

Crosby®

ENERGY INDUSTRY

OFFSHORE, LAND & RENEWABLE ENERGY PRODUCTS

CROSBY®

LEBUS®

McKISSICK®

NATIONAL®



We deliver a diverse portfolio of products engineered to exceed the toughest demands of any industry, including land-based and offshore energy and transportation.



Those who know the name “Crosby” know the significance the name holds within the rigging and lifting industry. It is a name that has been trusted for over 130 years and drives the industry-changing innovations of tomorrow.

As the world’s leading manufacturer for rigging, lifting, and material handling applications, Crosby delivers a broad range of products engineered to exceed the toughest demands of any industry, including land-based and offshore energy and transportation. Our products of uncompromising quality, combined with comprehensive risk management, world-class training programs, and a global customer service network create the winning formula you need to exceed expectations in a success-driven market.

At Crosby, our mission is far greater than providing time-tested, work-proven products—it’s about creating partnerships. It’s about investing in the goals and visions of every single product user to create custom-engineered solutions that bring aspirations to life and revolutionize industry practices. When you choose Crosby, you choose a trusted partner who is committed to providing you the resources you need to lead with confidence and without compromise.

Crosby[®]

www.thecrosbygroup.com



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your smart device to view
more information about
The Crosby Group.



**864, 865, 866,
868, 869 and
870 Series
Drilling Blocks**

RJ Style Drilling Blocks

- Capacities available:
 - 30", 36" and 42" sheaves with 1-1/8" and 1-1/4" wire line sizes. (762, 914, 1067mm sheaves with 28 and 32mm wire line sizes.)
 - 150, 250 and 350 Ton Working Load Limits. (146, 227 and 318 Metric Ton Working Load Limits.)
- Double row, pre-adjusted tapered bearings with seals.
- Blocks contain McKissick® Roll-Forged sheaves with flame-hardened grooves.
 - Grooves are API profile.
- Separate lubrication channel to each sheave.
- Easy opening guards for quick string-up (no bolts to pull out and lose).
- Each hook block is fitted with position lock and swivel lock assemblies.
- Additional weights available upon request.
- Manufactured to the requirements of API 8C, including all documentation.
 - Each block is individually serialized for full traceability.
 - Furnished with Certificate of Conformance.
- McKissick® heavy duty cast alloy hook is spring loaded with hydraulic snubber.
- Minimum design temperature of -20° C (-4° F).
- Standard top coat finish is safety orange enamel.
 - Other paint colors and systems are available on request.
 - Individual parts are primer coated on exposed surfaces.
- Combination hook blocks have interchangeable parts with BJ type McKissick® blocks built up to 1982.
 - Contact Crosby® Customer Service for details.
- All sizes are **RFID EQUIPPED**.

RP Style Traveling Blocks

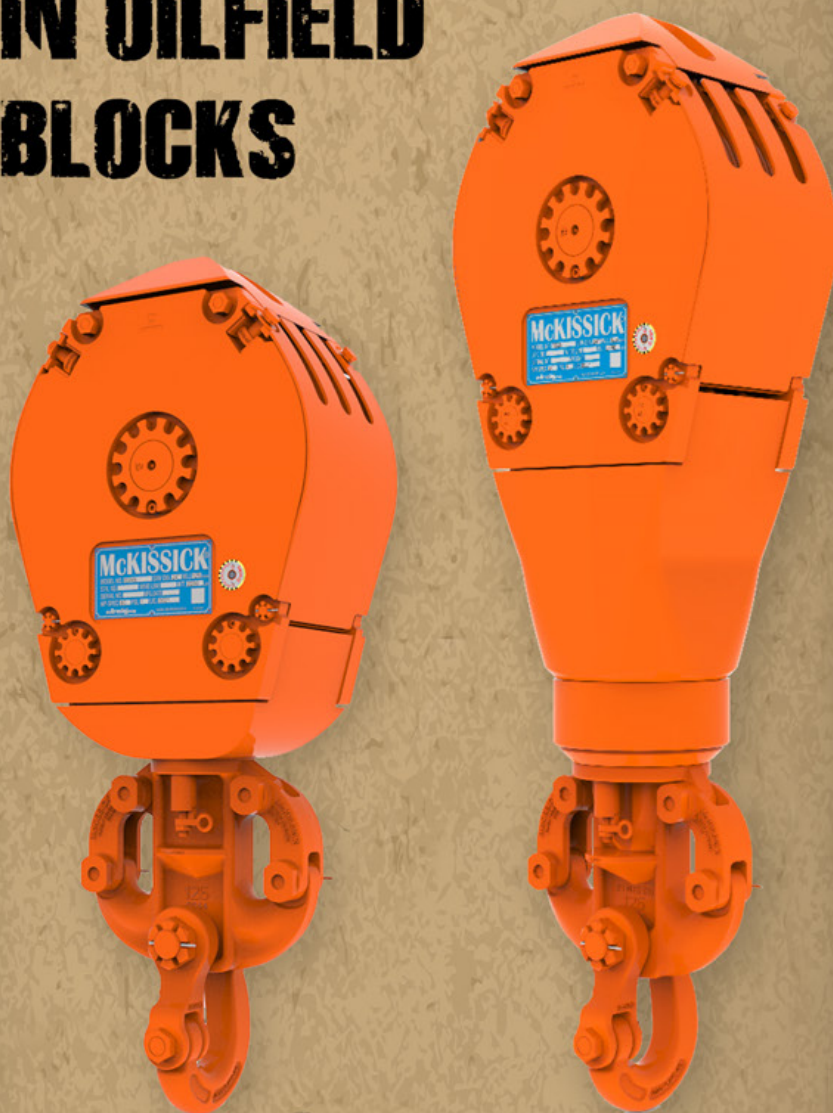
- Capacities Available:
 - 36", 42", 60" and 72" sheaves with 1-1/8" through 1-3/4" wire line sizes. (914, 1067, 1524 and 1829 mm sheaves with 28 through 44mm wire line sizes.)
 - 250 Ton, 350 Ton, 500 Ton, 750 Ton and 1000 Ton Working Load Limits.
- Double row, pre-adjusted tapered bearings with seals.
- Blocks contain McKissick® Roll-Forged sheaves with flame-hardened grooves.
 - Grooves are API profile.
- Separate lubrication channel to each sheave.
- Easy opening guards for quick string-up (no bolts to pull out and lose).
- Bail design to adapt to comparable capacity drilling equipment.
- Additional weights available upon request.
- Manufactured to the requirements of API 8C, including all documentation.
 - Each block is individually serialized for full traceability.
 - Furnished with Certificate of Conformance.
- Minimum design temperature of -20° C (-4° F).
- Standard top coat finish is safety orange enamel.
 - Other paint colors and systems are available on request.
 - Individual parts are primer coated on exposed surfaces.
- Block side plates can be drilled to adapt customer supplied equipment.
- Easy bail pin removal.
- All sizes are **RFID EQUIPPED**.



**RP Style
Traveling
Block**

McKISSICK®
Your Total Block Company

THE STRONGEST NAME IN OILFIELD BLOCKS



McKissick® Oilfield Tubing Blocks utilizing new Split Nut Retention System. Revolutionary new retention system eliminates conventional threaded nut and potential problems associated with thread corrosion.

- McKissick Split-Nut® hook parts precision machined and individually fitted for maximum performance.
- Manufactured to API-8C specifications.
- Lock Arms with Self Retaining Bolts.
- All sizes are **RFID EQUIPPED**.



Licensed Under
API Spec 8C-0021



Crosby®

www.thecrosbygroup.com



Oilfield Tubing Blocks

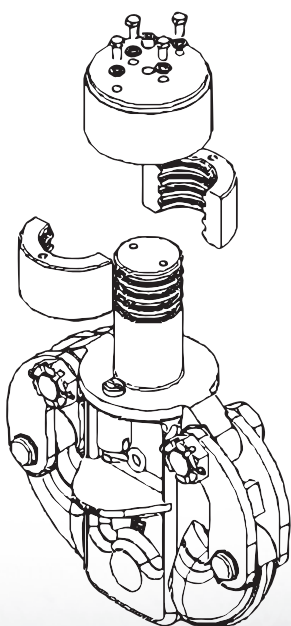
- Capacities available:
 - 17" through 30" (432 - 762mm) sheaves with 7/8" through 1-1/4" (22 - 32mm) wire line sizes.
 - 50 Ton through 175 Ton Working Load Limits (45 - 159 Metric Tons Working Load Limits).
- Exclusive E-Z opening guards, no bolts to pull out and lose. Feature gives fastest possible exposure of sheave cluster for quick reeving.
- Extremely short overall length, extra weight, excellent balance for fast non-wobbling falls.
- Extra large sealed sheave bearings.
- Tapered roller thrust bearing in hook.
- Duplex hook for easy elevator operation, locks in six or eight positions.
- Convenient rod hook clevis available 7.5 - 35 Tons.
- Completely streamlined, no projections.
- McKissick® Roll-Forged, flame-hardened sheaves, grooved for proper wire line size.
- Threaded hook parts precision machined and individually fitted for maximum performance.
- All blocks available with additional cheek weights.
- Manufactured to API 8C specifications.
- All sizes are **RFID EQUIPPED**.
- Self Retaining Lock Arm Bolts.



70 Series
Spring Loaded



80 Series
Utilizes Patented
McKissick Split-Nut®
Retention System



80 Series Replacement Hook

Featuring patented McKissick Split-Nut® Retention System.

- Revolutionary new retention system eliminates conventional threaded nut and problems associated with thread corrosion.
- Fatigue Rated.
- Design allows for easy inspection as required by API 8C.
- Easy field assembly/disassembly.
- Allows repeated installation and removals without risk of damage to hook/nut interface.
- Redundant secured and sealed fasteners.
- Can be purchased in a variety of configurations that can be used to retrofit existing McKissick® 80 Series Tubing blocks – in the field or in the shop.
 - Hook and nut assembly that fits existing cases.
 - Hook and case assembly that bolts into existing block.





Oilfield Service Blocks

Floor Blocks & Top Blocks

- Alloy aluminum housing for maximum strength and minimum weight.
- Conductor cable ONLY is recommended for use with Well Logger's Blocks.
- For use in high speed applications such as well logging, perforating, etc.
- Extra large double row, pre-adjusted sealed tapered bearing.
- Quick opening pin for fast string-up, light weight for easy handling.

Well Logger's Blocks



475



477



476

Crown Blocks

- McKissick® Roll-Forged sheaves with flame-hardened grooves.
- Double row pre-adjusted sealed tapered bearings mounted on a steel shaft.
- Heavy center and side plates for proper support of center pin.
- Pre-assembled units for rapid attachment to crown assembly for installation on derrick.
- On multiple sheave assemblies, one sheave can be grooved for sand line on request.
- Other sizes available upon request.
- Sheaves manufactured to API 8C specifications.



731



458



459

Guy Line Blocks

- Used on guy lines to gain mechanical advantage through rapid take-up, taking less pull to guy down.
- Steel plates, steel pins, 6" steel sheaves.

Special Application Blocks

Hay Fork Pulleys with Swivel Hook or Swivel Eye

- Forged steel eyes and hooks.
- Available painted or zinc plated.
- One piece pressed steel shells.
- Edges well rounded to prevent chaffing of rope.
- Can be furnished with SS-4055 hook latch.
- Furnished with roller beatings.
- Pressure lube fittings.



HF-1



HF-2

Tong Blocks

- Steel sheaves with roller bearings and pressure lubrication.
- Forged steel eyes and hooks.
- Easy opening feature shown available in 8" (201mm) size only.



171

Lay Down Blocks

- All steel construction, steel sheaves mounted on antifriction bearings, grooved for maximum of 3/4" (19mm) wire line.
- Used to lay down drill pipe.
- Hook made to fit into end of drill pipe, handy dead end becket for returning block.
- _ hooks have handle for disengagement.



443



Snatch Blocks

Snatch Blocks are available in a full range of sizes and styles to ensure that the appropriate block is available for your specific application.

Fatigue Rated



418



404



419

418, 419 & 404 Light Champion

- Hook, Shackle and Tailboard styles.
- 3" through 18" (76 - 457mm) sheaves with 5/16" through 1" (8 - 26mm) wire line sizes.
- 2t through 15t Working Load Limits.



408 / 432



409 / 433

408 & 409 Light Champion Double Sheave

- Hook and Shackle styles.
- 4-1/2" through 14" (114 - 356mm) sheaves with 3/8" through 3/4" (10 - 19mm) wire line sizes.
- 4t and 20t Working Load Limits.



420



406



421

420, 421 & 406 Champion

- Hook, Shackle and Tailboard styles.
- 6" through 10" (152 - 254mm) sheaves with 3/4" through 7/8" (19 - 22mm) dual rated wire line groove.
- 12t and 15t Working Load Limits.



430



407



431

430, 431 & 407 Super Champion

- Hook, Shackle and Tailboard styles.
- 8" through 24" (203 - 610mm) sheaves with 1" through 1-1/4" (26 - 32mm) wire line sizes.
- 20t through 30t Working Load Limits.



Snatch Blocks

Snatch Blocks are available in a full range of sizes and styles to ensure that the appropriate block is available for your specific application.



416



402



417



434



401



435

416, 417 & 402 All Alloy

- Hook, Shackle and Tailboard styles.
- 6" through 10" (152 - 254mm) sheaves with 3/4" through 7/8" (19 - 22mm) dual rated wire line groove.
- 12t Working Load Limit.

High Capacity Snatch Blocks for Gin Pole Applications

434, 435 & 401 All Alloy

Featuring new 60t models for gin pole truck applications.

- Hook, Shackle and Tailboard styles.
- Entire block made from heat-treated alloy steel for **reduced weight**.
- Available with bronze bushed sheaves
- 8" - 14" (203 - 305 mm) bronze bushed sheaves with 1" - 1 1/4" (25 - 32mm) wire line sizes.
- 25t, 30t and 60t Working Load Limits.



L160

L-160 Lebus Heavy Duty

- Hook, Shackle and Tailboard styles.
- 5" and 5-7/8" (127 - 149mm) sheaves with 3/8" through 3/4" (10 - 19mm) wire line sizes.
- 6t and 12t Working Load Limits.



L170

L-170 Lebus General Purpose

- Hook, Shackle and Tailboard styles.
- 4-1/8" (105mm) sheave with 3/8" - 1/2" (10 - 13mm) dual rated wire line groove.
- 5t Working Load Limit.



M-491
Derrick
Hoist Block



M-491 Derrick Hoist Blocks for Tugger and Tower Erection Applications

New design provides the dependability of standard McKissick® snatch blocks, along with features that make it perfect for the challenging needs of Tugger Hoist and Tower Erection Applications.

- A wide variety of configurations:
 - 4, 8, 12, 15, 25 and 30t Working Load Limits.
 - 3/8" through 1 1/4" (10 - 32mm) wireline sizes.
 - Painted or galvanized finish.
- 8" & 10" (203 - 254mm) blocks furnished with dual-rated wireline sheaves.
- Recessed side plate design reduces the gap between the sheave rim and the side plate, and allows the sheave assembly to be captured in the block if loss of center pin occurs.
- Forged steel swivels, tees, yokes, and shackles are Quenched and Tempered.
- Sheave lubrication through center pin for easy maintenance.
- Sealed tapered roller bearings extend the life of the center pin and bearings, and allows for faster line speeds than recommended with standard snatch blocks.
- All blocks 14" (356mm) and larger are furnished with McKissick® Roll Forged sheaves with flame hardened grooves.
- Shackle fitting swivels for easy positioning.
- Suitable for hoisting personnel, contingent upon all employees, including the winch operator, being trained to follow any applicable federal, local and industry standards.
 - Tugger/Derrick applications: API RP54.
 - Tower applications: OSHA directive CPL 2-1.36.
- Holes through side plates are available for secondary block securement device.
- Design factor of 4 to 1.
- Manufactured by an API Q1 Certified facility.
- Type Approval and certification in accordance with ABS 2006 Steel Vessel Rules 1-1-17.7, and ABS Guide for Certification of Cranes.
- All sizes are **RFID EQUIPPED**.

TGRB Tubing Grab

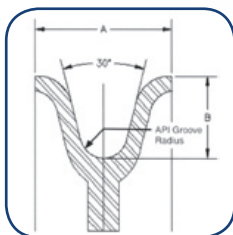
- Designed to lift tubing from horizontal to vertical and back.
- Engages with upset end of tubing.
- Available in two sizes:
 - 2 3/8" (60.3mm) tubing
 - 2 7/8" (73.0mm) tubing
- Repair kit (8037937) includes springs and retaining clip.
- Fitted with 3/8" G-2130 Crosby Shackle for attachment to air tugger line.
- Secondary eye provided for attachment of tag line.
- Individually proof tested to 125% Working Load Limit.
- Standard finish is zinc plated.
- Patented.



TGRB
Tubing Grab



Roll Forged Sheaves



American Petroleum Institute

McKissick® Products have been licensed by the American Petroleum Institute to manufacture Roll-Forged Sheaves under API specifications 8C. API sheaves must meet the criteria established by the American Petroleum Institute for drilling and production hoisting equipment.

Typical oilfield applications include:

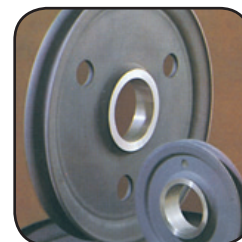
- Heavy Haul Trucking
- Workover and Well Servicing Units
- Tubing Blocks
- Crown Blocks
- Traveling Blocks

McKissick® manufactures all Roll-Forged sheaves to minimal API Specifications for general use in hoisting and wire rope guide applications.



Full Range of Standard Sheave Sizes

McKissick® Roll-Forged sheaves are available in a full range of sizes from 12 inches to 78 inches (305 - 1981mm), and bearing styles and prices that best fit your application. Crosby also manufactures custom McKissick sheaves and can make minor modifications to standard sheaves as needed for special applications.



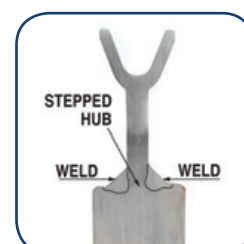
Solid Steel – No Castings

Every McKissick® sheave starts as a single piece of solid carbon steel plate. It's flame-cut from closely checked stock, so there's no inherent web/rim flaw as you find in cast sheaves. There's better balance and better distribution of forces with a McKissick Roll-Forged sheave too. Casting can result in groove wall variations – either too thick or too thin – causing uneven stresses and early failure.



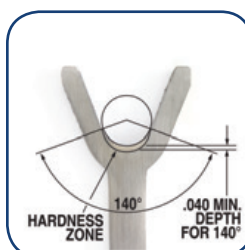
Closed Die Upset and Roll Forged – Not Split

Upsetting and roll forging forms the groove and flange walls in multiple steps, eliminating the need to split and weaken the groove. This exclusive forging process adds extra strength to the critical groove section. You can count on a McKissick® sheave to give maximum life performance, because it's forged to distribute the wire rope forces evenly over an accurately formed load surface. Plus, uniformity of the roll forged groove adds longer wire rope life.



Stepped Hub Design Proves Better

The McKissick® hub is stepped to eliminate stress failure in the weld, common in traditional hub designs. The hub is pressed into place with complete metal-to-metal contact. This helps ensure an accurate alignment to the hub's axis so there is no wobble or lopping of the rotating sheave. The precision aligned hub/sheave wheel combination adds to the bearing life and keeps the sheave on the job longer.



Flame Hardened Groove

Crosby's hardening technique is a science. It provides a precise maximum hardness for wear-resistance across the wire rope contact area. The McKissick sheave groove is flame-hardened to a minimum 35 Rockwell C for a 140° contact area with the wire rope (upon special request the McKissick sheave groove can be flame hardened to a minimum 50 Rockwell C for a 150° contact area with the wire rope). The solid steel plate provides the ideal surface for flame hardening and a closer tolerance fit to the wire rope to reduce fatigue and wear.

Bearing Selection to Match Your Job Requirement

Standard McKissick® Roll-Forged sheaves are available in the following configurations:

- Plain Bore
- Bronze Bushed
- Tapered Roller Bearing
- Roller Bearing
- Key Ways
- Set Screws
- Lubrication thru Hub
- Full Complement Bearing



Shackles

Load Rated



Fatigue Rated



Screw Pin Shackles

Screw Pin Shackles can be used in any application where a round pin shackle is used. In addition, screw pin shackles can be used for applications involving side-loading circumstances. Reduced working load limits are required for side-loading applications. While in service, do not allow the screw pin to be rotated by a live line, such as a choker application.



G-209A
2t - 21t



**G-209
S-209**
1/3t - 55t



**G-210
S-210**
1/2t - 55t

COLD TUFF® Shackles

Cold Tuff® Shackles are specifically designed for use in extreme cold operating conditions.

- 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).
- 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 31 ft-lbs. (42 joules) min. avg. at -4°F (-20°C).
- Individually mag inspected with certification.
- Type approval and certification in accordance with DNV Specification 2.7-1 Offshore Containers and DNV rules for Lifting Appliances – Loose Gear.
- COLD TUFF® shackles are suitable for use at -50°F (-46°C).



**G-2130CT
G-2140CT**
1/2t - 85t

Bolt Type Shackles

Bolt Type Shackles can be used in any application where round pin or screw pin shackles are used. In addition, they are recommended for permanent or long-term installations and where the load may slide on the shackle pin causing the pin to rotate.



**G-2130
S-2130**
1/3t - 150t



G-2130A
2t - 17t



**G-2140
S-2140**
2t - 400t



**G-2150
S-2150**
1/2t - 85t



G-2160E
125t - 300t



G-2140E
200t - 300t



G-2160E
75t - 300t



SHUR-LOC Swivel Hooks

QUIC-CHECK®



Load Rated



Fatigue Rated

- Forged Alloy Steel - Quenched and Tempered.
- Individually Proof Tested at 2-1/2 times the 4:1 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.
- Rated for both Wire Rope and use with Grade 80/100 Chain.
- 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"



S-1326A
Suitable for
infrequent,
non-continuous
rotation
under load



S-13326
Suitable for
frequent
rotation
under load

Eye Hooks

All Crosby® 320 Eye Hoist Hooks feature:

- Available in carbon steel and alloy steel.
 - Carbon hooks designed with a 5:1 Design Factor.
 - Alloy hooks designed with a 4.5:1 Design Factor 30 - 60t.
- Chemical analysis and tensile tests performed on each PIC to verify chemistry and mechanical properties.
- Proper design, careful forging and precision controlled quenching and tempering give maximum strength without excessive weight and bulk.
- Every Crosby® Eye Hook has a pre-drilled cam which can be equipped with a latch. Even years after purchase of the original hook, latch assemblies can be added.
- Eye hooks are load rated.
- Hoist hooks incorporate two types of strategically placed markings forged into the product which address two (2) **QUIC-CHECK®** features:
 - Deformation Indicators
 - Angle Indicators
- Fatigue rated at 1-1/2 times the Working Load Limit at 20,000 cycles.
- Can be proof tested to 2 times the Working Load Limit.
- Metric Rated at 5:1 Design Factor for Carbon Steel; 5:1 Design Factor for 1t - 22t Alloy Steel.
- Low profile hook tip.
- New integrated latch (S-4320) meets the world class standard for lifting.
- Heavy duty stamped latch interlocks with the hook tip.
- High cycle, long life spring.
- When secured with 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 hoisting.



L-320C
L-320A
20t Carbon -
60t Alloy



L-320CN
L-320AN
3/4t Carbon
- 22t Alloy



MAXTOUGH®

MAXTOUGH® is a registered Crosby® trademark identifying products that are statistically verified to meet or exceed impact values of 31 ft.-lbs. at -4°F (42 joules at -20°C) based on a high level of confidence. A confidence level is an index of certainty. MAXTOUGH® is another Value-Added benefit of The Crosby Group.

The mechanical properties of steel, when a load is very rapidly applied, is known as its impact strength. Impact tests are made by applying a sudden load to a test piece and measuring the energy absorbed when the specimen breaks. The “tougher” the material the greater the energy required to break the piece. A brittle piece can absorb virtually no energy upon breaking. The Charpy V Notched Impact test is one common method of performing the testing and measurement. Fittings must be able to have impact strengths that match the requirements of their application at all temperatures, even low temperatures commonly found in winter conditions. The difficulty of crack initiation and crack growth under impact is an important consideration.

MAXTOUGH® products are tested on an ongoing basis and are statistically verified to meet or exceed specific impact values. Sample heats of steel are Charpy impact tested and statistically verified that the material meets or exceeds impact values of 31 ft.-lbs. at -4°F, based on a high level of confidence.

QUIC-CHECK®



All Crosby® Shackles, except for G-2160s, incorporate markings forged into the product which address an easy QUIC-CHECK® feature. Angle indicators are forged into the shackle bow at 45° angles from vertical. These are utilized to quickly check the approximate angle of a two-legged hitch or quickly check the angle of a single leg hitch when the shackle pin is secured and the pull of the load is off vertical or side loaded, thus requiring a reduction in the working load limit of the shackle.

Crosby Easy-Loc®



The innovative Crosby Easy-Loc® Shackle Bolt Securement System utilizes a hinged split collar assembly that eliminates the traditional threaded bolt, nut and cotter pin. For heavy lifting applications, the new Crosby Easy-Loc®

system, coupled with industry leading Crosby shackles, provides many features that will simplify the lifting experience.

Wire Rope Clips

G-450 Red U-Bolt Clips

- Available in sizes from 1/8" through 3-1/2" (3 - 90mm).
- Each base has a Product Identification Code (PIC) for material traceability,
- The Name CROSBY® or “CG”, and a size forged into it.
- Entire clip – galvanized to resist corrosive and rusting action.
- Clip sizes up through 1-1/2" (38mm) have rolled threads.
- Look for the Red-U Bolt®, your assurance of Genuine Crosby® Clips.



G-450
Red U-Bolt Clips

G-429 Fist Grip Clips

- Available in sizes from 3/16" through 1-1/2" (5 - 40mm).
- Entire clip is galvanized to resist corrosive and rusting action.
- 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.
- Assembled with standard heavy hex nuts.



3/16" - 5/8"
(5 - 16mm)



3/4" - 1-1/2"
(18 - 40mm)



Crosby® Spelter Sockets



Fatigue Rated

Open and Closed Spelter Sockets

- Forged Steel Sockets thru 1-1/2" (38mm), cast alloy steel 1-5/8" thru 4" (40 - 102mm).
- Spelter socket terminations have an efficiency rating of 100%, based on the catalog strength of wire rope. Ratings are based on recommended use with 6 x 7, 6 x 19, or 6 x 36, IPS or XIP (EIP), XXIP (EEIP), RRL, FC, or IWRC wire rope.



G-416 / S-416
Spelter Sockets



G-417 / S-417
Closed Spelter Sockets

WIRELOCK® Resin



For use on 416 & 417 Spelter Sockets

- 100% termination efficiency.
- Temperature operating range is -65 F to +240 F (-54°C to 116°C).
- Ideal for on-site applications.
- No hazardous molten metal.
- Improved fatigue life.
- Pouring temperature without booster pack is 48 F to 110 F (6.67°C to 43.3°C).
- One booster pack if pouring temperature is 35 F to 48 F (1.67°C to 8.89°C).
- Two booster packs if pouring temperature is 27 F to 35 F (-2.78°C to 1.67°C).
- Refer to WIRELOCK® Technical Manual for more information.

Crosby® Turnbuckles

Turnbuckle assembly combinations include: Eye and Eye, Hook and Hook, Hook and Eye, Jaw and Jaw, Jaw and Eye.

- End fittings are Quenched and Tempered, bodies heat treated by normalizing.
- Hot Dip galvanized.
- Modified UNJ thread on end fittings for improved fatigue properties.
- Body has UNC threads.
- Turnbuckle eyes are forged elongated by design, to maximize easy attachment in system and minimize stress in the eye.
- For turnbuckle sizes 1/4" through 2-1/2" (6 - 64mm), a shackle one size smaller can be reeved through eye.
- Forged jaw ends are fitted with bolts and nuts on sizes 1/4" through 5/8" (6.35 - 15.9mm) and pins and cotters on sizes 3/4" through 2-3/4" (19.1 - 70.0mm).
- Turnbuckles recommended for straight or in-line pull only.
- Lock Nuts available for all sizes.
- Crosby products meet or exceed all the 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.



HG-226

HG-228

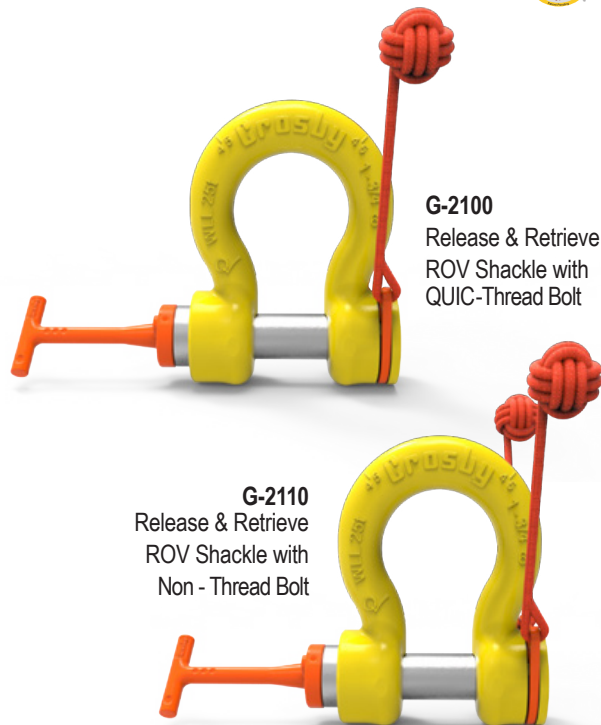


Subsea Shackles and Hooks



G-2100/G-2110 ROV Release & Retrieve Shackles

- Forged alloy bow with an industry best 6 to 1 performance design factor.
- Patent pending captured bolt can withstand over 2,000 lbs. (907 kg) of pull-out force.
- Galvanized bow with an API RP 17H color compliant coating.
- Galvanized alloy bolt (Non-Threaded) (G-2110). On average, QUIC-Thread bolt requires only 3.5 rotations for full engagement (G-2100).
- Raised pad for serialization.
- API RP 17H compliant 316 stainless steel handles available in T, D, F, and Eye models (sold separately).
- Built in eyelets for optional tether points.
- Monkey fist(s) included.



G-2100
Release & Retrieve
ROV Shackle with
QUIC-Thread Bolt

G-2110
Release & Retrieve
ROV Shackle with
Non - Thread Bolt



“D” Handle



“F” Handle



“T” Handle



“Eye” Handle

G-4210H ROV Handles

Handle Style	Stock No.	Weight Each (lbs.)	Dimensions (in)									
			A	B	C	D	E	F	G	H	J	K
D	1021324	10.0	10	6	7.4	31.8	19.1	44.5	128	251	19.1	*
F	1021315	11.1	10	6	7.4	31.8	19.1	39.6	140	312	*	*
T	1021306	5.4	10	6	7.4	31.8	19.1	19.1	97	176	*	19.1
Eye	1021333	4.7	10	6	7.4	31.8	19.1	19.1	*	93.7	21.8	*

- Capacities from 9-1/2t through 85t.
- Forged Steel, Quenched & Tempered, with alloy pins.
- Handles are stainless steel.
- Shackles and bolts are available in both “D” and “F” designs.
- Working Load Limit permanently shown on every shackle.
- QUIC-CHECK® deformation and angle indicators forged on the bow.
- All ROV shackle bows are galvanized, then painted fluorescent yellow.
- Handles are painted fluorescent orange.
- New Interchangeable handles on ROV shackle bolts.
- “D” and “F” handle kits available containing handle, retaining bolts and individual packet of Loctite® for easy installation.
- Handles are RFID EQUIPPED.
- Look for the Red Pin® . . . the mark of genuine Crosby quality.



Subsea Shackles and Hooks



L-320R ROV EYE HOOK

- Hook identification code stamped on each hook.
- Quenched and Tempered.
- **QUIC-CHECK®** deformation and angle indicators forged on the hook.
- Fluorescent yellow finish for high “subsea” visibility.
- Tip extension allows for easy handling.
- Sizes 3.2t through 31.5t utilize new integrated latch (S-4320) that meets the world class standard for lifting.
 - Heavy duty stamped latch interlocks with the hook tip.
 - High cycle, long life spring.
- Pad eyes are provided on either side of hook as cable guides. The cable is passed through a hole drilled in the latch that assists in allowing the “remotely operated” cable to open latch.
- Cables and drilled latches are not provided by Crosby. They can be fitted by your local Authorized Crosby Dealer.



L-320R
ROV Eye
Hook

L-562A ROV EYE SHANK HOOK

- Hook identification code stamped on each hook.
- Quenched and Tempered.
- **QUIC-CHECK®** angle indicators forged into the top eye; and deformation and angle indicators forged on the hook.
- Fluorescent yellow finish for high “subsea” visibility.
- Tip extension allows for easy handling.
- Sizes 5.4t through 31.5t utilize new integrated latch (S-4320) that meets the world class standard for lifting.
 - Heavy duty stamped latch interlocks with the hook tip.
 - High cycle, long life spring.
- Pad eyes are provided on either side of hook as cable guides. The cable is passed through a hole drilled in the latch that assists in allowing the “remotely operated” cable to open latch.
- Cables and drilled latches are not provided by Crosby. They can be fitted by your local Authorized Crosby Dealer.



L-562
ROV Eye
Shank Hook



Chain and Accessories



Load Rated®



Crosby® supplies carbon chain in Grades 30, 40 & 70, in addition to alloy chain in the following sizes and capacities.

Spectrum 8® Alloy Chain (Grade 80)

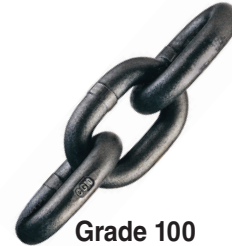
- Sizes: 1/4" through 1-1/4" (6 - 32mm).
- WLL: 3,500 lbs. through 34,200 lbs. (1.12 - 31.5t).

Spectrum 10® Alloy Chain (Grade 100)

- Sizes: 1/4" through 1" (7 - 26mm).
- WLL: 4,300 lbs. through 59,700 lbs. (2 - 26.5t).



Grade 80



Grade 100



A-1361



A-1362



A-1337



S-1317



A-1338 & L-1338

Chains and Accessories Fittings

Crosby® manufactures a full line of fittings for use with alloy chain, including the new Crosby ELIMINATOR®, which 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.

L-180 Winchline Tail Chains

- Hooks are Forged – Quenched and Tempered.
- Individually proof tested.
- Spectrum 4® High Tested Carbon Steel from 5/16" through 5/8" (8 - 16mm).
- Spectrum 8® Alloy Steel from 3/4" through 1-1/4" (19 - 32mm)
- Meets or exceeds requirements of US DOT FMCSA Part 393 Subpart I.



L-180

A-1355 Chain Choker Hook

- For use with S-1325A Coupler Link for choke applications such as pipe bundling.
- Forged alloy steel - Quenched and Tempered.
- Individually proof tested 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.
- 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-1355



Load Binders

Load Rated®



L-140 Ratchet Type Load Binders

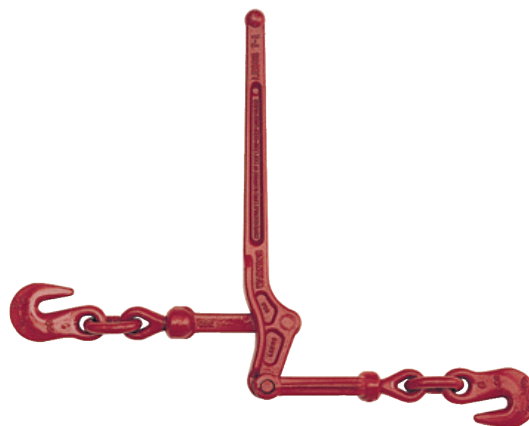
- Upgraded for use with grades 70, 80 and 100 chain.
- Utilizes standard Crosby® A-323 Alloy Eye Grab Hooks.
- New design “one piece” forged handle.
- Continuous take-up feature provides finite adjustment to tie down load.
- Ratchet spring rust proofed.
- All load bearing or holding parts forged.
- Easy operating positive ratchet.



L-140

L-150 Standard Lever Type Load Binders

- 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.



L-150

A-1W Walking Load Binders

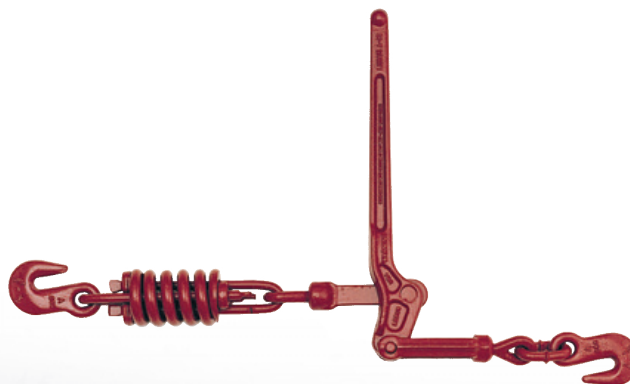
- Forged steel - Quenched and Tempered.
- Used as a come-a-long for short take-up on chain.
- Binder toggles away from the load.



A-1W

7-12 & A-12 Snubbing Load Binders

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



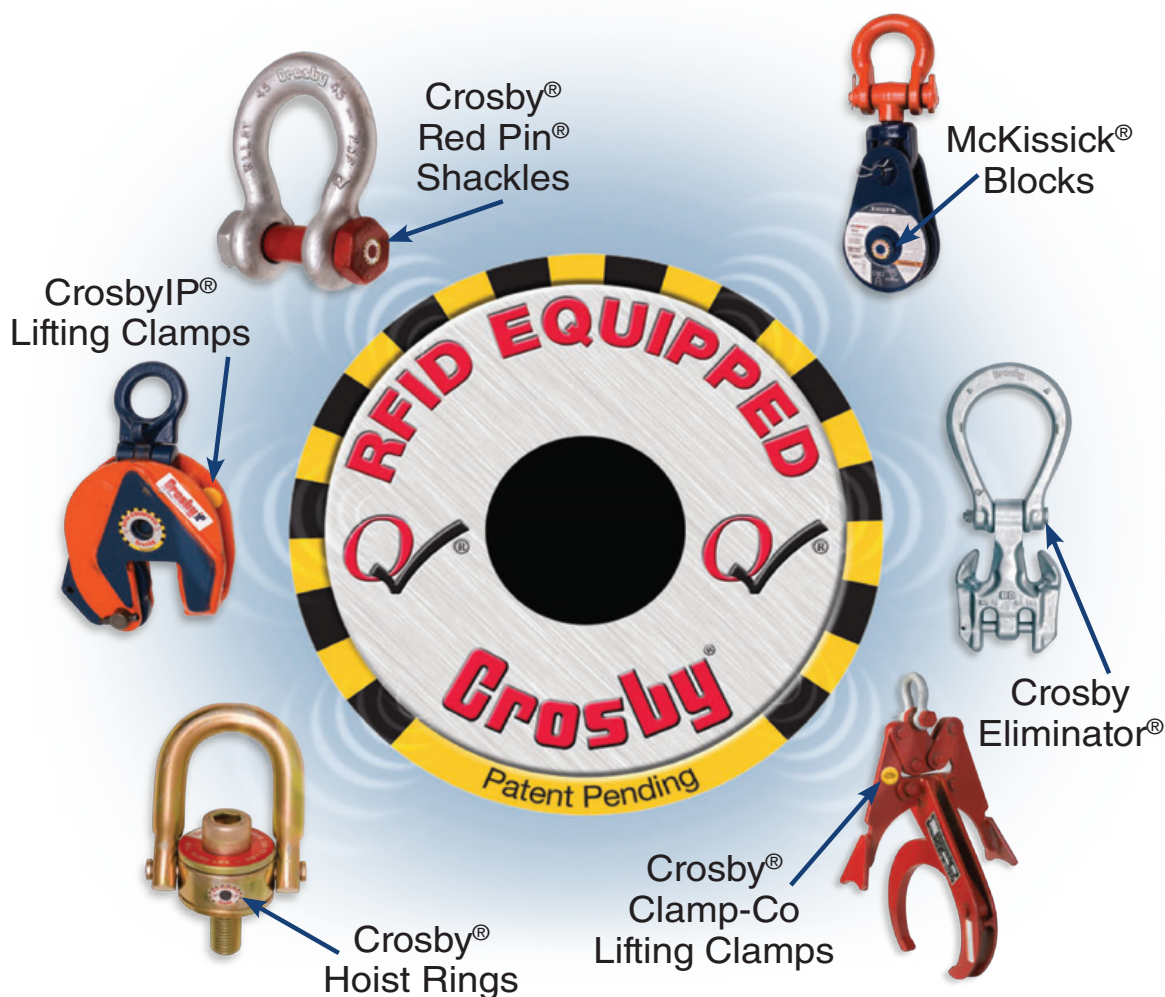
7-12 & A-12



Crosby® QUIC-CHECK® PLUS Inspection and Identification System



Fatigue Rated



An innovative software system, featuring RFID technology, that provides a streamlined and automated approach to the inspection process.

Benefits of the QUIC-CHECK® PLUS RFID inspection system include:

- Developed in accordance with ASME B30.9 and B30.26 inspection criteria.
- Efficient, accurate and timely inspections.
 - Eliminates having to handwrite the information.
- Inspection support material available.
 - Provides instant reference to product specific inspection information.
- Inspection History – Cradle to Grave.
- Reduces inspection cost.
- Accurate and timely inspection reports.

In addition to inspection of chain, wire rope and round slings, a growing number of Crosby products are **RFID EQUIPPED**.



TRAINING INFORMATION

The Crosby Group offers rigging seminars and support materials for the Crosby product line. Crosby does not charge our product users for training.

What types of training does Crosby offer?

- 4 and 8 hour rigging seminars at product users' facilities.
- Two Day Rigging Trainer Development courses in select cities nationwide.
- Computer based training utilizing CD/DVDs.
- Customized training for oilfield, offshore, manufacturing and construction markets.
- Training on proper application and inspection of crane blocks, sheaves and overhaul balls.
- Training on proper application and inspection of lifting clamps.
- Specialized training on "Heavy Lift" and various special topics.



How do I contact Crosby in regarding to training or training materials?

By phone: Call 918-834-4611, ext. 235. If busy, please contact ext. 357.

By email: Seminar schedules for the two day Rigging Trainer Development courses can be downloaded from the Crosby website at www.thecrosbygroup.com by email to crosbytraining@thecrosbygroup.com.

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