INDUSTRIAL WIRE ROPE SUPPL

Large Inventory Covering A Full Line of Products

Industrial Wire Rope Supply Co., Inc., maintains a large inventory of wire rope in all diameters and constructions to meet the needs and expectations of the market.

In addition, Industrial Wire Rope Supply Co., Inc. offers a complete range of wire rope slings, nylon slings, chain, shackles, thimbles, sockets, and other related hardware.

As a distributor for all manufacturers of wire rope and most manufacturers of rigging and hoisting equipment, we are able to provide prompt delivery of all products by utilizing their stocks from all around the country.

Full Range of Equipment and Services

- Proof testing on hardware and wire rope beyond 2,000,000 pounds
- Destruction test performed beyond 1,000,000 pounds 2-1/4" diameter wire rope
- Direct distribution with our own modern truck fleet
- · Field inspections and consulting

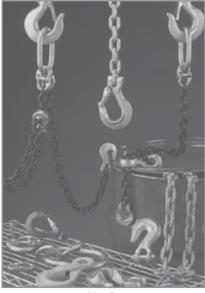
Quality and Service – Our Number One Priority

We have the opportunity to deal with a wide variety of successful companies in multiple industries, our key to growth has been to provide the products they need with the quality they demand and the service we know they deserve. This includes technical support that comes from a knowledgeable sales staff totalling over 200 years experience in wire rope.

Our ability to provide "one-stop shopping" means our customers can rely on Industrial Wire Rope Supply Co., Inc. for all their demands and prompt reliable service.



Wire Rope



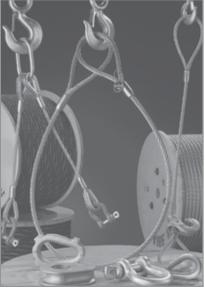
Chain



Wire Rope Fittings



Synthetic Web Slings www.industrialrope.com



Wire Rope Slings



Miscellaneous Equipment



ST. LOUIS, MO • CINCINNATI, OH we can supply all the rigging you need for lifting, loading and lashing!

BLOCKS

HOOKS

LINKS

LOAD BINDERS

PENDANTS

SHACKLES

Carbon

Round Pin Anchor

Round Pin Chain

Screw Pin Anchor

Screw Pin Chain

Stainless Steel Towing

Trawling

Wide Body

Safety Anchor

Safety Chain

Lifting

Alloy

CHAIN

Alloy - G80 & G100 Anchor Boomer - G70 Hi-Test - G43 Hoist Proof Coil - G30 Tail Chains

CLIPS

Drop Forged Fist Grip Malleable

COLD SHUTS

CORDAGE

Manila Nylon Poly HMPE

FENCING

Orange Plastic Wire Rope SILT Barriers

SHEAVES

SLINGS

Chain Fiber Rope Nylon web Polyester Round Steel Mesh Synthetic Web Wire Rope

SOCKETS

Bridge Spelter Strand Swage Wedge

SWIVELS

Ball Bearing Chain Jaw End

THIMBLES

Bronze Crescent Equalizing Fiber Rope Hawser Heavy Duty Regular Slip-On Slip-Thru Solid Stainless Towing

TURNBUCKLES

Stainless Steel Galvanized

WIRE ROPE

Aircraft Cable Cable-Laid Drill Line Galvanized Mooring Line Rotation Resistant Sandline Stainless Steel Trawl Cable Domestic Import

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INDUSTRIAL WIRE ROPE SUPPLY COMPANY INC.



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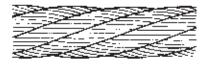
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8

Wire Rope

LAN' ROLL

Wire Rope: Popular Classifications



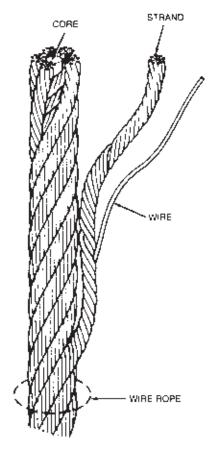
Left Lay REGULAR LAY

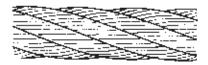


Left Lay LANG LAY



Alternate Lay





Right Lay REGULAR LAY



Right Lay LANG LAY

BASED ON THE NOMINAL NUMBER OF WIRES IN EACH STRAND

| Classification | Description |
|-------------------------|--|
| 6×7 | Containing 6 strands that are made up of 3 through 14 wires, of which no more than 9 are outside wires. |
| 6 × 19 | Containing 6 stands that are made up of 15 through 26 wires, of which no more than 12 are outside wires. |
| 6 × 37 | Containing 6 strands that are made up of 27 through 49 wires, of which no more than 18 are outside wires. |
| 6×61 | Containing 6 strands that are made up of 50 through 74 wires, of which no more than 24 are outside wires. |
| 6×91 | Containing 6 strands that are made up of 75 through 109 wires, of which no more that 30 are outside wires. |
| 6 - 127 | Containing 6 strands that are made up of 110 or more wires, of which no more than 36 are outside wires. |
| 8×19 | Containing 8 strands that are made up of 15 through 26 wires, of which no more than 12 are outside wires. |
| 19 × 7 and 18 × 7 | Containing 19 strands, each strand is made up of 7 wire It is manufactured by covering an inner rope of 7 × 7 left lang lay construction with 12 strands in right regular lay. (The rotation-resistant property that characterizes this highly specialized construction is a result of the counter torques developed by the two layers.) When the steel wire core strand is replaced by a fiber core, the decriptic becomes 18 × 7. |

When a center wire is replaced by a strand, it is considered as a single wire, and the rope classification remains unchanged.

There are, of course, many other types of wire rope, but they are useful only in a limited number of applications and, as such, are sold as specialties.

Wire Rope Specifications

TYPES OF CENTERS

An important point to consider is the selection of the proper type center to be needed in the rope. Wire Ropes are made with either liber core or steel wire core.

1) Fiber Center (FC)

This center is made of either natural libers or polypropylene and offers greater elasticity than the Independent Wire Rope Core.

Independent Wire Rope Core (IWRC)

This center is usually composed of a separate 7 imes 7 wire rope designated as IWAC. The steel core increases the strength by 7% and the weight by 10%. These steel cores provide more substantial support than fiber cores to the outer strands during the rope's operating life. Steel centers resist crushing, are more resistant to heat and increase the strength of the rope.

SAFETY FACTOR

The Safety Factor being the ratio between the minimum Breaking load of the rope and the safe working load (SWL) tells at what percentage of its ultimate strength a wire rope is operating. The Salety Factor takes into consideration both normal rope wear and potential stresses in various applications. The best practice in determining an adequate safety factor is to analyze the specific conditions involved in each individual installation. The following example shows how to determine the Safety Factor: If a rope is working under a max, operating load of 10,000 lbs and is having an ultimate strength of 50,000 lbs the factor is 5 which means it is operating at 20% of its ultimate strength.

FLEET ANGLE

The fleet angle is the angle formed between the rope running to or from the extreme left or right of the drum and a line drawn from the center of the sheave normal to the axis of the drum. For optimum efficiency, the angle here should not exceed $1\frac{1}{2}^{*}$ for a smooth drum, or 2° for a grooved drum. If the fleet angle is larger than the recommended limits it can cause bad winding on smooth drums and rubbing against the flanges of the sheave grooves. Too small a fleet angle should also be avoided since it will cause the rope to pite up against the flange head.

Before installing any wire rope that winds onto a drum, the fleet angle should be checked and if found improper, conditions should be corrected.

SHEAVE ALIGNMENT

Proper alignment of sheaves is essential. The main sheave should line up with the center of the hoisting drum, otherwise both the rope and sheave flanges will be subjected to severe wear and rapid deterioration will occur. If rope speeds are high sheaves should also be balanced.

NOTE:

Wire rope products will break if abused, misused or overused. Regular inspection and maintenance are necessary. Consult industry recommendations and OSHA standards before using.



1

Wire Rope

SUGGESTED WIRE ROPE FOR PARTICULAR USES

Preformed or Form-Set construction is used for all ropes shown.

| USE | SIZE (IN.) | CONSTRUCTION | LAY | CORE | GRADE |
|--|---------------------------------------|---|--------------------------|--------------------------------|------------------------------|
| Clamshell Holding & Closing Lines Boom Hoist Line Tag Line | ½1½ ½&Up ¼&∜₁₀ %₀&Up | 6 × 25 FW or 6 × 36 WS 6 × 25 FW 6 × 36 WS 6 × 41 WS | ARL AAL AAL AAL | iwrc Iwrc Fiber Fiber | eips Eips Eips Eips |
| Crawler & Truck Cranes Hoist Line Boom Hoist Line Whip Line | ½1½ All ⅔1½ | 6 x 25 FW or 19 x 7 8R 6 x 25 FW 19 x 7 8R | RAL RAL RAL | IWRC IWRC IWRC | eips Eips Eips |
| Cranes & Hoists Overhead | ½.—7⁄ ₁₆ ½.—1 1½s&Up | 6 × 19 Sor6 × 36 WS 6 × 36 WS 6 × 41 WS | RRL RRL RRL | IWRC IWRC IWRC | EIPS EIPS EIPS |
| Ladie Crane | ½-1 1¼ & Up | 6 × 36 WS 6 × 41 WS | RRL RAL | IWRC IWRC | EIP\$ EIP\$ |
| Dragline | | | | | |
| Hoist Line | Up To 1¼ 1% & Up | 6 x 25 FW or 8 x 25 6 x 41 WS or 8 x 25, 8 x 36 | RLL RLL | IWRC IWRC | EIP\$ EIPS |
| Drag Line | %,—1½ 1%,—3 3&∪p | 6 x 21 FW or 8 x 25 6 x 25 FW or 8 x 36 6 x 41 WS or 8 x 36 | ALL ALL RUL | IWRC IWRC IWRC | EIPS EIPS EIPS |
| Boom Hoist | % 8 Úp | 6 x 25 FW or 8 x 25 | ARL | IWRC | EIPS |
| Shovels | | | | | |
| Hoist Line | Up To 1½ 1¼ & Up | 6 x 25 FW or 8 x 25 6 x 41 WS or 8 x 25 | RLL RLL | IWRC IWRC | EIPS EIPS |
| Crowd & Retract | 3,8 Up | 6 x 41 WS or 8 x 25 | RLL BRL | IWRC IWRC | EIPS EIPS |
| Soom Hoist | ½—1¼ 1% & U p | 6 x 25 FW or 6 x 25 6 x 41 WS or 8 x 25 | RRL | IWAC | EIPS |
| Trip Rope | % ₈ —1 1‴& Up | 6 × 36 WS or 8 × 25 6 × 41 WS or 8 × 25 | RRL RRL | FIBER FIBER | IPS IPS |
| Logging Ropes | | | | | |
| Chokers | All | 6 × 26 WS or 6 × 25 FW | ARL | IWRC | EIPS |
| Winch Lines | All | 6 × 26 WS or 6 X 25 FW | AAL | IWAC | EIPS |
| Mining | | | | | |
| Slope Rope | All | 6 × 19 \$ or 6 × 21 FW | ALL | FIBER | IPS |
| Shaft Hoist Ropes | All | 6 × 19 S or 6 × 25 FW | RLL or BBL | FIBER | IPS |
| Slusher Rope | All | 3 × 19 S or 6 × 19 S | RRL | IWRC | IPS |
| Mining Machine Rope | All | 6 × 36 WS or 5 × 41 WS | BBL | IWRC | EIPS |

SUGGESTED WIRE ROPE FOR PARTICULAR USES

Preformed or Form-Set construction is used for all ropes shown.

| USE | SIZE (IN.) | CONSTRUCTION | LAY | CORE | GRADE |
|------------------------------|----------------------------------|--------------------------|-------------------|--------------|-------------|
| Marine Ropes | | | 00 | | EIPS |
| Towing Hawser | All | 6 × 41 WS | ARL | F.C. or IWRC | |
| Mooring Lines | All | 6 × 24 S or 6 × 41 WS | RAL | F.C. or IWAC | EIPS |
| Cargo Falls | All . | 6 × 36 WS | ARL | IWRC | EIPS |
| Oil Field | | | | | |
| Rotary Drill Lines | 34-12 | 6 x 19 S or 6 x 21 S | RRL | IWRC . | EIPS |
| Sand Lines | AH | 6 x 7 | RRL | POLY | IPS |
| Tubing Line | All | 6 x 26 WS or 19 x 7 RR | BBL or LBL | IWRC | EIPS |
| Cable Tool Line | All | 6 x 21 5 | LRL | POLY | IPS |
| Offshore | | | | | |
| Rotary Drill Lines | 1-1% | 6 x 19 S | RAL | IWRC | EIPS |
| Riser Tensioner Lines | 114-2 | 6 x 41 WS | RLL | IWAC | IPS |
| Guide Lines | 1/2-1 | 6 x 25FW | AAL | IWRC | IPS |
| Sand Lines | 1/2-2/8 | 6 x 7 | RAL | FIBER | IPS |
| Pendant Lines | 1 /2-3 | 6 x 25 FW or 6 x 37 WS | RBL | IWRC | EIPS |
| Crane-Main Hoist | %-2 | 6 x 25 FW or 6 x 37 WS | BBL | F.C. or IWRC | IPS or EIPS |
| Crane-Auxiliary Hoisi | × 2'4 | 19 x 7 AA or 36 x 7 BR | ARL | WRC | EIPS |
| Anchor Lines | 1 ³ / ₈ -6 | 6 x 37 WS through 6 x 91 | RRL | IWRC | EIPS |
| Heavy Lift Stings | 11/2-4 | • | RRL | IWRC | EIPS |
| | | 6 x 37 WS | | IWRC | EIPS |
| Cable Laid Heavy Lift Slings | 31/2-10 | 7 x 6 x 41 | ALL OF LLL | INTEG | LIFO |

Definition of Abbreviations

| Grade | Construction | Laγ | Core |
|---------------------------|-------------------------|-------------------------|-----------------------|
| IPS - Improved Plow Steel | FW - Filler Wre | RAL - Right Regular Lay | IWRC - Wire Rope Core |
| EIPS - Extra Improved | WS - Warrington Seale | RLL - A ghi Lang Lay | FC - Fiber Core |
| Plow Stee: | | | |
| GIPS - Galvanized | SFW - Seale Filler Wire | LRL - Lett Regular Lay | Fiber - Hemplor |
| mproved | R8 - Rotation Resistant | LLL - Left Lang Lay | PayCare |
| Plow Steel | W - Warungton | | Poty - Polypropy-ene |
| | S - Seale | | Core |



1

| Mode | Symptoms | Possible Causes |
|--------------------------------|--|--|
| Fatigue | Wire break is transverse—either straight across or Z shape. Broken ends will appear grainy. | Check for rope bent around too small a radius; vibra- tion or whipping; wobbly sheaves; rollers too small; reverse bends; bent shafts; tight grooves; corrosion; small drums & sheaves; incorrect rope construction; improper installation; poor end terminations. (In the absence of other modes of degradation, all rope will eventually fail in fatigue.) |
| Tension | Wire break reveals a mixture of cup and cone fracture and shear breaks. | Check for overloads; sticky, grabby clutches; jerky conditions; loose bearing on drum; fast starts, fast stops, broken sheave flange; wrong rope size & grade; poor end terminations. Check for too great a strain on rope after factors of degradation have weakened it. |
| Abrasion | Wire break mainly displays outer wires worn smooth to knife edge thinness. Wire broken by abrasion in combination with another factor will show a combination break. | Check for change in rope or sheave size; change in load; overburden change; frozen or stuck sheaves; soft rollers, sheaves or drums; excessive fleet angle; misalignment of sheaves; kinks; improperly attached fittings; grit & sand; objects imbedded in rope; improper grooving. |
| Abrasion plus Fatigue | Reduced cross-section is broken off square thereby producing a chisel shape. | A long term condition normal to the operating process. |
| Abrasion plus Tension | Reduced cross-section is necked down as in a cup and cone configuration. Tensile break produces a chisel shape. | A long term condition normal to the operating process. |
| Cut or Gouged or Rough Wire | Wire ends are pinched down, mashed and/or cut in a rough diagonal shear-like manner. | Check on all the above conditions for mechanical abuse, or either abnormal or accidental forces during installation. |
| Torsion or Twisting | Wire ends show evidence of twist and/or cork-screw effect. | Check on all the above conditions for mechanical abuse, or either abnormal or accidental forces during installation. |
| Mashing | Wires are flattened and spread at broken ends. | Check on all the above conditions for mechanical abuse, or either abnormal or accidental forces during installation. (This is a common occurrence on the drum.) |
| Corrosion | Wire surfaces are pitted with break showing evidence either of fatigue tension or abrasion. | Indicates improper lubrication or storage, or a corrosive environment. |

DIAGNOSTIC GUIDE TO COMMON WIRE ROPE DEGRADATION

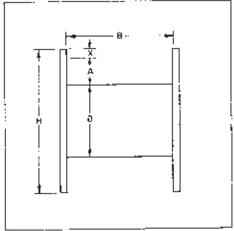
Figuring Reel Capacity

SHIPPING REEL CAPACITY

While it is virtually impossible to calculate the precise length of wire rope that can be spooled on a reel or drum, the following formula provides a sufficiently close approximation.

The formula* is: L == (A+D) * A * B * K

- where: I. = length of rope (ft)
 - A = depth of rope space on drum (inches)
 - B ... width of drum between
 - flanges (inches)
 - D 😔 drum barrel diameter (inches) K 📼 constant for given rope diameter
 - (see table below)
 - H ... diameter of reel flanges (inches)
 - x -- clearance



"K" FACTORS** (0.2618 ÷ rope diameter²)

| Diam. (inches) | к | Diam. (inches) | к | Diam. (inches) | к |
|-------------------|------|-------------------|-------|-------------------|--------|
| Vie | 49.8 | 1/2 | 0.925 | 13/6 | 0.127 |
| 2642 | 23.4 | 9/16 | 0.741 | ! 1/2 | 0.107 |
| Va. | 13.6 | 5/6 | 0.607 | 1 Ma | 0.0886 |
| n_{32} | 8.72 | 11_{16} | 0.506 | 3/4 | 0.0770 |
| N_{16}^{\prime} | 6.14 | 3/4 | 0.428 | 1 % | 0.0675 |
| 7/12 | 4.59 | 13/14 | 0.354 | 2 | 0.0597 |
| 1/4 | 3.29 | % | 0.308 | 2 1/8 | 0.0532 |
| Se | 2.21 | 1 | 0.239 | 21/4 | 0.0476 |
| 3/8 | 1.58 | 11/8 | 0.191 | 23/8 | 0.0419 |
| V_{16} | 1.19 | 11/4 | 0.152 | 21/2 | 0.0380 |

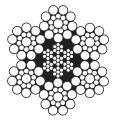
*This formula is based on uniform rope winding on the reel. It will not give correct results if the winding is non-uniform. The formula also assumes that there will be the same number of wraps of rope in each layer. While this is not strictly correct, there is no appreciable error in the result unless the traverse of the reel is quite small relative to the flange diameter ("H").

**The values given for "K" factors take normal rope oversize into account. Clearance ("x") should be about 2 inches unless rope-end fittings require more.



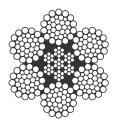
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Choosing the right rope for your application



IF YOU NEED ABRASION RESISTANCE

 > Abrasion resistance increases with fewer, larger outside wires per strand.



IF YOU NEED FATIGUE RESISTANCE

> Fatigue resistance increases with more, smaller outside wires per strand. ith each application, your choices of wire ropes can be many. How do you know which one works best for you? Ropes include a combination of properties that give them specific performance abilities. Before you choose, it pays to look closely at each rope's special properties.

NO SINGLE WIRE ROPE CAN DO IT ALL

All wire ropes feature design property tradeoffs. In most cases, a wire rope cannot increase both fatigue resistance and abrasion resistance. For example, when you increase fatigue resistance by selecting a rope with more wires, the rope will have less abrasion resistance because of its greater number of smaller outer wires.

When you need wire rope with greater abrasion resistance, one choice is a rope with fewer (and larger) outer wires to reduce the effects of surface wear. But that means the rope's fatigue resistance will decrease. That's why you need to choose your wire rope like you would any other machine. Very carefully. You must consider all operating conditions and rope properties.

THE BASIC PROPERTIES OF WIRE ROPE

How do you choose the wire rope that's best suited for your job? Following are the most common properties to be considered when selecting a rope for an application.

STRENGTH Wire rope strength is usually measured in tons of 2,000 lbs. In published material, wire rope strength is shown as minimum breaking force (MBF) or nominal (catalog) strength. These refer to calculated strength figures that have been accepted by the wire rope industry.

When placed under tension on a test device, a new rope should break at a figure equal to – or higher than – the minimum breaking force shown for that rope.

The values in this handbook apply to new, unused rope. A rope should never operate at – or near – the minimum breaking force. During its useful life, a rope loses strength gradually due to natural causes such as surface wear and metal fatigue.

FATIGUE RESISTANCE Fatigue resistance involves metal fatigue of the wires that make up a rope. To have high fatigue resistance, wires must be capable of bending repeatedly under stress – for example, a rope passing over a sheave.

Increased fatigue resistance is achieved in a rope design by using a large number of wires. It involves both the basic metallurgy and the diameters of wires.

In general, a rope made of many wires will have greater fatigue resistance than a same-size rope made of fewer, larger wires because smaller wires have greater ability to bend as the rope passes over sheaves or around drums. To reduce the effects of fatigue, ropes must never bend over sheaves or drums with a diameter so small as to bend wires excessively. There are precise recommendations for sheave and drum sizes to properly accommodate all sizes and types of ropes. Every rope is subject to metal fatigue from bending stress while in operation, and therefore the rope's strength gradually diminishes as the rope is used.

CRUSHING RESISTANCE Crushing is the effect of external pressure on a rope, which damages it by distorting the cross-section shape of the rope, its strands or core – or all three.

Crushing resistance therefore is a rope's ability to withstand or resist external forces, and is a term generally used to express comparison between ropes.

When a rope is damaged by crushing, the wires, strands and core are prevented from moving and adjusting normally during operation.

In general, IWRC ropes are more crush resistant than fiber core ropes. Regular lay ropes are more crush resistant than lang lay ropes. Six strand ropes have greater crush resistance than 8 strand ropes or 19 strand ropes. Flex-X[®] ropes are more crush resistant than standard round-strand ropes.

RESISTANCE TO METAL LOSS AND

DEFORMATION Metal loss refers to the actual wearing away of metal from the outer wires of a rope, and metal deformation is the changing of the shape of outer wires of a rope.

In general, resistance to metal loss by abrasion (usually called "abrasion resistance") refers to a rope's ability to withstand metal being worn away along its exterior. This reduces strength of a rope. The most common form of metal deformation is generally called "peening" – since outside wires of a peened rope appear to have been "hammered" along their exposed surface.

Peening usually occurs on drums, caused by rope-to-rope contact during spooling of the rope on the drum. It may also occur on sheaves.

Peening causes metal fatigue, which in turn may cause wire failure. The hammering – which causes the metal of the wire to flow into a new shape – realigns the grain structure of the metal, thereby affecting its fatigue resistance. The out-of-round shape also impairs wire movement when the rope bends.

$\ensuremath{\textbf{RESISTANCE TO ROTATION}}\xspace$ When

a load is placed on a rope, torque is created within the rope as wires and strands try to straighten out. This is normal and the rope is designed to operate with this load-induced torque. However, this torque can cause loads to rotate. Load-induced torque can be reduced by specially designed rotation resistant ropes.

In standard 6 and 8 strand ropes, the torques produced by the outer strands and the IWRC is in the same direction and add together. In rotation resistant ropes, the lay of the outer strands is in the opposite direction to the lay of the inner strands, thus the torques produced are in opposite directions and the torques subtract from each other.

Depending upon your application, other wire rope properties such as stability, bendability or reserve strength may need to be considered.



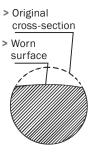
"SQUARED ENDS"

 Typical example of breaks due to fatigue.

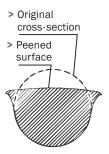


 * CRUSHING"
 > Typical example of external pressure on a wire rope.

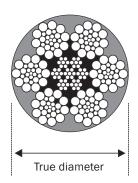
CROSS-SECTION OF A WORN WIRE

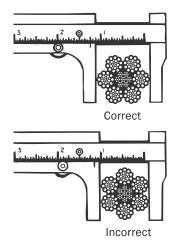


CROSS-SECTION OF A PEENED WIRE



How to measure wire rope diameter







he actual diameter of a wire rope is the diameter of a circumscribed circle that will enclose all the strands. It's the largest cross-sectional measurement as shown here. You should make the measurement carefully with calipers. The illustrations at left show the correct and incorrect methods of measuring wire ropes with even numbers of outer strands.

Metric conversion and equivalents

A s we move toward metric measurements, it will become increasingly necessary to convert English units into SI – International System of Units – (or metrics), and vice versa. The following table and conversion factors are included in this handbook to help you.

ROPE DIAMETER

For standard, general purpose wire ropes, in measuring diameter, the industry is leaning toward a "soft" conversion to metric during the transition period. For example, a 1" diameter rope converts to 25.4 mm in metrics. Using the soft conversion, this is changed to the whole metric size that most nearly parallels the 1" size range, or 26 mm. In sizes smaller than 5/8", the rope diameter is rounded to the nearest 0.5 mm.

STRENGTHS AND WEIGHTS

The following table gives the closest equivalent metric diameters for rope sizes up through 5 inches. Again, these metric sizes are based on the industry's "soft" conversion. Your application may have tighter tolerances that require a hard conversion. Therefore, the values in the table would not apply.

Since rope minimum breaking force and weight per unit of length vary for different types and grade of ropes, the following conversion factors are given to help you convert the figures you need:

> To convert rope weight in pounds per foot (lb/ft) to kilograms per meter (kg/m), multiply by 1.488.

Nominal wire rope diameter Inches Millimeters Inche

| Inches | Millimeters | Inches | Millimeters |
|--------|-------------|--------|-------------|
| 1/4 | 6.5 | 2 1/8 | 54 |
| 5/16 | 8 | 2 1/4 | 58 |
| 3/8 | 9.5 | 2 3/8 | 60 |
| 7/16 | 11.5 | 2 1/2 | 64 |
| 1/2 | 13 | 2 5/8 | 67 |
| 9/16 | 14.5 | 2 3/4 | 71 |
| 5/8 | 16 | 2 7/8 | 74 |
| 3/4 | 19 | 3 | 77 |
| 7/8 | 22 | 3 1/8 | 80 |
| 1 | 26 | 3 1/4 | 83 |
| 1 1/8 | 29 | 3 3/8 | 87 |
| 1 1/4 | 32 | 3 1/2 | 90 |
| 1 3/8 | 35 | 3 3/4 | 96 |
| 1 1/2 | 38 | 4 | 103 |
| 1 5/8 | 42 | 4 1/4 | 109 |
| 1 3/4 | 45 | 4 1/2 | 115 |
| 1 7/8 | 48 | 4 3/4 | 122 |
| 2 | 52 | 5 | 128 |

- > To convert rope minimum breaking force in tons (T) to kilonewtons (kN), multiply by 8.897; 1 lb equals 4.448 newtons (N).
- > To convert rope minimum breaking force in tons (T) to kilograms (kg), multiply by 907.2.

Note: The newton (a unit of force) is the correct unit for measurement of minimum breaking force in the SI system of units. We have included a conversion factor from tons to kilograms because a rope's minimum breaking force is often referred to in terms of kilograms (a unit of mass).



ALLOWABLE TOLERANCE IN WIRE ROPE DIAMETER Wire rope is normally made slightly

larger than its catalog (or nominal) size. The following chart lists the size tolerances of standard wire rope.

| Tolera | ance | Nominal Diameter |
|--------|-------------------|----------------------------|
| Under | Over | (mm) |
| | | |
| - 0 | + 8% | From 2 to <4 |
| - 0 | + 7% | From 4 to <6 |
| - 0 | + 6% | From 6 to < 8 |
| - 0 | + 5% | 8 and greater |
| | - 0 - 0 - 0 | -0 +8% -0 +7% -0 +6% |

Design factors

The design factor is defined as the ratio of the minimum breaking force of a wire rope to the total load it is expected to carry.

Use of design factors provides rope installations with reasonable assurance of adequate capacity for the work to be done throughout a rope's service life. Considerations in establishing design factors include the type of service, design of equipment and consequences of failure.

In most applications, the selection of a rope based on the proper design factor has been made by the equipment manufacturer. In an application where a different rope is to be used, or in a new application, check government and industry regulations for the required design factor. Different rope types on the same application may have different design factor requirements.

HOW TO USE DESIGN FACTORS

Standards and regulations require that design factors be applied to the rope's minimum breaking force to determine the maximum working load. To determine the maximum working load for which an operating rope may be used, divide the rope's minimum breaking force by the required design factor. This is the rope's maximum working load. There may be other limiting factors in an application that make the maximum load the equipment can handle less than the rope's maximum working load.*

Remember, an installation is only at the prescribed design factor when the rope is new. As a rope is used, it loses strength and literally is "used up."



* NOTE

> The rated capacity of a wire rope sling incorporates both a design factor and a splicing or attachment efficiency.



1

How to extend rope service life

w long will your rope last? There is not a simple answer but, rather, there are several factors involved, including:

- > The manner in which you install and "break in" your new rope.
- > The operating technique and work habits of the machine operators.
- > Physical maintenance of the rope throughout its service life.
- > Physical maintenance of the system in which your rope operates.

RECOMMENDED PRACTICES

We've outlined several recommended practices you may use to extend your rope's useful life. It's also important to note that all sections of this handbook, in some respect, also review ways to help you get greater useful life from your rope, and that's why you need to thoroughly understand all the material here.

INSTALL YOUR ROPE CORRECTLY The primary concern when installing a new rope is to not trap any twist in the rope system. Proper handling of the rope from the reel or coil to your equipment will help avoid this situation. Another important step on smooth faced drums is to spool with tensioned wraps tight and close together on the first layer. This layer forms the foundation for succeeding layers. Finally, spool the remaining rope on the drum with tension approximating 1% to 2% of the rope's minimum breaking force. **BREAK IN YOUR NEW ROPE PROPERLY** When you install a new operating rope, you should first run it for a brief period of time with no load. Then, for best results, run it under controlled loads and speeds to enable the wires and strands in the rope to adjust to themselves.

"CONSTRUCTIONAL" STRETCH

When first put into service, new ropes normally elongate while strands go through a process of seating with one another and with the rope core. This is called "constructional" stretch because it is inherent in the construction of the rope, and the amount of elongation may vary from one rope to another. For standard ropes, this stretch will be about 1/4% to 1% of the rope's length.

When constructional stretch needs to be minimized, ropes may be factory prestretched. Please specify when placing your order.

Another type of stretch, "elastic" stretch, results from recoverable elongation of the metal itself.

CUT OFF ENDS TO MOVE WEAR POINTS If you observe wear developing in a localized area, it may be beneficial to cut off short lengths of rope. This may require an original length slightly longer than you normally use. When severe abrasion or numerous fatigue breaks occur near one end or at any one concentrated area – such as drag ropes on draglines or closing lines in clamshell buckets, for example – the movement of this worn section can prolong rope life.



AVOID TWISTING OF NEW WIRE ROPE DURING INSTALLATION

> Handle the rope properly from the reel or coil to your equipment and, on smooth-faced drums, spool with wraps tight and close together on the first layer.



CLEAN AND LUBRICATE REGULARLY TO REDUCE WEAR

We lubricate our wire rope during manufacture so that the strands – as well as the individual wires in the strands – may move and adjust as the rope moves and bends. But no wire rope can be lubricated sufficiently during manufacture to last its entire life. That's why it's important to lubricate periodically throughout the life of the rope.

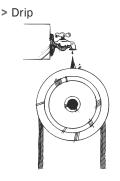
The surface of some ropes may become covered with dirt, rock dust or other material during their operation. This can prevent field-applied lubricants from properly penetrating into the rope, so it's a good practice to clean these ropes before you lubricate them.

The lubricant you apply should be lightbodied enough to penetrate to the rope's core. You can normally apply lubricant by using one of three methods: drip it on rope, spray it on or brush it on. In all cases, you should apply it at a place where the rope is bending, such as around a sheave. We recommend you apply it at the top of the bend because that's where the rope's strands are spread by bending and more easily penetrated. In addition, there are pressure lubricators available commercially. Your rope's service life will be directly proportional to the effectiveness of the method you use and the amount of lubricant that reaches the rope's working parts.

A proper lubricant must reduce friction, protect against corrosion and adhere to every wire. It should also be pliable and not crack or separate when cold – yet not drip when warm. Never apply heavy grease to the rope because it can trap excessive grit, which can damage the rope. Nor should you apply used "engine oil" because it contains materials that can damage the rope. For unusual conditions, you can specify special lubricants that we can apply at the factory.



THREE METHODS OF APPLYING LUBRICATION:

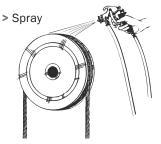


Wire breaks from vibration fatigue occur at end terminations, so short lengths cut off there with reattachment of the socket may prolong the rope's life. When broken wires are found, you should cut off sections of rope. In the case of a socket, you should cut off at least five or six feet. In the case of clips or clamps, you should cut off the entire length covered by them.

Where there is an equalizing sheave, such as that found in many overhead cranes, fatigue is localized at rope tangency points to the equalizing sheave. Rope life may be increased if you shift this point by cutting off a short length at the end of one of the drums. Be sure to make this cutoff before significant wear occurs at the equalizing sheave, and always do so at the same drum. You must maintain the required minimum number of dead wraps on the drum.

REVERSING ENDS

Frequently, the most severe deterioration occurs at a point too far from the end or is too long to allow the worn section to be cut off. In such cases, you may turn the rope end for end to bring a less worn section into the area where conditions are most damaging. This practice is beneficial for incline rope and draglines. The change must be made well before the wear reaches the removal criteria. When changing ends, be careful to avoid kinking or otherwise damaging the rope.







1

Wire rope wear, abuse - and removal criteria

Il wire ropes will wear out eventually and gradually lose work capability throughout their service life. That's why periodic inspections are critical. Applicable industry standards such as ASME B30.2 for overhead and gantry cranes or federal regulations such as OSHA refer to specific inspection criteria for varied applications.

INSPECT YOUR WIRE ROPE REGULARLY

> Inspection should be performed by a person with special training or practical experience. **THREE PURPOSES FOR INSPECTION** Regular inspection of wire rope and equipment should be performed for three good reasons:

- > It reveals the rope's condition and indicates the need for replacement.
- > It can indicate if you're using the most suitable type of rope.
- > It makes possible the discovery and correction of faults in equipment or operation that can cause costly accelerated rope wear.

HOW OFTEN

All wire ropes should be thoroughly inspected at regular intervals. The longer it has been in service or the more severe the service, the more thoroughly and frequently it should be inspected. Be sure to maintain records of each inspection.

APPOINT A QUALIFIED PERSON TO INSPECT

Inspections should be carried out by a person who has learned through special training or practical experience what to look for and who knows how to judge the importance of any abnormal conditions they may discover. It is the inspector's responsibility to obtain and follow the proper inspection criteria for each application inspected.

For information on inspection methods and techniques, our Techreport 107: Wire Rope Inspection, is available on the unionrope. com website for download. If you need further assistance with our ropes, contact our Product Engineering Department.



Rope Wear Deterioration and Abuse

 Mechanical damage due to noce movement over sharp edge projection whilst under load



- Localised wear due to abrasion on supporting structure. Vibration of robe between drum and jib head sheave.
- Narrow path of wear resulting in latigue fractures, caused by working in a grossly oversize groove, or over small support rollers.
- Two parallel paths of broken wires indicative of bending through an undersize groovel in the sheave.







 Severe wear, associated with high tread pressure. Protrusion of fibre mein core.



 Severe wear in Lang Lay, caused by abrasion of cross-over points on multi-layer colling application.

7.

Corrosion of severe degree caused by immersion of tope in chemically treated water





Severe wear, associated with both 🛛 🗃

www.industrialrope.com



Typical wire tractures as a result 8. of bend fatigue.



- 9. Wire fractures at the strand, or core interface, as distinct from forownil fractures, caused by failure of core support.
- Break up of IWRC resulting from 10. high stress application. Note nicking of wires in outer strands.
- 11. Strand core profusion as a result of torsional unbalance created by teropibal" application. (i.e. shock loading)
- Typical example of localised 12. wear and deformation created at a previously kinked portion of robo-







13. Multi strand rope, bird-caged due to forsional unbalance. Typical of pulle up seen at anonorage end of multi-fall crane application



Protusion of IWRC resulting from 14. shock loading.

1

WHAT TO LOOK FOR





Here's what happens when a **wire breaks** under tensile load exceeding its strength. It's typically recognized by the "cup and cone" appearance at the point of failure. The necking down of the wire at the point of failure to form the cup and cone indicates failure has occurred while the wire retained its ductility.



This is a wire with a distinct **fatigue break**. It's recognized by the square end perpendicular to the wire. This break was produced by a torsion machine that's used to measure the ductility. This break is similar to wire failures in the field caused by fatigue.



This is an example of **fatigue failure** of a wire rope subjected to heavy loads over small sheaves. The breaks in the valleys of the strands are caused by "strand nicking." There may be crown breaks, too.



Here you see a single strand removed from a wire rope subjected to **strand nicking.** This condition is a result of adjacent strands rubbing against one another. While this is normal in a rope's operation, the nicking can be accentuated by high loads, small sheaves or loss of core support. The ultimate result will be individual wire breaks in the valleys of the strands.



Shown here is a wire rope that has been subjected to repeated bending over sheaves under normal loads. This results in **fatigue breaks** in individual wires – these breaks are square and usually in the crown of the strands.

Wire rope wear, abuse - and removal criteria

1

TYPICAL EVIDENCE OF WEAR AND ABUSE



"birdcage" is caused by sudden release of tension and the resulting rebound of rope. These strands and wires will not be returned to their original positions. The rope should be replaced immediately.



This shows a typical failure of a rotary drill line with a poor cutoff practice. These wires have been subjected to continued **peening**, causing fatigue type failures. A predetermined, regularly scheduled cutoff practice can help eliminate this type of problem.



This is **localized wear** over an equalized sheave. The danger here is that it's invisible during the rope's operation, and that's why you need to inspect this portion of an operating rope regularly. The rope should be pulled off the sheave during inspection and bent to check for broken wires.



This is a wire rope with a **high strand** – a condition in which one or more strands are worn before adjoining strands. This is caused by improper socketing or seizing, kinks or doglegs. At top, you see a closeup of the concentration of wear. At bottom, you see how it recurs every sixth strand in a 6 strand rope.



A **kinked wire rope** is shown here. It's caused by pulling down a loop in a slack line during handling, installation or operation. Note the distortion of the strands and individual wires. This rope must be replaced.

> Here's a wire rope that has jumped a sheave. The rope "curled" as it went over the edge of the sheave. When you study the wires, you'll see two types of breaks here: tensile "cup and cone" breaks and shear breaks that appear to have been cut on an angle.



Drum crushing is caused by small drums, high loads and multiple winding conditions.



KNOW WHEN TO REMOVE YOUR WIRE ROPE

> The chart on the facing page offers a guide for removal, based on the number of wires involved.

REMOVAL CRITERIA

A major portion of any wire rope inspection is the detection of broken wires. The number and type of broken wires are an indication of the rope's general condition and a benchmark for its replacement.

Frequent inspections and written records help determine the rate at which wires are breaking. Replace the rope when the values given in the table below are reached.

Valley wire breaks – where the wire fractures between strands or a broken

wire protrudes between strands – are treated differently than those that occur on the outer surface of the rope. When there is more than one valley break, replace the rope.

Broken wire removal criteria cited in many standards and specifications, like those listed below, apply to wire ropes operating on steel sheaves and drums. For wire ropes operating on sheaves and drums made with material other than steel, please contact the sheave, drum or equipment manufacturer or a qualified person for proper broken wire removal criteria.

WHEN TO REPLACE WIRE ROPE - BASED ON NUMBER OF BROKEN WIRES

| | | | # OF BROKEN WIRES IN RUNNING ROPES | | | # OF BROKEN WIRES IN STANDING ROPES | |
|--------------------|---------------------------------------|--|---|---------------|----------------------|--|-------------------|
| Standard | Equipment | R оре Туре | In one rope lay | In one strand | At end connection | In one rope lay | At end connection |
| ASME B30.2 | Overhead and Gantry Cranes | All | 12** | 4 | 2 | N/A | N/A |
| ASME B30.3 | Construction Tower Cranes | Standard | 12** | 4 | 3 | Not specified | 3 |
| | | Rotation-resistant | 2 randomly distributed broken wires in 6 rope diameters or 4 randomly distributed broken wires in 30 rope diameters ** | N/A | 3 | N/A | 3 |
| ASME B30.4 | Portal and Pedestal Cranes | Standard | 6** | 3 | 2 | 3 | 2 |
| | | Rotation-resistant | 2 randomly distributed broken wires in 6 rope diameters or 4 randomly distributed broken wires in 30 rope diameters ** | N/A | 2 | N/A | N/A |
| ASME B30.5 | Mobile and Locomotive Cranes | Standard | 6** | 3 | Not specified | 3 | 2 |
| | | Rotation-resistant | 2 randomly distributed broken wires in 6 rope diameters or 4 randomly distributed broken wires in 30 rope diameters ** | N/A | Not specified | N/A | N/A |
| ASME B30.6 | Derricks | Standard [†] | 6** | 3 | Not specified | 3 | 2 |
| ASME B30.7 Winches | Standard | 6 randomly distributed broken wires in 6 rope diameters or 3 broken wires in one strand in 6 rope diameters** | N/A | Not specified | N/A | N/A | |
| | | Rotation-resistant | 2 randomly distributed broken wires in 6 rope diameters or 4 randomly distributed broken wires in 30 rope diameters ** | N/A | Not specified | N/A | N/A |
| ASME B30.8 | Floating Cranes and Floating Derricks | Standard | 6 randomly distributed broken wires in 6 rope diameters or 3 broken wires in one strand in 6 rope diameters** | N/A | Not specified | 3 | 2 |
| | | Rotation-resistant | 2 randomly distributed broken wires in 6 rope diameters or 4 randomly distributed broken wires in 30 rope diameters ** | N/A | Not specified | N/A | N/A |
| ASME B30.16 | Overhead Hoists (Underhung) | Standard | 6 randomly distributed broken wires in 6 rope diameters or 3 randomly distributed broken wires in 6 rope diameters** | N/A | 2 | N/A | N/A |
| | | Rotation-resistant | 2 randomly distributed broken wires in 6 rope diameters or 4 randomly distributed broken wires in 30 rope diameters ** | N/A | 2 | N/A | N/A |
| ASME B30.29 | Self-Erecting Tower Cranes | Standard | 6** | 3 | 3 | 3 | 2 |
| | | Rotation-resistant | 2 randomly distributed broken wires in 6 rope diameters or 4 randomly distributed broken wires in 30 rope diameters ** | N/A | 3 | N/A | N/A |
| ANSI A10.4 | Personnel Hoists | All | 6** | 3 | Not specified | Not specified | Not specified |
| ANSI A10.5 | Material Hoists | All | 6** | 3 | | 2** | 1 |

+ Contact technical service engineering regarding rotation-resistant ropes



How to unreel, uncoil and store wire rope

CORRECT WAYS TO UNREEL AND UNCOIL WIRE ROPE





THE RIGHT WAY TO UNREEL AND UNCOIL A WIRE ROPE

There is always a danger of kinking a wire rope if you improperly unreel or uncoil it. You should mount a reel on jacks or a turntable so that it will revolve as you pull the rope off. Apply sufficient tension by means of a board acting as a brake against the reel flange to keep slack from accumulating. With a coil, stand it on edge and roll it in a straight line away from the free end. You may also place a coil on a revolving stand and pull the rope as you would from a reel on a turntable.

THE THREE STAGES OF KINKING



1. The start: A rope should never be allowed to accumulate twist as shown here because it will loop and eventually form a kink. If this loop is removed before being pulled down tight, you can normally avoid the kink.



The kink: By now, the damage is done, and the rope must not be used.



3. The result: Even if the wires do not appear badly damaged, the rope is still damaged and must be replaced.

If a twist develops, remove the twist from the rope before a kink can form.

HOW TO STORE WIRE ROPE PROPERLY

We recommend you store your wire rope under a roof or a weatherproof covering so that moisture cannot reach it. Similarly, you must avoid acid fumes or any other corrosive atmosphere – including ocean spray – in order to protect the rope from rust. If you're storing a reel for a lengthy period, you may want to order your rope with a protective wrap. If not, at least coat the outer layers of rope with a good rope lubricant.

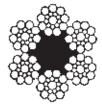
If you ever take a rope out of service and want to store it for future use, you should place it on a reel after you've thoroughly cleaned and relubricated it. Give the same storage considerations to your used rope as you would your new rope.

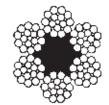
Be sure to keep your wire rope in storage away from steam or hot water pipes, heated air ducts or any other source of heat that can thin out lubricant and cause it to drain out of your rope.



Used by permission from WireCo WorldGroup

Wire Rope







6 x 21 FILLER WIRE

6 x 25 FILLER WIRE

6 x 26

WARRINGTON-SEALE

NOMINAL STRENGTHS OF WIRE ROPE

6 x 19 Classification/Bright (Uncoated), or Drawn-Galvanized, Fiber Core, IPS

| Nom. Diam. | Nominal Strength | Approx. Mass |
|------------|------------------------|--------------|
| | Improved Plow Steel | |
| inches | tons | lb/ft |
| 1/4 | 2.74 | 0.11 |
| 5/16 | 4.26 | 0.16 |
| 3/6 | 6.10 | 0.24 |
| 7/16 | 8.27 | 0.32 |
| 1/2 | 10.70 | 0.42 |
| 1/16 | 13.50 | 0.53 |
| 5/8 | 16.70 | 0.66 |
| 3/4 | 23.80 | 0.95 |
| ⅔ | 32.20 | 1.29 |
| 1 | 41.80 | 1.68 |
| 1 ⅓ | 52.60 | 2.13 |
| 1 ⅓ | 64.60 | 2.63 |
| 1 % | 77.70 | 3.18 |
| 1 ½ | 92.00 | 3.78 |
| 1 % | 107.00 | 4.44 |
| 1 % | 124.00 | 5.15 |
| 1 % | 141.00 | 5.91 |
| 2 | 160.00 | 6.72 |

6 x 19 Classification/Bright (Uncoated), or Drawn-Galvanized, IWRC, EIPS

| Nom. Diam. | Nominai Strength | Approx. Mass |
|------------|------------------------------|--------------|
| | Extra Improved Plow Steel | |
| inches | tons | lb/ft |
| 1/4 | 3.40 | 0.12 |
| 5/16 | 5.27 | 0.18 |
| 3/8 | 7.55 | 0.26 |
| 7/16 | 10.20 | 0.35 |
| 1/2 | 13.30 | 0.46 |
| 1%6 | 16.80 | 0.59 |
| 5%8 | 20.60 | 0.72 |
| 3/4 | 29.40 | 1.04 |
| % | 39.80 | 1.42 |
| 1 | 51.70 | 1.85 |
| 1 % | 65.00 | 2.34 |
| 1 % | 79.90 | 2.89 |
| 1 % | 96.00 | 3.50 |
| 1 ½ | 114.00 | 4.16 |
| 1 % | 132.00 | 4.88 |
| 1 % | 153.00 | 5.67 |
| 1 % | 174.00 | 6.50 |
| 2 | 198.00 | 7.39 |
| 2 % | 221.00 | 8.35 |
| 2 % | 247.00 | 9.36 |
| 2 % | 274.00 | 10.40 |
| 2 ½ | 302.00 | 11.60 |

(Meets or exceeds federal specification RR-W-410 [latest revision].)

*To convert to Kilonewtons (kN), multiply tons (nominal breaking strength) by 8.896; 1 lb = 4.448 newtons (N).

For Hot-Dipped Galvanized Strengths, Deduct 10%.



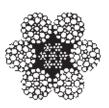
Wire Rope



6 x 31 WARRINGTON SEALE



6 × 36 WARRINGTON SEALE



6 x 41 SFW SEALE FILLER WIRE

6 x 49 SWS

5 X 49 SWS SEALE WARRINGTON SEALE

NOMINAL STRENGTHS OF WIRE ROPE

6 x 37 Classification/Bright (Uncoated), or Drawn-Galvanized, Fiber Core, IPS

| Nom. Diam. | Nominal Strength | Approx. Mass |
|------------|------------------------|--------------|
| | Improved Plow Steel | |
| inches | tons | lb/ft |
| 1/4 | 2.74 | 0.11 |
| 5/16 | 4.26 | 0.16 |
| 3/8 | 6.10 | 0.24 |
| 7/16 | 8.27 | 0.32 |
| 1/2 | 10.70 | 0.42 |
| 9/16 | 13.50 | 0.53 |
| 5/8 | 16.70 | 0.66 |
| 3/4 | 23.80 | 0.95 |
| % | 32.20 | 1.29 |
| 1 | 41.80 | 1.68 |
| 1 % | 52.60 | 2.13 |
| 1 % | 64.60 | 2.63 |
| 1 % | 77.70 | 3.18 |
| 1 ½ | 92.00 | 3.78 |
| 1 % | 107.00 | 4.44 |
| 1 % | 124.00 | 5.15 |
| 1 ¾ | 141.00 | 5.91 |
| 2 | 160.00 | 6.72 |

6 x 37 Classification/Bright (Uncoated), or Drawn-Galvanized, IWRC, EIPS

| Nom. Diam. | Nominal Strength | Approx. Mass |
|------------|------------------------------|--------------|
| | Extra Improved Plow Steel | |
| inches | tons | lb/ft |
| 1/4 | 3.40 | 0.12 |
| 5/16 | 5.27 | 0.18 |
| 3/8 | 7.55 | 0.26 |
| 7/16 | 10.20 | 0.35 |
| 1/2 | 13.30 | 0.46 |
| 9/16 | 16.80 | 0.59 |
| 5/8 | 20.60 | 0.72 |
| 3/4 | 29.40 | 1.04 |
| 7% | 39.80 | 1.42 |
| 1 | 51.70 | 1.85 |
| 1 % | 65.00 | 2.34 |
| 1 % | 79.90 | 2.89 |
| 1 % | 96.00 | 3.50 |
| 1 ½ | 114.00 | 4.16 |
| 1 % | 132.00 | 4.88 |
| 1 % | 153.00 | 5.67 |
| 1 % | 174.00 | 6.50 |
| 2 | 198.00 | 7.39 |
| 2 % | 221.00 | 8.35 |
| 2 % | 247.00 | 9.36 |
| 2 % | 274.00 | 10.40 |
| 2 ½ | 302.00 | 11.60 |
| 2 % | 331.00 | 12.80 |
| 2 % | 361.00 | 14.00 |
| 2 % | 392.00 | 15.30 |
| 3 | 425.00 | 16.60 |
| 3 % | 458.00 | 18.00 |
| 3 ½ | 492.00 | 19.50 |
| 3 % | 529.00 | 21.00 |
| 3 ½ | 564.00 | 22.70 |

Meets or exceeds federal specification RR-W-410 (latest revision).

*To convert to Kilonewtons (kN), multiply tons (nominal breaking strength) by 8.896; 1 lb = 4.448 newtons (N). For Hot-Dipped Galvanized Strengths, Deduct 10%. 1

Wire Rope

Specifications per API 9A



6 x 37 Classification Wire Rope Bright (Uncoated) or Drawn-Galvanized Wire, Independent Wire Rope Core (IWRC)

| | | | N | ominal Strength | า | | |
|--------------------------|-----------------|---------------------------|------|-------------------------------------|------|--|------|
| Nominal Diameter | Approx. Mass | Improved Plow Steel (IPS) | | Extra Improved Plow Steel (EIPS) | | Extra Extra Improved Plow Steel (EEIPS) | |
| In. | lb/ft | lb | kN | lb. | kN | lb | kN |
| 1/2 | 0.46 | 23,000 | 102 | 26,600 | 118 | 29,200 | 130 |
| ^{9/} 16 | 0.59 | 29,000 | 129 | 33,600 | 149 | 37,000 | 165 |
| 5/ ₈ | 0.72 | 35,800 | 159 | 41,200 | 183 | 45,400 | 202 |
| 3/4 | 1.04 | 51,200 | 228 | 58,800 | 262 | 64,800 | 288 |
| 7/8 | 1.42 | 69,200 | 308 | 79,600 | 354 | 87,600 | 389 |
| 1 | 1.85 | 89,800 | 399 | 103,400 | 460 | 113,800 | 506 |
| 1 ¹ /8 | 2.34 | 113,000 | 503 | 130,000 | 578 | 143,000 | 636 |
| 1 ^{1/} 4 | 2.89 | 138,800 | 617 | 159,800 | 711 | 175,800 | 782 |
| 1 ^{3/} 8 | 3.50 | 167,000 | 743 | 192,000 | 854 | 212,000 | 943 |
| 1 ¹ /2 | 4.16 | 197,800 | 880 | 228,000 | 1010 | 250,000 | 1112 |
| 1 ^{5/} 8 | 4.88 | 230,000 | 1020 | 264,000 | 1170 | 292,000 | 1300 |
| 1 ^{3/} 4 | 5.67 | 266,000 | 1180 | 306,000 | 1360 | 338,000 | 1500 |
| 17/8 | 6.50 | 304,000 | 1350 | 348,000 | 1550 | 384,000 | 1710 |
| 2 | 7.39 | 344,000 | 1530 | 396,000 | 1760 | 434,000 | 1930 |
| 21/8 | 8.35 | 384,000 | 1710 | 442,000 | 1970 | 488,000 | 2170 |
| 2 ^{1/} 4 | 9.36 | 430,000 | 1910 | 494,000 | 2200 | 544,000 | 2420 |
| 2 ^{3/} 8 | 10.4 | 478,000 | 2130 | 548,000 | 2440 | 604,000 | 2690 |
| 2 ^{1/} 2 | 11.6 | 524,000 | 2330 | 604,000 | 2690 | 664,000 | 2950 |
| 2 ^{5/8} | 12.8 | 576,000 | 2560 | 658,000 | 2930 | 728,000 | 3240 |
| 2 ^{3/} 4 | 14.0 | 628,000 | 2790 | 736,000 | 3270 | 794,000 | 3530 |
| 27/8 | 15.3 | 682,000 | 3030 | 796,000 | 3540 | 864,000 | 3840 |
| 3 | 16.6 | 740,000 | 3290 | 856,000 | 3810 | 936,000 | 4160 |
| 3 ^{1/8} | 18.0 | 798,000 | 3550 | 920,000 | 4090 | 1,010,000 | 4490 |
| 31/4 | 19.5 | 858,000 | 3820 | 984,000 | 4380 | 1,086,000 | 4830 |
| 3 ^{1/8} | 21.0 | 918,000 | 4080 | 1,074,000 | 4780 | 1,164,000 | 5180 |
| 3 ^{1/2} | 22.7 | 982,000 | 4370 | 1,144,000 | 5090 | 1,242,000 | 5520 |
| 3 ^{3/} 4 | 26.0 | 1,114,000 | 4960 | 1,290,000 | 5740 | 1,410,000 | 6270 |
| 4 | 29.6 | 1,254,000 | 5580 | 1,466,000 | 6520 | 1,586,000 | 7050 |

EEEIPS & HIGHER GRADES - AVAILABLE ON SPECIAL ORDER.

INDUSTRIAL WIRE ROPE SUPPL









1

ROTATION RESISTANT TYPES

NON-ROTATING

SPIN RESISTANT NOMINAL STRENGTHS OF WIRE ROPE

ROTATION RESISTANT NOMINAL STRENGTHS OF WIRE ROPE

19 x 7 Classification/Bright (Uncoated) or

Drawn-Galvanized Wire Strand Core

TORQUE BALANCED NOMINAL STRENGTHS OF WIRE ROPE

| Nominal | Nominal | Approx. |
|----------|----------|---------|
| Diameter | Strength | Mass |
| 1/4 | 2.77 | 0.113 |
| 5/16 | 4.30 | 0.175 |
| 3/8 | 6.15 | 0.25 |
| 7/16 | 8.33 | 0.35 |
| 1/2 | 10.8 | 0.45 |
| %6 | 13.6 | 0.58 |
| 5/8 | 16.8 | 0.71 |
| 3/4 | 24.0 | 1.02 |
| 7∕6 | 32.5 | 1.39 |
| 1 | 42.2 | 1.82 |
| 1 1∕6 | 53.1 | 2.30 |
| 1 1∕4 | 65.1 | 2.84 |

3 Strand Classification/Bright (Uncoated) or Drawn-Galvanized Wire Strand Core

| Size Inches | Construction | Mass Wt/Lb/Ft | Min Break Strength Lb. |
|---------------------------|--|------------------------------|---|
| 1/2 9/16 5/8 3/4 | 3 x 41 3 x 41 3 x 41 3 x 41 3 x 41 | .417 .517 .631 .903 | 25,700 32,500 40,300 57,800 |
| 7% 1 1 1% 1 14 | 3 x 46 3 x 46 3 x 46 3 x 46 3 x 46 | 1.27 1.64 2.07 2.60 | 83,200 100,000 124,000 158,000 |
| 1 % 1 ½ | 3 x 46 3 x 46 | 3.10 3.69 | 188,000 222,000 |

8 x 19 Classification/Bright (Uncoated), or Drawn-Galvanized, IWRC (EIPS)

| Nominal Diam. (in.) | Nominal Strength | Approx. Mass |
|------------------------|---------------------|-----------------|
| 1/2 | 11.6 | .47 |
| ⁹ ⁄16 | 14.7 | .60 |
| 5/8 | 18.1 | .73 |
| 3⁄4 | 25.9 | 1.06 |
| 7/8 | 35.0 | 1.44 |
| 1 | 45.5 | 1.88 |

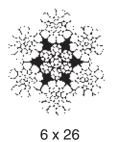
Meets or exceeds API-9A and federal specification RR-W-410 (latest revision) where applicable. *To convert to Kilonewtons (kN), multiply tons (nominal breaking strength) by 8.896; 1 lb = 4.448 newtons (N). For Hot-Dipped Galvanized Strengths, Deduct 10%.

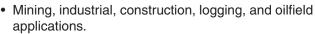
THE GIVEN STRENGTHS FOR 8 X 19 SPIN RESISTANT, 19 X 7 ROTATION RESISTANT WIRE ROPE ARE APPLICABLE ONLY WHEN A TEST IS CONDUCTED ON A NEW ROPE FIXED AT BOTH ENDS When the rope is in use and one end is free to rotate, the nominal strength is reduced.





Wire Rope COMPACTED STRAND



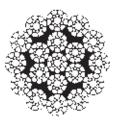


- Stability, strength, fatigue resistance, and abrasion resistance.
- All popular sizes.
- Longer service life.

Extra value means different things in different applications. **CompactGold™** is one of the most versatile new rope constructions to emerge from our new products effort. In applications where increased strength, stability, and abrasion resistance are beneficial, **CompactGold™** is a natural and can result in longer service life. From boom hoist ropes and drag ropes in mining applications, to sawmill carriage ropes and mainline ropes in logging, its versatility and extra value make a difference.



WIRE ROPE



19 X 19 & 19 X 7 Rotation Resistant

- As single-part hoist lines and wherever spooling problems, drum crushing, bird caging, block twisting and fast line speeds are likely to be encountered.
- At the design and specification stage, ideal when machinery space and weight savings are important.
- Greater fatigue resistance cuts rope expense in applications where fatigue is the primary cause for removal.
- Ideally suited to rugged applications.

This rotation resistant, higher strength rope provides extra value in both original equipment designs and replacement applications. **CompactGold™** provides higher strength in a smaller diameter, and resistance to drum crushing.

| Nominal | Bri | 0 | **19 X 7 and 19 X 19 Compacted Strand Rotation Resistant | | | |
|----------------------------|------------------------------|------------------------------|---|------------------------------|------------------------------|--|
| Diameter In. | Nominal Strength Tons | Approx. Mass | Construction | Nominal Strength Tons | Approx. Mass | |
| 1/4 5/16 3/8 7/16 | 3.91 6.06 8.80 11.9 | .131 .218 .32 .41 | 19 x 19 19 x 19 19 x 19 19 x 19 19 x 19 | 3.74 5.8 8.3 11.2 | .127 .212 .31 .40 | |
| 1/2 9/16 5/8 3/4 | 15.3 19.2 22.7 32.4 | .55 .70 .86 1.25 | 19 x 19 19 x 19 19 x 19 19 x 19 19 x 19 | 14.6 18.5 22.7 32.4 | .54 .69 .85 1.25 | |
| 7∕8 1 1 1∕8 1 1⁄4 | 43.8 56.9 71.5 87.9 | 1.67 2.18 2.71 3.45 | 19 x 19 19 x 19 19 x 19 19 x 19 19 x 19 | 43.8 56.9 71.5 87.9 | 1.68 2.17 2.75 3.45 | |
| 1 % 1 ½ | 106 125 | 4.25 5.01 | 19 x 19 19 x 19 | 106 125 | 4.33 5.11 | |

ALSO AVAILABLE

Compacted Strand Wire Ropes from Various

Manufacturer's Overseas.

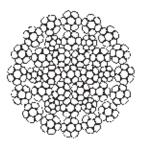
All meet the requirements as specified in API 9A and federal specification RR-W-410 (latest revision) when applicable.

* Availiable in U.S.A. and import.

** The given strengths for 19 strand rotation resistant wire ropes are applicable only when a test is conduced on a new rope fixed at both ends. When the rope is in use and one end is free to rotate, the nominal strength is reduced. **INDUSTRIAL WIRE ROPE SUPPI**

Metric Crane Ropes

- * Available in inches and millimeters
- * Super Rotation Resistance
- * Can be used with in-line Swivels
- * Up to 2160 Grade Tensile
- * Drawn Galvanized available, for added corrosion protection, at same strength.
- * Regular or Compacted Strand.



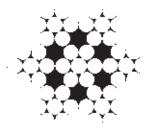
Compacted Strand 35 X 7 Class

2160 GRADE

| Nominal Diameter mm-1/+4% | Mass (Ibs/ft) | Estimated Break Strength (lbs) |
|---------------------------------|------------------|--------------------------------------|
| 10 | 0.312 | 31,580 |
| 12 | 0.450 | 30,570 |
| 13 | 0.538 | 36,460 |
| 14 | 0.622 | 42 260 |
| 15 | 0.712 | 49,000 |
| 16 | 0.800 | 54,400 |
| 17 | 0.907 | 61,370 |
| 18 | 1.011 | 70,140 |
| 19 | 1.136 | 78,230 |
| 20 | 1.297 | 87,450 |
| 21 | 1.431 | 96 660 |
| 22 | 1.556 | 105,210 |
| 23 | 1.699 | 114,650 |
| 24 | 1.848 | 123,950 |
| 25 | 2.009 | 134,430 |
| 1" | 2.100 | 147,700 |
| 26 | 2.157 | 144,320 |
| 28 | 2.553 | 169,730 |
| 29 | 2.688 | 177,590 |
| 30 | 2.923 | 192,210 |
| 32 | 3.313 | 217,160 |
| 34 | 3.736 | 245,040 |
| 36 | 4.193 | 273,140 |

Estimated breaking strength shown. **Call for available breaking strength.** ALL SPECIFICATIONS HEREIN ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Aircraft Cables

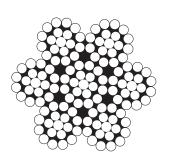


7 X 7

GALVANIZED

| Diameter in Inches | Construction | Breaking Strength (lbs) | Approx. Weight per Foot (lbs) | |
|-------------------------------------|--|---|---------------------------------------|--|
| 1/16 3/32 1/8 1/8 5/32 | 7x7 7x7 7x7 7x7 7x19 7x7 | 480 920 1,700 2,000 2,600 | .0075 .016 .028 .029 .043 | |
| 5/32 3/16 3/16 7/32 1/4 | 7x19 7x7 7x19 7x19 7x19 7x7 | 2,800 3,700 4,200 5,600 6,100 | .045 .062 .065 .086 .106 | |
| 1/4 5/16 3/8 | 7x19 7x19 7x19 | 7,000 9,800 14,400 | .11 .173 .243 | |

STAINLESS STEEL (T304)



7 X 19

| Diameter | Construction | Breaking Strength (lbs) | Approx. Weight per Foot (lbs) | | |
|-----------|--------------|----------------------------|----------------------------------|--|--|
| in Inches | | Strength (ibs) | per root (ibs) | | |
| 1/16 | 7x7 | 480 | .007 | | |
| 3/32 | 7x7 | 920 | .016 | | |
| 1/8 | 7x7 | 1,760 | .028 | | |
| 1/6 | 7x19 | 1,760 | .029 | | |
| 3/16 | 7x7 | 3,700 | .062 | | |
| 3⁄16 | 7x19 | 3,700 | .065 | | |
| 1/4 | 7x19 | 6,400 | .11 | | |
| 5/16 | 7x19 | 9,000 | .173 | | |
| 3/8 | 7x19 | 12,000 | .243 | | |

STAINLESS STEEL (T316)

| Diameter in Inches | Construction | Breaking Strength (lbs) | Approx. Weight per Foot (lbs) | | |
|-----------------------|--------------|----------------------------|----------------------------------|--|--|
| 1/16 | 7x7 | 480 | .007 | | |
| 1/8 | 7x19 | 1670 | .029 | | |
| 3/16 | 7x19 | 3565 | .065 | | |
| 1/4 | 7x19 | 5875 | .11 | | |
| 5/16 | 7x19 | 8825 | .173 | | |
| 3/8 | 7x19 | 11,760 | .243 | | |

All meet or exceed federal specification RR-W-410 (latest revision). Uncoated cable meets dimensional and strength requirements of MIL-W-83420E.

GALVANIZED STEEL STRAND* - 1 X 7

ASTM A475, CLASS A COATING, LEFT REGULAR LAY, EXTRA HIGH STRENGTH**

| Diameter Inches | Nominal Breaking Strength (Tons) | Approx. Weight Per Foot (lbs) |
|--------------------|---|--|
| ³ ⁄16 | 1.99 | .073 |
| 1⁄4 | 3.32 | .12 |
| 5⁄16 | 5.6 | .225 |
| 3/8 | 7.7 | .273 |
| 7⁄16 | 10.7 | .399 |
| 1/2 | 13.45 | .517 |
| 9⁄16 | 19.5 | .637 |
| 5/8 | 21.2 | .796 |



GALVANIZED STEEL STRAND* - 1 X 19

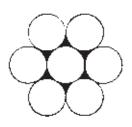
ASTM A475, CLASS A COATING, LEFT REGULAR LAY, EXTRA HIGH STRENGTH

| Diameter Inches | Nominal Breaking Strength (Tons) | Approx. Weight Per Foot (lbs) | | |
|--------------------|---|--|--|--|
| ³ /4 | 29.15 | 1.16 | | |
| 7/8 | 39.85 | 1.58 | | |
| 1 | 52.25 | 2.07 | | |

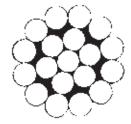
MADE IN U.S.A.

*MEETS OR EXCEEDS FEDERAL SPECIFICATIONS RR-W-410 (latest revision)

ASTM A586 & A603 ALSO AVAILABLE BRIDGE AND STRAND SOCKETS ALSO AVAILABLE STAINLESS STEEL STRAND ALSO AVAILABLE



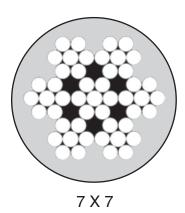
1x7 Strand



1x19 Strand

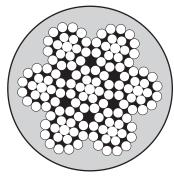
| Diameter (In) | Coated To (In) | To per foot | | Construction |
|------------------------------|---|-------------------------------|-----------------------------------|--------------------------------------|
| 1/16 1/16 3/32 3/32 | 332 1/8 1/8 3/16 | .0093 .012 .018 .026 | 480 480 920 920 | 7x7 7x7 7x7 7x7 7x7 |
| 1/8 3/32 1/8 3/16 | 3/16 1/8 3/16 1/4 | .035 .019 .036 .077 | 1,700 1,000 2,000 4,200 | 7x7 7x19 7x19 7X19 7X19 |
| 3/16 1/4 5/16 3/8 | 1/4 5/16 .12 5/16 3/8 .20 | | 4,200 7,000 9,800 14,400 | 7X19 7X19 7X19 7X19 7X19 |

GALVANIZED, CLEAR VINYL COATED - 7 X 7 & 7 X 19



STAINLESS STEEL, CLEAR VINYL COATED - 7 X 19

| D | iameter (In) | er Coated Weigh To per foo (In) (lbs) | | Breaking Strength (lbs) | Construction | | |
|---|-----------------|---|------|-------------------------------|--------------|--|--|
| | 1/8 | ³ /16 | .036 | 1,760 | 7x19 | | |
| | 3/16 | 1/4 | .077 | 3,700 | 7x19 | | |
| | 1/4 | 5/16 | .128 | 6,400 | 7x19 | | |
| | 5/16 | 3/8 | .20 | 9,000 | 7x19 | | |
| | 3/8 | 7/16 | .27 | 12,000 | 7x19 | | |



7 X 19

MEETS OR EXCEEDS FEDERAL SPECIFICATION RR-W-410 (latest revision)

Wire Rope Fittings

1

MINDUSTRIAL WIRE ROPE SUPPLY



G-450 Red U-Bolt[®] Clip



- Each base has a Product Identification Code (PIC) for material traceability, the name Crosby or "CG," and a size forged into it.
- Based on the catalog breaking strength of wire rope, Crosby wire rope clips have an efficiency rating
 of 80% for 1/8" through 7/8" sizes, and 90% for sizes 1" through 3-1/2".
- Entire clip is galvanized to resist corrosive and rusting action.
- Sizes 1/8" through 2-1/2" and 3" have forged bases.
- All clips are individually bagged or tagged with proper application instructions and warning information.
- Clip sizes up through 1-1/2" have rolled threads.
- Meets or exceeds all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, these wire rope clips meet other critical performance requirements, including fatigue life, impact properties, and material traceability not addressed by ASME B30.26.
- Look for the Red U-Bolt®, your assurance of genuine Crosby Clips.

| E F G | G- 7/ 9/ |
|-------------|----------------|
| C D | * |
| н — | * |

| G-450 | Croch | | | | | | | | | | SE | CTION 17 |
|------------|----------|-----------|-----------------|-------------------|------|-------|------|------|--------------|------|------|----------|
| G-450 | CIUSD | y Clips | | | | | | | | | | |
| Rope | Size | | Std. Package | Weight Per 100 | | | | | nsions n) | | | |
| (in) | (mm) | Stock No. | Qty. | (lb) | Α | В | С | D | E | F | G | н |
| 1/8 | 3-4* | 1010015 | 100 | 6 | .22 | .72 | .44 | .47 | .37 | .38 | .81 | .99 |
| 3/16* | 5* | 1010033 | 100 | 10 | .25 | .97 | .56 | .59 | .50 | .44 | .94 | 1.18 |
| 1/4 | 6-7 | 1010051 | 100 | 19 | .31 | 1.03 | .50 | .75 | .66 | .56 | 1.19 | 1.43 |
| 5/16 | 8 | 1010079 | 100 | 28 | .38 | 1.38 | .75 | .88 | .73 | .69 | 1.31 | 1.66 |
| 3/8 | 9-10 | 1010097 | 100 | 48 | .44 | 1.50 | .75 | 1.00 | .91 | .75 | 1.63 | 1.94 |
| 7/16 - 1/2 | 11-13 | 1010131 | 50 | 80 | .50 | 1.88 | 1.00 | 1.19 | 1.13 | .88 | 1.91 | 2.28 |
| 9/16 - 5/8 | 14-16 | 1010177 | 50 | 110 | .56 | 2.25 | 1.25 | 1.31 | 1.34 | .94 | 2.06 | 2.50 |
| 3/4 | 18-20 | 1010195 | 25 | 142 | .62 | 2.75 | 1.44 | 1.50 | 1.39 | 1.06 | 2.25 | 2.84 |
| 7/8 | 22 | 1010211 | 25 | 212 | .75 | 3.12 | 1.62 | 1.75 | 1.58 | 1.25 | 2.44 | 3.16 |
| 1 | 24-26 | 1010239 | 10 | 252 | .75 | 3.50 | 1.81 | 1.88 | 1.77 | 1.25 | 2.63 | 3.47 |
| 1-1/8 | 28-30 | 1010257 | 10 | 283 | .75 | 3.88 | 2.00 | 2.00 | 1.91 | 1.25 | 2.81 | 3.59 |
| 1-1/4 | 32-34 | 1010275 | 10 | 438 | .88 | 4.44 | 2.22 | 2.34 | 2.17 | 1.44 | 3.13 | 4.13 |
| 1-3/8 | 36 | 1010293 | 10 | 442 | .88 | 4.44 | 2.22 | 2.34 | 2.31 | 1.44 | 3.13 | 4.19 |
| 1-1/2 | 38 | 1010319 | 10 | 544 | .88 | 4.94 | 2.38 | 2.59 | 2.44 | 1.44 | 3.41 | 4.44 |
| 1-5/8 | 41-42 | 1010337 | Bulk | 704 | 1.00 | 5.31 | 2.62 | 2.75 | 2.66 | 1.63 | 3.63 | 4.75 |
| 1-3/4 | 44-46 | 1010355 | Bulk | 934 | 1.13 | 5.75 | 2.75 | 3.06 | 2.92 | 1.81 | 3.81 | 5.24 |
| 2 | 48-52 | 1010373 | Bulk | 1300 | 1.25 | 6.44 | 3.00 | 3.38 | 3.03 | 2.00 | 4.44 | 5.88 |
| 2-1/4 | 56-58 | 1010391 | Bulk | 1600 | 1.25 | 7.13 | 3.19 | 3.88 | 3.19 | 2.00 | 4.56 | 6.38 |
| 2-1/2 | 62-65 | 1010417 | Bulk | 1900 | 1.25 | 7.69 | 3.44 | 4.13 | 3.69 | 2.00 | 4.69 | 6.63 |
| ** 2-3/4 | ** 68-72 | 1010435 | Bulk | 2300 | 1.25 | 8.31 | 3.56 | 4.38 | 4.88 | 2.00 | 5.00 | 6.88 |
| 3 | 75-78 | 1010453 | Bulk | 3100 | 1.50 | 9.19 | 3.88 | 4.75 | 4.44 | 2.38 | 5.31 | 7.61 |
| ** 3-1/2 | ** 85-90 | 1010426 | Bulk | 4000 | 1.50 | 10.75 | 4.50 | 5.50 | 6.00 | 2.38 | 6.19 | 8.38 |

*Electro-plated U-Bolt and Nuts. ** 2-3/4" and 3-1/2" base is made of cast steel.

2

APPLICATION AND WARNING INFORMATION SECTION 17

Dimensions

(in)

Е

38

.38

.44

.50

.63

.75

.75

.75

.88

.88

1.00

G

1.41

1.50

1.84

2.21

2.72

2.94

3.31

3.72

4.22

4.25

5.56

Ν

1 4 4

1.54

1.78

2.15

2.57

2.67

2.86

3.06

3.44

3.56

4.12



G-429 Fist Grip®, Clip 3/16" - 5/8"



3/16" - 5/8"

WIRE ROPE END FITTINGS

G-429

Fist Grip®, Clip

3/4" - 1-1/2"

3/4" - 1-1/2"

D

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- Entire clip is galvanized to resist corrosive and rusting action.
- Based on the catalog breaking strength of wire rope, Crosby wire rope clips have an efficiency rating of 80% for 3/16" through 7/8" sizes, and 90% for sizes 1" through 1-1/2".
- Bolts are an integral part of the saddle. Nuts can be installed in such a way as to enable the operator to swing the wrench in a full arc for fast installation.
- All sizes have forged steel saddles.
- All Clips are individually bagged or tagged with proper application instructions and . warning information.
- Meets or exceeds all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, these wire rope clips meet other critical performance requirements, including fatigue life, impact properties, and material traceability not addressed by ASME B30.26.

Std.

Package

Qtv.

100

100

50

50

50

25

25

10

10

10

Weight

Per 100

(lb)

23

28

40

62

103

175

225

300

400

400

700

С

.40

.47

.51

.59

.72

.86

97

1.13

1.28

1.34

1.56

D

94

1.06

1.06

1.25

1.50

1.81

2.12

2.25

2.38

2.50

3.00

· Assembled with standard heavy hex nuts.

Stock No.

1010471

1010499

1010514

1010532

1010550

1010612

1010630

1010658

G-429 Fist Grip® Clips С (in)* 3/16 - 1/4 5/16 3/8 7/16 - 1/2 9/16 - 5/8 G 1-1/8 1-1/4 1-3/8 - 1-1/2

G-460

Soft Eye

Bundle Clip

14-16 3/4 18-20 1010578 7/8 22 1010596 24-26

28-30

32-34

(mm)

5-7

8

10

11-13

Rope Size

1

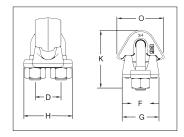
Bulk 36-40 1010676 * Sizes through 5/8" incorporate new style design.



- · Forged bases and bundle clip adapters. (For use without Thimble)
 - All bundle clips are individually bagged or tagged with proper application instructions and warning information.
 - Bundle Clip Adapter for Soft Eye (G4460) and for Thimble • Eye (G4461) kits available.
 - Meets or exceeds all requirements of ASME B30.26 • including manufacturing ID and size requirements. Importantly, these wire rope bundle clips meet material traceability not addressed by ASME B30.26.







G-460 Soft Eye / G-461 Thimble Eye Bundle Clip

| Rope Size | | | | | | Dimensions (in) | | | | | |
|-----------|-------|----------------------|--------------|------|------|-----------------|------|------|------|--------------|--|
| (in) | (mm) | Bundle Clip Style | Stock No. | D | F | G | н | к | 0 | each (lb) | |
| 3/4 | 18-20 | G460 | 1010509 | 1.50 | 1.06 | 2.25 | 2.84 | 3.50 | 4.13 | 2.5 | |
| 3/4 | 18-20 | G461 | 1010619 | 1.50 | 1.06 | 2.25 | 2.84 | 3.50 | 2.85 | 2.5 | |

E

G

D-

www.industrialrope.com

35

2

INDUSTRIAL WIRE ROPE SUPPLY

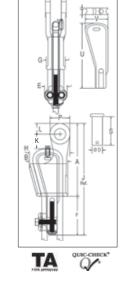
S-421T



- Wedge socket terminations have an efficiency rating of 80% based on the catalog strength of XXIP wire rope.
- Meets or exceeds all requirements of ASME B30.26, including identification, ductility, design factor, proof load, and temperature requirements. Importantly, these sockets meet other critical performance requirements, including fatigue life, impact properties and material traceability, not addressed by ASME B30.26.
- Type Approval certification in accordance with ABS rules for conditions of classification, Part 1 2017 Steel Vessels and ABS guide for certification of lifting appliances 2017 available. Certificates available when requested at time of order and may include additional charges.
- Basket is cast steel and individually magnetic particle inspected.
- Pin diameter and jaw opening allows wedge and socket to be used in conjunction with closed swage and spelter sockets.
- Secures the tail or dead end of the wire rope to the wedge, thus eliminates loss or punch out of the wedge.
- Eliminates the need for an extra piece of rope and is easily installed.
- The Terminator wedge eliminates the potential breaking off of the tail due to fatigue.
- The tail, which is secured by the base of the clip and the wedge, is left undeformed.
- Incorporates Crosby's patented QUIC-CHECK[®] 'Go' and 'No-Go' feature cast into the wedge. The proper size rope is determined when the following criteria are met:
 - 1) The wire rope should pass through the 'Go' hole in the wedge.
 - 2) The wire rope should NOT pass through the 'No-Go' hole in the wedge.
- Utilizes standard Crosby Red U-Bolt[®] wire rope clip.
- The 3/8 through 1-1/8 standard S-421 wedge socket can be retrofitted with the new style Terminator wedge.
- Available with bolt, nut, and cotter pin: S-421TB.
- US patent 5,553,360, Canada patent 2,217,004, and foreign equivalents.
- Meets the performance requirements of EN 13411-6.
- Available with API-2C certification upon request.
- Wedge sockets meet the performance requirements of Federal specification RR-S-550F, Type C, except those provisions required of the contractor.
- The S-423T Super Terminator wedge is designed to be assembled only into the Crosby S-421T
 Terminator socket body. Important: The S-423TW for sizes 5/8" through 1-1/8" (14mm through 28mm)
 will fit respective size standard Crosby S-421T basket. The 1-1/4" (30-32mm) S-423TW will only fit the
 Crosby S-421T 1-1/4" basket marked with Terminator.

S-421T WEDGE SOCKETS (Assembly includes socket, wedge, pin and wire rope clip)

| Wire Ro | ope Dia. | | | | | | | | | | | | | | | | | |
|---|--|---|---|--|--|--|---|--|--|--|--|--|--|--|--|---|--|--|
| (in) | | | Stock No. | | Weight Each (Ib) | | Wedge Only | | | Weight Each (Ib) | | | Standard Bolt, Nut & Cotter Assy | | | Weight Each (Ib) | | |
| 3/8 | 9-10 | 1035000 | | 3.30 | | | 1035555 | | | .50 | | | 2038971 | | | .38 | | |
| 1/2 | 11-13 | 1035009 | | 6.10 | | | 1035564 | | | 1.05 | | | 2038972 | | | .69 | | |
| 5/8 | 14-16 | 1035018 | | 10.5 | | 1035573 | | | | 1.79 | | | 2038974 | | | 1.15 | | |
| 3/4 | 18-19 | 1035027 | | 16.4 | | 1035582 | | | | 2.60 | | | 2038976 | | | 1.91 | | |
| 7/8 | 20-22 | 1035036 | | 24.8 | | 1035591 | | | | 4.00 | | | 2038978 | | | 3.23 | | |
| 1 | 24-26 | 1035045 | | 35.5 | | | 1035600 | | | 5.37 | | | 2038980 | | | 5.40 | | |
| 1-1/8 | 28 | 1035054 | | 48.8 | | | 1035609 | | | 7.30 | | | 2038982 | | | 7.50 | | |
| 1-1/4 | 30-32 | 1035063 | | 71.5 | | | 1035618 | | | 10.60 | | 2038984 | | | | 10.34 | | |
| Wire Rope Dia. | | | | | Dimensions (in) | | | | | | | | | | | | | |
| | | | | | | | | | | Dimen | 510115 (| | | | | | | |
| (in) | (mm) | S-421T Stock No. | S-421TB Stock No. | А | в | C +/- .09 | D | G | н | J* | K* | L | Р | R | s | т | U | v |
| | | | | A 5.69 | B 2.72 | C +/- .09 .81 | D .81 | G 1.38 | Н 3.06 | | | | P 1.56 | R .44 | S 2.13 | T .44 | U 1.25 | V 1.38 |
| (in) | (mm) | Stock No. | Stock No. | | | .09 | | | | J* | К* | L | - | | - | - | - | |
| (in) 3/8 | (mm) 9-10 | Stock No. 1035000 | Stock No. 1035203 | 5.69 | 2.72 | .09 .81 | .81 | 1.38 | 3.06 | J * 7.80 | K * 1.88 | L .88 | 1.56 | .44 | 2.13 | .44 | 1.25 | 1.38 |
| (in) 3/8 1/2 | (mm) 9-10 11-13 | Stock No. 1035000 1035009 | Stock No. 1035203 1035212 | 5.69 6.88 | 2.72 3.47 | .09 .81 1.00 | .81 1.00 | 1.38 1.62 | 3.06 3.76 | J* 7.80 8.91 | K * 1.88 1.26 | L .88 1.06 | 1.56 1.94 | .44 .50 | 2.13 2.56 | .44 .53 | 1.25 1.75 | 1.38 1.88 |
| (in) 3/8 1/2 5/8 | (mm) 9-10 11-13 14-16 | Stock No. 1035000 1035009 1035018 | Stock No. 1035203 1035212 1035221 | 5.69 6.88 8.25 | 2.72 3.47 4.30 | .09 .81 1.00 1.25 | .81 1.00 1.19 | 1.38 1.62 2.12 | 3.06 3.76 4.47 | J* 7.80 8.91 10.75 | K * 1.88 1.26 1.99 | L .88 1.06 1.22 | 1.56 1.94 2.25 | .44 .50 .56 | 2.13 2.56 3.25 | .44 .53 .69 | 1.25 1.75 2.00 | 1.38 1.88 2.19 |
| (in) 3/8 1/2 5/8 3/4 7/8 1 | (mm) 9-10 11-13 14-16 18-19 20-22 24-26 | Stock No. 1035000 1035009 1035018 1035027 | Stock No. 1035203 1035212 1035221 1035230 | 5.69 6.88 8.25 9.88 | 2.72 3.47 4.30 5.12 | .09 .81 1.00 1.25 1.50 | .81 1.00 1.19 1.38 | 1.38 1.62 2.12 2.44 | 3.06 3.76 4.47 5.28 | J* 7.80 8.91 10.75 12.36 | K * 1.88 1.26 1.99 2.41 | L .88 1.06 1.22 1.40 | 1.56 1.94 2.25 2.63 | .44 .50 .56 .66 | 2.13 2.56 3.25 3.63 | .44 .53 .69 .78 | 1.25 1.75 2.00 2.34 | 1.38 1.88 2.19 2.56 |
| (in) 3/8 1/2 5/8 3/4 7/8 1 1-1/8 | (mm) 9-10 11-13 14-16 18-19 20-22 | Stock No. 1035000 1035009 1035018 1035027 1035036 | Stock No. 1035203 1035212 1035221 1035230 1035249 | 5.69 6.88 8.25 9.88 11.25 | 2.72 3.47 4.30 5.12 5.85 | .09 .81 1.00 1.25 1.50 1.75 | .81 1.00 1.19 1.38 1.63 2.00 2.25 | 1.38 1.62 2.12 2.44 2.69 | 3.06 3.76 4.47 5.28 6.16 | J* 7.80 8.91 10.75 12.36 14.37 | K * 1.88 1.26 1.99 2.41 2.48 | L .88 1.06 1.22 1.40 1.67 2.00 2.25 | 1.56 1.94 2.25 2.63 3.13 3.75 4.25 | .44 .50 .56 .66 .75 | 2.13 2.56 3.25 3.63 4.31 | .44 .53 .69 .78 .88 | 1.25 1.75 2.00 2.34 2.69 2.88 3.25 | 1.38 1.88 2.19 2.56 2.94 |
| (in) 3/8 1/2 5/8 3/4 7/8 1 | (mm) 9-10 11-13 14-16 18-19 20-22 24-26 28 30-32 | Stock No. 1035000 1035009 1035018 1035027 1035036 1035045 1035054 1035063 | Stock No. 1035203 1035212 1035221 1035230 1035249 1035258 1035267 1035276 | 5.69 6.88 8.25 9.88 11.25 12.81 14.38 16.34 | 2.72 3.47 4.30 5.12 5.85 6.32 6.92 8.73 | .09 .81 1.00 1.25 1.50 1.75 2.00 | .81 1.00 1.19 1.38 1.63 2.00 | 1.38 1.62 2.12 2.44 2.69 2.94 | 3.06 3.76 4.47 5.28 6.16 6.96 | J * 7.80 8.91 10.75 12.36 14.37 16.29 | K * 1.88 1.26 1.99 2.41 2.48 3.04 | L .88 1.06 1.22 1.40 1.67 2.00 | 1.56 1.94 2.25 2.63 3.13 3.75 | .44 .50 .56 .66 .75 .88 | 2.13 2.56 3.25 3.63 4.31 4.70 | .44 .53 .69 .78 .88 1.03 | 1.25 1.75 2.00 2.34 2.69 2.88 | 1.38 1.88 2.19 2.56 2.94 3.28 |

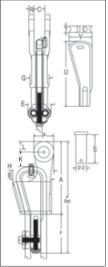






WIRE ROPE END FITTINGS

US-422T



LIC 400T Littlite We days Coste

- Wedge socket terminations have an efficiency rating of 80% based on the catalog strength of XXIP wire rope.
- Meets or exceeds all requirements of ASME B30.26, including identification, ductility, design factor, proof load, and temperature requirements. Importantly, these sockets meet other critical performance requirements, including fatigue life, impact properties, and material traceability not addressed by ASME B30.26.
- Basket is cast steel and individually magnetic particle inspected.
 - Wedges are color coded for easy identification.
 - Blue largest wire line size for socket.
 - Black mid size wire line for socket.
 - 7/16" on US4
 - 9/16" on US5
 - Orange smallest wire line size for socket.
- By simply changing out the wedge, each socket can be utilized for various wire line sizes (ensure correct wedge is used for wire rope size).
- Cast into each wedge is the model number of the socket and the wire line size for which the wedge is to be used.
- Load pin is forged and headed on one end.
- US-422T wedge sockets contain a hammer pad (lip) to assist in proper securement of termination.
- Incorporates Crosby's patented QUIC-CHECK[®] 'Go' and 'No-Go' feature cast into the wedge. The proper size rope is determined when the following criteria are met:
- 1) The wire rope should pass through the 'Go' hole in the wedge.
- 2) The wire rope should NOT pass through the 'No-Go' hole in the wedge.
- Available with API-2C certification upon request.
- UWO-422T Wedges are to be used only with the US-422T Wedge Socket Assemblies.

| | | Rope ize | | | | Wedge Only | | | | | | | Din | nensio (in) | ons | | | | | | |
|--------------|-------|-------------|--------------|------------------------|----------------------------|------------------------|-------|------|-----------------|------|------|------|-------|----------------|------|------|------|------|------|------|------|
| Model No. | (in) | (mm) | Stock No. | Weight Each (lb) | Wedge Only Stock No. | Weight Each (lb) | А | в | C +/- .09 | D | G | н | J | к | L | Р | R | s | т | U | v |
| US4T | 3/8 | 10 | 1044300 | 4.6 | 1047310 | 0.7 | 6.81 | 3.55 | 1.00 | 1.00 | 1.63 | 2.81 | 8.43 | 1.38 | 1.06 | 1.94 | .50 | 2.53 | .44 | 1.91 | 2.14 |
| US4T | 7/16 | 11 | 1044309 | 4.6 | 1047301 | 1.0 | 6.81 | 3.55 | 1.00 | 1.00 | 1.63 | 2.81 | 8.73 | 1.08 | 1.06 | 1.94 | .50 | 2.53 | .53 | 1.76 | 1.88 |
| US4T | 1/2 | 13 | 1044318 | 4.6 | 1047329 | 1.0 | 6.81 | 3.55 | 1.00 | 1.00 | 1.63 | 2.81 | 8.73 | 1.02 | 1.06 | 1.94 | .50 | 2.53 | .53 | 1.76 | 1.88 |
| US5T | 1/2 | 13 | 1044327 | 8.5 | 1047338 | 2.0 | 9.19 | 4.23 | 1.41 | 1.25 | 2.13 | 3.31 | 11.19 | 1.84 | 1.50 | 3.00 | .63 | 3.25 | .75 | 1.92 | 2.16 |
| US5T | 9/16 | 14 | 1044336 | 8.5 | 1047347 | 1.8 | 9.19 | 4.23 | 1.41 | 1.25 | 2.13 | 3.31 | 11.47 | 2.40 | 1.50 | 3.00 | .63 | 3.25 | .69 | 2.00 | 2.18 |
| US5T | 5/8 | 16 | 1044345 | 8.5 | 1047356 | 1.8 | 9.19 | 4.23 | 1.41 | 1.25 | 2.13 | 3.31 | 11.47 | 2.34 | 1.50 | 3.00 | .63 | 3.25 | .69 | 2.00 | 2.18 |
| US6T | 5/8 | 16 | 1044354 | 9.4 | 1047365 | 3.0 | 9.45 | 4.70 | 1.50 | 1.25 | 2.24 | 3.63 | 11.91 | 2.48 | 1.50 | 3.00 | .56 | 3.25 | .88 | 2.38 | 2.75 |
| US6T | 3/4 | 19 | 1044363 | 9.4 | 1047374 | 2.5 | 9.45 | 4.70 | 1.50 | 1.25 | 2.24 | 3.63 | 11.81 | 2.03 | 1.50 | 3.00 | .56 | 3.25 | .88 | 2.13 | 2.63 |
| US8AT | 5/8 | 16 | 1044372 | 17.5 | 1047383 | 3.2 | 10.59 | 5.68 | 1.81 | 1.63 | 2.38 | 5.53 | 13.19 | 1.91 | 1.53 | 2.88 | .75 | 4.13 | .69 | 3.26 | 3.50 |
| US8AT | 3/4 | 19 | 1044381 | 17.5 | 1047392 | 3.4 | 10.59 | 5.68 | 1.81 | 1.63 | 2.38 | 5.84 | 13.54 | 2.38 | 1.53 | 2.88 | .75 | 4.13 | .78 | 3.12 | 3.38 |
| US7* | 7/8 | 22 | 1038580 | 16.5 | 1046674 | 2.6 | 11.26 | 5.11 | 1.31 | 1.25 | 2.69 | — | — | 2.56 | 1.63 | 3.26 | .66 | 3.25 | 1.06 | 2.12 | 2.56 |
| US7* | 1 | 25 | 1038589 | 16.5 | 1046683 | 2.6 | 11.26 | 5.11 | 1.31 | 1.25 | 2.69 | — | — | 2.56 | 1.63 | 3.26 | .66 | 3.25 | 1.06 | 1.88 | 2.38 |
| US8T | 7/8 | 22 | 1044404 | 20.8 | 1047425 | 5.5 | 12.77 | 6.96 | 1.81 | 1.63 | 3.06 | 7.20 | 16.02 | 2.87 | 1.65 | 3.12 | .75 | 4.13 | .88 | 3.88 | 4.18 |
| US8T | 1 | 25 | 1044417 | 20.8 | 1047431 | 6.1 | 12.77 | 6.96 | 1.81 | 1.63 | 3.06 | 7.31 | 16.41 | 2.32 | 1.65 | 3.12 | .75 | 4.13 | 1.03 | 3.76 | 4.06 |
| US10T | 1-1/8 | 28 | 1044426 | 46.5 | 1047440 | 9.7 | 15.94 | 8.62 | 1.81 | 1.63 | 3.57 | 9.15 | 19.72 | 3.26 | 2.19 | 4.38 | .75 | 4.13 | 1.09 | 4.76 | 5.06 |
| US10T | 1-1/4 | 32 | 1044435 | 46.5 | 1047459 | 10.4 | 15.94 | 8.62 | 1.81 | 1.63 | 3.57 | 9.39 | 20.22 | 2.83 | 2.19 | 4.38 | .75 | 4.13 | 1.19 | 4.62 | 4.94 |
| US11T | 1-1/8 | 28 | 1044444 | 60.6 | 1047468 | 12.5 | 16.34 | 8.73 | 2.62 | 2.50 | 3.56 | 9.15 | 19.97 | 3.37 | 2.34 | 4.50 | 1.06 | 6.13 | 1.09 | 4.76 | 5.06 |
| US11T | 1-1/4 | 32 | 1044453 | 64.9 | 1047477 | 15.0 | 16.34 | 8.73 | 2.62 | 2.50 | 3.56 | 9.39 | 20.48 | 2.94 | 2.34 | 4.50 | 1.06 | 6.13 | 1.19 | 4.62 | 4.94 |

* Non-Terminator Style.

requirem ASME B3 Basket is Wedges Blue Black 7/16 9/16 0ran By simply correct w Cast into to be use

APPLICATION AND WARNING INFORMATION SECTION 17

Crosby

S-423T



- strength of the various ropes. Design eliminates the difficulty of properly seating the wedge with high performance wire rope into a ٠ wedge socket termination.
 - Proper application of the Super Terminator eliminates the 'first load' requirement of conventional wedge socket terminations.

The 423T wedge socket terminations have a minimum efficiency rating on most high-performance, high-strength, compacted-strand, rotation-resistant wire ropes of 80% based on the catalog breaking

- S-423TW Wedge Kit can be retrofitted onto existing Crosby S-421T Terminator Wedge Sockets.
- Wedge and accessories provided with a zinc finish.
- Meets the performance requirements of EN13411-6.
- Meets or exceeds all requirements of ASME B30.26, including identification, ductility, design factor, proof load, and temperature requirements. Importantly, these sockets meet other critical performance requirements, including fatigue life, impact properties, and material traceability not addressed by ASME B30.26.
- Basket is cast steel and individually magnetic particle inspected.
- Pin diameter and jaw opening allows wedge and socket to be used in conjunction with closed swage and spelter sockets.
- Secures the tail or dead end of the wire rope to the wedge, thus eliminates loss or punch out of the . wedge.
- Eliminates the need for an extra piece of rope, and is easily installed.
- The Terminator wedge eliminates the potential breaking off of the tail due to fatigue.
- The tail, which is secured by the base of the clip and the tension device, is left undeformed.
- Available with bolt, nut, and cotter pin: S-423TB.
- Available with API-2C certification upon request.
- Wedge sockets meet the performance requirements of Federal Specification RR-S-550F, Type C, except those provisions required of the contractor.
- The S-423T Super Terminator wedge is designed to be assembled only into the Crosby S-421T Terminator socket body. Important: The S-423TW for sizes 5/8" through 1-1/8" will fit respective size standard Crosby S-421T basket. The 1-1/4" S-423TW will only fit the Crosby S-421T 1-1/4" basket marked with Terminator.

Assembly includes socket, wedge, pin, wire rope clip, tensioner, bolts and secondary retention wire.

S-423T WEDGE SOCKETS

| Wire R Dia | | | S-423T ly with Rou d Cotter Pir | | | S-423TB nbly with Bolt and Cotter Pin | | - | 423TW** edge Kit | |
|---------------|--------|-----------|---------------------------------------|-----------------|-----------|---|--------|-----------|---------------------|------|
| | | S-423T | Weigh | 123T nt Each | S-423TB | | t Each | S-423TW | S-42 Weight | Each |
| (in) | (mm) | Stock No. | (lb) | (kg) | Stock No. | (lb) | (kg) | Stock No. | (lb) | (kg) |
| 5/8 | 14- 16 | 1035123 | 12.7 | 5.8 | 1035218 | 13.1 | 5.9 | 1034018 | 5.2 | 2.4 |
| 3/4 | 18-19 | 1035132 | 19.4 | 8.8 | 1035227 | 19.1 | 8.7 | 1034027 | 7.2 | 3.3 |
| 7/8 | 20-22 | 1035141 | 28.8 | 13.1 | 1035236 | 27.8 | 12.6 | 1034036 | 10.3 | 4.7 |
| 1 | 24-26 | 1035150 | 39.2 | 17.8 | 1035245 | 37.3 | 16.9 | 1034045 | 11.9 | 5.4 |
| 1-1/8 | 28 | 1035169 | 57.1 | 25.9 | 1035254 | 57.9 | 25.9 | 1034054 | 19.9 | 9.0 |
| 1-1/4 | 30-32 | 1035178 | 88.6 | 40.2 | 1035272 | 88.1 | 39.9 | 1034063 | 33.8 | 15.3 |

**Kit contains wedge, wire rope clip and bolts, tensioner bolt, and secondary retention wire.

| Dia. | | S-423T Stock | | | | | | | | Dir | nensioı (in) | าร | | | | | | | |
|-------|--------|-----------------|-------|------|------|------|------|------|------|------|-----------------|------|------|------|------|------|------|-------|------|
| (in) | (mm) | No. | Α | в | С | D | Е | F | G | н | J* | К | L | Р | R | S | Т | U | ٧ |
| 5/8 | 14- 16 | 1035123 | 8.25 | 4.50 | 1.25 | 1.19 | 3.00 | 4.06 | 2.13 | 4.61 | 12.31 | 1.09 | 1.22 | 2.25 | .56 | 3.25 | .75 | 6.88 | 2.60 |
| 3/4 | 18-19 | 1035132 | 9.88 | 5.20 | 1.50 | 1.38 | 3.25 | 4.81 | 2.44 | 5.37 | 14.69 | 1.50 | 1.40 | 2.62 | .66 | 3.63 | .88 | 7.65 | 3.02 |
| 7/8 | 20-22 | 1035141 | 11.25 | 5.88 | 1.75 | 1.63 | 3.81 | 5.73 | 2.69 | 6.16 | 16.98 | 1.59 | 1.67 | 3.13 | .75 | 4.31 | 1.00 | 9.47 | 3.47 |
| 1 | 24-26 | 1035150 | 12.81 | 6.56 | 2.00 | 2.00 | 3.81 | 5.73 | 2.94 | 7.05 | 18.54 | 1.44 | 2.01 | 3.75 | .88 | 4.70 | 1.13 | 10.41 | 3.82 |
| 1-1/8 | 28 | 1035169 | 14.38 | 6.94 | 2.25 | 2.25 | 4.00 | 6.85 | 3.38 | 7.81 | 21.23 | 1.12 | 2.26 | 4.25 | 1.00 | 5.44 | 1.25 | 11.83 | 4.22 |
| 1-1/4 | 30-32 | 1035178 | 16.34 | 8.63 | 2.62 | 2.50 | 4.50 | 7.76 | 3.57 | 9.38 | 24.10 | 1.50 | 2.34 | 4.50 | 1.06 | 6.62 | 1.38 | 13.87 | 5.82 |

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APPLICATION AND WARNING INF

SECTION 17

Crosby® Round Pin Shackles

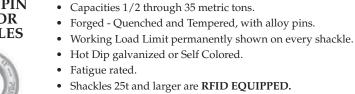
QUIC-CHECK





G-213 / S-213

G-213 Round pin anchor shackles meet the performance requirements of Federal Specification RR-C-271F Type IVA, Grade A, Class 1, except for those provisions required of the contractor.



- Fatigue rated.
 Shackles 25t and larger are **RFID EQUIPPED**.
 Shackles can be furnished proof tested with certificates to designated standards, such as ABS, DNV, Lloyds, or other certification. Charges for proof testing and certification available when requested at the time of order.
 - Shackles are Quenched and Tempered and can meet DNV impact requirements of 42 joules (31 ft-lbs.) at -20 degree C (-4 degree F).
 - Look for the Red Pin[®] . . . the mark of genuine Crosby quality.

MAXTOUGH[®] ROUND PIN

A STATE

2

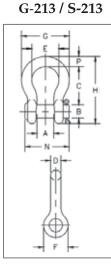
G-215 / S-215

CHAIN

SHACKLES

G-215 Round pin chain shackles meet the performance requirements of Federal Specification RR-C-271F Type IVB, Grade A, Class 1, except for those provides required of the contractor.

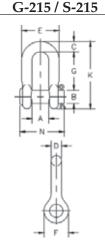
G-213 / S-213 Round Pin Anchor Shackles



| Nominal | Working Load | | ock o. | Weight | | | | | | nsions n.) | | | | | Toler + | rance / - |
|---------------|-----------------|---------|-----------|----------------|------|------|------|------|------|---------------|------|-------|------|------|------------|--------------|
| Size (in.) | Limit (t)* | G-213 | S-213 | Each (lbs.) | А | в | с | D | Е | F | G | н | N | Р | с | A |
| 1/4 | 1/2 | 1018017 | 1018026 | .13 | .47 | .31 | 1.13 | .25 | .78 | .61 | 1.28 | 1.84 | 1.34 | .25 | .06 | .06 |
| 5/16 | 3/4 | 1018035 | 1018044 | .18 | .53 | .38 | 1.22 | .31 | .84 | .75 | 1.47 | 2.09 | 1.59 | .31 | .06 | .06 |
| 3/8 | 1 | 1018053 | 1018062 | .29 | .66 | .44 | 1.44 | .38 | 1.03 | .91 | 1.78 | 2.49 | 1.86 | .38 | .13 | .06 |
| 7/16 | 1-1/2 | 1018071 | 1018080 | .38 | .75 | .50 | 1.69 | .44 | 1.16 | 1.06 | 2.03 | 2.91 | 2.13 | .44 | .13 | .06 |
| 1/2 | 2 | 1018099 | 1018106 | .71 | .81 | .63 | 1.88 | .50 | 1.31 | 1.19 | 2.31 | 3.28 | 2.38 | .50 | .13 | .06 |
| 5/8 | 3-1/4 | 1018115 | 1018124 | 1.50 | 1.06 | .75 | 2.38 | .63 | 1.69 | 1.50 | 2.94 | 4.19 | 2.91 | .69 | .13 | .06 |
| 3/4 | 4-3/4 | 1018133 | 1018142 | 2.32 | 1.25 | .88 | 2.81 | .75 | 2.00 | 1.81 | 3.50 | 4.97 | 3.44 | .81 | .25 | .06 |
| 7/8 | 6-1/2 | 1018151 | 1018160 | 3.49 | 1.44 | 1.00 | 3.31 | .88 | 2.28 | 2.09 | 4.03 | 5.83 | 3.81 | .97 | .25 | .06 |
| 1 | 8-1/2 | 1018179 | 1018188 | 5.00 | 1.69 | 1.13 | 3.75 | 1.00 | 2.69 | 2.38 | 4.69 | 6.56 | 4.53 | 1.06 | .25 | .06 |
| 1-1/8 | 9-1/2 | 1018197 | 1018204 | 6.97 | 1.81 | 1.25 | 4.25 | 1.13 | 2.91 | 2.69 | 5.16 | 7.47 | 5.13 | 1.25 | .25 | .06 |
| 1-1/4 | 12 | 1018213 | 1018222 | 9.75 | 2.03 | 1.38 | 4.69 | 1.29 | 3.25 | 3.00 | 5.75 | 8.25 | 5.50 | 1.38 | .25 | .06 |
| 1-3/8 | 13-1/2 | 1018231 | 1018240 | 13.25 | 2.25 | 1.50 | 5.25 | 1.42 | 3.63 | 3.31 | 6.38 | 9.16 | 6.13 | 1.50 | .25 | .13 |
| 1-1/2 | 17 | 1018259 | 1018268 | 17.25 | 2.38 | 1.63 | 5.75 | 1.54 | 3.88 | 3.63 | 6.88 | 10.00 | 6.50 | 1.62 | .25 | .13 |
| 1-3/4 | 25 | 1018277 | 1018286 | 29.46 | 2.88 | 2.00 | 7.00 | 1.84 | 5.00 | 4.19 | 8.86 | 12.34 | 7.75 | 2.25 | .25 | .13 |
| 2 | 35 | 1018295 | 1018302 | 45.75 | 3.25 | 2.25 | 7.75 | 2.08 | 5.75 | 4.81 | 9.97 | 13.68 | 8.75 | 2.40 | .25 | .13 |

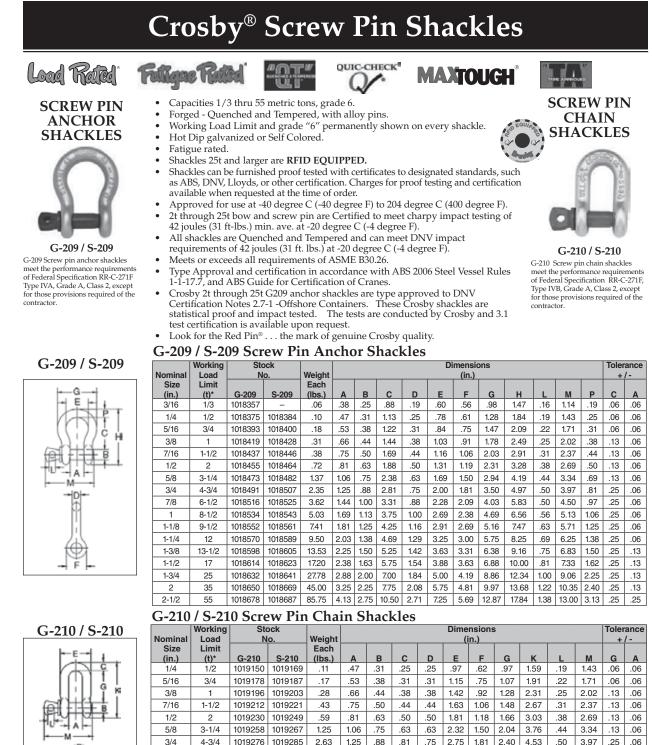
* NOTE: Maximum Proof Load is 2.0 times the Working Load Limit. Minimum Ultimate Strength is 6 times the Working Load Limit. For Working Load Limit reduction due to side loading applications, see page 91.

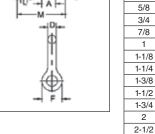
G-215 / S-215 Round Pin Chain Shackles



| | IN | o. 🛛 | Weight | | | | DI | nensio (in.) | ns | | | | | ance / - |
|---------------|---|---|--|---|--|---|---|---|---|---|---|---|---|---|
| Limit (t)* | G-215 | S-215 | Each (Ibs.) | А | в | с | D | Е | F | G | к | N | G | A |
| 1/2 | 1018810 | 1018829 | .10 | .47 | .31 | .25 | .25 | .97 | .62 | .91 | 1.59 | 1.34 | .06 | .06 |
| 3/4 | 1018838 | 1018847 | .18 | .53 | .38 | .31 | .31 | 1.15 | .75 | 1.07 | 1.91 | 1.63 | .06 | .06 |
| 1 | 1018856 | 1018865 | .25 | .66 | .44 | .38 | .38 | 1.42 | .92 | 1.28 | 2.31 | 1.86 | .13 | .06 |
| 1-1/2 | 1018874 | 1018883 | .40 | .75 | .50 | .44 | .44 | 1.63 | 1.06 | 1.48 | 2.67 | 2.13 | .13 | .06 |
| 2 | 1018892 | 1018909 | .50 | .81 | .63 | .50 | .50 | 1.81 | 1.18 | 1.66 | 3.03 | 2.38 | .13 | .06 |
| 3-1/4 | 1018918 | 1018927 | 1.21 | 1.06 | .75 | .63 | .63 | 2.32 | 1.50 | 2.04 | 3.76 | 2.91 | .13 | .06 |
| 4-3/4 | 1018936 | 1018945 | 2.00 | 1.25 | .88 | .81 | .75 | 2.75 | 1.81 | 2.40 | 4.53 | 3.44 | .25 | .06 |
| 6-1/2 | 1018954 | 1018963 | 3.28 | 1.44 | 1.00 | .97 | .88 | 3.20 | 2.10 | 2.86 | 5.33 | 3.81 | .25 | .06 |
| 8-1/2 | 1018972 | 1018981 | 4.75 | 1.69 | 1.13 | 1.00 | 1.00 | 3.69 | 2.38 | 3.24 | 5.94 | 4.53 | .25 | .06 |
| 9-1/2 | 1018990 | 1019007 | 6.30 | 1.81 | 1.25 | 1.25 | 1.13 | 4.07 | 2.68 | 3.61 | 6.78 | 5.13 | .25 | .06 |
| 12 | 1019016 | 1019025 | 9.00 | 2.03 | 1.38 | 1.38 | 1.25 | 4.53 | 3.00 | 3.97 | 7.50 | 5.50 | .25 | .13 |
| 13-1/2 | 1019034 | 1019043 | 12.00 | 2.25 | 1.50 | 1.50 | 1.38 | 5.01 | 3.31 | 4.43 | 8.28 | 6.13 | .25 | .13 |
| 17 | 1019052 | 1019061 | 16.15 | 2.38 | 1.63 | 1.62 | 1.50 | 5.38 | 3.62 | 4.87 | 9.05 | 6.50 | .25 | .13 |
| 25 | 1019070 | 1019089 | 29.96 | 2.88 | 2.00 | 2.12 | 1.75 | 6.38 | 4.19 | 5.82 | 10.97 | 7.75 | .25 | .13 |
| 35 | 1019098 | 1019105 | 43.25 | 3.25 | 2.25 | 2.36 | 2.10 | 7.25 | 5.00 | 6.82 | 12.74 | 8.75 | .25 | .13 |
| | 1/2 3/4 1 1-1/2 2 3-1/4 1-3/4 5-1/2 3-1/2 0-1/2 12 3-1/2 17 25 35 | 1/2 1018810 3/4 1018838 1 1018838 1 1018856 1-1/2 1018874 2 1018874 2 1018892 3-1/4 1018936 5-1/2 1018954 5-1/2 1018954 5-1/2 10189572 5-1/2 10189900 12 1019016 3-1/2 1019034 17 1019052 25 1019070 35 1019088 | 1/2 1018810 1018829 3/4 1018838 1018847 1 1018856 1018865 1-1/2 1018874 1018883 2 1018874 1018883 2 1018928 1018909 3-1/2 1018918 1018927 1-3/4 1018972 1018963 3-1/2 1018972 1018963 3-1/2 10189901 1019007 12 1019016 1019025 3-1/2 1019034 1019043 17 1019052 1019061 25 1019070 1019083 35 1019098 1019105 | 1/2 1018810 1018829 .10 3/4 1018838 1018847 .18 1 1018856 1018865 .25 1-1/2 1018874 1018883 .40 2 1018892 1018909 .50 3-1/2 1018918 1018927 1.21 1-3/4 1018918 1018925 2.00 3-1/2 1018954 1018945 2.00 3-1/2 1018954 1018963 3.28 3-1/2 1018954 1018907 6.30 12 1018905 1019007 6.30 12 1019016 1019025 9.00 3-1/2 1019034 1019043 12.00 17 1019052 1019061 16.15 25 1019070 1019089 29.96 35 1019088 1019105 43.25 | 1/2 1018810 1018829 .10 .47 3/4 1018838 1018847 .18 .53 1 1018856 1018865 .25 .66 1-1/2 1018874 1018883 .40 .75 2 1018892 1018909 .50 .81 3-1/2 1018918 1018927 1.21 1.06 1-3/4 1018936 1018945 2.00 1.25 5-1/2 1018954 1018963 3.28 1.44 3-1/2 1018954 1019007 6.30 1.81 12 1018909 1019007 6.30 1.81 12 1019016 1019025 9.00 2.03 3-1/2 1019034 1019043 12.00 2.25 17 1019052 1019061 16.15 2.38 25 1019070 1019089 29.96 2.88 35 1019088 1019105 43.25 3.25 | 1/2 1018810 1018829 .10 .47 .31 3/4 1018838 1018847 .18 .53 .38 1 1018856 1018865 .25 .66 .44 1-1/2 1018874 1018883 .40 .75 .50 2 1018892 1018909 .50 .81 .63 3-1/4 1018918 1018927 1.21 1.06 .75 1-3/4 1018954 1018945 2.00 1.25 .88 5-1/2 1018954 1018963 3.28 1.44 1.00 3-1/2 1018954 1019007 6.30 1.81 1.25 12 1018954 1019007 6.30 1.81 1.25 12 1019016 1019025 9.00 2.03 1.38 3-1/2 1019034 1019043 12.00 2.25 1.50 17 1019052 1019061 16.15 2.38 1.63 25 <td>$\begin{array}{c ccccccccccccccccccccccccccccccccccc$</td> | $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ |

* NOTE: Maximum Proof Load is 2.0 times the Working Load Limit. Minimum Ultimate Strength is 6 times the Working Load Limit. For Working Load Limit reduction due to side loading applications.





| OTE: M | aximum P | roof Load | is 2.0 time | s the Wo | rking I | Load Li | mit. N | /linimu | m Ultir | nate St | rength | is 6 tim | ies the V | Vorking | , Load | |
|----------|------------|------------|--------------|-----------|---------|---------|--------|---------|---------|---------|--------|----------|-----------|---------|--------|--|
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Crosby® Alloy Screw Pin Shackles



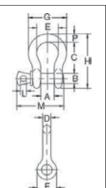
G-209A



G-209A Screw pin anchor shackles meet the performance requirements of Federal Specification RR-C-271F Type IVA, Grade B, Class 2, except for those provisions required of the contractor.



- Capacities 2 thru 21 metric tons. Meets performance requirements of Grade 8 shackles.
- Forged Alloy Steel Quenched and Tempered, with alloy pins.
- Working Load Limit permanently shown on every shackle.
- Hot Dip Galvanized.
- Shackles can be furnished proof tested with certificates to designated standards, such as ABS, DNV, Lloyds, or other certification. Charges for proof testing and certification available when requested at the time of order.
- Approved for use at -40 degree C (-40 degree F) to 204 degree C (400 degree F).
- Meets or exceeds all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, these shackles meet other critical performance requirements including fatigue life, impact properties and material traceability, not addressed by ASME B30.26.



G-209A Crosby[®] Alloy Screw Pin Shackles

| Nominal | Working Load | | Weight | | | | | D | imensior (in.) | ıs | | | | | | rance /- |
|---------------|-----------------|---------------------|----------------|------|------|------|------|------|-------------------|------|------|-----|------|------|-----|-------------|
| Size (in.) | Limit (t)* | G-209A Stock No. | Each (lbs.) | A | в | с | D | E | F | G | н | L | М | Р | с | A |
| 3/8 | 2 | 1017450 | .31 | .66 | .44 | 1.44 | .38 | 1.03 | .91 | 1.78 | 2.49 | .25 | 2.03 | .38 | .13 | .06 |
| 7/16 | 2-2/3 | 1017472 | .38 | .75 | .50 | 1.69 | .44 | 1.16 | 1.06 | 2.03 | 2.91 | .31 | 2.38 | .44 | .13 | .06 |
| 1/2 | 3-1/3 | 1017494 | .63 | .81 | .63 | 1.88 | .50 | 1.31 | 1.19 | 2.31 | 3.28 | .38 | 2.69 | .50 | .13 | .06 |
| 5/8 | 5 | 1017516 | 1.38 | 1.06 | .75 | 2.38 | .63 | 1.69 | 1.50 | 2.94 | 4.19 | .44 | 3.34 | .69 | .13 | .06 |
| 3/4 | 7 | 1017538 | 2.35 | 1.25 | .88 | 2.81 | .75 | 2.00 | 1.81 | 3.50 | 4.97 | .50 | 3.97 | .81 | .25 | .06 |
| 7/8 | 9-1/2 | 1017560 | 3.61 | 1.44 | 1.00 | 3.31 | .88 | 2.28 | 2.09 | 4.03 | 5.83 | .50 | 4.50 | .97 | .25 | .06 |
| 1 | 12-1/2 | 1017582 | 5.32 | 1.69 | 1.13 | 3.75 | 1.00 | 2.69 | 2.38 | 4.69 | 6.56 | .56 | 5.07 | 1.06 | .25 | .06 |
| 1-1/8 | 15 | 1017604 | 7.25 | 1.81 | 1.25 | 4.25 | 1.16 | 2.91 | 2.69 | 5.16 | 7.47 | .63 | 5.59 | 1.25 | .25 | .06 |
| 1-1/4 | 18 | 1017626 | 9.88 | 2.03 | 1.38 | 4.69 | 1.29 | 3.25 | 3.00 | 5.75 | 8.25 | .69 | 6.16 | 1.38 | .25 | .06 |
| 1-3/8 | 21 | 1017648 | 13.25 | 2.25 | 1.50 | 5.25 | 1.42 | 3.63 | 3.31 | 6.38 | 9.16 | .75 | 6.84 | 1.50 | .25 | .13 |

* Maximum Proof Load is 2 times the Working Load Limit (metric tons) and 2.2 times the Working Load Limit (short tons). Minimum Ultimate Strength is 4.5 times the Working Load Limit for metric tonnes, and 5 times the Working Load Limit for short tons. For Working Load Limit reduction due to side loading applications.





- Capacities of 7, 12.5 and 18 metric tons.
- Quenched and Tempered for maximum strength.
- Forged Alloy Steel.



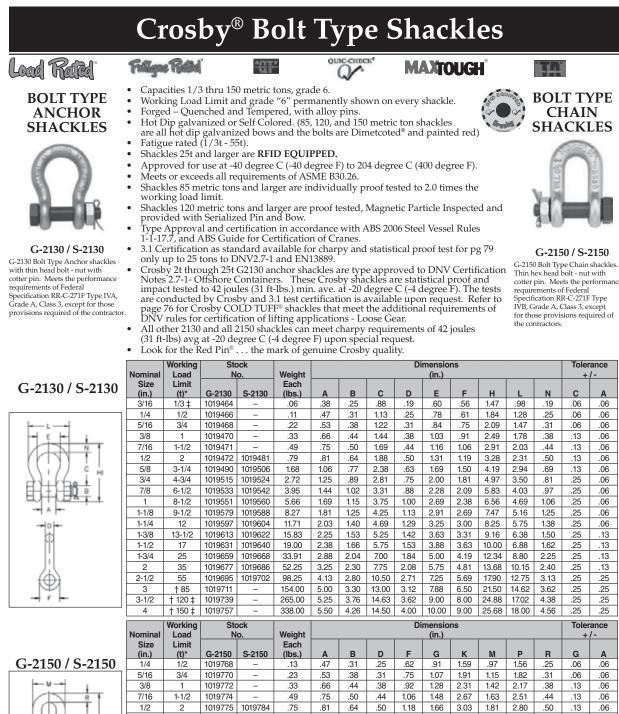
S-2169

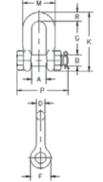
- Available in galvanized and self colored finished.
- Individually proof tested and magnetic particle inspected. Crosby certification available at time of order.
- Meets or exceeds all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, these shackles meet other critical performance requirements including fatigue life, impact properties and material traceability, not addressed by ASME B30.26.
 - Look for the Red Pin[®]... the mark of genuine Crosby quality.

G-2169 / S-2169 Screw Pin "Wide Body" Shackles

| Working | | | | | | | | | Dimer (iı | | | | | | |
|-----------------------|---------------------|---------------------|--------------------------|-----------------|------|-----------------|------|------|--------------|------|------|-----|------|------|------|
| Load Limit (t)* | G-2169 Stock No. | S-2169 Stock No. | Weight Each (lbs.) | B +/- .25 | С | D +/- .02 | E | G | н | J | к | L | М | Р | R |
| 7 | 1021655 | 1021664 | 3.5 | 1.25 | .69 | .88 | 1.82 | 1.25 | 3.56 | 1.60 | 1.25 | .50 | 3.97 | 4.10 | 5.87 |
| 12.5 | 1021673 | 1021682 | 8.8 | 1.69 | .92 | 1.13 | 2.38 | 1.37 | 4.63 | 2.13 | 1.63 | .56 | 5.13 | 5.51 | 7.63 |
| 18 | 1021691 | 1021699 | 13 | 2.03 | 1.16 | 1.38 | 2.69 | 1.50 | 5.81 | 2.50 | 2.00 | .69 | 6.25 | 6.76 | 9.38 |

* Ultimate Load is 5 times the Working Load Limit. Forged Alloy Steel. Proof Load is 2 times the Working Load Limit.





| | (III.) | (1) | G-2150 | 3-2100 | (IDS.) | A | D | U | . | G | n n | IVI | P | n | G | A |
|-----|--------|--------|---------|-----------|--------|------|------|------|----------|-----------|----------|-------|-----------|-------|---------|-----|
| | 1/4 | 1/2 | 1019768 | - | .13 | .47 | .31 | .25 | .62 | .91 | 1.59 | .97 | 1.56 | .25 | .06 | .06 |
| ן ר | 5/16 | 3/4 | 1019770 | - | .23 | .53 | .38 | .31 | .75 | 1.07 | 1.91 | 1.15 | 1.82 | .31 | .06 | .06 |
| | 3/8 | 1 | 1019772 | - | .33 | .66 | .44 | .38 | .92 | 1.28 | 2.31 | 1.42 | 2.17 | .38 | .13 | .06 |
| | 7/16 | 1-1/2 | 1019774 | - | .49 | .75 | .50 | .44 | 1.06 | 1.48 | 2.67 | 1.63 | 2.51 | .44 | .13 | .06 |
| | 1/2 | 2 | 1019775 | 1019784 | .75 | .81 | .64 | .50 | 1.18 | 1.66 | 3.03 | 1.81 | 2.80 | .50 | .13 | .06 |
| | 5/8 | 3-1/4 | 1019793 | 1019800 | 1.47 | 1.06 | .77 | .63 | 1.50 | 2.04 | 3.76 | 2.32 | 3.56 | .63 | .13 | .06 |
| | 3/4 | 4-3/4 | 1019819 | 1019828 | 2.52 | 1.25 | .89 | .75 | 1.81 | 2.40 | 4.53 | 2.75 | 4.15 | .81 | .25 | .06 |
| | 7/8 | 6-1/2 | 1019837 | 1019846 | 3.85 | 1.44 | 1.02 | .88 | 2.10 | 2.86 | 5.33 | 3.20 | 4.82 | .97 | .25 | .06 |
| | 1 | 8-1/2 | 1019855 | 1019864 | 5.55 | 1.69 | 1.15 | 1.00 | 2.38 | 3.24 | 5.94 | 3.69 | 5.39 | 1.00 | .25 | .06 |
| | 1-1/8 | 9-1/2 | 1019873 | 1019882 | 7.60 | 1.81 | 1.25 | 1.13 | 2.68 | 3.61 | 6.78 | 4.07 | 5.90 | 1.25 | .25 | .06 |
| | 1-1/4 | 12 | 1019891 | 1019908 | 10.81 | 2.03 | 1.40 | 1.25 | 3.00 | 3.97 | 7.50 | 4.53 | 6.69 | 1.38 | .25 | .06 |
| | 1-3/8 | 13-1/2 | 1019917 | 1019926 | 13.75 | 2.25 | 1.53 | 1.38 | 3.31 | 4.43 | 8.28 | 5.01 | 7.21 | 1.50 | .25 | .13 |
| | 1-1/2 | 17 | 1019935 | 1019944 | 18.50 | 2.38 | 1.66 | 1.50 | 3.62 | 4.87 | 9.05 | 5.38 | 7.73 | 1.62 | .25 | .13 |
| | 1-3/4 | 25 | 1019953 | 1019962 | 31.40 | 2.88 | 2.04 | 1.75 | 4.19 | 5.82 | 10.97 | 6.38 | 9.33 | 2.12 | .25 | .13 |
| | 2 | 35 | 1019971 | 1019980 | 46.75 | 3.25 | 2.30 | 2.10 | 5.00 | 6.82 | 12.74 | 7.25 | 10.41 | 2.36 | .25 | .13 |
| | 2-1/2 | 55 | 1019999 | 1020004 | 85.00 | 4.12 | 2.80 | 2.63 | 5.68 | 8.07 | 14.85 | 9.38 | 13.58 | 2.63 | .25 | .25 |
| | 3 | † 85 | 1020013 | - | 124.25 | 5.00 | 3.25 | 3.00 | 6.50 | 8.56 | 16.87 | 11.00 | 15.13 | 3.50 | .25 | .25 |
| 13 | NOTE N | A | Duesti | 1:- 201:- | +1 TA7 | | | | | T Theirer | La Chara | | time on t | 1 147 | luine T | 1 |

NOTE: Maximum Proof Load is 2.0 times the Working Load Limit. Minimum Ultimate Strength is 6 times the Working Load Limit. For Working Load Limit reduction due to side loading applications, see page 91. Individually Proof Tested with certification.

‡ Furnished in Anchor style only and furnished with Round Head Bolts with welded handles.

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cotter pin. Meets the performance

Crosby® Alloy Bolt Type Shackles

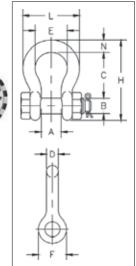
QUIC-CHECK® Lord Refed " MAXTOUGH "TT MIN \mathbf{Q}

G-2130A ALLOY **BOLT TYPE SHACKLES GRADE 80**



G-2130A Bolt Type Anchor shackles with thin head bolt - nut with cotter pin. Meets the performance requirements of Federal Specification RR-C-271F Type IVA, Grade B, Class 3, except for those provisions required of the contractor.

- Capacities 2 to 17 metric tons.
- Working Load Limit permanently shown on every • shackle.
- Forged Alloy Steel Quenched and Tempered, with bow and bolt.
- Hot Dip galvanized.
- Shackles can be **RFID EQUIPPED.** •
- Meets or exceeds all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, these shackles meet other critical performance requirements including impact properties and material traceability, not addressed by ASME B30.26.
- Shackles can be furnished proof tested with certificates to designated standards, such as ABS, DNV, Lloyds, or other certification when requested at time of order.
- Type Approval and certification in accordance with DNV Type Approval under DNV 2.7-1.
- Shackles are Quenched and Tempered and meets DNV impact requirements of 42 joules (31 ft. Ibs.) at -40 degree C (-40 degree F).





G-2130A Alloy Bolt Type Shackles Grade 80

| Nominal | Working Load | | Weight | | | | C | imension (in) | IS | | | | Tolera +/- | nce |
|---------------|-----------------|----------------------|----------------|------|------|------|------|------------------|------|------|------|------|---------------|------|
| Size (in.) | Limit (t)* | G-2130A Stock No. | Each (Ibs.) | А | в | с | D | Е | F | н | L | N | с | А |
| 1/2 | 2 | 1219472 | .79 | .81 | .63 | 1.88 | 0.50 | 1.31 | 1.19 | 3.29 | 2.30 | 0.50 | 0.13 | 0.06 |
| 5/8 | 3-1/4 | 1219491 | 1.37 | 1.06 | .75 | 2.38 | 0.63 | 1.69 | 1.50 | 4.18 | 2.94 | 0.69 | 0.25 | 0.06 |
| 3/4 | 4-3/4 | 1219516 | 2.71 | 1.25 | .88 | 2.82 | 0.75 | 2.01 | 1.81 | 4.96 | 3.51 | 0.81 | 0.25 | 0.06 |
| 7/8 | 6-1/2 | 1219534 | 3.95 | 1.44 | 1.00 | 3.31 | 0.88 | 2.29 | 2.09 | 5.83 | 4.02 | 0.97 | 0.25 | 0.06 |
| 1 | 8-1/2 | 1219552 | 5.03 | 1.69 | 1.10 | 3.76 | 1.00 | 2.70 | 2.38 | 6.58 | 4.69 | 1.06 | 0.25 | 0.06 |
| 1-1/8 | 9-1/2 | 1219578 | 8.27 | 1.81 | 1.25 | 4.26 | 1.13 | 2.92 | 2.70 | 7.49 | 5.16 | 1.25 | 0.25 | 0.06 |
| 1-1/4 | 12 | 1219598 | 11.7 | 2.03 | 1.38 | 4.69 | 1.25 | 3.25 | 2.99 | 8.27 | 5.75 | 1.38 | 0.25 | 0.06 |
| 1-3/8 | 13-1/2 | 1219614 | 15.8 | 2.25 | 1.50 | 5.24 | 1.38 | 3.62 | 3.31 | 9.18 | 6.38 | 1.50 | 0.25 | 0.13 |
| 1-1/2 | 17 | 1219632 | 19.0 | 2.38 | 1.63 | 5.75 | 1.50 | 3.88 | 3.62 | 10.0 | 6.90 | 1.62 | 0.25 | 0.13 |

* NOTE: Maximum Proof Load is 2.0 times the Working Load Limit. Minimum Ultimate Strength is 8 times the Working Load Limit. For Working Load Limit reduction due to side loading applications

Crosbu

G-2140 / S-2140



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D

- Quenched & Tempered. Alloy bows, alloy bolts.
 - Forged alloy steel 2 through 250 metric tons. Cast alloy steel 400 metric tons.
 - Meets performance requirements of Grade 8 shackles.
 - Working Load Limit is permanently shown on every shackle. •
 - 30, 40, 55, and 85 metric ton shackle bows are available galvanized (G) or self colored (S) with bolts that are galvanized and painted red.
 - Size 3/8 inch is mechanically galvanized.
 - 120, 150, 175 metric ton shackle bows are hot-dip galvanized; bolts are Dimetcoted and painted red.
 - 200, 250, 300, 400 metric ton shackle bows are Dimetcoted; bolts are Dimetcoted and painted red.
 - Approved for use at -40° C (-40° F) to 204° C (400° F).
 - Shackles are Quenched & Tempered and can meet DNV impact requirements of 42 Joules (31 ft-lb) at -20° C (-4° F).
 - Crosby COLD TUFF® shackles that meet the additional requirements of DNV rules for certification of lifting applications - loose gear are available.
 - Shackles 200 metric tons and larger are provided as follows:
 - · Serialized bolt and bow
 - Material certification (chemical)
 - Magnetic particle inspected.
 - · Certification must be requested at time of order.
 - Meets or exceeds all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. 2140 shackles meet other critical performance requirements including impact properties and material traceability, not addressed by ASME B30.26.
 - Type Approval certification in accordance with ABS 2016 Steel Vessel Rules and 2016 ABS Guide for Certification of Lifting Appliances. Certificates are available when requested at time of order and may include additional charges.
 - G-2140 meets the performance requirements of Federal Specification RR-C-271H, Type IVA, Grade B, Class 3, except for those provisions required of the contractor. For additional information, see Warnings & Applications.
 - Look for the Red Pin[®]... the mark of genuine Crosby quality.

G-2140 / S-2140 Alloy Bolt Type Anchor Shackles

| Nominal Shackle | Working Load | : | Stock No. | | Weight | | | | | | Din | nensio (in) | ns | | | | | | | lerano +/-inj | |
|--------------------|-----------------|---------|-----------|--------------|--------------|------|-------|------|------|-------|------|----------------|-------|-------|-------|------|------|------|------|------------------|------|
| Size (in) | Limit (t) | G-2140 | S-2140 | G-2140 OC | Each (lb) | А | в | с | D | Е | F | G | н | J | к | L | м | N | А | D | Е |
| 3/8 | 2 | 1021015 | | - | 0.33 | 0.66 | 0.91 | 0.38 | 0.44 | 1.44 | 0.38 | 1.78 | 2.17 | 2.49 | 1.03 | 0.38 | - | - | 0.06 | 0.01 | 0.13 |
| 7/16 | 2.67 | 1021020 | - | - | 0.49 | 0.75 | 1.06 | 0.44 | 0.50 | 1.69 | 0.41 | 2.03 | 2.51 | 2.91 | 1.16 | 0.44 | - | - | 0.06 | 0.01 | 0.13 |
| 1/2 | 3.33 | 1021029 | - | - | 0.79 | 0.81 | 1.19 | 0.50 | 0.64 | 1.88 | 0.46 | 2.31 | 2.80 | 3.28 | 1.31 | 0.50 | - | - | 0.06 | 0.02 | 0.13 |
| 5/8 | 5 | 1021038 | - | - | 1.68 | 1.06 | 1.50 | 0.69 | 0.77 | 2.38 | 0.58 | 2.94 | 3.56 | 4.19 | 1.69 | 0.63 | - | - | 0.06 | 0.02 | 0.13 |
| 3/4 | 7 | 1021047 | - | - | 2.72 | 1.25 | 1.81 | 0.81 | 0.89 | 2.81 | 0.69 | 3.50 | 4.15 | 4.97 | 2.00 | 0.75 | - | - | 0.06 | 0.02 | 0.25 |
| 7/8 | 9.5 | 1021056 | - | - | 3.95 | 1.44 | 2.09 | 0.97 | 1.02 | 3.31 | 0.81 | 4.03 | 4.82 | 5.83 | 2.28 | 0.88 | - | - | 0.06 | 0.02 | 0.25 |
| 1 | 12.5 | 1021065 | - | - | 5.66 | 1.69 | 2.38 | 1.06 | 1.15 | 3.75 | 0.92 | 4.69 | 5.39 | 6.56 | 2.69 | 1.00 | - | - | 0.06 | 0.02 | 0.25 |
| 1-1/8 | 15 | 1021074 | - | - | 8.27 | 1.81 | 2.69 | 1.25 | 1.25 | 4.25 | 1.04 | 5.16 | 5.90 | 7.47 | 2.91 | 1.13 | - | - | 0.06 | 0.02 | 0.25 |
| 1-1/4 | 18 | 1021083 | | - | 11.7 | 2.03 | 3.00 | 1.38 | 1.40 | 4.69 | 1.16 | 5.75 | 6.69 | 8.25 | 3.25 | 1.29 | - | - | 0.06 | 0.03 | 0.25 |
| 1-3/8 | 21 | 1021092 | - | - | 15.8 | 2.25 | 3.31 | 1.50 | 1.53 | 5.25 | 1.28 | 6.38 | 7.21 | 9.16 | 3.63 | 1.42 | - | - | 0.13 | 0.03 | 0.25 |
| 1-1/2 | 30 | 1021110 | 1021129 | 1262407 | 18.8 | 2.38 | 3.62 | 1.62 | 1.63 | 5.75 | 1.39 | 6.88 | 7.73 | 10.00 | 3.88 | 1.53 | - | - | 0.13 | 0.03 | 0.25 |
| 1-3/4 | 40 | 1021138 | 1021147 | 1262416 | 33.8 | 2.88 | 4.19 | 2.25 | 2.00 | 7.00 | 1.75 | 8.81 | 9.33 | 12.34 | 5.00 | 1.84 | - | - | 0.13 | 0.03 | 0.25 |
| 2 | 55 | 1021156 | 1021165 | 1262425 | 49.9 | 3.25 | 4.81 | 2.40 | 2.25 | 7.75 | 2.00 | 10.16 | 10.41 | 13.68 | 5.75 | 2.08 | - | - | 0.13 | 0.03 | 0.25 |
| 2-1/2 | 85 | 1021174 | 1021183 | 1262434 | 103 | 4.12 | 5.81 | 3.12 | 2.75 | 10.50 | 2.62 | 12.75 | 13.58 | 17.90 | 7.25 | 2.71 | - | - | 0.25 | 0.03 | 0.25 |
| 3 | 120 | 1021192 | - | 1262443 | 162 | 5.00 | 6.50 | 3.63 | 3.25 | 13.00 | 3.00 | 14.62 | 15.13 | 21.50 | 7.88 | 3.12 | - | - | 0.25 | 0.04 | 0.25 |
| 3-1/2 | † 150 | 1021218 | - | 1262452 | 268 | 5.25 | 8.00 | 4.38 | 3.75 | 14.63 | 3.75 | 17.02 | 20.33 | 24.88 | 9.00 | 3.62 | 4.00 | 1.80 | 0.25 | 0.01 | 0.25 |
| 4 | † 175 | 1021236 | - | 1262461 | 318 | 5.50 | 9.00 | 4.56 | 4.25 | 14.50 | 4.00 | 18.00 | 21.20 | 25.68 | 10.00 | 4.00 | 4.00 | 1.80 | 0.25 | 0.01 | 0.25 |
| 4-3/4 | † 200 | 1021234 | - | - | 461 | 7.25 | 10.50 | 5.00 | 4.75 | 15.19 | 4.58 | 20.84 | 24.04 | 27.81 | 11.00 | 4.75 | 4.00 | 1.80 | 0.25 | 0.01 | 0.25 |
| 5 | † 250 | 1021243 | - | - | 608 | 8.50 | 12.00 | 5.62 | 5.00 | 18.50 | 4.85 | 23.62 | 24.87 | 32.61 | 13.00 | 5.00 | 4.00 | 1.80 | 0.25 | 0.01 | 0.25 |
| 6 | † 300 | 1021252 | - | - | 797 | 8.38 | 13.00 | 6.06 | 6.00 | 18.72 | 4.89 | 24.76 | 26.22 | 34.28 | 13.00 | 5.88 | 4.00 | 1.80 | 0.25 | 0.01 | 0.25 |
| 7* | † 400 | 1021478 | - | - | 1289 | 8.25 | 14.00 | 7.25 | 7.00 | 22.50 | 6.50 | 26.00 | 29.66 | 40.25 | 13.00 | 6.00 | 4.00 | 1.80 | 0.25 | 0.01 | 0.25 |

4.5:1 Design Factor for sizes 2 through 21 metric tons, 5.4:1 Design Factor for sizes 30 through 175 metric tons. 4:1 Design Factor for 200 through 400 metric tons. Maximum Proof Load is 2 times the Working Load Limit. * Cast alloy steel. † Furnished with round head bolts with a handle. For Working Load Limit reduction due to side loading applications, see Warnings & Applications. APPLICATION AND WARNING INFORMATION SECTION 17









G-2160E



- Increase in shackle bow radius provides minimum 58% gain in sling bearing surface and eliminates need for a thimble.
- Increases usable sling strength a minimum of 15% and greatly improves life of wire rope slings.
- Can be used to connect synthetic web slings, synthetic round slings or wire rope slings.
- All sizes Quenched & Tempered for maximum strength.
- Forged alloy steel from 75 through 300 metric tons.
- Proof tested as follows:
 - 75 metric tons and 200-300 metric tons: 2 x WLL.
 - 125 metric tons: 1.6 x WLL.
- All ratings are in metric tons, embossed on side of bow.
- G-2160E, (75t and larger), bows are furnished Dimetcoted, and pins are Dimetcoted, then painted red.
- Approved for use at -40° C (-40° F) to 204 degrees C (400° F).
- Bow and bolt are certified to meet Charpy impact testing of 42 Joules (31 ft-lb) min. avg. at -20° C (-4 degrees F).
- All 2160E shackles are individually proof tested and magnetic particle inspected. Crosby certification available at time of order.
 - Shackles requiring ABS, Lloyds and other certifications are available upon special request and must be specified at time of order.
- Shackles have DNV Type Approval to Rules for Certification of Lifting Appliances, and are produced in accordance with DNV MSA requirements. Databook is provided that includes required documents.
 - Serialization / Identification
 - Material Testing (physical / chemical / Charpy)
 - Proof Testing
- Look for the Red Pin[®]... the mark of genuine Crosby quality.

G-2160E Easy-Loc Wide Body Shackles

•

| Working Load | | Weight | | | | | | | | Dimensi (in) | ons | | | | | |
|-----------------|--------------|--------------|-------|------|------|------|-------|------|-------|-----------------|------|------|------|-------|-------|----------------------------|
| Limit (t) | Stock No. | Each (lb) | А | в | с | D | Е | G | н | J | к | м | N | Р | R | Effective Body Diameter |
| 75 | 1021500 | 110 | 15.04 | 4.13 | 2.39 | 2.75 | 5.34 | 3.75 | 11.54 | 5.00 | 3.64 | 4.00 | 1.80 | 12.64 | 18.66 | 6.3 |
| 125 | 1021509 | 190 | 17.70 | 5.12 | 3.10 | 3.15 | 6.50 | 3.75 | 14.37 | 5.91 | 4.33 | 4.00 | 1.80 | 15.47 | 23.00 | 6.8 |
| 200 | 1021518 | 408 | 19.35 | 5.91 | 3.39 | 4.12 | 8.41 | 5.25 | 18.91 | 8.56 | 5.42 | 4.00 | 1.80 | 20.27 | 30.44 | 9.5 |
| 300 | 1021527 | 787 | 22.61 | 7.38 | 4.30 | 5.25 | 10.50 | 6.13 | 23.63 | 10.38 | 6.31 | 4.00 | 1.80 | 23.93 | 37.51 | 11.4 |

5:1 Design Factor on 75 through 300 metric tons. Maximum Proof Load is 2 times the Working Load Limit on 75 through 300 metric tons (except for 125 metric tons which is proof tested to 1.6 times the Working Load Limit).



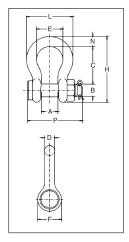


Crosby[®] COLD TUFF[®] Shackles



G-2130CT and G-2140CT

- Forged Quenched and Tempered, with alloy bolt.
- G-2130CT Carbon Steel
- G-2140CT Alloy Steel
- Working Load Limit permanently shown on every shackle.
- Individually Serialized with Certification.
- Fatigue Rated (G-2130CT only).
- Shackles 25t and larger are **RFID EQUIPPED**.
- All sizes are individually proof tested to 2.0 times the Working Load Limit.
- Finish is Inorganic Zinc Primer or Hot Dipped Galvanized.
 - Bow and Bolt are Certified to meet charpy impact testing of 42 joules (31 ft-lbs.) min. ave. at -20 degree C (-4 degree F).
 - Individually Mag Inspected with certification.
 - COLD TUFF[®] shackles are suitable for use to -50° F.
 - Type Approval and certification in accordance with DNV 2.7-1 Offshore Containers, and Rules for Certification of Lifting Appliances, DNV OS-101, and are produced in accordance with DNV MSA requirements, including required documents.



G-2130CT

• Bolt Type Anchor shackle with thin head bolt - nut with cotter pin. Meets the performance requirements of Federal Specification RR-C2.7-1F Type IVA, Grade A, Class 3, except for those provisions required of the contractor.

| Nominal Shackle | Working Load | | Weight | | | | | | | | | | | Tolerance +/- | | |
|--------------------|-----------------|-----------------------|----------------|------|------|------|------|------|------|-------|------|------|------|------------------|-----|--|
| Size (in.) | Limit (t)* | G-2130CT Stock No. | Each (lbs.) | А | в | с | D | E | F | н | L | N | Р | А | с | |
| 3/4 | 4-3/4 | 1260568 | 2.72 | 1.25 | .88 | 2.81 | .75 | 2.00 | 1.81 | 4.97 | 3.50 | .81 | 4.25 | .06 | .25 | |
| 7/8 | 6-1/2 | 1260577 | 3.87 | 1.44 | 1.00 | 3.31 | .88 | 2.28 | 2.09 | 5.83 | 4.03 | .97 | 4.71 | .06 | .25 | |
| 1 | 8-1/2 | 1260586 | 5.66 | 1.69 | 1.13 | 3.75 | 1.03 | 2.69 | 2.38 | 6.56 | 4.69 | 1.06 | 5.38 | .06 | .25 | |
| 1-1/8 | 9-1/2 | 1260595 | 8.26 | 1.81 | 1.25 | 4.25 | 1.13 | 2.91 | 2.69 | 7.47 | 5.16 | 1.25 | 5.90 | .06 | .25 | |
| 1-1/4 | 12 | 1260604 | 11.71 | 2.03 | 1.38 | 4.69 | 1.29 | 3.25 | 3.00 | 8.25 | 5.75 | 1.38 | 6.63 | .06 | .25 | |
| 1-3/8 | 13-1/2 | 1260613 | 15.1 | 2.25 | 1.50 | 5.25 | 1.38 | 3.63 | 3.31 | 9.16 | 6.38 | 1.50 | 7.21 | .13 | .25 | |
| 1-1/2 | 17 | 1260622 | 20.8 | 2.38 | 1.63 | 5.75 | 1.54 | 3.88 | 3.63 | 10.00 | 6.88 | 1.62 | 7.66 | .13 | .25 | |
| 1-3/4 | 25 | 1260633 | 33.9 | 2.88 | 2.00 | 7.00 | 1.84 | 5.00 | 4.19 | 12.34 | 8.86 | 2.25 | 9.19 | .13 | .25 | |

* NOTE: Maximum Proof Load is 2.0 times the Working Load Limit. 4-3/4t - 25t, Minimum Ultimate Load is 5.4 times the Working Load Limit.

G-2140CT

• G-2140 meets the performance requirements of Federal Specifications RR-C-271F, Type IVA, Grade B, Class 3 except for those provisions required of the contractor.

| Nominal | Working | | | Dimensions (in.) | | | | | | | | | | | rance |
|--------------------------|-----------------------|-----------------------|--------------------------|---------------------|------|-------|------|-------|----------|-------|-------|------|-------|---------|---------|
| Shackle Size (in.) | Load Limit (t)* | G-2140CT Stock No. | Weight Each (lbs.) | A | в | с | D | E | 1.) F | н | L | N | Р | +. A | /- с |
| 1-1/2 | 30 | 1260801 | 20.8 | 2.38 | 1.63 | 5.75 | 1.54 | 3.88 | 3.62 | 10.00 | 6.88 | 1.62 | 7.73 | .13 | .25 |
| 1-3/4 | 40 | 1260812 | 33.9 | 2.88 | 2.00 | 7.00 | 1.84 | 5.00 | 4.19 | 12.34 | 8.81 | 2.25 | 9.33 | .13 | .25 |
| 2 | 55 | 1260823 | 52.0 | 3.25 | 2.25 | 7.75 | 2.08 | 5.75 | 4.81 | 13.68 | 10.16 | 2.40 | 10.41 | .13 | .25 |
| 2-1/2 | 85 | 1260834 | 96.0 | 4.12 | 2.75 | 10.50 | 2.72 | 7.25 | 5.69 | 17.84 | 12.87 | 3.12 | 13.58 | .25 | .25 |
| 3 | 120 | 1260843 | 178.0 | 5.00 | 3.25 | 13.00 | 3.11 | 7.88 | 6.50 | 21.50 | 14.36 | 3.63 | 15.13 | .25 | .25 |
| 3-1/2 | † 150 | 1260852 | 265.0 | 5.25 | 3.75 | 14.63 | 3.62 | 9.00 | 8.00 | 24.62 | 16.50 | 4.12 | 17.62 | .25 | .25 |
| 4 | † 175 | 1260861 | 338.0 | 5.50 | 4.25 | 14.5 | 4.10 | 10.00 | 9.00 | 25.69 | 18.42 | 4.56 | 20.37 | .25 | .25 |
| 4-3/4 | † 200 | 1260870 | 450.0 | 7.25 | 4.75 | 15.63 | 4.50 | 11.00 | 10.50 | 29.25 | 21.00 | 6.00 | 21.21 | .25 | .25 |
| 5 | † 250 | 1260889 | 600.0 | 8.50 | 5.00 | 20.00 | 4.50 | 13.00 | 12.00 | 35.00 | 24.50 | 6.50 | 22.68 | .25 | .25 |

* NOTE: Maximum Proof Load is 2.0 times the Working Load Limit.

30t - 175t, Minimum Ultimate Load is 5.4 times the Working Load Limit.

200t and larger, Minimum Ultimate Load is 4 times the Working Load Limit.

+ Furnished with Round Head Bolts with welded handle.

Crosby[®] Specialty Shackles



S-209T THEATRICAL **SHACKLES**

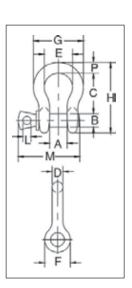
• Sizes: 3/8" through 3/4"

Fatigue Rated.

- Capacities: 1 through 4-3/4 metric tonnes.
- Forged Quenched and Tempered, with alloy pins.
- Working Load Limit permanently shown on every shackle.
- Flat black baked on power coat finish.



- Industry leading 6 to 1 design factor.
- Screw pin anchor shackles meet the performance requirement of Federal Specification RR-C-271F Type A, Grade A, Class 2, except for those provisions required of the contractor.
- Meets the performance requirements of EN 13889:2003.
- Meets or exceeds all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, these shackles meet other critical performance requirements including fatigue life, impact properties and material traceability, not addressed by ASME B30.26.



S-209T Theatrical Shackles

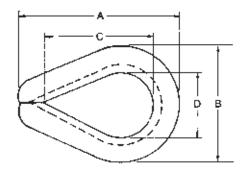
| Nominal | Working Load | | Weight | | | | | D | imensior (in.) | ıs | | | | | Toler + | ance / - |
|---------------|-----------------|---------------------|----------------|---|-----|------|-----|------|-------------------|------|------|-----|------|-----|------------|-------------|
| Size (in.) | Limit (t)* | S-209T Stock No. | Each (lbs.) | A | в | с | D | E | F | G | н | L | м | Р | с | А |
| 3/8 | 1 | 1018706 | .31 | .66 | .44 | 1.44 | .38 | 1.03 | .91 | 1.78 | 2.49 | .25 | 2.02 | .38 | .13 | .06 |
| 7/16 | 1-1/2 | 1018724 | .38 | .75 | .50 | 1.69 | .40 | 1.16 | 1.06 | 2.03 | 2.91 | .31 | 2.37 | .44 | .13 | .06 |
| 1/2 | 2 | 1018742 | .72 | .81 | .63 | .188 | .50 | 1.31 | 1.19 | 2.31 | 3.28 | .38 | 2.69 | .50 | .13 | .06 |
| 5/8 | 3-1/4 | 1018760 | 1.37 | 1.06 | .75 | 2.38 | .63 | 1.69 | 1.50 | 2.94 | 4.19 | .44 | 3.34 | .69 | .13 | .06 |
| 3/4 | 4-3/4 | 1018778 | 2.35 | 1.25 | .88 | 2.81 | .75 | 2.00 | 1.81 | 3.50 | 4.97 | .50 | 3.97 | .81 | .25 | .06 |
| | | | | .30 1.25 .88 2.81 .75 2.00 1.81 3.50 4.97 .50 3.97 .81 .25 king Load Limit | | | | | | | | | | | .06 | |

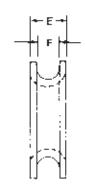
Minimum Ultimate Load is 5 times the Working Load Limit.

Wire Rope Thimbles

EXTRA HEAVY DUTY WIRE ROPE THIMBLES GALVANIZED STEEL

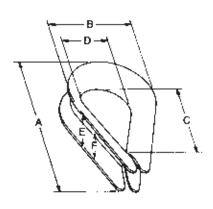
| | | I | DIMENS | IONS IN | INCHES | | | |
|--------------------------------|------------------------|---------------------------------|-----------------------|----------------------|---------------------------|----------------------------------|-------------------------------|-----------------------------|
| For Rope Diameter Inches | A Overall Length | B Overall Width | C Inside Length | D Inside Width | E Overall Thickness | F Inside Width of Score | Maximum Pin Diameter | Weight Pounds Per 100 |
| 1/4 | 2 ¾ | 1 ½ | 1 % | % | ¹³ /32 | %2 | ¹³ / ₁₆ | 7.5 |
| 5/16 | 2 ½ | 1 ¹ % | 1 % | 1 ⅓ | 1/2 | 11/32 | ¹⁵ / ₁₆ | 14.0 |
| 3/8 | 2 % | 2 ½ | 2 % | 1 ⅛ | ²¹ /32 | 13/32 | 1 1/ ₁₆ | 25.0 |
| 7/16 | 3 ¼ | 2 ¾ | 2 ¾ | 1 ¼ | 3⁄4 | ¹⁵ / ₃₂ | 1 ¾6 | 36.0 |
| 1/2-9/16 | 3 % | 2 ¾ | 2 ¾ | 1 ½ | ²⁷ /32 | ¹⁷ / ₃₂ | 1 ⅔6 | 51.0 |
| 5/8 | 4 ¼ | 3 ½ | 3 ¼ | 1 ¾ | 1 | ²¹ / ₃₂ | 1 % | 75.0 |
| 3/4 | 5 | 3 ¹³ / ₁₆ | 3 ¾ | 2 | 1 ¼ | ²⁵ /32 | 1 ½ | 147.0 |
| 7/8 | 5½ | 4 ¹ / ₄ | 4 ¼ | 2 ¼ | 1 % | ¹⁵ /16 | 2 ½ | 185.0 |
| 1 | 6½ | 4 ¹⁵ / ₁₆ | 4 ½ | 2 ½ | 1 % | 1 ¹ /16 | 2 ¾ | 295.0 |
| 1 ¼-1 ¼ | 7 | 5 % | 5 ½ | 2 % | 1 % | 1 5⁄16 | 2 ¾ | 390.0 |
| 1 ¼-1 ¾ | 9 ¼6 | 6 ¹³ / ₁₆ | 6 ½ | 3 ½ | 2 ¼ | 1 7∕16 | 3 ¼ | 820.0 |
| 1 ¾-1 ½ | 9 | 7 % | 6 ¼ | 3 ½ | 2 % | 1 %6 | 3 ¾ | 1175.0 |
| 1 % | 11 ¼ | 8 ½ | 8 | 4 | 2 ³ ⁄4 | 1 ²³ / ₃₂ | 3 % | 1625.0 |
| 1 ¾ | 12 ¾ | 8 ½ | 9 | 4 ½ | 2 ⁷ ⁄8 | 1 ²⁷ / ₃₂ | 4 % | 1800.0 |
| 1 %-2 | 15 ¼ | 10 ¾ | 12 | 6 | 3 ¹ ⁄8 | 2 ³ / ₃₂ | 5 % | 2600.0 |
| 2 ¼ | 17 ½ | 11 % | 14 | 7 | 3 % | 2 % | 6 % | 3880.0 |
| 2 ½ | 20 ½ | 13 ½ | 15 ¾ | 8 ½ | 4 ¼ | 2 % | 8 ¼ | 7500.0 |





STAINLESS HEAVY DUTY WIRE ROPE THIMBLES

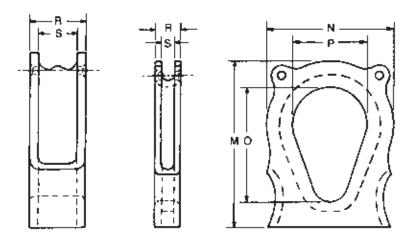
| | | | DIMENS | IONS IN | INCHES | ; | | |
|----------------------|--|--|------------------|-------------------|----------------------|-------------------|-----------------|------------------|
| For Rope Diameter | A | В | С | D | E | F Inside | Maximum | Weight Pounds |
| Inches | Overall Length | Overall Width | Inside Length | Inside Width | Overall Thickness | Width of Score | Pin Diameter | Per 100 |
| 1/4 | 1 ¹⁵ / ₁₆ | 1 ½6 | 1 5/16 | 11/16 | 3/8 | 9/32 | 5/8 | 3.5 |
| 5/16 | 2 1/8 | 1 ¼ | 1 ½ | ¹³ ⁄16 | 7⁄16 | 3/8 | 3/4 | 4.0 |
| 3/8 | 2 ¾ | 1 ¹⁵ ⁄ ₃₂ | 1 % | 15/16 | 17/32 | 7/16 | 7⁄8 | 7.5 |
| 1/2 | 2 ¾ | 1 ¾ | 1 % | 1 1⁄8 | 11/16 | 9⁄16 | 1 ¼6 | 15.8 |
| 5% | 3 ½ | 2 % | 2 ¼ | 1 % | ²⁹ /32 | 11/16 | 1 ¼ | 36.0 |
| 3⁄4 | 3 ¾ | 2 11/16 | 2 ½ | 1 % | 1 3/32 | 13/16 | 1 ½ | 50.0 |
| 7/8 | 5 | 3 ¾ | 3 ½ | 1 % | 1 32 | 15/16 | 1 ¾ | 90.0 |
| 1 | 5 ¹ / ₁₆ | 3 3/4 | 4 1/4 | 2 ½ | 1 % | 1 1/16 | 2 % | 105.0 |
| 1 1/8-1 1/4 | 6 ¼ | 4 5/16 | 4 ½ | 2 ¾ | 1 ¾ | 1 5⁄16 | 2 % | 176.0 |



Meets or exceeds federal specification FF-T-276 (latest revision).

www.industrialrope.com

Equalizing Thimbles



- Legs of bridle slings may be adjusted in length, using the equalizing thimble.
- For use in lifting unbalanced loads.

SINGLE GROOVE

| | | | | | | | CAST 1035 | STEEL |
|--|---|------------------------------|----------------------|----------------------|---|--|------------------------------|-------|
| Wire Rope | | | Dimension | is in Inches | | | Wt. | |
| Size Range | М | N | 0 | Р | R | S | Lbs. | |
| %-7⁄16 ½-%6 5%-¾ %- 1 | 6 ½ 8 ½ 9 ¹⁵ /16 10 ¾ | 4 % 6 ¾ 7 8 ¾ | 4 ½ 6 7 7 ½ | 3 4 4½ 5 | 7∕8 1 1∕8 1 7∕16 1 13∕16 | ½ % 15⁄16 1 %6 | 3.0 6.3 9.8 15.6 | |
| 1 ¼-1 ¼ 1 ¾-1 ½ 1 %-1 ¾ 1 %-2 | 14 % 15 % 20 ¹ % 21 % | 10 % 11 ¾ 14 ¼ 14 % | 10 11 15 15 | 6 ½ 7 ½ 9 9 | 2 ¾6 2 %6 2 ¹⁵ ⁄16 3 ⅔6 | 1 %6 1 ¹¹ %6 1 ¹⁵ %6 2 %6 | 28.0 39 0 65.0 85.0 | |

DOUBLE GROOVE

CAST 1035 STEEL

| Wire Rope | | | Dimension | is in Inches | | | Wt. |
|-------------|------|------|-----------|--------------|-----|------------|------|
| Size Range | М | Ν | 0 | Р | R | S | Lbs. |
| 5/8-3/4 | 11 ¼ | 8 | 8 1/4 | 5 ½ | 2 ¾ | 1 ¾ | 21.0 |
| ‰-1 | 12 ¾ | 8 ½ | 9 | 6 | 2 % | 2 ¼ | 28.0 |
| 1 1/4-1 1/4 | 16 | 12 ½ | 11 ½ | 7 ½ | 3 ¼ | 2 5/8 | 45.0 |

Larger sizes upon application.

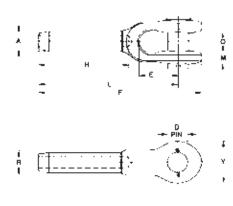
Cast Alloy Available Upon Request.

Swage Sockets

CAUTION: When attaching swage sockets to wire rope it is extremely important to follow recommended procedures. Read important warnings and information preceding fittings setting.

Swage sockets are recommend for use on 6 x 19 or 6 x 36 IWRC regular lay ropes. They are also satisfactory on galvanized bridge rope. They are NOT recommended for use on fiber core or lang lay ropes. Spheroidized annealed for cold swaging. Sockets properly applied have an efficiency rating of 100%. This rating is based on the catalog breaking strength of wire rope.





| Rope Diameter | | | | Din | nension | s in Incl | hes | | | | Approx. Weight Ea. | A/S |
|------------------|-------|-------|------|------|---------|-----------|-------|------|------|------|-----------------------|-------|
| in Inches | А | В | D | Е | F | н | L | М | 0 | Υ | in Pounds | A/S |
| 1/4 | .495 | .272 | .688 | 1.50 | 4.75 | 2.13 | 4.00 | .31 | .69 | 1.38 | .55 | .438 |
| 5/16 | .770 | .339 | .812 | 1.75 | 6.25 | 3.19 | 5.31 | .41 | .81 | 1.63 | 1.10 | .688 |
| 3% | .770 | .406 | .812 | 1.75 | 6.25 | 3.19 | 5.31 | .41 | .81 | 1.63 | 1.08 | .688 |
| 7/16 | .982 | .484 | 1.00 | 2.00 | 7.81 | 4.25 | 6.69 | .50 | 1.00 | 2.00 | 2.30 | .875 |
| 1/2 | .982 | .547 | 1.00 | 2.00 | 7.81 | 4.25 | 6.69 | .50 | 1.00 | 2.00 | 2.25 | .875 |
| 9/16 | 1.257 | .609 | 1.19 | 2.25 | 9.56 | 5.31 | 8.13 | .63 | 1.25 | 2.50 | 4.60 | 1.125 |
| % | 1.257 | .672 | 1.19 | 2.25 | 9.56 | 5.31 | 8.13 | .63 | 1.25 | 2.50 | 4.50 | 1.125 |
| 3/4 | 1.545 | .796 | 1.38 | 2.75 | 11.69 | 6.38 | 10.00 | .75 | 1.50 | 3.00 | 7.80 | 1.375 |
| 7/8 | 1.700 | .938 | 1.63 | 3.25 | 13.63 | 7.44 | 11.63 | .94 | 1.75 | 3.38 | 11.70 | 1.50 |
| 1 | 1.975 | 1.062 | 2.00 | 3.75 | 15.63 | 8.50 | 13.38 | 1.03 | 2.00 | 4.00 | 17.8 | 1.75 |
| 1 1% | 2.245 | 1.188 | 2.25 | 4.25 | 17.50 | 9.56 | 15.00 | 1.19 | 2.25 | 4.50 | 29.7 | 2.00 |
| 1 ¼ | 2.525 | 1.328 | 2.50 | 4.75 | 19.44 | 10.63 | 16.50 | 1.19 | 2.50 | 5.00 | 36.0 | 2.25 |
| 1 % | 2.800 | 1.453 | 2.50 | 5.25 | 21.25 | 11.69 | 18.13 | 1.31 | 2.50 | 5.25 | 47.0 | 2.50 |
| 1 ½ | 3.075 | 1.578 | 2.75 | 5.75 | 23.25 | 12.75 | 19.75 | 1.44 | 3.00 | 5.75 | 65.0 | 2.75 |
| 1 ¾ | 3.385 | 1.859 | 3.50 | 6.75 | 27.13 | 14.88 | 23.00 | 1.69 | 3.50 | 7.00 | 93.0 | 3.00 |
| 2 | 3.935 | 2.109 | 3.75 | 8.00 | 31.44 | 17.00 | 26.75 | 1.81 | 4.00 | 8.00 | 145.0 | 3.50 |

CLOSED SWAGE SOCKETS A/S indicates the proper dimension of A after swaging.

| | | | | | | Rope Diameter | | | Di | mensions | s in Inche | es | | | Approx. Weight Ea. | A/S |
|----|-----|---|-----|-----------------------|----------|------------------|-------|-------|------|----------|------------|-------|-------|-------|-----------------------|-------|
| | - | н | к | | - | in Inches | А | В | С | D | Е | Н | К | L | in Pounds | A/5 |
| £. | £71 | | ť | 2 | - N - 1 | 1/4 | .495 | .272 | 1.44 | .750 | .50 | 2.13 | 4.38 | 3.50 | .34 | .438 |
| 8 | | | ŧ | ··· · | | 5/16 | .770 | .339 | 1.69 | .875 | .69 | 3.19 | 5.50 | 4.50 | .79 | .688 |
| - | | | - | , , | , | 3% | .770 | .406 | 1.69 | .875 | .69 | 3.19 | 5.50 | 4.50 | .78 | .688 |
| | | | | | | 7/16 | .982 | .484 | 2.00 | 1.063 | .88 | 4.25 | 6.94 | 5.75 | 1.45 | .875 |
| | | | | | | 1/2 | .982 | .547 | 2.00 | 1.063 | .88 | 4.25 | 6.94 | 5.75 | 1.38 | .875 |
| | | | | | | %16 | 1.257 | .609 | 2.50 | 1.250 | 1.13 | 5.31 | 8.75 | 7.25 | 2.78 | 1.125 |
| | | | | مرجعة بتعتبي والمراجع | S . 1 | 5/8 | 1.257 | .672 | 2.50 | 1.250 | 1.13 | 5.31 | 8.75 | 7.25 | 2.75 | 1.125 |
| 4 | :"] | | | É | :)] _ e | 3/4 | 1.545 | .796 | 3.00 | 1.438 | 1.31 | 6.38 | 10.38 | 8.63 | 5.00 | 1.375 |
| | .] | | - [| <u>e</u> , v., | | 7/8 | 1.700 | .938 | 3.50 | 1.688 | 1.50 | 7.44 | 12.13 | 10.13 | 7.50 | 1.50 |
| ' | | | | | 57 • F | 1 | 1.975 | 1.062 | 4.00 | 2.063 | 1.75 | 8.50 | 13.75 | 11.50 | 11.2 | 1.75 |
| | - | L | | - | | 1 1% | 2.245 | 1.188 | 4.50 | 2.313 | 2.00 | 9.56 | 15.25 | 12.75 | 15.8 | 2.00 |
| | | | | | | 1 ¼ | 2.525 | 1.328 | 5.00 | 2.563 | 2.25 | 10.63 | 17.25 | 14.38 | 23.0 | 2.25 |
| | | | | | | 1 % | 2.800 | 1.453 | 5.25 | 2.563 | 2.25 | 11.69 | 18.88 | 15.75 | 31.0 | 2.50 |
| | | | | | | 1 ½ | 3.075 | 1.578 | 5.50 | 2.813 | 2.50 | 12.75 | 20.38 | 17.00 | 39.0 | 2.75 |
| | | | | | | 1 ¾ | 3.385 | 1.859 | 6.75 | 3.563 | 3.00 | 14.88 | 24.00 | 20.00 | 52.0 | 3.00 |
| | | | | | | 2 | 3.935 | 2.109 | 7.75 | 3.813 | 3.25 | 17.00 | 27.50 | 23.00 | 90.0 | 3.50 |

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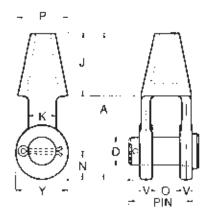
Open Wire Rope Spelter Sockets

Material Specification:

All cast sockets are ASTM, A148 steel, grade 90-60. All sockets are magnetic particle inspected at critical areas. Forged & cast sockets are proof tested on request.

Note: This drawing illustrates one groove used on sockets marked ½" & smaller. Sizes %6"-1½" have two grooves. Sizes 1%" & larger have three grooves.

Tolerances: Dimensions under 4", ±1/4"; over 4", ±1/4"



| Rope | | | | Dimensions | s In Inches | | | | F | Pin | Wt Each |
|------------------|---|--------|-------|--------------------------------|-------------|--|--|---------------|--------|---------------------------------------|-----------|
| Diameter | А | J | К | Ν | 0 | Р | V | Y | Length | D Diameter | In Pounds |
| 1/4 | 4 % | 2 ¼ | 3/4 | 3/4 | 11/16 | 1 % | 5/16 | 1 5⁄16 | 1 ¾ | 11/16 | 1.1 |
| 5/16 - 38 | 4 % | 2 1/4 | 13/16 | 7/8 | 13/16 | 1 ¹ ¹ / ₁₆ | 7/16 | 1 ½ | 2 1/16 | ¹³ / ₁₆ | 1.3 |
| 7/16-1/2 | 5 % | 2 ½ | 1 | 1 1/16 | 1 | 1 % | 1/2 | 1 % | 2 1/16 | 1 | 2.3 |
| %16 - 5% | 6 ³ ⁄ ₄ | 3 | 1 ¼ | 1 ¼ | 1 1/4 | 2 1/4 | 5/8 | 2 1/4 | 2 % | 1 ³ ⁄ ₁₆ | 3.8 |
| 3/4 | 7 15/16 | 3 ½ | 1 ½ | 1 7/16 | 1 ½ | 2 5% | 3/4 | 2 % | 3 ¼ | 1 % | 6 |
| 7/8 | 9 ¼ | 4 | 1 ¾ | 1 34 | 1 3⁄4 | 3 ½ | 7/8 | 3 ¼ | 3 % | 1 % | 10 |
| 1 | 10 % | 4 ½ | 2 | 2 1/16 | 2 | 3 % | 7/8 | 3 ¾ | 4 ½ | 2 | 15.5 |
| 1 1% | 11 ¹³ / ₁₆ | 5 1/16 | 2 % | 2 5/16 | 2 1/4 | 4 | 1 | 4 1⁄8 | 5 | 2 1/4 | 22 |
| 1 ¼-1 % | 13 3/16 | 5 ½ | 2 ¾ | 2 ¹ / ₁₆ | 2 ½ | 4 ¾ | 1 ½ | 4 ¾ | 5 % | 2 ½ | 32 |
| 1 ½ | 15 ½ | 6 | 3 | 3 1⁄8 | 3 | 5 ¼ | 1 ¼ | 5 % | 6 % | 2 ¾ | 46 |
| 1 % | 16 ¼ | 6 ½ | 3 ¼ | 3 ¼ | 3 | 5 ½ | 1 5/16 | 5 ¾ | 6 % | 3 | 55 |
| 1 ¾-1 % | 18 ¼ | 7 ½ | 3 % | 3 ¾ | 3 ½ | 6 % | 1 % | 6 ½ | 7 % | 3 ½ | 85 |
| 2-2 1/8 | 21 ½ | 8 ½ | 4 ¼ | 4 | 4 | 7 % | 1 ¹³ / ₁₆ | 7 | 8 3/4 | 3 3/4 | 125 |
| 2 ¼-2 ¾ | 23 ½ | 9 | 4 ¾ | 4 ½ | 4 ½ | 8 ¼ | 2 ¼ | 7 ¾ | 10 | 4 1⁄4 | 165 |
| 2 ½-2 % | 25 ½ | 9 ¾ | 4 % | 5 | 5 | 9 ¼ | 2 % | 8 ½ | 11 | 4 ¾ | 252 |
| 2 34-2 7/8 | 27 ¼ | 11 | 4 % | 5 ¼ | 5 ¼ | 10 ¾ | 2 % | 9 | 12 | 5 | 315 |
| 3-3 1/8 | 29 | 12 | 5 ¼ | 5 ¾ | 5 ¾ | 11 ½ | 3 | 9 ½ | 12 ¾ | 5 ¼ | 380 |
| 3 ¼-3 % | 30 % | 13 | 5 ¾ | 6 ½ | 6 ¼ | 12 ¼ | 3 1⁄8 | 10 | 13 ½ | 5 ½ | 435 |
| 3 1⁄2-3 5⁄8 | 33 ¼ | 14 | 6 ¼ | 6 ¾ | 6 ¾ | 13 | 3 ¼ | 10 ¾ | 14 ¼ | 6 | 563 |
| 3 ¾-4 | 36 ¼ | 15 | 7 | 7 3/4 | 7 ½ | 14 ½ | 3 ½ | 12 ½ | 15 ½ | 7 | 785 |

STANDARD OPEN WIRE ROPE SOCKETS

Larger Sizes Available Upon Request.

5/16" - 21/2" in accordance with Federal Specification RR-S-450D, Amendment 1.

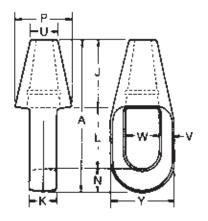
leets Federal Specifications RR-S-550 (latest revision).

Closed Wire Rope Spelter Sockets

Material Specification:

All cast sockets are ASTM A148 steel, grade 90-60. All sockets are magnetic particle inspected at critical areas. Forged & cast sockets are proof tested on special order.

- Note: This drawing illustrates one groove used on sockets ½" & smaller. Sizes %"-1½" have two grooves. Sizes 15⁄° & larger have three grooves.
- Tolerances: Dimensions under 4", ±½"; over 4" ±½". "U", "W", "L", & "N" are minimum dimensions.



Meets Federal Specifications RR-S-550.

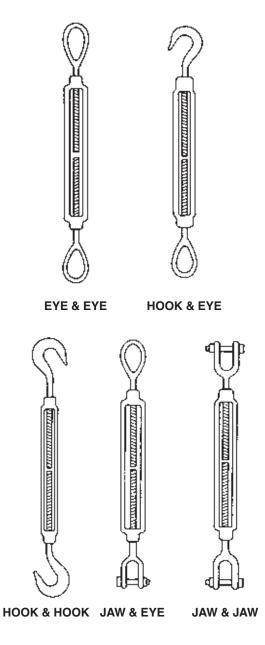
STANDARD CLOSED WIRE ROPE SOCKETS

| Rope | | | | Dimension | s In Inches | 6 | | | Weight Each |
|----------|-------|-----|-----|-------------------|-------------------|-------------------|---------------------------------|------|-------------|
| Diameter | А | J | K | Ν | Р | V | W | Y | In Pounds |
| 1/4 | 4 ½ | 2 ¼ | ½ | 1/2 | 1 %6 | 5/16 | ¹³ / ₁₆ | 1 ½ | 0.7 |
| 5/16-3/8 | 4 % | 2 ¼ | 1½6 | 5% | 1 ¹ %6 | 3/8 | ¹⁵ / ₁₆ | 1 ¹‰ | 1.1 |
| 7/16-3/2 | 5 % | 2 ½ | % | 11/16 | 1 % | 7/16 | 1 % | 2 | 1.5 |
| 9/16-5/6 | 6 % | 3 | 1 | 13/16 | 2 % | 5/8 | 1 % | 2 % | 3.0 |
| 34 | 7 % | 3 ½ | 1 ¼ | 1 ½6 | 2 ¾ | ¹¹ /16 | 1 % | 3 | 4.5 |
| 76 | 8 ¾ | 4 | 1 ½ | 1 ¼ | 3 ¼ | 78 | 1 % | 3 % | 7 |
| 1 | 9 % | 4 ½ | 1 ¾ | 1 % | 3 ¾ | ¹⁵ /16 | 2 ¼ | 4 ½ | 11 |
| 1 1⁄8 | 11 | 5 | 2 | 1 ½ | 4 ½ | 1 | 2 ½ | 4 ½ | 16 |
| 1 ¼-1 ¾ | 12 ⅓ | 5 ½ | 2 ¼ | 1 % | 4 ¾ | 1 ½ | 2 ¾ | 5 | 22 |
| 1 ½ | 13 ⁵‰ | 6 | 2 ½ | 1 ¹⁵ % | 5 ¼ | 1 ½ | 3 ⅛ | 5 % | 28 |
| 1 % | 15 ⅓ | 6 ½ | 2 ¾ | 2 % | 5 ½ | 1 ¼ | 3 ¼ | 5 ¾ | 36 |
| 1 ¾-1 ¾ | 17 ¼ | 7 ½ | 3 | 2 % | 6 ¾ | 1 ½ | 3 1½ | 6 ¾ | 58 |
| 2-2 ½ | 19 ½ | 8½ | 3 ¼ | 2 ½ | 7 % | 1 % | 3 ²⁵ / ₃₂ | 7 % | 80 |
| 2 ¼-2 ¾ | 21 % | 9 | 3 % | 2 ½ | 8 ¼ | 1 ¾ | 4 %2 | 8 ½ | 106 |
| 2 ½-2 ‰ | 23 ½ | 9¾ | 4 | 3 ½ | 9 ¼ | 2 | 5 ½ | 9 ½ | 140 |
| 2 ¾-2 ‰ | 25 % | 11 | 4 % | 3 ½ | 10 ¾ | 2 ¼ | 6 ½ | 10 ¾ | 220 |
| 3-3 ½ | 27 | 12 | 5 ¼ | 3 ¼ | 11 ½ | 2 ½ | 6 ¾ | 11 ½ | 275 |
| 3 ¼-3 ¾ | 29 ¼ | 13 | 5 ¾ | 4 | 12 ¼ | 2 ¾ | 7 ¼ | 12 ¼ | 315 |
| 3 ½-3 ‰ | 31 | 14 | 6 ¼ | 4 | 13 | 3 | 7 ¾ | 13 | 400 |
| 3 ¾-4 | 33 ¼ | 15 | 7 | 4 ¼ | 14 ½ | 3 ½ | 8 ¼ | 14 | 540 |

Larger Sizes Available Upon Request.

 $\ensuremath{^{5\!\!/\!6}}$ - 2½" in accordance with Federal Specification RR-S-450D, Amendment 1

Turnbuckles



- 1st— Diameter of thread.
- 2nd— Length of take-up.
- 3rd— Self colored or galvanized.
- 4th— The type of end fittings desired.

Meets Federal Specification FF-T-791 (latest revision)

| Diameter (A) and | Average Overall Length in | WEIGH | IT POUNDS | EACH |
|---------------------|------------------------------|-----------|-----------|---------|
| Takeup (B) | Closed Position | With Eyes | Jaw | Jaw |
| Inches | Inches | or Hooks | and Eye | and Jaw |
| 1⁄4 X 4 | 8 1/4 | .31 | .33 | .35 |
| 5∕16 X 4½ | 9 % ₁₆ | .50 | .53 | .58 |
| % X 6 | 11 % | .79 | .86 | .93 |
| ½ X 6 | 13 5⁄46 | 1.42 | 1.54 | 1.66 |
| 9 | 16 5∕46 | 1.83 | 1.95 | 2.07 |
| 12 | 19 5∕16 | 2.01 | 2.19 | 2.37 |
| % X 6 | 15 ½ | 2.61 | 2.81 | 3.02 |
| 9 | 18 ½ | 2.81 | 3.01 | 3.22 |
| 12 | 21 ½ | 3.12 | 3.32 | 3.53 |
| 18 | 28 ½ | 6.00 | 6.20 | 6.40 |
| ¾ X 6 | 17 1/16 | 3.60 | 3.87 | 4.18 |
| 9 | 20 1/6 | 4.69 | 4.98 | 5.27 |
| 12 | 23 1/16 | 5.07 | 5.36 | 5.65 |
| 18 | 29 1/16 | 6.21 | 6.51 | 6.81 |
| % X 12 | 24 % | 8.10 | 8.75 | 9.40 |
| 18 | 30 % | 9.93 | 10.60 | 11.20 |
| 1 X 6 | 20 % | 8.75 | 9.15 | 9.50 |
| 12 | 26 % | 10.40 | 11.20 | 12.10 |
| 18 | 32 % | 13.20 | 14.10 | 14.90 |
| 24 | 38 % | 15.90 | 16.80 | 17.60 |
| 1 ¼ X 12 | 29 % | 19.00 | 20.50 | 22.00 |
| 18 | 35 % | 23.40 | 24.90 | 26.40 |
| 24 | 41 % | 27.80 | 29.30 | 30.90 |
| 1 ½ X 12 | 32 % | 26.10 | 28.20 | 30.30 |
| 18 | 38 % | 37.50 | 39.60 | 41.80 |
| 24 | 44 % | 43.10 | 45.20 | 47.30 |
| 36 | 58 % | 52.60 | 54.80 | 57.00 |
| 1 ¾ X 18 | 41 ¾ | 45.00 | 48.80 | 52.40 |
| 24 | 47 ¾ | 52.20 | 56.00 | 59.60 |
| 2 X 24 | 51 ¾ | 89.80 | 94.60 | 100.00 |
| 2 ½ X 24 | 58 ½ | 140.00 | 150.00 | 161.00 |
| 2 ¾ X 24 | 61 ½ | 194.00 | 200.00 | 216.00 |

Larger sizes available per request.

Lock nuts available per request.

Jaw end fittings sizes $\ensuremath{\rlap|}{4}\ensuremath{"}$ through $\ensuremath{\below{\ensuremath{"}}}\ensuremath{"}$ have bolts and nuts.

Jaw end fittings sizes ¾" through 2 ¾" have pins and cotters.

Large jaw sizes available with bolts and nuts upon special request.

2

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UNC Swivel Hoist Rings

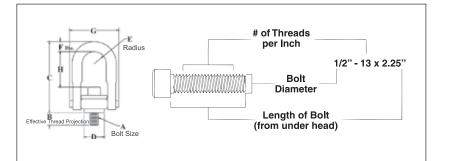


HR-125

2



- Top washer has the following features:
 - The Working Load Limit and Recommended Torque value are permanently stamped into each washer.
 - Washer is color coded for easy identification: Red UNC thread. •
- Individually Proof Tested to 2-1/2 times Working Load Limit.
- Bolt specification is an Alloy socket head cap screw to ASTM A 574.
- All threads listed are UNC.
- BOLT SIZE IDENTIFICATION: The size of the bolt will be stated as in the drawing below. Illustration shows meaning of each dimension given.
- Frame 2 and larger are **RFID EQUIPPED**. •





HR-125 **UNC Threads**

| | | | | | | | nsions in.) | ; | | | | |
|----------------------|---------------------|-------------------------------------|--------------------------|--------------------|--|-------|----------------|-------------|---------------|-------|------|--------------------------|
| Frame Size No. | HR-125 Stock No. | Working Load Limit (Ibs.)* | Torque in Ft. Lbs. | Bolt Size A ‡ | Effective Thread Projection Length B | с | D | Radius E | Diameter F | G | н | Weight Each (Ibs.) |
| 1 † | 1016887 | 800 | 7 | 5/16 - 18 x 1.50 | .58 | 2.72 | .97 | .46 | .34 | 1.87 | 1.12 | .37 |
| 1† | 1016898 | 1000 | 12 | 3/8 - 16 x 1.50 | .58 | 2.72 | .97 | .46 | .34 | 1.87 | 1.05 | .39 |
| 2 | 1016909 | 2500 | 28 | 1/2 - 13 x 2.00 | .70 | 4.85 | 1.96 | .87 | .75 | 3.35 | 2.29 | 2.33 |
| 2 † | 1016912 | 2500 | 28 | 1/2 - 13 x 2.50 | 1.20 | 4.85 | 1.96 | .87 | .75 | 3.35 | 2.29 | 2.36 |
| 2 | 1016920 | 4000 | 60 | 5/8 - 11 x 2.00 | .70 | 4.85 | 1.96 | .87 | .75 | 3.35 | 2.16 | 2.41 |
| 2 † | 1016924 | 4000 | 60 | 5/8 - 11 x 2.75 | 1.45 | 4.85 | 1.96 | .87 | .75 | 3.35 | 2.16 | 2.47 |
| 2 | 1016931 | 5000 | 100 | 3/4 - 10 x 2.25 | .95 | 4.85 | 1.96 | .87 | .75 | 3.35 | 2.04 | 2.52 |
| 2† | 1016935 | 5000 | 100 | 3/4 - 10 x 2.75 | 1.45 | 4.85 | 1.96 | .87 | .75 | 3.35 | 2.04 | 2.59 |
| 3 | 1016942 | 7000 ** | 100 | 3/4 - 10 x 2.75 | .89 | 6.57 | 2.96 | 1.36 | .94 | 4.87 | 2.97 | 6.72 |
| 3† | 1016946 | 7000 ** | 100 | 3/4 - 10 x 3.50 | 1.64 | 6.57 | 2.96 | 1.36 | .94 | 4.87 | 2.97 | 6.81 |
| 3 | 1016953 | 8000 | 160 | 7/8 - 9 x 2.75 | .89 | 6.57 | 2.96 | 1.36 | .94 | 4.87 | 2.84 | 6.84 |
| 3† | 1016957 | 8000 | 160 | 7/8 - 9 x 3.50 | 1.64 | 6.57 | 2.96 | 1.36 | .94 | 4.87 | 2.84 | 6.96 |
| 3 | 1016964 | 10000 | 230 | 1 - 8 x 3.00 | 1.14 | 6.57 | 2.96 | 1.36 | .94 | 4.87 | 2.72 | 7.09 |
| 3† | 1016969 | 10000 | 230 | 1 - 8 x 4.00 | 2.14 | 6.57 | 2.96 | 1.36 | .94 | 4.87 | 2.72 | 7.31 |
| 4 | 1016975 | 15000 | 470 | 1-1/4 - 7 x 4.50 | 2.21 | 8.72 | 3.71 | 1.75 | 1.19 | 6.18 | 3.93 | 14.51 |
| 5 | 1016986 | 24000 | 800 | 1-1/2 - 6 x 6.75 | 3.00 | 12.55 | 4.71 | 2.39 | 1.75 | 8.48 | 5.52 | 37.73 |
| 5 | 1016997 | 30000 | 1100 | 2 - 4-1/2 x 6.75 | 3.00 | 12.55 | 4.71 | 2.39 | 1.75 | 8.48 | 5.02 | 40.69 |
| 6 | 1017001 | 50000 | 2100 | 2-1/2 - 4 x 8.0 | 4.00 | 16.88 | 5.75 | 3.00 | 2.25 | 11.00 | 8.03 | 88.00 |
| 7 | 1017005 | 75000 | 4300 | 3 - 4 x 10.5 | 5.00 | 19.50 | 7.25 | 3.75 | 2.75 | 14.16 | 8.50 | 166.00 |
| 8 | 1017009 | 100000 | 5100 | 3-1/2 - 4 x 13.0 # | 7.00 | 22.09 | 7.75 | 4.00 | 3.25 | 15.91 | 9.28 | 265.00 |

*Ultimate Load is 5 times the Working Load Limit. ** Ultimate Load is 4.5 times the Working Load Limit for 7000# Hoist Ring when tested in 90 degree orientation.

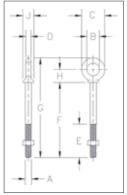
t Long Bolts are designed to be used with soft metal (i.e., aluminum) workpiece. While the long bolts may also be used with ferrous metal (i.e., steel & iron) workpiece, short bolts are designed for ferrous workpiecesonly.
t Bolt specification is an Alloy socket head cap screw to ASTM A 574.
Hex head bolt used on Frame 8 (100,000lb.) Hoist Ring.



G-277



- Forged steel, Quenched & Tempered.
- Fatigue rated at 1-1/2 times the Working Load Limit at 20,000 cycles.
- Working Load Limits shown are for in-line pull. For angle loading, see applications and warning section.
- Meets or exceeds all requirements of ASME B30.26, including identification, ductility, design factor, proof load, and temperature requirements. Importantly, these bolts meet other critical performance requirements, including fatigue life, impact properties, and material traceability not addressed by ASME B30.26.
- All bolts hot-dip galvanized after threading (UNC).
- Furnished with standard hot-dip galvanized, heavy hex nuts.



G-277 Shoulder Nut Eye Bolts

| Shank Diameter & Length | | Working Load Limit | Weight Each | | | | Dim | ensions | s (in) | | | |
|----------------------------|-----------|-----------------------|----------------|------|------|------|------|---------|--------|-------|------|------|
| (in) | Stock No. | (lb) | (lb) | Α | В | С | D | E | F | G | Н | J |
| 5/16 x 2-1/4 | 1045050 | 1200 | 0.13 | .31 | .62 | 1.12 | .25 | 1.50 | 2.25 | 3.50 | .69 | .56 |
| 5/16 x 4-1/4 | 1045078 | 1200 | 0.19 | .31 | .62 | 1.12 | .25 | 2.50 | 4.25 | 5.50 | .69 | .56 |
| 3/8 x 2-1/2 | 1045096 | 1550 | 0.21 | .38 | .75 | 1.38 | .31 | 1.50 | 2.50 | 3.97 | .78 | .66 |
| 3/8 x 4-1/2 | 1045112 | 1550 | 0.25 | .38 | .75 | 1.38 | .31 | 2.50 | 4.50 | 5.97 | .78 | .66 |
| 1/2 x 3-1/4 | 1045130 | 2600 | 0.43 | .50 | 1.00 | 1.75 | .38 | 1.50 | 3.25 | 5.12 | 1.00 | .91 |
| 1/2 x 6 | 1045158 | 2600 | 0.57 | .50 | 1.00 | 1.75 | .38 | 3.00 | 6.00 | 7.88 | 1.00 | .91 |
| 5/8 x 4 | 1045176 | 5200 | 0.69 | .62 | 1.25 | 2.25 | .50 | 2.00 | 4.00 | 6.44 | 1.31 | 1.12 |
| 5/8 x 6 | 1045194 | 5200 | 1.02 | .62 | 1.25 | 2.25 | .50 | 3.00 | 6.00 | 8.44 | 1.31 | 1.12 |
| 3/4 x 4-1/2 | 1045210 | 7200 | 1.45 | .75 | 1.50 | 2.75 | .62 | 2.00 | 4.50 | 7.44 | 1.56 | 1.38 |
| 3/4 x 6 | 1045238 | 7200 | 1.68 | .75 | 1.50 | 2.75 | .62 | 3.00 | 6.00 | 8.94 | 1.56 | 1.38 |
| 7/8 x 5 | 1045256 | 10600 | 2.25 | .88 | 1.75 | 3.25 | .75 | 2.50 | 5.00 | 8.46 | 1.84 | 1.56 |
| 1 x 6 | 1045292 | 13300 | 3.66 | 1.00 | 2.00 | 3.75 | .88 | 3.00 | 6.00 | 9.97 | 2.09 | 1.81 |
| 1 x 9 | 1045318 | 13300 | 4.23 | 1.00 | 2.00 | 3.75 | .88 | 4.00 | 9.00 | 12.97 | 2.09 | 1.81 |
| 1-1/4 x 8 | 1045336 | 21000 | 6.50 | 1.25 | 2.50 | 4.50 | 1.00 | 4.00 | 8.00 | 12.72 | 2.47 | 2.28 |
| 1-1/4 x 12 | 1045354 | 21000 | 7.95 | 1.25 | 2.50 | 4.50 | 1.00 | 4.00 | 12.00 | 16.72 | 2.47 | 2.28 |
| 1-1/2 x 15 | 1045372 | 24000 | 14.25 | 1.50 | 3.00 | 5.50 | 1.25 | 6.00 | 15.00 | 20.75 | 3.00 | 2.75 |

5:1 Design Factor. Maximum Proof Load is 2 times the Working Load Limit.



APPLICATION AND WARNING INFORMATION SECTION 17

CE

Forged steel - Quenched & Tempered. S-276 Shoulder Rivet Eye Bolts • Shank Dia. & Weight Dimensions (in) E H Length Per 100 (in) Stock No. (lb) Α в С D Е F G н 1/2 x 3-1/4 1045862 33.00 .50 3.25 4.25 5.12 1.00 1.75 .38 .91 3/4 x 4-1/2 1045942 125.00 2.75 1.38 .75 4.50 6.06 7.44 1.50 .62 3/4 x 6 1045960 150.00 .75 6.00 7.56 8.94 1.50 2.75 .62 1.38 7/8 x 5 1045988 200.00 .88 5.00 6.84 8.46 1.75 3.25 .75 1.56 1046022 298.00 1 0 0 2 00 88 1×6 6 00 8 0 9 9 97 3 75 1 81 1 x 9 1046040 425.00 1.00 9.00 11.09 12.97 2.00 3.75 .88 1.81 D 1-1/4 x 8 1046068 654.00 1.25 8.00 10.47 12.72 2.50 4.50 1.00 2.28 1-1/4 x 12 1046086 4.50 712 00 1 25 12 00 14 47 16.72 2 50 1 00 2 28 1-1/2 x 15 1046102 1425.00 1.50 15.00 18.00 20.75 3.00 5.50 1.25 2.75 OUIC-CHECK* Ga Q/

A



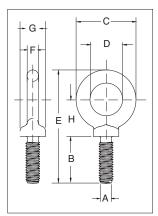
- S-279 / M-279
- C

Crosby

- Working Load Limits shown are for in-line pull. For angle loading, see Warnings & Applications.
 Fatigue rated at 1-1/2 times the Working Load Limit at 20,000 cycles.
 - cycles.
 Recommended for in-line pull.
 S-279 threaded UNC.
 - M-279 metric threaded.

• Forged steel - Quenched & Tempered.

 Meets or exceeds all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, these bolts meet other critical performance requirements including fatigue life, impact properties and material traceability, not addressed by ASME B30.26.



S-279 UNC Shoulder Type Machinery Eye Bolts

| | | Working Load | Weight | | | Din | nensions | (in) | | | |
|---------------|-----------|---------------|-----------------|--------------|------|------|----------|-------|------|------|------|
| Size (in) | Stock No. | Limit (lb) | Per 100 (lb) | A* Thread | в | с | D | Е | F | G | н |
| 3/8 x 1-1/4 | 9900208 | 1550 | 15.00 | 3/8 - 16 | 1.27 | 1.62 | 1.00 | 3.07 | .31 | .69 | 1.05 |
| 1/2 x 1-1/2 | 9900217 | 2600 | 28.00 | 1/2 - 13 | 1.53 | 1.95 | 1.19 | 3.70 | .38 | .91 | 1.27 |
| 5/8 x 1-3/4 | 9900226 | 5200 | 55.00 | 5/8 - 11 | 1.79 | 2.38 | 1.38 | 4.45 | .50 | 1.13 | 1.53 |
| 3/4 x 2 | 9900235 | 7200 | 96.00 | 3/4 - 10 | 2.05 | 2.76 | 1.50 | 5.07 | .63 | 1.38 | 1.71 |
| 7/8 x 2-1/4 | 9900244 | 10600 | 154.00 | 7/8 - 9 | 2.31 | 3.25 | 1.75 | 5.87 | .75 | 1.56 | 2.00 |
| 1 x 2-1/2 | 9900253 | 13300 | 238.00 | 1-8 | 2.57 | 3.76 | 2.00 | 6.66 | .88 | 1.81 | 2.30 |
| 1-1/8 x 2-3/4 | 9900257 | 15000 | 320.00 | 1-1/8 - 7 | 2.75 | 4.19 | 2.25 | 7.20 | .97 | 2.06 | 2.35 |
| 1-1/4 x 3 | 9900262 | 21000 | 399.00 | 1-1/4 - 7 | 3.09 | 4.50 | 2.50 | 7.95 | 1.00 | 2.28 | 2.73 |
| 1-1/2 x 3-1/2 | 9900271 | 24000 | 720.00 | 1-1/2 - 6 | 3.60 | 5.50 | 3.00 | 9.49 | 1.25 | 2.75 | 3.28 |
| 1-3/4 x 3-3/4 | 9900280 | 34000 | 1040.00 | 1-3/4 - 5 | 3.75 | 6.26 | 3.50 | 10.48 | 1.38 | 3.00 | 3.60 |
| 2 x 4 | 9900289 | 42000 | 1880.00 | 2-4-1/2 | 4.00 | 7.62 | 4.00 | 12.31 | 1.81 | 3.38 | 4.50 |
| 2-1/2 x 5 | 9900298 | 65000 | 3250.00 | 2-1/2 - 4 | 5.00 | 8.76 | 4.50 | 14.88 | 2.12 | 4.25 | 5.50 |

5:1 Design Factor. Maximum Proof Load is 2 times the Working Load Limit. *All bolts threaded UNC.



APPLICATION AND WARNING INFORMATION SECTION 17

M-279 Metric Shoulder Type Machinery Eye Bolts

| | | Working Load | | | | Dime | nsions (I | nm) | | | |
|----------------------|--------------------|--------------------------|---------------------|--------------|------|------|-----------|------|------|------|------|
| Size (mm) | Stock No. | Limit (kg) | Weight Each (kg) | A* Thread | в | с | D | Е | F | G | н |
| M6 x 13 | 1045753 | 200 | .03 | M6 x 1.0 | 13.0 | 28.7 | 19.1 | 47.0 | 4.9 | 13.5 | 19.6 |
| M8 x 13 | 1045789 | 400 | .05 | M8 x 1.25 | 13.0 | 35.1 | 22.4 | 54.6 | 6.4 | 15.0 | 24.1 |
| M10 x 17 | 1045833 | 640 | .07 | M10 x 1.5 | 17.0 | 41.1 | 25.4 | 64.3 | 7.9 | 17.5 | 26.5 |
| M12 x 20.5 | 1045869 | 1000 | .11 | M12 x 1.75 | 20.5 | 49.5 | 30.2 | 77.7 | 9.7 | 23.1 | 32.8 |
| M16 x 27 | 1045913 | 1800 | .25 | M16 x 2.0 | 27.0 | 60.5 | 35.1 | 96.0 | 12.7 | 28.7 | 38.9 |
| M20 x 30 | 1045995 | 2500 | .42 | M20 x 2.5 | 30.0 | 70.0 | 38.1 | 108 | 16.0 | 35.1 | 43.4 |
| M24 x 36 | 1046029 | 4000 | 1.05 | M24 x 3.0 | 36.0 | 95.5 | 51.0 | 142 | 22.4 | 46.0 | 58.4 |
| M27 x 69.8 | 1046038 | 5000 | 1.42 | M27 x 3.0 | 69.8 | 107 | 57.1 | 183 | 24.6 | 52.3 | 59.7 |
| M30 x 45 | 1046075 | 6000 | 1.77 | M30 x 3.5 | 45.0 | 114 | 63.5 | 171 | 25.4 | 58.0 | 69.3 |
| M36 x 54 | 1046109 | 8500 | 3.12 | M36 x 4.0 | 54.0 | 140 | 76.0 | 207 | 31.8 | 70.0 | 83.3 |
| M42 x 95.2 | 1046118 | 14000 | 4.58 | M42 x 4.5 | 95.2 | 159 | 88.9 | 266 | 35.0 | 76.2 | 91.4 |
| M48 x 102 | 1046127 | 17300 | 8.71 | M48 x 5.0 | 102 | 194 | 101 | 313 | 46.0 | 85.9 | 114 |
| M64 x 127 | 1046136 | 29500 | 14.74 | M64 x 6.0 | 127 | 223 | 114 | 378 | 53.8 | 108 | 140 |
| 5:1 Design Factor. N | Maximum Proof Load | d is 2 times the Working | Load Limit. | | | | | | | | OF |



L-320CN Frame Size D-N



- Available in carbon steel and alloy steel.
- Eye hooks are load rated (marked with the Working Load Limit).
- Fatigue rated to 20,000 cycles at 1.5 times the Working Load Limit.
- Chemical analysis and tensile tests performed on each PIC to verify chemistry and mechanical properties.
- Hooks incorporate QUIC-CHECK[®] deformation and angle indicators. (For detailed information, see the Crosby Value Added page at the beginning of this section.)

L-320C Frame Size O-T



| Load Rated | Filiges Rithi | TA | QUIC-CHECK* | QAT | APPLICATION AND WARNING INFORM |
|------------|---------------|----|-------------|-----|--------------------------------|
| | | | | | |

| Load | rking Limit t) | | | Eye Hook Stock No. | | | | Replacement Latch Kits | |
|--------|-------------------------|--------------------|-------------------------------------|-----------------------------|------------------------------------|------------------------|---------------------|---------------------------|------------------|
| Carbon | Alloy | Hook ID Code | Carbon L-320C L-320CN S.C. | Carbon GL-320CN Galv. | Alloy L-320A L-320AN S.C. | Weight Each (Ib) | S-4320 Stock No. | PL Stock No. | SS-40 Stock N |
| 0.75 | 1 | †D | 1022205 | 1022208 | 1022380 | .61 | 1096325 | - | - |
| 1 | 1.5 | †F | 1022216 | 1022219 | 1022391 | .89 | 1096374 | - | - |
| 1.5 | 2 | †G | 1022227 | 1022230 | 1022402 | 1.44 | 1096421 | - | - |
| 2 | 3 | †H | 1022238 | 1022241 | 1022413 | 2.07 | 1096468 | - | - |
| 3 | 5 | †I | 1022246 | 1022249 | 1022424 | 4.30 | 1096515 | 1092000 | - |
| 5 | 7 | †J | 1022260 | 1022262 | 1022435 | 8.30 | 1096562 | 1092001 | - |
| 7.5 | 11 | †K | 1022271 | 1022274 | 1022446 | 15.00 | 1096609 | 1092002 | - |
| 10 | 15 | †L | 1022282 | 1022285 | 1022457 | 20.77 | 1096657 | 1092003 | - |
| 15 | 22 | †N | 1022293 | 1022296 | 1022468 | 39.50 | 1096704 | 1092004 | - |
| 20 | 30 | 0 | 1022302 | - | 1022477 | 60.00 | - | 1093716 | 109016 |
| 25 | 37 | Р | 1023306 | - | 1023565 | 105.00 | - | 1093717 | 109018 |
| 40 | 45 | S | 1023324 | - | 1023583 | 148.00 | - | 1093718 | 109018 |
| 40 | 60 | Т | 1023342 | - | 1023609 | 228.00 | - | 1093719 | 109020 |

All carbon hooks have a 5:1 Design Factor. Alloy eye hooks 1t through 22t have a 5:1 Design Factor. Alloy eye hooks 30t through 60t have a 4.5:1 Design Factor. For a carbon through 22t alloy eye hooks, Proof Load is 2.5 times Working Load Limit. For 20t carbon through 60t alloy eye hooks, Proof Load is 2 times Working Load Limit.

L-320N / L-320 Eye Hooks



HOOKS & SWIVELS

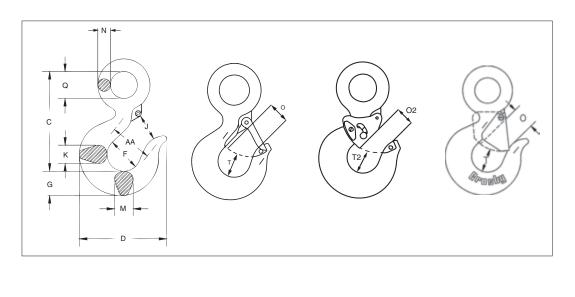
L-320AN Frame Size D-N

Crosby



L-320AN Frame Size O-T





QUIC-CHECK

Load Rated Frig

Ren TA

G& APPLICATION

APPLICATION AND WARNING INFORMATION SECTION 17

L-320N / L-320 Eye Hooks

| Hook | | | | | | | | ensions (in) | | | | | | |
|-------------|-------|-------|------|------|------|------|------|-----------------|------|-------|------|------|-------|-------|
| ID Code* | С | D | F | G | J | К | М | Ν | 0† | O2 †† | Q | Τ† | T2 †† | AA** |
| †D | 3.34 | 2.83 | 1.25 | .73 | .90 | .63 | .63 | .36 | .89 | - | .75 | .87 | - | 1.50 |
| †F | 3.81 | 3.11 | 1.38 | .84 | .93 | .71 | .71 | .42 | .91 | - | .91 | .98 | - | 2.00 |
| †G | 4.14 | 3.53 | 1.50 | 1.00 | 1.00 | .88 | .88 | .55 | 1.00 | - | 1.13 | 1.03 | - | 2.00 |
| †H | 4.69 | 3.97 | 1.63 | 1.13 | 1.13 | .94 | .94 | .58 | 1.09 | - | 1.25 | 1.16 | - | 2.00 |
| †I | 5.77 | 4.81 | 2.00 | 1.44 | 1.47 | 1.31 | 1.31 | .72 | 1.36 | 1.00 | 1.56 | 1.53 | 1.50 | 2.50 |
| †J | 7.37 | 6.27 | 2.50 | 1.81 | 1.75 | 1.66 | 1.66 | .90 | 1.61 | 1.31 | 2.00 | 1.96 | 1.88 | 3.00 |
| †K | 9.07 | 7.45 | 3.00 | 2.25 | 2.29 | 1.88 | 1.63 | 1.11 | 2.08 | 1.81 | 2.44 | 2.47 | 2.25 | 4.00 |
| †L | 10.08 | 8.30 | 3.25 | 2.59 | 2.50 | 2.19 | 1.94 | 1.27 | 2.27 | 2.00 | 2.84 | 2.62 | 2.31 | 4.00 |
| †N | 12.53 | 10.30 | 4.25 | 3.00 | 3.30 | 2.69 | 2.38 | 1.56 | 3.02 | 2.75 | 3.50 | 2.83 | 2.56 | 5.00 |
| 0 | 14.06 | 13.62 | 5.00 | 3.62 | 4.00 | 3.00 | 3.00 | 1.75 | 3.25 | - | 3.50 | 3.44 | - | 6.50 |
| Р | 18.19 | 14.06 | 5.38 | 4.56 | 4.25 | 3.75 | 3.19 | 2.00 | 3.00 | - | 4.50 | 3.88 | - | 7.00 |
| S | 20.12 | 15.44 | 6.00 | 5.06 | 4.75 | 4.50 | 3.25 | 2.18 | 3.38 | - | 4.94 | 4.75 | - | 8.00 |
| Т | 23.72 | 18.50 | 7.00 | 6.00 | 5.75 | 5.50 | 3.91 | 2.53 | 4.12 | - | 5.69 | 5.69 | - | 10.00 |

*Deformation indicators. †3/4t carbon though 22t alloy dimensions shown are for S-4320 Latch Kits. Dimensions for "0" frame size and larger are for PL Latch Kits. ††Dimensions are for PL-N latch kits.

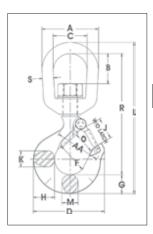


L-322CN / L-322AN



- Forged, Quenched & Tempered.
- Suitable for positioning of the hook before the load is lifted.
- Swivel hooks are load rated.
- Proper design, careful forging, and precision controlled quench and tempering gives maximum strength without excessive weight and bulk.
- Low profile hook tip designed to utilize Crosby S-4320 or PL-N latch kit.
- Hooks incorporate QUIC-CHECK[®] deformation and angle indicators. (For detailed information, see the Crosby Value Added page at the beginning of this section.)

Use in corrosive environment requires shank and nut inspection in accordance with ASME B30.10-1.10.4(b)(5)(c).



| Load Rated | Filiger Rebi | TA | QUIC-CHECK* | GAT | APPLICATION AND WARNING INFORMATION SECTION 17 |
|------------|--------------|----|-------------|-----|---|
|------------|--------------|----|-------------|-----|---|

L-322CN / L-322AN Swivel Hooks with Latch

| Work Load L (t) | imit | Hook | L-322CN | L-322AN | Weight | | | | | | | Dir | nensi (in) | ons | | | | | | | Rep. Latch |
|-----------------------|-------|-------------|--------------|--------------|--------------|------|------|------|-------|------|------|------|---------------|------|-------|------|------|-------|------|------|---------------|
| Carbon | Alloy | ID Code* | Stock No. | Stock No. | Each (lb) | А | в | с | D | F | G | н | J | к | L | М | 0† | R | s | AA* | Stock No. |
| 0.75 | 1 | D | 1048603 | 1048807 | .75 | 2.00 | .82 | 1.25 | 2.86 | 1.25 | .73 | .81 | .93 | .63 | 5.66 | .63 | .89 | 4.55 | .38 | 1.50 | 1096325 |
| 1 | 1.5 | F | 1048612 | 1048816 | 1.25 | 2.50 | 1.31 | 1.50 | 3.15 | 1.38 | .84 | .94 | .97 | .71 | 6.71 | .71 | .91 | 5.37 | .50 | 2.00 | 1096374 |
| 1.5 | 2 | G | 1048621 | 1048825 | 2.25 | 3.00 | 1.50 | 1.75 | 3.59 | 1.50 | 1.00 | 1.16 | 1.06 | .88 | 7.75 | .88 | 1.00 | 6.12 | .63 | 2.00 | 1096421 |
| 2 | 3 | Н | 1048630 | 1048834 | 2.30 | 3.00 | 1.50 | 1.75 | 4.00 | 1.62 | 1.13 | 1.31 | 1.19 | .94 | 8.25 | .94 | 1.09 | 6.50 | .63 | 2.00 | 1096468 |
| 3 | 5 | I | 1048639 | 1048840 | 4.96 | 3.50 | 1.64 | 2.00 | 4.84 | 2.00 | 1.44 | 1.63 | 1.50 | 1.31 | 9.69 | 1.13 | 1.36 | 7.50 | .75 | 2.50 | 1096515 |
| 5 | 7 | J | 1048648 | 1048859 | 10.29 | 4.56 | 2.29 | 2.50 | 6.28 | 2.50 | 1.81 | 2.06 | 1.78 | 1.66 | 12.47 | 1.44 | 1.61 | 9.63 | 1.00 | 3.00 | 1096562 |
| 7.5 | 11 | K | 1048657 | 1048868 | 19.40 | 5.00 | 2.44 | 2.75 | 7.54 | 3.00 | 2.25 | 2.63 | 2.41 | 1.88 | 14.75 | 1.63 | 2.08 | 11.37 | 1.13 | 4.00 | 1096609 |
| 10 | 15 | L | 1048666 | 1048880 | 23.25 | 5.62 | 2.48 | 3.12 | 8.34 | 3.25 | 2.59 | 2.94 | 2.62 | 2.19 | 16.40 | 1.94 | 2.27 | 12.25 | 1.25 | 4.00 | 1096657 |
| 15 | 22 | Ν | 1048675 | 1048889 | 47.00 | 7.10 | 3.76 | 4.10 | 10.34 | 4.25 | 3.00 | 3.50 | 3.41 | 2.69 | 21.34 | 2.38 | 3.02 | 16.71 | 1.50 | 5.00 | 1096704 |
| - | 30 | 0 | - | 1048898 | 70.50 | 7.10 | 3.76 | 4.10 | 13.62 | 5.00 | 3.61 | 4.63 | 4.00 | 3.00 | 23.25 | 3.00 | 3.62 | 18.01 | 1.50 | 6.50 | 1090161 |

All carbon swivel hooks have a 5:1 Design Factor and Proof Load is 2 times the Working Load Limit. Alloy swivel hooks 1t through 22t have a 4.5:1 Design Factor and Proof Load is 2.5 times the Working Load Limit. Alloy swivel hooks of 30t capacity have a 4:1 Design Factor and Proof Load is 2 times the Working Load Limit. *Deformation indicators †Dimensions for hooks 3/4t carbon through 22t alloy are for S-4320 latch kits. Dimensions for hooks 30t alloy are for 4055 latch kit.

HOOKS & SWIVELS

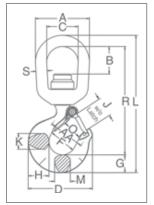


Crosby

L-3322B

- Bearing design allows hook to rotate freely under load.
- Capacities ranging from 2 through 15 metric tons.
- Forged, Quenched & Tempered.
- Low profile hook tip designed to utilize Crosby S-4320 or PL-N latch kit.

L-3322 hooks incorporate QUIC-CHECK[®] deformation and angle indicators. (For detailed information, see the Crosby Value Added page at the beginning of this section.)

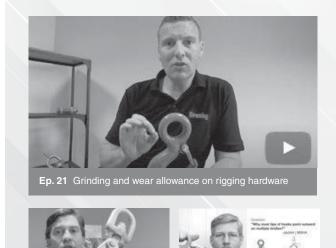




L-3322B Swivel Hooks with Bearing

| | | | | | | | | | | D | imens (in) | | | | | | | | Rep. |
|------------------------------|------------------|-----------|------------------------|------|------|------|------|------|------|------|---------------|------|-------|------|------|-------|------|-------------|-----------------------|
| Working Load Limit (t) | Hook ID Code* | Stock No. | Weight Each (lb) | А | в | с | D | F | G | н | J | к | L | м | 0 | R | s | AA * | Latch Stock No. |
| 2 | GA | 1028609 | 2.5 | 3.00 | 1.50 | 1.75 | 3.59 | 1.50 | 1.00 | 1.16 | 1.06 | .88 | 7.64 | .88 | 1.00 | 6.01 | .63 | 2.00 | 1096421 |
| 3 | HA | 1028618 | 3.8 | 3.50 | 1.56 | 2.00 | 4.00 | 1.62 | 1.13 | 1.31 | 1.19 | .94 | 8.60 | .94 | 1.09 | 6.72 | .75 | 2.00 | 1096468 |
| 5 | IA | 1028627 | 7.0 | 4.00 | 1.56 | 2.25 | 4.84 | 2.00 | 1.44 | 1.63 | 1.50 | 1.31 | 10.32 | 1.13 | 1.36 | 8.00 | .88 | 2.50 | 1096515 |
| 7 | JA | 1028636 | 14.0 | 5.00 | 1.94 | 2.75 | 6.27 | 2.50 | 1.81 | 2.06 | 1.78 | 1.66 | 12.84 | 1.44 | 1.61 | 9.90 | 1.13 | 3.00 | 1096562 |
| 11 | KA | 1028645 | 22.3 | 5.62 | 2.05 | 3.12 | 7.54 | 3.00 | 2.25 | 2.63 | 2.41 | 1.88 | 15.24 | 1.63 | 2.08 | 11.74 | 1.25 | 4.00 | 1096609 |
| 15 | LA | 1028654 | 36.0 | 7.12 | 3.62 | 4.10 | 8.33 | 3.25 | 2.59 | 2.94 | 2.62 | 2.19 | 18.64 | 1.94 | 2.27 | 14.41 | 1.50 | 4.00 | 1096657 |

4.5:1 Design Factor. Maximum allowable proof load is 2.5 times Working Load Limit. *Deformation indicators.



VIDEO PODCAST SERIES

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www.industrialrope.com

Crosby

S-1316



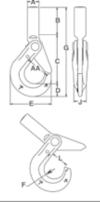
- All SHUR-LOC[®] hooks have the following features:
 - Forged alloy steel, Quenched & Tempered.
 - · Recessed trigger design is flush with the hook body, protecting the trigger from potential damage.
 - Easy to operate with enlarged thumb access.
 - Positive lock latch is self-locking when the hook is loaded.
 - The SHUR-LOC[®] hook, if properly installed and locked, can be used for personnel lifting applications and meets the intent of OSHA Rule 1926.1431(g)(1)(i)(A) and 1926.1501(g)(4)(iv)(B).
 - Fatigue rated to 20,000 cycles at 1-1/2 times the Working Load Limit.
 - Contact Engineered Solutions for additional threading or Split-Nut options at thecrosbygroup.com/engineeredsolutions.
 - Eye Style incorporates these added features:
 - Individually Proof Tested to 2-1/2 times the chain Working Load Limit with certification.

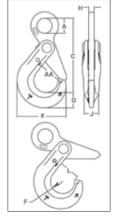
APPLICATION AND WARNING

NFORMATION SECTION 17

- S-1316 meets the performance requirements of EN1677-3.
- Suitable for use with Grade 100 and Grade 80 chain.
- Designed with 'engineered flat' to connect to S-1325 chain coupler.







S-1316 SHUR-LOC[®] Eye Hook with Positive Locking Latch

Breebe 2/30

| Cha Siz | | | Frame | Grade 100 Alloy Chain Working | Working Load Limit | Weight | | | | | nsions n) | | | | |
|------------|-------|-----------|-------|-------------------------------------|-----------------------|--------------|------|-------|------|------|--------------|------|------|------|------|
| (in) | (mm) | Stock No. | code | Load Limit (lb) 4:1 | (lb) 5:1 | Each (lb) | А | с | D | Е | F | н | J | L | AA* |
| - | 6 | 1022896 | D | 3200 | 2560 | .85 | .78 | 3.95 | .79 | 2.60 | .67 | .31 | .63 | 1.14 | 1.50 |
| 1/4-5/16 | 7-8 | 1022914 | G | 5700 | 4560 | 1.80 | 1.08 | 5.31 | 1.10 | 3.50 | .87 | .39 | .81 | 1.48 | 2.00 |
| 3/8 | 10 | 1022923 | Н | 8800 | 7040 | 3.40 | 1.30 | 6.57 | 1.17 | 4.39 | 1.10 | .51 | .94 | 1.83 | 2.50 |
| 1/2 | 13 | 1022932 | I. | 15000 | 12000 | 6.00 | 1.65 | 8.23 | 1.67 | 5.45 | 1.26 | .67 | 1.16 | 2.22 | 3.00 |
| 5/8 | 16 | 1022941 | J | 22600 | 18000 | 15.1 | 2.20 | 10.06 | 2.04 | 6.56 | 1.50 | .87 | 1.50 | 2.65 | 3.50 |
| 3/4 | 18-20 | 1022952 | - | 35300 | 28240 | 19.0 | 2.60 | 10.77 | 2.22 | 7.76 | 2.01 | .87 | 2.03 | 3.52 | 5.00 |
| 7/8 | 22 | 1022943 | - | 42700 | 34160 | 28.0 | 2.87 | 12.49 | 2.45 | 8.75 | 2.27 | .98 | 2.20 | 3.83 | 6.00 |
| 1 | 26 | 1022944 | - | 59700 | 47760 | 49.5 | 3.15 | 14.60 | 3.21 | 9.87 | 2.46 | 1.26 | 2.68 | 4.09 | 6.50 |

*Deformation indicators.

S-1318A SHUR-LOC® Shank Hook

| Cha Size | | | | Grade 100 Allov Chain | Dimensions (in) | | | | | | | | | | |
|-------------|------|-----------|---------------|----------------------------|--------------------|------|------|------|------|------|-------|------|------|------|---------------------|
| (in) | (mm) | Stock No. | Frame code | Working Load Limit (Ib) | A† | в | с | D | Е | F | G | J | L | AA* | Weight Each (lb) |
| - | 6 | 1098200 | D | 3200 | .79 | 2.16 | 3.31 | .79 | 2.60 | .67 | 6.26 | .63 | 1.16 | 1.50 | 1.00 |
| 1/4-5/16 | 7-8 | 1098209 | G | 5700 | 1.00 | 2.40 | 4.16 | 1.10 | 3.51 | .87 | 7.66 | .81 | 1.48 | 2.00 | 1.99 |
| 3/8 | 10 | 1098218 | Н | 8800 | 1.14 | 2.95 | 5.14 | 1.17 | 4.39 | 1.10 | 9.26 | .94 | 1.83 | 2.50 | 3.56 |
| 1/2 | 13 | 1098227 | I | 15000 | 1.34 | 3.35 | 6.31 | 1.67 | 5.49 | 1.26 | 11.33 | 1.16 | 2.22 | 3.00 | 7.00 |

4:1 Design Factor based on Grade 100 chain. *Deformation indicators. †Dimension before machining (as forged).



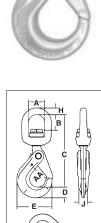


Crosby

S-1326

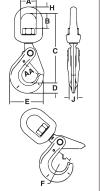


- · The S-1326 hook is a positioning device and is not intended to rotate under load. For swivel hook designed to rotate under load, use the S-13326.
- S-13326 Swivel Hook utilizes anti-friction bearing design which allows hook to rotate freely under load.
- Rated for both wire rope and for use with Grade 80/100 chain.
- Forged alloy steel, Quenched & Tempered. ٠
- Individually Proof Tested at 2-1/2 times the chain Working Load Limit with • certification.
- Recessed trigger design is flush with the hook body, protecting the trigger from potential damage.
- Easy to operate with enlarged thumb access.
- Positive lock latch is self-locking when hook is loaded. •
- Trigger repair kit available (S-4316). Consists of spring, roll pin, and trigger. .
- Fatigue rated to 20,000 cycles at 1-1/2 times the Working Load Limit. ٠
- The SHUR-LOC® Hook, if properly installed and locked, can be used for personnel lifting applications and meets the intent of OSHA Rule 1926.1431(g) (1)(i)(A) and 1926.1501(g)(4)(iv)(B).



HOOKS & SWIVELS

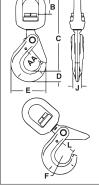
S-13326





Breeby 8/10

APPLICATION AND WARNING INFORMATION SECTION 17 CE



S-1326 SHUR-LOC® Swivel Hooks Suitable for positioning before lifting.

| Cha Siz | | | Grade 100 Alloy Chain Working | Working | | | | | | D | imens (in) | | | | | |
|--------------------|-------------------|---------------|---|---|--------------|------------------------|------|------|-------|------|---------------|------|------|------|------|-------------|
| (in) | (mm) | Frame code | Load Limit (Ib) 4:1 Design Factor | Load Limit (Ib) 5:1 Design Factor | Stock No. | Weight Each (lb) | А | в | с | D | Е | F | н | J | L | AA * |
| - | 6 | D | 3200 | 2560 | 1004304 | 1.26 | 1.50 | 1.32 | 6.13 | .79 | 2.60 | .67 | .50 | .63 | 1.13 | 1.50 |
| 1/4 - 5/16 | 7-8 | G | 5700 | 4560 | 1004313 | 2.62 | 1.75 | 1.59 | 7.60 | 1.10 | 3.50 | .87 | .63 | .81 | 1.38 | 2.00 |
| 3/8 | 10 | Н | 8800 | 7040 | 1004322 | 4.70 | 2.00 | 1.73 | 8.83 | 1.17 | 4.39 | 1.10 | .75 | .94 | 1.75 | 2.50 |
| 1/2 | 13 | 1 | 15000 | 12000 | 1004331 | 8.64 | 2.50 | 2.38 | 11.20 | 1.67 | 5.45 | 1.26 | 1.00 | 1.16 | 2.11 | 3.00 |
| 5/8 | 16 | - | 22600 | 18000 | 1004340 | 17.00 | 2.75 | 2.70 | 12.90 | 2.05 | 6.56 | 1.50 | 1.13 | 1.50 | 2.49 | 3.50 |
| 3/4 | 18 - 20 | - | 35300 | 28240 | 1004349 | 24.00 | 2.83 | 2.52 | 14.10 | 2.22 | 7.76 | 2.01 | 1.10 | 2.03 | 3.52 | 5.00 |
| 7/8 *Deformatio | 22 n indicator | - | 42700 | 34160 | 1004358 | 29.00 | 3.44 | 3.19 | 16.40 | 2.45 | 8.75 | 2.26 | 1.30 | 2.20 | 3.83 | 6.00 |

ormation indicators

S-13326 SHUR-LOC[®] Swivel Hooks with Bearing Suitable for frequent rotation under load.

| Cha Size | | | Grade 100 Alloy Chain Working Working Load Load Limit Limit | | | | | | | Dime (i | nsions n) | 5 | | | | |
|---------------------|-----------------|---------------|--|---------------|--------------|------------------------|------|------|-------|------------|--------------|------|------|------|------|-------------|
| (in) | (mm) | Frame code | Load Limit (Ib) 4:1 Design Factor | Limit (Ib) | Stock No. | Weight Each (lb) | A | в | с | D | Е | F | н | J | L | AA * |
| - | 6 | D | 3200 | 2560 | 1004404 | 1.50 | 1.50 | 1.14 | 6.17 | .79 | 2.60 | .67 | .50 | .63 | 1.13 | 1.50 |
| 1/4 - 5/16 | 7-8 | G | 5700 | 4560 | 1004413 | 3.10 | 1.75 | 1.52 | 7.54 | 1.10 | 3.50 | .87 | .63 | .81 | 1.44 | 2.00 |
| 3/8 | 10 | Н | 8800 | 7040 | 1004422 | 5.26 | 2.00 | 1.61 | 8.88 | 1.16 | 4.35 | 1.10 | .75 | .94 | 1.83 | 2.50 |
| 1/2 | 13 | I | 15000 | 12000 | 1004431 | 11.22 | 2.50 | 2.03 | 11.11 | 1.66 | 5.45 | 1.26 | 1.00 | 1.16 | 2.19 | 3.00 |
| 5/8 *Deformation | 16 indicator | - | 22600 | 18000 | 1004440 | 17.32 | 2.75 | 2.25 | 12.90 | 2.05 | 6.56 | 1.50 | 1.13 | 1.50 | 2.61 | 3.50 |

*Deformation indicators.

62

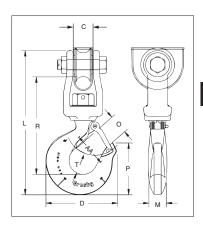
www.industrialrope.com



S-3319



- Designed for utility applications using synthetic rope. ٠
- Suitable for positioning before lifting. •
- Hook is forged alloy steel, Quenched & Tempered. •
- Design of hook provides needed overhaul weight. •
- Utilizes spool & shield designed to protect rope and keep rope • positioned correctly on spool.
- Spool provides wider rope bearing surface resulting in an increased area for load distribution and reduces rope abrasion.



2



APPLICATION AND WARNING INFORMATION SECTION 17

S-3319 Utility Swivel Hook

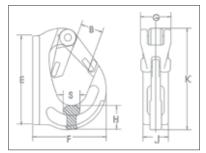
| Working Load Limit | | Weight Each | Hook ID | Synthetic Rope Size | | | | 0 | Dimensi (in) | ons | | | | Replacement Latch Kit |
|-----------------------|-----------|----------------|------------|---------------------------|------|------|-------|------|-----------------|------|------|------|------|--------------------------|
| (t)* | Stock No. | (lb) | Code | (in) | С | D | L | М | 0 | Р | R | т | AA* | Stock No. |
| 1.63 | 1002054 | 4.2 | HA | 9/16 - 5/8 | 1.09 | 3.99 | 8.75 | .94 | 1.16 | 2.78 | 5.94 | 1.16 | 2.00 | 1096468 |
| 2.50 | 1002063 | 8.0 | IA | 3/4 - 13/16 | 1.31 | 4.84 | 10.56 | 1.13 | 1.41 | 3.47 | 7.06 | 1.53 | 2.50 | 1096515 |
| 4.50 | 1002072 | 15.0 | JA | 7/8 - 1-1/16 | 1.78 | 6.29 | 12.75 | 1.44 | 1.78 | 4.59 | 8.69 | 1.94 | 3.00 | 1096562 |
| E.d. Dealand Franks | | | | | | + | | | | | | | | |

5:1 Design Factor. Maximum allowable proof load is 2 times the Working Load Limit. *Deformation indicators.

BH-313



- Wide range of sizes available: 1-10 metric ton capacity.
- Forged alloy steel. •
- Designed for attachment to mobile lifting equipment to ٠ provide a pick point for easy sling attachment.
- · Large weld pad.
- Heavy duty latch interlocks with the hook tip. Replacement • latches are available.
- Detailed installation and application instructions included with . each hook.



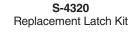
BH-313 Weld-On Hooks

| Working Load Limit | | Weight Each | | | | | nsions in) | | | | Replacement Latch |
|-----------------------|-----------|----------------|------|------|------|------|---------------|------|------|------|----------------------|
| (t)* | Stock No. | (lb) | в | E | F | G | н | J | К | S | Stock No. |
| 1 | 1029105 | 1.15 | .91 | 3.82 | 2.80 | 1.42 | 1.06 | 1.02 | 4.21 | .71 | 1092104 |
| 2 | 1029114 | 1.85 | .91 | 3.23 | 3.58 | 1.42 | .98 | 1.34 | 4.53 | .83 | 1092104 |
| 3 | 1029123 | 2.60 | 1.14 | 4.61 | 4.13 | 1.42 | 1.22 | 1.42 | 5.16 | .94 | 1092104 |
| 4 | 1029132 | 4.19 | 1.34 | 5.16 | 4.49 | 1.81 | 1.42 | 1.69 | 5.79 | 1.14 | 1092105 |
| 5 | 1029141 | 5.62 | 1.34 | 6.34 | 5.24 | 1.85 | 1.77 | 1.73 | 6.81 | 1.14 | 1092105 |
| 8 | 1029150 | 7.28 | 1.38 | 6.54 | 5.31 | 1.85 | 2.05 | 2.05 | 7.01 | 1.54 | 1092105 |
| 10 | 1029169 | 11.02 | 1.93 | 8.07 | 6.61 | 1.85 | 2.24 | 2.13 | 8.74 | 1.54 | 1092106 |

5.1 Design Factor

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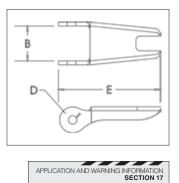
Crosby





- Heavy duty stamped latch interlocks with the hook tip.
- High cycle, long life spring.
- Can be made into a "Positive Locking" Hook when proper cotter pin is utilized.
- Latch kits shipped unassembled and individually packaged with instructions.
- Meets the intent of OSHA Rule 1926.1431(g) and 1926.1501(g)(when secured with the bolt, nut and pin) for lifting personnel.

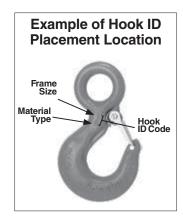
 $\label{eq:linear} \begin{array}{l} \text{IMPORTANT: The new S-4320 Latch Kit will not fit the old style 319, 320} \\ \text{and } 322 \text{ hooks.} \end{array}$



HOOKS & SWIVELS

S-4320 Replacement Latch Kit for 319N, 320N, 322N, 339N, 1327 and 1339 Hooks

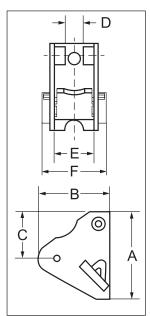
| ŀ | look Siz (t) | e | U I. ID | | Weight | D | Dimensions (in) | | |
|--------|-----------------|--------|-----------------|-----------|--------------|------|--------------------|------|--|
| Carbon | Alloy | Bronze | Hook ID Code | Stock No. | Each (lb) | в | D | Е | |
| 3/4 | 1 | .5 | D | 1096325 | .03 | .50 | .15 | 1.44 | |
| 1 | 1-1/2 | .6 | F | 1096374 | .04 | .54 | .17 | 1.56 | |
| 1-1/2 | 2 | 1 | G | 1096421 | .04 | .63 | .17 | 1.66 | |
| 2 | 3 | 1.4 | Н | 1096468 | .06 | .66 | .17 | 1.91 | |
| 3 | 5 | 2 | I | 1096515 | .10 | .83 | .20 | 2.31 | |
| 5 | 7 | 3.5 | J | 1096562 | .15 | 1.04 | .20 | 2.88 | |
| 7-1/2 | 11 | 5 | К | 1096609 | .28 | 1.25 | .27 | 3.56 | |
| 10 | 15 | 6.5 | L | 1096657 | .33 | 1.35 | .27 | 3.81 | |
| 15 | 22 | 10 | N | 1096704 | .84 | 1.66 | .39 | 5.18 | |



Crosby[®] Hook Latch Kits







LATCH ORDERING INSTRUCTIONS

- Specify PL, PL-N or PL-O latch kit stock number from charts 1. below.
- Specify capacity of hook to which latch will be assembled. 2. 3. Specify hook material (carbon or alloy).

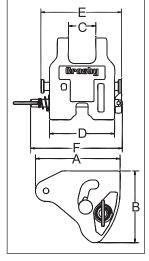
NOTE: The PL latch will not work on 319N, 320N or 322N hooks. The PL-N/O Latches, in the sizes available, will work on both the old and new style hooks.

PL Latch Kits

- Hot dip galvanized.
- Heavy duty latch with easy operating features. Flapper lever indicates locked or unlocked position. •
- Assembly instructions included with each latch.
- For additional dimensional data on eye, shank or swivel hooks refer to pages 110 through 115 in this section.
- Meets the intent of OSHA Rule 1926.1431(g) and 1926.1501(g) (when secured with the bolt, nut and pin) for lifting personnel.

| Hook (i | : Size t) | Hook ID | PL Latch Kit | Weight Each | | | | nsions n.) | | |
|------------|--------------|---------|-----------------|----------------|-------|-------|------|---------------|------|-------|
| Carbon | Alloy | Code | Stock No. | (lbs.) | Α | В | С | D | E | F |
| 3 | 4-1/2 | †I | 1093711 | .54 | 2.57 | 2.34 | 1.94 | .56 | 1.13 | 2.00 |
| 5 | 7 | †J | 1093712 | .66 | 3.00 | 2.34 | 2.00 | .63 | 1.38 | 2.22 |
| 7-1/2 | 11 | †K | 1093713 | 1.00 | 3.63 | 2.77 | 2.38 | .63 | 1.63 | 2.38 |
| 10 | 15 | †L | 1093714 | 1.25 | 4.00 | 3.22 | 2.69 | .63 | 1.88 | 3.38 |
| 15 | 22 | †N | 1093715 | 2.96 | 5.31 | 4.00 | 2.91 | .84 | 2.38 | 3.44 |
| 20 | 30 | 0 | 1093716 | 4.05 | 6.00 | 4.44 | 3.19 | 1.06 | 2.88 | 4.25 |
| 25 | 37 | Р | 1093717 | 8.63 | 7.00 | 6.63 | 4.06 | 2.24 | 4.50 | 6.12 |
| 30 | 45 | S | 1093718 | 10.00 | 6.75 | 7.00 | 4.03 | 2.24 | 4.75 | 6.38 |
| 40 | 60 | Т | 1093719 | 14.30 | 8.00 | 7.66 | 4.38 | 3.46 | 5.50 | 7.25 |
| 50 | 75 | U | 1093720 | 27.00 | 9.88 | 8.19 | 5.13 | 3.38 | 6.50 | 8.88 |
| - | 100-150 | W - X | 1093721 | 33.25 | 10.88 | 11.06 | 6.38 | 3.38 | 7.50 | 10.00 |
| - | 200 | Y | 1093723 | 45.00 | 11.88 | 11.19 | 6.38 | 3.38 | 8.75 | 11.25 |
| - | 300 | Z | 1093724 | 55.00 | 12.50 | 12.19 | 8.00 | 3.38 | 9.75 | 13.00 |

†New 319N style hook.



PL-N/O Latch Kits

- Heavy duty latch with easy operating features. PL-N designed for Crosby 319N & 320N style hooks, PL-O designed for Crosby 319 & 320 old . style hooks.
- Flapper lever indicates locked or unlocked position.
- Assembly instructions included with each latch.
- Meets the intent of OSHA Rule 1926.1431(g) and 1926.1501(g) (when secured with the supplied toggle pin) for lifting personnel.

| Hook (t | Size) | Hook ID | PL-N Latch Kit | PL-O | Weight Each | | | | nsions n.) | | |
|------------|-----------|------------|-------------------|-----------|----------------|------|------|------|---------------|------|------|
| Carbon | Alloy | Code | | Stock No. | (lbs.) | Α | В | С | D | E | F |
| 3 | 4.5/5* | I | 1092000 | 1091900 | .8 | 2.40 | 2.01 | .83 | 2.13 | 2.71 | 3.44 |
| 5 | 7 | J | 1092001 | 1091901 | 1.3 | 2.94 | 2.50 | 1.00 | 2.52 | 3.19 | 3.83 |
| 7-1/2 | 11 | K | 1092002 | 1091902 | 2.0 | 3.63 | 3.02 | 1.19 | 2.75 | 3.44 | 4.38 |
| 10 | 15 | L | 1092003 | 1091903 | 2.8 | 4.00 | 3.39 | 1.34 | 3.19 | 4.00 | 4.50 |
| 15 | 22 | N | 1092004 | 1091904 | 4.9 | 5.19 | 4.32 | 1.61 | 3.86 | 4.81 | 5.13 |

*"N" style hooks are rated at 5 tonnes.

PL-N/O

LATCH KITS

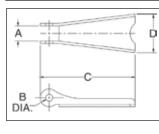
Crosby[®] Hook Latch Kits





- 1. Specify latch kit stock number.
- 2. Specify capacity of hook to which latch will be assembled.
- 3. Specify hook material (carbon or alloy).

NOTE: These latches will not work on new "N" style Hooks.



- Stainless steel construction with cadmium plated steel nuts.
- Shipped packaged and unassembled.
- Instructions included for easy field assembly.

| | notice of a case of the assentity. | | | | | | | | | |
|------------|------------------------------------|-----------|------------|-----------|----------------|------|--------------|------|------|--|
| | Hook Size (t) | | Hook ID | SS-4055 | Weight Each | | Dimen (ir | | | |
| Carbon | Alloy | Bronze | Code | Stock No. | (lbs.) | Α | В | С | D | |
| 3/4 | 1 | .5 | D | 1090027 | .02 | .38 | .16 | 1.44 | .59 | |
| 1 | 1-1/2 | .6 | F | 1090045 | .02 | .38 | .16 | 1.60 | .59 | |
| 1-1/2 - 2 | 2 - 3 | 1.0 - 1.4 | G/H | 1090063 | .03 | .47 | .19 | 1.84 | .82 | |
| 3 | 4-1/2 | 2.0 | I | 1090081 | .06 | .56 | .17 | 2.41 | 1.00 | |
| 5 | 7 | 3.5 | J | 1090107 | .11 | .58 | .20 | 2.97 | 1.21 | |
| 7-1/2 - 10 | 11 - 15 | 5.0 - 6.5 | K/L | 1090125 | .17 | .59 | .27 | 3.66 | 1.50 | |
| 15 | 22 | 10.0 | N | 1090143 | .39 | .83 | .39 | 4.94 | 1.90 | |
| 20 | 30 | | 0 | 1090161 | .63 | .94 | .52 | 5.88 | 2.56 | |
| 25 - 30 | 37 - 45 | | P/S | 1090189 | 1.12 | 2.19 | .39 | 6.50 | 3.84 | |
| 40 | 60 | | Т | 1090205 | 1.77 | 3.31 | .52 | 7.88 | 4.12 | |

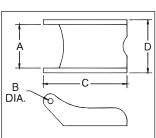
S-4088

S-4088 Alloy Hook Latch Kits

- To be used on A-327 and A-339 Grade 8 Sling Hooks.
- Latch Kits shipped unassembled and individually packaged with instructions.



| | Hook Chain | | Weight | | Dimen (ir | | |
|---|---------------|---------------------|----------------|------|--------------|------|------|
| | Size (in.) | S-4088 Stock No. | Each (lbs.) | А | В | С | D |
| 1 | 9/32 (1/4) | 1090250 | .06 | .78 | .16 | 2.03 | .94 |
| | 3/8 | 1090251 | .14 | 1.03 | .19 | 2.69 | 1.25 |
| | 1/2 | 1090252 | .15 | 1.03 | .19 | 3.00 | 1.25 |
| | 5/8 | 1090253 | .15 | 1.03 | .19 | 3.25 | 1.25 |
| - | 3/4 | 1090254 | .15 | 1.53 | .26 | 4.13 | 1.88 |
| | 7/8 | 1090255 | .15 | 1.53 | .26 | 4.66 | 2.00 |



Crosby[•]

HOOKS & SWIVELS

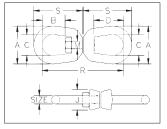
Crosby® Forged Swivels

- 402 and 403 forged swivels are positioning devices and are not intended to rotate under load.
- Hot-dip galvanized.
- Quenched & Tempered.
- Crosby products meet or exceed all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, Crosby products meet other critical performance requirements, including fatigue life, impact properties and material traceability, not addressed by ASME B30.26.
- G-402 swivels meet the performance requirements of Federal Specification RR-C-271G, Type VII, Class 2, except for those provisions required of the contractor.
- G-403 swivels meet the performance requirements of Federal Specification RR-C-271G, Type VII, Class 3, except for those provisions required of the contractor.



G-402 Regular Swivels

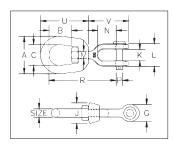
| C | AY | 5 |
|----|------------|---|
| E. | 一人 | E |
| | 1 1/2" siz | e |



| | | Working Load | Weight | Dimensions (in) | | | | | | | | | |
|--------------|-----------|-----------------|--------------|--------------------|------|------|------|------|------|-------|------|--|--|
| Size (in) | Stock No. | Limit (lb)* | Each (lb) | А | в | с | D | J | М | R | s | | |
| 1/4 | 1016019 | 850 | .21 | 1.25 | .69 | .75 | 1.06 | .69 | .31 | 2.94 | 1.69 | | |
| 5/16 | 1016037 | 1250 | .39 | 1.63 | .81 | 1.00 | 1.25 | .81 | .38 | 3.56 | 2.06 | | |
| 3/8 | 1016055 | 2250 | .71 | 2.00 | .94 | 1.25 | 1.50 | 1.00 | .50 | 4.31 | 2.50 | | |
| 1/2 | 1016073 | 3600 | 1.32 | 2.50 | 1.31 | 1.50 | 2.00 | 1.31 | .63 | 5.44 | 3.19 | | |
| 5/8 | 1016091 | 5200 | 2.49 | 3.00 | 1.56 | 1.75 | 2.38 | 1.50 | .75 | 6.56 | 3.88 | | |
| 3/4 | 1016117 | 7200 | 4.02 | 3.50 | 1.75 | 2.00 | 2.63 | 1.88 | .88 | 7.19 | 4.31 | | |
| 7/8 | 1016135 | 10000 | 6.25 | 4.00 | 2.06 | 2.25 | 3.06 | 2.13 | 1.00 | 8.38 | 5.00 | | |
| 1 | 1016153 | 12500 | 8.95 | 4.50 | 2.31 | 2.50 | 3.50 | 2.38 | 1.13 | 9.63 | 5.75 | | |
| 1-1/4 | 1016199 | 18000 | 16.37 | 5.63 | 2.69 | 3.13 | 3.69 | 3.00 | 1.50 | 11.44 | 6.75 | | |
| 1-1/2+ | 1016215 | 45200 | 45.79 | 7.09 | 3.88 | 4.09 | 3.88 | 3.75 | 2.25 | 16.69 | 9.91 | | |
| 5:1 Design F | actor. | | | | | | | | | | | | |



G-403 Jaw End Swivels



| | | Working | | | Dimensions (in) | | | | | | | | | | | |
|--------------|--------------|------------------------|------------------------|------|--------------------|------|------|------|------|------|------|------|------|-------|-------|-------|
| Size (in) | Stock No. | Load Limit (lb)* | Weight Each (lb) | А | в | с | G | J | к | L | М | N | Р | R | U | v |
| 1/4 | 1016395 | 850 | .21 | 1.25 | .69 | .75 | .69 | .69 | .47 | 1.03 | .31 | .88 | .25 | 2.63 | 1.69 | 1.69 |
| 5/16 | 1016411 | 1250 | .34 | 1.63 | .81 | 1.00 | .81 | .81 | .50 | 1.13 | .38 | .88 | .31 | 2.94 | 2.06 | 1.81 |
| 3/8 | 1016439 | 2250 | .66 | 2.00 | .94 | 1.25 | 1.00 | 1.00 | .63 | 1.41 | .50 | 1.06 | .38 | 3.63 | 2.50 | 2.25 |
| 1/2 | 1016457 | 3600 | 1.34 | 2.50 | 1.31 | 1.50 | 1.31 | 1.31 | .75 | 1.75 | .63 | 1.31 | .50 | 4.50 | 3.19 | 2.88 |
| 5/8 | 1016475 | 5200 | 2.48 | 3.00 | 1.56 | 1.75 | 1.63 | 1.50 | .94 | 2.06 | .75 | 1.50 | .63 | 5.31 | 3.88 | 3.44 |
| 3/4 | 1016493 | 7200 | 3.88 | 3.50 | 1.75 | 2.00 | 1.88 | 1.88 | 1.13 | 2.53 | .88 | 1.75 | .75 | 6.06 | 4.31 | 4.00 |
| 7/8 | 1016518 | 10000 | 5.87 | 4.00 | 2.06 | 2.25 | 2.13 | 2.13 | 1.34 | 2.79 | 1.00 | 2.06 | .88 | 7.00 | 5.00 | 4.53 |
| 1 | 1016536 | 12500 | 9.84 | 4.50 | 2.31 | 2.50 | 2.63 | 2.38 | 1.75 | 3.72 | 1.13 | 2.81 | 1.13 | 8.56 | 5.75 | 5.94 |
| 1-1/4 | 1016572 | 18000 | 15.75 | 5.69 | 2.69 | 3.13 | 3.13 | 3.00 | 2.06 | 4.31 | 1.63 | 2.81 | 1.38 | 9.75 | 7.06 | 6.38 |
| 1-1/2 | 1016590 | 45200 | 54.75 | 7.00 | 3.88 | 4.00 | 5.63 | 4.00 | 2.88 | 6.00 | 2.25 | 4.44 | 2.25 | 14.25 | 10.00 | 10.84 |
| 5:1 Desi | gn Factor. | | | | | | | | | | | | | | | |

67

CE

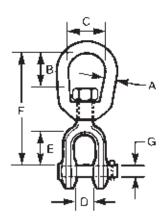
Drop Forged Swivels

CAUTION: NEVER EXCEED WORKING LOAD LIMIT. Read important warnings and information preceding fittings section. SWIVELS ARE NOT INTENDED TO ROTATE UNDER LOAD.

JAW & EYE SWIVELS

Meets or exceeds the performance requirements of Federal Specifiation RR-C-271 (latest revision). Hot galvanized.

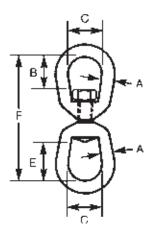
| Size (A) | Working | Approximate | | | Dimension | s in Inches | | |
|--------------|-------------------------|--------------------------|------|------|-----------|-------------|-------|------|
| in Inches | Load Limit in Pounds | Weight Each in Pounds | В | С | D | E | F | G |
| 1/4 | 850 | .22 | .69 | .75 | .38 | .88 | 2.69 | .25 |
| 5⁄16 | 1,200 | .39 | .88 | 1.00 | .50 | .88 | 2.88 | .31 |
| 3/8 | 2,250 | .71 | .94 | 1.25 | .63 | 1.00 | 3.50 | .38 |
| 1/2 | 3,600 | 1.4 | 1.38 | 1.50 | .81 | 1.31 | 4.50 | .50 |
| 5/8 | 5,200 | 2.3 | 1.63 | 1.75 | 1.00 | 1.50 | 5.31 | .63 |
| 3/4 | 7,200 | 3.5 | 1.75 | 2.00 | 1.19 | 1.75 | 6.06 | .75 |
| 7/8 | 10,000 | 5.7 | 2.08 | 2.25 | 1.20 | 2.07 | 7.06 | .88 |
| 1 | 12,500 | 9.5 | 2.27 | 2.44 | 1.73 | 2.81 | 8.56 | 1.12 |
| 1 ¼ | 18,000 | 15.7 | 2.69 | 3.13 | 2.06 | 2.81 | 9.44 | 1.38 |
| 1 ½ | 45,200 | 55.0 | 4.20 | 4.00 | 2.37 | 4.43 | 14.75 | 2.25 |



EYE & EYE SWIVELS

Meets or exceeds the performance requirements of Federal Specifiation RR-C-271 (latest revision). Hot galvanized.

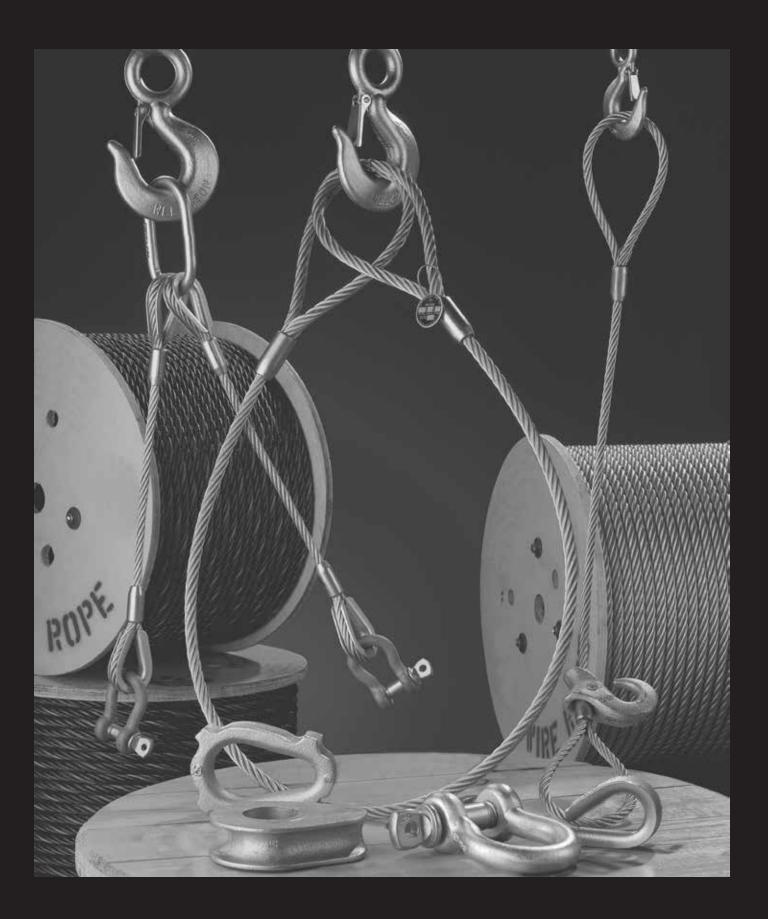
| Size (A) | Working | Approximate | | Dimension | s in Inches | |
|--------------|-------------------------|--------------------------|------|-----------|-------------|-------|
| in Inches | Load Limit in Pounds | Weight Each in Pounds | В | С | E | F |
| 1/4 | 850 | .2 | .69 | .75 | .94 | 2.88 |
| 5/16 | 1,200 | .38 | .75 | 1.00 | 1.13 | 3.63 |
| 3/8 | 2,250 | .68 | .94 | 1.25 | 1.38 | 4.25 |
| 1/2 | 3,600 | 1.4 | 1.38 | 1.50 | 1.94 | 5.63 |
| 5% | 5,200 | 2.5 | 1.63 | 1.75 | 2.31 | 6.63 |
| 3/4 | 7,200 | 3.8 | 1.81 | 2.00 | 2.56 | 7.25 |
| 7/8 | 10,000 | 6.0 | 2.06 | 2.25 | 3.02 | 8.28 |
| 1 | 12,500 | 8.5 | 2.35 | 2.48 | 3.43 | 9.53 |
| 1 ¼ | 18,000 | 16.3 | 2.69 | 3.13 | 3.69 | 11.13 |
| 1 ½ | 45,200 | 46.0 | 4.18 | 4.00 | 4.18 | 17.12 |



2

www.industrialrope.com

Wire Rope Slings



Type 11 Slings

Flemished Eye and Mechanically Swaged

| Diam | Mes | los | .de | | Rafed (| Sagarety 1 | • Tons 2 | OR IN I | |
|----------------|---------|---------|---------|---------|---------|------------|----------|---------|--------|
| 01 | Length | Le | юр | | | | IWBC | | |
| Wee | (SL) OF | Cone | 15/015 | Single | | | Baske: | HighT | |
| Rope | Sting | - W | L | Ling | Choker | Ship ght | | | |
| noties | Et de | toones. | lection | Ved cal | HX* | 261 | - 60 | 45 | 30 |
| 1 | 1.6 | 2 | t | 65 | ÷Б | 13 | 1 • | 9- | 65 |
| Δ _P | 1.9 | 2'; | 5 | . 00 | 74 | 20 | 1.7 | ! 40 | 1 20 |
| 10 | 2.0 | 2 | 9 | - 40 | 1.12 | 2.9 | 25 | 2.00 | 140 |
| 1.10 | 2.3 | 3', | 1 | 1.90 | 1.40 | 39 | 3.4 | 2 70 | 1.90 |
| 1. | 2.6 | 4 | н | 2.50 | 1.90 | 5 * | 4.4 | 1.60 | 2.50 |
| 1.4 | 2.9 | 4' | 9 | 3.20 | 2.40 | 63 | 5.5 | a 50 | 3,20 |
| 1.1 | 30 | 5 | 10 | 3,90 | 2.90 | 7 E | 66 | 5.50 | 3.90 |
| 12 | 3.6 | 5 | 12 | 5.60 | 2.10 | 11.0 | 9.7 | 7.90 | 5 b0 |
| · • | 4-0 | 7 | 14 | 7.60 | 5.62 | 15.0 | .30 | 1:00 | 2.1.0 |
| 1 | 4.5 | 9 | 18 | 9.60 | 7.20 | 20.0 | 17.0 | 14.00 | 9.8G |
| 14 | 5-C | 9 | 19 | 12:00 | 9.12 | 24.5 | 21.0 | -7.00 | 12:50 |
| 1. | 5-E | ·0 | 20 | 15:00 | 12.00 | 30.0 | 26.0 | 21.00 | 15.00 |
| 1. | 6.0 | -1 | 22 | 16.00 | 10.00 | 36-0 | 01.0 | 25.00 | 16.00 |
| 1^{\prime} , | 7-0 | 12 | 24 | 21.00 | 16.03 | 42.0 | 37.6 | 30.00 | Z* 00 |
| 12 | 2.6 | 13 | 26 | 24.30 | 18.00 | 49.0 | \$2.0 | 35.00 | 24.00 |
| 124 | 8 G | 14 | 28 | 28 GD | 21.00 | 570 | 49 C | 40.00 | 28.60 |
| 2 | ЯÇ | 16 | 3.2 | 37.00 | 26.00 | 73.0 | 63.0 | 52.00 | 37.00 |
| 2' 4 | 10-0 | :8 | 36 | 44.00 | 35.00 | \$9.0 | 27.0 | 493,00 | 44.00 |
| 212 | 11-0 | 20 | 40 | 54.00 | 42 00 | 109.0 | 94.0 | 27.00 | 54.00 |
| 214 | 12-0 | 22 | 44 | 65.00 | 51:00 | 130.0 | 113.0 | P2 00 | 65.00 |
| 3 | 13-0 | 24 | 49 | 77.00 | 60.00 | 153.0 | 133.0 | 106-30 | 77.00 |
| 31. | 17-8 | 32 | 64 | 69.00 | 69.00 | 177.0 | 153.0 | 125.00 | 39.00 |
| 3' > | 19-8 | 36 | 72 | 102.00 | 79.00 | 203 D | 176.0 | 144.00 | 102.00 |
| 31. | 21-6 | aD | 80 | 115.00 | 67.00 | 2310 | 200.0 | 163.00 | 15.00 |
| 4 | 23-8 | 45 | 90 | 100.00 | 97.00 | 259.0 | 224.0 | 163.00 | 130,00 |



"Plaind copabilies of choker hitches apply when the angle of choke is greater than 135

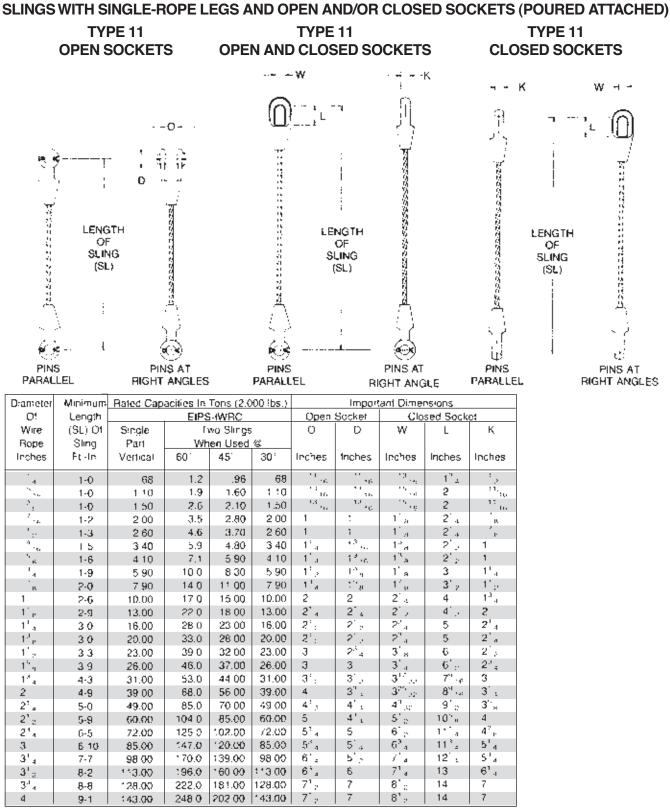
trBatted expectives of basket hildres are based on o minimum clameter of survature at the point of fond contact of 20 times the rope diameter. For approximate capacities using Fiber Core IPS, deduct 1012 from IPS IWPC strengths

For approximate capacities on Name Data dis all or capacities that are share and your data cally social of this for a proximate capacities on Socket Allact inserts, and Studie corresponding IWRC swaged strengths.

| Wire Rope Diam | Heavy Docy Thimble | | | | | ren 1 Scr∙el | Closed Gwaget Socker | |
|----------------------|-----------------------|------------------|------------------------------|-------------------------|---------|-------------------|-------------------------|------------------|
| | Ing | ade | For | Fo- | P.o | ي. مردل | Hole | Head |
| Inches | Width | Length | CIPS | EIPS | 5.76 | Size | Dam | Operand |
| | Inches | "othes | | | runes | inclues. | menes | Incluss. |
| | | | Ş i 1 | 9 WITH LW R C | | | | |
| '+ - | e . | $\sim 0_{\rm e}$ | , | 1.00 | | · | 1. | · . |
| ¹ и | 1 17 | - Ce | 11 s | - | 17 ju | 24 | | · · · · |
| 1 | 1.0 | 2'r | 6 | 1.1 | 19 a.c. | 2.4 | | · · · · · |
| - În | ·. ⁷ | 2°. | 2 | · | 1 | | 1.1 | |
| | ** z | 2,1 | 4 ¹ > | | 1 | | 1. 16 | |
| 1.16 | 11 | 2 ³ 4 | 4 ¹ 5 | ` s | 13.4 | 11 a 1 | 1 A A | · |
| · · | 1 ¹ 1 | J'4 | 7 | 14 | 1 | 10 A | 11 A. | |
| Ş. | 2 | 3,4 | 1' | | 1.12 | 11 A. | | 12.5 |
| 2.9 | 2.* | a' 4 | 1: | 1 | 12. | $-\dot{\phi}_{i}$ | · · · · · | 1.5 |
| • | 2.7 | 42 | 15 | · · · | 2 | 2 | 81.6 | . о _с |
| ''e | 2') 2' e | 55 | 22 | 1.2 | 212 | - p' - | 22.6 | 2 |
| | | | $\mathbf{G} \in \mathcal{G}$ | 2 W D L W 9 C | | | | |
| *a - | Z ¹ H | 5', | 22 | 1 | 2 ; | 2' - | 2°-6 | 214 |
| 14 | 2' . | 5. | 30 | | 2 , | 2' - | 21.7 | 2'4 |
| 1.8 | 3', | 6', | 30 | | 2. | à | 27.5 | 2.5 |
| ·*• | 4 | Ð | 30 | ·'. | 5.5 | - A' | 3.11 | а |
| 01 | 4'5 | 9 | 37 | 8 | 3.5 | 315 | 31.7 | 3 |
| 3 | 6 | :2 | 50 | 815 | 31. | 4 | 31.0 | з, |
| 212 | 7 | 14 | <u>90</u> | 215 | 4 . | 4 . | 4 | 4 |
| p_{ij} | | | | 3 | 4 2 | 4 . | 4 1- | 4 |
| \mathcal{P}_{e} | | | | 3 | | | | |
| 3 | - | | | 3 | | | | |
| 3'. | | | | 317 | | | | |
| з, | | | | D ² / | | | | |
| 3'. | - | | | -4 | | | | |
| 4 | - | | | -T | | | | |

100 W 0000000 CENCTH OF SUNG (SL) -

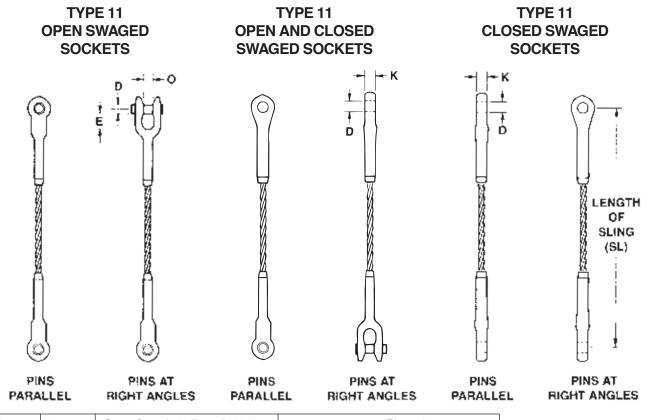
Type 11 Slings



Sockets available up through 6" diameter wire rope upon request.

Type 11 Slings

SLINGS WITH SINGLE-ROPE LEGS AND OPEN AND/OR CLOSED SOCKETS*



| Diameter | Minimum | Rated Cap | acity In 1 | Tons (200 | 00 lbs) | Important Dimensions | | | | | | |
|-----------------|-------------|-----------|-------------|-----------|---------|----------------------|-------------------|---------------------|----------|------------------------------|--|--|
| OI | Length | 1 | EIPS-IW | RC | | C | ipen Swaj | pen Swage Closed St | | | | |
| Wire | (SL) OI | Single | Т | wo Sling: | 5 | | Socket | Socket | | | | |
| Rope | Sling | Part | Wh | her Used | 8 | 0 | D | E | к | D | | |
| Inches | FtIn. | Vertical | 601 | 45° | 301 | Inches | Inches | Inches | Inches | Inches | | |
| - 14 | 0-11 | .68 | 1.2 | .96 | .68 | 17 | 11 | 1^{2} by | '. '2 | -1. -1 | | |
| 16 N | 1-1 | 1.10 | 1.9 | 1.60 | 1,10 | 13 | · 9 .6 | 11.00 | · · í | 1 | | |
| 3, | 1-3 | 1 50 | 2.6 | 2.1D | 1.50 | 11.6 | 1.0 cg | 11 | 11 | Б | | |
| 7/16 | 1-6 | 2 00 | 3.5 | 2.80 | 2.00 | 1 | 1 | 1', | 7. a | 154 | | |
| 14 | 1-8 | 2.60 | 46 | 3 70 | 2 60 | 1 | 1 | 1.5 | - (s) | 1 | | |
| 16 | 1-10 | 3.40 | 5.9 | 4.80 | 3 40 | 41. 4 | 11.6 | 12102 | 1',, | 1 | | |
| 1. 1. | 2-0 | 4.10 | 7.1 | 5 90 | 4 10 | 1', | 12.56 | 1 ²² -12 | 1' | 1': | | |
| 1/a | 2-5 | 5.90 | <u>^0.0</u> | 8 30 | 5.90 | $1'_{2}$ | 1 ¹¹ g | 2.1 | 1. A. | 1/16 | | |
| 1/B | 2-10 | 7.90 | 14.0 | 11.00 | 7.90 | 11 a | 1''u | 2' 11 | 159 | 11%g | | |
| 1 | 3-2 | 10.00 | 17.0 | 15.00 | 10.00 | 2 | 2 | 23.4 | 124 | 2_{10} | | |
| 1% | 3-7 | 13.00 | 22.0 | 18.00 | 13.00 | 2' 4 | 215 | 3.4 | 2 | 25.10 | | |
| 1% | 4-0 | 16 00 | 28.0 | 23.00 | 16.00 | 2', | 2' 9 | з`, | 2'4 | 2 ⁰ | | |
| 13/6 | 4-5 | 20.00 | 33.0 | 28.00 | 20.00 | 2° 9 | 2', | 4 | 2 4 | 2 ⁹ | | |
| 11/2 | 4-9 | 23.00 | 39.0 | 32.00 | 23 00 | 3 | $-2^{n_{2}}$ | 4 ^{:1} | 2', | 213 10 | | |
| $1N_{\rm B}$ | 5-1 | 26.00 | 46 0 | 37.00 | 26 00 | 3', | 319 | 5 | 3 | $-3^{\prime\prime}$. ϕ | | |
| 1% | 5-5 | 31.00 | 53.0 | 44.00 | 31.00 | 3'2 | 31, | 5 | 3 | 3" 11 | | |
| 2 | 6-4 | 39.00 | 68.0 | 56 00 | 39.00 | 4 | 3°. | 61.6 | 31, | 3.3.4 | | |
| 24 | 7-2 | 49.00 | 85.0 | 70 00 | 49.00 | 4 | 4 a | 4''% | 4 | 4'16 | | |
| $-2\frac{1}{2}$ | 9 -0 | 60.00 | 104.0 | 85 00 | 60.00 | 412 | 4 ¹ 4 | 4° _в | 4 | 4110 | | |

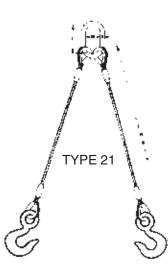
Interchangeable with zinc sockets

Type 21 Slings

FLEMISHED EYE AND MECHANICALLY SWAGED

Type 21 slings are 2-leg All-Purpose bridles, designed for general lifting purposes where attachment may be made directly to the load, such as hooking into lifting eyes or placing loops over lugs.

| Diam | Min. Lengti: | Rateo | i Capacities in EIPS IWRC | n Tons | Alloy |
|------------------------|---------------------------|-------|------------------------------|--------|---------------------------|
| Wire Rope Inches | (Şi) Öl Şling Fi Jh | | × (45" | \leq | Links Diany Incleas |
| 1.2 | 1-3 | 1 10 | 91 | 65 | ·, |
| N., | 1-6 | 1 70 | 1.40 | 1.00 | - 13 - E |
| 35 | 1-8 | 2 50 | 2 00 | 1.40 | - 14 |
| 1.00 | 1.10 | 340 | 2 70 | 1.90 | 14 C. |
| 15 | 2.0 | 4 40 | 3 60 | 2.50 | 1 |
| 2.6 | 2.2 | 5.50 | 4.50 | 3.20 | 1' |
| Ne | 2.4 | 880 | 5.50 | 3.90 | 1' 4 |
| N | 2-9 | 970 | 7.90 | 5.60 | 1.1 |
| i. | 3.3 | 13 00 | *1.00 | 7.60 | 1.7 |
| 1 | 3.6 | 17 00 | 14.00 | 980 | 1'. |
| 159 | 4-0 | 21.00 | 17 00 | 15.00 | 17. |
| 1'1 | 4-6 | 25 00 | 21.00 | 15 00 | 2 |
| 1% | 5-0 | 31.00 | 25.00 | 18.00 | 2 |
| 1.6 | 5.6 | 37.00 | 30.00 | 21.00 | 2'. |
| 11. | 6-0 | 42.00 | 35.00 | 24.00 | 2'5 |
| 144 | 6.6 | 49:00 | 40-00 | 28 00 | 25 |
| 2 | 8-0 | 63 00 | 52 00 | 37.00 | 2 ³ 4 |
| 2'1 | 8-9 | 77 00 | 63.00 | 44.00 | 3'4 |
| 2'.5 | 10-0 | 94 00 | 77.00 | 54.00 | 3'4 |



For approximate capacities using Fiber Core EIP: deduct 10% from EIP-IWRC strengths.

For approximate capacities on Hand Braided Slings: deduct 15% from corresponding mechanically swaged strengths. For approximate capacities on Socket Attachments: add 5% to corresponding IWRC swaged strengths.

PERTINENT DIMENSIONS FOR END FITTINGS

| Diain Of | Sian Lo | οp | Heavy Duly Thimble | | Alloy Hook | Carbon Shackle | Hall Thimble Inside Loop | | Open Swage Socket | | Closed Swage Sockel Mole Mead | | | | |
|------------------|--|--------|-----------------------|--------|---------------|-------------------|--------------------------------|--------|----------------------|---------|---------------------------------------|-----------|--|--|--|
| Wire | 105 | de | Ins | -de | Size-Tons | Size-Inches | Inside | 1000 | Pa | Jaw | Male | | | | |
| Poge - | WK211 | Cength | Weath | Length | For | For | Width | Lenth | Diam | Opening | Olam | Thickness | | | |
| Inches | Inches | Inches | Inches | hotes | EIP5 | EIPS | nches | inches | Inches | Inches | Inches | Inches | | | |
| | 6 • 19 with WAC | | | | | | | | | | | | | | |
| <u>'</u> + | $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | | | | | | | | | | | | | | |
| <u>`</u> '' | 2' > | | | | | | | | 1.4 | 16 | 1 | 1.4 | | | |
| | 3 | ß | · ' • | 2. 6 | 2 | In | 2 | 4 | 1. | 2.6 | | | | | |
| | $3'_{2}$ | 7 | 114 | 21.6 | 3 | 5 | 24 | 5 | • | 1 | 1 16 | | | | |
| , | 4 | B | $1^{\circ}g$ | Z1. | 412 | <u></u> | 24 | 57 | · . | 1 | 1 16 | | | | |
| - je | 4'2 | 9 | 1.2 | Z1. | 4' > | <u>`</u> • | 214 | 5'7 | · 11. | 14 | 14 | Ľ, | | | |
| 2.0 | 5 | 10 | 112 | 3. | > | , î | 3.4 | 7 | 244 | 1.4 | 1.4 | | | | |
| , i | 6 | 12 | 2 | 3'4 | 1' | , . | з', | 9 | 1,4 | 1', | 11.0 | · · · · · | | | |
| 8 | 7 | 14 | 2'4 | 4.4 | 1' | • | 4' ; | '0'; | 1'n | 13. | · 2 | 1.5 | | | |
| 1 | B | 16 | 2'> | 4.5 | 15 | 1 2 | 4' ; | 52 | 2 | 2 | Z'ie | 12. | | | |
| 1.1 | 9 | 18 | 276 | 5'1 | 22 | ۴. | 45. | 13' 2 | 2 . | 2'4 | 2118 | 2 | | | |
| | | | | | 6 - | 37 with IWRC | | | | | | | | | |
| 14 | 10 | 20 | 27 8 | 5.4 | 22 | 1.2 | 515 | 15 | z', | 2. | 29.5 | 2'4 | | | |
| - 1 ₈ | '1 | 22 | 3', | 6`₄ | 30 | ្ស | - 6 | 17 | Z, | 2', | 24.5 | 2', | | | |
| 1.2 | 12 | 24 | 3'2 | 6'₄ | 30 | · · · · | | 18 | 2'4 | 3 | 5,7 10 | 215 | | | |
| 15.0 | - 53 | 26 | 4 | 8 | - 30 | <u>ي</u> ان | - ¹⁰ | 18 | 3' 2 | 3'> | 31.6 | 3 | | | |
| 14. | 14 | 28 | 4 2 | 9 | 37 | 2 | 2 | 21'2 | 3', | 3'7 | 3 ² ·k | 3 | | | |
| 2 | 16 | 32 | 6 | 12 | 60 | 2', | 7 | 24' 2 | 3°. | 4 | 313 16 | 3'1 | | | |
| 214 | 18 | 38 | 7 | 14 | 60 | 27 | 8'. | 25 | 4'. | 4 | 4.4 | 4 | | | |
| 217 | 20 | 4.; | | | | 3 | 8'. | 26') | 4's | 4. | 4. 16 | 4 | | | |
| 2°. | 22 | 44 | | | | 3 | 10 | 30 | | | | • | | | |
| 3 3'2 | 24 | 48 | | | | 3 3'2 | 10 | 32 | | | | | | | |
| | | | | | | 3) 3) | | | | | | | | | |
| 3', 3', | | | | | | | | | | | | | | | |
| 3". 4 | | | | | | - | | | | | | | | | |

INDUSTRIAL WIRE ROPE SUPPL

TYPE 31

Type 31 Slings

FLEMISHED EYE & MECHANICALLY SWAGED

Type 31 slings are 3-leg All-Purpose bridles, generally recommended for handling unbalanced loads.

| Diam Ol | Julian. Langth | Sam | ¢ Capacities in EIPS (WBC) | n Tóns | A⊯oy |
|------------------------|---------------------------|--------|-------------------------------|----------------|--------------------------|
| Wirn Rope Inches | (SL) Ol Sleng Ft-In | 14 | 145* | <u>ها</u> | Links Diam. Inches |
| <u>54</u> | 1-3 | 1,70 | L 40 | 97 | *4 |
| 5y ₁₆ | 1-5 | 2.60 | 2 10 | 1 50 | 14 |
| 3/8 | 1-B | 3 70 | 3 00 | 2 20 | 24 |
| 5. a | 1-10 | 5.00 | 4 10 | 2.90 | 1 |
| 12 | 2-0 | 6.60 | 5.40 | 3.80 | 1 |
| 3/16 | 2.2 | B.30 | 5 80 | 4.80 | 1% |
| 54 | 2.4 | 10.00 | 8 30 | 5.90 | 1% |
| 14 | 2-9 | 15.00 | 12 00 | 8 40 | 1'6 |
| 24 | 3-3 | 20.00 | 16.00 | \$1.00 | 1% |
| 1 | 3-6 | 26.00 | 21.00 | 15 00 | 3 |
| 1% | 4-G | 31.00 | 26 00 | 18.00 | z |
| 1% | 4.6 | 38 00 | 31 00 | 22.00 | 214 |
| 120 | 5-0 | 46 00 | 38.00 | 27.00 | 2'5 |
| U.S. | 5-6 | 55.00 | 45.00 | 32.00 | 2% |
| 125 | 6-0 | 63 00 | 52.00 | 37.00 | 2 ³ 4 |
| 1^{2} | 5.6 | 74.00 | 60.00 | 42.00 | з |
| 2 | 8-0 | 95 00 | 78.00 | 55. 0 0 | 3% |
| 2% | 8-9 | 115-00 | 94 00 | 67 00 | 4 |
| 2% | 10-0 | 141.00 | 115.00 | 82.00 | 4% |



For approximate capacities using Fibre Core EIPS: deduct 10% from EIPS-IWRC strengths.

For approximate capacities on Hand Braided Slings: deduct 15% from corresponding mechanically swaged strengths.

For approximate capacities on Socket Attachments: add 5% to corresponding IWRC swaged strengths.

| Diam Of | | icard X0D | | r Duty hble | Alloy Hook | Carbon Shackin | | ali Toble | | sockel | | ased e Socket |
|----------------|--------|--------------|------------------|--------------------|-----------------------------|-------------------|--------|--------------|--------------------|---------|------------------|------------------|
| Wre | | kap Side | 1.11 | | Size-Tons | Size-Inches | | Loop | Pip | Law. | Hote | Head |
| - | | | | | For | For | Wieth | | | Open no | Diam | Theses: |
| Rope | Wetter | Length | | Length | EIPS | EIPS | - | Length | Cham | | | |
| Inclues | Inches | Inches | Inches | mohes | £145 | EIPS | Inches | loches | Inches | 'nches | inches | Inches |
| | | | | | | 6 × 19 With (| WPC | | | | | |
| 14 | 2 | 4 | 5.8 | 1>. | 1 | 5 16 | | - | ²¹ м. | ·· ·• | 1 | 17 |
| 1. A | 2', | 5 | 1 14 | - 1 ⁷ 9 | 1', | , , | | | | | 14 | 1 N. |
| · · - | 3 | 6 | 1 ¹ µ | 2' | 2 | 1 iu | Z | - 4 | -) ₁₆ | 0.7 | | 1.1 |
| 1.6 | 3'2 | 7 | 1'4 | 2°. | 3 | · · · | ζ'. | 5 | 1 | 1 | 1.16 | |
| · | 4 | B | 1'2 | 2 ⁹ 4 | a' > | 2. C | 2.4 | 5'2 | 1 | 1 | 1.16 | |
| - 9 ín | 4'> | 9 | 1'-> | 214 | 4 ¹ ₂ | <u>``</u> | z'a | 5') | $1^{\ell} \cdot g$ | 14 | · . | 1. |
| ` • | 5 | 10 | 1.5 | 3'4 | 7 | 24 | 3. | 7 | 1.12 | 1.4 | - Gall | 1.4 |
| 4 | 6 | 12 | 2 | 3'4 | -1 | 1 | 3. | 9 | 1.6 | 1'; | 1^{2} m 2 | 1 |
| 2 N | 1.1 | 14 | 2' . | 4'e | 1 | 1 | 4.7 | ισ', | 12.0 | 12 | 1 | 1.2 |
| 1 | 8 | 16 | 2'2 | 4.5 | -5 | 1'4 | 4', | 12 | 7 | 2 | 2' .4 | 2. |
| 1. | 9 | 18 | 2. | 516 | 22 | 14 | 4'4 | 13, | z'. | 2. | 22.4 | 2 |
| | | | 1 | | | 6 × 37 yulin ili | NRC . | | | | I | |
| 1^{1} | 10 | 20 | 2 | 5'n | 22 | 1° - | 5.2 | 15 | 27 | 2' , | 28.0 | 21. |
| 121 | - 11 | 22 | 3. | 6'. | 30 | 124 | 6 | 17 | 2' 3 | 2' : | 2411 | 212 |
| 1', | 32 | 24 | 3.2 | δ'. | 30 | 10 | 6' 2 | 18 | 214 | а | 2 16 | 2' - |
| 12.0 | '3 | 26 | 4 | ß | 30 | 14 | 6', | 18 | 3.2 | 3' 7 | 39.2 | 3 |
| -04 - | 14 | 28 | 4.2 | 9 | 37 | 2 | 7 | 21.5 | 3.5 | 3' ; | 39 14 | Э |
| 2 | 16 | 32 | 6 | 12 | 60 | 2' - | 7 | 24 3 | 34 6 | 6 | 37 | 3.4 |
| 2'. | '8 | 36 | 1 | 14 | 60 | 21. | 8', | 25') | 4. | ۵. | 43.4 | 4 |
| 2' ; | 20 | 40 | | | | 2 | 8',- | 26', | 4. | ۵. | 42.4 | 4 |
| 22. | | | | | | Э | | | | | | |
| 3 | | | | | | E. | | | | | | |
| 3' | | | | | | 3', | | | | | | |
| 3'5 | | | | | | з', | | | | | | |
| 3 ² | | | | | | 4 | | | | | | |
| 4 | | | | | | 4 | | | | | | |
| | | | | | | | 1 | | | 1 | | |

Type 41 Slings

FLEMISHED EYE & MECHANICALLY SWAGED

| Dam Qt | Mir Jeagth | Flate | d Capacites : EIPS-WRC | | Altoy Oblang |
|------------------------|---------------------------|--------|---------------------------|------------|--------------------------|
| With Pope Inches | ISULQI Sling Fil-In | 1 600 | × (45° | × \ 30° | Links Olart Incres |
| | 1.3 | 5 50 | 1.80 | 1.30 | 1 N 1 |
| 24 | 1-6 | 3 50 | 280 | 2.00 | · • |
| 14 I. | 1-8- | 5.00 | 4 10 | 2.90 | • |
| 14 C | 1-10 | 670 | 5 50 | 3.90 | 1 |
| 1 | 2-0 | B BO | 7 10 | 5 10 | 11 |
| 1. | 2-2 | 11.00 | 9 00 | 640 | 1 |
| ×. | 2.4 | 14 00 | :1 00 | 7.89 | 1. |
| 2 | 2.9 | 19:00 | :6 00 | 11.00 | 1'2 |
| | 3-3 | 26.00 | 21.00 | 15.00 | 2 |
| 1 | 3.6 | 34 00 | 28.00 | 20.00 | 2. |
| Sec. 1 | 4-0 | 42.00 | 34 00 | 24.00 | 2 : |
| 1.4 | 4.6 | 51:00 | 42.00 | 30.00 | 2'8 |
| n | 5.0 | 62.00 | 50.00 | 36.00 | 3. |
| 1.2 | 5.6 | 73 00 | 6C 00 | 42.00 | 3'4 |
| 17. | 6-0 | 85.00 | 69.00 | 49.00 | 3', |
| 114 | 5.6 | 98 QO | 60.00 | 57.00 | 4.7 |
| 2 | 8.0 | 127 00 | 104 00 | 73.00 | 4 |
| 2'. | 8-9 | 154.00 | 126 00 | 89.00 | Cali |
| 2'> | 10-0 | 168-00 | 154.00 | 109.00 | Call |

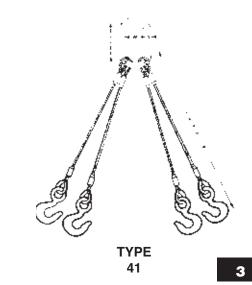
For approximate capacities using Fiber Core EIP: deduct 10% from EIP-IWRC strengths. For approximate capacities on Hand Braided Slings: deduct 15% from corresponding mechanically swaged strengths.

For approximate capacities on Socket Attachments: add 5% to corresponding IWRC swaged strengths.

* These ratings refer to an even'y balanced load between the four legs in most instances, the ratings for a 3-leg sing should be used to accommodate for an uneventy balanced kaid.

| | | | | | | | 1 | | | | | |
|-------------|--------|--------|----------|---------|-----------|----------------|--------|------------|--------|-----------|---------|----------------------------|
| Diam | | darð | | Duty | Alley | Carbon | 1 | all | | pen | | sseð |
| OM . | | οp | | nt o | Hook | Shackle | | nole | - | Sec 465 | | Socket |
| Wee | | iide | | de | Size-Toos | Size-inches | | Loop | D | Jaw | Hole | Mead |
| Rope | Width | Lengih | Witth | r euðip | Far | ¢qr | Weath | -cength | Oram | Opening | Diam | Theyness |
| Inches | inches | inches | Inches | loches | EIPS | €IPS | Inches | Inches | Inches | nches | Inches | inches |
| | | | | | | 6 · 19 Wab 0 | WAC | | | | | |
| 14 | 2 | 4 | | 12.6 | 1 | <u></u> | | _ | м. | · · · · · | - 'a | ', |
| ` 16 | ₹', | . n | | | 11.00 | | | | | | | |
| 1 N | 3 | 6 | 1'6 | 2' N | Z | 1 | z | 4 | 10 m | 19.00 | | " |
| 16 | J' - | 7 | 14 | 2'n | 3 | 2 | 2.4 | 5 | - | 1 | 1 6 | , e |
| 12 | d | 8 | 1.5 | 2', | κ', | S, | 2. | 515 | | 1 | 11.00 | ` • |
| 3.4 | 4', | 9 | - 63 | 27. | 4.7 | 2, | 2. | 515 | 1.0 | 11 a - | 1.1 | 1. |
| 2 A . | 5 | 10 | 112 | 3. | 1 | 1 - C | 3. | 7 | 12. | 1. | 1. | 11. |
| <u>_</u> | 6 | 12 | 2 | 31. | 11 | `. | 3. | 9 | 26 | 1.5 | 1.1 | 1.0 |
| `* | 7 | 14 | 2.1 | ٩' و | 11 | 1 | 4 5 | 10^{4} y | 154 | 13 | | 1'2 |
| 1 | К | 16 | 2° 2 | 4 / | 15 | 114 | 4 | 12 | 2 | 2 | 2 . 4 | 124 |
| 1', | 9 | !8 | Zie | 5. | 22 | 114 | a*, | 13 2 | 214 | 2' . | 2' | 2 |
| | | | | | | 6 · J2 with IV | MAC | | | | | |
| - Carl | 10 | 20 | 27,6 | 5', | 22 | 1.2 | 57 | 15 | 2', | 2', | 2°., | 2'4 |
| 1', | 11 | 22 | a'y - | 6' 4 | 30 | ı'. | 6 | 17 | 2.2 | 215 | 2*.6 | 2. |
| 1', | 12 | 24 | 312 | 6.2 | 30 | 1'. | - 6° s | 19 | 2' | - 3 | - 2°° a | 2 5 |
| 15, | 13 | 26 | 4 | Ŗ | 30 | 12. | 6.2 | 18 | з', | 3. | 37-5 | 3 |
| 12.4 | 14 | 28 | - 4' j - | 9 | 37 | 2 | 1.00 | 2117 | 37 | 3' - | | 3 |
| 7 | 16 | 37 | Б | 12 | 60 | Ζ, | 1 | Z4' / | 31. | 4 | 30% | °., |
| 212 | 18 | 36 | 7 | 14 | 60 | Ζ., | B | 26', | 4' 2 | 4°, | 4 | a |
| 2'; | 20 | 40 | | | | Э | 6.2 | Z9', | ÷¿ | 4'. | 4 | 4 |
| 5. | | | | | | Э | | | | | | |
| 3 | | | | | | Э | | | | | | |
| 3' 4 | | | | | | 3 ; | | | | | | |
| 3', | | | | | | a*7 | | | | | | |
| 35. | | | | | | 4 | | | | | | |
| 4 | | | | | | 4 | | | | | | |

Type 41 slings are 4-leg All Purpose bridles, used both for balanced and unbalanced loads and for heavier loads where design calls for more distribution of weight by the use of attachment at four points.



MAXTOUGH

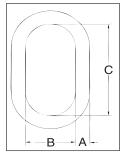
Alloy Master Links

Load Rated

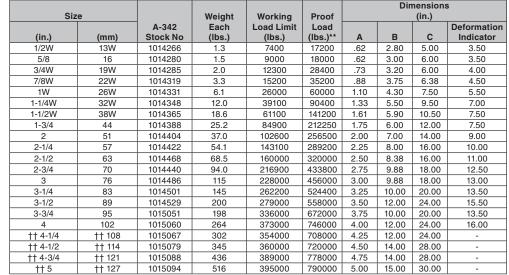


- Faligae Rates
- Alloy Steel Quenched and Tempered.
- Individually Proof Tested to values shown, with certification.
- Proof Tested with 60% inside width special fixtures sized to prevent localized point loading per ASME A-952.
- Meets or exceeds all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, these links meet other critical performance requirements including fatigue life, impact properties and material traceability, not addressed by ASME B30.26.
- . Forgings have a Product Identification Code (PIC) for material traceability, along with the size, the name Crosby and USA in raised lettering.
- Selected sizes designated with "W" in the size column have enlarged inside dimensions to allow additional room for sling hardware and crane hook.
- Crosby 1 ¼" to 2" 342/345 master links are type approved to DNV Certification Notes 2.7-1- Offshore Containers. These Crosby master links are 100% proof tested, MPI and impact tested. The tests are conducted by Crosby and 3.1 test certification is available upon request. Refer to page 161 for Crosby COLD TUFF® master links that meet the additional requirements of DNV rules for certification of lifting applications - Loose Gear. • Incorporates patented QUIC-CHECK® deformation indicators.

A-342 Alloy Master Links



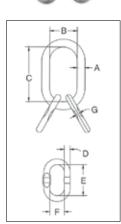
A-345



*Ultimate Load is 5 times the Working Load Limit. Based on single leg sling (in-line load), or resultant load on multiple legs with an included angle less than or equal to 120 degrees. Applications with wire rope and synthetic sling generally require a design

factor of 5. ** Proof Test Load equals or exceeds the requirement of ASTM A952(8.1) and ASME B30.9. ++ Welded Master Link.

A-345 Master Link Assembly with Engineered Flat for use with S-1325A coupler link.



| Siz | e | | | Working Load Limit | | | | | Di | mensic (in.) | ons | | |
|--------|------|--------------------|--------------------------|---|---------------------------|------|-------|-------|------|-----------------|-------|-----|--------------------------|
| (in.) | (mm) | A-345 Stock No. | Weight Each (Ibs.) | Based on 5:1 Design Factor (Ibs.) | Proof Load (Ibs.)** | A | в | с | D | E | F | G | Deformation Indicator |
| 3/4W | 19W | 1014739 | 3.5 | 12300 | 28400 | .73 | 3.20 | 6.00 | .56 | 3.35 | 1.77 | .30 | 4.00 |
| 7/8W | 22W | 1014742 | 4.8 | 15200 | 35200 | .88 | 3.75 | 6.38 | .56 | 3.35 | 1.77 | .30 | 4.50 |
| 1W | 26W | 1014766 | 9.3 | 26000 | 60000 | 1.10 | 4.30 | 7.50 | .75 | 3.94 | 2.36 | .33 | 5.50 |
| 1-1/4W | 32W | 1014779 | 15.8 | 39100 | 90400 | 1.33 | 5.50 | 9.50 | 1.00 | 6.30 | 3.54 | .51 | 7.00 |
| 1-1/2W | 38W | 1014807 | 34.1 | 61100 | 141200 | 1.61 | 5.90 | 10.50 | 1.25 | 7.09 | 3.94 | .65 | 7.50 |
| 1-3/4 | 44 | 1014814 | 46.7 | 84900 | 212250 | 1.75 | 6.00 | 12.00 | 1.38 | 8.00 | 5.00 | .73 | 7.50 |
| 2 | 51 | 1014832 | 67.2 | 102600 | 256500 | 2.00 | 7.00 | 14.00 | 1.50 | 9.00 | 5.75 | - | 9.00 |
| 2-1/2 | 64 | 1014855 | 206 | 160000 | 320000 | 2.50 | 8.38 | 16.00 | 2.50 | 16.00 | 8.38 | - | 11.00 |
| 2-3/4 | 70 | 1014864 | 282 | 216900 | 433800 | 2.75 | 9.88 | 18.00 | 2.75 | 18.00 | 9.88 | - | 12.50 |
| 4 | 102 | 1014999 | 667 | 373000 | 746000 | 4.00 | 12.00 | 24.00 | 3.50 | 24.00 | 12.00 | - | 15.50*** |

Ultimate Load is 5 times the Working Load Limit. The maximum individual sublink working load limit is 75% of the assembly working load limit except for 2-1/2" and 2-3/4", which are 100% of assembly working load limit. Applications with wire rope and synthetic sling generally require a design factor of 5. ** Proof Test Load equals or exceeds the requirement of ASTM A952(8.1) and ASME B30.9. *** Sublink only.

Type 12 Slings

CABLE-LAID: GALVANIZED

Cable-Laid slings are specialized slings, designed specifically for applications that require extreme flexibility, resistance to kinking. Type 12 is a single-leg construction for use singularly or in pairs. Where cutting abrasion or extreme conditions are factors, however, the All-Purpose Type 11 sling is recommended.

| | Min. | | | B | ated Capacit | ties in Ton | s (2000 lb) | |
|------------|----------------|---------------------------|-----|------------------------|--------------|-------------|-------------|--------|
| Diam of | Length (SL) | Inside Loop Dimensions | | +1 | Single | Basket | Hitch when | used*@ |
| Rope | of Sling | W L | | Choker | Part | | | |
| Inches | ſt—in. | in. | in. | Hitch | Vertical | 60° | 45° | 30° |
| | | | | 7×7×7 | | | | |
| 3/8 | 2 | з | 6 | 8.0 | 1.1 | 1.9 | 1.5 | 1.1 |
| 1/2 | 2-6 | - 4 | 8 | 1.3 | 1.9 | 3.2 | 2.6 | 1.9 |
| 5/8 | 3 | 5 | 10 | 1.9 | 2.8 | 4.8 | 3.9 | 2.8 |
| | | | | $7 \times 7 \times 19$ | | | | |
| 3/4 | 3—6 | 6 | 12 | 2.8 | 4.1 | 7.0 | 5.8 | 4.1 |
| - % | 4 | 7 | 14 | 3.8 | 5.4 | 9.3 | 7.6 | 5.4 |
| 1 | 4—6 | 8 | 16 | 4.8 | 6.9 | 12 | 9,7 | 6.9 |
| 1½ | 5 | 9 | 18 | 5.8 | 8.3 | 14 | 12 | 8.3 |
| 1% | 5—6 | 10 | 20 | 6.9 | 9.9 | 17 | 14 | 9.9 |

SINGLE LEG

3

LOOP

c.

TYPE

12

PERTINENT DIMENSIONS FOR END FITTINGS

| | LO | LOOP | | ABLE | ALLOY | SHACKLE | HALF T | HIMBLE |
|--------|-------|--------|-------------------|------------------------|-------|-------------------|--------|---------------|
| Rope | INS | IDE | INS | IDE | HOOK | with thimble | INSIDE | LOOP |
| Diam. | Width | Length | Width | Width Length | | Size | Width | Length |
| Inches | In, | In. | ln, | In. | Tons | ln. | In. | ln. |
| | | | | $7 \times 7 \times 7$ | | | | |
| 3/8 | 3 | 6 | 1 7/8 | 21/8 | 11/2 | 16 | 2 | 4 |
| 1/2 | 4 | 8 | 11/2 | 23/4 | 3 | 1/2 | 21/4 | 5 |
| -5⁄a | 5 | 10 | 1% | 374 | 41/2 | % | 31/2 | 5½ |
| | | | | $7 \times 7 \times 19$ | | | | |
| 3/4 | 6 | 12 | 2 | 3¾ | 7 | 3/2 | 31/2 | 7 |
| 1 | 8 | 16 | 2 ¹ /2 | 41/2 | 11 | 1 | 41/2 | 9 |
| 11/8 | 9 | 18 | 2½ | 5% | 11 | 1½ | 4% | $10^{1}/_{2}$ |
| 1% | 10 | 20 | 31/2 61/2 | | 15 | 1 ³ /4 | 6 | 12 |

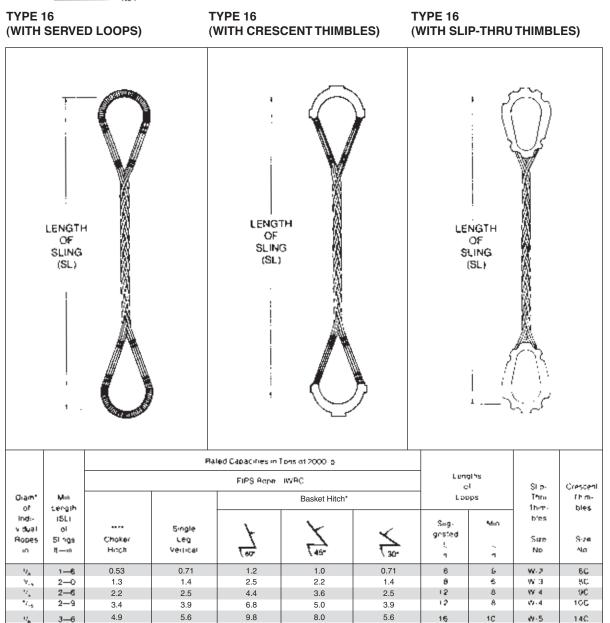
. Rated capacities of basket friches are based on a ran mum dominter of curvature at the point of load contact of 10 timos thin rope diameter.

17 Rated capacities for choken latches apply when the pogle of choke is greater than 135%.

Bright 7 X 6 v 19 with IWRC Class Hope may be used on larger sizes. Capacities will other

Braided Slings Type 16

6-PART FLAT BODY



Larger sizes available upon request.

4-0

4-6

5-6

6—6

/---6

8—9

10-6

Ζ.,

11.4

 b_{ij}

X,

1

Rated capacities basket hitch based on D/d ratio of 25 times the component rope diameter.

7.6

9.9

12

15

22

30

39

Rated capacities based on pin diameter no larger than natural eye width or less than the nominal sling diameter.

Rated capacities based on design factor of 5. Horizontal sling angles less than 30 degrees shall not be used.

6.7

8.7

11 14

19

26

34

** Rated capacities of choker hitches apply when the angle of choke is greater than 135°.

Available in Galvanized Aircraft Cable up to 3/8" ropes.

13

17

22

27

38

52

67

11

14

18

22

31

42

55

7.6

9.9

12

15

22

30

39

18

18

20

24

28

32

36

12

:2

- d

' B

20

24

30

₩ 5

W 5

w e

W-7

W-7

W-8

W-9

16C

18C

200

220

24C

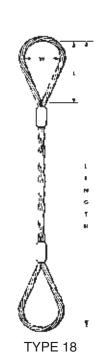
32C

40C

Type 18 Slings

8-PART BRAIDED

| Diameter | Diameter | Min. | | | Rated Ca | pacities** | | | | Loop |
|--------------------------------------|---------------------------------|----------------------------|---------------------------|-----------------|------------------------------|------------|----------|--------|----------|----------|
| of | of | Length | | ** | | Basket | t Hitch* | | App | |
| Individual Ropes Inches | Sling Body Inches | (SL) of Sling ft—in. | Single Leg Vertical | Choker Hitch | Straight Pull Vertical | 60° | 45° | 30° | W in. | L in. |
| * 3/32 | 7/16 | 1-5 | .59 | .44 | 1.18 | 1.00 | .83 | .59 | 2 | 4 |
| * 1/8 | 9/ ₁₆ | 1-10 | 1.10 | .82 | 2.20 | 1.90 | 1.50 | 1.10 | 3 | 6 |
| * 3/16 | ¹³ / ₁₆ | 2-10 | 2.20 | 1.80 | 4.30 | 3.70 | 3.00 | 2.20 | 5 | 10 |
| * 1/4 | 1 ¹ / ₈ | 3—6 | 3.80 | 3.30 | 7.60 | 6.60 | 5.40 | 3.80 | 6 | 12 |
| * 5/16 | 1 3/ ₈ | 4-6 | 5.90 | 5.20 | 12.00 | 10.00 | 8.30 | 5.90 | 8 | 16 |
| * 3/8 | 1 ¹¹ / ₁₆ | 5-0 | 8.50 | 7.40 | 17.00 | 15.00 | 12.00 | 8.50 | 8 | 16 |
| 7/16 | 2 | 5—9 | 11.00 | 10.00 | 23.00 | 20.00 | 16.00 | 11.00 | 9 | 18 |
| 1/2 | 2 1/ ₄ | 6-5 | 15.00 | 13.00 | 30.00 | 26.00 | 21.00 | 15.00 | 9 | 18 |
| 9/ ₁₆ | 2 ¹ / ₂ | 8—0 | 19.00 | 16.00 | 38.00 | 33.00 | 27.00 | 19.00 | 12 | 24 |
| 5/ ₈ | 2 ¹³ / ₁₆ | 9-4 | 23.00 | 20.00 | 46.00 | 40.00 | 33.00 | 23.00 | 14 | 28 |
| 3/4 | 3 3/ ₈ | - | 33.00 | 29.00 | 66.00 | 57.20 | 47.85 | 33.20 | - | - |
| 7/8 | 4 | _ | 45.00 | 39.00 | 89.00 | 77.60 | 63.80 | 45.55 | - | - |
| 1 | 4 1/2 | - | 58.00 | 51.00 | 116.00 | 100.60 | 82.35 | 58.35 | — | — |
| 1 1/ ₈ | 5 | - | 73.00 | 64.00 | 146.00 | 126.00 | 103.00 | 73.00 | - | - |
| 1 ¹ / ₄ | 5 ⁵ / ₈ | - | 89.00 | 78.00 | 179.00 | 155.00 | 127.00 | 89.00 | — | — |
| 1 ³ / ₈ | 6 ³ / ₁₆ | - | 108.00 | 94.00 | 215.00 | 186.00 | 152.00 | 108.00 | — | — |
| 1 1/ ₂ | 6 ³ / ₄ | — | 128.00 | 112.00 | 255.00 | 221.00 | 181.00 | 128.00 | — | — |
| 1 ⁵ / ₈ | 7 ⁵ / ₁₆ | — | 148.00 | 129.00 | 296.00 | 256.00 | 209.00 | 148.00 | - | - |
| 1 ³ / ₄ | 7 ⁷ / ₈ | - | 171.00 | 150.00 | 343.00 | 297.00 | 242.00 | 171.00 | — | — |
| 1 7/ ₈ | 8 7/16 | — | 195.00 | 171.00 | 390.00 | 338.00 | 276.00 | 195.00 | — | — |
| 2 | 9 | — | 222.00 | 194.00 | 444.00 | 384.00 | 314.00 | 222.00 | — | — |



Larger sizes available.

 * Galvanized Aircraft Cable may be used on Individual Ropes up to $^{3}\!/_{8}^{\ast}$ Dia.

** Rated capacities are given in tons of 2000 lb using EIPS rope with IWRC. Rated capacities of basket hitches are based on minimum diameter of curvature at the point of load contact of 20 times the rope diameter.

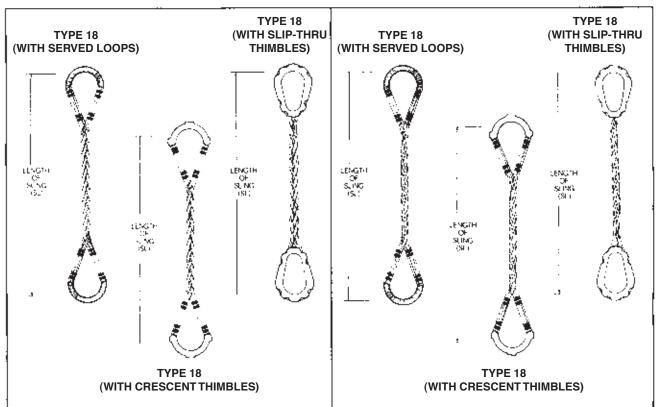
**** Rated capacities of choker hitches apply when the angle of choke is greater than 135°.

PERTINENT DIMENSIONS FOR END FITTINGS

| Sling | LO | OP | SLIP- THIN | | ALLOY HOOK | SHACKLE with Thimble | HALF | THIMBLE |
|------------------|-------------------------------|---------------|-------------------------------|--------------------------------|-------------------------------|-------------------------------|-------------------------------|---------------|
| Size | INS | IDE | INS | IDE | nook | with filmble | INSID | E LOOP |
| Inches | Width In. | Length In. | Width In. | Length In. | Size Tons | Size In. | Width In. | Length In. |
| 3/32 | 1 ¹ / ₂ | 3 | 2 ¹ / ₈ | 4 ¹ / ₈ | 1 | 1/4 | | |
| 1/8 | 2 | 4 | 2 ¹ / ₈ | 4 ¹ / ₈ | 1 ¹ / ₂ | 3/8 | 2 | 4 |
| 3/ ₁₆ | 3 | 6 | 2 ³ / ₈ | 4 3/ ₈ | 3 | 1/2 | 2 1/4 | 6 |
| 1/4 | 4 | 8 | 3 ³ / ₈ | 6 ⁵ / ₈ | 4 ¹ / ₂ | 5/ ₈ | 3 ¹ / ₄ | 8 |
| 5/ ₁₆ | 5 | 10 | 3 ³ / ₄ | 7 1/8 | 7 | 3/4 | 4 ¹ / ₂ | 10 |
| 3/8 | 6 | 12 | 3 ³ / ₄ | 7 1/8 | 11 | 7/8 | 4 ⁵ / ₈ | 12 |
| 7/16 | 7 | 14 | 4 ³ / ₈ | 8 ³ / ₈ | 15 | 1 ¹ / ₈ | 5 ¹ / ₂ | 14 |
| 1/2 | 8 | 16 | 5 | 9 ¹ / ₂ | 15 | 1 ¹ / ₄ | 6 | 16 |
| 9/ ₁₆ | 9 | 18 | 5 | 9 1/ ₂ | 22 | 1 1/ ₂ | 6 ¹ / ₂ | 18 |
| 5/ ₈ | 10 | 20 | 6 ³ / ₄ | 11 ³ / ₄ | 30 | 1 ³ / ₄ | 7 | 20 |
| 3/4 | 12 | 24 | 8 | 14 ¹ / ₂ | 37 | 2 | 8 | 24 |
| 7/8 | 14 | 28 | 8 ³ / ₈ | 17 ⁵ / ₈ | 45 | 2 | | |
| 1 | 16 | 32 | 8 ³ / ₈ | 17 ⁵ / ₈ | 60 | 2 ¹ / ₈ | | |

Type 18 **Braided Slings**

8-PART FLAT BODY ERECTOR SLINGS



8-PART ROUND BODY ERECTOR SLINGS

| | | | | | Rateo | I Capacities | in Tons (20 | 00 lb) | | | | | | | |
|---|----------------------------|------------------------|---------------------------|-----------------------|-----------------------|-----------------------|------------------------|---------------------------|-------------------------|--------------------------|--------------------------|----------------------------|----------------------|-----------------------------------|----------------------------------|
| | | | EIP | S—Fiber Co | ore | | | E | IPS-IWRC | ; | | Lengths of Loops | | Thin | nbles |
| Diam. of | Min. Length | | | E | Basket Hitch* | | | | | Basket Hitch | * | | | | |
| Individual Ropes in. | (SL) of Sling ft—in. | ** Choker Hitch | Single Leg Vertical | <u>↓</u> . 60° | × 45° | ₹ 30° | ** Choker Hitch | Single Leg Vertical | 1 (60° | × 45° | ₹ 30° | Sug- gested L in. | Min L in. | Slip-Thru Thimbles Size No. | Crescent Thimbles Size No. |
| 1/ ₈ 3/ ₁₆ 1/ ₄ 5/ ₁₆ | 1—6 2—0 2—6 2—9 | | 1.9 3.4 5.2 | 3.3 5.8 9.1 | 2.7 4.8 7.4 | | 1 1.9 3.3 5.2 | 1.1 2.2 3.8 5.9 | 1.9 3.7 6.6 10 | 1.6 3.0 5.4 8.3 | 1.1 2.2 3.8 5.9 | 6 10 12 16 | 6 6 8 8 | W-2 W-3 W-4 W-5 | 8C 9C 10C 14C |
| 3/ ₈ 7/ ₁₆ 1/ ₂ 9/ ₁₆ | 3—6 4—0 4—6 5—6 | 6.6 8.9 12 15 | 7.5 10 13 17 | 13 18 23 29 | 11 14 19 24 | 7.5 10 13 17 | 7.4 10 13 16 | 8.5 11 15 19 | 15 20 26 33 | 12 16 21 27 | 8.5 11 15 19 | 16 18 18 24 | 10 12 12 14 | W-5 W-6 W-7 W-7 | 16C 18C 20C 22C |
| 5/ ₈ 3/ ₄ 7/ ₈ 1 | 6—6 7—6 8—9 10—6 | 18 26 35 45 | 21 29 40 51 | 36 51 69 89 | 29 41 56 73 | 21 29 40 51 | 20 29 39 51 | 23 33 45 58 | 40 57 77 100 | 33 47 63 82 | 23 33 45 58 | 28 30 36 48 | 18 20 24 30 | W-8 W-9 W-10 W-10 | 24C 28C 32C 40C |
| 1 ¹ / ₈ 1 ¹ / ₄ 1 ³ / ₈ | 12—6 15—0 18—8 | 57 70 84 | 65 80 96 | 112 138 166 | 92 113 135 | 65 80 96 | 64 78 94 | 73 89 108 | 126 155 186 | 103 127 152 | 73 89 108 | 60 72 84 | 36 42 54 | W-11 W-11 — | 48C — — |

* NOTE: 1/8 utilize Galvanized Small Cord minimum breakage force. Rated capacities basket hitch based on D/d ratio of 25 times the compo-

Rated capacities based on pin diameter no larger than natural eye width or

Horizontal sling angles less than 30 degrees shall not be used.

** Rated capacities of choker hitches apply when the angle of choke is greater than 135°.

Also available made from Galvanized Aircraft Cable.

Larger sizes available.

less than the nominal sling diameter. Rated capacities based on design factor of 5.

nent rope diameter.

Braided Slings Type 19



Through Body

Helically laid with one continuous wire rope running through both eyes and the body

Flexibility and handing ease for rigging large lifts is achieved in these 9-part slings by laying a single wire rope continuously through both eyes and the sling body so that nine parts of rope form the body. This proven design provides internal adjustment to distribute the load evenly among all nine parts of the body when a sling is in tension. In addition, the construction makes it possible to visually inspect all internal parts of the sling before and after each lift - important when a sling is to be used many times. Only two splices occur in the entire sling, where the two rope ends are spliced at the eyes.

A 9-part sling construction exhibits constructional stretch of approximately 1 1/2% on the first loading, and a lesser amount thereafter. For this reason, lifts using two or more legs should always be made with legs which have been subjected to the same past usage when such stretch may affect the lift.

Where a sling body must conform to a tight choke hitch, or must bend in a tight radius, as around a pin or post, a 9-part construction may be the most suitable, since it can develop greater lifting capacity from a smaller component rope.

Conforms with WRTB Publication "Wire Rope Sling Users Manual".

9-PART BRAID HAND TUCKED SPLICE

IWRC

VERTICAL, CHOKER OR VERTICAL BASKET

RATED CAPACITY IN TONS OF 2,000 lbs. RATED CAPACITIES SHOWN APPLY ONLY TO 6X19 AND 6X36 CLASSIFICATION WIRE ROPE

| ROPE DIAMETER (INCHES) | VERT | ICAL | СНС | KER | VERTICAL | BASKET | |
|--------------------------------------|---|--------------------------------------|---|-------------------------------------|--|--|--|
| | Į | } | é | 3 | U | | |
| | IPS | EIPS | IPS | EIPS | IPS | EIPS | |
| %2* %* %6 %6 %6 % | 0.63 1.3 2.1 3.7 5.8 8.3 | 2.4 4.3 6.6 9.5 | 0.55 1.1 1.8 3.2 5.0 7.2 | 2.1 3.7 5.8 8.3 | 1.3 2.5 4.2 7.4 12 17 | 4.8 8.6 13 19 | |
| 746 1/2 946 5% 94 7% | 11 14 18 23 32 44 | 13 17 21 26 37 50 | 9.8 13 16 20 28 38 | 11 15 19 23 32 44 | 22 29 37 45 65 87 | 26 34 42 52 74 100 | |
| 1 1 ½ 1 ½ 1 ½ 1 ½ 1 % | 57 71 87 105 125 145 | 65 82 101 121 144 166 | 50 62 77 92 109 127 | 57 72 88 106 126 146 | 113 142 175 210 249 290 | 130 164 201 242 287 333 | |
| 1 ¾ 1 % 2 | 168 192 217 | 193 219 249 | 147 168 190 | 169 192 218 | 335 383 433 | 386 438 499 | |

NOTE: 3/32 & 1/8 utilize Galvanized Small Cord minimum breaking force.

Rated capacities basket hitch based on D/d ratio of 25 times the component rope diameter.

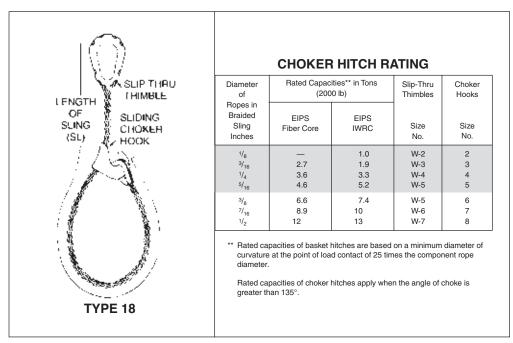
Rated capacities based on pin diameter no larger than natural eye width or less than the nominal sling diameter.

Rated capacities based on design factor of 5 Horizontal sling angles less than 30 degrees shall not be used.

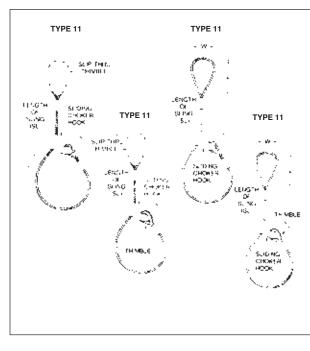


Choker Slings

Braided Slings



Flemished Eye & Mechanically Swaged



| Diameter of | Rated Capac (200 | | Slip-Thru Thimbles | | iced | Slidi Choker | |
|-------------------------------|---------------------|--------------|-----------------------|----------|----------|---|--------|
| Individual Ropes Inches | EIPS Fiber Core | EIPS IWRC | Size No. | W in. | L in. | Size No. | Weight |
| 1/ ₄ | .42 | .48 | W-2 | 2 | 2 | 1/ ₄ - 5/ ₁₆ | 1.0 |
| 3/ ₈ | .94 | 1.1 | W-2 | 3 | 3 | 3/ ₈ | 0.8 |
| 1/ ₂ | 1.6 | 1.9 | W-3 | 4 | 4 | 1/ ₂ | 1.25 |
| 5/ ₈ | 2.6 | 2.9 | W-4 | 5 | 5 | 5/ ₈ | 2.5 |
| 3/ ₄ | 3.7 | 4.1 | W-4 | 6 | 6 | 3/ ₄ | 4.5 |
| 7/ ₈ | 5.8 | 5.6 | W-5 | 7 | 7 | 7/ ₈ . 1 | 10 |
| 1 | 6.4 | 7.2 | W-5 | 8 | 8 | 7/ ₈ . 1 | 10 |
| 1 1/ ₈ | 8.1 | 9 | W-6 | 9 | 9 | 1 1/ ₈ . 1 1/ ₄ | 26 |
| 1 ¹ / ₄ | 9.9 | 11 | W-6 | 10 | 10 | 1 ¹ / ₈ . 1 ¹ / ₄ | 26 |
| 1 ³ / ₈ | 12 | 13 | W-7 | 11 | 11 | 1 ³ / ₈ . 1 ¹ / ₂ | 42 |
| 1 ¹ / ₂ | 14 | 16 | W-7 | 12 | 12 | 1 ³ / ₈ . 1 ¹ / ₂ | 42 |

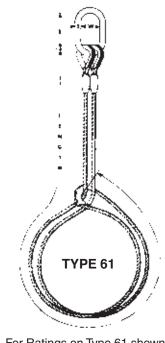
** Rated capacities of choker hitches apply when the angle of choke is greater than 135°.

Choker Slings

TAPERED SLEEVE ATTACHMENTS

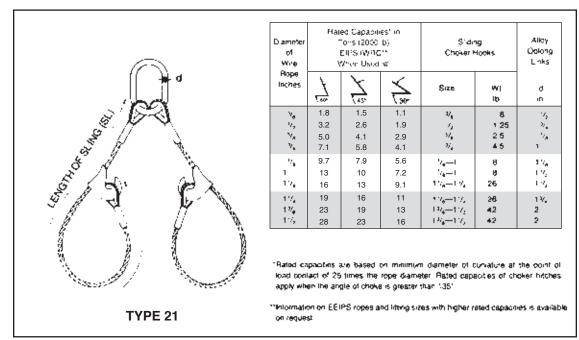
These Choker Slings are designed to grip or choke the load. Ideally suited to lifting bar stock, beams, lumber, bundles of pipe and similar material. The tapered sleeve splice, as well as the anchor hitch on Type 61, allows close snubbing of the load, insuring a positive grip.

The use of sliding choker hooks on Type 21 increases sling life and permits faster handling.

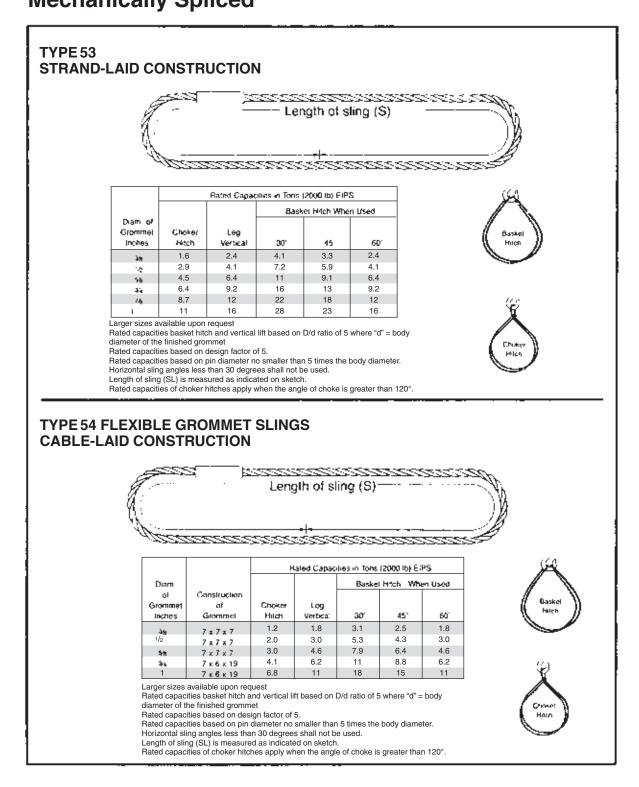


For Ratings on Type 61 shown above call IRSCI.

TWO LEG BRIDLE CHOKER SLING - TYPE 21

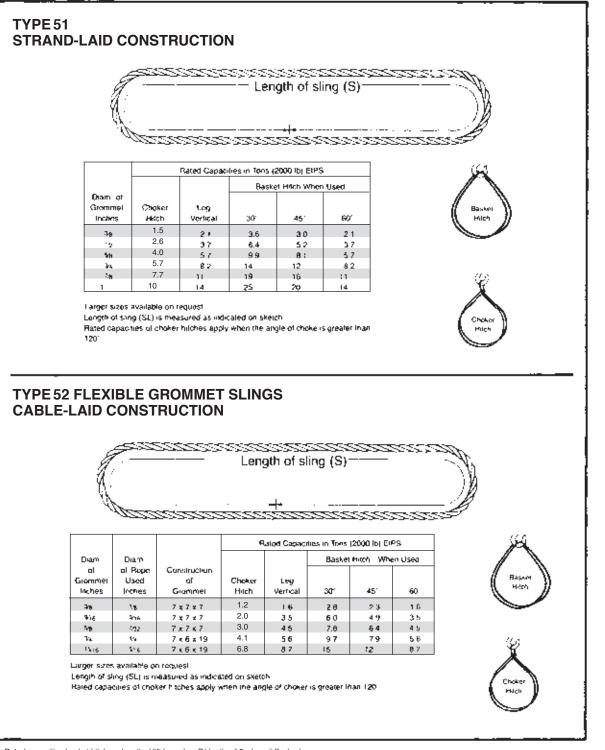


Grommet Slings Mechanically Spliced



Grommet Slings

Hand Tucked



Rated capacities basket hitch and vertical lift based on D/d ratio of 5 where "d" = body diameter of the finished grommet

Rated capacities based on design factor of 5. Rated capacities based on pin diameter no smaller than 5 times the body diameter.

Hated capacities based on pin diameter no smaller than 5 times the body Horizontal sling angles less than 30 degrees shall not be used.

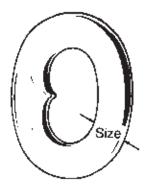




INDUSTRIAL WIRE ROPE SUPPI

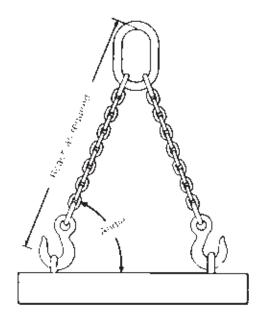
Alloy Chain Slings

HOW TO ORDER THE PROPER CHAIN SLING When ordering, please be sure to include the following:



SIZE

Size means diameter of the material from which the link of the body chain is formed. Throughout this bulletin, size will be given in fractions.



REACH("PULL TO PULL")

If chain slings are to be used in pairs and are to be matched for reach, please indicate when ordering.

TYPE

In describing the type of chain sling, the following symbols should be used. If attachments required are other than standard, give detailed specifications and description.

First symbol (basic type)

- S —Single chain sling.
- C Single Choker chain sling with a standard end link on each end, no hooks.
- Double branch chain sling.
- T Triple branch chain sling.
- Q Quadruple branch chain bling.

Second symbol (type of master link or end link)

- Oblong master link of standard dimensions.
- Pear-shaped master link (available on request, not a standard item).

Third symbol (type of hook)

- S Sling hook
- G Grab hook
- F Foundry hook
- L Latchlok
- PH Plate hook (available on request, not a standard item).
- PC Plate clamp (available on request, not a standard item).

Grade 80 & 100 Alloy Chain

GENERAL INFORMATION

WORKING LOAD LIMIT

The "Working Load Limit" is the maximum load in pounds which should ever be applied to chain, when the chain is new or "in as new" condition, and when the load is uniformly applied in direct tension to a straight length of chain.

PROOF TEST

The "Proof Test" is a term designating the tensile test applied to new chain for the sole purpose of detecting injurious defects in the material or manufacture. It is the load which the chain has withstood under a test in which the load has been applied in direct tension to a straight length of chain.

MINIMUM ULTIMATE LOAD

The "Minimum Ultimate Load" is the minimum load at which new chain will break when tested by applying direct tension to a straight length of chain at a uniform rate of speed in a testing machine.

ATTACHMENTS

Any attachments, such as hooks or links, should have a rated "Working Load Limit" at least equal to the chain with which it is used.

SYMMETRICAL LOADING

Rated Working Load Limit assumes symmetrical loading of all sling legs.

SPECIFICATIONS: ANSI / ASME B30.9 2006

Paragraph 9-1.6.1 "Prior to initial use, all new and repaired chain and components of an alloy steel chain sling, either individually or as an assembly, shall be proof tested by the sling manufacturer or qualified person."

CAUTION

Only Crosby Alloy chain, Spectrum 8[®] or Spectrum 10[®], should be used for overhead lifting applications.

General Usage – It must be recognized that certain factors in the usage of chain and attachments can be abusive and lessen the load that the chain or attachments can withstand. Some examples are twisting of the chain; disfigurement; deterioration by straining, usage, weathering and corrosion; rapid application of load or jerking; applying excessive loads; sharp corner cutting action and non-symmetrical loading effects.

When using chain slings in choker applications, the Working Load Limit must be reduced by 20%. Crosby recommends a minimum angle of choke of 120 degrees. Consult Crosby when planning to use an angle of choke of less than 120 degrees. If Crosby A-1338 cradle grab hooks are used at a minimum angle of choke of 120 degrees, the full sling rated WLL can be utilized.



In shortening applications, a 20% reduction of the Working Load Limit is required except when using the Crosby A-1338 cradle grab hooks or S-1311N chain shortener link. They can be used without any reduction to the Working Load Limit.

Care should be taken to observe these derated applications or chain may fracture or permanently stretch at loads less than the advertised chain ultimate strength and proof load respectively.

Environmental Effects – Excessive high or low temperatures, or exposure to chemically active environments such as acids or corrosive liquids or fumes, can reduce the performance of the chain.

Temperature

- Extreme temperatures will reduce the performance of alloy steel chain slings.
- Normal operating temperature is -40° F to 400° F (-40° C to 204° C).
- See the temperature exposure chart (Table 1) to determine reduction of WLL due to operation at, and exposure to, elevated temperatures.

Chemically Active Environments can have detrimental effects on the performance of chain. The effects can be both visible loss of material and undetectable material degradation causing significant loss of strength.

- Usage Exposure Exposure to chemically active environments such as acids or corrosive liquids or fumes can reduce the performance of the chain.
- Special Surface Coating/Plating/Galvanizing Chain should not be subjected to galvanizing, or any plating process.
- If it is suspected that the chain has been exposed to chemically active environment, remove from service.

| | TABLE 1 | | | | | | | | | | | |
|--------------|--|---|--|---|--|--|--|--|--|--|--|--|
| | Use of Crosby Alloy Chain at Elevated Temperatures | | | | | | | | | | | |
| | erature hain | | e 8 (80) Iain | | 10 (100) nain | | | | | | | |
| (F°) | (C°) | Temporary Reduction of Rated Load at Elevated Temperature* | Permanent Reduction of Rated Load After Exposure to Temperature** | Temporary Reduction of Rated Load at Elevated Temperature* | Permanent Reduction of Rated Load After Exposure to Temperature** | | | | | | | |
| Below 400 | Below 204 | None | None | None | None | | | | | | | |
| 400 | 204 | 10% | None | 15% | None | | | | | | | |
| 500 | 260 | 15% | None | 25% | 5% | | | | | | | |
| 600 | 316 | 20% | 5% | 30% | 15% | | | | | | | |
| 700 | 371 | 30% | 10% | 40% | 20% | | | | | | | |
| 800 | 427 | 40% | 15% | 50% | 25% | | | | | | | |
| 900 | 482 | 50% | 20% | 60% | 30% | | | | | | | |
| 1000 | 538 | 60% | 25% | 70% | 35% | | | | | | | |
| Over 1000 | Over 538 | | 4 and ASME B30 s over 1000° F to | | | | | | | | | |

 * Crosby does not recommend the use of Alloy Chain at temperatures above 800° F.

** When chain is used at room temperature after being heated to temperatures shown in the first column.



Crosby® Grade 100 Chain Sling Configurations

TO MAKE YOUR CROSBY® GRADE 100 ALLOY CHAIN SLING

Follow these simple steps in making a sling assembly:

- 1. Determine the maximum load to be lifted by the sling assembly.
- 2. Choose the type of sling assembly suited for the shape of the load and the size of the sling assembly for the load to be lifted. The decision must take into account the angle of the sling legs in multileg slings.
- 3. Determine the overall reach from bearing point of master link to bearing point on hook (see Fig. 1).
- 4. Select components, assemble chain and components.
- 5. Affix sling identification tag to sling. The tag is available from your Authorized Crosby Distributor.

Each sling shall be marked to show: name or trademark of manufacturer, grade, nominal chain size, number of legs, rated load for the type(s) of Fig. 1 hitch(es) used and angle upon which it is based (reach).

If measurement comes in the link, cut the following link. For two leg type slings, count the links and use an even number

for clevis hooks and an odd number for eye hooks. This will position hooks in the same plane. In multileg slings always use the same number of links in each leg.

When using chain slings in choker applications, the Working Load Limit must be reduced by 20%. Crosby recommends a minimum angle of choke of 120 degrees. Consult Crosby when planning to use an angle of choke of less than 120 degrees. If Crosby A-1338 cradle grab hooks are used at a minimum angle of choke of 120 degrees, the full



0

sling rated WLL can be utilized. In shortening applications, a 20% reduction of the Working Load Limit is required except when using the Crosby A-1338 cradle grab hooks or S-1311N chain shortener link. They can be used without any reduction to the Working Load Limit.

The Slings shown here are standard assemblies that can be made from "Proof Tested" Crosby Components and Alloy Chain supplied by your authorized Crosby distributor. Assemblies must include chain sling identification tag (not shown).

REACH

| Туре | | Descript | tion | | Туре | | Descript | tion | |
|---------|----------|----------|-----------|--|----------------|-----------|-----------|-----------|-----------|
| TYPE CO | TYPE SOS | TYPE SOG | TYPE SOF | TYPE SSS | TYPE SGS | TYPE ASOS | TYPE ASOF | TYPE ASOG | TYPE SOCH |
| Q | Gamman | Q | Queenee Q | (An and a second | C-goonaaaaaaaa | R | | R | C |

| | .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | 2 coonplicit. | .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | Decemption |
|---|---|--|---|---|
| ſ | CO | Single Chain Sling with Master Link each end | SGS | Single Chain Sling with Grab Hook and Sling Hook |
| | SOS | Single Chain Sling with Master Link and Sling Hook | ASOS | Adjustable Single Chain with Master Link and Sling Hook |
| ſ | SOG | Single Chain Sling with Master Link and Grab Hook | ASOF | Adjustable Single Chain Sling with Master Link and Foundry Hook |
| Γ | SOF | Single Chain Sling with Master Link and Foundry Hook | ASOG | Adjustable Single Chain Sling with Master Link and Grab Hook |
| | SSS | Single Chain Sling with Sling Hook each end | SOCH | Single with 1355 Choker |

| 5 | Â, | Å | Å | US | | Å | |
|------|--------------|------------------------------|------------|------|---------------|---------------------------------|--------------------|
| TYP | PE DOS | TYPE DOG | TYPE DOF | TY | PE ADOS | TYPE ADOG | TYPE DOCH |
| Туре | | Description | | Туре | | Description | |
| DOS | Double Chair | n Sling with Master Link and | Sling Hook | ADOS | Adjustable Do | uble Chain Sling with Master Li | ink and Sling Hook |
| DOG | Double Chai | n Sling with Master Link and | Grab Hook | ADOG | Adjustable Do | uble Chain Sling with Master Li | ink and Grab Hook |

| ſ | DOG | Double Chain Sling w | vith Master Link and Gr | ab Hook | ADOG | Adjustable Double Chain Slin | g with Master Link and Gr |
|---|-----|----------------------|-------------------------|------------|------|------------------------------|---------------------------|
| [| DOF | Double Chain Sling w | vith Master Link and Fo | undry Hook | DOCH | Double with 1355 Choker | |
| | | 8 | ~ | | ~ | ~ | |

| 5 | | | ₹ "Â | | | | Λ | Å | |
|------|-------------|--------------------------|--------------------|------|------|-----------------------|---|------------|--|
| ТҮРІ | ETOS | TYPE TOG | TYPE TOF | TYPE | тосн | TYPE QOS | TYPE QOG | TYPE QOF | |
| Туре | | Desci | ription | | Туре | | Description | | |
| TOS | Triple Cha | in Sling with Master Lin | k and Sling Hook | | QOS | Quadruple Chain Sling | with Master Link and S | Sling Hook | |
| TOG | Triple Cha | in Sling with Master Lin | k and Grab Hook | | QOG | Quadruple Chain Sling | Grab Hook | | |
| TOF | Triple Cha | in Sling with Master Lin | k and Foundry Hook | | QOF | Quadruple Chain Sling | le Chain Sling with Master Link and Foundry Hoo | | |
| TOCH | Triple with | 1355 Choker | | | | | | | |

INDUSTRIAL WIRE ROPE SUPPLY

Crosby ELIMINATOR®

TO ORDER YOUR CROSBY ELIMINATOR[®] GRADE 100 ALLOY CHAIN SLING

REACH

Fig. 1

Follow these simple steps to order a sling assembly:

- 1. Determine the maximum load to be lifted by the sling assembly.
- 2. Choose the type of sling assembly suited for the shape of the load and the size of the sling assembly for the load to be lifted. The decision must take into account the angle of the sling legs in multileg slings.
- 3. Determine the overall reach from bearing point of Eliminator Bail to bearing point on hook (see Fig. 1).
- 4. Select components, assemble chain and components.
- 5. Affix sling identification tag to sling. The tag is available from your Authorized Crosby Distributor.

Each sling shall be marked to show: name or trademark of manufacturer, grade, nominal chain size, number of legs, rated load for the type(s) of hitch(es) used and angle upon

Crosby ELIMINATOR® Triple Chain Sling with Master Link and

which it is based (reach).

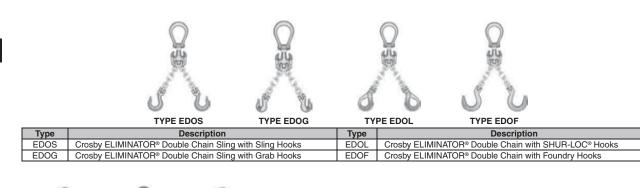
When using chain slings in choker applications, the Working Load Limit must be reduced by 20%. Crosby recommends a minimum angle of choke of 120 degrees.

Consult Crosby when planning to use an angle of choke of less than 120 degrees. If Crosby A-1338 cradle grab hooks are used at a minimum angle of choke of 120 degrees, the full sling rated WLL can be utilized



In shortening applications, a 20% reduction of the Working Load Limit is required except when using the Crosby A-1338 cradle grab hook, S-1311N chain shortener link or the Crosby ELIMINATOR® Shortener Link. They can be used without any reduction to the Working Load Limit.

| | TYPE ESOS | TYPE ESOG | ТҮ | PE ESOL | TYPE ESOF | |
|------|--|-----------------|------|---|-----------------------------|-------------|
| Туре | Description | | Туре | pe Description | | |
| ESOS | Crosby ELIMINATOR® Single Chain Sling | with Sling Hook | ESOL | Crosby ELIMINATOR® Single Chain with SHUR-LOC® Hook | | |
| ESOG | Crosby ELIMINATOR® Single Chain Sling with Grab Hook | | ESOF | Crosby ELIMIN | IATOR® Single Chain with Fo | oundry Hook |



| 5.00 | LA A A | 500 C | LA.A.A. |
|--------|---|-------|---|
| TYPE E | TOS TYPE ETOG TYPE ETOL TYPE ETOF | TYPE | EQOS TYPE EQOG TYPE EQOL TYPE EQOF |
| Туре | Description | Туре | Description |
| ETOS | Crosby ELIMINATOR [®] Triple Chain Sling with Master Link and Sling Hooks | EQOS | Crosby ELIMINATOR [®] Quad Chain Sling with Master Link and Sling Hooks |
| ETOG | Crosby ELIMINATOR [®] Triple Chain Sling with Master Link and Grab Hooks | EQOG | Crosby ELIMINATOR [®] Quad Chain Sling with Master Link and Grab Hooks |
| ETOL | Crosby ELIMINATOR® Triple Chain Sling with Master Link and SHUR-LOC® Hooks | EQOL | Crosby ELIMINATOR® Quad Chain Sling with Master Link and SHUR-LOC® Hooks |

4

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Crosby ELIMINATOR® Quad Chain Sling with Master Link and

EQOF

Foundry Hooks

ETOF

Foundry Hooks

Grade 100 Assembly Chart

SINGLE LEG SLING

| | | þ | 0 | R | 0 | R | Q | 0 | Ω | | 0 | 8 | 8 |
|---------------------------|-------|------------------------------------|---|--|-------------------------------------|-------------------------------------|------------------------------------|---------------------------------------|--|--|--|--|---|
| Spectru Chain (in.) | | Grade 100 Chain Stock No. | Master Link A-1342N + Stock No | Master Link Assembly A-1345N + Stock No | Master Link A-342 Stock No | Master Link A-345 Stock No | ELIMINATOR® L-1361 Stock No. | LOK-A- LOY® A-1337 Stock No. | Chain Coupler S-1325A Stock No. | Chain Shortener Link S-1311N Stock No. | SHUR-LOC [®] Clevis Hook S-1317 Stock No. | SHUR-LOC® Swivel Hook S-1316 Stock No. | SHUR-LOC [®] Swivel Hook S-1326 Stock No. |
| 1/4 (9/32) | 7 | 273710 | 1011403X1 | _ | 1014266 | _ | 1049802 | 1015104 | 1098500 | 1017869 | 1029000 | 1022914 | 1004313 |
| 5/16 | 8 | 273729 | 1011412X2 | _ | 1014266 1014280 1014285 | _ | 1049809 | 1015113 | 1098504 | 1017878 | 1029009 | 1022914 | 1004313 |
| 3/8 | 10 | 273738 | 1011421X3 | _ | 1014285 1014319 | _ | 1049818 | 1015122 | 1098508 | 1017897 | 1029018 | 1002923 | 1004323 |
| 1/2 | 13 | 273747 | 1011430X4 | _ | 1014319 1014331 | _ | 1049827 | 1015136 | 1098512 | 1017906 | 1029027 | 1002932 | 1004331 |
| 5/8 | 16 | 273756 | 1011449X5 | _ | 1014331 1014348 | _ | 1049836 | 1015145 | 1098516 | 1017915 | 1029036 | 1002941 | 1004340 |
| 3/4 | 20 | 273858 | 1011458X6 | _ | 1014348 1014365 | _ | _ | 1015154 | _ | _ | 1021071 | 1022942 | 1004349 |
| 7/8 | 22-23 | 273867 | 1011467X7 | _ | 1014365 1014388 | _ | _ | 1015163 | _ | _ | 1029080 | 1022943 | 1004358 |
| 1 | 26 | 273876 | _ | _ | 1014388 1014404 | _ | _ | 1015172 | _ | | 1029089 | 1022944 | _ |
| 1-1/4 | 32 | — | — | — | 1014404 1014422 | — | — | 1015181 | — | | | | |

DOUBLE LEG SLING

| Spectru Chain | | Grade 100 | Master Link | Master Link Assembly | Master Link | Master Link | ELIMINATOR® | LOK-A- LOY® | Chain Coupler | Chain Shortener Link | SHUR-LOC® Clevis Hook | SHUR-LOC® Swivel Hook | SHUR-LOC® Swivel Hook |
|------------------|-------|--------------------|-----------------------|-------------------------|-------------------|-------------------|---------------------|---------------------|----------------------|----------------------------|-----------------------------|-----------------------------|--------------------------|
| (in.) | (mm) | Chain Stock No. | A-1342N + Stock No | A-1345N + Stock No | A-342 Stock No | A-345 Stock No | L-1362 Stock No. | A-1337 Stock No. | S-1325A Stock No. | S-1311N Stock No. | S-1317 Stock No. | S-1316 Stock No. | S-1326 Stock No. |
| 1/4 (9/32) | 7 | 273710 | 1011403X1 | — | 1014266 | — | 1049913 | 1015104 | 1098500 | 1017869 | 1029000 | 1022914 | 1004313 |
| 5/16 | 8 | 273729 | 1011412X2 | _ | 1014285 | _ | 1049922 | 1015113 | 1098504 | 1017878 | 1029009 | 1022914 | 1004313 |
| 3/8 | 10 | 273738 | 1011421X3 | _ | 1014319 | _ | 1049931 | 1015122 | 1098508 | 1017897 | 1029018 | 1002923 | 1004323 |
| 1/2 | 13 | 273747 | 1011430X4 | — | 1014331 | _ | 1049940 | 1015136 | 1098512 | 1017906 | 1029027 | 1002932 | 1004331 |
| 5/8 | 16 | 273756 | 1011449X5 | — | 1014348 | — | 1049949 | 1015145 | 1098516 | 1017915 | 1029036 | 1002941 | 1004340 |
| 3/4 | 20 | 273858 | 1011458X6 | _ | 1014365 | — | - | 1015154 | — | - | 1021071 | 1022942 | 1004349 |
| 7/8 | 22-23 | 273867 | 1011467X7 | _ | 1014388 | _ | - | 1015163 | — | - | 1029080 | 1022943 | 1004358 |
| 1 | 26 | 273876 | — | _ | 1014404 | — | _ | 1015172 | — | | 1029089 | 1022944 | - |
| 1-1/4 | 32 | — | — | — | 1014468 | — | _ | 1015181 | _ | | | | |

TRIPLE AND QUAD LEG SLINGS

| Spectru Chain (in.) | | Grade 100 Chain Stock No. | Master Link A-1342N + Stock No | Master Link Assembly A-1345N + Stock No | Master Link A-342 Stock No | Master Link A-345 Stock No | ELIMINATOR® Stock No. | LOK-A- LOY® A-1337 Stock No. | Chain Coupler S-1325A Stock No. | Chain Shortener Link S-1311N Stock No. | SHUR-LOC [®] Clevis Hook S-1317 Stock No. | SHUR-LOC [®] Swivel Hook S-1316 Stock No. | SHUR-LOC® Swivel Hook S-1326 Stock No. |
|---------------------------|-------|------------------------------------|---|--|-------------------------------------|-------------------------------------|--------------------------|---------------------------------------|--|--|--|--|---|
| 1/4 (9/32) | 7 | 273710 | — | 1011510 | — | 1014739 | | 1015104 | 1098500 | 1017869 | 1029000 | 1022914 | 1004313 |
| 5/16 | 8 | 273729 | — | 1011510 | — | 1014742 | | 1015113 | 1098504 | 1017878 | 1029009 | 1022914 | 1004313 |
| 3/8 | 10 | 273738 | — | 1011529 | — | 1014766 |] | 1015122 | 1098508 | 1017897 | 1029018 | 1002923 | 1004323 |
| 1/2 | 13 | 273747 | — | 1011538 | — | 1014779 | See | 1015136 | 1098512 | 1017906 | 1029027 | 1002932 | 1004331 |
| 5/8 | 16 | 273756 | — | 1011547 | — | 1014807 | Page 219 | 1015145 | 1098516 | 1017915 | 1029036 | 1002941 | 1004340 |
| 3/4 | 20 | 273858 | — | 1011556 | — | 1014810 |] | 1015154 | — | — | 1021071 | 1022942 | 1004349 |
| 7/8 | 22-23 | 273867 | — | 1011565 | — | 1014845 | | 1015163 | — | — | 1029080 | 1022943 | 1004358 |
| 1 | 26 | 273876 | — | — | — | 1014845 |] | 1015172 | — | | 1029089 | 1022944 | — |
| 1-1/4 | 32 | — | — | — | — | 1014986 | | 1015181 | — | | | | |

Grade 100 Assembly Chart

SINGLE LEG SLING

| | | 8 | Ö | S | Z | Ľ | U | Z | Ċ | 3 |
|--|-------|--------------------------------------|----------------------|---------------------|----------------------|----------------------|---------------------|---------------------------|-------------------------------------|---------------------|
| Spectrum 10 [®] Chain Size | | SHUR-LOC [®] Swivel Hook | Clevis Sling Hook | Eye Sling Hook | Cradle Grab Hook | Clevis Grab Hook | Eye Grab Hook | Clevis Foundry Hook | Eye | Chain Choker |
| (in.) | (mm) | w/ Bearing S-13326 Stock No. | L-1339 Stock No. | L-1327 Stock No. | A-1338* Stock No. | A-1358* Stock No. | A-1328 Stock No. | A-1359 Stock No. | Foundry Hook A-1329 Stock No. | A-1355 Stock No. |
| 1/4 (9/32) | 7 | 1004413 | 1049112 | 1025869 | 1049417 | 1049610 | 1026169 | 1049907 | 1026280 | 1015204 |
| 5/16 | 8 | 1004413 | 1049121 | 1025869 | 1049426 | 1049629 | 1026169 | 1049911 | 1026280 | 1015204 |
| 3/8 | 10 | 1004422 | 1049130 | 1025878 | 1049435 | 1049638 | 1026187 | 1049916 | 1026289 | 1015213 |
| 1/2 | 13 | 1004431 | 1049149 | 1025887 | 1049444 | 1049647 | 1026196 | 1049925 | 1026297 | 1015222 |
| 5/8 | 16 | 1004440 | 1049158 | 1025896 | 1049453 | 1049656 | 1026205 | 1049934 | 1026306 | 1015231 |
| 3/4 | 20 | _ | 1049167 | 1025915 | — | _ | 1026214 | 1049943 | 1026315 | _ |
| 7/8 | 22-23 | _ | 1049176 | 1025924 | — | _ | 1026223 | 1049952 | 1026324 | _ |
| 1 | 26 | _ | _ | 1025933 | — | _ | 1016232 | _ | 1026333 | _ |
| 1-1/4 | 32 | — | _ | 1025942 | — | _ | 1026241 | — | 1026342 | — |

DOUBLE LEG SLING

| Spectrur Chain S | | SHUR-LOC [®] Swivel Hook w/ Bearing | Clevis Sling Hook | Eye Sling Hook | Cradle Grab Hook | Clevis Grab Hook | Eye Grab Hook | Clevis Foundry Hook | Eye Foundry Hook | Chain Choker |
|---------------------|-------|--|-----------------------|---------------------|----------------------|----------------------|---------------------|---------------------------|---------------------|---------------------|
| (in.) | (mm) | S-1326 Stock No. | L-1339 * Stock No. | L-1327 Stock No. | A-1338* Stock No. | A-1358* Stock No. | A-1328 Stock No. | A-1359 Stock No. | A-1329 Stock No. | A-1355 Stock No. |
| 1/4 (9/32) | 7 | 1004413 | 1049112 | 1025869 | 1049417 | 1049610 | 1026169 | 1049907 | 1026280 | 1015204 |
| 5/16 | 8 | 1004413 | 1049121 | 1025869 | 1049426 | 1049629 | 1026169 | 1049911 | 1026280 | 1015204 |
| 3/8 | 10 | 1004422 | 1049130 | 1025878 | 1049435 | 1049638 | 1026187 | 1049916 | 1026289 | 1015213 |
| 1/2 | 13 | 1004431 | 1049149 | 1025887 | 1049444 | 1049647 | 1026196 | 1049925 | 1026297 | 1015222 |
| 5/8 | 16 | 1004440 | 1049158 | 1025896 | 1049453 | 1049656 | 1026205 | 1049934 | 1026306 | 1015231 |
| 3/4 | 20 | _ | 1049167 | 1025915 | _ | _ | 1026214 | 1049943 | 1026315 | _ |
| 7/8 | 22-23 | _ | 1049176 | 1025924 | — | _ | 1026223 | 1049952 | 1026324 | _ |
| 1 | 26 | _ | _ | 1025933 | — | _ | 1026232 | — | 1026333 | _ |
| 1-1/4 | 32 | — | — | 1025942 | — | — | 1026241 | — | 1026342 | — |

4

TRIPLE AND QUAD LEG SLINGS

| Spectrur Chain S | | SHUR-LOC [®] Swivel Hook w/ Bearing | Clevis Sling Hook | Eye Sling Hook | Cradle Grab Hook | Clevis Grab Hook | Eye Grab Hook | Clevis Foundry Hook | Eye Foundry Hook | Chain Choker |
|---------------------|-------|--|----------------------|---------------------|----------------------|----------------------|---------------------|---------------------------|---------------------|---------------------|
| (in.) | (mm) | S-1326 Stock No. | L-1339 Stock No. | L-1327 Stock No. | A-1338* Stock No. | A-1358* Stock No. | A-1328 Stock No. | A-1359 Stock No. | A-1329 Stock No. | A-1355 Stock No. |
| 1/4 (9/32) | 7 | 1004413 | 1048991 | 1025869 | 1049417 | 1049610 | 1026169 | 1049907 | 1026280 | 1015204 |
| 5/16 | 8 | 1004413 | 1049000 | 1025869 | 1049426 | 1049629 | 1026169 | 1049911 | 1026280 | 1015204 |
| 3/8 | 10 | 1004422 | 1049009 | 1025878 | 1049435 | 1049638 | 1026187 | 1049916 | 1026289 | 1015213 |
| 1/2 | 13 | 1004431 | 1049018 | 1025887 | 1049444 | 1049647 | 1026196 | 1049925 | 1026297 | 1015222 |
| 5/8 | 16 | 1004440 | 1049027 | 1025896 | 1049453 | 1049656 | 1026205 | 1049934 | 1026306 | 1015231 |
| 3/4 | 20 | _ | 1049036 | 1025915 | _ | _ | 1026214 | 1049943 | 1026315 | _ |
| 7/8 | 22-23 | _ | 1049045 | 1025924 | — | _ | 1026223 | 1049952 | 1026324 | _ |
| 1 | 26 | _ | _ | 1025933 | _ | _ | 1026232 | — | 1026333 | _ |
| 1-1/4 | 32 | _ | _ | 1025942 | _ | _ | 1026241 | — | 1026342 | _ |

* Available with latch attached.

Grade 100 Chain Sling Components

| Chain S | Size | 90° | 60° | 45° | 30° | 60° | 45° | 30° |
|------------|------|------------|--------|------------|-------|--------|---------------------|--------|
| (in.) | (mm) | Single Leg | | Double Leg | | - | Triple and Quad Leg | 3 |
| _ | 6 | 3200 | 5500 | 4500 | 3200 | 8300 | 6800 | 4800 |
| 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 | 12600 | 89550 |
| 1-1/4 | 32 | 90400 | 156600 | 127800 | 90400 | 234900 | 191700 | 135600 |

WORKING LOAD LIMIT - 4 TO 1 DESIGN FACTOR

*For choker applications, the Working Load Limit must be reduced by 20%. The Crosby A-1338 cradle grab hook and S1311N chain shortner link do not require any reduction of the Working Load Limit. The design factor of 4 to 1 on Spectrum® 10 Alloy Chain agrees with the design factor used by the International Standards Organization (I.S.O.) and ANSI B30.9 and is the preferred set of Working Load Limit values to be used.

INDUSTRIAL WIRE ROPE SUPPLY

Crosby ELIMINATOR® Fittings







The Crosby ELIMINATOR[®] combines selected features and functionality of a master link, connecting link, grab hook and adjuster legs to provide you with one fitting that is suitable for applications that require an adjustable length chain sling.

- Forged Alloy Steel Quenched and Tempered.
- Innovative two piece design allows for maximum flexibility.
- Individually Proof Tested with certification.
- The Crosby ELIMINATOR[®], if properly installed and locked, can be used for personnel lifting applications and meets the intent of OSHA Rule 1926.1431(g)(1)(i)(A) and 1926.1501(g)(4)(iv)(B).
- Suitable for use with Grade 100 and Grade 80 chain.
- Engineered to accommodate optional locking pins that can be inserted to "lock" the shortened chain legs into place.
- Fatigue rated at 1-1/2 times the Working Load Limit at 20,000 cycles.
- Use the A-1361 and A-1362 in combination to make 3 leg chain slings.
- Load pin assembly instructions on page 269.
- "Look for the Platinum Color Crosby Grade 100 Alloy Products."
- All sizes are **RFID EQUIPPED.**

A-1361 Crosby ELIMINATOR[®] Single Hook

| - | ain ize | | Working Load | A-1361 | L-1361 | Weight | Dimensions (in.) | | | | | | | |
|-------|------------|---------------|------------------|--------------|--------------|----------------|---------------------|------|------|------|------|------|-------|------|
| (in.) | (mm) | Frame Size | Limit (Ibs.)* | Stock No. | Stock No. | Each (lbs.) | А | в | с | D | Е | G | н | AA |
| 1/4 | 7 | 2 | 4300 | 1049797 | 1049802 | 3.9 | 8.20 | 3.88 | .90 | 3.00 | .94 | 4.40 | 9.78 | 3.50 |
| 5/16 | 8 | 2 | 5700 | 1049804 | 1049809 | 3.9 | 8.18 | 3.88 | .90 | 3.00 | .94 | 4.40 | 9.78 | 3.50 |
| 3/8 | 10 | 3 | 8800 | 1049813 | 1049818 | 6.5 | 10.05 | 4.81 | 1.16 | 3.50 | 1.13 | 5.20 | 12.06 | 4.00 |
| 1/2 | 13 | 4 | 15000 | 1049822 | 1049827 | 13.5 | 12.88 | 6.00 | 1.63 | 4.13 | 1.31 | 6.39 | 15.57 | 5.00 |
| 5/8 | 16 | 5 | 22600 | 1049831 | 1049836 | 24.1 | 15.26 | 6.88 | 1.96 | 4.75 | 1.63 | 7.41 | 18.58 | 6.00 |

* Proof tested at 2.5 times the Working Load Limit. Minimum Ultimate Load is 4 times the Working Load Limit.

A-1362 Crosby ELIMINATOR® Double Hook

| _ | ain ze | | Working Load | A-1362 | L-1362 | Weight | Dimensions (in.) | | | | | | | |
|-------|-----------|---------------|------------------|--------------|--------------|----------------|---------------------|------|------|------|------|------|-------|------|
| (in.) | (mm) | Frame Size | Limit (Ibs.)* | Stock No. | Stock No. | Each (lbs.) | А | в | с | D | Е | G | н | AA |
| 1/4 | 7 | 2 | 8600 | 1049859 | 1049913 | 4.7 | 8.20 | 3.88 | .90 | 3.00 | .94 | 4.40 | 10.10 | 3.50 |
| 5/16 | 8 | 2 | 11400 | 1049868 | 1049922 | 4.7 | 8.18 | 3.88 | .90 | 3.00 | .94 | 4.40 | 10.10 | 3.50 |
| 3/8 | 10 | 3 | 17600 | 1049877 | 1049931 | 8.1 | 10.05 | 4.81 | 1.16 | 3.50 | 1.13 | 5.20 | 12.56 | 4.00 |
| 1/2 | 13 | 4 | 30000 | 1049886 | 1049940 | 17.3 | 12.88 | 6.00 | 1.63 | 4.13 | 1.31 | 6.39 | 16.25 | 5.00 |
| 5/8 | 16 | 5 | 45200 | 1049895 | 1049949 | 31.5 | 15.26 | 6.88 | 1.96 | 4.75 | 1.63 | 7.41 | 19.33 | 6.00 |

* Proof tested at 2 times the Working Load Limit. Minimum Ultimate Load is 4 times the Working Load Limit.

Using Crosby ELIMINATOR® in 3 and 4 Leg Slings

| Spectr Chain | | Master | Master | Crosby ELIMINATOR® | Crosby ELIMINATOR® |
|-----------------|--------|----------------------------|-----------------------------|-------------------------------|-------------------------------|
| (in.) | (mm) | Link A-342 Stock No. | Link A-1342 Stock No. | Single A-1361 Stock No. | Double A-1362 Stock No. |
| 1/4 (9/32) | 7 | 1014285 | 1011412 | 1049797 | 1049859 |
| 5/16 | 8 | 1014319 | 1011421 | 1049804 | 1049868 |
| 3/8 | 10 | 1014331 | 1011430 | 1049813 | 1049877 |
| 1/2 | 1/2 13 | | 1011449 | 1049822 | 1049886 |
| 5/8 | 5/8 16 | | 1011458 | 1049831 | 1049895 |

Use one of either A-342 or A-1342 master link. Use one of each when making three leg sling.

| Spectr Chair | | Master | Master | Crosby ELIMINATOR | Crosby ELIMINATOR |
|-----------------|------|----------------------------|-----------------------------|-------------------------------|-------------------------------|
| (in.) | (mm) | Link A-342 Stock No. | Link A-1342 Stock No. | Single A-1361 Stock No. | Double A-1362 Stock No. |
| 1/4 (9/32) | 7 | 1014285 | 1011412 | - | 1049859 |
| 5/16 | 8 | 1014319 | 1011421 | - | 1049868 |
| 3/8 | 10 | 1014331 | 1011430 | - | 1049877 |
| 1/2 | 13 | 1014348 | 1011449 | - | 1049886 |
| 5/8 | 16 | 1014365 | 1011458 | - | 1049895 |

Use one of either A-342 or A-1342 master link. Use two A-1362 fittings when making quad leg sling. A-1362



Crosby ELIMINATOR® Fittings



Crosby ELIMINATOR® Components





A-1360B Bail

| | Chain Size | | | Weight | | Dim | ensions (in.) | | S-4103 Replacement |
|------------|---------------|---------------|----------------------|----------------|---------------------|------|------------------|------|-----------------------|
| (in.) | (mm) | Frame Size | A-1360B Stock No. | Each (lbs.) | Inside Length | | | | |
| 1/4 - 5/16 | 7 - 8 | 2 | 1049626 | 2.1 | 3.88 | 3.00 | .94 | 3.50 | 1092916 |
| 3/8 | 10 | 3 | 1049635 | 3.7 | 4.81 | 3.50 | 1.13 | 4.00 | 1092925 |
| 1/2 | 13 | 4 | 1049644 | 7.4 | 6.00 | 4.13 | 1.31 | 5.00 | 1092934 |
| 5/8 | 16 | 5 | 1049653 | 13.0 | 6.88 4.75 1.63 6.00 | | | 6.00 | 1092943 |



A-1360S Single Hook (shown with optional S-4104 Latch Pin)

| Cha Siz | | | Working Load | | | Weight | S-4100 Replacement |
|------------|------|---------------|------------------|----------------------|----------------------|----------------|---------------------------|
| (in.) | (mm) | Frame Size | Limit (lbs.)* | A-1360S Stock No. | L-1360S Stock No. | Each (lbs.) | Load Pin Kit Stock No. |
| 1/4 | 7 | 2 | 4300 | 1049671 | 1049790 | 1.8 | 1091801 |
| 5/16 | 8 | 2 | 5700 | 1049680 | 1049799 | 1.8 | 1091810 |
| 3/8 | 10 | 3 | 8800 | 1049699 | 1049808 | 2.8 | 1091829 |
| 1/2 | 13 | 4 | 15000 | 1049706 | 1049817 | 6.1 | 1091838 |
| 5/8 | 16 | 5 | 22600 | 1049715 | 1049826 | 11.1 | 1091847 |

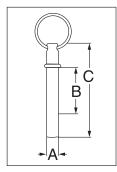
* Ultimate Load is 4 times the Working Load Limit.



A-1360D Double Hook (shown with optional S-4104 Latch Pin)

| Cha Siz | | | Working Load | | | Weight | S-4102 Replacement |
|------------|------|---------------|------------------|----------------------|----------------------|----------------|---------------------------|
| (in.) | (mm) | Frame Size | Limit (lbs.)* | A-1360D Stock No. | L-1360D Stock No. | Each (Ibs.) | Load Pin Kit Stock No. |
| 1/4 | 7 | 2 | 8600 | 1049733 | 1049838 | 2.6 | 1092713 |
| 5/16 | 8 | 2 | 11400 | 1049742 | 1049847 | 2.6 | 1092722 |
| 3/8 | 10 | 3 | 17600 | 1049751 | 1049856 | 4.4 | 1092731 |
| 1/2 | 13 | 4 | 30000 | 1049760 | 1049865 | 9.9 | 1092740 |
| 5/8 | 16 | 5 | 45200 | 1049779 | 1049874 | 18.5 | 1092759 |

* Ultimate Load is 4 times the Working Load Limit.



S-4104N Latch Pin

The new style S-4104N latch pin is colored yellow zinc.The old style S-4104 latch pin is colored silver zinc.

| Cha Siz | | Fromo | C 4104N | Weight | | Dimensions (in.) | |
|------------|-------|---------------|----------------------|----------------|------|---------------------|------|
| (in.) | (mm) | Frame Size | S-4104N Stock No. | Each (lbs.) | А | В | с |
| 1/4 - 5/16 | 7 - 8 | 2 | 1092983 | .06 | .313 | 1.36 | 2.58 |
| 3/8 | 10 | 3 | 1092992 | .10 | .313 | 1.62 | 3.08 |
| 1/2 | 13 | 4 | 1093001 | .12 | .313 | 1.83 | 3.83 |
| 5/8 | 16 | 5 | 1093010 | .15 | .313 | 2.21 | 4.59 |



A-1343

- Alloy steel Quenched & Tempered.
- Individually Proof Tested to values shown, with certification.
- Design Factor of 5 to 1.
- Proof Tested with 70% inside width special fixtures sized to prevent localized point loading per EN 1677-4, reference applications & warnings.
- Each main link is marked with Product Identification Code (PIC) for • material traceability, Grade, CE, chain size and the "CG" (Crosby Group).
- A-1343 master links are type approved to DNV Certification. Notes 2.7-1- Offshore Containers. These Crosby master links are 100% proof tested. Every batch is impact tested. The tests are conducted by Crosby and 3.1 test certification is available upon request.
- Engineered Flat for use with S-1325A coupler link. •
- Fatigue rated to 20,000 cycles at 1.5 times the Working Load Limit. •
- Meets or exceeds all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, these links meet other critical performance requirements including fatigue life, impact properties and material traceability, not addressed by ASME B30.26.

Grade 100 A-1343 Welded Master Link

| | | Grade 100 | Chain Sling | Grade 80 0 | Chain Sling | | | Di | mens | ions (i | n) | Engineered |
|-----------|------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|-------------|-----------------------|------|------|---------|------|-------------------------------------|
| Stock No. | Weight Each (Ib) | Single Leg Chain Size (in) | Double Leg Chain Size (in) | Single Leg Chain Size (in) | Double Leg Chain Size (in) | WLL (lb) | Proof Load (lb) | А | в | с | G | Flat Size for S-1325A (in) |
| 1247051 | 0.8 | 6mm, 9/32 | 6mm | 6mm, 9/32 | 6mm, 9/32, 5/16 | 7000 | 17632 | 0.51 | 2.36 | 4.72 | 0.26 | 6mm, 9/32, 5/16 |
| 1247087 | 1.9 | 5/16, 3/8 | 9/32 | 5/16, 3/8 | 5/16 | 9000 | 22701 | 0.67 | 3.54 | 6.30 | 0.33 | 3/8 |
| 1247096 | 2.3 | 3/8, 1/2 | 5/16 | 3/8, 1/2 | 3/8 | 14700 | 37027 | 0.75 | 3.54 | 6.30 | 0.33 | 3/8, 1/2 |
| 1247122 | 5.2 | 3/8, 1/2 | 3/8 | 3/8, 1/2 | 3/8 | 15400 | 38570 | 0.87 | 5.71 | 10.83 | 0.41 | 1/2 |
| 1247120 | 3.6 | 3/8, 1/2 | 3/8 | 5/8 | 3/8 | 19400 | 48488 | 0.87 | 3.94 | 7.09 | 0.41 | 1/2 |
| 1247126 | 6.7 | 1/2 | - | 1/2, 5/8 | 3/8 | 19600 | 48929 | 0.98 | 5.71 | 10.83 | 0.53 | 5/8 |
| 1247124 | 5.3 | 5/8, 1/2 | 3/8 | 5/8 | 1/2 | 25300 | 63475 | 0.98 | 4.53 | 8.27 | 0.53 | 5/8 |
| 1247133 | 8.5 | 5/8, 1/2 | 1/2 | 5/8 | 1/2 | 28600 | 71630 | 1.10 | 5.71 | 10.83 | 0.53 | 5/8 |
| 1247142 | 10.6 | 5/8, 3/4 | 1/2 | 3/4 | 5/8 | 37400 | 93670 | 1.26 | 5.71 | 10.83 | 0.66 | - |
| 1247151 | 15.2 | 3/4 | 5/8 | 3/4, 7/8 | 3/4 | 52900 | 132240 | 1.42 | 6.10 | 11.22 | - | - |
| 1247163 | 16.1 | 7/8 | 3/4 | 7/8 | 7/8 | 69400 | 173675 | 1.57 | 5.51 | 10.63 | - | - |
| 1247164 | 28.4 | 1 | 7/8 | 1 | 1 | 84400 | 210923 | 1.77 | 7.09 | 13.39 | - | - |
| 1247166 | 42.1 | 1, 1-1/4 | 7/8 | 1 | 1 | 99200 | 247950 | 2.01 | 8.46 | 15.35 | - | - |
| 1247175 | 55.3 | 1-1/4 | 1 | 1-1/4 | 1-1/4 | 147600 | 369170 | 2.17 | 7.99 | 15.98 | - | - |

5:1 Design Factor. Applications with wire rope and synthetic sling generally require a Design Factor of 5. Based on single leg sling (in-line load), or resultant load on multiple legs with an included angle less than or equal to 120 degrees. Proof Test Load equals or exceeds the requirement of ASTM A952(8.1) and ASME B30.9. Chain slings require that the Design Factor be 4:1. Refer to Applications & Warnings to determine product's actual Ultimate Load. There are no manufactured flats on links over 1 1/4" (32mm)

ilique Rated Brasky 3/10°CE 🔍

APPLICATION AND WARNING INFORMATI

INDUSTRIAL WIRE ROPE SUPPLY



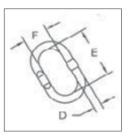
A-1346



- Alloy steel Quenched & Tempered.
- Individually Proof Tested to values shown, with certification.
- Design Factor of 5 to 1.
- Proof Tested with 70% inside width special fixtures sized to prevent localized point loading per EN 1677-4, reference Applications & Warnings.
- Each main link is marked with Product Identification Code (PIC) for material traceability, Grade, CE, chain size and the "CG" (Crosby Group). Each sublink is marked with traceability code.
- A-1346 master links are type approved to DNV Certification. Notes 2.7-1-Offshore Containers. These Crosby master links are 100% proof tested. Every batch is impacted tested. The tests are conducted by Crosby and 3.1 test certification is available upon request.
- Engineered Flat for use with S-1325A coupler link.
- Fatigue rated to 20,000 cycles at 1-1/2 times the Working Load Limit.
- Meets or exceeds all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, these links meet other critical performance requirements including fatigue life, impact properties and material traceability, not addressed by ASME B30.26.

C -A

2



Grade 100 A-1346 Welded Master Link Assembly

| | | Grade 100 | Grade 80 | | | | | Dime | nsions | (in) | | | Engineered |
|-----------|------------------------|--|--|-------------|-----------------------|------|------|-------|--------|-------|------|------|--|
| Stock No. | Weight Each (lb) | Chain Sling Three / Four Legs Chain Size (in) | Chain Sling Three / Four Legs Chain Size (in) | WLL (lb) | Proof Load (Ib) | А | в | с | D | Е | F | G | Flat Size for S-1325A Chain Size (in) |
| 1256865 | 2.4 | - | 6mm | 7000 | 17632 | 0.51 | 2.36 | 4.72 | 0.51 | 4.72 | 2.36 | 0.26 | 6mm |
| 1256868 | 3.5 | 6mm | 6mm | 9000 | 22701 | 0.67 | 3.54 | 6.30 | 0.51 | 4.72 | 2.36 | 0.26 | 6mm, 9/32 |
| 1256874 | 3.9 | 6mm | 9/32 | 9200 | 23362 | 0.75 | 3.54 | 6.30 | 0.51 | 4.72 | 2.36 | 0.26 | 9/32, 5/16 |
| 1256878 | 7.3 | 5/16, 9/32 | 5/16 | 15400 | 38570 | 0.87 | 3.94 | 7.09 | 0.67 | 6.30 | 3.54 | 0.33 | 3/8 |
| 1256880 | 8.9 | 5/16, 9/32 | 5/16 | 15400 | 38570 | 0.87 | 5.71 | 10.83 | 0.67 | 6.30 | 3.54 | 0.33 | 3/8 |
| 1256876 | 8.4 | 5/16 | 3/8 | 18700 | 46725 | 0.87 | 3.94 | 7.09 | 0.75 | 6.30 | 3.54 | 0.33 | 3/8 |
| 1256882 | 10.1 | 5/16 | 3/8 | 19600 | 49149 | 0.98 | 4.53 | 8.27 | 0.75 | 6.30 | 3.54 | 0.33 | 3/8 |
| 1256892 | 11.4 | 5/16 | 3/8 | 19600 | 49149 | 0.98 | 5.71 | 10.83 | 0.75 | 6.30 | 3.54 | 0.33 | 3/8 |
| 1256917 | 15.6 | 3/8 | 1/2 | 31900 | 80005 | 1.10 | 5.71 | 10.83 | 0.87 | 7.09 | 3.94 | 0.41 | 1/2 |
| 1256926 | 21.2 | 3/8 | 1/2 | 37400 | 93670 | 1.26 | 5.71 | 10.83 | 0.98 | 8.27 | 4.53 | 0.53 | 5/8 |
| 1256929 | 28 | 1/2 | 5/8 | 52000 | 130036 | 1.42 | 6.10 | 11.22 | 1.10 | 7.48 | 4.33 | 0.53 | 5/8 |
| 1256930 | 40.6 | 5/8 | 5/8 | 61900 | 154941 | 1.57 | 5.51 | 10.63 | 1.26 | 10.83 | 5.71 | 0.66 | - |
| 1256953 | 58.6 | 5/8 | 3/4 | 84400 | 211143 | 1.77 | 7.09 | 13.39 | 1.42 | 11.22 | 6.10 | - | - |
| 1256958 | 78.2 | 3/4 | 7/8 | 99200 | 247950 | 2.01 | 8.46 | 15.35 | 1.57 | 10.63 | 5.51 | - | - |
| 1256973 | 134.6 | 7/8 | 1 | 147600 | 369170 | 2.17 | 7.99 | 15.98 | 2.01 | 15.35 | 8.46 | - | - |

5:1 Design Factor. Applications with wire rope and synthetic sling generally require a Design Factor of 5. Based on single leg sling (in-line load), or resultant load on multiple legs with an included angle less than or equal to 120 degrees. Proof Test Load equals or exceeds the requirement of ASTM A952(8.1) and ASME B30.9. Chain slings require that the Design Factor be 4:1. Refer to applications & warnings to determine product's actual Ultimate Load. There are no manufactured flats on links over 1 1/4" (32mm).





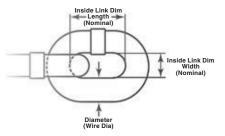
MASTER LINKS



Peerless 10 Alloy Chain



- 25% stronger than Grade 80 alloy chain.
- · Permanently embossed with P (Peerless) and 10 (Grade).
- Finish black paint.
- Meets the latest guidelines of the National Association of Chain Manufacturers (NACM) and ASTM A952/ A952M and ASTM A973/A973M for Grade 10 chain.
- Proof Tested at minimum 2 times the Working Load Limit with certification.



Grade 100 Alloy Chain Recommended for overhead lifting applications

| Chain | Size | | | | Working | Nominal | Nominal | |
|------------|------|-----------|-----------------------------|--------------------------|-----------------------|--------------------------|-------------------------|----------------------------|
| (in) | (mm) | Stock No. | Feet Per Drum / Crate | Material Size (in) | Load Limit (Ib) | Inside Length (in) | Inside Width (in) | Weight Per Foot (lb) |
| 9/32 (1/4) | 7 | 5510226 | 800 | .286 | 4300 | .87 | .42 | 0.77 |
| 5/16 | 8 | 5510326 | 500 | .332 | 5700 | 1.01 | .49 | 1.12 |
| 3/8 | 10 | 5510426 | 500 | .394 | 8800 | 1.23 | .58 | 1.52 |
| 1/2 | 13 | 5510626 | 300 | .529 | 15000 | 1.57 | .75 | 2.71 |
| 5/8 | 16 | 5510826 | 200 | .641 | 22600 | 1.96 | .90 | 3.74 |
| 3/4 | 20 | 5510926 | 100 | .812 | 35300 | 2.42 | 1.14 | 6.29 |
| 7/8 | 22 | 5511026 | 100 | .906 | 42700 | 2.66 | 1.26 | 7.94 |
| 1 | 26 | 5511126 | 50 | 1.06 | 59700 | 3.09 | 1.42 | 10.10 |
| 1-1/4 | 32 | *1210075 | 82 | 1.34 | 90400 | 3.89 | 1.73 | 16.40 |

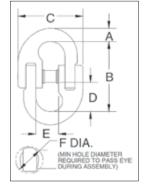
4:1 Design Factor.

*Size 1-1/4" (32mm) is embossed "CG" instead of "P".

A-1337



- Suitable for use with both Grade 80 and Grade 100 chain.
- Individually Proof Tested at 2-1/2 times Working Load Limit with certification.
- Locking system that provides for simple assembly and disassembly no special tools needed.
- Meets ASTM A-952 standards for Grade 100 chain fittings.
- Forged alloy steel Quenched & Tempered.
- Sizes 9/32 through 1 inch are fatigue rated.



Breedy 8/10" File



A-1337 LOK-A-LOY® 10 Alloy Connecting Link

| Chain | Size | | | Weight | Working Load | | | | ensions (in) | | |
|------------|------|-----------|--------------|--------------|-----------------|------|------|------|-----------------|------|------|
| (in) | (mm) | Stock No. | Pkg. Qty. | Each (lb) | Limit (Ib) | А | в | с | D | Е | F |
| 9/32 (1/4) | 7 | 1015104 | 60 | 0.29 | 4300 | 0.38 | 1.94 | 2.00 | 0.80 | 0.68 | 0.53 |
| 5/16 | 8 | 1015113 | 50 | 0.42 | 5700 | 0.37 | 2.36 | 2.13 | 0.99 | 0.72 | 0.59 |
| 3/8 | 10 | 1015122 | 40 | 0.77 | 8800 | 0.51 | 2.65 | 2.55 | 1.09 | 0.91 | 0.73 |
| 1/2 | 13 | 1015136 | 12 | 1.60 | 15000 | 0.68 | 3.46 | 3.39 | 1.45 | 1.13 | 0.89 |
| 5/8 | 16 | 1015145 | 10 | 3.10 | 22600 | 0.78 | 4.25 | 4.00 | 1.77 | 1.34 | 1.20 |
| 3/4 | 20 | 1015154 | 1 | 6.39 | 35300 | 1.01 | 5.14 | 5.30 | 2.15 | 1.64 | 1.56 |
| 7/8 | 22 | 1015163 | 1 | 7.85 | 42700 | 1.09 | 5.46 | 5.78 | 2.27 | 1.97 | 1.55 |
| 1 | 26 | 1015172 | 1 | 11.05 | 59700 | 1.24 | 5.94 | 6.50 | 2.41 | 2.21 | 1.88 |
| 1-1/4 | 32 | 1015181 | 1 | 21.00 | 90400 | 1.56 | 7.43 | 7.60 | 3.07 | 2.57 | 2.22 |

4:1 Design Factor.

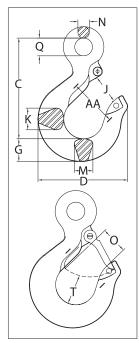
INDUSTRIAL WIRE ROPE SUPPLY

Crosby^{*}

L-1327

ALL TO BE ALL TO

- For use with wire rope. Suitable for use with Grade 100 and Grade 80 chain. Working load limit needs to be de-rated to achieve a 5:1 design factor.
- Forged alloy steel, Quenched & Tempered.
- Each hook has a Product Identification Code (PIC) for material traceability, along with the size and the name Crosby.
- 25% stronger than Grade 80.
- Eye Sling Hooks incorporate QUIC-CHECK[®] deformation and angle indicators. (For detailed information, see the Crosby Value Added page at the beginning of this section.)
- When secured with the proper cotter pin through the hole in the tip of hook, meets the intent of OSHA Rule 1926.1431(g) and 1926.1501(g) for personnel lifting.
- Individually Proof Tested to 2.5 times the Working Load Limit with certification.
- Fatigue rated to 20,000 cycles at 1.5 times the Working Load Limit.



HOOKS & SWIVELS



APPLICATION AND WARNING INFORMATION SECTION 17

L-1327 Eye Sling Hook

| Grade Alloy C Siz | Chain | Working | | | | | | | | Dii | mensio (in) | ns | | | | | |
|-------------------------|---------|------------------------|--------------------|--------------|------------------------|-------|-------|------|------|------|----------------|------|------|------|------|------|-----------------------------------|
| (in) | (mm) | Load Limit (Ib)* | Hook ID Code | Stock No. | Weight Each (lb) | с | D | G | J | к | м | N | о | Q | т | АА | Replacement Latch Stock No. |
| - | 6 | 3200 | DA | 1025860 | .50 | 3.34 | 2.86 | .73 | .90 | .63 | .63 | .36 | .89 | .75 | .87 | 1.50 | 1096325 |
| 1/4-5/16 | 7 - 8 | 5700 | HA | 1025869 | 1.3 | 4.21 | 3.90 | 1.03 | 1.18 | .75 | .75 | .50 | 1.15 | .75 | 1.16 | 2.00 | 1096468 |
| 3/8 | 10 | 8800 | IA | 1025878 | 2.3 | 4.99 | 4.34 | 1.19 | 1.53 | 1.19 | 1.00 | .56 | 1.40 | .94 | 1.23 | 2.50 | 1096515 |
| 1/2 | 13 | 15000 | JA | 1025887 | 4.5 | 6.36 | 5.67 | 1.44 | 1.78 | 1.37 | 1.17 | .72 | 1.67 | 1.12 | 1.88 | 3.00 | 1096562 |
| 5/8 | 16 | 22600 | KA | 1025896 | 8.4 | 7.43 | 6.78 | 1.88 | 2.38 | 1.66 | 1.44 | .88 | 2.08 | 1.31 | 2.03 | 4.00 | 1096609 |
| 3/4 | 18-20 | 35300 | KA | 1025915 | 15.0 | 9.07 | 7.45 | 2.25 | 2.38 | 1.88 | 1.63 | 1.11 | 2.08 | 2.44 | 2.47 | 4.00 | 1096609 |
| 7/8 | 22-23 | 44100 | LA | 1025924 | 20.7 | 10.08 | 8.30 | 2.59 | 2.50 | 2.19 | 1.94 | 1.27 | 2.27 | 2.84 | 2.62 | 4.00 | 1096657 |
| 1 | 26 | 59700 | NA | 1025933 | 39.5 | 12.82 | 10.30 | 3.00 | 3.30 | 2.69 | 2.38 | 1.56 | 3.02 | 3.50 | 2.83 | 5.00 | 1096704 |
| 1 1/4 | 32 | 90400 | PA | 1025942 | 105.0 | 18.19 | 14.06 | 4.56 | 4.25 | 3.75 | 3.19 | 2.00 | 3.00 | 4.50 | 3.88 | 7.00 | 1093717 |
| 4:1 Design | Factor. | *Deformatio | n indicato | rs. | | | | | | | | | | | | | |



4

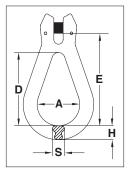
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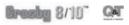
Crosbu

A-1370



- Forged alloy steel Quenched & Tempered.
- Individually proof tested to 2.5 times the Working Load Limit.
- Proof test certification shipped with each link. •
- Each link has a Product Identification Code (PIC) for material traceability, along • with the size and the name Crosby in raised letters.
- Suitable for use with Grade 100 and Grade 80 chain.





A-1370 Reeving Link

| Chai | n Size | Working Load Limit | | Weight Each | | | Dimension (in) | s | |
|----------|--------|-----------------------|-----------|-------------|------|------|-------------------|------|------|
| (in) | (mm) | (lb) | Stock No. | (lb) | Α | D | E | н | S |
| 1/4-5/16 | 7-8 | 5700 | 1012000 | 0.57 | 1.54 | 2.66 | 3.54 | 0.63 | 0.39 |
| 3/8 | 10 | 8800 | 1012009 | 1.10 | 1.93 | 3.37 | 4.25 | 0.67 | 0.55 |
| 1/2 | 13 | 15000 | 1012018 | 2.43 | 2.46 | 4.25 | 5.43 | 0.83 | 0.71 |
| 5/8 | 16 | 22600 | 1012027 | 5.62 | 3.11 | 5.47 | 7.09 | 1.20 | 1.00 |

4:1 Design Factor.

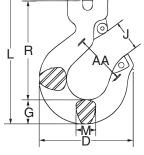
L-1339

- Forged alloy steel Quenched & Tempered.
- Individually Proof Tested to 2-1/2 times the Working Load Limit with • certification.
- Each hook has a Product Identification Code (PIC) for material ٠ traceability, along with the size and the name Crosby.
- Hoist hooks incorporate QUIC-CHECK® deformation and angle indicators.
- Low profile hook tip.
- New integrated latch (S-4320/S-4339) meets the world standard for lifting.
 - Heavy duty stamped latch interlocks with the hook tip.
 - High cycle, long life spring.
 - When secured with the proper cotter pin through the hole in the tip of hook, meets the intent of OSHA Rule 1926.1431(g) and 1926.1501(g) for personnel lifting.
- Suitable for use with Grade 100 and Grade 80 chain.
- Fatigue rated at 1-1/2 times the Working Load Limit at 20,000 cycles.

L-1339 Clevis Sling Hook

| Chair | n Size | Working | | | | | | D | imensioı (in) | าร | | | S-4320 | S-4339 |
|-------|--------|-----------------------|--------------------|-----------|------------------------|------|------|------|------------------|------|------|------|-----------------------------|-----------------------------|
| (in) | (mm) | Load Limit (Ib) | Hook ID Code | Stock No. | Weight Each (lb) | D | G | J | L | М | R | AA | Repl. Latch Stock No. | Repl. Latch Stock No. |
| - | 6 | 3200 | DA | 1049103 | 0.64 | 2.86 | 0.73 | 0.93 | 4.21 | 0.63 | 2.95 | 1.50 | 1096325 | - |
| 1/4 | 7 | 4300 | HA | 1049112 | 1.58 | 3.86 | 1.04 | 1.19 | 5.67 | 0.75 | 3.97 | 2.00 | 1096468 | - |
| 5/16 | 8 | 5700 | HA | 1049121 | 1.57 | 3.86 | 1.04 | 1.19 | 5.67 | 0.75 | 3.95 | 2.00 | 1096468 | - |
| 3/8 | 10 | 8800 | IA | 1049130 | 2.58 | 4.38 | 1.19 | 1.53 | 6.75 | 1.00 | 4.71 | 2.50 | 1096515 | - |
| 1/2 | 13 | 15000 | JA | 1049149 | 5.28 | 5.60 | 1.44 | 1.78 | 8.38 | 1.17 | 5.89 | 3.00 | 1096562 | - |
| 5/8 | 16 | 22600 | KA | 1049158 | 9.81 | 6.76 | 1.89 | 2.41 | 10.21 | 1.44 | 6.97 | 4.00 | 1096609 | - |
| 3/4 | 18-20 | 35300 | - | 1049167 | 18.3 | 8.31 | 2.83 | 2.69 | 13.07 | 1.97 | 8.00 | 4.50 | - | 1048714 |
| 7/8* | 22-23* | 44100 | - | 1049176 | 24.6 | 9.17 | 3.07 | 3.05 | 13.98 | 1.97 | 8.76 | 5.00 | - | 1048732 |

4:1 Design Factor. *7/8 in (22-23 mm) size does not have cam, latch attaches to unique pin.



Crosby[®] Grade 100 Foundry Hooks

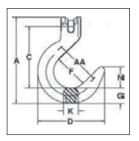








- Forged Alloy Steel Quenched and Tempered.
- Individually Proof Tested to 2-1/2 times the Working Load Limit with certification.
- Each hook has a Product Identification Code (PIC) for material traceability, along with the size and the name Crosby & U.S.A. in raised letters.
- Suitable for use with Grade 100 and Grade 80 chain.
- Fatigue rated at 1-1/2 times the Working Load Limit at 20,000 cycles.
- "Look for the Platinum Color Crosby Grade 100 Alloy Products."
- Hook can be tip loaded at the reduced Working Load Limit, see below.
 Operator must ensure the load is retained properly in the hook.



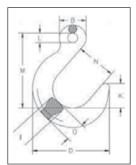
A-1359 Clevis Foundry Hook

| Chair | n Size | | Working Load | Working Load | | | | | Dimer (ir | | | | |
|-------|--------|---------------------|--|---------------------------------------|--------------------------|-------|-------|-------|--------------|------|------|------|------|
| (in.) | (mm) | A-1359 Stock No. | Limit at Saddle of Hook (lbs.)* | Limit at Tip of Hook (Ibs.)* | Weight Each (Ibs.) | А | с | D | F | G | к | N | AA |
| 1/4 | 7 | 1049907 | 4300 | 2150 | 2.15 | 6.26 | 4.38 | 4.82 | 2.50 | 1.13 | 0.88 | 1.57 | 3.50 |
| 5/16 | 8 | 1049911 | 5700 | 2850 | 2.06 | 6.26 | 4.37 | 4.82 | 2.50 | 1.13 | 0.88 | 1.57 | 3.50 |
| 3/8 | 10 | 1049916 | 8800 | 4400 | 4.29 | 7.76 | 5.54 | 5.82 | 3.00 | 1.38 | 1.30 | 1.88 | 4.00 |
| 1/2 | 13 | 1049925 | 15000 | 7500 | 7.97 | 9.38 | 6.67 | 7.04 | 3.50 | 1.63 | 1.50 | 2.25 | 4.50 |
| 5/8 | 16 | 1049934 | 22600 | 11300 | 14.2 | 11.25 | 7.68 | 8.17 | 4.00 | 2.19 | 1.75 | 2.53 | 5.00 |
| 3/4 | 18-20 | 1049943 | 35300 | 17650 | 24.7 | 14.43 | 9.79 | 9.65 | 5.00 | 2.40 | 2.20 | 3.39 | 6.00 |
| 7/8 | 22-23 | 1049952 | 44100 | 22050 | 43.8 | 16.25 | 11.02 | 11.03 | 5.50 | 3.07 | 2.72 | 3.74 | 6.50 |

* Ultimate Load is 4 times the Working Load Limit.

A-1329

- Forged Alloy Steel Quenched and Tempered.
- Individually Proof Tested to 2-1/2 times the Working Load Limit with certification.
- Each hook has a Product Identification Code (PIC) for material traceability, along with the size and the name Crosby & U.S.A. in raised letters.
- Suitable for use with Grade 100 and Grade 80 chain.
- Fatigue rated at 1-1/2 times the Working Load Limit at 20,000 cycles.
- "Look for the Platinum Color Crosby Grade 100 Alloy Products."
- Hook can be tip loaded at the reduced Working Load Limit, see below. Operator must ensure the load is retained properly in the hook.



A-1329 Eye Foundry Hook

| Chain | Size | | Working Load | Working Load | | | | | Dimer (iı | nsions n.) | | | |
|------------|-------|---------------------|--|--------------------------------------|--------------------------|------|-------|------|--------------|---------------|-------|------|------|
| (in.) | (mm) | A-1329 Stock No. | Limit at Saddle of Hook (lbs.)* | Limit at Tip of Hook (Ibs.) | Weight Each (Ibs.) | в | D | I | к | L | м | N | ο |
| 1/4 - 5/16 | 7-8 | 1026280 | 5700 | 2850 | 2.00 | 1.56 | 4.82 | .88 | 1.57 | .63 | 4.81 | 2.50 | 1.13 |
| 3/8 | 10 | 1026289 | 8800 | 4400 | 3.80 | 2.07 | 5.82 | 1.30 | 1.88 | .81 | 5.50 | 3.00 | 1.38 |
| 1/2 | 13 | 1026297 | 15000 | 7500 | 7.20 | 2.53 | 7.04 | 1.50 | 2.25 | 1.03 | 7.11 | 3.50 | 1.63 |
| 5/8 | 16 | 1026306 | 22600 | 11300 | 12.3 | 3.00 | 8.17 | 1.75 | 2.53 | 1.25 | 7.96 | 4.00 | 2.19 |
| 3/4 | 18-20 | 1026315 | 35300 | 17650 | 23.0 | 4.13 | 9.65 | 2.20 | 3.39 | 1.97 | 10.75 | 5.00 | 2.40 |
| 7/8 | 22-23 | 1026324 | 44100 | 22050 | 40.6 | 4.77 | 11.03 | 2.72 | 3.74 | 2.28 | 12.25 | 5.50 | 3.07 |
| 1 | 26 | 1026333 | 59700 | 29850 | 51.7 | 5.33 | 11.90 | 2.83 | 3.93 | 2.56 | 13.37 | 6.00 | 3.31 |
| 1 1/4 | 32 | 1026342 | 90400 | 45200 | 84.4 | 6.61 | 13.25 | 3.50 | 4.33 | 3.15 | 15.25 | 6.50 | 3.84 |

* Ultimate Load is 4 times the Working Load Limit.

Crosby[®] Grade 100 Clevis Grab Hooks

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8/10

- Forged Alloy Steel Quenched and Tempered.
- Innovative cradle design allows for 100% efficiency of Grade 100 chain.
- Individually Proof Tested to 2-1/2 times the Working Load Limit with certification.
- Each hook has a Product Identification Code (PIC) for material traceability, along with the size and the name Crosby & U.S.A. in raised letters.
- Suitable for use with Grade 100 and Grade 80 chain.
- The use of A-1338 Cradle Grab Hook will allow 100 percent of the chain sling capacity. When used to hook back to chain leg to form a choker, the angle of the choke must be 120 degrees or greater. When used as a chain shortener, minimize twist of chain and ensure chain is fully engaged in hook.
- Fatigue rated at 1-1/2 times the Working Load Limit at 20,000 cycles.
- "Look for the Platinum Color Crosby Grade 100 Alloy Products."

A/L-1338 Cradle Grab Hook

| Chai | n Size | Working Load | A-1338 | L-1338 | Weight | | | Dimer (ir | nsions 1.) | | | S-4338 Replacement |
|---------|---------|------------------|--------------|--------------|----------------|------|------|--------------|---------------|------|------|------------------------|
| (in.) | (mm) | Limit (Ibs.)* | Stock No. | Stock No. | Each (Ibs.) | А | в | с | D | Е | F | Latch Kit Stock No. |
| 1/4 | 7 | 4300 | 1049417 | 1049480 | .45 | 1.72 | 2.54 | 2.20 | 3.88 | 1.50 | .88 | 1048426 |
| 5/16 | 8 | 5700 | 1049426 | 1049489 | .99 | 1.72 | 2.54 | 2.18 | 3.88 | 1.50 | .88 | 1048426 |
| 3/8 | 10 | 8800 | 1049435 | 1049498 | 1.80 | 1.85 | 3.09 | 2.58 | 4.69 | 1.83 | 1.09 | 1048435 |
| 1/2 | 13 | 15000 | 1049444 | 1049507 | 3.92 | 2.39 | 3.83 | 3.28 | 5.88 | 2.25 | 1.42 | 1048444 |
| 5/8 | 16 | 22600 | 1049453 | 1049516 | 7.00 | 2.67 | 4.52 | 3.85 | 7.03 | 2.94 | 1.75 | 1048453 |
| * Ultir | nate Lo | ad is 4 tim | es the Wor | king Load | Limit. | | | | | | | |

- A-1358
- Forged Alloy Steel Quenched and Tempered.
- Individually Proof Tested to 2-1/2 times the Working Load Limit with certification.
- Each hook has a Product Identification Code (PIC) for material traceability, along with the size and the name Crosby & U.S.A. in raised letters.
- Suitable for use with Grade 100 and Grade 80 chain.
- Fatigue rated at 1-1/2 times the Working Load Limit at 20,000 cycles. ٠ "Look for the Platinum Color - Crosby Grade 100 Alloy Products."

A/L-1358 Grab Hook

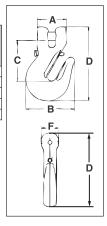
| Chair | n Size | Working Load | A-1358 | L-1358 | Weight | | Din | nensio (in.) | ns | | S-4338 Replaceme |
|-------|--------|------------------|--------------|--------------|----------------|------|------|-----------------|------|------|-----------------------|
| (in.) | (mm) | Limit (lbs.)* | Stock No. | Stock No. | Each (lbs.) | А | в | с | D | F | Latch Kit Stock No |
| 1/4 | 7 | 4300 | 1049610 | 1049605 | 1.00 | 1.72 | 2.54 | 2.20 | 3.88 | .88 | 1048426 |
| 5/16 | 8 | 5700 | 1049629 | 1049614 | .99 | 1.72 | 2.54 | 2.18 | 3.88 | .88 | 1048426 |
| 3/8 | 10 | 8800 | 1049638 | 1049623 | 1.80 | 1.85 | 3.09 | 2.58 | 4.69 | 1.09 | 1048435 |
| 1/2 | 13 | 15000 | 1049647 | 1049634 | 3.92 | 2.39 | 3.83 | 3.28 | 5.88 | 1.42 | 1048444 |
| 5/8 | 16 | 22600 | 1049656 | 1049643 | 7.00 | 2.67 | 4.52 | 3.85 | 7.03 | 1.75 | 1048453 |

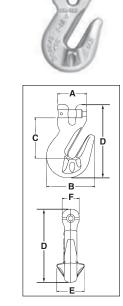


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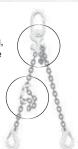


GrabiQ: Components with multiple functions

Innovative designs that combine several clever functions in one component



Midgrab, MIG Instant mounting, positioning, shortening on any part of the chain.



C-grab Duo, CGD Built in shortening function.

Master Grab, MG

• All-in-one compact top link.

- Every chain leg can instantly be altered.
- Using the built in shortening function, you can alter between a straight lift to a looped sling in a matter of seconds.

Fewer components & lighter assembly



4-leg sling with shortening function



(1) Master link (2) C-grab Duos

Total: 3 components with GrabiQ system



Master link
 Sub links
 Berglok chain couplers
 Grab hooks

Total: 15 components with traditional system

Grab O.

2-leg sling with shortening function



(1) Master Grab Duo

Total: 1 component with GrabiQ



(1) Master link(4) Berglok chain couplers(2) Grab hooks

Total: 7 components with traditional system



CHAIN & ACCESSORIES

Less is more with FlexiLeg

Thanks to the unique features of our GrabiQ product range, we offer solutions that increase the flexibility in lifting operations even further. Our FlexiLeg solution allows you to have an instant leg change on site.

With one single master link in combination with five Flexi-legs, we offer a solution that replaces four complete traditional slings, a total of ten legs. In addition, FlexiLeg also gives you the opportunity to modify the chain sling to different lifting operations, whenever and wherever it is needed.

1 Master Link

The benefits of instant leg-change

- Enables the user to change slings, leg by leg.
- · Makes the sling lighter and easier to work with.
- Sling legs that are not being used can easily be removed, thereby • increasing safety at the work site.
- The quantity of sling material is greatly reduced, providing cost savings.
- The chain sling can be reconfigured on site, thus increasing efficiency.



GrabiQ FlexiLeg a total of 5 legs replaces the total of 10 legs with the old traditional system.



4



Related Products

QuickPin - For safe exchange of sling legs

- Fits all C-components (CL, CLD, CG, CGD)
- · Instant close/open function, no tools needed
- Easy to retrofit
- Made of stainless steel for long product life span



FlexiTag - For every GrabiQ sling

- Specially designed for FlexiLeg
- Fits all other GrabiQ slings
- WLL and chain size pre-stamped for 1 4 legs
- Leg angle 30/45 degree shown in contour
- Made of stainless steel for use in all weather conditions



INDUSTRIAL WIRE ROPE SUPPLY



GrabiQ - solutions for every need

1-leg chain slings

| Ø | MG1-GBK Consist of: Master Link MG, Chain KLA, Safety Hook GBK | | | | | | |
|---|--|---------|-------|---------------------------|--|--|--|
| | Chair | Size | WLL | Total | | | |
| 8 | (mm) | (in) | (lb) | Components Length (in) | | | |
| | 6 | - | 3300 | 6.73 | | | |
| | 8 | 5/16" | 5700 | 11.65 | | | |
| | 10 | 3/8" | 8800 | 14.21 | | | |
| | 13 | 1/2" | 15000 | 17.83 | | | |
| 3 | 16 | 5/8" | 22600 | 20.75 | | | |
| | 4:1 Des | sign Fa | ctor | | | | |

| Chair | n Size | WLL | Total | | | | |
|---------------------|--------|-------|---------------------------|--|--|--|--|
| (mm) | (in) | (lb) | Components Length (in) | | | | |
| 6 | - | 3300 | 9.09 | | | | |
| 8 | 5/16" | 5700 | 10.28 | | | | |
| 10 | 3/8" | 8800 | 13.03 | | | | |
| 13 | 1/2" | 15000 | 16.06 | | | | |
| 16 5/8" 22600 18.94 | | | | | | | |

MG1-EGKN

TG1-GBK Master Link MF, C-grab CG, Chain KLA, Safety Hook GBK

| Chain Size | | WLL | Total | | |
|------------|--------|----------|-------|---------------------------|--|
| | (mm) | (in) | (lb) | Components Length (in) | |
| | 6 | - | 3300 | 7.87 | |
| | 8 | 5/16" | 5700 | 13.62 | |
| | 10 | 3/8" | 8800 | 16.69 | |
| | 13 | 1/2" | 15000 | 19.84 | |
| | 16 | 5/8" | 22600 | 24.45 | |
| 4 | :1 Des | ign Fact | or | | |

2-leg chain slings

TG1-EGKN

Consists of: Master Link MF, C-grab CG, Chain KLA, Hook with Latch EGKN

| Chair | n Size | WLL | Total Components Length (in) | | | |
|-------------------|--------|-------|------------------------------------|--|--|--|
| (mm) | (in) | (lb) | | | | |
| 6 | - | 3300 | 11.26 | | | |
| 8 | 5/16" | 5700 | 13.46 | | | |
| 10 | 3/8" | 8800 | 16.34 | | | |
| 13 | 1/2" | 15000 | 19.96 | | | |
| 16 | 5/8" | 22600 | 24.57 | | | |
| 4:1 Design Factor | | | | | | |

MGD2-GBK Consists of: Master Link MGD, Chain KLA, Safety Hook GBK

| Chair | n Size | | WLL (lb) | Total | | | |
|-------------------|--------|-------|----------|---------------------------|-------|--|--|
| (mm) | (in) | β 60° | β 45° | Components Length (in) | | | |
| 6 | - | 5500 | 4625 | 3300 | 9.25 | | |
| 8 | 5/16" | 9900 | 8100 | 5700 | 11.65 | | |
| 10 | 3/8" | 15200 | 12400 | 8800 | 14.21 | | |
| 13 | 1/2" | 26000 | 21200 | 15000 | 17.83 | | |
| 16 | 5/8" | 39100 | 32000 | 22600 | 20.75 | | |
| 4:1 Design Factor | | | | | | | |

TG2-EGKN

Consists of: Master Link MF, C-grab Duo CGD, Chain KLA, Latch Hook EGKN

| Chain | Size | | WLL (lb) | Total | |
|-------|-------|-------|----------|-------|---------------------------|
| (mm) | (in) | β 60° | β 45° | β 30° | Components Length (in) |
| 6 | - | 5500 | 4625 | 3300 | 11.26 |
| 8 | 5/16" | 9900 | 8100 | 5700 | 13.46 |
| 10 | 3/8" | 15200 | 12400 | 8800 | 16.34 |
| 13 | 1/2" | 26000 | 21200 | 15000 | 19.96 |
| 16 | 5/8" | 39100 | 32000 | 22600 | 24.61 |



MGD2-EGKN Consists of: Master Link MGD, Chain KLA, Latch Hook EGKN

| Chain Size | | | Total | | | | |
|-------------------|-------|-------|-------|-------|---------------------------|--|--|
| (mm) | (in) | β 60° | β 45° | β 30° | Components Length (in) | | |
| 6 | - | 5500 | 4625 | 3300 | 9.06 | | |
| 8 | 5/16" | 9900 | 8100 | 5700 | 10.28 | | |
| 10 | 3/8" | 15200 | 12400 | 8800 | 13.03 | | |
| 13 | 1/2" | 26000 | 21200 | 15000 | 16.06 | | |
| 16 | 5/8" | 39100 | 32000 | 22600 | 18.94 | | |
| 4:1 Design Factor | | | | | | | |

TG2-GBK

Consists of: Master Link MF, C-grab Duo CGD, Chain KLA, Safety Hook GBK

| Chain Size (mm) (in) | | β 60° | WLL (Ib) β 45° | Total Components Length (in) | | |
|-------------------------|-------|-------|-------------------|------------------------------------|-------|--|
| 6 | - | 5500 | 4625 | 3300 | 11.46 | |
| 8 | 5/16" | 9900 | 8100 | 5700 | 14.41 | |
| 10 | 3/8" | 15200 | 12400 | 8800 | 17.48 | |
| 13 | 1/2" | 26000 | 21200 | 15000 | 21.02 | |
| 16 | 5/8" | 39100 | 32000 | 22600 | 26.42 | |
| 4:1 Design Factor | | | | | | |

MGD2-CL Consists of: Master Link MGD, Chain KLA, C-lok CL

| | Chain Size | | | WLL (Ib) | Total Components | |
|----|------------|--------|-------|----------|---------------------|-------------|
| | (mm) | (in) | β 60° | β 45° | β 30° | Length (in) |
| | 6 | - | 5500 | 4625 | 3300 | 7.36 |
| | 8 | 5/16" | 9900 | 8100 | 5700 | 9.06 |
| Υ. | 10 | 3/8" | 15200 | 12400 | 8800 | 11.22 |
| 1 | 13 | 1/2" | 26000 | 21200 | 15000 | 14.13 |
| 1 | 16 | 5/8" | 39100 | 32000 | 22600 | 16.89 |
| 2 | 1:1 Design | Factor | | | | |

4

INDUSTRIAL WIRE ROPE SUPP



3-leg chain sling

TG3-GBK Consists of: Master Link MF, C-grab CG, C-grab Duo CGD, Chain KLA, Safety Hook GBK

| | 29 |
|---|----|
| | N |
| X | 11 |
| 6 | 88 |

| Chair | n Size | | WLL (Ib) | Total Component | | |
|-------|--------|-------|----------|--------------------|----------------|--|
| (mm) | (in) | β 60° | β 45° | β 30° | Length (in) | |
| 6 | - | 8400 | 6800 | 4850 | 12.24 | |
| 8 | 5/16" | 14800 | 12100 | 8500 | 15.43 | |
| 10 | 3/8" | 22900 | 18700 | 13200 | 18.66 | |
| 13 | 1/2" | 39000 | 31800 | 22500 | 23.78 | |
| 16 | 5/8" | 58700 | 47900 | 33900 | 26.77 | |

4:1 Design Factor

4-leg chain sling

TG4-GBK

Consists of: Master Link MF, C-grab Duo CGD, Chain KLA, Safety Hook GBK

| | Chain Size | | | Total | | |
|-----|------------|---------|-------|-------|-------|-----------------------------|
| | (mm) | (in) | β 60° | β 45° | β 30° | Component Length (in) |
| | 6 | - | 8400 | 6800 | 4850 | 12.24 |
| | 8 | 5/16" | 14800 | 12100 | 8500 | 15.43 |
| 1 | 10 | 3/8" | 22900 | 18700 | 13200 | 18.66 |
| 8 | 13 | 1/2" | 39000 | 31800 | 22500 | 23.78 |
| B | 16 | 5/8" | 58700 | 47900 | 33900 | 26.77 |
| -09 | 4:1 Des | ign Fac | tor | | | |



| TG3-EGKN | |
|--------------|---------------------------|
| Consists of: | Master link MF, C-grab CG |
| C-grab Duo | CGD, Chain KLA, |
| Latch Hook | EGKN |

CHAIN & ACCESSORIES

| | Chair | n Size | | WLL (Ib) | | Total |
|---|--------|---------|-------|----------|-------|-----------------------------|
| | (mm) | (in) | β 60° | β 45° | β 30° | Component Length (in) |
| | 6 | - | 8400 | 6800 | 4850 | 12.05 |
| | 8 | 5/16" | 14800 | 12100 | 8500 | 14.06 |
| | 10 | 3/8" | 22900 | 18700 | 13200 | 17.48 |
| 2 | 13 | 1/2" | 39000 | 31800 | 22500 | 22.01 |
| | 16 | 5/8" | 58700 | 47900 | 33900 | 24.96 |
| 9 | 4:1 De | sign Fa | actor | | | |

TG4-EGKN Consists of: Master link MF, C-grab Duo CGD, Chain KLA, Latch Hook EGKN

| | Chair | n Size | | WLL (lb) | | | | | |
|---|---------|--------|-------|----------|-------|-----------------------------|--|--|--|
| | (mm) | (in) | β 60° | β 45° | β 30° | Component Length (in) | | | |
| | 6 | - | 8400 | 6800 | 4850 | 12.05 | | | |
| 4 | 8 | 5/16" | 14800 | 12100 | 8500 | 14.06 | | | |
| 8 | 10 | 3/8" | 22900 | 18700 | 13200 | 17.48 | | | |
| 8 | 13 | 1/2" | 39000 | 31800 | 22500 | 22.01 | | | |
| 0 | 16 | 5/8" | 58700 | 47900 | 33900 | 24.96 | | | |
| - | 4:1 Des | | | | | | | | |

Based on EN 818-4:2008 WLL +25%

Grade 10 chain slings

Working Load Limits in tonnes for chain slings grade 10



ß

2-leg



3- and 4-leg

| | | | β 60° | β 45° | β 30° | β 60° | β 45° | β 30° |
|-----------------|-----------------|----------|--------|--------|--------|--------|--------|--------|
| Chain Size (mm) | Chain Size (in) | WLL (Ib) | α 60° | α 90° | α 120° | α 60° | α 90° | α 120° |
| 6 | - | 3300 | 5500 | 4625 | 3300 | 8400 | 6800 | 4850 |
| 7 | 9/32" | 4300 | 7400 | 6100 | 4300 | 11200 | 9100 | 6400 |
| 8 | 5/16" | 5700 | 9900 | 8100 | 5700 | 14800 | 12100 | 8500 |
| 10 | 3/8" | 8800 | 15200 | 12400 | 8800 | 22900 | 18700 | 13200 |
| 13 | 1/2" | 15000 | 26000 | 21200 | 15000 | 39000 | 31800 | 22500 |
| 16 | 5/8" | 22600 | 39100 | 32000 | 22600 | 58700 | 47900 | 33900 |
| 20 | 3/4" | 35300 | 61100 | 49900 | 35300 | 91700 | 74900 | 52950 |
| 22 | 7/8" | 42700 | 74000 | 60400 | 42700 | 110900 | 90600 | 64000 |
| 26 | 1" | 59700 | 103100 | 84100 | 59500 | 155600 | 126600 | 89250 |
| 32 | 1-1/4" | 88160 | 152700 | 124600 | 88160 | 229000 | 186950 | 132200 |

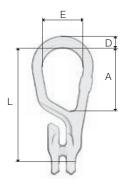
4:1 Design Factor. Working Load Limits are based on equally loaded and disposed sling legs.



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INDUSTRIAL WIRE ROPE SUPPLY

GUNNEBO Industries

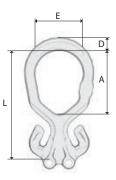


Master Grab MG

For use with Grade 100 or Grade 80 chain. "All-in-one" compact top link.

| Stock No. | Code | WLL (lb) | L | А | Е | D | Weight (Ib) |
|-----------|----------|-------------|-------|------|------|------|----------------|
| B14710 | MG-6-10 | 3306 | 5.71 | 3.46 | 2.36 | 0.59 | 1.10 |
| B14711 | MG-8-10 | 5700 | 6.73 | 3.62 | 2.36 | 0.71 | 1.98 |
| B14712 | MG-10-10 | 8800 | 8.31 | 4.45 | 2.95 | 0.87 | 3.97 |
| B14713 | MG-13-10 | 15000 | 10.28 | 5.43 | 3.54 | 1.02 | 7.72 |
| B14714 | MG-16-10 | 22600 | 12.24 | 6.18 | 4.13 | 1.22 | 13.45 |

4:1 Design Factor. Fulfills requirements in: EN 1677:2008 (WLL +25%), ASTM A952/A952M and AS 3776:2015.



Master Grab Duo MGD

For use with Grade 100 or Grade 80 chain. "All-in-one" compact top link for 2-leg slings.

| Stock No. | Code | WLL (lb) | L | А | Е | D | Weight (Ib) |
|-----------|-----------|-------------|------|-----|-----|------|----------------|
| B14700 | MGD-6-10 | 4700 | 5.7 | 3.5 | 2.4 | 0.67 | 1.5 |
| B14701U | MGD-8-10 | 9900 | 6.7 | 3.9 | 3.0 | 0.83 | 2.9 |
| B14702U | MGD-10-10 | 15200 | 8.3 | 4.9 | 3.5 | 0.94 | 5.1 |
| B14703U | MGD-13-10 | 26000 | 10.3 | 5.9 | 4.1 | 1.2 | 11.5 |
| B14704U | MGD-16-10 | 39100 | 12.2 | 6.9 | 4.7 | 1.4 | 17.4 |

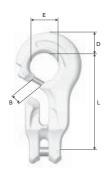
4:1 Design Factor. Fulfills requirements in: EN 1677:2008 (WLL +25%), ASTM A952/A952M and AS 3776:2015. Note: The maximum in service temperature is 392°F.



INDUSTRIAL WIRE ROPE SUPPL



CHAIN & ACCESSORIES

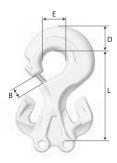


C-Grab CG

For use with Grade 100 or Grade 80 chain. For use with MF master and BK type hooks.

| Stock No. | Code | WLL (lb) | L | в | Е | D | Weight (lb) |
|-----------|----------|-------------|------|------|------|------|----------------|
| B14730 | CG-6-10 | 3306 | 3.15 | 0.43 | 0.94 | 0.75 | 0.66 |
| B14731 | CG-8-10 | 5700 | 4.21 | 0.47 | 1.26 | 0.94 | 1.54 |
| B14732 | CG-10-10 | 8800 | 5.28 | 0.59 | 1.57 | 1.14 | 3.31 |
| B14733 | CG-13-10 | 15000 | 6.77 | 0.71 | 2.05 | 1.50 | 7.05 |
| B14734 | CG-16-10 | 22600 | 8.46 | 0.87 | 2.52 | 1.85 | 13.45 |

4:1 Design Factor. Fulfills requirements in: EN 1677:2008 (WLL +25%), ASTM A952/A952M and AS 3776:2015.

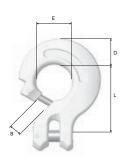


C-Grab Duo CGD

For use with Grade 100 or Grade 80 chain. For use with master links.

| Stock No. | Code | WLL (Ib) | L | в | Е | D | Weight (Ib) |
|-----------|-----------|-------------|-----|------|------|------|----------------|
| B14720 | CGD-6-10 | 4700 | 3.1 | 0.43 | 0.94 | 0.87 | 1.1 |
| B14721U | CGD-8-10 | 9900 | 4.2 | 0.47 | 1.3 | 1.1 | 2.4 |
| B14722U | CGD-10-10 | 15200 | 5.3 | 0.59 | 1.6 | 1.5 | 4.8 |
| B14723 | CGD-13-10 | 26000 | 6.8 | 0.75 | 1.9 | 1.9 | 11.9 |
| B14724U | CGD-16-10 | 39100 | 8.5 | 0.87 | 2.5 | 2.2 | 20.1 |

4:1 Design Factor. Fulfills requirements in: EN 1677:2008 (WLL +25%), ASTM A952/A952M and AS 3776:2015. Note: The maximum in service temperature is 392°F.

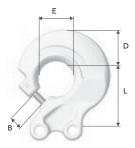


C-Lok CL

For use with Grade 100 or Grade 80 chain. For use with master links, eye hooks and choke.

| Stock No. | Code | WLL (lb) | L | в | Е | D | Weight (lb) |
|-----------|----------|-------------|------|------|------|------|----------------|
| B14750 | CL-6-10 | 3306 | 1.69 | 0.43 | 0.94 | 0.71 | 0.44 |
| B14751 | CL-8-10 | 5700 | 2.28 | 0.47 | 1.26 | 0.94 | 1.10 |
| B14752 | CL-10-10 | 8800 | 2.91 | 0.59 | 1.57 | 1.14 | 2.20 |
| B14753 | CL-13-10 | 15000 | 3.70 | 0.71 | 2.05 | 1.50 | 4.41 |
| B14754 | CL-16-10 | 22600 | 4.69 | 0.87 | 2.52 | 1.89 | 8.38 |

4:1 Design Factor. Fulfills requirements in: EN 1677:2008 (WLL +25%), ASTM A952/A952M and AS 3776:2015.



C-Lok Duo CLD

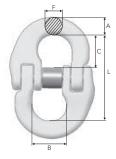
For use with Grade 100 or Grade 80 chain. For use with master links.

| Stock No. | Code | WLL (Ib) | L | в | Е | D | Weight (Ib) |
|-----------|-----------|-------------|------|------|------|------|----------------|
| B14740 | CLD-6-10 | 5 700 | 1.69 | 0.43 | 0.94 | 0.87 | 0.88 |
| B14741U | CLD-8-10 | 9 918 | 2.28 | 0.47 | 1.26 | 1.14 | 1.32 |
| B14742U | CLD-10-10 | 15 317 | 2.91 | 0.59 | 1.57 | 1.46 | 2.65 |
| B14743U | CLD-13-10 | 26 007 | 3.70 | 0.71 | 2.05 | 1.81 | 6.83 |
| B14744U | CLD-16-10 | 39 231 | 4.69 | 0.98 | 2.52 | 2.24 | 12.13 |

4:1 Design Factor. Fulfills requirements in: EN 1677:2008 (WLL +25%), ASTM A952/A952M and AS 3776:2015. Note: The maximum in service temperature is 392°F.

INDUSTRIAL WIRE ROPE SUPPLY





Coupling Link G

For use with Grade 100 or Grade 80 chain. For use with master link and eye hook.

| Stock No. | Code | WLL (Ib) | L | в | F | А | с | Weight (Ib) |
|-----------|---------|-------------|------|------|------|------|------|----------------|
| Z100821 | G-6-10 | 3306 | 1.77 | 0.59 | 0.28 | 0.31 | 0.63 | 0.22 |
| Z101358 | G-7-10 | 4500 | 2.20 | 0.71 | 0.35 | 0.43 | 0.87 | 0.44 |
| Z100822 | G-8-10 | 5700 | 2.20 | 0.71 | 0.35 | 0.43 | 0.87 | 0.44 |
| Z100823 | G-10-10 | 8800 | 2.68 | 0.98 | 0.47 | 0.51 | 1.02 | 0.66 |
| Z100824 | G-13-10 | 15000 | 3.50 | 1.14 | 0.59 | 0.67 | 1.30 | 1.54 |
| Z100825 | G-16-10 | 22600 | 4.17 | 1.42 | 0.75 | 0.79 | 1.57 | 3.09 |
| Z101119 | G-20-10 | 35300 | 4.92 | 1.69 | 0.91 | 1.02 | 1.73 | 4.85 |
| Z101339 | G-22-10 | 44080 | 5.98 | 1.97 | 1.02 | 1.10 | 2.32 | 7.72 |
| Z101365 | G-26-10 | 60169 | 6.34 | 2.28 | 1.26 | 1.34 | 2.40 | 12.57 |
| Z101666 | G-32-10 | 88160 | 7.87 | 2.76 | 1.50 | 1.57 | 3.03 | 20.94 |

4:1 Design Factor. Fulfills requirements in: EN 1677:2008 (WLL +25%), ASTM A952/A952M-02 and AS 3776:2015.

Grab Hook GG

Clevis shortening hook. For use with Grade 100 or Grade 80 chain. No reduction of working load limit, thanks to supporting cradle lugs on either side of hook to prevent chain link deformation.

| Stock No. | Code | WLL (lb) | L | в | Weight (lb) |
|-----------|----------|-------------|------|------|----------------|
| Z101844 | GG-6-10 | 3306 | 2.13 | 0.31 | 0.44 |
| Z100845 | GG-7-10 | 4500 | 2.24 | 0.39 | 0.66 |
| B14771 | GG-8-10 | 5700 | 2.24 | 0.39 | 0.88 |
| B14772 | GG-10-10 | 8800 | 2.99 | 0.47 | 1.98 |
| B14773 | GG-13-10 | 15000 | 3.82 | 0.63 | 3.97 |
| B14774 | GG-16-10 | 22600 | 4.49 | 0.79 | 6.83 |
| Z101152 | GG-20-10 | 35300 | 5.79 | 1.02 | 15.43 |

4:1 Design Factor. Fulfills requirements in: EN 1677:2008 (WLL +25%), ASTM A952/A952M and AS 3776:2015.

Grab Hook GG with Locking Pin

Clevis shortening hook with locking pin for extra safety. For use with Grade 100 or Grade 80 chain. No reduction of working load limit, thanks to supporting cradle lugs on either side of hook to prevent chain link deformation.

| Stock No. | Code | WLL (lb) | L | В | Weight (Ib) |
|-------------------|-----------------------------|---------------|-----------|-------------|----------------|
| B14971 | GG-8-10 LP | 5700 | 2.24 | 0.39 | 0.88 |
| B14972 | GG-10-10 LP | 8800 | 3.03 | 0.47 | 1.98 |
| B14973 | GG-13-10 LP | 15000 | 3.82 | 0.63 | 4.19 |
| B14974 | GG-16-10 LP | 22600 | 4.49 | 0.79 | 7.05 |
| 4-1 Design Factor | Fulfills requirements in: F | N 1677-2008 (| WIL +25%) | ASTM A952/4 | 952M and A |

EN 1677:2008 (WLL +25%), ASTM A952/A952M and AS 3776:2015.

Grab Hook OG

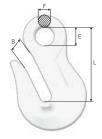
Eye shortening hook. For use with Grade 100 or Grade 80 chain. No reduction of working load limit, thanks to supporting lugs on either side of hook to prevent chain link deformation.

| Stock No. | Code | WLL (lb) | L | в | Е | F | Weight (lb) |
|-----------|-----------|-------------|------|------|------|------|----------------|
| Z101296 | OG-7/8-10 | 5700 | 2.56 | 0.39 | 0.67 | 0.39 | 0.66 |
| Z101297 | OG-10-10 | 8800 | 3.35 | 0.47 | 0.79 | 0.47 | 1.54 |
| Z101298 | OG-13-10 | 15000 | 4.09 | 0.63 | 1.02 | 0.63 | 3.53 |
| Z101299 | OG-16-10 | 22600 | 5.16 | 0.79 | 1.26 | 0.75 | 6.17 |
| Z101300 | OG-20-10 | 35300 | 6.57 | 1.02 | 1.61 | 0.91 | 13.45 |
| Z101301 | OG-22-10 | 44094 | 7.36 | 1.02 | 1.81 | 1.26 | 18.96 |
| Z101302 | OG-26-10 | 60169 | 8.98 | 1.26 | 2.17 | 1.50 | 30.86 |
| Z101303 | OG-32-10 | 88160 | 9.02 | 1.57 | 1.97 | 1.06 | 45.64 |

4:1 Design Factor. Fulfills requirements in: EN 1677:2008 (WLL +25%), ASTM A952/A952M and AS 3776:2015.







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CHAIN & ACCESSORIES

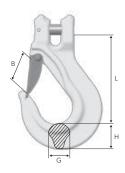


| Sling | Hook | EGK |
|-------|------|-----|
|-------|------|-----|

For use with Grade 100 or Grade 80 chain. Sling hook with clevis connector.

| Stock No. | Code | WLL (Ib)* | L | в | G | н | Weight (Ib) |
|-----------|-----------|--------------|------|------|------|------|----------------|
| Z100915 | EGK-6-10 | 3306 | 3.39 | 1.14 | 0.67 | 0.79 | 0.88 |
| Z100918 | EGK-7-10 | 4500 | 3.74 | 1.26 | 0.67 | 0.87 | 1.10 |
| Z100938 | EGK-8-10 | 5700 | 3.74 | 1.26 | 0.67 | 0.91 | 1.10 |
| Z100942 | EGK-10-10 | 8800 | 4.76 | 1.61 | 0.91 | 1.22 | 2.20 |
| Z100946 | EGK-13-10 | 15000 | 5.71 | 1.93 | 1.10 | 1.50 | 4.41 |
| Z100950 | EGK-16-10 | 22600 | 6.69 | 2.40 | 1.42 | 1.81 | 8.38 |
| Z101138 | EGK-20-10 | 35300 | 8.23 | 2.80 | 1.65 | 2.36 | 16.09 |

4:1 Design Factor. Fulfills requirements in: EN 1677:2008 (WLL +25%), ASTM A952/A952M and AS 3776:2015.



Sling Hook EGKN

For use with Grade 100 or Grade 80 chain. Sling hook with latch.

| Stock No. | Code | WLL (lb)* | L | в | G | н | Weight (Ib) |
|-----------|------------|--------------|------|------|------|------|----------------|
| B14460 | EGKN-6-10 | 3306 | 3.39 | 0.98 | 0.67 | 0.79 | 0.88 |
| Z100843 | EGKN-7-10 | 4500 | 3.74 | 1.06 | 0.67 | 0.91 | 1.10 |
| B14461 | EGKN-8-10 | 5700 | 3.74 | 1.10 | 0.67 | 0.91 | 1.10 |
| B14462 | EGKN-10-10 | 8800 | 4.76 | 1.38 | 0.91 | 1.22 | 2.43 |
| B14463 | EGKN-13-10 | 15000 | 5.71 | 1.65 | 1.10 | 1.50 | 4.85 |
| B14464 | EGKN-16-10 | 22600 | 6.69 | 2.09 | 1.42 | 1.81 | 8.82 |
| Z101127 | EGKN-20-10 | 35300 | 8.23 | 2.56 | 1.65 | 2.36 | 16.76 |

4:1 Design Factor. Fulfills requirements in: EN 1677:2008 (WLL +25%), ASTM A952/A952M and AS 3776:2015.



Coupling Link GF – stain proof

High strength stainless steel.

| Stock No. | Code | WLL (Ib) | For chain dim. | L | в | F | А | с | Weight (Ib) |
|-----------|------------|-------------|-------------------|------|------|------|------|------|----------------|
| B80202 | GF-10-8 SP | 7100 | 3/8" | 2.68 | 0.98 | 0.43 | 0.51 | 1.02 | 0.66 |
| B80203 | GF-13-8 SP | 12000 | 1/2" | 3.50 | 1.18 | 0.59 | 0.63 | 1.30 | 1.54 |
| B80204 | GF-16-8 SP | 18000 | 5/8" | 4.13 | 1.42 | 0.75 | 0.79 | 1.57 | 2.65 |

4:1 Design Factor



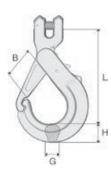
Coupling Link G HDG

Hot-dip galvanized for marine environments.

| Stock No. | Code | WLL (Ib) | L | в | F | А | с | Weight (Ib) |
|-----------|------------|-------------|------|------|------|------|------|----------------|
| ZG100821 | G-6-8 HDG | 2500 | 1.77 | 0.59 | 0.28 | 0.31 | 0.67 | 0.22 |
| ZG100822 | G-8-8 HDG | 4500 | 2.20 | 0.71 | 0.35 | 0.43 | 0.87 | 0.44 |
| ZG100823 | G-10-8 HDG | 7100 | 2.68 | 0.98 | 0.43 | 0.51 | 1.02 | 0.66 |
| ZG100824 | G-13-8 HDG | 12000 | 3.50 | 1.18 | 0.59 | 0.63 | 1.30 | 1.54 |
| ZG100825 | G-16-8 HDG | 18000 | 4 | 1.42 | 0.75 | 0.79 | 1.57 | 2.65 |

4:1 Design Factor





Safety Hook GBK

For use with Grade 100 or Grade 80 chain. Safety hook with clevis connector and grab latch.

| Stock No. | Code | WLL (lb) | L | В | G | н | Weight (Ib) |
|-----------|-----------|-------------|------|------|------|------|----------------|
| Z100758 | GBK-6-10 | 3306 | 3.43 | 1.02 | 0.59 | 0.67 | 0.88 |
| Z100849 | GBK-7-10 | 4500 | 4.49 | 1.42 | 0.79 | 0.87 | 1.10 |
| Z100759 | GBK-8-10 | 5700 | 4.69 | 1.42 | 0.79 | 0.87 | 1.76 |
| Z100760 | GBK-10-10 | 8800 | 5.91 | 1.85 | 0.87 | 1.14 | 3.09 |
| Z100761 | GBK-13-10 | 15000 | 6.77 | 2.09 | 1.14 | 1.50 | 5.95 |
| Z100762 | GBK-16-10 | 22600 | 8.19 | 2.68 | 1.18 | 1.77 | 9.70 |

4:1 Design Factor. Fulfills requirements in: EN 1677:2008 (WLL +25%), ASTM A952/A952M and AS 3776:2015.

Safety Hook BKG

For use with Grade 100 or Grade 80 chain. Safety hook with clevis connector and standard latch.

| Stock No. | Code | WLL (lb) | L | в | G | н | Weight (Ib) |
|-----------|-----------|-------------|------|------|------|------|----------------|
| Z101110 | BKG-6-10 | 3306 | 3.58 | 1.14 | 0.59 | 0.83 | 1.10 |
| Z101098 | BKG-7-10 | 4500 | 4.72 | 1.46 | 0.67 | 0.87 | 1.10 |
| Z101100 | BKG-8-10 | 5700 | 4.76 | 1.46 | 0.67 | 1.02 | 1.98 |
| Z101026 | BKG-10-10 | 8800 | 5.67 | 1.77 | 0.83 | 1.22 | 3.31 |
| Z101034 | BKG-13-10 | 15000 | 7.09 | 2.17 | 1.18 | 1.57 | 6.61 |
| Z101042 | BKG-16-10 | 22600 | 8.62 | 2.44 | 1.46 | 1.97 | 12.13 |
| Z101091 | BKG-20-10 | 35300 | 9.45 | 2.68 | 1.73 | 2.44 | 21.16 |

4:1 Design Factor. Fulfills requirements in: EN 1677:2008 (WLL +25%), ASTM A952/A952M and AS 3776:2015.

Safety Hook BKGC

For use with Grade 100 or Grade 80 chain. Safety hook with clevis connector for skip loaders.

| Stock No. | Code | WLL (lb) | L | в | G | н | Weight (Ib) |
|-----------|------------|-------------|------|------|------|------|----------------|
| Z1002401 | BKGC-13-10 | 15000 | 6.46 | 2.17 | 1.06 | 1.69 | 7.05 |

4:1 Design Factor. Fulfills requirements in: EN 1677:2008 (WLL +25%), ASTM A952/A952M and AS 3776:2015.

Sling Hook GKC

For use with Grade 100 or Grade 80 chain. Sling hook with clevis connector for skip loaders.

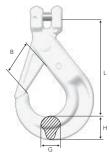
| Stock No. | Code | WLL (lb) | L | в | G | н | Weight (Ib) |
|-----------|-----------|-------------|------|------|------|------|----------------|
| Z7006461 | GKC-13-10 | 15000 | 7.40 | 2.36 | 1.06 | 1.69 | 5.51 |

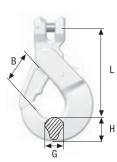
4:1 Design Factor. Fulfills requirements in: EN 1677:2008 (WLL +25%), ASTM A952/A952M and AS 3776:2015.

Clevis Egglink CEL

| Stock No. | Code | WLL (Ib) | с | Е | G | н | L | Weight (Ib) |
|-----------|-----------|-------------|------|------|------|------|------|----------------|
| Z701968 | CEL-8-10 | 5733 | 3.15 | 1.57 | 0.55 | 0.59 | 3.94 | 0.88 |
| Z701969 | CEL-10-10 | 8820 | 3.94 | 1.97 | 0.71 | 0.75 | 4.96 | 1.54 |
| Z701970 | CEL-13-10 | 14994 | 5.12 | 2.56 | 0.91 | 0.98 | 6.38 | 3.31 |

4:1 Deisgn Factor. Fulfills requirements in: EN 1677:2008, ISO 8539:2009, ASTM A952/A952M and AS 3776:2015.







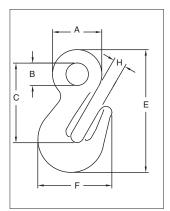


Crosby[®]

A-1328



- Forged alloy steel Quenched & Tempered.
- Individually Proof Tested to 2-1/2 times the Working Load Limit with certification.
- Each hook has a Product Identification Code (PIC) for material traceability, along with the size and the name Crosby.
- Suitable for use with Grade 100 and Grade 80 chain.
- Fatigue rated at 1-1/2 times the Working Load Limit at 20,000 cycles.



Gal

A-1328 Eye Grab Hook

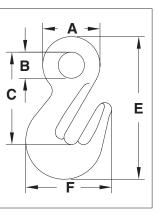
| Chain | Size | Working Load Limit | | Weight Each | | | | nsions in) | | |
|----------------------------|-------|-----------------------|-----------|-------------|------|------|------|---------------|------|------|
| (in) | (mm) | (lb) | Stock No. | (lb) | Α | В | С | E | F | Н |
| 1/4 - 5/16 | 7 - 8 | 5700 | 1026169 | .98 | 1.75 | .75 | 2.79 | 4.29 | 2.57 | .44 |
| 3/8 | 10 | 8800 | 1026187 | 1.6 | 2.06 | .94 | 3.33 | 5.13 | 3.09 | .53 |
| 1/2 | 13 | 15000 | 1026196 | 3.3 | 2.56 | 1.12 | 4.11 | 6.38 | 3.83 | .66 |
| 5/8 | 16 | 22600 | 1026205 | 6.0 | 3.07 | 1.31 | 4.91 | 7.62 | 4.53 | .79 |
| 3/4 | 19-20 | 35300 | 1026214 | 10.0 | 3.25 | 1.50 | 5.41 | 8.76 | 6.00 | .94 |
| 7/8 | 22-23 | 44100 | 1026223 | 13.1 | 3.94 | 1.81 | 6.48 | 10.10 | 6.53 | 1.09 |
| 1 | 26 | 59700 | 1026232 | 18.9 | 4.44 | 2.00 | 7.22 | 11.45 | 7.75 | 1.19 |
| 1 1/4 | 32 | 90400 | 1026241 | 39.4 | 5.64 | 2.38 | 9.08 | 14.59 | 9.50 | 1.50 |
| I 1/4 A:1 Decign Easter | 32 | 90400 | 1020241 | 39.4 | 5.04 | 2.30 | 9.06 | 14.59 | 9.50 | 1.5 |

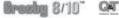
4:1 Design Factor.

A-1348



- Forged alloy steel Quenched & Tempered.
- The use of A-1348 Cradle Grab Hook will allow 100% percent of the chain sling capacity. When used to hook back to chain leg to form a choker, the angle of the choke must be 120 degrees or greater.
 When used as a chain shortener, minimize twist of chain and ensure chain is fully engaged in hook.
- Innovative cradle design allows for 100% efficiency of Grade 100 chain.
- Individually Proof Tested to 2-1/2 times the Working Load Limit with certification.
- Each hook has a Product Identification Code (PIC) for material traceability, along with the size and the name Crosby in raised letters.
- Suitable for use with Grade 100 and Grade 80 chain.
- Fatigue rated to 20,000 cycles at 1-1/2 times the Working Load Limit.





A-1348 Eye Cradle Grab Hook

| Chai | n Size | Working Load Limit | | Weight Each | | | Dimension (in) | S | |
|----------|--------|-----------------------|-----------|-------------|------|------|-------------------|------|------|
| (in) | (mm) | (lb) | Stock No. | (lb) | А | В | С | E | F |
| 1/4-5/16 | 7-8 | 5700 | 1026200 | 0.77 | 1.43 | 0.65 | 2.52 | 3.87 | 2.29 |
| 3/8 | 10 | 8800 | 1026209 | 1.41 | 1.95 | 1.02 | 3.07 | 4.72 | 2.71 |
| 1/2 | 13 | 15000 | 1026218 | 1.92 | 2.44 | 1.14 | 3.82 | 5.75 | 3.24 |
| 5/8 | 16 | 22600 | 1026227 | 6.24 | 3.11 | 1.42 | 4.98 | 7.72 | 4.40 |

4:1 Design Factor.

S-1317

Crosby® Grade 100 SHUR-LOC® Hooks



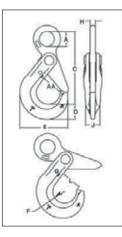




S-1316

- Forged Alloy Steel Quenched and Tempered. •
- 25% stronger than Grade 80.
- Individually Proof Tested to 2-1/2 times the Working Load Limit with certification.
- Recessed trigger design is flush with the hook body, protecting the trigger from potential damage.
- Easy to operate with enlarged thumb access.
- Positive Lock Latch is Self-Locking when hook is loaded.
- Eye style is designed with "Engineered Flat" to connect to S-1325 chain coupler.
- Suitable for use with Grade 100 and Grade 80 chain. •
- The SHUR-LOC® hook, if properly installed and locked, can be used for • personnel lifting applications and meets the intent of OSHA Rule 1926.1431(g)(1)(i)(A) and 1926.1501(g)(4)(iv)(B).
- Fatigue rated at 1-1/2 times the Working Load Limit at 20,000 cycles. •
- "Look for the Platinum Color Crosby Grade 100 Alloy Products.

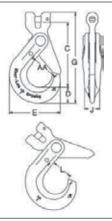
SHUR-LOC® Hook Series with Positive Locking Latch



S-1316 Eye Hook

| | | Working | | | Dimensions (in.) | | | | | | | | |
|-------------|------|--------------------------|---------------------|--------------------------|---------------------|-------|------|------|------|------|------|------|------|
| (in.) (m | nm) | Load Limit (Ibs.)* | S-1316 Stock No. | Weight Each (Ibs.) | А | с | D | Е | F | н | J | L | AA |
| - 6 | 6 | 3200 | 1022896 | .85 | .78 | 3.95 | .79 | 2.60 | .67 | .31 | .63 | 1.14 | 1.50 |
| 1/4-5/16 7- | 7-8 | 5700 | 1022914 | 1.80 | 1.08 | 5.31 | 1.10 | 3.50 | .87 | .39 | .81 | 1.48 | 2.00 |
| 3/8 1 | 10 | 8800 | 1022923 | 3.40 | 1.30 | 6.57 | 1.17 | 4.39 | 1.10 | .51 | .94 | 1.83 | 2.50 |
| 1/2 1 | 13 | 15000 | 1022932 | 6.00 | 1.65 | 8.23 | 1.67 | 5.45 | 1.26 | .67 | 1.16 | 2.22 | 3.00 |
| 5/8 1 | 16 | 22600 | 1022941 | 15.1 | 2.20 | 10.06 | 2.04 | 6.56 | 1.50 | .87 | 1.50 | 2.65 | 3.50 |
| 3/4 18- | 3-20 | 35300 | 1022942 | 19.0 | 2.60 | 10.77 | 2.22 | 7.76 | 2.01 | .87 | 2.03 | 3.52 | - |
| 7/8 2 | 22 | 42700 | 1022943 | 28.0 | 2.87 | 12.49 | 2.45 | 8.75 | 2.27 | .98 | 2.20 | 3.83 | - |
| 1 2 | 26 | 59700 | 1022944 | 49.5 | 3.15 | 14.60 | 3.21 | 9.87 | 2.46 | 1.26 | 2.68 | 4.09 | - |

Minimum Ultimate Load is 4 times the Working Load Limit



S-1317 Clevis Hook

| Chai | n Size | Working | | | | | D | imensior (in.) | ıs | | |
|-------|--------|--------------------------|---------------------|--------------------------|-------|------|------|-------------------|------|-------|------|
| (in.) | (mm) | Load Limit (Ibs.)* | S-1317 Stock No. | Weight Each (lbs.) | с | D | Е | G | J | L | AA |
| - | 6 | 3200 | 1028991 | .77 | 3.44 | .79 | 2.60 | 4.75 | .63 | 1.16 | 1.50 |
| 1/4 | 7 | 4300 | 1029000 | 1.80 | 4.48 | 1.10 | 3.51 | 6.25 | .81 | 1.48 | 2.00 |
| 5/16 | 8 | 5700 | 1029009 | 1.80 | 4.47 | 1.10 | 3.51 | 6.25 | .81 | 1.48 | 2.00 |
| 3/8 | 10 | 8800 | 1029018 | 3.66 | 5.53 | 1.17 | 4.39 | 7.54 | .94 | 1.83 | 2.50 |
| 1/2 | 13 | 15000 | 1029027 | 6.80 | 6.81 | 1.67 | 5.49 | 9.52 | 1.16 | 2.22 | 3.00 |
| 5/8 | 16 | 22600 | 1029036 | 11.9 | 8.22 | 2.04 | 6.55 | 11.61 | 1.50 | 2.65 | 3.50 |
| 3/4 | 18-20 | 35300 | 1029071 | 15.0 | 9.42 | 2.22 | 7.76 | 13.21 | 2.03 | 3.52 | - |
| 7/8 | 22 | 42700 | 1029080 | 28.0 | 11.14 | 2.45 | 8.75 | 15.45 | 2.20 | 3.83 | - |
| 1 | 26 | 59700 | 1029089 | 49.5 | 12.56 | 3 21 | 9.87 | 18 44 | 2.68 | 4 0 9 | - |

* Minimum Ultimate Load is 4 times the Working Load Limit.

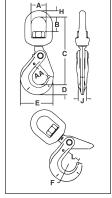
Crosby[®] Grade 100 SHUR-LOC[®] Hooks

Faligue Rated and Contracting and Contracting

S-1326

- Forged Alloy Steel Quenched and Tempered.
- Individually Proof Tested at 2-1/2 times the Working Load Limit with certification.
- Recessed trigger design is flush with the hook body, protecting the trigger from potential damage.
- Easy to operate with enlarged thumb access.
- Positive Lock Latch is Self-Locking when hook is loaded.
- G-414 Heavy Thimble should be used with wire rope slings.
- Trigger repair Kit available (S-4316). Consists of spring, roll pin and trigger.
- S-13326 Swivel Hook utilizes anti-friction bearing design which allows hook to rotate freely under load.
- Fatigue rated.
- The SHUR-LOC[®] hook, if properly installed and locked, can be used for personnel lifting applications and meets the intent of OSHA Rule 1926.1431(g)(1)(i)(A) and 1926.1501(g)(4)(iv)(B).
- "Look for the Platinum Color Crosby Grade 100 Alloy Products".
- U.S. Patent 5,381,650 and foreign equivalents.

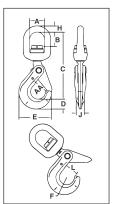
Use in corrosive environment requires shank and nut inspection in accordance with ASME B30.10-1.10.4(b)(5)(c)2009.



S-1326 SHUR-LOC[®] Swivel Hooks

• Suitable for infrequent, non-continuous rotation under load.

| Chain | Size | | Grade 100 Alloy Chain | | | | | | Dimer (ir | | | | | |
|------------|---------|---------------------|---|--------------------------|------|------|-------|------|--------------|------|------|------|------|------|
| (in.) | (mm) | S-1326 Stock No. | Working Load Limit (Ibs.) 4:1* | Weight Each (Ibs.) | А | в | с | D | E | F | н | J | L | AA |
| - | 6 | 1004304 | 3200 | 1.26 | 1.50 | 1.32 | 6.13 | .79 | 2.60 | .67 | .50 | .63 | 1.13 | 1.50 |
| 1/4-5/16 | 7-8 | 1004313 | 5700 | 2.62 | 1.75 | 1.59 | 7.60 | 1.10 | 3.50 | .87 | .63 | .81 | 1.38 | 2.00 |
| 3/8 | 10 | 1004322 | 8800 | 4.70 | 2.00 | 1.73 | 8.83 | 1.17 | 4.39 | 1.10 | .75 | .94 | 1.75 | 2.50 |
| 1/2 | 13 | 1004331 | 15000 | 8.64 | 2.50 | 2.38 | 11.20 | 1.67 | 5.45 | 1.26 | 1.00 | 1.16 | 2.11 | 3.00 |
| 5/8 | 16 | 1004340 | 22600 | 17.00 | 2.75 | 2.53 | 12.98 | 2.05 | 6.56 | 1.50 | 1.13 | 1.50 | 2.49 | 3.50 |
| 3/4 | 18-20 | 1004349 | 35300 | 24.00 | 2.83 | 2.52 | 17.42 | 2.22 | 7.76 | 2.01 | 1.10 | 2.03 | 3.52 | 5.00 |
| 7/8 | 22 | 1004358 | 42700 | 29.00 | 3.44 | 3.19 | 16.47 | 2.45 | 8.75 | 2.26 | 1.30 | 2.20 | 3.83 | 6.00 |
| * Ultimate | Load is | s 4 times the V | Norking Load L | .imit. | | | | | | | | | | |



S-13326 SHUR-LOC® Swivel Hooks with Bearing • Suitable for frequent rotation under load.

| Chain | Size | | Grade 100 Alloy Chain | | | | | | Dimen (ir | | | | | |
|----------|------|----------------------|---|--------------------------|------|------|-------|------|--------------|------|------|------|------|------|
| (in.) | (mm) | S-13326 Stock No. | Working Load Limit (lbs.) 4:1* | Weight Each (Ibs.) | А | в | с | D | Е | F | н | J | L | AA |
| - | 6 | 1004404 | 3200 | 1.50 | 1.50 | 1.14 | 6.17 | .79 | 2.60 | .67 | .50 | .63 | 1.13 | 1.50 |
| 1/4-5/16 | 7-8 | 1004413 | 5700 | 3.10 | 1.75 | 1.52 | 7.54 | 1.10 | 3.50 | .87 | .63 | .81 | 1.44 | 2.00 |
| 3/8 | 10 | 1004422 | 8800 | 5.26 | 2.00 | 1.61 | 8.88 | 1.16 | 4.35 | 1.10 | .75 | .94 | 1.83 | 2.50 |
| 1/2 | 13 | 1004431 | 15000 | 11.22 | 2.50 | 2.03 | 11.11 | 1.66 | 5.45 | 1.26 | 1.00 | 1.16 | 2.19 | 3.00 |
| 5/8 | 16 | 1004440 | 22600 | 17.32 | 2.75 | 1.98 | 12.61 | 2.05 | 6.56 | 1.50 | 1.13 | 1.50 | 2.61 | 3.50 |

Ultimate Load is 4 times the Working Load Limit.

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4

S-13326

Crosby[®] Grade 100 Chain Fittings

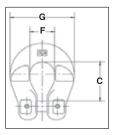
Faligue Rated



S-1325A



- Designed to connect Grade 100 chain fittings produced with "Engineered Flat" to Grade 100 chain.
- Forged Alloy Steel - Quenched and Tempered.
- Suitable for use with Grade 100 and Grade 80 chain.
- Individually Proof Tested to 2-1/2 times the Working Load Limit with certification.
- Locking system that provides for simple assembly and disassembly no special tools required.
- Fatigue rated at 1-1/2 times the Working Load Limit at 20,000 cycles.
- "Look for the Platinum Color Crosby Grade 100 Alloy Products."



S-1325A Grade 100 Chain Coupler

| Chair | n Size | | Working Load | Weight | | Dimensions (in.) | |
|-------|--------|----------------------|------------------|----------------|------|---------------------|------|
| (in.) | (mm) | S-1325A Stock No. | Limit (Ibs.)* | Each (lbs.) | с | F | G |
| - | 6 | 1098496 | 3200 | .25 | 1.03 | .74 | 1.74 |
| 1/4 | 7 | 1098500 | 4300 | .50 | 1.41 | .88 | 2.32 |
| 5/16 | 8 | 1098504 | 5700 | .50 | 1.40 | .88 | 2.32 |
| 3/8 | 10 | 1098508 | 8800 | .80 | 1.84 | 1.18 | 2.72 |
| 1/2 | 13 | 1098512 | 15000 | 1.70 | 2.12 | 1.50 | 3.62 |
| 5/8 | 16 | 1098516 | 22600 | 1.90 | 2.84 | 1.96 | 4.40 |

* Minimum Ultimate Load is 4 times the Working Load Limit.

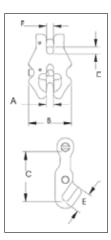




S-1311N



- Alloy Steel - Quenched and Tempered.
- Individually Proof Tested to 2-1/2 times the Working Load Limit with certification. •
- Suitable for use with Grade 100 and Grade 80 chain.
- Spring loaded chain locking system keeps chain in place under slack conditions.
- The use of S-1311N Chain Shortener will allow 100 percent of the chain sling capacity. ٠
- Fatigue rated at 1-1/2 times the Working Load Limit at 20,000 cycles.
- "Look for the Platinum Color Crosby Grade 100 Alloy Products." •



S-1311N Grade 100 Chain Shortener Link

| Chair | n Size | | Working Load | Weight | | | Dimer (ir | nsions n.) | | |
|-------|--------|----------------------|------------------|----------------|-----|------|--------------|---------------|------|-----|
| (in.) | (mm) | S-1311N Stock No. | Limit (Ibs.)* | Each (Ibs.) | А | в | с | D | Е | F |
| - | 6 | 1017860 | 3200 | .49 | .30 | 1.76 | 1.83 | .29 | .76 | .29 |
| 1/4 | 7 | 1017869 | 4300 | .84 | .34 | 2.04 | 2.17 | .34 | .88 | .33 |
| 5/16 | 8 | 1017878 | 5700 | 1.22 | .40 | 2.36 | 2.53 | .39 | 1.01 | .38 |
| 3/8 | 10 | 1017897 | 8800 | 2.03 | .48 | 2.84 | 3.07 | .48 | 1.23 | .46 |
| 1/2 | 13 | 1017906 | 15000 | 4.31 | .62 | 3.56 | 3.77 | .61 | 1.57 | .59 |
| 5/8 | 16 | 1017915 | 22600 | 7.20 | .73 | 4.24 | 4.64 | .73 | 1.91 | .70 |

* Minimum Ultimate Load is 4 times the Working Load Limit.

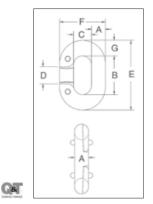
INDUSTRIAL WIRE ROPE SUPPLY

Crosby

G-335

CHAIN & ACCESSORIES

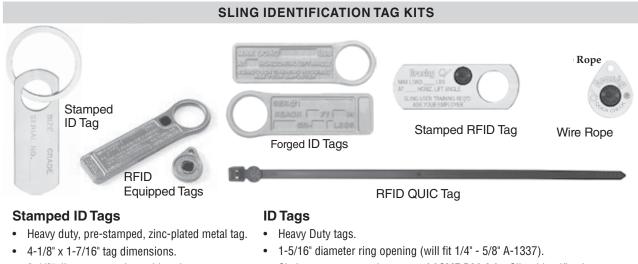
- Forged steel Quenched & Tempered.
- · Integral rivets join the two halves.
- After making connections, rivets must be peened.
- All sizes have countersunk rivet holes.
- Meets or exceeds the performance requirements of Federal Specifications RR-C-27IG, Type II, except for those provisions required of the contractor.
- Not suitable for use with Grade 80 or Grade 100 chain and chain slings used in overhead lifting.



G-335 "Missing Link"® Replacement Links

| Chain Size | | Working Load Limit | Links Per | Weight Per 100 | | | C |)imension (in) | S | | |
|------------|-----------|-----------------------|-----------|-------------------|------|------|------|-------------------|------|------|------|
| (in) | Stock No. | (lb) | Box | (lb) | A | В | С | D | E | F | G |
| *1/4 | 1013110 | 1325 | 10 | 6.25 | .28 | .88 | .44 | .44 | 1.50 | 1.00 | .31 |
| 3/8 | 1013156 | 2750 | 10 | 20.00 | .41 | 1.13 | .56 | .56 | 2.06 | 1.38 | .47 |
| 7/16 | 1013174 | 3625 | 10 | 27.50 | .47 | 1.28 | .59 | .59 | 2.34 | 1.53 | .53 |
| 1/2 | 1013192 | 4750 | 10 | 37.50 | .53 | 1.47 | .66 | .66 | 2.66 | 1.72 | .59 |
| 5/8 | 1013236 | 7250 | 10 | 72.50 | .66 | 1.81 | .78 | .81 | 3.31 | 2.09 | .75 |
| 3/4 | 1013254 | 10250 | 10 | 122.50 | .78 | 2.13 | .94 | 1.06 | 3.88 | 2.50 | .88 |
| 7/8 | 1013272 | 12000 | Bulk | 175.00 | .91 | 2.50 | 1.13 | 1.13 | 4.50 | 2.94 | 1.00 |
| † 1 | 1013290 | 15500 | Bulk | 250.00 | 1.03 | 2.75 | 1.25 | 1.25 | 5.00 | 3.31 | 1.13 |

4:1 Design Factor. *Rivets Only - No interlocking lugs. †Has reinforced rivet holes.



- 2-1/2" diameter metal attaching ring.
- Tag pre-stamped for simple inclusion of sling type, Working Load Limit, reach, serial number, chain size and grade.

| ID Tag Stock No. | Carton Qty. | Weight Per Carton (Ib) |
|------------------|-------------|---------------------------|
| 115244 | 50 | 10.55 |

- Chain tags meet requirements of ASME B30.9 for Sling Identification.
- Raised edge and recessed pads to protect lettering.
- Raised lettering for quick reference.

Operating Frequency: 13.5MHz

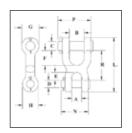
| Stock No. | Style | Material Type | RFID Equipped | Tag Size (in) | Weight Each (lb) |
|-----------|-----------|----------------------------|------------------|------------------|------------------------|
| 115369 | Chain | Cast Stainless Steel | Yes | 6-5/16 x 1-5/8 | .46 |
| 115350 | Wire Rope | Cast Stainless Steel | Yes | 1-11/16 x 1-5/16 | .07 |
| 115217 | Chain | Forged Steel | No | 5-3/4 x 1-7/8 | .40 |
| 115353 | Chain | Stamped Zinc Plated Steel | Yes | 5-3/4 x 1-5/8 | .29 |
| 115355 | Wire Rope | Stamped Zinc Plated Steel | Yes | 1-11/16 x 1-5/16 | .04 |
| 1224692 | Zip Tie | High Crystalline Polyamide | Yes | 7.625 | .05 |

Crosby[®] Connecting Links





- All pins Alloy Steel Quenched and Tempered.
- Body is forged and heat treated carbon steel.
- Designed for linking all popular sizes of Crosby Spectrum 3[®] and Spectrum 4[®] chain to rings, end links, eye hooks, pad eyes, tractor eye bolts, etc.
- Features quick and easy assembly.



S-247 Double Clevis Link

| | | Working | | | | | | | Dimer (ir | | | | | | |
|------------------------|-----------------------|--------------------------|--------------------------|-----|------|-----|-----|-----|--------------|------|------|------|------|------|------|
| Chain Size (in.) | S-247 Stock No. | Load Limit (Ibs.)* | Weight Each (Ibs.) | А | в | с | D | Е | F | G | н | L | N | Р | R |
| 1/4 | 1013021 | 2600 | .38 | .50 | .75 | .50 | .31 | .38 | .75 | 1.00 | .81 | 2.81 | 1.38 | 1.66 | 1.50 |
| 5/16-3/8 | 1013049 | 5400 | .81 | .56 | 1.00 | .63 | .44 | .47 | 1.00 | 1.19 | 1.00 | 3.53 | 1.75 | 2.25 | 1.91 |
| 7/16 | 1013067 | 7200 | 1.25 | .69 | 1.13 | .69 | .56 | .59 | 1.09 | 1.31 | 1.19 | 4.06 | 2.00 | 2.50 | 2.19 |
| 1/2 | 1013085 | 9200 | 1.56 | .81 | 1.25 | .75 | .63 | .68 | 1.25 | 1.44 | 1.31 | 4.53 | 2.25 | 2.75 | 2.47 |

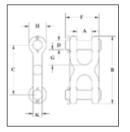
* Ultimate Load is 4 times the Working Load Limit.

Not Suitable for use with Grade 80 or Grade 100 chain and chain slings used in overhead lifting.



S-249

- B
- Available in three popular sizes.
- Body is forged and heat treated carbon steel.
- All pins Alloy Steel Quenched and Tempered.
- Features quick and easy assembly.
- Twin Clevis design provides a variety of uses and can be used with Crosby Spectrum 3[®], Spectrum 4[®] and Spectrum 7[®] chain.



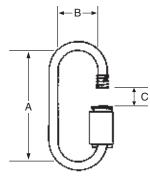
S-249 Twin Clevis Link

| Chain | | Working Load | Weight | | | | Dimer (ir | | | | |
|---------------|--------------------|------------------|----------------|-----|------|------|--------------|------|-----|------|-----|
| Size (in.) | S-249 Stock No. | Limit (lbs.)* | Each (Ibs.) | А | в | С | D | F | G | н | к |
| 1/4-5/16 | 1012861 | 4700 | .31 | .47 | 2.50 | 1.56 | .38 | 1.31 | .43 | .94 | .50 |
| 3/8 | 1012889 | 6600 | .44 | .53 | 2.81 | 1.81 | .44 | 1.53 | .50 | 1.00 | .56 |
| 7/16-1/2 | 1012905 | 11300 | .98 | .65 | 3.62 | 2.31 | .56 | 1.91 | .63 | 1.31 | .81 |

* Ultimate Load is 4 times the Working Load Limit.

Not Suitable for use with Grade 80 or Grade 100 chain and chain slings used in overhead lifting.

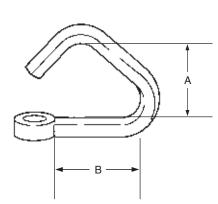
Chain Connecting Links



Quick Link or Rapid Link

| Trade Size | A Inside Length | B Inside Width | C Side Opening | Working Load Limit | Avg. Wi Pounds |
|---------------|-----------------------|----------------------|----------------------|-----------------------|----------------------|
| Inches | Inches | Inches | Inches | Pounds* | Per 100 |
| 3/16 | $1^{1}i_{2}$ | 1.0 | 14 | 750 | 4.50 |
| 1. | 1ª.a | 9/ 16 | %/ ₃₂ | 1,250 | 9.QQ |
| 2/16 | $2^{5}/16$ | 146 | ». а | 1,900 | 17.00 |
| J B | 27/16 | 3- a | 1/16 | 2,650 | 23.00 |
| 1 2 | 3¾a | 15/16 | 19/30 | 4.500 | 51 00 |

*CAUTION: This working load limit should not be exceeded. APPLICATIONS: Used as a repair link, connecting link or attaching device on proof coil chain only. DESCRIPTION: Zinc-plated NOT heat-treated.



Cold Shut

| Trade Size Inches | A Inside Length Inches | B Inside Width Inches | Working Load Limit+ Pounds | Avg. Wi. Pounds Per 100 |
|-------------------------|---------------------------------|--------------------------------|----------------------------------|----------------------------------|
| 3/. 6 | 1/26 | 2/16 | 525 | 3 |
| 4 | 1^{3} /16 | 3 0 13, 32 | 925 | 6 |
| 7:6 | 12/16 | 13/32 | 1.450 | 10 |
| 3 8 | 114 | 5 | 2,110 | 18 |
| 7/18 | 1 ³ .a | 13,16 | 2,850 | 26 |
| 12 | 1%16 | 13/16 | 3,750 | 38 |
| ь в | 2'. | .j a | 5.850 | 78 |
| у 4 | 2'2 | 7 8 | 8.425 | 130 |
| ′в | 3 ³ a | 1 | 11,475 | 200 |
| 1 | 37 a | 1%6 | 15,000 | 325 |

*CAUTION: This working load limit should not be exceeded. APPLICATIONS: As temporary repair link, use **one size larger** than the proof coil chain with which it is to be used. Also used to couple light attachments.

DESCRIPTION: Low carbon steel, self-colored or zinc-plated finish.

Gal

Ga

GaT

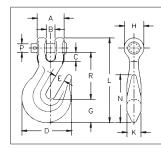




A-330

- Clevis Grab Hook
- Forged steel Quenched & Tempered.
- Design factor is 4:1.
- Features quick and easy assembly.
- Designed for Grade 8 chain.

A-330 Clevis Grab Hooks



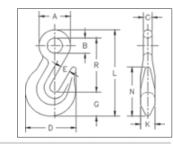
| Chain | | Working | Weight | | | | | | Dimer (ii | | | | | | |
|--------------|-----------|--------------------|--------------|------|-----|-----|------|-----|--------------|------|------|------|------|-----|------|
| Size (in) | Stock No. | Load Limit (lb) | Each (lb) | (lb) | в | с | D | Е | G | н | к | L | N | Р | R |
| 1/4 | 1027249* | 3500 | .36 | 1.00 | .32 | .31 | 1.81 | .34 | .88 | .72 | .47 | 3.05 | 1.75 | .31 | 1.64 |
| 5/16 | 1027267* | 4700 | .62 | 1.22 | .43 | .36 | 2.12 | .44 | .97 | .91 | .59 | 3.66 | 2.06 | .38 | 2.02 |
| 3/8 | 1027285* | 7100 | 1.00 | 1.42 | .48 | .49 | 2.53 | .50 | 1.17 | 1.00 | .72 | 4.42 | 2.34 | .44 | 2.41 |
| 1/2 | 1027329* | 12000 | 2.22 | 1.88 | .57 | .51 | 3.56 | .66 | 1.53 | 1.25 | .78 | 5.72 | 2.97 | .63 | 3.19 |
| 5/8 | 1027347 | 18100 | 4.41 | 2.31 | .71 | .67 | 4.39 | .78 | 1.78 | 1.56 | 1.09 | 6.83 | 4.31 | .75 | 4.09 |
| 3/4 | 1027365 | 24700 | 6.50 | 2.62 | .94 | .94 | 5.22 | .94 | 2.13 | 1.88 | 1.31 | 8.13 | 5.09 | .88 | 4.63 |

* These A-330 hooks are forged with an "8" designating Grade 80, and are suitable for use with Grade 8 chain in overhead lifting applications as long as the hook is proof-tested as part of the chain sling assembly or as an individual component per ASME B30.9. We recommend the use of the A-1338 / A-1358 which is proof tested and supplied with a proof test certificate.



A-323 Eye Grab Hook

- Forged steel Quenched & Tempered.
- Design Factor is 4:1.
- Designed for Grade 8 chain.



A-323 Eye Grab Hooks

| с | hain | | Working Load | Weight | | | | | | nsions n) | | | | |
|---|--------------|-----------|---------------|--------------|------|------|-----|------|-----|--------------|------|------|------|------|
| | Size (in) | Stock No. | Limit (lb) | Each (lb) | (lb) | в | с | D | Е | G | к | L | N | R |
| | 1/4 | 1026384* | 3500 | .28 | 1.09 | .53 | .31 | 1.81 | .34 | .88 | .47 | 3.05 | 1.75 | 1.88 |
| 5 | 5/16 | 1026400* | 4700 | .45 | 1.31 | .62 | .38 | 2.12 | .44 | .97 | .59 | 3.59 | 2.06 | 2.28 |
| : | 3/8 | 1026428* | 7100 | .79 | 1.56 | .75 | .44 | 2.53 | .50 | 1.17 | .72 | 4.28 | 2.34 | 2.69 |
| | 1/2 | 1026464* | 12000 | 1.75 | 1.94 | .88 | .53 | 3.56 | .66 | 1.53 | .78 | 5.44 | 2.97 | 3.38 |
| | 5/8 | 1026482* | 18100 | 3.25 | 2.48 | 1.16 | .66 | 4.41 | .79 | 1.89 | 1.16 | 6.82 | 4.25 | 4.25 |
| ; | 3/4 | 1026507 | 24700 | 5.94 | 2.88 | 1.38 | .75 | 5.22 | .94 | 2.13 | 1.31 | 8.06 | 5.09 | 5.16 |

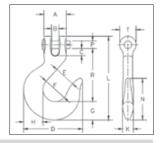
* These A-323 hooks are forged with an "8" designating Grade 80, and are suitable for use with Grade 8 chain in overhead lifting applications as long as the hook is proof-tested as part of the chain sling assembly or as an individual component per ASME B30.9. We recommend the use of the A-1328 which is proof tested and supplied with a proof test certificate.



A-331

Clevis Slip Hook

- Forged alloy steel Quenched & Tempered.
- All pins are alloy steel Quenched & Tempered.
- Not suitable for use with Grade 80 chain and chain slings used in overhead lifting. For slings or lifting chains, Grade 80 or 100 alloy components are recommended.



A-331 Clevis Slip Hooks

| | | Working | | | | | | | | | nsions n) | | | | | | |
|-----------------------|-----------|-----------------------|------------------------|------|------|------|------|------|------|------|--------------|------|-------|------|------|------|------|
| Chain Size (in) | Stock No. | Load Limit (lb) | Weight Each (Ib) | А | в | с | D | Е | F | G | Н | к | L | N | Р | R | т |
| 1/4 | 1027524 | 2750 | 0.55 | 1.06 | 0.32 | 0.29 | 2.76 | 0.94 | 1.19 | 0.81 | 0.88 | 0.50 | 3.94 | 2.13 | 0.31 | 2.58 | 0.72 |
| 5/16 | 1027542 | 4300 | 0.79 | 1.22 | 0.43 | 0.34 | 3.05 | 1.06 | 1.25 | 0.94 | 1.00 | 0.56 | 4.53 | 2.24 | 0.38 | 2.87 | 0.97 |
| 3/8 | 1027560 | 5250 | 1.21 | 1.38 | 0.45 | 0.44 | 3.62 | 1.31 | 1.50 | 1.13 | 1.19 | 0.66 | 5.16 | 2.56 | 0.44 | 3.25 | 1.06 |
| 7/16 | 1027588 | 7000 | 2.05 | 1.73 | 0.59 | 0.60 | 4.33 | 1.56 | 1.81 | 1.38 | 1.44 | 0.81 | 5.98 | 3.05 | 0.56 | 3.70 | 1.19 |
| 1/2 | 1027604 | 9000 | 2.76 | 1.88 | 0.57 | 0.53 | 4.80 | 1.69 | 1.94 | 1.56 | 1.63 | 0.91 | 6.54 | 3.44 | 0.63 | 4.02 | 1.31 |
| 5/8 | 1027622 | 13500 | 4.74 | 2.30 | 0.71 | 0.71 | 5.63 | 2.01 | 2.38 | 1.81 | 1.94 | 1.09 | 7.87 | 4.02 | 0.75 | 4.92 | 1.56 |
| 3/4 | 1027640 | 19250 | 11.28 | 3.19 | 1.18 | 1.29 | 7.38 | 2.50 | 3.00 | 2.38 | 2.50 | 1.44 | 10.02 | 5.06 | 1.00 | 6.09 | 2.09 |
| 4.1 Decia | n Eastar | | | | | | | | | | | | | | | | |

4:1 Design Factor.

INDUSTRIAL WIRE ROPE SUPPL

Lebus[®] Load Binders

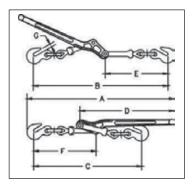


L-150

60-00

• Extra heavy construction at leverage point to prevent spreading. Heel of binder toggles away from load, permitting easy release.

- Ball and socket swivel joints at hook assemblies permit a straight line pull.
- Binders shown with Proof Loads have been individually proof tested to values shown, prior to shipment.



L-150 Standard Lever Type Load Binders

• Meets or exceeds requirements of US DOT FMCSA Part 393 Subpart I.

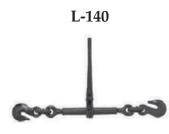
| | | | Min-Max | Working | | | | | | | | Di | mensio (in.) | ns | | |
|-------|-----------|--------------|------------------------|-------------------------|-------------------------|----------------------------|--------------------------|---------------------------|---------------------|-------|-------|-------|-----------------|-------|-------|-----|
| Model | Stock No. | Std. Pkg. | Chain Size (in.) | Load Limit (Ibs.) | Proof Load (Ibs.) | Ultimate Load (lbs.) | Weight Each (Ibs.) | Handle Length (in.) | Take Up (in.) | A | в | с | D | Е | F | G |
| 7-1 | 1048128 | 4 | 5/16-3/8 | 5400 | 10800 | 19000 | 7.02 | 16.00 | 4.50 | 24.13 | 22.13 | 17.88 | 16.00 | 10.38 | 10.38 | .50 |
| A-1 | 1048146 | 4 | 3/8-1/2 | 9200 | 18400 | 33000 | 12.47 | 18.69 | 4.50 | 28.75 | 25.75 | 21.25 | 18.69 | 12.31 | 12.38 | .63 |
| C-1 | 1048164 | 4 | 1/2-5/8 | 13000 | 26000 | 46000 | 19.68 | 21.00 | 4.75 | 31.25 | 29.75 | 25.00 | 21.00 | 14.63 | 13.75 | .72 |



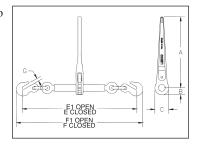
Lebus[®] Load Binders



- Upgraded for use with Grades 70, 80 and 100 Chain.
- Utilizes standard Crosby A-323 Alloy Eye Grab Hooks.
- New design "one piece" forged handle.



- Continuous take-up feature provides finite adjustment to tie down load.
- One piece assembly, no bolts or nuts to loosen.
- Ratchet spring is rust proofed.
- All load bearing or holding parts forged.
- Easy operating positive ratchet.
- Binders shown with Proof Loads have been individually proof tested to values shown, prior to shipment.



L-140 Standard Ratchet Type Load Binders

• Meets or exceeds requirements of US DOT FMCSA Part 393 Subpart I.

| | | Min-Max | Working | | | | | | Dimensions (in.) | | | | | | | |
|---------|-----------|------------------------|--------------------------|-------------------------|--------------------------|---------------------------|---------------------------|---------------------|---------------------|------|------|-------|-------|-------|-------|-----|
| Model | Stock No. | Chain Size (in.) | Load Limit (lbs.)* | Proof Load (Ibs.) | Weight Each (lbs.) | Handle Length (in.) | Barrel Length (in.) | Take Up (in.) | А | в | с | E | E1 | F | F1 | G |
| R-7 ** | 1048404 | 5/16-3/8 | 8800 | 17600 | 12.11 | 14 | 10 | 8.0 | 14.00 | 1.38 | 2.75 | 22.94 | 30.94 | 25.13 | 33.13 | .50 |
| R-A ** | 1048422 | 3/8-1/2 | 15000 | 30000 | 14.70 | 14 | 10 | 8.0 | 14.00 | 1.38 | 2.75 | 25.25 | 33.25 | 27.63 | 35.63 | .63 |
| R-C *** | 1048440 | 1/2-5/8 | 16000 | 32000 | 14.55 | 14 | 10 | 8.0 | 14.00 | 1.38 | 2.75 | 26.38 | 24.38 | 29.44 | 37.44 | .72 |

* Ultimate Load is 3 times the Working Load Limit. ** Matches the Working Load Limit of Grade 100 chain for both sizes.

*** Matches the Working Load Limit of Grade 100 chain for 1/2" size.

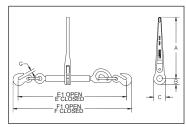
R-7QL

- For use with Grade 7 Transport Chain.
- Utilizes standard Crosby A-323 Alloy Eye Grab Hooks. • New design "one piece" forged handle.
 - Continuous take-up feature, infinite adjustment, gets the last half of chain.
 - One piece assembly, no bolts or nuts to loosen.
 - Ratchet spring is rust proofed.
 - All load bearings or holding parts forged.
 - Easy operating positive ratchet.
 - Binders shown with Proof Loads have been individually proof tested to values shown, prior to shipment.

R-7QL QUIC-LINK Ratchet Load Binder

| | | Min-Max | Working | | | | | | | | | | nsions n.) | | | |
|-------|-----------|----------|---------|--------|--------|--------|--------|-------|-------|------|------|-------|---------------|-------|-------|-----|
| | | Chain | Load | Proof | Weight | Handle | Barrel | Take | | | | | | | | |
| | R-7QL | Size | Limit | Load | Each | Length | Length | Up | | | | | | | | |
| Model | Stock No. | (in.) | (lbs.)* | (lbs.) | (lbs.) | (in.) | (in.) | (in.) | A | В | С | E | E1 | F | F1 | G |
| R-7QL | 1048413 | 5/16-3/8 | 6600 | 13200 | 12.25 | 14 | 10 | 8.0 | 14.00 | 1.38 | 2.75 | 24.81 | 32.81 | 27.00 | 35.00 | .50 |

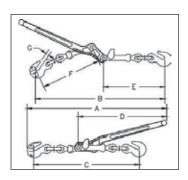
* Ultimate Load is 3 times the Working Load Limit.



Lebus[®] Load Binders



- Forged steel Quenched and Tempered.
- Used as a come-a-long for short take-up on chain.
- Binder toggles away from the load.
- Binders shown with Proof Loads have been individually proof tested to values shown, prior to shipment.

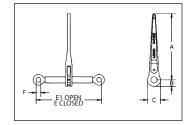


A-1W Walking Load Binders

• Meets or exceeds requirements of US DOT FMCSA Part 393 Subpart I.

| | | | Working | | | | | | | D | imension (in.) | IS | | |
|-------|-----------|---------------|---------------|---------------|------------------|----------------|------------------|-------|-------|-------|-------------------|-------|-------|-----|
| | | Chain Size | Load Limit | Proof Load | Ultimate Load | Weight Each | Handle Length | | | | | | | |
| Model | Stock No. | (in.) | (lbs.) | (lbs.) | (lbs.) | (lbs.) | (in.) | Α | В | С | D | E | F | G |
| A-1W | 1048388 | 1/2 only | 9200 | 18400 | 33000 | 13.10 | 18.69 | 28.75 | 25.75 | 21.25 | 18.69 | 12.31 | 12.38 | .63 |





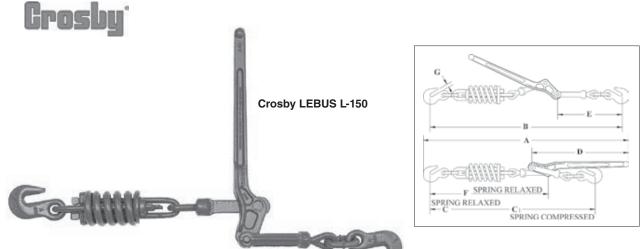
R-10 Binder without Links and Hooks

• Meets or exceeds requirements of US DOT FMCSA Part 393 Subpart I.

| | | Working | | | | | | | Dimer (ir | nsions n.) | | |
|-------|-----------|---------------|----------------|------------------|------------------|------------|----|------|--------------|---------------|----|------|
| | R-10 | Load Limit | Weight Each | Handle Length | Barrel Length | Take Up | | | | | | |
| Model | Stock No. | (lbs.)* | (lbs.) | (in.) | (in.) | (in.) | Α | В | С | E | E1 | F |
| R-10 | 1048468 | 16000 | 8.04 | 14 | 10 | 8.0 | 14 | 1.38 | 2.75 | 14 | 22 | 1.00 |

* Ultimate Load is 3 times the Working Load Limit.

INDUSTRIAL WIRE ROPE SUPPLY



- Forged steel Quenched & Tempered.
- Spring cushion for load protection, cushions shock and sway. ٠
- Binder toggles away from the load. •

Crosby LEBUS L-150 Snubbing Load Binders

| | | Min-Max | Working | | | | | Compression | | | | Dimen (iı | | | | |
|-------|-----------|-----------------------|-----------------------|--------------------------|------------------------|--------------------------|--------------------|-------------------------------|-------|-------|-------|--------------|-------|-------|-------|-----|
| Model | Stock No. | Chain Size (in) | Load Limit (lb) | Ultimate Load (lb) | Weight Each (lb) | Handle Length (in) | Take Up (in) | Strength of Spring (lb) | А | в | с | C1 | D | E | F | G |
| 7-12 | 1048280 | 5/16 - 3/8 | 5400 | 16000 | 11.25 | 16.00 | 4.25 | 2300 | 32.75 | 30.75 | 28.00 | 26.50 | 16.00 | 10.38 | 19.00 | .50 |
| A-12 | 1048306 | 3/8 - 1/2 | 9200 | 20000 | 18.69 | 18.50 | 4.50 | 3300 | 37.19 | 34.00 | 29.50 | 30.44 | 18.69 | 12.31 | 20.88 | .63 |

Crosby LEBUS C-188 Spectrum 8®

• Heat treated alloy steel.

- Ends fitted with Crosby A-330 Quenched & Tempered alloy clevis grab hook.
- Finish self colored.
- Meets or exceeds requirements of US DOT FMCSA Part 393 Subpart I.

Crosby LEBUS C-188 Spectrum 8[®] Alloy Boomer Chains

| Chain Size (in) | Stock No. | Working Load Limit (Ib) | Standard Length (ft) | Weight Each (lb) |
|--------------------|-----------|----------------------------|-------------------------|---------------------|
| 3/8 | 279889 | 7100 | 20 | 30.28 |
| 1/2 | 279898 | 12000 | 20 | 54.04 |

Crosby LEBUS L-180

- Hooks are Forged Quenched & Tempered.
- Individually Proof Tested.
- Spectrum 8[®] alloy steel from 3/4" through 1-1/4" (20 32mm).
- · Meets or exceeds requirements of US DOT FMCSA Part 393 Subpart I.

Crosby LEBUS L-180 Winchline Tail Chain

| Wire Rope Diameter (in)* | Stock No. | Working Load Limit (Ib)† | Length (in) | No. of Links | Weight Each (Ib) |
|------------------------------------|-----------------------------|-----------------------------------|--------------------|-----------------|---------------------|
| 5/16 - 3/8 | 1091473 | 5400 | 18 | 11 | 3.0 |
| 1/2 - 5/8 | 1091482 | 13000 | 18 | 7 | 6.2 |
| 3/4 - 7/8 | 1091511 | 34200 | 24 | 8 | 18.2 |
| 1 - 1-1/8 | 1091516 | 47700 | 18 | 5 | 21.2 |
| 1 - 1-1/8 | 1091525 | 47700 | 24 | 7 | 23.3 |
| 1-1/4 | 1091532 | 72300 | 24 | 5 | 40.0 |
| * Decommanded for IDC or VID (EID) | DDI EC or IM/DC wire rope + | Illtimata Load is 9 E timos the W | Norking Load Limit | | |



APPLICATION AND WARNING



Welded Chain Specifications

TRANSPORT CHAIN (GRADE 70)

Significantly higher tensile strength for all load binding and tie down applications, which permits you to hold a given load with the next smaller size chain than High Test. This increased strength-to-weight ratio means lower costs and a lighter chain, for easier storage and handling.

| Trade Size In Inches | Size Materia in Inches | Working" Load Limit Los | Nominal Inside Length in Inches | Nominal Inside Width in Inches | Maximum Length 100 Links in Incodes | Weight per 100 Feel Cbs |
|-------------------------|---------------------------|----------------------------|------------------------------------|-----------------------------------|--|----------------------------|
| 4 | 1 | 3 150 | 76 | 40 | 87 | /6 |
| 19 Aug. | 11 A. | 4 700 | .98 | 46 | 102 | 113 |
| д р. | 14 M | 6 600 | 1,14 | 54 | 119 | 162 |
| 5.0 | 15 | 8,700 | 1 29 | 62 | 134 | 212 |
| | 17,12 | 11 300 | 143 | 72 | 149 | 270 |

*Working load limit must not be exceeded.

Not to be used for overhead lifting.

Boomer chains or binder chains available on request.

HIGH TEST CHAIN (GRADE 40 OR 43)

High test chain features both high tensile strength and resistance to wear needed by modern hauling and heavy duty trucking. Working load limit exceeds those of ordinary low carbon or general utility chain. **MATERIAL** High carbon steel. Minimum tensile 85,000 psi. **FINISH** Self-colored, and hot galvanized.

| Trado Size To Inches | Size Material in Inches | Working" Load Limit Lbs | Nominai Inside L'englh in Inches | Nomina' Inside Width in Inches | Maximum Length 100 Links in Inches | Weight Por 100 Feet Lbs |
|-------------------------|----------------------------|----------------------------|-------------------------------------|-----------------------------------|---------------------------------------|----------------------------|
| - N | 1. 1. 2. | 2,600 | 82 | 39 | 86 | 75 |
| 5 ₁₁ 6 | 11,32 | 4,000 | 1.01 | 48 | 105 | 111 |
| 10 | 1.1. 37 | 5,400 | L 15 | .56 | 121 | 157 |
| 7/16 | ⁵⁴ .37 | 7,200 | 1.29 | 65 | 135 | 213 |
| 14 | 17,32 | 9.200 | 1 43 | 75 | 150 | 274 |
| Na - | 27 1920 | 11.500 | 1 79 | 90 | 186 | 409 |
| 22 | 25,00 | 16.200 | 1.96 | 1 06 | 205 | 603 |
| 1. 18 | 74 31 | 22,500 | 2 23 | 1 14 | 235 | 735 |
| 1 | 11/32 | 26,500 | 2.66 | 1 34 | 277 | 975 |

*Working load limit must not be exceeded.

Not to be used for overhead lifting.

HIGH TEST BOOMER CHAINS OR BINDER CHAINS

Made according to ASTM specifications. Bright Polished High Test Steel. Ridgeless electrically welded, with grab hook at each end.

| Size / Longity | Working Load Urral | Approx Weight Each Lbs |
|--------------------------------------|-----------------------|---------------------------|
| ⁵ 17 - x 201 | 2,600 | 16 |
| $\gamma_{ m e}^{\circ} > 20^{\circ}$ | 4,000 | 22 |
| 's" → 201 | 5,400 | 32 |
| í _{•6} ″ ≥ 201 | 7.200 | 44 |
| 17 × 201 | 9.200 | 54 |
| *s" i × 20" | 11,500 | 86 |

*Working load limit must not be exceeded. Not to be used for overhead lifting.

PROOF COIL CHAIN (GRADE 28 OR 30)

A general utility chain for such uses as log chain, cargo lashing chain, pipe line hanging chain, tailgate, guard rail, tow and switch chain.

MATERIAL Low carbon steel. Minimum tensile 55,000 psi. FINISH Self-colored, bright zinc and hot galvanized.

| Trade Size | Size Material | Working* Load | Nominal Inside | Nominal Inside | Maximum Length | Weight per |
|------------|---------------|---------------|------------------|-----------------|---------------------|--------------|
| In Iriches | in Inches | Limit Lbs. | Length in Inches | Width in Inches | 100 Links in Inches | 100 Fet Los, |
| 3/16 | 7/37 | 750 | ,95 | .40 | 99 | 40 |
| 374 | 9/32 | 1,250 | 1.00 | .50 | 104 | 71 |
| 2/16 | 11/32 | 1,875 | 1.10 | .50 | 114 | 107 |
| 0/a | 13/32 | 2,625 | 1,23 | ,62 | 128 | 156 |
| 2716 | 75/3D | 3,500 | 1 38 | .75 | 142 | 213 |
| 14 | 12/32 | 4,500 | 1,50 | .81 | 156 | 278 |
| 578 | 21/32 | 6,800 | 1,87 | 1.00 | 194 | 410 |
| 2.4 | 25/32 | 9,500 | 2.12 | 1,12 | 220 | 580 |
| ?/e | 29/12 | 11,375 | 2.50 | 1,37 | 260 | 611 |
| 1 | 1 1/37 | 13,950 | 2.75 | 1,50 | 286 | 1045 |

*Working load limit must not be exceeded. Not to be used for overhead lifting.

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Synthetic Web Slings



Recommended Practices

For a complete review of recommended industry practices, please refer to:

- ASME B30.9 Sling Safety Standard
- OSHA Industrial Slings Regulations (Office of the Federal Register)
- Web Sling Tie Down Association Technical Manual

Do:

- Make sure load weight is within the sling's rated capacity; slings should be long enough so the rated load is adequate when the sling to load angle is considered.
- · Select sling characteristics that are suitable for the load, hitch and environment
- Slings with fittings used in a choker hitch should be of sufficient length to ensure choking action is on the webbing, not the fitting
- · Balance loads on basket hitch slings to prevent slippage
- Make sure fitting opening shape and size ensure proper seating in the hook and other attachments
- · Protect slings from being cut by sharp edges or abrasive surfaces.
- · Keep tags and labels away from the load, hook, and point of choke
- · Place blocks under a load to allow removal of sling
- Hitch slings so that the load is controlled.
- · Make sure personnel stand clear of suspended loads and remain alert for snagging
- Avoid shock loading
- Avoid twisting and kinking of legs (branches)
- Sling legs (branches) should support the load from the sides above the center of gravity when in a basket hitch
- · Center load applied to the hook

Don't:

- · Load slings in excess of rated capacity (consider load angle)
- Twist, shorten, lengthen, or tie knots in slings
- · Drag slings on the floor or abrasive surfaces
- Pull slings out from under a load
- · Drop slings equipped with metal fittings
- Constrict or bunch slings and labels between the ears of a clevis, shackle, or in a hook
- Use slings that appear to be damaged
- Allow personnel to ride the sling or load being lifted
- Use slings with illegible tags

Removal from Service

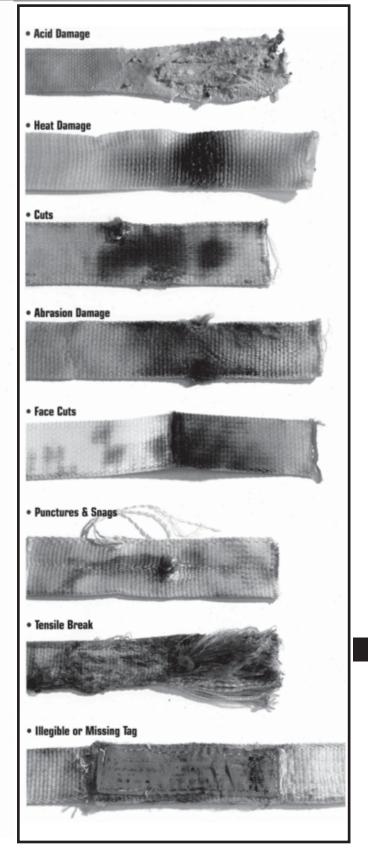
A flat web sling shall be removed from service if any of the following is visible:

- If sling rated capacity or sling material identification is missing or not readable.
- Acid or alkali burns.
- Melting, charring or weld spatter of any part of the web sling.
- Holes, tears, cuts snags or embedded particles.
- Broken or worn stitching in load bearing splices.
- · Excessive abrasive wear.
- Knots in any part of the web sling.
- Distortion and excessive pitting, corrosion or broken fittings.
- Any conditions which cause doubt as to the strength of the sling.

| Exposure To Common Chemicals | | | | | | |
|------------------------------|-----------|-------|--|--|--|--|
| Chemical | Polyester | Nylon | | | | |
| Acid | ۰ | No | | | | |
| Alcohol | OK | OK | | | | |
| Aldehydes | NO | OK | | | | |
| Strong Alkalis | 00 | OK | | | | |
| Bleaching Agents | OK | NO | | | | |
| Dry Cleaning Solvents | OK | OK | | | | |
| Ethers | NO | OK | | | | |
| Halogenated Hydrocarbons | OK | OK | | | | |
| Hydrocarbons | OK | OK | | | | |
| Ketones | OK | OK | | | | |
| Oil, Crude | OK | OK | | | | |
| Oil, Lubricating | OK | OK | | | | |
| Soaps, Detergents | OK | OK | | | | |
| Water, Seawater | OK | OK | | | | |
| Weak Alkalis | OK | OK | | | | |

* Disintegrated by concentrated sulphuric acid.

** Degraded by strong alkalis at elevated temperatures



Rated Capacity Information

| Angle Degrees | Factor |
|---------------|--------|
| 90 | 1.0000 |
| 85 | 0.9962 |
| 80 | 0.9848 |
| 75 | 0.9659 |
| 70 | 0.9397 |
| 65 | 0.9063 |
| 60 | 0.8660 |
| 55 | 0.8192 |
| 50 | 0.7660 |
| 45 | 0.7071 |
| 40 | 0.6528 |
| 35 | 0.5736 |
| 30 | 0.5000 |
| 25 | 0.4226 |
| 20 | 0.3420 |
| 15 | 0.2588 |

Rated Capacity

The rated capacities of the slings in this catalog are given in pounds. Refer to the maximum recommended weight for which the sling is to be used in one of the standard types of lifts as illustrated:

Effect of Angle

When slings are used at an angle (i.e.-two slings or one sling in a basket attached to only one crane hook), sling capacity is reduced. How much it is reduced depends on the degree of the angle. You can determine whether a sling will be rated high enough if you know the angle between the sling leg and the horizontal. Once you know this angle, multiply the sling's rating by the appropriate factor in the table. This will give you the sling's reduced rating.

Sling Capacity decreases as the angle increases.

Vertical Hitch

Choker Hitch

Basket Hitch

1000 LBS

5

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INDUSTRIAL WIRE ROPE SUPPLY

Customize Your Sling

Flat Web Material Options

| 9800# Heavy Duty Nylon Webbing: | Industry standard webbing, suited for most applications. |
|---------------------------------|---|
| 7000# Light Duty Nylon Webbing: | An economical alternative for lighter applications. |
| 9800# Polyester Webbing: | For applications where the sling is exposed to acidic environments or strong alkalis. |
| 9800# Scuff Edge™: | These polyester web slings have polymer coated yarns woven into the edges to reduce damage and increase life. |
| Cordura Jacketed: | Has Cordura fibers woven into the outer layer of the web material, providing increased strength and wear |

protection.

Custom Printed Tags

IRSCI can custom print tags in Tyvek, vinyl and leather. Each type has unique qualities, depending upon customer preference. (Private label programs available)

Tyvek:

| INDUSTRIAL ROFF SUPPLY Co. Inc. EEG 402 LENGTH 10 FT. NYLON VERTICAL 10000 DO NOT EXCERD CITAKER 20000 ARTED CARACITES IN LOS. | These durable tags are printed on demand by IRSCI. Tyvek tags offer customers greater flexibility and can be serialized, customized with company logos, and bar coded; there is no minimum quantity or premium charge for Tyvek tags. |
|---|--|
| Leather: | A very durable tag, printed with diagrams accompanying the rated lifting capacities of the slings. The vinyl tag must be pre-printed and carries a small premium charge (price varies by quantity]. IRSCI will stock and maintain customers vinyl tag inventory. |
| NNDUSTRIAL EE2702 VERTICAL 4800 20FT CHOKER 3800 NYLON BASKET 9800 LBS | Leather is the most durable of the three tags. Leather tags can be branded with serial numbers and other identifying information, such as your company's logo, at the distributor or end user level. It carries a premium charge, but can be purchased in any quantity. |

Wear Protection

Wear protection prolongs life of the sling, ultimately resulting in cost effectiveness. IRSCI utilizes four wear materials: Pukka (a 5/16" felt pad, as shown), leather, Cordura and nylon, which can be used in any of the following configurations:

- Eye or Body Wrapped
- Edge guard treatment, protects against edge abrasion
- Lined eye, protects the sling at lifting point
- Velcro sliding pad, easily removable
- Sewn-on, attached to sling
- Sliding sleeve, adjustable



Nylon and Polyester Web Slings



HEAVY DUTY

| | | RATED CAPACITIES IN LBS. | | | | | |
|---------|---------|--------------------------|--------|--------|--|--|--|
| TYPE 1 | TYPE 2* | VERTICAL | CHOKER | BASKET | | | |
| (TC) | (TT) | | | | | | |
| ONE PLY | | | | | | | |
| TC1-902 | TT1-902 | 3,200 | 2,500 | 6,400 | | | |
| TC1-903 | TT1-903 | 4,800 | 3,800 | 9,600 | | | |
| TC1-904 | TT1-904 | 6,400 | 5,000 | 12,800 | | | |
| TC1-906 | TT1-906 | 9,600 | 7,700 | 19,200 | | | |
| TC1-908 | TT1-908 | 12,800 | 10,200 | 25,600 | | | |
| TC1-910 | TT1-910 | 16,000 | 12,800 | 32,000 | | | |
| TC1-912 | TT1-912 | 19,200 | 15,400 | 38,400 | | | |
| TWO PLY | | | | | | | |
| TC2-902 | TT2-902 | 6,400 | 5,000 | 12,800 | | | |
| TC2-903 | TT2-903 | 8,600 | 6,900 | 17,200 | | | |
| TC2-904 | TT2-904 | 11,500 | 9,200 | 23,000 | | | |
| TC2-906 | TT2-906 | 16,300 | 13,000 | 32,600 | | | |
| TC2-908 | TT2-908 | 19,200 | 15,000 | 38,400 | | | |
| TC2-910 | TT2-910 | 22,400 | 17,400 | 44,800 | | | |
| TC2-912 | TT2-912 | 26,900 | 21,500 | 53,800 | | | |

Three and four ply hardware slings are available upon request. * Type 2 can not be used in a choker hitch.

LIGHT DUTY

| | | RATED CAPACITIES IN LBS. | | | | | |
|----------------|-----------------|--------------------------|--------|--------|--|--|--|
| TYPE 1 (TC) | TYPE 2* (TT) | VERTICAL | CHOKER | BASKET | | | |
| ONE PLY | | | | | | | |
| TC1-702 | TT1-702 | 2,400 | 1,900 | 4,800 | | | |
| TC1-703 | TT1-703 | 3,600 | 2,900 | 7,200 | | | |
| TC1-704 | TT1-704 | 4,800 | 3,800 | 9,600 | | | |
| TC1-706 | TT1-706 | 7,200 | 5,800 | 14,400 | | | |
| TWO PLY | | | | | | | |
| TC2-702 | TT2-702 | 4,800 | 3,800 | 9,600 | | | |
| TC2-703 | TT2-703 | 6,500 | 5,200 | 13,000 | | | |
| TC2-704 | TT2-704 | 8,600 | 6,900 | 17,200 | | | |
| TC2-706 | TT2-706 | 12,600 | 10,100 | 25,200 | | | |

* Type 2 can not be used in a choker hitch.

Note:

Hardware – Aluminum hardware is available on single ply types 1 and 2 slings in 2", 3", 4" and 6" widths.

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Nylon and Polyester Web Slings

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HEAVY DUTY

| TYPE 3 | TYPE 4 | RATED | CAPACITIES IN F | OUNDS |
|-------------|----------------|----------|-----------------|---------|
| FLAT Eye | TWISTED EYE | VERTICAL | CHOKER | BASKET |
| | | | | |
| EE1 | -901 | 1,600 | 1,250 | 3,200 |
| EE1 | -902 | 3,200 | 2,500 | 6,400 |
| EE1 | -903 | 4,800 | 3,800 | 9,600 |
| EE1 | -904 | 6,400 | 5,000 | 12,800 |
| EE1 | -906 | 9,600 | 7,700 | 19,200 |
| EE1 | -908 | 12,800 | 10,200 | 25,600 |
| EE1 | -910 | 16,000 | 12,800 | 32,000 |
| EE1 | -912 | 19,200 | 15,400 | 38,400 |
| | | 1 | | |
| EE2 | -901 | 3,200 | 2,500 | 6,400 |
| EE2 | -902 | 6,400 | 5,000 | 12,800 |
| EE2 | -903 | 8,600 | 6,900 | 17,200 |
| EE2 | -904 | 11,500 | 9,200 | 23,000 |
| EE2 | -906 | 16,300 | 13,000 | 32,600 |
| EE2 | -908 | 19,200 | 15,400 | 38,400 |
| EE2 | -910 | 22,400 | 17,900 | 44,800 |
| EE2 | -912 | 26,900 | 21,500 | 53,800 |
| | | | | |
| EE3 | -901 | 4,100 | 3,300 | 8,200 |
| EE3 | -902 | 8,300 | 6,600 | 16,600 |
| EE3 | -903 | 12,500 | 10,000 | 25,000 |
| EE3 | -904 | 16,000 | 12,800 | 32,000 |
| EE3 | -906 | 23,000 | 18,400 | 46,000 |
| EE3 | -908 | 30,700 | 24,500 | 61,400 |
| | -910 | 36,800 | 29,400 | 73,600 |
| EE3 | -912 | 44,000 | 35,200 | 88,000 |
| | | | | |
| EE4 | -901 | 5,000 | 4,000 | 10,000 |
| EE4 | -902 | 10,000 | 8,000 | 20,000 |
| EE4 | -903 | 14,900 | 11,900 | 29,800 |
| EE4 | -904 | 19,800 | 15,800 | 39,600 |
| EE4 | -906 | 29,800 | 23,800 | 59,600 |
| EE4 | -908 | 39,700 | 31,700 | 79,400 |
| EE4 | -910 | 49,600 | 39,600 | 99,200 |
| EE4 | -912 | 59,500 | 47,600 | 119,000 |

Note:

Tapering – types 3 and 4 are tapered at 3" and wider unless otherwise ordered. These wider slings are tapered at the bearing points to accommodate a crane hook.

LIGHT DUTY

| TYPE 3 | TYPE 4 | RATED | CAPACITIES IN P | OUNDS |
|-------------|----------------|----------|-----------------|--------|
| FLAT Eye | TWISTED Eye | VERTICAL | CHOKER | BASKET |
| ON | e ply | | | |
| EE1 | 1-701 | 1,200 | 950 | 2,400 |
| EE1 | 1-702 | 2,400 | 1,900 | 4,800 |
| EE1 | 1-703 | 3,600 | 2,900 | 7,200 |
| EE1 | 1-704 | 4,800 | 3,800 | 9,600 |
| EE1 | 1-706 | 7,200 | 5,800 | 14,400 |
| TW | o ply | | | |
| EE2 | 2-701 | 2,400 | 1,900 | 4,800 |
| EE2 | 2-702 | 4,800 | 3,800 | 9,600 |
| EE2 | 2-703 | 6,500 | 5,200 | 13,000 |
| EE2 | 2-704 | 8,600 | 6,900 | 17,200 |
| EE2 | 2-706 | 12,200 | 9,800 | 24,400 |
| THR | ee ply | | | |
| EE3 | 3-701 | 3,500 | 2,800 | 7,000 |
| EE3 | 3-702 | 7,000 | 5,600 | 14,000 |
| EE: | 3-703 | 9,400 | 7,500 | 18,800 |
| EE: | 3-704 | 12,000 | 9,600 | 24,000 |
| EE3 | 3-706 | 18,000 | 14,400 | 36,000 |
| FOU | r Ply | | | |
| EE4 | 4-701 | 4,200 | 3,400 | 8,400 |
| EE4 | 1-702 | 8,000 | 6,400 | 16,000 |
| EE4 | 1-703 | 12,000 | 9,600 | 24,000 |
| EE4 | 4-704 | 16,000 | 12,800 | 32,000 |
| EE4 | 1-706 | 23,500 | 18,800 | 47,000 |

Eye Length Chart

| | Plies of Webbing | | | | |
|-------------|------------------|-----|-----|-----|--|
| Sling Width | 1 | 2 | 3 | 4 | |
| 1" | 9" | 9" | 12" | 12" | |
| 2" | 9" | 9" | 12" | 12" | |
| 3" | 12" | 12" | 18" | 18" | |
| 4" | 12" | 12" | 18" | 18" | |
| 5" | 15" | 15" | 20" | 20" | |
| 6" | 18" | 18" | 24" | 24" | |
| 8" | 24" | 24" | 30" | 30" | |
| 10" | 30" | 30" | 36" | 36" | |
| 12" | 30" | 30" | 36" | 36" | |



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Nylon and Polyester Web Slings



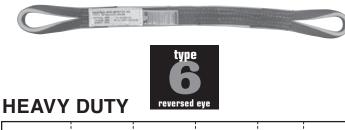
HEAVY DUTY

| | RATI | RATED CAPACITIES IN LBS. | | | | |
|----------------|----------|--------------------------|---------|--|--|--|
| TYPE 5 (EN) | VERTICAL | CHOKER | BASKET | | | |
| ONE PLY | ! | , , | | | | |
| EN1-901 | 3,200 | 2,500 | 6,400 | | | |
| EN1-902 | 6,400 | 5,000 | 12,800 | | | |
| EN1-903 | 8,600 | 6,900 | 17,200 | | | |
| EN1-904 | 11,500 | 9,200 | 23,000 | | | |
| EN1-906 | 16,300 | 13,000 | 32,600 | | | |
| EN1-908 | 19,200 | 15,400 | 38,400 | | | |
| EN1-910 | 22,400 | 17,900 | 44,800 | | | |
| EN1-912 | 26,900 | 21,500 | 53,800 | | | |
| TWO PLY | 1 | | | | | |
| EN2-901 | 6,200 | 4,900 | 12,400 | | | |
| EN2-902 | 12,200 | 9,800 | 24,400 | | | |
| EN2-903 | 16,300 | 13,000 | 32,600 | | | |
| EN2-904 | 20,700 | 16,500 | 41,400 | | | |
| EN2-906 | 28,600 | 23,000 | 57,200 | | | |
| EN2-908 | 30,700 | 24,500 | 61,400 | | | |
| EN2-910 | 33,600 | 26,800 | 67,200 | | | |
| EN2-912 | 37,600 | 30,000 | 75,200 | | | |
| THREE PLY | | | | | | |
| EN3-901 | 8,000 | 6,400 | 16,000 | | | |
| EN3-902 | 16,000 | 12,800 | 32,000 | | | |
| EN3-903 | 21,500 | 17,200 | 43,000 | | | |
| EN3-904 | 28,700 | 23,000 | 57,400 | | | |
| EN3-906 | 40,700 | 32,500 | 81,400 | | | |
| EN3-908 | 46,000 | 36,800 | 92,000 | | | |
| EN3-910 | 51,500 | 41,200 | 103,000 | | | |
| EN3-912 | 59,200 | 47,300 | 118,400 | | | |
| FOUR PLY | | | | | | |
| EN4-901 | 10,000 | 8,000 | 20,000 | | | |
| EN4-902 | 19,800 | 15,800 | 39,600 | | | |
| EN4-903 | 26,700 | 21,300 | 53,400 | | | |
| EN4-904 | 35,600 | 28,400 | 71,200 | | | |
| EN4-906 | 50,500 | 40,400 | 101,000 | | | |
| EN4-908 | 57,600 | 46,000 | 115,200 | | | |
| EN4-910 | 67,200 | 53,700 | 134,400 | | | |
| EN4-912 | 80,700 | 64,500 | 161,400 | | | |

LIGHT DUTY

| | RATED CAPACITIES IN LBS. | | | | |
|----------------|--------------------------|--------|--------|--|--|
| TYPE 5 (EN) | VERTICAL | CHOKER | BASKET | | |
| ONE PLY | | | | | |
| EN1-701 | 2,400 | 1,900 | 4,800 | | |
| EN1-702 | 4,800 | 3,800 | 9,600 | | |
| EN1-703 | 6,500 | 5,200 | 13,000 | | |
| EN1-704 | 8,600 | 6,900 | 17,200 | | |
| EN1-706 | 12,200 | 9,800 | 24,400 | | |
| TWO PLY | | | | | |
| EN2-701 | 4,800 | 3,800 | 9,600 | | |
| EN2-702 | 9,600 | 7,700 | 19,200 | | |
| EN2-703 | 11,700 | 9,400 | 23,400 | | |
| EN2-704 | 15,500 | 12,400 | 31,000 | | |
| EN2-706 | 22,500 | 18,000 | 45,000 | | |
| THREE PLY | | | | | |
| EN3-701 | 6,200 | 4,900 | 12,400 | | |
| EN3-702 | 12,500 | 10,000 | 25,000 | | |
| EN3-703 | 16,300 | 13,000 | 32,600 | | |
| EN3-704 | 20,600 | 16,400 | 41,200 | | |
| EN3-706 | 29,300 | 23,400 | 58,600 | | |
| FOUR PLY | | | | | |
| EN4-701 | 7,700 | 6,200 | 15,400 | | |
| EN4-702 | 15,500 | 12,400 | 31,000 | | |
| EN4-703 | 20,800 | 16,600 | 41,600 | | |
| EN4-704 | 26,600 | 21,200 | 53,200 | | |
| EN4-706 | 37,800 | 30,200 | 75,600 | | |

Cordura Lined Reversed Eye Slings



| TYPE 6 (RE) | VERTICAL | CHOKER | BASKET | SLING WIDTH | EYE Length |
|----------------|----------|-------------|--------|----------------|---------------|
| ONE PLY | | | | | |
| RE1-902 | 4,500 | 3,600 | 9,000 | 2 | 9 |
| RE1-904 | 7,700 | 6,200 | 15,400 | 4 | 15 |
| RE1-906 | 11,000 | 000 8,800 2 | | 6 | 15 |
| TWO PLY | | | | | |
| RE2-902 | 6,500 | 5,200 | 13,000 | 2 | 9 |
| RE2-904 | 13,000 | 10,400 | 26,000 | 4 | 15 |
| RE2-906 | 20,000 | 16,000 | 40,000 | 6 | 15 |
| THREE PLY | | | | | |
| RE3-904 | 16,400 | 13,100 | 32,800 | 4 | 15 |
| RE3-906 | 25,500 | 20,400 | 51,000 | 6 | 15 |
| FOUR PLY | | | | | |
| RE4-906 | 34,000 | 27,200 | 68,000 | 6 | 15 |

Wide Body Basket



When surface area is more critical than weight capacity, a wide body basket is the preferred alternative. A wide body basket is also an economical approach to load balancing. Contact a IRSCI specialist for more information on Wide Body and Load Balancing Baskets.

wide body basket load balance



LIGHT DUTY

| TYPE 6 (RE) | VERTICAL | CHOKER BASKET | | SLING Width | EYE Length |
|----------------|----------|---------------|--------|----------------|---------------|
| ONE PLY | | | | | |
| RE1-702 | 3,600 | 2,900 | 7,200 | 2 | 9 |
| RE1-704 | 6,800 | 5,400 | 13,600 | 4 | 15 |
| RE1-706 | 8,000 | 6,400 | 16,000 | 6 | 15 |
| TWO PLY | | | | | |
| RE2-702 | 5,200 | 4,200 | 10,400 | 2 | 9 |
| RE2-704 | 10,500 | 8,400 | 21,000 | 4 | 15 |
| RE2-706 | 14,400 | 11,500 | 28,000 | 6 | 15 |
| THREE PLY | | | | | |
| RE3-704 | 14,000 | 11,200 | 28,000 | 4 | 15 |
| RE3-706 | 20,000 | 16,000 | 40,000 | 6 | 15 |

type

flat ev

Multi-leg Bridle

A multi-leg bridle can be manufactured from either flat web or polyester round slings. IRSCI application specialists are available to assist in determining the best configuration for your lifting requirements.

multi-leg bridle

Round Slings

Tubular Polyester Round Slings

Lift Capacities according to polyester round sling type (color) and hitch used.

| | | | CAPACITIES IN LBS. | | | |
|---------|--------|----------|--------------------|---------|-------------------|--|
| CODE | COLOR | VERTICAL | CHOKER | BASKET | MINIMUM Length | |
| SWG30 | PURPLE | 2,650 | 2,120 | 5,300 | 3 ft. | |
| SWG60 | GREEN | 5,300 | 4,240 | 10,600 | 3 ft. | |
| SWG90 | YELLOW | 8,400 | 6,720 | 16,800 | 3 ft. | |
| SWG120 | TAN | 10,600 | 8,500 | 21,200 | 3 ft. | |
| SWG150 | RED | 13,200 | 10,560 | 26,400 | 3 ft. | |
| SWG180 | ORANGE | 16,800 | 13,440 | 33,600 | 3 ft. | |
| SWG240 | BLUE | 21,200 | 17,000 | 42,400 | 3 ft. | |
| SWG300 | ORANGE | 25,000 | 20,000 | 50,000 | 3 ft. | |
| SWG360 | GREY | 31,700 | 25,300 | 63,400 | 3 ft. | |
| SWG500 | ORANGE | 40,000 | 32,000 | 80,000 | 3 ft. | |
| SWG600 | BROWN | 52,900 | 42,300 | 105,800 | 6 ft. | |
| SWG800 | OLIVE | 66,100 | 52,880 | 132,200 | 6 ft. | |
| SWG1000 | BLACK | 90,000 | 72,000 | 180,000 | 6 ft. | |

Removal from Service

A polyester round sling shall be removed from service if any of the following is visible:

- If polyester round slings identification tag is missing or unreadable.
- Melting, charring or weld spatter of any part of the polyester round sling.
- Holes, tears cuts, embedded particles, abrasive wear, or snags that expose the core fibers of the polyester round sling.
- Broken or worn stitching in the cover which exposes the core fibers.
- Fittings when damaged, stretched or distorted in any way.
- Polyester round slings that are knotted.
- Acid or alkalis burns of the polyester round sling.
- Any conditions which cause doubt as to the strength of the polyester round sling.

| | | | | | | | - | | | |
|---------|-------------------------|----------|---------|---------|----------------------------|----------------------|-------------------------------|-------------------------------|-------------------------------|----------------------|
| | RATED CAPACITIES (LBS.) | | | | | | APPROXIM/ | ATE MEASUREI | VIENTS | |
| CODE | COLOR | VERTICAL | CHOKER | BASKET | MINIMUM Length (FT.) | WEIGHT (LBS./FT.) | STANDARD Eye (EL) (IN.) | WIDTH At load (W) (IN.) | THICKNESS AT LOAD (IN.) | EYE DIA. (IN.) |
| SWG30 | PURPLE | 8,800 | 7,100 | 17,600 | 4 1/2 | 1.1 | 15 | 3 1/2 | 1 | 1 3/4 |
| SWG60 | GREEN | 18,000 | 14,400 | 36,000 | 5 | 1.5 | 15 | 4 | 1 9/8 | 2 |
| SWG90 | YELLOW | 28,500 | 22,800 | 57,000 | 5 1/2 | 2.2 | 15 | 4 3/4 | 1 5/8 | 2 1/2 |
| SWG120 | TAN | 36,000 | 28,800 | 72,000 | 5 1/2 | 2.6 | 15 | 5 | 1 3/4 | 2 1/2 |
| SWG150 | RED | 44,900 | 35,900 | 89,800 | 6 1/2 | 3.6 | 20 | 6 | 2 1/6 | 2 3/4 |
| SWG180 | ORANGE | 57,100 | 45,600 | 114,200 | 7 | 4.1 | 20 | 6 1/4 | 2 1/2 | 3 1/4 |
| SWG240 | BLUE | 72,000 | 57,600 | 144,000 | 9 | 5.6 | 20 | 7 1/2 | 2 3/4 | 3 3/4 |
| SWG360 | GREY | 105,400 | 84,300 | 210,800 | 9 1/2 | 8.3 | 30 | 9 1/2 | 3 1/4 | 4 1/2 |
| SWG600 | BROWN | 180,200 | 144,100 | 360,400 | 10 1/2 | 12.0 | 30 | 13 | 3 3/4 | 5 1/2 |
| SWG800 | OLIVE | 224,400 | 179,500 | 448,800 | 13 | 16.0 | 30 | 13 1/2 | 4 1/2 | 6 |
| SWG1000 | BLACK | 306,000 | 244,000 | 612,000 | 14 1/2 | 20.0 | 31 | 15 3/4 | 5 1/4 | 6 1/2 |

8 Part Braided Round Slings

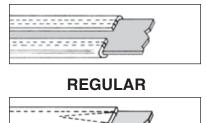
Endless and Eye & Eye styles of Round Slings are made to a tolerance of $\pm 1\%$ of the specified length (± 1 " minimum tolerance) and can stretch 3% at rated capacity.

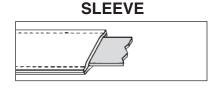
Braided Round Slings length tolerance is \pm 5% of the ordered length (sling at rest). At its rated capacity, braided Round Slings will stretch approximately 9%.

Note: Matched lengths of slings must be specified at time of order. Higher capacity round slings available upon request.

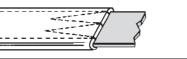
Wear Pads

EDGEGUARD





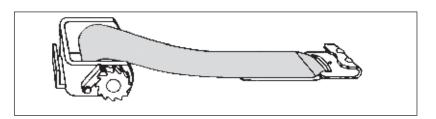




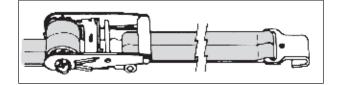
Truck Tiedowns

Polyester Webbing

- 27' and 30' Standard Lengths
- Fits Standard 3" & 4" Winches
- Manufactured to Customer Order
- Corner Protectors, Sliding Sleeves Available
- Meets or Exceeds California and Federal Regulations



Ratchet Snugger (Truck Tiedown)



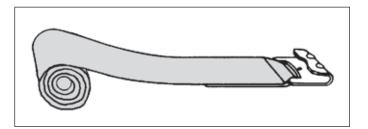
| Size | W.L.L. |
|--------------------|--------|
| 1" X 10' W/Ratchet | 1500 |
| 1" X 12' W/Ratchet | 1500 |
| 2" X 27' W/Ratchet | 3300 |
| 3" X 27' W/Ratchet | 5000 |
| 4" X 27' W/Ratchet | 5000 |

5

Replacement Strap for Standard Truck Tiedowns

| Size | W.L.L. |
|------|--------|
| 3" | 5000 |
| 4" | 5000 |

Length to your requirements



NINDUSTRIAL WIRE ROPE SUPPLY





GUARDIAN

SUPPLYING FALL PROTECTION

Industrial Wire Rope Supply Company Inc. carries quality fall protection solutions. • Anchors • Harnesses • Self-Retracting Lifelines • Lanyards • Safety kits • And more

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Miscellaneous

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LEVER HOIST 1/2 TON - 6 TON

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Larger Hoists Available Upon Request

WIRE ROPE HOIST



Or Call Toll Free: Cincinnati, Ohio (888) 345-0919 St. Charles, Missouri (866) 852-9714



UB-500 Series Non Swiveling Overhaul Balls



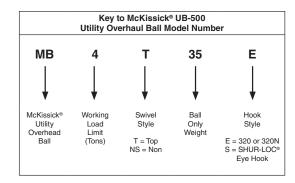


Both styles available with optional **McKissick**[®] Wedge Socket Assembly or S-422 **TERMINATOR** Wedge Socket



UWO 422T TERMINATOR Wedge Only

- Sizes 4 short Tons through 15 short Tons are available with Crosby's S1316A "Positive Locking" SHUR-LOC[®] hook which may be used for lifting personnel. Meets the intent of OSHA Rule 1926.1431(g)(1)(i)(A) and 1926.1501(g)(4)(iv)(B).
- Design Factor 4:1.
- Each ball can be equipped with the new McKissick[®] US-422T Wedge Socket which can be easily adjusted to fit various sizes of wireline by changing the wedge.



Overhaul Ball Assembly

Optional US-422T Wedge Sockets

| McKissick [⊚] UB-500 Model No. | UB-500 "E" Eye Hook Stock No.* | UB-500 "S" SHUR-LOC [®] Stock No. | Working Load Limit (short tons) | Weight Each (Ib) | Wire Rope Diameter (in) | Model No. | Wedge Socket Assy. Stock No. | Weight Each (lb) | Wedge Only Stock No. | Weight Each (Ib) |
|---|---|---|---------------------------------------|------------------------|----------------------------------|----------------|---------------------------------------|------------------------|-------------------------------|------------------------|
| MB4NS35E | 1036402 | 1036407 | 4 | 54 | | | | | | |
| MB4NS85E | 1036411 | 1036416 | 4 | 98 | 3/8 | US4T | 1044300 | 4.6 | 1047310 | 0.7 |
| MB4NS150E | 1036420 | 1036425 | 4 | 158 | 7/16 1/2 | US4T US4T | 1044309 1044318 | 4.6 4.6 | 1047301 1047329 | 1.0 1.0 |
| MB4NS200E | 1036429 | 1036434 | 4 | 200 | 1/2 9/16 5/8 5/8 3/4 | US5T | 1044327 | 8.5 | 1047338 | 2.0 |
| MB7NS85E | 1036438 | 1036443 | 7 | 104 | | US5T | 1044336 | 8.5 | 1047347 | 1.8 |
| MB7NS150E | 1036447 | 1036452 | 7 | 165 | | US5T US6T | 1044345 1044354 1044363 | 8.5 9.4 | 1047356 1047365 1047374 | 1.8 3.0 |
| MB7NS200E | 1036456 | 1036461 | 7 | 205 | | US6T | | 9.4 | | 2.5 |
| MB7NS285E | 1036465 | 1036470 | 7 | 316 | | | | | | |
| MB10NS150E | 1036474 | 1036479 | 10 | 198 | | | | | | |
| MB10NS200E | 1036483 | 1036488 | 10 | 242 | | | | | | |
| MB10NS285E | 1036492 | 1036497 | 10 | 347 | | | | | | |
| MB10NS350E | 1036501 | 1036506 | 10 | 385 | 5/8 3/4 | US6T US6T | 1044354 1044363 | 9.4 9.4 | 1047365 1047374 | 3.0 2.5 |
| MB10NS650E | 1036510 | 1036511 | 10 | 700 | 7/8 | US8T | 1044404 | 20.8 | 1047425 | 5.5 |
| MB12NS150E | 1036519 | - | 12 | 198 | 1 | US8T | 1044417 | 20.8 | 1047431 | 6.1 |
| MB12NS200E | 1036528 | - | 12 | 240 | 1-1/8 1-1/4 | US10T US10T | 1044426 1044435 | 46.5 46.5 | 1047440 1047459 | 9.7 10.4 |
| MB12NS285E | 1036537 | - | 12 | 347 | , . | 00101 | 1011100 | 10.0 | 1011100 | 10.1 |
| MB12NS350E | 1036546 | - | 12 | 385 | | | | | | |
| MB12NS650E | 1036555 | - | 12 | 700 | | | | | | |
| MB15NS200E | 1036564 | _ | 15 | 267 | 5/8 | US8AT | 1044372 | 17.5 | 1047383 | 3.2 |
| MB15NS350E | 1036573 | - | 15 | 425 | 3/4 7/8 | US8AT US8T | 1044381 1044404 | 17.5 20.8 | 1047392 1047425 | 3.4 5.5 |
| MB15NS650E | 1036582 | - | 15 | 722 | 1 | US8T | 1044417 | 20.8 | 1047425 | 6.1 |
| MB15NS1150E | 1036591 | _ | 15 | 1280 | 1-1/8 1-1/4 | US10T US10T | 1044426 1044435 | 46.5 46.5 | 1047440 1047459 | 9.7 10.4 |

4:1 Design Factor. *Utilizes Crosby "N" style hooks with integrated latch. Replacement latch kit is S-4320. PL latch and S-4055 latch will not fit.

www.industrialrope.com

McKISSICK[®]

UB-500 Series Top Swiveling Overhaul Balls



- Sizes 4 short Tons through 30 short Tons are available with Crosby's S1316A positive-locking SHUR-LOC[®] hook, which may be used for lifting personnel. Meets the intent of OSHA Rule 1926.1431(g)(1)(i)(A) and 1926.1501(g)(4)(iv)(B).
- Design Factor 4:1

Overhaul Ball Assembly

- The top swivel design on the UB-500 assures the ball remains stationary if the wireline spins.
- The swivel incorporates a sealed roller thrust bearing together with a grease fitting for easy lubrication.
- Each ball can be equipped with the new McKissick[®] US-422T Wedge Socket which can be easily adjusted to fit various sizes of wireline by changing the wedge (ensure that correct wedge is used for selected wireline size).
- All hooks used on UB-500 Overhaul Balls (S320, S320N & S1316A) are forged from alloy steel. The S320 and S320N hooks come complete with latches.
- The S320 hook (PL latch) and the S320N hook (S4320 latch), with the proper latch attached, may be used for personnel lifting when secured with proper device (bolt, nut and pin for the PL latch; Cotter pin for the S4320 latch). Meets the intent of OSHA Rule 1926.1431(g)(1)(i)(A) and 1926.1501(g)(4)(iv)(B).

Optional US-422T Wedge Sockets

| McKissick [®] UB-500 Model No. | UB-500 "E" Eye Hook Stock No. | UB-500 "S" SHUR-LOC [®] Stock No. | Working Load Limit (short tons) | Weight Each (Ib) | Wireline Size (in) | Model No. | Wedge Socket Assy. Stock No. | Weight Each (Ib) | Wedge Only Stock No. | Weight Each (Ib) |
|---|--|---|---------------------------------------|------------------------|--|--|---------------------------------------|------------------------|----------------------------|------------------------|
| MB4T35E | 1036000* | 1036005 | 4 | 58 | 3/8 | US4T | 1044300 | 4.6 | 1047310 | 0.7 |
| MB4T85E | 1036009* | 1036018 | 4 | 102 | 102 7/16 162 1/2 | US4T | 1044309 | 4.6 | 1047301 | 1.0 |
| MB4T150E | 1036027* | 1036032 | 4 | 162 | | US4T | 1044318 | 4.6 | 1047329 | 1.0 |
| MB4T200E | 1036036* | 1036041 | 4 | 201 | 1/2 | US5T | 1044327 | 8.5 | 1047338 | 2.0 |
| MB7T85E | 1036045* | 1036050 | 7 | 109 | 9/16 | US5T | 1044336 | 8.5 | 1047347 | 1.8 |
| MB7T150E | 1036054* | 1036063 | 7 | 170 | 5/8 | US5T | 1044345 | 8.5 | 1047356 | 1.8 |
| MB7T200E | 1036072* | 1036077 | 7 | 210 | 5/8 | US6T US6T | 1044354 | 9.4 | 1047365 | 3.0 |
| MB7T285E | 1036081* | 1036086 | 7 | 321 | 3/4 | | 1044363 | 9.4 | 1047374 | 2.5 |
| MB10T150E | 1036090* | 1036095 | 10 | 216 | | | | | | |
| MB10T200E | 1036099* | 1036108 | 10 | 260 | | | | 9.4 | 1047365 | |
| MB10T285E | 1036117* | 1036122 | 10 | 365 | 5/8 | US6T US6T US8T US8T US10T US10T | 1044354 | | | 3.0 |
| MB10T350E | 1036126* | 1036131 | 10 | 403 | 3/4 | | 1044363 | 9.4 | 1047374 | 2.5 |
| MB10T650E | 1036135* | 1036140 | 10 | 718 | 7/8 1 | | 1044404 | 20.8 | 1047425 | 5.5 |
| MB12T150E | 1036144* | 1036520 | 12 | 216 | | | 1044417 | 20.8 | 1047431 | 6.1 |
| MB12T200E | 1036153* | 1036529 | 12 | 258 | 1-1/8 | | 1044426 1044435 | 46.5 | 1047440 | 9.7 |
| MB12T285E | 1036171* | 1036538 | 12 | 365 | 1-1/4 | | | 46.5 | 1047459 | 10.4 |
| MB12T350E | 1036180* | 1036547 | 12 | 403 | | | | | | |
| MB12T650E | 1036189* | 1036556 | 12 | 718 | | | | | | |
| MB15T200E | 1036198* | 1036565 | 15 | 298 | 1 | | | | | |
| MB15T350E | 1036207* | 1036574 | 15 | 456 | | | | | | |
| MB15T650E | 1036216* | 1036583 | 15 | 753 | | | | | | |
| MB15T1150E | 1036225* | 1036592 | 15 | 1311 | | | | | | |
| MB20T200E | 1036234* | 1036611 | 20 | 298 | 5/8 | US8AT | 1044372 | 17.5 | 1047383 | 3.2 |
| MB20T350E | 1036243* | 1036620 | 20 | 456 | 3/4 | US8AT | 1044381 | 17.5 | 1047392 | 3.4 |
| MB20T650E | 1036252* | 1036629 | 20 | 753 | 7/8 | US8T | 1044404 | 20.8 | 1047425 | 5.5 |
| MB20T1150E | 1036261* | 1036638 | 20 | 1311 | 1 | US8T | 1044417 | 20.8 | 1047431 | 6.1 |
| MB25T350E | 1036270 | 1036647 | 25 | 533 | 1-1/8 1-1/4 | US10T US10T | 1044426 1044435 | 46.5 46.5 | 1047440 1047459 | 9.7 10.4 |
| MB25T650E | 1036279 | 1036656 | 25 | 865 | 1-1/4 | 03101 | 1044403 | 40.0 | 1047453 | 10.4 |
| MB25T1150E | 1036288 | 1036665 | 25 | 1421 | | | | | | |
| MB30T650E | 1036297 | 1036674 | 30 | 865 | | | | | | |
| MB30T1150E | 1036306 | 1036683 | 30 | 1421 | | | | | | |

4:1 Design Factor. * Utilizes Crosby "N" style hooks with integrated latch. Replacement latch kit is S-4320. PL latch and S-4055 latch will not fit. Standard Crosby S-5 Thrust style swivels can not be used with UB-500 Overhaul Balls. For replacement swivels, contact Crosby Customer Service.

McKISSIGK

BLOCKS

VALUE ADDED

- Dual Rated: To meet the requirements of both short tons and metric tons.
- Metric Rating: McKissick[®] snatch blocks are metric rated to a design factor of 4:1. Because they are metric rated with a world-class design, they are applicable to global use without conversion.
- **US Rating:** When compared to other blocks that are rated in short tons, the design factor of McKissick snatch blocks is 4.5 to 1.
- Fatigue Properties: McKissick snatch blocks are fatigue rated. The blocks are designed to meet specific fatigue performance levels and the requirements for the new Euronorm Standards: 20,000 cycles at 1-1/2 times the Working Load Limit.
- Latch Kits: McKissick snatch blocks that utilize a hook as an end fitting connection are equipped with latches.
- Application Information: Application and warning information for tackle block systems is attached directly to each block. In addition, each block has a product warning sticker attached directly to it for the purpose of giving specific warning instructions about the block.
- Lock Nut: McKissick snatch blocks have a special high-performance lock nut on the non-moveable side plate for securing the sheave pin.
- Sheave & Wireline: Sheaves for McKissick snatch blocks have a machine-formed groove.
- Secondary Securement Systems: McKissick snatch blocks are designed to incorporate a secondary securement system
 that retains the end fitting connection bolt when the block is in the closed position. In addition, a patented system retains the
 end fitting connection bolt when the block is in the open position, thus eliminating the loss of block parts.





SNATCH BLOCK DEMONSTRATION

- How to determine snatch block capacity
- How to use a snatch block to gain a mechanical advantage
- Importance of using a load cell in conjunction with a snatch block on a lift



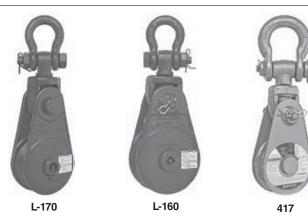
WATCH VIDEO thecrosbygroup.com/snatchblockdemo

MeKISSICK[®]

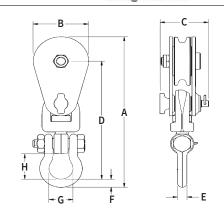
SNATCH BLOCK WITH SHACKLE FITTING, SINGLE SHEAVE, 2-12t

Foligne Relth (CE

APPLICATION AND WARNING INFORMATION



- Opening feature permits easy insertion of rope without reeving, or while the block is suspended.
- Bolt for opening feature is retained, to ensure no lost bolts.
- · Forged steel swivel tees, yokes and shackles.
- Can be furnished with bronze bushings or roller bearings.
- · Center pin equipped with pressure lube fitting.
- All sizes feature sheave grooves suited for a range of wireline diameters.
- Meets or exceeds all requirements of ASME B30.26. Importantly, these blocks meet other critical performance requirements including fatigue life and material traceability, not addressed by ASME B30.26.



- 417 alloy snatch blocks feature a significant reduction in weight compared to snatch blocks made of non-alloy materials.
- L-170 snatch blocks (with shackle or hook) feature an easyto-open bolt design. The retaining bolt is released by rotating the fitting assembly, no tools required.
- Crosby's Engineered Solutions Group is ready to discuss your requirements and help select or develop the ideal block for your application.

Visit thecrosbygroup.com/engineeredsolutions for more

| Working | Wire Rope | Sheave | | Weight | | | Dimensions (in) | | | | | | | |
|-------------------|------------------|------------------|-----------------|--------------|----------------|--------------|-----------------|-------|------|-------|------|------|------|------|
| .oad Limit (t) | Diameter (in) | Diameter (in) | Bearing Code | Each (lb) | Catalog No. | Stock No. | А | в | с | D | E | F | G | н |
| | | | | | 21 | netric tons | | | | | | | | |
| 2 | 5/16 - 3/8 | 3 | BB | 4 | 419 w/Eye | 109037† | 8.67 | 3.00 | 2.64 | 6.61 | 0.56 | 0.56 | 1.38 | 1.38 |
| 2 | 5/16 - 3/8 | 3 | BB | 5 | 419 | 109091 | 9.27 | 3.00 | 2.64 | 7.27 | 0.50 | 0.50 | 1.32 | 1.5 |
| | | | | | 4 1 | netric tons | | | | | | | | |
| 4 | 3/8 - 1/2 | 4.5 | BB | 12 | 419 | 109064 | 13.38 | 4.24 | 3.13 | 10.57 | 0.62 | 0.69 | 1.70 | 2.0 |
| | | | | | 5 1 | netric tons | | | | | | | | |
| 5 | 3/8 - 1/2 ‡ | 4 | BB | 11 | L-170 | 599828 | 13.88 | 4.50 | 2.94 | 10.94 | 0.62 | 0.69 | 1.70 | 2.0 |
| 5 | 3/8 - 1/2 ‡ | 4 | RB | 11 | L-170 | 599837 | 13.88 | 4.50 | 2.94 | 10.94 | 0.62 | 0.69 | 1.70 | 2.0 |
| | | | | | 6 1 | netric tons | | | | | | | | |
| 6* | 3/8 - 1/2 | 5 | BB | 13 | L-160 | 599524 | 13.82 | 5.12 | 3.69 | 10.57 | 0.62 | 0.69 | 1.70 | 2.0 |
| 6* | 3/8 - 1/2 | 5 | RB | 13 | L-160 | 599533 | 13.82 | 5.12 | 3.69 | 10.57 | 0.62 | 0.69 | 1.70 | 2.0 |
| | | | | | 8 1 | netric tons | | | | | | | | |
| 8 | 5/8 - 3/4 | 6 | BB | 28 | 419 | 109126 | 18.93 | 6.00 | 4.19 | 14.68 | 1.25 | 1.25 | 3.00 | 3.4 |
| 8 | 5/8 - 3/4 | 6 | RB | 28 | 419 | 109153 | 18.93 | 6.00 | 4.19 | 14.68 | 1.25 | 1.25 | 3.00 | 3.4 |
| 8 | 5/8 - 3/4 | 8 | BB | 33 | 419 | 109224 | 20.99 | 8.12 | 4.19 | 15.68 | 1.25 | 1.25 | 3.00 | 3.4 |
| 8 | 5/8 - 3/4 | 8 | RB | 33 | 419 | 109251 | 20.99 | 8.12 | 4.19 | 15.68 | 1.25 | 1.25 | 3.00 | 3.4 |
| 8 | 5/8 - 3/4 | 10 | BB | 43 | 419 | 109322 | 23.06 | 10.12 | 4.19 | 16.75 | 1.25 | 1.25 | 3.00 | 3.4 |
| 8 | 5/8 - 3/4 | 10 | RB | 43 | 419 | 109359 | 23.06 | 10.12 | 4.19 | 16.75 | 1.25 | 1.25 | 3.00 | 3.4 |
| 8 | 5/8 - 3/4 | 12 | BB | 55 | 419 | 109420 | 25.87 | 12.12 | 4.19 | 18.56 | 1.25 | 1.25 | 3.00 | 3.4 |
| 8 | 5/8 - 3/4 | 12 | RB | 55 | 419 | 109457 | 25.87 | 12.12 | 4.19 | 18.56 | 1.25 | 1.25 | 3.00 | 3.4 |
| 8 | 5/8 - 3/4 | 14 | BB | 67 | 419 | 109527 | 27.37 | 14.12 | 4.19 | 19.06 | 1.25 | 1.25 | 3.00 | 3.4 |
| 8 | 5/8 - 3/4 | 14 | RB | 67 | 419 | 109545 | 27.37 | 14.12 | 4.19 | 19.06 | 1.25 | 1.25 | 3.00 | 3.4 |
| | | | | | 12 | metric tons | | | | | | | | |
| 12* | 5/8 - 3/4 | 5.75 | BB | 29 | L-160 | 599588 | 19.03 | 6.00 | 4.19 | 14.78 | 1.25 | 1.25 | 3.00 | 3.4 |
| 12* | 5/8 - 3/4 | 5.75 | RB | 29 | L-160 | 599597 | 19.03 | 6.00 | 4.19 | 14.78 | 1.25 | 1.25 | 3.00 | 3.4 |
| 12 | 3/4 - 7/8 | 6 | BB | 28 | 417 | 168972 | 18.93 | 6.00 | 4.19 | 14.68 | 1.25 | 1.25 | 3.00 | 3.4 |
| 12 | 3/4 - 7/8 | 6 | RB | 28 | 417 | 193757 | 18.93 | 6.00 | 4.19 | 14.68 | 1.25 | 1.25 | 3.00 | 3.4 |
| 12 | 3/4 - 7/8 | 8 | BB | 34 | 417 | 168990 | 20.99 | 8.12 | 4.19 | 15.68 | 1.25 | 1.25 | 3.00 | 3.4 |
| 12 | 3/4 - 7/8 | 8 | RB | 34 | 417 | 193819 | 20.99 | 8.12 | 4.19 | 15.68 | 1.25 | 1.25 | 3.00 | 3.4 |
| 12 | 3/4 - 7/8 | 10 | BB | 42 | 417 | 193882 | 23.06 | 10.12 | 4.19 | 16.75 | 1.25 | 1.25 | 3.00 | 3.4 |
| 12 | 3/4 - 7/8 | 10 | RB | 42 | 417 | 193935 | 23.06 | 10.12 | 4.19 | 16.75 | 1.25 | 1.25 | 3.00 | 3.4 |

information.

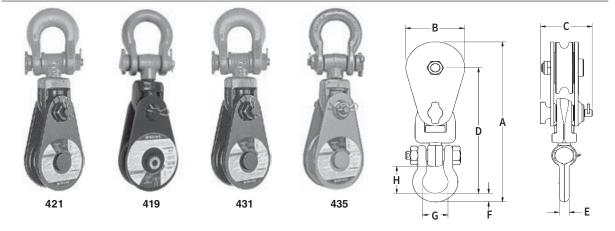
4:1 Design Factor. *3.5:1 Design Factor. † Fitted with 1-1/4" ID Swivel Eye. ‡ Special Dual Groove Sheave also accepts 1-1/4" Manilla Rope.

McKISSICK

BLOCKS

SNATCH BLOCK WITH SHACKLE FITTING, SINGLE SHEAVE, 15-60t

Fallene CE



- · Opening feature permits easy insertion of rope without reeving, or while the block is suspended.
- Can be furnished with bronze bushings or roller bearings.
- Center pin equipped with pressure lube fitting.
- All sizes feature sheave grooves suited for a range of wireline . diameters.
- Meets or exceeds all requirements of ASME B30.26. Importantly, • these blocks meet other critical performance requirements including fatigue life and material traceability, not addressed by ASME B30.26.
- 435 alloy snatch blocks feature a significant reduction in weight compared to snatch blocks made of non-alloy materials.
- · Crosby's Engineered Solutions Group is ready to discuss your requirements and help select or develop the ideal block for your application. Visit thecrosbygroup.com/ engineeredsolutions for more information.

| | | | | | | | | | | 1 | | | S | SECTION |
|-----------------------|-----------------------|--------------------|---------|----------------|---------|-----------|-------|-------|------|----------|---------|------|------|---------|
| Working .oad Limit | Wire Rope Diameter | Sheave Diameter | Bearing | Weight Each | Catalog | Stock | | | | Dimensio | ns (in) | | | |
| (t) | (in) | (in) | Code | (lb) | No. | No. | А | в | с | D | Е | F | G | н |
| ., | • • • | | | . , | | 15 metric | tons | | | | | | | |
| 15 | 3/4 - 7/8 | 8 | BB | 59 | 421 | 108308 | 23.00 | 8.12 | 5.09 | 17.19 | 1.50 | 1.75 | 3.12 | 3.12 |
| 15 | 3/4 - 7/8 | 8 | RB | 59 | 421 | 108309 | 23.00 | 8.12 | 5.09 | 17.19 | 1.50 | 1.75 | 3.12 | 3.12 |
| 15 | 3/4 - 7/8 | 10 | BB | 68 | 421 | 108390 | 24.75 | 10.12 | 5.09 | 17.94 | 1.50 | 1.75 | 3.12 | 3.12 |
| 15 | 3/4 - 7/8 | 10 | RB | 68 | 421 | 108391 | 24.75 | 10.12 | 5.09 | 17.94 | 1.50 | 1.75 | 3.12 | 3.12 |
| 15 | 3/4 - 7/8 | 16 | BB | 130 | 419 | 109607 | 31.75 | 16.12 | 5.09 | 22.00 | 1.50 | 1.75 | 3.12 | 3.12 |
| 15 | 3/4 - 7/8 | 16 | RB | 130 | 419 | 109625 | 31.75 | 16.12 | 5.09 | 22.00 | 1.50 | 1.75 | 3.12 | 3.12 |
| 15 | 7/8 - 1 | 18 | BB | 159 | 419 | 109643 | 33.12 | 18.12 | 5.09 | 22.25 | 1.50 | 1.75 | 3.12 | 3.12 |
| 15 | 7/8 - 1 | 18 | RB | 159 | 419 | 109661 | 33.12 | 18.12 | 5.09 | 22.25 | 1.50 | 1.75 | 3.12 | 3.12 |
| | | | | | | 20 metric | tons | | | | | | | |
| 20 | 1 - 1-1/8 | 8 | BB | 92 | 431 | 121022 | 26.57 | 8.12 | 6.00 | 19.76 | 2.00 | 2.75 | 3.72 | 4.00 |
| 20 | 1 - 1-1/8 | 8 | RB | 92 | 431 | 121040 | 26.57 | 8.12 | 6.00 | 19.76 | 2.00 | 2.75 | 3.72 | 4.0 |
| 20 | 1 - 1-1/8 | 10 | BB | 112 | 431 | 121095 | 28.64 | 10.12 | 6.00 | 20.72 | 2.00 | 2.75 | 3.72 | 4.0 |
| 20 | 1 - 1-1/8 | 10 | RB | 112 | 431 | 121111 | 28.64 | 10.12 | 6.00 | 20.72 | 2.00 | 2.75 | 3.72 | 4.0 |
| 20 | 1 - 1-1/8 | 12 | BB | 130 | 431 | 121175 | 30.65 | 12.25 | 6.00 | 21.78 | 2.00 | 2.75 | 3.72 | 4.0 |
| 20 | 1 - 1-1/8 | 12 | RB | 130 | 431 | 121193 | 30.65 | 12.25 | 6.00 | 21.78 | 2.00 | 2.75 | 3.72 | 4.0 |
| 20 | 1 - 1-1/8 | 14 | BB | 160 | 431 | 121255 | 33.00 | 14.00 | 6.00 | 23.25 | 2.00 | 2.75 | 3.72 | 4.0 |
| 20 | 1 - 1-1/8 | 14 | RB | 160 | 431 | 121273 | 33.00 | 14.00 | 6.00 | 23.25 | 2.00 | 2.75 | 3.72 | 4.0 |
| | | | | | | 25 metric | tons | | | | | | | |
| 25 | 1 - 1-1/4 | 8 | BB | 103 | 435 | 208954 | 27.08 | 8.25 | 6.13 | 20.21 | 2.00 | 2.75 | 3.72 | 4.0 |
| 25 | 1 - 1-1/4 | 10 | BB | 117 | 435 | 208965 | 29.33 | 10.24 | 6.13 | 21.46 | 2.00 | 2.75 | 3.72 | 4.00 |
| 25 | 1 - 1-1/4 | 18 | BB | 270 | 431 | 119495 | 41.36 | 18.25 | 7.13 | 29.12 | 2.00 | 3.12 | 3.50 | 4.8 |
| 25 | 1 - 1-1/4 | 18 | RB | 280 | 431 | 119496 | 41.36 | 18.25 | 7.13 | 29.12 | 2.00 | 3.12 | 3.50 | 4.8 |
| | | | | | | 30 metric | tons | | | | | | | |
| 30 | 1 - 1-1/4 | 12 | BB | 208 | 435 | 208976 | 36.61 | 12.25 | 7.00 | 27.37 | 2.00 | 3.12 | 3.50 | 4.8 |
| 30 | 1 - 1-1/4 | 14 | BB | 230 | 435 | 208977 | 38.86 | 14.25 | 7.00 | 28.62 | 2.00 | 3.12 | 3.50 | 4.8 |
| 30 | 1 - 1-1/4 | 20 | BB | 503 | 431 | 119589 | 52.40 | 20.25 | 8.31 | 38.34 | 2.50 | 3.94 | 5.62 | 7.06 |
| 30 | 1 - 1-1/4 | 20 | RB | 485 | 431 | 119598 | 52.40 | 20.25 | 8.31 | 38.34 | 2.50 | 3.94 | 5.62 | 7.06 |
| 30 | 1 - 1-1/4 | 24 | BB | 581 | 431 | 119605 | 56.00 | 24.25 | 8.31 | 40.00 | 2.50 | 3.94 | 5.62 | 7.06 |
| 30 | 1 - 1-1/4 | 24 | RB | 575 | 431 | 119614 | 56.00 | 24.25 | 8.31 | 40.00 | 2.50 | 3.94 | 5.62 | 7.06 |
| | | | | | | 60 metric | tons | | | | | | | |
| 60 | 1 - 1-1/4 | 12 | BB | 315 | 435 | 8027291 | 41.65 | 12.12 | 8.66 | 33.19 | 2.06 | 2.40 | 5.75 | 6.12 |

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SNATCH BLOCK WITH HOOK FITTING, SINGLE SHEAVE, 2-12t

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- Opening feature permits easy insertion of rope without reeving, or while the block is suspended.
- Bolt for opening feature is retained, to ensure no lost bolts. •
- Forged steel swivel tees, yokes and hooks.
- · Furnished with a latch installed.
- Can be furnished with bronze bushings or roller bearings.
- Center pin equipped with pressure lube fitting. ٠
- All sizes feature sheave grooves suited for a range of wireline • diameters.
- Meets or exceeds all requirements of ASME B30.26. Importantly, these blocks meet other critical performance requirements including fatique life and material traceability not addressed by ASME B30.26

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- 416 alloy snatch blocks feature a significant reduction in weight compared to snatch blocks made of non-alloy materials.
- · L-170 snatch blocks (with shackle or hook) feature an easy-to-open bolt design. The retaining bolt is released by rotating the fitting assembly, no tools required.
- · Crosby's Engineered Solutions Group is ready to discuss your requirements and help select or develop the ideal block for your application.
- Visit thecrosbygroup.com/engineeredsolutions for more information. APPLICATION AND WARNING INFORMATION

| Working | Wire Rope | Sheave | | Weight | | | | | | Dimens | sions (in) | | | |
|-------------------|------------------|------------------|-----------------|--------------|----------------|--------------|---------|-------|------|--------|------------|-------|------|------|
| oad Limit. (t) | Diameter (in) | Diameter (in) | Bearing Code | Each (lb) | Catalog No. | Stock No. | А | в | с | D | Е | F | G | н |
| | | | | | | 2 metri | c tons | | | | | | | |
| 2 | 5/16 - 3/8 | 3 | BB | 5 | 418 | 108038 | 9.74 | 3.00 | 2.64 | 3.59 | 0.75 | 7.24 | 0.75 | 1.00 |
| | | | | | | 4 metri | c tons | | | | | | | |
| 4 | 3/8 - 1/2 | 4.5 | BB | 12 | 418 | 108065 | 14.12 | 4.24 | 3.13 | 5.24 | 1.00 | 10.13 | 0.94 | 1.87 |
| | | | | | | 5 metri | c tons | | | | | | | |
| 5 | 3/8 - 1/2 ‡ | 4 | BB | 11 | L-170 | 599800 | 14.62 | 4.56 | 2.94 | 5.24 | 1.00 | 10.50 | 0.94 | 1.87 |
| 5 | 3/8 - 1/2 ± | 4 | RB | 11 | L-170 | 599819 | 14.62 | 4.56 | 2.94 | 5.24 | 1.00 | 10.50 | 0.94 | 1.87 |
| | | | | | | 6 metri | c tons | | | | | | | |
| 6* | 3/8 - 1/2 | 5 | BB | 13 | L-160 | 599506 | 14.56 | 5.12 | 3.69 | 5.24 | 1.00 | 10.13 | 0.94 | 1.87 |
| 6* | 3/8 - 1/2 | 5 | RB | 13 | L-160 | 599515 | 14.56 | 5.12 | 3.69 | 5.24 | 1.00 | 10.13 | 0.94 | 1.87 |
| | | | | | | 7 shor | t Tons | | | | | | | |
| 7T* | 3/4 - 7/8 | 6 | BB | 28 | C-720 | 280010 | 16.14 | 6.00 | 3.81 | 6.27 | 1.44 | 11.33 | 1.25 | 1.61 |
| | | | | | | 8 metri | c tons | | | | | | | |
| 8 | 5/8 - 3/4 | 6 | BB | 27 | 418 | 108127 | 18.95 | 6.00 | 4.19 | 6.81 | 1.56 | 13.55 | 1.31 | 2.41 |
| 8 | 5/8 - 3/4 | 6 | RB | 27 | 418 | 108154 | 18.95 | 6.00 | 4.19 | 6.81 | 1.56 | 13.55 | 1.31 | 2.41 |
| 8 | 5/8 - 3/4 | 8 | BB | 33 | 418 | 108225 | 21.01 | 8.12 | 4.19 | 6.81 | 1.56 | 14.54 | 1.31 | 2.41 |
| 8 | 5/8 - 3/4 | 8 | RB | 33 | 418 | 108252 | 21.01 | 8.12 | 4.19 | 6.81 | 1.56 | 14.54 | 1.31 | 2.41 |
| 8 | 5/8 - 3/4 | 10 | BB | 41 | 418 | 108323 | 23.08 | 10.12 | 4.19 | 6.81 | 1.56 | 15.61 | 1.31 | 2.41 |
| 8 | 5/8 - 3/4 | 10 | RB | 41 | 418 | 108350 | 23.08 | 10.12 | 4.19 | 6.81 | 1.56 | 15.61 | 1.31 | 2.41 |
| 8 | 5/8 - 3/4 | 12 | BB | 48 | 418 | 108421 | 25.89 | 12.12 | 4.16 | 6.81 | 1.56 | 17.42 | 1.31 | 2.41 |
| 8 | 5/8 - 3/4 | 12 | RB | 48 | 418 | 108458 | 25.89 | 12.12 | 4.16 | 6.81 | 1.56 | 17.42 | 1.31 | 2.41 |
| 8 | 5/8 - 3/4 | 14 | BB | 55 | 418 | 108528 | 27.39 | 14.12 | 4.19 | 6.81 | 1.56 | 17.92 | 1.31 | 2.41 |
| 8 | 5/8 - 3/4 | 14 | RB | 55 | 418 | 108546 | 27.39 | 14.12 | 4.19 | 6.81 | 1.56 | 17.92 | 1.31 | 2.41 |
| | | | | | | 12 metr | ic tons | | | | | | | |
| 12* | 5/8 - 3/4 | 5.75 | BB | 29 | L-160 | 599560 | 19.99 | 6.00 | 4.19 | 7.88 | 1.56 | 14.37 | 1.44 | 2.62 |
| 12* | 5/8 - 3/4 | 5.75 | RB | 29 | L-160 | 599579 | 19.99 | 6.00 | 4.19 | 7.88 | 1.56 | 14.37 | 1.44 | 2.62 |
| 12 | 3/4 - 7/8 | 6 | BB | 26 | 416 | 193427 | 19.89 | 6.00 | 4.19 | 7.88 | 1.56 | 14.27 | 1.44 | 2.62 |
| 12 | 3/4 - 7/8 | 6 | RB | 26 | 416 | 193472 | 19.89 | 6.00 | 4.19 | 7.88 | 1.56 | 14.27 | 1.44 | 2.62 |
| 12 | 3/4 - 7/8 | 8 | BB | 33 | 416 | 193490 | 21.95 | 8.12 | 4.19 | 7.88 | 1.56 | 15.27 | 1.44 | 2.62 |
| 12 | 3/4 - 7/8 | 8 | RB | 33 | 416 | 193542 | 21.95 | 8.12 | 4.19 | 7.88 | 1.56 | 15.27 | 1.44 | 2.62 |
| 12 | 3/4 - 7/8 | 10 | BB | 41 | 416 | 193613 | 24.02 | 10.12 | 4.19 | 7.88 | 1.56 | 16.34 | 1.44 | 2.62 |
| 12 | 3/4 - 7/8 | 10 | RB | 41 | 416 | 193677 | 24.02 | 10.12 | 4.19 | 7.88 | 1.56 | 16.34 | 1.44 | 2.62 |

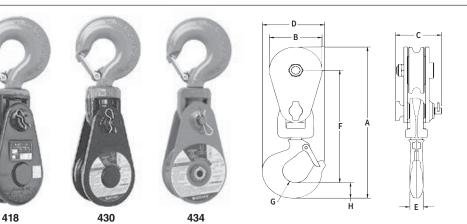
4:1 Design Factor. *3.5:1 Design Factor.. ‡ Special Dual Groove Sheave also accepts 1-1/4" Manilla Rope

McKISSICK

BLOCKS

CE

SNATCH BLOCK WITH HOOK FITTING, SINGLE SHEAVE, 15-30t



- Opening feature permits easy insertion of rope without reeving, or while the block is suspended.
- Furnished with a latch installed.

420

- Can be furnished with bronze bushings or roller bearings.
- Center pin equipped with pressure lube fitting.
- All sizes feature sheave grooves suited for a range of wireline diameters.
- Meets or exceeds all requirements of ASME B30.26. Importantly, these blocks meet other critical performance requirements including fatigue life and material traceability, not addressed by ASME B30.26.
- 434 snatch blocks feature a significant reduction in weight compared to snatch blocks made of non-alloy materials.
- Crosby's Engineered Solutions Group is ready to discuss your requirements and help select or develop the ideal block for your application.

APPLICATION AND WARNING INFORMATION SECTION 17

Visit thecrosbygroup.com/engineeredsolutions for more information.

| Working | Wire Rope | Sheave | | Weight | | | | | | Dimensio | ns (in) | | | |
|------------|------------------|------------------|-----------------|--------------|----------------|--------------|----------|-------|------|----------|---------|-------|------|-----|
| Load Limit | Diameter (in) | Diameter (in) | Bearing Code | Each (lb) | Catalog No. | Stock No. | А | в | с | D | Е | F | G | н |
| (t) | (in) | (11) | Code | (ai) | INO. | | | D | C | U | - | - F | G | п |
| | | | | | 100 | | ric tons | | | | . = 0 | | | |
| 15 | 3/4 - 7/8 | 8 | BB | 51 | 420 | 108275 | 23.50 | 8.12 | 5.09 | 8.34 | 1.76 | 16.51 | 1.50 | 2.9 |
| 15 | 3/4 - 7/8 | 8 | RB | 51 | 420 | 108276 | 23.50 | 8.12 | 5.09 | 8.34 | 1.76 | 16.51 | 1.50 | 2.9 |
| 15 | 3/4 - 7/8 | 10 | BB | 63 | 420 | 108371 | 25.25 | 10.12 | 5.09 | 8.34 | 1.76 | 17.26 | 1.50 | 2.9 |
| 15 | 3/4 - 7/8 | 10 | RB | 63 | 420 | 108372 | 25.25 | 10.12 | 5.09 | 8.34 | 1.76 | 17.26 | 1.50 | 2.9 |
| 15 | 3/4 - 7/8 | 16 | BB | 130 | 418 | 108608 | 32.25 | 16.12 | 5.09 | 8.34 | 1.76 | 21.26 | 1.50 | 2.9 |
| 15 | 3/4 - 7/8 | 16 | RB | 130 | 418 | 108626 | 32.25 | 16.12 | 5.09 | 8.34 | 1.76 | 21.26 | 1.50 | 2.9 |
| 15 | 7/8 - 1 | 18 | BB | 150 | 418 | 108644 | 33.50 | 18.12 | 5.09 | 8.34 | 1.76 | 21.51 | 1.50 | 2.9 |
| 15 | 7/8 - 1 | 18 | RB | 150 | 418 | 108662 | 33.50 | 18.12 | 5.09 | 8.34 | 1.76 | 21.51 | 1.50 | 2.9 |
| | | | | | | 20 met | ric tons | | | | | | | |
| 20 | 1 - 1-1/8 | 8 | BB | 75 | 430 | 120023 | 25.87 | 8.12 | 6.00 | 9.39 | 2.00 | 18.43 | 1.50 | 3.3 |
| 20 | 1 - 1-1/8 | 8 | RB | 75 | 430 | 120041 | 25.87 | 8.12 | 6.00 | 9.39 | 2.00 | 18.43 | 1.50 | 3.3 |
| 20 | 1 - 1-1/8 | 10 | BB | 89 | 430 | 120096 | 27.94 | 10.12 | 6.00 | 9.39 | 2.00 | 19.50 | 1.50 | 3.3 |
| 20 | 1 - 1-1/8 | 10 | RB | 89 | 430 | 120112 | 27.94 | 10.12 | 6.00 | 9.39 | 2.00 | 19.50 | 1.50 | 3.3 |
| 20 | 1 - 1-1/8 | 12 | BB | 103 | 430 | 120176 | 30.00 | 12.25 | 6.00 | 9.39 | 2.00 | 20.50 | 1.50 | 3.3 |
| 20 | 1 - 1-1/8 | 12 | RB | 103 | 430 | 120194 | 30.00 | 12.25 | 6.00 | 9.39 | 2.00 | 20.50 | 1.50 | 3.3 |
| 20 | 1 - 1-1/8 | 14 | BB | 123 | 430 | 120256 | 32.34 | 14.00 | 6.00 | 9.39 | 2.00 | 21.96 | 1.50 | 3.3 |
| 20 | 1 - 1-1/8 | 14 | RB | 123 | 430 | 120274 | 32.34 | 14.00 | 6.00 | 9.39 | 2.00 | 21.96 | 1.50 | 3.3 |
| | | | | | | 25 met | ric tons | | | | | | | |
| 25 | 1 - 1-1/4 | 8 | BB | 90 | 434 | 208896 | 26.56 | 8.25 | 6.13 | 9.36 | 2.00 | 19.06 | 1.50 | 3.3 |
| 25 | 1 - 1-1/4 | 10 | BB | 107 | 434 | 208910 | 28.63 | 10.25 | 6.13 | 9.36 | 2.00 | 20.13 | 1.50 | 3.3 |
| 25 | 1 - 1-1/4 | 18 | BB | 240 | 430 | 119486 | 41.41 | 18.25 | 7.12 | 11.76 | 2.50 | 27.97 | 1.94 | 4.3 |
| 25 | 1 - 1-1/4 | 18 | RB | 240 | 430 | 119487 | 41.41 | 18.25 | 7.12 | 11.76 | 2.50 | 27.97 | 1.94 | 4.3 |
| | | | | | | | ric tons | | | | | | | |
| 30 | 1 - 1-1/4 | 12 | BB | 165 | 434 | 208931 | 36.32 | 12.25 | 7.00 | 11.76 | 2.50 | 25.88 | 1.94 | 4.3 |
| 30 | 1 - 1-1/4 | 14 | BB | 180 | 434 | 208932 | 38.57 | 14.25 | 7.00 | 11.76 | 2.50 | 27.13 | 1.94 | 4.3 |
| 30 | 1 - 1-1/4 | 20 | BB | 375 | 430 | 119507 | 52.15 | 20.25 | 8.31 | 15.24 | 3.00 | 36.12 | 2.25 | 5.9 |
| 30 | 1 - 1-1/4 | 20 | RB | 375 | 430 | 119516 | 52.15 | 20.25 | 8.31 | 15.24 | 3.00 | 36.12 | 2.25 | 5.9 |
| 30 | 1 - 1-1/4 | 20 | BB | 450 | 430 | 119525 | 55.75 | 24.25 | 8.31 | 15.24 | 3.00 | 37.75 | 2.25 | 5.9 |
| 30 | 1 - 1-1/4 | 24 | RB | 450 | 430 | 119525 | 55.75 | 24.25 | 8.31 | 15.24 | 3.00 | 37.75 | 2.25 | 5.9 |

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McKISSICK[®]

SNATCH BLOCK, TAIL BOARD, SINGLE SHEAVE, 2-12t

- Opening feature permits easy insertion of rope without reeving. Bolt for opening feature is retained, to ensure no lost bolts.
- All sizes feature sheave grooves suited for a range of wireline diameters.
- Meets or exceeds all requirements of ASME B30.26. Importantly, these blocks meet other critical performance requirements including fatigue life and material traceability, not addressed by ASME B30.26.
- 402 snatch blocks feature a significant reduction in weight compared to snatch blocks made of non-alloy materials.
- Crosby's Engineered Solutions Group is ready to discuss your requirements and help select or develop the ideal block for your application. Visit thecrosbygroup.com/ engineeredsolutions for more information.

| Ũ | | | | | 5 | | | | | ٢ | APPLIC | ATION AND W | VARNING INF | |
|-------------------|------------------|------------------|-----------------|--------------|--------------|---------------|-------|-------|------|---------|----------|-------------|-------------|-----|
| Working | Wire Rope | Sheave | | Weight | | | | | | Dimensi | ons (in) | | | |
| Load Limit (t) | Diameter (in) | Diameter (in) | Bearing Code | Each (lb) | Model No. | Stock No. | А | в | с | D | Е | F | G | н |
| (4) | () | () | 0000 | (10) | | 2 metric tons | | 5 | Ŭ | 5 | - | | ũ | |
| 2 | 5/16 - 3/8 | 3 | BB | 3 | 404 | 102016 | 4.87 | 3.00 | 2.64 | 1.04 | 0.50 | 2.62 | 0.87 | 0.7 |
| | | | | | 4 | metric tons | 5 | | | | | | | |
| 4 | 3/8 - 1/2 | 4.5 | BB | 7 | 404 | 102025 | 7.75 | 4.25 | 3.13 | 1.56 | 0.75 | 4.25 | 1.63 | 1.3 |
| | | | | | 5 | metric tons | 5 | | | | | | | |
| 5 | 3/8 - 1/2 ‡ | 4 | BB | 11 | L-170 | 599846 | 8.38 | 4.50 | 2.94 | 1.57 | 0.85 | 4.69 | 2.25 | 1.4 |
| 5 | 3/8 - 1/2 ‡ | 4 | RB | 11 | L-170 | 599855 | 8.38 | 4.50 | 2.94 | 1.57 | 0.85 | 4.69 | 2.25 | 1.4 |
| | | | | | 6 | 6 metric tons | 5 | | | | | | | |
| 6* | 3/8 - 1/2 | 5 | BB | 13 | L-160 | 599542 | 8.25 | 5.12 | 3.69 | 1.53 | 0.75 | 4.25 | 1.38 | 1.4 |
| 6* | 3/8 - 1/2 | 5 | RB | 13 | L-160 | 599551 | 8.25 | 5.12 | 3.69 | 1.53 | 0.75 | 4.25 | 1.38 | 1.4 |
| | | | | | 8 | 8 metric tons | 5 | | | | | | | |
| 8 | 5/8 - 3/4 | 6 | BB | 15 | 404 | 102098 | 9.87 | 6.00 | 4.19 | 1.80 | 1.00 | 5.12 | 1.62 | 1. |
| 8 | 5/8 - 3/4 | 6 | RB | 15 | 404 | 102114 | 9.87 | 6.00 | 4.19 | 1.80 | 1.00 | 5.12 | 1.62 | 1.1 |
| 8 | 5/8 - 3/4 | 8 | BB | 21 | 404 | 102169 | 11.93 | 8.12 | 4.19 | 1.80 | 1.00 | 6.12 | 1.62 | 1.1 |
| 8 | 5/8 - 3/4 | 8 | RB | 21 | 404 | 102187 | 11.93 | 8.12 | 4.19 | 1.80 | 1.00 | 6.12 | 1.62 | 1.1 |
| 8 | 5/8 - 3/4 | 10 | BB | 29 | 404 | 102230 | 14.00 | 10.12 | 4.19 | 1.80 | 1.00 | 7.19 | 1.69 | 1.1 |
| 8 | 5/8 - 3/4 | 10 | RB | 29 | 404 | 102258 | 14.00 | 10.12 | 4.19 | 1.80 | 1.00 | 7.19 | 1.69 | 1. |
| 8 | 5/8 - 3/4 | 12 | BB | 36 | 404 | 102301 | 16.81 | 12.12 | 4.19 | 1.80 | 1.00 | 9.00 | 2.50 | 1.1 |
| 8 | 5/8 - 3/4 | 12 | RB | 36 | 404 | 102329 | 16.81 | 12.12 | 4.19 | 1.80 | 1.00 | 9.00 | 2.50 | 1. |
| | | | | | | 2 metric ton | | | | | | | | |
| 12* | 5/8 - 3/4 | 5.75 | BB | 29 | L-160 | 599604 | 9.97 | 6.00 | 4.19 | 1.72 | 1.00 | 5.22 | 1.85 | 1.1 |
| 12* | 5/8 - 3/4 | 5.75 | RB | 29 | L-160 | 599613 | 9.97 | 6.00 | 4.19 | 1.72 | 1.00 | 5.22 | 1.85 | 1. |
| 12 | 3/4 - 7/8 | 6 | BB | 15 | 402 | 179238 | 9.87 | 6.00 | 4.19 | 1.80 | 1.00 | 5.12 | 1.62 | 1. |
| 12 | 3/4 - 7/8 | 6 | RB | 15 | 402 | 179283 | 9.87 | 6.00 | 4.19 | 1.80 | 1.00 | 5.12 | 1.62 | 1.1 |
| 12 | 3/4 - 7/8 | 8 | BB | 21 | 402 | 179318 | 11.93 | 8.12 | 4.19 | 1.80 | 1.00 | 6.12 | 1.62 | 1.1 |
| 12 | 3/4 - 7/8 | 8 | RB | 21 | 402 | 179363 | 11.93 | 8.12 | 4.19 | 1.80 | 1.00 | 6.12 | 1.62 | 1. |
| 12 | 3/4 - 7/8 | 10 | BB | 29 | 402 | 179434 | 14.00 | 10.12 | 4.19 | 1.80 | 1.00 | 7.19 | 1.69 | 1. |
| 12 | 3/4 - 7/8 | 10 | RB | 29 | 402 | 179498 | 14.00 | 10.12 | 4.19 | 1.80 | 1.00 | 7.19 | 1.69 | 1.1 |

4:1 Design Factor. *3.5:1 Design Factor. **‡ Special Dual Groove Sheave also accepts 1-1/4" Manilla Rope.**

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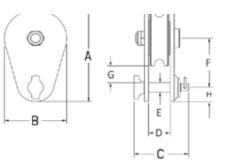
BLOCKS

SNATCH BLOCK, TAIL BOARD, SINGLE SHEAVE, 15-60t



APPLICATION AND WARNING INFORMATION





- Opening feature permits easy insertion of rope without reeving. Bolt for opening feature is retained, to ensure no lost bolts.
- Can be furnished with bronze bushings or roller bearings.
- Center pin equipped with pressure lube fitting.
- All sizes feature sheave grooves suited for a range of wireline diameters.
- Meets or exceeds all requirements of ASME B30.26. Importantly, these blocks meet other critical performance requirements including fatigue life and material traceability, not addressed by ASME B30.26.
- Visit thecrosbygroup.com/engineeredsolutions for more information.

| Working | Wire Rope | Sheave | | Weight | | | | | 0 | Dimensio | ons (in) | | | |
|-------------------|------------------|------------------|-----------------|--------------|----------------|--------------|-------|-------|------|----------|----------|-------|------|----|
| Load Limit (t) | Diameter (in) | Diameter (in) | Bearing Code | Each (lb) | Model No. | Stock No. | А | в | с | D | Е | F | G | н |
| | | | | | 15 metr | ic tons | | | | | | | | |
| 15 | 3/4 - 7/8 | 8 | BB | 30 | 406 | 108311 | 13.19 | 8.12 | 5.13 | 2.35 | 1.25 | 6.75 | 2.13 | 2. |
| 15 | 3/4 - 7/8 | 8 | RB | 30 | 406 | 108312 | 13.19 | 8.12 | 5.13 | 2.35 | 1.25 | 6.75 | 2.13 | 2. |
| 15 | 3/4 - 7/8 | 10 | BB | 42 | 406 | 108406 | 14.94 | 10.12 | 5.13 | 2.35 | 1.25 | 7.50 | 1.94 | 2. |
| 15 | 3/4 - 7/8 | 10 | RB | 42 | 406 | 108407 | 14.94 | 10.12 | 5.13 | 2.35 | 1.25 | 7.50 | 1.94 | 2 |
| | | | | | 20 metr | ic tons | | | | | | | | |
| 20 | 1 - 1-1/8 | 8 | BB | 42 | 407 | 103523 | 13.56 | 8.12 | 6.00 | 2.55 | 1.50 | 7.12 | 2.37 | 2 |
| 20 | 1 - 1-1/8 | 8 | RB | 42 | 407 | 103541 | 13.56 | 8.12 | 6.00 | 2.55 | 1.50 | 7.12 | 2.37 | 2 |
| 20 | 1 - 1-1/8 | 10 | BB | 55 | 407 | 103603 | 15.63 | 10.12 | 6.00 | 2.55 | 1.50 | 8.19 | 2.44 | 2 |
| 20 | 1 - 1-1/8 | 10 | RB | 55 | 407 | 103621 | 15.63 | 10.12 | 6.00 | 2.55 | 1.50 | 8.19 | 2.44 | 2 |
| 20 | 1 - 1-1/8 | 12 | BB | 70 | 407 | 103685 | 17.75 | 12.25 | 6.00 | 2.55 | 1.50 | 9.25 | 2.56 | 2 |
| 20 | 1 - 1-1/8 | 12 | RB | 70 | 407 | 103701 | 17.75 | 12.25 | 6.00 | 2.55 | 1.50 | 9.25 | 2.56 | 2 |
| 20 | 1 - 1-1/8 | 14 | BB | 90 | 407 | 103765 | 20.10 | 14.00 | 6.00 | 2.55 | 1.50 | 10.72 | 2.97 | 2 |
| 20 | 1 - 1-1/8 | 14 | RB | 90 | 407 | 103783 | 20.10 | 14.00 | 6.00 | 2.55 | 1.50 | 10.72 | 2.97 | 2 |
| | | | | | 25 metr | | | | | | | | | |
| 25 | 1 - 1-1/4 | 8 | BB | 50 | 401 | 178151 | 13.49 | 8.25 | 6.13 | 2.55 | 1.50 | 7.12 | 2.37 | 2 |
| 25 | 1 - 1-1/4 | 10 | BB | 65 | 401 | 179167 | 15.43 | 10.25 | 6.13 | 2.55 | 1.50 | 8.19 | 2.44 | 2 |
| 25 | 1 - 1-1/4 | 18 | BB | 165 | 407 | 119652 | 24.62 | 18.25 | 7.12 | 3.05 | 1.75 | 13.00 | 3.13 | 2 |
| 25 | 1 - 1-1/4 | 18 | RB | 165 | 407 | 119653 | 24.62 | 18.25 | 7.12 | 3.05 | 1.75 | 13.00 | 3.13 | 2 |
| | | | | | 30 metr | | | | | | | | | |
| 30 | 1 - 1-1/4 | 12 | BB | 95 | 401 | 179178 | 18.62 | 12.25 | 7.00 | 3.05 | 1.75 | 10.00 | 3.13 | 2 |
| 30 | 1 - 1-1/4 | 14 | BB | 110 | 401 | 179187 | 20.88 | 14.25 | 7.00 | 3.05 | 1.75 | 11.25 | 3.38 | 2 |
| 30 | 1 - 1-1/4 | 20 | BB | 215 | 407 | 119669 | 28.88 | 20.25 | 8.31 | 3.55 | 2.25 | 15.25 | 4.13 | 3 |
| 30 | 1 - 1-1/4 | 20 | RB | 215 | 407 | 119678 | 28.88 | 20.25 | 8.31 | 3.55 | 2.25 | 15.25 | 4.13 | 3 |
| 30 | 1 - 1-1/4 | 24 | BB | 290 | 407 | 119687 | 32.50 | 24.25 | 8.31 | 3.55 | 2.25 | 16.88 | 3.76 | 3 |
| 30 | 1 - 1-1/4 | 24 | RB | 290 | 407 | 119696 | 32.50 | 24.25 | 8.31 | 3.55 | 2.25 | 16.88 | 3.76 | 3 |
| 60 | 1 - 1-1/4 | 12 | BB | 95 | 60 metr 401 | 8027292 | 20.32 | 12.12 | 8.66 | 2.78 | 2.50 | 10.75 | 3.50 | 3 |

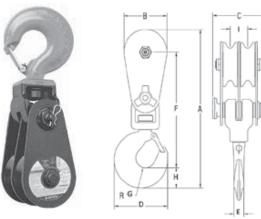
4:1 Design Factor.

6

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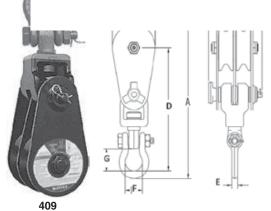
SNATCH BLOCK WITH HOOK OR SHACKLE FITTING DOUBLE SHEAVE, 4-12t



408 With Hook

- Two sheave snatch block to allow for additional mechanical advantage, must be reeved with four parts of line.
- Opening feature permits easy insertion of wireline in both sheaves with removal of one bolt.
- 408 is furnished with S-4320 hook latch.
- Center Pin equipped with pressure lube fittings.
- All sizes feature sheave grooves suited for a range of wireline diameters.

408 Double Sheave Snatch Block with Hook



With Shackle

- Meets or exceeds all requirements of ASME B30.26. Importantly, these blocks meet other critical performance requirements including fatigue life and material traceability, not addressed by ASME B30.26.
- Crosby's Engineered Solutions Group is ready to discuss your requirements and help select or develop the ideal block for your application. Visit thecrosbygroup.com/ engineeredsolutions for more information.

| | | | | | | | | | Dim | nensions | (in) | | | | |
|------------------------------|-------------------------------|----------------------------|-----------------|------------------------|--------------|-------|------|------|------|----------|-------|------|------|------|--|
| Working Load Limit (t) | Wire Rope Diameter (in) | Sheave Diameter (in) | Bearing Code | Weight Each (lb) | Stock No. | А | в | с | D | Е | F | G | н | Т | |
| | 4 metric tons | | | | | | | | | | | | | | |
| 4 | 3/8 - 1/2 | 4.5 | BB | 18 | 104023 | 14.77 | 4.24 | 5.25 | 5.24 | 1.00 | 10.78 | 0.94 | 1.87 | 1.72 | |
| | 12 metric tons | | | | | | | | | | | | | | |
| 12 | 5/8 - 3/4 | 6 | BB | 45 | 104103 | 21.12 | 6.00 | 6.13 | 7.86 | 1.56 | 15.50 | 1.44 | 2.62 | 2.03 | |
| 12 | 5/8 - 3/4 | 6 | RB | 45 | 104121 | 21.12 | 6.00 | 6.13 | 7.86 | 1.56 | 15.50 | 1.44 | 2.62 | 2.03 | |
| 12 | 5/8 - 3/4 | 8 | BB | 53 | 104185 | 23.18 | 8.12 | 6.13 | 7.86 | 1.56 | 16.50 | 1.44 | 2.62 | 2.03 | |
| 12 | 5/8 - 3/4 | 8 | RB | 53 | 104201 | 23.18 | 8.12 | 6.13 | 7.86 | 1.56 | 16.50 | 1.44 | 2.62 | 2.03 | |

4:1 Design Factor.

409 Double Sheave Snatch Block with Shackle

| Working | Wire Rope | Sheave | | Weight | | | | | Dimensi | ons (in) | | | | | |
|-------------------|------------------|------------------|-----------------|--------------|--------------|-------|------|------|---------|----------|------|------|------|--|--|
| Load Limit (t) | Diameter (in) | Diameter (in) | Bearing Code | Each (lb) | Stock No. | А | в | с | D | Е | F | G | н | | |
| | 4 metric tons | | | | | | | | | | | | | | |
| 4 | 3/8 - 1/2 | 4.5 | BB | 18 | 105022 | 14.03 | 4.24 | 5.25 | 11.22 | 0.62 | 1.70 | 2.01 | 1.72 | | |
| 12 metric tons | | | | | | | | | | | | | | | |
| 12 | 5/8 - 3/4 | 6 | BB | 50 | 105102 | 21.12 | 6.00 | 6.13 | 16.36 | 1.50 | 3.12 | 3.12 | 2.03 | | |
| 12 | 5/8 - 3/4 | 6 | RB | 50 | 105120 | 21.12 | 6.00 | 6.13 | 16.36 | 1.50 | 3.12 | 3.12 | 2.03 | | |
| 12 | 5/8 - 3/4 | 8 | BB | 58 | 105184 | 23.17 | 8.12 | 6.13 | 17.36 | 1.50 | 3.12 | 3.12 | 2.03 | | |
| 12 | 5/8 - 3/4 | 8 | RB | 58 | 105200 | 23.17 | 8.12 | 6.13 | 17.36 | 1.50 | 3.12 | 3.12 | 2.03 | | |

4:1 Design Factor.



Vertical Clamps

IPU10

Universal - For Lifting in any Direction

- Available in capacities of .5 thru 30 metric tons (Higher Working Load Limits are available upon request).
- Wide variety of jaw openings available: 0" to 6.13".
- Welded alloy steel body for strength and smaller size. Forged alloy components, where required.
- Individually Proof Tested to 2 times the Working Load Limit with certification.
- Company name (CrosbyIP), logo, Working Load Limit and jaw opening permanently stamped on body.
- Each product is individually serialized, with the serial number and Proof Load test date stamped on body. Serial number is included on the test certificate with maintenance and warranty logbook.
 - IPU10 Standard clamp for materials with a surface hardness to 37Rc (345HB) .

 - IPU10J Larger jaw opening. IPU10S For use with Stainless Steel material. ٠
 - IPU10H For use with materials with a surface hardness to 47Rc (450HB). Full 180° turning range for material transfer, turning or moving.
- Lock open, lock closed ability with latch for pretension on material and then release . of material.
- Optional IP-5000 Stinger assembly available. Allows for easy connection between the clamp and hoist hook
- Minimum WLL of 10% of Maximum WLL.
- Maintenance replacement kits are available.
- Manufactured by a ISO 9001 facility.
- All sizes are **RFID EQUIPPED.**

Model IPU10



(450 HB).

IPU10S: For use on

IPU10H: For use on

hardness to 47Rc

Stainless Steel material.

materials with a surface

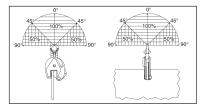
IPU10S

| - H_A - F - K | |
|---------------------|--|
| | |

| | <u>viouer i</u> | Working Load Limit | IPU10 Stock | Weight Each | | | | | Dimensi (in.) | ions | | | | |
|----|-----------------|-----------------------|----------------|----------------|---------------|------|-------|-------|------------------|-------|------|------|------|------|
| | Model | (t)* | No. | (lbs.) | Jaw A | В | С | D | E | F | G | Н | J | К |
| Į | IPU10 | 0.5 | 2701675 | 4.19 | 063 | 1.73 | 5.04 | 8.98 | 1.57 | 4.53 | 1.61 | 1.10 | - | .43 |
| [| IPU10 | 1 | 2701663 | 5.29 | 075 | 1.77 | 5.47 | 8.74 | 1.57 | 4.96 | 1.61 | 1.50 | - | .43 |
| 1[| IPU10 | 2 | 2701677 | 18.7 | 0 - 1.38 | 3.07 | 7.91 | 14.65 | 2.76 | 7.48 | 2.40 | 2.17 | - | .63 |
| ļļ | IPU10 | 3 | 2701665 | 32.6 | 0 - 1.56 | 3.94 | 9.96 | 17.52 | 2.95 | 8.86 | 3.07 | 2.36 | - | .79 |
| ļĮ | IPU10 | 4.5 | 2701667 | 35.3 | 0 - 1.56 | 3.94 | 9.96 | 17.52 | 2.95 | 9.13 | 3.23 | 2.56 | - | .79 |
| | IPU10 | 6 | 2701669 | 53.0 | 0 - 2.00 | 4.96 | 11.89 | 20.67 | 3.15 | 11.50 | 3.31 | 3.74 | 1.73 | .79 |
| | IPU10/J | 6 | 2702469 | 67.3 | 2.00 - 4.00 | 4.96 | 11.89 | 20.67 | 3.15 | 13.46 | 3.31 | 3.74 | 1.73 | .79 |
| l | IPU10 | 9 | 2701671 | 65.0 | 0 - 2.00 | 4.96 | 12.80 | 21.93 | 3.15 | 12.20 | 3.62 | 4.13 | 1.73 | .79 |
| | IPU10/J | 9 | 2701673 | 67.2 | 2.00 - 4.00 | 4.96 | 12.80 | 22.13 | 3.15 | 14.17 | 3.62 | 4.13 | 1.73 | .79 |
| | IPU10 | 12 | 2701679 | 126 | 0 - 2.13 | 6.30 | 15.39 | 24.53 | 3.15 | 13.03 | 4.61 | 5.39 | 1.61 | .98 |
| | IPU10/J | 12 | 2701681 | 130 | 2.13 - 4.25 | 7.01 | 17.28 | 26.50 | 3.15 | 16.34 | 4.61 | 5.39 | 1.61 | .98 |
| l | IPU10 | 16 | 2701683 | 159 | .25 - 2.50 | 7.01 | 18.31 | 28.90 | 3.46 | 15.63 | 4.69 | 6.02 | 1.77 | .98 |
| | IPU10/J | 16 | 2701685 | 187 | 2.50 - 5.00 | 8.19 | 20.51 | 31.10 | 3.46 | 18.58 | 4.69 | 6.34 | 1.77 | .98 |
| ļļ | IPU10 | 22.5 | 2701687 | 280 | .25 - 3.13 | 8.74 | 21.81 | 33.66 | 4.33 | 18.50 | 5.35 | 7.32 | 1.93 | .98 |
| ll | IPU10/J | 22.5 | 2701689 | 287 | 3.13 - 6.13 | 9.96 | 24.72 | 36.61 | 4.33 | 22.64 | 5.35 | 7.72 | 1.93 | .98 |
| ΙL | IPU10 | 30 | 2701691 | 337 | .25 - 3.13 | 8.74 | 21.46 | 33.86 | 4.33 | 18.50 | 5.98 | 7.32 | 2.13 | 1.18 |
| L | IPU10/J | 30 | 2701693 | 364 | 3.13 - 6.13 | 9.84 | 24.41 | 36.81 | 4.33 | 22.24 | 5.98 | 7.72 | 2.13 | 1.18 |
| ļĮ | | | | | stainless ste | | | | | - | | | | |
| | IPU10/S | 0.5 | 2702275 | 4.19 | 063 | 1.73 | 5.04 | 8.98 | 1.57 | 4.53 | 1.61 | 1.10 | - | .43 |
| ļĮ | IPU10/S | 1 | 2702263 | 4.63 | 075 | 1.77 | 5.47 | 8.74 | 1.57 | 4.96 | 1.61 | 1.50 | - | .43 |
| ļĮ | IPU10/S | 2 | 2702277 | 16.8 | 0 - 1.38 | 3.07 | 7.91 | 14.65 | 2.76 | 7.48 | 2.40 | 2.17 | - | .63 |
| | IPU10/S | 3 | 2702265 | 32.7 | 0 - 1.56 | 3.94 | 9.96 | 1.752 | 2.95 | 8.86 | 3.07 | 2.36 | - | .79 |
| | IPU10/S | 4.5 | 2702267 | 35.3 | 0 - 1.56 | 3.94 | 9.96 | 17.52 | 2.95 | 9.13 | 3.23 | 2.56 | - | .79 |
| ļ | IPU10/S | 6 | 2702269 | 53.0 | 0 - 2.00 | 4.96 | 11.89 | 20.67 | 3.15 | 11.50 | 3.31 | 3.74 | 1.73 | .79 |
| ļ | IPU10/S | 9 | 2702271 | 65.1 | 0 - 2.00 | 4.96 | 12.80 | 21.93 | 3.15 | 12.20 | 3.62 | 4.13 | 1.73 | .79 |
| ļ | IPU10/S | 12 | 2702279 | 67.3 | 0 - 2.13 | 6.30 | 15.39 | 24.53 | 3.15 | 13.03 | 4.61 | 5.39 | 1.61 | .98 |
| | | | | | ry hard mate | | | | | | | | | |
| ļ | IPU10/H | 0.5 | 2702175 | 4.19 | 063 | 1.73 | 5.04 | 8.98 | 1.57 | 4.53 | 1.61 | 1.10 | - | .43 |
| ļ | IPU10/H | 1 | 2702177 | 16.8 | 0 - 1.38 | 3.07 | 7.91 | 14.65 | 2.76 | 7.48 | 2.40 | 2.17 | - | .63 |
| ļ | IPU10/H | 2 | 2702165 | 32.7 | 0 - 1.56 | 3.94 | 9.96 | 17.52 | 2.95 | 8.86 | 3.07 | 2.36 | - | .79 |
| ļ | IPU10/H | 3 | 2702167 | 35.3 | 0 - 1.56 | 3.94 | 9.96 | 17.52 | 2.95 | 9.13 | 3.23 | 2.56 | - | .79 |
| ļ | IPU10/H | 4.5 | 2702169 | 53.0 | 0 - 2.00 | 4.96 | 11.89 | 20.67 | 3.15 | 11.50 | 3.31 | 3.74 | 1.73 | .79 |
| l | IPU10/H | 6 | 2702171 | 65.1 | 0 - 2.00 | 4.96 | 12.80 | 21.93 | 3.15 | 12.20 | 3.62 | 4.13 | 1.73 | .79 |

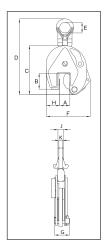
* Design Factor based on EN 13155 and ASME B30.20.







for the lifting, turning, moving or vertical transfer of sheet, plates, or fabrications from horizontal to vertical and down to horizontal (180°) as needed. The hinged hoisting eye allows for the clamp to place and lift the load from any direction, or with a multiple leg sling without side-loading the clamp.

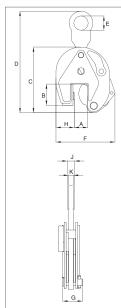


Vertical Clamps

IP10

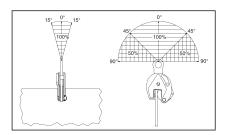
For Vertical Lifting, Turning and Transfer

The IP10 vertical lifting clamp is used for the lifting, turning, moving or vertical transfer of sheet, plates, or fabrications from horizontal to vertical and down to horizontal (180°) as needed. Usually used as a single point pick or when used with a spreader beam with multiple vertical drop lines.



| Mode | el IP10 | | | | | | | | - | | | | |
|--------|-----------------|--------------|----------------|---------------|----------|-------------|----------|-----------------|-------|------|------|------|------|
| | Working Load | IP10 | Weight | | | | | Dimens (in.) | | | | | |
| Model | Limit (t)* | Stock No. | Each (lbs.) | Jaw A | в | с | D | Е | F | G | н | J | к |
| IP10 | 0.5 | 2701674 | 3.97 | 063 | 1.73 | 5.04 | 8.15 | 1.18 | 4.53 | 1.61 | 1.10 | - | .39 |
| IP10 | 1 | 2701662 | 4.85 | 075 | 1.77 | 5.47 | 8.46 | 1.18 | 4.96 | 1.61 | 1.50 | - | .39 |
| IP10 | 2 | 2701676 | 16.8 | 0 - 1.38 | 3.07 | 7.91 | 13.23 | 2.76 | 7.48 | 2.40 | 2.17 | - | .63 |
| IP10 | 3 | 2701664 | 30.4 | 0 - 1.56 | 3.94 | 9.96 | 17.17 | 2.95 | 8.86 | 3.07 | 2.36 | - | .79 |
| IP10 | 4.5 | 2701666 | 33.1 | 0 - 1.56 | 3.94 | 9.96 | 17.17 | 2.95 | 9.13 | 3.23 | 2.56 | - | .79 |
| IP10 | 6 | 2701668 | 51.9 | 0 - 2.00 | 4.96 | 11.89 | 20.28 | 3.15 | 11.50 | 3.31 | 3.74 | 1.57 | .79 |
| IP10/J | 6 | 2701705 | 62.9 | 2.00 - 4.00 | 4.96 | 11.89 | 20.28 | 3.15 | 13.46 | 3.31 | 3.74 | 1.57 | .79 |
| IP10 | 9 | 2701670 | 60.7 | 0 - 2.00 | 4.96 | 12.80 | 21.65 | 3.15 | 12.20 | 3.62 | 4.13 | 1.73 | .79 |
| IP10/J | 9 | 2701672 | 62.9 | 2.00 - 4.00 | 4.96 | 12.80 | 21.85 | 3.15 | 14.17 | 3.62 | 4.13 | 1.73 | .79 |
| IP10 | 12 | 2701678 | 108 | 0 - 2.13 | 6.30 | 15.39 | 22.83 | 3.16 | 13.03 | 4.61 | 5.39 | 1.61 | .98 |
| IP10/J | 12 | 2701680 | 128 | 2.13 - 4.25 | 7.01 | 17.28 | 24.80 | 3.15 | 16.34 | 4.61 | 5.39 | 1.61 | .98 |
| IP10 | 16 | 2701682 | 150 | .25 - 2.50 | 7.01 | 18.31 | 27.17 | 3.46 | 15.63 | 4.69 | 6.02 | 1.93 | .98 |
| IP10/J | 16 | 2701684 | 199 | 2.50 - 5.00 | 8.19 | 20.51 | 29.37 | 3.46 | 18.58 | 4.69 | 6.34 | 1.93 | .98 |
| IP10 | 22.5 | 2701686 | 238 | .25 - 3.13 | 8.74 | 21.81 | 31.50 | 4.33 | 18.50 | 5.35 | 7.32 | 1.93 | .98 |
| IP10/J | 22.5 | 2701688 | 243 | 3.13 - 6.10 | 9.96 | 24.72 | 34.65 | 4.33 | 22.64 | 5.35 | 7.72 | 1.93 | .98 |
| IP10 | 30 | 2701690 | 327 | .25 - 3.13 | 8.74 | 21.46 | 31.50 | 4.33 | 18.50 | 5.98 | 7.32 | 2.13 | 1.18 |
| IP10/J | 30 | 2701692 | 335 | 3.13 - 6.10 | 9.84 | 24.41 | 34.65 | 4.33 | 22.24 | 5.98 | 7.72 | 2.13 | 1.18 |
| | | | | For stainle | ss steel | l - with fi | xed hois | sting eye | e | | | | |
| IP10/S | 0.5 | 2702274 | 3.97 | 063 | 1.73 | 5.04 | 8.15 | 1.18 | 4.53 | 1.61 | 1.10 | - | .39 |
| IP10/S | 1 | 2702262 | 4.41 | 075 | 1.77 | 5.47 | 8.46 | 1.18 | 4.96 | 1.61 | 1.50 | - | .39 |
| IP10/S | 2 | 2702276 | 15.0 | 0 - 1.38 | 3.07 | 7.91 | 13.23 | 2.76 | 7.48 | 2.40 | 2.17 | - | .63 |
| IP10/S | 3 | 2702264 | 30.5 | 0 - 1.56 | 3.94 | 9.96 | 17.17 | 2.95 | 8.86 | 3.07 | 2.36 | - | .79 |
| IP10/S | 4.5 | 2702266 | 33.1 | 0 - 1.56 | 3.94 | 9.96 | 17.17 | 2.95 | 9.13 | 3.23 | 2.56 | - | .79 |
| IP10/S | 6 | 2702268 | 51.9 | 0 - 2.00 | 4.96 | 11.89 | 20.67 | 3.15 | 11.50 | 3.31 | 3.74 | 1.57 | .79 |
| IP10/S | 9 | 2702270 | 60.7 | 0 - 2.00 | 4.96 | 12.80 | 21.93 | 3.15 | 12.20 | 3.62 | 4.13 | 1.73 | .98 |
| IP10/S | 12 | 2702278 | 108 | 0 - 2.13 | 6.30 | 15.39 | 24.53 | 3.15 | 13.03 | 4.61 | 5.39 | 1.61 | .98 |
| | | | | For very hard | | | | <u> </u> | | | - | | |
| IP10/H | 0.5 | 2702174 | 3.97 | 063 | 1.73 | 5.04 | 8.15 | 1.18 | 4.53 | 1.61 | 1.10 | - | .39 |
| IP10/H | 1 | 2702176 | 15.0 | 0 - 1.38 | 3.07 | 7.91 | 13.23 | 2.76 | 7.48 | 2.40 | 2.17 | - | .39 |
| IP10/H | 2 | 2702164 | 30.4 | 0 - 1.56 | 3.94 | 9.96 | 17.17 | 2.95 | 8.86 | 3.07 | 2.36 | - | .63 |
| IP10/H | 3 | 2702166 | 33.1 | 0 - 1.56 | 3.94 | 9.96 | 17.17 | 2.95 | 9.13 | 3.23 | 2.56 | - | .79 |
| IP10/H | 4.5 | 2702168 | 51.9 | 0 - 2.00 | 4.96 | 11.89 | 20.28 | 3.15 | 11.50 | 3.31 | 3.74 | 1.57 | .79 |
| IP10/H | 6 | 2702170 | 60.7 | 0 - 2.00 | 4.96 | 12.80 | 21.65 | 3.15 | 12.20 | 3.62 | 4.13 | 1.73 | .98 |

* Design Factor based on EN 13155 and ASME B30.20.





6

www.industrialrope.com

- Available in capacities of .5 thru 30 metric tons (Higher Working Load Limits are available upon
- request).
- Wide variety of jaw openings available: 0" to 6.10". Welded alloy steel body for strength and smaller size. Forged alloy components, where required. Individually Proof Tested to 2 times the Working Load Limit with certification.
- Company name (CrosbyIP), logo, Working Load Limit and jaw opening permanently stamped on body.
- Each product is individually serialized, with the serial number and Proof Load test date stamped on body. Serial number is included on the test certificate with maintenance and warranty logbook.
- Available in a variety of styles:
 - IP10 Standard clamp for materials with a surface hardness to 37Rc (345 HB).

 - IP10J Larger jaw opening. IP10S For use with Stainless Steel material. •
 - IP10H For use with materials with a surface hardness to 47Rc (450 HB).
- Full 180° turning range for material transfer, turning or moving.
- Lock open, lock closed ability with latch for pretension on material and then release of material. Optional IP-5000 Stinger assembly available. Allows for easy connection between the clamp and hoist
- hook.
- Minimum WLL of 10% of Maximum WLL.
- Maintenance replacement kits are available.
- Manufactured by a ISO 9001 facility. All sizes are **RFID EQUIPPED.**

Load Rated



Crosby[®] Clamp-Co Padded Pipe Grab

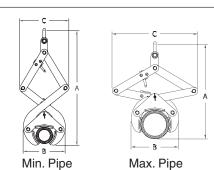


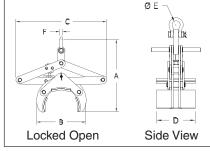
The new Crosby Clamp-Co Adjustable Pipe Grab provides an excellent means of handling cylindrical objects. Featuring padded grabs, the new Grab offers an excellent method of handling any pipe or solid bar, 3.5" to 36", especially where damage to material surface is not permitted.

- Capacities: 1,200 lbs. to 20,000 lbs.
- Each Grab size accommodates several diameters of pipe or solid bar.
- Auto indexing system provides quick connect and disconnect to load (one person - hands free)
- (one person hands free).
 Individually Proof Tested to 2 times the Working Load Limit with certification.
- Designed to handle loads of various types of material, including:
 - Cast Iron / Steel
 - PVC
 - Painted
- Epoxy Coated
- Finish Red Paint
- Replacement pads are available.
- Features Crosby shackle as upper connection point.Custom sizes are available.
- All sizes are RFID EQUIPPED.









| | | | | | Dimensions (in.) | | | | | |
|--------------|----------------------|----------------------------------|--------------------------|---------------------|------------------|-------|-------|-------|------|------|
| Model No. | CCPA Stock No. | Working Load Limit* (lbs.) | Weight Each (Ibs.) | Grip Width | А | в | с | D | E | F |
| | | | | Locked Open | 13.50 | 10.00 | 18.00 | | | |
| PA-5 | 2736000 | 1200 | 23 | Min. Pipe 3.50" | 27.00 | 9.00 | 8.00 | 6.50 | 1.31 | .50 |
| | | | | Max. Pipe 5.56" | 23.00 | 9.00 | 14.75 | | | |
| | | | | Locked Open | 23.50 | 15.50 | 27.75 | | | |
| PA-8 | 2736009 | 2000 | 75 | Min. Pipe 5.56" | 40.50 | 14.50 | 14.00 | 10.00 | 1.69 | .63 |
| | | | | Max. Pipe 8.81" | 34.00 | 14.75 | 24.00 | | | |
| | | | | Locked Open | 28.75 | 24.00 | 28.50 | | | |
| PA-14 | 2736018 | 4500 | 230 | Min. Pipe 8.81" | 46.00 | 22.50 | 13.50 | 15.50 | 1.50 | 1.00 |
| | | | | Max. Pipe 14.00" | 34.00 | 23.00 | 26.00 | | | |
| | | | | Locked Open | 42 | 36 | 42.5 | | | |
| PA-22 | 2736027 | 10,000 | 496 | Min. Pipe 14.00" | 67.5 | 34 | 19 | 20 | 2.5 | 1.5 |
| | | | | Max. Pipe 22.00" | 52 | 36 | 40 | | | |
| | | | | Locked Open | 57.27 | 57.03 | 57.31 | | | |
| PA-36 | 2736036 | 20,000 | 1250 | Min. Pipe 24.00" | 92.02 | 52.38 | 26.98 | 30.00 | 3.37 | 1.50 |
| | | | | Max. Pipe 36.00" | 66.36 | 55.03 | 53.24 | | | |

* Maximum Proof Load is 2 times the Working Load Limit and design factor based on EN13155 and ASME B30.20.

www.industrialrope.com

Crosby® Clamp-Co Barrier / Curb Grabs

CCBG

Crosby Clamp-Co Barrier Grabs provide a fast and efficient method for handling concrete road barriers.

- Hands-free operation.
- Alloy Steel Construction.
- Available with polyurethane pads or hardened steel jaw
- (Replacement kits available).
- Eliminates the need for slings, chokers and spreader bars.
 Individually Proof Tested to 2 times the Working Load Limit with certification.
- Finish Red Paint.
- All sizes are RFID EQUIPPED.



Barrier Grab

| Model | CCBG-150 Stock | Working Load Limit | Weight Each | Grip Width | I | Dimension (in.) | s |
|---------|-------------------|-----------------------|----------------|---------------|-------|--------------------|-------|
| No. | No. | (Tons)* | (lbs.) | (in.) | Α | В | С |
| BG-9000 | 2734009 | 4.5 | 000 | 6 (min.) | 40.88 | 44.88 | 18.00 |
| BG-9000 | 2734009 | 4.5 | 290 | 12 (max.) | 44.00 | 36.75 | 18.00 |

* Design factor based on EN13155 and ASME B30.20.

CCGG



Crosby Clamp-Co Curb Grabs provide a fast and efficient method for handling large granite curbs.

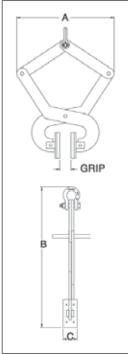
- large granne curb
- Virtually no manual assistance is required. Alloy Steel Construction.
- Available with polyurethane pads or hardened steel jaw.
- (Replacement kits available).
- Eliminates the need for slings, chokers and spreader bars.
- Individually Proof Tested to 2 times the Working Load Limit
- with certification.Finish Red Paint.
- All sizes are **RFID EQUIPPED**.



Curb Grab

| | | | | | | <u>.</u> | |
|---------|-------------------|-----------------------|----------------|---------------|------|--------------------|------|
| Model | CCGG-140 Stock | Working Load Limit | Weight Each | Grip Width | | Dimension (in.) | s |
| No. | No. | (lbs.)* | (lbs.) | (in.) | Α | В | С |
| CG-1400 | 2734000 | 1400 | 290 | 4 (min.) | 22.5 | 27.25 | 3.00 |
| CG-1400 | 2734000 | 1400 | 290 | 7 (max.) | 25.0 | 20.25 | 3.00 |

* Design factor based on EN13155 and ASME B30.20.



6

C

GRIP

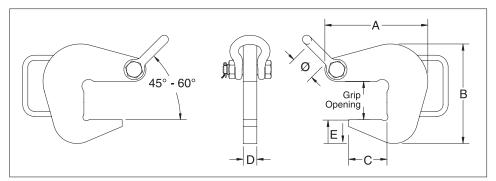
Crosby® Clamp-Co Pipe Hooks

ССРН



Crosby Clamp-Co Pipe Hooks provide a fast and efficient method for lifting pipe, tube or any similarly shaped fabrications.

- Alloy steel plate construction.
- Equipped with a convenient handle.
- Equipped with a Bolt Type Shackle. Non marring inserts available. .
- Used in pairs with 45° 60° horizontal angle or 60° 90° included angle.



Pipe Hooks

| | | Working Load Limit | | Weight | | | Dimer (ii | | Shackle | Cast | | |
|-------|-----------|-----------------------|---------------|----------------|-------|-------|--------------|------|---------|------|---------------|-----------------------|
| Model | Stock No. | Per Pair (t.)** | Grip (in.) | Each (lbs.) | А | в | С | D | Е | ø | Size (in.) | Aluminium Inserts* |
| PH-2 | 2734500 | 2 | 2.06 | 5.94 | 5.81 | 5.06 | 2.06 | 1.00 | 1.25 | 1.69 | 5/8 | 2734800 2734809 |
| PH-4 | 2734509 | 4 | 2.81 | 10.03 | 7.56 | 7.31 | 2.81 | 1.00 | 1.75 | 1.69 | 5/8 | 2734818 |
| PH-6 | 2734518 | 6 | 4.06 | 17.74 | 10.18 | 10.06 | 4.06 | 1.00 | 2.25 | 2.00 | 3/4 | 2734827 |
| PH-10 | 2734527 | 10 | 6.06 | 38.67 | 14.81 | 15.06 | 6.06 | 1.00 | 3.50 | 2.69 | 1.0 | 2734836 |

* See CCPHI chart for Pipe ID range. **Design factor based on EN13155 and ASME B30.20.





Interchangeable cast aluminium inserts for use with the CCPH Pipe Hook that minimizes thread and pipe damage.

CCPHI

•

| Catalog Number | Stock No. | ID of Pipe (in.) | |
|----------------|-----------|------------------|--|
| | 2734800 | 3-12 | |
| | 2734809 | 12-18 | |
| CCPHI | 2734818 | 18-30 | |
| | 2734827 | 30-42 | |
| | 2734836 | 42-72 | |

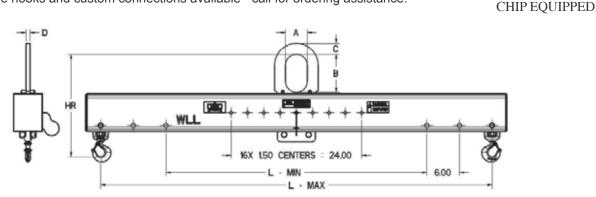
INDUSTRIAL WIRE ROPE SUPPLY

Adjustable Length Lifting Beams with Swivel Hook bottoms

- Manufactured to exceed all ASME B30.20 and OSHA regulations.
- Painted safety yellow for increased visibility.
- **ALL** Lifting Beams proof loaded and shipped with certification paperwork.
- Durable construction ideally suited to jobsite or warehouse use.
 - Quick and easy adjustment of unbalanced loads.
 - · Ideally suited to low headroom applications.
 - Pictured with standard alloy swivel latch hooks.
 - Eye hooks and custom connections available call for ordering assistance.

- Made in U.S.A.
- Custom lettering available call for details.
- Custom designs available call for engineering.
- ALL lifting equipment individually proof loaded per OSHA requirements.
- All dimensions in inches unless otherwise noted.

RFID TRACKING



| Working Load Limit in Pounds* | Part Number | L min | L max | А | В | С | D | HR | Weight in Pounds |
|-------------------------------------|----------------|-------|-------|---|---|------|------|------|---------------------|
| 2,000 | 16410 | 48 | 72 | 3 | 5 | 0.75 | 0.63 | 13.8 | 85 |
| 2,000 | 16411 | 120 | 144 | 3 | 5 | 0.75 | 0.63 | 15.7 | 285 |
| 4,000 | 16412 | 48 | 72 | 3 | 5 | 1.5 | 0.63 | 14.6 | 135 |
| 4,000 | 16413 | 120 | 144 | 3 | 5 | 1.5 | 0.63 | 16.6 | 330 |
| 6,000 | 16414 | 48 | 72 | 3 | 5 | 1.5 | 0.63 | 16.2 | 160 |
| 6,000 | 16415 | 120 | 144 | 3 | 5 | 1.5 | 0.63 | 19.1 | 530 |
| 8,000 | 16416 | 48 | 72 | 4 | 7 | 2 | 0.75 | 18.9 | 200 |
| 8,000 | 16417 | 120 | 144 | 4 | 7 | 2 | 0.75 | 20.9 | 540 |
| 10,000 | 16418 | 48 | 72 | 4 | 7 | 2 | 0.75 | 21.2 | 300 |
| 10,000 | 16419 | 120 | 144 | 4 | 7 | 2 | 0.75 | 22.2 | 795 |
| 15,000 | 16420 | 48 | 72 | 4 | 7 | 2 | 1.00 | 22.1 | 315 |
| 15,000 | 16421 | 120 | 144 | 4 | 7 | 2 | 1.00 | 25.1 | 815 |

* Call for specifications on larger sizes and capacities



McKissick[®] Custom Sheaves

| Customer Name: | - | Date: | | | | | |
|-----------------------------------|---|----------------------|--|--|--|--|--|
| Address: | City: | State, Zip: | | | | | |
| Phone: | Fax: | E-Mail: | | | | | |
| | | | | | | | |
| Customer Contact Na | me: | Quantity: | | | | | |
| DIMENSIONAL INFO | NOMINAL THREE OF LOUGH LIKEY | ANN HAR | | | | | |
| Nominal Outside Diar | meter: Wire Rope Size: | Rim Width: | | | | | |
| | * Hub Width: | | | | | | |
| + Shaft size is bore size on Pla | eter (Optional): Nominal Hub ain Bore Sheaves. the cone of the Tapered Bearing Sheaves. | Diameter (Optional): | | | | | |
| BEARING TYPE | Bronze Bushing | Ball Bearing | | | | | |
| | Tapered Roller Bearing | Ginish / Plain Bore | | | | | |
| | Roller Bearing (requires hardened and ground shaft) | Underwater | | | | | |
| | Full Complement Double-Row Cylindrical Roller Bearings with Seals | C Other | | | | | |
| MATERIAL TYPE | Roll Forged (Flame hardened 14" (356mm) and larger |) Forged Steel | | | | | |
| | Cast Steel | Domed | | | | | |
| | General Fabricated | Contract Other | | | | | |
| APPLICATION INFO | RMATION | | | | | | |
| Line Pull: | Fleet Angle: | Degree of Wrap: | | | | | |
| Line Speed: | Line Speed: Environment: Groove Angle: | | | | | | |
| Finish: Third Party Inspectior | | | | | | | |



Crosby[®] **Custom Design Hooks**

CROSBY CUSTOM MACHINED SHANK HOOK & NUT QUOTATION REQUEST FORM

| Customer Name: | | Date: | | | | |
|---|---|-----------|--|--|--|--|
| Address: | City, State, Zip | | | | | |
| Phone: | Fax: | | | | | |
| Customer Contact Name: | | | | | | |
| Quotation Due Date: | Product Delivery Date: | | | | | |
| Crosby / McKissick Proposal Number: | | Quantity: | | | | |
| Browling | SHANK AFTER ASSEMBLY | ND NUT | | | | |
| Dimensions: | | | | | | |
| Frame Size and material Symbol: | | | | | | |
| Working Load Limit (tons) | | | | | | |
| Α. | Round or Hex Nut | | | | | |
| В. | E.* | | | | | |
| C.* | F. | | | | | |
| D. | | | | | | |
| * The minimum thread length engaged in the nut should not be less than one (1) thread diameter. | Hook Latch Kit SS-4055 Flipp PL Flapper lat 4320 Latch | | | | | |
| For additional information concerning customer design products, contact: In U.S.A Crosby's Special Engineered Products Group at 1-800-777-1555 In Canada - Crosby Canada at (905) 451-9261 In Europe - N.V. Crosby Europe at 32-15-757125 (26) | 1 | | | | | |

Crosby® Swivel Hoist Ring Data Form

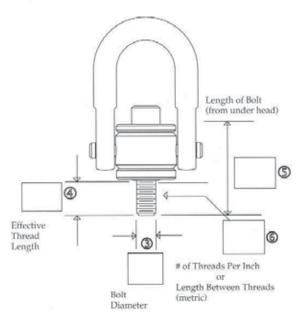
Specification sheet for Crosby HR125 & HR125M Hoist Rings with optional bolt lengths

| Date: | |
|-----------------------------|---------------------------|
| CG #: | Crosby Quote Number: |
| Customer #: | Contact: |
| Distributor's Names: | Distributor's Fax Number: |
| Distributor's Phone Number: | Quantity Requested: |
| Distributor's P.O. # | Crosby Representative: |

1. Determine the *Type of Threads* required on the Hoist 1. Ring - Metric or UNC, UNF, Etc. **NOTE - NOT DESIGNED FOR PIPE, ACME OR TAPERED THREADS.**

Data

- 2. Determine the *Working Load Limit* of the requested Hoist Ring.
- 3. Determine *Bolt Diameter* The diameter of the required bolt.
- Thread Type (Circle One)
 U.N.C. Thread
 Metric Thread
 Other
 (NOT DESIGNED FOR PIPE, ACME, OR TAPERED THREADS)
- 2.→ Hoist Ring Capacity (Working Load Limit) _____lbs. Kgs.
- 4. Determine *Effective Thread Length* -This is the length the threads must be in order to fully engage, or project through, the work piece. **NOTE**; If the Effective Thread Length is not known, the Length of Bolt is required.
- 5. Determine *Length of the Bolt* The over all length of the bolt as measured from under the head of the bolt. **NOTE: If the Effective Thread Length is not known, the Length of the bolt is required.**
- 6. # of Thread Threads per Inch (Length Between Threads for Metric threads) - This information is <u>required</u> to ensure we ship proper bolt size (i.e., 1/2 - 13, 7/8 -9, 8 x 1.25, etc.).



Crosby[®] / Bullard[®] Golden Gate[®] Hook

HOOK DATA FORM

| Hook Size: | Name of Person Completing Form: |
|---|---|
| Sales Order: | |
| Working Load Limit (Tons) | Telephone: |
| Hoist Name and Model: | Distributor: |
| Top Hook 🗋 Bottom Hook 🗋 | Distributor P.O.: |
| Is Self-Closing Gate Required? Yes 🔲 No 🗋 | Accurate dimensions are important. If you have any questions, contact your authorized Crosby Distributor. |

Shank Length

- 1. Measure total USABLE shank length from top of hook shank to top of gate assembly. Gate assembly is not considered part of the USABLE shank. When measuring other manufacturer's hooks, measure from the top of the hook shank to the hook shoulder.
- 2. Measure threaded portion (enter BLANK if threads not required). NOTE: Hook is supplied with Steel Hex-Load Nut and Bronze Load Washer. Hook and Nut threads areNational Coarse. If a SPECIAL Load Nut or Load Washer is required, attach a drawing to this form.

Shank Diameter

- 3. Measure width of threaded portion.
- 4. Measure width of blank portion.

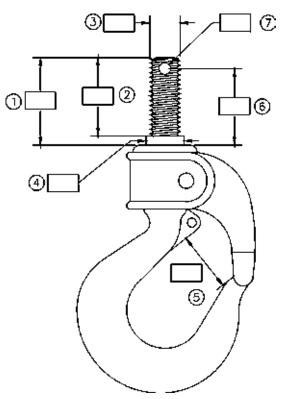
Throat Opening

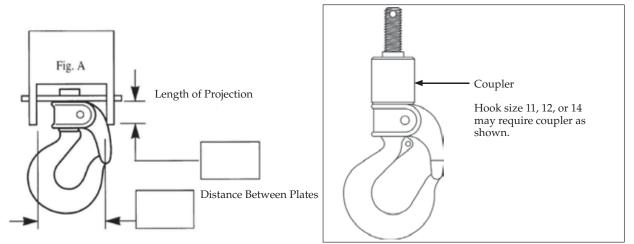
5. ONLY measure throat opening if this distance is critical to customer's operation.

Cross Hole in Shank Hooks

(complete only if required)

- 6. Measure shank length from center of hole to top of gate assembly.
- 7. Measure diameter of hole.

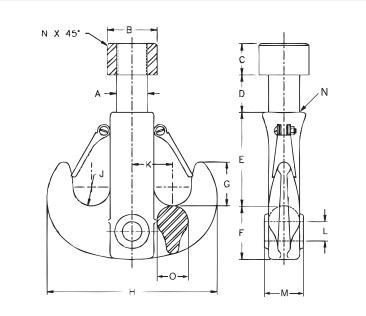




McKissick[®] Custom Design Hooks

McKissick® Duplex Hook Assemblies

- Cast alloy steel.
- Available in forged steel upon special request.
- Can be machined to optional dimensions upon request.
- Furnished complete with two flipper latches.
- The working load limits shown are in short tons and applicable for loading up to an included sling angle of 90 degrees. For included sling angles up to 60 degrees, the hooks can be rated in metric tons.



| | Duplex Hook with Nut and Latches Dimensions (in.) | | | | | | | | | | | | | | | | |
|-------------------|---|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-----|-------|----------------|--------------------------|
| Stock No. Hook | Size | | | | | | | | | | | | | | | Weight Each | Replacement Latch Kit |
| Assembly | (tons) | Α | в | с | D | Е | F | G | н | J | к | L | М | Ν | 0 | (lbs.) | Stock No. |
| 127384 | 25 | 2.50 | 4.00 | 2.50 | 3.00 | 7.50 | 4.31 | 3.50 | 13.75 | 1.50 | 3.25 | 2.06 | 2.75 | .12 | 2.50 | 62 | 1090143 |
| 126802 | 50 | 3.00 | 4.88 | 3.00 | 3.25 | 10.00 | 5.50 | 5.00 | 18.50 | 2.00 | 4.25 | 2.81 | 3.75 | .25 | 3.50 | 136 | 1090189 |
| 137373 | 75 | 4.00 | 7.50 | 4.00 | 4.00 | 13.50 | 8.00 | 6.50 | 25.00 | 2.50 | 5.50 | 3.31 | 4.62 | .25 | 4.50 | 311 | 1090223 |
| 137364 | 100 | 5.00 | 9.00 | 5.00 | 5.50 | 16.00 | 9.00 | 9.00 | 30.00 | 3.00 | 6.75 | 3.81 | 5.00 | .25 | 5.00 | 532 | 1090223 |
| 137266 | 125 | 5.00 | 9.00 | 5.00 | 5.50 | 19.00 | 10.00 | 9.00 | 31.50 | 3.00 | 7.50 | 4.31 | 5.25 | .25 | 5.00 | 844 | 1090223 |
| 137355 | 150 | 6.00 | 10.00 | 6.00 | 6.00 | 19.00 | 10.00 | 9.00 | 31.50 | 3.00 | 7.50 | 4.31 | 5.25 | .12 | 5.00 | 844 | 1090223 |
| 137346 | 200 | 7.00 | 12.00 | 6.00 | 8.25 | 20.50 | 12.75 | 10.50 | 36.50 | 3.50 | 8.00 | 4.81 | 6.75 | .25 | 6.00 | 1085 | 1090241 |
| 137337 | 250 | 8.00 | 14.00 | 7.00 | 9.00 | 23.75 | 14.00 | 11.75 | 40.00 | 3.75 | 8.75 | 5.12 | 8.00 | .25 | 7.00 | 1635 | 1090241 |
| 137328 | 350 | 8.00 | 15.50 | 8.00 | 10.00 | 24.00 | 16.00 | 12.00 | 45.25 | 4.25 | 10.25 | 7.16 | 9.50 | .25 | 9.00 | 2423 | 143080 |
| 2022897 | 500 | 10.00 | 18.00 | 8.25 | 16.75 | 26.50 | 18.50 | 12.25 | 45.00 | 4.50 | 10.00 | 7.16 | 9.50 | .25 | 9.00 | 3300 | 8022575* |
| 137319 | 600 | 10.00 | 18.00 | 8.25 | 8.75 | 25.00 | 18.00 | 14.00 | 51.00 | 5.00 | 11.00 | 7.94 | 9.75 | .25 | 9.00 | 3120 | 143071 |
| +2031520 | 1000 | 12.00 | 23.00 | 10.00 | 22.00 | 36.50 | 28.75 | 16.00 | 69.50 | 4.50 | 17.00 | 10.75 | 14.50 | _ | 11.50 | 7800 | 8015361* |

Ultimate Load is 4 times the Working Load Limit.

* Bolt style latch.

+ 1000 ton has different prong profile than shown.

For the purpose of calculating D/d ratio, utilize dimension O.

For additional information concerning custom design products, contact:

In U.S.A. — Crosby's Special Engineered Products Group at 1-800-777-1555, Fax (918) 834-5035.

In Canada — Crosby Canada at (905) 451-9261.

In Europe — N.V. Crosby Europe at 32 15 757125 (26).

Custom Split-Nut Hook for Mobile Cranes

| Customer Name: | | Date: |
|--|------------------------|--------------------------|
| Address: | City, State, Zip Code: | |
| Phone: | Fax: | |
| Customer Contact Name: | Quantity: | Requested Delivery Date: |
| - INTERNAL USE ONLY - Crosby / McKissick | Proposal Number: | |

Crosby McKissick® patented (U.S. Patent 7,000,905 and 7,293,763) Split-Nut Hook Retention System featured on McKissick® crane blocks makes inspection easier. The hook can be disassembled, inspected and put back into service in a fraction of the time of a conventional threaded nut.

| | Available Configurations | | | | | | | | | | |
|--|---------------------------|--------------------------------|------|-------|-------------|-------|--------------|-------------------------------|------|--|--|
| 319 Hook Type | | "A" Available Shank Dia. | | - | 3" nsion | | C" Insion | "D" Maximum Grip Length | | | |
| and Working Load Limit 4:1 Alloy (t) | Crosby Hook ID Code | (in.) | (mm) | (in.) | (mm) | (in.) | (mm) | (in.) | (mm) | | |
| 15 | L | 1.75 | 44.4 | 1.62 | 41.1 | 3.25 | 82.5 | 5.38 | 137 | | |
| 22 | Ν | 2.00 | 50.8 | 1.62 | 41.1 | 3.50 | 88.9 | 5.38 | 137 | | |
| 30 | 0 | 2.50 | 63.5 | 2.31 | 58.7 | 4.38 | 111 | 15.69 | 398 | | |
| 37 | Р | 2.50 | 63.5 | 2.31 | 58.7 | 4.38 | 111 | 21.69 | 551 | | |
| 45 | S | 3.00 | 76.2 | 2.75 | 69.9 | 5.50 | 140 | 21.25 | 540 | | |
| 60 | Т | 3.00 | 76.2 | 2.75 | 69.9 | 5.50 | 140 | 23.25 | 591 | | |
| 75 | U | 4.00 | 102 | 3.75 | 95.2 | 7.50 | 190 | 19.25 | 489 | | |

Steps to fit your block with the patented McKissick® Split-Nut Hook Retention System

- Measure side plate to hook tip clearance and record in box "G" below. (The net length "H" dimension may be affected by holding the "G" dimension. If there is adequate clearance at tip of hook, the net length "H" dimension may be the 1. dimension to specify).
- Remove hook and thrust bearing from existing crane block. 2
- Measure shank diameter and record in box "A" below. Measure nut thickness and record in box "B" below. The standard "B" dimension З. 4
- (shown above) is a minimum and will be utilized unless actual measured "B" dimension is required.
- Measure nut diameter and record in box "C" below. The standard "C" dimension 5. (shown above) is a minimum and will be utilized.

Measure thrust bearing thickness and record in box "E" below. If known, record 6. thrust bearing manufacturer and stock number below.

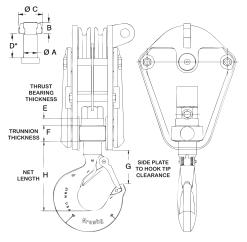
7. Measure trunnion thickness through the hook shank hole and record in box "F" within 1/32'

8. The required grip length "D" will be the addition of the "E" and "F" dimensions

betermine the required hook size based on shank diameter and tonnage. Other shank /hook / tonnage combinations may be available. Your supplied information will be reviewed for the Split-Nut application. 9

10. Complete the form and forward to your local Authorized Distributor for quotation.

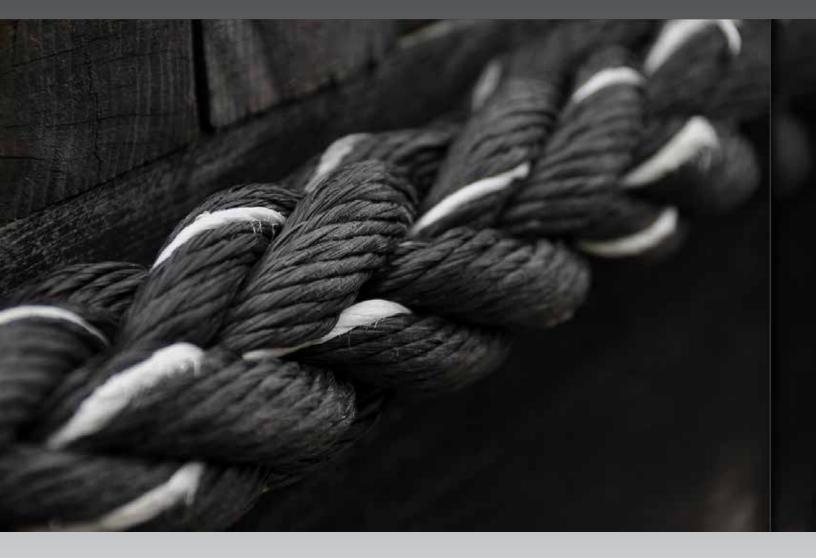
| | | Required Dimension | IS | | | | | |
|--|--|--------------------------------|-----------|----------------------------|--|--|--|--|
| Frame Code or other dist | inguishable size designator: | Material Type | Check O | Ine: Carbon D Alloy | | | | |
| Working Load Limit: | Check One: D Tons D Metric Ton | Thrust Bearing Identification: | | | | | | |
| Check One: | | | | | | Hook Latch Kit | | |
| Dimension A: | □(in.) □ (mm) | Dimension E: | 🗖 (i | n.) 🔲(mm) | | Check One: | | |
| Dimension B: | □(in.) □(mm) | (mm) Dimension F: | | | | PL / PL-N Flapper latch | | |
| Dimension C: | 🖵 (in.) 🗖 (mm) | Dimension G: | (| in.) 🔲 (mm) | | For personnel hoisting | | |
| Dimension D*: | 🗖 (in.) 🔲 (mm) | Dimension H: | □ (| in.) 🔲 (mm) | | applications, only a PL, PL-N or S-4320 shall be utilized. | | |
| *D = Bearing Thickness "I | E" + Trunnion Thickness "F" + .06" running c | clearance. | | | | · | | |
| U.S.A Crosby's Special Canada - Crosby Canada | For additional information concerning customer design products, contact: U.S.A Crosby's Special Engineered Products Group at 1-800-777-1555 Canada - Crosby Canada at (905) 451-9261 Europe - N.V. Crosby Europe at 32-15-757125 (26) | | | | | | | |



| | Thrust Bearing Standard | | | | | | | | | |
|-------|-------------------------|------------|-----------------|-------|----------------|-------------|--|--|--|--|
| | ank Ø | | ring de Dia. | | aring kness | Bearing | | | | |
| (in.) | (mm) | (in.) (mm) | | (in.) | (mm) | Description | | | | |
| 1.75 | 44.4 | 3.266 | 83.0 | 0.938 | 23.8 | T-176 | | | | |
| 2.00 | 50.8 | 3.672 | 93.3 | 1.062 | 26.9 | T-202 | | | | |
| 2.50 | 63.5 | 4.375 | 111 | 1.063 | 27.0 | T-251 | | | | |
| 3.00 | 76.2 | 5.250 | 133 | 1.313 | 33.4 | T-301-W | | | | |
| 4.00 | 102 | 7.000 | 178 | 1.750 | 44.4 | 40-TP-114 | | | | |

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Cordage and Pull Tape



Cordage Comparative Weight Strength and Working Load Chart

| | | | MANILA | | | NYLON | | POL | YPROPYLEN | ŧ٤ |
|--------------------|-------------------------------|-----------------------------------|---|--|-----------------------------------|--|------------------------------------|---|---|--|
| NOMINA Dismeter | AL SIZE Circum- ference | Unear Density' (Lbs/100fil) | Minimum Tensile Strength ² (Lbs.) | Max. Working ³ Load (Lbs.) | Linear Density' (Lbs/100ft) | Moimum Tensile Strength ² (Lbs.) | Max. Working? Lead (Lbs.) | Linear Dansity ⁱ (Lbs/100it) | Minimum Tensila Streng©1 ² (Lbs.) | Max. Working ³ Load (Lbs.) |
| W 16 | 5/8 | 1.50 | 406 | 41 | 1,00 | 900 | 75 | .70 | 720 | 72 |
| 40 | 3/4 | 2.00 | 540 | 54 | 1.50 | 1,490 | 124 | 1.20 | 1,130 | 113 |
| 5/14 | í | 2.90 | 900 | 90 | 2.50 | 2,300 | 192 | 1.60 | 1,210 | 171 |
| ₩0 | 1 1/6 | 4.10 | 1,220 | 122 | 3.50 | 3,340 | 278 | 2.60 | 2,440 | 244 |
| 7/16 | 1 1/4 | 5.25 | 1,580 | 176 | 5.00 | 4,500 | 410 | 3.60 | 3,160 | 352 |
| 1/2 | 1 1/2 | 7.50 | 2,380 | 264 | 6.50 | 5,750 | 525 | 4.70 | 3,780 | 420 |
| 9 /16 | 1 3/4 | 10.4 | 3,100 | 389 | 6.15 | 7,200 | 720 | 6.10 | 4,600 | 575 |
| s _{ya} | 2 | 13.3 | 3,960 | 496 | 10.5 | 9,350 | 935 | 7.50 | 5.600 | 700 |
| ÷y∉ | 2 % | 15.7 | 4,860 | 695 | 14,5 | 12.800 | 1,420 | 10.7 | 7,650 | 1,090 |
| 13/16 | 2 1/2 | 19.5 | 5,850 | 835 | 17.0 | 15,300 | 1,700 | 12.7 | 8,900 | 1,270 |
| 7/8 | 234 | 22.4 | 6,950 | 995 | 20.0 | 18,000 | 2,000 | 15.0 | 10,400 | 1,490 |
| ٢ | з | 27.0 | 8,100 | 1,160 | 26.4 | 22,600 | 2,520 | 18.0 | 12,600 | 1,800 |
| 1 1/46 | 3 1/4 | 31.2 | 9,450 | 1,350 | 29.0 | 26,000 | 2,880 | 20.4 | 14,400 | 2,060 |
| 1 1/6 | 3 1/2 | 36.0 | 10.800 | 1,540 | 34 D | 29,800 | 3,320 | 23.6 | 16,500 | 2,360 |
| 1.94 | 3 3/4 | 41,6 | 12,200 | 1,740 | 40 0 | 33,800 | 3,760 | 27.0 | 18,900 | 2,700 |
| 1 \$/16 | 4 | 47.8 | 13,500 | 1.930 | 45.0 | 38,800 | 4,320 | 30.4 | 21,200 | 3,020 |
| 1 1/2 | 4 1/2 | 60.0 | 16,700 | 2.380 | 55 O | 47,800 | 5,320 | 38.4 | 26,800 | 3,820 |
| 1 %8 | 5 | 74.5 | 20.200 | 2.880 | 66.5 | 58.500 | 6,500 | 47.6 | 32,400 | 4,620 |
| 1-3/4 | 5 1/z | 89.5 | 23.800 | 3,400 | 83.0 | 70,000 | 7,600 | 59.0 | 38,800 | 5,550 |
| 2 | 6 | 108. | 28.000 | 4.000 | 95.0 | B3,000 | 9,200 | 69.0 | 46.800 | 6.700 |
| 2 Ve | 6 1/2 | 125. | 32,400 | 4,620 | 109. | 85,500 | 10,600 | 80.0 | 55,000 | 7,850 |
| 2.44 | 7 | 146. | 37,000 | 5,300 | 129. | 1 13,000 | 12,600 | 92.0 | 62,000 | 6,650 |
| 2 1/2 | 7 1/2 | 167. | 41,800 | 5.950 | 149. | 126.000 | 14,000 | 107. | 72,000 | 10,300 |
| 2.5% | 8 | 191 | 46,800 | 6,700 | 168. | 146.000 | 16,200 | 120. | 81,000 | 11,600 |
| 2.7/8 | B 1/2 | 215. | 52.000 | 7,450 | 189. | 162.000 | 18,000 | 137. | 91,000 | 13,000 |
| 3 | 9 | 242. | 57,500 | 6,200 | 210. | 190,000 | 20,000 | 153. | 103.000 | 14,700 |
| 3 1/4 | 10 | 298. | 69,500 | 9,950 | 264. | 226,000 | 25,200 | 190. | 123,000 | 17,600 |
| 3 % | 11 | 36 6. | 82,000 | 11,700 | 312. | 270,000 | 30,000 | 232. | 146,000 | 20,800 |
| 4 | 12 | 434, | 94,500 | 13,500 | 380 | 324,000 | 36,000 | 276. | 171,000 | 24,000 |
| 4 % | 13 | | | | 445. | 380.000 | 42,200 | 325 | 202.000 | 28,900 |
| 4 1/2 | 14 | | | | 520. | 441,000 | 49,000 | 375. | 234.000 | 33,400 |
| 5 | 15 | | | | 590. | 507,000 | 56,300 | 436. | 268,000 | 38,390 |
| 5.1% | 16 | | | | 675. | 572,000 | 63,600 | 490. | 302,000 | 43,100 |
| 5 5/8 | 17 | | | | 765. | 635.000 | 70.600 | 555 | 329,000 | 47,000 |
| 6 | 18 | | | | 860. | 698.000 | 77,600 | 625. | 360,000 | 51,400 |

NOTES:

- 1. LINEAR DENSITY: (pounds per 100 feet) shown is "average " Maximum is 5% higher.
- NEW AOPE TENSILE STRENGTHS; are based on tests of new and unused rope of standard construction in accordance with Cordage Institute Standard Test Methods.
- MAX. WORKING LOADS: are for rope in good condition with appropriate splices in noncritical applications, and under normal service conditions. Working loads should be reduced where fite, fimb, or valuable property are involved, or for exceptional service conditions such as shock loads, sustained loads, etc.

These specifications are for 3 strand laid standard ropes. Fourstrand ropes weigh approximately 7% more and breaking tests are approximately 5% less than 3-strand ropes.

CAUTION!

- 1. Working loads are recommanded guidelines only.
- Specs are based on test of new and unused ropes of current manufacturers.
- Once rope is put into service it is continuously detenorating.
- 4 Manila and sisal rope will deteriorate in storage even under ideal conditions.

INDUSTRIAL WIRE ROPE SUPPL



Industrial Wire Rope Supply Co., Inc.

<u>Cincinnati Division</u> 7390 Harrison Avenue Cincinnati, Ohio 45247 Phone: (513) 941-2443 Fax: (513) 941-2445 Toll Free:(888)-345-0919

St. Charles Division

2086 Exchange Drive St. Charles, Missouri 63303 Phone: (636) 255-0600 Fax: (636) 255-0602 Toll Free: (866) 852-9714

DOUBLE BRAID POLYESTER STANDARD WHITE / GREEN TRACER

Approx. Approx. Diameter LBS/100 KGS/100 **Tensile** in **Tensile In** Diameter in MM Circumference Feet Meters LBS KG 1/4" 1900 6 3/4" Z.00 3.0 856 5/16" 8 1 3.50 1441 5.2 320D 3/8" 10 1 1/8" 4.40 1892 6.6 4200 7/16" 11 1 5/16" 6.70 10.0 6000 2703 1/2" 12 1 1/2" 8.20 12.2 7500 3378 9/16" 1.3/4" 9.70 14.5 9500 4279 14 5/8" 2" 16 13.00 19.4 12700 5721 3/4" 18 2 1/4" 17.50 26.1 18800 8468 7/8" 23.30 **2**2 2 3/4" 34.7 27660 12459 1" 3" 24 30.50 45.4 31000 13964 1 1/8" 28 3 1/2" 40.00 59.6 40650 18311 1 1/4" 30 3 3/4" 49.00 22072 73.0 49000 4" 1 5/16" 32 55.00 82.0 55000 24775 1 1/2" 36 4 1/2" 64.00 95.0 70500 31725 1 5/8" 5" 40 82.00 122.2 89600 33558 1 3/41 95.00 44 5 1/2" 141.6 103800 38626 Ζ" 6" 48 124.00 184.8 126000 46846 137.00 204.0 143000 64414 2 1/81 50 6 1/2" 77 72072 2 1/4" 56 153.00 339.0 160000 2 1/2" 60 7 1/2" 189.00281.0 181000 81531

INDUSTRIAL WIRE ROPE SUPPLY



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2086 Exchange Drive St. Charles, Missouri 63303 Phone: (636) 255-0600 Fax: (636) 255-0602 Toll Free: (866) 852-9714

L

Double Braid Nylon

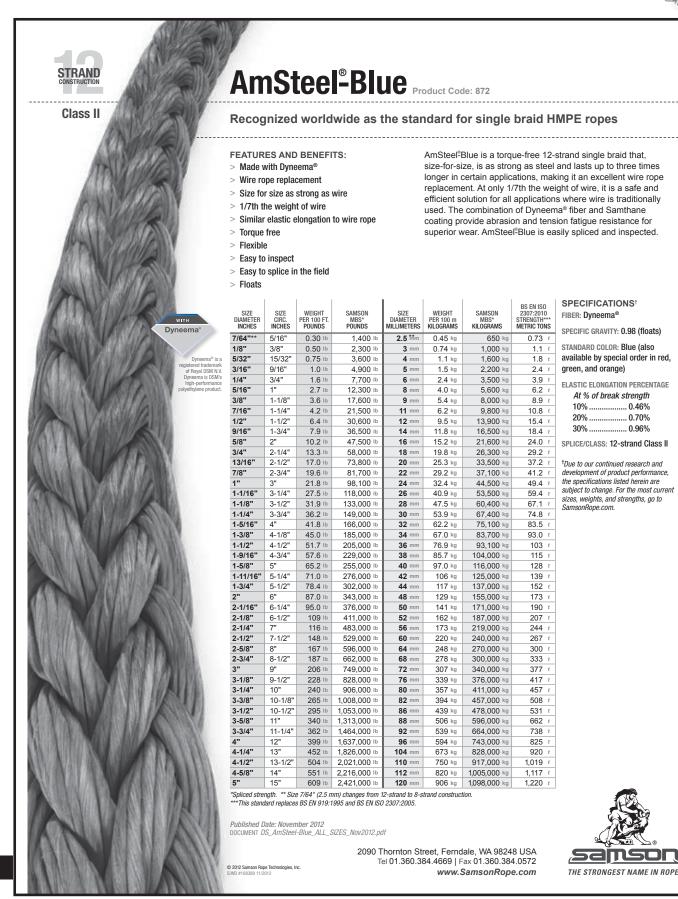
KEY BENEFITS:

 High strength
 High energy absorption and elasticity. For mooring, anchoring, towing and any other application that requires controlling sudden shock loading. Meets or Exceeds US Military Specifications # Mil-DTL-24050 E and Canadian Military Specifications 40-16-95 Type 1. Specific Gravity 1.14.

Standard White/Blue Tracer, Also available in Red, Blue, Black, Green and Gold.

| Diameter | Diameter in MM | Circumference | LBS/100 Feet | KGS/100 Meters | Approx. Tensile in L8S | Approx. Tensile In KG |
|----------|-------------------|---------------|-----------------|-------------------|------------------------------|-----------------------------|
| 1/4" | 6 | 3/4" | 1.7 | 2.5 | 2170 | 984 |
| 5/16" | 8 | 1 | 2.5 | 3.7 | 3090 | 1401 |
| 3/8" | 10 | 1 1/8" | 3.4 | 5.1 | 4220 | 1914 |
| 7/161 | 11 | 1.5/16" | 5.3 | 7.8 | 5400 | 2449 |
| 1/2" | 12 | 1 1/2" | 6.3 | 9.3 | 7200 | 3265 |
| 9/16" | 14 | 1 3/4" | 7.8 | 11.7 | 10500 | 4729 |
| 5/8" | 16 | 2" | 10.8 | 16.1 | 14000 | 6349 |
| 3/41 | 18 | 2 1/4" | 16.2 | 21.1 | 20000 | 9070 |
| 7/8" | 22 | 2 3/41 | 20.0 | 29.8 | 28000 | 12698 |
| נ" | 24 | 3" | 25.0 | 37.2 | 33500 | 15193 |
| 1 1/8" | 28 | 3 1/2" | 33.3 | 49.6 | 47000 | 21171 |
| 1 1/4" | 30 | 3 3/4" | 39.2 | 58.3 | 53000 | 23873 |
| 1 5/16" | 32 | 4" | 44.2 | 65.7 | 56940 | 25823 |
| 1 1/2" | 36 | 4 1/2" | 53.3 | 79.4 | 72500 | 32658 |
| 1 5/8" | 40 | 5" | 67.5 | 100.5 | 88000 | 39639 |
| 1 3/4" | 44 | 5 1/2" | 82.0 | 122.0 | 105000 | 47297 |
| 2" | 48 | 6" | 97.0 | 144.4 | 125000 | 56306 |
| 2 1/8" | 52 | 6 1/2" | 114.0 | 169.7 | 143000 | 64414 |
| 2 1/4" | 56 | 7" | 132.0 | 196.4 | 165000 | 74324 |
| 2 1/2" | 60 | 7 1/2" | 152.D | 226.2 | 185000 | 83333 |
| 2 5/8" | 64 | B" | 173.0 | 257.5 | 201000 | 91172 |

INDUSTRIAL WIRE ROPE SUPPLY



MINDUSTRIAL WIRE ROPE SUPPLY



Industrial Wire Rope Supply Co., Inc.

<u>Cincinnati Division</u> 7390 Harrison Avenue Cincinnati, Ohio 45247 Phone: (513) 941-2443 Fax: (513) 941-2445 Toll Free:(888)-345-0919

St. Charles Division

2086 Exchange Drive St. Charles, Missouri 63303 Phone: (636) 255-0600 Fax: (636) 255-0602 Toll Free: (866) 852-9714

HERCULINE[®] is the premium choice for underground measuring and pulling of fiber optic and other lightweight.

cables. Specifically designed for the telecommunications, power utility and CATV industries, #ERCULINE[®] can be easily blown through innerduct to provide smooth, safe pulls. Durable footmarkings allow for accurate measurement while flat construction and specially formulated lubricants work to minimize friction and duct cutting.

| | | HERCULINE® | | | | | | | | | | |
|----------|----------|------------|--------------|-----------------------|--------------|--|--|--|--|--|--|--|
| Item No. | Tensile | Width | Construction | Prelubrication | Footmarkings | | | | | | | |
| P160S | 160 lbf | 3/16" | Stranded | No | Yes | | | | | | | |
| P400W | 400 lbf | 1/4" | Woven | No | Yes | | | | | | | |
| P900W | 900 lbf | 3/8" | Woven | No | Yes | | | | | | | |
| P1100W | 1100 lbf | 1/2" | Woven | No | No | | | | | | | |
| P1250W | 1250 lbf | 1/2" | Woven | No | Yes | | | | | | | |
| P1800W | 1800 lbf | 5/8" | Woven | No | Yes | | | | | | | |
| P2500W | 2500 lbf | 3/4" | Woven | No | Yes | | | | | | | |

All products are available by special request with or without lubricant and with or without footmarkings HERCULINE* is also available by request with metric markings.

VEV/LAD*

| | | NEV | LAR | | |
|---------------------|---------------------|-----------|--------------|----------------|--------------|
| Item No. | Tensile | Width | Construction | Prelubrication | Footmarkings |
| A900W | 900 lbf | 1/4" | Woven | No | Yes |
| A1250W | 1250 lbf | 1/4" | Woven | No | Yes |
| A1800W | 1800 lbf | 3/8" | Woven | No | Yes |
| A2500W | 2500 lbf | 1/2" | Woven | No | Yeş |
| Keylar is a registe | ered Trademark of F | L Du Pont | | | |

Kevlar is a registered trademark of E.I. Du Pont

A DETECTABLE POLYESTER HERCULINE

| ltem No. | Tensile | Width | Construction | Prelubrication | Footmarkings |
|----------|----------|-------|--------------|----------------|--------------|
| P1250T | 1250 lbf | 1/2" | Woven | No | Yes |
| P1800T | 1800 lbf | 5/8" | Woven | No | Yes |
| P2500T | 2500 lbf | 3/4" | Woven | No | Yes |

Detectable HERCULINESt features a corrosion resistant 22 gauge solid copper wire woven directly into the pulling tape to detect underground conduit and dielectric cable

HURCULINE Meets Telcordia (Bellcore) GR356-5.3

Herculine is a registered Trademark of Pacific Strapping Inc., Seattle, Washington USA



SPXFLOW

powerteam.com



>Power Team[®]

MINDUSTRIAL WIRE ROPE SUPPLY

>Power Team

LOW PROFILE, SINGLE-ACTING, SPRING RETURN TONNAGE RANGE: 5 - 150

RLS SERIES

Model Shown: RLS100



RLS200 used in this lifting application.



Features

IDEAL LOW CLEARANCE OR TIGHT CONSTRAINT APPLICATIONS REQUIRING HIGH FORCES.

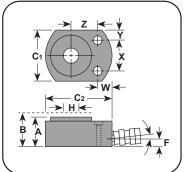
- Low height starting at 1.63" to 4.00".
- Cylinder body, piston and gland nut are "Power-Tech" treated for corrosion and abrasion resistance.
- Standard domed piston rod (5-30 tons) or swivel cap (50-150 tons) minimize effects of off-center loading.
- Unique heavy-duty spring provides fast piston return on all cylinders, except RLS50.
- Coupler is angled upward for extra clearance.
- Complies with ANSI / ASME B30.1 Safety Standards.

RLS1000S (with swivel load cap)



RLS Series ending with an "S" suffix denotes models equipped with a swivel load cap.

| Mounting holes for "RLS" cylinders | | | | | | | | | | | |
|------------------------------------|---|--|------------|---|--|--|--|--|--|--|--|
| RLS Series | Description | | RLS Series | Description | | | | | | | |
| RLS50 | 0.34" C'bore x 0.25" deep, 0.22" thru hole | | RLS500S | 0.70" C'bore x 0.50" deep, 0.47" thru hole | | | | | | | |
| RLS100 | 0.42" C'bore x 0.34" deep, 0.28" thru hole | | RLS750S | 0.80" C'bore x 0.56" deep, 0.53" thru hole | | | | | | | |
| RLS200 | 0.62" C'bore x 0.41" deep, 0.41" thru hole | | RLS1000S | 0.80" C'bore x 0.56" deep, 0.53" thru hole | | | | | | | |
| RLS300 | 0.62" C'bore x 0.44" deep, 0.28" thru hole | | RLS1500S | 0.81" C'bore x 0.56" deep, 0.53" thru hole | | | | | | | |



Ordering Information

| Cyl. | Stroke | Order | Oil | А | В | C1 | C2 | F | Н | W | Х | Y | Z | Bore Dia. | Cylinder Effective | Int. Press. | Tons at | Prod. |
|--------|--------|----------|-----------|--------------------------|-------------------------|-----------|-------|--------------------|-----------------------|------------------------|-------|-------|-------|--------------|-----------------------|----------------|------------|--------|
| Cap. | | No. | Cap. | Retract- ed Height | Extend- ed Height | Out Di | | Base to Port | Piston Rod Dia. | Mounting Hole Location | | | Dia. | Area | at Cap. | 10,000 | Wt. | |
| (tons) | (in.) | | (cu. in.) | (in.) | (in.) | (in.) | (in.) | (in.) | (in.) | (in.) | (in.) | (in.) | (in.) | (in.) | (sq. in.) | (psi) | (tons) | (lbs.) |
| 5 | 0.56 | RLS50 | 0.62 | 1.63 | 2.19 | 1.63 | 2.56 | 0.75 | 0.63 | 0.75 | 1.13 | 0.25 | 1.00 | 1.13 | 0.994 | 10,061 | 4.97 | 2.20 |
| 10 | 0.44 | RLS100 | 1.00 | 1.75 | 2.19 | 2.19 | 3.25 | 0.63 | 0.75 | 0.69 | 1.44 | 0.38 | 1.31 | 1.69 | 2.236 | 8,943 | 11.18 | 3.30 |
| 20 | 0.44 | RLS200 | 2.00 | 2.00 | 2.44 | 3.00 | 4.00 | 0.66 | 1.13 | 0.72 | 1.94 | 0.53 | 1.56 | 2.38 | 4.430 | 9,029 | 22.15 | 5.60 |
| 30 | 0.50 | RLS300 | 3.20 | 2.31 | 2.81 | 3.75 | 4.50 | 0.72 | 1.38 | 0.81 | 2.06 | 0.84 | 1.75 | 2.88 | 6.492 | 9,242 | 32.46 | 8.60 |
| 50 | 0.63 | RLS500S | 6.00 | 2.63 | 3.25 | 4.50 | 5.50 | 0.84 | 1.75 | 0.94 | 2.63 | 0.94 | 2.13 | 3.50 | 9.621 | 10,394 | 48.10 | 14.00 |
| 75 | 0.63 | RLS750S | 9.90 | 3.13 | 3.75 | 5.53 | 6.50 | 1.00 | 2.13 | 0.94 | 3.00 | 1.27 | 2.59 | 4.50 | 15.904 | 9,431 | 79.52 | 23.30 |
| 100 | 0.63 | RLS1000S | 12.30 | 3.38 | 4.00 | 6.00 | 7.00 | 1.00 | 2.50 | 0.81 | 3.00 | 1.50 | 2.81 | 5.00 | 19.635 | 10,186 | 98.17 | 30.00 |
| 150 | 0.56 | RLS1500S | 17.20 | 4.00 | 4.56 | 7.50 | 8.50 | 1.31 | 3.00 | 1.31 | 4.63 | 1.44 | 3.13 | 6.25 | 30.680 | 9,778 | 153.39 | 52.00 |

powerteam.com

www.industrialrope.com

Cylinders



SINGLE-ACTING, SPRING RETURN TONNNAGE RANGE: 5 - 100

>Power Team



Features

 (F)

RUGGED, HIGH QUALITY CYLINDER USED FOR LIFTING AND PRESSING.

- Aluminum bronze bearing reduces wear caused by off-center loads.
- Maximum sized springs speed piston return and increase spring life.
- Collar threads are standard on all C-Series models, simplifying fixturing applications.
- Removable rubber boots protect collar threads during transport and storage.
- Solid steel cylinder body for durability.
- Chrome plated piston rod resists wear and corrosion.
- Wide range of accessories available that mount onto the piston rod, collar, or base.
- Base mounting holes standard on 5 through 55 ton cylinders and optional on 75 and 100 ton cylinders.
- A 3/8" NPTF female half coupler is standard.
- Complies with ANSI / ASME B30.1 Safety Standards.

Best Practice for Cylinder Selection

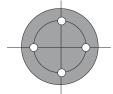


Power Team recommends using 80% of the rated capacity and stroke to maximize product performance and safety.

Lifting Handle Order Number: 4206550R9

Lifting handle for "C" series, 25 ton cylinders

Technical Dimensions, Base Mounting Holes



| Cylinder Tonnage | 5 | | | | | | 75* | 100* |
|----------------------------|----------|-----------|----------|----------|--------|----------|----------|-------|
| # of Holes | 2 | 2 | 2 | 2 | 2 | 2 | 4 | 4 |
| Thread Size | 1/4 - 20 | 5/16 - 18 | 3/8 - 16 | 1/2 - 13 | 1/2-13 | 1/2 - 13 | 3/4 - 10 | 1 - 8 |
| Thread Depth (in.) | 0.38 | 0.50 | 0.50 | 0.75 | 0.75 | 0.75 | 1.00 | 1.00 |
| Bolt Circle Diameter (in.) | 1.00 | 1.56 | 1.88 | 2.31 | 2.90 | 3.75 | 4.50 | 4.75 |

* Consult Factory for optional base mounting holes.

Four base mounting holes are 45° apart - standard on all models.

www.industrialrope.com

INDUSTRIAL WIRE ROPE SUPPLY

P

SINGLE/TWO-SPEED, SINGLE-ACTING HYDRAULIC HAND PUMP **> Power Team** 12 TO 55 CU. IN.

Model Shown: **P55, P12, P23**



Features

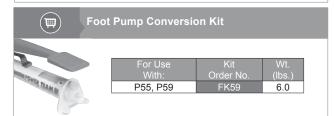
STEEL HAND PUMPS BEST SUITED FOR MRO APPLICATIONS.

- All metal construction won't burn through in welding environments.
- Formed metal handle provides rigidity, and reduces operator fatigue with grip.
- Convenient fill port enables pumps to be filled in a horizontal or vertical position, excluding P12.
- Fill cap seal acts as safety valve preventing overpressurizing of reservoir.
- Large valve knob gives added control for slowly metering loads down.

POV

Pump Protection System

Power Team hand pumps, with the angled fill port, have a built in "relief valve" protection system. This system is designed to protect overpressurization of the reservoir from sudden back pressure. This system also works as a seal to prevent oil leaks only fill to bottom of threads.



| / | | | ٦ |
|---|--------------|---------------------------------------|---|
| | | K dia. | |
| | ↓↓ ← | | |
| | FG | G L | |
| | | | |
| | ↑ ↑ | 1 [↑] ↑ | |
| | <u> </u> | ¥ | |
| | A/B | · · · · · · · · · · · · · · · · · · · | |
| | | | |
| | <u>↓ ~)</u> | | |
| | ^ < | — е —́≻ м́ ↑ | |
| | | | |
| | | | / |

Technical Dimensions

| Order | A | В | С | D | E | F | G | Н | J | K | L | М | N |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|----------|-------|
| No. | (in.) | (deg.) | (in.) | (in.) | (in.) | (in.) |
| P12 | 4.00 | 13.00 | 2.06 | 4.00 | 13.50 | 3.38 | 2.19 | 11.50 | 45° | 0.19 | 3.38 | 3/8 NPTF | 1.13 |
| P19 | 5.50 | 14.63 | 2.88 | 4.56 | 13.69 | 4.00 | 3.25 | 11.06 | 53° | 0.31 | 4.00 | 3/8 NPTF | 1.41 |
| P23* | 6.25 | 13.00 | 3.50 | 5.56 | 13.63 | 4.25 | 3.25 | 10.31 | 38° | 0.31 | 4.75 | 3/8 NPTF | 1.63 |
| P55 | 6.50 | 21.00 | 3.50 | 5.56 | 23.00 | 4.25 | 3.25 | 19.75 | 38° | 0.31 | 4.75 | 3/8 NPTF | 1.63 |
| P59 | 7.00 | 21.00 | 3.50 | 5.00 | 23.00 | 4.25 | 3.25 | 19.75 | 38° | 0.31 | 4.75 | 3/8 NPTF | 1.63 |
| P59F | 3.50 | 16.75 | 3.50 | 6.00 | 23.25 | 4.25 | 3.25 | 20.25 | — | 0.31 | 4.50 | 3/8 NPTF | 1.69 |

*The P23 pump maximum pressure is 3000 psi only.

| For Use | Speed | Order | Volume p | er Stroke | Max. Pi | ressure | Handle | Resei | voir | Oil | Prod. |
|---------------------|-------|-------|----------|-----------|---------|---------|--------|-------------|--------------------|----------|--------|
| With | | No. | LP | HP | LP | HP | Effort | Oil Cap. | Usable Oil Cap. | Port | Wt. |
| | | | (cu. in) | (cu. in) | (psi) | (psi) | (lbs.) | (cu. in.) | (cu. in.) | (in.) | (lbs.) |
| | 1 | P12 | _ | 0.069 | _ | 10,000 | 75 | 12.00 | 9.00 | 3/8 NPTF | 5.70 |
| | 2 | P19 | 0.305 | 0.076 | 325 | 10,000 | 99 | 24.40 | 20.00 | 3/8 NPTF | 6.60 |
| Single- | 1 | P23 | _ | 0.160 | _ | 3,000 | 70 | 23.80 | 20.30 | 3/8 NPTF | 12.00 |
| Acting Cylinders | 1 | P55 | _ | 0.160 | _ | 10,000 | 145 | 55.00 | 45.00 | 3/8 NPTF | 15.80 |
| | 2 | P59 | 0.662 | 0.160 | 325 | 10,000 | 145 | 55.00 | 45.00 | 3/8 NPTF | 17.20 |
| | 2 | P59F | 0.550 | 0.130 | 325 | 10,000 | 120 | 55.00 | 45.00 | 3/8 NPTF | 14.00 |
| | | | | | | | | | | | |

LP = Low Pressure

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HP = High Pressure
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SERIES

Pumps

COMPACT, LI-ION BATTERY-POWERED, HYDRAULIC PUMP 70 CU. IN.

>Power Team

Model Shown: PB102-1, PB102P-1



Features

COMPACT, PORTABLE, CORDLESS HYDRAULIC PUMP FOR MRO APPLICATIONS.

- Compact, Li-ion 18VDC, 9.0 Ah battery-powered pump provides extended run-time.
- Two-stage, high-pressure hydraulic pump offers quick tool advancement in the first stage.
- Extremely compact, lightweight with an ergonomic handle grip and transport strap to ease portability.
- Self-contained, rubber bladder reservoir allows pump usage in most positions with an impressive capacity of 70 cu. in. usable.
- Quiet, smooth-running, serviceable brushed 18VDC motor.
- High-impact, fiberglass reinforced shroud protects your investment in the most demanding and harsh applications.
- Interchangeable valve configuration accommodates a vast array of applications.
- CSA rated for intermittent duty, CE compliant.

D **Ordering Information**

| Order No. | Description | Refer to | Tool Type | Valve Type | Valve Function | Remote Control |
|--------------|---|-------------|---|--|---|---------------------------------------|
| | | Note | .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | |
| | | | | | | |
| PB102-0 | 18VDC Power Pump SA 2-Way Auto-Dump NO Charger | (1) | SA | 2-Way Hold/Auto Dump (9561) | Advance/Return | Optional |
| PB102P-0 | 18VDC Power Pump SA 2-Way Auto-Dump w/Pendent NO Charger | (1) | SA | 2-Way Hold/Auto Dump (9561) | Advance/Return | Included Pendant with 10 ft. cord |
| PB102R-0 | 18VDC Power Pump SA 2-Way Auto-Dump Pressure Reg. NO Charger | (1), (3) | SA | 2-Way Hold/Auto Dump w/ Pressure Regulator (9561, 9560) | Advance/Return Pressure Adjustment 1-10K | Optional |
| PB102A-0 | 18VDC Power Pump SA Auto-Dump NO Charger | (2) | SA | 2-Way Auto Dump (9562) | Advance/Return (Auto) | Optional |
| PB104-0 | 18VDC Power Pump DA 4-Way NO Charger | (4) | DA | 4-Way (9563) | Advance/Hold/Return | Optional |
| PB102-CP | 18VDC Power Pump SA 2-Way Auto-Dump w/Popper | (2), (5) | SA | 2-Way Dump w/ Pop Off RV (3001123) | Advance/Auto Return | Optional |
| PB102-1 | 18VDC Power Pump SA 2-Way Auto-Dump US Charger | (1) | SA | 2-Way Hold/Auto Dump (9561) | Advance/Return | Optional |
| PB102P-1 | 18VDC Power Pump SA 2-Way Auto-Dump w/Pendent US Charger | (1) | SA | 2-Way Hold/Auto Dump (9561) | Advance/Return | Included, Pendant with 10 ft. cord |
| PB102R-1 | 18VDC Power Pump SA 2-Way Auto-Dump Pressure Reg. US Charger | (1), (3) | SA | 2-Way Hold/Auto Dump w/Pressure Regulator (9561, 9560) | Advance/Return Pressure Adjustment 1-10K | Optional |
| PB102A-1 | 18VDC Power Pump SA Auto-Dump US Charger | (2) | SA | 2-Way Auto Dump (9562) | Advance/Return (Auto) | Optional |
| PB104-1 | 18VDC Power Pump DA 4-Way US Charger | (4) | DA | 4-Way (9563) | Advance/Hold/Return | Optional |
| PB102-2 | 18VDC Power Pump SA 2-Way Auto-Dump EU Charger | (1) | SA | 2-Way Hold/Auto Dump (9561) | Advance/Return | Optional |
| PB102P-2 | 18VDC Power Pump SA 2-Way Auto-Dump w/Pendent EU Charger | (1) | SA | 2-Way Hold/Auto Dump (9561) | Advance/Return | Included Pendant with 10 ft. cord |
| PB102R-2 | 18VDC Power Pump SA 2-Way Auto-Dump Pressure Reg. EU Charger | (1), (3) | SA | 2-Way Hold/Auto Dump w/Pressure Regulator (9561, 9560) | Advance/Return Pressure Adjustment 1-10K | Optional |
| PB102A-2 | 18VDC Power Pump SA Auto-Dump EU Charger | (2) | SA | 2-Way Auto Dump (9562) | Advance/Return (Auto) | Optional |
| PB104-2 | 18VDC Power Pump DA 4-Way EU Charger | (4) | DA | 4-Way (9563) | Advance/Hold/Return | Optional |

(1) 2-Way Auto Dump Function: Flapper handle in "hold" position will allow the tool to advance an maintain pressure when the motor is shut-off, flapper handle must be switched back to retract and dump pressure. Flapper handle is set to "return" position, power on will advance tool and power-off will retract tool and dump pressure. (2) Auto Dump Function: Power on - tool advances, and power-off - tool returns, releasing pressure to tank.

(3) Using the external knob, the pressure regulator valve allows the operator to externally adjust the pressure on demand, ranges from 500 - 10,000 psi.
 (4) Four-way valve direction is controlled by the handle lever. Three position; Advance, hold, retract.
 (5) For crimping applications only. Once full pressure is reached, RV provides audible noise.
 SA = Single-Acting DA = Double-Acting

INDUSTRIAL WIRE ROPE SUPPLY



SINGLE AND DOUBLE-ACTING, ELECTRIC PUMP, VANGUARD®, 55 CU. IN. / MIN.

>Power Team

Model Shown: PE554S, PE552, PE554W

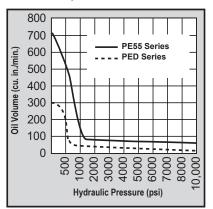


Torque Wrench Pumps

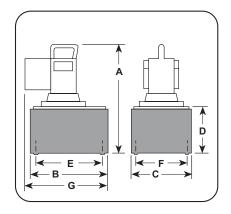
Features

INDUSTRY LEADING HEAVY-DUTY PUMP FOR MULTIPLE APPLICATIONS

- 1-1/8 hp, 12,000 rpm, 110/115VAC, 50/60 Hz universal motor. Draws 25 amps at full load, starts at reduced voltage.
- True unloading valve achieves greater pump efficiency, allowing higher flow at maximum pressure.
- Reservoirs available in sizes up to 10 gallons, refer to pump accessories page.
- Lightweight and portable. Best performance-to-weight ratio of all Power Team pumps.
- 10 foot remote motor control (except PE552S which has a 25 foot remote motor and valve control).
- "Assemble to Order" System allows you to choose from a wide range of pre-engineered, off-the-shelf components to build a customized pump to fit specific requirements. Refer to the "Assemble to Order" (ATO) Pump Pages.
- CSA rated for intermittent duty.



Performance Specifications



Technical Dimensions

| Order | | | | | _ | | <u> </u> | Max. | | dBA at Idle and | | Oil Del. (cu. in./min. @) | | | | Prod. Wt. |
|-------------|-------|-------|-------|-------|-------|-------|----------|--------------------|--------|--------------------|-----------------------|---------------------------|-------|-------|--------|--------------|
| No. | A | D | U U | ש | E | | G | Pressure Output | | 10,000 | Amp Draw at 10,000 | 0 | 700 | 5,000 | 10,000 | with Oil |
| | (in.) | (psi) | | (psi) | (psi) | (psi) | (psi) | (psi) | (psi) | (lbs.) |
| PE55 Series | 18.25 | 11.50 | 9.50 | 7.00 | 10.00 | 8.00 | 14.00 | 10,000 | 12,000 | 90/89* | 25 | 704 | 440 | 74 | 56 | 65.00 |

* Amp draw at 10,000 psi, 230VAC 50/60 Hz is 15 Amps.

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>Power Team

Model Shown: HS2000, HS3000





SPREADERS, HYDRAULIC TONNAGE RANGE: 1 - 1.5

SERIES

Tools

Features

HYDRAULIC SPREADERS OFFER A GREATER FORCE THAN TRADITIONAL MECHANICAL TOOLS.

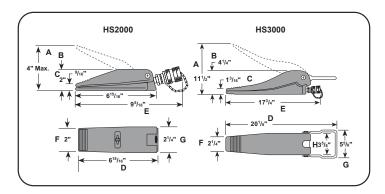
- Use to lift machines to spread concrete forms or rebar and perform straightening jobs.
- Conforms to ASME B30.1 standard.
- High strength alloy steel forged upper and lower jaws on HS2000.
- Jaws are spring-return to retract automatically when pressure is released.

HS2000 (FORGED STEEL)

- 1 ton capacity spreader, full 2,000 lbs. capacity at 10,000 PSI with 4" spread.
- Can be "dead-ended" at 4" spread under full load.
- Needs only 0.56" clearance to engage jaws.

HS3000 (HIGH GRADE DUCTILE IRON)

- 1.5 ton capacity spreader, full 3,000 lb. capacity at 10,000 psi. with 11.5" spread.
- Needs only 1.25" clearance to engage jaws.
- Can be "dead-ended" at 11.50" spread at full load.



Ordering Information

| Order No. | Cap. | Max. Spread | A | В | С | D | Е | F | G | н | Oil Cap. | Min. Clearance Required | Prod. Wt. |
|--------------|-------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------------|----------------------------|--------------|
| | (ton) | (in.) | (in.) | (in.) | (in.) | (in.) | (in.) | (in.) | (in.) | (in.) | (cu. in.) | (in.) | (lbs.) |
| HS2000 | 1.0 | 4.00 | 4.00 | 2.00 | 0.56 | 6.94 | 9.31 | 2.00 | 2.25 | — | 0.63 | 0.56 | 4.80 |
| HS3000 | 1.5 | 11.50 | 11.50 | 4.50 | 1.19 | 20.13 | 17.75 | 2.25 | 5.63 | 3.63 | 3.50 | 1.25 | 22.00 |

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INFO SECTION CYLINDER SEAL KITS

>Power Team

| Cylinder Order Number | Seal Kit* | Viton ™ Seal Kit |
|-----------------------------|--------------|---------------------|-----------------------------|--------------|---------------------|-----------------------------|--------------|---------------------|-----------------------------|--------------|---------------------|
| C51C | 300404 | 300210 | R1502C | 300676 | — | R10010L | 300675 | - | RD10013 | 300120 | — |
| C53C | 300404 | 300210 | R1506C | 300676 | _ | R1502L | 300676 | _ | RD10020 | 300120 | _ |
| C55C | 300404 | 300210 | R15010C | 300676 | — | R1506L | 300676 | — | RD1506 | 300007 | — |
| C57C | 300404 | 300210 | R2002C | 300677 | - | R15010L | 300676 | - | RD15013 | 300007 | — |
| C59C | 300404 | 300210 | R2006C | 300677 | — | R2002L | 300677 | — | RD15018 | 300007 | — |
| C101C | 300116 | 300211 | R20010C | 300677 | - | R2006L | 300677 | - | RD2006 | 300008 | _ |
| C102C | 300116 | 300211 | R2802C | 300678 | - | R2008L | 300677 | - | RD20013 | 300008 | _ |
| C104C | 300116 | 300211 | R2806C | 300678 | _ | R20010L | 300677 | _ | RD3006 | 300466 | _ |
| C106C | 300116 | 300211 | R28010C | 300678 | _ | R2802L | 300678 | _ | RD30013 | 300466 | — |
| C108C | 300116 | 300211 | R3552C | 300679 | _ | R2806L | 300678 | _ | RD4006 | 300467 | _ |
| C1010C | 300116 | 300211 | R3556C | 300679 | _ | R28010L | 300678 | _ | RD40013 | 300467 | — |
| C1012C | 300116 | 300211 | R35510C | 300679 | _ | R3552L | 300679 | _ | RD5006 | 300468 | _ |
| C1014C | 300116 | 300211 | R4302C | 300680 | _ | R3556L | 300679 | _ | RD50013 | 300468 | — |
| C1016C | 300116 | 300211 | R4306C | 300680 | _ | R35510L | 300679 | _ | RDG552 | 3000906 | _ |
| C151C | 300453 | 300471 | R43010C | 300680 | _ | R4302L | 300680 | _ | RDG554 | 3000906 | _ |
| C152C | 300453 | 300471 | R5652C | 300681 | _ | R4306L | 300680 | _ | RDG556 | 3000906 | _ |
| C154C | 300453 | 300471 | R5656C | 300681 | _ | R43010L | 300680 | _ | RDG558 | 3000906 | _ |
| C156C | 300453 | 300471 | R56510C | 300681 | _ | R5652L | 300681 | _ | RDG5510 | 3000906 | _ |
| C158C | 300453 | 300471 | R1002D | 300928 | _ | R5656L | 300681 | _ | RDG5512 | 3000906 | _ |
| C1510C | 300453 | 300471 | R1006D | 300928 | _ | R56510L | 300681 | _ | RDG5513 | 3000906 | _ |
| C1512C | 300453 | 300471 | R10010D | 300928 | _ | RA202 | 300631 | _ | RDG5514 | 3000906 | _ |
| C1514C | 300453 | 300471 | R1502D | 300929 | _ | RA204 | 300631 | _ | RDG752 | 3000908 | _ |
| C1516C | 300453 | 300471 | R1506D | 300929 | _ | RA206 | 300631 | _ | RDG754 | 3000908 | _ |
| C251C | 300147 | 300213 | R15010D | 300929 | _ | RA302 | 300632 | _ | RDG756 | 3000908 | _ |
| C252C | 300147 | 300213 | R2002D | 300930 | | RA304 | 300632 | _ | RDG758 | 3000908 | _ |
| C254C | 300147 | 300213 | R2006D | 300930 | _ | RA306 | 300632 | _ | RDG7510 | 3000908 | _ |
| C256C | 300147 | 300213 | R20010D | 300930 | _ | RA552 | 300391 | _ | RDG7512 | 3000908 | _ |
| C258C | 300147 | 300213 | R2802D | 300931 | _ | RA554 | 300391 | _ | RDG7513 | 3000908 | _ |
| C2510C | 300147 | 300213 | R2806D | 300931 | _ | RA556 | 300391 | _ | RDG7514 | 3000908 | _ |
| C2512C | 300147 | 300213 | R28010D | 300931 | _ | RA5510 | 300391 | _ | RDG1002 | 3000876 | _ |
| C2514C | 300147 | 300213 | R3552D | 300932 | _ | RA1002 | 300444 | _ | RDG1004 | 3000876 | _ |
| C552C | 300114 | 300215 | R3556D | 300932 | _ | RA1006 | 300444 | _ | RDG1006 | 3000876 | _ |
| C554C | 300114 | 300215 | R35510D | 300932 | _ | RA10010 | 300444 | _ | RDG1008 | 3000876 | _ |
| C556C | 300114 | 300215 | R4302D | 301047 | _ | RA556L | 300395 | _ | RDG10010 | 3000876 | _ |
| C5510C | 300114 | 300215 | R4306D | 301047 | _ | RA1006L | 300396 | _ | RDG10012 | 3000876 | _ |
| C5513C | 300114 | 300215 | R43010D | 301047 | _ | RD106 | 300017 | _ | RDG10013 | 3000876 | |
| C756C | 300647 | 300846 | R5652D | 300681 | _ | RD1010 | 300017 | _ | RDG10014 | 3000876 | _ |
| C7513C | 300647 | 300846 | R5656D | 300681 | _ | RD256 | 300018 | _ | RDG1502 | 3000881 | _ |
| C1002C | 300112 | 300216 | R56510D | 300681 | _ | RD2514 | 300018 | _ | RDG1504 | 3000881 | _ |
| C1006C | 300112 | 300216 | R552L | 300674 | _ | RD556 | 300005 | _ | RDG1506 | 3000881 | _ |
| C10010C | 300112 | 300216 | R556L | 300674 | _ | RD5513 | 300005 | _ | RDG1508 | 3000881 | _ |
| C55CBT | 300404 | 300210 | R5510L | 300674 | _ | RD5518 | 300005 | _ | RDG15010 | 3000881 | |
| C106CBT | 300116 | 300211 | R1002L | 300675 | _ | RD8013 | 300410 | _ | RDG15012 | 3000881 | _ |
| C256CBT | 300147 | 300213 | R1006L | 300675 | _ | RD1006 | 300120 | _ | RDG15013 | 3000881 | |
| 0200001 | | 000210 | | | | | 000120 | | | | |

Resources

Viton™ is an trademarks or registered trademarks of The Chemours Company

* Nitrile seals comes standard on all cylinders.

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ACC

1/4" & 3/8" I.D., 20,000 PSI

Model Shown: 9755



>Power Team

Features

REINFORCED WIRE-BRAID RUBBER HOSES OFFER INCREASED DURABILITY

- 2-ply rated hose reinforced with two braids of high tensile steel wire.
- The rubber covering is oil and weather resistant.
- Hoses are equipped with spring guards.
- 3/8" NPTF fittings on both ends.
- Operating pressure is 10,000 psi. All comply with MHI standard IJ100.
- These hoses are MSHA approved.

| Cylinder Return Time | | | | | | | |
|----------------------|--------------------------|--------------------------|--|--|--|--|--|
| Cylinder | 9769 | 9781 | | | | | |
| No. | 10 Ft. Hose 1/4" I.D. | 10 Ft. Hose 3/8" I.D. | | | | | |
| C2514C | 51 sec. | 14 sec. | | | | | |
| C556C | 1 min., 30 sec. | 24 sec. | | | | | |
| C5513C | 4 min., 12 sec. | 59 sec. | | | | | |
| C10010C | 6 min., 56 sec. | 1 min. 3 sec. | | | | | |

Hose with Coupler Half



Ordering Information

| Hose Type | Hose | Hose | Burst | Order |
|--------------------|------|--------|--------|--------|
| | I.D. | Length | Rating | Number |
| | | (ft.) | (psi.) | |
| Rubber, Wire-Braid | 1/4" | 3 | 20,000 | 9755 |
| Rubber, Wire-Braid | 1/4" | 6 | 20,000 | 9756 |
| Rubber, Wire-Braid | 1/4" | 6 | 20,000 | 9754** |
| Rubber, Wire-Braid | 1/4" | 8 | 20,000 | 9757 |
| Rubber, Wire-Braid | 1/4" | 10 | 20,000 | 9758 |
| Rubber, Wire-Braid | 1/4" | 12 | 20,000 | 9759 |
| Rubber, Wire-Braid | 1/4" | 20 | 20,000 | 9760 |
| Rubber, Wire-Braid | 1/4" | 30 | 20,000 | 9761 |
| Rubber, Wire-Braid | 1/4" | 50 | 20,000 | 9762 |

**Furnished with 9798 hose half coupler and 9800 dust cap.

| Hose Type | Hose | Hose | Burst | Order |
|---------------------|------|--------|--------|--------|
| | I.D. | Length | Rating | Number |
| | | (ft.) | (psi.) | |
| Rubber, Wire-Braid* | 3/8" | 3 | 20,000 | 9733 |
| Rubber, Wire-Braid* | 3/8" | 6 | 20,000 | 9776 |
| Rubber, Wire-Braid* | 3/8" | 10 | 20,000 | 9777 |
| Rubber, Wire-Braid* | 3/8" | 15 | 20,000 | 9734 |
| Rubber, Wire-Braid* | 3/8" | 20 | 20,000 | 9778 |
| Rubber, Wire-Braid* | 3/8" | 30 | 20,000 | 9735 |
| Rubber, Wire-Braid* | 3/8" | 40 | 20,000 | 9736 |
| Rubber, Wire-Braid* | 3/8" | 50 | 20,000 | 9779 |

* High Flow