

the Crosby® group

Crosby®
McKissick®
Lebus®
National®



Oilfield Industry Products



**70 Series
Spring Loaded**

Oilfield Tubing Blocks

- Capacities available:
 - 17" through 30" sheaves with 7/8" through 1-1/8" wire line sizes
 - 50 Ton through 150 Ton 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 bearing diameters for fully rated capacities.
- Tapered roller thrust bearing in hook.
- Duplex hook for easy elevator operation, locks in six or eight positions.
- Convenient rod hook clevis available.
- 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.



Licensed under
API Spec BA-8005
and BC-0021



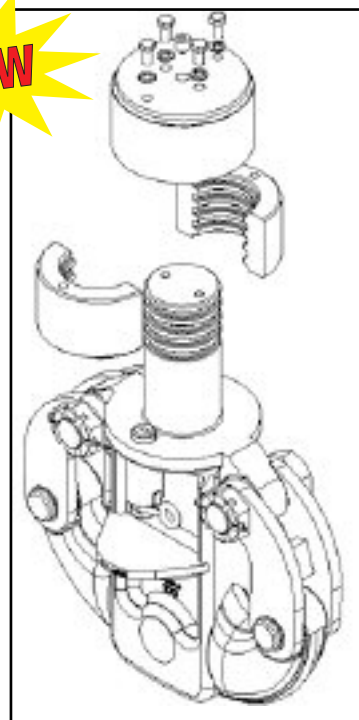
80 Series

80 Series Replacement Hook

Replacement Hook for 80 Series Blocks

Featuring patented 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 RP-8B.
- 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 retro-fit 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

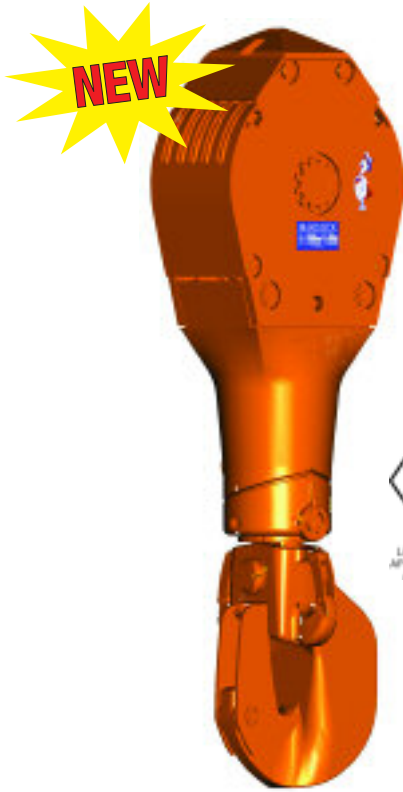


Licensed under
API Spec BA-8005
and BC-0021

Patented

Fatigue Rated

Drilling Blocks



**868, 869 & 870
Series Drilling Blocks**

RJ Style Drilling Blocks

- Capacities available:
 - 36" and 42" sheaves with 1-1/8" and 1-1/4" wire line sizes
 - 250 Ton and 350 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.

Traveling Blocks

RP Style Traveling Blocks

- Capacities Available:
 - 60" and 72" sheaves with 1-3/8" through 1-3/4" wire line sizes
 - 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.



**RP Style
Traveling Blocks**

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.



418, 419 & 404 Light Champion

- Hook, Shackle and Tailboard styles
- 3" through 18" sheaves with 5/16" through 1" wire line sizes
- 2t through 15t Working Load Limits

408 & 409 Light Champion Double Sheave

- Hook and Shackle styles
- 4-1/2" through 14" sheaves with 3/8" through 3/4" wire line sizes
- 4t and 12t Working Load Limits

420, 421 & 406 Champion

- Hook, Shackle and Tailboard styles
- 6" through 10" sheaves with 3/4" through 7/8" dual rated wire line groove
- 12t and 15t Working Load Limits

430, 431 & 407 Super Champion

- Hook, Shackle and Tailboard styles
- 8" through 24" sheaves with 1" through 1-1/4" wire line sizes
- 20t through 30t Working Load Limits

416, 417 & 402 All Alloy

- Hook, Shackle and Tailboard styles
- 6" through 10" sheaves with 3/4" - 7/8" dual rated wire line groove
- 12t Working Load Limit

L-160 Lebus Heavy Duty

- Hook, Shackle and Tailboard styles
- 5" and 5-7/8" sheaves with 3/8" through 3/4" wire line sizes
- 6t and 12t Working Load Limits

L-170 Lebus General Purpose

- Hook, Shackle and Tailboard styles
- 4-1/8" sheaves with 3/8" - 1/2" dual rated wire line groove
- 5t Working Load Limit

Fatigue Rated®

Other sizes and styles also available upon request.

High Capacity Snatch Blocks for Gin Pole Applications

NEW



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 or roller bearing sheaves.

M-491 Derrick Hoist Blocks for Tugger 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 applications.

- A wide variety of configurations:
 - 4, 8, 12 or 15t Working Load Limits
 - 3/8" through 1" wire line sizes
 - Painted or galvanized finish
- 8" & 10" blocks furnished with dual rated wire line 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.
- 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.
- 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
- Holes through side plates are available for secondary block securement device.
- Design factor of 4 to 1.





475

477

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Well Logger's 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.

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.



731

732



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 S-4320 hook latch.
- Furnished with roller bearings.
- 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" size only.



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Lay Down Blocks

- All steel construction, steel sheaves mounted on antifriction bearings, grooved for maximum of 3/4" 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.

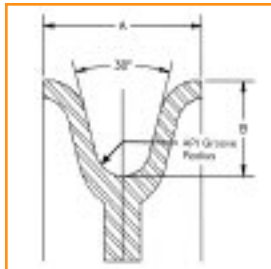


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Roll Forged™ Sheaves

American Petroleum Institute

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



Typical oilfield applications include:

- Drilling Rigs
- Working Units
- Motion Compensation Applications
- Tubing Blocks
- Traveling Blocks
- Riser Tensioners
- Crown Block Units

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 14" through 60" with wire line sizes 1/2" - 2", with a full array of bearing types, you will find a Roll-Forged™ sheave to meet your application. McKissick® also manufactures custom Roll-Forged™ sheaves (12" through 72") and can make minor modifications to standard sheaves as needed for special applications.

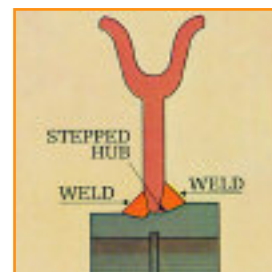


Solid Steel — No Castings

Every McKissick® sheave starts as a single piece of solid carbon steel plate. It is “flame-cut” from closely checked steel, so no inherent web / rim flaw may occur as in cast sheaves.

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.



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 loping of the rotating sheave.



Flame Hardened Groove

Crosby's hardening technique is a science providing a precise maximum hardness for wear resistance across the wire rope contact area. The McKissick® sheave groove is flame hardened to a minimum Rockwell C 35 for a 140° contact area with the wire rope.



Bearing Selection to Match Your Job Requirement

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

- Plain bore
- Roller bearing
- Bronze bushed
- Tapered roller bearing

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

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



G-2140 S-2140
30t - 400t



G-2160
30t - 1250t

COLD TUFF® Shackles

- 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. min. ave. at -4°F.
- 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.



G-2130CT / G-2140CT

Fatigue Rated Load Rated



QUIC-CHECK®



All Crosby® Shackles, except for G-2160's 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.

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 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 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. These tests are conducted on an ongoing basis.

Wire Rope Clips

G-450 Red U-Bolt Clips

- Available in sizes from 1/8" through 3-1/2"
- 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" have rolled threads.
- Look for the Red-U Bolt®, your assurance of Genuine Crosby® Clips.



G-429 Fist Grip Clips

- Available in sizes from 3/16" through 1-1/2"
- 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"



3/4" - 1-1/2"

Sling Saver Line

Sling Saver Fittings

Crosby's Sling Saver line of fittings, featuring the new S-237 High Performance Sling Connector, has been designed to eliminate the "bunching" effect found with conventional hardware, which can reduce the sling efficiency. The result is that you achieve the full efficiency of your web sling, round sling, or high performance sling.



S-237
High Performance
Sling Connector



S-252



S-253



S-281

Web Sling / Round Sling Shackles



S-282
Web to Chain
Connector



S-280
Web Connector



WS-320
Synthetic
Sling Hook



S-287
Web Sling
Choker Hook

Sling Saver® Fatigue Rated®
Load Rated®

Eye Hooks

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.
- Chemical analysis and tensile tests performed on each PIC to verify chemistry and mechanical properties.
- Proper design, careful forging and precision controlled quenched 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



S-320C / S-320A
20t Carbon - 60t Alloy

Additional Features of Crosby® S-320N Eye Hoist Hooks:

- Fatigue rated at 1-1/2 times the Working Load Limit at 20,000 cycles.
- Can be proof tested to 2-1/2 times the Working Load Limit.
- Can be Metric Rated at 5:1 Design Factor.
- 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 1926.550(g) for personnel hoisting.



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



Fatigue Rated® Load Rated®

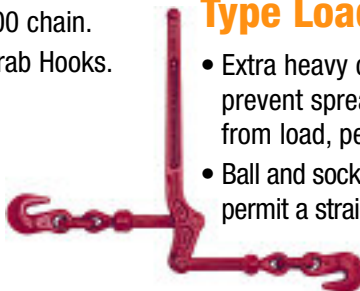
L-140 Ratchet Type Load Binders

- 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.



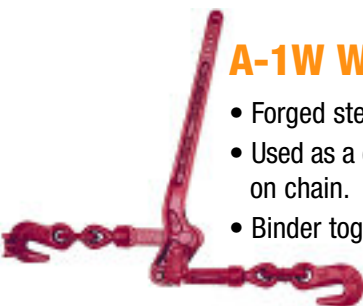
L-150 Standard Lever Type Load Binders

- 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.



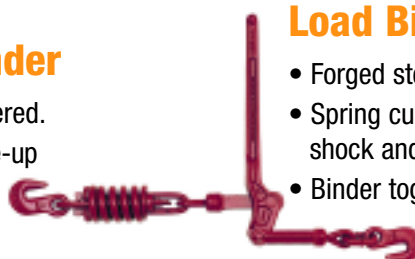
A-1W Walking Load Binder

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



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.



Load Rated®



Meets or exceeds DOT and CVSA Cargo Securement Tie-Down Guidelines, November 2003.

Chain & Accessories

Chain & Accessories

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 7/8"
WLL: 3,500 lbs. through 34,200 lbs.



Spectrum 10® Alloy Chain (Grade 100)

Sizes: 1/4" through 5/8"
WLL: 4,300 lbs. through 22,600 lbs.

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.



Load Rated®



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.”



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"
- Spectrum 8® Alloy Steel from 3/4" through 1-1/8"
- Meets or exceeds DOT and CVSA Cargo Securement Tie-Down Guidelines, November 2003.



Hoist Rings

Crosby® Hoist Rings...Time Tested and Work Proven!



HR-125 UNC / Metric

Swivel Hoist Ring

Crosby's original swivel hoist ring available in capacities from 400 lbs. to 100,000 lbs., with 100% rated Working Load Limit at 90° angle. Features full 360° rotation and 180° pivot action. Also available in stainless steel.

HR-1000 UNC / Metric

Heavy Lift Swivel Hoist Ring

All the benefits of our standard hoist ring, plus, features a forged bail which provides larger opening than standard hoist rings, along with greater durability in potentially abusive field conditions.



HR-1200 UNC / Metric

Side Pull Hoist Ring

Capacities from 650 lbs. to 29,000 lbs. Body components are alloy steel. Allows utilization of standard Crosby® Red Pin® shackles to connect to wire rope or synthetic slings.



Crosby® IP® Lifting Clamps

Fatigue Rated

IPTK Beam Clamp

- For the transfer of steel beams and attachment of tackle eye.
- Available in capacities of 2 thru 25 metric tons.
- Wide variety of jaw openings available: 3" to 40"
- 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.



IPSC Positioning Clamp

- Suitable for use in positioning and turning of steel plates and sections.
- Available in capacities of 1.5 and 3 metric tons.
- Suitable for steel with a surface hardness up to 30 Rc.
- 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.



Not to be used as a lifting clamp.



IPDV and IPVK Drum Clamps

- Designed to lift, move and transfer 50-55 gallon drums with steel tops.
- Available in capacity of .5 metric tons.
- 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.



Allows drum to remain in an upright position during the lift and transfer using one clamp.

Automatically locks on drum and can be used alone or in pairs.

Crosby® Training Information

These seminar and support materials were developed for the Crosby® product line. The materials are intended to be used as classroom references in training sessions conducted by Authorized Crosby® Instructors. Crosby® provides instruction only on how to use the material. Crosby® does not select or determine whether each attendee is qualified to be a trainer. The management of companies requesting the Crosby® training is responsible for determining the capability and suitability of all trainers in their employment.

API RP-2D Basic Rigging Requirements

Those who attend day one, Course # OE-001 will receive:

- Certificate of Completion
- A Crosby® Workbook API RP-2D
- Crosby's API laminated pocket reference guide

Those who attend the full two-day program, Course # OE-001 and # OE-002, will receive:

- Same materials as shown above
- Crosby® General Catalog on CD-Rom
- Crosby® API CD-Rom Lift Guide (computer based course)
- The ability to receive a "Crosby® Authorized Trainer" certificate valid for four years
- A CD-Rom with Power Point files that can be used to print a basic set of overhead slides for a seven hour presentation. You can create the overhead transparency slides at your facility or at a local print shop.
- The ability to order Crosby® training materials at reduced prices.

Land Based Energy Operations Training Information

Those who attend day one, Course # LB-001 will receive:

- Certificate of Completion
- A Crosby® Seminar Workbook: Land Based Energy Operations, Edition 1
- Crosby's Land-Based laminated pocket reference guide

Those who attend the full two-day program, Course # LB-001 and # LB-002, will receive:

- Same materials as shown above
- Crosby® General Catalog on CD-Rom
- Crosby® API CD-Rom Lift Guide (computer based course)
- The ability to receive a "Crosby® Authorized Trainer" certificate valid for four years
- A CD-Rom with PowerPoint files that can be used to print a basic set of overhead slides for a seven hour presentation. You can create the overhead transparency slides at your facility or at a local print shop.
- The ability to order Crosby® training materials at reduced prices.

Classroom training is only a small part of the needed qualifications. Demonstrated ability on the job is equally important. Once the certificate request form is signed by a supervisor or manager and all requirements are met, we will send a certificate as a "Crosby® Authorized Trainer" valid for four years.



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