

Recovery



Snatch Blocks

all-Grip® Snatch Blocks

We have these blocks manufactured to our exacting standards. Forged hook and yokes, heavy side plates, grease zerks, and hook latches are all standard equipment. We offer 8 popular models. If you need a great quality block with a budget price . . . this is the block for you. See page 29 for instructions.



Hook Blocks

Part #	Type	Sheave Diameter	Wire Rope Size	Working Load Limit	Weight	Latch Part #
108038P	Hook	3"	5/16" - 3/8"	4000 lbs.	5.25 lbs.	90063P
108065P	Hook	4 1/2"	3/8" - 1/2"	8000 lbs.	13 lbs.	90081P
108127P	Hook	6"	5/8" - 3/4"	16,000 lbs.	26 lbs.	90107
108225P	Hook	8"	5/8" - 3/4"	16,000 lbs.	35 lbs.	90107
169418P	Hook	8"	7/8"	30,000 lbs.	56 lbs.	90125
110221P	Hook	10"	7/8"	30,000 lbs.	77 lbs.	90125



Shackle Blocks

Part #	Type	Sheave Diameter	Wire Rope Size	Working Load Limit	Weight
109037P	SHACKLE	3"	5/16" - 3/8"	4000 lbs.	5.25 lbs.
109064P	SHACKLE	4 1/2"	3/8" - 1/2"	8000 lbs.	12.2 lbs.



Chain Blocks by all-Grip®

These chain blocks allow for securement into T slots, keyholes or rings, providing a quick, secure anchor point. Used to change direction of winchlines.

Part#	DIA.	W/R Size	W.L.L.	Chain Size	Weight
SBC2T	3"	5/16"-3/8"	4,000 lbs.	5/16" x 30"	8.6 lbs.
SBC4T	4-1/2"	3/8"-1/2"	8,000 lbs.	3/8" x 30"	18.1 lbs.
32903	Replacement chain for SBC2T				3.4 lbs.
8607456	Replacement chain for SBC4T				5.9 lbs.





Recovery



Snatch Blocks

McKissick, a part of the Crosby Group, Inc. has manufactured snatch blocks for the towing industry since 1959. These blocks have forged yokes and alloy hooks. They open, permitting insertion of the wire rope while the block is suspended. They also have a bolt retaining spring which assures no lost bolts and pressure lube fitting. 4-1/2" and larger are RFID equipped. Painted blue with orange hook. See page 29 for instructions.

McKissick Standard Weight Blocks by Crosby

Model 418

Part#	Type	Sheave Diameter	Wire Rope Size	W.L.L.	Weight	Latch Part#
108038	418	3"	5/16" - 3/8"	4,000 lbs.	5 lbs.	96421
108065	418	4 1/2"	3/8" - 1/2"	8,000 lbs.	12 lbs.	96468
108127	418	6"	5/8" - 3/4"	16,000 lbs.	27 lbs.	96562
108225	418	8"	5/8" - 3/4"	16,000 lbs.	34 lbs.	96562
108323	418	10"	5/8" - 3/4"	16,000 lbs.	41 lbs.	96562



These McKissick snatch blocks have all the features of the above blocks only the entire block is made from heat treated alloy steel. Use of heat treated alloy gives the block only 60% of the weight of blocks of comparable capacities. Strong block.....light weight. Painted all orange.

McKissick All Alloy Blocks by Crosby

Model 416

Part#	Type	Sheave Diameter	Wire Rope Size	W.L.L.	Weight	Latch Part#
193000	416	6"	3/4"	16,000 lbs.	26 lbs.	96562
193427	416	6"	3/4" - 7/8"	24,000 lbs.	26 lbs.	96609
193490	416	8"	3/4" - 7/8"	24,000 lbs.	33 lbs.	96609
193613	416	10"	3/4" - 7/8"	24,000 lbs.	41 lbs.	96609



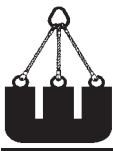
Photo: Thanks to Kara Cunningham, Editor, Tow Canada and Hanson Husky, Burns Lake, BC.



Photo: Used with permission, Ken Papaleo, Rocky Mountain News



Photo: Thanks to Jim Schlier, Owner, Schlier's Towing and Recovery, Tannersville, Pa.



Operating Practices ▬ Snatch Blocks

TACKLE BLOCK WARNING, USE & MAINTENANCE INFORMATION

WARNING

- A potential hazard exists when lifting or dragging heavy loads with tackle block assemblies.
- Failure to design and use tackle block systems properly may cause a load to slip or fall - the result could be serious injury or death.
- A tackle block system should be rigged by a qualified person as defined by ANSI / ASME B.30.
- Instruct workers to keep hands and body away from block sheaves and swivels - and away from "pinch points" where rope touches block parts or loads.
- Do not side load tackle blocks.
- Read, understand, and follow these instructions to select, use and maintain tackle block systems.

IMPORTANT:

For maximum safety and efficiency, tackle block systems must be properly designed, used, and maintained. You must understand the use of tackle block components in the system. These instructions provide this knowledge. Read them carefully and completely. Some parts of these instructions must use technical words and detailed explanations. NOTE: If you do not understand all words, diagrams, and definitions – DO NOT TRY TO USE A TACKLE BLOCK SYSTEM!

TACKLE BLOCK MAINTENANCE

Tackle Blocks must be regularly inspected, lubricated, and maintained for peak efficiency and extended usefulness. Their proper use and maintenance is equal in importance to other mechanical equipment. The frequency of inspection and lubrication is dependent upon frequency and periods of use, environmental conditions, and the user's good judgment.

Inspection: As a minimum, the following points should be considered:

1. Wear on pins or axles, rope grooves, side plates, bushing or bearings, and fittings. Excessive wear may be a cause to replace parts or remove block from service.
2. Deformation in side plates, pins and axles, fitting attachment points, trunnions, etc. Deformation can be caused by abusive service and / or overload and may be a cause to remove block from service.
3. Misalignment or wobble in sheaves.
4. Security of nuts, bolts, and other locking methods, especially after reassembly following a tear down inspection. Original securing method should be used; e.g., staking, set screw, cotter pin, cap screw.
5. Deformation or corrosion of hook and nut threads.
6. Surface condition and deformation of hook.
7. Welded side plates for weld corrosion or weld cracking.
8. Hook latch for deformation, proper fit and operation.

Lubrication: The frequency of lubrication depends upon frequency and period of product use as well as environmental conditions, which are contingent upon the user's good judgment.

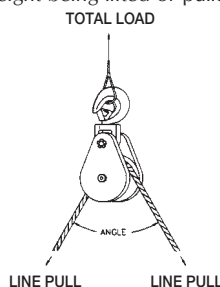
Assuming normal product use, the following schedule is suggested when using lithium-base grease of a medium consistency.

Bronze Bushings—(Not Self Lubricated)—Every 8 hours of continuous operation or every 14 days of intermittent operation.

LOADS ON BLOCKS

The Working Load Limit (WLL) for blocks indicates the maximum load that should be exerted on the block and its connecting fitting.

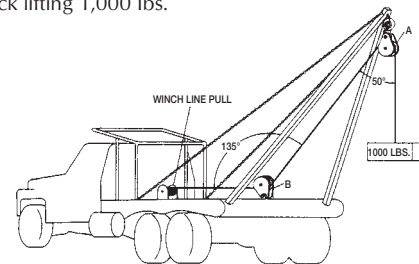
This total load value may be different from the weight being lifted or pulled by a hoisting or hauling system. It is necessary to determine the total load being imposed on each block in the system to properly determine the rated capacity block to be used. A single sheave block used to change load line direction can be subjected to total loads greatly different from the weight being lifted or pulled. The total load value varies with the angle between the incoming and departing lines to the block. The following chart indicates the factor to be multiplied by the line pull to obtain the total load on the block.



EXAMPLE A

Angle Factor Multipliers			
Angle	Factor	Angle	Factor
0°	2.00	100°	1.29
10°	1.99	110°	1.15
20°	1.97	120°	1.00
30°	1.93	130°	.84
40°	1.87	135°	.76
45°	1.84	140°	.68
50°	1.81	150°	.52
60°	1.73	160°	.35
70°	1.64	170°	.17
80°	1.53	180°	.00
90°	1.41	—	—

(Calculations for determining total load value on single line system.)
A gin pole truck lifting 1,000 lbs.



There is no mechanical advantage to a single part load line system, so winch line pull is equal to 1,000 lbs. or the weight being lifted.

To determine total load on snatch block A:

$$A = 1,000 \text{ lbs.} \times 1.81 = 1,810 \text{ lbs.}$$

(line pull) (factor 50° angle)

To determine total load on toggle block B:

$$B = 1,000 \text{ lbs.} \times .76 = 760 \text{ lbs.}$$

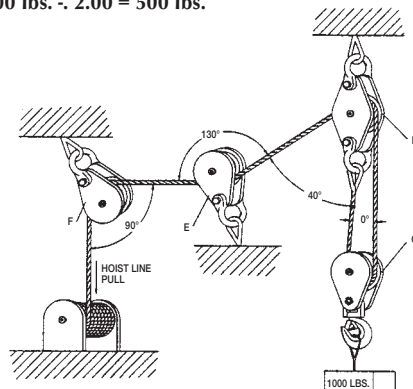
(line pull) (factor 135° angle)

EXAMPLE B

(Calculation for determining total load value for mechanical advantage system.)
Hoisting system lifting 1,000 lbs. using a traveling block. The mechanical advantage of traveling block C is 2.00 because two (2) parts of load line support the 1,000 lb. weight.

To Determine Line Pull:

$$\text{Line Pull} = 1000 \text{ lbs.} \div 2.00 = 500 \text{ lbs.}$$



To determine total load on traveling block C:

$$C = 500 \text{ lbs.} \times 2.0 = 1,000 \text{ lbs.}$$

(line pull)(Factor 0° angle)

To determine total load on stationary block D:

$$D = 500 \text{ lbs.} \times 1.87 + 500 \text{ lbs.} = 1,435 \text{ lbs.}$$

(line pull) ↑ (dead end load)

(Factor 40° angle)

To determine total load on block E:

$$E = 500 \text{ lbs.} \times .84 = 420 \text{ lbs.}$$

(line pull) (Factor 130° angle)

To determine total load on block F:

$$F = 500 \text{ lbs.} \times 1.41 = 705 \text{ lbs.}$$

(line pull) (Factor 90° angle)