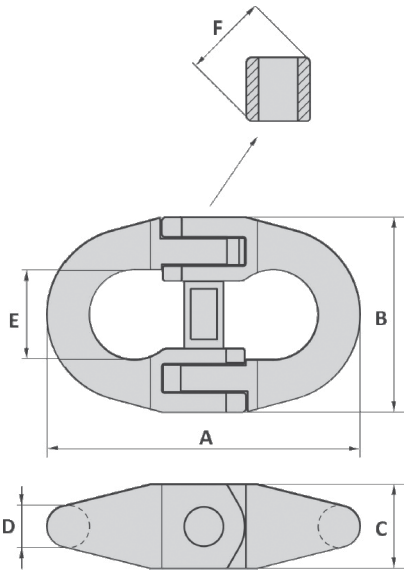


| No. | Size (mm) | Weight (lb) | Proof Load (lb) | Break Load (lb) | Price / ea. | Part Number   |
|-----|-----------|-------------|-----------------|-----------------|-------------|---------------|
| 2   | 19-24     | 7.9         | 74 861          | 107 009         | 3,866.80    | 20-#2PEARLINK |
| 3   | 25-30     | 14.3        | 115 552         | 165 235         | 4,467.12    | 20-#3PEARLINK |
| 4   | 32-40     | 32.0        | 201 654         | 288 879         | 4,771.20    | 20-#4PEARLINK |
| 5   | 42-51     | 59.5        | 319 678         | 457 486         | 6,342.00    | 20-#5PEARLINK |
| 6   | 52-60     | 108.0       | 436 579         | 621 822         | 10,264.80   | 20-#6PEARLINK |

LINK - CONNECTING LINK FOR PENNANT LINES, GN®

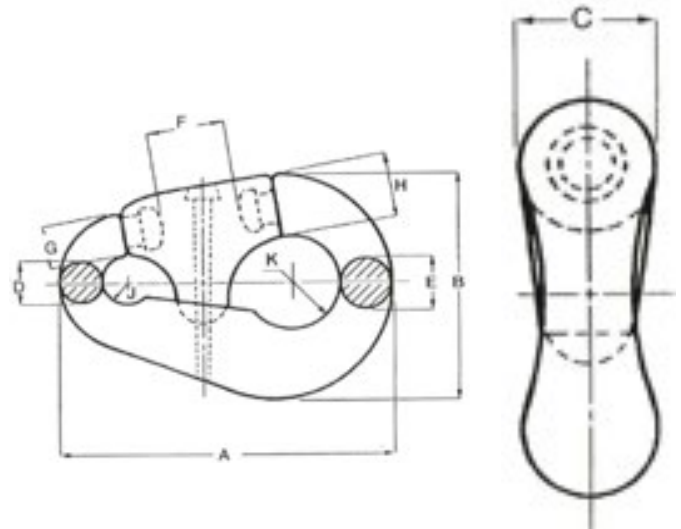
- Material: Alloy steel
- Finish: Painted
- Design Factor: 5:1
- Temperature Range: -20°C up to +200°C
- Certification: Certificate of Conformity  
3.1 material certificate EN 10204
- Rated in Metric Ton(s)

| WLL<br>(t) | PL<br>(t) | Dimensions (mm) |     |     |    |     |     | Wt./ea.<br>(kg) | Price              |
|------------|-----------|-----------------|-----|-----|----|-----|-----|-----------------|--------------------|
|            |           | A               | B   | C   | D  | E   | F   |                 |                    |
| 110        | 220       | 560             | 360 | 108 | 76 | 156 | 150 | 76              | Pricing on Request |



## LINK - CONNECTING, PEAR, ANCHOR JOINING

- Pricing on availability
- See Page 185 for in-stock Pear Links



| No | Size (mm) | Dimensions (mm) |     |     |     |     |     |           |           |     |     | Wt. (kg) | Proof (lb) | Break (lb) |
|----|-----------|-----------------|-----|-----|-----|-----|-----|-----------|-----------|-----|-----|----------|------------|------------|
|    |           | A               | B   | C   | D   | E   | F   | G         | H         | J   | K   |          |            |            |
| 2  | 19-24     | 194             | 132 | 38  | 24  | 32  | 57  | 24        | 35        | 17  | 30  | 3.6      | 74 936     | 106 894    |
| 3  | 25-30     | 238             | 167 | 46  | 30  | 38  | 66  | 33        | 45        | 19  | 35  | 6.5      | 116 812    | 166 843    |
| 4  | 32-40     | 299             | 206 | 59  | 40  | 48  | 83  | 40 x 4 5  | 56        | 26  | 43  | 14.5     | 201 446    | 288 724    |
| 5  | 42-51     | 378             | 260 | 76  | 51  | 64  | 100 | 51 x 60   | 74        | 32  | 52  | 27       | 320 462    | 457 771    |
| 6  | 52-60     | 454             | 313 | 92  | 60  | 76  | 121 | 62 x 73   | 88        | 37  | 64  | 49       | 439 918    | 628 581    |
| 7  | 62-79     | 562             | 376 | 121 | 79  | 95  | 149 | 86 x 79   | 111       | 48  | 76  | 92       | 731 948    | 1 045 798  |
| 8  | 81-92     | 654             | 419 | 133 | 92  | 124 | 149 | 111 x 102 | 130x133   | 54  | 79  | 149      | 958 299    | 1 369 125  |
| 9  | 94-95     | 692             | 435 | 146 | 98  | 130 | 159 | 124 x 137 | 141       | 57  | 83  | 236      | 1 018 909  | 1 454 860  |
| 10 | 97-102    | 889             | 572 | 191 | 121 | 165 | 191 | 130 x 148 | 181       | 73  | 108 | 386      | 1 150 708  | 1 644 184  |
| 11 | 103-108   | 940             | 610 | 203 | 127 | 175 | 203 | 156       | 200       | 76  | 111 | 418      | 1 271 708  | 1 818 300  |
| 12 | 110-114   | 991             | 648 | 216 | 133 | 184 | 216 | 165 x 167 | 210 x 200 | 105 | 114 | 459      | 1 404 609  | 2 007 624  |

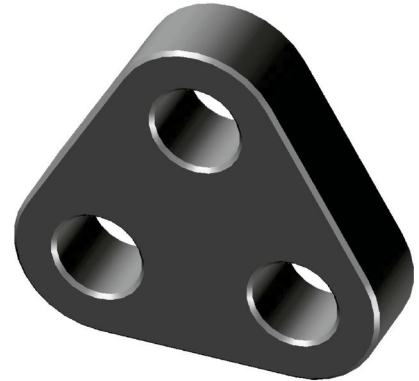
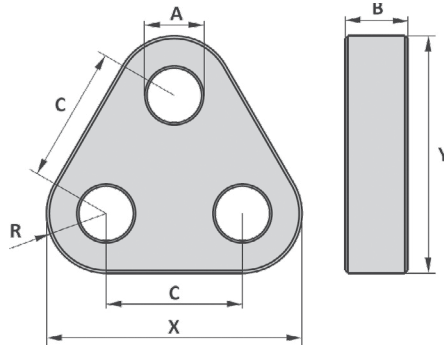
A potential hazard exists when lifting or dragging heavy loads with tackle block assemblies. Failure to design and use tackle block systems properly may cause a load to slip or fall, the result could be serious injury or death. A tackle block system should be rigged by a qualified person as defined by ANSI/ASME B30.

## TRIANGLE PLATE - GN®



### Made in Holland

- Material: High tensile steel
- Design Factor: 5:1
- Finish: Painted
- Temperature Range: -40°F up to +392°F, Polar Rated



"Tolerance +/- 5%"

| WLL<br>(t) | MBL<br>(t) | Dimensions (mm) |     |     |     |      |      | Wt./ea.<br>(kg) | Price<br>/ ea.        | Part Number |
|------------|------------|-----------------|-----|-----|-----|------|------|-----------------|-----------------------|-------------|
|            |            | A               | B   | C   | R   | X    | Y    |                 |                       |             |
| 17         | 85         | 47              | 35  | 120 | 65  | 250  | 234  | 10              | \$2,634.85            | 116-TR117   |
| 25         | 125        | 55              | 40  | 150 | 80  | 310  | 290  | 18              | Pricing on<br>Request | -           |
| 35         | 175        | 60              | 50  | 160 | 90  | 340  | 319  | 28              |                       | -           |
| 55         | 275        | 75              | 70  | 210 | 105 | 420  | 392  | 58              | 5,223.75              | 116-TR155T  |
| 85         | 425        | 90              | 80  | 230 | 135 | 500  | 469  | 96              | 6,594.00              | 116-TR185T  |
| 120        | 600        | 105             | 100 | 280 | 170 | 620  | 582  | 188             | Pricing on<br>Request | -           |
| 150        | 750        | 115             | 110 | 320 | 185 | 690  | 647  | 256             |                       | -           |
| 175        | 875        | 115             | 110 | 320 | 195 | 710  | 667  | 274             |                       | -           |
| 200        | 1000       | 140             | 120 | 390 | 215 | 820  | 768  | 390             |                       | -           |
| 250        | 1250       | 150             | 140 | 390 | 240 | 870  | 818  | 518             |                       | -           |
| 300        | 1500       | 160             | 150 | 420 | 250 | 920  | 864  | 617             |                       | -           |
| 400        | 2000       | 185             | 200 | 490 | 300 | 1090 | 1024 | 1170            |                       | -           |
| 500        | 2500       | 200             | 200 | 550 | 360 | 1270 | 1196 | 1619            |                       | -           |
| 600        | 3000       | 220             | 200 | 600 | 400 | 1400 | 1320 | 1972            |                       | -           |
| 700        | 3500       | 230             | 250 | 600 | 400 | 1400 | 1320 | 2452            |                       | -           |

## HOOK - G, ALLOY, GRADE 80 / LINK - RECESSED, ALLOY, GRADE 80

- Material: Grade 80, Alloy Steel
- Standard: EN 13001-3-5, EN 1677-4
- Finish: Painted Yellow
- Design Factor: 5:1
- Identification: Size/WLL
- Rated in Metric Ton(s)

| Size (in)                          | WLL (t) | Price / ea. | Part Number |
|------------------------------------|---------|-------------|-------------|
| Hook "G" Alloy Forged              |         |             |             |
| 3/4                                | 2       | 37.95       | 6-3/4"GHF   |
| 1                                  | 6       | 73.50       | 6-1"GHF     |
| Double recessed links Alloy Forged |         |             |             |
| 3/4                                | 2       | 23.30       | 6-3/4"DRL   |
| 1                                  | 6       | 52.10       | 6-1"DRL     |



# LINK - SPLIT, ALLOY, LOBSTER LINK

- Material: Alloy Mild Steel
- Finish: Galvanized



| Size (in) | Qty. / Bag | Price / ea. | Part Number |
|-----------|------------|-------------|-------------|
| 3/8       | 300        | 2.08        | 6-10MMSL    |
| 1/2       | 200        | 3.37        | 6-13MMSL    |
| 5/8       | 60         | 6.30        | 6-16MMSL    |



MARINE



## RING - ROUND

Not Load Rated

### Stainless Steel:

| Size (in)   | Dia. (in) | I.D. (in) | O.D. (in) | Price / ea. | Part Number     |
|-------------|-----------|-----------|-----------|-------------|-----------------|
| 1/4 x 2     | 1/4       | 2.00      | 2.50      | 4.22        | 6-1/4X2SSRR     |
| 5/16 x 2    | 5/16      | 2.00      | 2.62      | 6.88        | 6-5/16X2SSRR    |
| 3/8 x 2-1/2 | 3/8       | 2.50      | 3.25      | 15.05       | 6-3/8X2 1/2SSRR |
| 1/2 x 3     | 1/2       | 3.00      | 4.00      | 19.44       | 6-1/2X3SSRR     |



### Zinc:

| Size (in) | Dia. (in) | I.D. (in) | O.D. (in) | Price / ea. | Part Number |
|-----------|-----------|-----------|-----------|-------------|-------------|
| 1/4 x 3   | 1/4       | 3.00      | 3.50      | 0.28        | 6-1/4X3RR   |

## SWIVEL - LOBSTER

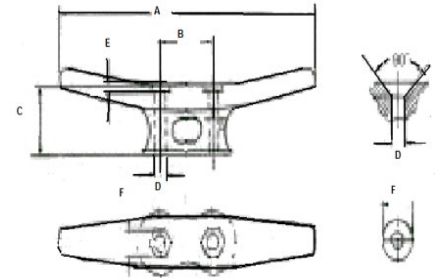
- Material: 316 Stainless Steel
- Finish: Stainless Steel

| Size  | Price / ea. | Part Number |
|-------|-------------|-------------|
| Small | 11.07       | 6-SMSWIVEL  |
| Large | 11.95       | 6-LGSWIVEL  |



## CLEAT - DOCK, HEAVY DUTY

- Material: Steel
- Standard: ASTM F1074
- Finish: Galvanized, Painted
- Identification: Size



| Size (in)                     | Dimensions (in) |      |      |      |      |      | Weight (lb) | Bolt | Price / ea. | Part Number |
|-------------------------------|-----------------|------|------|------|------|------|-------------|------|-------------|-------------|
|                               | A               | B    | C    | D    | E    | F    |             |      |             |             |
| 5                             | 5.00            | 1.08 | 1.05 | 0.26 | 0.09 | 0.43 | 0.33        | #12  | 3.78        | 6-5CLHH     |
| 6                             | 5.88            | 1.25 | 1.09 | 0.31 | 0.19 | 0.45 | 0.38        | 1/4  | 5.22        | 6-6CLHH     |
| 8                             | 8.00            | 1.63 | 1.56 | 0.38 | 0.25 | 0.52 | 1.00        | 5/16 | 15.25       | 6-8CLHH     |
| 10                            | 10.25           | 2.38 | 1.93 | 0.44 | 0.28 | 0.58 | 2.00        | 3/8  | 20.47       | 6-10CLHH    |
| 12                            | 12.25           | 3.83 | 2.38 | 0.44 | 0.28 | 0.58 | 3.60        | 3/8  | 31.60       | 6-12CLHH    |
| 14                            | 14.31           | 4.25 | 2.63 | 0.57 | 0.36 | 0.77 | 5.88        | 1/2  | 52.21       | 6-14CLHH    |
| 18                            | 18.00           | 5.38 | 3.50 | 0.69 | 0.47 | 0.97 | 11.00       | 5/8  | 136.32      | 6-18CLHH    |
| 20                            | 18.50           | 7.00 | 3.50 | 1.00 | 0.75 | 2.25 | 29.00       | 3/4  | 202.35      | 6-20CLHH    |
| 24 (primer only)<br>B1 Style` | 24.00           | 6.00 | 6.87 | 1.12 | 2.5  | 4    | 91.00       | 7/8  | 492.56      | 6-24"CLHHB1 |
| 24 (primer only)<br>B2 Style` | 24.00           | 5.50 | 8.00 | 1.12 | 2.5  | 4    | 95.00       | 7/8  | 618.76      | 6-24"CLHHB2 |



18" Galvanized Cleat



20" Galvanized Cleat



24" B1 Style



24" B2 Style

## HINGE - BUTT, HEAVY DUTY

- Material/Finish: 316 Stainless Steel



| Size (in) |       | Price / ea. | Part Number   |
|-----------|-------|-------------|---------------|
| Length    | Width |             |               |
| 1 1/2     | 1 1/2 | 18.44       | 6-1-1/2" BHSS |
| 2         | 2     | 21.06       | 6-2" BHSS     |
| 3         | 3     | 43.56       | 6-3" BHSS     |
| 4         | 4     | 71.29       | 6-4" BHSS     |

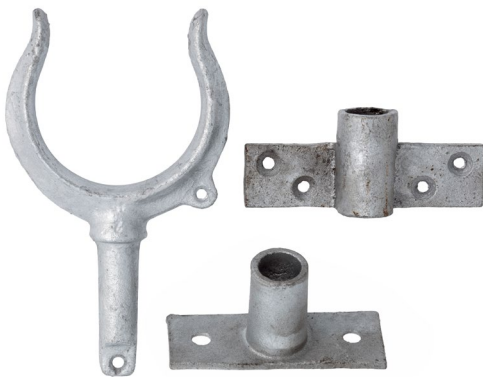
## HINGE - STRAP

- Material/Finish: 304 Stainless Steel



| Size (in) |       | Price / ea. | Part Number    |
|-----------|-------|-------------|----------------|
| Length    | Width |             |                |
| 3 1/2     | 1 1/2 | 48.65       | 6-3-1/2" SH304 |
| 5         | 1 1/2 | 55.73       | 6-5" SH304     |
| 8         | 2     | 130.82      | 6-8" SH304     |

## OAR LOCK



| Finish       | Description  | Price / ea. | Part Number |
|--------------|--------------|-------------|-------------|
| Galvanized   | # 2 oar lock | 15.82       | 6-HDGOL     |
| Galv. Socket | Gunwale      | 7.11        | 6-HDGGs     |
| Galv. Socket | Side Mount   | 7.11        | 6-HDGSMS    |

## KNIFE - BAIT



| Blade Length (in) | Handle Length (in) | Overall Length (in) | Price / ea. | Part Number |
|-------------------|--------------------|---------------------|-------------|-------------|
| 11.00             | 6.00               | 17.00               | 39.75       | 6-BAITKNIFE |

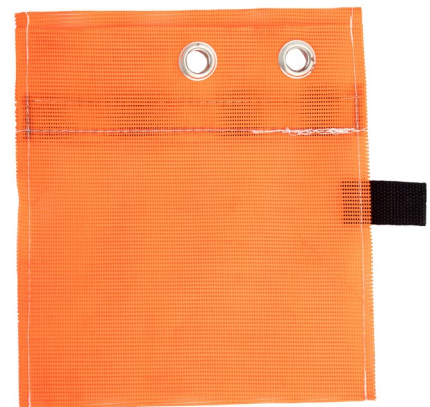
## KNIFE - SCALLOP



| Blade Length (in) | Handle Length (in) | Overall Length (in) | Price / ea. | Part Number |
|-------------------|--------------------|---------------------|-------------|-------------|
| 4.50              | 3.50               | 8.00                | 16.64       | 6-SCKNIFE   |

## BAG - BAIT

- Offset Velcro Closure easy opening, stainless steel grommet, and tag on side to hang bag sideways.
- Made of high quality fine orange mesh to keep out sand flies and still allow the scent of the bait out.



| Size (in) |       | Qty. / Box<br>(pcs) | Price / ea. | Part Number |
|-----------|-------|---------------------|-------------|-------------|
| Length    | Width |                     |             |             |
| 10        | 8     | 400                 | 4.25        | 6-BAITBAG   |

## JAR - BAIT



| Jar Size (in) |       | Qty. / Box (pcs) | Price / ea. | Part Number |
|---------------|-------|------------------|-------------|-------------|
| Height        | Width |                  |             |             |
| 4.25          | 4.25  | 200              | 4.79        | 6-BAITJAR   |

## WASHER - SCALLOP, BLACK



| lb / Bag | Price / lb | Part Number |
|----------|------------|-------------|
| 50       | 4.39       | 6-SWB       |

## STENHOUSE SLIP

- Material: Steel
- Finish: Hot Dip Galvanized

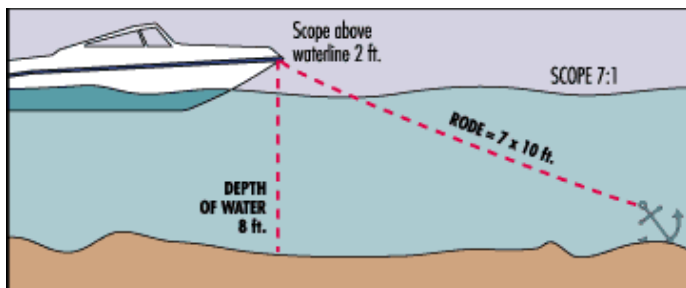


| Size Dia. (in) | I.D. of Ring (in) | Inside Length Arm (in) | Price / ea. | Part Number |
|----------------|-------------------|------------------------|-------------|-------------|
| 1/2            | 3 1/2             | 4 1/2                  | 55.23       | 6-12MMGSS   |
| 5/8            | 3 1/2             | 4                      | 74.02       | 6-16MMGSS   |
| 3/4            | 4 1/4             | 5 1/2                  | 86.11       | 6-20MMGSS   |



## ANCHORS

## ANCHOR - DANFORTH STYLE / WORKBOAT

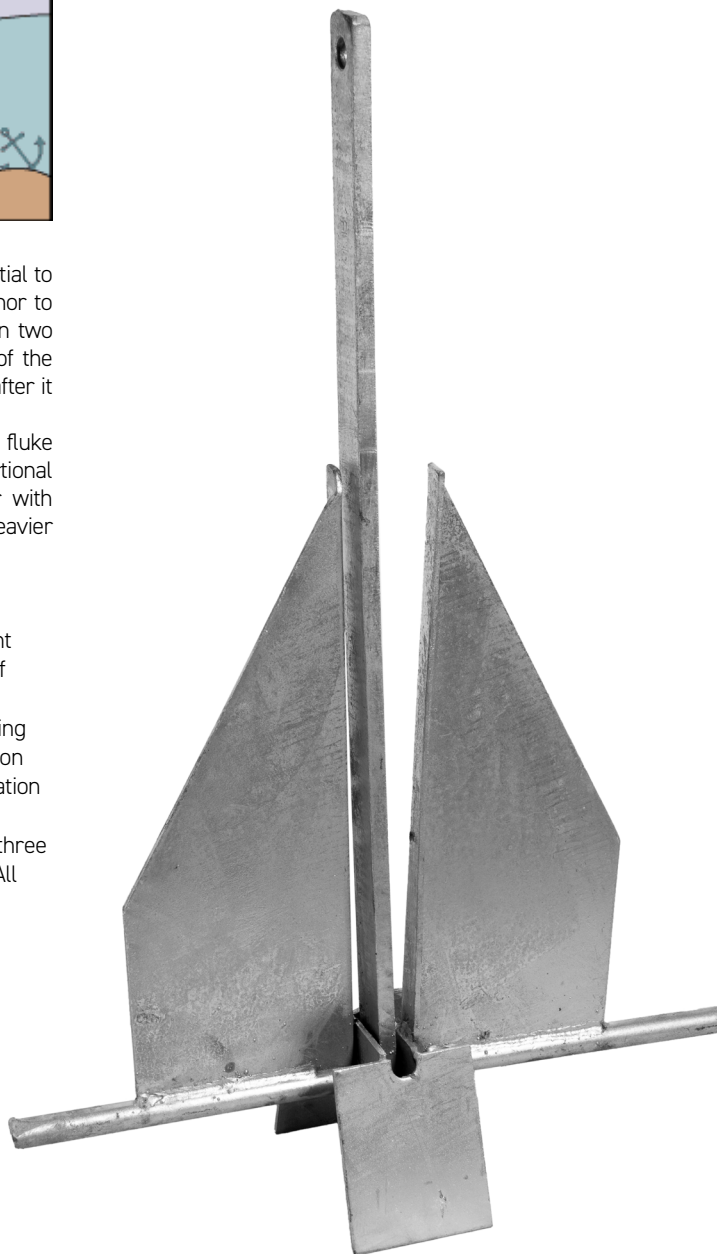
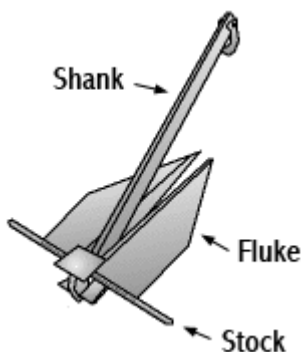


The anchor is the key to effective anchoring or mooring. It is essential to know what to expect from various anchors. Resistance of an anchor to being dragged through a soil has been considered as occurring in two stages: first, biting into the bottom due to the ploughing effects of the flukes, and secondly, maintaining a continuous resistance to drag after it is planted into the bottom.

Holding power type anchors are directly proportional to projected fluke area, and shear strength of the bottom material, and inversely proportional to penetration-area resistance. In many cases a smaller anchor with favorable fluke area to weight ratio is more dependable than a heavier anchor.

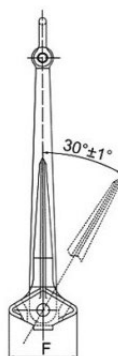
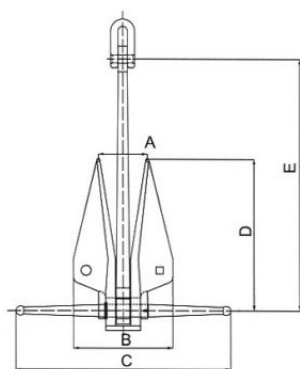
Holding power for the two most widely used anchors are as follows:

- Stockless Type anchors in sand develop a holding power to weight ratio of seven to one. In mud it develops three to one. The angle of penetration in both cases is 45°.
- Lightweight Type (Danforth style) anchors in sand develop a holding power to weight ratio of twenty to one, with the angle of penetration being 30°. In mud it develops nine to one with the angle of penetration being 50°.
- The depth of penetration in all preceding cases is compiled from three to seven feet in sand, and from seventeen to twenty feet in mud. All calculations incorporate a 0° scope angle.



With the "hook" head forcing the flukes to dig in quickly, and the large fluke design providing tremendous holding power; this anchor offers terrific holding power in both sand and mud bottoms.

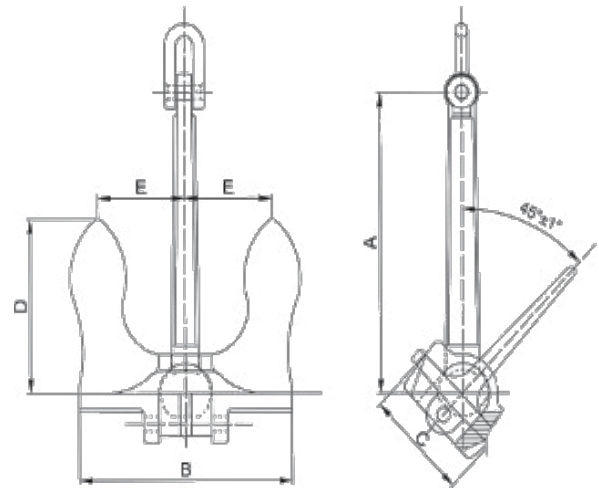
| Weight (lb) | Price / ea. | Part Number |
|-------------|-------------|-------------|
| 4           | 34.55       | 6-ANC4      |
| 9           | 77.75       | 6-ANC9      |
| 13          | 94.67       | 6-ANC13     |
| 18          | 131.18      | 6-ANC18     |
| 22          | 160.21      | 6-ANC22     |
| 44          | 320.41      | 6-ANC44     |
| 70          | 1464.92     | 6-ANC70     |
| 100         | 2093.50     | 6-ANC100    |
| 125         | 2616.87     | 6-ANC125    |
| 150         | 3140.25     | 6-ANC150    |
| 200         | 4187.00     | 6-ANC200    |
| 300         | 6280.50     | 6-ANC300    |
| 400         | 8374.00     | 6-ANC400    |



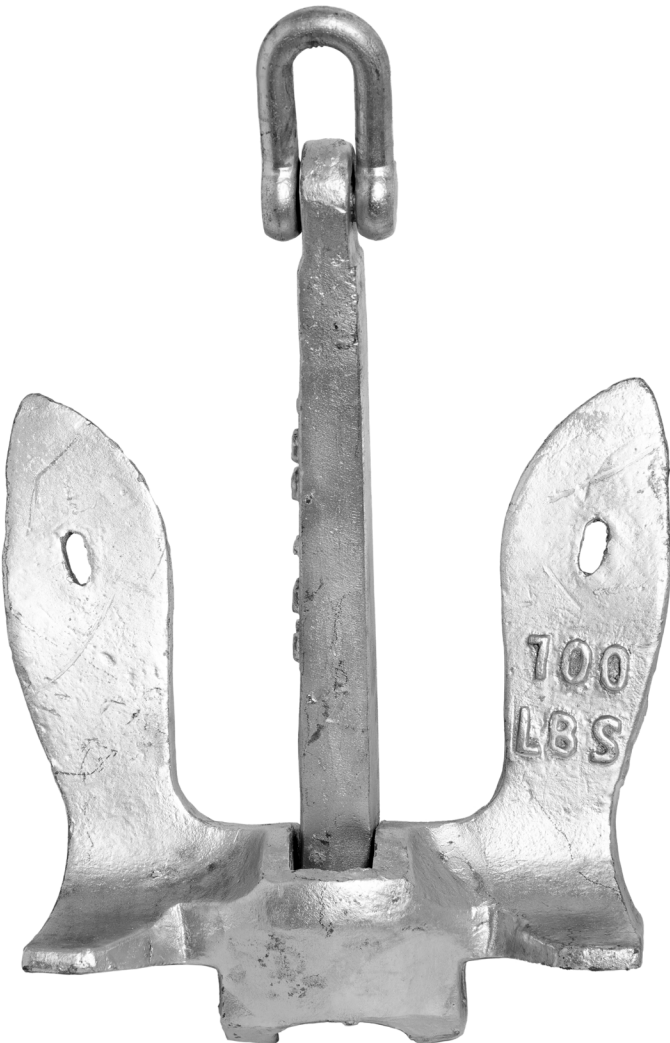
| Weight (kg) | Dimensions (mm) |      |      |      |      |      |
|-------------|-----------------|------|------|------|------|------|
|             | A               | B    | C    | D    | E    | F    |
| 60          | 186             | 408  | 755  | 535  | 985  | 240  |
| 75          | 200             | 450  | 830  | 590  | 1080 | 260  |
| 100         | 216             | 490  | 930  | 640  | 1180 | 290  |
| 120         | 220             | 505  | 970  | 670  | 1230 | 300  |
| 125         | 234             | 520  | 1000 | 690  | 1270 | 310  |
| 150         | 242             | 550  | 1060 | 732  | 1348 | 330  |
| 200         | 266             | 600  | 1150 | 810  | 1490 | 360  |
| 250         | 294             | 650  | 1240 | 270  | 1600 | 390  |
| 276         | 296             | 660  | 1250 | 885  | 1620 | 400  |
| 300         | 312             | 690  | 1320 | 925  | 1700 | 420  |
| 400         | 342             | 750  | 1460 | 1010 | 1810 | 460  |
| 500         | 368             | 800  | 1570 | 1100 | 2020 | 490  |
| 750         | 414             | 910  | 1800 | 1260 | 2300 | 560  |
| 1000        | 450             | 980  | 1980 | 1380 | 2540 | 620  |
| 1250        | 484             | 1070 | 2100 | 1490 | 2740 | 670  |
| 1500        | 512             | 1120 | 2220 | 1580 | 2850 | 700  |
| 2000        | 560             | 1130 | 2440 | 1730 | 2910 | 770  |
| 2500        | 605             | 1217 | 2628 | 1864 | 3070 | 830  |
| 3000        | 640             | 1290 | 2790 | 1980 | 3330 | 880  |
| 4000        | 700             | 1420 | 3070 | 2170 | 3590 | 970  |
| 5000        | 735             | 1482 | 3200 | 2270 | 3840 | 1020 |
| 6000        | 800             | 1620 | 3500 | 2480 | 4100 | 1100 |
| 7000        | 840             | 1696 | 3850 | 2590 | 4180 | 1150 |
| 8500        | 910             | 1936 | 3940 | 2600 | 4490 | 1240 |
| 10 000      | 940             | 2000 | 4150 | 2900 | 4640 | 1280 |
| 13 600      | 1046            | 2120 | 4590 | 3250 | 5378 | 1440 |
| 16 000      | 1105            | 2240 | 4845 | 3435 | 5680 | 1520 |
| 18 000      | 1150            | 2270 | 5000 | 3570 | 5680 | 1580 |
| 20 000      | 1190            | 2350 | 5175 | 3695 | 5880 | 1635 |
| 25 000      | 1280            | 2530 | 5570 | 3982 | 6330 | 1760 |

# ANCHOR - STOCKLESS

| Weight (lb) | Price / ea. | Part Number |
|-------------|-------------|-------------|
| 100         | 2093.50     | 6-ANCSTK100 |
| 150         | 3140.25     | 6-ANCSTK150 |
| 200         | 4187.00     | 6-ANCSTK200 |
| 250         | 5233.75     | 6-ANCSTK250 |
| 300         | 6280.50     | 6-ANCSTK300 |
| 500         | 10467.50    | 6-ANCSTK500 |



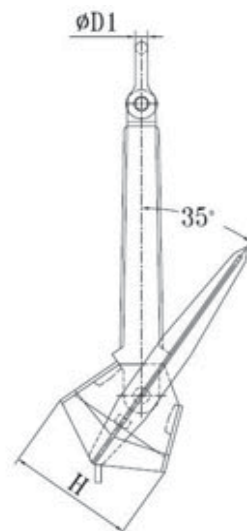
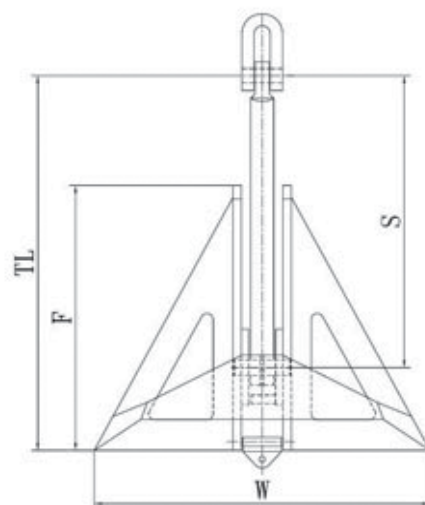
| Weight (kg) | Dimensions (mm) |      |     |      |       |
|-------------|-----------------|------|-----|------|-------|
|             | A               | B    | C   | D    | E     |
| 200         | 685             | 457  | 241 | 366  | 190.5 |
| 300         | 812             | 590  | 296 | 442  | 230   |
| 400         | 812             | 654  | 330 | 482  | 250   |
| 500         | 900             | 673  | 356 | 530  | 287.5 |
| 750         | 965             | 770  | 407 | 584  | 308   |
| 1000        | 1067            | 854  | 457 | 640  | 347.5 |
| 1250        | 1165            | 923  | 475 | 720  | 370   |
| 1500        | 1232            | 1005 | 515 | 748  | 392   |
| 2000        | 1370            | 1092 | 558 | 848  | 430   |
| 2100        | 1370            | 1092 | 558 | 848  | 436   |
| 2500        | 1473            | 1136 | 568 | 848  | 448   |
| 3000        | 1625            | 1194 | 648 | 912  | 483   |
| 3500        | 1625            | 1340 | 698 | 1003 | 500   |
| 4000        | 1734            | 1354 | 705 | 1054 | 518   |
| 4500        | 1794            | 1440 | 735 | 1066 | 563   |
| 5000        | 1930            | 1460 | 762 | 1130 | 588   |
| 6000        | 1930            | 1613 | 844 | 1194 | 641.5 |
| 6300        | 1930            | 1613 | 844 | 1194 | 641.5 |
| 7000        | 2082            | 1691 | 882 | 1263 | 668   |



## ANCHOR - DELTA HHP



| Weight (kg) | Dimensions (mm) |      |      |      |      |     | P.L. (kN) |
|-------------|-----------------|------|------|------|------|-----|-----------|
|             | TL              | W    | F    | H    | S    | D1  |           |
| 300         | 1380            | 1200 | 960  | 465  | 1080 | 45  | 98        |
| 500         | 1725            | 1500 | 1200 | 570  | 1350 | 48  | 143       |
| 750         | 1950            | 1700 | 1360 | 650  | 1530 | 50  | 198       |
| 1000        | 2150            | 1870 | 1500 | 710  | 1680 | 62  | 250       |
| 1500        | 2460            | 2140 | 1710 | 815  | 1920 | 70  | 350       |
| 2000        | 2715            | 2360 | 1890 | 900  | 2125 | 75  | 435       |
| 2500        | 2925            | 2540 | 2035 | 970  | 2290 | 80  | 510       |
| 3000        | 3105            | 2700 | 2160 | 1030 | 2430 | 90  | 576       |
| 3500        | 3240            | 2845 | 2280 | 1087 | 2565 | 90  | 635       |
| 4000        | 3375            | 2953 | 2315 | 1140 | 2650 | 100 | 686       |
| 5000        | 3658            | 3200 | 2560 | 1225 | 2900 | 110 | 776       |
| 6000        | 3935            | 3405 | 2720 | 1310 | 3125 | 110 | 875       |
| 7000        | 4120            | 3580 | 2860 | 1360 | 3220 | 117 | 968       |
| 7500        | 4215            | 3666 | 2925 | 1390 | 3295 | 124 | 1005      |
| 8000        | 4315            | 3750 | 3000 | 1425 | 3380 | 130 | 1048      |
| 9000        | 4490            | 3874 | 3120 | 1480 | 3512 | 135 | 1108      |
| 10000       | 4725            | 4100 | 3280 | 1560 | 3690 | 140 | 1172      |
| 11000       | 4868            | 4140 | 3310 | 1600 | 3750 | 145 | 1238      |
| 12000       | 4960            | 4275 | 3420 | 1640 | 3860 | 150 | 1300      |
| 13500       | 5120            | 4450 | 3560 | 1700 | 4000 | 155 | 1408      |
| 15000       | 5345            | 4600 | 3685 | 1735 | 4160 | 160 | 1520      |
| 18000       | 5678            | 4890 | 3919 | 1840 | 4418 | 170 | 1710      |
| 20000       | 5880            | 5065 | 4050 | 1900 | 4570 | 175 | 1840      |



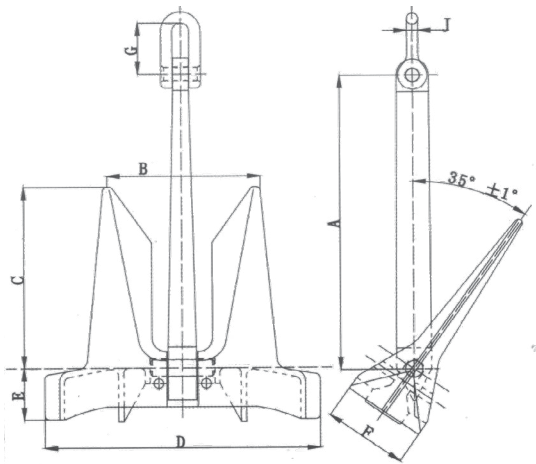
## ANCHOR - AC-14

| Weight (kg) | Dimensions (mm) |      |      |      |     |     |     |     |
|-------------|-----------------|------|------|------|-----|-----|-----|-----|
|             | A               | B    | C    | D    | E   | F   | G   | H   |
| 56          | 612             | 298  | 376  | 555  | 109 | 170 | 115 | 24  |
| 100         | 745             | 364  | 458  | 675  | 130 | 200 | 130 | 28  |
| 180         | 909             | 442  | 558  | 822  | 162 | 252 | 160 | 36  |
| 300         | 1075            | 524  | 660  | 975  | 194 | 298 | 192 | 45  |
| 428         | 1213            | 590  | 745  | 1098 | 216 | 336 | 215 | 48  |
| 675         | 1410            | 690  | 868  | 1278 | 250 | 390 | 255 | 60  |
| 750         | 1450            | 700  | 878  | 1315 | 256 | 396 | 255 | 60  |
| 910         | 1560            | 760  | 957  | 1410 | 273 | 430 | 255 | 60  |
| 970         | 1592            | 775  | 978  | 1445 | 284 | 440 | 280 | 62  |
| 1080        | 1650            | 805  | 1014 | 1495 | 294 | 455 | 280 | 62  |
| 1305        | 1760            | 858  | 1082 | 1595 | 313 | 485 | 310 | 68  |
| 1440        | 1818            | 885  | 1118 | 1645 | 324 | 505 | 310 | 68  |
| 1710        | 1925            | 940  | 1184 | 1745 | 343 | 532 | 340 | 74  |
| 1845        | 1975            | 965  | 1215 | 1785 | 347 | 546 | 340 | 74  |
| 2100        | 2065            | 1005 | 1268 | 1865 | 354 | 570 | 380 | 82  |
| 2475        | 2175            | 1062 | 1340 | 1970 | 385 | 570 | 380 | 82  |
| 2835        | 2265            | 1105 | 1393 | 2055 | 399 | 625 | 410 | 90  |
| 3550        | 2455            | 1198 | 1508 | 2225 | 438 | 680 | 415 | 100 |
| 3940        | 2540            | 1240 | 1562 | 2300 | 453 | 705 | 450 | 100 |
| 4500        | 2655            | 1295 | 1632 | 2405 | 473 | 735 | 450 | 100 |
| 4840        | 2720            | 1330 | 1670 | 2465 | 490 | 755 | 480 | 110 |
| 5610        | 2858            | 1396 | 1758 | 2590 | 509 | 790 | 500 | 110 |
| Weight (kg) | Dimensions (mm) |      |      |      |     |     |     |     |
|             | A               | B    | C    | D    | E   | F   | G   | H   |
| 6000        | 2922            | 1426 | 1796 | 2646 | 515 | 810 | 500 | 110 |
| 6900        | 3062            | 1496 | 1884 | 2775 | 545 | 848 | 540 | 117 |
| 7800        | 3190            | 1558 | 1962 | 2890 | 569 | 884 | 600 | 130 |



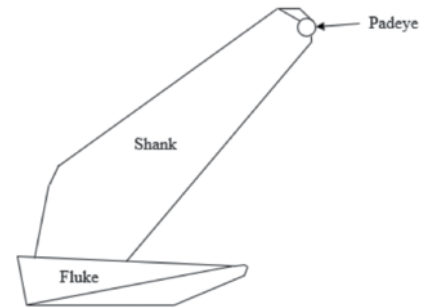


ANCHOR - AC-14

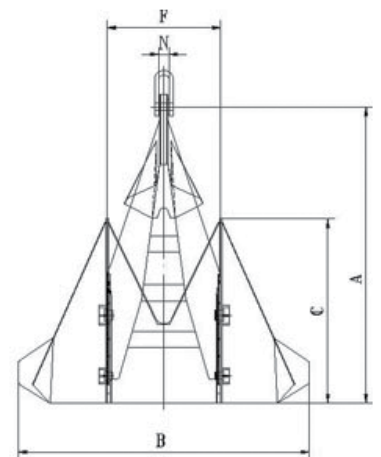
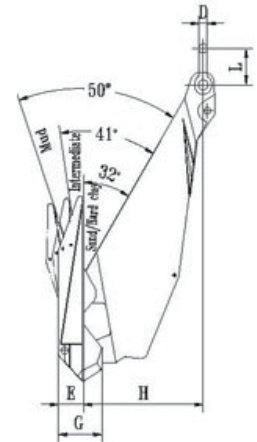


|       |      |      |      |      |     |      |     |     |
|-------|------|------|------|------|-----|------|-----|-----|
| 8300  | 3256 | 1590 | 2002 | 2950 | 574 | 902  | 600 | 130 |
| 9300  | 3382 | 1652 | 2080 | 3064 | 603 | 936  | 630 | 135 |
| 9900  | 3452 | 1686 | 2124 | 3128 | 616 | 956  | 640 | 140 |
| 10575 | 3523 | 1720 | 2166 | 3192 | 628 | 976  | 660 | 145 |
| 11100 | 3589 | 1720 | 2166 | 3192 | 628 | 976  | 660 | 145 |
| 11700 | 3650 | 1782 | 2245 | 3308 | 648 | 1010 | 680 | 150 |
| 12300 | 3683 | 1794 | 2260 | 3330 | 655 | 1018 | 700 | 155 |
| 12900 | 3772 | 1842 | 2320 | 3418 | 670 | 1044 | 700 | 155 |
| 13500 | 3830 | 1870 | 2355 | 3470 | 682 | 1060 | 730 | 160 |
| 14100 | 3885 | 1896 | 2389 | 3520 | 689 | 1076 | 730 | 160 |
| 14700 | 3940 | 1924 | 2423 | 3570 | 700 | 1090 | 730 | 160 |
| 15400 | 4002 | 1954 | 2461 | 3626 | 710 | 1108 | 730 | 160 |
| 16100 | 4062 | 1982 | 2498 | 3680 | 721 | 1125 | 770 | 170 |
| 16900 | 4128 | 2016 | 2538 | 3740 | 721 | 1144 | 770 | 170 |
| 17800 | 4200 | 2050 | 2583 | 3806 | 725 | 1162 | 800 | 180 |
| 18800 | 4277 | 2088 | 2630 | 3875 | 729 | 1185 | 800 | 180 |
| 20000 | 4350 | 2101 | 2694 | 3945 | 729 | 1185 | 820 | 199 |
| 25000 | 5046 | 2437 | 3125 | 4577 | 846 | 1375 | 848 | 230 |

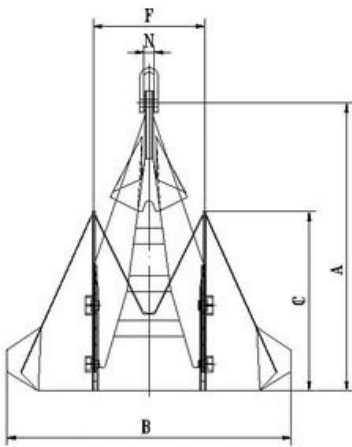
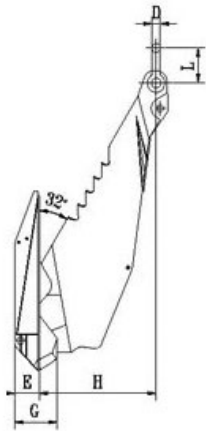
## ANCHOR - ST OFFSHORE



| Weight (kg) | Dimensions (mm) |      |      |     |     |      |      |      |     |     |
|-------------|-----------------|------|------|-----|-----|------|------|------|-----|-----|
|             | A               | B    | C    | D   | E   | F    | G    | H    | L   | N   |
| 500         | 2050            | 2191 | 1242 | 48  | 187 | 859  | 323  | 1002 | 215 | 64  |
| 1000        | 2580            | 2755 | 1563 | 59  | 236 | 1081 | 407  | 1261 | 271 | 78  |
| 1500        | 2957            | 3160 | 1792 | 68  | 270 | 1240 | 467  | 1446 | 310 | 94  |
| 2000        | 3253            | 3477 | 1970 | 74  | 297 | 1364 | 513  | 1591 | 340 | 106 |
| 3000        | 3722            | 3979 | 2256 | 90  | 340 | 1561 | 586  | 1820 | 385 | 120 |
| 4000        | 4096            | 4378 | 2483 | 100 | 374 | 1717 | 645  | 2003 | 415 | 124 |
| 5000        | 4415            | 4718 | 2678 | 110 | 403 | 1853 | 696  | 2161 | 480 | 136 |
| 6000        | 4691            | 5013 | 2845 | 110 | 428 | 1968 | 739  | 2296 | 500 | 144 |
| 7000        | 4939            | 5277 | 2994 | 115 | 451 | 2071 | 778  | 2416 | 540 | 156 |
| 7500        | 5053            | 5399 | 3063 | 124 | 461 | 2119 | 796  | 2472 | 580 | 156 |
| 8000        | 5166            | 5519 | 3134 | 130 | 471 | 2169 | 816  | 2530 | 600 | 156 |
| 9000        | 5372            | 5739 | 3239 | 135 | 490 | 2255 | 848  | 2631 | 620 | 170 |
| 10000       | 5563            | 5943 | 3375 | 140 | 508 | 2335 | 878  | 2725 | 640 | 170 |
| 11000       | 5742            | 6134 | 3483 | 145 | 524 | 2410 | 906  | 2812 | 660 | 184 |
| 12000       | 5914            | 6318 | 3588 | 150 | 539 | 2483 | 935  | 2897 | 680 | 184 |
| 13500       | 6150            | 6570 | 3731 | 155 | 561 | 2582 | 972  | 3012 | 700 | 188 |
| 15000       | 6369            | 6804 | 3864 | 160 | 581 | 2674 | 1006 | 3119 | 730 | 198 |
| 18000       | 6767            | 7229 | 4105 | 175 | 618 | 2841 | 1065 | 3313 | 790 | 212 |
| 20000       | 7011            | 7490 | 4255 | 180 | 640 | 2946 | 1107 | 3435 | 800 | 216 |
| 22000       | 7237            | 7731 | 4391 | 190 | 660 | 3040 | 1142 | 3545 | 850 | 226 |
| 25000       | 7551            | 8066 | 4581 | 195 | 689 | 3171 | 1191 | 3699 | 860 | 230 |
| 30000       | 8023            | 8570 | 4866 | 210 | 733 | 3282 | 1264 | 3929 | 940 | 244 |

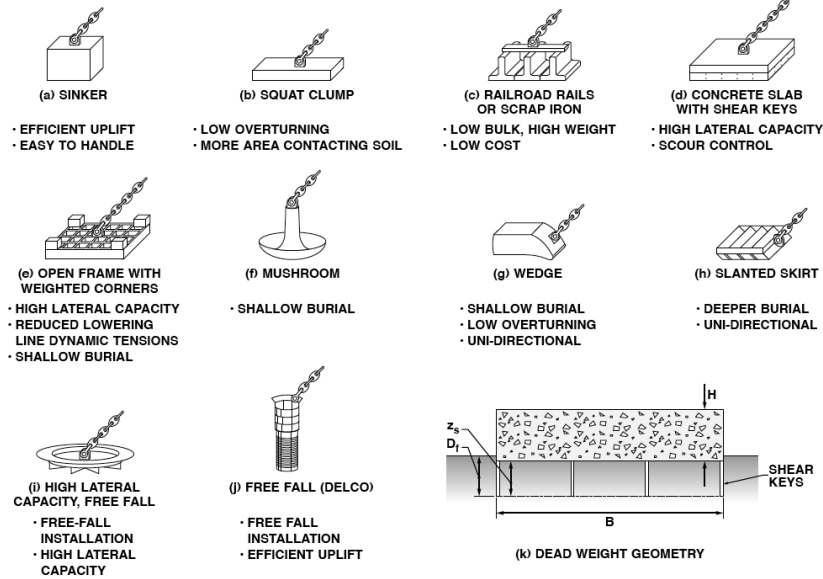


ANCHOR - STS OFFSHORE



| Weight (kg) | Dimensions (mm) |      |      |     |     |      |      |      |     |     |
|-------------|-----------------|------|------|-----|-----|------|------|------|-----|-----|
|             | A               | B    | C    | D   | E   | F    | G    | H    | L   | N   |
| 500         | 2034            | 2175 | 1232 | 48  | 187 | 849  | 317  | 992  | 215 | 64  |
| 1000        | 2564            | 2742 | 1553 | 59  | 236 | 1071 | 401  | 1251 | 271 | 78  |
| 1500        | 2933            | 3136 | 1776 | 68  | 270 | 1224 | 457  | 1430 | 310 | 94  |
| 2000        | 3229            | 3453 | 1955 | 74  | 297 | 1348 | 503  | 1575 | 340 | 106 |
| 3000        | 3698            | 3955 | 2240 | 90  | 340 | 1545 | 576  | 1804 | 385 | 120 |
| 4000        | 4072            | 4354 | 2467 | 100 | 374 | 1701 | 635  | 1987 | 415 | 124 |
| 5000        | 4385            | 4688 | 2654 | 110 | 403 | 1829 | 684  | 2137 | 480 | 136 |
| 6000        | 4661            | 4983 | 2821 | 110 | 428 | 1944 | 727  | 2272 | 500 | 144 |
| 7000        | 4909            | 5247 | 2970 | 115 | 451 | 2047 | 766  | 2392 | 540 | 156 |
| 7500        | 5023            | 5369 | 3039 | 124 | 461 | 2095 | 784  | 2448 | 580 | 156 |
| 8000        | 5130            | 5483 | 3104 | 130 | 471 | 2139 | 800  | 2500 | 600 | 156 |
| 9000        | 5336            | 5703 | 3209 | 135 | 490 | 2225 | 832  | 2601 | 620 | 170 |
| 10000       | 5527            | 5907 | 3345 | 140 | 508 | 2305 | 862  | 2695 | 640 | 170 |
| 11000       | 5706            | 6098 | 3453 | 145 | 524 | 2380 | 890  | 2782 | 660 | 184 |
| 12000       | 5870            | 6274 | 3552 | 150 | 539 | 2447 | 913  | 2861 | 680 | 184 |
| 13500       | 6106            | 6526 | 3695 | 155 | 561 | 2546 | 950  | 2976 | 700 | 188 |
| 15000       | 6325            | 6760 | 3828 | 160 | 581 | 2638 | 984  | 3083 | 730 | 198 |
| 18000       | 6723            | 7185 | 4069 | 175 | 618 | 2805 | 1043 | 3277 | 790 | 212 |
| 20000       | 6961            | 7440 | 4211 | 180 | 640 | 2902 | 1077 | 3391 | 800 | 216 |
| 22000       | 7187            | 7681 | 4347 | 190 | 660 | 2996 | 1112 | 3501 | 850 | 226 |
| 25000       | 7501            | 8016 | 4537 | 195 | 689 | 3127 | 1161 | 3655 | 860 | 230 |
| 30000       | 7973            | 8520 | 4822 | 210 | 733 | 3238 | 1234 | 3885 | 940 | 244 |

## ANCHOR - DEAD WEIGHTS



Flipper Delta



Bruce Mk4 Twin Shank



AC 14



Hall



Stockless



Danforth

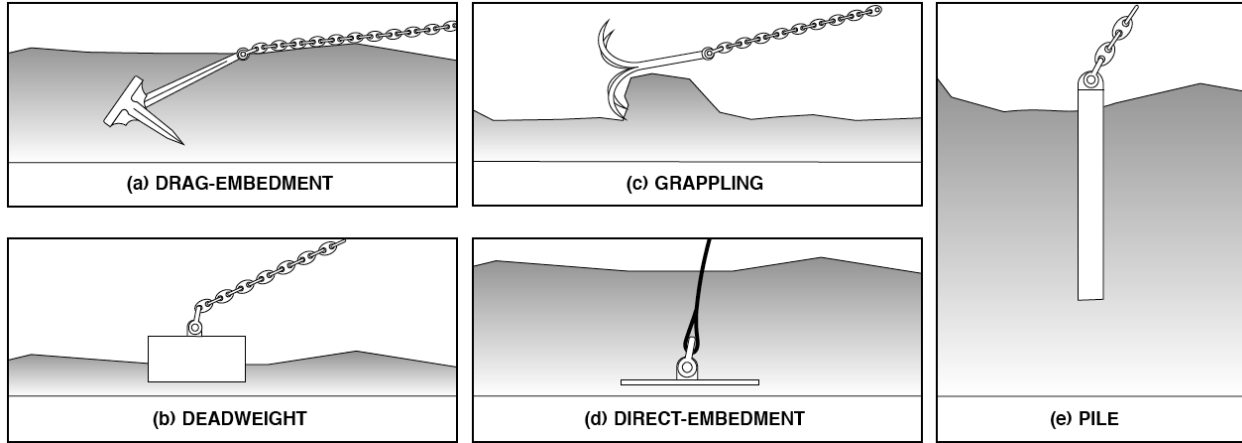


Suction type anchors.

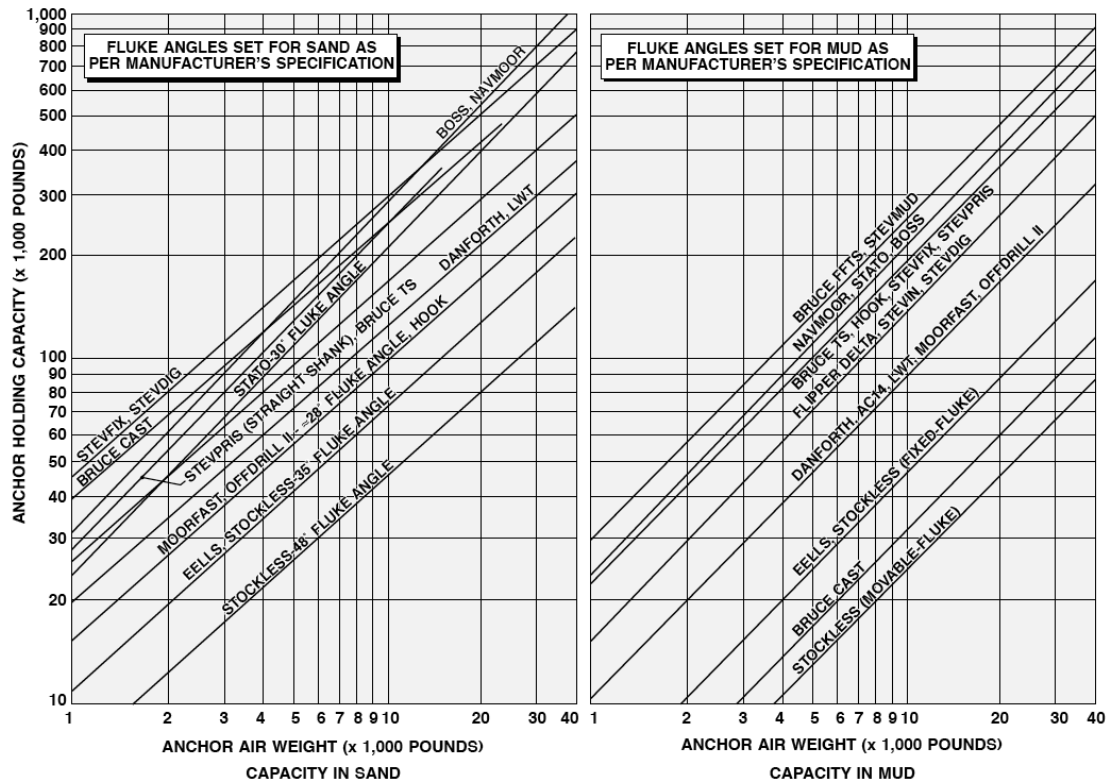
## ANCHORS

Anchors are available to 65,000 kg in weight. Measurements are holding capacity charts can be supplied. Selecting the correct anchor is dependent on the application. The water depth, soil conditions,

holding power line ratios, distance to penetration/burial and installation methods all have to be considered when selecting the style and weight to be used.



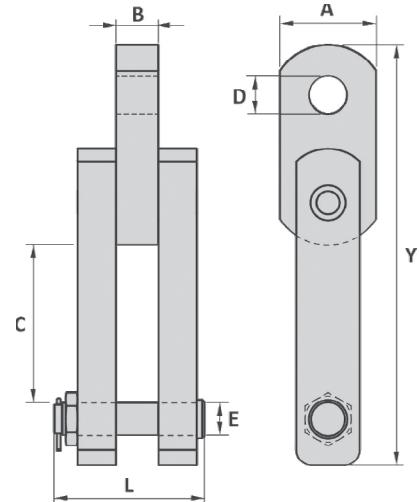
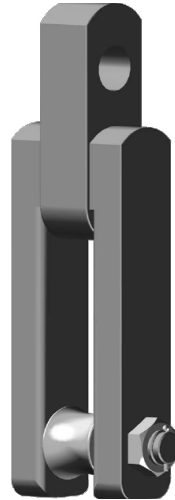
Below are a list of the most common drag embedment type anchors used, they are usually used for temporary moorings or as an anchoring point for pulling systems.





## TUNING FORK - GN®

- Material: High tensile steel
- Finish: Painted
- Design Factor: 4:1
- Temperature Range: -20°C up to +200°C
- Certification: Certificate of Conformity (on request)
- Rated in Metric Ton(s)



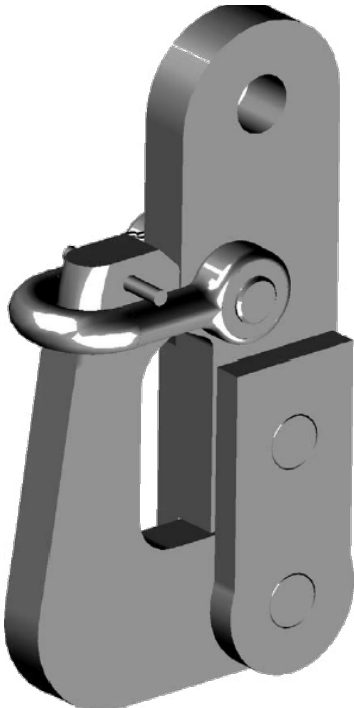
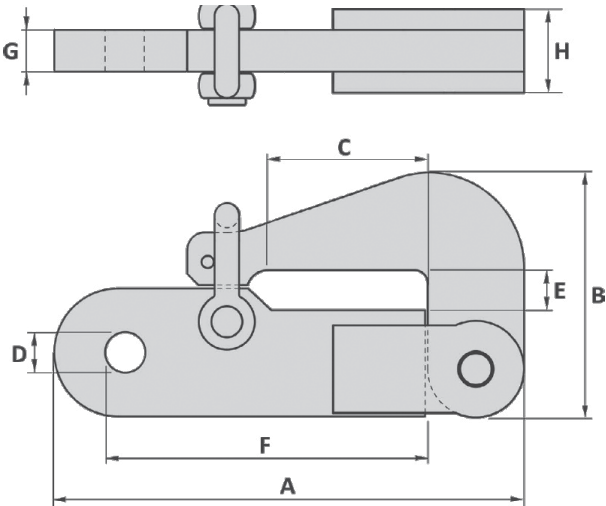
Tolerance: Forged parts  $\pm 5\%$ , machined parts  $\pm 1$  mm

| Chain<br>(in) | WLL<br>(ton) | Dimensions (mm) |     |     |     |     |     |      | Weight<br>(kg) | Price                 |
|---------------|--------------|-----------------|-----|-----|-----|-----|-----|------|----------------|-----------------------|
|               |              | A               | B   | C   | D   | E   | L   | Y    |                |                       |
| 2 1/2         | 55           | 170             | 75  | 280 | 75  | 60  | 255 | 768  | 100            | Pricing on<br>Request |
| 2 3/4         | 85           | 210             | 85  | 300 | 85  | 60  | 290 | 863  | 148            |                       |
| 3             | 110          | 240             | 100 | 330 | 98  | 70  | 384 | 927  | 221            |                       |
| 3 1/4         | 110          | 240             | 100 | 360 | 98  | 70  | 384 | 957  | 237            |                       |
| 3 1/2         | 120          | 250             | 110 | 390 | 98  | 85  | 391 | 1047 | 301            |                       |
| 3 3/4         | 120          | 250             | 110 | 410 | 98  | 85  | 391 | 1091 | 315            |                       |
| 4             | 150          | 280             | 120 | 440 | 115 | 90  | 421 | 1262 | 433            |                       |
| 4 1/4         | 180          | 320             | 130 | 470 | 130 | 95  | 496 | 1325 | 543            |                       |
| 4 1/2         | 200          | 330             | 140 | 490 | 130 | 100 | 510 | 1385 | 629            |                       |
| 4 3/4         | 225          | 350             | 150 | 520 | 145 | 105 | 540 | 1447 | 714            |                       |

# HOOK - PELICAN SLIPHOOK, GN®



- Material: High tensile steel
- Finish: Painted
- Design Factor: 5:1
- Temperature Range: -20°C up to +200°C
- Certification: Certificate of Conformity (on request)
- Rated in Metric Ton(s)
- Non-standard sizes or custom products available on request.

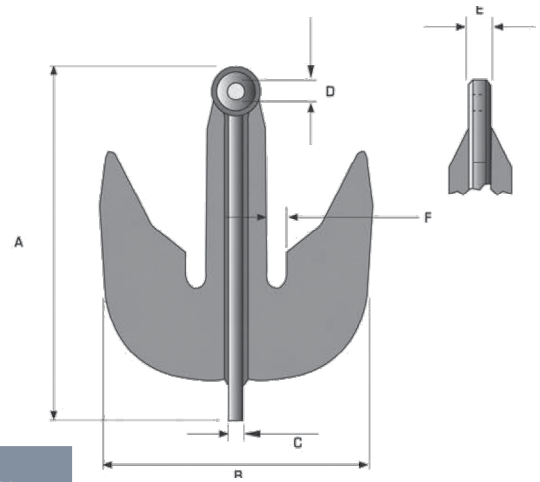


| WLL<br>(ton) | MBL<br>(ton) | Dimensions (mm) |     |     |     |     |      |     |     | Wt.<br>(kg) | Price              |
|--------------|--------------|-----------------|-----|-----|-----|-----|------|-----|-----|-------------|--------------------|
| A            | B            | C               | D   | E   | F   | G   | H    |     |     |             |                    |
| 3.5          | 17.5         | 328             | 155 | 85  | 26  | 35  | 240  | 20  | 54  | 6.7         | Pricing on Request |
| 5            | 25           | 338             | 161 | 100 | 38  | 35  | 234  | 30  | 60  | 12          |                    |
| 8            | 40           | 415             | 200 | 150 | 50  | 55  | 300  | 30  | 70  | 17          |                    |
| 12.5         | 62.5         | 491             | 235 | 160 | 55  | 65  | 358  | 35  | 75  | 26          |                    |
| 17           | 85           | 550             | 265 | 165 | 55  | 70  | 390  | 45  | 95  | 45          |                    |
| 25           | 125          | 610             | 308 | 180 | 60  | 76  | 430  | 45  | 105 | 62          |                    |
| 35           | 175          | 670             | 355 | 200 | 60  | 85  | 465  | 50  | 110 | 100         |                    |
| 55           | 275          | 775             | 410 | 230 | 75  | 90  | 500  | 60  | 130 | 152         |                    |
| 85           | 425          | 1020            | 490 | 310 | 103 | 110 | 704  | 100 | 200 | 352         |                    |
| 120          | 600          | 1240            | 650 | 418 | 105 | 160 | 858  | 100 | 220 | 524         |                    |
| 150          | 750          | 1308            | 710 | 482 | 115 | 180 | 919  | 100 | 240 | 616         |                    |
| 200          | 1000         | 1477            | 790 | 550 | 130 | 200 | 1017 | 120 | 280 | 702         |                    |

Tolerance: Forged parts ± 5%, machined parts ± 1 mm

## HOOK - CHAIN GRAPNEL

- Material: Forged Steel
- Finish: Painted/Self coloured
- Design Factor: 4:1
- Temperature Range: -20°C up to +200°C
- Certification: Certificate of Conformity (on request)  
3.1 material certificate EN 10204 (on request)
- Rated in Metric Ton(s)

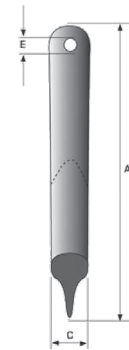
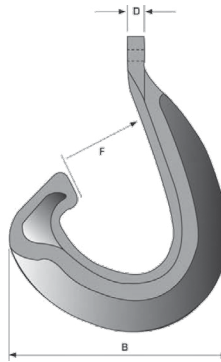


| WLL<br>(t) | PL<br>(t) | Dimensions (mm) |      |      |     |     |     | Wt./ea.<br>(kg) | Price              |
|------------|-----------|-----------------|------|------|-----|-----|-----|-----------------|--------------------|
| 100        | 150       | 1178            | 1372 | 75   | 98  | 135 | 108 | 1351            | Pricing on Request |
| 200        | 270       | 1822            | 1499 | 90   | 114 | 130 | 108 | 1850            |                    |
| 250        | 350       | 2630            | 1994 | 1676 | 100 | 144 | 190 | 127             |                    |

Tolerance: ± 5%

## HOOK - J, CHAIN CHASER

- Material: Mild Steel
- Finish: Painted
- Temperature Range: -20°C up to +200°C
- Certification: Certificate of Conformity (on request)  
3.1 material certificate EN 10204 (on request)
- Rated in Metric Ton(s)



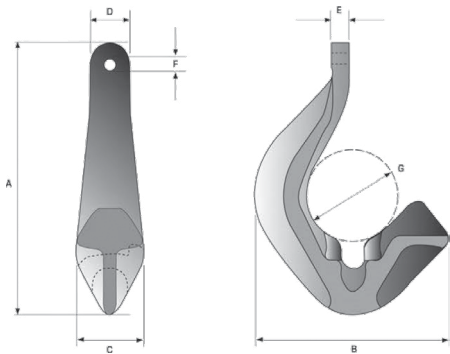
| WLL<br>(t) | PL<br>(t) | Dimensions (mm) |      |     |     |     |     | Wt./ea.<br>(kg) | Price              |
|------------|-----------|-----------------|------|-----|-----|-----|-----|-----------------|--------------------|
| 100        | 250       | 2438            | 1829 | 305 | 124 | 86  | 699 | 1886            | Pricing on Request |
| 250        | 400       | 2573            | 2185 | 457 | 178 | 144 | 699 | 3400            |                    |

Tolerance: ± 5%



HOOK - J, CHAIN CHASER

- Material: Mild Steel
- Finish: Painted
- Temperature Range: -20°C up to +200°C
- Certification: Certificate of Conformity (on request)  
3.1 material certificate EN 10204 (on request)
- Rated in Matric Ton(s)

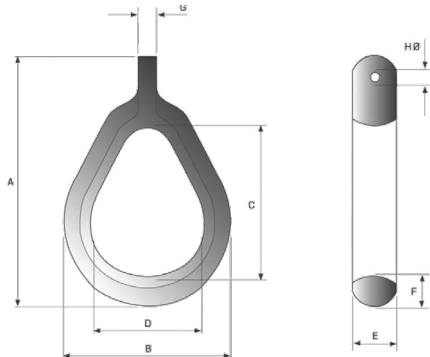


| WLL<br>(t) | PL<br>(t) | Dimensions (mm) |      |     |     |     |     |     | Wt./ea.<br>(kg) | Price              |
|------------|-----------|-----------------|------|-----|-----|-----|-----|-----|-----------------|--------------------|
|            |           | A               | B    | C   | D   | E   | F   | G   |                 |                    |
| 100        | 250       | 2083            | 1486 | 533 | 305 | 124 | 86  | 711 | 1752            | Pricing on Request |
| 250        | 400       | 2350            | 1824 | 533 | 406 | 178 | 144 | 711 | 3000            |                    |



HOOK - PERMANENT CHAIN CHASER

- Material: Mild Steel
- Finish: Painted
- Temperature Range: -20°C up to +200°C
- Certification: Certificate of Conformity (on request)  
3.1 material certificate EN 10204 (on request)
- Rated in Matric Ton(s)



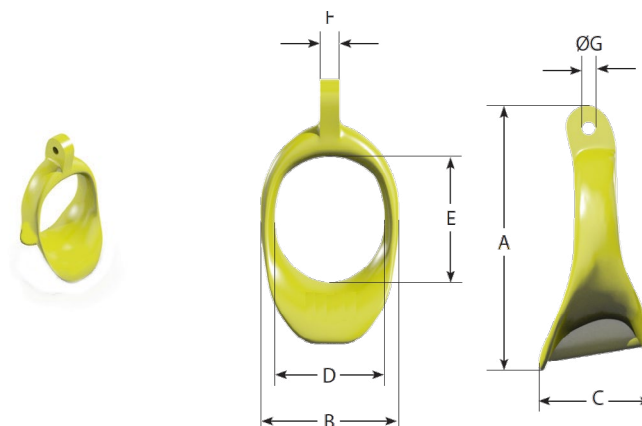
| WLL<br>(t) | PL<br>(t) | Dimensions (mm) |      |     |     |     |     |     | Wt./ea.<br>(kg) | Price              |
|------------|-----------|-----------------|------|-----|-----|-----|-----|-----|-----------------|--------------------|
|            |           | A               | B    | C   | D   | E   | F   | G   |                 |                    |
| 100        | 250       | 2083            | 1486 | 533 | 305 | 124 | 86  | 711 | 1752            | Pricing on Request |
| 250        | 400       | 2350            | 1824 | 533 | 406 | 178 | 144 | 711 | 3000            |                    |



| WLL (t) |                                             |
|---------|---------------------------------------------|
| 100     | Designed for use with 64 mm to 90mm chain   |
| 250     | Designed for use with 95 mm to 120 mm chain |

## HOOK - RING CHASER

- Material: Forged Steel
- Finish: Painted/Self coloured
- Design Factor: 4:1
- Temperature Range: -20°C up to +200°C
- Certification: Certificate of Conformity (on request)
- 3.1 material certificate EN 10204 (on request)
- Rated in Metric Ton(s)

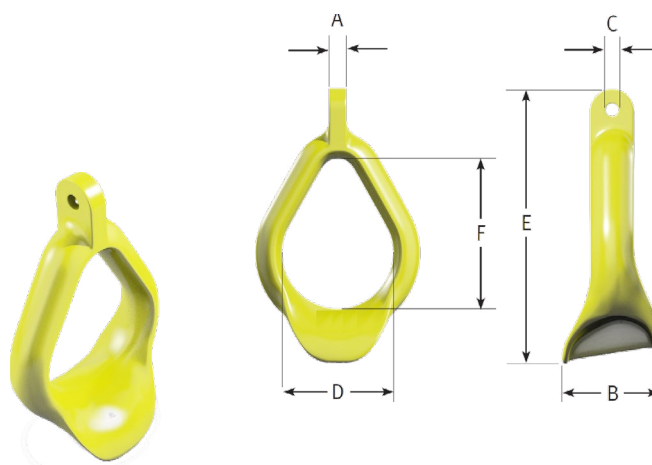


| WLL<br>(t) | PL<br>(t) | Dimensions (mm) |   |   |   |   |   |   | Wt./ea.<br>(kg) | Price              |
|------------|-----------|-----------------|---|---|---|---|---|---|-----------------|--------------------|
| 150        | 300       | A               | B | C | D | E | F | G | 950             | Pricing on Request |

Tolerance: ± 5%

## HOOK - DUAL CHASER RING

- Material: Forged Steel
- Finish: Painted/Self coloured
- Design Factor: 4:1
- Temperature Range: -20°C up to +200°C
- Certification: Certificate of Conformity (on request)
- 3.1 material certificate EN 10204 (on request)
- Rated in Metric Ton(s)



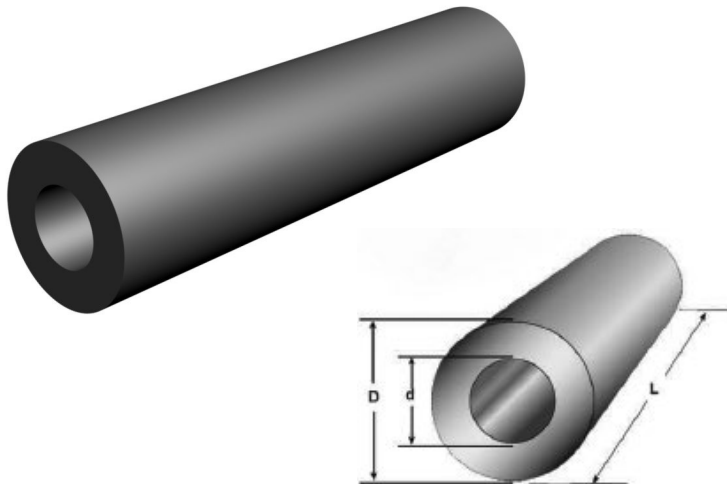
| WLL<br>(t) | PL<br>(t) | Dimensions (mm) |   |   |   |   |   |   | Wt./ea.<br>(kg) | Price              |
|------------|-----------|-----------------|---|---|---|---|---|---|-----------------|--------------------|
| 150        | 300       | A               | B | C | D | E | F | G | 950             | Pricing on Request |

Tolerance: ± 5%



## FENDER - CYLINDRICAL FENDERS

- Applicable for ships of different sizes, easy installation.
- Low reaction forces.
- Little surface pressure.

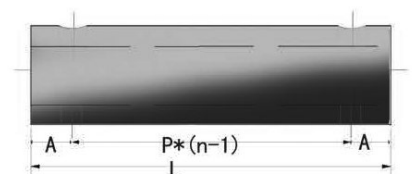
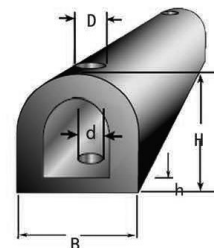


| Weight (kg) | Dimensions (mm) |      |     |
|-------------|-----------------|------|-----|
|             | L               | D    | d   |
| Y150        | 500-5500        | 150  | 75  |
| Y200        | 500-5500        | 200  | 100 |
| Y250        | 500-5500        | 250  | 125 |
| Y300        | 500-5500        | 300  | 150 |
| Y400        | 500-5500        | 400  | 200 |
| Y500        | 500-5500        | 500  | 250 |
| Y600        | 500-5500        | 600  | 300 |
| Y700        | 500-5500        | 700  | 350 |
| Y800        | 500-5500        | 800  | 400 |
| Y900        | 500-5500        | 900  | 450 |
| Y1000       | 500-5500        | 1000 | 500 |
| Y1100       | 500-5500        | 1100 | 550 |
| Y1200       | 500-5500        | 1200 | 600 |
| Y1400       | 500-5500        | 1400 | 700 |
| Y1600       | 500-5500        | 1600 | 800 |

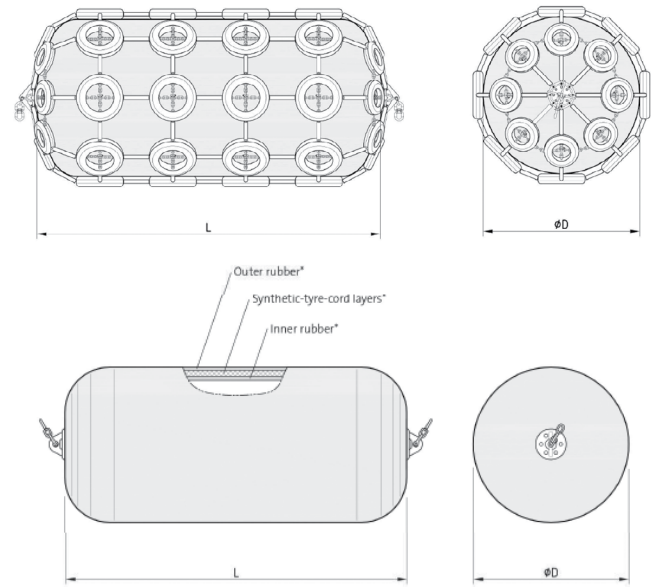
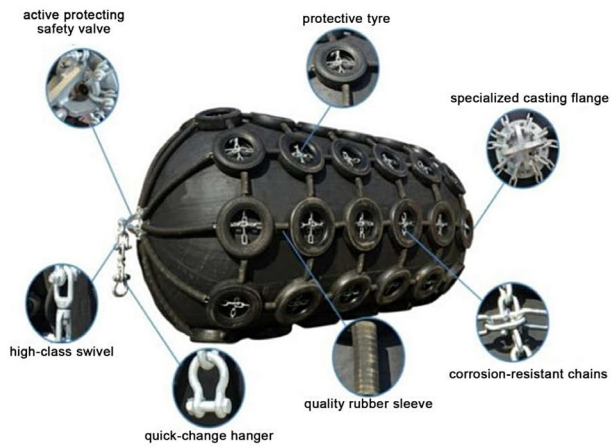
## FENDER - SEMI-CIRCULAR FENDERS

| Model | Dimensions (mm) |     |    |    |     |     |    |     | n<br>(Fastening Points) |
|-------|-----------------|-----|----|----|-----|-----|----|-----|-------------------------|
|       | L               | A   | D  | d  | B   | H   | h  | P   |                         |
| D200H | 1000            | 200 | 55 | 28 | 200 | 200 | 30 | 600 | 3                       |
| D200H | 1500            | 150 | 55 | 28 | 200 | 200 | 30 | 600 | 3                       |
| D200H | 2000            | 250 | 55 | 28 | 200 | 200 | 30 | 500 | 4                       |
| D300H | 900             | 150 | 65 | 32 | 300 | 300 | 40 | 600 | 2                       |
| D300H | 1000            | 200 | 65 | 32 | 300 | 300 | 40 | 600 | 2                       |
| D300H | 1500            | 150 | 65 | 32 | 300 | 300 | 40 | 600 | 3                       |
| D300H | 2000            | 250 | 65 | 32 | 300 | 300 | 40 | 500 | 5                       |
| D300H | 1000            | 200 | 65 | 32 | 360 | 300 | 40 | 600 | 2                       |
| D300H | 1500            | 150 | 65 | 32 | 360 | 300 | 40 | 600 | 3                       |
| D400H | 1500            | 150 | 65 | 32 | 400 | 400 | 55 | 400 | 4                       |
| D400H | 2000            | 200 | 65 | 32 | 400 | 400 | 55 | 400 | 5                       |
| D500H | 1000            | 150 | 55 | 28 | 500 | 500 | 60 | 350 | 3X2                     |
| D500H | 1500            | 150 | 55 | 28 | 500 | 500 | 60 | 400 | 4X2                     |
| D500H | 2000            | 200 | 55 | 28 | 500 | 500 | 60 | 400 | 5X2                     |

- Suitable reaction force and energy absorption, low weight and easy for installation and maintenance. Applicable for frame dock due to smaller bottom width.



## FENDER - PNEUMATIC FENDER



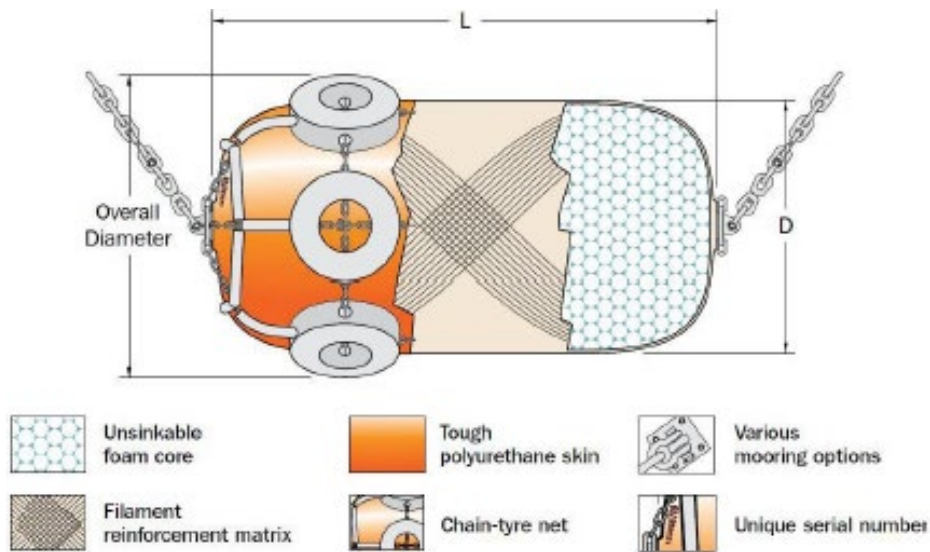
| Fender Size<br>D x L<br><br>[mm] | Initial Pressure 0.5 kg/cm <sup>2</sup>     |                                          |                                                         | Initial Pressure 0.8 kg/cm <sup>2</sup>     |                                          |                                                         | Weight              |                   |               |
|----------------------------------|---------------------------------------------|------------------------------------------|---------------------------------------------------------|---------------------------------------------|------------------------------------------|---------------------------------------------------------|---------------------|-------------------|---------------|
|                                  | Guaranteed energy absorption (GEA)<br>[kJm] | Reaction force at GEA deflection<br>[kN] | Hull pressure at GEA deflection<br>[kN/m <sup>2</sup> ] | Guaranteed energy absorption (GEA)<br>[kJm] | Reaction force at GEA deflection<br>[kN] | Hull pressure at GEA deflection<br>[kN/m <sup>2</sup> ] | Fender Body<br>[kg] | Chain Net<br>[kg] | Total<br>[kg] |
| 500 x 1,000                      | 6                                           | 64                                       | 132                                                     | 8                                           | 85                                       | 174                                                     | 25                  | 55                | 80            |
| 600 x 1,000                      | 8                                           | 74                                       | 126                                                     | 11                                          | 98                                       | 166                                                     | 30                  | 65                | 95            |
| 700 x 1,500                      | 17                                          | 137                                      | 135                                                     | 24                                          | 180                                      | 177                                                     | 45                  | 100               | 145           |
| 1,000 x 1,500                    | 32                                          | 182                                      | 122                                                     | 45                                          | 239                                      | 160                                                     | 60                  | 110               | 170           |
| 1,000 x 2,000                    | 45                                          | 257                                      | 132                                                     | 63                                          | 338                                      | 174                                                     | 75                  | 150               | 225           |
| 1,200 x 2,000                    | 63                                          | 297                                      | 126                                                     | 88                                          | 390                                      | 166                                                     | 110                 | 180               | 290           |
| 1,350 x 2,500                    | 102                                         | 427                                      | 130                                                     | 142                                         | 561                                      | 170                                                     | 170                 | 210               | 380           |
| 1,500 x 3,000                    | 153                                         | 579                                      | 132                                                     | 214                                         | 761                                      | 174                                                     | 220                 | 400               | 620           |
| 1,700 x 3,000                    | 191                                         | 639                                      | 128                                                     | 267                                         | 840                                      | 168                                                     | 250                 | 520               | 770           |
| 2,000 x 3,500                    | 308                                         | 875                                      | 128                                                     | 430                                         | 1,150                                    | 168                                                     | 360                 | 670               | 1,030         |
| 2,500 x 4,000                    | 663                                         | 1,381                                    | 137                                                     | 925                                         | 1,815                                    | 180                                                     | 650                 | 830               | 1,480         |
| 2,500 x 5,500                    | 943                                         | 2,019                                    | 148                                                     | 1,317                                       | 2,653                                    | 195                                                     | 860                 | 1,050             | 1,910         |
| 3,300 x 4,500                    | 1,175                                       | 1,884                                    | 130                                                     | 1,640                                       | 2,476                                    | 171                                                     | 1,100               | 1,600             | 2,700         |
| 3,300 x 6,500                    | 1,814                                       | 3,015                                    | 146                                                     | 2,532                                       | 3,961                                    | 191                                                     | 1,660               | 2,300             | 3,960         |
| 3,300 x 10,600                   | 3,067                                       | 5,257                                    | 158                                                     | 4,281                                       | 6,907                                    | 208                                                     | 3,000               | 4,700             | 7,700         |
| 4,500 x 9,000                    | 4,752                                       | 5,747                                    | 146                                                     | 6,633                                       | 7,551                                    | 192                                                     | 3,800               | 3,680             | 7,480         |
| 4,500 x 12,000                   | 6,473                                       | 7,984                                    | 154                                                     | 9,037                                       | 10,490                                   | 202                                                     | 7,000               | 8,570             | 15,570        |

## FENDER - FOAM FILLED FENDER TYPE & STRUCTURE

• Dock Protection Colorful Fender, also called EVA solid fender, is a new type of fender using light weight high elasticity foam as cushion medium, widely applied to harbor, off-shore, STS and STD operation.

• Hanger Foam Filled Solid Fender is made of environmental protection material and high elasticity polymeric material. Long service life and high economic value of this product is achieved by the high quality material with performance of high strength, high elasticity, high adhesion, anti-leakage, and aging resistance.

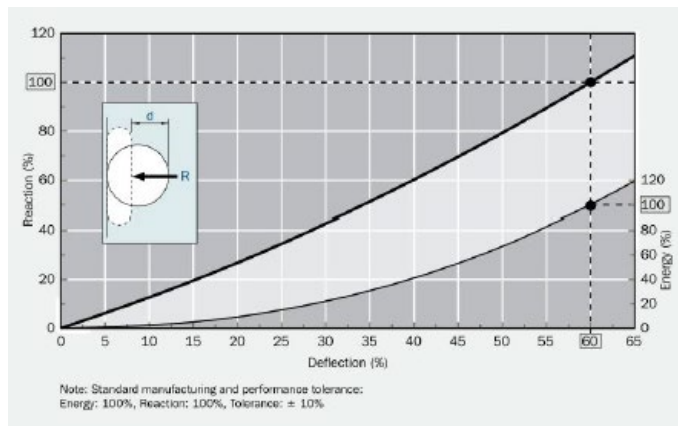
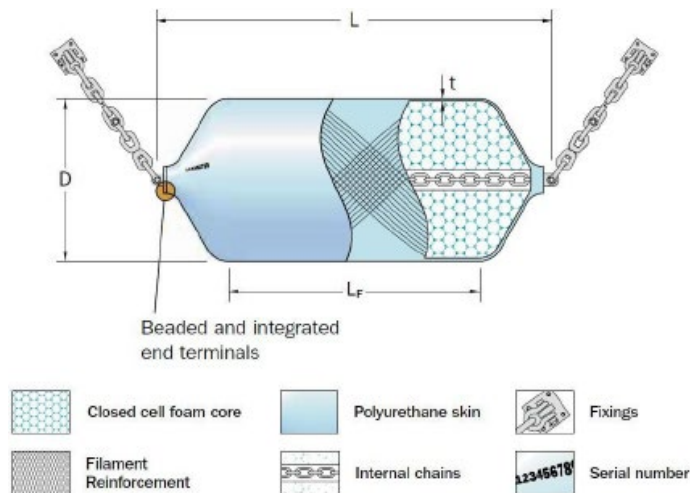
Foam Filled Fender Type & Structure



Type I fender with tire-chain protective sleeve



- Inside of Foam Filled Solid Fender is filled with environmental protection material-EVA with coating protective layer of polyurea material on outer surface. Polyurea is a new material of adjustable high-elasticity modulus. There are a galvanized flange and swivel on the fender two ends. Like pneumatic rubber fender, tire-chain net protective jacket is also optional spare part to Dock Protection Colorful Fender for better anti-collision performance.



| Foam Fender Performance              |                               |                        |
|--------------------------------------|-------------------------------|------------------------|
| Size<br>Diameter x<br>Length<br>[mm] | At 60% Deflection             |                        |
|                                      | Energy<br>Absorption<br>[kJm] | Force Reaction<br>[kN] |
| 500 x 1000                           | 8                             | 71                     |
| 600 x 1000                           | 12                            | 86                     |
| 700 x 1500                           | 27                            | 161                    |
| 1000 x 1500                          | 49                            | 205                    |
| 1000 x 2000                          | 64                            | 274                    |
| 1200 x 2000                          | 93                            | 337                    |
| 1200 x 2400                          | 110                           | 390                    |
| 1350 x 2500                          | 145                           | 463                    |
| 1500 x 3000                          | 216                           | 624                    |
| 1700 x 3000                          | 273                           | 696                    |
| 2000 x 3500                          | 456                           | 990                    |
| 2000 x 4000                          | 505                           | 1110                   |
| 2200 x 4500                          | 697                           | 1396                   |
| 2500 x 4000                          | 781                           | 1386                   |
| 2500 x 5000                          | 985                           | 1750                   |
| 3000 x 5000                          | 1410                          | 2050                   |
| 3000 x 6000                          | 1695                          | 2460                   |
| 3300 x 6500                          | 2245                          | 2950                   |
| 4500 x 9000                          | 7660                          | 19650                  |

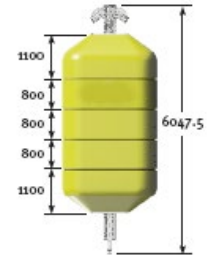
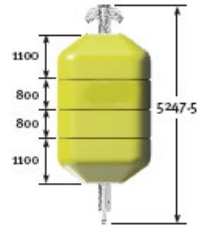
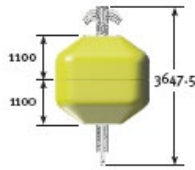
## FENDER AND BUOYANCY



**Anchor Pendant Buoyancy (APB)**



**Ancillary Buoyancy**



**Surface/Sub-Surface Modular Buoyancy**



**Dock Fenders**



## FENDER FOAM IONOMER, GILMAN CORPORATION



Gilman Ionomer fenders are made from continuous extruded sheets with thick walled closed cell material. This material has the unique ability to link ionically between neighboring molecular chains with the same bond as the polymer itself. The surface is tough yet smooth and flexible: solid ionomer plastic is the primary material used for the covers of golf balls and bowling pins. These fenders offer superior strength, energy absorption and compression resistance and unsurpassed functional integrity in an almost infinite variety of shapes and sizes from buoys to ski barriers.

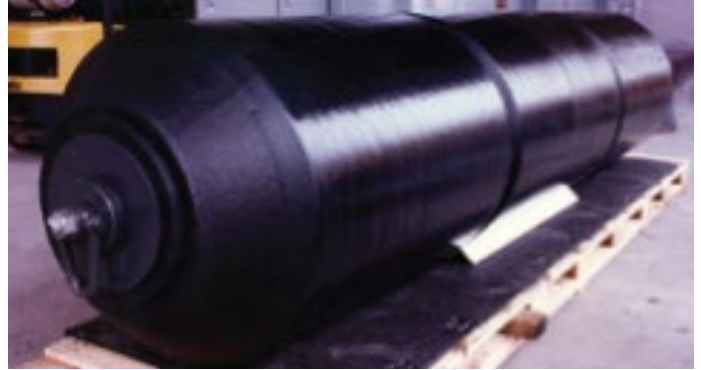
### Benefits of integral Ionomer Foam Fendering

- More Energy Absorption in smaller sizes
- Low-Hysteresis Reaction forces
- Low weight/high Buoyancy
- High-Density Skin
- Unsurpassed Functional Integrity
- Proven Effectiveness
- Impervious to Fuels and chemicals/oil spills
- Non-toxic/Fire Safety
- Highly water repellent
- Unaffected by Cold
- No Dissimilar materials
- Easy to repair
- High Visibility
- Non Marking/non-abrasive
- Damage Control
- Fully Repairable
- Design Flexibility



## FENDER FOAM IONOMER, BERTHING ENERGY AND REACTION FORCES

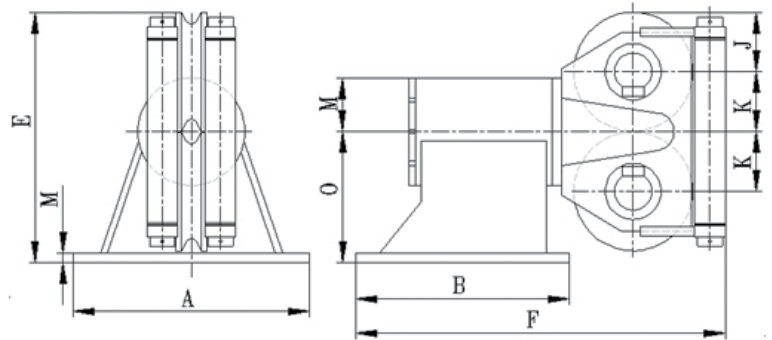
| Fender Size<br>Diameter (ft) x<br>Length (ft) | Berthing Energy<br>(ft-kips) | Reaction Force<br>(kips) |
|-----------------------------------------------|------------------------------|--------------------------|
| 2 x 3                                         | 15                           | 35                       |
| 2 x 4                                         | 20                           | 45                       |
| 2 x 6                                         | 30                           | 70                       |
| 2 x 8                                         | 40                           | 90                       |
| 3 x 6                                         | 70                           | 105                      |
| 3 x 8                                         | 90                           | 140                      |
| 3 x 10                                        | 115                          | 175                      |
| 3 x 12                                        | 140                          | 210                      |
| 3 x 14                                        | 160                          | 245                      |
| 4 x 8                                         | 165                          | 185                      |
| 4 x 10                                        | 205                          | 235                      |
| 4 x 12                                        | 250                          | 280                      |
| 4 x 14                                        | 290                          | 325                      |
| 4 x 16                                        | 330                          | 375                      |
| 4 x 20                                        | 415                          | 465                      |
| 5 x 10                                        | 325                          | 290                      |
| 5 x 12                                        | 390                          | 350                      |
| 5 x 14                                        | 450                          | 410                      |
| 5 x 16                                        | 515                          | 465                      |
| 5 x 18                                        | 580                          | 545                      |
| 5 x 20                                        | 645                          | 585                      |
| 6 x 12                                        | 560                          | 420                      |
| 6 x 14                                        | 650                          | 490                      |
| 6 x 16                                        | 745                          | 560                      |
| 6 x 18                                        | 835                          | 630                      |
| 6 x 20                                        | 930                          | 700                      |



### Assumptions:

- Fender size is expressed as diameter (in feet) by length overall (in feet)
- Rated berthing energy and reaction force are based on fender performance at 60% compression ratio
- Berthing energy and reaction force values for the 2 x 6 fender are based on testing performed in 1993. The berthing energy and reaction forces for the other fenders in this table were scaled from the nominal tested fender results using equations (11) and (12) from ASTM F2192-02

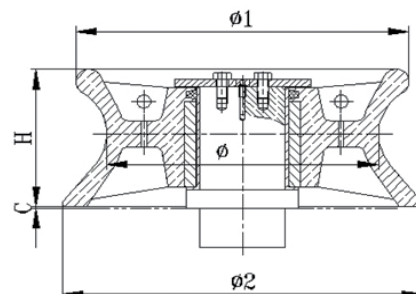
## FAIRLEAD ROLLER - ANCHOR



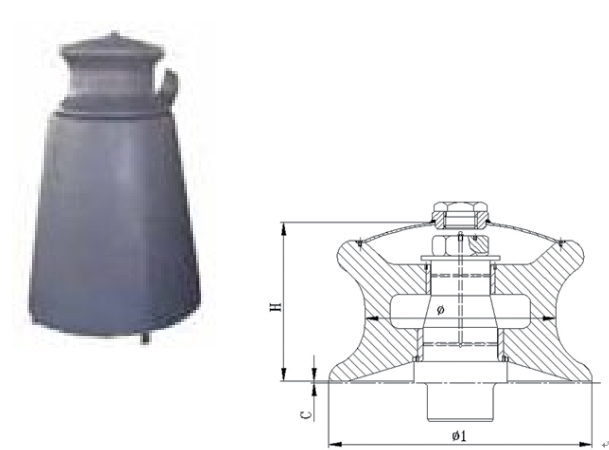
| Wire Rope Dia.<br>(mm) | Sheave Dia.<br>(mm) | Dimensions (mm) |      |      |      |     |     |    |     |     |
|------------------------|---------------------|-----------------|------|------|------|-----|-----|----|-----|-----|
|                        |                     | A               | B    | E    | F    | J   | K   | M  | N   | O   |
| 25                     | 254                 | 356             | 356  | 530  | 680  | 127 | 129 | 20 | 114 | 275 |
| 32                     | 305                 | 660             | 505  | 665  | 890  | 152 | 154 | 32 | 124 | 360 |
| 38                     | 406                 | 760             | 760  | 867  | 1280 | 203 | 205 | 38 | 178 | 460 |
| 44                     | 508                 | 1016            | 915  | 1070 | 1485 | 254 | 256 | 45 | 220 | 560 |
| 52                     | 610                 | 1220            | 1068 | 1265 | 1792 | 305 | 307 | 48 | 265 | 650 |
| 64                     | 762                 | 1420            | 1370 | 1565 | 2080 | 381 | 383 | 60 | 325 | 800 |

## FAIRLEAD ROLLER - TYPE A

| Nominal Dia.<br>(mm) | Dimensions (mm) |     |     |     |   |
|----------------------|-----------------|-----|-----|-----|---|
|                      | Φ               | Φ 1 | Φ 2 | H   | C |
| 150                  | 150             | 216 | 240 | 137 | 5 |
| 200                  | 200             | 280 | 310 | 157 | 5 |
| 250                  | 250             | 350 | 380 | 177 | 6 |
| 300                  | 300             | 400 | 440 | 197 | 7 |
| 350                  | 350             | 460 | 500 | 217 | 7 |
| 400                  | 400             | 520 | 560 | 237 | 7 |
| 450                  | 450             | 590 | 630 | 257 | 7 |
| 500                  | 500             | 660 | 700 | 277 | 7 |



# FAIRLEAD ROLLER - JIS F2014



| Nominal Dia.<br>(mm) | Weight<br>(kg) | Dimensions (mm) |     |     |   |
|----------------------|----------------|-----------------|-----|-----|---|
|                      |                | Φ               | Φ 1 | H   | C |
| 100                  | 18             | 100             | 170 | 140 | 3 |
| 150                  | 32.1           | 150             | 240 | 195 | 3 |
| 200                  | 64.6           | 200             | 310 | 235 | 3 |
| 250                  | 108            | 250             | 380 | 282 | 4 |
| 300                  | 159            | 300             | 440 | 305 | 4 |
| 350                  | 235            | 350             | 500 | 330 | 4 |
| 400                  | 336            | 400             | 560 | 355 | 5 |

# FAIRLEAD ROLLER - UNIVERSAL

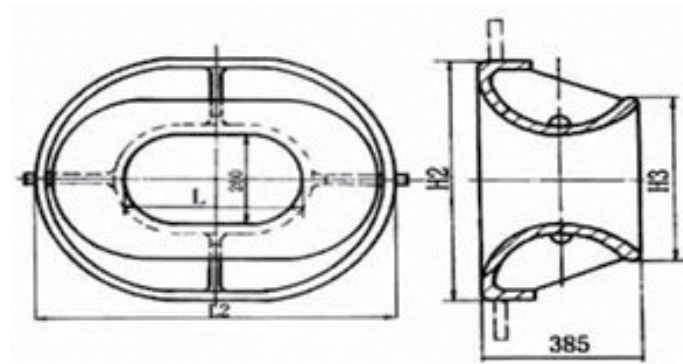


| Type   | Rope Dia. (mm) | Dimensions (mm) |     |      |     |      |     |     |      | Mass<br>(kg) |
|--------|----------------|-----------------|-----|------|-----|------|-----|-----|------|--------------|
|        |                | A               | B   | C    | D   | E    | F   | K   | L    |              |
| FA4-12 | 12             | 180             | 100 | 650  | 80  | 446  | 170 | 80  | 356  | 75           |
| FA4-16 | 16             | 230             | 130 | 800  | 100 | 546  | 210 | 100 | 446  | 130          |
| FA4-20 | 20             | 250             | 130 | 900  | 120 | 626  | 250 | 120 | 506  | 220          |
| FA4-24 | 24             | 280             | 160 | 1000 | 140 | 716  | 288 | 120 | 576  | 330          |
| FA4-32 | 32             | 300             | 160 | 1200 | 180 | 836  | 366 | 140 | 676  | 580          |
| FA4-40 | 40             | 320             | 180 | 1350 | 245 | 1030 | 500 | 180 | 830  | 1100         |
| FA4-48 | 48             | 400             | 250 | 1700 | 300 | 1236 | 608 | 200 | 1016 | 2210         |

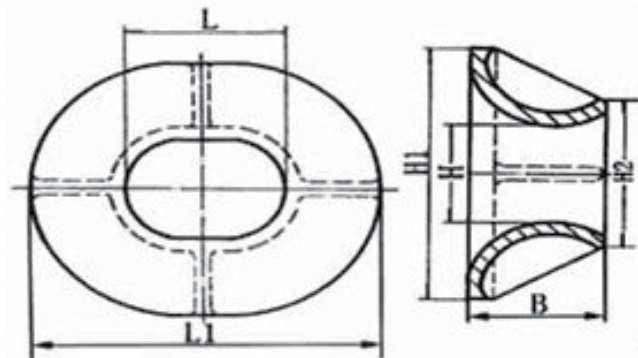
## CHOCK - BULWARK MOUNTING, JIS F2017-BC



| Nominal No. | Weight (kg) | Dimensions (mm) |     |     |     |
|-------------|-------------|-----------------|-----|-----|-----|
|             |             | L               | L2  | H2  | H3  |
| 310         | 276         | 310             | 734 | 684 | 462 |
| 360         | 305         | 360             | 788 | 688 | 464 |
| 400         | 344         | 400             | 832 | 692 | 470 |
| 450         | 385         | 450             | 886 | 696 | 474 |
| 500         | 422         | 500             | 940 | 700 | 478 |



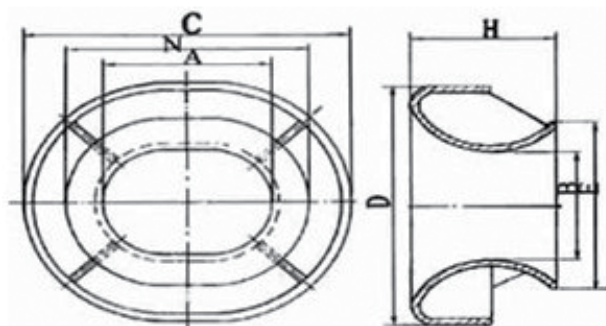
## CHOCK - BULWARK MOUNTING, JIS F2030-A



| Nominal No. | Dimensions (mm) |      |     |      |     | Weight (kg) |
|-------------|-----------------|------|-----|------|-----|-------------|
|             | L               | L1   | H   | H1   | B   |             |
| 400         | 400             | 780  | 300 | 680  | 350 | 210         |
| 500         | 500             | 940  | 400 | 840  | 400 | 340         |
| 600         | 600             | 1100 | 450 | 950  | 450 | 490         |
| 700         | 700             | 1260 | 500 | 1060 | 500 | 600         |
| 800         | 800             | 1420 | 600 | 1220 | 550 | 880         |

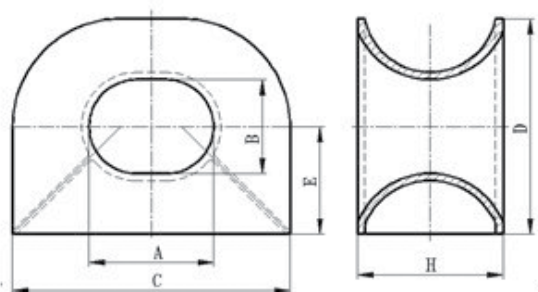


## CHOCK - BULWARK MOUNTING, BOW, TYPE EU



| Nominal No. | Dimensions (mm) |     |      |      |      |     |      | Weight (kg) |
|-------------|-----------------|-----|------|------|------|-----|------|-------------|
|             | A               | B   | C    | D    | E    | H   | N    |             |
| 315 x 250   | 315             | 250 | 695  | 630  | 432  | 342 | 497  | 198         |
| 425 x 280   | 425             | 280 | 925  | 780  | 516  | 450 | 661  | 358         |
| 600 x 315   | 600             | 315 | 1160 | 875  | 571  | 504 | 866  | 547         |
| 600 x 450   | 600             | 450 | 1160 | 1010 | 706  | 504 | 866  | 629         |
| 800 x 600   | 800             | 600 | 1360 | 1160 | 1060 | 504 | 1260 | 813         |

## CHOCK - MOUNTING, TYPE EU

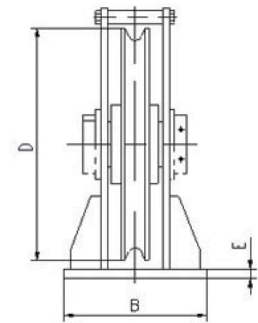
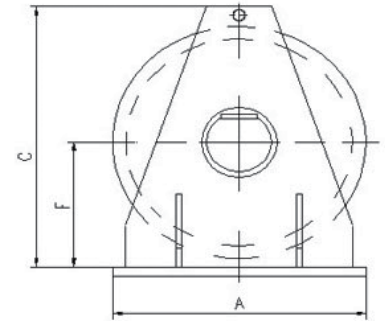


| Nominal No. | Dimensions (mm) |     |      |      |     |     | Weight (kg) |
|-------------|-----------------|-----|------|------|-----|-----|-------------|
|             | A               | B   | C    | D    | E   | H   |             |
| 315 x 250   | 315             | 250 | 815  | 620  | 365 | 380 | 230         |
| 425 x 280   | 425             | 280 | 1075 | 785  | 450 | 500 | 378         |
| 600 x 315   | 600             | 315 | 1360 | 865  | 507 | 560 | 598         |
| 600 x 450   | 600             | 450 | 1360 | 1000 | 575 | 560 | 655         |
| 600 x 450   | 600             | 450 | 1560 | 1200 | 675 | 760 | 780         |

## SHEAVE - VERTICAL LEAD



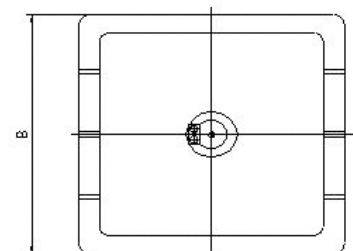
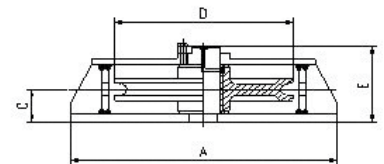
| Wire Size |       | Sheave Dia.<br>(mm) | Dimensions (mm) |     |      |    |     |
|-----------|-------|---------------------|-----------------|-----|------|----|-----|
| mm        | in    |                     | A               | B   | C    | E  | F   |
| 25        | 1     | 406                 | 485             | 276 | 520  | 20 | 220 |
| 32        | 1-1/4 | 508                 | 603             | 345 | 610  | 25 | 275 |
| 38        | 1-1/2 | 600                 | 711             | 407 | 700  | 30 | 330 |
| 44        | 1-3/4 | 660                 | 782             | 448 | 770  | 30 | 390 |
| 52        | 2     | 762                 | 903             | 517 | 900  | 40 | 410 |
| 58        | 2-1/4 | 830                 | 870             | 580 | 980  | 40 | 440 |
| 64        | 2-1/2 | 914                 | 1083            | 620 | 1070 | 40 | 490 |
| 76        | 3     | 1260                | 1320            | 700 | 1450 | 50 | 670 |
| 83        | 3-1/4 | 1330                | 1410            | 760 | 1560 | 50 | 720 |



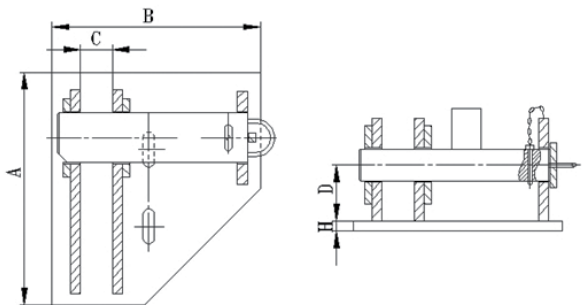
## SHEAVE - HORIZONTAL LEAD



| Wire Size |       | Sheave Dia. (mm) | Dimensions (mm) |      |     |     |
|-----------|-------|------------------|-----------------|------|-----|-----|
| mm        | in    |                  | A               | B    | C   | E   |
| 25        | 1     | 406              | 635             | 635  | 90  | 190 |
| 32        | 1-1/4 | 508              | 787             | 787  | 102 | 210 |
| 38        | 1-1/2 | 610              | 914             | 914  | 110 | 230 |
| 44        | 1-3/4 | 660              | 1016            | 1016 | 120 | 250 |
| 52        | 2     | 762              | 1143            | 1143 | 130 | 270 |
| 58        | 2-1/4 | 850              | 1250            | 1250 | 140 | 280 |
| 64        | 2-1/2 | 914              | 1372            | 1372 | 150 | 310 |
| 76        | 3     | 1260             | 1580            | 1580 | 170 | 350 |
| 83        | 3-1/4 | 1330             | 1680            | 1680 | 190 | 390 |

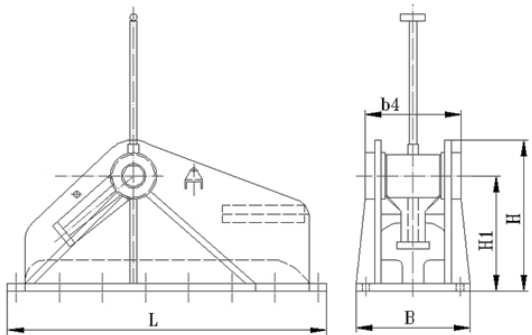


BRACKET - SMIT BRACKET



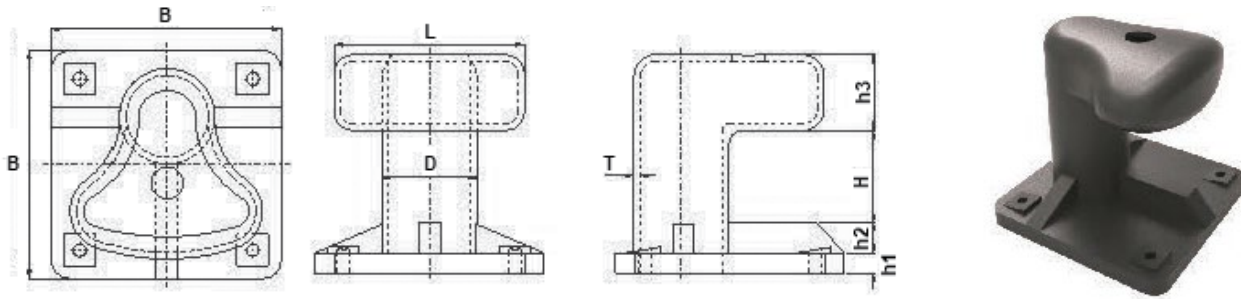
| Nominal No. | Weight (kg) | Dimensions (mm) |     |     |     |    |
|-------------|-------------|-----------------|-----|-----|-----|----|
|             |             | A               | B   | C   | D   | H  |
| 54-56       | 160         | 500             | 450 | 75  | 160 | 25 |
| 62-64       | 198         | 625             | 600 | 100 | 180 | 35 |
| 76-78       | 311         | 800             | 720 | 110 | 228 | 35 |

STOPPER - CHAIN CABLE STOPPER



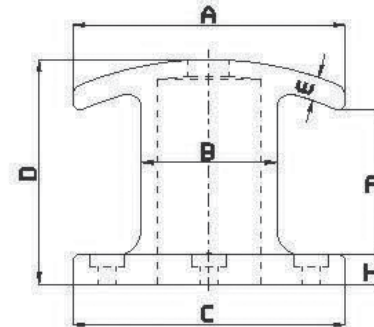
| Nominal No. | Weight (kg) | Dimensions (mm) |     |     |     |     |
|-------------|-------------|-----------------|-----|-----|-----|-----|
|             |             | L               | B   | H   | H1  | b4  |
| 54-56       | 488         | 1336            | 474 | 631 | 481 | 400 |
| 76-78       | 1421        | 1800            | 640 | 850 | 648 | 540 |

## BOLLARD - CURVED TYPE A



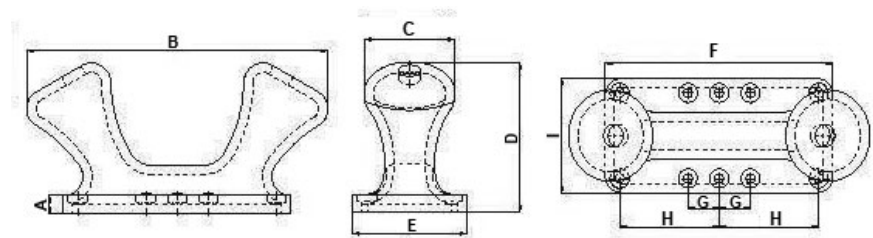
| Model No. | Bolts Qty. | Dimensions (mm) |     |    |     |      |    |     |     |
|-----------|------------|-----------------|-----|----|-----|------|----|-----|-----|
|           |            | D               | H   | T  | L   | B    | h1 | h2  | h3  |
| 6T        | 4          | 150             | 170 | 20 | 300 | 360  | 30 | 60  | 120 |
| 10T       | 4          | 200             | 210 | 20 | 400 | 460  | 40 | 70  | 150 |
| 15T       | 4          | 250             | 250 | 20 | 500 | 600  | 50 | 80  | 200 |
| 25T       | 4          | 300             | 200 | 21 | 600 | 720  | 65 | 95  | 240 |
| 35T       | 4          | 300             | 280 | 25 | 600 | 810  | 65 | 95  | 240 |
| 50T       | 4          | 350             | 330 | 29 | 700 | 945  | 70 | 100 | 280 |
| 75T       | 4          | 400             | 370 | 33 | 800 | 1180 | 90 | 120 | 320 |
| 100T      | 4          | 450             | 410 | 39 | 900 | 1365 | 95 | 125 | 360 |

## BOLLARD - DOCK TYPE J



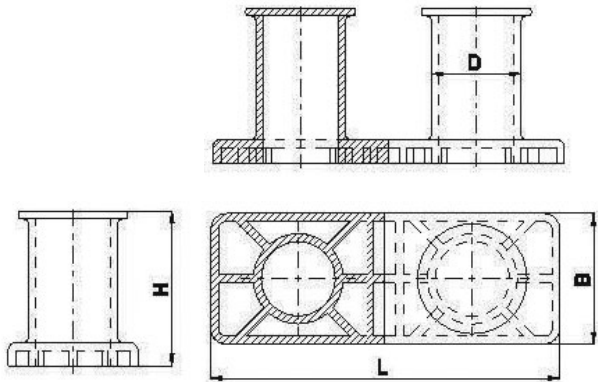
| Model No. | Bolts Qty. | SWA (t) | Dimensions (mm) |     |     |     |    |     |     |    |
|-----------|------------|---------|-----------------|-----|-----|-----|----|-----|-----|----|
|           |            |         | A               | B   | C   | D   | E  | F   | G   | H  |
| J-01      | 4          | 10      | 180             | 120 | 240 | 190 | 25 | 140 | 180 | 25 |
| J-02      | 4          | 16      | 216             | 150 | 290 | 220 | 25 | 160 | 220 | 35 |
| J-03      | 4          | 20      | 280             | 200 | 380 | 260 | 25 | 200 | 280 | 35 |
| J-04      | 4          | 16      | 290             | 150 | 290 | 220 | 25 | 160 | 220 | 35 |
| J-05      | 6          | 50      | 400             | 230 | 480 | 380 | 40 | 244 | 340 | 60 |

# **BOLLARD - DOUBLE BITT LXY-B09**



| Model No. | Dimensions (mm) |      |     |     |     |      |     |     |     | Bolt Size | Bolt Length | Qty. |
|-----------|-----------------|------|-----|-----|-----|------|-----|-----|-----|-----------|-------------|------|
|           | A               | B    | C   | D   | E   | F    | G   | H   | I   |           |             |      |
| 20T       | 38              | 678  | 204 | 204 | 267 | 533  | 70  | 222 | 191 | M20       | 300         | 8    |
| 30T       | 46              | 781  | 235 | 389 | 302 | 604  | 81  | 258 | 221 | M22       | 300         | 8    |
| 50T       | 56              | 942  | 285 | 469 | 356 | 711  | 98  | 311 | 267 | M30       | 450         | 8    |
| 75T       | 62              | 1144 | 346 | 670 | 432 | 884  | 189 | 378 | 324 | M36       | 450         | 10   |
| 100T      | 75              | 1346 | 407 | 670 | 508 | 1016 | 222 | 444 | 381 | M42       | 600         | 10   |
| 125T      | 80              | 1548 | 468 | 771 | 508 | 1168 | 256 | 512 | 438 | M42       | 600         | 10   |
| 150T      | 91              | 1683 | 509 | 838 | 635 | 1270 | 278 | 556 | 476 | M48       | 750         | 10   |
| 200T      | 96              | 1886 | 570 | 936 | 702 | 1422 | 311 | 622 | 533 | M56       | 915         | 10   |

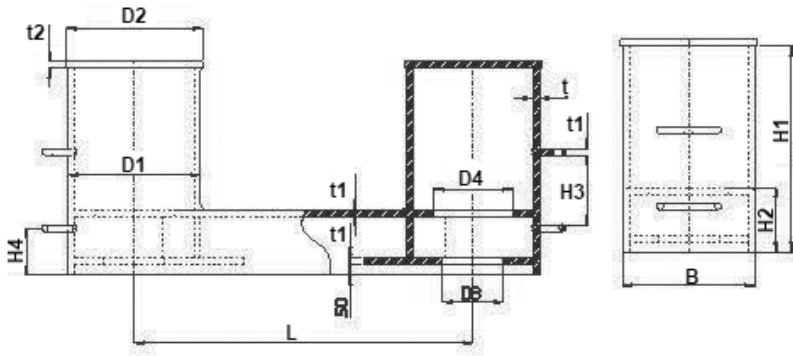
# **BOLLARD - DOUBLE BITT LXY-B10**



| Model No. | Weight (kg) | Dimensions (mm) |      |      |      |
|-----------|-------------|-----------------|------|------|------|
|           |             | D               | L    | B    | H    |
| 100       | 19          | 114             | 445  | 165  | 196  |
| 125       | 29          | 140             | 540  | 195  | 246  |
| 160       | 45          | 168             | 670  | 225  | 316  |
| 200       | 80          | 219             | 860  | 290  | 378  |
| 250       | 141         | 273             | 1065 | 360  | 470  |
| 315       | 264         | 325             | 1300 | 430  | 597  |
| 355       | 369         | 351             | 1476 | 480  | 663  |
| 400       | 499         | 402             | 1630 | 550  | 749  |
| 450       | 680         | 450             | 1840 | 620  | 841  |
| 500       | 911         | 508             | 1040 | 690  | 926  |
| 560       | 1208        | 560             | 2240 | 750  | 1026 |
| 630       | 1601        | 610             | 2510 | 820  | 1152 |
| 710       | 2252        | 712             | 2840 | 960  | 1294 |
| 800       | 3071        | 813             | 3240 | 1100 | 1480 |

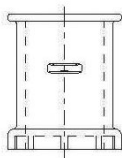
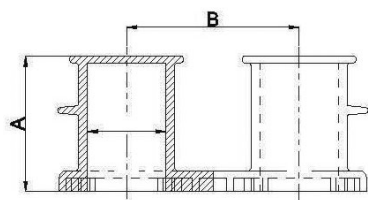
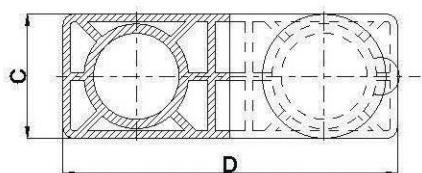


## BOLLARD - DOUBLE BIT DECK MOUNT LXY-B011



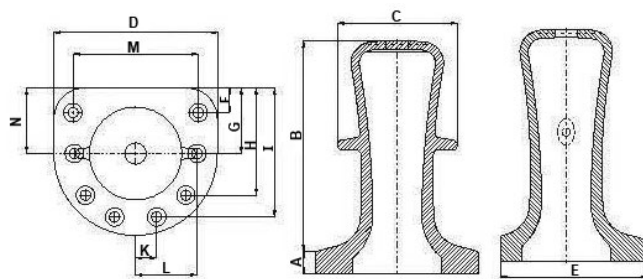
| Model No. | Dimensions (mm) |     |     |     |     |     |     |      |     | SWL (t) | Weight (kg) |
|-----------|-----------------|-----|-----|-----|-----|-----|-----|------|-----|---------|-------------|
|           | D1              | D2  | D3  | D4  | H1  | H2  | B   | L    | E   |         |             |
| 150       | 166.2           | 185 | -   | 80  | 330 | 90  | 155 | 400  | -   | 5T      | 29          |
| 200       | 226.3           | 240 | -   | 130 | 395 | 115 | 205 | 600  | -   | 6.7T    | 46          |
| 250A      | 257.4           | 290 | -   | 160 | 505 | 135 | 250 | 630  | -   | 14T     | 107         |
| 250B      | 257.4           | 290 | -   | 160 | 505 | 135 | 250 | 630  | -   | 11T     | 91          |
| 300A      | 328.5           | 340 | 150 | 185 | 600 | 150 | 290 | 600  | 300 | 31T     | 281         |
| 300B      | 328.5           | 340 | 150 | 185 | 600 | 150 | 290 | 600  | 300 | 16T     | 166         |
| 350A      | 355.8           | 380 | 170 | 200 | 685 | 175 | 340 | 890  | 350 | 43T     | 431         |
| 350B      | 355.8           | 380 | 170 | 200 | 685 | 175 | 340 | 890  | 350 | 22T     | 241         |
| 400A      | 406.4           | 430 | 190 | 230 | 730 | 185 | 380 | 1000 | 380 | 53T     | 570         |
| 400B      | 406.4           | 430 | 190 | 230 | 730 | 185 | 380 | 1000 | 380 | 27T     | 322         |
| 450A      | 457.2           | 480 | 210 | 265 | 770 | 195 | 425 | 1100 | 410 | 62T     | 712         |
| 450B      | 457.2           | 480 | 210 | 265 | 770 | 195 | 425 | 1100 | 410 | 30T     | 379         |
| 500A      | 508             | 530 | 235 | 295 | 830 | 230 | 480 | 1250 | 460 | 77T     | 880         |
| 500B      | 508             | 530 | 235 | 320 | 830 | 230 | 480 | 1250 | 460 | 33T     | 485         |
| 550A      | 558.8           | 680 | 255 | 330 | 900 | 270 | 520 | 1380 | 540 | 83T     | 1123        |
| 550B      | 558.8           | 680 | 255 | 350 | 900 | 270 | 520 | 1380 | 540 | 55T     | 787         |
| 600       | 609.4           | 830 | 280 | 365 | 950 | 300 | 560 | 1660 | 600 | 87T     | 1391        |

## BOLLARD - DECK MOUNT LXY-B012



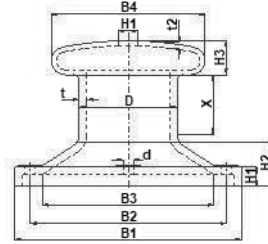
| Model No. | Dimensions (mm) |      |      |      | Weight (kg) |
|-----------|-----------------|------|------|------|-------------|
|           | A               | B    | C    | D    |             |
| 19.8      | 196             | 250  | 165  | 445  | 100         |
| 29.4      | 248             | 315  | 195  | 640  | 125         |
| 44.7      | 316             | 400  | 225  | 670  | 160         |
| 79.5      | 378             | 500  | 290  | 860  | 200         |
| 139       | 470             | 630  | 360  | 1065 | 250         |
| 261       | 597             | 800  | 430  | 1300 | 315         |
| 362       | 663             | 890  | 480  | 1476 | 355         |
| 602       | 740             | 1000 | 550  | 1630 | 400         |
| 685       | 841             | 1130 | 620  | 1840 | 450         |
| 911       | 928             | 1250 | 690  | 2040 | 500         |
| 1208      | 1025            | 1380 | 750  | 2240 | 560         |
| 1601      | 1152            | 1670 | 820  | 2510 | 630         |
| 2252      | 1294            | 1750 | 900  | 2840 | 710         |
| 3071      | 1480            | 2000 | 1100 | 3240 | 800         |

## BOLLARD - SINGLE BITT



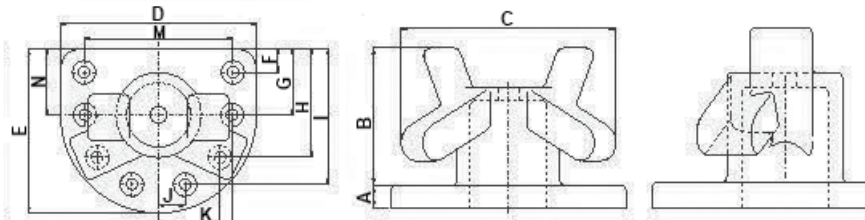
| Model No. | Dimensions (mm) |      |     |     |     |     |     |     |     |     |     |     |     |     | Bolt Size | Bolt Length | Qty. |
|-----------|-----------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------|-------------|------|
|           | A               | B    | C   | D   | E   | F   | G   | H   | I   | J   | K   | L   | M   | N   |           |             |      |
| 10T       | 44              | 390  | 224 | 325 | 284 | 46  | -   | -   | 205 | 83  | -   | -   | 234 | 122 | M24       | 450         | 4    |
| 15T       | 44              | 429  | 246 | 358 | 313 | 50  | -   | -   | 225 | 91  | -   | -   | 257 | 184 | M24       | 450         | 4    |
| 20T       | 54              | 454  | 263 | 358 | 322 | 54  | -   | 201 | 281 | 0   | 124 | -   | 275 | 149 | M24       | 450         | 5    |
| 30T       | 60              | 540  | 307 | 419 | 377 | 63  | -   | 236 | 328 | 0   | 140 | -   | 321 | 189 | M30       | 450         | 5    |
| 50T       | 70              | 696  | 391 | 533 | 480 | 80  | -   | 256 | 394 | 96  | 200 | -   | 409 | 213 | M36       | 600         | 6    |
| 75T       | 82              | 829  | 475 | 648 | 583 | 97  | -   | 311 | 476 | 117 | 249 | -   | 497 | 259 | M42       | 600         | 6    |
| 100T      | 89              | 925  | 559 | 762 | 688 | 114 | 330 | 522 | 607 | 0   | 195 | 291 | 584 | 305 | M46       | 760         | 7    |
| 125T      | 92              | 1067 | 604 | 823 | 741 | 123 | 357 | 564 | 645 | 0   | 211 | 314 | 631 | 329 | M48       | 760         | 7    |
| 150T      | 96              | 1153 | 659 | 899 | 809 | 135 | 390 | 616 | 704 | 0   | 231 | 343 | 689 | 360 | M68       | 915         | 7    |
| 200T      | 111             | 1270 | 726 | 991 | 892 | 149 | 396 | 814 | 755 | 124 | 311 | 380 | 769 | 396 | M68       | 915         | 8    |

## BOLLARD - SINGLE-BITE TYPE JIS



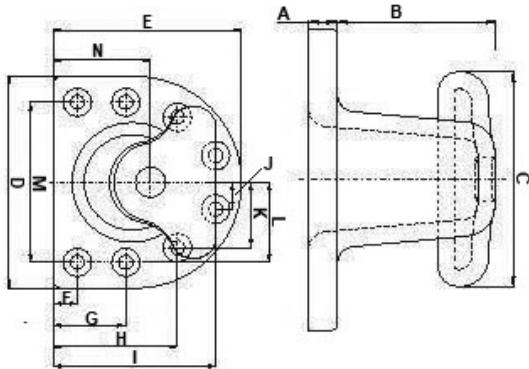
| Model No. | Size (mm) |     |    |      |     |    |     |     |      |      |      |     | Kgs  |
|-----------|-----------|-----|----|------|-----|----|-----|-----|------|------|------|-----|------|
|           | D         | X   | t  | B4   | H3  | t2 | H1  | H2  | B3   | B1   | B2   | d   |      |
| 15T       | 250       | 290 | 20 | 400  | 87  | 25 | 45  | 100 | 430  | 600  | 500  | 43  | 130  |
| 25T       | 300       | 290 | 20 | 460  | 106 | 15 | 50  | 130 | 510  | 725  | 600  | 55  | 220  |
| 35T       | 300       | 290 | 25 | 480  | 106 | 16 | 60  | 130 | 510  | 725  | 600  | 55  | 230  |
| 50T       | 350       | 330 | 27 | 550  | 122 | 16 | 70  | 160 | 600  | 810  | 700  | 66  | 350  |
| 70T       | 400       | 380 | 30 | 610  | 140 | 23 | 80  | 190 | 680  | 900  | 800  | 74  | 530  |
| 100T      | 450       | 410 | 35 | 720  | 157 | 25 | 90  | 270 | 680  | 1180 | 1000 | 74  | 893  |
| 150T      | 630       | 510 | 40 | 880  | 192 | 29 | 100 | 340 | 1010 | 1440 | 1220 | 91  | 1450 |
| 200T      | 750       | 550 | 43 | 1030 | 227 | 39 | 110 | 410 | 1240 | 1700 | 1440 | 101 | 2230 |

## BOLLARD - TYPE STAG HORN



| Model No. | Dimensions (mm) |     |     |     |     |    |     |     |     |     |     |     |     |     | Bolt Size | Bolt Length | Qty. |
|-----------|-----------------|-----|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----------|-------------|------|
|           | A               | B   | C   | D   | E   | F  | G   | H   | I   | J   | K   | L   | M   | N   |           |             |      |
| 10T       | 41              | 291 | 348 | 381 | 330 | 44 | -   | -   | 243 | 103 | -   | -   | 291 | 140 | M24       | 450         | 4    |
| 15T       | 45              | 320 | 394 | 419 | 363 | 49 | -   | -   | 287 | 114 | -   | -   | 320 | 154 | M24       | 450         | 4    |
| 20T       | 49              | 349 | 430 | 442 | 391 | 49 | -   | 234 | 335 | 0   | 159 | -   | 349 | 160 | M24       | 450         | 6    |
| 30T       | 66              | 392 | 483 | 497 | 429 | 51 | -   | 263 | 377 | 0   | 179 | -   | 393 | 180 | M30       | 450         | 5    |
| 50T       | 69              | 419 | 616 | 530 | 457 | 55 | -   | 281 | 402 | 0   | 191 | -   | 419 | 192 | M36       | 600         | 5    |
| 75T       | 71              | 469 | 627 | 645 | 556 | 67 | -   | 287 | 459 | 120 | 250 | -   | 509 | 233 | M42       | 600         | 6    |
| 100T      | 81              | 559 | 717 | 737 | 636 | 76 | 292 | 484 | 559 | 0   | 195 | 291 | 532 | 267 | M42       | 600         | 7    |
| 125T      | 90              | 616 | 788 | 810 | 690 | 84 | 321 | 532 | 615 | 0   | 215 | 320 | 640 | 293 | M48       | 750         | 7    |
| 150T      | 99              | 671 | 880 | 884 | 762 | 91 | 351 | 541 | 671 | 0   | 235 | 349 | 698 | 320 | M48       | 750         | 7    |
| 200T      | 102             | 699 | 896 | 921 | 794 | 95 | 333 | 543 | 679 | 119 | 299 | 365 | 727 | 333 | M56       | 915         | 8    |

BOLLARD - T-HEAD



| Model No. | Dimensions (mm) |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Bolt Size | Bolt Length | Qty. |
|-----------|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------|-------------|------|
|           | A               | B   | C   | D   | E   | F   | G   | H   | I   | J   | K   | L   | M   | N   |     |           |             |      |
| MT10      | 47              | 199 | 305 | 381 | 330 | 44  | -   | -   | 243 | 103 | -   | -   | 292 | 169 | M24 | 460       | 4           |      |
| MT15      | 52              | 219 | 335 | 419 | 363 | 49  | -   | -   | 307 | 114 | -   | -   | 321 | 208 | M24 | 460       | 4           |      |
| MT20      | 54              | 240 | 351 | 435 | 380 | 51  | -   | 232 | 329 | 0   | 152 | -   | 336 | 217 | M24 | 460       | 5           |      |
| MT30      | 57              | 250 | 366 | 457 | 396 | 53  | -   | 242 | 343 | 0   | 159 | -   | 351 | 225 | M30 | 460       | 5           |      |
| MT60      | 70              | 308 | 451 | 564 | 489 | 65  | -   | 266 | 423 | 0   | 196 | -   | 432 | 279 | M36 | 600       | 5           |      |
| MT75      | 80              | 354 | 518 | 648 | 561 | 76  | -   | 298 | 463 | 105 | 241 | -   | 497 | 321 | M42 | 600       | 6           |      |
| MT100     | 80              | 419 | 610 | 762 | 660 | 89  | 305 | 406 | 572 | 0   | 195 | 291 | 584 | 377 | M42 | 600       | 7           |      |
| MT125     | 87              | 458 | 671 | 838 | 726 | 98  | 335 | 546 | 629 | 0   | 215 | 320 | 643 | 415 | M48 | 750       | 7           |      |
| MT150     | 87              | 492 | 719 | 899 | 779 | 105 | 360 | 566 | 674 | 0   | 231 | 343 | 689 | 445 | M48 | 750       | 7           |      |
| MT200     | 97              | 521 | 762 | 952 | 826 | 111 | 349 | 559 | 684 | 119 | 299 | 365 | 730 | 472 | M56 | 915       | 8           |      |





## MOORING CONNECTOR - H-LINKS

### H-Links - Forged and Plate Styles

Oceanside Equipment is the world leader in the design and manufacture of mooring H-links. With many high-profile projects Oceanside has worked closely with its client to complete and innovate connecting components for deep water moorings. Many of these projects span over several years from concept to installation. The experience we have acquired is used in the design and customization of the Links to improve the installation and in-service requirements of our clients. The deep-water industry has evolved over the years with new standards and class requirements. Many of these moorings have a service life of 20 years to 40 years. Oceanside has worked with clients and Class with engineering studies and

full size testing to confirm the inner workings of the design and features of our links. The traceability of our components begins at the ladle steel pour, followed and tested at many stages throughout production. Project specific ITP and MPS are prepared for full compliance to client and class requirements. The final load testing is done with our 3000 te purpose built test bed.

## Project – Reference List



|                                |          |
|--------------------------------|----------|
| •Ocean Confidence              | 730 te   |
| •MadDog                        | 1,895 te |
| •Red Hawk                      | 1,246 te |
| •ATP Rowan Midland             | 602 te   |
| •Thunderhorse                  | 1,386 te |
| •Independence Hub              | 1,527 te |
| •Tahiti                        | 1,875 te |
| •BlindFaith                    | 1,665 te |
| •Balmoral FPV                  |          |
| •Triton FPSO                   |          |
| •Kikeh                         | 1,441 te |
| •Mirage                        | 1,501 te |
| •ThunderHawk                   | 1,964 te |
| •West Berani at Tombua Landana |          |
| •Anasuria FPSO                 |          |
| •Exxon Balder                  |          |
| •Oxy Petroleum FPSO            |          |
| •Technip Lucius                | 2,131 te |
| •Chervon Jack St Malo          | 2,558 te |
| •GulfStar 1                    | 1,501 te |
| •Heidelberg                    | 2,131 te |
| •Asta Hansteen                 | 2,437 te |
| •Appomattox                    | 2,632 te |

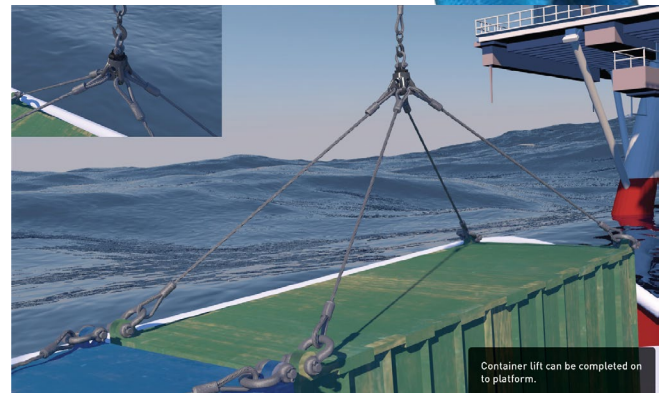
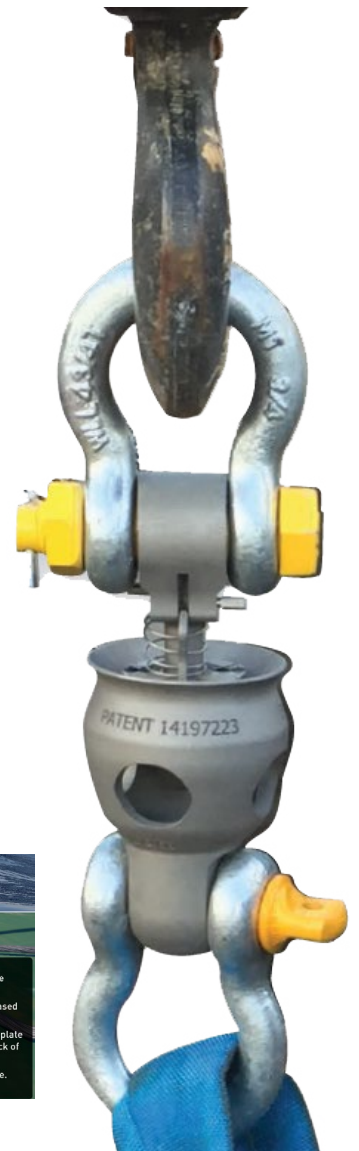
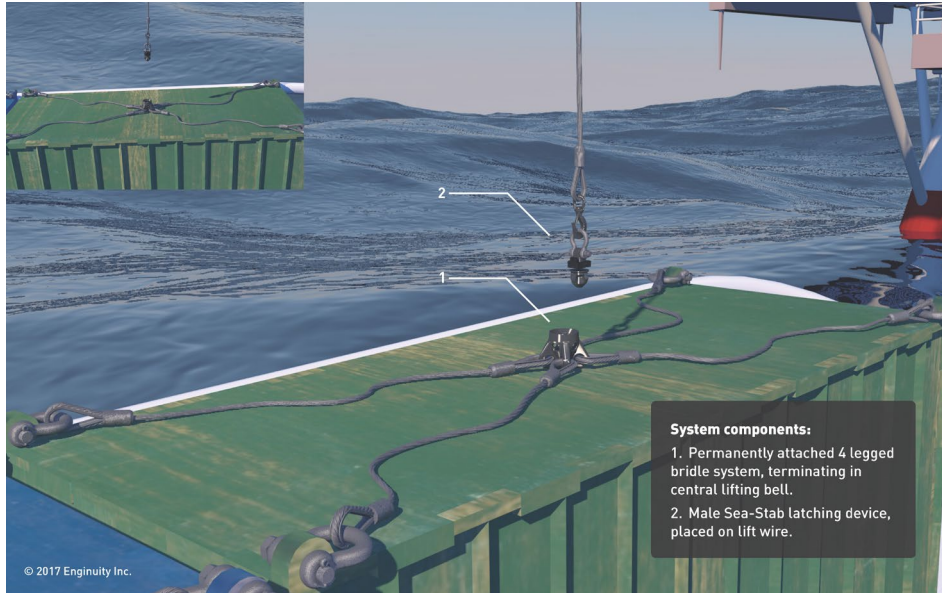
602 to 2632te MBL



## CONTAINER LIFTING - SEA-STAB

### Introducing Sea-Stab

A rapidly deployed, preset, re-usable, high-load connector, container latching and lifting system. Innovative, 'hands free' cargo lifting connection in a dynamic environment.



# PERMANENT MOORING CONNECTIONS MADE SIMPLE

# SEAStab™



Connects in Seconds.  
Stays for Life.



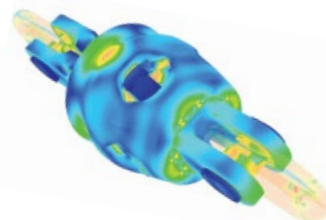
Female and male components with optional padeye

## A new subsea mooring connector that's lighter, simpler, stronger and more cost effective than traditional 'ball and taper' technology

Whether you're installing a pre-lay for a MODU, a new spread for an offloading system or replacing a line on an FPSO, SEA-Stab™ from Engenuity offers simple, cost-effective and rapid connection. Designed to be stronger than any equivalent sized chain, with a fully scalable design allowing for working loads up to 30,000kN.

SEA-Stab™ outperforms traditional permanent or re-connectable technologies.

- Zero deformation at full chain MBL, ensuring connector remains 'Truly' reconnectable
- Cost effective design reduces capital cost
- Self-centers during deployment with wide approach angles, reducing installation costs
- Fully inspectable during installation and throughout life, ensuring 'fitness for purpose'
- Only 5 Moving parts with no dissimilar materials reducing corrosion risk
- Configurable coupling reduces need for additional components during hook-up



Finite Element Analysis showing connector at chain break load



Design Approved by:



Patent No. US 9,488,203 B2 • © Copyright 2017 Engenuity Inc. • [www.sea-stab.com](http://www.sea-stab.com) • +1.902.431.7931



# SLINGS

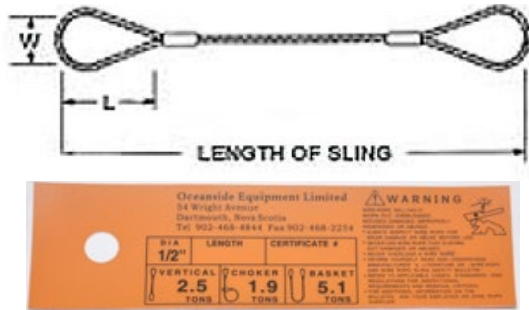
|                                    |           |
|------------------------------------|-----------|
| Wire Rope Slings - Bright.....     | 217 - 218 |
| Wire Rope Slings - Galvanized..... | 219 - 221 |
| Wire Rope Sling Chart.....         | 222 - 223 |
| Web Slings.....                    | 224 - 225 |
| Polyester Webbing.....             | 226       |
| Round Slings.....                  | 227 - 229 |
| Twin Path .....                    | 230       |



## SLING - WIRE ROPE, BRIGHT, WITH A1 LIGHT LUBE

### 1/2", 5/8", 3/4", 7/8"

Diameter of Wire Rope vs. Standard length for Pricing  
(5:1 by design API spec. 9a table 3.7)



| Length<br>(ft)        | 1/2"           |             | 5/8"           |             | 3/4"           |             | 7/8"           |             |
|-----------------------|----------------|-------------|----------------|-------------|----------------|-------------|----------------|-------------|
|                       | Price /<br>ea. | Part #      | Price /<br>ea. | Part #      | Price /<br>ea. | Part #      | Price /<br>ea. | Part #      |
| 3                     | 20.18          | SE-B-1/2X3  | 36.45          | SE-B-5/8X3  |                |             |                |             |
| 4                     | 22.38          | SE-B-1/2X4  | 39.73          | SE-B-5/8X4  | 58.43          | SE-B-3/4X4  | 95.58          | SE-B-7/8X4  |
| 5                     | 24.57          | SE-B-1/2X5  | 43.01          | SE-B-5/8X5  | 62.98          | SE-B-3/4X5  | 101.81         | SE-B-7/8X5  |
| 6                     | 26.76          | SE-B-1/2X6  | 46.29          | SE-B-5/8X6  | 67.54          | SE-B-3/4X6  | 108.04         | SE-B-7/8X6  |
| 7                     | 28.96          | SE-B-1/2X7  | 49.58          | SE-B-5/8X7  | 72.10          | SE-B-3/4X7  | 114.28         | SE-B-7/8X7  |
| 8                     | 31.15          | SE-B-1/2X8  | 52.85          | SE-B-5/8X8  | 76.65          | SE-B-3/4X8  | 120.51         | SE-B-7/8X8  |
| 9                     | 33.34          | SE-B-1/2X9  | 56.14          | SE-B-5/8X9  | 81.21          | SE-B-3/4X9  | 126.74         | SE-B-7/8X9  |
| 10                    | 35.54          | SE-B-1/2X10 | 59.41          | SE-B-5/8X10 | 85.76          | SE-B-3/4X10 | 132.97         | SE-B-7/8X10 |
| 11                    | 37.72          | SE-B-1/2X11 | 62.69          | SE-B-5/8X11 | 90.32          | SE-B-3/4X11 | 139.21         | SE-B-7/8X11 |
| 12                    | 39.92          | SE-B-1/2X12 | 65.98          | SE-B-5/8X12 | 94.88          | SE-B-3/4X12 | 145.45         | SE-B-7/8X12 |
| 15                    | 46.50          | SE-B-1/2X15 | 75.81          | SE-B-5/8X15 | 108.54         | SE-B-3/4X15 | 164.15         | SE-B-7/8X15 |
| 20                    | 57.46          | SE-B-1/2X20 | 92.22          | SE-B-5/8X20 | 131.32         | SE-B-3/4X20 | 195.30         | SE-B-7/8X20 |
| Std. eye size<br>(in) | 4 x 8          |             | 5 x 10         |             | 6 x 12         |             | 7 x 14         |             |
| WLL (T)               | 2.5            |             | 3.9            |             | 5.6            |             | 7.6            |             |
| Wt / ft (lb)          | 0.46           |             | 0.72           |             | 1.04           |             | 1.42           |             |

\*All wire rope slings made with EIPS, IWRC Bright Wire rope with A1 light lube with steel ferrule and Flemish roll splice complete with tag showing size, length, WLL and manufacture. Rated in Imperial Ton(s) (2000 lb).

## SLING - WIRE ROPE, BRIGHT, WITH A1 LIGHT LUBE 1", 1-1/8", 1-1/4"

Diameter of Wire Rope vs. Standard length for Pricing  
(5:1 by design API spec. 9a table 3.7)



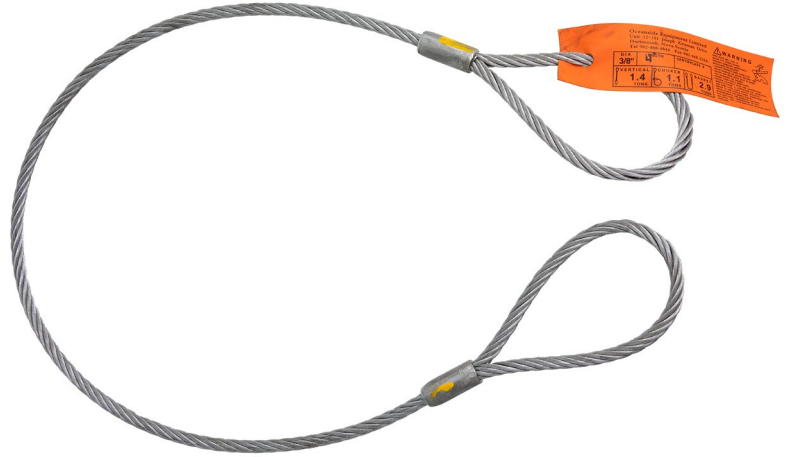
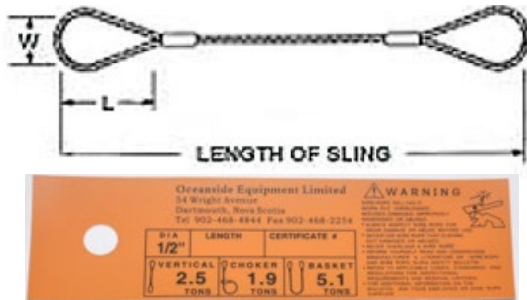
| Length<br>(ft)        | 1"          |           | 1-1/8"      |               | 1-1/4"      |               |
|-----------------------|-------------|-----------|-------------|---------------|-------------|---------------|
|                       | Price / ea. | Part #    | Price / ea. | Part #        | Price / ea. | Part #        |
| 3                     | -           | -         | -           | -             | -           | -             |
| 4                     | -           | -         | -           | -             | -           | -             |
| 5                     | 139.02      | SE-B-1X5  | 187.84      | SE-B-1-1/8X5  | -           | -             |
| 6                     | 147.17      | SE-B-1X6  | 198.50      | SE-B-1-1/8X6  | 259.04      | SE-B-1-1/4X6  |
| 7                     | 155.32      | SE-B-1X7  | 209.15      | SE-B-1-1/8X7  | 272.05      | SE-B-1-1/4X7  |
| 8                     | 163.47      | SE-B-1X8  | 219.81      | SE-B-1-1/8X8  | 285.05      | SE-B-1-1/4X8  |
| 9                     | 171.63      | SE-B-1X9  | 230.46      | SE-B-1-1/8X9  | 298.06      | SE-B-1-1/4X9  |
| 10                    | 179.78      | SE-B-1X10 | 241.11      | SE-B-1-1/8X10 | 311.06      | SE-B-1-1/4X10 |
| 11                    | 187.93      | SE-B-1X11 | 251.77      | SE-B-1-1/8X11 | 324.07      | SE-B-1-1/4X11 |
| 12                    | 196.09      | SE-B-1X12 | 262.42      | SE-B-1-1/8X12 | 337.07      | SE-B-1-1/4X12 |
| 15                    | 220.55      | SE-B-1X15 | 294.39      | SE-B-1-1/8X15 | 376.08      | SE-B-1-1/4X15 |
| 20                    | 261.31      | SE-B-1X20 | 347.66      | SE-B-1-1/8X20 | 441.10      | SE-B-1-1/4X20 |
| Std. eye size<br>(in) | 8 x 16      |           | 9 x 18      |               | 10 x 20     |               |
| WLL (T)               | 9.8         |           | 12          |               | 15          |               |
| Wt / ft (lb)          | 1.85        |           | 2.34        |               | 2.89        |               |

\*All wire rope slings made with EIPS, IWRC Bright Wire rope with A1 light lube with steel ferrule and Flemish roll splice complete with tag showing size, length, WLL and manufacture. Rated in Imperial Ton(s) (2000 lb).



## SLING - WIRE ROPE, GALVANIZED 1/4", 3/8", 1/2", 5/8"

Diameter of Wire Rope vs. Standard length for Pricing  
(5:1 by design API spec. 9a table 3.7)

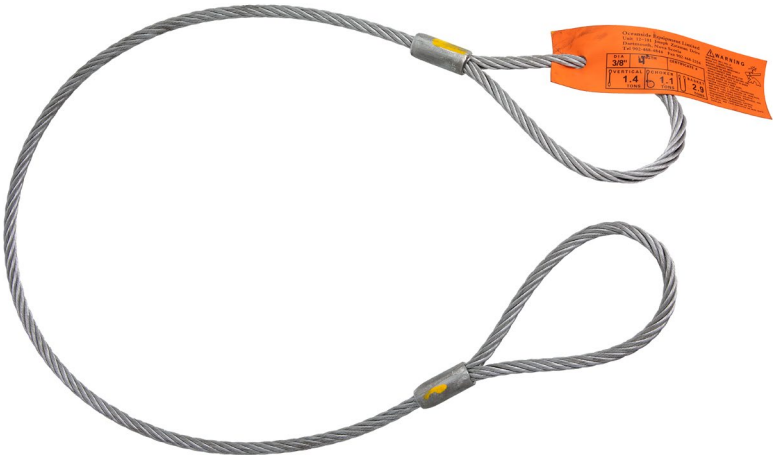


| Length<br>(ft)     | 1/4"           |             | 3/8"           |             | 1/2"           |             | 5/8"           |             |
|--------------------|----------------|-------------|----------------|-------------|----------------|-------------|----------------|-------------|
|                    | Price /<br>ea. | Part #      | Price /<br>ea. | Part #      | Price /<br>ea. | Part #      | Price /<br>ea. | Part #      |
| 2                  | 8.21           | SE-G-1/4X2  | 10.94          | SE-G-3/8X2  | -              | -           | -              | -           |
| 3                  | 9.19           | SE-G-1/4X3  | 12.33          | SE-G-3/8X3  | 22.53          | SE-G-1/2X3  | 40.86          | SE-G-5/8X3  |
| 4                  | 10.17          | SE-G-1/4X4  | 13.71          | SE-G-3/8X4  | 25.19          | SE-G-1/2X4  | 44.86          | SE-G-5/8X4  |
| 5                  | 11.16          | SE-G-1/4X5  | 15.11          | SE-G-3/8X5  | 27.85          | SE-G-1/2X5  | 48.88          | SE-G-5/8X5  |
| 6                  | 12.14          | SE-G-1/4X6  | 16.49          | SE-G-3/8X6  | 30.51          | SE-G-1/2X6  | 52.89          | SE-G-5/8X6  |
| 7                  | 13.12          | SE-G-1/4X7  | 17.89          | SE-G-3/8X7  | 33.18          | SE-G-1/2X7  | 56.91          | SE-G-5/8X7  |
| 8                  | 14.11          | SE-G-1/4X8  | 19.27          | SE-G-3/8X8  | 35.84          | SE-G-1/2X8  | 60.92          | SE-G-5/8X8  |
| 9                  | 15.09          | SE-G-1/4X9  | 20.66          | SE-G-3/8X9  | 38.50          | SE-G-1/2X9  | 64.94          | SE-G-5/8X9  |
| 10                 | 16.07          | SE-G-1/4X10 | 22.05          | SE-G-3/8X10 | 41.16          | SE-G-1/2X10 | 68.95          | SE-G-5/8X10 |
| 11                 | 17.06          | SE-G-1/4X11 | 23.44          | SE-G-3/8X11 | 43.82          | SE-G-1/2X11 | 72.97          | SE-G-5/8X11 |
| 12                 | 18.04          | SE-G-1/4X12 | 24.83          | SE-G-3/8X12 | 46.50          | SE-G-1/2X12 | 76.98          | SE-G-5/8X12 |
| 15                 | 20.99          | SE-G-1/4X15 | 28.99          | SE-G-3/8X15 | 54.48          | SE-G-1/2X15 | 89.02          | SE-G-5/8X15 |
| 20                 | 25.90          | SE-G-1/4X20 | 35.94          | SE-G-3/8X20 | 67.79          | SE-G-1/2X20 | 109.09         | SE-G-5/8X20 |
| Std. eye size (in) | 2 x 4          |             | 3 x 6          |             | 4 x 8          |             | 5 x 10         |             |
| WLL (T)            | 0.65           |             | 1.4            |             | 2.5            |             | 3.9            |             |
| Wt. / ft (lb)      | 0.116          |             | 0.26           |             | 0.46           |             | 0.72           |             |

\*All wire rope slings made with EIPS, IWRC Galvanized Wire rope with A1 steel ferrule and Flemish roll splice complete with tag showing size, length, WLL and manufacture. Rated in Imperial Ton(s) (2000 lb)

# SLING - WIRE ROPE, GALVANIZED 3/4", 7/8", 1", 1-1/8"

Diameter of Wire Rope vs. Standard length for Pricing  
(5:1 by design API spec. 9a table 3.7)



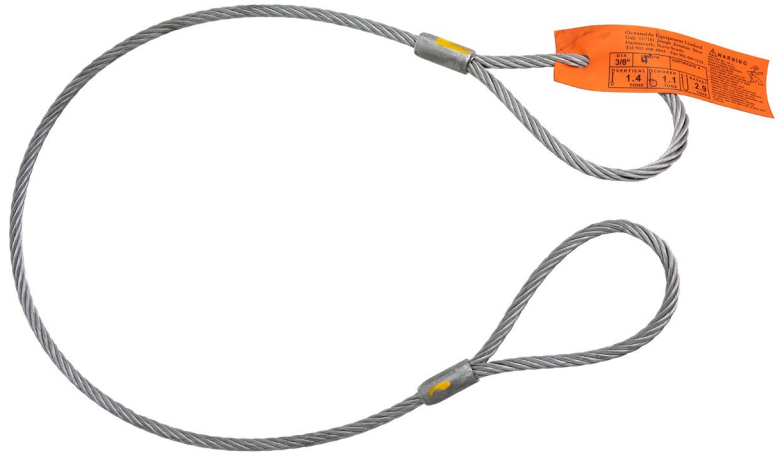
| Length<br>(ft)     | 3/4"        |             | 7/8"        |             | 1"          |           | 1-1/8"      |               |
|--------------------|-------------|-------------|-------------|-------------|-------------|-----------|-------------|---------------|
|                    | Price / ea. | Part #      | Price / ea. | Part #      | Price / ea. | Part #    | Price / ea. | Part #        |
| 4                  | 65.72       | SE-G-3/4X4  | 107.16      | SE-G-7/8X4  | -           | -         | -           | -             |
| 5                  | 71.31       | SE-G-3/4X5  | 114.84      | SE-G-7/8X5  | 156.76      | SE-G-1X5  | 212.22      | SE-G-1-1/8X5  |
| 6                  | 76.91       | SE-G-3/4X6  | 122.53      | SE-G-7/8X6  | 166.78      | SE-G-1X6  | 225.31      | SE-G-1-1/8X6  |
| 7                  | 82.50       | SE-G-3/4X7  | 130.21      | SE-G-7/8X7  | 176.80      | SE-G-1X7  | 238.40      | SE-G-1-1/8X7  |
| 8                  | 88.10       | SE-G-3/4X8  | 137.90      | SE-G-7/8X8  | 186.82      | SE-G-1X8  | 251.50      | SE-G-1-1/8X8  |
| 9                  | 93.70       | SE-G-3/4X9  | 145.57      | SE-G-7/8X9  | 196.84      | SE-G-1X9  | 264.60      | SE-G-1-1/8X9  |
| 10                 | 99.29       | SE-G-3/4X10 | 153.25      | SE-G-7/8X10 | 206.87      | SE-G-1X10 | 277.68      | SE-G-1-1/8X10 |
| 11                 | 104.90      | SE-G-3/4X11 | 160.94      | SE-G-7/8X11 | 216.90      | SE-G-1X11 | 290.78      | SE-G-1-1/8X11 |
| 12                 | 110.48      | SE-G-3/4X12 | 168.62      | SE-G-7/8X12 | 226.90      | SE-G-1X12 | 303.90      | SE-G-1-1/8X12 |
| 15                 | 127.27      | SE-G-3/4X15 | 191.66      | SE-G-7/8X15 | 256.96      | SE-G-1X15 | 343.15      | SE-G-1-1/8X15 |
| 20                 | 155.24      | SE-G-3/4X20 | 230.07      | SE-G-7/8X20 | 307.06      | SE-G-1X20 | 408.61      | SE-G-1-1/8X20 |
| Std. eye size (in) | 6 x 12      |             | 7 x 14      |             | 8 x 16      |           | 9 x 18      |               |
| WLL (T)            | 5.6         |             | 7.6         |             | 9.8         |           | 12          |               |
| Wt. / ft (lb)      | 1.04        |             | 1.42        |             | 1.85        |           | 2.34        |               |

\*All wire rope slings made with EIPS, IWRC Galvanized Wire rope with A1 steel ferrule and Flemish roll splice complete with tag showing size, length, WLL and manufacture. Rated in Imperial Ton(s) (2000 lb)

## SLING - WIRE ROPE, GALVANIZED

### 1-1/4", 1-1/2", 1-3/4", 2", 2-1/4", 2-1/2"

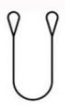
Diameter of Wire Rope vs. Standard length for Pricing  
(5:1 by design API spec. 9a table 3.7)



| Length<br>(ft)     | 1-1/4"         |               | 1-1/2"         |                      | 1-3/4"                | 2"                    | 2-1/4"                | 2-1/2"                |
|--------------------|----------------|---------------|----------------|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|                    | Price /<br>ea. | Part #        | Price /<br>ea. | Part #               | Price / ea.           | Price / ea.           | Price / ea.           | Price / ea.           |
| 6                  | 293.30         | SE-G-1-1/4X6  | 441.00         | SE-G-1-1/2X6         | Pricing on<br>Request | Pricing on<br>Request | Pricing on<br>Request | Pricing on<br>Request |
| 7                  | 309.27         | SE-G-1-1/4X7  | 463.43         | SE-G-1-1/2X7         |                       |                       |                       |                       |
| 8                  | 325.26         | SE-G-1-1/4X8  | 485.90         | <b>SE-G-1-1/2X8</b>  |                       |                       |                       |                       |
| 9                  | 341.24         | SE-G-1-1/4X9  | 508.33         | SE-G-1-1/2X9         |                       |                       |                       |                       |
| 10                 | 357.22         | SE-G-1-1/4X10 | 530.80         | SE-G-1-1/2X10        |                       |                       |                       |                       |
| 11                 | 373.20         | SE-G-1-1/4X11 | 553.23         | SE-G-1-1/2X11        |                       |                       |                       |                       |
| 12                 | 389.19         | SE-G-1-1/4X12 | 575.70         | <b>SE-G-1-1/2X12</b> |                       |                       |                       |                       |
| 15                 | 437.14         | SE-G-1-1/4X15 | 643.03         | <b>SE-G-1-1/2X15</b> |                       |                       |                       |                       |
| 20                 | 517.10         | SE-G-1-1/4X20 | 755.28         | <b>SE-G-1-1/2X20</b> |                       |                       |                       |                       |
| Std. eye size (in) | 10 x 20        |               | 12 x 24        |                      | 14 x 28               | 16 x 32               | 18 x 36               | 20 x 40               |
| WLL (T)            | 15             |               | 21             |                      | 28                    | 37                    | 44                    | 54                    |
| Wt. / ft (lb)      | 2.89           |               | 4.16           |                      | 5.67                  | 7.39                  | 9.36                  | 11.6                  |

\*All wire rope slings made with EIPS, IWRC Galvanized Wire rope with A1 steel ferrule and Flemish roll splice complete with tag showing size, length, WLL and manufacture. Rated in Imperial Ton(s) (2000 lb)

## WIRE ROPE SLING CHARTS

| Wire Rope Dia. (in) | Single Leg                                                                        |                                                                                   |                                                                                   | 2 Slings or Basket Hitch                                                          |                                                                                   |                                                                                   | 2 Sling Basket Hitch                                                              |                                                                                    |                                                                                     | 2 Sling Choker Hitch                                                                |                                                                                     |                                                                                     |
|---------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                     | Vertical                                                                          | Choker                                                                            | V.Basket                                                                          | Horizontal                                                                        |                                                                                   |                                                                                   | Horizontal                                                                        |                                                                                    |                                                                                     | Horizontal                                                                          |                                                                                     |                                                                                     |
|                     |  |  |  |  |  |  |  |  |  |  |  |  |
|                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| 1/4"                | 0.65                                                                              | 0.48                                                                              | 1.3                                                                               | 1.1                                                                               | 0.91                                                                              | 0.65                                                                              | 2.3                                                                               | 1.8                                                                                | 1.3                                                                                 | 0.82                                                                                | 0.7                                                                                 | 0.48                                                                                |
| 5/16"               | 1.0                                                                               | 0.74                                                                              | 2.0                                                                               | 1.7                                                                               | 1.4                                                                               | 1.0                                                                               | 3.5                                                                               | 2.8                                                                                | 2.0                                                                                 | 1.3                                                                                 | 1.1                                                                                 | 0.74                                                                                |
| 3/8"                | 1.4                                                                               | 1.1                                                                               | 2.8                                                                               | 2.5                                                                               | 2.0                                                                               | 1.4                                                                               | 4.8                                                                               | 4.0                                                                                | 2.8                                                                                 | 1.8                                                                                 | 1.5                                                                                 | 1.1                                                                                 |
| 7/16"               | 1.9                                                                               | 1.4                                                                               | 3.8                                                                               | 3.4                                                                               | 2.7                                                                               | 1.9                                                                               | 6.6                                                                               | 5.4                                                                                | 3.8                                                                                 | 2.5                                                                                 | 2.0                                                                                 | 1.4                                                                                 |
| 1/2"                | 2.5                                                                               | 1.9                                                                               | 5.0                                                                               | 4.4                                                                               | 3.6                                                                               | 2.5                                                                               | 8.7                                                                               | 7.1                                                                                | 5.0                                                                                 | 3.2                                                                                 | 2.7                                                                                 | 1.9                                                                                 |
| 9/16"               | 3.2                                                                               | 2.4                                                                               | 6.4                                                                               | 5.5                                                                               | 4.5                                                                               | 3.2                                                                               | 11                                                                                | 9.0                                                                                | 6.4                                                                                 | 4.1                                                                                 | 3.4                                                                                 | 2.4                                                                                 |
| 5/8"                | 3.9                                                                               | 2.9                                                                               | 7.8                                                                               | 6.8                                                                               | 5.5                                                                               | 3.9                                                                               | 14                                                                                | 11                                                                                 | 7.8                                                                                 | 5.0                                                                                 | 4.1                                                                                 | 2.9                                                                                 |
| 3/4"                | 5.6                                                                               | 4.1                                                                               | 11                                                                                | 9.7                                                                               | 7.9                                                                               | 5.6                                                                               | 19                                                                                | 16                                                                                 | 11                                                                                  | 7.1                                                                                 | 5.9                                                                                 | 4.1                                                                                 |
| 7/8"                | 7.6                                                                               | 5.6                                                                               | 15                                                                                | 13                                                                                | 11                                                                                | 7.6                                                                               | 26                                                                                | 22                                                                                 | 15                                                                                  | 9.7                                                                                 | 8.1                                                                                 | 5.6                                                                                 |
| 1"                  | 9.8                                                                               | 7.2                                                                               | 20                                                                                | 17                                                                                | 14                                                                                | 9.8                                                                               | 34                                                                                | 28                                                                                 | 20                                                                                  | 13                                                                                  | 10                                                                                  | 7.2                                                                                 |
| 1-1/8"              | 12                                                                                | 9.7                                                                               | 24                                                                                | 21                                                                                | 17                                                                                | 12                                                                                | 42                                                                                | 33                                                                                 | 24                                                                                  | 16                                                                                  | 13                                                                                  | 9.1                                                                                 |
| 1-1/4"              | 15                                                                                | 11                                                                                | 30                                                                                | 26                                                                                | 21                                                                                | 15                                                                                | 52                                                                                | 42                                                                                 | 30                                                                                  | 19                                                                                  | 16                                                                                  | 11                                                                                  |
| 1-3/8"              | 18                                                                                | 13                                                                                | 36                                                                                | 31                                                                                | 25                                                                                | 18                                                                                | 62                                                                                | 51                                                                                 | 36                                                                                  | 23                                                                                  | 19                                                                                  | 13                                                                                  |
| 1-1/2"              | 21                                                                                | 16                                                                                | 42                                                                                | 37                                                                                | 30                                                                                | 21                                                                                | 72                                                                                | 59                                                                                 | 42                                                                                  | 28                                                                                  | 22                                                                                  | 16                                                                                  |
| 1-3/4"              | 28                                                                                | 21                                                                                | 56                                                                                | 49                                                                                | 40                                                                                | 28                                                                                | 97                                                                                | 79                                                                                 | 56                                                                                  | 37                                                                                  | 29                                                                                  | 21                                                                                  |
| 2"                  | 37                                                                                | 28                                                                                | 74                                                                                | 63                                                                                | 52                                                                                | 37                                                                                | 128                                                                               | 104                                                                                | 74                                                                                  | 48                                                                                  | 39                                                                                  | 28                                                                                  |

| Wire<br>Rope Dia.<br>(in) | 3 and 4 Leg Wire Rope Bridles                                                     |                                                                                   |                                                                                     |
|---------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                           |  |                                                                                   |                                                                                     |
|                           | Horizontal                                                                        |                                                                                   |                                                                                     |
|                           |  |  |  |
| 1/4"                      | 1.7                                                                               | 1.4                                                                               | 0.97                                                                                |
| 5/16"                     | 2.6                                                                               | 2.1                                                                               | 1.5                                                                                 |
| 3/8"                      | 3.7                                                                               | 3.0                                                                               | 2.2                                                                                 |
| 7/16"                     | 5.0                                                                               | 4.1                                                                               | 2.9                                                                                 |
| 1/2"                      | 6.6                                                                               | 5.4                                                                               | 3.8                                                                                 |
| 9/16"                     | 8.3                                                                               | 6.8                                                                               | 4.8                                                                                 |
| 5/8"                      | 10                                                                                | 8.3                                                                               | 5.9                                                                                 |
| 3/4"                      | 15                                                                                | 12                                                                                | 8.4                                                                                 |
| 7/8"                      | 20                                                                                | 16                                                                                | 11                                                                                  |
| 1"                        | 26                                                                                | 21                                                                                | 15                                                                                  |
| 1-1/8"                    | 31                                                                                | 26                                                                                | 18                                                                                  |
| 1-1/4"                    | 38                                                                                | 31                                                                                | 22                                                                                  |
| 1-3/8"                    | 46                                                                                | 38                                                                                | 27                                                                                  |
| 1-1/2"                    | 55                                                                                | 45                                                                                | 32                                                                                  |
| 1-3/4"                    | 74                                                                                | 60                                                                                | 42                                                                                  |
| 2"                        | 95                                                                                | 78                                                                                | 55                                                                                  |

- Rated load for 6 x19 or 6 x 36 classification.
- Extra Improved Plow Steel (EIPS).
- Independent Wire Rope Core (IWRC).
- Wire Rope - Design Factor of 5:1.
- Loads rated in US/Short Tons (2,000 lb).
- Basket Hitch based on D/d Ratio of 25.
- Flemish Ferrule Eye Splice.
- Values rounded for convenience.



### Sling Considerations:

Polyester web slings offer several features which promote their popularity among riggers. They are often used when highly polished, fragile or delicate loads must be lifted. The softness of the web will lessen marring, or scratch loads, while its flexibility assures a firm grip around the item being lifted. The light weight of the material, combined with flexibility allows the slings to be quickly & safely handled by riggers.

**Identification / Marking:**

**Additional Identification:**

**Identification Included (but not Required):**[illegible]

### Manufacturing Information:

Reference: WSTDA-WB-1:2010

**Design/Safety Factor: 5:1**

### Recommended Operating Practice:



## SLING - WEB, POLYESTER

| Length<br>(ft) | 1", 1-ply type 3 |          | 1", 2-ply type 4 |             | 2", 2-ply type 4 |          |
|----------------|------------------|----------|------------------|-------------|------------------|----------|
|                | Price / ea.      | Part #   | Price / ea.      | Part #      | Price / ea.      | Part #   |
| 2              | 4.79             | 8-901x2  | 5.22             | 8-901X2-2P  | 7.61             | 8-902x2  |
| 4              | 7.56             | 8-901x4  | 7.70             | 8-901X4-2P  | 11.82            | 8-902x4  |
| 6              | 8.80             | 8-901x6  | 10.10            | 8-901X6-2P  | 16.12            | 8-902x6  |
| 8              | 10.18            | 8-901x8  | 12.58            | 8-901X8-2P  | 20.34            | 8-902x8  |
| 10             | 11.81            | 8-901x10 | 15.07            | 8-901X10-2P | 24.56            | 8-902x10 |
| 12             | 13.30            | 8-901x12 | 17.42            | 8-901X12-2P | 28.80            | 8-902x12 |
| 15             |                  |          |                  |             | 35.25            | 8-902x15 |
| 16             |                  |          |                  |             | 37.32            | 8-902x16 |
| 18             |                  |          |                  |             | 41.57            | 8-902x18 |
| 20             |                  |          |                  |             | 45.85            | 8-902x20 |
| Eye size       | 10"              |          | 10"              |             | 10"              |          |
| Vertical       | 1600 lb          |          | 3100 lb          |             | 6200 lb          |          |
| Basket         | 3200 lb          |          | 6200 lb          |             | 12 400 lb        |          |
| Choker         | 1280 lb          |          | 2480 lb          |             | 4960 lb          |          |

| Length<br>(ft) | 3", 2-ply type 4 |          | 4", 2-ply type 4 |          | 6", 2-ply type 4 |          |
|----------------|------------------|----------|------------------|----------|------------------|----------|
|                | Price / ea.      | Part #   | Price / ea.      | Part #   | Price / ea.      | Part #   |
| 2              | 10.92            | 8-903x2  |                  |          |                  |          |
| 4              | 17.55            | 8-903x4  | 22.97            | 8-904x4  |                  |          |
| 6              | 24.17            | 8-903x6  | 31.82            | 8-904x6  |                  |          |
| 8              | 30.81            | 8-903x8  | 40.76            | 8-904x8  |                  |          |
| 10             | 37.40            | 8-903x10 | 49.65            | 8-904x10 | 104.77           | 8-906x10 |
| 12             | 44.05            | 8-903x12 | 58.54            | 8-904x12 |                  |          |
| 15             | 54.00            | 8-903x15 | 71.80            | 8-904x15 | 152.25           | 8-906x15 |
| 16             | 57.30            | 8-903x16 | 76.22            | 8-904x16 |                  |          |
| 18             | 63.97            | 8-903x18 | 85.12            | 8-904x18 |                  |          |
| 20             | 70.67            | 8-903x20 | 94.03            | 8-904x20 | 199.57           | 8-906x20 |
| 25             | 87.18            | 8-903x25 | 116.15           | 8-904x25 | 247.05           | 8-906x25 |
| 30             |                  |          | 138.37           | 8-904x30 | 294.52           | 8-906x30 |
| Eye size       | 12"              |          | 12"              |          | 18"              |          |
| Vertical       | 8800 lb          |          | 11 000 lb        |          | 16 500 lb        |          |
| Basket         | 17 600 lb        |          | 22 000 lb        |          | 33 000 lb        |          |
| Choker         | 7040 lb          |          | 8800 lb          |          | 13 200 lb        |          |



## SLING - WEBBING MATERIAL, POLYESTER

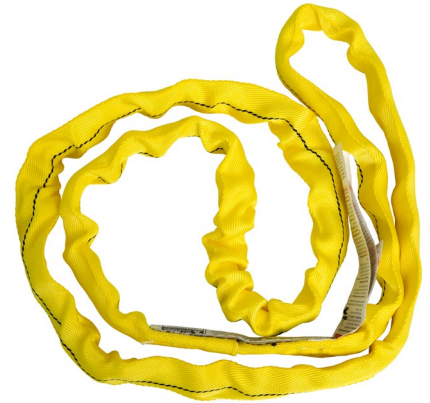


- 9800 lb Polyester Webbing.
- Yellow with black edge & blue stripe in the middle.

| Size (in) | Pallet Packaging<br>(44"x44"x40")<br>Qty (ft) | Price / ft. | Part Number         |
|-----------|-----------------------------------------------|-------------|---------------------|
| 1         | 26 250                                        | 0.35        | 190-1"POLYESTERWEB  |
| 2         | 13 125                                        | 0.72        | 190-2"POLYESTERWEB  |
| 3         | 9840                                          | 1.12        | 190-3"POLYESTERWEB  |
| 4         | 7710                                          | 1.50        | 190-4"POLYESTERWEB  |
| 6         | 5515                                          | 2.52        | 190-6"POLYESTERWEB  |
| 8         | 3545                                          | 3.47        | 190-8"POLYESTERWEB  |
| 10        | 2955                                          | 4.50        | 190-10"POLYESTERWEB |
| 12        | 2625                                          | 5.05        | 190-12"POLYESTERWEB |

| Size (in) | Roll Packaging<br>Qty (ft) | Price / ft. | Part Number              |
|-----------|----------------------------|-------------|--------------------------|
| 1         | 328.08                     | 0.35        | 190-1"X328'POLYESTERWEB  |
| 2         | 328.08                     | 0.72        | 190-2"X328'POLYESTERWEB  |
| 3         | 328.08                     | 1.12        | 190-3"X328'POLYESTERWEB  |
| 4         | 328.08                     | 1.50        | 190-4"X328'POLYESTERWEB  |
| 6         | 328.08                     | 2.52        | 190-6"X328'POLYESTERWEB  |
| 8         | 328.08                     | 3.47        | 190-8"X328'POLYESTERWEB  |
| 10        | 328.08                     | 4.50        | 190-10"X328'POLYESTERWEB |
| 12        | 328.08                     | 5.05        | 190-12"X328'POLYESTERWEB |

## SLING - ROUND, POLYESTER



| Polyester Round Slings Working Load Limits |             |                           |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                         |                           |
|--------------------------------------------|-------------|---------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------|---------------------------|
| Code                                       | Color       | Vertical<br>WLL in<br>(T) |  |  |  |  |  | Approx.<br>Dia.<br>(in) | Approx.<br>Wt./ft<br>(lb) |
|                                            |             |                           | Vertical                                                                            | Choker                                                                              | 90°<br>Basket<br>(lb)                                                               | 60°<br>Basket                                                                        | 45°<br>Basket                                                                         |                         |                           |
| OC-30                                      | Purple      | 1.5                       | 3000                                                                                | 2400                                                                                | 6000                                                                                | 5100                                                                                 | 4200                                                                                  | 0.75                    | 0.25                      |
| OC-60                                      | Green       | 3                         | 6000                                                                                | 4800                                                                                | 12 000                                                                              | 10 300                                                                               | 8400                                                                                  | 0.90                    | 0.40                      |
| OC-90                                      | Yellow      | 4.5                       | 9000                                                                                | 7200                                                                                | 18 000                                                                              | 15 500                                                                               | 12 600                                                                                | 1.00                    | 0.50                      |
| OC-140                                     | Red         | 7                         | 14 000                                                                              | 11 200                                                                              | 28 000                                                                              | 24 100                                                                               | 19 600                                                                                | 1.30                    | 0.85                      |
| OC-230                                     | Blue        | 11.5                      | 23 000                                                                              | 18 400                                                                              | 46 000                                                                              | 39 500                                                                               | 32 200                                                                                | 1.65                    | 1.25                      |
| OC-320                                     | Grey        | 16                        | 32 000                                                                              | 25 600                                                                              | 64 000                                                                              | 55 000                                                                               | 44 800                                                                                | 2.15                    | 1.75                      |
| OC-400                                     | Orange      | 20                        | 40 000                                                                              | 32 000                                                                              | 80 000                                                                              | 68 800                                                                               | 56 000                                                                                | 2.45                    | 2.25                      |
| OC-540                                     | Brown       | 27                        | 54 000                                                                              | 43 200                                                                              | 108 000                                                                             | 92 900                                                                               | 75 600                                                                                | 3.00                    | 2.75                      |
| OC-680                                     | Olive Green | 34                        | 68 000                                                                              | 54 400                                                                              | 136 000                                                                             | 117 000                                                                              | 95 200                                                                                | 3.25                    | 3.60                      |
| OC-900                                     | Black       | 45                        | 90 000                                                                              | 72 000                                                                              | 180 000                                                                             | 155 000                                                                              | 126 000                                                                               | 3.75                    | 4.10                      |
| OC-1000                                    | Black       | 50                        | 100 000                                                                             | 80 000                                                                              | 200 000                                                                             | 173 000                                                                              | 140 000                                                                               | 4.25                    | 4.75                      |

## SLING - ROUND, POLYESTER

### Sling Considerations:

Polyester round slings offer several notable characteristics including the following:

- Lightweight, flexible, and easy to handle and rig.
- Polyester roundsling elongation at rated capacity is approximately 3%, which is less than comparable nylon and polyester webbing slings.
- Wear points can be easily rotated to extend sling life.
- Polyester roundslings are easy to inspect.
- Polyester roundslings are less damaging on contacting load surfaces than metal type slings
- The exterior cover, aid in protecting the load bearing core yarn.

### Identification / Marking:

1. Three basic WLL hitches: (Vertical, Choker, Vertical Basket).
2. Length: Bearing point to bearing point.
3. Core type: Polyester fiber.
4. Name or trademark of manufacturer.
5. Manufacturer's code or stock number.

### Additional Identification:

6. Color coded, corresponding with WLL.
7. Includes warning labels for use and inspection with each new web sling

### Identification Included (but not Required):

8. Unique Serial No.



|                    |      |   |   |   |   |   |   |   |   |   |   |   |   |
|--------------------|------|---|---|---|---|---|---|---|---|---|---|---|---|
| INSPECTION<br>DATE | YEAR | J | F | M | A | M | J | J | A | S | O | N | D |
|                    |      |   |   |   |   |   |   |   |   |   |   |   |   |
|                    |      |   |   |   |   |   |   |   |   |   |   |   |   |
|                    |      |   |   |   |   |   |   |   |   |   |   |   |   |
|                    |      |   |   |   |   |   |   |   |   |   |   |   |   |
|                    |      |   |   |   |   |   |   |   |   |   |   |   |   |
|                    |      |   |   |   |   |   |   |   |   |   |   |   |   |
|                    |      |   |   |   |   |   |   |   |   |   |   |   |   |
|                    |      |   |   |   |   |   |   |   |   |   |   |   |   |
|                    |      |   |   |   |   |   |   |   |   |   |   |   |   |
|                    |      |   |   |   |   |   |   |   |   |   |   |   |   |
|                    |      |   |   |   |   |   |   |   |   |   |   |   |   |



Most slings are bagged individually.

### Manufacturing Information:

- The polyester core(s) is formed from one or more ends of continuous filament yarn, wound together in a plurality of turns. This yarn is continuous filament. The core(s) is uniformly wound to ensure even distribution of the load.
- The cover(s) is commonly the same fiber (polyester) type as the load bearing core(s) (polyester).
- Round Slings are manufactured in compliance with WSTDA-RS-1 and exceed ASME B30.9 requirements.

### Design/Safety Factor: 5:1

The sling design factor is based on destructive, laboratory controlled testing conditions, which will not be exactly duplicated during actual load conditions. Never load any sling in excess of its rated WLL. Rated in Imperial Ton(s) (2000 lb).

### Recommended Operating Practice:

See: WSTDA-RS-1, Ch 4.0, available on request. Reference: WSTDA-RS-1:2010.

### Note:

For "proper" proof loading, you need to "Milk" the jacket cover to the seam to prevent the jacket/cover from ripping.



## SLING - ROUND, POLYESTER

| Length<br>(ft) | OC-30       |           | OC-60       |           | OC-90       |           | OC-140      |            | OC-230      |            | OC-320      |            |
|----------------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|------------|-------------|------------|-------------|------------|
|                | Price / ea. | Part #    | Price / ea. | Part #    | Price / ea. | Part #    | Price / ea. | Part #     | Price / ea. | Part #     | Price / ea. | Part #     |
| 3              | 6.78        | 6-OC30X3  |             |           |             |           |             |            |             |            |             |            |
| 4              | 8.36        | 6-OC30X4  | 12.97       | 6-OC60X4  | 17.85       | 6-OC90X4  | 28.52       | 6-OC140X4  |             |            |             |            |
| 6              | 12.28       | 6-OC30X6  | 18.15       | 6-OC60X6  | 25.72       | 6-OC90X6  | 41.80       | 6-OC140X6  |             |            |             |            |
| 8              | 14.69       | 6-OC30X8  | 23.58       | 6-OC60X8  | 33.65       | 6-OC90X8  | 55.05       | 6-OC140X8  | 86.72       | 6-OC230X8  | 113.22      | 6-OC320X8  |
| 10             | 17.85       | 6-OC30X10 | 29.00       | 6-OC60X10 | 41.57       | 6-OC90X10 | 68.30       | 6-OC140X10 | 107.90      | 6-OC230X10 | 141.00      | 6-OC320X10 |
| 12             | 21.02       | 6-OC30X12 | 34.35       | 6-OC60X12 | 49.50       | 6-OC90X12 | 81.55       | 6-OC140X12 | 129.07      | 6-OC230X12 | 168.90      | 6-OC320X12 |
| 14             |             |           | 39.77       | 6-OC60X14 | 57.40       | 6-OC90X14 | 94.87       | 6-OC140X14 | 150.30      | 6-OC230X14 | 196.72      | 6-OC320X14 |
| 16             | 27.35       | 6-OC30X16 | 45.13       | 6-OC60X16 | 65.32       | 6-OC90X16 | 108.12      | 6-OC140X16 | 171.47      | 6-OC230X16 | 224.40      | 6-OC320X16 |
| 20             | 33.68       | 6-OC30X20 | 55.90       | 6-OC60X20 | 81.12       | 6-OC90X20 | 134.62      | 6-OC140X20 | 213.82      | 6-OC230X20 | 280.10      | 6-OC320X20 |
| 25             |             |           |             |           |             |           | 167.80      | 6-OC140X25 | 259.25      | 6-OC230X25 | 349.67      | 6-OC320X25 |
| 30             |             |           |             |           |             |           | 200.90      | 6-OC140X30 | 319.65      | 6-OC230X30 | 419.20      | 6-OC320X30 |

| Length<br>(ft) | OC-400      |            | OC-540      |            | OC-680      |            | OC-900      |            | OC-1000     |             |
|----------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|-------------|
|                | Price / ea. | Part #     | Price / ea. | Part #     | Price / ea. | Part #     | Price / ea. | Part #     | Price / ea. | Part #      |
| 10             | 172.75      | 6-OC400X10 | 297.27      | 6-OC540X10 | 342.20      | 6-OC680X10 | 459.85      | 6-OC900X10 |             |             |
| 12             | 206.90      | 6-OC400X12 | 356.27      | 6-OC540X12 | 410.17      | 6-OC680X12 | 551.37      | 6-OC900X12 |             |             |
| 16             | 275.17      | 6-OC400X16 | 474.37      | 6-OC540X16 | 546.25      | 6-OC680X16 | 734.57      | 6-OC900X16 |             |             |
| 20             | 343.52      | 6-OC400X20 | 592.50      | 6-OC540X20 | 682.32      | 6-OC680X20 | 917.72      | 6-OC900X20 | 1,055.37    | 6-OC1000X20 |
| 25             | 428.77      | 6-OC400X25 | 740.12      | 6-OC540X25 | 852.50      | 6-OC680X25 | 1,146.62    | 6-OC900X25 | 1,318.62    | 6-OC1000X25 |
| 30             | 514.17      | 6-OC400X30 | 887.75      | 6-OC540X30 | 1,022.55    | 6-OC680X30 | 1,375.65    | 6-OC900X30 |             |             |
| 40             | 684.92      | 6-OC400X40 | 1,183.05    | 6-OC540X40 | 1,362.72    | 6-OC680X40 | 1,833.35    | 6-OC900X40 |             |             |

## TWIN-PATH® EXTRA COVERMAX® WITH CHECK-FAST® SLING WITH K-SPEC® CORE YARN

- The lightest and strongest sling on the market today, and the only repairable synthetic sling made
- Check-Fast® external warning indicator (EWI) provides a pass/ fail indication of the internal load bearing core yarns
- Heavy duty bulked nylon, 2 ply, 2 path, outer cover with superior abrasion resistance
- Overload tell-tails and a fiber optic internal inspection system
- Red inner cover provides an early warning safety alert
- 10% the weight of a wire rope sling of comparable length and capacity
- 1% stretch at rated capacity
- Proof tested to 2X rated capacity
- Design factor 5 to 1



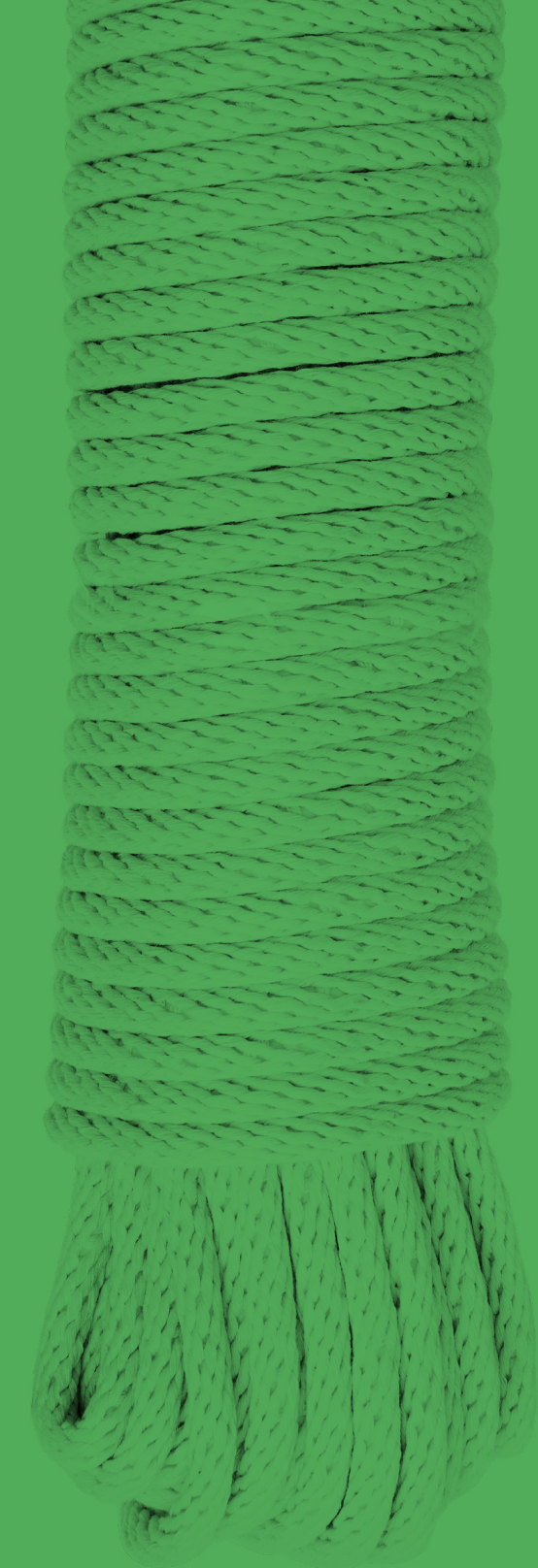
| Part Number<br>Model(add<br>length to end) | Rated Capacities in Lbs. |         |               |               |               | Approx.<br>Weight per foot<br>(bearing to bearing) | Nominal Body<br>Width |
|--------------------------------------------|--------------------------|---------|---------------|---------------|---------------|----------------------------------------------------|-----------------------|
|                                            | Vertical                 | Choker  | 90°<br>Basket | 60°<br>Basket | 45°<br>Basket |                                                    |                       |
| TPXCF 1000                                 | 10,000                   | 8,000   | 20,000        | 17,320        | 14,140        | .40                                                | 1.5 - 3"              |
| TPXCF 1500                                 | 15,000                   | 12,000  | 30,000        | 25,980        | 21,210        | .45                                                | 1.5 - 3"              |
| TPXCF 2000                                 | 20,000                   | 16,000  | 40,000        | 34,640        | 28,280        | .51                                                | 1.5 - 3"              |
| TPXCF 2500                                 | 25,000                   | 20,000  | 50,000        | 43,300        | 35,350        | .57                                                | 2.0 - 4"              |
| TPXCF 3000                                 | 30,000                   | 24,000  | 60,000        | 51,960        | 42,420        | .71                                                | 2.0 - 4"              |
| TPXCF 4000                                 | 40,000                   | 32,000  | 80,000        | 69,280        | 56,560        | .83                                                | 2.0 - 4"              |
| TPXCF 5000                                 | 50,000                   | 40,000  | 100,000       | 86,600        | 70,700        | 1.14                                               | 2.5 - 5"              |
| TPXCF 6000                                 | 60,000                   | 48,000  | 120,000       | 103,920       | 84,840        | 1.27                                               | 2.5 - 5"              |
| TPXCF 7000                                 | 70,000                   | 56,000  | 140,000       | 121,240       | 98,980        | 1.39                                               | 2.5 - 5"              |
| TPXCF 8500                                 | 85,000                   | 68,000  | 170,000       | 147,220       | 120,190       | 1.65                                               | 3.0 - 6"              |
| TPXCF 10000                                | 100,000                  | 80,000  | 200,000       | 173,200       | 141,400       | 1.84                                               | 3.0 - 6"              |
| TPXCF 12500                                | 125,000                  | 100,000 | 250,000       | 216,500       | 176,750       | 2.35                                               | 4.0 - 8"              |
| TPXCF 15000                                | 150,000                  | 120,000 | 300,000       | 259,800       | 212,100       | 2.66                                               | 4.0 - 8"              |
| TPXCF 17500                                | 175,000                  | 140,000 | 350,000       | 303,100       | 247,450       | 3.14                                               | 4.0 - 8"              |
| TPXCF 20000                                | 200,000                  | 160,000 | 400,000       | 346,400       | 282,800       | 3.45                                               | 5.0 - 10"             |
| TPXCF 25000                                | 250,000                  | 200,000 | 500,000       | 433,000       | 353,500       | 4.07                                               | 5.0 - 10"             |
| TPXCF 27500                                | 275,000                  | 220,000 | 550,000       | 476,300       | 388,850       | 4.61                                               | 6.0 - 12"             |
| TPXC 30000                                 | 300,000                  | 240,000 | 600,000       | 519,600       | 424,200       | 4.92                                               | 6.0 - 12"             |
| TPXC 40000                                 | 400,000                  | 320,000 | 800,000       | 692,800       | 565,600       | 6.54                                               | 7.0 - 14"             |
| TPXCF 50000                                | 500,000                  | 400,000 | 1,000,000     | 866,000       | 707,000       | 8.15                                               | 7.0 - 14"             |
| TPXCF 60000                                | 600,000                  | 480,000 | 1,200,000     | 1,039,000     | 848,000       | 10.20                                              | 8.0 - 16"             |

[illegible]



## ROPE (SYNTHETIC & FIBER)

|                                          |           |
|------------------------------------------|-----------|
| Manila Rope .....                        | 233 - 234 |
| Dyneema Rope .....                       | 235 - 238 |
| Soft Shackles - Dyneema .....            | 239       |
| Polypropylene Ropes .....                | 240 - 242 |
| Sail Twine .....                         | 242       |
| Nylon Rope .....                         | 243 - 245 |
| Sash Cord .....                          | 246       |
| Nylon & Polyester Double Braid .....     | 247 - 248 |
| Fid, Pushers, Needles & Sail Palms ..... | 251 - 252 |





Manila rope is a type of rope made from Manila hemp. Manila hemp is a type of fiber obtained from the leaves of the abaca. It is not actually hemp, but named so because hemp was long a major source of fiber, and other fibers were sometimes named after it. The name refers to the capital of the Philippines, one of the main producers of abaca.

Manila rope is very durable, flexible and resistant to salt water damage, allowing its use in rope, hawsers, ship's lines, and fishing nets.

These ropes have passed all routine quality control inspection and testing procedures, and, when new, have a guaranteed breaking strength in accordance with the requirements of US Federal Specification TR-605B, Type M Class 1, Amendment 3.

## ROPE - MANILA, 3-STRAND

- Material: Manila Hemp
- Standard: USFS TR-605B
- Specific Gravity: 1.38 / Sinks

Made of natural fiber it offers low stretch, superb knot holding ability and is biodegradable.



ROPE (SYNTHETIC & FIBER)

| Diameter (in) | Length / Coil (ft) | Breaking Load (lb) | Avg. Weight / coil (lb) | Price / lb | Part Number |
|---------------|--------------------|--------------------|-------------------------|------------|-------------|
| 1/4           | 1250               | 540                | 25                      | 10.56      | 112-7687A   |
| 5/16          | 1725               | 900                | 50                      | 10.56      | 112-7687B   |
| 3/8           | 1220               | 1215               | 50                      | 10.56      | 112-7687C   |
| 1/2           | 600                | 2385               | 45                      | 10.56      | 112-7687D   |
| 5/8           | 600                | 3960               | 80                      | 10.56      | 112-7687E   |
| 3/4           | 600                | 4860               | 100                     | 10.56      | 112-7687F   |
| 7/8           | 600                | 6930               | 135                     | 10.56      | 112-7687G   |
| 1             | 600                | 8100               | 162                     | 10.56      | 112-7687H   |

\*Actual Weight per coil may vary!



ROPE - MANILA, 4-STRAND

- Material: Manila Hemp
- Standard: USFS TR-605B
- Specific Gravity: 1.38 / Sinks



| Diameter (in) | Length / coil (ft) | Breaking Load (lb) | Avg. Weight/ coil (lb) | Price / lb | Part Number    |
|---------------|--------------------|--------------------|------------------------|------------|----------------|
| 1             | 100                | 8100               | 28.35                  | 10.56      | 112-7687H4S100 |
| 1             | 300                | 8100               | 82.70                  | 10.56      | 112-7687H4S300 |
| 1-1/8         | 125                | 10 800             | 47.95                  | 10.56      | 112-7687I4S125 |
| 1-1/8         | 150                | 10 800             | 54.95                  | 10.56      | 112-7687I4S150 |
| 1-1/8         | 300                | 10 800             | 111.65                 | 10.56      | 112-7687I4S300 |
| 1-1/4         | 300                | 12 150             | 129.60                 | 10.56      | 112-7687J4S300 |

\*Actual Weight per coil may vary!

## ROPE - DSM DYNEEMA, 12-STRAND

DSM Dyneema is made from ultra-high molecular-weight polyethylene and is an extremely high-strength, low-stretch rope. Dyneema is stronger than steel cable, floats on water and is extremely resistant to abrasion. It is commonly used to replace steel cable when weight is an issue. It also makes an excellent material for winch cables.

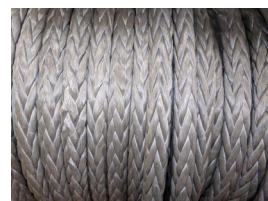
### In house splicing available - Call with your specifications

Oceanside Equipment offers Custom Made DSM Dyneema Rope Assemblies for heavy duty marine and industrial towing lines, towing hawser, mooring lines, dock lines, anchor lines, hawsers, construction rope, mining rope, oil field rope, offshore marine rope, oil platform rope, railroad rope, and rope for heavy duty industrial applications. All our lines are custom made-to-order per the customer's specifications.



| Dia.(in)      | Stock Colour           |
|---------------|------------------------|
| 1/4 to 1/2    | High Visibility Yellow |
| 5/8 & Greater | Grey                   |

Additional colour options are available with custom orders.



## ROPE - DSM DYNEEMA, 12-STRAND

- Material: Synthetic DSM Dyneema
- Standard: ISO 9554, 1346
- Finish: Dyed Colour
- Specific Gravity: 0.97 / Floats

| Dia.(in)      | Stock Colour           |
|---------------|------------------------|
| 1/4 to 1/2    | High Visibility Yellow |
| 5/8 & Greater | Grey                   |

Additional colour options are available with custom orders.

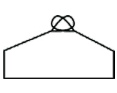
| Dia. (in)  | Dia. (mm) | MBL (lb)  | Weight / 100 ft. (lb) | Price / ft         | Part Number       |
|------------|-----------|-----------|-----------------------|--------------------|-------------------|
| 3/16 - 1/4 | 5.5       | 7055      | 1.23                  | 1.50               | 17-1/4"D12STR     |
| 5/16       | 8         | 13 007    | 2.30                  | Pricing on Request | 17-5/16"D12STR    |
| 3/8        | 10        | 20 503    | 3.69                  | 4.49               | 17-3/8"D12STR     |
| 7/16       | 11        | 25 353    | 4.70                  | 5.71               | 17-7/16"D12STR    |
| 1/2        | 12        | 30 424    | 5.58                  | 6.78               | 17-1/2"D12STR     |
| 9/16       | 14        | 39 904    | 7.39                  | Pricing on Request | 17-9/16"D12STR    |
| 5/8        | 16        | 46 517    | 8.73                  | 10.60              | 17-5/8"D12STR     |
| 3/4        | 18        | 65 257    | 12.36                 | 15.01              | 17-3/4"D12STR     |
| 13/16      | 20        | 77 823    | 15.25                 | Pricing on Request | 17-13/16"D12STR   |
| 53/64      | 21        | 82 012    | 17.00                 |                    | 17-53/64"D12STR   |
| 7/8        | 22        | 92 594    | 18.47                 | 22.44              | 17-7/8"D12STR     |
| 1          | 24        | 108 026   | 21.76                 | 26.45              | 17-1"D12STR       |
| 1-1/16     | 26        | 124 561   | 25.86                 | 31.43              | 17-26MMD12STR     |
| 1-1/8      | 28        | 142 639   | 29.83                 | 36.25              | 17-28MMD12STR     |
| 1-1/4      | 30        | 164 244   | 34.93                 | 42.43              | 17-1-1/4"D12STR   |
| 1-5/16     | 32        | 185 849   | 39.57                 | 48.11              | 17-1-5/16"D12STR  |
| 1-3/8      | 34        | 203 927   | 44.34                 | Pricing on Request | 17-1-3/8"D12STR   |
| 1-1/2      | 36        | 222 667   | 48.37                 | 58.79              | 17-1-1/2"D12STR   |
| 1-9/16     | 38        | 245 815   | 53.74                 | Pricing on Request | 17-1-9/16"D12STR  |
| 1-5/8      | 40        | 268 964   | 59.11                 | 71.83              | 17-1-5/8"D12STR   |
| 1-11/16    | 42        | 295 419   | 65.83                 | Pricing on Request | 17-1-11/16"D12STR |
| 1-3/4      | 44        | 321 875   | 72.41                 | 88.97              | 17-1-3/4"D12STR   |
| 2          | 48        | 365 967   | 84.91                 | 103.17             | 17-2"D12STR       |
| 2-1/16     | 50        | 399 036   | 93.37                 | Pricing on Request | 17-2-1/16"D12STR  |
| 2-1/8      | 52        | 432 106   | 102.11                |                    | 17-2-1/8"D12STR   |
| 2-1/4      | 56        | 498 244   | 118.23                | 143.69             | 17-2-1/4"D12STR   |
| 2-1/2      | 60        | 562 178   | 135.02                | 162.88             | 17-2-1/2"D12STR   |
| 2-5/8      | 64        | 626 112   | 151.81                | Pricing on Request | 17-2-5/8"D12STR   |
| 2-3/4      | 68        | 707 683   | 173.98                | 211.40             | 17-2-3/4"D12STR   |
| 3          | 72        | 789 254   | 195.48                | 237.60             | 17-3"D12STR       |
| 3-1/8      | 76        | 864 211   | 216.30                | Pricing on Request | 17-3-1/8"D12STR   |
| 3-1/4      | 80        | 936 964   | 237.13                | 288.25             | 17-3-1/4"D12STR   |
| 3-3/8      | 82        | 978 851   | 249.22                |                    | 17-3-3/8"D12STR   |
| 3-1/2      | 86        | 1 062 627 | 273.40                |                    | 17-3-1/2"D12STR   |
| 3-5/8      | 88        | 1 106 719 | 284.82                |                    | 17-3-5/8"D12STR   |
| 3-3/4      | 92        | 1 192 699 | 310.35                | Pricing on Request | 17-3-3/4"D12STR   |
| 4          | 96        | 1 280 884 | 335.20                |                    | 17-4"D12STR       |
| 4-1/4      | 104       | 1 523 392 | 405.73                |                    | 17-4-1/4"D12STR   |
| 5          | 120       | 1 995 400 | 536.21                |                    | 17-5"D12STR       |

- Items priced are in stock.

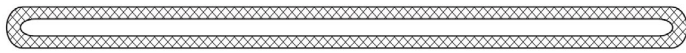
## SLINGS - SLING CHART, DYNEEMA (SYNTHETIC ROPE), EYE & EYE



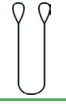
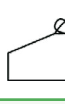
Tensile strengths are determined in accordance with Cordage Institute 1500.2. Test Methods for Fiber Rope.  
Minimum Breaking Loads (MBL) published assumes standard eye splices at each end of the rope.

| Nominal Size |           |          |  | <br>120° or > |  |  |  |  |
|--------------|-----------|----------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Dia. (in)    | Dia. (mm) | MBL (lb) | Vertical                                                                          | Choker                                                                                         | 90°                                                                               | 60°                                                                                 | 45°                                                                                 | 30°                                                                                 |
| 1            | 24        | 108026   | 21605                                                                             | 17284                                                                                          | 43210                                                                             | 38889                                                                               | 30247                                                                               | 21605                                                                               |
| 1-1/16       | 26        | 124561   | 24912                                                                             | 19930                                                                                          | 49824                                                                             | 44842                                                                               | 34877                                                                               | 24912                                                                               |
| 1-1/8        | 28        | 142639   | 28528                                                                             | 22822                                                                                          | 57056                                                                             | 51350                                                                               | 39939                                                                               | 28528                                                                               |
| 1-1/4        | 30        | 164244   | 32849                                                                             | 26279                                                                                          | 65698                                                                             | 59128                                                                               | 45988                                                                               | 32849                                                                               |
| 1-5/16       | 32        | 185849   | 37170                                                                             | 29736                                                                                          | 74340                                                                             | 66906                                                                               | 52038                                                                               | 37170                                                                               |
| 1-3/8        | 34        | 203927   | 40785                                                                             | 32628                                                                                          | 81571                                                                             | 73414                                                                               | 57100                                                                               | 40785                                                                               |
| 1-1/2        | 36        | 222667   | 44533                                                                             | 35627                                                                                          | 89067                                                                             | 80160                                                                               | 62347                                                                               | 44533                                                                               |
| 1-9/16       | 38        | 245815   | 49163                                                                             | 39330                                                                                          | 98326                                                                             | 88493                                                                               | 68828                                                                               | 49163                                                                               |
| 1-5/8        | 40        | 268964   | 53793                                                                             | 43034                                                                                          | 107586                                                                            | 96827                                                                               | 75310                                                                               | 53793                                                                               |
| 1-11/16      | 42        | 295419   | 59084                                                                             | 47267                                                                                          | 118168                                                                            | 106351                                                                              | 82717                                                                               | 59084                                                                               |
| 1-3/4        | 44        | 321875   | 64375                                                                             | 51500                                                                                          | 128750                                                                            | 115875                                                                              | 90125                                                                               | 64375                                                                               |
| 2            | 48        | 365967   | 73193                                                                             | 58555                                                                                          | 146387                                                                            | 131748                                                                              | 102471                                                                              | 73193                                                                               |
| 2-1/16       | 50        | 399036   | 79807                                                                             | 63846                                                                                          | 159614                                                                            | 143653                                                                              | 111730                                                                              | 79807                                                                               |
| 2-1/8        | 52        | 432106   | 86421                                                                             | 69137                                                                                          | 172842                                                                            | 155558                                                                              | 120990                                                                              | 86421                                                                               |
| 2-1/4        | 56        | 498244   | 99649                                                                             | 79719                                                                                          | 199298                                                                            | 179368                                                                              | 139508                                                                              | 99649                                                                               |
| 2-1/2        | 60        | 562178   | 112436                                                                            | 89948                                                                                          | 224871                                                                            | 202384                                                                              | 157410                                                                              | 112436                                                                              |
| 2-5/8        | 64        | 626112   | 125222                                                                            | 100178                                                                                         | 250445                                                                            | 225400                                                                              | 175311                                                                              | 125222                                                                              |
| 2-3/4        | 68        | 707683   | 141537                                                                            | 113229                                                                                         | 283073                                                                            | 254766                                                                              | 198151                                                                              | 141537                                                                              |
| 3            | 72        | 789254   | 157851                                                                            | 126281                                                                                         | 315702                                                                            | 284131                                                                              | 220991                                                                              | 157851                                                                              |
| 3-1/8        | 76        | 864211   | 172842                                                                            | 138274                                                                                         | 345684                                                                            | 311116                                                                              | 241979                                                                              | 172842                                                                              |
| 3-1/4        | 80        | 936964   | 187393                                                                            | 149914                                                                                         | 374786                                                                            | 337307                                                                              | 262350                                                                              | 187393                                                                              |
| 3-3/8        | 82        | 978851   | 195770                                                                            | 156616                                                                                         | 391540                                                                            | 352386                                                                              | 274078                                                                              | 195770                                                                              |
| 3-1/2        | 86        | 1062627  | 212525                                                                            | 170020                                                                                         | 425051                                                                            | 382546                                                                              | 297536                                                                              | 212525                                                                              |
| 3-5/8        | 88        | 1106719  | 221344                                                                            | 177075                                                                                         | 442688                                                                            | 398419                                                                              | 309881                                                                              | 221344                                                                              |
| 3-3/4        | 92        | 1192699  | 238540                                                                            | 190832                                                                                         | 477080                                                                            | 429372                                                                              | 333956                                                                              | 238540                                                                              |
| 4            | 96        | 1280884  | 256177                                                                            | 204941                                                                                         | 512354                                                                            | 461118                                                                              | 358648                                                                              | 256177                                                                              |
| 4-1/4        | 104       | 1523392  | 304678                                                                            | 243743                                                                                         | 609357                                                                            | 548421                                                                              | 426550                                                                              | 304678                                                                              |
| 5            | 120       | 1995400  | 399080                                                                            | 319264                                                                                         | 798160                                                                            | 718344                                                                              | 558712                                                                              | 399080                                                                              |

## SLINGS - SLING CHART, DYNEEMA (SYNTHETIC ROPE), ENDLESS GROMMET



Tensile strengths are determined in accordance with Cordage Institute 1500.2. Test Methods for Fiber Rope.  
Minimum Breaking Loads (MBL) published assumes standard eye splices at each end of the rope.

| Nominal Size |           |          |  | <br>120° or > |  |  |  |  |
|--------------|-----------|----------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Dia. (in)    | Dia. (mm) | MBL (lb) | Vertical                                                                          | Choker                                                                                         | 90°                                                                               | 60°                                                                                 | 45°                                                                                 | 30°                                                                                 |
| 1            | 24        | 178243   | 35649                                                                             | 28519                                                                                          | 64167                                                                             | 54542                                                                               | 44917                                                                               | 35649                                                                               |
| 1-1/16       | 26        | 205526   | 41105                                                                             | 32884                                                                                          | 73989                                                                             | 62891                                                                               | 51792                                                                               | 41105                                                                               |
| 1-1/8        | 28        | 235354   | 47071                                                                             | 37657                                                                                          | 84728                                                                             | 72018                                                                               | 59309                                                                               | 47071                                                                               |
| 1-1/4        | 30        | 271003   | 54201                                                                             | 43360                                                                                          | 97561                                                                             | 82927                                                                               | 68293                                                                               | 54201                                                                               |
| 1-5/16       | 32        | 306651   | 61330                                                                             | 49064                                                                                          | 110394                                                                            | 93835                                                                               | 77276                                                                               | 61330                                                                               |
| 1-3/8        | 34        | 336480   | 67296                                                                             | 53837                                                                                          | 121133                                                                            | 102963                                                                              | 84793                                                                               | 67296                                                                               |
| 1-1/2        | 36        | 367401   | 73480                                                                             | 58784                                                                                          | 132264                                                                            | 112425                                                                              | 92585                                                                               | 73480                                                                               |
| 1-9/16       | 38        | 405595   | 81119                                                                             | 64895                                                                                          | 146014                                                                            | 124112                                                                              | 102210                                                                              | 81119                                                                               |
| 1-5/8        | 40        | 443791   | 88758                                                                             | 71006                                                                                          | 159765                                                                            | 135800                                                                              | 111835                                                                              | 88758                                                                               |
| 1-11/16      | 42        | 487441   | 97488                                                                             | 77991                                                                                          | 175479                                                                            | 149157                                                                              | 122835                                                                              | 97488                                                                               |
| 1-3/4        | 44        | 531094   | 106219                                                                            | 84975                                                                                          | 191194                                                                            | 162515                                                                              | 133836                                                                              | 106219                                                                              |
| 2            | 48        | 603846   | 120769                                                                            | 96615                                                                                          | 217384                                                                            | 184777                                                                              | 152169                                                                              | 120769                                                                              |
| 2-1/16       | 50        | 658409   | 131682                                                                            | 105346                                                                                         | 237027                                                                            | 201473                                                                              | 165919                                                                              | 131682                                                                              |
| 2-1/8        | 52        | 712975   | 142595                                                                            | 114076                                                                                         | 256671                                                                            | 218170                                                                              | 179670                                                                              | 142595                                                                              |
| 2-1/4        | 56        | 822103   | 164421                                                                            | 131536                                                                                         | 295957                                                                            | 251563                                                                              | 207170                                                                              | 164421                                                                              |
| 2-1/2        | 60        | 927594   | 185519                                                                            | 148415                                                                                         | 333934                                                                            | 283844                                                                              | 233754                                                                              | 185519                                                                              |
| 2-5/8        | 64        | 1033085  | 206617                                                                            | 165294                                                                                         | 371911                                                                            | 316124                                                                              | 260337                                                                              | 206617                                                                              |
| 2-3/4        | 68        | 1167677  | 233535                                                                            | 186828                                                                                         | 420364                                                                            | 357309                                                                              | 294255                                                                              | 233535                                                                              |
| 3            | 72        | 1302269  | 260454                                                                            | 208363                                                                                         | 468817                                                                            | 398494                                                                              | 328172                                                                              | 260454                                                                              |
| 3-1/8        | 76        | 1425948  | 285190                                                                            | 228152                                                                                         | 513341                                                                            | 436340                                                                              | 359339                                                                              | 285190                                                                              |
| 3-1/4        | 80        | 1545991  | 309198                                                                            | 247358                                                                                         | 556557                                                                            | 473073                                                                              | 389590                                                                              | 309198                                                                              |
| 3-3/8        | 82        | 1615104  | 323021                                                                            | 258417                                                                                         | 581437                                                                            | 494222                                                                              | 407006                                                                              | 323021                                                                              |
| 3-1/2        | 86        | 1753335  | 350667                                                                            | 280534                                                                                         | 631200                                                                            | 536520                                                                              | 441840                                                                              | 350667                                                                              |
| 3-5/8        | 88        | 1826086  | 365217                                                                            | 292174                                                                                         | 657391                                                                            | 558782                                                                              | 460174                                                                              | 365217                                                                              |
| 3-3/4        | 92        | 1967953  | 393591                                                                            | 314873                                                                                         | 708463                                                                            | 602194                                                                              | 495924                                                                              | 393591                                                                              |
| 4            | 96        | 2113459  | 422692                                                                            | 338153                                                                                         | 760845                                                                            | 646718                                                                              | 532592                                                                              | 422692                                                                              |
| 4-1/4        | 104       | 2513597  | 502719                                                                            | 402175                                                                                         | 904895                                                                            | 769161                                                                              | 633426                                                                              | 502719                                                                              |
| 5            | 120       | 3292410  | 658482                                                                            | 526786                                                                                         | 1185268                                                                           | 1007477                                                                             | 829687                                                                              | 658482                                                                              |



## SOFT SHACKLES

With the rich experience in manufacturing high-end product (e.g. UHMWPE) for more than 20 years, FBR Soft Shackles offer outstanding strength at a light weight to replace conventional steel shackles or other connection types.

FBR Soft Shackles are made of 100% UHMWPE. Imported coating makes them very resistant to abrasion and UV-radiation, it can also be customized and comes with a protection sleeve for additional protection against wear and tear.

### Special Features:

- Extremely lightweight
- Easy to handle
- High breaking strength
- No stretch
- Good corrosion resistance.

### Application:

- ATV & SUV Off-road recovery
- Boating
- Camping
- Personal watercraft
- 5-1 for lifting
- 3-1 for towing



## SHACKLE - SOFT, SYNTHETIC

| Diameter (in) | Length (in) | Colour | MBS (lbs) | Price / ea. | Part Number  |
|---------------|-------------|--------|-----------|-------------|--------------|
| 5/16          | 10"         | Yellow | 24 200    | 53.98       | 17-5/16X10SS |
| 3/8           | 10"         | Yellow | 30 800    | 61.69       | 17-3/8X10SS  |
| 1/2           | 10"         | Yellow | 41 800    | 69.39       | 17-1/2X10SS  |
| 9/16          | 10"         | Yellow | 55 100    | 77.09       | 17-9/16X10SS |
| 5/8           | 18"         | Yellow | 74 900    | 138.83      | 17-5/8X18SS  |
| 3/4           | 18"         | Yellow | 92 500    | 151.94      | 17-3/4X18SS  |
| 7/8           | 24"         | Yellow | 136 600   | 177.03      | 17-7/8X24SS  |

\*Other sizes are available upon request.  
Lengths are measured from pull to pull when joined.  
Use of soft shackles below a D/d ratio of 3 is not recommended.

# ROPE - OCEAN STEEL LINE, 3-STRAND, AQUA

- Material: Synthetic Polypropylene
- Standard: ISO 9554, 1346
- Finish: Dyed Aqua Green, with Yellow Tracer
- Lay: Medium
- Specific Gravity: 0.91 / Floats
- Sold in full coils only



| Dia. (in) | Qty. / Coil (ft) | MBL (lb) | Est. Weight / Coil (lb) | Price / lb | Part Number       |
|-----------|------------------|----------|-------------------------|------------|-------------------|
| 1/4       | 1200             | 1670     | 13.2                    | 4.95       | 17-1/4"AGML1200   |
| 5/16      | 1200             | 3170     | 24.2                    | 4.95       | 17-5/16"AGML1200  |
| 3/8       | 1200             | 3920     | 35.2                    | 4.95       | 17-3/8"AGML1200   |
| 7/16      | 1200             | 4800     | 44                      | 4.95       | 17-7/16"AGML1200  |
| 1/2       | 1200             | 6870     | 62                      | 4.95       | 17-1/2"AGML1200   |
| 9/16      | 1200             | 9560     | 72.7                    | 4.95       | 17-9/16"AGML1200  |
| 5/8       | 1200             | 11 500   | 92.4                    | 4.95       | 17-5/8"AGML1200   |
| 3/4       | 1200             | 14 600   | 119                     | 4.95       | 17-3/4"AGML1200   |
| 7/8       | 600              | 21 100   | 88.2                    | 4.95       | 17-7/8"AGML600    |
| 1         | 600              | 24 300   | 104.7                   | 4.95       | 17-1"AGML600      |
| 1-1/4     | 600              | 34 600   | 185                     | 4.95       | 17-1-1/4"AGML600  |
| 1-1/4     | 1200             | 34 600   | 370                     | 4.95       | 17-1-1/4"AGML1200 |
| 1-1/2     | 600              | 53 300   | 236                     | 4.95       | 17-1-1/2"AGML600  |
| 2         | 720              | 87 800   | 547                     | 4.95       | 17-2"AGML720      |

Polypropylene (PP), also known as polyprop, is a thermoplastic polymer, made by the chemical industry and used in a wide variety of applications. It is rugged and unusually resistant to many chemical solvents, bases and acids. Polypropylene rope has nearly twice the strength of Manila rope when compared size to size. The rope has positive buoyancy (floats) and doesn't absorb water, rot or decay. It's resistant to acid, alkali and most chemicals. When not in use the rope should be stored away from direct sun light. Recommended usages are mooring, dock and anchor line, boat life-line, tarpaulin line, tent tie down, pool barrier line, public utility and general use in home, farm and industry.

## ROPE - OCEAN STEEL LINE, 8-STRAND, GOLD

- Material: Synthetic Polypropylene
- Standard: ISO 2307
- Finish: Dyed Gold, with Red Tracer
- Lay: Medium
- Specific Gravity: 0.91 / Floats
- Sold in full coils only



| Circ. (in) | Dia. (in) | Qty. / Coil (ft) | Weight / 100 ft (lb) | Breaking Strength (lb) | Est. Weight / Coil (lb) | Price / lb | Part Number |
|------------|-----------|------------------|----------------------|------------------------|-------------------------|------------|-------------|
| 5          | 1-5/8     | 720              | 53.1                 | 62 500                 | 382                     | 5.95       | 8-5"SDAN    |
| 6          | 2         | 720              | 80.2                 | 91 400                 | 577                     | 5.95       | 8-6"SDAN    |
| 7          | 2-1/4     | 720              | 108.5                | 120 600                | 781                     | 5.95       | 8-7"SDAN    |
| 8          | 2-5/8     | 720              | 141.1                | 155 000                | 1015                    | 5.95       | 8-8"SDAN    |
| 9          | 3         | 720              | 178.1                | 197 100                | 1282                    | 5.95       | 8-9"SDAN    |
| 10         | 3-1/4     | 720              | 220                  | 235 000                | 1585                    | 5.95       | 8-10"SDAN   |

## ROPE - OCEAN STEEL LINE, 3-STRAND, YELLOW

- Material: Synthetic Polypropylene
- Standard: ISO 9554, 1346
- Finish: Dyed Yellow, with Blue Tracer
- Lay: Medium
- Specific Gravity: 0.91 / Floats
- Sold in full coils only



| Diameter (in) | Qty / Coil (ft) | Breaking Strength (lb) | Est. Weight / Coil (lb) | Price / lb | Part Number |
|---------------|-----------------|------------------------|-------------------------|------------|-------------|
| 1/4           | 1200            | 1670                   | 13.3                    | 4.95       | 8-1/4"SDAN  |
| 5/16          | 1200            | 3170                   | 26.4                    | 4.95       | 8-5/16"SDAN |
| 3/8           | 1200            | 3920                   | 35.3                    | 4.95       | 8-3/8"SDAN  |
| 1/2           | 600             | 6870                   | 30.9                    | 4.95       | 8-1/2"SDAN  |
| 5/8           | 600             | 11 500                 | 46.3                    | 4.95       | 8-5/8"SDAN  |
| 3/4           | 600             | 14 600                 | 59.5                    | 4.95       | 8-3/4"SDAN  |
| 7/8           | 600             | 21 100                 | 97                      | 4.95       | 8-7/8"SDAN  |
| 1             | 600             | 24 300                 | 105.8                   | 4.95       | 8-1"SDAN    |

# ROPE - POLYPROPYLENE, JUMBO, 3-STRAND, YELLOW

- Jumbo Plastic Reels,
- General Purpose, commercial grade
- Material: Synthetic Polypropylene
- Standard: ISO 2307
- Finish: Dyed Yellow
- Lay: Soft
- Specific Gravity: 0.91 / Floats



| Diameter (in) | Qty. / Reel (ft) | Break Load (lb) | Price / Reel | Part Number |
|---------------|------------------|-----------------|--------------|-------------|
| 3/16          | 2125             | 720             | 66.34        | 8-3/16"PJR  |
| 1/4           | 1300             | 1050            | 66.34        | 8-1/4"PJR   |
| 5/16          | 975              | 1700            | 66.34        | 8-5/16"PJR  |
| 3/8           | 630              | 2450            | 66.34        | 8-3/8"PJR   |
| 1/2           | 335              | 3600            | 66.34        | 8-1/2"PJR   |
| 5/8           | 200              | 5500            | 66.34        | 8-5/8"PJR   |
| 3/4           | 125              | 8000            | 66.34        | 8-3/4"PJR   |

# ROPE - SAIL TWINE, WAXED

- Material: Synthetic Fiber
- Finish: Waxed

| Size   | Price / ea | Part Number |
|--------|------------|-------------|
| 1/4 lb | 46.92      | 125-1/4LBST |



\* For whipping rope ends, splicing, reinforcing sail fittings and general sail sewing and repair!



Nylon is a generic designation for a family of synthetic polymers known generically as polyamides, first produced on February 28, 1935, by Wallace Carothers at DuPont's research facility at the DuPont Experimental Station. Nylon is one of the most commonly used polymers. Nylon rope exceeds twice the strength of Manila rope. It has high elongation (under load) when compared to other synthetic ropes. Nylon has higher energy absorption under shock and good abrasion resistance. When combined, these characteristics make nylon rope the best in handling compared to other synthetics. It's utilized extensively in marine use such as mooring lines, towing slings, commercial fishing, utility rope, leisure boat, sailing etc. This rope does not float.

## ROPE - NYLON, 8-STRAND

- Material: Synthetic Polymer
- Standard: ISO 9554, 1140
- Tested to: ISO 2307
- Finish: White
- Lay: Medium
- Specific Gravity: 1.14 / Sinks



ROPE (SYNTHETIC & FIBER)

| Circ. (in) | Diameter (in) | Qty. / Coil (ft) | Est. Weight / Coil (lb) | Break Strength (lb) | Price / lb         | Part Number |
|------------|---------------|------------------|-------------------------|---------------------|--------------------|-------------|
| 8          | 2-5/8         | 720              | 1219                    | 162 000             | Pricing on Request | 8-8"NYLON   |
| 9          | 3             | 720              | 1543                    | 200 000             |                    | 8-9"NYLON   |

\*Actual Weight per Coil may vary!



# ROPE - NYLON, 3-STRAND

- Material: Synthetic Polymer
- Standard: ISO 9554, 1140
- Tested to: ISO 2307
- Finish: White
- Lay: Medium
- Specific Gravity: 1.14 / Sinks
- Sold in full reels only



| Diameter (in) | Est. Qty. / Reel (ft) | Est. Weight / Reel (lb) | Break Loads (lb) | Price / lb | Part Number   |
|---------------|-----------------------|-------------------------|------------------|------------|---------------|
| 1/4           | 1200                  | 18.74                   | 1540             | 11.46      | 8-1/4"NYLON   |
| 5/16          | 1200                  | 33.06                   | 2860             | 11.46      | 8-5/16"NYLON  |
| 3/8           | 1200                  | 50.7                    | 3696             | 11.46      | 8-3/8"NYLON   |
| 1/2           | 600                   | 42.98                   | 6600             | 11.46      | 8-1/2"NYLON   |
| 5/8           | 600                   | 63.92                   | 11 660           | 11.46      | 8-5/8"NYLON   |
| 3/4           | 600                   | 90.37                   | 16 500           | 11.46      | 8-3/4"NYLON   |
| 7/8           | 600                   | 121                     | 22 000           | 11.46      | 8-7/8"NYLON   |
| 1             | 600                   | 160                     | 28 380           | 11.46      | 8-1"NYLON     |
| 1-1/8         | 600                   | 204                     | 34 760           | 11.46      | 8-1-1/8"NYLON |
| 1-1/4         | 600                   | 240                     | 44 000           | 11.46      | 8-1-1/4"NYLON |
| 1-1/2         | 600                   | 330                     | 59 620           | 11.46      | 8-1-1/2"NYLON |

\*Actual Weight per Coil may vary!

## ROPE - NYLON, JUMBO, 3-STRAND

- Jumbo Plastic Reels
- Material: Synthetic Polymer
- Standard: ISO 9554, 1140
- Tested to: ISO 2307
- Finish: White
- Lay: Soft
- Specific Gravity: 1.14 / Sinks
- Sold in full reels only



| Diameter (in) | Qty. / Reel (ft) | Break Load (lb) | Price / Reel | Part Number |
|---------------|------------------|-----------------|--------------|-------------|
| 3/16          | 2125             | 1000            | 323.12       | 8-3/16"NJR  |
| 1/4           | 1300             | 1650            | 323.12       | 8-1/4"NJR   |
| 5/16          | 975              | 2550            | 323.12       | 8-5/16"NJR  |
| 3/8           | 630              | 3700            | 323.12       | 8-3/8"NJR   |
| 1/2           | 335              | 6400            | 323.12       | 8-1/2"NJR   |
| 5/8           | 200              | 10 400          | 323.12       | 8-5/8"NJR   |
| 3/4           | 125              | 14 200          | 323.12       | 8-3/4"NJR   |

ROPE - SASH CORD, COTTON

- Material: Synthetic Cotton
- Finish: White/Beige
- Specific Gravity: 1.38 / Sinks



| Size |       | Hank length | Price / ea. | Part Number | 10 (lb) reel footage | Price / ea. | Part Number |
|------|-------|-------------|-------------|-------------|----------------------|-------------|-------------|
| # 6  | 3/16" | 100 ft      | 17.53       | 125-6SCH    | 760 ft               | 155.15      | 125-6SCR    |
| # 7  | 7/32" | 100 ft      | 24.91       | 125-7SCH    | 660 ft               | 155.15      | 125-7SCR    |
| # 8  | 1/4"  | 100 ft      | 19.27       | 125-8SCH    | 500 ft               | 155.15      | 125-8SCR    |
| # 10 | 5/16" | 100 ft      | 29.48       | 125-10SCH   | 350 ft               | 155.15      | 125-10SCR   |
| # 12 | 3/8"  | 100 ft      | 38.57       | 125-12SCH   | 240 ft               | 155.15      | 125-12SCR   |
| #16  | 1/2"  | 100 ft      | 58.37       | 125-16SCH   |                      |             |             |

This cord has an interlocking solid braid construction, a durable composite cotton cover, and is polished with a weather resistant coating. It also has a synthetic reinforcing core. Hanks are 100' connected and shrink wrapped.

## ROPE - NYLON DOUBLE BRAIDED 2-1, OCEAN STEEL LINE

- Material: Synthetic Polymer
- Standard: ISO 9554, 10554
- Tested to: ISO 2307
- Finish: White with Yellow Tracer
- Lay: Soft
- Specific Gravity: 1.14 / Sinks



| Dia. (in) | Qty. / Coil (ft) | Breaking Strength Min. (lb) | Est. Weight / Coil (lb) | Price / Coil | Part Number    |
|-----------|------------------|-----------------------------|-------------------------|--------------|----------------|
| 3/8       | 1200             | 5000                        | 44                      | 605.45       | 17-3/8"NDBLB   |
| 1/2       | 600              | 8000                        | 37.4                    | 514.63       | 17-1/2"NDBLB   |
| 5/8       | 600              | 14 800                      | 70.4                    | 968.72       | 17-5/8"NDBLB   |
| 3/4       | 600              | 19 000                      | 85.5                    | 1,180.63     | 17-3/4"NDBLB   |
| 1         | 600              | 33 500                      | 149.6                   | 2,058.53     | 17-1"NDBLB     |
| 1-1/4     | 600              | 52 000                      | 235.4                   | 3,239.15     | 17-1-1/4"NDBLB |
| 1-1/2     | 600              | 74 000                      | 358                     | 4,440.30     | 17-1-1/2"NDBLB |
| 2         | 600              | 131 000                     | 636                     | 7,932.00     | 17-2"NDBLB     |



# ROPE - POLYESTER DOUBLE BRAIDED 2-1, OCEAN STEEL LINE

- Material: Synthetic Polyester
- Standard: ISO 9554, 10554
- Tested to: ISO 2307
- Finish: White with Blue Tracer
- Lay: Soft
- Specific Gravity: 1.38 / Sinks

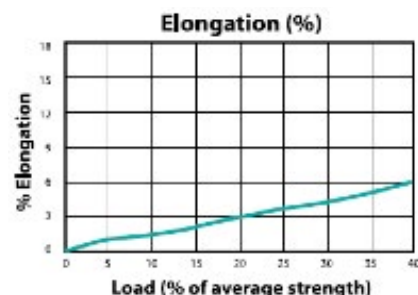


| Dia. (in) | Qty. / Coil (ft) | Breaking Strength Min. (lb) | Est. Weight / Coil (lb) | Price / Coil | Part Number    |
|-----------|------------------|-----------------------------|-------------------------|--------------|----------------|
| 3/8       | 1200             | 4900                        | 54                      | 751.40       | 17-3/8"PDBLB   |
| 1/2       | 600              | 10 400                      | 48                      | 617.40       | 17-1/2"PDBLB   |
| 5/8       | 600              | 16 100                      | 75                      | 914.00       | 17-5/8"PDBLB   |
| 3/4       | 600              | 18 000                      | 107.4                   | 1,207.97     | 17-3/4"PDBLB   |
| 1         | 600              | 32 000                      | 191.4                   | 2,308.56     | 17-1"PDBLB     |
| 1-1/4     | 600              | 49 000                      | 298.8                   | 3,642.60     | 17-1-1/4"PDBLB |



## ROPE TYPES - SYNTHETIC

### OLETEC-12™



#### FEATURES:

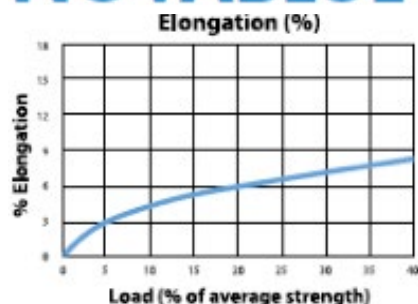
- Non-Rotating
- Torque Free
- Lightweight
- High Strength
- UV Stabilized
- High Dielectric
- High Visibility
- No Water Absorption
- Specific Gravity of 0.99



**OLETEC-12™** is a hollow braided 12 strand rope using 100% polyolefin high tenacity co-polymer fiber. It is designed with single or two ply construction depending upon nominal size. Oletec 12 is designed for commercial and marine applications where an easily handled, high strength, floating rope is required. It has excellent abrasion resistance, will not mildew or rot, and is easily spliced.

Oletec-12 meets or exceeds dielectric requirements per ASTM F1701-05

### NOVABLUE™



#### FEATURES:

- Specific Gravity of 1.38
- Low Elongation
- High Strength
- Excellent Dielectrics
- Abrasion Resistance
- UV Stabilized Cover
- Urethane Coated Cover

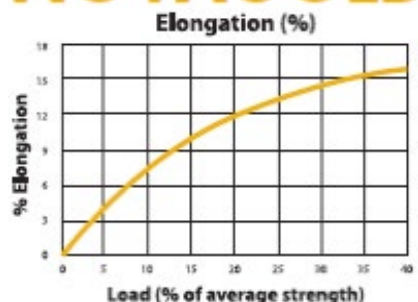
Available



**NOVABLUE™** is our premium double braided polyester rope designed for general marine, industrial, and commercial use where low elongation, high strength, and abrasion resistance are required. Constructed from the highest quality UV stabilized yarns, Novablue's balanced core and cover construction insures easy splicing. It can be easily identified by a single blue tracer in the cover. Diameters over 1" are solid white.

NovaBlue meets or exceeds (on request) US MIL Spec # MIL-R-24677 Cdn MIL Spec # 40-GP-16M

### NOVAGOLD™



#### FEATURES:

- Specific Gravity of 1.14
- High Energy Absorption
- Controlled Elongation
- High Strength
- Abrasion Resistance
- Mildew Resistance
- Urethane Coated Cover

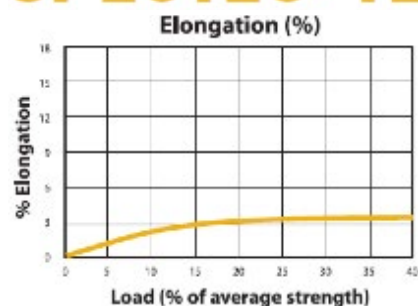
Available



**NOVAGOLD™** is our premium double braided nylon rope designed for general marine, industrial, and commercial use where controlled elongation, high strength, and abrasion resistance are required. It is constructed from the highest quality yarns to resist mildew, rot, and most chemicals. Novagold's balanced core and cover construction insure easy splicing. It can be easily identified by a single gold tracer in the cover. Diameters over 1" are solid white.

NovaGold meets or exceeds (on request) US MIL Spec # MIL-R-24050D Cdn MIL Spec # 40-GP-16M

### SPECTEC-12™



#### FEATURES:

- Specific Gravity of 0.98
- Very High Strength
- Low Elongation
- Easy Handling
- Fully Spliceable



**SPECTEC-12™** is a hollow braided 12-strand rope using 100% Spectra fiber. It is designed with single ply construction up to 1½" nominal size and two ply in larger diameters. Spectec-12 yields one of the highest strength to weight ratios available in a synthetic rope. It comes standard with a urethane coating that provides additional abrasion resistance while remaining easy to handle and splice.

#### DYNEEMA - 12

Dyneema-12 is a hollow braided 12-strand rope made from Dyneema fiber. It has a high weight to strength ratio with very little stretch. Custom slings are available ready made from manufacturer.

ROPE TYPES - SYNTHETIC

| ROPE TYPE    |               |                                    |                                        |                                    |                                        |                                    |                                        |                                    |                                        |                                    |                                        |
|--------------|---------------|------------------------------------|----------------------------------------|------------------------------------|----------------------------------------|------------------------------------|----------------------------------------|------------------------------------|----------------------------------------|------------------------------------|----------------------------------------|
| Size         |               | OLTEC-12™                          |                                        | NOVABLUETM                         |                                        | NOVAGOLD™                          |                                        | SPECTEC-12™                        |                                        | DYNEEMA- 12                        |                                        |
| Dia.<br>(in) | Circ.<br>(in) | Est.<br>Weight<br>(lb) /<br>100 ft | Average<br>Tensile<br>Strength<br>(lb) | Est.<br>Weight<br>(lb) /<br>100 ft | Average<br>Tensile<br>Strength<br>(lb) | Est.<br>Weight<br>(lb) /<br>100 ft | Average<br>Tensile<br>Strength<br>(lb) | Est.<br>Weight<br>(lb) /<br>100 ft | Average<br>Tensile<br>Strength<br>(lb) | Est.<br>Weight<br>(lb) /<br>100 ft | Average<br>Tensile<br>Strength<br>(lb) |
| 1/8"         |               |                                    |                                        |                                    |                                        |                                    |                                        | 0.5                                | 1,600                                  | 0.5                                | 2,500                                  |
| 3/16"        |               |                                    |                                        | 1.0                                | 1,175                                  |                                    |                                        | 1.0                                | 3,200                                  | 1.0                                | 5,400                                  |
| 1/4"         | 3/4"          | 1.1                                | 1,500                                  | 2.0                                | 1,950                                  | 1.7                                | 2,400                                  | 1.7                                | 6,500                                  | 1.7                                | 8,600                                  |
| 5/16"        | 1"            | 1.7                                | 2,400                                  | 3.1                                | 3,500                                  | 2.6                                | 3,400                                  | 2.9                                | 9,500                                  | 2.7                                | 13,700                                 |
| 3/8"         | 1-1/8"        | 2.7                                | 3,500                                  | 4.5                                | 4,900                                  | 3.7                                | 5,000                                  | 3.8                                | 14,200                                 | 3.6                                | 19,600                                 |
| 7/16"        | 1-1/4"        | 3.5                                | 4,400                                  | 6.1                                | 6,200                                  | 5.0                                | 6,500                                  | 4.3                                | 16,500                                 | 4.2                                | 23,900                                 |
| 1/2"         | 1-1/2"        | 4.9                                | 6,000                                  | 8.0                                | 10,400                                 | 6.4                                | 8,000                                  | 6.4                                | 24,000                                 | 6.4                                | 34,000                                 |
| 9/16"        | 1-3/4"        | 6.8                                | 8,000                                  | 10.1                               | 10,800                                 | 8.4                                | 11,800                                 | 7.5                                | 28,000                                 | 7.9                                | 40,500                                 |
| 5/8"         | 2"            | 8.7                                | 9,900                                  | 12.5                               | 15,500                                 | 12.0                               | 14,800                                 | 10.6                               | 41,000                                 | 10.2                               | 52,800                                 |
| 3/4"         | 2-1/4"        | 10.9                               | 12,000                                 | 17.9                               | 18,000                                 | 16.0                               | 19,000                                 | 13.2                               | 49,000                                 | 13.5                               | 64,400                                 |
| 7/8"         | 2-3/4"        | 14.4                               | 15,800                                 | 24.4                               | 24,000                                 | 21.8                               | 28,000                                 | 19.5                               | 68,000                                 | 19.5                               | 90,800                                 |
| 1"           | 3"            | 20.5                               | 21,000                                 | 31.9                               | 32,000                                 | 26.0                               | 33,500                                 | 23.3                               | 79,000                                 | 21.8                               | 109,000                                |
| 1-1/8"       | 3-1/2"        | 25.0                               | 26,000                                 | 40.0                               | 39,500                                 | 35.8                               | 45,000                                 | 32.0                               | 100,000                                | 31.9                               | 148,000                                |
| 1-1/4"       | 3-3/4"        | 27.4                               | 28,500                                 | 49.8                               | 49,000                                 | 41.0                               | 52,000                                 | 36.1                               | 110,000                                | 36.2                               | 165,000                                |
| 1-5/16"      | 4"            | 32.0                               | 32,800                                 | 55.0                               | 53,500                                 | 46.8                               | 59,000                                 |                                    |                                        | 41.8                               | 184,000                                |
| 1-3/8"       |               |                                    |                                        |                                    |                                        |                                    |                                        |                                    |                                        | 45.0                               | 205,000                                |
| 1-1/2"       | 4-1/2"        | 40.0                               | 40,000                                 | 71.8                               | 65,000                                 | 59.8                               | 74,000                                 |                                    |                                        | 51.7                               | 228,000                                |
| 1-5/8"       | 5"            | 51.0                               | 50,000                                 | 84.0                               | 77,500                                 | 74.0                               | 91,500                                 |                                    |                                        |                                    |                                        |
| 1-3/4"       | 5-1/2"        | 59.0                               | 58,000                                 | 97.7                               | 89,500                                 | 89.0                               | 111,000                                |                                    |                                        |                                    |                                        |
| 2"           | 6"            | 72.0                               | 69,000                                 | 128.0                              | 110,000                                | 106.0                              | 131,000                                |                                    |                                        |                                    |                                        |

Note this is average tensile strength and not minimum tensile strength

ROPE (SYNTHETIC & FIBER)

## FID - NORWEGIAN

- Stainless steel fid with hardwood handles for making eye, end, and running splices in twisted line. Hollow backside for ease of threading.

| Size  | Price / ea. | Part Number |
|-------|-------------|-------------|
| Small | 21.68       | 6-SM304FID  |
| Large | 28.00       | 6-LG304FID  |



## SAIL NEEDLE

- Used for Sail Repair

| Size | Length (in) | Price / ea. | Part Number |
|------|-------------|-------------|-------------|
| 11   | 3-1/2       | 3.28        | 98-11SN     |
| 12   | 3-3/8       | 3.28        | 98-12SN     |
| 13   | 3           | 3.28        | 98-13SN     |
| 14   | 2-3/4       | 3.28        | 98-14SN     |
| 15   | 2-1/2       | 3.28        | 98-15SN     |
| 16   | 2-3/8       | 3.28        | 98-16SN     |



ROPE (SYNTHETIC & FIBER)

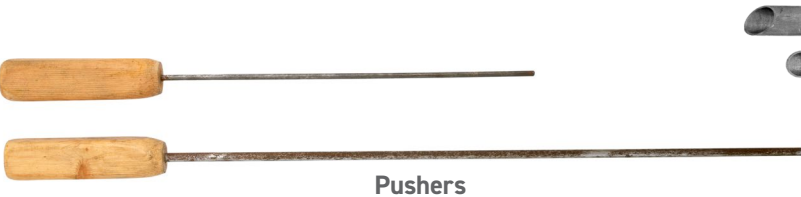
## SAIL PALMS

- Leather rawhide palm with thimble in left & right
- Designed to provide user with protection while sewing.

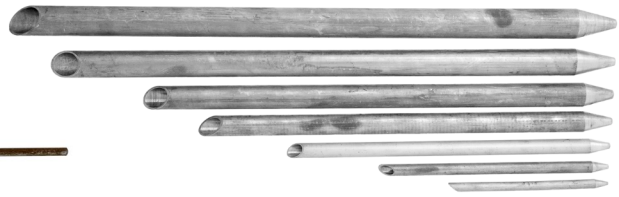
| Type       | Price / ea. | Part Number |
|------------|-------------|-------------|
| Right hand | 33.67       | 98-SPRH     |
| Left hand  | 33.67       | 98-SPLH     |



## SPLICING - PUSHER & FIDS - ALUMINUM



Pushers



Fids

- Designed to splice double braided rope, measurements are designed in fid lengths so it is important to get the right size fids for the rope being spliced. Pushers are used to push strands of rope into the splice and are offered in two sizes for small or large ropes.

| Size Rope (in) | Type   | Length (in) | Price / ea. | Part Number |
|----------------|--------|-------------|-------------|-------------|
| 1/4 to 1/2     | Pusher | 11-1/2      | 8.40        | 22-SMPUSH   |
| 9/16 to 1      | Pusher | 17          | 14.08       | 22-LGPUSH   |
| 1/4            | Fid    | 5-1/2       | 12.59       | 22-1/4"ATF  |
| 3/8            | Fid    | 7-3/4       | 14.69       | 22-3/8"ATF  |
| 1/2            | Fid    | 11          | 16.80       | 22-1/2"ATF  |
| 5/8            | Fid    | 14          | 21.03       | 22-5/8"ATF  |
| 3/4            | Fid    | 15-3/4      | 25.23       | 22-3/4"ATF  |
| 7/8            | Fid    | 19          | 31.56       | 22-7/8"ATF  |





## WIRE ROPE END TERMINATORS

|                                                        |           |
|--------------------------------------------------------|-----------|
| Rigging Equipment.....                                 | 256 - 258 |
| Die Lube .....                                         | 259       |
| Wire Rope Sleeves, Ferrules,<br>Stops & Buttons .....  | 260 - 266 |
| Marlin Spikes.....                                     | 266       |
| Thimbles.....                                          | 267 - 271 |
| Choker Buttons & Hooks .....                           | 272       |
| Go-No-Go Guages & Cable Joiners .....                  | 272 - 273 |
| Wire Rope Clips .....                                  | 274 - 276 |
| Spelter Sockets .....                                  | 277 - 281 |
| Socket Lock, Broom Degreaser<br>& Socketing Putty..... | 282 - 283 |
| Swage, & Wedge Sockets .....                           | 284 - 287 |





## RIGGING EQUIPMENT

Wirop Industrial Company Ltd was established in 1979 by Mr. Ben Chiu. Our modern factory is located in Kaohsiung, the southern hub of Taiwan, close to the international airport, harbor and rail ways. We have been providing for the needs of wire rope fabricators for more than 35 years.

The main products we make are hydraulic swaging machines (wire rope clamping machines) [capacity 30 ton - 4000 ton for wire rope [1mm - 120mm], dies, horizontal testing benches (capacity: 50 ton-3000 ton), annealing and tapering machines, recoiling machines, marking machines, auto-measuring & cutting machines as well as others. Besides this, we offer Aluminum ferrules according to EN 13411-3 (DIN 3093), Flemish eye steel sleeves from 1/4" to 6" and other swaging products for wire ropes of different kinds of material, i.e. copper, stainless steel, swage sockets and thread stud terminals.



Wire Rope Grip System



200 ton x 22.5 m  
Horizontal Tension tester



Power Hydraulic Pump Unit



Measuring &  
Cutting Machine



Hand Press Portable



Coiling Machine



Table Swager



Portable Hydraulic Press



Portable Hydraulic Wire Rope Cutter



Annealing & Tapering Machine

## FAST FLEMISH SWAGE SYSTEM

This swaging is not only faster and more efficient but it greatly reduces the possibility of over or under swaging the sleeve. In the first swage step, the sleeve cannot be over swaged because of the precise notching of the die; the second step allows a controlled closing of the dies to slightly less than full closure whereby the third and final step allows full closure of the dies. The end result is a nearly smooth round swaged sleeve without the usual "wrinkles" one gets from the conventional swaging methods.

Conventional swaging of a round carbon steel sleeve on the wire rope has repeated multiple closing of the dies until the sleeve is completely swaged. This "multi-swage" system of swaging requires several die closures that are dependent on the wire rope diameter. On rope diameters 1" and larger, two dies are necessary to swage the sleeve, requiring an extra die change. The total number of die closures for sleeves larger than 1" diameter can be as many as ten total closures for the two sets of dies.

In the Wirop "Fast Flemish Swage" system not only are the number of swages minimized and simplified, over and under swaging are eliminated, multi-swages on sleeves over 1" in size are greatly reduced. Die changes from 1st open stage to 2nd taper is also eliminated.

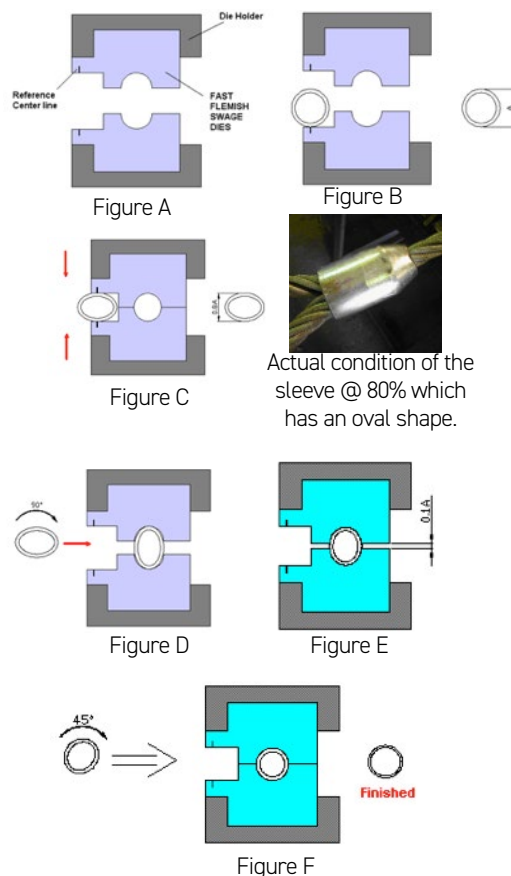
Fast Flemish Swage system is available up to 2-1/2" sleeve diameters. Bigger sizes are under development.

Wirop swaging machines are packed with functions that add to the efficiency and speed in swaging. Should the users choose to use the machine to swage sleeves conventionally; the operator is able to adjust the hydraulic pressure simply by setting the sleeve size on a round dial. This function alone eliminates the guesswork for how much pressure to apply for a given size sleeve. Another simple dial but extremely useful function allows the die openings to be fixed to any desired amount of opening. Aluminium oval ferrules are swaged in just one step as the dies have cutting edges that remove the excess flash. Fully automatic one button swage for Aluminium oval ferrules is a huge time saver. In the automatic mode the dies close and open with the push of a button. The dies opening can be pre-set to just enough space to allow the swage sleeve to be removed, again saving time to insert the next sleeve to be swaged quickly and efficiently.

### WIROP "FAST FLEMISH SWAGE" swaging instruction

(Instructions vary for different size sleeves)

1. Place the Flemish Eye steel sleeves on the "Flat Side" (Notched Side) by lining the center line of sleeves with the reference center line (see Figure A) of the die as shown in Figure B
2. Close the dies completely. The sleeves will be swaged to 80% of diameter A and turn into an oval shape as in Figure C
3. Turn the swaged sleeve 90 degrees and place the sleeve on the die as shown below in Figure D
4. Close the die until gap is about 0.1 A as shown in Figure E
5. Turn the sleeve 45 degree again and close the dies completely as shown in Figure F



## RIGGING EQUIPMENT



| Description            | Value                  |
|------------------------|------------------------|
| Column                 | 1                      |
| Max. Pressure Capacity | 1350 (t)               |
| Power Supply           | 25 Hp                  |
| Max. Oil Pressure      | 300 kg/cm <sup>2</sup> |
| Max. Piston Stroke     | 120 mm                 |
| Unloaded Speed         | 8.1 mm/s               |
| Loaded Speed           | 1.2 mm/s               |
| Reversing Speed        | 12.4 mm/s              |
| Operating Height       | 1250 mm                |
| Dimensions L*W*H       | 3100*1050*2480         |
| Approximate Weight     | 19000 kg               |



WP-1300C

| Capacity                              |             |              |
|---------------------------------------|-------------|--------------|
| Aluminium Ferrules ( one/multi-stage) |             | # 58 / # S66 |
| Flemish Eye Steel Sleeve              |             | 3-1/4"       |
| Swage Sockets                         | Full Shank  | 1-1/8"       |
|                                       | Progressive | 2"           |

## SWAGING MACHINE NEW-TECH "SMART PRESS"

Wirop is pleased to introduce a new generation swaging machine.

### NEW CONCEPT:

HMI (Human Machine Interface), PLC, Pressure Sensor, Temperature Sensor and Special design die No. sensor system combined as Wirop NEW-TECH swaging machine. The dies No. can be detected by Special Sensor System on die holder and show the Die No. on screen.

### NEW OPERATION MODE:

The FUZZY mode allows swaging pressure to be set automatically according to the detected Die No. by Special Sensor System. The operator does not need to set the swaging pressure manually.

### SELF-DETECTION:

The troubles such as overload, high oil temperature, imperfect die installation and so on can be detected and appear on the troubleshooting screen.

### ON-LINE HELP:

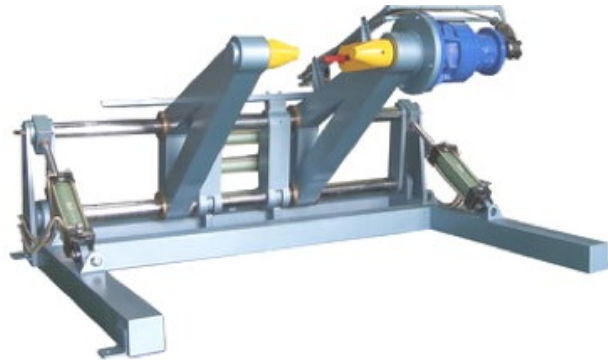
On-line Help is available. The swaging information is stored in memory. It is easy to get the swaging information such as splicing table, swaging method, and operation menu on screen.



WP-600CN



## REELING MACHINES WIROP SHAFTLESS



| Model                                      | WPRC-3500      | WPRC-4500      | WPRC-8000      |
|--------------------------------------------|----------------|----------------|----------------|
| Power supply, (HP)                         | 15 HP/4P       | 15 HP/4P       | 25 HP/4P       |
| Outside diameter of reels, (mm)            | 500~1500       | 500~1700       | 500~2100       |
| Width of reels, (mm)                       | 400~1500       | 400~1500       | 400~1700       |
| Drum weight with wire rope wound on, (kg)  | 3500           | 4500           | 8000           |
| Inner reel hole diameter (stepped up type) | 30~90mm        | 30~90mm        | 30~90mm        |
| Adjustable speed, (RPM)                    | 0~40           | 0~40           | 0~45           |
| Oil tank capacity, Liter (l)               | 330            | 350            | 400            |
| Dimensions (W x L x H) (mm)                | 2600x3000x1200 | 2800x3000x1200 | 2800x3500x1350 |

\* WIROP® reserves the right to change specifications.

- Easier loading and unloading
- User friendly operation control
- Motorized opening /closing of pintles with mechanical torque limiters (by hydraulic cylinders)
- Motorized lifting and lowering of pintles to fit appropriate reels (by hydraulic cylinders)
- Adjustable winding speed and the rotation direction (forward or reverse) can be switched
- The system has braked control in the winding process to avoid over coiling
- Wireless remote control box



### OPTIONAL EQUIPMENT:

Power Traverse System



Collapsible Coiling Arm





## SWAGING MACHINES FROM 150 TE TO 4,000 TE



WP-150C



WP-300C



WP-600C



WP-300H



WP-600H



WP-1000



WP-1500



WP-2000



WP-3000/4000



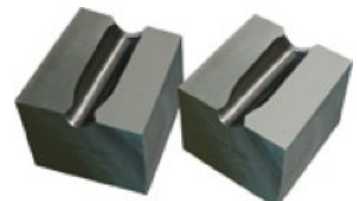
Wirop Swag Dies



Swage Socket Dies



Flemish Eye Steel Sleeve Dies  
(Fast Flemish Wage System)



Flemish Eye Steel Sleeve Dies  
(Conventional)



## DIE LUBE - SWAGING LUBRICANT

### EXTREMELY LOW COEFFICIENT OF FRICTION FOR HIGH PRESSURE APPLICATIONS

- Specially formulated to prevent pre-mature wearing of dies
- Minimizes friction to allow swage fitting to "flow" while pressing
- Helps to produce higher quality surface finish on swage fitting
- Lubrication of swaging dies is necessary to properly press all types of swage fittings

| Size          | Price / ea. | Part Number  |
|---------------|-------------|--------------|
| 1 gallon pail | 570.36      | 38-DIELUBE1G |
| 5 gallon pail | 2,700.15    | 38-DIELUBE5G |



#### What happens during the swaging process?

While being pressed, swage fittings will actually elongate. After swage lengths are always longer than before swage lengths. This shows that there is heat and wear being generated by metal to metal contact under great pressure. By design, dies are harder than swaging fittings. Despite the difference in hardness between the dies and swage fittings, the dies will wear during the swaging process.

#### Why is it necessary to lubricate while swaging?

Because you have two metal surfaces grinding against each other under great pressure, a lubricant is required to minimize the friction between the surfaces. Lubrication assists the metal of the swage fitting to flow more freely and therefore minimize wear on the die surface. It is important to note that not only does lubricating minimize die wear; it promotes the

elongation of swage fittings rather than squeezing the metal of the fitting to the sides which then produce excessive metal "flesh". This metal "flesh" tends to produce an ugly finish on the fitting and can cause the fitting to crack.

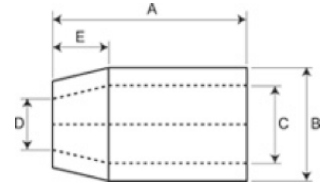
#### What makes "Die-Lube" such a good lubricant for its application?

"Die-Lube" is formulated to possess a high coefficient of friction under high pressure, compressive loads. This means friction is absolutely minimized. Common heavy greases are certainly better than no lubrication, but most grease is not formulated to perform under high pressure and for dies with swage fittings. Besides being a quality high pressure lubricant, "Die-Lube" is affordably priced and will protect the investment you have in your dies.

## SLEEVE (FERRULE) - FLEMISH SPLICE, CARBON STEEL

Larger sizes available on request to 6" diameter wire rope.

Wirop Flemish Splice Steel Sleeves are stamped with size and PIC (product identification code) to assure traceability and come with a galvanized finish for prolonged life in harsh environments. When a self colored and galvanized sleeve are left out in the elements for a prolonged period of time the results are obvious. The self colored sleeve shows severe signs of surface rust and pitting while the galvanized sleeve shows little to no effect. Each sleeve shown below (center) was put side by side and left outside for one month.



| Wire Rope Size (in) | Max. after swage Dim. (in) | Weight (lb) / 100 pcs | Dimensions (mm) |      |      |      |      | Qty./ box | Price / ea. | Part Number |
|---------------------|----------------------------|-----------------------|-----------------|------|------|------|------|-----------|-------------|-------------|
|                     |                            |                       | A               | B    | C    | D    | E    |           |             |             |
| 1/4                 | 0.57                       | 5                     | 1.00            | 0.66 | 0.47 | 0.31 | 0.28 | 1000      | 1.50        | 139-1/4"    |
| 5/16                | 0.75                       | 14                    | 1.50            | 0.91 | 0.62 | 0.38 | 0.44 | 300       | 2.09        | 139-5/16"   |
| 3/8                 | 0.75                       | 14                    | 1.50            | 0.91 | 0.66 | 0.47 | 0.39 | 350       | 2.09        | 139-3/8"    |
| 7/16                | 1.01                       | 33                    | 2.00            | 1.22 | 0.85 | 0.53 | 0.65 | 130       | 4.19        | 139-7/16"   |
| 1/2                 | 1.01                       | 29                    | 2.00            | 1.22 | 0.91 | 0.63 | 0.56 | 150       | 3.71        | 139-1/2"    |
| 9/16                | 1.24                       | 64                    | 2.75            | 1.47 | 1.03 | 0.70 | 0.63 | 60        | 7.35        | 139-9/16"   |
| 5/8                 | 1.24                       | 56                    | 2.75            | 1.47 | 1.09 | 0.75 | 0.63 | 70        | 6.77        | 139-5/8"    |
| 3/4                 | 1.46                       | 88                    | 3.19            | 1.72 | 1.28 | 0.91 | 0.84 | 50        | 10.76       | 139-3/4"    |
| 7/8                 | 1.68                       | 131                   | 3.56            | 2.03 | 1.53 | 1.03 | 1.00 | 30        | 18.49       | 139-7/8"    |
| 1                   | 1.93                       | 195                   | 4.00            | 2.28 | 1.72 | 1.16 | 1.13 | 20        | 24.97       | 139-1"      |
| 1- 1/8              | 2.13                       | 260                   | 4.81            | 2.50 | 1.94 | 1.28 | 1.25 | 16        | 33.01       | 139-1-1/8"  |
| 1- 1/4              | 2.32                       | 355                   | 5.19            | 2.78 | 2.16 | 1.44 | 1.41 | 11        | 44.45       | 139-1-1/4"  |
| 1- 3/8              | 2.52                       | 423                   | 5.81            | 3.00 | 2.38 | 1.56 | 1.56 | 9         | 54.36       | 139-1-3/8"  |
| 1- 1/2              | 2.71                       | 499                   | 6.25            | 3.25 | 2.63 | 1.69 | 1.69 | 8         | 65.12       | 139-1-1/2"  |
| 1-3/4               | 3.1                        | 805                   | 7.25            | 3.84 | 3.13 | 1.94 | 1.97 | 5         | 119.15      | 139-1-3/4"  |
| 2                   | 3.56                       | 1132                  | 8.50            | 4.38 | 3.63 | 2.25 | 2.25 | Bulk      | 206.91      | 139-2"      |
| 2-1/4               | 4.12                       | 1936                  | 9.56            | 5.03 | 4.03 | 2.50 | 2.53 | Bulk      | 345.31      | 139-2-1/4"  |
| 2-1/2               | 4.5                        | 2352                  | 10.5            | 5.50 | 4.50 | 2.75 | 2.81 | Bulk      | 417.60      | 139-2-1/2"  |

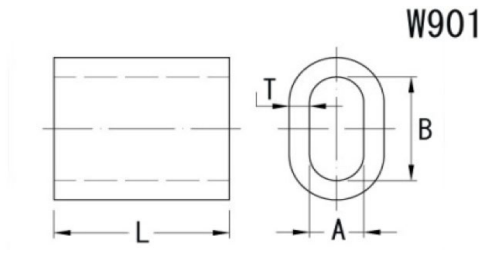
Stamping of swaged steel sleeves for identification is allowed without concern of fractures if the following directions are followed:

1. Use round corner stamps.
2. The maximum depth of stamps is not over 0.015 inch (0.4mm).
3. The area for stamping should be on the side of the sleeve in the plane of the sling eye, and no less than 0.25 inch (6.35mm) from either end of sleeve.

# SLEEVES (FERRULES) SIZE NUMBER TABLE A.2

| Rope Diameter |          |      | Ferrule Size Number Table A.2                                             |                                                                                                  |                                                                                                                    |                                           |
|---------------|----------|------|---------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
|               |          |      | Case 1                                                                    | Case 2                                                                                           | Case 3                                                                                                             | Case 4                                    |
| Nominal       | Measured |      | single layer round strand ropes with FC and cable laid ropes<br>C ≥ 0,283 | single layer round strand ropes with IWRC and rotation-resistant round strand ropes<br>C ≤ 0,487 | single layer round strand ropes with IWRC, rotation-resistant ropes and parallel-closed ropes<br>0,487 < C ≤ 0,613 | spiral strands<br>2 ferrules<br>C ≥ 0,613 |
| Dia.          | from:    | to:  |                                                                           |                                                                                                  |                                                                                                                    |                                           |
| (mm)          | (mm)     | (mm) |                                                                           |                                                                                                  |                                                                                                                    |                                           |
| 2.5           | 2.5      | 2.7  | 2.5                                                                       | 3                                                                                                | -                                                                                                                  | -                                         |
| 3             | 2.8      | 3.2  | 3                                                                         | 3.5                                                                                              | -                                                                                                                  | -                                         |
| 3.5           | 3.3      | 3.7  | 3.5                                                                       | 4                                                                                                | -                                                                                                                  | -                                         |
| 4             | 3.8      | 4.3  | 4                                                                         | 4.5                                                                                              | -                                                                                                                  | 5                                         |
| 4.5           | 4.4      | 4.8  | 4.5                                                                       | 5                                                                                                | -                                                                                                                  | 6                                         |
| 5             | 4.9      | 5.4  | 5                                                                         | 6                                                                                                | -                                                                                                                  | 6.5                                       |
| 6             | 5.5      | 5.9  | 6                                                                         | 6.5                                                                                              | -                                                                                                                  | 7                                         |
|               | 6        | 6.4  |                                                                           |                                                                                                  | 7                                                                                                                  |                                           |
| 6.5           | 6.5      | 6.9  | 6.5                                                                       | 7                                                                                                | 8                                                                                                                  | 8                                         |
| 7             | 7        | 7.4  | 7                                                                         | 8                                                                                                | 9                                                                                                                  | 9                                         |
| 8             | 7.5      | 7.9  | 8                                                                         | 9                                                                                                | 9                                                                                                                  | 10                                        |
|               | 8        | 8.4  |                                                                           |                                                                                                  | 10                                                                                                                 |                                           |
| 9             | 8.5      | 8.8  | 9                                                                         | 10                                                                                               | 10                                                                                                                 | 11                                        |
|               | 9        | 9.5  |                                                                           |                                                                                                  | 11                                                                                                                 |                                           |
| 10            | 9.6      | 9.9  | 10                                                                        | 11                                                                                               | 11                                                                                                                 | 12                                        |
|               | 10       | 10.5 |                                                                           |                                                                                                  | 12                                                                                                                 |                                           |
| 11            | 10.6     | 10.9 | 11                                                                        | 12                                                                                               | 12                                                                                                                 | 13                                        |
|               | 11       | 11.6 |                                                                           |                                                                                                  | 13                                                                                                                 |                                           |
| 12            | 11.7     | 11.9 | 12                                                                        | 13                                                                                               | 13                                                                                                                 | 14                                        |
|               | 12       | 12.6 |                                                                           |                                                                                                  | 14                                                                                                                 |                                           |
| 13            | 12.7     | 12.9 | 13                                                                        | 14                                                                                               | 14                                                                                                                 | 16                                        |
|               | 13       | 13.7 |                                                                           |                                                                                                  | 16                                                                                                                 |                                           |
| 14            | 13.8     | 13.9 | 14                                                                        | 16                                                                                               | 16                                                                                                                 | 18                                        |
|               | 14       | 14.7 |                                                                           |                                                                                                  | 18                                                                                                                 |                                           |
| 16            | 14.8     | 15.9 | 16                                                                        | 18                                                                                               | 18                                                                                                                 | 20                                        |
|               | 16       | 16.8 |                                                                           |                                                                                                  | 20                                                                                                                 |                                           |
| 18            | 16.9     | 17.9 | 18                                                                        | 20                                                                                               | 20                                                                                                                 | 22                                        |
|               | 18       | 18.9 |                                                                           |                                                                                                  | 22                                                                                                                 |                                           |
| 20            | 19       | 19.9 | 20                                                                        | 22                                                                                               | 22                                                                                                                 | 24                                        |
|               | 20       | 21   |                                                                           |                                                                                                  | 24                                                                                                                 |                                           |
| 22            | 21.1     | 21.9 | 22                                                                        | 24                                                                                               | 24                                                                                                                 | 26                                        |
|               | 22       | 23.1 |                                                                           |                                                                                                  | 26                                                                                                                 |                                           |
| 24            | 23.2     | 23.9 | 24                                                                        | 26                                                                                               | 26                                                                                                                 | 28                                        |
|               | 24       | 25.2 |                                                                           |                                                                                                  | 28                                                                                                                 |                                           |
| 26            | 25.3     | 25.9 | 26                                                                        | 28                                                                                               | 28                                                                                                                 | 30                                        |
|               | 26       | 27.3 |                                                                           |                                                                                                  | 30                                                                                                                 |                                           |
| 28            | 27.4     | 27.9 | 28                                                                        | 30                                                                                               | 30                                                                                                                 | 32                                        |
|               | 28       | 29.4 |                                                                           |                                                                                                  | 32                                                                                                                 |                                           |
| 30            | 29.5     | 29.9 | 30                                                                        | 32                                                                                               | 32                                                                                                                 | 34                                        |
|               | 30       | 31.5 |                                                                           |                                                                                                  | 34                                                                                                                 |                                           |
| 32            | 31.6     | 31.9 | 32                                                                        | 34                                                                                               | 34                                                                                                                 | 36                                        |
|               | 32       | 33.6 |                                                                           |                                                                                                  | 36                                                                                                                 |                                           |
| 34            | 33.7     | 33.9 | 34                                                                        | 36                                                                                               | 36                                                                                                                 | 38                                        |
|               | 34       | 35.7 |                                                                           |                                                                                                  | 38                                                                                                                 |                                           |
| 36            | 35.8     | 35.9 | 36                                                                        | 38                                                                                               | 38                                                                                                                 | 40                                        |
|               | 36       | 37.8 |                                                                           |                                                                                                  | 40                                                                                                                 |                                           |
| 38            | 37.9     | 37.9 | 38                                                                        | 40                                                                                               | 40                                                                                                                 | 44                                        |
|               | 38       | 39.9 |                                                                           |                                                                                                  | 44                                                                                                                 |                                           |
| 40            | 40       | 42   | 40                                                                        | 44                                                                                               | 48                                                                                                                 | 48                                        |
| 44            | 42.1     | 43.9 | 44                                                                        | 48                                                                                               | 48                                                                                                                 | 48                                        |
|               | 44       | 46.2 |                                                                           |                                                                                                  | 52                                                                                                                 | 52                                        |
| 48            | 46.3     | 47.9 | 48                                                                        | 52                                                                                               | 52                                                                                                                 | 52                                        |
|               | 48       | 50.4 |                                                                           |                                                                                                  | 56                                                                                                                 | 56                                        |
| 52            | 50.5     | 51.9 | 52                                                                        | 56                                                                                               | 56                                                                                                                 | 60                                        |
|               | 52       | 54.6 |                                                                           |                                                                                                  | 60                                                                                                                 |                                           |
| 56            | 54.7     | 55.9 | 56                                                                        | 60                                                                                               | -                                                                                                                  | -                                         |
|               | 56       | 58.8 |                                                                           |                                                                                                  | -                                                                                                                  | -                                         |
| 60            | 58.9     | 59.9 | 60                                                                        | -                                                                                                | -                                                                                                                  | -                                         |
|               | 60       | 63   |                                                                           |                                                                                                  | -                                                                                                                  | -                                         |

# SLEEVE (FERRULE) - ALUMINIUM



| Ferrule Code | Dimensions (mm) |      |      |     | Weight (lb)<br>/ 100 pcs | Price<br>/ ea. | Part Number  |
|--------------|-----------------|------|------|-----|--------------------------|----------------|--------------|
|              | A               | B    | T    | L   |                          |                |              |
| 11           | 12.1            | 24.2 | 4.5  | 39  | 7.89                     | 2.00           | 176-W901-011 |
| 12           | 13.2            | 26.4 | 4.9  | 42  | 10.09                    | 2.25           | 176-W901-012 |
| 13           | 14.2            | 28.4 | 5.4  | 46  | 13.16                    | 3.07           | 176-W901-013 |
| 14           | 15.3            | 30.6 | 5.8  | 49  | 16.20                    | 3.50           | 176-W901-014 |
| 16           | 17.5            | 35   | 6.7  | 56  | 24.46                    | 5.62           | 176-W901-016 |
| 18           | 19.6            | 39.2 | 7.6  | 63  | 34.38                    | 7.35           | 176-W901-018 |
| 20           | 21.7            | 43.4 | 8.4  | 70  | 47.83                    | 9.07           | 176-W901-020 |
| 22           | 24.3            | 48.6 | 9.2  | 77  | 64.36                    | 11.83          | 176-W901-022 |
| 24           | 26.4            | 52.8 | 10   | 84  | 82.87                    | 16.20          | 176-W901-024 |
| 26           | 28.5            | 57   | 10.9 | 91  | 106.01                   | 19.56          | 176-W901-026 |
| 28           | 31              | 62   | 11.7 | 98  | 132.90                   | 24.22          | 176-W901-028 |
| 30           | 33.1            | 66.2 | 12.5 | 105 | 162.88                   | 29.24          | 176-W901-030 |
| 32           | 35.2            | 70.4 | 13.4 | 112 | 197.70                   | 37.81          | 176-W901-032 |
| 34           | 37.8            | 75.6 | 14.2 | 119 | 237.44                   | 47.62          | 176-W901-034 |
| 36           | 39.8            | 79.6 | 15   | 126 | 281.01                   | 56.90          | 176-W901-036 |

All WIROP® aluminium ferrules are made of seamless aluminium. Random samples have been passed with 75,000 cycles fatigue test, and strictly follow the material composition and mechanical property requirements of the EN 13411-3 (DIN 3093) standard.

Dies for EN 13411-3 Form A (DIN 3093) Aluminium Ferrules Swaging are needed in order to swage these aluminium ferrules.

Swaging is finished in one step. Turn the ferrule 90 degrees and swage again is NOT recommended. WIROP® reserves the right to change specifications.

Please refer to the Ferrule Size Selection Chart on the previous page to find the correct size ferrule for the type of wire being used - Table A.2, Ferrule Size Numbers from the BS EN 13411-3:2004 standard.

The efficiency of the termination for Aluminum Ferrule splicing is 90% of the wire rope breaking strength with proper splicing technique and standard-length ferrule.

## SLEEVE (FERRULE) - ALUMINIUM DUPLEX

Generally used with galvanized wire

| Cable Size (in) | Weight / 100 pcs (lb) | Dimensions (in) |        |        | O.D After Swage (in) | Price / ea. | Part Number |
|-----------------|-----------------------|-----------------|--------|--------|----------------------|-------------|-------------|
|                 |                       | Length          | Depth  | Width  |                      |             |             |
| 1/16            | 0.10                  | 3/8             | 11/64  | 1/4    | 0.187                | 0.17        | 6-1/16ALDUP |
| 3/32            | 0.30                  | 1/2             | 9/32   | 13/32  | 0.281                | 0.20        | 6-3/32ALDUP |
| 1/8             | 0.66                  | 5/8             | 11/32  | 1/2    | 0.312                | 0.27        | 6-1/8ALDUP  |
| 5/32            | 0.88                  | 11/16           | 3/8    | 9/16   | 0.375                | 0.28        | 6-5/32ALDUP |
| 3/16            | 1.6                   | 1               | 7/16   | 21/32  | 0.437                | 0.43        | 6-3/16ALDUP |
| 1/4             | 2.8                   | 1-1/8           | 17/32  | 13/16  | 0.563                | 0.68        | 6-1/4ALDUP  |
| 5/16            | 4.6                   | 1-1/4           | 11/16  | 1-1/32 | 0.687                | 1.12        | 6-5/16ALDUP |
| 3/8             | 5.9                   | 1-7/16          | 3/4    | 1-5/32 | 0.812                | 1.38        | 6-3/8ALDUP  |
| 7/16            | 12                    | 1-11/16         | 15/16  | 1-7/16 | 1.000                | 3.11        | 6-7/16ALDUP |
| 1/2             | 17                    | 2               | 1-1/16 | 1-5/8  | 1.120                | 4.92        | 6-1/2ALDUP  |



## SLEEVE (FERRULE) - ALUMINIUM STOP

Generally used with galvanized wire

| Cable Size (in) | Weight / 100 pcs (lb) | Outside Dia. (in) | Inside Dia. (in) | O.D After Swage (in) | Price / ea. | Part Number |
|-----------------|-----------------------|-------------------|------------------|----------------------|-------------|-------------|
| 1/16            | 0.06                  | 1/4               | 3/32             | 0.187                | 0.21        | 6-AST116    |
| 3/32            | 0.25                  | 11/32             | 1/8              | 0.245                | 0.21        | 6-AST332    |
| 1/8             | 0.24                  | 11/32             | 5/32             | 0.245                | 0.21        | 6-AST18     |
| 5/32            | 0.38                  | 7/16              | 3/16             | 0.325                | 0.26        | 6-AST532    |
| 3/16            | 0.35                  | 7/16              | 7/32             | 0.325                | 0.26        | 6-AST316    |
| 1/4             | 2.06                  | 11/16             | 9/32             | 0.508                | 0.53        | 6-AST14     |
| 5/16            | 1.74                  | 11/16             | 3/8              | 0.508                | 0.69        | 6-AST516    |





## SLEEVE (FERRULE) - COPPER OVAL

Generally used with stainless steel wire

| Cable Size (in) | Weight / 100 pcs (lb) | Dimensions (in) |       |        | O.D After Swage (in) | Price / ea. | Part Number |
|-----------------|-----------------------|-----------------|-------|--------|----------------------|-------------|-------------|
|                 |                       | Length          | Depth | Width  |                      |             |             |
| 1/16            | 0.3                   | 25/64           | 11/64 | 1/4    | 0.190                | 0.32        | 91-CSL116   |
| 3/32            | 0.65                  | 29/64           | 15/64 | 3/8    | 0.265                | 0.79        | 91-CSL332   |
| 1/8             | 1.6                   | 9/16            | 21/64 | 1/2    | 0.353                | 1.18        | 91-CSL18    |
| 5/32            | 2.3                   | 5/8             | 3/8   | 19/32  | 0.390                | 1.75        | 91-CSL532   |
| 3/16            | 5.1                   | 7/8             | 7/16  | 43/64  | 0.475                | 3.51        | 91-CSL316   |
| 1/4             | 7.5                   | 1-1/8           | 13/16 | 1/2    | 0.585                | 4.87        | 91-CSL14    |
| 5/16            | 11.8                  | 1-1/8           | 21/32 | 1-1/64 | 0.730                | 8.88        | 91-CSL516   |
| 3/8             | 17                    | 1-1/2           | 23/32 | 1-1/8  | 0.795                | 11.82       | 91-CSL38    |



## SLEEVE (FERRULE) - COPPER STOP

Generally used with stainless steel wire

| Cable Size (in) | Weight / 100 pcs (lb) | Outside Diameter (in) | Inside Diameter (in) | O.D After Swage (in) | Price / ea. | Part Number |
|-----------------|-----------------------|-----------------------|----------------------|----------------------|-------------|-------------|
| 1/16            | 0.20                  | 13/64                 | 5/64                 | 0.182                | 0.52        | 91-CST116   |
| 3/32            | 0.80                  | 21/64                 | 7/64                 | 0.261                | 1.33        | 91-CST332   |
| 1/8             | 0.80                  | 21/64                 | 5/32                 | 0.261                | 1.10        | 91-CST18    |
| 5/32            | 1.3                   | 27/64                 | 3/16                 | 0.350                | 2.02        | 91-CST532   |
| 3/16            | 1.2                   | 27/64                 | 7/32                 | 0.350                | 1.81        | 91-CST316   |
| 1/4             | 6                     | 21/32                 | 9/32                 | 0.600                | 4.74        | 91-CST14    |
| 5/16            | 9                     | 21/32                 | 5/16                 | 0.600                | 4.31        | 91-CST516   |



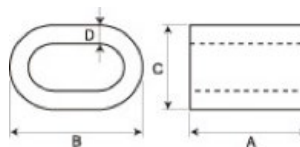
## SLEEVE (FERRULE) - STAINLESS STEEL DUPLEX



Material: 304 Stainless Steel

| Cable Size (in) | Weight / each (lb) | Before Swage (in) |        |         | After Swage (in) |      | Price/ ea. | Part Number     |
|-----------------|--------------------|-------------------|--------|---------|------------------|------|------------|-----------------|
|                 |                    | Length            | Width  | Height  | Length           | Dia. |            |                 |
| 1/4             | 0.03               | 7/8               | 9/16   | 3/4     | 1                | 0.53 | 9.90       | 15-1/4SSSLEEVE  |
| 5/16            | 0.18               | 1-19/32           | 25/32  | 1-1/8   | 1-9/16           | 0.76 | 17.72      | 15-5/16SSSLEEVE |
| 3/8             | 0.14               | 1-23/32           | 13/16  | 1-1/8   | 1-7/8            | 0.76 | 25.22      | 15-3/8SSSLEEVE  |
| 7/16            | 0.35               | 2-1/32            | 1-1/32 | 1-7/16  | 1-15/16          | 1.01 | 41.50      | 15-7/16SSSLEEVE |
| 1/2             | 0.31               | 2                 | 1      | 1-7/16  | 2-1/4            | 1.01 | 46.38      | 15-1/2SSSLEEVE  |
| 9/16            | 0.6                | 2-1/4             | 1-3/16 | 1-3/4   | 2-1/2            | 1.27 | 62.92      | 15-9/16SSSLEEVE |
| 5/8             | 0.6                | 2-23/32           | 1-1/4  | 1-13/16 | 2-5/8            | 1.27 | 64.64      | 15-5/8SSSLEEVE  |
| 3/4             | 1                  | 3                 | 1-7/16 | 2-1/8   | 3-3/8            | 1.53 | 94.57      | 15-3/4SSSLEEVE  |

## SLEEVE (FERRULE) - DUPLEX OVAL



| Rope Size (in) | Weight / 100 pcs (lb) | Dimensions (in) |      |      |      | After Swage Dia. (in) | Price / ea. | Part Number |
|----------------|-----------------------|-----------------|------|------|------|-----------------------|-------------|-------------|
|                |                       | A               | B    | C    | D    |                       |             |             |
| 5/16           | 17                    | 1.25            | 1.08 | 0.81 | 0.19 | 0.77                  | 16.30       | 33-903-08   |
| 3/8            | 13                    | 1.25            | 1.12 | 0.81 | 0.14 | 0.77                  | 16.17       | 33-903-10   |
| 7/16           | 31                    | 1.63            | 1.41 | 1.02 | 0.19 | 1.03                  | 19.82       | 33-903-11   |
| 1/2            | 27                    | 1.63            | 1.44 | 1.02 | 0.16 | 1.03                  | 19.87       | 33-903-13   |
| 9/16           | 63                    | 2.25            | 1.72 | 1.23 | 0.23 | 1.29                  | 21.74       | 33-903-14   |
| 5/8            | 54                    | 2.25            | 1.84 | 1.28 | 0.20 | 1.29                  | 21.60       | 33-903-16   |
| 3/4            | 90                    | 2.63            | 2.16 | 1.52 | 0.23 | 1.55                  | 30.20       | 33-903-19   |
| 7/8            | 126                   | 2.88            | 2.50 | 1.75 | 0.27 | 1.80                  | 43.48       | 33-903-22   |
| 1              | 187                   | 3.06            | 2.84 | 2.00 | 0.33 | 2.05                  | 57.48       | 33-903-25   |
| 1-1/4          | 384                   | 4.06            | 3.50 | 2.50 | 0.38 | 2.56                  | 167.21      | 33-903-32   |

## SLEEVE (FERRULE) - BUTTON STOP



| Cable Size (in) | Weight / 100 pcs (lb) | Before Swage Dimension (in) |        |           | After Swage Dimension (in) |        | Price / ea. | Part Number     |
|-----------------|-----------------------|-----------------------------|--------|-----------|----------------------------|--------|-------------|-----------------|
|                 |                       | O.D.                        | Length | Hole Dia. | Max Dia.                   | Length |             |                 |
| 1/4             | 8                     | 0.63                        | 1.06   | 0.30      | 0.58                       | 1.41   | 4.36        | 16-1/4"BUTTON   |
| 5/16            | 16                    | 0.88                        | 1.13   | 0.36      | 0.77                       | 1.33   | 4.81        | 16-5/16"BUTTON  |
| 3/8             | 15                    | 0.88                        | 1.48   | 0.42      | 0.77                       | 1.69   | 6.01        | 16-3/8"BUTTON   |
| 7/16            | 30                    | 1.13                        | 1.63   | 0.48      | 1.03                       | 1.94   | 7.52        | 16-7/16"BUTTON  |
| 1/2             | 50                    | 1.31                        | 1.89   | 0.55      | 1.16                       | 2.17   | 9.59        | 16-1/2"BUTTON   |
| 5/8             | 100                   | 1.56                        | 2.42   | 0.67      | 1.42                       | 2.89   | 13.99       | 16-5/8"BUTTON   |
| 3/4             | 131                   | 1.69                        | 2.73   | 0.79      | 1.55                       | 3.25   | 17.88       | 16-3/4"BUTTON   |
| 7/8             | 220                   | 2.00                        | 3.27   | 0.94      | 1.80                       | 3.86   | 30.70       | 16-7/8"BUTTON   |
| 1               | 310                   | 2.25                        | 3.67   | 1.06      | 2.05                       | 4.36   | 39.37       | 16-1"BUTTON     |
| 1-1/8           | 450                   | 2.56                        | 4.05   | 1.19      | 2.30                       | 4.81   | 67.01       | 16-1-1/8"BUTTON |
| 1-1/4           | 650                   | 2.81                        | 4.58   | 1.33      | 2.56                       | 5.42   | 93.74       | 16-1-1/4"BUTTON |

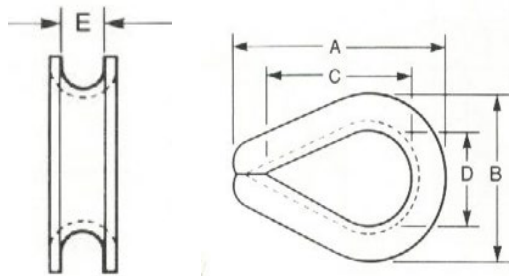
## MARLIN SPIKE



| Size (in) | Price / ea. | Part Number |
|-----------|-------------|-------------|
| 6         | 21.45       | 99-MS06     |
| 8         | 31.78       | 99-MS08     |
| 10        | 36.70       | 99-MS10     |
| 12        | 46.54       | 99-MS12     |
| 14        | 56.98       | 99-MS14     |
| 16        | 95.39       | 99-MS16     |
| 18        | 99.13       | 99-MS18     |
| 20        | 117.65      | 99-MS20     |

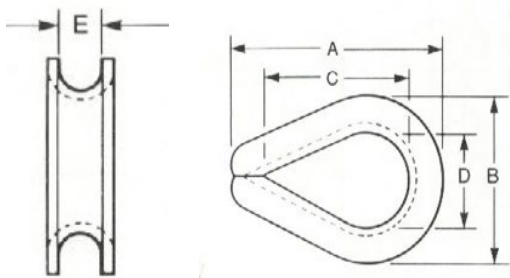
## THIMBLE - HEAVY DUTY

- Material: Steel.
- Standard: FF-T-276C
- Finish: Hot Dip Galvanized



| Rope Dia. (in) | Wt. / 100 pcs. (lb) | Dimensions (in) |       |       |      |      |           | Qty. / Box | Price / ea. | Part Number   |
|----------------|---------------------|-----------------|-------|-------|------|------|-----------|------------|-------------|---------------|
|                |                     | A               | B     | C     | D    | E    | Thickness |            |             |               |
| 1/4            | 6.5                 | 2.19            | 1.50  | 1.63  | 0.88 | 0.28 | 0.41      | 1000       | 0.43        | 6-1/4GT       |
| 5/16           | 11.8                | 2.50            | 1.81  | 1.88  | 1.06 | 0.34 | 0.50      | 500        | 0.85        | 6-5/16GT      |
| 3/8            | 21.6                | 2.88            | 2.13  | 2.13  | 1.13 | 0.41 | 0.63      | 250        | 1.57        | 6-3/8GT       |
| 7/16           | 34.7                | 3.25            | 2.38  | 2.38  | 1.25 | 0.47 | 0.72      | 150        | 1.86        | 6-7/16GT      |
| 1/2            | 51.0                | 3.63            | 2.75  | 2.75  | 1.50 | 0.53 | 0.81      | 100        | 2.71        | 6-1/2GT       |
| 9/16           | 51.0                | 3.63            | 2.69  | 2.75  | 1.50 | 0.59 | 0.88      | 100        | 3.40        | 6-9/16GT      |
| 5/8            | 75.7                | 4.25            | 3.13  | 3.25  | 1.75 | 0.66 | 0.97      | 80         | 3.83        | 6-5/8GT       |
| 3/4            | 158.1               | 5.00            | 3.81  | 3.75  | 2.00 | 0.78 | 1.22      | 50         | 7.08        | 6-3/4GT       |
| 7/8            | 177.8               | 5.50            | 4.25  | 4.25  | 2.25 | 0.94 | 1.38      | 30         | 10.22       | 6-7/8GT       |
| 1              | 313.9               | 6.13            | 4.94  | 4.50  | 2.50 | 1.06 | 1.56      | 20         | 13.20       | 6-1GT         |
| 1 1/8 - 1 1/4  | 400.0               | 7.00            | 5.88  | 5.13  | 2.88 | 1.31 | 1.81      | 15         | 18.26       | 6-11/8-11/4GT |
| 1 1/4 - 1 3/8  | 811.0               | 9.00            | 6.81  | 6.25  | 3.50 | 1.44 | 2.19      | 6          | 42.23       | 6-11/4-13/8GT |
| 1 3/8 - 1 1/2  | 1295                | 9.06            | 7.13  | 6.50  | 3.50 | 1.56 | 2.56      | 5          | 60.33       | 6-1-1/2GT     |
| 1 3/4          | 1775                | 12.19           | 8.50  | 9.00  | 4.50 | 1.84 | 2.84      | 4          | 85.73       | 6-1-3/4GT     |
| 2              | 2775                | 15.13           | 10.38 | 12.00 | 6.00 | 2.09 | 3.09      | 2          | 128.19      | 6-2GT         |
| 2 1/4          | 3950                | 17.13           | 11.88 | 14.00 | 7.00 | 2.38 | 3.63      | 1          | 273.70      | 6-2-1/4GT     |
| 2 1/2          | 6350                | 18.50           | 12.75 | 15.00 | 7.00 | 3.00 | 4.50      | 1          | 489.90      | 6-2-1/2GT     |
| 3              | 11 000              | 21.50           | 13.00 | 18.00 | 8.00 | 3.50 | 5.25      | 1          | 665.62      | 6-3GT         |

# THIMBLE - LIGHT DUTY

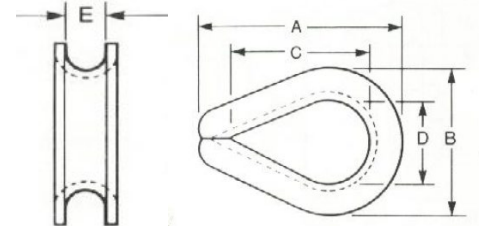


| Rope Dia. (in) | Wt. / 100 pcs. (lb) | Dimensions (in) |      |      |      |      | Price / ea. | Part Number |
|----------------|---------------------|-----------------|------|------|------|------|-------------|-------------|
|                |                     | A               | B    | C    | D    | E    |             |             |
| 1/8            | 3.50                | 1.94            | 1.06 | 1.31 | 0.69 | 0.16 | 0.32        | 6-1/8"GLDT  |
| 3/16           | 3.50                | 1.94            | 1.06 | 1.31 | 0.69 | 0.22 | 0.32        | 6-3/16"GLDT |
| 1/4            | 3.50                | 1.94            | 1.06 | 1.31 | 0.69 | 0.28 | 0.32        | 6-1/4"GLDT  |
| 5/16           | 4.00                | 2.13            | 1.25 | 1.50 | 0.81 | 0.34 | 0.37        | 6-5/16"GLDT |
| 3/8            | 6.70                | 2.38            | 1.47 | 1.63 | 0.94 | 0.41 | 0.48        | 6-3/8"GLDT  |
| 1/2            | 12.5                | 2.75            | 1.75 | 1.88 | 1.13 | 0.53 | 0.87        | 6-1/2"GLDT  |
| 5/8            | 34.50               | 3.50            | 2.38 | 2.25 | 1.38 | 0.66 | 2.15        | 6-5/8"GLDT  |
| 3/4            | 47.10               | 3.75            | 2.69 | 2.50 | 1.63 | 0.78 | 3.38        | 6-3/4"GLDT  |
| 7/8            | 84.60               | 5.00            | 3.19 | 3.50 | 1.88 | 0.94 | 5.21        | 6-7/8GLDT   |
| 1              | 97.50               | 5.69            | 3.75 | 4.25 | 2.50 | 1.06 | 6.25        | 6-1"GLDT    |



## THIMBLE - HEAVY DUTY

- Material: 304 Stainless Steel.
- Standard: FF-T-276C
- Finish: Stainless Steel



| Rope Dia. (in) | Wt. / 100 pcs. (lb) | Dimensions (in) |      |      |      |      | Thickness | Price / ea. | Part Number   |
|----------------|---------------------|-----------------|------|------|------|------|-----------|-------------|---------------|
|                |                     | A               | B    | C    | D    | E    |           |             |               |
| 1/4            | 6.5                 | 2.19            | 1.43 | 1.65 | 0.88 | 0.28 | 0.41      | 2.29        | 6-1/4"SSHDTH  |
| 5/16           | 11.8                | 2.75            | 1.88 | 2.00 | 1.06 | 0.34 | 0.50      | 3.30        | 6-5/16"SSHDTH |
| 3/8            | 21.6                | 2.88            | 2.00 | 2.13 | 1.13 | 0.41 | 0.63      | 6.34        | 6-3/8"SSHDTH  |
| 1/2            | 51.0                | 3.63            | 2.75 | 2.75 | 1.50 | 0.53 | 0.81      | 14.06       | 6-1/2"SSHDTH  |
| 5/8            | 75.7                | 4.25            | 3.25 | 3.13 | 1.75 | 0.66 | 0.97      | 18.26       | 6-5/8"SSHDTH  |
| 3/4            | 158.1               | 5.00            | 3.75 | 3.81 | 2.00 | 0.78 | 1.22      | 39.93       | 6-3/4SSHDTH   |

## THIMBLE - LIGHT DUTY

- Material: 304 Stainless Steel.
- Standard: FF-T-276C
- Finish: Stainless Steel

| Size (in) | Price / ea. | Part Number   |
|-----------|-------------|---------------|
| 1/8       | 1.33        | 6-1/8"SSLDTH  |
| 3/16      | 1.55        | 6-3/16"SSLDTH |



## THIMBLE - TUBE

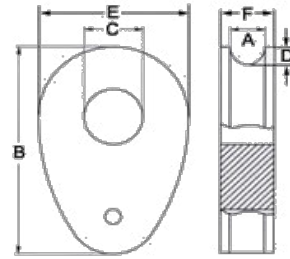
- Material: Steel.
- Standard: FF-T-276C
- Finish: Painted Yellow



| Size (mm) | Type | Price / ea. | Part Number |
|-----------|------|-------------|-------------|
| 12        | 215  | 16.24       | 6-TT1/2     |
| 14        | 217  | 19.20       | 6-TT9/16    |
| 16        | 219  | 27.15       | 6-TT5/8     |
| 18        | 222  | 35.05       | 6-TT3/4     |
| 22        | 225  | 49.92       | 6-TT7/8     |
| 24        | 228  | 63.83       | 6-TT15/16   |
| 26        | 230  | 66.73       | 6-TT1       |
| 32        | 235  | 90.80       | 6-TT1-1/4   |

## SOLID THIMBLE - DIN 3091

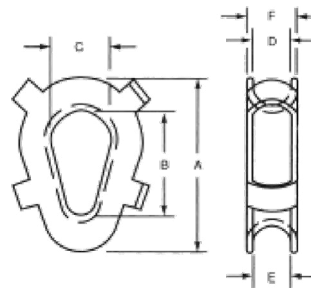
- Material: Cast Iron
- DIN 3091
- Finish: Hot Dip Galvanized



| Size | Dimensions (mm) |     |    |      |     |      | Weight /<br>ea. kgs | Price<br>/ ea. | Part Number |
|------|-----------------|-----|----|------|-----|------|---------------------|----------------|-------------|
|      | A               | B   | C  | D    | E   | F    |                     |                |             |
| 10   | 11              | 70  | 18 | 6    | 50  | 17.5 | 0.24                | 17.16          | 6-10MMST    |
| 12   | 13              | 84  | 21 | 7.5  | 60  | 20   | 0.39                | 22.36          | 6-12MMST    |
| 14   | 16              | 98  | 25 | 9    | 70  | 23.5 | 0.61                | 34.93          | 6-14MMST    |
| 16   | 18              | 110 | 28 | 10.5 | 80  | 26   | 0.84                | 48.14          | 6-16MMST    |
| 18   | 20              | 130 | 31 | 12   | 90  | 28.5 | 1.21                | 51.99          | 6-18MMST    |
| 20   | 22              | 140 | 35 | 13.5 | 100 | 31   | 1.55                | 66.30          | 6-20MMST    |
| 22   | 24              | 150 | 38 | 15   | 110 | 33.5 | 1.90                | 84.19          | 6-22MMST    |
| 24   | 26              | 170 | 41 | 16.5 | 120 | 36   | 2.75                | 115.50         | 6-24MMST    |
| 26   | 29              | 180 | 44 | 18   | 130 | 39.5 | 3.16                | 140.58         | 6-26MMST    |
| 28   | 31              | 200 | 47 | 20   | 140 | 42   | 3.29                | 152.72         | 6-28MMST    |
| 32   | 35              | 220 | 53 | 23   | 160 | 47   | 6.05                | 260.55         | 6-32MMST    |
| 36   | 40              | 250 | 59 | 26   | 180 | 53   | 8.60                | 367.42         | 6-36MMST    |

## THIMBLE - SYNTHETIC ROPE

- Material: Steel
- Standard: FF-T-276C
- Finish: Hot Dip Galvanized



| Size<br>(in)  | Rope<br>Dia. (mm) | Wt.<br>(lb) | Dimensions (mm) |     |     |     |     |     | Price<br>/ ea. | Part Number      |
|---------------|-------------------|-------------|-----------------|-----|-----|-----|-----|-----|----------------|------------------|
|               |                   |             | A               | B   | C   | D   | E   | F   |                |                  |
| 1-1/4 - 1-5/8 | 32 - 40           | 6.6         | 196             | 127 | 85  | 50  | 50  | 60  | 240.05         | 6-1-1/4-1-5/8SRT |
| 2 - 2-1/4     | 48 - 56           | 15          | 247             | 149 | 92  | 72  | 72  | 89  | 434.90         | 6-2-2-1/4SRT     |
| 2-5/8         | 64                | 19.4        | 276             | 159 | 102 | 75  | 75  | 79  | 529.10         | 6-2-5/8SRT       |
| 3             | 72                | 30.2        | 320             | 195 | 120 | 87  | 87  | 105 | 685.43         | 6-3SRT           |
| 3-1/4         | 80 - 86           | 41.8        | 360             | 220 | 128 | 101 | 101 | 114 | 1024.19        | 6-3-1/4SRT       |

## CHOKER BUTTON



| Size (in) | Price / ea. | Part Number |
|-----------|-------------|-------------|
| 7/16      | 4.15        | 31-7/16"CB  |
| 1/2       | 4.15        | 31-1/2"CB   |

## HOOK - MICRO MIDGET CHOKER

- New improved manufacturing process
- Material: 35CMRO Alloy Steel Heat treated



| Price / ea. | Part Number |
|-------------|-------------|
| 17.62       | 90-CHCM     |

## GO-NO-GO GAGUES - FOR FLEMISH EYE STEEL SLEEVES (FERRULES)

For measuring after swage dimensions of Flemish eye steel sleeves to ensure the sleeve is swaged to proper dimensions for reasons such as worn dies and / or incorrect swaging procedures.



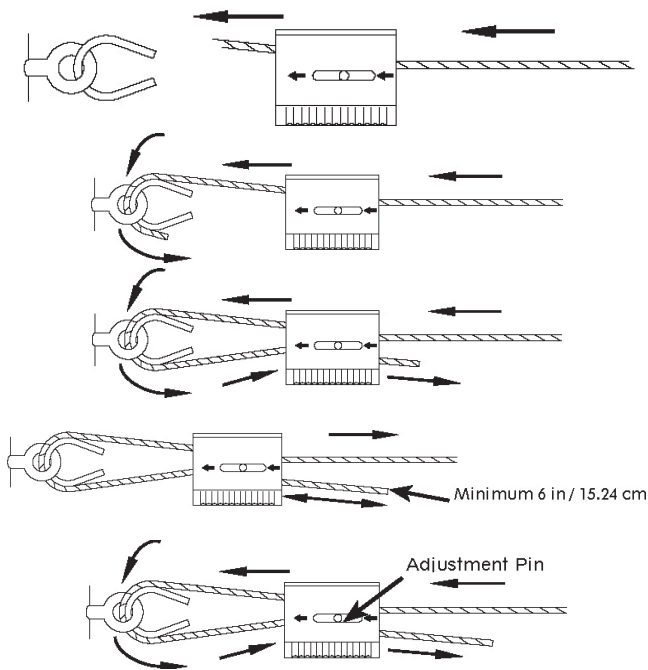
| For Sleeve Sizes | Price / ea. | Part Number        |
|------------------|-------------|--------------------|
| 1/4" ~ 1-1/4"    | 185.70      | 176-1/4-1-1/4NGG   |
| 1-3/8" ~ 1-1/2"  | 185.70      | 176-1-3/8-1-1/2NGG |
| 1-3/4" ~ 2"      | 185.70      | 176-1-3/4-2NGG     |
| 2-1/4" ~ 2-1/2"  | 185.70      | 176-2-1/4-2-1/2NGG |

## CABLE JOINER - SELF-LOCKING

| WLL (lb)  | Wire Diameter (in) | Wire Construction | Material         | Price              | Part Number |
|-----------|--------------------|-------------------|------------------|--------------------|-------------|
| 10 - 75   | 1/16               | 7 x 7             | Galvanised Steel | 10.01              | 27-KL75     |
| 0 - 75    | 1/16               | 7 x 7             | Galvanised Steel | Pricing on Request | 27-KL100    |
| 25 - 150  | 3/32               | 7 x 7             | Galvanised Steel |                    | 27-KL150    |
| 25 - 150  | 3/32               | 7 x 7             | Galvanised Steel |                    | 27-KL200    |
| 25 - 250  | 1/8                | 7 x 7             | Galvanised Steel |                    | 27-KL600    |
| 25 - 250  | 1/8                | 7 x 7             | Galvanised Steel |                    |             |
| 50 - 640  | 3/16               | 7 x 19            | Galvanised Steel |                    |             |
| 50 - 1000 | 1/4                | 7 x 19            | Galvanised Steel |                    |             |



### Assembly Instructions:



Pull adjustment pin back and pass wire through joiner.  
Failure to pull adjustment pin first may cause damage to serrated teeth and reduce holding capacity.

Lop wire through anchor.

Pull adjustment pin back and pass wire back through joiner.  
Push through at least 6" of wire rope.

Always confirm engagement of joiner on wire before applying load by pushing the adjustment pin in the opposite direction of the arrows on the cable lock and then pulling the cable also in the opposite direction of the arrows on the cable lock.

To adjust, take the load off and pull the tail slightly to disengage teeth, then release using adjustment pin.

### Warning Instructions:

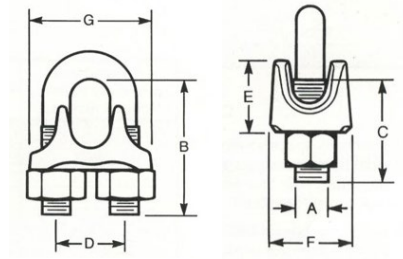
- To ensure hanging system integrity and safety, use only properly sized wire rope.
- Always pull adjustment pin back before passing wire rope through rise cable lock. Failure to pull adjustment pin first may cause damage to serrated teeth and reduce holding capacity.
- Always confirm engagement of joiner on wire before applying load by pushing the adjustment pin in the opposite direction of the arrows on the cable lock and then pulling the cable also in the opposite direction of the arrows on the cable lock.

- Do not use for loads outside the stated range of the product.
- Do not exceed the safe working range of the product.
- Do not use on coated wire rope, paint, lubricant, or other coating.
- Do not use for lofting or dynamic loads.
- Keep the product clean and free from dirt.
- Remove damaged cable end prior to inserting into the joiner.
- Do not use in chlorinated atmospheres.
- For use on static load applications only.



## CLIP - WIRE ROPE, MALLEABLE

- To be used for light Duty, NON CRITICAL applications only.
- Typical uses include: guard line and fencing.
- Material: Malleable Steel
- Standard: FF-C-450, Type 1 Class 2.
- Finish: Electro-Galvanized
- Identification: Size



| Rope Size (in) | Weight / 100 pcs. (lb) | Dimensions (in) |      |      |      |      |      |      | Price / ea. | Part Number |
|----------------|------------------------|-----------------|------|------|------|------|------|------|-------------|-------------|
|                |                        | A               | B    | C    | D    | E    | F    | G    |             |             |
| 1/8            | 4                      | 0.18            | 0.81 | 0.50 | 0.50 | 0.50 | 0.56 | 0.94 | 0.24        | 6-1/8"MC    |
| 3/16           | 6.3                    | 0.25            | 0.94 | 0.56 | 0.56 | 0.56 | 0.63 | 1.06 | 0.39        | 6-3/16"MC   |
| 1/4            | 13                     | 0.31            | 1.19 | 0.75 | 0.75 | 0.69 | 0.75 | 1.31 | 0.58        | 6-1/4"MC    |
| 5/16           | 15                     | 0.31            | 1.31 | 0.84 | 0.75 | 0.75 | 0.75 | 1.44 | 0.64        | 6-5/16"MC   |
| 3/8            | 21                     | 0.38            | 1.63 | 1.00 | 0.88 | 0.84 | 0.88 | 1.63 | 0.94        | 6-3/8"MC    |
| 1/2            | 37                     | 0.44            | 2.00 | 1.19 | 1.06 | 1.00 | 1.06 | 1.88 | 1.48        | 6-1/2"MC    |
| 5/8            | 59                     | 0.50            | 2.31 | 1.38 | 1.25 | 1.25 | 1.28 | 2.09 | 2.21        | 6-5/8"MC    |
| 3/4            | 84                     | 0.56            | 2.56 | 1.56 | 1.31 | 1.44 | 1.56 | 2.38 | 3.15        | 6-3/4"MC    |
| 7/8            | 125                    | 0.63            | 3.06 | 1.81 | 1.63 | 1.75 | 1.81 | 2.88 | 4.77        | 6-7/8"MC    |
| 1              | 166                    | 0.63            | 3.44 | 2.00 | 1.88 | 2.06 | 2.00 | 3.00 | 5.66        | 6-1"MC      |

## CLIP - WIRE ROPE, STAINLESS

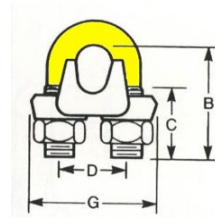
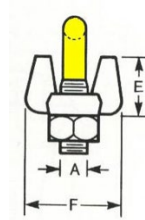
- Material: 304 Stainless Steel
- Standard: FF-C-450
- Finish: Stainless Steel
- Identification: Size

| Size (in) | Price / ea. | Part Number  |
|-----------|-------------|--------------|
| 1/8       | 2.18        | 6-1/8"304SS  |
| 3/16      | 2.71        | 6-3/16"304SS |
| 1/4       | 3.99        | 6-1/4"304SS  |
| 5/16      | 4.95        | 6-5/16"304SS |
| 3/8       | 7.99        | 6-3/8"304SS  |
| 1/2       | 12.78       | 6-1/2"304SS  |
| 5/8       | 17.94       | 6-5/8"304SS  |



## CLIP - WIRE ROPE, FORGED

- Only genuine 'OCEAN' clips have yellow U-Bolt for instant recognition.
- Material: Forged Steel
- Standard: EN 13411-5, FF-C-450: Type 1 Class 1, ASME B30.26
- Finish: Clip: Galvanized, U-Bolt: Powder Coated Yellow.
- Identification: Trademark, Size/WLL, Batch Code



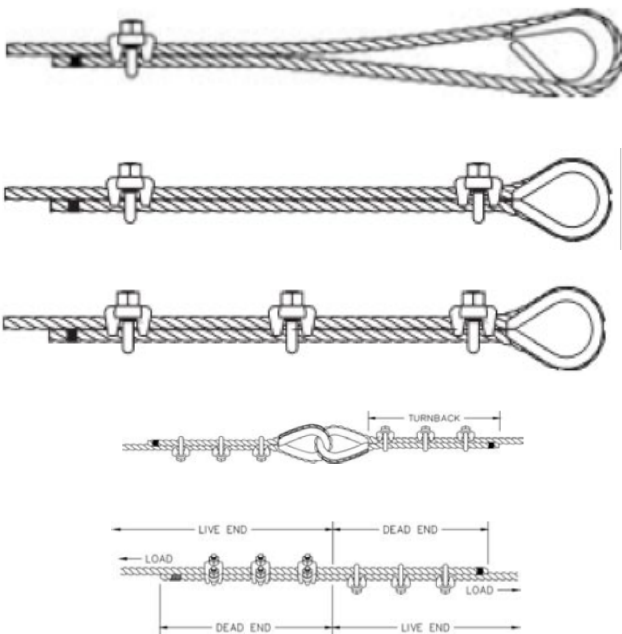
| Rope Size (in) | Weight / 100 pcs. (lb) | Dimensions (in) |       |      |      |      |      | Use    |                   |                          | Qty. / Box | Price / ea.        | Part Number  |
|----------------|------------------------|-----------------|-------|------|------|------|------|--------|-------------------|--------------------------|------------|--------------------|--------------|
|                |                        | A               | B     | D    | E    | F    | G    | *Min # | Torque (lbf * ft) | Min. rope turn back (in) |            |                    |              |
| 1/8            | 6                      | 0.22            | 0.72  | 0.47 | 0.41 | 0.81 | 0.94 | 2      | 4.5               | 3 1/4                    | 1000       | 0.99               | 6-1/8"FC     |
| 3/16           | 10                     | 0.25            | 0.97  | 0.59 | 0.50 | 0.94 | 1.16 | 2      | 4.5               | 3 3/4                    | 500        | 1.38               | 6-3/16"FC    |
| 1/4            | 20                     | 0.31            | 1.03  | 0.75 | 0.66 | 1.19 | 1.44 | 2      | 15                | 4 3/4                    | 250        | 1.43               | 6-1/4"FC     |
| 5/16           | 30                     | 0.38            | 1.38  | 0.88 | 0.72 | 1.31 | 1.69 | 2      | 30                | 5 1/4                    | 150        | 1.73               | 6-5/16"FC    |
| 3/8            | 47                     | 0.44            | 1.50  | 1.00 | 0.91 | 1.63 | 1.94 | 2      | 45                | 6 1/2                    | 100        | 2.51               | 6-3/8"FC     |
| 1/2            | 80                     | 0.50            | 1.88  | 1.19 | 1.13 | 1.91 | 2.28 | 3      | 65                | 11 1/2                   | 75         | 3.99               | 6-1/2"FC     |
| 9/16           | 104                    | 0.56            | 2.25  | 1.31 | 1.22 | 2.06 | 2.50 | 3      | 95                | 12                       | 50         | 5.41               | 6-9/16"FC    |
| 5/8            | 106                    | 0.56            | 2.38  | 1.31 | 1.34 | 2.06 | 2.50 | 3      | 95                | 12                       | 50         | 6.02               | 6-5/8"FC     |
| 3/4            | 150                    | 0.62            | 2.75  | 1.50 | 1.41 | 2.25 | 2.84 | 4      | 130               | 18                       | 35         | 9.04               | 6-3/4"FC     |
| 7/8            | 212                    | 0.75            | 3.12  | 1.75 | 1.59 | 2.44 | 3.16 | 4      | 225               | 19                       | 25         | 14.43              | 6-7/8"FC     |
| 1              | 260                    | 0.75            | 3.50  | 1.88 | 1.78 | 2.63 | 3.47 | 5      | 225               | 26                       | 20         | 15.77              | 6-1"FC       |
| 1 1/8          | 290                    | 0.75            | 3.88  | 2.00 | 1.91 | 2.81 | 3.59 | 6      | 225               | 34                       | 15         | 18.02              | 6-1-1/8"FC   |
| 1 1/4          | 430                    | 0.88            | 4.25  | 2.31 | 2.19 | 3.13 | 4.13 | 7      | 360               | 44                       | 12         | 25.40              | 6-1-1/4"FC   |
| 1 1/2          | 540                    | 0.88            | 4.94  | 2.59 | 2.44 | 3.41 | 4.44 | 8      | 360               | 54                       | 9          | 28.02              | 6-1-1/2"FC   |
| 1 3/4          | 925                    | 1.13            | 5.75  | 3.06 | 2.94 | 3.81 | 5.28 | 8      | 590               | 61                       | 6          | 109.82             | 6-1-3/4"FC   |
| 2              | 1300                   | 1.25            | 6.44  | 3.38 | 3.28 | 4.44 | 5.88 | 8      | 750               | 71                       | 4          | 148.67             | 6-2"FC       |
| 2 1/4          | 1540                   | 1.25            | 7.13  | 3.86 | 3.19 | 4.49 | 6.38 | 8      | 750               | 73                       | 3          | Pricing on Request | 116-2-1/4"FC |
| 2 1/2          | 1980                   | 1.25            | 7.68  | 4.13 | 3.70 | 4.06 | 6.67 | 9      | 750               | 84                       | Bulk       |                    | 116-2-1/2"FC |
| 2 3/4          | 2200                   | 1.25            | 8.31  | 4.37 | 4.88 | 5.00 | 6.89 | 10     | 750               | 100                      | Bulk       |                    | 116-2-3/4"FC |
| 3              | 3080                   | 1.50            | 9.77  | 4.76 | 4.69 | 5.87 | 7.64 | 10     | 1200              | 106                      | Bulk       |                    | 116-3"FC     |
| 3 1/2          | 3960                   | 1.50            | 10.75 | 5.51 | 5.98 | 6.18 | 8.39 | 12     | 1200              | 149                      | Bulk       |                    | 116-3-1/2"FC |

## CLIPS WIRE ROPE 'OCEAN' - WARNINGS AND APPLICATION INSTRUCTIONS

Efficiency ratings for wire rope end terminations are based on the catalog strength of standard EIPS wire rope. The efficiency rating of a properly prepared loop or thimble eye termination for clip sizes 1/8" through 7/8" is 80%, and for 1" through 3-1/2" is 90%.

Based on RRL or RLL wire rope class 6x19 or 6x37, FC or IWRC, EEIPS. If Seale construction or similar large outer wire type construction in the 6x19 class is to be used add one extra clip. If a pulley or sheave is to be used, add one extra clip.

For elevator, personal hoist, and scaffold applications refer to ANSI A17.1 and ANSI A10.4. These standards do not recommend U-Bolt wire rope terminations.



Turn back specified amount of rope from thimble or loop. Apply first clip one base width from dead end of rope, live end rests in saddle. Use torque wrench to tighten evenly alternating from one nut to the other until achieving recommended torque.

Apply the second clip as near the loop or thimble as possible, if more than two clips are required, tighten firmly but do not torque, go to the next step. If only two clips are required tighten evenly while alternating nuts until reaching the recommended torque.

Space additional clips evenly between the first two clips, take up the rope slack, and tighten evenly on each U-Bolt including the clip closest to the eye, alternating nuts until reaching recommended torque.

The recommended method of joining two wire ropes together with U-Bolt clips is to use inter locking turn back eyes with thimbles while using the recommended number of clips on each eye.

An alternate method is to use twice the number of clips as used by a turn back termination. The rope ends are placed parallel to each other overlapping by twice the turn back amount recommended, while using the minimum amount of clips on each dead end. Tighten evenly on each U-Bolt alternating nuts until reaching recommended torque.

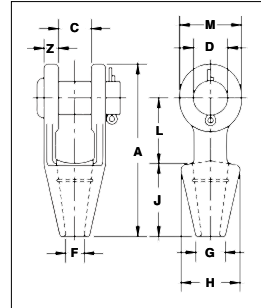
**\*\* Remember apply the first load to test the assembly as mentioned in the warnings \*\***

If a greater number of clips are used than shown in the chart, the amount of turn back should be increased proportionately.

- FAILURE TO READ, UNDERSTAND AND FOLLOW THESE INSTRUCTIONS MAY CAUSE DEATH OR SERIOUS INJURY
- READ AND UNDERSTAND THESE INSTRUCTIONS BEFORE USING CLIPS
- MATCH THE SAME SIZE CLIP TO THE SAME SIZE WIRE ROPE
- PREPARE WIRE ROPE AND TERMINATION ONLY AS INSTRUCTED
- DO NOT USE WITH PLASTIC COATED WIRE ROPE
- APPLY FIRST LOAD TO TEST THE ASSEMBLY. THIS LOAD SHOULD BE OF EQUAL OR GREATER WEIGHT THAN LOADS EXPECTED IN USE. NEXT, CHECK AND RETIGHTEN NUTS TO RECOMMENDED TORQUE

## SOCKET - SPELTER, OPEN, FORGED, OCEAN

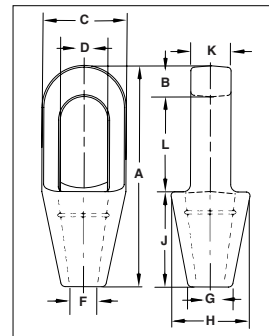
- Spelter sockets are forged from special bar quality carbon steel with the very finest in hardness controls.
- Spelter sockets properly applied have an efficiency rating of 100% based on catalog strength of wire rope.
- Socket size range 1/4" through 3/4" using one groove, 7/8" trough 1-1/2" uses 2 grooves. Ocean Open Spelter Sockets meet the performance requirements on Federal Specification RR-S-550E, Type A.



| Wire Size (in) | Structural Strand Dia. (in) | Dimensions (in) |      |      |      |      |      |      |      |      |      |              | Price / ea. | Part Number |
|----------------|-----------------------------|-----------------|------|------|------|------|------|------|------|------|------|--------------|-------------|-------------|
|                |                             | L               | W    | D1   | d    | D    | T    | H    | K    | A    | C    | Wt./ ea.(lb) |             |             |
| 5/16 - 3/8     | --                          | 4.84            | 0.83 | 0.79 | 0.51 | 0.83 | 1.73 | 2.25 | 1.77 | 1.50 | 0.44 | 1.3          | 70.17       | 3-3/8OSP    |
| 7/16 - 1/2     | --                          | 5.62            | 1.00 | 0.98 | 0.56 | 0.98 | 1.96 | 2.48 | 2.13 | 1.91 | 0.50 | 2.3          | 92.67       | 3-1/2OSP    |
| 9/16 - 5/8     | 1/2                         | 6.77            | 1.26 | 1.19 | 0.70 | 1.14 | 2.25 | 3.00 | 2.52 | 2.28 | 0.55 | 3.7          | 107.44      | 3-5/8OSP    |
| 3/4            | 9/16 - 5/8                  | 7.96            | 1.50 | 1.38 | 0.81 | 1.26 | 2.64 | 3.62 | 3.00 | 2.64 | 0.62 | 5.8          | 160.13      | 3-3/4OSP    |
| 7/8            | 11/16 - 3/4                 | 9.25            | 1.77 | 1.63 | 0.94 | 1.50 | 3.35 | 4.02 | 3.50 | 3.17 | 0.80 | 10.4         | 248.2       | 3-7/8OSP    |
| 1              | 13/16 - 7/8                 | 10.55           | 2.05 | 2.00 | 1.14 | 1.75 | 3.75 | 4.48 | 4.02 | 3.78 | 0.91 | 16.3         | 426.20      | 3-1OSP      |
| 1-1/8          | 15/16-1                     | 11.81           | 2.25 | 2.25 | 1.25 | 2.00 | 4.13 | 5.00 | 4.60 | 4.13 | 1.00 | 22.0         | 649.60      | 3-1-1/8OSP  |
| 1-1/4-1-3/8    | 1-1/16-1/8                  | 13.19           | 2.50 | 2.50 | 1.51 | 2.24 | 4.76 | 5.51 | 5.00 | 4.76 | 1.13 | 32.8         | 730.80      | 3-1-1/4OSP  |
| 1-1/2          | 1-3/16-1-1/4                | 15.12           | 3.00 | 2.75 | 1.63 | 2.75 | 5.25 | 5.98 | 5.98 | 5.37 | 1.19 | 45.9         | 1070.82     | 3-1-1/2OSP  |

## SOCKET - SPELTER, CLOSED, FORGED, OCEAN

- Spelter sockets are forged from special bar quality carbon steel with the very finest in hardness controls.
- Spelter sockets properly applied have an efficiency rating of 100% based on catalog strength of wire rope.
- Socket size range 1/4" through 3/4" using one groove, 7/8" trough 1-1/2" uses 2 grooves. Ocean Closed Spelter Sockets meet the performance requirements on Federal Specification RR-S-550E, Type A.

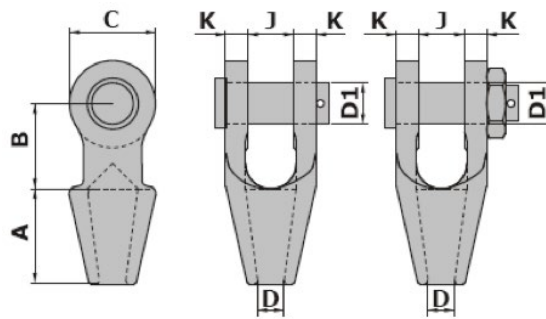


| Wire Size (in) | Structural Strand Dia. (in) | Dimensions (in) |      |      |      |      |      |      |      |      |      |              | Price / ea. | Part Number |
|----------------|-----------------------------|-----------------|------|------|------|------|------|------|------|------|------|--------------|-------------|-------------|
|                |                             | L               | B    | A    | D1   | d    | D    | T    | H    | W    | K    | Wt./ ea.(lb) |             |             |
| 5/16 - 3/8     | --                          | 4.88            | 0.62 | 1.69 | 0.98 | 0.50 | 0.83 | 1.70 | 2.25 | 0.71 | 2.00 | 0.8          | 56.11       | 3-3/8CSP    |
| 7/16 - 1/2     | --                          | 5.43            | 0.71 | 2.00 | 1.19 | 0.55 | 0.98 | 1.96 | 2.52 | 0.87 | 2.25 | 1.5          | 75.96       | 3-1/2CSP    |
| 9/16 - 5/8     | 1/2                         | 6.31            | 0.83 | 2.63 | 1.41 | 0.71 | 1.12 | 2.50 | 3.00 | 0.98 | 2.52 | 2.6          | 94.07       | 3-5/8CSP    |
| 3/4            | 9/16 - 5/8                  | 7.58            | 1.06 | 3.00 | 1.61 | 0.81 | 1.26 | 2.75 | 3.50 | 1.26 | 3.00 | 4.3          | 131.68      | 3-3/4CSP    |
| 7/8            | 11/16 - 3/4                 | 8.75            | 1.26 | 3.63 | 1.89 | 0.94 | 1.50 | 3.46 | 3.98 | 1.50 | 3.50 | 7.9          | 202.73      | 3-7/8CSP    |
| 1              | 13/16 - 7/8                 | 9.88            | 1.38 | 4.13 | 2.28 | 1.14 | 1.77 | 3.78 | 4.50 | 1.77 | 4.02 | 10.5         | 291.06      | 3-1CSP      |
| 1-1/8          | 15/16-1                     | 11.14           | 1.56 | 4.53 | 2.52 | 1.25 | 2.00 | 4.13 | 5.00 | 2.00 | 4.48 | 15.2         | 360.32      | 3-1-1/8CSP  |
| 1-1/4-1-3/8    | 1-1/16-1/8                  | 12.13           | 1.63 | 5.04 | 2.80 | 1.52 | 2.25 | 4.76 | 5.51 | 2.25 | 4.90 | 22.7         | 535.41      | 3-1-1/4CSP  |
| 1-1/2          | 1-3/16-1-1/4                | 13.94           | 1.94 | 5.43 | 3.19 | 1.63 | 2.77 | 5.25 | 5.98 | 2.52 | 5.98 | 30.9         | 752.67      | 3-1-1/2CSP  |

## SOCKET - SPELTER, OPEN, GN®

### Made in Holland

Cast material, 5:1 safety, 3.1B certificates and material certificate, galvanized finish, c/w cotter pin. Rated in Metric Ton(s)



### Galvanized Finish

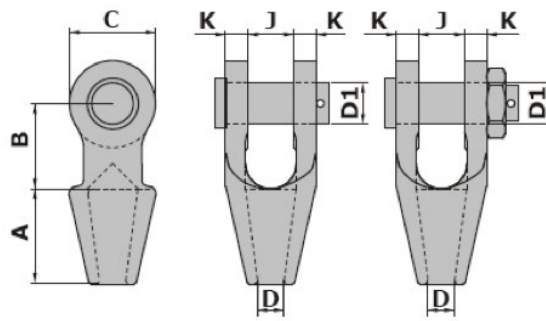
| Wire Size (in) | MBL (t) | Dimensions (mm) |     |       |     |     |     |     | Wt./ea. (kg) | Price / ea.        | Part Number   |
|----------------|---------|-----------------|-----|-------|-----|-----|-----|-----|--------------|--------------------|---------------|
|                |         | A               | B   | C     | D   | D1  | J   | K   |              |                    |               |
| 1 1/8          | 100     | 127             | 114 | 123.5 | 32  | 57  | 57  | 25  | 11.6         | 683.28             | 116-1-1/80SPG |
| 1 1/4 - 1 3/8  | 125     | 139             | 127 | 135   | 38  | 63  | 63  | 28  | 16.3         | 834.00             | 116-1-1/40SPG |
| 1 1/2          | 150     | 152             | 162 | 160   | 41  | 70  | 76  | 30  | 24           | 1,109.00           | 116-1-1/20SPG |
| 1 5/8          | 200     | 165             | 165 | 176   | 44  | 76  | 76  | 33  | 27           | 1,350.99           | 116-1-5/80SPG |
| 1 3/4 - 1 7/8  | 260     | 190             | 178 | 200   | 51  | 89  | 89  | 39  | 38           | 2,040.20           | 116-1-7/80SPG |
| 2 - 2 1/8      | 280     | 216             | 228 | 216   | 57  | 95  | 101 | 46  | 59           | 2,767.20           | 116-2-1/80SPG |
| 2 1/4 - 2 3/8  | 360     | 228             | 250 | 236   | 63  | 108 | 113 | 53  | 87           | 3,666.98           | 116-2-3/80SPG |
| 2 1/2 - 2 5/8  | 450     | 248             | 273 | 264   | 73  | 121 | 127 | 60  | 130          | 5,219.85           | 116-2-5/80SPG |
| 2 3/4 - 2 7/8  | 480     | 279             | 279 | 276   | 79  | 127 | 133 | 73  | 157          | P.O.R              | 116-2-7/80SP  |
| 3 - 3 1/8      | 520     | 305             | 286 | 284   | 86  | 133 | 146 | 76  | 192          | 5,787.13           | 116-3-1/80SP  |
| 3 1/4 - 3 3/8  | 600     | 330             | 298 | 296   | 92  | 140 | 159 | 79  | 243          | Pricing on Request | 116-3-3/80SP  |
| 3 1/2 - 3 5/8  | 700     | 356             | 318 | 340   | 99  | 152 | 171 | 83  | 287          |                    | 116-3-5/80SP  |
| 3 3/4 - 4      | 875     | 381             | 343 | 362   | 108 | 178 | 191 | 89  | 370          |                    | 116-40SP      |
| 4 1/2          | 1100    | 460             | 480 | 440   | 125 | 190 | 208 | 101 | 447          |                    | 116-4-1/20SP  |
| 5              | 1250    | 500             | 500 | 560   | 138 | 250 | 210 | 120 | 750          |                    | 116-50SP      |
| 5 1/2 - 6      | 1400    | 580             | 500 | 600   | 160 | 275 | 230 | 140 | 880          |                    | 116-60SP      |
| 6 1/2          | 1600    | 675             | 600 | 650   | 175 | 290 | 310 | 175 | 1040         |                    | 116-6-1/20SP  |



## SOCKET - SPELTER, OPEN, GN®

### Made in Holland

Cast material, 5:1 safety, 3.1B certificates and material certificate, painted finish, c/w cotter pin. Rated in Metric Ton(s)

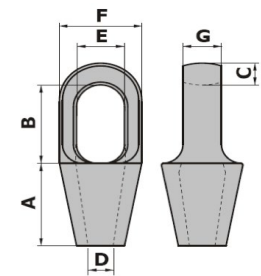


### Painted Finish

| Wire Size (in) | MBL (t) | Dimensions (mm) |     |     |    |     |     |    | Wt./ea. (kg) | Price / ea. | Part Number  |
|----------------|---------|-----------------|-----|-----|----|-----|-----|----|--------------|-------------|--------------|
|                |         | A               | B   | C   | D  | D1  | J   | K  |              |             |              |
| 1 1/2          | 150     | 152             | 162 | 160 | 41 | 70  | 76  | 30 | 24           | 927.14      | 116-1-1/20SP |
| 1 5/8          | 200     | 165             | 165 | 176 | 44 | 76  | 76  | 33 | 27           | 1,044.34    | 116-1-5/80SP |
| 1 3/4 - 1 7/8  | 260     | 190             | 178 | 200 | 51 | 89  | 89  | 39 | 38           | 1,655.67    | 116-1-7/80SP |
| 2 - 2 1/8      | 280     | 216             | 228 | 216 | 57 | 95  | 101 | 46 | 59           | 2,093.79    | 116-2-1/80SP |
| 2 1/4 - 2 3/8  | 360     | 228             | 250 | 236 | 63 | 108 | 113 | 53 | 87           | 2,904.20    | 116-2-3/80SP |
| 2 1/2 - 2 5/8  | 450     | 248             | 273 | 264 | 73 | 121 | 127 | 60 | 130          | 4,167.20    | 116-2-5/80SP |

# SOCKET - SPELTER, CLOSED, GN®

**Made in Holland**  
 Cast material, 5:1 safety, 3.1B certificates and material certificate, galvanized or painted finish. Rated in Metric Ton(s)



Tolerance + 5%



Galvanized Finish



Painted Finish

## Galvanized Finish

| Wire Size (in) | MBL (t) | Dimensions (mm) |     |     |     |     |     |     | Wt./ea. (kg) | Price / ea.        | Part Number   |
|----------------|---------|-----------------|-----|-----|-----|-----|-----|-----|--------------|--------------------|---------------|
| A              | B       | C               | D   | E   | F   | G   |     |     |              |                    |               |
| 1              | 75      | 114             | 103 | 36  | 28  | 57  | 106 | 45  | 6            | 296.39             | 116-1CSPG     |
| 1 1/8          | 100     | 127             | 116 | 39  | 32  | 63  | 114 | 51  | 7.5          | 379.10             | 116-1-1/8CSPG |
| 1 1/4 - 1 3/8  | 125     | 139             | 130 | 44  | 38  | 70  | 128 | 58  | 11           | 611.87             | 116-1-1/4CSPG |
| 1 1/2          | 150     | 152             | 155 | 51  | 41  | 79  | 136 | 63  | 13           | 668.60             | 116-1-1/2CSP  |
| 1 5/8          | 200     | 165             | 171 | 54  | 44  | 82  | 146 | 70  | 17           | 868.49             | 116-1-5/8CSP  |
| 1 3/4 - 1 7/8  | 260     | 190             | 198 | 55  | 51  | 89  | 171 | 76  | 24           | 1,330.00           | 116-1-7/8CSPG |
| 2 - 2 1/8      | 280     | 216             | 224 | 62  | 57  | 96  | 193 | 82  | 37           | 1,978.23           | 116-2-1/8CSP  |
| 2 1/4 - 2 3/8  | 360     | 228             | 247 | 73  | 63  | 108 | 216 | 92  | 56           | 2,460.70           | 116-2-3/8CSP  |
| 2 1/2 - 2 5/8  | 450     | 248             | 270 | 76  | 73  | 140 | 241 | 102 | 65           | 2,857.75           | 116-2-5/8CSP  |
| 2 3/4 - 2 7/8  | 480     | 279             | 286 | 79  | 79  | 159 | 273 | 124 | 93           | Pricing on Request | 116-2-7/8CSP  |
| 3 - 3 1/8      | 520     | 305             | 298 | 83  | 86  | 171 | 292 | 133 | 110          |                    | 116-3-1/8CSP  |
| 3 1/4 - 3 3/8  | 600     | 330             | 311 | 102 | 92  | 184 | 311 | 146 | 142          |                    | 116-3-3/8CSP  |
| 3 1/2 - 3 5/8  | 700     | 356             | 330 | 102 | 99  | 197 | 330 | 159 | 170          |                    | 116-3-5/8CSP  |
| 3 3/4 - 4      | 875     | 381             | 356 | 108 | 108 | 216 | 362 | 178 | 225          |                    | 116-4CSP      |
| 4 1/2          | 1100    | 450             | 425 | 120 | 125 | 235 | 405 | 190 | 340          |                    | 116-4-1/2CSP  |
| 5              | 1250    | 500             | 475 | 120 | 138 | 260 | 515 | 205 | 555          |                    | 116-5CSP      |
| 5 1/2 - 6      | 1400    | 580             | 550 | 150 | 160 | 300 | 550 | 225 | 850          |                    | 116-6CSP      |
| 6 1/2          | 1600    | 675             | 600 | 175 | 175 | 325 | 600 | 300 | 1050         |                    | 116-6-1/2CSP  |

## Painted Finish (Limited quantities)

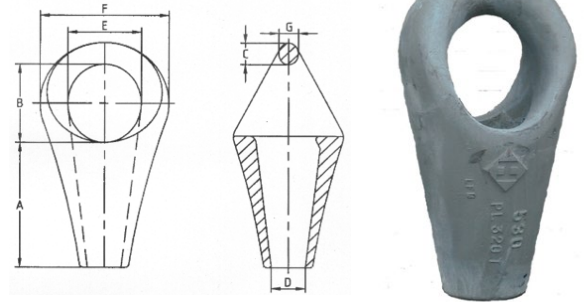
| Wire Size (in) | MBL (t) | Dimensions (mm) |     |    |    |    |     |    | Wt./ea. (kg) | Price / ea. | Part Number  |
|----------------|---------|-----------------|-----|----|----|----|-----|----|--------------|-------------|--------------|
| A              | B       | C               | D   | E  | F  | G  |     |    |              |             |              |
| 1 3/4 - 1 7/8  | 260     | 190             | 198 | 55 | 51 | 89 | 171 | 76 | 24           | 1,095.29    | 116-1-7/8CSP |

CAUTION: WHILE ATTACHING SPELTER SOCKETS TO WIRE ROPE IT IS EXTREMELY IMPORTANT TO FOLLOW RECOMMENDED PROCEDURES.WHENEVER POSSIBLE THE ASSEMBLY SHOULD BE PROOF LOADED. ALL SLINGS WITH POURED SOCKETS, IN ACCORDANCE WITHASME B30.9, SHALL BE PROOF LOADED.

## SOCKET - SPELTER, CR, CLOSED (PEEWEE, GOLD NOSE), GN®

### Made in Holland

Cast material, 5:1 safety, proof load, 3.1B certificates, on request – MPI.  
CR sockets are the best possible connection between chain and a wire rope anchoring system. These sockets have a non rotating system that prevents the tamp from turning or slipping out of the cone increasing the performance of the connection. Rated in Metric Ton(s)



| Wire Size (in) | WLL (t) | Dimensions (mm) |     |     |     |     |     |     | Wt./ea. (kg) | Price / ea.        | Part Number |
|----------------|---------|-----------------|-----|-----|-----|-----|-----|-----|--------------|--------------------|-------------|
|                |         | A               | B   | C   | D   | E   | F   | G   |              |                    |             |
| 1 1/4 – 1 3/8  | 28      | 140             | 85  | 38  | 39  | 75  | 124 | 35  | 7.2          | Pricing on Request | 116-CR28    |
| 1 1/2 – 1 5/8  | 32      | 160             | 110 | 42  | 44  | 92  | 130 | 38  | 11           |                    | 116-CR32    |
| 1 3/4 – 1 7/8  | 40      | 188             | 128 | 50  | 51  | 110 | 180 | 45  | 18           |                    | 116-CR40    |
| 2 – 2 1/8      | 50      | 215             | 125 | 55  | 57  | 115 | 200 | 50  | 25           |                    | 116-CR50    |
| 2 1/4 – 2 3/8  | 60      | 230             | 145 | 65  | 63  | 135 | 230 | 57  | 35           |                    | 116-CR60    |
| 2 1/2 – 2 5/8  | 80      | 250             | 160 | 75  | 73  | 160 | 265 | 65  | 51           |                    | 116-CR80    |
| 2 3/4 – 2 7/8  | 100     | 280             | 175 | 80  | 79  | 170 | 278 | 70  | 62           | 5,256.54           | 116-CR100   |
| 3 – 3 1/8      | 120     | 315             | 210 | 85  | 86  | 184 | 300 | 75  | 75           |                    | 116-CR120   |
| 3 1/4 – 3 3/8  | 140     | 340             | 205 | 100 | 92  | 204 | 320 | 90  | 93           |                    | 116-CR140   |
| 3 1/2 – 3 5/8  | 160     | 360             | 220 | 105 | 99  | 215 | 340 | 95  | 110          |                    | 116-CR160   |
| 3 3/4 – 4      | 180     | 380             | 240 | 110 | 108 | 234 | 376 | 100 | 141          | Pricing on Request | 116-CR180   |
| 4 1/4 – 4 1/2  | 200     | 450             | 260 | 125 | 120 | 252 | 400 | 110 | 186          |                    | 116-CR200   |

**CAUTION:**  
WHILE ATTACHING SPELTER SOCKETS TO WIRE ROPE IT IS EXTREMELY IMPORTANT TO FOLLOW RECOMMENDED PROCEDURES.  
WHENEVER POSSIBLE THE ASSEMBLY SHOULD BE PROOF LOADED. ALL SLINGS WITH POURED SOCKETS, IN ACCORDANCE WITH ASME B30.9, SHALL BE PROOF LOADED.

## WIRE ROPE BROOM DEGREASER



- Easy to use
- Does not irritate skin
- No objectionable or toxic fumes
- Fresh pine scent
- Non-Corrosive
- Will not harm metal surfaces
- Will not scratch metal surfaces
- MSDS available on request



ENVIRONMENTALLY FRIENDLY  
Biodegradable - Non-Toxic / Non-Hazardous  
Chlorine Free - Free of Petroleum Distillates  
Does Not Effect the Ozone

| Size          | Price / ea. | Part Number |
|---------------|-------------|-------------|
| 5 gallon pail | 1,210.00    | 38-93220005 |

## SOCKETING PUTTY

| Item            | Size                          | Price / ea. | Part Number |
|-----------------|-------------------------------|-------------|-------------|
| Socketing Putty | 1 lb pack (10 packs per case) | 14.90       | 38-91910100 |



**INCOMPATIBILITIES: PRE SOCKET IS NOT RECOMMENDED FOR USE ON LATEX, BUNA N, NEOPRENE, POLYSTYRENE, AND SOME PLASTICS**

**WARNING: BIODEGRADABLE PRE SOCKET SOAKED RAGS MAY SPONTANEOUSLY COMBUST IN WASTE CONTAINERS. WET PRE SOCKET RAGS WITH WATER TO PREVENT THE RISK OF SPONTANEOUS COMBUSTION. REFER TO MSDS PRIOR TO USE: FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT. CALL CHEMTREC DAY AND NIGHT: DOMESTIC NORTH AMERICA: 800-424-9300 / INTERNATIONAL: 703-527-3887**

## SOCKET LOCK - RESIN



- Longer shelf life of 18 months
- MSDS sheets for hassle free shipping to your customers
- Newly formulated after extensive testing for better wire rope grip
- Packaged in environmentally protected pouches and rust-free plastic pails to ensure product freshness
- Disposable pouring funnel included in each kit helps eliminate spills
- Bright green resin and white hardener makes mixing easy to verify
- Packaged in CCs and individually sized kits to minimize waste and aid in easy mixing
- Non-dusting, safe to use formula contains no dry powders that become airborne health hazards



### FULL CASE QUANTITIES ONLY!

| Size    | Kits per Case | Booster Kits (sold individually) |             | Socket Lock |             |
|---------|---------------|----------------------------------|-------------|-------------|-------------|
|         |               | Price / ea.                      | Part Number | Price / ea. | Part Number |
| 250 cc  | 12            | 17.71                            | 38-10840250 | 128.08      | 38-10900010 |
| 500 cc  | 12            | 23.29                            | 38-10840500 | 173.50      | 38-10900020 |
| 1000 cc | 6             | 28.00                            | 38-10841000 | 343.76      | 38-10900030 |

**RESIN SOCKETING WARNING AND SAFETY INFORMATION, SEE PAGE 308**

## RESIN SOCKETING WARNING AND SAFETY INFORMATION



| Ambient Temperature* |    | Booster Packs Required | Approximate Gel Time (Working Time)* | Approximate Cure Time (Ready For Service) |
|----------------------|----|------------------------|--------------------------------------|-------------------------------------------|
| °F                   | °C | Packs                  | Minutes                              | Hours                                     |
| 110                  | 43 | None                   | 3-4                                  | 1                                         |
| 105                  | 41 | None                   | 3-4                                  | 1                                         |
| 100                  | 38 | None                   | 4-5                                  | 1                                         |
| 95                   | 35 | None                   | 5-6                                  | 1                                         |
| 90                   | 32 | None                   | 6-8                                  | 1                                         |
| 85                   | 29 | None                   | 8-10                                 | 1                                         |
| 80                   | 27 | None                   | 11-13                                | 1                                         |
| 75                   | 24 | None                   | 13-16                                | 1                                         |
| 70                   | 21 | None                   | 16-20                                | 1                                         |
| 65                   | 18 | None                   | 20-25                                | 1                                         |
| 60                   | 16 | None                   | 23-28                                | 1                                         |
| 55                   | 13 | 1                      | 17-23                                | 1                                         |
| 50                   | 10 | 1                      | 24-30                                | 1                                         |
| 45                   | 7  | 1                      | 30-36                                | 2                                         |
| 40                   | 4  | 1                      | 50-60                                | 2.5                                       |
| 35                   | 2  | 1                      | 70-85                                | 4.5                                       |
| 30                   | -1 | 1                      | 100-120                              | 6.5                                       |

### NOTE:

- Times are approximate. The temperature of the resin, socket and wire rope can affect these times. The times above are based on the temperature of the resin at the time of mixing.
- Thorough mixing is required to achieve appropriate times listed in the table to the right.
- Approximate time to gel begins once resin has been mixed.
- Approximate time to cure begins once resin has gelled.

### WARNINGS

- Inspect inside of socket bowl to determine if socket has grooves. If grooves are present, fill grooves with socketing putty.
- If using wire for seizing, only use soft annealed iron wire.
- Socket Lock resin must be gelled and cured before assembly can be used.
- Socket Lock is not to be used with stainless steel rope in a salt water environment.
- Never use oversized sockets for wire rope unless you consult the socket and wire rope manufacturer.
- Never use Socket Lock beyond the expiration date.
- Never heat socket prior to pouring resin in an effort to accelerate the curing of the resin as it may cause the resin to prematurely gel prior to reaching the bottom of the socket bowl. Doing this could cause the assembly to fail.
- Caution: Exposure to some strong chemicals may affect the cured polymer (hardened resin mixture) in a way that could weaken the assembly. Please contact the manufacturer if this has occurred.

| Socket Size     |          | CCs   |
|-----------------|----------|-------|
| inches          | mm       |       |
| 1/4"            | 6-7      | 9     |
| 5/16" - 3/8"    | 8-10     | 17    |
| 7/16" - 1/2"    | 11 - 13  | 35    |
| 9/16" - 5/8"    | 14 - 16  | 52    |
| 3/4"            | 19       | 86    |
| 7/8"            | 22       | 131   |
| 1"              | 26       | 164   |
| 1 1/8"          | 29       | 210   |
| 1 1/4" - 1 3/8" | 32 - 35  | 361   |
| 1 1/2"          | 37       | 426   |
| 1 5/8"          | 42       | 495   |
| 1 3/4" - 1 7/8" | 43 - 48  | 737   |
| 2" - 2 1/8"     | 51 - 54  | 1,265 |
| 2 1/4" - 2 3/8" | 55 - 60  | 1,475 |
| 2 1/2" - 2 5/8" | 61 - 68  | 1,966 |
| 2 3/4" - 2 7/8" | 69 - 75  | 2,294 |
| 3" - 3 1/8"     | 76 - 80  | 3,277 |
| 3 1/4" - 3 3/8" | 81 - 87  | 3,933 |
| 3 1/2" - 3 5/8" | 88 - 93  | 4,920 |
| 3 3/4" - 4"     | 94 - 103 | 7,784 |

NOTE: Socket volumes are approximate and may vary according to manufacturer

### SAFETY INFORMATION

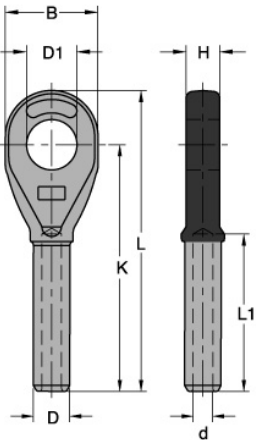
- When handling the resin or hardener, goggles and protective clothing are recommended. Impervious gloves are recommended.
- Always work in a ventilated area.
- Avoid skin or eye contact. Wash skin with soap and water and remove contaminated clothing. If contact with eyes, flush with clean water for at least 15 minutes. If irritation persists, seek medical attention.
- Avoid ingestion. If ingestion occurs, DO NOT induce vomiting. Drink milk or water to dilute and call for medical attention.
- Avoid inhaling vapors. If excessive vapors are inhaled, move to a fresh air area. If breathing has stopped or is labored seek medical attention.
- Never aim an open flame at Socket Lock. Keep away from heat. Resin is a flammable liquid.
- Whenever using chemicals, always reference the MSDS sheet for safety and handling guidelines.

VISIT [socket-locket.com](https://socket-locket.com) FOR FULL INFORMATION BROCHURE!



# SOCKET - SWAGE, CLOSED, FORGED

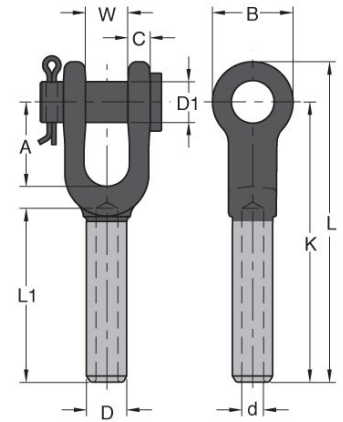
- Swage sockets properly applied have an efficiency rating of 100% based on catalog strength of wire rope.
- Swage sockets are recommended for use with 6x19, 6x37, IWRC wire rope, and galvanized bridge rope.
- Swage sockets are not recommended for use on fiber core or lang lay wire rope.



| Rope<br>(in) | Before Swage Dimensions (in) |      |      |      |      |       |       |       | Max. after<br>Swage (in) | Wt./ea.<br>(lb) | Price<br>/ ea. | Part Number |
|--------------|------------------------------|------|------|------|------|-------|-------|-------|--------------------------|-----------------|----------------|-------------|
|              | B                            | D    | D1   | d    | H    | K     | L     | L1    |                          |                 |                |             |
| 1/4          | 1.38                         | 0.50 | 0.75 | 0.27 | 0.50 | 3.50  | 4.33  | 2.13  | 0.46                     | 0.3             | 69.74          | 28-1/4CSS   |
| 5/16         | 1.63                         | 0.77 | 0.89 | 0.34 | 0.67 | 4.50  | 5.50  | 3.15  | 0.71                     | 0.8             | 86.55          | 28-5/16CSS  |
| 3/8          | 1.63                         | 0.77 | 0.89 | 0.41 | 0.67 | 4.50  | 5.50  | 3.15  | 0.71                     | 0.7             | 86.55          | 28-3/8CSS   |
| 1/2          | 2.00                         | 0.98 | 1.06 | 0.55 | 0.89 | 5.75  | 6.93  | 4.25  | 0.91                     | 1.4             | 105.51         | 28-1/2CSS   |
| 5/8          | 2.40                         | 1.25 | 1.26 | 0.67 | 1.14 | 7.28  | 8.70  | 5.31  | 1.16                     | 2.9             | 155.33         | 28-5/8CSS   |
| 3/4          | 2.87                         | 1.55 | 1.44 | 0.80 | 1.31 | 8.54  | 10.20 | 6.38  | 1.42                     | 5.0             | 219.63         | 28-3/4CSS   |
| 7/8          | 3.11                         | 1.70 | 1.70 | 0.94 | 1.50 | 10.16 | 11.97 | 7.44  | 1.55                     | 6.8             | 325.50         | 28-7/8CSS   |
| 1            | 3.62                         | 1.98 | 2.05 | 1.06 | 1.77 | 11.54 | 13.46 | 8.50  | 1.80                     | 10.4            | 442.31         | 28-1CSS     |
| 1-1/8        | 4.02                         | 2.25 | 2.32 | 1.19 | 2.00 | 12.72 | 15.04 | 9.57  | 2.05                     | 14.8            | 508.47         | 28-1-1/8CSS |
| 1-1/4        | 4.50                         | 2.53 | 2.56 | 1.33 | 2.25 | 14.33 | 16.97 | 10.63 | 2.30                     | 21.6            | 749.87         | 28-1-1/4CSS |
| 1-3/8        | 5.00                         | 2.80 | 2.56 | 1.45 | 2.25 | 15.83 | 18.70 | 11.69 | 2.56                     | 28.4            | 977.58         | 28-1-3/8CSS |
| 1-1/2        | 5.50                         | 3.08 | 2.81 | 1.58 | 2.52 | 17.01 | 20.12 | 12.75 | 2.81                     | 38.1            | 1,080.63       | 28-1-1/2CSS |

## SOCKET - SWAGE, OPEN, FORGED

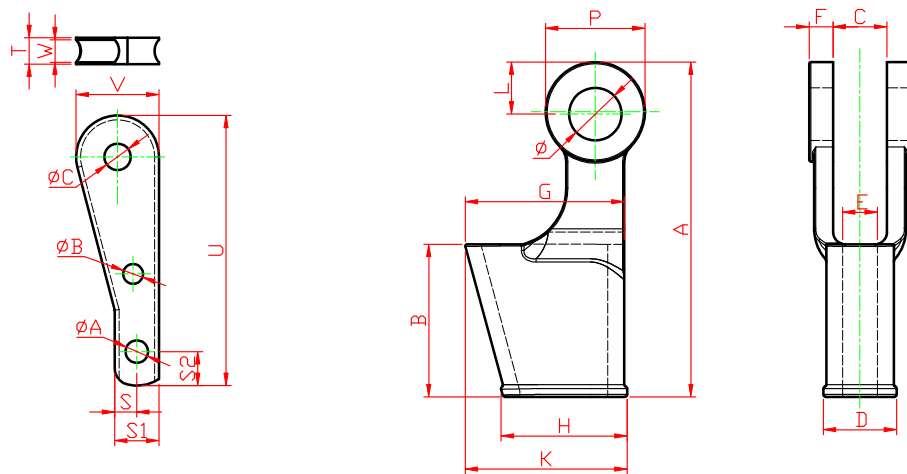
- Swage sockets properly applied have an efficiency rating of 100% based on catalog strength of wire rope.
- Swage sockets are recommended for use with 6x19, 6x37, IWRC wire rope, and galvanized bridge rope.
- Swage sockets are not recommended for use on fiber core or lang lay wire rope.



| Rope<br>(in) | Before Swage Dimensions (in) |      |      |      |      |      |       |       |       |      | Max.<br>after<br>Swage<br>(in) | Wt./<br>ea.<br>(lb) | Price/ ea. | Part<br>Number |
|--------------|------------------------------|------|------|------|------|------|-------|-------|-------|------|--------------------------------|---------------------|------------|----------------|
|              | A                            | B    | C    | D    | D1   | d    | K     | L     | L1    | W    |                                |                     |            |                |
| 1/4          | 1.50                         | 1.38 | 0.35 | 0.50 | 0.69 | 0.27 | 4.02  | 4.80  | 2.17  | 0.67 | 0.46                           | 0.5                 | 98.33      | 28-1/40SS      |
| 5/16         | 1.77                         | 1.65 | 0.47 | 0.77 | 0.81 | 0.34 | 5.31  | 6.26  | 3.15  | 0.79 | 0.71                           | 1.1                 | 123.39     | 28-5/160SS     |
| 3/8          | 1.77                         | 1.65 | 0.47 | 0.77 | 0.81 | 0.41 | 5.31  | 6.26  | 3.15  | 0.79 | 0.71                           | 1.3                 | 138.23     | 28-3/80SS      |
| 1/2          | 1.96                         | 2.00 | 0.55 | 0.98 | 1.00 | 0.55 | 6.85  | 7.83  | 4.33  | 1.00 | 0.91                           | 2.1                 | 163.35     | 28-1/20SS      |
| 9/16         | 2.25                         | 2.36 | 0.68 | 1.25 | 1.19 | 0.61 | 8.27  | 9.45  | 5.31  | 1.22 | 1.16                           | 4.7                 | 254.08     | 28-9/160SS     |
| 5/8          | 2.25                         | 2.36 | 0.68 | 1.25 | 1.19 | 0.67 | 8.27  | 9.45  | 5.31  | 1.22 | 1.16                           | 4.5                 | 228.78     | 28-5/80SS      |
| 3/4          | 2.75                         | 2.75 | 0.79 | 1.55 | 1.38 | 0.80 | 10.07 | 11.61 | 6.34  | 1.50 | 1.42                           | 8.0                 | 329.57     | 28-3/40SS      |
| 7/8          | 3.23                         | 3.15 | 0.94 | 1.70 | 1.63 | 0.94 | 11.81 | 13.39 | 7.44  | 1.77 | 1.55                           | 11.5                | 501.95     | 28-7/80SS      |
| 1            | 3.86                         | 3.94 | 1.02 | 1.98 | 2.00 | 1.06 | 13.58 | 15.55 | 8.50  | 2.00 | 1.80                           | 17.8                | 642.75     | 28-10SS        |
| 1-1/8        | 4.26                         | 4.06 | 1.19 | 2.25 | 2.20 | 1.19 | 15.08 | 17.40 | 9.37  | 2.25 | 2.05                           | 25.3                | 891.39     | 28-1-1/80SS    |
| 1-1/4        | 4.72                         | 4.45 | 1.34 | 2.53 | 2.48 | 1.33 | 16.50 | 19.06 | 10.59 | 2.48 | 2.30                           | 35.6                | 1,106.53   | 28-1-1/40SS    |
| 1-3/8        | 5.20                         | 5.00 | 1.38 | 2.80 | 2.50 | 1.45 | 18.23 | 21.02 | 11.69 | 2.52 | 2.56                           | 45.9                | 1,324.85   | 28-1-3/80SS    |
| 1-1/2        | 5.75                         | 5.51 | 1.69 | 3.08 | 2.75 | 1.58 | 19.75 | 22.88 | 12.40 | 3.00 | 2.81                           | 58.5                | 1,690.00   | 28-1-1/20SS    |

## SOCKET - CLIPINATOR WEDGE SOCKET

- Standard: ASME B30.26
- Efficiency rating of 80% of wire breaking strength
- Secures the tail of the wire to the wedge
- Stops tail from getting deformed when clipped

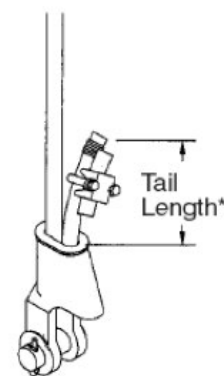


| Price  | Part Number |
|--------|-------------|
| 53.11  | 6-3/80WS    |
| 102.15 | 6-1/20WS    |
| 174.87 | 6-5/80WS    |
| 223.60 | 6-3/40WS    |
| 298.20 | 6-7/80WS    |
| 503.21 | 6-10WS      |
| 644.06 | 6-1-1/80WS  |
| 982.43 | 6-1-1/40WS  |

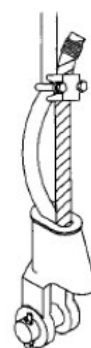
| SIZE  | A     | B   | C    | D    | E    | F    | G     | H     | K     | L    | P    | T    | U     | V   | W    | Ø    | ØA   | ØB   | ØC   | S    | S1   | S2   |
|-------|-------|-----|------|------|------|------|-------|-------|-------|------|------|------|-------|-----|------|------|------|------|------|------|------|------|
| 3/8   | 145   |     | 20.6 | 35.1 |      | 11.2 |       |       | 69    | 22.4 | 39.6 | 11.2 |       | 35  |      |      |      |      |      |      |      |      |
| 1/2   | 175   |     | 25.4 | 41.1 |      | 12.7 |       |       | 88    | 26.9 | 49.3 | 13.5 |       | 48  |      |      |      |      |      |      |      |      |
| 5/8   | 235   | 94  | 31.8 | 54.4 | 22.4 | 14.2 | 111   | 94    | 114   | 31   | 57.4 | 17.5 | 189   | 57  | 12.8 | 29   | 15   | 15   | 18   | 16.7 | 32.2 | 20.7 |
| 3/4   | 251   |     | 38.2 | 67.8 | 29   | 17   | 130   |       | 130   | 33.5 | 66.8 | 21   | 202   | 65  | 12.2 | 35   | 17.8 | 15.6 | 20   |      |      |      |
| 7/8   | 285.5 | 128 | 45   | 61   | 29   | 19   | 144.5 | 114.5 | 146.5 | 39.4 | 79   | 23   | 243   | 79  | 16.8 | 42   | 22   | 18.4 | 26.3 | 23.2 | 46.5 | 35.3 |
| 1     | 325.5 | 146 | 51.5 | 69   | 34   | 22.5 | 158.5 | 126.5 | 161   | 50   | 94.5 | 26   | 267.5 | 88  | 22.4 | 52   | 23   | 20.3 | 28.5 | 24.7 | 49.5 | 39.5 |
| 1-1/8 | 369.5 | 169 | 57   | 83   | 40.5 | 26.5 | 177.5 | 143.5 | 182   | 57   | 109  | 28   | 312.5 | 100 | 23.2 | 58.5 | 23   | 20   | 30.3 | 27.5 | 55   | 40   |
| 1-1/4 | 404   | 184 | 65   | 88.5 | 42   | 29   | 192   | 152   | 195   | 62.8 | 120  | 31   | 326   | 125 | 26   | 63.5 | 27.2 | 24   | 32   | 39   | 78   | 41   |

## WEDGE SOCKET WARNINGS AND USE

- Always inspect socket, wedge and pin before using.
- Do not use any part that is showing cracks, do not repair by welding.
- Do not modify or substitute any parts.
- Inspect assemblies before use.
- Do not mix and match wedges or pins between sizes.
- Always select the wedge and socket for the wire rope size.
- Use only with standard 6 to 8 strand wire rope of designated size, for intermediate size rope, use next larger size socket.
- Welding of tail on standard wire rope is not recommended, the tail length of the dead end should be a minimum of 6 rope diameters but not less than 6".
- Secure dead end section of rope. **DO NOT ATTACH DEAD END TO LIVE END.**
- Use a hammer to seat the wedge and rope as deep into socket as possible before applying first load.
- To use with rotation resistant wire rope, ensure that the dead end is welded or seized before inserting the wire rope into the wedge socket to prevent core slippage or loss of rope lay. The tail length of the dead end should be a minimum of 20 rope diameters but not less than 6".
- Efficiency rating of the wedge socket termination is based on the catalog breaking strength of wire rope. The efficiency of properly assembled wedge socket is 80%.



**RIGHT**



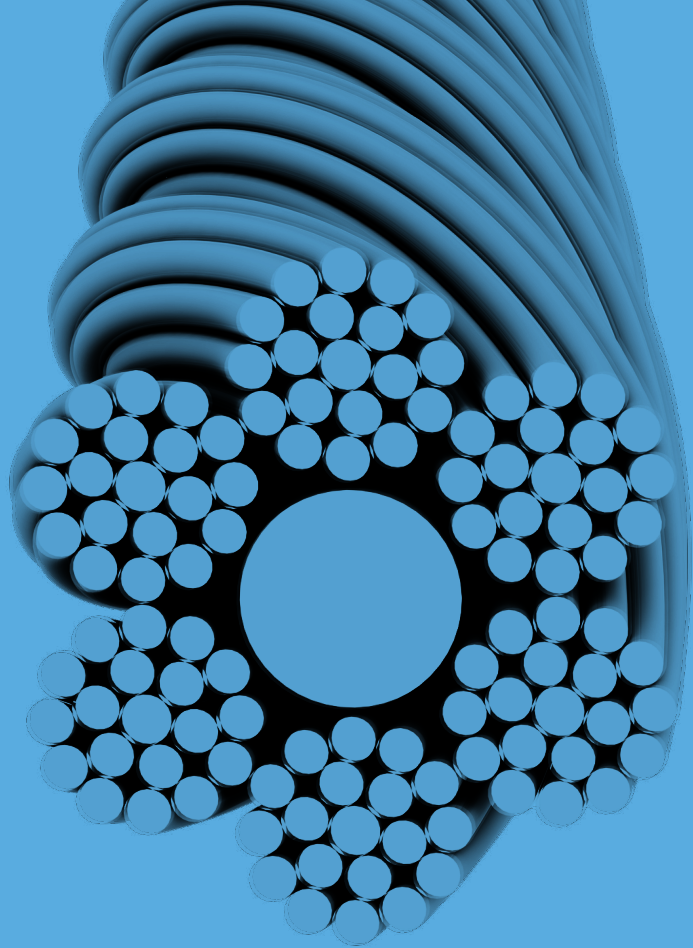
**WRONG**



**WRONG**

- LOADS MAY SLIP OR FALL IF THE WEDGE SOCKET IS NOT PROPERLY INSTALLED.
- A FALLING LOAD CAN SERIOUSLY INJURE OR KILL.
- READ AND UNDERSTAND THESE INSTRUCTIONS BEFORE INSTALLING THE WEDGE SOCKET.
- DO NOT SIDE LOAD THE WEDGE SOCKET.
- DO NOT INTERCHANGE WEDGE SOCKET, WEDGE OR PIN WITH OTHER MANUFACTURES SOCKET, WEDGE OR PIN.
- APPLY FIRST LOAD TO FULLY SEAT THE WEDGE AND WIRE ROPE IN THE SOCKET. THIS LOAD SHOULD BE OF EQUAL OR GREATER WEIGHT THAN LOADS EXPECTED IN USE.
- DO NOT INTERCHANGE WEDGE BETWEEN SIZES.





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## WIRE ROPE

|                                                   |           |
|---------------------------------------------------|-----------|
| Wire Rope Lubricant .....                         | 289       |
| 7x7 & 7x19 GAC & PVC GAC .....                    | 292 - 293 |
| 7x7, 7x19, 6x19, 6x26 Stainless Steel Wire .....  | 294       |
| 7x7 & 7x19 PVC Stainless Steel Wire .....         | 295       |
| 1x7 Stainless Seizing Wire .....                  | 295       |
| 6x19 & 6x24 Fiber Core .....                      | 296 - 297 |
| 6x26 Regular Swaged Wire Rope .....               | 297       |
| 6x19, 6x26, 6x36 IWRC .....                       | 298 - 302 |
| 8x26, 18x19, 19x7, 6x25,<br>6x37 Wire Ropes ..... | 303 - 305 |
| 35x7, 8x19, 8x36 Wire Ropes.....                  | 306 - 309 |

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## SEA LUBE WIRE ROPE LUBRICANT

- Sea Lube penetrates with a lubricating film that displaces moisture and prevents corrosion.
- Sea Lube guards against surface corrosion from atmospheric, salt, water and acid exposure.
- Sea Lube will not drip or run off surface even at elevated temperatures. Finished coating is dry to the touch. Protects metals, alloys and painted surfaces.



**AVAILABLE IN AEROSOL CANS,  
5 GAL PAILS & 55 GAL DRUMS.**

| Size              | Packagin          | Price / ea.        | Part Number |
|-------------------|-------------------|--------------------|-------------|
| 12 oz aerosol can | 12 cans per case  | 62.50 / can        | 38-93200000 |
| 5 gallon pail     | Sold individually | 779.00 / each      | 38-93200001 |
| 55 gallon drum    | Sold individually | Pricing on Request | 38-93200002 |

**MADE IN USA**



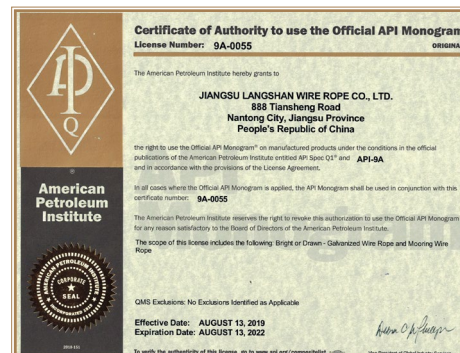
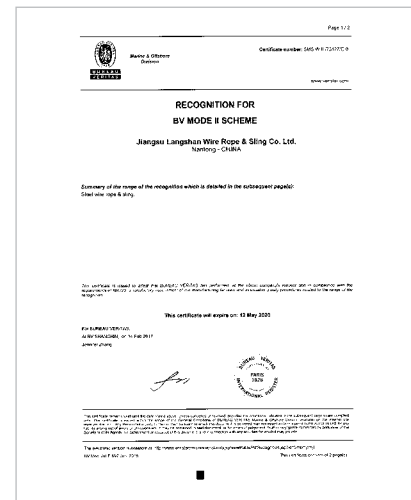
# OCEANSIDE EQUIPMENT LTD, EXCLUSIVE CANADIAN DEALER FOR JIANGSU LANGSHAN WIRE ROPE CO. LTD., THE WORLDS LARGEST WIRE ROPE FACTORY

Jiangsu Wire Rope Mill is a large scale, high tech enterprise and is one of the earliest enterprises in its country specializing in steel wire and steel wire rope sling manufacturing with an annual output of 1,560,000 metric ton, 78,000 containers with a capacity of producing up to 8" diameter wire ropes! With 50 years experience in production they are well equipped with advanced technology and have a complete means of measuring and testing capabilities with the continuous adoption of new equipment, new production processes, new technology and the development of new products.

worldwide known standards like GB, DIN, BS, JIS, ASTM, RR-W-410, API, ISO, and so on. They have already passed the quality system verification of API, ISO9001. Factory through CCS, Lloyd's, ABS, BV, and DNV Factory Certification. In 2006 the products were awarded as the "National Inspection-Free Product".

The company has always attached great importance to product quality, its reputation and that the products are well accepted around the world.

The products manufactured can be organized according to



## JIANGSU LANGSHAN WIRE ROPE CO. LTD. THE WORLDS LARGEST WIRE ROPE FACTORY



9A-0055



Lloyd's  
Register



ABS





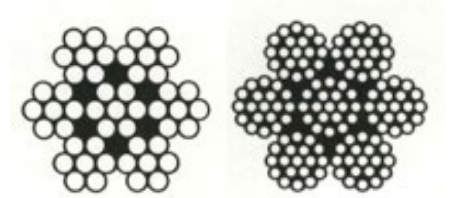
## WIRE ROPE - 7X7 & 7X19, AIRCRAFT CABLE, STEEL CORE, GALVANIZED

- Material: Improved Plow Steel (Grade 1770)
- Standard: MIL-W-83420D
- Finish: Drawn Galvanized, Lube: Dry
- Lay: ROL (sZ) / Core: IWRC
- Construction: 7x7 & 7x19

- Certification: Manufacturers (on request)

Note: Reel material differs between; Wood, Metal, and Plastic.

\*Actual loads may vary.



| Diameter (in) | Tolerance (in) | *MBF (lb) | Construction | Wt./1000 ft (lb) | Qty. / Reel (ft) | Price / Reel | Part Number       |
|---------------|----------------|-----------|--------------|------------------|------------------|--------------|-------------------|
| 1/16          | 0.010          | 480       | 7 x 7        | 7.5              | 500              | 31.31        | WR-7X7-1/16X500   |
| 1/16          | 0.010          | 480       | 7 x 7        | 7.5              | 1000             | 60.71        | WR-7X7-1/16X1000  |
| 3/32          | 0.012          | 920       | 7 x 7        | 16.0             | 500              | 53.66        | WR-7X7-3/32X500   |
| 3/32          | 0.012          | 920       | 7 x 7        | 16.0             | 1000             | 105.28       | WR-7X7-3/32X1000  |
| 1/8           | 0.014          | 1700      | 7 x 7        | 28.5             | 500              | 74.55        | WR-7X7-1/8X500    |
| 1/8           | 0.014          | 1700      | 7 x 7        | 28.5             | 1000             | 145.97       | WR-7X7-1/8X1000   |
| 1/8           | 0.014          | 2000      | 7 x 19       | 29.0             | 1000             | 196.98       | WR-7X19-1/8       |
| 5/32          | 0.016          | 2600      | 7 x 7        | 43.0             | 500              | 105.37       | WR-7X7-5/32X500   |
| 5/32          | 0.016          | 2600      | 7 x 7        | 43.0             | 1000             | 207.04       | WR-7X7-5/32X1000  |
| 5/32          | 0.016          | 2800      | 7 x 19       | 45.0             | 1000             | 263.04       | WR-7X19-5/32      |
| 3/16          | 0.018          | 3700      | 7 x 7        | 62.0             | 500              | 147.55       | WR-7X7-3/16X500   |
| 3/16          | 0.018          | 3700      | 7 x 7        | 62.0             | 1000             | 289.49       | WR-7X7-3/16X1000  |
| 3/16          | 0.018          | 4200      | 7 x 19       | 65.0             | 250              | 83.37        | WR-7X19-3/16X250  |
| 3/16          | 0.018          | 4200      | 7 x 19       | 65.0             | 500              | 159.22       | WR-7X19-3/16X500  |
| 3/16          | 0.018          | 4200      | 7 x 19       | 65.0             | 1000             | 312.13       | WR-7X19-3/16X1000 |
| 3/16          | 0.018          | 4200      | 7 x 19       | 65.0             | 5000             | 1,516.20     | WR-7X19-3/16      |
| 1/4           | 0.018          | 7000      | 7 x 19       | 110.0            | 250              | 132.74       | WR-7X19-1/4X250   |
| 1/4           | 0.018          | 7000      | 7 x 19       | 110.0            | 500              | 254.21       | WR-7X19-1/4X500   |
| 1/4           | 0.018          | 7000      | 7 x 19       | 110.0            | 1000             | 499.07       | WR-7X19-1/4X1000  |
| 1/4           | 0.018          | 7000      | 7 x 19       | 110.0            | 5000             | 2,296.88     | WR-7X19-1/4       |
| 5/16          | 0.022          | 9800      | 7 x 19       | 173.0            | 500              | 370.34       | WR-7X19-5/16X500  |
| 5/16          | 0.022          | 9800      | 7 x 19       | 173.0            | 1000             | 740.69       | WR-7X19-5/16X1000 |
| 5/16          | 0.022          | 9800      | 7 x 19       | 173.0            | 5000             | 3,527.31     | WR-7X19-5/16      |
| 3/8           | 0.026          | 14 400    | 7 x 19       | 243.0            | 110              | 121.18       | WR-7X19-3/8X110   |
| 3/8           | 0.026          | 14 400    | 7 x 19       | 243.0            | 500              | 503.15       | WR-7X19-3/8X500   |
| 3/8           | 0.026          | 14 400    | 7 x 19       | 243.0            | 1000             | 987.42       | WR-7X19-3/8X1000  |
| 3/8           | 0.026          | 14 400    | 7 x 19       | 243.0            | 5000             | 4,791.05     | WR-7X19-3/8       |

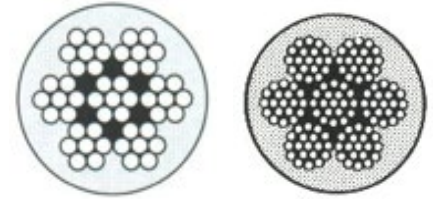
NOT FOR AIRCRAFT USE - SOLD IN FULL REELS ONLY

## WIRE ROPE - 7X7 & 7X19, AIRCRAFT CABLE, PVC COATED, STEEL CORE, GALVANIZED

- Material: Improved Plow Steel (Grade 1770)
- Standard: MIL-W-83420D
- Finish: Drawn Galvanized / PVC Coated - Clear; Lube: Dry
- Lay: ROL (sZ) / Core: IWRC
- Construction: 7x7 & 7x19
- Certification: Manufacturers (on request)

\*Actual loads may vary.

\*Note: Diameter A: PVC Coating removed, raw steel cable.  
Diameter B: PVC Coating not removed.



| *Diameter (in) |      | MBF (lb) | Construction | Wt. / 1000 ft (lb) | Qty. / Reel (ft) | Price / ft | Part Number   |
|----------------|------|----------|--------------|--------------------|------------------|------------|---------------|
| A              | B    |          |              |                    |                  |            |               |
| 1/8            | 3/16 | 1700     | 7 x 7        | 36.2               | Bulk             | 0.30       | WR-PVC3/16"-7 |
| 3/16           | 1/4  | 4200     | 7 x 19       | 77.5               | Bulk             | 0.60       | WR-PVC1/4"-7  |
| 1/4            | 5/16 | 7000     | 7 x 19       | 123                | Bulk             | 0.85       | WR-PVC-5/16"  |
| 5/16           | 3/8  | 9800     | 7 x 19       | 197                | Bulk             | 1.25       | WR-PVC3/8"    |

NOT FOR AIRCRAFT USE

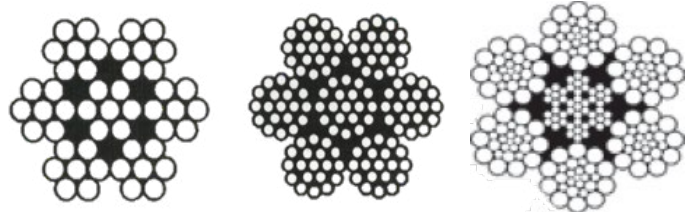


WIRE ROPE



## WIRE ROPE - 7X7, 7X19, 6X19, 6X26, STEEL CORE, STAINLESS

- Material: Improved Plow Steel (Grade 1770), 304 & 316 Stainless (ANSI 316)
- Standard: MIL-W-83420D, ASTM A492, ISO 2408, RR-W-410G, API-9A
- Finish: Stainless Steel, Lube: Dry
- Lay: ROL (sZ) / Core: IWRC
- Construction: 7x7 & 7x19 & 6x19 & 6x26
- Certification: Manufacturers (on request)
- \* Actual loads may vary.



| Diameter (in) | *MBF (lb) | Construction | Grade Stainless | Qty. / Reel (ft) | Price / Reel or ft | Part Number        |
|---------------|-----------|--------------|-----------------|------------------|--------------------|--------------------|
| 1/16          | 480       | 7 x 7        | 304             | *Bulk            | 0.23               | WRSS-7X7-1/16      |
| 1/16          | 480       | 7 x 7        | 304             | 500              | 85.00              | WRSS-7X7-1/16X500  |
| 3/32          | 920       | 7 x 7        | 304             | *Bulk            | 0.26               | WRSS-7X7-3/32      |
| 1/8           | 1700      | 7 x 7        | 304             | *Bulk            | 0.45               | WRSS-7X7-1/8       |
| 1/8           | 1700      | 7 x 7        | 304             | 250              | 121.46             | WRSS-7X7-1/8X250   |
| 1/8           | 1760      | 7 x 19       | 304             | 1000             | 525.80             | WRSS-7X19-1/8X1000 |
| 1/8           | 1760      | 7 x 19       | 304             | *Bulk            | 0.51               | WRSS-7X19-1/8      |
| 5/32          | 2400      | 7 x 7        | 304             | *Bulk            | 0.63               | WRSS-7X7-5/32      |
| 3/16          | 3700      | 7x19         | 304             | Bulk             | 1.03               | WRSS-7X19-3/16     |
| 1/4           | 6400      | 7 x 19       | 304             | *Bulk            | 1.54               | WRSS-7X19-1/4      |
| 5/16          | 9000      | 7 x 19       | 304             | *Bulk            | 2.28               | WRSS-7X19-5/16     |
| 3/8           | 12 000    | 7 x 19       | 304             | *Bulk            | 3.20               | WRSS-7X19-3/8      |
| 1/2           | 19 300    | 6 x 26       | 316             | *Bulk            | 7.43               | WRSS-6X19-1/2"     |
| 5/8           | 32 250    | 6 x 26       | 316             | *Bulk            | 12.14              | WRSS-6x26-5/8      |
| 3/4           | 44 600    | 6 x 26       | 316             | *Bulk            | 17.00              | WRSS-6x26-3/4      |

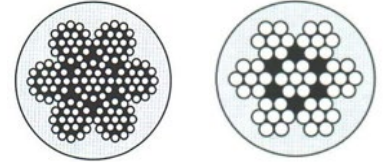
\*Note: Bulk pricing is subject to labor and material charges.  
Pricing based on Full reel lengths, Custom lengths will be subject to reel charge and Labour.

## WIRE ROPE - 7X7, 7X19, AIRCRAFT CABLE, PVC COATED, STEEL CORE, STAINLESS

- Material: Improved Plow Steel (Grade 1770), 316 Stainless (ANSI 316)
- Standard: MIL-W-83420D, ASTM A492
- Finish: Stainless Steel, Lube: Dry
- Lay: ROL (sZ) / Core: IWRC
- Construction: 7x7 & 7x19
- Certification: Manufacturers (on request)

\*Actual loads may vary.

\*Note: Diameter A: PVC Coating removed, steel cable only. Diameter B: PVC Coating not removed.



| *Diameter (in) |      | *MBF (lb) | Construction | Price / ft | Part Number   |
|----------------|------|-----------|--------------|------------|---------------|
| A              | B    |           |              |            |               |
| 1/8            | 3/16 | 1700      | 7 x 7        | 0.94       | WRSS-PVC-1/8  |
| 3/16           | 1/4  | 3700      | 7 x 19       | 1.70       | WRSS-PVC1/4"  |
| 1/4            | 5/16 | 6400      | 7 x 19       | 2.66       | WRSS-PVC5/16" |
| 5/16           | 3/8  | 9000      | 7 x 19       | 3.82       | WRSS-PVC3/8"  |

## WIRE ROPE - 1X7, SEIZING, STEEL CORE, STAINLESS

- Material: Improved Plow Steel (Grade 1770), 316 Stainless (ANSI 316)
- Standard: ASTM A492
- Finish: Stainless Steel, Lube: Dry
- Construction: 1x7
- Lay: ROL (sZ) / Core: IWRC



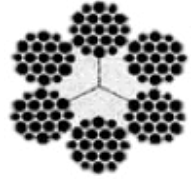
| Diameter (in) | Construction | Price / ft | Part Number  |
|---------------|--------------|------------|--------------|
| 1/16          | 1 x 7        | 0.72       | WR-1x7-1/16" |

\*Actual loads may vary.

## WIRE ROPE - 6X19, TRAWL WARP, FIBER CORE, GALVANIZED & GREASED

- Material: Improved Plow Steel (Grade 1770)
- Standard: ISO 2408, RR-W-410G, API-9A
- Finish: Drawn Galvanized, Lube: A1 Light Lube
- Lay: ROL (sZ) / Core: FC
- Construction: 6x19
- Certification: Manufacturers (on request)

\*Actual loads may vary.

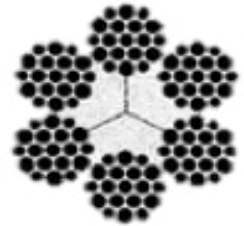


| Diameter (in) | *MBF (lb) | Weight / ft (lb) | Price / ft | Part Number   |
|---------------|-----------|------------------|------------|---------------|
| 3/8           | 12 200    | 0.24             | 1.18       | WR-6X19-3/8"  |
| 7/16          | 16 540    | 0.32             | 1.65       | WR-6X19-7/16" |
| 1/2           | 21 400    | 0.42             | 2.00       | WR-6X19-1/2"  |
| 9/16          | 27 000    | 0.53             | 2.47       | WR-6X19-9/16" |
| 5/8           | 33 400    | 0.66             | 3.07       | WR-6X19-5/8"  |
| 3/4           | 47 600    | 0.95             | 4.32       | WR-6X19-3/4"  |

## WIRE ROPE - 6X19, BRIDLE WIRE, FIBER CORE, GALVANIZED

- Material: Improved Plow Steel (Grade 1770)
- Standard: ISO 2408, RR-W-410G, API-9A
- Finish: Drawn Galvanized, Lube: Dry
- Lay: ROL (sZ) / Core: FC
- Construction: 6x19
- Certification: Manufacturers (on request)

\*Actual loads may vary.



| Diameter (in) | *MBF (lb) | Weight / ft (lb) | Price / ft | Part Number    |
|---------------|-----------|------------------|------------|----------------|
| 3/8           | 12 200    | 0.24             | 1.18       | WRD-6X19-3/8"  |
| 1/2           | 21 400    | 0.42             | 2.00       | WRD-6X19-1/2"  |
| 9/16          | 27 000    | 0.53             | 2.47       | WRD-6X19-9/16" |
| 5/8           | 33 400    | 0.66             | 3.07       | WRD-6X19-5/8"  |
| 3/4           | 47 600    | 0.95             | 4.32       | WRD-6X19-3/4"  |
| 7/8           | 64 400    | 1.29             | 5.75       | WR-6X19-7/8"   |

## WIRE ROPE - 6X24, FIBER CORE, GALVANIZED

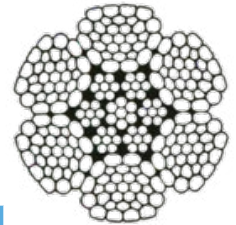
- Material: Improved Plow Steel (Grade 1770)
- Standard: ISO 2408, RR-W-410G, API-9A
- Finish: Drawn Galvanized, Lube: Dry
- Lay: ROL (sZ) / Core: FC
- Construction: 6x24
- Certification: Manufacturers (on request)
- \*Actual loads may vary.



| Diameter (in) | *MBF (lb) | Weight / ft (lb) | Price / ft | Part Number   |
|---------------|-----------|------------------|------------|---------------|
| 9/16          | 21 200    | 0.44             | 1.92       | WR-6X24-9/16" |
| 5/8           | 26 000    | 0.54             | 2.37       | WR-6X24-5/8"  |
| 3/4           | 26 000    | 0.54             | 3.54       | WR-6X24-3/4"  |

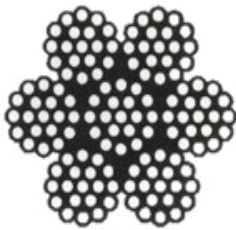
## WIRE ROPE - 6X26, REGULAR SWAGED WS, STEEL CORE, BRIGHT & GREASED

- Material: Extra Improved Plow Steel (Grade 1960)
- Standard: ISO 2408, RR-W-410G, API-9A
- Finish: Bright, Lube: A1 Light Lube
- Lay: ROL (sZ) / Core: IWRC
- Construction: 6x26, Regular Swaged
- Certification: Manufacturers (on request)
- \*Actual loads may vary.



| Diameter (in) | *MBF (lb) | Weight / ft (lb) | Price / ft | Part Number     |
|---------------|-----------|------------------|------------|-----------------|
| 3/8           | 18 500    | 0.35             | 2.25       | WR-6X26RS-3/8"  |
| 7/16          | 24 300    | 0.49             | 2.56       | WR-6X26RS-7/16" |
| 1/2           | 31 000    | 0.61             | 3.03       | WR-6X26RS-1/2"  |
| 9/16          | 39 200    | 0.78             | 3.69       | WR-6X26RS-9/16" |
| 5/8           | 48 400    | 0.97             | 4.23       | WR-6X26RS-5/8"  |

## WIRE ROPE - 6X19, STEEL CORE, GALVANIZED

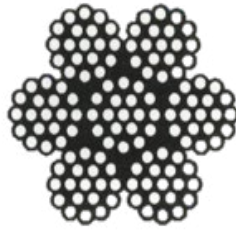


- Material: Improved Plow Steel
- (Grade 1770)
- Standard: ISO 2408, RR-W-410G, API-9A
- Finish: Drawn Galvanized, Lube: Dry
- Lay: ROL (sZ) / Core: IWRC
- Construction: 6x19
- Certification: Manufacturers (on request)

\*Actual loads may vary.

| Diameter (in) | *MBF (lb) | Weight / ft (lb) | Qty. / Reel (ft) | Price / ft | Part Number   |
|---------------|-----------|------------------|------------------|------------|---------------|
| 1/2           | 23 000    | 0.46             | 5 000            | 1.80       | WRG-6X19-1/2" |
| 5/8           | 35 400    | 0.72             | 5 000            | 2.37       | WRG-6X19-5/8" |
| 3/4           | 51 200    | 1.04             | 5 000            | 3.60       | WRG-6X19-3/4" |

## WIRE ROPE - 6X19, STEEL CORE, GALVANIZED & GREASED



- Material: Extra Improved Plow Steel
- (Grade 1960)
- Standard: ISO 2408, RR-W-410G, API-9A
- Finish: Drawn Galvanized, Lube: A1 Light Lube
- Lay: ROL (sZ) / Core: IWRC
- Construction: 6x19
- Certification: Manufacturers (on request)

\*Actual loads may vary.

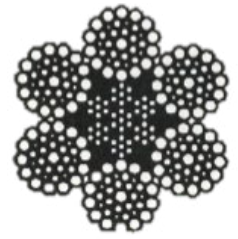
| Diameter (in) | *MBF (lb) | Weight / ft (lb) | Qty. / Reel (ft) | Price / ft | Part Number       |
|---------------|-----------|------------------|------------------|------------|-------------------|
| 1 1/8         | 130 000   | 2.34             | 2 332            | 9.70       | WRGA1-6X19-1-1/8" |
| 1 1/4         | 159 800   | 2.89             | 2 332            | 12.12      | WRGA1-6X19-1-1/4" |



## WIRE ROPE - 6X36, STEEL CORE, GALVANIZED & GREASED

- Material: Extra Improved Plow Steel (Grade 1960)
- Standard: ISO 2408, RR-W-410G, API-9A
- Finish: Bright, Lube: A1 Light Lube
- Lay: ROL (sZ) / Core: IWRC
- Construction: 6x36, Compacted
- Certification: Manufacturers (on request)

\*Actual loads may vary.

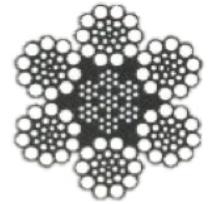


| Diameter (in) | *MBF (lb) | Weight / ft (lb) | Price / ft | Part Number       |
|---------------|-----------|------------------|------------|-------------------|
| 1-1/2         | 228 000   | 4.16             | 19.12      | WRGA1-6x36-1-1/2" |

## WIRE ROPE - 6X26, STEEL CORE, BRIGHT & GREASED

- Material: Extra Improved Plow Steel (Grade 1960)
- Standard: ISO 2408, RR-W-410G, API-9A
- Finish: Bright, Lube: A1 Light Lube
- Lay: ROL (sZ) / Core: IWRC
- Construction: 6x26
- Certification: Manufacturers (on request)

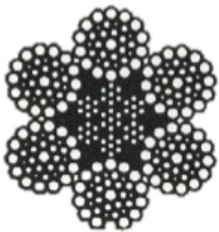
\*Actual loads may vary.



| Diameter (in) | *MBF (lb) | Weight / ft (lb) | Qty. / Reel (ft) | Price / ft Full Reel Only | Price / ft | Part Number     |
|---------------|-----------|------------------|------------------|---------------------------|------------|-----------------|
| 3/8           | 15 100    | 0.26             | 5000             | 1.05                      | 1.26       | WRB-6X26-3/8"   |
| 7/16          | 20 400    | 0.35             | 5000             | 1.35                      | 1.62       | WRB-6x26-7/16"  |
| 1/2           | 26 600    | 0.46             | 5000             | 1.72                      | 2.06       | WRB-6X26-1/2"   |
| 9/16          | 33 600    | 0.59             | 5000             | 2.13                      | 2.55       | WRB-6X26-9/16"  |
| 5/8           | 41 200    | 0.72             | 5000             | 2.57                      | 3.08       | WRB-6X26-5/8"   |
| 3/4           | 58 800    | 1.04             | 2500, 5000       | 3.57                      | 4.28       | WRB-6X26-3/4"   |
| 7/8           | 79 600    | 1.42             | 2500             | 4.89                      | 5.86       | WRB-6X26-7/8"   |
| 1             | 103 400   | 1.85             | 2500             | 6.22                      | 7.46       | WRB-6X26-1"     |
| 1-1/8         | 130 000   | 2.34             | 2500             | 7.85                      | 9.30       | WRB-6X26-1-1/8" |

# WIRE ROPE - 6X36, STEEL CORE, BRIGHT & GREASED

- Material: Extra Improved Plow Steel (Grade 1960)
- Standard: ISO 2408, RR-W-410G, API-9A
- Finish: Bright, Lube: A1 Light Lube
- Lay: ROL (sZ) / Core: IWRC
- Construction: 6x36
- Certification: Manufacturers (on request)
- \*Actual loads may vary.



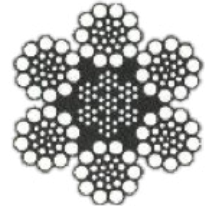
| Diameter (in) | *MBF (lb) | Weight / ft (lb) | Qty. / Reel (ft) | Price / ft Full Reel Only | Price / ft | Part Number      |
|---------------|-----------|------------------|------------------|---------------------------|------------|------------------|
| 5/16          | 10 540    | 0.18             | 5000             | 0.90                      | 1.08       | WRB-6X36-5/16"   |
| 3/8           | 15 100    | 0.26             | 5000             | 1.09                      | 1.31       | WRB-6X36-3/8"    |
| 7/16          | 20 400    | 0.35             | 5000             | 1.40                      | 1.68       | WRB-6X36-7/16"   |
| 1/2           | 26 600    | 0.46             | 5000             | 1.76                      | 2.11       | WRB-6X36-1/2"    |
| 9/16          | 33 600    | 0.59             | 5000             | 2.19                      | 2.63       | WRB-6X36-9/16"   |
| 5/8           | 41 200    | 0.72             | 5000             | 2.62                      | 3.14       | WRB-6X36-5/8"    |
| 3/4           | 58 800    | 1.04             | 5000             | 3.65                      | 4.38       | WRB-6X36-3/4"    |
| 7/8           | 79 600    | 1.42             | 2500             | 4.98                      | 5.97       | WRB-6X36-7/8"    |
| 1             | 103 400   | 1.85             | 2500             | 6.39                      | 7.66       | WRB-6X36-1"      |
| 1-1/16        | 116 700   | 2.10             | 2000             | 7.22                      | 8.66       | WRB-6X36-1-1/16" |
| 1-1/8         | 130 000   | 2.34             | 2500             | 8.35                      | 10.02      | WRB-6X36-11/8"   |
| 1-1/4         | 159 800   | 2.89             | 2000             | 10.20                     | 12.24      | WRB-6X36-1-1/4"  |



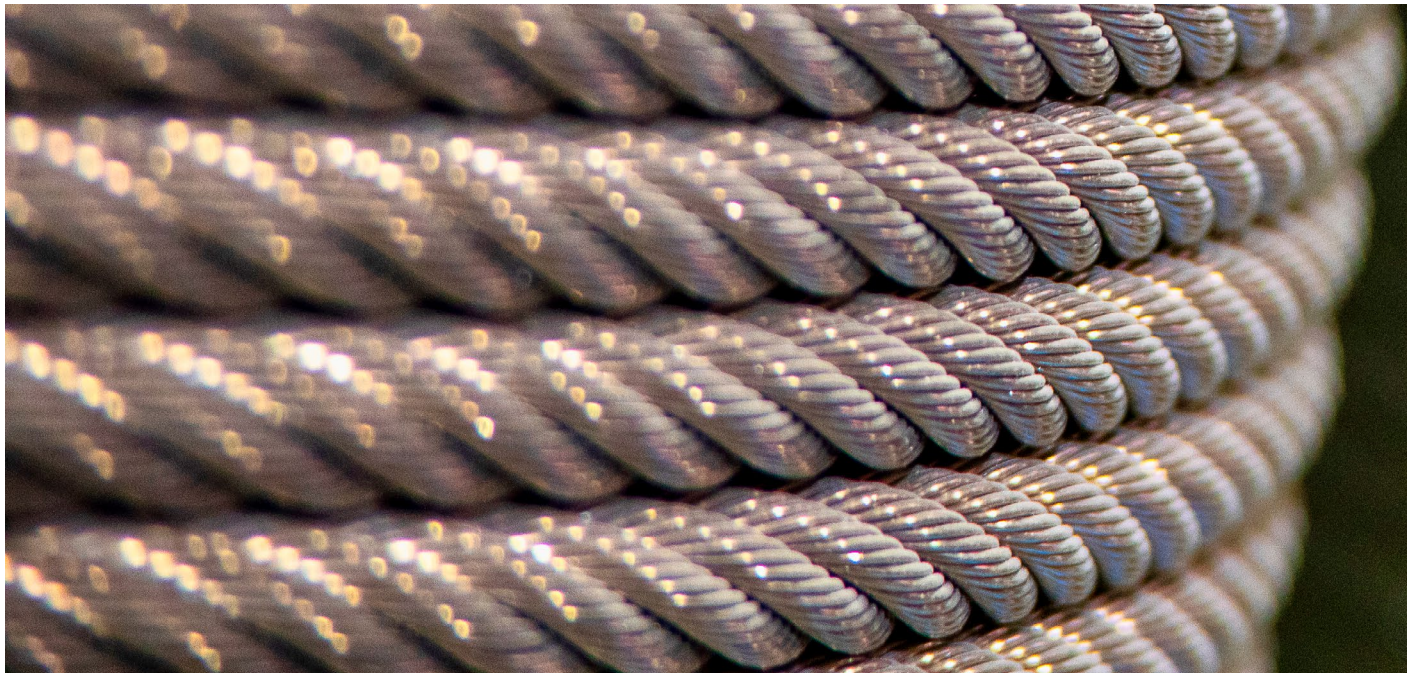


## WIRE ROPE - 6X26, STEEL CORE, GALVANIZED

- Material: Extra Improved Plow Steel (Grade 1960)
  - Standard: ISO 2408, RR-W-410G, API-9A
  - Finish: Drawn Galvanized, Lube: Dry
  - Lay: ROL (sZ) / Core: IWRC
  - Construction: 6x26
  - Certification: Manufacturers (on request)
- \*Actual loads may vary.



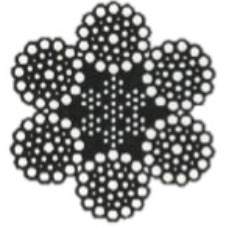
| Diameter (in) | *MBF (lb) | Weight / ft (lb) | Qty. / Reel (ft) | Price / ft Full Reel Only | Price / ft | Part Number     |
|---------------|-----------|------------------|------------------|---------------------------|------------|-----------------|
| 3/8           | 15 100    | 0.26             | 5000             | 1.26                      | 1.51       | WRG-6X26-3/8"   |
| 7/16          | 20 400    | 0.35             | 5000             | 1.63                      | 1.96       | WRG-6X26-7/16"  |
| 1/2           | 26 600    | 0.46             | 5000             | 2.09                      | 2.51       | WRG-6X26-1/2"   |
| 9/16          | 33 600    | 0.59             | 5000             | 2.60                      | 3.12       | WRG-6X26-9/16"  |
| 5/8           | 41 200    | 0.72             | 5000             | 3.15                      | 3.78       | WRG-6X26-5/8"   |
| 3/4           | 58 800    | 1.04             | 5000             | 4.39                      | 5.27       | WRG-6X26-3/4"   |
| 7/8           | 79 600    | 1.42             | 2500             | 6.02                      | 7.22       | WRG-6X26-7/8"   |
| 1             | 103 400   | 1.85             | 2500             | 7.70                      | 9.24       | WRG-6X26-1"     |
| 1-1/8         | 130 000   | 2.34             | 2500             | 9.67                      | 11.60      | WRG-6X26-1 1/8" |



## WIRE ROPE - 6X36, STEEL CORE, GALVANIZED

- Material: Extra Improved Plow Steel (Grade 1960)
- Standard: ISO 2408, RR-W-410G, API-9A
- Finish: Drawn Galvanized, Lube: Dry
- Lay: ROL (sZ) / Core: IWRC
- Construction: 6x36
- Certification: Manufacturers (on request)

\*Actual loads may vary.



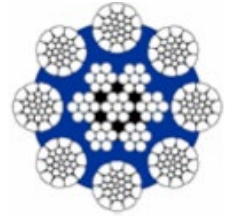
| Diameter (in) | *MBF (lb) | Weight / ft (lb) | Qty. / Reel (ft) | Price / ft Full Reel Only     | Price / ft | Part Number    |
|---------------|-----------|------------------|------------------|-------------------------------|------------|----------------|
| 1/4           | 6800      | 0.12             | 5000             | 0.75                          | 0.90       | WR-6X36-1/4"   |
| 5/16          | 10 540    | 0.18             | 5000             | 1.05                          | 1.26       | WR-6X36-5/16"  |
| 3/8           | 15 100    | 0.26             | 5000             | 1.29                          | 1.55       | WR-6X36-3/8"   |
| 7/16          | 20 400    | 0.35             | 5000             | 1.68                          | 2.01       | WR-6X36-7/16"  |
| 1/2           | 26 600    | 0.46             | 5000             | 2.13                          | 2.55       | WR-6X36-1/2"   |
| 5/8           | 41 200    | 0.72             | 5000             | 3.19                          | 3.82       | WR-6X36-5/8"   |
| 3/4           | 58 800    | 1.04             | 5000             | 4.47                          | 5.36       | WR-6X36-3/4"   |
| 7/8           | 79 600    | 1.42             | 2500             | 6.11                          | 7.35       | WR-6X36-7/8"   |
| 1             | 103 400   | 1.85             | 2500             | 7.85                          | 9.33       | WR-6X36-1"     |
| 1-1/8         | 130 000   | 2.34             | 2500             | 10.25                         | 12.30      | WR-6X36-1 1/8" |
| 1-1/4         | 159 800   | 2.89             | 2500             | 12.50                         | 15.00      | WR-6X36-1 1/4" |
| 1-3/8         | 192 000   | 3.50             | 2000, 3000       | 15.15                         | 18.18      | WR-6X36-1 3/8" |
| 1-1/2         | 228 000   | 4.16             | 2500             | 17.60                         | 21.12      | WR-6X36-1 1/2" |
| 1-3/4         | 306 000   | 5.67             | 2000             | 24.45                         | 29.34      | WR-6X36-1 3/4" |
| 2             | 396 000   | 7.39             | 1500             | 33.01                         | 39.61      | WR-6X36-2"     |
| 2-1/4         | 494 000   | 9.36             | 1200             | Stock items, call for pricing |            | WR-6X36-2 1/4" |
| 2-1/2         | 604 000   | 11.6             | 1000             |                               |            | WR-6X36-2 1/2" |
| 3             | 936 000   | 16.6             | 1000             |                               |            | WR-6X36-3"     |



## WIRE ROPE - 8X26, BOOM ROPE, BRIGHT & GREASED

Improved Fatigue and Abrasion Resistance because of plastic filled between the steel core and the outer strands. FlexTec rope has excellent abrasion resistance and fatigue resistance by keeping out water and abrasive elements that could penetrate conventional ropes.

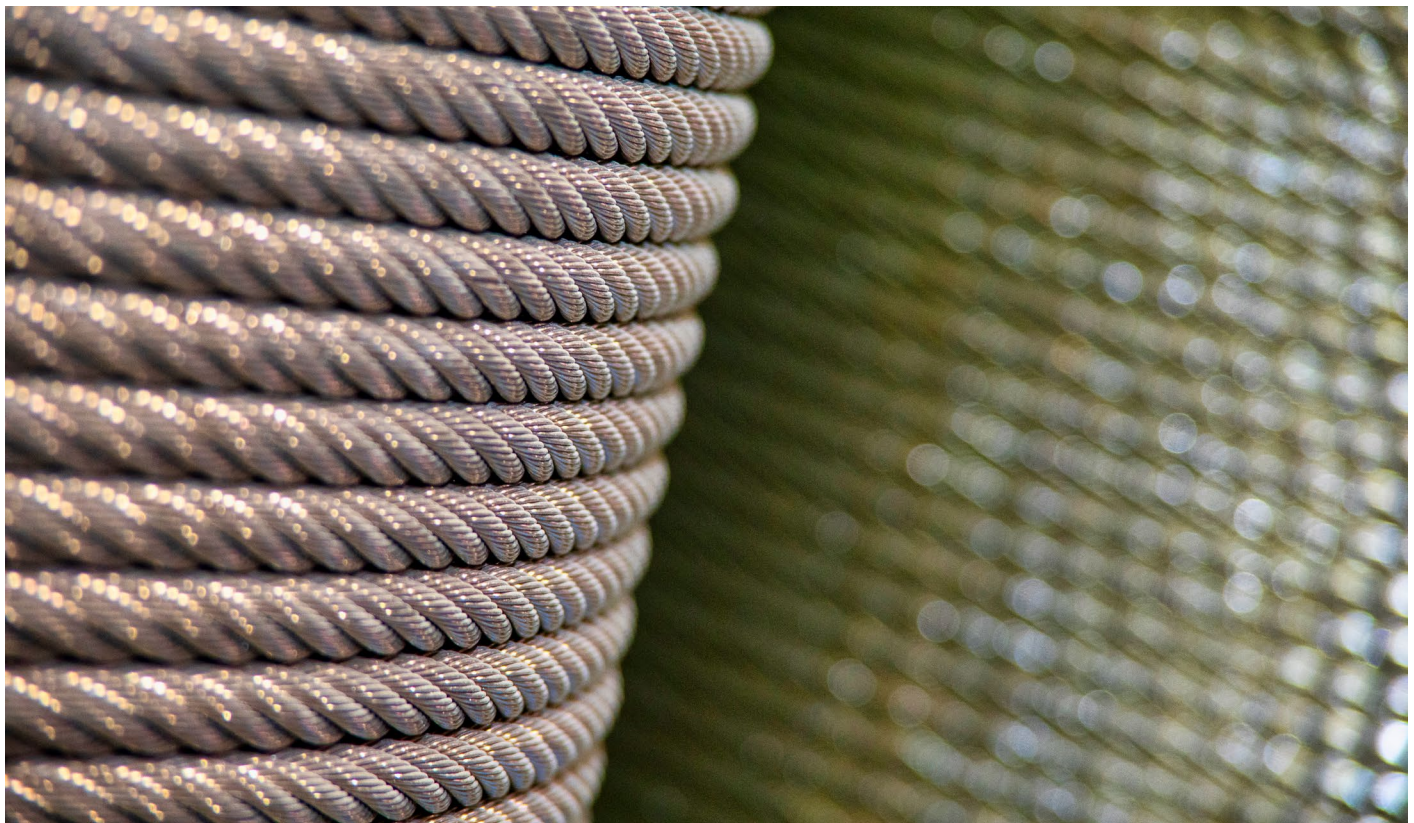
Improved service life for crane usage, because of the plastic filled in the FlexTec; it can absorb shock and reduce the peak loading of wire rope under high dynamic loadings. Two times service life can be achieved compared to conventional ropes.



- Material: Extra Improved Plow Steel (Grade 1960)
- Standard: ISO 2408, RR-W-410G, API-9A
- Finish: Bright, Lube: A1 Light Lube
- Lay: ROL (sZ) / Core: IWRC
- Construction: 8x26
- Certification: Manufacturers (on request)
- Rated in Metric Ton(s)
- Rotation - resistance
- High structural stability
- High breaking load
- High Flexibility
- Safe to shape-damage
- Prevents abrasion and break among internal wires
- Extended life of winch drum and sheave
- Suitable for Tower Crane
- Excellent life time
- Extremely reduces internal stress

\*Actual loads may vary.

| Diameter (mm) | *MBF (t)         | Approx. Weight (kg/m) | Qty. / Reel (ft) | Price / ft | Part Number  |
|---------------|------------------|-----------------------|------------------|------------|--------------|
| 16            | 23.0 (50 700 lb) | 1.17 (0.78 lb / ft.)  | 5,000            | 8.12       | WR-8X26-16MM |

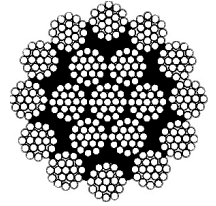




## WIRE ROPE - 18X19S, ROTATION RESISTANT, STEEL CORE, BRIGHT & GREASED

- Material: Extra Improved Plow Steel (Grade 1960)
- Standard: ISO 2408, RR-W-410G, API-9A
- Finish: Bright, Lube: A1 Light Lube
- Lay: ROL (sZ) / Core: IWRC
- Construction: 18x19, Seale Construction
- Certification: Manufacturers (on request)

\*Actual loads may vary.

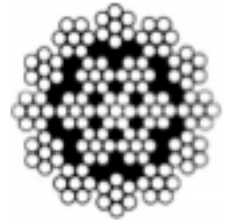


| Diameter (in) | *MBF (lb) | Weight / ft (lb) | Price / ft | Part Number    |
|---------------|-----------|------------------|------------|----------------|
| 9/16          | 27 200    | 0.70             | 3.08       | WR-18X19-9/16" |
| 5/8           | 33 600    | 0.86             | 3.73       | WR-18X19-5/8"  |
| 3/4           | 48 000    | 1.24             | 5.17       | WR-18X19-3/4"  |
| 7/8           | 65 000    | 1.69             | 6.90       | WR-18X19-7/8"  |

## WIRE ROPE - 19X7, ROTATION RESISTANT, STEEL CORE, BRIGHT & GREASED

- Material: Extra Improved Plow Steel (Grade 1960)
- Standard: ISO 2408, RR-W-410G, API-9A
- Finish: Bright, Lube: A1 Light Lube
- Lay: ROL (sZ) / Core: IWRC
- Construction: 19x7
- Certification: Manufacturers (on request)

\*Actual loads may vary.



| Diameter (in) | *MBF (lb) | Weight / ft (lb) | Price / ft | Part Number   |
|---------------|-----------|------------------|------------|---------------|
| 1/4           | 5540      | 0.11             | 1.25       | WR-19X7-1/4"  |
| 5/16          | 8600      | 0.18             | 1.55       | WR-19X7-5/16" |
| 3/8           | 12 300    | 0.25             | 1.67       | WR-19X7-3/8"  |
| 7/16          | 16 660    | 0.35             | 2.19       | WR-19X7-7/16" |
| 1/2           | 21 600    | 0.45             | 2.83       | WR-19X7-1/2"  |
| 9/16          | 27 200    | 0.58             | 3.42       | WR-19X7-9/16" |
| 5/8           | 33 600    | 0.71             | 4.17       | WR-19X7-5/8"  |
| 3/4           | 48 000    | 1.02             | 5.88       | WR-19X7-3/4"  |

## WIRE ROPE - 6X25, TROLLEY & HOISTS ROPE, FIBER CORE, BRIGHT & GREASED

- Material: Improved Plow Steel (Grade 1770)
- Standard: ISO 2408, RR-W-410G, API-9A
- Finish: Bright, Lube: A1 Light Lube
- Lay: ROL (sZ) / Core: FC
- Construction: 6x25
- Certification: Manufacturers (on request)
- \*Actual loads may vary.



| Diameter (in) | *MBF (lb) | Approx. Weight / ft (lb) | Price / ft | Part Number  |
|---------------|-----------|--------------------------|------------|--------------|
| 3/8           | 12 200    | 0.24                     | 1.37       | WR-6X25-3/8" |
| 1/2           | 21 400    | 0.42                     | 2.25       | WR-6X25-1/2" |
| 3/4           | 47 600    | 0.95                     | 4.62       | WR-6X25-3/4" |
| 7/8           | 64 400    | 1.29                     | 6.18       | WR-6X25-7/8" |

## WIRE ROPE - 6X37, FIBER CORE, BRIGHT & GREASED

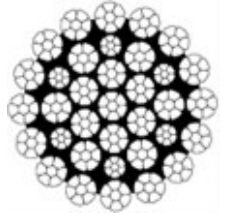
- Material: Improved Plow Steel (Grade 1770)
- Standard: ISO 2408, RR-W-410G, API-9A
- Finish: Bright, Lube: A1 Light Lube
- Lay: ROL (sZ) / Core: FC
- Construction: 6x37
- Certification: Manufacturers (on request)
- \*Actual loads may vary.



| Diameter (in) | *MBF (lb) | Weight / ft (lb) | Price / ft | Part Number   |
|---------------|-----------|------------------|------------|---------------|
| 7/16          | 16 540    | 0.35             | 2.14       | WR-6X37-7/16" |
| 1/2           | 21 400    | 0.46             | 2.42       | WR-6X37-1/2"  |
| 5/8           | 33 400    | 0.72             | 3.50       | WR-6X37-5/8"  |

## WIRE ROPE - 35X7, COMPACTED, HOIST ROPE, BRIGHT & GREASED

By flattening the surface of outer wires of each strand, this plane contacting lay construction has a flat touch area of outer wires comparing round strand type rope. This flat touch area enables longer life of each wire before breaking. While designing this construction, we emphasized the optimal balance between high tensile strength, fatigue resistance, and structural stability. These ropes are widely used in various applications such as crane, fishing and mining.



- Rotation - resistance
- Safe to shape-damage
- High structural stability
- Extended life of winch drum and sheave
- High breaking load
- Suitable for Tower Crane
- Strong against abrasion
- Excellent life time
- Material: Extra Improved Plow Steel (Grade 1960)
- Standard: ISO 2408, RR-W-410G, API-9A
- Finish: Bright, Lube: A1 Light Lube
- Lay: ROL (sZ) / Core: IWRC
- Construction: 35x7, Compacted
- Certification: Manufacturers (on request)
- Rated in Metric Ton(s)

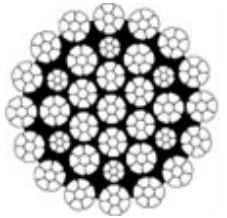
\*Actual loads may vary.

| Diameter (mm) | *MBF (t)          | Approx. Weight (kg/m) | Price / ft (> 1000 ft) | Price / ft (< 1000 ft) | Part Number   |
|---------------|-------------------|-----------------------|------------------------|------------------------|---------------|
| 14            | 17.1 (37 770 lb)  | 0.974 (0.65 lb / ft)  | 5.28                   | 6.09                   | WRI-35X7-14MM |
| 15            | 20.4 (44 900 lb)  | 1.015 (0.68 lb / ft)  | 5.86                   | 6.74                   | WRI-35X7-15MM |
| 16            | 22.8 (50 360 lb)  | 1.272 (0.85 lb / ft)  | 6.43                   | 7.40                   | WRI-35X7-16MM |
| 18            | 27.9 (61 600 lb)  | 1.610 (1.08 lb / ft)  | 7.49                   | 8.60                   | WRI-35X7-18MM |
| 20            | 34.8 (76 660 lb)  | 1.988 (1.34 lb / ft)  | 8.89                   | 10.20                  | WRI-35X7-20MM |
| 22            | 42.3 (93 300 lb)  | 2.405 (1.62 lb / ft)  | 10.26                  | 11.80                  | WRI-35X7-22MM |
| 26            | 60.0 (132 190 lb) | 3.360 (2.26 lb / ft)  | 13.77                  | 15.83                  | WRI-35X7-26MM |
| 28            | 68.9 (151 970 lb) | 3.896 (2.62 lb / ft)  | 17.43                  | 20.03                  | WRI-35X7-28MM |

## WIRE ROPE - 35X7, COMPACTED, HOIST ROPE, BRIGHT & GREASED

- Material: Extra Improved Plow Steel (Grade 2160)
- Standard: ISO 2408, RR-W-410G, API-9A
- Finish: Bright, Lube: A1 Light Lube
- Lay: RLL (zZ) / Core: IWRC
- Construction: 35x7, Compacted
- Certification: Manufacturers (on request)
- Rated in Metric Ton(s)

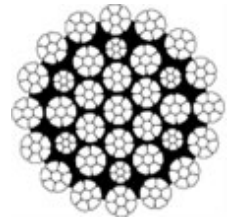
\*Actual loads may vary.



| Diameter (mm) | *MBF (t)         | Approx. Weight (kg/m) | Price / ft (> 1000 ft) | Price / ft (< 1000 ft) | Part Number      |
|---------------|------------------|-----------------------|------------------------|------------------------|------------------|
| 19            | 35.1 (77 330 lb) | 1.86                  | 9.28                   | 10.69                  | WR-35X7-19MM2160 |

## WIRE ROPE - 35X7, COMPACTED, HOIST ROPE, BRIGHT & GREASED

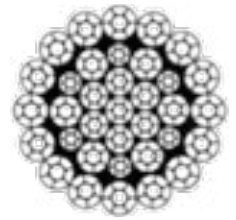
- Material: Extra Improved Plow Steel (Grade 1960)
  - Standard: ISO 2408, RR-W-410G, API-9A
  - Finish: Bright, Lube: A1 Light Lube
  - Lay: RLL (zZ) / Core: IWRC
  - Construction: 35xK7, Compacted
  - Certification: Manufacturers (on Request)
- \*Actual loads may vary.



| Diameter (in) | *MBF (lb) | Approx. Weight (lb/ft) | Price / ft (≥ 1000 ft) | Price / ft (< 1000 ft) | Part Number |
|---------------|-----------|------------------------|------------------------|------------------------|-------------|
| 1             | 124 800   | 2.26                   | 13.57                  | 15.60                  | WRI-35x7-1" |

## WIRE ROPE - 35X7, COMPACTED, NON-ROTATING, STEEL CORE, GALVANIZED & GREASED

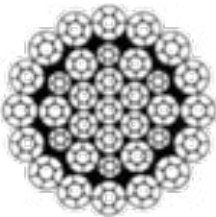
- Material: Extra Improved Plow Steel (Grade 1960)
  - Standard: ISO 2408, RR-W-410G, API-9A
  - Finish: Drawn Galvanized, Lube: A1 Light Lube
  - Lay: RLL (zZ) / Core: IWRC
  - Construction: 35xK7, Compacted
  - Certification: Manufacturers (on request)
- \*Actual loads may vary.



| Diameter (mm) | *MBF (lb) | Weight / ft (lb) | Price / ft (≥ 1000 ft) | Price / ft (< 1000 ft) | Part Number    |
|---------------|-----------|------------------|------------------------|------------------------|----------------|
| 10            | 19 690    | 0.33             | 4.08                   | 4.69                   | WRGI-35X7-10MM |
| 12            | 27 880    | 0.48             | 4.49                   | 5.14                   | WRGI-35X7-12MM |
| 18            | 61 600    | 1.08             | 8.06                   | 9.37                   | WRGI-35X7-18MM |

# WIRE ROPE - 35X7, COMPACTED, NON-ROTATING, STEEL CORE, GALVANIZED & GREASED

By flattening the surface of outer wires of each strand, this plane contacting lay construction has a flat touch area of outer wires comparing round strand type rope. This flat touch area enables longer life of each wire before breaking. While designing this construction, we emphasized the optimal balance between high tensile strength, fatigue resistance, and structural stability. These ropes are widely used in various applications such as crane, fishing and mining.



- Material: Extra Improved Plow Steel (Grade 2160)
- Standard: ISO 2408, RR-W-410G, API-9A
- Finish: Drawn Galvanized, Lube: A1 Light Lube
- Lay: RLL (zZ) / Core: IWRC
- Construction: 35xK7, Compacted
- Certification: Manufacturers (on request)

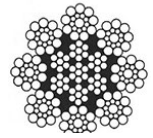
\*Actual loads may vary.

| Diameter (mm) | *MBF (lb) | Weight / ft (lb) | Price / ft<br>(≥ 1000 ft) | Price / ft<br>(< 1000 ft) | Part Number   |
|---------------|-----------|------------------|---------------------------|---------------------------|---------------|
| 10            | 22 100    | 0.35             | 4.54                      | 5.23                      | WRG-35X7-10MM |
| 12            | 31 470    | 0.50             | 5.00                      | 5.74                      | WRG-35X7-12MM |
| 13            | 36 420    | 0.56             | 5.57                      | 6.40                      | WRG-35X7-13MM |
| 14            | 42 260    | 0.65             | 6.20                      | 7.11                      | WRG-35X7-14MM |
| 15            | 49 600    | 0.75             | 7.06                      | 8.11                      | WRG-35X7-15MM |
| 16            | 56 430    | 0.89             | 7.90                      | 9.08                      | WRG-35X7-16MM |
| 18            | 69 240    | 1.08             | 9.80                      | 11.27                     | WRG-35X7-18MM |
| 19            | 77 330    | 1.25             | 10.90                     | 12.53                     | WRG-35X7-19MM |
| 20            | 85 900    | 1.34             | 11.95                     | 13.74                     | WRG-35X7-20MM |
| 22            | 104 800   | 1.62             | 14.50                     | 16.67                     | WRG-35X7-22MM |
| 24            | 124 770   | 1.92             | 17.25                     | 19.83                     | WRG-35X7-24MM |
| 26            | 148 400   | 2.26             | 20.25                     | 23.28                     | WRG-35X7-26MM |
| 28            | 170 400   | 2.62             | 23.45                     | 26.96                     | WRG-35X7-28MM |
| 30            | 198 400   | 3.05             | 26.95                     | 30.99                     | WRG-35X7-30MM |
| 32            | 220 300   | 3.42             | 30.65                     | 35.24                     | WRG-35X7-32MM |



## WIRE ROPE - 8X19, SEALE, IWRC 1960 N/MM2, GALVANIZED, A-2 LUBE

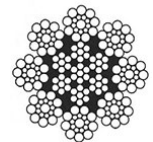
- Material: Extra Improved Plow Steel (Grade 1960)
- Standard: ISO 2408, RR-W-410G, API-9A
- Finish: Drawn Galvanized, Lube: A2 Lube
- Lay: RRL and LRL / Core: IWRC
- Construction: 8x19
- Certification: Manufacturers (on request)
- \*Actual loads may vary.



| Diameter (mm) | *MBF (lb) | Weight / ft (lb) | Lay | Price / ft | Part Number      |
|---------------|-----------|------------------|-----|------------|------------------|
| 7             | 7688      | 0.16             | RRL | 1.29       | WR-8X19-7MMRRL   |
| 7             | 7688      | 0.16             | LRL | 1.29       | WR-8X19-7MMLRL   |
| 7.5           | 8813      | 0.18             | RRL | 1.56       | WR-8X19-7.5MMRRL |
| 8             | 10 049    | 0.20             | RRL | 1.62       | WR-8X19-8MMRRL   |
| 8             | 10 049    | 0.20             | LRL | 1.62       | WR-8X19-8MMLRL   |
| 9             | 12 701    | 0.24             | RRL | 2.00       | WR-8X19-9MMRRL   |
| 9             | 12 701    | 0.24             | LRL | 2.00       | WR-8X19-9MMLRL   |
| 10            | 15 691    | 0.31             | RRL | 2.55       | WR-8X19-10MMRRL  |
| 10            | 15 691    | 0.31             | LRL | 2.55       | WR-8X19-10MMLRL  |

## WIRE ROPE - 8X36, SEALE, IWRC 1960 N/MM2, GALVANIZED, A-2 LUBE

- Material: Extra Improved Plow Steel (Grade 1960)
- Standard: ISO 2408, RR-W-410G, API-9A
- Finish: Drawn Galvanized, Lube: A2 Lube
- Lay: RRL and LRL / Core: IWRC
- Construction: 8x36
- Certification: Manufacturers (on request)
- \*Actual loads may vary.



| Diameter (mm) | *MBF (lb) | Weight / ft (lb) | Lay | Price / ft | Part Number     |
|---------------|-----------|------------------|-----|------------|-----------------|
| 11            | 18 973    | 0.36             | RRL | 2.92       | WR-8X36-11MMRRL |
| 11            | 18 973    | 0.36             | LRL | 2.92       | WR-8X36-11MMLRL |
| 12            | 22 480    | 0.43             | RRL | 3.40       | WR-8X36-12MMRRL |
| 12            | 22 480    | 0.43             | LRL | 3.40       | WR-8X36-12MMLRL |
| 13            | 26 526    | 0.52             | RRL | 3.97       | WR-8X36-13MMRRL |
| 13            | 26 526    | 0.52             | LRL | 3.97       | WR-8X36-13MMLRL |
| 14            | 30 798    | 0.60             | RRL | 4.60       | WR-8X36-14MMRRL |
| 14            | 30 798    | 0.60             | LRL | 4.60       | WR-8X36-14MMLRL |
| 16            | 40 239    | 0.77             | RRL | 5.90       | WR-8X36-16MMRRL |
| 16            | 40 239    | 0.77             | LRL | 5.90       | WR-8X36-16MMLRL |
| 18            | 50 805    | 0.97             | RRL | 7.40       | WR-8X36-18MMRRL |
| 18            | 50 805    | 0.97             | LRL | 7.40       | WR-8X36-18MMLRL |
| 20            | 62 719    | 1.21             | RRL | 9.05       | WR-8X36-20MMRRL |
| 20            | 62 719    | 1.21             | LRL | 9.05       | WR-8X36-20MMLRL |







## INDEX

|                                                                |            |
|----------------------------------------------------------------|------------|
| <b>FALL ARREST .....</b>                                       | <b>154</b> |
| Hook - Rebar, N-3620 .....                                     | 157        |
| Hook - Rebar, N-3630 .....                                     | 157        |
| Hook - Snap, N-3610 .....                                      | 157        |
| Link - Carabiner, Self-Locking, With Captive Pin, N-252g ..... | 155        |
| Link - Carabiner, Self-Locking, With Captive Pin, N-256g ..... | 156        |
| Link - Carabiner, Self-Locking, With Captive Pin, N-259g ..... | 155        |
| Link - O-Ring, N-489 .....                                     | 156        |

|                                                       |            |
|-------------------------------------------------------|------------|
| <b>HOISTS &amp; LIFTING ACCESSORIES .....</b>         | <b>127</b> |
| Available Spare Parts For Chain Hoist Block 619 ..... | 133        |
| Block - Chain Hoist, 619, Ocean® Brand .....          | 129        |
| Block - Chain Hoist, 619, Ocean® Brand (Nop) .....    | 130        |
| Cable Sock - K-Type .....                             | 152        |
| Cable Sock - T-Type .....                             | 151        |
| Chain Hoist Parts Breakdown .....                     | 132        |
| Clamp - Beam .....                                    | 148        |
| Clamp - Plate, Horizontal Lifting Clamp .....         | 151        |
| Drum Lifter .....                                     | 154        |
| Lever Hoist Parts Breakdown .....                     | 142        |
| Lever Hoist - Puller, 622, Ocean® Brand .....         | 139        |
| Lever Hoist - Puller, 622, Ocean® Brand (Nop) .....   | 141        |
| Lever Hoist - Puller, 816, Ocean® Brand, Subsea ..... | 134        |
| Lever Hoist - Puller, Hsh-Al, Ocean® Brand, .....     |            |
| Light Weight Aluminum .....                           | 136        |
| Light Weight Aluminum Lever Hoist .....               | 136        |
| Non-Overload Protection .....                         | 130        |
| Non-Overload Protection .....                         | 140        |
| Pcd Vertical Plate Clamps Table .....                 | 150        |
| Permanent Magnet Lifter .....                         | 145        |
| Permanent Magnet Lifter - .....                       |            |
| Warnings and Application Instructions .....           | 146        |
| Principle of Overload Protection .....                | 128, 138   |
| Rope Grab - Puller .....                              | 152        |
| Trolleys - Beam, Push Travel .....                    | 147        |
| Winch - Wire Rope .....                               | 144        |
| Winch - Wire Rope, Spare Pin .....                    | 144        |

|                                              |           |
|----------------------------------------------|-----------|
| <b>LASHING EQUIPMENT .....</b>               | <b>15</b> |
| Buckle - Ratchet .....                       | 22        |
| Hook - Wire, Double J .....                  | 23        |
| Loadbinder - Folding Binder - Ratchet .....  | 18        |
| Loadbinder - Lever .....                     | 16        |
| Loadbinder - Lever, Bx .....                 | 16        |
| Loadbinder - Ratchet .....                   | 17        |
| Loadbinder - Ratchet, Hs .....               | 17        |
| Loadbinder - Ratchet, T-Handle .....         | 19        |
| Ring - Weld-On D-Ring Tie Down .....         | 20        |
| Tie Down Cargo Strap - Chain Assembly .....  | 19        |
| Tie Down Cargo Strap - Ratchet .....         | 21        |
| Webbing - Tie Down Material, Polyester ..... | 23        |
| Winch - Truck, #5820 .....                   | 20        |

|                                                       |          |
|-------------------------------------------------------|----------|
| <b>LIFTING &amp; GENERAL PURPOSE CHAIN .....</b>      | <b>6</b> |
| Chain - Alloy Long-Link, Grade 80, Ocean® Brand ..... | 8        |
| Chain - Alloy Long-Link, Grade 80, Trygg® .....       | 11       |
| Chain - Alloy Short-Link, Grade 80, Trygg® .....      | 11       |
| Chain - Long-Link Lashing, Grade 80 .....             | 11       |

|                                                         |    |
|---------------------------------------------------------|----|
| Chain - Mid-Link Fishing, Grade 80 .....                | 10 |
| Chain - Overhead Lifting, Grade 80, Ocean® Brand .....  | 7  |
| Chain - Overhead Lifting, Grade 100, Ocean® Brand ..... | 7  |
| Chain - Proof Coil, Grade 30 .....                      | 9  |
| Chain - Self Coloured, High Test, Grade 43 .....        | 10 |
| Chain Slings - Sling Chart, Chain .....                 | 12 |
| Chain - Stainless, Grade 50 .....                       | 12 |
| Chain - Transport, Grade 70, Ocean® Brand .....         | 8  |

|                                                                    |            |
|--------------------------------------------------------------------|------------|
| <b>MARINE .....</b>                                                | <b>161</b> |
| Anchor - Ac-14 .....                                               | 183        |
| Anchor - Danforth Style / Workboat .....                           | 179        |
| Anchor - Dead Weights .....                                        | 187        |
| Anchor - Delta Hhp .....                                           | 182        |
| Anchor - Stockless .....                                           | 181        |
| Anchor - St Offshore .....                                         | 186        |
| Anchor - Sts Offshore .....                                        | 187        |
| Aquaculture Gear Available From Stock .....                        | 162        |
| Bag - Bait .....                                                   | 177        |
| Bollard - Curved Type A .....                                      | 207        |
| Bollard - Deck Mount Lxy-B012 .....                                | 209        |
| Bollard - Dock Type J .....                                        | 207        |
| Bollard - Double Bit Deck Mount Lxy-B011 .....                     | 209        |
| Bollard - Double Bitt Lxy-B09 .....                                | 208        |
| Bollard - Double Bitt Lxy-B10 .....                                | 208        |
| Bollard - Single-Bite Type Jis .....                               | 211        |
| Bollard - Single Bitt .....                                        | 210        |
| Bollard - T-Head .....                                             | 212        |
| Bollard - Type Stag Horn .....                                     | 211        |
| Bracket - Smit Bracket .....                                       | 207        |
| Chain - Open Link .....                                            | 165        |
| Chain - Stud Link Anchor .....                                     | 165        |
| Chock - Bulwark Mounting, Bow, Type Eu .....                       | 205        |
| Chock - Bulwark Mounting, Jis F2017-Bc .....                       | 204        |
| Chock - Bulwark Mounting, Jis F2030-A .....                        | 204        |
| Chock - Mounting, Type Eu .....                                    | 205        |
| Cleat - Dock, Heavy Duty .....                                     | 175        |
| Container Lifting - Sea-Stab .....                                 | 214        |
| Fairlead Roller - Anchor .....                                     | 201        |
| Fairlead Roller - Jis F2014 .....                                  | 202        |
| Fairlead Roller - Type A .....                                     | 201        |
| Fairlead Roller - Universal .....                                  | 202        |
| Fender And Buoyancy .....                                          | 198        |
| Fender - Cylindrical Fenders .....                                 | 194        |
| Fender - Foam Filled Fender Type & Structure .....                 | 196        |
| Fender Foam Ionomer, Berthing Energy And Reaction Forces .....     | 200        |
| Fender Foam Ionomer, Gilman Corporation .....                      | 199        |
| Fender - Pneumatic Fender .....                                    | 195        |
| Hinge - Butt, Heavy Duty .....                                     | 176        |
| Hinge - Strap .....                                                | 176        |
| Hook - Chain Grapnel .....                                         | 191        |
| Hook - Dual Chaser Ring .....                                      | 193        |
| Hook - G, Alloy, Grade 80 / Link - Recessed, Alloy, Grade 80 ..... | 172        |
| Hook - J, Chain Chaser .....                                       | 191        |
| Hook - Pelican Sliphook, GN® .....                                 | 190        |
| Hook - Permanent Chain Chaser .....                                | 192        |
| Hook - Ring Chaser .....                                           | 193        |
| Jar - Bait .....                                                   | 178        |

# INDEX

|                                                         |     |
|---------------------------------------------------------|-----|
| Knife - Bait .....                                      | 177 |
| Knife - Scallop.....                                    | 177 |
| Link - Connecting, Pear, Anchor Joining .....           | 170 |
| Link - Split .....                                      | 172 |
| Link - Split, Alloy, Lobster Link .....                 | 173 |
| Mooring Connector - H-Links .....                       | 213 |
| Oar Lock.....                                           | 176 |
| Ring - Round .....                                      | 169 |
| Shackle - Kenter Shackle, Joining Link .....            | 168 |
| Sheave - Horizontal Lead.....                           | 205 |
| Sheave - Vertical Lead .....                            | 205 |
| Stenhouse Slip .....                                    | 178 |
| Stopper - Chain Cable Stopper.....                      | 206 |
| Swivel - Forerunner, Assembly, With Links.....          | 163 |
| Swivel - Lobster .....                                  | 174 |
| Triangle Plate - GN® .....                              | 172 |
| Tuning Fork - GN® .....                                 | 189 |
| Turnbuckle - Chain Stopper Assembly, Devil's Claw ..... | 168 |
| Washer - Scallop, Black.....                            | 178 |

|                                                                                              |           |
|----------------------------------------------------------------------------------------------|-----------|
| <b>OCEAN G80 &amp; G100 STEEL LIFTING COMPONENTS.....</b>                                    | <b>24</b> |
| Hook - Clevis Grab Hook, Grade 80, Ocean® Brand .....                                        | 26        |
| Hook - Clevis Grab Hook, Grade 100, Ocean® Brand.....                                        | 36        |
| Hook - Clevis Grab Hook With Pin, Grade 100, Ocean® Brand.....                               | 37        |
| Hook - Clevis Sling Hook, Grade 80, Ocean® Brand.....                                        | 27        |
| Hook - Clevis Sling Hook, Grade 100, Ocean® Brand.....                                       | 37        |
| Hook - Container Hook, Grade 80, Ocean® Brand.....                                           | 30        |
| Hook - Coupling, Self-Locking, Grade 80, Ocean® Brand .....                                  | 34        |
| Hook - Eye Sling Hooks, Grade 100, Ocean® Brand .....                                        | 40        |
| Hook - Foundry Clevis Hooks, Grade 100, Ocean® Brand.....                                    | 40        |
| Hook - Foundry Eye Hook, Grade 80, Ocean® Brand.....                                         | 29        |
| Hook - Foundry Eye Hooks, Grade 100, Ocean® Brand.....                                       | 40        |
| Hook - Kit, Clevis, Load Pin Kit, Grade 80, Ocean® Brand .....                               | 31        |
| Hook - Kit, Clevis, Load Pin Kit, Grade 100, Ocean® Brand.....                               | 42        |
| Hook - Kit, Self-Locking Recessed Trigger Kit,<br>Grade 80/100, Ocean® Brand .....           | 31, 41    |
| Hook - Self Locking Clevis Hook, Grade 80, Ocean® Brand.....                                 | 29        |
| Hook - Self Locking Clevis Hook, Grade 100, Ocean® Brand .....                               | 39        |
| Hook - Self Locking Eye Hook, Grade 80, Ocean® Brand.....                                    | 28        |
| Hook - Self Locking Eye Hook, Grade 100, Ocean® Brand .....                                  | 39        |
| Hook - Self Locking Swivel Hook, Grade 80, Ocean® Brand .....                                | 28        |
| Hook - Sliding Choker Hooks, Grade 80, Ocean® Brand .....                                    | 30        |
| Hook - Swivel Self Locking Hook Ball Bearing,<br>Grade 100, Ocean® Brand .....               | 38        |
| Hook - Swivel Self Locking Hook Brass Bushing,<br>Grade 100, Ocean® Brand .....              | 38        |
| Hook - Web And Round Sling Hook, Grade 100, Ocean® Brand .....                               | 41        |
| Hook - Weld On Bucket Hook, Grade 80, Ocean® Brand.....                                      | 43        |
| Link - Connecting Link, Grade 80, Ocean® Brand.....                                          | 26        |
| Link - Connecting Link, Grade 100, Ocean® Brand .....                                        | 36        |
| Link - Coupling, Half Link & Pin, Grade 80, Ocean® Brand.....                                | 32        |
| Link - Coupling, Master Link, Grade 80, Ocean® Brand.....                                    | 34        |
| Link - Coupling & Pin, Grade 80, Ocean® Brand .....                                          | 33        |
| Link - Coupling, Round Sling, Grade 80, Ocean® Brand .....                                   | 32        |
| Link - Kit, Connecting, Pin & Sleeve Kit,<br>Grade 80, For Ocean® Brand Coupling Series..... | 34        |
| Link - Kit, Connecting, Pin & Sleeve Kit,<br>Grade 80, Ocean® Brand.....                     | 31        |

|                                                                               |       |
|-------------------------------------------------------------------------------|-------|
| Link - Kit, Connecting, Pin & Sleeve Kit,<br>Grade 100, Ocean® Brand .....    | 42    |
| Link - Master Link, Grade 80, Ocean® Brand.....                               | 25    |
| Link - Master Link, Grade 100, Ocean® Brand.....                              | 35    |
| Ring - Weld On Lifting Point, Grade 80, Ocean® Brand.....                     | 44    |
| Swivel - Coupling, Insulated Blank Swivel,<br>Grade 80, Ocean® Brand.....     | 33    |
| Swivel - Hoist Ring, Metric Thread, Grade 80, Ocean® Brand .....              | 50    |
| Swivel - Hoist Ring, Unc Thread (Ocean), Grade 80.....                        | 49,51 |
| Swivel - Hoist Ring, Unc Thread, Grade 80, Ocean® Brand .....                 | 48    |
| Swivel - Lifting Eye Key Point, Metric Thread,<br>Grade 80, Ocean® Brand..... | 47    |
| Swivel - Lifting Eye Key Point - Unc Thread,<br>Grade 80, Ocean® Brand.....   | 46    |

|                                                                                       |           |
|---------------------------------------------------------------------------------------|-----------|
| <b>RIGGING HARDWARE &amp; EQUIPMENT.....</b>                                          | <b>52</b> |
| Block - Chain.....                                                                    | 102       |
| Block - Gin .....                                                                     | 102       |
| Block - Pulley.....                                                                   | 104       |
| Block - Sheave Bronze Brushed.....                                                    | 103       |
| Block - Single Or Double Sheave, Wooden, With Hook.....                               | 103       |
| Block - Snatch, Double Sheave, Light Duty,<br>With Hook, Ocean® Brand.....            | 105       |
| Block - Snatch, Double Sheave, Light Duty,<br>With Shackle, Ocean® Brand .....        | 106       |
| Block - Snatch, Single Sheave, Alloy,<br>With Hook, Ocean® Brand .....                | 106       |
| Block - Snatch, Single Sheave, Alloy,<br>With Shackle, Ocean® Brand .....             | 107       |
| Block - Snatch, Single Sheave, Heavy Duty, With Eye, GN® .....                        | 111       |
| Block - Snatch, Single Sheave, Large, Super Duty,<br>With Hook, Ocean® Brand .....    | 109       |
| Block - Snatch, Single Sheave, Large, Super Duty,<br>With Shackle, Ocean® Brand ..... | 110       |
| Block - Snatch, Single Sheave, Light Duty,<br>Tail Board, Ocean® Brand.....           | 105       |
| Block - Snatch, Single Sheave, Light Duty,<br>With Hook, Ocean® Brand .....           | 107       |
| Block - Snatch, Single Sheave, Light Duty,<br>With Shackle, Ocean® Brand .....        | 108       |
| Block - Snatch, Single Sheave, With Hook, Ocean® Brand .....                          | 108       |
| Block - Snatch, Single Sheave, With Shackle, Ocean® Brand.....                        | 109       |
| Block - Snatch, Single Sheave, Wooden, With Hook.....                                 | 104       |
| Block - Try Net .....                                                                 | 101       |
| Block - Yarding.....                                                                  | 101       |
| Bow, Anchor, With Safety Bolt Green Pin® .....                                        | 64        |
| Bow, Anchor, With Safety Bolt Yellow Pin® .....                                       | 58        |
| Bow, Anchor, With Screw Green Pin® .....                                              | 63        |
| Bow, Anchor, With Screw Pin.....                                                      | 55        |
| Bow, Anchor, With Screw Yellow Pin® .....                                             | 57        |
| Bow, With Safety Bolt, GN® .....                                                      | 62        |
| Commercial Bow, Anchor, With Screw Pin.....                                           | 54        |
| Dee (Chain) Trawling, With Square Head Screw Pin.....                                 | 52        |
| Dee (Chain), With Screw Pin .....                                                     | 53        |
| Eye Bolt - Regular With Nut.....                                                      | 80        |
| Eye Bolt - Ring With Shoulder & Nut.....                                              | 84        |
| Eye Bolt - Screw.....                                                                 | 81        |
| Eye Bolts Forged - Warnings And Application Instructions.....                         | 87        |

## INDEX

|                                                                   |        |                                                                                                                                             |               |
|-------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Eye Bolt - Shoulder Machine, Imperial.....                        | 84     | Turnbuckle - Jaw & Jaw, Stainless Steel.....                                                                                                | 76            |
| Eye Bolt - Shoulder Machine, Metric.....                          | 85     | Turnbuckle - Stub End.....                                                                                                                  | 77            |
| Eye Bolt - Shoulder With Nut.....                                 | 82, 83 | Turnbuckle - Stub End, Body Only.....                                                                                                       | 77            |
| Eye Bolt - Shoulder With Nut, Unc.....                            | 81     | Water Bags, Crane.....                                                                                                                      | 114           |
| Eye Nut.....                                                      | 83, 86 | Water Bags, Crane Certification Fluid Weight.....                                                                                           | 113           |
| Eye Pad.....                                                      | 85     | Water Bags, Lifeboat.....                                                                                                                   | 114           |
| Hook - Anchor Line Hook, GN®.....                                 | 124    | Wide Body Sling, With Safety Bolt Green Pin®.....                                                                                           | 59            |
| Hook - Carabiner, Fishing, Screw Lock.....                        | 93     | Wide Body Sling, With Safety Bolt, Yoke® Brand.....                                                                                         | 59            |
| Hook - Clevis, Grab, Grade 70.....                                | 117    | Wide Mouth Bow, With Safety Bolt Green Pin®.....                                                                                            | 66            |
| Hook - Clevis, Grab, With Latch, Grade 70.....                    | 117    |                                                                                                                                             |               |
| Hook - Clevis, Slip, Grade 70.....                                | 118    | <b>ROPE (SYNTHETIC &amp; FIBER).....</b>                                                                                                    | <b>232</b>    |
| Hook - Clevis, Slip, With Latch, Grade 70.....                    | 118    | Fid - Norwegian.....                                                                                                                        | 251           |
| Hook - Eye, Hoist, Grade 100, Yoke® Brand.....                    | 124    | Rope - Dsm Dyneema, 8 & 12-Strand.....                                                                                                      | 235           |
| Hook - Eye, Hoist, With Latch.....                                | 119    | Rope - Dsm Dyneema, 12-Strand.....                                                                                                          | 236           |
| Hook - Eye, Rov, With Latch, GN®.....                             | 122    | Rope - Manila, 3-Strand.....                                                                                                                | 233           |
| Hook - Eye, Slip, With Latch.....                                 | 116    | Rope - Manila, 4-Strand.....                                                                                                                | 242           |
| Hook - Lanyard, With Double Lock.....                             | 117    | Rope - Nylon, 3-Strand.....                                                                                                                 | 244           |
| Hook - Latch Kit.....                                             | 121    | Rope - Nylon, 8-Strand.....                                                                                                                 | 243           |
| Hook - Rov Shank Hook, GN®.....                                   | 123    | Rope - Nylon Double Braided 2-1, Ocean Steel Line.....                                                                                      | 247           |
| Hook - "S".....                                                   | 93     | Rope - Nylon, Jumbo, 3-Strand.....                                                                                                          | 245           |
| Hooks Eye Hoist - Warnings And Application Instructions.....      | 126    | Rope - Ocean Steel Line, 3-Strand, Aqua.....                                                                                                | 240           |
| Hook - Snap.....                                                  | 93     | Rope - Ocean Steel Line, 3-Strand, Yellow.....                                                                                              | 241           |
| Hook - Snap, With Latch.....                                      | 115    | Rope - Ocean Steel Line, 8-Strand, Gold.....                                                                                                | 241           |
| Hook - Sorting, With Handle.....                                  | 115    | Rope - Polyester Double Braided 2-1, Ocean Steel Line.....                                                                                  | 248           |
| Hook - Swivel Eye, Hoist, With Latch.....                         | 120    | Rope - Polypropylene, Jumbo, 3-Strand, Yellow.....                                                                                          | 242           |
| Hook - Swivel Eye, With Latch.....                                | 116    | Rope - Sail Twine, Waxed.....                                                                                                               | 242           |
| Hook - Swivel, Hoist, Grade 100, Yoke® Brand.....                 | 124    | Rope - Sash Cord, Cotton.....                                                                                                               | 246           |
| Link - Master Link, Dnv 2.7-1+.....                               | 88     | Rope Types - Synthetic.....                                                                                                                 | 247           |
| Link - Quick.....                                                 | 92     | Sail Needle.....                                                                                                                            | 251           |
| Link - Twin Clevis.....                                           | 92     | Sail Palms.....                                                                                                                             | 252           |
| Load Cell - Software Packages.....                                | 116    | Slings - Sling Chart, Dyneema (Synthetic Rope),<br>Endless Grommet.....                                                                     | 238           |
| Load Cell - Wireless Kit.....                                     | 114    | Slings - Sling Chart, Dyneema (Synthetic Rope), Eye & Eye.....                                                                              | 237           |
| Master Link Assembly, Dnv 2.7-1+.....                             | 89     | Soft Shackles.....                                                                                                                          | 239           |
| Master Link, Large.....                                           | 91     | Splicing - Pusher & Fids - Aluminum.....                                                                                                    | 252           |
| Pear, Weldless Sling.....                                         | 90     | Twin-path Extra Covermax.....                                                                                                               | 230           |
| Ring - Round, Weldless.....                                       | 91     |                                                                                                                                             |               |
| Rov Locking Clamp Release Bow, Polar, With Green Pin®.....        | 68     | <b>SLINGS.....</b>                                                                                                                          | <b>218</b>    |
| Rov Spring Release Bow, Polar, With Green Pin®.....               | 67     | Sling - Round, Polyester.....                                                                                                               | 229, 230, 231 |
| Shackle - Warnings And Applications.....                          | 69     | Sling - Webbing Material, Polyester.....                                                                                                    | 230           |
| Sling Protector, With Safety Bolt, GN®.....                       | 60     | Sling - Web, Polyester.....                                                                                                                 | 228, 229      |
| Super Bow, Anchor, With Safety Bolt Green Pin®.....               | 65     | Sling - Wire Rope, Bright, With A1 Light Lube.....                                                                                          | 219, 220      |
| Swivel - Bullet Style, Angular Contact Bearing.....               | 99     | Sling - Wire Rope, Galvanized.....                                                                                                          | 221-223       |
| Swivel - Closed Body Swivel, GN®.....                             | 100    | Wire Rope Sling Charts.....                                                                                                                 | 224           |
| Swivel - Eye & Eye.....                                           | 94, 96 |                                                                                                                                             |               |
| Swivel - Eye & Eye, Angular Contact Bearing.....                  | 97     | <b>TOOLS.....</b>                                                                                                                           | <b>157</b>    |
| Swivel - Eye & Eye, With Hardened Wearing Ring.....               | 96     | Tool - Bolt Cutter.....                                                                                                                     | 159           |
| Swivel - Flex, Eye & Eye.....                                     | 97     | Tool - Swager Cutter.....                                                                                                                   | 158           |
| Swivel - Jaw & Eye.....                                           | 95     | Tool - Wire Cutter.....                                                                                                                     | 158           |
| Swivel - Jaw & Jaw, Angular Contact Bearing.....                  | 99     |                                                                                                                                             |               |
| Swivel - Short Bow.....                                           | 96     | <b>WIRE ROPE.....</b>                                                                                                                       | <b>288</b>    |
| Turnbuckle - Bottle Type (Closed) Galvanized.....                 | 75     | Jiangsu Langshan Wire Rope Co. Ltd.....                                                                                                     |               |
| Turnbuckle - Eye & Eye, Galvanized.....                           | 72     | The Worlds Largest Wire Rope Factory.....                                                                                                   | 291           |
| Turnbuckle - Eye & Eye, Lashing.....                              | 76     | Oceanside Equipment Ltd,<br>Exclusive Canadian Dealer for Jiangsu Langshan Wire Rope Co. Ltd.,<br>The Worlds Largest Wire Rope Factory..... | 290           |
| Turnbuckle - Heavy Duty, GN®.....                                 | 78     | Sea Lube Wire Rope Lubricant.....                                                                                                           | 289           |
| Turnbuckle - Hook & Hook, Galvanized.....                         | 73     | Wire Rope - 6x19, Bridle Wire, Fiber Core, Galvanized.....                                                                                  | 296           |
| Turnbuckle - Jaw & Eye, Galvanized.....                           | 74     |                                                                                                                                             |               |
| Turnbuckle - Jaw & Jaw, Bottle Type (Closed) Stainless Steel..... | 75     |                                                                                                                                             |               |
| Turnbuckle - Jaw & Jaw, Galvanized.....                           | 70     |                                                                                                                                             |               |



# INDEX

|                                                                                     |            |                                                            |          |
|-------------------------------------------------------------------------------------|------------|------------------------------------------------------------|----------|
| Wire Rope - 6x19, Steel Core, Galvanized .....                                      | 298        | Sleeve (Ferrule) - Copper Oval.....                        | 264      |
| Wire Rope - 6x19, Steel Core, Galvanized & Greased.....                             | 298        | Sleeve (Ferrule) - Copper Stop .....                       | 262      |
| Wire Rope - 6x19, Trawl Warp, Fiber Core,<br>Galvanized & Greased .....             | 296        | Sleeve (Ferrule) - Duplex Oval .....                       | 265      |
| Wire Rope - 6x24, Fiber Core, Galvanized.....                                       | 297        | Sleeve (Ferrule) - Flemish Splice, Carbon Steel .....      | 260      |
| Wire Rope - 6x25, Trolley & Hoists Rope,<br>Fiber Core, Bright & Greased .....      | 305        | Sleeve (Ferrule) - Stainless Steel Duplex.....             | 265      |
| Wire Rope - 6x26, Regular Swaged Ws,<br>Steel Core, Bright & Greased.....           | 297        | Sleeves (Ferrules) Size Number Table A.2 .....             | 261      |
| Wire Rope - 6x26, Steel Core, Bright & Greased.....                                 | 299        | Socket - Clipinator Wedge Socket.....                      | 286      |
| Wire Rope - 6x26, Steel Core, Galvanized .....                                      | 301        | Socketing Putty .....                                      | 282      |
| Wire Rope - 6x36, Steel Core, Bright & Greased.....                                 | 300        | Socket Lock - Resin .....                                  | 282      |
| Wire Rope - 6x36, Steel Core, Galvanized.....                                       | 302        | Socket - Spelter, Closed, Forged, Ocean.....               | 277      |
| Wire Rope - 6x36, Steel Core, Galvanized & Greased.....                             | 299        | Socket - Spelter, Closed, GN®.....                         | 280      |
| Wire Rope - 6x37, Fiber Core, Bright & Greased.....                                 | 304        | Socket - Spelter, Cr, Closed (Peewee, Gold Nose), GN®..... | 281      |
| Wire Rope - 7x7, 7x19, 6x19, 6x26, Steel Core, Stainless.....                       | 294        | Socket - Spelter, Open, Forged, Ocean .....                | 277      |
| Wire Rope - 7x7 & 7x19, Aircraft Cable,<br>Pvc Coated, Steel Core, Galvanized ..... | 293        | Socket - Spelter, Open, GN®.....                           | 278, 279 |
| Wire Rope - 7x7, 7x19, Aircraft Cable,<br>Pvc Coated, Steel Core, Stainless.....    | 295        | Socket - Swage, Closed, Forged.....                        | 284      |
| Wire Rope - 7x7 & 7x19, Aircraft Cable,<br>Steel Core, Galvanized .....             | 292        | Socket - Swage, Open, Forged .....                         | 285      |
| Wire Rope - 8x19, Seale, Iwrc 1960 N/Mm2,<br>Galvanized, A-2 Lube.....              | 309        | Solid Thimble - Din 3091.....                              | 271      |
| Wire Rope - 8x26, Boom Rope, Bright & Greased.....                                  | 303        | Swaging Machine New-Tech "Smart Press" .....               | 260      |
| Wire Rope - 8x36, Seale, Iwrc 1960 N/Mm2,<br>Galvanized, A-2 Lube .....             | 309        | Swaging Machines From 150 Te To 4,000 Te .....             | 258      |
| Wire Rope - 18x19s, Rotation Resistant,<br>Steel Core, Bright & Greased.....        | 304        | Thimble - Heavy Duty .....                                 | 267, 269 |
| Wire Rope - 19x7, Rotation Resistant,<br>Steel Core, Bright & Greased.....          | 304        | Thimble - Light Duty.....                                  | 268, 269 |
| Wire Rope - 35x7, Compacted, Hoist Rope,<br>Bright & Greased.....                   | 306, 307   | Thimble - Synthetic Rope.....                              | 271      |
| Wire Rope - 35x7, Compacted, Non-Rotating,<br>Steel Core, Galvanized & Greased..... | 308        | Thimble - Tube .....                                       | 270      |
| Wire Rope - 35x7, Compacted, Non-Rotating,<br>Steel Core, Galvanized & Greased..... | 307        | Wedge Socket Warnings And Use.....                         | 287      |
| <b>WIRE ROPE END TERMINATORS .....</b>                                              | <b>253</b> | Wire Rope Broom Degreaser .....                            | 282      |
| Cable Joiner - Self-Locking.....                                                    | 273        |                                                            |          |
| Choker Button.....                                                                  | 272        |                                                            |          |
| Clips Wire Rope 'Ocean' - Warnings<br>and Application Instructions.....             | 276        |                                                            |          |
| Clip - Wire Rope, Forged .....                                                      | 275        |                                                            |          |
| Clip - Wire Rope, Malleable.....                                                    | 274        |                                                            |          |
| Clip - Wire Rope, Stainless .....                                                   | 274        |                                                            |          |
| Die Lube - Swaging Lubricant.....                                                   | 259        |                                                            |          |
| Fast Flemish Swage System.....                                                      | 255        |                                                            |          |
| Go-No-Go Guages - For Flemish Eye Steel Sleeves (Ferrules).....                     | 272        |                                                            |          |
| Hook - Micro Midget Choker .....                                                    | 272        |                                                            |          |
| Marlin Spike .....                                                                  | 266        |                                                            |          |
| Reeling Machines Wirop Shaftless.....                                               | 265        |                                                            |          |
| Resin Socketing Warning And Safety Information .....                                | 285        |                                                            |          |
| Rigging Equipment.....                                                              | 254        |                                                            |          |
| Sleeve (Ferrule) - Aluminium .....                                                  | 262        |                                                            |          |
| Sleeve (Ferrule) - Aluminium Duplex.....                                            | 263        |                                                            |          |
| Sleeve (Ferrule) - Aluminium Stop .....                                             | 263        |                                                            |          |
| Sleeve (Ferrule) - Button Stop.....                                                 | 270        |                                                            |          |



## INDEX A - Z

|                                                               |     |                                                                                 |          |
|---------------------------------------------------------------|-----|---------------------------------------------------------------------------------|----------|
| Anchor - Ac-14.....                                           | 183 | Fender Foam Ionomer, Gilman Corporation.....                                    | 199      |
| Anchor - Danforth Style / Workboat.....                       | 179 | Hinge - Butt, Heavy Duty.....                                                   | 176      |
| Anchor - Dead Weights.....                                    | 187 | Hinge - Strap.....                                                              | 176      |
| Anchor - Delta Hhp.....                                       | 182 | Hook - Chain Grapnel.....                                                       | 191      |
| Anchor - Stockless.....                                       | 181 | Hook - Dual Chaser Ring.....                                                    | 193      |
| Anchor - St Offshore.....                                     | 186 | Hook - G, Alloy, Grade 80 / Link - Recessed, Alloy, Grade 80.....               | 172      |
| Anchor - Sts Offshore.....                                    | 187 | Hook - J, Chain Chaser.....                                                     | 191      |
| Aquaculture Gear Available From Stock.....                    | 162 | Hook - Pelican Sliphook, GN®.....                                               | 190      |
| Available Spare Parts For Chain Hoist Block 619.....          | 133 | Hook - Permanent Chain Chaser.....                                              | 192      |
| Bag - Bait.....                                               | 177 | Hook - Rebar, N-3620.....                                                       | 157      |
| Block - Chain Hoist, 619, Ocean® Brand (Nop).....             | 130 | Hook - Rebar, N-3630.....                                                       | 157      |
| Block - Chain Hoist, 619, Ocean® Brand.....                   | 129 | Hook - Ring Chaser.....                                                         | 193      |
| Bollard - Curved Type A.....                                  | 207 | Hook - Snap, N-3610.....                                                        | 157      |
| Bollard - Deck Mount Lxy-B012.....                            | 209 | Hook - Wire, Double J.....                                                      | 23       |
| Bollard - Dock Type J.....                                    | 207 | Jar - Bait.....                                                                 | 178      |
| Bollard - Double Bit Deck Mount Lxy-B011.....                 | 209 | Knife - Bait.....                                                               | 177      |
| Bollard - Double Bitt Lxy-B09.....                            | 208 | Knife - Scallop.....                                                            | 177      |
| Bollard - Double Bitt Lxy-B10.....                            | 208 | Lever Hoist - Puller, 622, Ocean® Brand (Nop).....                              | 141      |
| Bollard - Single-Bite Type Jis.....                           | 211 | Lever Hoist - Puller, 622, Ocean® Brand.....                                    | 139      |
| Bollard - Single Bitt.....                                    | 210 | Lever Hoist - Puller, 816, Ocean® Brand, Subsea.....                            | 134      |
| Bollard - T-Head.....                                         | 212 | Lever Hoist - Puller, Hsh-Al, Ocean® Brand,<br>Lever Hoist Parts Breakdown..... | 142      |
| Bollard - Type Stag Horn.....                                 | 211 | Light Weight Aluminum.....                                                      | 136      |
| Bracket - Smit Bracket.....                                   | 207 | Light Weight Aluminum Lever Hoist.....                                          | 136      |
| Buckle - Ratchet.....                                         | 22  | Link - Carabiner, Self-Locking, With Captive Pin, N-252g.....                   | 155      |
| Cable Sock - K-Type.....                                      | 152 | Link - Carabiner, Self-Locking, With Captive Pin, N-256g.....                   | 156      |
| Cable Sock - T-Type.....                                      | 151 | Link - Carabiner, Self-Locking, With Captive Pin, N-259g.....                   | 155      |
| Chain - Alloy Long-Link, Grade 80, Ocean® Brand.....          | 8   | Link - Connecting, Pear, Anchor Joining.....                                    | 170      |
| Chain - Alloy Long-Link, Grade 80, Trygg®.....                | 11  | Link - O-Ring, N-489.....                                                       | 156      |
| Chain - Alloy Short-Link, Grade 80, Trygg®.....               | 11  | Link - Split, Alloy, Lobster Link.....                                          | 173      |
| Chain - Long-Link Lashing, Grade 80.....                      | 11  | Link - Split.....                                                               | 172      |
| Chain - Mid-Link Fishing, Grade 80.....                       | 10  | Loadbinder - Folding Binder - Ratchet.....                                      | 18       |
| Chain - Open Link.....                                        | 165 | Loadbinder - Lever, Bx.....                                                     | 16       |
| Chain - Overhead Lifting, Grade 100, Ocean® Brand.....        | 7   | Loadbinder - Lever.....                                                         | 16       |
| Chain - Proof Coil, Grade 30.....                             | 9   | Loadbinder - Ratchet, Hs.....                                                   | 17       |
| Chain - Self Coloured, High Test, Grade 43.....               | 10  | Loadbinder - Ratchet, T-Handle.....                                             | 19       |
| Chain - Stainless, Grade 50.....                              | 12  | Loadbinder - Ratchet.....                                                       | 17       |
| Chain - Stud Link Anchor.....                                 | 165 | Mooring Connector - H-Links.....                                                | 213      |
| Chain - Transport, Grade 70, Ocean® Brand.....                | 8   | Non-Overload Protection.....                                                    | 130      |
| Chain - Overhead Lifting, Grade 80, Ocean® Brand.....         | 7   | Non-Overload Protection.....                                                    | 140      |
| Chain Hoist Parts Breakdown.....                              | 132 | Oar Lock.....                                                                   | 176      |
| Chain Slings - Sling Chart, Chain.....                        | 12  | Pcd Vertical Plate Clamps Table.....                                            | 150      |
| Chock - Bulwark Mounting, Bow, Type Eu.....                   | 205 | Permanent Magnet Lifter -<br>Permanent Magnet Lifter.....                       | 145      |
| Chock - Bulwark Mounting, Jis F2017-Bc.....                   | 204 | Principle of Overload Protection.....                                           | 128, 138 |
| Chock - Bulwark Mounting, Jis F2030-A.....                    | 204 | Ring - Round.....                                                               | 169      |
| Chock - Mounting, Type Eu.....                                | 205 | Ring - Weld-On D-Ring Tie Down.....                                             | 20       |
| Clamp - Beam.....                                             | 148 | Rope Grab - Puller.....                                                         | 152      |
| Clamp - Plate, Horizontal Lifting Clamp.....                  | 151 | Shackle - Kenter Shackle, Joining Link.....                                     | 168      |
| Cleat - Dock, Heavy Duty.....                                 | 175 | Sheave - Horizontal Lead.....                                                   | 205      |
| Container Lifting - Sea-Stab.....                             | 214 | Sheave - Vertical Lead.....                                                     | 205      |
| Drum Lifter.....                                              | 154 | Tie Down Cargo Strap - Chain Assembly.....                                      | 19       |
| Fairlead Roller - Anchor.....                                 | 201 | Tie Down Cargo Strap - Ratchet.....                                             | 21       |
| Fairlead Roller - Jis F2014.....                              | 202 | Trolleys - Beam, Push Travel.....                                               | 147      |
| Fairlead Roller - Type A.....                                 | 201 | Warnings and Application Instructions.....                                      | 146      |
| Fairlead Roller - Universal.....                              | 202 | Webbing - Tie Down Material, Polyester.....                                     | 23       |
| Fender - Cylindrical Fenders.....                             | 194 | Winch - Truck, #5820.....                                                       | 20       |
| Fender - Foam Filled Fender Type & Structure.....             | 196 | Winch - Wire Rope, Spare Pin.....                                               | 144      |
| Fender - Pneumatic Fender.....                                | 195 | Winch - Wire Rope.....                                                          | 144      |
| Fender And Buoyancy.....                                      | 198 |                                                                                 |          |
| Fender Foam Ionomer, Berthing Energy And Reaction Forces..... | 200 |                                                                                 |          |

## INDEX A - Z

|                                                                                              |        |                                                                                      |        |
|----------------------------------------------------------------------------------------------|--------|--------------------------------------------------------------------------------------|--------|
| Stenhouse Slip.....                                                                          | 178    | Block - Chain.....                                                                   | 102    |
| Stopper - Chain Cable Stopper.....                                                           | 206    | Block - Gin.....                                                                     | 102    |
| Swivel - Forerunner, Assembly, With Links.....                                               | 163    | Block - Pulley.....                                                                  | 104    |
| Swivel - Lobster.....                                                                        | 174    | Block - Sheave Bronze Brushed.....                                                   | 103    |
| Triangle Plate - GN®.....                                                                    | 172    | Block - Single Or Double Sheave, Wooden, With Hook.....                              | 103    |
| Tuning Fork - GN®.....                                                                       | 189    | Block - Snatch, Double Sheave, Light Duty,<br>With Hook, Ocean® Brand.....           | 105    |
| Turnbuckle - Chain Stopper Assembly, Devil's Claw.....                                       | 168    | Block - Snatch, Double Sheave, Light Duty,<br>With Shackle, Ocean® Brand.....        | 106    |
| Washer - Scallop, Black.....                                                                 | 178    | Block - Snatch, Single Sheave, Alloy,<br>With Hook, Ocean® Brand.....                | 106    |
| Hook - Clevis Grab Hook, Grade 80, Ocean® Brand.....                                         | 26     | Block - Snatch, Single Sheave, Alloy,<br>With Shackle, Ocean® Brand.....             | 107    |
| Hook - Clevis Grab Hook, Grade 100, Ocean® Brand.....                                        | 36     | Block - Snatch, Single Sheave, Heavy Duty, With Eye, GN®.....                        | 111    |
| Hook - Clevis Grab Hook With Pin, Grade 100, Ocean® Brand.....                               | 37     | Block - Snatch, Single Sheave, Large, Super Duty,<br>With Hook, Ocean® Brand.....    | 109    |
| Hook - Clevis Sling Hook, Grade 80, Ocean® Brand.....                                        | 27     | Block - Snatch, Single Sheave, Large, Super Duty,<br>With Shackle, Ocean® Brand..... | 110    |
| Hook - Clevis Sling Hook, Grade 100, Ocean® Brand.....                                       | 37     | Block - Snatch, Single Sheave, Light Duty,<br>Tail Board, Ocean® Brand.....          | 105    |
| Hook - Container Hook, Grade 80, Ocean® Brand.....                                           | 30     | Block - Snatch, Single Sheave, Light Duty,<br>With Hook, Ocean® Brand.....           | 107    |
| Hook - Coupling, Self-Locking, Grade 80, Ocean® Brand.....                                   | 34     | Block - Snatch, Single Sheave, Light Duty,<br>With Shackle, Ocean® Brand.....        | 108    |
| Hook - Eye Sling Hooks, Grade 100, Ocean® Brand.....                                         | 40     | Block - Snatch, Single Sheave, With Hook, Ocean® Brand.....                          | 108    |
| Hook - Foundry Clevis Hooks, Grade 100, Ocean® Brand.....                                    | 40     | Block - Snatch, Single Sheave, With Shackle, Ocean® Brand.....                       | 109    |
| Hook - Foundry Eye Hook, Grade 80, Ocean® Brand.....                                         | 29     | Block - Snatch, Single Sheave, Wooden, With Hook.....                                | 104    |
| Hook - Foundry Eye Hooks, Grade 100, Ocean® Brand.....                                       | 40     | Block - Try Net.....                                                                 | 101    |
| Hook - Kit, Clevis, Load Pin Kit, Grade 80, Ocean® Brand.....                                | 31     | Block - Yarding.....                                                                 | 101    |
| Hook - Kit, Clevis, Load Pin Kit, Grade 100, Ocean® Brand.....                               | 42     | Bow, Anchor, With Safety Bolt Green Pin®.....                                        | 64     |
| Hook - Kit, Self-Locking Recessed Trigger Kit,<br>Grade 80/100, Ocean® Brand.....            | 31, 41 | Bow, Anchor, With Safety Bolt Yellow Pin®.....                                       | 58     |
| Hook - Self Locking Clevis Hook, Grade 80, Ocean® Brand.....                                 | 29     | Bow, Anchor, With Screw Green Pin®.....                                              | 63     |
| Hook - Self Locking Clevis Hook, Grade 100, Ocean® Brand.....                                | 39     | Bow, Anchor, With Screw Pin.....                                                     | 55     |
| Hook - Self Locking Eye Hook, Grade 80, Ocean® Brand.....                                    | 28     | Bow, Anchor, With Screw Yellow Pin®.....                                             | 57     |
| Hook - Self Locking Eye Hook, Grade 100, Ocean® Brand.....                                   | 39     | Bow, With Safety Bolt, GN®.....                                                      | 62     |
| Hook - Self Locking Swivel Hook, Grade 80, Ocean® Brand.....                                 | 28     | Commercial Bow, Anchor, With Screw Pin.....                                          | 54     |
| Hook - Sliding Choker Hooks, Grade 80, Ocean® Brand.....                                     | 30     | Dee (Chain) Trawling, With Square Head Screw Pin.....                                | 52     |
| Hook - Swivel Self Locking Hook Ball Bearing,<br>Grade 100, Ocean® Brand.....                | 38     | Dee (Chain), With Screw Pin.....                                                     | 53     |
| Hook - Swivel Self Locking Hook Brass Bushing,<br>Grade 100, Ocean® Brand.....               | 38     | Eye Bolt - Regular With Nut.....                                                     | 80     |
| Hook - Web And Round Sling Hook, Grade 100, Ocean® Brand.....                                | 41     | Eye Bolt - Ring With Shoulder & Nut.....                                             | 84     |
| Hook - Weld On Bucket Hook, Grade 80, Ocean® Brand.....                                      | 43     | Eye Bolt - Screw.....                                                                | 81     |
| Link - Connecting Link, Grade 80, Ocean® Brand.....                                          | 26     | Eye Bolts Forged - Warnings And Application Instructions.....                        | 87     |
| Link - Connecting Link, Grade 100, Ocean® Brand.....                                         | 36     | Eye Bolt - Shoulder Machine, Imperial.....                                           | 84     |
| Link - Coupling, Half Link & Pin, Grade 80, Ocean® Brand.....                                | 32     | Eye Bolt - Shoulder Machine, Metric.....                                             | 85     |
| Link - Coupling, Master Link, Grade 80, Ocean® Brand.....                                    | 34     | Eye Bolt - Shoulder With Nut.....                                                    | 82, 83 |
| Link - Coupling & Pin, Grade 80, Ocean® Brand.....                                           | 33     | Eye Bolt - Shoulder With Nut, Unc.....                                               | 81     |
| Link - Coupling, Round Sling, Grade 80, Ocean® Brand.....                                    | 32     | Eye Nut.....                                                                         | 83, 86 |
| Link - Kit, Connecting, Pin & Sleeve Kit,<br>Grade 80, For Ocean® Brand Coupling Series..... | 34     | Eye Pad.....                                                                         | 85     |
| Link - Kit, Connecting, Pin & Sleeve Kit,<br>Grade 80, Ocean® Brand.....                     | 31     | Hook - Anchor Line Hook, GN®.....                                                    | 124    |
| Link - Kit, Connecting, Pin & Sleeve Kit,<br>Grade 100, Ocean® Brand.....                    | 42     | Hook - Carabiner, Fishing, Screw Lock.....                                           | 93     |
| Link - Master Link, Grade 80, Ocean® Brand.....                                              | 25     | Hook - Clevis, Grab, Grade 70.....                                                   | 117    |
| Link - Master Link, Grade 100, Ocean® Brand.....                                             | 35     | Hook - Clevis, Grab, With Latch, Grade 70.....                                       | 117    |
| Ring - Weld On Lifting Point, Grade 80, Ocean® Brand.....                                    | 44     | Hook - Clevis, Slip, Grade 70.....                                                   | 118    |
| Swivel - Coupling, Insulated Blank Swivel,<br>Grade 80, Ocean® Brand.....                    | 33     | Hook - Clevis, Slip, With Latch, Grade 70.....                                       | 118    |
| Swivel - Hoist Ring, Metric Thread, Grade 80, Ocean® Brand.....                              | 50     | Hook - Eye, Hoist, Grade 100, Yoke® Brand.....                                       | 124    |
| Swivel - Hoist Ring, Unc Thread (Ocean), Grade 80.....                                       | 49, 51 | Hook - Eye, Hoist, With Latch.....                                                   | 119    |
| Swivel - Hoist Ring, Unc Thread, Grade 80, Ocean® Brand.....                                 | 48     | Hook - Eye, Rov, With Latch, GN®.....                                                | 122    |
| Swivel - Lifting Eye Key Point, Metric Thread,<br>Grade 80, Ocean® Brand.....                | 47     | Hook - Eye, Slip, With Latch.....                                                    | 116    |
| Swivel - Lifting Eye Key Point - Unc Thread,<br>Grade 80, Ocean® Brand.....                  | 46     | Hook - Lanyard, With Double Lock.....                                                | 117    |

## INDEX A - Z

|                                                                   |        |                                                                                                                                             |               |
|-------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Hook - Latch Kit.....                                             | 121    | Rope - Ocean Steel Line, 3-Strand, Aqua.....                                                                                                | 240           |
| Hook - Rov Shank Hook, GN®.....                                   | 123    | Rope - Ocean Steel Line, 3-Strand, Yellow.....                                                                                              | 241           |
| Hook - "S".....                                                   | 93     | Rope - Ocean Steel Line, 8-Strand, Gold.....                                                                                                | 241           |
| Hooks Eye Hoist - Warnings And Application Instructions.....      | 126    | Rope - Polyester Double Braided 2-1, Ocean Steel Line.....                                                                                  | 248           |
| Hook - Snap.....                                                  | 93     | Rope - Polypropylene, Jumbo, 3-Strand, Yellow.....                                                                                          | 242           |
| Hook - Snap, With Latch.....                                      | 115    | Rope - Sail Twine, Waxed.....                                                                                                               | 242           |
| Hook - Sorting, With Handle.....                                  | 115    | Rope - Sash Cord, Cotton.....                                                                                                               | 246           |
| Hook - Swivel Eye, Hoist, With Latch.....                         | 120    | Rope Types - Synthetic.....                                                                                                                 | 247           |
| Hook - Swivel Eye, With Latch.....                                | 116    | Sail Needle.....                                                                                                                            | 251           |
| Hook - Swivel, Hoist, Grade 100, Yoke® Brand.....                 | 124    | Sail Palms.....                                                                                                                             | 252           |
| Link - Master Link, Dnv 2.7-1+.....                               | 88     | Slings - Sling Chart, Dyneema (Synthetic Rope),<br>Endless Grommet.....                                                                     | 238           |
| Link - Quick.....                                                 | 92     | Slings - Sling Chart, Dyneema (Synthetic Rope), Eye & Eye.....                                                                              | 237           |
| Link - Twin Clevis.....                                           | 92     | Soft Shackles.....                                                                                                                          | 239           |
| Load Cell - Software Packages.....                                | 116    | Splicing - Pusher & Fids - Aluminum.....                                                                                                    | 252           |
| Load Cell - Wireless Kit.....                                     | 114    | Twin-path Extra Covermax.....                                                                                                               | 230           |
| Master Link Assembly, Dnv 2.7-1+.....                             | 89     | Sling - Round, Polyester.....                                                                                                               | 229, 230, 231 |
| Master Link, Large.....                                           | 91     | Sling - Webbing Material, Polyester.....                                                                                                    | 230           |
| Pear, Weldless Sling.....                                         | 90     | Sling - Web, Polyester.....                                                                                                                 | 228, 229      |
| Ring - Round, Weldless.....                                       | 91     | Sling - Wire Rope, Bright, With A1 Light Lube.....                                                                                          | 219, 220      |
| Rov Locking Clamp Release Bow, Polar, With Green Pin®.....        | 68     | Sling - Wire Rope, Galvanized.....                                                                                                          | 221-223       |
| Rov Spring Release Bow, Polar, With Green Pin®.....               | 67     | Wire Rope Sling Charts.....                                                                                                                 | 224           |
| Shackle - Warnings And Applications.....                          | 69     | Tool - Bolt Cutter.....                                                                                                                     | 159           |
| Sling Protector, With Safety Bolt, GN®.....                       | 60     | Tool - Swager Cutter.....                                                                                                                   | 158           |
| Super Bow, Anchor, With Safety Bolt Green Pin®.....               | 65     | Tool - Wire Cutter.....                                                                                                                     | 158           |
| Swivel - Bullet Style, Angular Contact Bearing.....               | 99     | Jiangsu Langshan Wire Rope Co. Ltd.<br>The Worlds Largest Wire Rope Factory.....                                                            | 291           |
| Swivel - Closed Body Swivel, GN®.....                             | 100    | Oceanside Equipment Ltd,<br>Exclusive Canadian Dealer for Jiangsu Langshan Wire Rope Co. Ltd.,<br>The Worlds Largest Wire Rope Factory..... | 290           |
| Swivel - Eye & Eye.....                                           | 94, 96 | Sea Lube Wire Rope Lubricant.....                                                                                                           | 289           |
| Swivel - Eye & Eye, Angular Contact Bearing.....                  | 97     | Wire Rope - 6x19, Bridle Wire, Fiber Core, Galvanized.....                                                                                  | 296           |
| Swivel - Eye & Eye, With Hardened Wearing Ring.....               | 96     | Wire Rope - 6x19, Steel Core, Galvanized.....                                                                                               | 298           |
| Swivel - Flex, Eye & Eye.....                                     | 97     | Wire Rope - 6x19, Steel Core, Galvanized & Greased.....                                                                                     | 298           |
| Swivel - Jaw & Eye.....                                           | 95     | Wire Rope - 6x19, Trawl Warp, Fiber Core,<br>Galvanized & Greased.....                                                                      | 296           |
| Swivel - Jaw & Jaw, Angular Contact Bearing.....                  | 99     | Wire Rope - 6x24, Fiber Core, Galvanized.....                                                                                               | 297           |
| Swivel - Short Bow.....                                           | 96     | Wire Rope - 6x25, Trolley & Hoists Rope,<br>Fiber Core, Bright & Greased.....                                                               | 305           |
| Turnbuckle - Bottle Type (Closed) Galvanized.....                 | 75     | Wire Rope - 6x26, Regular Swaged Ws,<br>Steel Core, Bright & Greased.....                                                                   | 297           |
| Turnbuckle - Eye & Eye, Galvanized.....                           | 72     | Wire Rope - 6x26, Steel Core, Bright & Greased.....                                                                                         | 299           |
| Turnbuckle - Eye & Eye, Lashing.....                              | 76     | Wire Rope - 6x26, Steel Core, Galvanized.....                                                                                               | 301           |
| Turnbuckle - Heavy Duty, GN®.....                                 | 78     | Wire Rope - 6x36, Steel Core, Bright & Greased.....                                                                                         | 300           |
| Turnbuckle - Hook & Hook, Galvanized.....                         | 73     | Wire Rope - 6x36, Steel Core, Galvanized.....                                                                                               | 302           |
| Turnbuckle - Jaw & Eye, Galvanized.....                           | 74     | Wire Rope - 6x36, Steel Core, Galvanized & Greased.....                                                                                     | 299           |
| Turnbuckle - Jaw & Jaw, Bottle Type (Closed) Stainless Steel..... | 75     | Wire Rope - 6x37, Fiber Core, Bright & Greased.....                                                                                         | 304           |
| Turnbuckle - Jaw & Jaw, Galvanized.....                           | 70     | Wire Rope - 7x7, 7x19, 6x19, 6x26, Steel Core, Stainless.....                                                                               | 294           |
| Turnbuckle - Jaw & Jaw, Stainless Steel.....                      | 76     | Wire Rope - 7x7 & 7x19, Aircraft Cable,<br>Pvc Coated, Steel Core, Galvanized.....                                                          | 293           |
| Turnbuckle - Stub End.....                                        | 77     | Wire Rope - 7x7, 7x19, Aircraft Cable,<br>Pvc Coated, Steel Core, Stainless.....                                                            | 295           |
| Turnbuckle - Stub End, Body Only.....                             | 77     | Wire Rope - 7x7 & 7x19, Aircraft Cable,<br>Steel Core, Galvanized.....                                                                      | 292           |
| Water Bags, Crane.....                                            | 114    | Wire Rope - 8x19, Seale, Iwrc 1960 N/Mm2,<br>Galvanized, A-2 Lube.....                                                                      | 309           |
| Water Bags, Crane Certification Fluid Weight.....                 | 113    | Wire Rope - 8x26, Boom Rope, Bright & Greased.....                                                                                          | 303           |
| Water Bags, Lifeboat.....                                         | 114    | Wire Rope - 8x36, Seale, Iwrc 1960 N/Mm2,<br>Galvanized, A-2 Lube.....                                                                      | 309           |
| Wide Body Sling, With Safety Bolt Green Pin®.....                 | 59     |                                                                                                                                             |               |
| Wide Body Sling, With Safety Bolt, Yoke® Brand.....               | 59     |                                                                                                                                             |               |
| Wide Mouth Bow, With Safety Bolt Green Pin®.....                  | 66     |                                                                                                                                             |               |
| Fid - Norwegian.....                                              | 251    |                                                                                                                                             |               |
| Rope - Dsm Dyneema, 8 & 12-Strand.....                            | 235    |                                                                                                                                             |               |
| Rope - Dsm Dyneema, 12-Strand.....                                | 236    |                                                                                                                                             |               |
| Rope - Manila, 3-Strand.....                                      | 233    |                                                                                                                                             |               |
| Rope - Manila, 4-Strand.....                                      | 242    |                                                                                                                                             |               |
| Rope - Nylon, 3-Strand.....                                       | 244    |                                                                                                                                             |               |
| Rope - Nylon, 8-Strand.....                                       | 243    |                                                                                                                                             |               |
| Rope - Nylon Double Braided 2-1, Ocean Steel Line.....            | 247    |                                                                                                                                             |               |
| Rope - Nylon, Jumbo, 3-Strand.....                                | 245    |                                                                                                                                             |               |



## INDEX A -Z

|                                                                                     |                 |
|-------------------------------------------------------------------------------------|-----------------|
| Wire Rope - 18x19s, Rotation Resistant,<br>Steel Core, Bright & Greased.....        | <b>304</b>      |
| Wire Rope - 19x7, Rotation Resistant,<br>Steel Core, Bright & Greased.....          | <b>304</b>      |
| Wire Rope - 35x7, Compacted, Hoist Rope,<br>Bright & Greased.....                   | <b>306, 307</b> |
| Wire Rope - 35x7, Compacted, Non-Rotating,<br>Steel Core, Galvanized & Greased..... | <b>308</b>      |
| Wire Rope - 35x7, Compacted, Non-Rotating,<br>Steel Core, Galvanized & Greased..... | <b>307</b>      |
| Cable Joiner - Self-Locking.....                                                    | <b>273</b>      |
| Choker Button.....                                                                  | <b>272</b>      |
| Clips Wire Rope 'Ocean' - Warnings<br>and Application Instructions.....             | <b>276</b>      |
| Clip - Wire Rope, Forged.....                                                       | <b>275</b>      |
| Clip - Wire Rope, Malleable.....                                                    | <b>274</b>      |
| Clip - Wire Rope, Stainless.....                                                    | <b>274</b>      |
| Die Lube - Swaging Lubricant.....                                                   | <b>259</b>      |
| Fast Flemish Swage System.....                                                      | <b>255</b>      |
| Go-No-Go Guages - For Flemish Eye Steel Sleeves (Ferrules).....                     | <b>272</b>      |
| Hook - Micro Midget Choker.....                                                     | <b>272</b>      |
| Marlin Spike.....                                                                   | <b>266</b>      |
| Reeling Machines Wirop Shaftless.....                                               | <b>265</b>      |
| Resin Socketing Warning And Safety Information.....                                 | <b>285</b>      |
| Rigging Equipment.....                                                              | <b>254</b>      |
| Sleeve (Ferrule) - Aluminium.....                                                   | <b>262</b>      |
| Sleeve (Ferrule) - Aluminium Duplex.....                                            | <b>263</b>      |
| Sleeve (Ferrule) - Aluminium Stop.....                                              | <b>263</b>      |
| Sleeve (Ferrule) - Button Stop.....                                                 | <b>270</b>      |
| Sleeve (Ferrule) - Copper Oval.....                                                 | <b>264</b>      |
| Sleeve (Ferrule) - Copper Stop.....                                                 | <b>262</b>      |
| Sleeve (Ferrule) - Duplex Oval.....                                                 | <b>265</b>      |
| Sleeve (Ferrule) - Flemish Splice, Carbon Steel.....                                | <b>260</b>      |
| Sleeve (Ferrule) - Stainless Steel Duplex.....                                      | <b>265</b>      |
| Sleeves (Ferrules) Size Number Table A.2.....                                       | <b>261</b>      |
| Socket - Clipinator Wedge Socket.....                                               | <b>286</b>      |
| Socketing Putty.....                                                                | <b>282</b>      |
| Socket Lock - Resin.....                                                            | <b>282</b>      |
| Socket - Spelter, Closed, Forged, Ocean.....                                        | <b>277</b>      |
| Socket - Spelter, Closed, GN®.....                                                  | <b>280</b>      |
| Socket - Spelter, Cr, Closed (Peewee, Gold Nose), GN®.....                          | <b>281</b>      |
| Socket - Spelter, Open, Forged, Ocean.....                                          | <b>277</b>      |
| Socket - Spelter, Open, GN®.....                                                    | <b>278, 279</b> |
| Socket - Swage, Closed, Forged.....                                                 | <b>284</b>      |
| Socket - Swage, Open, Forged.....                                                   | <b>285</b>      |
| Solid Thimble - Din 3091.....                                                       | <b>271</b>      |
| Swaging Machine New-Tech "Smart Press".....                                         | <b>260</b>      |
| Swaging Machines From 150 Te To 4,000 Te.....                                       | <b>258</b>      |
| Thimble - Heavy Duty.....                                                           | <b>267, 269</b> |
| Thimble - Light Duty.....                                                           | <b>268, 269</b> |
| Thimble - Synthetic Rope.....                                                       | <b>271</b>      |
| Thimble - Tube.....                                                                 | <b>270</b>      |
| Wedge Socket Warnings And Use.....                                                  | <b>287</b>      |
| Wire Rope Broom Degreaser.....                                                      | <b>282</b>      |





# CONDITIONS OF SALE

## Right to Inspect:

In the event of the Buyer making a claim against the Company for any reason whatsoever the goods in respect of which any such claim is made shall be preserved intact where delivery for a period of seven days from the notification of the claim to the Company within which time the Company shall have the right to attend at the place where the goods were delivered to investigate the complaint. No claim by the Buyer will be accepted unless this condition is strictly complied with.

## Design Changes:

The company reserves the right to effect design changes as technical developments may require without prior notice.

## Specifications Provided by Buyer:

The buyer shall indemnify the Company against any and all liability arising through execution by the Company of any order placed by a buyer in accordance with the Buyer's specification where such execution infringes any patent, trademark, or registered design not owned by the buyer or the Company.

## Risk, Property and Insurance:

1. Goods supplied by the Company shall be at the Buyer's risk immediately on delivery to the buyer or into custody on the buyer's behalf (whichever is the sooner) the buyer should therefore arrange insurance accordingly unless the Company has specifically agreed to arrange insurance of the goods.
2. The property in the goods supplied by the Company will pass to the buyer when (1) the goods the subject of the Contract in question and (2) all other goods the subject of any contract between the Company and the buyer which have been delivered to the buyer (prior to the payment in full for the goods the subject of the contract in question) have been paid in full.
3. In the event that the buyer resells or hires out goods supplied by the Company (either in the original form, or after alterations by the buyer and/or after they have been added to an item manufactured by the buyer) prior to the passing of the property therein to the buyer such resale or hire shall be effected by the buyer as bailee for the Company and the proceeds of such sale or hire shall be held on trust for the Company in a separate bank account opened by the buyer for this purpose and these proceeds shall be received by the buyer for and on behalf of the Company unless all debts owing to the Company by the buyer in respect to the goods supplied by the Company have been paid.
4. So long as the property and goods remain the Company and the buyer is in default of such obligation hereunder the Company shall have the right, with or without prior notice to the buyer, to take possession of the goods and for that purpose to go onto any premises occupied by the buyer) and on such retaking of possession the contract shall be deemed to have been determined without prejudice to any claim or rights the Company might otherwise make or exercise.
5. Until payment due under all contracts between the Company and buyer has been made in full the buyer shall hold upon trust for the Company the goods (either in their original form, or after alterations by the buyer and /or after they have been added to an item manufactured by the buyer) and shall in so far as may be possible store them in such a way as they may be identifiable as the property of the Company and separate from all other goods in the buyers possession.
6. Until payment due under all contracts between the buyer and the Company has been made in full the Company shall be entitled to trace all proceeds of sale or hire charges received by the buyer on sale of the goods (either in their original form or after alteration by the buyer and/or after they have been added to an item manufactured by the buyer) received by the buyer through any bank or other account maintained by the buyer and the buyer will provide every assistance free of charge to the Company for the same.
7. Until payment due under all contracts between the buyer and Company has been made in full if the buyer sells or hires the goods (either in their original form or after alteration by the buyer and /or after they have been added to an item manufactured by the buyer) in the ordinary course of its business the buyer shall assign its rights to recover the selling price or hire charges from the third parties concerned to the Company if required to do so in writing by the Company.
8. Every insurable risk shall pass to the buyer as soon as the goods are delivered to it or into custody on its behalf. The buyer shall keep the goods insured in the amount of the price at which the goods are sold to the buyer against all insurable risks until payment due under all contracts between the buyer and Company has been made in full.
9. Of goods (either in their original form or after alteration by the buyer and/or after they have been added to an item manufactured by the buyer) are destroyed by an insured risk to the same being paid for by the buyer the buyer shall receive the proceeds of any such insurance as trustee for the Company.

## Cancellation:

Once a contract has come into being between the Company and the buyer, that contract can not be cancelled only with the consent of the Company and upon terms that will indemnify it against loss. The buyer will indemnify the Company for all of the Company's contractual losses and the Company will not be under a duty to mitigate those losses.

## Dispatch Abroad:

Goods dispatched abroad shall be deemed to have been inspected by the Buyer's agent or representative prior to dispatch from the Company's as no responsibility can be accepted by the Company after goods are consigned for shipment and the Company shall be under no obligation to give the buyer the notice specified.

## Literature:

Illustrations, weights, measures, performance capabilities, application suitability information and other data set out in the sales literature of the Company are statements of opinion and are provided for information only and form no part of the contract.

## Law of Contract and Jurisdiction:

All contracts for the supply of goods by the Company shall be governed by English Law and be within the exclusive jurisdiction of the Nova Scotia Courts.

## Definition:

In these conditions "the Company" means the company upon whose document these conditions are endorsed.

## General:

1. All quotations are made and all orders are accepted subject to the following conditions. All other conditions whatsoever are excluded from the contract or any variation thereof, unless expressly accepted by the Company in writing.
2. Acceptance of delivery of the goods shall where no prior agreement has been reached be conclusive evidence of acceptance of these conditions.
3. Quotations shall only be available for acceptance for a maximum period of 10 days from the date thereof and may be withdrawn or altered by the Company within such period at any time without notice.

# CONDITIONS OF SALE

4. Goods sold from stock are offered subject to the same being unsold upon receipt of the order.
5. The goods are subject to specifications (including dimensions, weights, analyses and properties) stated expressly in the contract or where none is specified, to the specification published by the company or where none is published to any relevant standards or code of practice.
6. Any typographical, clerical or other error or omission in any sales literature, quotation, price list, acceptance of offer, invoice or other document or information issued by the Company shall be subject to correction without any liability on the part of the Company.
7. The buyer shall not be entitled to retain any more money due to the Company under a contract unless previously agreed in writing by the Company's authorized representative.

## Delivery:

Any date named by the Company for dispatch or delivery is given and intended as an estimate only and is not to be of the essence of the Contract. The buyer shall nevertheless be bound to accept the goods ordered whether available on or after the date stated. The Company shall be not be liable in any way in respect of late dispatch or delivery however caused nor shall failure to dispatch be deemed to be a breach of the Contract. Where drawings, specifications, instructions and materials are to be supplied by the buyer, the buyer shall supply the same in reasonable time to enable the Company to dispatch within the period named. The Company may, at its discretion, make installment deliveries and each delivery shall constitute a separate order for the purpose of payment.

## Damage or Loss in transit:

No claim for damage or corrosion in transit or shortage of delivery of goods will be entertained unless a separate notice in writing is given to the Company and /or the carrier concerned within three days of receipt of the goods followed by a complete claim in writing to the Company within five days of receipt of the goods.

## Non delivery:

No claim for loss or non-delivery of goods will be entertained unless in writing is received within seven days of the invoice date.

## Storage:

The Company reserves the right to charge for storage and /or any other costs incurred in the event of deferment or delay in delivery at the request and /or action of the Buyer.

## Prices:

The Company reserves the right to increase any prices agreed between the Company and the Buyer in accordance with market conditions and the company's price for similar goods ruling at the date of dispatch and the buyer shall pay such additions in addition to the quoted price. Without prejudice to the generality of the foregoing market conditions shall include any increases in the cost of labor, materials, transport and any other costs between quotation and dispatch.

## HST and GST Taxes:

All taxes will be charged at the rate applicable at the date of dispatch. The quoted prices do not include any taxes.

## Carriage and Packaging:

The cost of carriage and packaging shall be paid for by the customer in addition to price payable for the goods, unless agreed beforehand between the customer and the Company.

## Terms of Payment:

1. Terms of payment are that invoices must be settled in full within 30 days from the date of the invoice.
2. If the buyer fails to make any payment on the due date then, without prejudice to any other right or remedy available to the Company, the Company shall be entitled to: (a) Cancel the contract and suspend any further deliveries to the buyer, (b) Appropriate any payment made by the buyer to such of the goods (as goods supplied under any other contract between the buyer and the Company) as the Company may think fit. (c) Charge the buyer interest (both before and after any judgment) on the amount unpaid, at the rate of 10% per annum over the base lending rate of the Company's own bankers, until payment in full is made (a part of a month being treated as a full month for the purpose of calculating interest).

## Defective and Damaged Goods:

No claim against the Company for goods represented by the defective, from whatever cause, or not to conform to the Contract can be entertained, and the Company shall incur no liability in respect thereof unless received by the Company in writing within twenty-eight days after the date of dispatch and the defective goods or goods failing to conform to contract are returned to the Company within the said period of twenty-eight days.

## Returns and Refunds:

1. Items that are obsolete or Specially Engineered product are not returnable.
2. Oceanside reserves the right to decline any request for a Returned Goods Authorization.
3. Proof of purchase must be established on all returned items. A valid purchase order number is required provided at time of request.
4. Oceanside will not accept the return of merchandise purchased over 60 days from receipt date.
5. The price shown on the Request for Return must coincide with the original invoice price.
6. Oceanside's Order Number and Invoice Number should be furnished at time of request to expedite the processing of Returned Goods Authorization forms.
7. After authorization is received, all returns must be shipped to the designated location.
8. Any material returned without authorization will be subject to an additional handling charge.
9. Returned Goods Authorization will be valid for 30 days from date of issue.
10. The greater of a 20% restocking fee or \$50.00 restocking charge will apply to all authorized returned merchandise. There will be no outbound freight chargeback; however, the customer will be responsible for in-bound freight charges.
11. All returned merchandise will be subject to inspection, and must be in resealable condition upon receipt. Any products returned within the guidelines of this policy or for inspection that is deemed non-Oceanside or non-resealable is subject to rejection or additional fees.

## Limit of Liability:

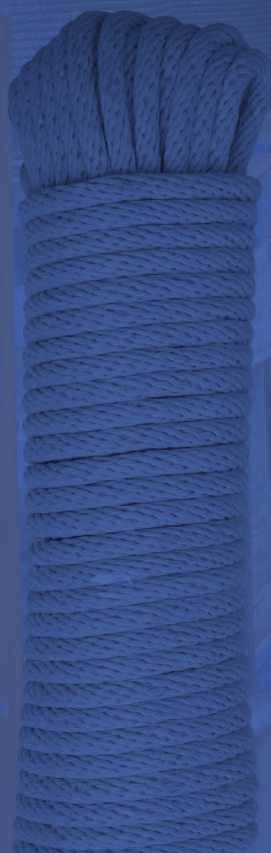
In the event of any claim against the Company in respect of any matter whatsoever the Company's liability (if any) shall be limited to the replacement of goods sold in respect of which the liability arises if required and practicable or the buyer shall be given a credit for the invoiced value of the order in respect of which the liability arises. Under no circumstances whatsoever shall the Company be liable for any consequential loss or damage or any personal injury or damage or loss of any property other than as stated herein howsoever and whatsoever arising. Any express or implied conditions, statement, warranty, statutory, or otherwise, are hereby excluded save where such exclusions are invalidated by statute. No claim by the Buyer shall be accepted as a reason for cancellation of the remainder of the order.







# World Class Rigging Products





OCEANSIDE



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**A BISHOP LIFTING COMPANY**

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