November 2015

PRENFROE

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- Manufacturing To Customized Specs
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Reliability equals safety equals less downtime and more continuous workflow - any place where you need to lift, shift and move big weights. Be assured that all our products have to outperform the specification they were designed to meet; a solid fact that holds firm. That's why it's safe to say Renfroe products last longer.





J.C. Renfroe & Sons has been an international leader in the manufacturing and marketing of lifting products for over 70 years.

Corporate Headquarters Jacksonville, Florida Telephone: 904-356-4181 Toll Free: 1-800-874-8454 Fax: 904-354-7865 www.jcrenfroe.com

USA Plant Location

J.C. Renfroe & Sons 1926 Spearing Street Jacksonville, Florida 32206

Partnering Plants Spain Germany

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J.C. RENFROE & SONS HAS BEEN A LEADER IN THE MANUFACTURING AND MARKETING OF LIFTING PRODUCTS FOR OVER 70 YEARS.

Renfroe products are manufactured in Jacksonville, Florida and Germany. A worldwide network of stocking distributors provides a readily available source of supply and service.

We have a distinguished heritage at J.C. Renfroe & Sons. When our country has called, we have responded. The historic Liberty Bell in Philadelphia, Pennsylvania, needed to be relocated with great care. Our lifting products were used. After the space shuttle Challenger tragedy, we were called to design a special clamp to aid in the recovery of the debris. When they needed lifting capabilities for our nuclear submarines, we were there. History has proven when our country needed the very best, Renfroe was called.

The Renfroe legacy began in 1940 with Joseph Renfroe and his four sons. The standard of excellence on which the company was founded exists today with J.C. Renfroe II, grandson of the founder, overseeing the final inspections of Renfroe clamps.

Renfroe's innovative technology and streamlined manufacturing produces the highest quality lifting products in the industry. Our close-knit employee family continues to work with the same dedication to excellence as our founders.









J.C. RENFROE WORKS HARD TO EARN YOUR BUSINESS



Our Delivery Systems Are Designed To Get Lifting Products To You When You Need Them

It is the goal of J.C. Renfroe to make the purchase and delivery of products as smooth and easy as possible. To help achieve that goal, we offer two time-sensitive delivery programs, Quickship and Instock, to help you prevent downtime on your projects.



designated products ship within 48 hours.



designated products ship within 10 business

Just look for our red Quickship logo or our green Instock logo on our products, in our catalogs and on our website.



Big or small, Renfroe has it all.

Whether it's big, small or somewhere in between, if your operation depends on using the right size lifting clamp for the job, you need a Renfroe clamp. That's because J.C. Renfroe has an extensive selection of products with many rated lifting capacities. We're so determined that you find the right model for

your lifting needs that, if you can't find

it from our line of clamps, we'll

and training seminars for our customers. That's what comes from being tuned into our customers' needs and wants for more than 65 years. It's no wonder that outstanding customer service and on-time deliveries rank right up there with our being able to offer you the best quality lifting clamp in the

industry.

to your application. We even offer free safety surveys

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- Catalog specifications
- Use history
- Maintenance instructions
- In-service date & inspection records
- Maintenance updates
- Manufacturing and training contact information.

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PLATE AND FABRICATED -VERTICAL ONLY

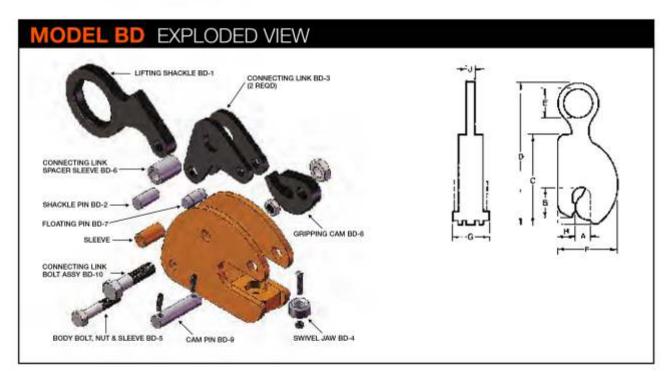






Model BD Non-Locking Type

The **Model BD** is a vertical lifting, non-locking clamp used primarily for steel warehousing and bench work where a locking type clamp is not essential. The clamp is a low-cost, low maintenance tool that features lightweight and compact size. It is recommended for use and application where constant tension is applied to the lifting shackle throughout the entire operation.



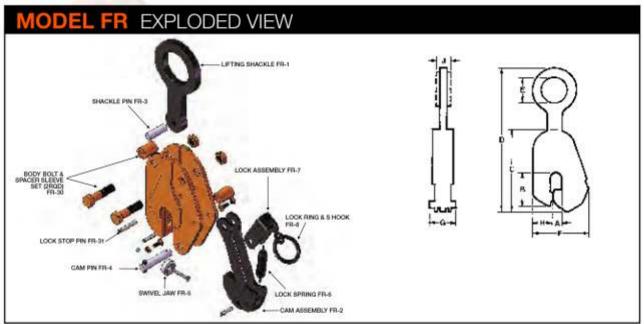
Rated Capacity Tons	Plate Thickness A	MAX.	С	D	Е	F	G	Н	Weight	(in pounds)
1/2	0-1	2%6	65/s	10%	1%	41/2	21/4	13/6	1/2	6
1	0-1%	31/1a	7 ⁵ /s	12¾	2½	5%s	27/6	15/6	5/6	11
2	0-1%	3%e	81/ss	141/2	31/é	6%s	3	21/4	%	16
4	0-1%	37/4	10¾	17¾	31/6	7 ⁷ /16	31/4	21/4	3/4	27
7	1/4-21/2	5	123/4	221/2	3½	95/6	5	3	11	65





Model FR Locking Type

The **Model FR** is a vertical lifting tool for relatively light work. It is small and easy to handle in capacities through three tons. It incorporates a "Lock Closed" feature which facilitates attaching the clamp to the plate.









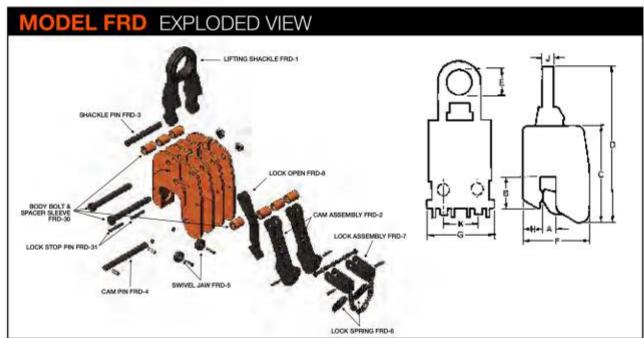
Capacity	Thickness A	В	c	MAX.	Ε	F	G	H	J	Weight (in pounds)
1/2	0-% ½-1 ¾-1¼ 1-1½ 1¼-1¾	2 ¹³ / ₁₆ 2 ¹³ / ₁₆ 2 ¹³ / ₁₆ 2 ¹³ / ₁₆ 2 ¹³ / ₁₆	7 7 7 7 7	11/4 11/4 11/4 11/4 11/4	2% 2% 2% 2% 2% 2%	4% 4% 5% 5% 5%	2½ 2½ 2½ 2½ 2½ 2½	1½ 1½ 1½ 1½ 1½	1/4 1/4 1/4	8 9 10 11
1	0-% ½-1 ¾-1¼ 1-1½ 1¼-1¾ 1½-2	3%s 3%s 3%s 3%s 3%s 3%s 3%s	9 9 9 9	13% 13% 13% 13% 13% 13%	2% 2% 2% 2% 2% 2%	574 674 676 676 676 776	3% 3% 3% 3% 3% 3% 3%	1% 1% 1% 1% 1% 1%	56 56 56 56 56	14 15 15 16 17 18
2	0-1 34-1½ 1¼-2 134-2½	3½ 3½ 3½ 3½	9 9 9	16% 16% 16% 16%	354 354 354 356	6% 7% 7% 8%	3% 3% 3% 3% 3%	21/6 21/6 21/6 21/6	94 94 94 94	23 23 23 24
3	0-1¼ %-1½ 1¼-2 1¾-2½	4%s 4%s 4%s 4%s	10¾ 10¾ 10¾ 10¾	18% 18% 18% 18%	3% 3% 3% 3% 3%	7% 7% 8% 8%	3%6 3%6 3%6 3%6	2 ⁷ /16 2 ⁷ /16 2 ⁷ /16 2 ⁷ /16	3,4 3,4 3,4 3,4	30 31 32 33





Model FRD Locking Type

The **Model FRD** is a vertical lifting clamp that incorporates two Model FR clamps into one and is used for heavy duty work where it is desirable to spread the gripping surfaces with two points of contact. The clamp contains two "Lock Closed" mechanisms which are activated by a single chain and a manually operated "Lock Open" mechanism.



Rated Capacity Tons	Plate Thickness A	В	С	MAX.	E	F	G	н	1	J	Weight (in pounds)
1	0-%	2%	7%	14	23/6	4%	5½	11/2	%	3	16
	0-3/4	2%	73/4	14	25/8	51/4	51/2	11/2	% %	3	18
	34-154	2%	734	14	2%	5%	51/2	11/2	%	3	20
	114-134	2%	73/4	14	2%	5%	51/2	11/2	%	3	24
2	0-34	31/16	9	15%	21/2	6	6½	1%	3/4	31/6	26
	34-134	31/16	9	15 ³ /4	21/2	6½	6½	1%	3/4 3/4	31/6	30
	11/4-13/4	31/se	9	15%	21/2	7	6½	156	34	31/6	34
4	0-1	31/2	9 ⁷ /16	17%	27/6	65/16	6%	2%	3/4	35/6	40
	1-13/4	31/2	97/16	17%	27/6	71/16	6%	21/6	% %	35/6	44
	134-21/2	31/2	9 ⁷ /16	17^{9} 4	27/6	7 ¹³ /46	6¾	21/6	3/4	35/6	48
6	0-1%	41/6	111/2	20%	33/16	7	7%	2	1%	41/6	58
	1%-2%	41/é	111/2	20%	35/se	81/6	7%	2	1%	416	67
	21/4-31/6	41/6	111/2	20%	33/4e	91/4	77/6	2	1¾	416	66

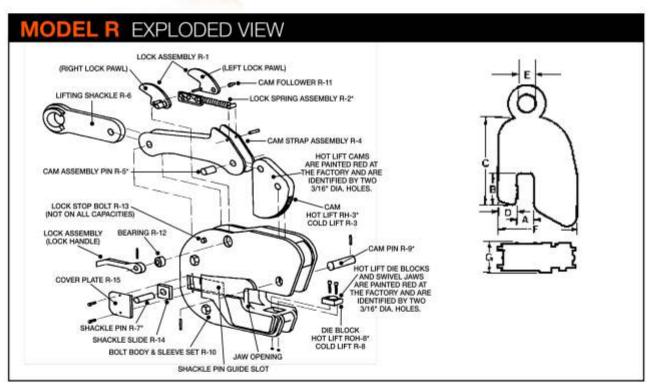




Model R Locking Type

The **Model R** is a vertical lifting clamp primarily used in the handling of heavy steel plate in a wide range of plate thicknesses. Specific models are available for handling "hot" plate (refer to factory for maximum temperatures and recommended application).

The **Model R** incorporates a "Lock Open," "Lock Closed" feature which facilitates attaching and removing the clamp from the plate.



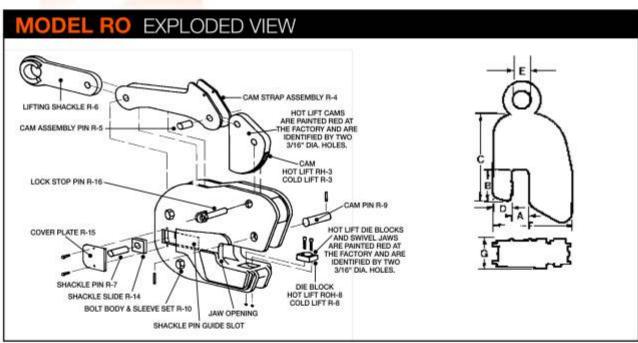
Rated	Plate Thickness					VA	/oight	
Tons	A	В	C	D	E	F	G	(in pounds)
35	14-41/4	83/é	23%	51/s	5	21 ³ /6	8	470
	4-8	B36	23%	51/16	5	251/6	8	515
50	1/2-61/2	13	44%	9	5	36	13½	1370
	6-12	13	44%	9	5	411/2	13½	1500
75	1/2-61/2	16½	46¾	141/4	11	42½	12½	2700
	3-9	16%	463/4	141/4	11	45	121/2	2775
	6-12	161/2	4634	1414	11	48	121/2	2850
	8-14	16%	4634	141/4	11	50	121/2	2900





Model RO Non-Locking Type

The **Model RO** incorporates a "Lock Open Only" feature allowing the clamp to be "Locked Open," lifted onto a "hot" plate and the lock released without the operator coming in close contact with the "hot" plate.



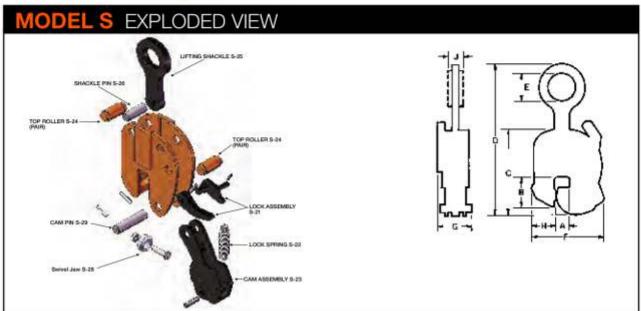
Rated Capacity Tons	Plate Thickness A	В	C	D	E		Weight G	(in pounds)
35	1/4-41/4	8%	23%	51/16	5	21%	8	470
189	4-8	8%	23%	51/16	5	25 ¹ /e	8	515
50	1/2-61/2	13	44%	9	5	36	13½	1370
	6-12	13	44%	9	5	41½	13½	1500
75	1/2-61/2	16½	46%	14¼	11	421/2	12½	2700
	3-9	16½	463/4	141/4	11	45	121/2	2775
	6-12	16½	46%	141/4	11	48	121/2	2850
	8-14	16½	46%	141/4	11	50	121/2	2900





Model S **Locking Type**

The Model S is a vertical lifting clamp and is an effective tool for construction and erection. It incorporates a "Lock Open," "Lock Closed" feature which facilitates attaching and removing the clamp from the plate.



SPECIFICATIONS (in inches)

Rated Capacity Tons	Plate Thickness A	В	C	MAX.	E	F	G	н		Weight (in pounds)
1/2	0-%	2	51/10	7%	1%	4%	21/6	1%	%	.4
1	0-%	2	51/4	7%	136	4%	2%	1%	1/4	5
2	0-1 %-1½ 1¼-2 1%-2½	374a 374a 374a 374a	10 10 10 10	17 17 17 17	3% 3% 3% 3%	8½ 9 9½ 10	313/46 313/46 313/46 313/46	2% 2% 2% 2%	% % % %	32 33 33 36
4	0-1¼ 1-2 1½-2½ 2½-3½ 3¼-4¼	4% 4% 4% 4% 4%	11% 11% 11% 11% 11%	19% 19% 19% 19% 19%	3% 3% 3% 3% 3%	10 10% 11½ 12% 13	4% 4% 4% 4% 4% 4%	31/46 31/46 31/46 31/46 31/46	% % % %	41 43 43 52 60
8	0-1½ 1-2 2-3 2½-4 3%-5	4½ 4½ 4½ 4½ 4½	13% 13% 13% 13% 13% 13%	22½ 22½ 22½ 22½ 22½ 22½	3% 3% 3% 3% 3%	10½ 11 12 13 14	514 514 514 514 514	3% 3% 3% 3% 3% 3%	1 1 1 1	70 73 77 81 85
12	0-2½ ½-3 2-4 4-6 5½-7½	6½ 6½ 6½ 6½ 6½	18 18 18 18 18	28 28 28 28 28 28	3% 3% 3% 3% 3%	13½ 14 15 17 18½	6¼ 6¼ 6¼ 6¼ 6¼	3% 3% 3% 3% 3% 3%	1% 1% 1% 1% 1%	140 140 143 150 160
20	½-3 3-5 5-7 7-9	7½ 7½ 7½ 7½ 7½	22% 22% 22% 22%	35 35 35 35	41% 41% 41% 41% 41%	17 19 21 23	7% 7% 7% 7%	5 5 5	2½ 2½ 2½ 2½	265 294 324 350
50*	%-3	8%	27%	41	4%	22	9%	6%	3	470
100*	14-3	13%	34	44	415/6	26	12%	10%	4	1350

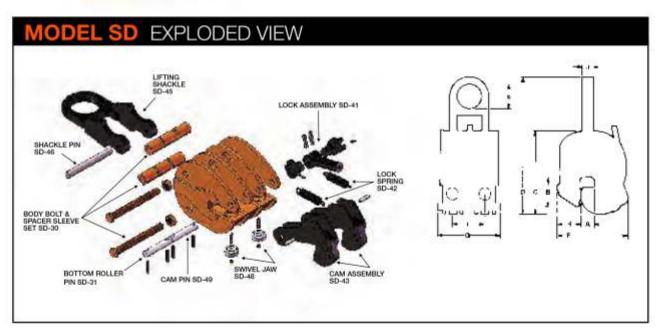
*For handling heavy plate or hot material, see Model R.





Model SD Locking Type

The **SD** is a vertical lifting clamp that incorporates two Model S clamps into one and is used for heavy duty work where it is desirable to spread the gripping surfaces with two points of contact. It incorporates a "Lock Open," "Lock Closed" feature which facilitates attaching and removing the clamp from the plate.



Rated Capacity Tons	Plate Thickness A	В	С	MAX.	E	F	G	н		J	Weight (in pounds)
6	0-1	31/4	91/2	151/2	3	7½	61/2	21/6	41/6	3/4	60
	34-11/2	31/4	9½	151/2	3	8	61/2	2%	41/á	34	62
8	0-11/4	41/2	11%	17	3	8%	6%	3	41/4	- 4	77
	1-2	41/2	11/2	17	3	91/2	6%	3	41/4	-1	81



VERTICAL + 90

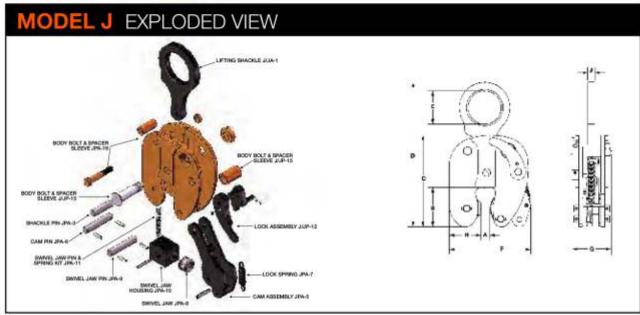






Model J Locking Type

The **Model J** is a vertical lifting clamp capable of turning a single plate or member from horizontal to vertical and back to horizontal through the same 90 degree arc.



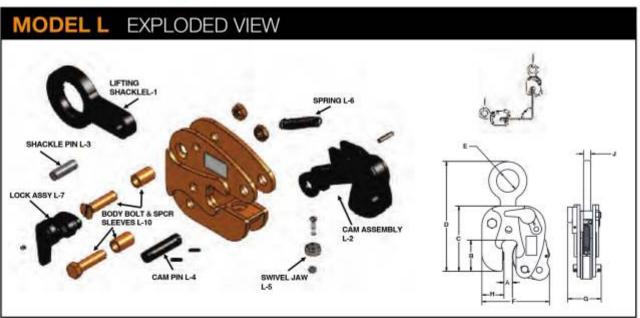
Rated apacity Tons	Plate Thickness A	В	C	MAX.	E	F	G	н	J	Weight (in pounds
1/2	0-% %-1 %-1% 1%-1%	2%%%	6% 6% 6% 6%	12 12 12 12	2% 2% 2% 2%	5% 6 6% 6%	3¼ 3¼ 3¼ 3%	2½ 2½ 2½ 2¼	% % %	10
1	0-% %-1 %-1/4 1-1/6 1/6-2	3% 3% 3% 3% 3%	7% 7% 7% 7% 7%	13 % 13 % 13 % 13 % 13 %	2% 2% 2% 2%	7 7% 8 8% 8%	3 % 3 % 3 % 3 %	2% 2% 2% 2% 2%	76 66 66	15
2	0-1 %-1% 1¼-2 2-2%	3% 3% 3% 3%	9½ 9½ 9½ 9%	17% 17% 17% 17%	3½ 3½ 3½ 3½	8% 9% 9% 10%	4½ 4½ 4½ 4½	3333	96 96 96	36
4	%e-1% 1-2 2-3 3-4	4% 4% 4% 4%	11½ 11½ 11½ 11½	2016 2016 2016 2016	3½ 3½ 3½ 3½	9% 10 11 12	4½ 4½ 4½ 4½	3¼ 3¼ 3¼ 3¼	1½ 1½ 1½ 1½ 1½	42
6	%-1% 1-2% 2-3% 3-4%	476 476 476 476	12% 12% 12% 12%	201/4 201/4 201/4 201/4	3½ 3½ 3½ 3½	10% 11½ 12½ 13½	4% 4% 4% 4%	3% 3% 3%	11/6 11/2 11/2 11/2	64
8	%-1½ 1-2½ 2-3½ 3-4½	5% 5% 5%	12% 12% 12% 12%	22% 22% 22% 22% 22%	3% 3% 3% 3%	12% 13 14% 15%	5¼ 5¼ 5¼ 5¼	4¼ 4¼ 4¼ 4¼	2222	83
12	%-2% 2-4 4-6	7% 7% 7%	17% 17% 17%	28 1/6 28 1/6 28 1/6	3/6 3/6 3/6	15 % 17 % 19 %	7 ¼a 7 ¼a 7 ¼a	5% 5% 5%	2 2 2	203 212 222
16	%-2%	8	1913%	32%	41/4	19 %	8746	61/4	214	350
20	1/2-3	8%	2113/16	35 %	5	21	111/2	6%	23/4	456
25	%-2% 3-5 4-6	8% 8% 8%	23¼ 23¼ 23¼	35 1/4 35 1/4 35 1/4	5 5 5	191% 21% 22%	9% 9% 9%	6% 6% 6%	3 3 3	483 495 502
30	1/2-3	9%	241/4	39%	5	22 13/10	14%e	7%	3	625
50	3-5	10%	30%	46 %s	5	29%₅	11%	91/4	31/4	1306





Model L

The **Model L** is an ergonomic vertical lifting clamp capable of turning a single plate or member from horizontal to vertical to horizontal through a 90 degree arc. The "Lock Open – Lock Closed" feature facilitates attaching and removing the clamp from the plate.



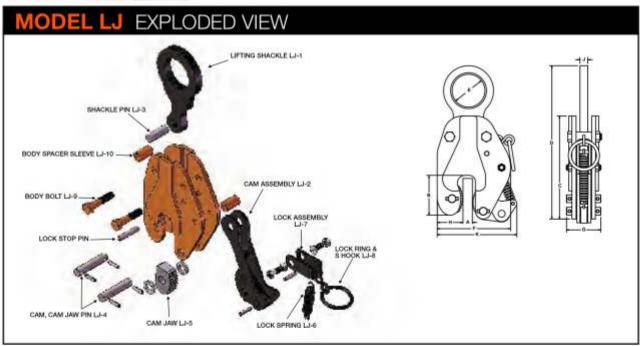
Rated Capacity Tons	Plate Thickness A	В	С	MAX.	E	MAX.	G	н	J	Weight (in pounds)
1/2	0-5/a	2	4 7/8	8	1.1/8	4 1/4	2 7/16	1 3/a	3/8	4 ¹ /8
1	$0^{-3/4}$	2	4 7/8	8	1 1/8	4 3/8	2 7/16	1.3/8	1/2	5.1/8
2	0-1	3 5/16	6 7/8	12 1/2	2 3/8	7.1/18	3 %	2 3/8	3/4	16 ⁷ /8
3	0-1	3 7/16	10	17	3 3/8	8 1/2	3 13/16	2 3/4	3/4	32





Model LJ Locking Type

The **MODEL LJ** is a vertical lifting clamp capable of turning a plate from horizontal to vertical and back through the same ninety-degree arc. It is small and easy to handle in capacities through three tons. The Model LJ incorporates a "Lock Closed" feature, which facilitates attaching the clamp to the plate.



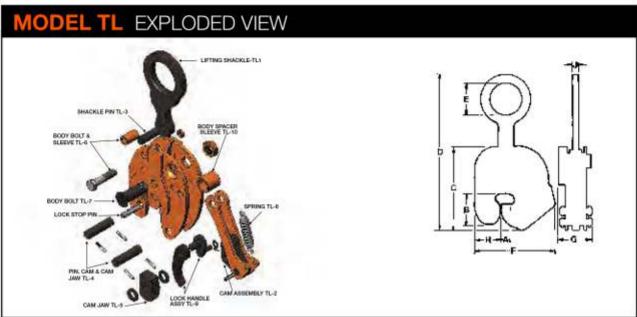
Rated Capacity Tons	Plate Thickness A	В	С	MAX. D	E	F	G	н	J	K	Weight (in pounds)
1/2	0-%	25/6	65%	101/4	21/4	5	23/6	17,6	1/2	5	9
1	0-34	3 ³ / ₁₆	81/4	13 ⁷ /s	256	57/é	2 ⁷ /s	2 ¹ /16	5/6	6 ⁷ /16	15
2	0-1	35/6	9	15 ¹³ / ₁₆	3%	71/4	31/4	2 ⁷ ,ā	34	7 ⁶ ڎ	26
3	0-11/4	41/4	103/4	18	3%	8 ³ /16	3%	3	34	83/6	34





Model TL Locking Type

The **Model TL** is a vertical lifting clamp capable of turning a single plate or member from horizontal to vertical and back to horizontal through the same 90 degree arc.



Rated Capacity Tons	Plate Thickness A	В	C	MAX.	E	MAX.	G	н		Weight (in pounds
1/2	0-% ½-1 %-1¼ 1¼-1¾	2% 2% 2% 2%	6¼ 6¼ 6¼ 6¼	11% 11% 11% 11%	2% 2% 2% 2% 2%	4% 5% 5% 5%	2% 2% 2% 2%	11% 11% 11% 11%	% % % %	9 10 11 13
1	0-% %-1 %-1% 1-1% 1%-2	3 3 3 3	7½ 7½ 7½ 7½ 7½ 7½	13 % 13 % 13 % 13 % 13 %	2% 2% 2% 2% 2% 2%	6 6¼ 6½ 6% 7¼	21% 21% 21% 21% 21%	2 2 2 2 2	% % % %	14 15 16 17 18
2	0-1 %-1½ 1½-2 2-2%	3½ 3½ 3½ 3½	9% 9% 9% 9%	1614 1614 1614 1614	3% 3% 3% 3%	8% 9% 9% 10%	3% 3% 3% 3%	2% 2% 2% 2%	% % %	32 33 35 37
4	%-1¼ 1-2 2-3 3-4	4 4 4 4	9% 9% 9% 9%	17% 17% 17% 17%	3% 3% 3% 3%	9 9% 10% 11%	31% 31% 31% 31%	3 3 3 3	% % %	36 37 40 43
6	%-1% 1-2% 2-3% 3-4%	4% 4% 4% 4%	11% 11% 11% 11%	20% 20% 20% 20%	3½ 3½ 3½ 3½	10% 11 12 13	3% 3% 3% 3%	3% 3% 3% 3%	% % %	49 51 54 57
8	%-1% 1-2% 2-3% 3-4%	4%6 4%6 4%6 4%e	12% 12% 12% 12%	21% 21% 21% 21% 21%	3% 3% 3% 3%	11% 12% 13% 14%	4% 4% 4% 4%	3% 3% 3% 3%	1 1 1	72 74 77 80
12	%-2% 2-4 3-5 4-6	6¼ 6¼ 6¼ 6¼	15 16 15 16 15 16 15 16	26% 26% 26% 26%	3% 3% 3% 3%	14½ 16 17 18	634 634 634	4% 4% 4% 4% 4%	1% 1% 1% 1%	142 150 154 158
20	½-3 2½-4½ 3-5 5-7	81/6 81/6 81/6 81/6	21% 21% 21% 21% 21%	36"/4e 36"/4e 36"/4e 36"/4e	5 5 5	20"/4e 22"/4e 22"/4e 24"/4e	8 % 8 % 8 % 8 %	6% 6% 6% 6%	2% 2% 2% 2%	415 426 430 445



VERTICAL + 90 + SIDE PULL





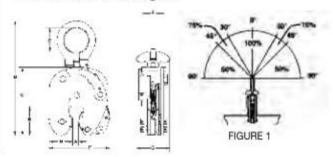


EXPLODED VIEW BODY BOLT & SPACER SLEEVE JUP-15 SWIVEL JAW PIN & SPRING KIT JPA-11

Model JP Locking Type

The Model JP is a vertical lifting clamp capable of turning a single plate or member from horizontal to vertical and back to horizontal through the same 90 degree arc. Permits side loading of lifting shackle up to 90 degrees by derating of clamp's rated capacity. Refer to FIGURE 1 for derated capacities.

Model JP incorporates a pivoting shackle that permits side loading of the lifting shackle at 100 percent of rated capacity from vertical to 30 degrees, 75 percent of rated capacity between 30 and 45 degrees and 50 percent of rated capacity between 45 and 90 degrees



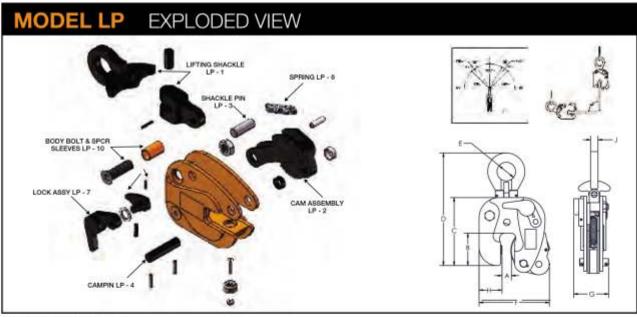
Rated apacity Tons	Plate Thickness A	В	C	MAX.	E	MAX.	G	Н		Weight (in pounds)
1/2	0-% %-1 %-1% 1%-1%	2% 2% 2% 2%	61/6 61/6 61/6 61/6	12 12 12 12	2% 2% 2% 2%	5% 6 6% 6%	3¼ 3¼ 3¼ 3¼	2% 2% 2% 2%	% % %	12
	0-% %-1 %-1% 1-1% 1%-2	3% 3% 3% 3% 3%	7% 7% 7% 7% 7%	13 % 13 % 13 % 13 % 13 %	2% 2% 2% 2% 2%	7 7¼ 8 8¼ 8¾	3 ½ 3 ½ 3 ½ 3 ½ 3 ½	2 % 2 % 2 % 2 %	% % %	20
2	0-1 %-1½ 1¼-2 2-2%	3% 3% 3% 3%	9% 9% 9% 9%	17 % 17 % 17 % 17 %	31/4 31/4 31/6 31/6	8% 9% 9% 10%	416 416 416 416 416	3 3 3 3	% %	40
4	%-1% 1-2 2-3 3-4	4% 4% 4% 4%	11 ½ 11 ½ 11 ½ 11 ½	201/4 201/4 201/4 201/4	3½ 3½ 3½ 3½	9¼ 10 11 12	416 416 416 416	3¼ 3¼ 3¼ 3¼	1% 1% 1% 1%	50
6	¼-1½ 1-2¼ 2-3¼ 3-4½	4 % 4 % 4 % 4 %	12% 12% 12% 12%	2014 2014 2014 2014	3½ 3½ 3½ 3½	10% 11% 12% 13%	4% 4% 4% 4%	3% 3% 3% 3%	1% 1% 1% 1% 1%	72
8	%-1% 1-2% 2-3% 3-4%	5% 5% 5%	12% 12% 12% 12%	22% 22% 22% 22% 22%	3% 3% 3% 3%	12% 13 14% 15%	5¼ 5¼ 5¼ 5¼	4% 4% 4% 4%	2222	93
12	%-2'% 2-4 4-6	7% 7% 7% 7%	17% 17% 17%	28 ¼ 28 ¼ 28 ¼	374 374 374	1519/46 177/46 197/46	7 1/16 7 1/16 7 1/16	5% 5% 5%	2 2 2	203 212 222
16	%-2%	В	191%	32%	41/6	19*%	811/46	614	234	350
20	1/4-3	8%	21 ¹³ / ₁₆	35%	5	21	111/2	6%	21/4	456
25	%-2'% 3-5 4-6	8% 8% 8%	23 % 23 % 23 %	35 % 35 % 35 %	5 5 5	19 %s 21 %s 22 %s	9% 9% 9%	6% 6% 6%	3 3 3	483 495 502
30	1/6-3	9%	241/4	397/4	5	22 ¹³ /ss	14%s	7%	3	625
50	3-5	10%	30%	46 %a	5	29%	1116	934	31/4	1306



Model LP

The **Model LP** is an ergonomic vertical lifting clamp capable of turning a single plate or member from horizontal to vertical to horizontal through a 90 degree arc. Permits side loading of lifting shackle to 90 degrees by de-rating of clamp's capacity. Refer to FIGURE 1 for de-rated capacities. The "Lock Open – Lock Closed" feature facilitates attaching and removing the clamp from the plate.

Model LP incorporates a pivoting shackle that permits side loading of the lifting shackle at 100 percent of rated capacity from vertical to 30 degrees, 75 percent of rated capacity between 30 and 45 degrees, and 50 percent of rated capacity between 45 and 90 degrees.



Rated Capacity Tons	Plate Thickness A	В	С	MAX.	E	MAX.	G	н	J	Weight (in pounds)
1/2	O-5/e	2	5 1/16	8 11/18	1 1/8	4 1/4	2 7/16	1 3/6	3/8	4 ¹ /8
1	0-3/4	2	5 1/8	8 11/16	1 1/8	4 3/g	2 7/16	1 ³ /8	1/2	5 1/a
2	0-1	3.5/16	6.7/B	12 1/2	1 ⁷ /8	7 1/18	3 5/8	2 ³ /8	3/4	16.7/a
3	0-1	3.7/16	10	17	3 %	8 1/2	3 13/16	2 3/4	3/4	32



VERTICAL + 180

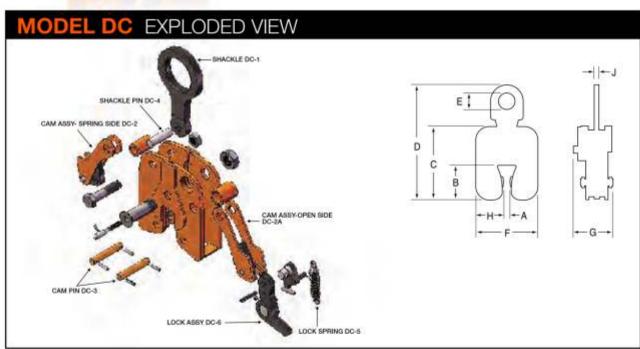






Model DC Locking Type

Model DC is vertical lifting, locking and 180° turning clamp. The DC's unique design, utilizing two movable gripping cams, allows this clamp to lift any load within its plate size range from 0 up to 6 ton with a 300 Brinell hardness or less.



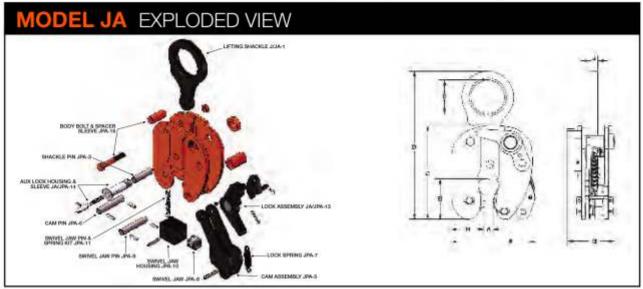
Model	Rated Capacity Tons	Plate Thickness A	В	MAX.	D	E	F	G	н	J	Weight (in pounds)
DC-A	1/2	0.5/8	25/16	5	77/8	11/8	43/8	25/8	17/8	5/16	6
DC-B	1/2	0.3/4	2 ⁹ /16	6 ⁵ /16	9 1/4	11/8	5 1/2	23/4	23/8	5/16	9
DC-C	1/2	3/4 - 11/2	2 ⁹ /16	63/8	9 1/2	11/8	6 1/4	23/4	23/8	5/16	10
DC	10	0 -1 ¹ /8	3 3/8	7 5/16	12 ¹ /8	2 5/8	63/8	3 3/4	2 5/8	5/16	15
DC	3	0 - 3/4	4 3/4	9 1/4	17 ¹ /4	3 5/8	8	43/8	3 5/8	3/4	30
DC	6	0-1	57/8	11 1/2	19	3 1/2	10 ¹ /2	43/4	43/4	1 1/2	54
DC	6	1 1/2 - 3	5 ⁷ /8	11 5/8	19	3 1/2	10 7/8	43/4	4	1 1/2	51
DC	6	2-3	5 ⁷ /8	11 5/8	19	3 1/2	10 7/8	43/4	4	1 1/2	51





Model JA Locking Type

The **Model JA** is a vertical lifting clamp capable of turning a single plate or member from horizontal to vertical to horizontal through a 180 degree arc. It incorporates a push button auxiliary lock.



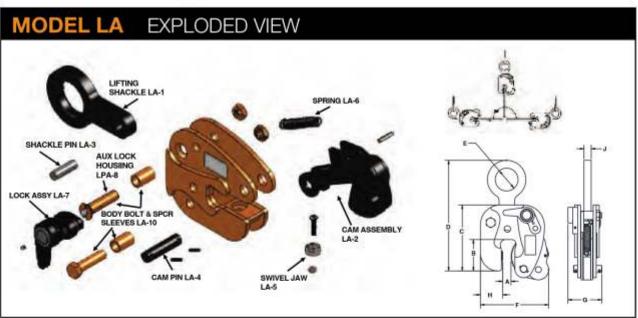
Rated Capacity Tons	Plate Thickness A	В	C	MAX.	E	MAX.	G	н	J	Weight (in pounds
1/2	0-% %-1 %-1% 1%-1%	2% 2% 2% 2%	6½ 6½ 6½ 6½	12 12 12 12	2% 2% 2% 2%	5% 6 6% 6%	3¼ 3¼ 3¼ 3%	2¼ 2¼ 2¼ 2¼	16 16 16	10
1	0-% %-1 %-1% 1-1% 1%-2	3% 3% 3% 3% 3%	7% 7% 7% 7% 7%	13 % 13 % 13 % 13 % 13 %	2% 2% 2% 2% 2%	7 7¼ 8 8¼ 8¾	3% 3% 3% 3% 3%	2 % 2 % 2 % 2 %	% % %	15
2	0-1 %-1½ 1¼-2 2-2%	3% 3% 3% 3%	9% 9% 9% 9%	17% 17% 17% 17%	3 % 3 % 3 % 3 %	8% 9% 9% 10%	4½ 4½ 4½ 4½ 4½	3 3 3 3	**	36
4	%-1¼ 1-2 2-3 3-4	4% 4% 4% 4%	11 ½ 11 ½ 11 ½ 11 ½	20¼ 20½ 20½ 20½	3½ 3½ 3½ 3½	9¼ 10 11 12	4½ 4½ 4½ 4½ 4½	3¼ 3¼ 3¼ 3¼	1½ 1½ 1½ 1½	42
6	%-1% 1-2% 2-3% 3-4%	4% 4% 4% 4%	12% 12% 12% 12%	20 % 20 % 20 % 20 %	3½ 3½ 3½ 3½	10% 11% 12% 13%	4% 4% 4% 4%	3% 3% 3% 3%	1½ 1½ 1½ 1½	64
8	%-1½ 1-2½ 2-3½ 3-4½	5% 5% 5% 5%	12% 12% 12% 12%	22% 22% 22% 22% 22%	3% 3% 3% 3%	12% 13 14% 15%	5¼ 5¼ 5¼ 5¼	4¼ 4¼ 4¼ 4¼	2 2 2 2	83
12	%-2% 2-4 4-6	7% 7% 7%	17% 17% 17%	28 ¼ 28 ¼ 28 ¼	374 374 374	15 % 17 % 19 %	7 %s 7 %s 7 %s	5% 5% 5%	2 2 2	203 212 222
16	1/2-21/4	8	191%s	32%	41/2	19 °%	811/46	6%	2%	350
20	14-3	.8%	2113/4	3574	5	21	11%	6%	2%	456
25	½-2½ 3-5 4-6	8% 8% 8%	23 % 23 % 23 %	35 74 35 74 35 74	5 5 5	19% 21% 22%	9% 9% 9%	6% 6% 6%	3333	483 496 502
30	1/4-3	9%e	241/4	3976	5	22 ¹³ /ie	14%	7%	3	625
50	3-5	10%	30%	46 %a	5	29 ³ /m	111/4	914	31/4	1306





Model LA

Model LA is an ergonomic vertical lifting clamp capable of turning a single plate or member from horizontal to vertical to horizontal through a 180 degree arc. It incorporates a push button auxiliary lock. The "Lock Open – Lock Closed" feature facilitates attaching and removing the clamp from the plate.





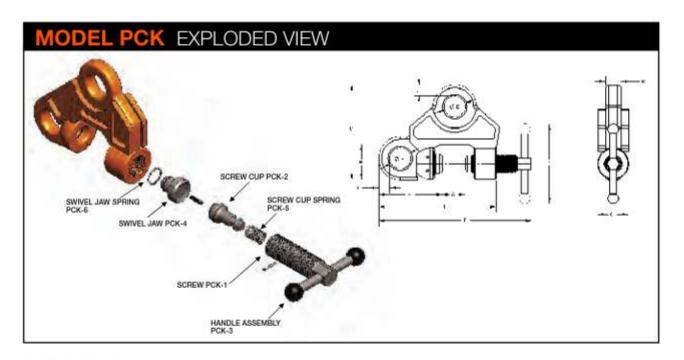
Rated Capacity Tons	Plate Thickness A	В	C	MAX.	E	MAX.	G	н	J	Weight (in pounds)
1/2	0- ⁵ /a	2	4.7/8	8	1.1/0	4.54	27/16	1.3/6	3/8	4 1/a
- 1	0.9/4	2	47/8	8	1.50	4 %	27/10	1.7/0	1/2	5.1/#
2	0-1	3 5/16	6 ⁷ /8	12 1/2	2 3/a	7 1/16	3.5/8	2.3/a	3/4	16.7/a
3	0-1	3.7/te	10	17	3 3/8	8 1/2	3 13/16	23/4	3/4	32





Model PCK-SL Locking, Screw Type

The PCK Locking Screw Clamp is a versatile multipurpose lifting turning pulling clamp capable of lift and turn operations from the horizontal through 180 degrees arc. The clamp can also be used for the assembling of steel plates, structural members and welded sections. The clamp is generally used in pairs for the purpose of drawing two plates or members together or to a predetermined position adjacent to each other. The adjusting screw is used to accommodate various thicknesses of material and to facilitate the attachment of the clamp to the member being worked on.



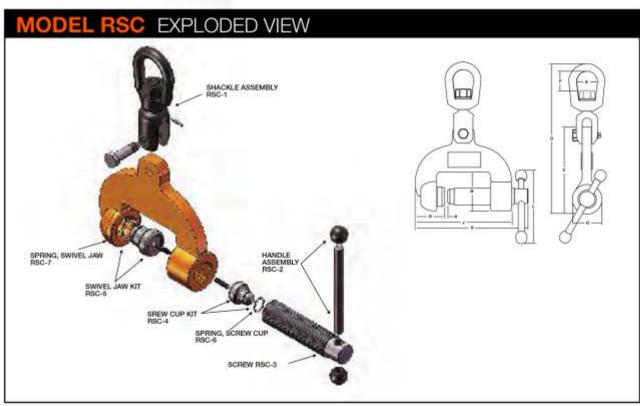
Capacity	Plate								Wain	feet.		
Tons	Thickness	В	C	D	E	F	G	H	J	K		(in kg)
0.5	0-1	2½	5½	5 ¹¹ /16	1	91/6	13/4	3	1/2	⁵ /4e	61/6	4.64
1	0-11/2	3	63/4	5 ¹¹ /16	1%	10½	21/6	41/2	¹¹ /15	3/4	7 ⁵ /é	9.6
2	0-11/2	33/16	7½	7	1½	111/2	2 ³ /s	4%e	3/4	1	81/2	14.5
3	3/1e-13/6	3½	8	6 ¹¹ /16	1%	121/6	25/6	5 ³ ⁄6	7,6	11/6	91/6	17.94
5	0-1%	3 ¹³ /16	9 ⁵ /4e	73/6	2	13%	21,6	5 ⁷ /s	81	136	10	28.42





Model RSC Locking Type

The **Model RSC** is a lightweight screw clamp for bench work on steel plates of large thickness, and weighing less than 1000 lbs.



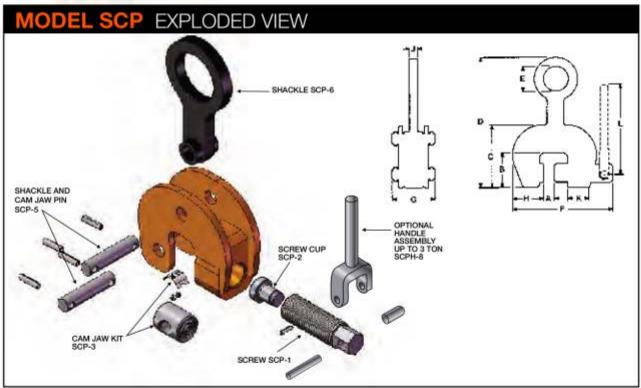
Rated	Plate Thickness								Weig	tht		
Tons	A	В	C	D	E	F	G	H	J	K	L	(in pounds)
1/2	0-3	3 ³ /16	7	12%s	1%	1 ⁹ / ₁₀	2%	2½	7%	11½	63/4	13½
1/2	1%-41/4	3 ³ /16	7 ⁵ /1e	12%e	1%	1%e	2%	23/6	91/4	131/6	63/4	161/2





Model SCP Locking, Screw Type

The **Model SCP** clamp is capable of handling steel plate from horizontal to vertical to horizontal through a 180 degree arc and may be used for handling plate at rolling and forming machines. These clamps feature a spring loaded pivoting cam jaw that "cams in" when a load is applied to the lifting shackle. Clamp is capable of handling plate horizontally when used in pairs or sets of pairs, or in a tripod arrangement.



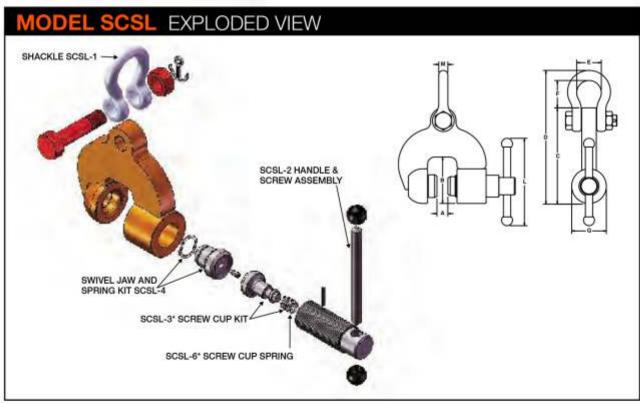
Rated	Plate Thickness										100	wieslat.			
Tons	A	B	C	D	E	F	G	H	J	K	L	M	N	P	(in pounds)
1/2	0-%	2³/é	41/4	9	2%	6%	2^3 á	1 7.6	1/2	11/2	-	13/4	13/4	9/10	7
1½	0-11/4	27,6	51/6	10%	25/6	87/s	3¾	2³6	5/6	13/4	8¼	2	2	11/16	13
3	0-2	31/é	534	12	23ڇ	10 ¹³ /is	4½	2 ¹³ /se	3/4	2	8 ⁵ /s	3	6	34	19
6	0-21/2	4 ⁵ /16	7%	14%	3	143/4	5 ³ / ₆	3 ⁷ /16	1	215/16	₩.	31/2	7	1	44
10	0-3	5½	9%	19 ¹ /4	3¼	16¾	634	4 ³ /é	1	31/6	_	31/2	7	1	93
15	0-4	71/4	121/6	22 ⁷ /6	3%	211/2	814	5%e	1%	4	-	374	8	1%	210





Model SCSL Locking, Screw Type

The MODEL SCSL is a locking screw clamp capable of handling a steel plate from horizontal to vertical to horizontal through a 180-degree arc. It is a lightweight clamp primarily used for bench work. It is capable of handling up to a 2,000-pound load. The MODEL SCSL incorporates a spring loaded swivel jaw and screw cup. The spring loaded screw cup serves as an indicator when the locking screw has been properly tightened.



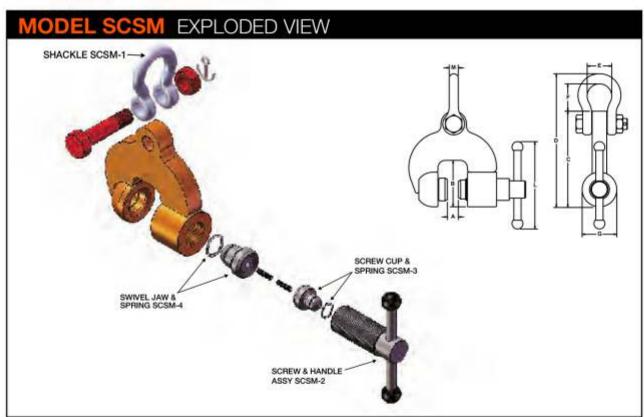
Rated	Plate	Weight								
Tons	A	В	C	D	E	F	G	L	M	(in pounds)
1	0-3/4	31/4	65/6	93/16	111/16	176	21/2	6	5,6	12





Model SCSM Locking, Screw Type

The **MODEL SCSM** is a locking screw clamp capable of handling a steel plate from horizontal to vertical to horizontal through a 180-degree arc. It is a lightweight clamp primarily used for bench work. It is capable of handling up to a 2,000-pound load.



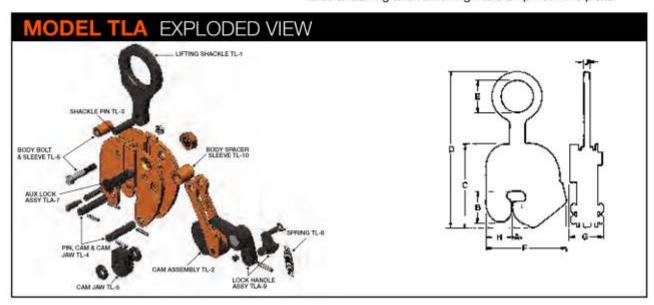
Rated Capacity Tons	Plate Thickness A	В	C	D	E	F	G	Weight	M	(in pounds)
1	0-3/4	31/4	65/6	93/16	111/16	17.6	21/2	6	5/6	12





Model TLA Locking Type

The **Model TLA** is a vertical lifting clamp incorporating a "Lock Open" and a "Lock Closed" feature and an auxiliary push button lock. The clamp is capable of turning a steel plate from horizontal to vertical to horizontal through a 180 degree arc. The "Lock Open," "Lock Closed" feature facilitates attaching and removing the clamp from the plate.



Rated Capacity Tons	Plate Thickness A		С	MAX.	E	MAX.	G	н	J	Weight (in pounds)
1/2	0-% %-1 %-1% 1%-1%	2% 2% 2% 2%	614 614 614 614	11% 11% 11% 11%	2% 2% 2% 2%	4% 5% 5% 5%	2% 2% 2% 2%	11% 11% 11% 11%	% % %	9 10 11 13
1	0-% %-1 %-1% 1-1% 1%-2	33333	7% 7% 7% 7% 7% 7%	13 ¼ 13 ¼ 13 ¼ 13 ½ 13 ½	2% 2% 2% 2% 2%	6 6!4 6!6 6% 7%	21% 21% 21% 21% 21% 21%	2 2 2 2 2 2	% % % %	14 15 16 17 18
2	0-1 %-1½ 1¼-2 2-2¾	31/4 31/4 31/4 31/4	9% 9% 9% 9%	16¼ 16¼ 16¼ 16¼	3% 3% 3% 3%	8% 9% 9% 10%	3% 3% 3% 3%	2% 2% 2% 2%	% % %	32 33 35 37
4	%-1¼ 1-2 2-3 3-4	4 4 4 4	9% 9% 9% 9%	17% 17% 17% 17%	3% 3% 3% 3%	9 9% 10% 11%	31% 31% 31% 31%	3 3 3 3	% % %	36 37 40 43
6	%-1% 1-2% 2-3% 3-4%	4% 4% 4% 4%	11% 11% 11% 11%	2016 2016 2016 2016	3½ 3½ 3½ 3%	10¼ 11 12 13	3% 3% 3% 3%	3% 3% 3% 3%	**	49 51 54 57
8	%-1½ 1-2½ 2-3½ 3-4½	4% 4% 4% 4% 4%	12% 12% 12% 12%	21% 21% 21% 21%	3% 3% 3% 3%	11½ 12½ 13½ 14½	4% 4% 4% 4%	3% 3% 3% 3%	1 1 1	72 74 77 80
12	%-2% 2-4 3-5 4-6	6¼ 6¼ 6¼ 6¼	15 1/6 15 1/6 15 1/6 15 1/6	26 % 26 % 26 % 26 %	37.6 37.6 37.6 37.6	14½ 16 17 18	6% 6% 6% 6%	4% 4% 4% 4% 4%	134 134 134 134	142 150 154 158
20	½-3 2½-4½ 3-5	81% 81% 81%	21¾ 21¾ 21¾ 21¾	36 17/46 36 17/46 36 17/46	5 5 5	20 ¹⁷ / ₄₆ 22 ³ / ₄₆ 22 ¹⁷ / ₄₆	8 % 8 % 8 %	6 % 6 % 6 %	2¾ 2¾ 2¾	415 426 430
	5-7	81/6	21%	36 1/4	5	24 11/46	81/10	6%	234	445



VERTICAL + 180 + SIDE PULL





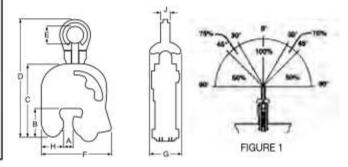


BIACKLE PIN JRA-3 SHACKLE PIN JRA-3 LOCK AUSSEMBLY JRA-18 SWINGL JAW PIN JRA-6 SWINGL JAW PIN JRA-6 SWINGL JAW PIN JRA-6 SWINGL JAW PIN JRA-6 SWINGL JAW PIN SWINGL JAW JRA-8

Model JPA Locking Type

The **Model JPA** is a vertical lifting clamp capable of turning a single plate or member from horizontal to vertical to horizontal through a 180 degree arc. Incorporates a push button auxiliary lock. Permits side loading of lifting shackle to 90 degrees by derating of clamp's rated capacity. Refer to FIGURE 1 for derated capacities.

Model JPA incorporates a pivoting shackle that permits side loading of the lifting shackle at 100 percent of rated capacity from vertical to 30 degrees, 75 percent of rated capacity between 30 and 45 degrees and 50 percent of rated capacity between 45 and 90 degrees.



Rated Capacity Tons	Plate Thickness A		С	MAX.	E	MAX.	G	н	J	Weight (in pounds)
1/2	0-% %-1 %-1% 1%-1%	2½ 2½ 2½ 2½	6½ 6½ 6½ 6½	12 12 12 12	2% 2% 2% 2%	5% 6 6% 6%	3 ¼ 3 ¼ 3 ¼ 3 ¼	2½ 2½ 2½ 2½	16 16 16	12
1	0-% %-1 %-1% 1-1% 1%-2	3% 3% 3% 3% 3%	7% 7% 7% 7% 7% 7%	13 % 13 % 13 % 13 % 13 %	2% 22% 22%	7 7¼ 8 8¼ 8%	3 % 3 % 3 % 3 % 3 %	NANA NANA NANA NANA NANA NANA NANA NAN	****	20
2	0-1 %-1½ 1½-2 2-2%	3% 3% 3% 3%	9½ 9½ 9½	17% 17% 17% 17%	3% 33% 33%	8% 9% 9% 10%	4½ 4½ 4½ 4½ 4½	3333	No. of the State o	40
4	%e-1¼ 1-2 2-3 3-4	4% 4% 4% 4%	11 ½ 11 ½ 11 ½ 11 ½	201/4 201/4 201/4 201/4	316 336 336 336 336	9¼ 10 11 12	4½ 4½ 4½ 4½ 4½	3¼ 3¼ 3¼ 3¼	1½ 1½ 1½ 1½	50
6	½-1¾ 1-2½ 2-3½ 3-4½	4% 4% 4%	12% 12% 12% 12%	20 % 20 % 20 % 20 %	3 % 3 % 3 % 3 %	10% 11% 12% 13%	4% 4% 4% 4%	3333 3333 34	1% 1% 1% 1% 1%	72
8	%-1½ 1-2½ 2-3½ 3-4½	5% 5% 5%	12% 12% 12% 12%	22% 22% 22% 22%	3% 3% 3% 3%	12% 13 14% 15%	514 514 514 514	414 414 414 414	2222	93
12	%-2% 2-4 4-6	7% 7% 7%	17% 17% 17%	28 ¼ 28 ¼ 28 ¼	3% 3% 3%	15 % 17 % 19 %	7 1/16 7 1/16 7 1/16	5% 5% 5%	2 2 2	203 212 222
16	56-21h	8	1913/m	32%s	41/6	19 ¹³ /s	811/46	614	21/4	350
20	16-3	8%	21134s	3574	-5	21	1136	6%	2%	456
25	½-2½ 3-5 4-6	8% 8% 8%	23 % 23 % 23 %	35 % 35 % 35 %	5 5 5	191% 21% 22%	9% 9% 9%	6% 6% 6%	333	483 495 502
30	16-3	9%	24 %	3974	5	22 10/ne	14%	7%	3	625
50	3-5	10%	30 %	46 7/m	5	293/m	1116	914	31/4	1306

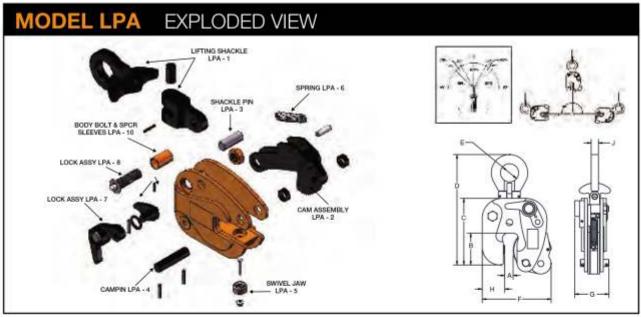




Model LPA

Model LPA is an ergonomic vertical lifting clamp capable of turning a single plate or member from horizontal to vertical to horizontal through a 180 degree arc. It incorporates an auxiliary push button lock. Permits side loading of lifting shackle to 90 degrees by de-rating of clamp's capacity. Refer to FIGURE 1 for de-rated capacities. The "Lock Open – Lock Closed" feature facilitates attaching and removing the clamp from the plate.

The **Model LPA** incorporates a pivoting shackle that permits side loading of the lifting shackle at 100 percent of rated capacity from vertical to 30 degrees, 75 percent of rated capacity between 30 and 45 degrees, and 50 percent of rated capacity between 45 and 90 degrees.







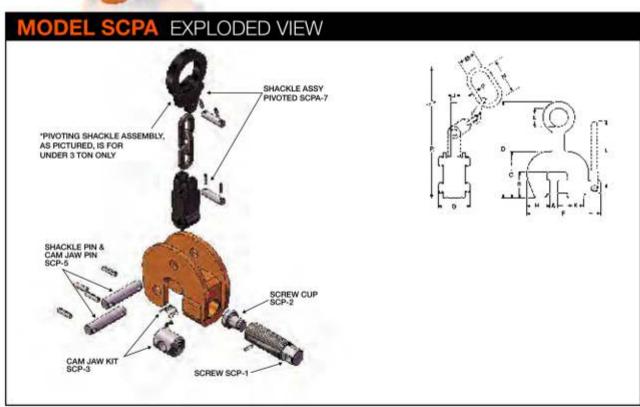




Model SCPA Locking, Screw Type

The **SCPA** clamp is capable of handling steel plate from horizontal to vertical to horizontal through a 180 degree arc and may be used for handling plate at rolling and forming machines. These clamps feature a spring loaded pivoting cam jaw that "cams in" when a load is applied to the lifting shackle. Clamp is capable of handling plate horizontally when used in pairs or sets of pairs, or in a tripod arrangement.

*Pivoting shackle assembly, as shown, is available on capacities 3 tons and larger.



Rated	Plate Thickness										Wei	aht			
Tons	A	B	C	E	F	G	H	J	K	L	M	N	P	R	(in pounds)
1/2	0-34	2⁵⁄6	41/2	23/6	6%	2³⁄6	17/é	1/2	11/2	-	1¾	134	9/16	12 ³ /10	8
1½	0-11/4	2 ⁷ /s	5½	2%	87/s	3%	236	%	134	8¼	2	2	15/16	14 ³ /16	15
3	0-2	31/é	5%	2 %	10 ¹³ /16	4 1/4s	2 ¹³ /16	36	2	85é	3	6	34	21 ³ /6	24
6	0-21/2	4 ⁵ /4s	7%e	3	14%	5 ³ /e	3 ⁷ /46	1	2 ¹⁵ /16	(E)	31/2	7	1	27 ³ /4	57
10	0-3	51/2	9¾	31/4	16¾	6%	4 ² é	1	31/6	-	31/2	7	1	29 ⁷ /16	134
15	0-4	71/4	121/6	33/4	211/2	8¼	5%e	11/4	4		3%	8	1%	361/2	312

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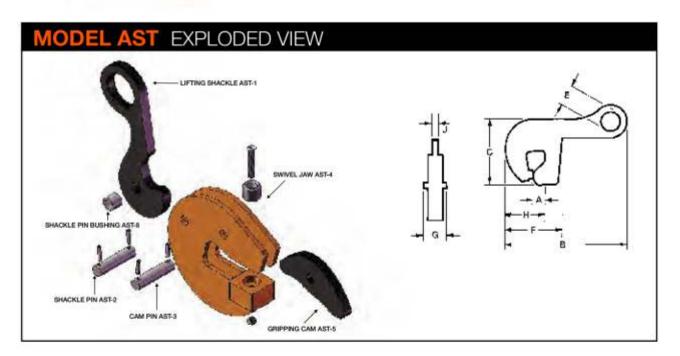






Model AST Non-Locking Type

Both the **Model AST** and **ASTL** were developed primarily for lifting, turning and stacking lightweight beams and structural shapes while a constant tension is applied to the lifting shackle. The horizontal shackle permits a beam to be lifted with the web in a near horizontal position by placing the clamp on the load with the shackle positioned over the web, and between the flanges. With a beam lying in a horizontal position, and the clamp placed with the shackle overhanging the flange, the beam can be lifted, turned 90 degrees, and raised in a vertical position.



Rated	Plate. Thickness	MAX							Weight	
Tons	A	В	C	D	E			H	J	(in pounds)
1/2	0-%	10%	611/46	35	1%	6%	1%	21/2	1/2	10
1%	0-%	13	8%		21/2	7	2%	3	%	20
3	0-1%	19%	121/2	196	3%	11	3	4%	3/4	50

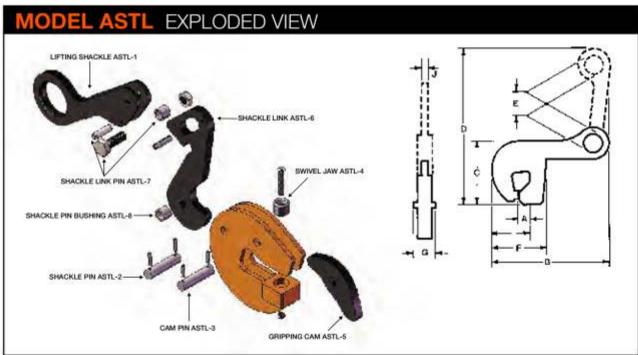




Model ASTL Non-Locking Type

Both the **Model AST** and **ASTL** were developed primarily for lifting, turning and stacking lightweight beams and structural shapes while a constant tension is applied to the lifting shackle. The horizontal shackle permits a beam to be lifted with the web in a near horizontal position by placing the clamp on the load with the shackle positioned over the web, and between the flanges. With a beam lying in a horizontal position, and the clamp placed with the shackle overhanging the flange, the beam can be lifted, turned 90 degrees, and raised in a vertical position.

The Model ASTL includes all of the feature of the Model AST plus a linkage which permits the tool to be removed remotely by setting the load down with the sling slack, then lifting the crane hook.



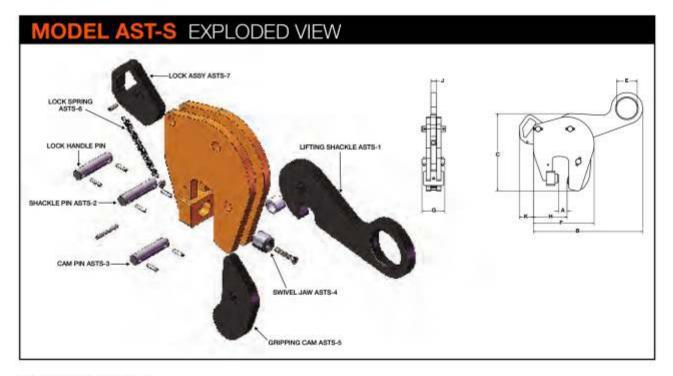
Rated Capacity Tons	Plate Thickness A	MAX. B	C	D	E	F	G	н	Weight	(in pounds)
1/2	0-%	10%	611/4	14	1%	6%	1%	21/2	1/2	10
1%	0-%	13	8%	18%	21/2	7	2%	3	%	24
3	0-11/4	19%	12%	25	3%	11	3	4%	34	61





Model AST-S Locking Type

The **Model ASTS** is the same as the Model AST with the exception that it incorporates a "Lock Closed" feature which facilitates attaching to the beam. Developed primarily for lifting, turning and stacking lightweight beams and structural shapes. The horizontal shackle permits a beam to be lifted with the web in a near horizontal position by placing the clamp on the load with the shackle positioned over the web, and between the flanges. With a beam lying in a horizontal position, and the clamp placed with the shackle over-hanging the flange, the beam can be lifted, turned 90 degrees, and raised in a vertical position.



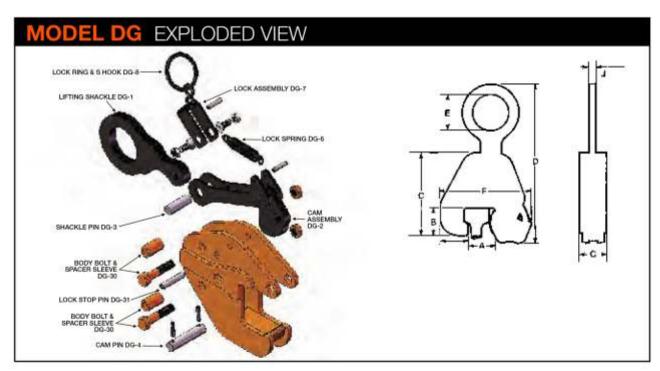
Rated Capacity Tons	Plate Thickness A	MAX. B	C	D	E	F	G	н	Weight	K	(in pounds)
1/2	0-%	10%	61%	2	1%	6%	1%	2%	1/4	11/2	10
1%	0-%	13	8½	2	21/4	7	2%e	3	%	11/2	20
3	0-1%	19%	12%	-	3%	11	3	4%	34	1%	50





Model DG Locking Type

The **Model DG** rail clamp is used for lifting and transporting crane rails and railroad rails. Lightness of weight allows it to be hand applied and hand removed. The Model DG possesses all the features of the Model FR. All the repair parts are identical to same tonnage of the FR, except the swivel jaw has been eliminated.



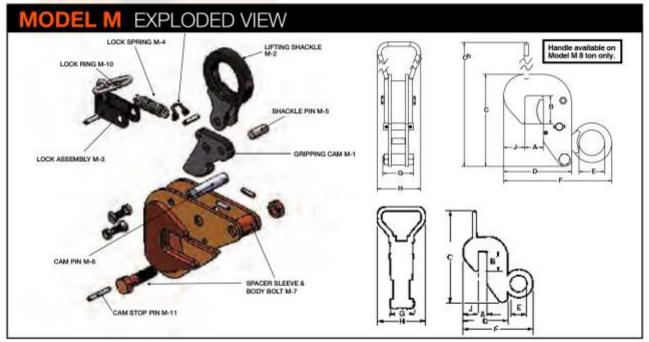
Rated Capacity Tons	Model	Capacity Std. Rail A	Capacity Crane Rail A	В	С	D	E		G	н	J	Weight (in pounds)
1/2	25	12-25 LB.	NONE	15/16	6 ¹¹ /16	111/4	23/6	5³⁄6	21/2	1%	1/2	10
1/2	50	30-50 LB.	NONE	1 ³ /6	6 ¹¹ /is	111/4	2 ³ /6	6	21/2	1 ⁵ /e	1/2	11
1	132	85-155 LB.	NONE	21/2	81/4	13½	25/6	8%	31/4	176	56	16
2	105	60-155 LB.	104 & 105 LB.	2 ⁵ /e	9	16	35/4	91/4	31/4	21/2	3/4	26
2	175	NONE	135, 171, 175 LB.	2%	91/2	16	3%	10%	31/4	21/2	3/4	26





Model M Locking Type

The **Model M** is a multipurpose clamp used for positioning, sorting, erection and handling of prefabricated sections. The split lower jaw enables the clamp to be particularly useful in handling structural shapes. The **Model M** incorporates a "Lock Closed" feature which facilitates attaching the clamp to the member being lifted. These clamps must be used in pairs, sets of pairs, or in a tripod arrangement for transporting plate horizontally. Handle is available on 8 ton clamp only.



Rated Capacity Tons	Plate Thickness A	В	C	Ch	D	MAX.	F	G	н	J	Weight (in pounds)
1/2	0-1	2 ⁵ /re	7 ⁷ /4e	-	4 ¹¹ /is	21/4	87/6	25/6	-	17/16	
	34-11/2	25/16	7/16		53/16	21/4	93/6	25/6	-	17/10	8
	114-2	25/16	7/16	20	511/16	21/4	97/6	25/6	_	17/16	7 8 9
1	0-1	21/2	81/6		51/2	21/4	91/2	23/4	0.75	17/6	11
	34-11/2	21/2	81/6	2	6	21/4	10	23/4	_	176	11 12
	11/4-2	21/2	81/6	-	61/2	21/4	101/2	23/4	-	17/6	13
2	0-11/4	33/16	103/4	_	69/16	31/16	121/6	37/4	_	2	23
	1-2	3 ³ /16	103/4	-	73/16	31/16	127/6	37/6	-	2	24
	134-234	33/4e	103/4	-	715/48	31/48	13%	37/6	-	2	27
4	0-11/2	3 ¹³ /16	12	-	73/4	35/6	141/2	4 ³ /6	-	23/4	36
	11/4-21/2	313/16	12	-	B3/4	35/6	161/2	436	-	$2^{3}/4$	38
	21/4-31/4	3 ¹³ /18	12	75.0	93/4	35/6	141/2	43/6	-	23/4	41
8	0-2	4 ¹⁵ /16	-	19%	117/10	4	191/2	51/2	8	4	107
	134-31/2	415/16	-	1914	1215/18	4	21	51/2	8	4	110
	314-5	415/16	_	191/4	147/16	4	221/2	51/4	8	4	125

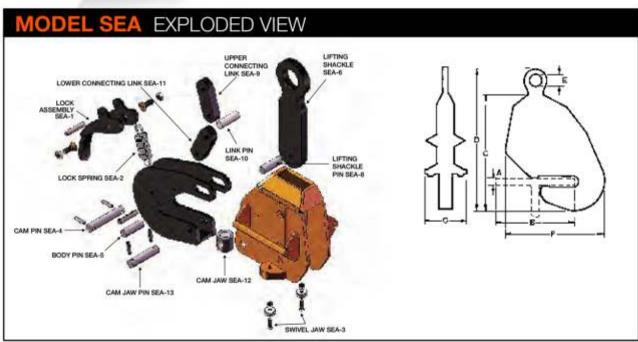




Model SEA Locking Type

The **Model SEA** is a clamp used primarily for erection of structural beams. Configuration of the lower hook assembly and the over center position of the shackle permits a clamp to grip closer to the beam web, stabilizing the load and holding it with the web near horizontal for easy alignment of bolt holes.

The clamp incorporates a "Lock Open" and "Lock Closed" feature which facilitates in attaching and removing the clamp from the beam.



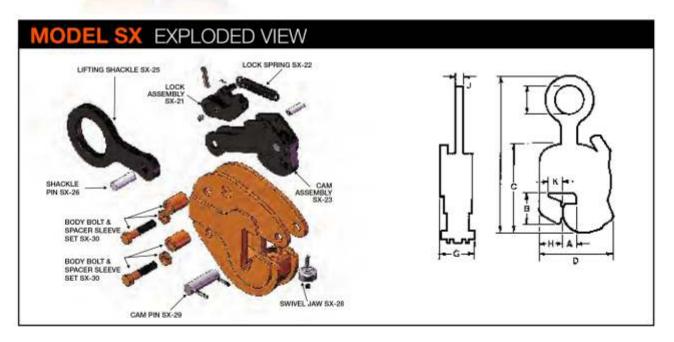
Rated Capacity Tons	Piate Thickness A	Flange Width B	C	Max.	E	F	G	Weight (in pounds)
1	0-3/4	3-8	11%e	171/6	11/6	9¼	57,6	22
2	0-1	5-12	171/2	211/2	11/2	14½	6 ⁷ ,é	73
4	0-1	7-14	1934	27½	1 ³ /4	17 ⁷ /é	8 ¹¹ /is	116
	34-134	7-14	20 ^t ∕₂	281/4	134	17 ⁷ ∕é	811/16	120
8	0-11/2	10-20	251/2	31	2	211/2	93/4	200
	1-21/2	10-20	261/2	32	2	211/2	93/4	204
15	34-214	10-20	31	411/4	33/4	211/2	10¾	343
	2-31/2	10-20	321/4	4234	33/4	211/2	10%	





Model SX Locking Type

The **Model SX** clamp is used for lifting and transporting of angles both in fabrication and erection of steel. It possesses all the features of the Model S. All repair parts are identical to the same tonnage Model S parts.



Rated Capacity Tons	Plate Thickness A	В	С	MAX.	E	F	G	н	J	К	Weight (in pounds)
2	0-1	35/4	91/2	18½	31/2	91/4	33/4	41/6	3/4	21/2	34
	1/2-11/2	3%	91/2	18½	31/2	101/4	33/4	41/6	3/4	21/2	34
4	1/2-11/2	41/6	111/2	1956	35/6	101/2	47/6	43/4	3/4	21/2	51



HORIZONTAL





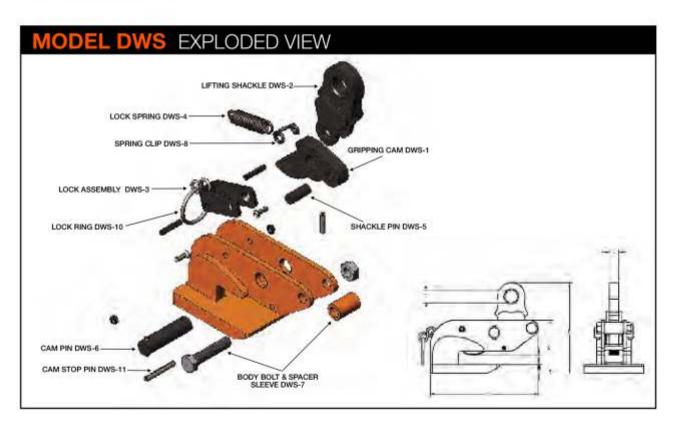


Model DWS Locking Type

Model DWS is a horizontal lifting clamp utilizing Renfroe's famous "lock-closed" feature. This clamp comes in four sizes:

- 1/4 Ton: 0 1/2" opening
- 1/2 Ton: 0 3/4" opening
- 1-1/2 Ton: 0 1" opening
- 3 Ton: 0 1-1/4" opening

Recommended for use in pairs.



Rated Capacity Tons	Plate Thickness A	В	C	D	Std.	Option	Max.	G	н	J	Weight (in pounds)
1/4	0 - 1/2	27/8	65/8	3 3/16	3/4	2	5 3/4	3 1/2	3/8	1/2	5
1/2	0 - 3/4	3	7	3 9/16	1	2 1/4	7 3/8	4	1/2	5/8	9
11/2	0 - 1	3 1/2	8 1/4	41/4	1	2 1/4	8 1/8	5	5/8	5/8	14
3	0 - 1 1/4	4 1/2	11 3/4	5 13/16	1 1/8	3 1/2	11 3/4	6 1/2	1	1	37

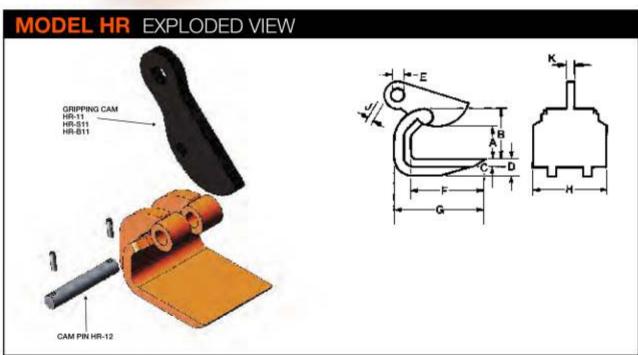




Model HR Non-Locking Type

The **Model HR** is a horizontal lifting clamp intended to be used in pairs, sets of pairs, or in a tripod arrangement for transporting steel plates horizontally-.

Equipped with serrated gripping cams as standard equipment, both the HR and HDR models are available with smooth, bronze or stainless steel gripping cams to prevent marring when handling polished metals such as stainless steel, copper, aluminum, etc.



Rated Capacity Tons	Plate Thickness A	В	C	D	E		G	н	Weight	K	(in pounds)
1/4	0-1	23/4	1/2	+	1	3%	4½s	3	3/6	1/2	3½
1/2	0-2	41/4	1/2	: #	1%	5%	61/6	7	3/4	1/2	14
3/4	0-2	4 ³ /e	5/6	+	1%	5%	61/4	7	3/4	34	19
1½	0-2	4 ³ /e	3/4	+	1%	5%	63/6	7	34	34	23
3	0-2	456	%	1%	136	5%	71/4	7	3/4	3/4	24
4	0-3	5%	34	21/6	13/6	71/2	9%	7	1%	11	44

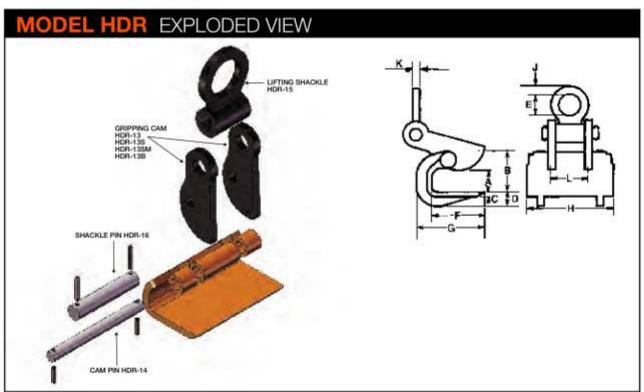




Model HDR Non-Locking Type

The **Model HDR** is a horizontal lifting clamp intended to be used in pairs, sets of pairs, or in a tripod arrangement for transporting steel plates horizontally. The **Model HDR** is similar to the **Model HR** except that it contains dual cam assemblies which provide two gripping surfaces.

Equipped with serrated gripping cams as standard equipment, both the HR and HDR models are available with smooth, bronze or stainless steel gripping cams to prevent marring when handling polished metals such as stainless steel, copper, aluminum, etc.



Rated Capacity Tons	Plate Thickness A	В	C	D	E		G	н	Weig	iht K	L	(in pounds)
1½	0-2	43/6	5/6	+	31/4	5 ⁵ / ₆	61/4	12	¹⁵ /16	34	5	44
3	0-2	436	3/4	+	31/4	5%	63/4	12	¹⁵ /16	34	5	48
6	0-2	45é	5,6	1%	31/4	5 ⁵ /6	71/4	12	¹⁵ /16	1%	5	53
8	0-3	556	3/4	21/6	31/4	71/2	95/6	121/4	¹⁵ /16	15/6	51/4	84

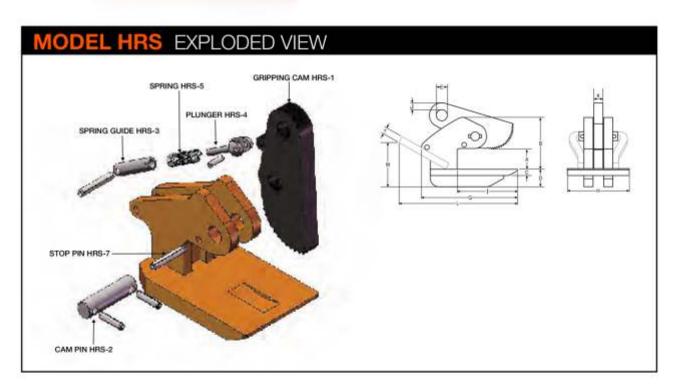




Model HRS Locking Type

The **Model HRS** is a horizontal lifting clamp that has a spring loaded open and closed position. The spring closed position allows one-man operation of multiple clamps. The clamps stay in position where they're attached until spring open is actuated.

These clamps must be used in pairs, sets of pairs, or in a tripod arrangement for transporting plate horizontally.



SPECIFICATIONS (in inches)

Rated Capacity Tons	Plate Thickness A	В	C	D	E	F	G	Н	J	К	Weight L	M	Т	(in pounds)
1/4	1/16-3/4	2%в	3/6	-	1/2	3	43/4	3	1/4	1/2		90	-	4
1/2	1/16-1	3%a	1/2	-	1/2	3%	5 ¹⁵ /16	31/4	5/16	1/2	300		-	5
1	1/16-11/4	3 ¹ /16	56	-3	5/6	4	63/1e	3½	7/16	5/6	388	-	-	7:
2	1/16/-11/2	4½	3/4		11/16	5 ³ é	8%	5	9∕46	34	10 ¹⁵ /16	3¼	56	20
3	¼e-1¾	5%	1	-	11/4	634	1034	7	3/4	1	13	4	5/4	34
4	1/ss-2	5%	3/4	2	11/4	6%	10%	7	3/4	1	13%6	5	34	44

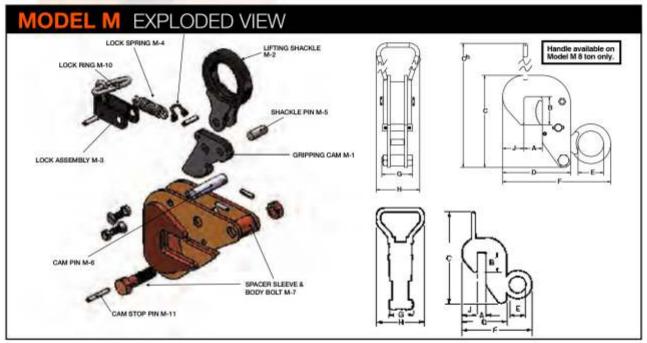
Backpad available only on 4 ton model. Handles are standard on 2, 3 and 4 ton models.





Model M Locking Type

The **Model M** is shown with the structural shape lifting clamps but can also be used for horizontal lifting of plates and structural beams. The **Model M** incorporates a "Lock Closed" feature which facilities attaching the clamp to the member being lifted. These clamps must be used in pairs, sets of pairs, or in a tripod arrangement for transporting plate horizontally. Handle is available on 8 ton clamp only.



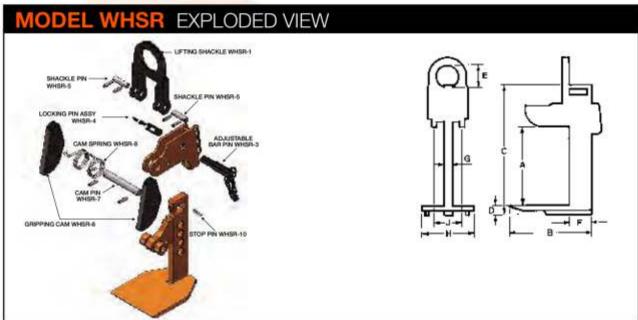
Rated Capacity Tons	Plate Thickness A	В	C	Ch	D	MAX.	F	G	н	J	Weight (in pounds)
1/2	0-1	2 ⁵ /re	7 ⁷ /4e	-	4 ¹¹ /is	21/4	87/6	25/6	-	17/16	
	34-11/2	25/16	7/16		53/16	21/4	93/6	25/6	-	17/10	8
	114-2	25/16	7/16	20	511/16	21/4	97/6	25/6	_	17/16	7 8 9
1	0-1	21/2	81/6		51/2	21/4	91/2	23/4	0.75	17/6	11
	34-11/2	21/2	81/6	2	6	21/4	10	23/4	_	176	11 12
	11/4-2	21/2	81/6	-	61/2	21/4	101/2	23/4	-	17/6	13
2	0-11/4	33/16	103/4	_	69/16	31/16	121/6	37/4	_	2	23
	1-2	3 ³ /16	103/4	-	73/16	31/16	127/6	37/6	-	2	24
	134-234	33/4e	103/4	-	715/48	31/48	13%	37/6	-	2	27
4	0-11/2	3 ¹³ /16	12	-	73/4	35/6	141/2	4 ³ /6	-	23/4	36
	11/4-21/2	313/16	12	-	B3/4	35/6	161/2	436	-	$2^{3}/4$	38
	21/4-31/4	3 ¹³ /18	12	75.0	93/4	35/6	141/2	43/6	-	23/4	41
8	0-2	4 ¹⁵ /16	-	19%	117/10	4	191/2	51/2	8	4	107
	134-31/2	415/16	-	1914	1215/18	4	21	51/2	8	4	110
	314-5	415/16	_	191/4	147/16	4	221/2	51/4	8	4	125





Model WHSR Non-Locking Type

The **Model WHSR** is an adjustable, horizontal clamp intended to be used in pairs, sets of pairs, or in a tripod arrangement for transporting steel plates horizontally. In addition to incorporating two gripping cams, the jaw opening may be adjusted by the positioning of a pin in the body of the clamp. The gripping cams are spring loaded to remain in the "open" position until the load is applied. This feature permits the clamp to be easily applied and removed from the load. Normally furnished with serrated gripping surfaces, it is available with smooth faced bronze or stainless steel surfaces to prevent marring when handling polished plates.



Rated Capacity Tons	Plate Thickness A	В	С	D		Ė	G	н		Weight (in pounds)
1/2	0-6	10%	14%	5/4	31/2	3	1/2	83/6	4/2	46
	0-12	13	231/4	6.6	31/2	3 5 5	1/2 1/2	81/4	41/2	60
	0-16	13	27%	5/6	31/2	5	1/2	81/4	41/2	80
11/2	0-6	10%	14 ⁵ /16	34	3½	3	34	83/6	45/6	66
	0-12	13	2314	34 34 34	31/2	3 5 5	34 34 34	8¼	45%	90
	0-16	13	275/16	3/4	31/2	5	34	81/4	4%	104
3	0-6	1034	1514	1%	31/4	3	1	83/4	4%	70
	0-12	13	235/ie	1%	31/2	3 5	1	81/4	4%	94
	0-16	13	27 ¹³ /16	1%	31/2	5	1	81/4	456	112
6	0-6	13	181/16	21/4	31/2	5	1	81/4	4 ⁵ /6	108
	0-12	13	24 ¹³ /46	21/4	31/2		1	81/4	4%	114
	0-16	13	28 ¹³ /16	21/4	31/2	5 5	1	814	45/4	154
8	0-6	13	181/2	3	31/2	6	(48)	81/4	51/4	130
	0-12	13	247/6	3	31/2	6	1	814	51/4	141
	0-16	13	28 ⁷ /s	3	31/2	6	1	814	514	220



BEAM

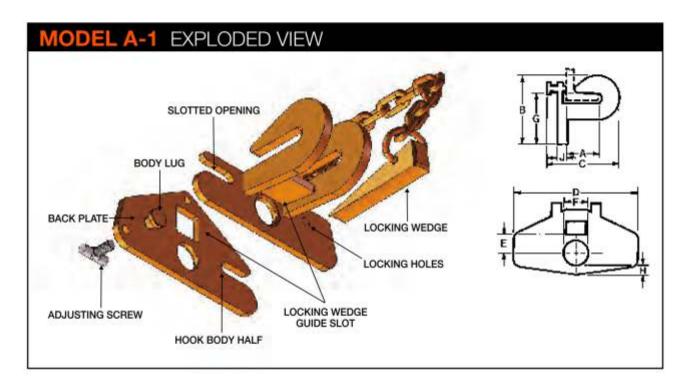






Model A-1 Locking Type

The **Model A-1** is a portable beam clamp that provides easy suspension of hoists, from channels or angles thereby eliminating the need for nuts, bolts, shackles and so on. The **Model A-1** is designed for use on channel or angle shapes only. This model is furnished with a fluted tool steel locking wedge which holds the clamp in place on channels or angles.



Rated Capacity Tons	Flange Width A	В	MAX.	D	E	F	G	н	J	Weight (in pounds)
1	11/2-4	5 ⁵ /16	7 ⁷ .é	834	1 ³ /16	11/2	4%	5/6	2/4	14
	4-8	61/4	121/4	83/4	1 ³ /16	11/6	4 ¹¹ /ie	%	3/4	15
3	2-4	611/16	8%s	111/4	1 ¹³ /16	21/4	5%	7,6	3,4	22
	4-8	81/4	131/2	111/4	111/46	21/4	61/2	7/6	3,4	27
5	2-4	85/4	8 ⁷ /6	13¼	2 ³ /4	31/6	63/6	1	1	35
	4-8	10 ³ / ₁₆	13 ¹³ /16	131/4	23/4	31/6	67,4	1	1	45



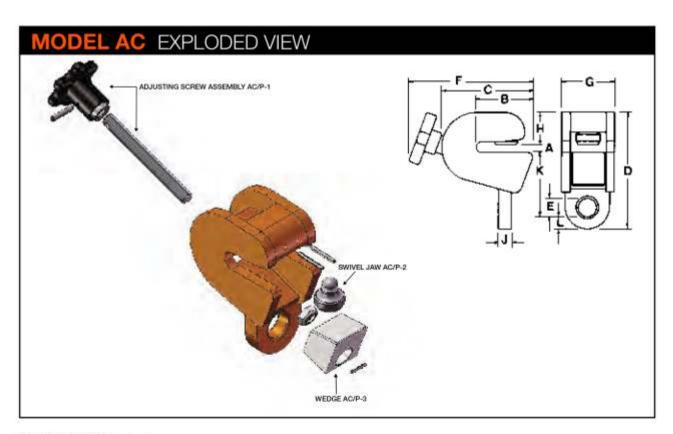


Model AC Locking, Screw Type

These clamps may be used for Drifting Loads when used in pairs or multiples.

The **Models AC** and **ACP** are light weight, portable clamps that provide quick easy attachment to structural members for the use of chain falls, hoists and wire rope pullers. These clamps are of single unit construction with a quick acting hand screw to secure the clamp.

The **Model AC** has a fixed Shackle Eye. These clamps are especially useful in the construction and maintenance for shipbuilding and other industries.



Rated	Flange								Weigh	t		
Tons	A	В	C	D	Ε	F	G	H	J	K	L	(in pounds)
2	14-5/6	31/4	51/4	7	114	63/4	3	1 13/16	3,4	39/16	3/4	111/2



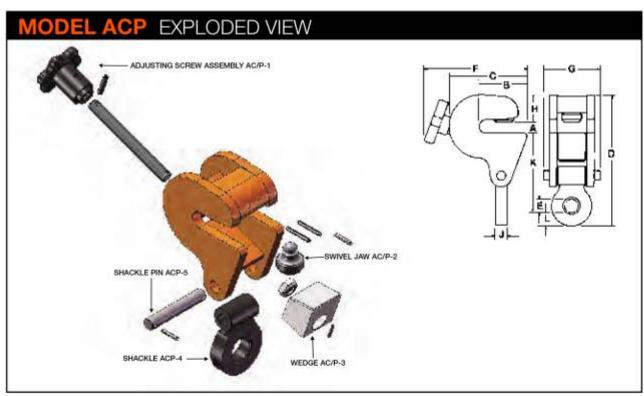


Model ACP Locking, Screw Type

These clamps may be used for Drifting Loads when used in pairs or multiples.

The **Models AC** and **ACP** are light weight, portable clamps that provide quick easy attachment to structural members for the use of chain falls, hoists and wire rope pullers. These clamps are of single unit construction with a quick acting hand screw to secure the clamp.

The **Model ACP** has a Pivoting Shackle Eye. These clamps are especially useful in the construction and maintenance for shipbuilding and other industries.



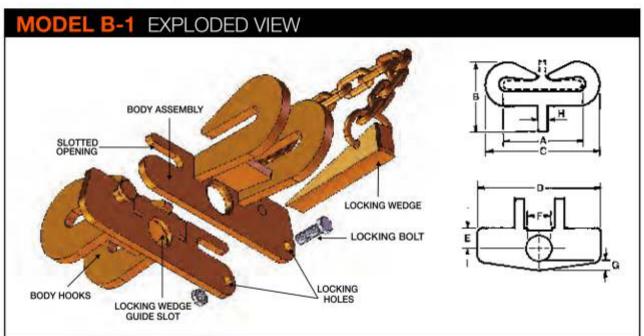
Rated Capacity	Flange Wiidth								Weigh			
Tons	A	В	C	D.	E	F	G	Н	J	K	L	(in pounds)
2	14-5/6	31/4	51/4	85/16	11/4	$6^{3}4$	33/4	113/16	3/4	51/2	3/4	121/2





Model B-1 Locking Type

The **Model B-1** is a portable beam clamp that provides easy suspension of hoists from beams or girders thereby eliminating the need for nuts, bolts, shackles and so on. The **Model B-1** is intended for use on the American standard or wide flange beams. This model is furnished with a fluted tool steel locking wedge which holds the clamp in place on a beam.



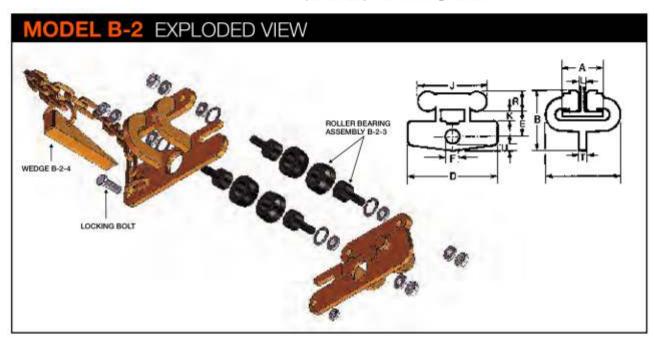
Rated Capacity Tons	Flange Width A	В	C	D	E	F	Weight G	н	(in pounds)
1	116-4	421/32	63/4	83/4	19/46	11/2	5/4	34	12
	2-6	51/4	91/2	83/4	1º/46	11/4	5/4	3,4 3,4	13
	4-12	6¾e	18 ⁷ /e	8¾	1 ⁹ /46	11/2	5/4	3,4	22
3	4-6	6 ¹¹ /16	10%	11%	2	21/4	7,6	3,4	20
	4-12	711/16	18%	111/4	2	21/4	7 _{/6}	3,4	38
5	4-8	97/16	15	141/4	3	31/6	1	1	45
	4-14	9 ¹³ /16	213/é	141/4	3	31/4	1	1	45 62
8	6-12	11 ⁷ /16	18 ³ /6	18 ⁵ /6	4	31/2 x 45/6	17/s	1	96
	6-17	15 ¹ .6	261/4	1856	4	$3\frac{1}{2} \times 4\frac{5}{6}$	17/46	1	151
	6-24	15⁵∕4s	34 ³ /6	18%	4	$3\frac{1}{2} \times 4\frac{5}{8}$	17/ss	1	207
12	6-12	11 ¹⁵ /16	19³⁄é	18 ⁵ /s	4	3½ x 45/6	17/16	11/4	98
	6-17	15% is	26 ⁷ /6	185/6	4	31/2 x 45/4	17/46	11/4	153
	6-24	15 ¹³ /16	34%	185/é	4	31/2 x 45/4	17/16	11/4	209





Model B-2 Trolley Clamp

The **Model B-2** is a beam trolley clamp that provides connection of a hoist or chain fall to an overhead beam and enables it to be moved along the beam as the necessity arises. Equipped with four heavy duty rollers, the **Model B-2**, with load attached, can be moved along any length of American Standard or wide flange beams. The fluted tool steel locking wedge permits the clamp to be temporarily or permanently locked at a particular position along the beam.



Rated	Flange Width								W	eight			
Tons	A	В	C	D	E			K	L "	R	T	U	(in pounds
1	11/2-4	534	71/4	83/4	2 ⁹ /16	11/2	634	7,6	56	2	3/4	3,4	18
	2-6	7%	101/2	83/4	336	11/2	834	134	11/6	31/2	3/4	3,4	28
	4-12	8 ³ /16	18	83/4	315/16	11/2	834	1 ¹³ /16	13/6	31/2	3/4	34	38
3	4-6	101/4	121/4	11%	4	21/4	121/4	1%	11/2	51/6	3/4	76	65
	4-12	10 ⁷ /e	19	111/4	45é	21/4	121/4	17/4	11/2	5 ¹ /6	3/4	7,6	78
5	4-8	13 ⁷ /16	161∕2	16½	5	31/6	15½	17/6	1½	6	1	1	92
	4-14	13 ⁷ /16	221/2	161/2	5	31/6	151/2	17,6	11/2	6	1	1	130
8	6-12	181/se	211/6	18 ⁵ ⁄e	61/6	31/2 x 45/4	21	21/2	11/6	8	1	1 ⁷ /10	256
	6-17	18½6	27	18 ⁵ /e	61/2	31/2 x 45/8	21	21/2	11/2	8	1	17/16	332
	6-24	181/16	35	18 ⁵ é	61/2	31/2 x 45/6	21	21/2	11/2	8	1	17/16	355
12	6-12	18½e	221/2	185é	61/2	3½ x 45/á	21	21/2	11/2	8	11/4	17/1e	275
	6-17	18½e	281/2	185é	61/2	31/2 x 45/6	21	21/2	11/6	8	134	17/16	295
	6-24	181/ie	361/2	18%	61/2	31/2 x 45/6	21	21/2	11/2	8	11/4	17/16	345



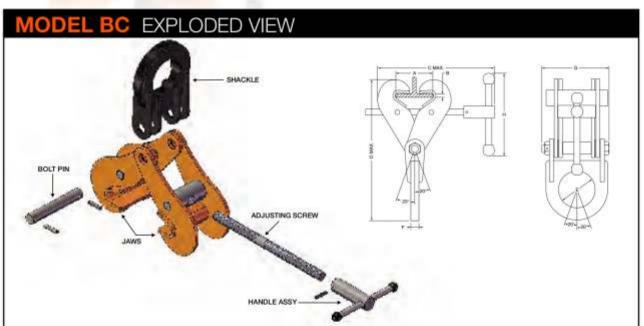


Model BC Locking Type

The **Model BC** is a multi-purpose beam clamp suitable for both lifting beams or providing suspension of hoists from beams or girders, thereby eliminating the need for nuts, bolts and shackles. It is intended for use on the American standard or wide flange beams.



OPTION: Now available with soft jaw inserts. Factory installed at time of order or as a Retrofit Kit for customer installation



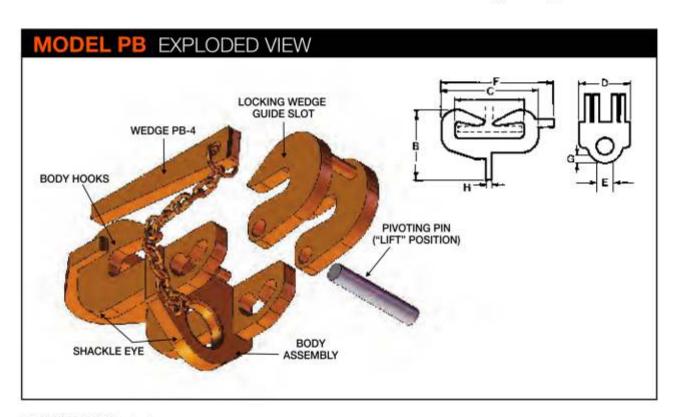
Working Load Limit at 0'- 20° Vertical Tons	Flange Width A	Flange Thickness B	C	D	E	F	G	н	Weight (in pounds)
11/2	3-71/4	1/4-1/2	117/8	113/4	3	1/2	5	53/4	91/2
3	3-71/4	1/4-1/2	117/8	12	3	5/8	53/16	63/4	131/2
5	6-91/2	1/2-3/4	17	147/a	31/4	3/4	65/16	63/4	221/2
10	6-111/8	1/2-11/4	211/4	191/8	4	11/2	71/8	9	53
15	8 - 163/4	7/8-2	32	26 ¹ /2	41/2	13/4	83/8	12	120
25	18 - 38	2-3	61	40 ¹ /2	5	2	15	15	450



Model PB Locking Type



The **Model PB** is similar to the Model B-1 and provides quick attachment to beams and girders and may be used in the general rigging of chain falls and hoists. The clamp hinges in two sections allowing quick installation. This model is furnished with a fluted tool steel locking wedge which holds the clamp in place on a beam. The two eyes allow the clamp to be attached in the vertical or horizontal positions. The clamp is of single unit construction and fits a wide range of flange widths.



Rated Capacity Tons	Flange Width A	В	С	D	E	E	Weight G	н	(in pounds)
1	2-6	7	71/2	5	11/2	107/6	3/4	1/4	10
3	2-6	91/4	101/2	6½	2¼	13½s	7/s	3,4	28
5	4-8	10½	13	7	21/2	151/4	1	3,4	44



PULL

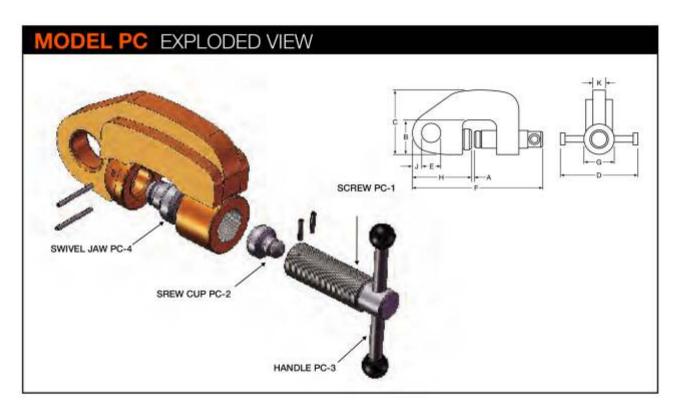






Model PC Locking, Screw Type

Eliminate expensive pad eyes with the **Model PC**... a light "pull clamp" used for pulling and aligning structural members and fabricated sections in the construction and maintenance for shipbuilding and other industries. These clamps are versatile and have a wide range jaw opening. They are secured to the load by tightening the screw and have a rotating cam jaw grip on the screw and clamp body.



Rated Capacity Tons	Plate Thickness A	В	С	D	E	MAX.	G	н	J	K	Weight (in pounds)
1	0-1	21/2	4 ⁹ ∕is	5	11/4	91/6	21∕s	3 ¹⁵ /16	5∕6	3/4	10
2	0-1%	2 ¹¹ /16	5	6	11/2	11%	2³⁄6	4%e	3,4	1	15
3	0-1½	27.é	51/4	6	13/4	12 ⁵ /4a	2⁵∕é	57/46	15/ ₄₆	1	18
5	0-1%	31/4	576	61/2	2	131/2	276	53/4	15/16	1%	24



NON-MARRING

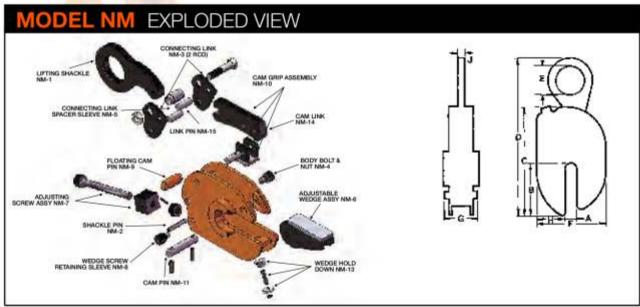






Model NM Locking, Screw Type

The **Model NM** clamp (non-marring) is manufactured with smooth gripping surfaces to prevent marring when gripping stainless steel, copper, aluminum and other polished metal plates. Due to the variety of conditions that may exist in handling these plates, it is recommended that these clamps be used in pairs and attached to a chain or wire rope sling, supported by a spreader beam. The **Model NM** is supplied with stainless steel gripping surfaces and is available with steel or bronze upon request. The **model NM** is not intended for use in transportation of plates using mobile equipment where shocking of the load may occur.



Rated Capacity Tons	Plate Thickness A	В	C	MAX.	E	F	G	н		Weight (in pounds)
31	0-% %-1% 1%-1% 1%-2%	4½ 4½ 4½ 4½ 4½	9% 9% 9% 9%	15% 15% 15% 15%	2% 2% 2% 2% 2%	5% 6% 6% 7%	314 314 314 314	2% 2% 2% 2%	% % % %	17 19 21 23
2	0-1 %-1½ 1¼-2 1¾-2⅓ 2¼-3	51/4 51/4 51/4 51/4 51/4	10% 10% 10% 10% 10%	16 16 16 16 16	2% 2% 2% 2% 2%	6% 7% 7% 8% 8%	3% 3% 3% 3% 3%	2 ⁷ / ₆ 2 ⁷ / ₈ 2 ⁷ / ₆ 2 ⁷ / ₆ 2 ⁷ / ₆	76 76 76 76 96	23 27 28 30 33
4	%-1% 1%-2% 1%-3 3-4%	5% 5% 5% 5%	12% 12% 12% 12%	18% 18% 18% 18%	215% 215% 215% 215% 216%	7% 8% 9% 11	416 416 416 416	21% 21% 21% 21% 21%	1	45 48 50 55
8	1½-3¼ 1¾-3½ 3-4½ 4-5½	11 11 11 11	20¼ 20¼ 20¼ 20¼ 20¼	27% 27% 27% 27%	3% 3% 3% 3%	15% 15% 16% 17%	6% 6% 6% 6%	5% 5% 5% 5%	2 2 2 2	193 195 210 225
12	2-4 3%-5½ 4½-6	11 11 11	20¼ 20¼ 20¼	27% 27% 27%	3% 3% 3%	16'.6 17'.6 18'.6	7% 7% 7%	5% 5% 5%	2 2 2	200 220 240

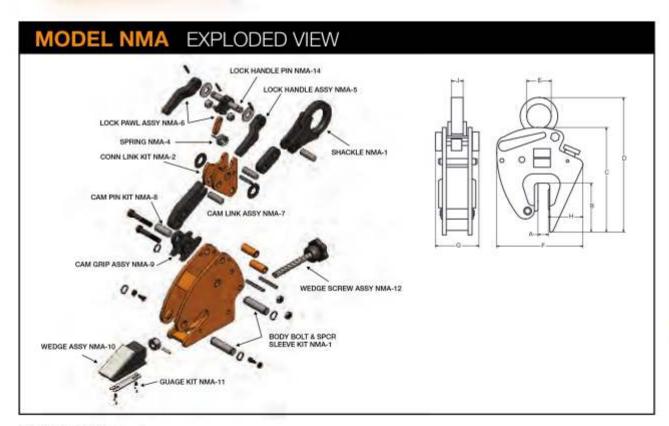




Model NMA Locking Type

The **Model NMA** is a non-marring clamp with smooth gripping pads that can lift hard surface materials.

Materials with sensitive finishes such as stainless steel, copper, aluminum and polished metal plates can also be lifted. The clamp incorporates a locking feature which enables the clamps gripping jaws to be "Locked Open" for attaching and removing the clamp from the material being lifted and to be "Locked Closed" for turning material through 180 degrees. It is recommended these clamps be used in pairs.



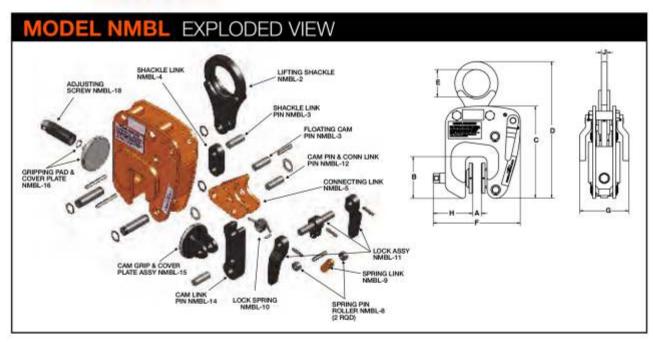
Rated Capacity Tons	Plate Thickness A	В	С	D	E	MAX.	G	н	J	Weight (in pounds)
1/2	0 - 1/2	3 7/16	7 26/32	12 1/16	2	7 1/4	4 1/4	2 15/16	1/2	16
1	0 - 3/4	4 3/4	11.3/8	16 ¹³ /16	2 5/8	9 5/8	5 1/16	4 5/8	5/8	27
2	0 - 1	5 1/2	127/8	20 1/8	3	11 1/2	6	4 15/32	3/4	53
4	1/4 - 1 1/4	6 31/32	14 7/16	22 1/4	3 ⁵ /s	11 11/16	6	4 ⁷ /s	1	63 1/2
4	1 - 2	6 31/32	14 7/16	22 1/4	3 5/8	12 13/18	6	4 7/8	1	65 1/2





Model NMBL Locking Type

The **NMBL** model is used to turn plates from the horizontal through a 180 degree arc. It is manufactured with smooth gripping surfaces to prevent marring when gripping stainless steel, copper, aluminum and other polished metal plates. The NMBL incorporates a lock open – lock closed feature to facilitate attaching and removing the clamp from the plate.



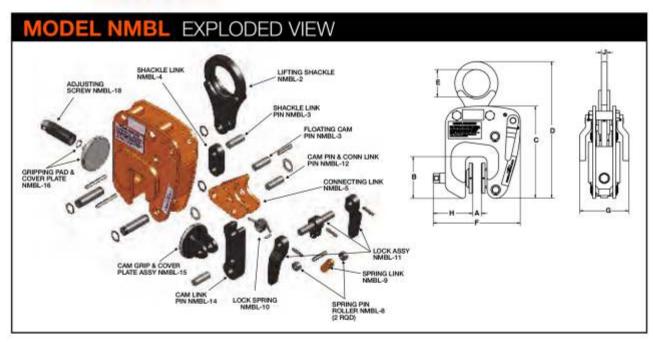
Rated Capacity Tons	Plate Thickness A	В	С	D	E	MAX.	G	н	J	Weight (in pounds)
1/2	0-5/6	3 %	8	12 %s	2 %	7 %	41/4	3 7/16	1/2	15%
1	0-34	3 %	8	11 7/6	2%	7 ⁹ /46	4¹,á	3 ⁷ /46	1/2	171/4
2	0-2	4 1/6	10 7/6	17 %s	3	121/12	5½	5 1/16	3/4	31
4	14-11/2	7 11/64	16 3/s	23 25/32	3	61/4	81/2	8 %4	134	126





Model NMBL Locking Type

The **NMBL** model is used to turn plates from the horizontal through a 180 degree arc. It is manufactured with smooth gripping surfaces to prevent marring when gripping stainless steel, copper, aluminum and other polished metal plates. The NMBL incorporates a lock open – lock closed feature to facilitate attaching and removing the clamp from the plate.



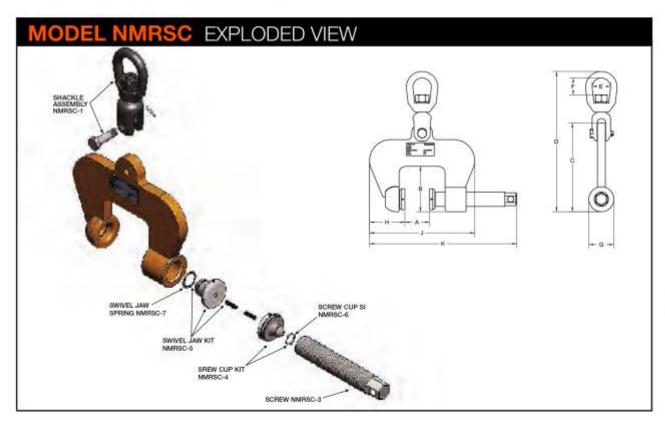
Rated Capacity Tons	Plate Thickness A	В	С	D	E	MAX.	G	н	J	Weight (in pounds)
1/2	0-5/6	3 %	8	12 %s	2 %	7 %	41/4	3 7/16	1/2	15%
1	0-34	3 %	8	11 7/6	2%	7 ⁹ /46	4¹,á	3 ⁷ /46	1/2	171/4
2	0-2	4 1/6	10 7/6	17 %s	3	121/12	5½	5 1/16	3/4	31
4	14-11/2	7 11/64	16 3/s	23 25/32	3	61/4	81/2	8 %4	134	126





Model NMRSC Locking, Screw Type

The **Model NMRSC** is a lightweight screw clamp for bench work on steel plates of large thickness, and weighing less than 1000 lbs. Supplied with smooth gripping surfaces to prevent marring when gripping stainless steel, copper, aluminum and other polished metal plates.



Rated Capacity Tons	Plate Thickness A	В	С	D	Ε	F	G	н	Weight	к	(in pounds)
1/2	0-3	4 ⁵ /16	81/46	13¾	1%	1%6	2¾	3%	10	14	13%
1/2	136-414	4 ⁵ /16	81/46	13 ³ /6	1%	1%6	2%	3%	11 ³ /16	15 % 16	14%

New Solutions For New Challenges... RENFROE



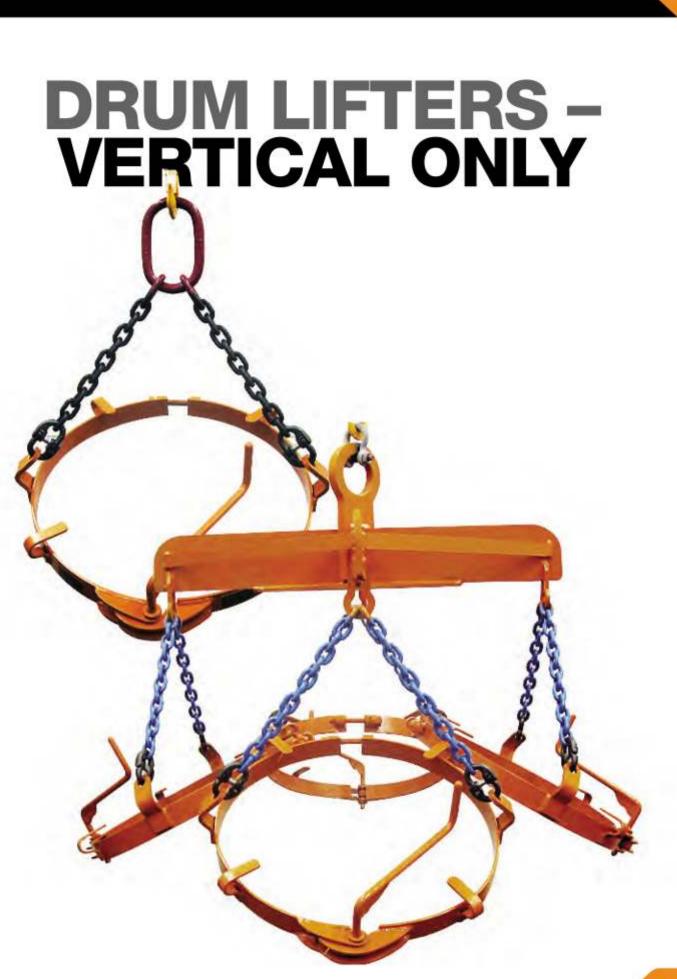
FREE SAFETY TRAINING

Increase the level of your employee's expertise in application, inspection and maintenance of clamps. Call Joe Pless at 1-800-874-8454. For your nearest distributor, call 1-800-874-8454.



Made in USA



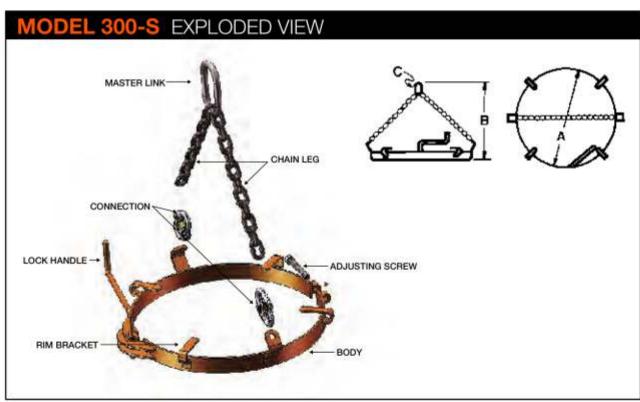






Model 300-S Locking Type

The **Model 300-S** is used for vertical lifting and transporting of metal drums. Equipped with a past center locking device which secures the clamp tightly to the drum. The **Model 300-S** is capable of handling one drum at a time.



SPECIFICATIONS (in inches)

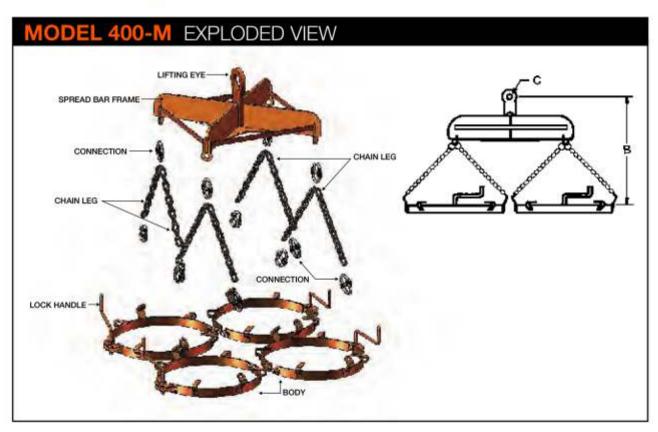
MODEL	Rated Capacity (in pounds)	Drum Diameter	Standard B	Standard C	Weight (in pounds)
300-S	3,000 lbs.	22 ¹ /a	25	3×6	25
300-S	3,000 lbs.	18½	25	3×6	24
300-S	3,000 lbs.	161/2	25	3×6	23





Model 400-M Locking Type

The Model 400-M is used for vertical lifting and transporting of metal drums. Equipped with a past center locking device which secures the clamp tightly to the drum. The Model 400-M is capable of handling four drums.



SPECIFICATIONS (in inches)

MODEL	Rated Capacity (in pounds)	Drum Diameter	Standard B	Standard C	Weight (in pounds)
400-M	12,000 lbs.	221/2	273	3¾	275
400-M	12,000 lbs.	18½	25	33/4	273
400-M	12,000 lbs.	16 ¹ / ₂	273	3 ³ /4	270



TOOL







Tagline

The Tagline is a tool to which a load-guiding lanyard is attached to assist in controlling the swing of a load during transport and to aid in aligning the load before it is brought to rest.



SPECIFICATIONS (in inches)

Plate Tickness A	В	C	D	E	MAX.	G	н	J	K	Weight (in pounds)
0-1	1 -3/16	1 7/8	4 7/8	1 1/4	5 9/16	1 1/2	41/2	3/4	2 1/2	4
1-2	1 -5/18	2 1/8	51/2	1 1/4	6 13/16	11/2	41/2	3/4	3	5

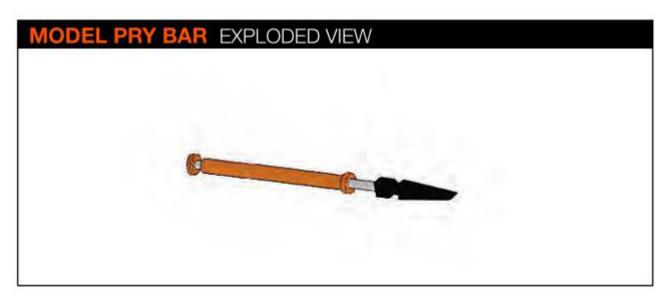


Pry Bar



With this amazing simple tool you can prepare plates in stacks easily, quickly and carefully for clamp attachment. The function of the bar includes...

- 1 The exact guidance of both bars sliding into each other to ensure a safe application at the point of contact.
- 2 Through a few powerful blows of the double bar handle, the wedge is pushed between the metal plates.
- 3 When the bar is extended, leverage makes it possible to lift even heavy plates to cover the length of the wedge.
- In this position lifting equipment like Renfroe clamps can easily be applied for lifting



SPECIFICATIONS (in inches)

Length Retracted (inches/mm)	Length Extended (inches/mm)	Weight (lbs/kg)
34.625 / 879	51.625 / 1311	14.73 / 6.7
PECIFICATIONS ARE SUBJECT TO CHANGE WITH	HOUT NOTICE.	



Factory Refurbish and Recertification of Renfroe Clamp's



ASME B30.20 recommends specific inspections of "Below the Hook" Lifting devices.

ASME B30.20 Section 20-1.3 lists inspection classifications for inspection, testing and maintenance of structural and mechanical lifting devices.

Replacement parts and Renfroe Rebuild Kits are available for customer's to refurbish their Renfroe clamps. If, however, you are not comfortable with performing this service for your customer, then J. C. Renfroe and Sons can provide this service.

A simple phone call to our customer service department will start the process. We will issue an RGA number to send the clamp(s) to us. Once received, we will inspect it/them and issue a quote for services required to put the clamp(s) into "as new" condition. If requested, we will provide a certificate of proof test.



SAFETY OPERATING AIDS (DO's and DON'TS)

- DO read and understand the operator's manual before using clamp.
- 2 DO consult Operators Manual or RENFROE when in doubt.
- 3 DON"T lift over workmen. DON"T lift over safety areas or personnel.
- 4 DO attend a factory training class for establishing proper use of Renfroe Products.
- 5 DO Lock clamp closed when clamps are fitted with a lock. DON"T lift with lock in open or "lock open" position.
- 6 DON"T use a connection that may release the clamp.
- 7 DON"T attach clamp directly to crane hook.
 DO use a flexible connection between crane hook and clamp shackle. DON"T use heavy flexible connection.
- 8 DO use correct clamp for job. DON"T use large capacity clamps to lift light loads.
- 9 DO use an adequate number of clamps to balance load. DON"T lift loads that are not balanced.

- 10 DO use clamps within their rated capacity. DON'T overload clamps.
- 11 DO inspect clamp before each lift, follow inspection and maintenance instructions outlined in the manual and use RENFROE replacement parts to assure proper operation of the clamp.
- 12 DON'T use clamp that has been overloaded. DO refer to pre-lift inspection in Operator's Manual.
- 13 DON'T side load with a straight shackle clamp.
- 14 DON'T misuse. DON'T lift plate from bottom of plate stack.
- 15 DON'T rush. DON'T lift more than one plate at a time with a vertical clamp.
- 16 DON'T improvise. Always use correct clamp for the job. DON'T lift plate horizontally with a vertical lift only clamp.
- 17 DON'T alter clamp. DON'T grind, weld or modify the clamp in any manner.































RENFROE FACTORY TRAINING IS AVAILABLE

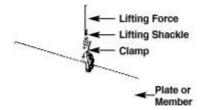
NOTICE OF EXCLUSION OF WARRANTY

RENFROE HAS HEREIN SET FORTH IN CONSPICUOUS LANGUAGE AN EXCLUSION OF ANY WARRANTY EITHER EXPRESSED OR IMPLIED, WHICH IS NOT SPECIFICALLY AND PARTICULARLY CONTAINED HEREIN. PLEASE REFER TO THAT STATEMENT FOR REPRESENTATIONS AND WARRANTIES OF PRODUCTS MANUFACTURED BY J.C. RENFROE & SONS.



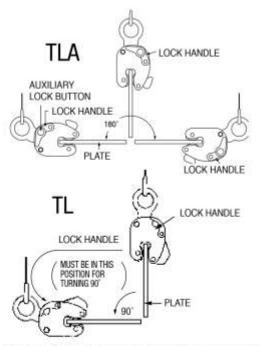
DEFINITIONS

VERTICAL LIFT: The lifting of a single plate or member in which the lifting force exerted by the rigging is directly above and in line with the lifting shackle as shown in the illustration below.



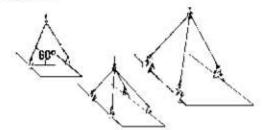
VERTICAL TURN/LIFT: A vertical turn/lift clamp is a vertical lifting clamp specifically intended to turn a single plate or member thru a ninety degree (90°) arc and back to vertical thru the same ninety degree (90°) arc or from horizontal to vertical to horizontal thru a one hundred and eighty degree (180°) arc. Refer to Application Section of specific Turn/Lift clamps for further detail.

During the turning operation the edge of the plate opposite the edge to which the clamp is attached should always be in contact with a supporting surface such as a factory floor and the load on the clamp should not exceed one half rated capacity of clamp — refer to illustrations shown below.



HORIZONTAL LIFT: Clamps (used in pairs or multiples) are attached to the side edges of a plate or bundle of plates positioned horizontally to the floor level. The rigging attached to clamps is generally multi-legged slings with the connecting point of the slings being approximately centered between the distance separating the clamps. Refer to illustrations shown below.

WARNING: The capacity of all horizontal clamps is based on a sling angle of sixty degrees (60°). See illustration below. Sling angles less than sixty degrees (60°) increase the load exerted on the clamps. Sling angles greater than 60° reduce gripping force, do not exceed 60°.



STEEL PLATES: Unless otherwise specified, lifting clamps are manufactured to handle hot-rolled steel plates whose Brinell Hardness does not exceed 300.

WARNING: Do not lift plates with coatings or mill scale that prevent the gripping surfaces of the clamp from making positive contact with the base metal.

For applications not covered by the above information, secure written recommendations from RENFROE.

FINISHED AND POLISHED PLATES:

Steel plates in this category having other than hot-rolled surfaces such as stainless steel, etc., are generally handled using non-marring clamps incorporating smooth gripping surfaces.

WARNING: For applications using clamps with serrated gripping surfaces on finished or polished plates, secure written recommendations from RENFROE.

STRUCTURAL MEMBERS —FABRICATED SECTIONS: Unless otherwise specified, clamps described as capable of handling structural members and fabricated sections are limited to hot-rolled steel whose Brinell Hardness does not exceed 300.

WARNING: For applications not covered by the above information, secure written recommendations from RENFROE.

RATED CAPACITY: ALL RENFROE CLAMPS
ARE RATED INDIVIDUALLY. The rated capacity of a
RENFROE product is based on the product being in "new
or as new" condition and represents the maximum load
the product is to be subjected to when utilized in the
manner described in this manual. Wear, misuse, abuse
and other factors relating to usage may reduce the rated
capacity. Shock loading and the factors listed must be
taken into consideration when selecting a RENFROE
product for a given application.

PLATE THICKNESS: The minimum and maximum plate thickness a clamp specified for handling plates is capable of lifting.



DEFINITIONS

WARNING: Never use a clamp for lifting a plate where the plate thickness is less than or greater than the minimum and maximum stenciled on the clamp.

JAW OPENING: The minimum and maximum thickness of a member of a clamp specified as having a JAW OPENING is capable of handling.

WARNING: Never use a clamp on a member whose thickness is less than or greater than the range of jaw opening stenciled on the clamp.

OPERATING TEMPERATURES: Unless specified under the Applications Section of the individual model, the approved operating temperature of RENFROE clamps is from zero degrees Fahrenheit (-18 Celsius) to a maximum of 200 degrees Fahrenheit (+93 degrees Celsius). The minimum and maximum temperatures apply to both ambient and the material being handled by the clamp.

WARNING: Secure written authorization from RENFROE before using clamps in temperatures other than shown.

"HOT LIFTS": The Model R and S clamps are available in modifications that are capable of making lifts where the temperatures of the member being lifted exceeds 200 degrees Fahrenheit (+93 degrees Celsius). Depending on conditions, a lift may exceed 1000 degrees Fahrenheit (538 degrees Celsius). The exact application and temperatures of the plates to be handled are critical in selecting the proper model.

WARNING: Secure written instructions from RENFROE for all hot lift applications.

LOCKING CLAMPS: Locking clamps are divided into the categories listed below. With the exception of the "Locking Wedge" and "Locking Screw" type the purpose of the locks are to facilitate the attaching and removing of the clamp from the member being handled.

"Lock Closed" — an overcenter spring loaded mechanism in which the spring exerts a force on the gripping cam when the lock handle is moved to the "Lock Closed" position. When the handle is moved to unlocked position, the force exerted by the spring is relaxed and the gripping cam may be retracted by pushing the lifting shackle into the body of clamp. Refer to the Operation Section of specific models of "Lock Closed" clamps for additional details. Typical "Lock Closed" clamps are Models DG, FR, M and HRS.

"Lock Open Only" — normally used on "Hot Lift" clamps and consists of a manually operated "Lock Stop Pin" that is inserted when gripping cam of clamp is retracted and removed when clamp is positioned on the plate. Tag line may be used to permit operator to remove pin from a greater distance from clamp. Refer to the Operation Section of specific model of "Lock Open Only" clamps for additional details. Typical "Lock Open Only" clamp is the Model RO.

"Lock Open-Lock Closed" — an over-center spring loaded mechanism in which the spring exerts a force on the gripping carm when the lock handle is moved to the "Lock Closed" position. When the handle is moved to the "Lock Open" the gripping carm is maintained in the retracted position for ease in installing the clamp on a plate or member. The Model FRD contains individual "Lock Open" and "Lock Closed" mechanisms that must be operated separately. Refer to the Operation Section of specific models of the "Lock Open-Lock Closed" clamps for additional details. Typical "Lock Open-Lock Closed" clamps are Models FRD, R, S, SD, SEA, SX, TL, TLA and the J-Series.

"Locking Wedge" — is a fluted steel wedge that is driven in place with a hammer. The body of the wedge is positioned in a slot in the clamp body with the fluted edges contacting the member to which the clamp is being attached. Refer to Operation Section of specific models of the "Locking Wedge" clamps for additional details. Typical "Locking Wedge" clamps are Models A1, B1, B2 and PB.

"Locking Screw" — "Locking Screw" clamps depend on manually adjusting a screw to hold the gripping surface in place for lifting and removing the clamp from member being lifted. Refer to Operation Section of a specific model of "Locking Screw" clamps for additional details. Typical "Locking Screw" clamps are Models AC, ACP, BC, NM, PC, SCP, SCPA and RSC.

NON-LOCKING: "Non-Locking" clamps have no mechanisms to aid in attaching or removing clamp from member being lifted. It is necessary to have position of clamp maintained on the member being lifted until a properly applied force is exerted to the lifting shackle. Refer to Operation Section of specific models of the "Non-Locking" clamps for additional details. Typical "Non-Locking" clamps are Models AST, ASTL, BD, HR, HDR, HRS and WHSR.

WARNING: A POINTING OUT AND NOTICE OF DANGER. THE PURPOSE OF A "WARNING" IS TO APPRISE THE OPERATOR AND ALL OTHER AFFECTED PERSONS OF THE EXISTENCE OF DANGER OF WHICH HE SHOULD BE. BUT MAY NOT BE AWARE; AND TO **ENABLE THE OPERATOR TO PROTECT** HIMSELF AND OTHERS, WHERE APPLICABLE, AGAINST SUCH DANGER. AN ATTEMPT IS MADE HEREIN TO WARN AGAINST REASONABLE AND REASONABLY FORESEEABLE DANGER IN THE PROPER USE AND POSSIBLE REASONABLE MISUSE OF RENFROE PRODUCTS DESCRIBED IN THIS CATALOG.



RENFROE® Operator's Manuals

No operator should engage or attempt to engage in the use of any Renfroe product until the applicable manual has been read and fully understood.

Failure to review and utilize recommended applications, operating and maintenance instructions could result in serious injury to the operator and others.

An Application, Operation and Maintenance Manual is packaged with each Renfroe product. Additional copies are available by contacting J. C. Renfroe & Sons at 1-800-874-8454 or by email: sales@jcrenfroe.com.



RENFROE® Rebuild Kit

15% savings when ordering in kits

The construction of RENFROE products permits the installation of repair parts to be accomplished by qualified personnel utilizing recommended procedures for inspection and installation of each product model as recommended in the Maintenance Section of the Operator's Manuals.

When necessary, the worn or damaged parts may be replaced by installing individual replacement parts or through the use of a RENFROE Rebuild Kit which includes all parts generally replaced due to normal wear. Parts not subjected to daily operating wear are not included in the Rebuild Kit and may be purchased separately.



KITS ARE AVAILABLE FOR THE FOLLOWING MODELS:

- MODEL AST
- MODEL ASTS
- MODEL ASTL
- MODEL BD
- MODEL DC
- MODEL DG
- MODEL DWS

- MODEL FR
- MODEL FRD
- MODEL J SERIES
- MODEL LJ
- MODEL M
- MODEL NM
- MODEL R

- MODEL RSC
- MODEL S
- MODEL SH
- MODEL SCP
- MODEL SCPA
- MODEL SCSL
- MODEL SD

- MODEL SEA
- MODEL SX
- MODEL TL
- MODEL TLA
- MODEL WHSR

AND HOT LIFT CLAMPS



GENERAL INFORMATION

IMPORTANT: Information contained in this catalog is for the presentation of pertinent illustrative and specification data for use in the selection of suitable RENFROE® products consistent with the use intended by RENFROE. Refer to Operator's Manuals for information on application, operation and maintenance of each particular model or product.

Photographs of products shown in this catalog which may include examples of applications are for illustrative purposes only. Please refer to the Operator's Manuals for approved applications of RENFROE products.

OPERATOR'S MANUALS: PRIOR TO PURCHASE AND/OR USE OF ANY RENFROE PRODUCT, EACH PURCHASER AND OPERATOR SHOULD READ AND UNDERSTAND FULLY ALL OF THE PERTINENT INSTRUCTIONS AND RECOMMENDATIONS CONTAINED IN THE OPERATOR'S MANUALS FOR THE PARTICULAR PRODUCT INVOLVED.

THE OPERATOR'S MANUAL:

Manuals contain recommended application, operation and maintenance instructions for all RENFROE products listed in this catalog. A copy of the Operator's Manual pertaining to each such product is attached to the product or enclosed within the shipping carton with each product. In addition, Operator's Manuals may be obtained from authorized RENFROE Distributors or by contacting J. C. Renfroe & Sons at 1-800-874-8454 or by email: sales@jcrenfroe.com.

TRAINING AIDS: RENFROE provides upon request and at no charge posters, inspection kits containing coded inspection tags, and maintenance inspection record forms.

RENFROE factory representatives are also available upon request to assist with training end-users in the proper use, maintenance, and inspection of RENFROE products. Direct requests to Renfroe Training Department toll free 800-874-8454. Fax 904-354-7865. Email: sales@jcrenfroe.com.

INSPECTION AND REBUILD: RENFROE Factory
Representatives are available upon request to inspect
RENFROE products in use at Plant sites or such other
reasonable locations where such products are in use.
RENFROE products may be returned to the factory for
inspection and rebuild in accordance with an established
fee schedule. Neither operators nor maintenance personnel
of the user of such products should engage in any
modification of any RENFROE product for any reason.
Installation of parts and Rebuild Kits should be effected
only in accordance with instructions included within the
Operator's Manual and as furnished with each RENFROE
Rebuild Kit.

ENGINEERING SERVICE: Our Engineering Department is ready to assist in the solution of special problems and its service is available at all times to our customers.

DELAYS: J. C. RENFROE & SONS is not liable for any delays in manufacturing or shipping caused by fire, strikes, lockouts, war, insurrections, inability to secure materials, government interference or regulations, delays in transportation, or other circumstances beyond reasonable control.

EXCLUSION OF WARRANTY

THERE EXISTS NO WARRANTIES NEITHER
EXPRESSED NOR IMPLIED WHICH
EXTEND BEYOND THE DESCRIPTIONS OR
STATEMENTS CONTAINED IN THE FACE
OR ANY PART HEREOF.

This catalog supercedes all catalogs previously published by RENFROE and further supercedes any materials previously published or described by RENFROE or its distributors as to the contents hereof.

Stainless Steel Gripping Surfaces

KITS ARE AVAILABLE FOR THE FOLLOWING MODELS:

Vertical Clamps

- Model FR
- Model J
- Model JP
- Model JA
- Model JPA

- Model LJ
- Model SCP
- Model SCPA
- Model TL
- Model TLA

Horizontal Clamps

- Model HR
- Model HDR
- Model M
- Model WHSR

THINK OUTSIDE OF THE BLOCK With Us...

J.C. Renfroe offers a full line of quality, dependable bridge and mobile crane blocks.

But what raises Renfroe above the competition is our in-house engineering staff that thinks outside of the box. At Renfroe, we can work with you to develop unique designs and custom specifications to produce blocks for any project. OEM's can work directly with our engineers in the design and manufacture of blocks to accommodate specific applications. Over the past 75 years, we have built our business on customizing products ranging from lifting clamps to sheaves. So, we can "knock off" a block for you, too.

Call 1-800-874-8454 for a free consultation with one of our engineers or for the name of your nearest distributor.



SCAN CODE FOR MORE ON RENFROE BLOCKS







Renfroe Sheaves

Sheave Sizes Available From J.C. Renfroe

Model "M" (Machined Sheave) - 3 inches up to 24 inches (Made in USA)

Available In Imperial And Metric Wire Rope Sizes

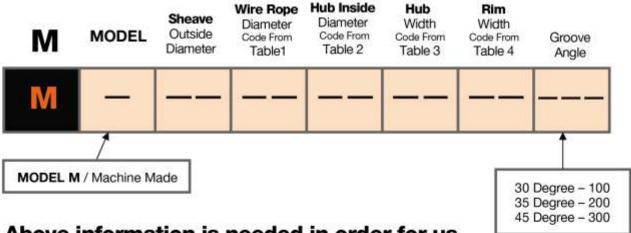
Renfroe Advantages

- Flexibility in our manufacturing process means we can produce a single sheave without a considerable cost impact.
 Flexibility = Better Lead Time
- Induction groove hardening available.
- Technology, manufacturing flexibility, quality and dependability all of these features are standard in every J.C. Renfroe product.
- Because of our technology and manufacturing flexibility, we can produce special configurations (dimensions) without the long lead times and without increased costs associated with standard manufacturing techniques.
- Proven technology (worldwide).



Wire RopeTo Sheave Dimensions

	Wire Rope Dia.										SH	EA	/E C	Duts	ide	Dia	me	ter	(in.)							
Code	Inch	ies	mm	14	15	16	17	18	20	22	24	26	28	30	32	33	34	36	40	42	48	50	52	55	60	72
06	0.250	1/4	6.5																	-					1	
08	0.313	5/16	8																							
09	0.375	3/8	9.5																							
11	0.438	7/16	11																							
13	0.500	1/2	13						-3																	
14	0.563	9/16	14.5																							
16	0.625	5/8	16																							
19	0.750	3/4	19																							
22	0.875	7/8	22																		- //					
26	1.000	1	26																							
29	1.125	1 1/8	29																							
32	1.250	1 1/4	32																							
35	1.375	1 3/8	35																							
38	1.500	1.1/2	38																							



Above information is needed in order for us to be able to manufacture a sheave for you.

If Bushings or Bearings are needed, please contact your distributor or the Renfroe factory and provide specific information. If you want us to quote and/or provide bearings, you must give us the bearing manufacturer name, and part numbers.





	WIRE ROP	
Code	Inches	Inches
04	0.187	3/16
06	0.250	1/4
08	0.313	5/16
09	0.375	3/8
11	0.438	7/16
13	0.500	1/2
14	0.563	9/16
16	0.625	5/8
19	0.750	3/4
22	0.875	7/8
26	1.000	1
29	1.125	1 1/8
32	1.250	1 1/4
35	1.375	1 3/8
38	1.500	1 1/2

	HUB INSIDE DIA.
Code	Inches
01	0.752
02	0.814
03	0.875
04	1.125
05	1.250
06	1.500
07	1.569
08	1.750
09	1.851
10	1.8745
11	1.876
12	1.880
13	2.000
14	2.060
15	2.0611
16	2.250
17	2.310
18	2.375
19	2.3109
20	2.4995
21	2.500
22	2.560
23	2.5611
24	2.6111
25	2.750
26	2.7505
27	2.9987
28	2.998
29	2.999
30	3.000
31	3.2486
32	3.249
33	3.250
34	3.270
35	3.4985
36	3.499
37	3.500
38	3.548
39	3.672
40	3.7485
41	3.749
42	3.750

	HUB INSIDE DIA.
Code	Inches
43	3.937
44	3.999
45	4.000
46	4.248
47	4.250
48	4.329
49	4.330
50	4.4985
51	4.500
52	4.560
53	4.720
54	4.722
55	4.725
56	4.750
57	4.875
58	5.000
59	5.513
60	5.250
61	5.375
62	5.500
63	5.512
64	5.9984
65	5.9985
66	6.000
67	6.100
68	6.125
69	6.375
70	6.497
71	6.498
72	6.4984
73	6.500

Wire Rope To Sheave Dimensions



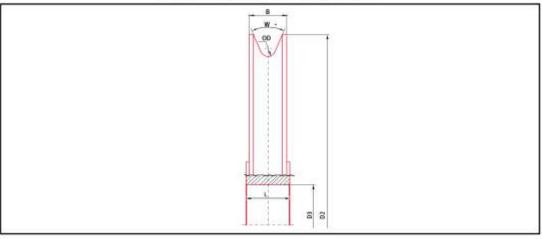
	HUB WIDTH
Code	Inches
01	1.250
02	1.375
03	1.500
04	1.563
05	1.625
06	1.750
07	1.970
08	2.000
09	2.1875
10	2.190
11	2.250
12	2.310
13	2.3125
14	2.375
15	2.500
16	2.750
17	2.810
18	2.875
19	2.880
20	2.9375
21	3.000
22	3.375
23	3.380
24	3.500
25	3.620
26	3.625
27	3.6875
28	3.750
29	3.875
30	4.000
31	4.120
32	4.125
33	4.500
34	5.000
35	5.750
36	2.313

RIM WID	RIM WIDTH CODES					
Number Code	Fraction inches					
05	1/2					
06	9/16					
07	5/8					
08	11/16					
09	3/4					
10	13/16					
11	7/8					
12	15/16					
13	1.0					
14	1 1/16					
15	1 1/8					
16	1 3/16					
17	1 1/4					
18	1 5/16					
19	1 3/8					
20	1 7/16					
21	1 1/2					
22	1 9/16					
23	1 5/8					
24	1 3/4					
25	1 13/16					
26	1 7/8					
27	2.0					
28	2 1/16					
29	2 1/8					
30	2 5/16					
31	2 1/2					
32	2 7/16					
33	2 1/2					
34	2 9/16					
35	2 5/8					
36	2 3/4					
37	2 13/16					
38	27/8					
39	3.0					





DIMENSIONS OF SHEAVES



Outside	Wire Rope	Hub width	Rim Width	Nom. Hub O.D.
inches)	(inches)	(inches)	(inches)	(inches)
3	3/16	3/4	3/4	NA.
3	1/4	3/4	11/16	1
3	1/4	3/4	3/4	NA.
3	5/16	3/4	3/4	NA.
3	3/8	3/4	3/4	NA:
3	3/8	1	7/8	1-1/2
3	7/16	1	1	NA.
3	1/2	1	1	NA
		4 Inches		
4	3/16	3/4	5/8	2
4	1/4	1	5/8	2
4	5/16	3/4	5/8	2
4	3/8	3/4	3/4	NA NA
4	3/8	13/16	3/4	2
4	3/8	1	7/8	2
4	3/8	1-1/2	1-3/8	2
4	7/16	1-1/16	1	2
4	1/2	1-1/16	1	2
4	1/2	1-1/2	1-3/8	2
4	5/8	1-1/2	1-3/8	2
10		6 inches		
1100	1/4	7/8	3/4	
6				2-1/2
6	3/8	7/8	3/4	2-1/2
6	3/8	3/4	3/4	NA NA
6	3/8	1-1/8	1	2-1/2
6	7/16	1-1/8	1	2-1/2
6	1/2	1-1/8	1	2-1/2
6	1/2	1-3/8	1-1/4	2-1/2
6	9/16	1-1/8	1	2-1/2
6	5/8	1-5/16	1-1/4	2-1/2
6	5/8	1-3/8	1-1/4	2-1/2
6	5/8	1-3/4	1-5/8	2-1/2
6	3/4	1-3/4	1-5/8	2-1/2
	- W	8 inches		1
В	3/8	1-1/8	1	2-3/4
8	7/16	1-3/8	1-1/4	2-3/4
В	1/2	1-1/8	1	2-3/4
8	1/2	1-3/8	1-1/4	2-3/4
8	5/8	1-3/8	1-1/4	2-3/4
8	5/8	1-1/2	1-3/8	2-3/4
В	5/8	1-3/4	1-5/8	2-3/4
8	3/4	2	1-3/4	2-3/4
8	3/4	2-1/4	2-1/8	3
8	7/8	2-1/4	2-1/8	3
		10 inches		
10	3/8	1-1/8	1	3-1/4
10	7/16	1-3/8	1-1/4	3-1/4
10	1/2	1000 0000	1-1/4	0 PO 1 HO 200 PO 1
	The state of the s	1-1/8	1-1/4	3-1/4
10	1/2	1-3/8	1-1/4	3-1/4
10	9/16	1-5/8 1-3/8	1-1/2	3-1/4 3-1/4
10	9/10	1-0/6	1-1/4	3-1/4

Standard Sheaves With Dimensions (Machine Made)



			140	19
Outside	Wire Rope	Hub width	Rim Width	Nom. Hub O.D.
D2	Size	L	В	
(inches)	(inches)	(inches)	(inches)	(inches)
10	5/8	1-3/8	1-1/4	3-1/4
10	5/8	1-5/8	1-1/2	3-1/4
10	5/8	1-3/4	1-5/8	3-1/4
10	3/4	1-5/8	1-1/2	3-1/4
10	3/4	1-3/4	1-5/8	3-1/4
10	7/8	2	1-3/4	4
10	7/8	2-1/2	2-5/16	4
10	1	2-3/8	2-1/4	4
10	1	2-1/2	2-5/16	4
		12 inches	1	
10	2.00			
12	3/8	1-1/8	3/4	4
12	7/16	1-3/8	1-1/4	4
12	1/2	1-3/8	1-1/4	4
12	1/2 9/16	1-7/8	1-3/4	4
12	5/8	1-3/4	1-1/4	4
12	5/8	1-7/8	1-3/4	4
12	3/4	1-3/4	1-5/8	4
1000000	0.717			4
12	3/4 7/8	2 1-3/4	1-3/4	5
12	7/8	2	1-3/4	5
12	7/8	2-3/4	2-1/2	5
12	1	2-1/2	2-5/16	5
12	1	2-3/4	2-1/2	5
12		2-3/4	2-1/2	3
		14 inches		
14	1/2	1-3/8	1-1/4	5
14	9/16	1-3/8	1-1/4	5
14	5/8	1-5/8	1-1/2	5
14	5/8	1-7/8	1-3/4	5
14	3/4	1-5/8	1-1/2	5
14	3/4	1-7/8	1-3/4	5
14	7/8	2	1-3/4	5
14	7/8	2-3/4	2-1/2	5
14	1	2-3/8	2-1/4	5-1/2
14	1	2-1/2	2-5/16	5-1/2
14	1-1/8	2-1/2	2-5/16	5-1/2
14	1-1/8	2-3/4	2-1/2	5-1/2
		16 inches		
16	400		1-1/4	-
16	1/2 9/16	2	# 12 ml 2 m	5
the second secon		2	1-5/8	
16	5/8	2	1-3/4	5
16	3/4 7/8	2 2-1/2	1-3/4	5
16	1	2-1/2	2-1/4	6
16	1-1/8	2-3/4	2-1/2	6
10	1-1/0	2.0.4	2.0%	
		18 inches		
18	1/2	2	1-1/4	5
18	9/16	2	1-5/8	5
18	5/8	2	1-3/4	5
18	3/4	2	1-3/4	6
18	7/8	2-1/2	2	6
18	1	2-1/2	2-1/4	6
18	1-1/8	2-3/4	2-1/2	6-1/2
18	1-1/4	3	2-3/4	6-1/2
		20 inches		
200	670	2	1.9/4	e
20	5/8	2	1-3/4	6
20	7/8	2-1/2	1-3/4	6
20	1	2-1/2	2-1/4	6
20	1-1/8	3	2-1/4	6-1/2
20	1-1/4	3	2-3/4	6-1/2
20	1-3/8	3-1/2	2-7/8	8
20	1-1/2	3-1/2	3	8
2.0	4:374			
		24 inches		
24	5/8	2	1-3/4	6
24	3/4	2	1-3/4	6
24	7/8	2-1/2	2	6
24	1	2-1/2	2-1/4	6
24	1+1/8	3	2-1/2	6-1/2
24	1-1/4	3	2-3/4	6-1/2
24	1-3/8	3-1/2	2-7/8	8
24	1-1/2	3-1/2	3	8



Model S Synthetic Sheaves



MDS Cast Nylon 6 (Other Materials Available)

Features and Benefits

- Lighter than Steel Sheaves
- Good Rigidity and Hardness
- High Impact Value
- Corrosion Resistant
- Low to No Moisture Absorption
- Good Resistance to Chemicals
- Dimensionally Stable
- Wide Variety of Dimensions Available

Applications

- Overhead Traveling Bridge Cranes
- Mobile Cranes
- Port Cranes
- Offshore Cranes and Platforms
- Conveyor Systems
- And Many More



Bearing Policy

Please contact the Renfroe Plant for spec ordering of bearings.

Sales Policy

Freight: Freight is F.O.B. shipping point. Freight is prepaid and allowed within the mainland US on orders: With a value greater than \$3,000 net

Return Goods Policy: No material may be returned without prior written permission. Contact customer service for a Return Material Authorization (RMF) Number.

Invoice Terms: Net 30 days after date on invoice. A prompt payment discount of 1% is allowed for invoices paid within 10 days.

Pricing: J.C. Renfroe & Sons reserves the right to change prices at any time.

Definitions

Commercial Surface Quality – the surface condition associated with the normal methods of production of raw materials and machined surfaces.

Design Factor – a measure of the theoretical reserve capacity, which is determined by dividing the ultimate load by the working load limit.

Proof Load – the average force to which a product is subjected before deformation occurs.

Proof Test – a test conducted on a product to determine injurious material or manufacturing defects.

Shock Load – a force that results from the rapid application of a force or a rapid movement of a static load.

Static Load – the load resulting from a constant applied force or load.

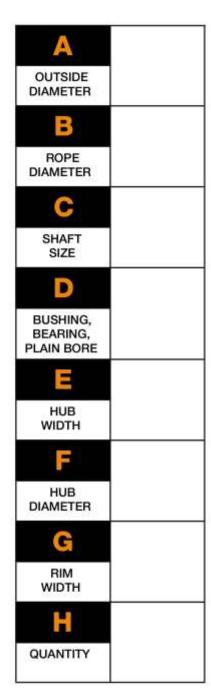
Ultimate Load – the average load or force at which a product fails or no longer supports the load.

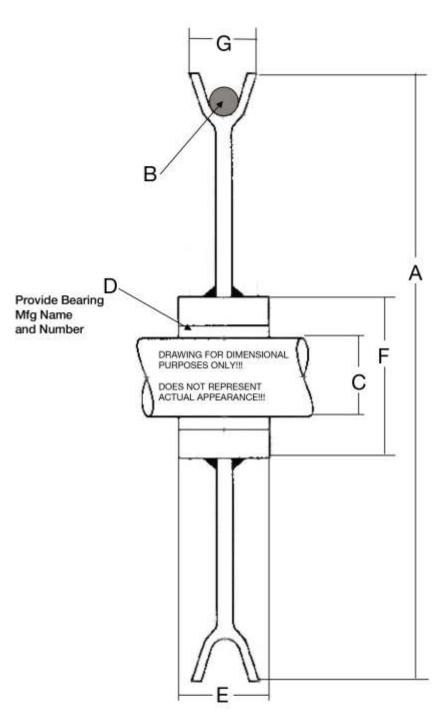
Working Load – the maximum mass or force for which the product is authorized to support in a particular service.

Working Load Limit (also known as WLL, Rated Load Value and Resultant) – the maximum mass or force for which the product is authorized to support in general service when the pull is applied with respect to the centerpiece of the product.

R

Sheave Inquiry & Order Form





Date:	
Company:	
Contact:	
Phone:	
Fax:	

E-mail: _____



1926 SPEARING ST. JACKSONVILLE, FL. 32206 PH: 904-356-4181 FAX: 904-354-7865

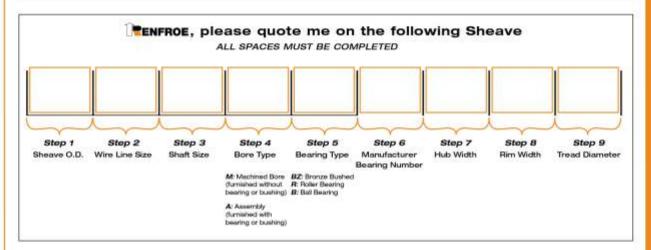




Be sure to make extra copies for future orders.

Sheave Inquiry/Order Form

Customer Name		Date		
Address	City	State/Zip	Country	
Phone	Fax	E-mail		
Customer Contact Name		Quantity		
P.O. Number		Inquiry Numbe	r .	



Application Information

Line Pull	Fleet Angle	Degree of Wrap
Line Speed	Environment	

Special Requirements

Special Testing	
Finish	
Third Party Inspection or Approval	

Contact your RENFROE Distributor for more information

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Contact:

J.C. RENFROE & SONS Jacksonville, Florida

Telephone: 904/356-4181 Toll Free: 800-874-8454 Fax: 904/354-7865 **COPY & FAX**



Renfroe Sheaves

Instructions For Installation, Operations And Maintenance

General:

These instructions are applicable to wire rope sheaves and hook blocks supplied as complete units, either with bearings or bushings.

Stocking of delivered parts:

Our customers have to make sure that the parts supplied by our firm are stored in a dry and temperate place.

When wire rope sheaves are stored outside, the bearings or bushings and the spaces in the hubs have to be completely filled with grease in order to prevent the formation of condensed water. The lubrication holes, in case of sealed or shielded bearings have to be closed by grease. In cases of bearings, without seals or shields, please take the necessary precautions, in order to avoid the dirt, the humidity and the other foreign objects between the opened bearings.

The non-machined and primed surfaces should be protected in order to avoid corrosion.

In cases when the wire rope sheaves are already installed in the plant, and if an extended length of time passes between the installation of the assembly and the start of the running, the pulley grooves must be lubricated sufficiently in order to avoid oxidation.

Installation:

In the case of wire rope sheaves, please check before the installation to assure the diameter of the shaft is in the tolerance range h 6. Then grease the wire rope sheaves making sure that the cavities between the bearings are also completely filled with grease. The grease should be seen exiting the assembly.

Do lubricate the shaft (Mo S2) in order to avoid damage to the shaft and then install the sheave.

If several pulleys are assembled consecutively on the same shaft, make sure that there is separation between the bushings, and the bushings are lubricated.

If it is not required in another way, the greasing of the pulley must be done centrally through the shaft by axial and radial holes of lubrication. For correct lubrication, the gap between the bearings in the sheave must be on the center of the hole for lubrication in the shaft. This pertains to all the wire rope sheaves which are equipped with bearings.

In case of wire rope sheaves with bushings, grease and install. Prior to the start of the running, check if the bushings work with a smooth action.

In the case of sheave assemblies, please take special care in not damaging the seals or shields.

For the model with cylindrical bearings with lip seals SL04 ... PX, the spacer must be designed in such a way that they are situated in front of the seals and they cannot push them when greasing. Please make sure that the suitable installation is assured.

Concerns for all the wire rope sheaves:

Without calling attention to the type of bearing chosen, re-lubrication of each wire rope sheave must be possible. This is not necessary in the case of bearings with 2 RS seals with charge of permanent grease and if the working conditions permit it.

As general norm, all the bearing assemblies are only preserved, and must be fully lubricated before putting into service.

Sheave Installation, Operation & Maintenance



Working and maintenance:

The wire rope sheaves with bearings have to be greased again in maximum intervals of 3-6 months (must be determined by user based on their usage). Please make sure that the old grease is completely eliminated from the bearings. Grease until the fresh grease appears. Clean the lube fittings before greasing so that no foreign material enters the bearings.

In case of wire rope sheaves with friction bushings, lubricate at least every four weeks.

Lubricants:

Use only grease of high quality with base of saponified lithium, suitable for working temperatures from -20 (C) / -4 (F) degrees to more than +100 (C) / 212 (F) degrees.

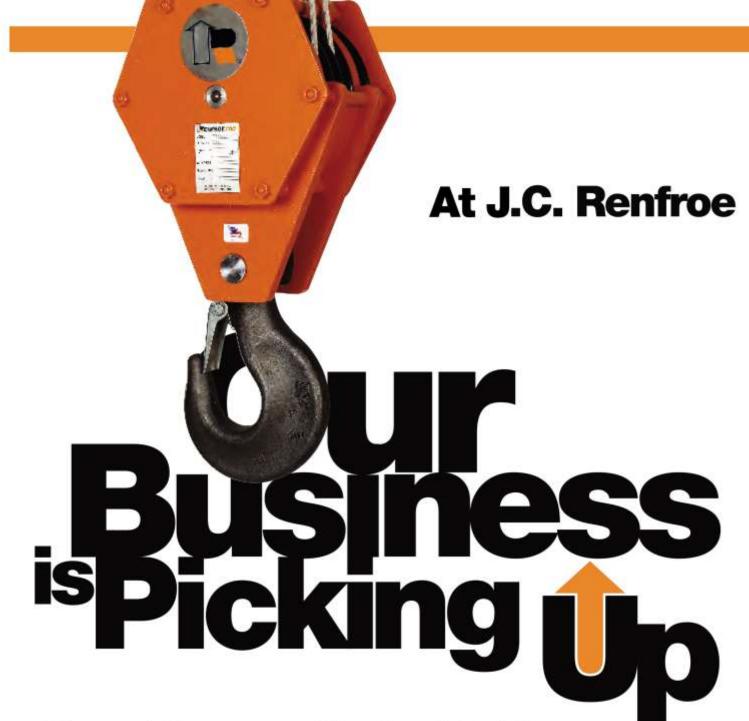
For working at low temperature, the grease must be of good quality for a range for less than -40 (C) / -40 (F) degrees to more than +100 (C) / 212 (F) degrees.

Instructions of service and control for cable grooves:

The cable grooves of each sheave must be covered by viscous grease before putting them in service. This condition of greasing must be controlled continuously during the working of the crane. This also implies that all the cables must be greased. In order to protect the cable groove from undue wear, the fleet angle of the cable in working conditions should never exceed 2°.

The movement of the cable must be adjusted in a way that in the start and the end of each operation, any cable sliding, which may cause undue wear of the cables and the cable grooves, should not happen. You must give a good initial tension to the cables in order to avoid the axial and the radial deformation in the cable groove.

The cable grooves must be inspected frequently for wear, (to be determined by user based of severity of service).



with mobile crane blocks & bridge crane blocks manufactured in Jacksonville, Florida.

Utilizing the same technology and quality production we have delivered with our clamp line for over 70 years, J.C. Renfroe is now producing a line of crane blocks in our Jacksonville facility which can give your business a lift.

- Bridge crane blocks available in 1 ton to 500 ton capacities
- Mobile crane blocks available in 1 ton to 1000 ton capacities
- Single and multiple sheave configurations
- Standard single point alloy swiveling hook with latch
- Through-the-shaft sheave bearing lubrication
- Double and quad hooks available

Call J.C. Renfroe at 1-800-874-8454 for the name of your nearest distributor.





Bridge Crane Blocks 3 Ton to 50 Ton Made in USA





RENFROE SINGLE SHEAVE BRIDGE CRANE BLOCKS

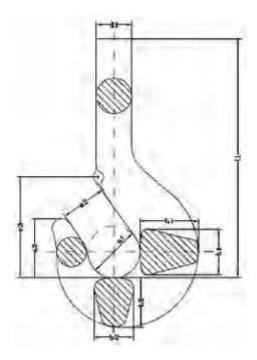
W.L.L. Tons	Wire Line Size	Sheave 0.D. (Inch)	Number Of Sheaves	Hook Throat Opening
3	5/16, 3/8, 7/16, 1/2	8, 10, 12	1	1.57"
5	3/8, 7/16, 1/2, 9/16, 5/8	10, 12, 14	1	1.77"
7.5	1/2, 9/16, 5/8, 3/4	12, 14, 16	1	1.97"
10	1/2, 9/16, 5/8, 3/4, 7/8	14, 16	1	2.2"
15	5/8, 3/4, 7/8, 1	14, 16, 18	1	2.48"

RENFROE TWO SHEAVE BRIDGE CRANE BLOCKS

W.L.L. Tons	Wire Line Size	Sheave 0.D. (Inch)	Number Of Sheaves	Hook Throat Opening	Center Of Groove To Center Of Groove Options
5	1/4, 5/16, 3/8, 7/16, 1/2	8, 10, 12	2	1.77"	4.5, 5.0, 5.5, 6.0, 6.5
7.5	3/8, 7/16, 1/2, 9/16, 5/8	10, 12, 14	2	1.97"	5.25, 5.75, 6.0, 6.25, 6.5, 7.0, 7.5, 8.0
10	1/2, 9/16, 5/8, 3/4	12, 14, 16	2	2.2"	6.0, 7.0, 7.5, 8.0, 8.5, 9.5, 10.0
15	1/2, 9/16, 5/8, 3/4	12, 14, 16	2	2.48"	7.5, 8.0, 8.5, 9.0, 10.0, 10.5, 11.0
20	1/2, 9/16, 5/8, 3/4, 7/8	14, 16, 18, 20	2	2.79"	7.5, 8.5, 10.0, 11.0
25	9/16, 5/8, 3/4, 7/8	14, 16, 18, 20	2	3.15"	8.0, 9.0, 10.5, 11.0
30	5/8, 3/4, 7/8, 1	16, 18, 20	2	3.54"	9.0, 10.5, 12.5



DIN Hook



DIMENSIONS (mm).

HOOK N°	A1	A2	B1	B2	D1	H1	H2	L1	Aprrox. WEIGHT (Kg.)
0.8	48	38	35	29	30	44	37	186	2.3
1.6	56	45	45	38	36	56	48	224	4.5
2.5	63	50	53	45	42	67	58	253	6.3
4	71	56	63	53	48	80	67	285	10 - 12.3
5	80	63	71	60	53	90	75	318	17 - 19.5
6	90	71	80	67	60	100	85	395	24.5 - 28.5
8	100	80	90	75	67	112	95	430	31.5 - 36
10	112	90	100	85	75	125	106	460	40 - 43
12	125	100	112	95	85	140	118	525	55 - 68
16	140	112	125	106	95	160	132	595	77 - 95
20	160	125	140	118	106	180	150	665	112
25	180	140	160	132	118	200	170	735	160
32	200	160	180	150	132	224	190	810	220
50	250	200	224	190	170	280	236	990	430
63	280	224	250	212	190	315	265	1.120	600
80	315	250	280	236	212	355	300	1.270	860
100	355	280	315	265	236	400	355	1.415	1.220
125	400	315	355	300	265	450	375	1.590	1.740
160	450	355	400	335	300	500	425	1.790	2.480
200	500	400	450	375	335	560	475	2.048	3.420
250	560	450	500	425	375	630	530	2.305	4.800

STRENGTH CLASS - MATERIALS : P-T-V - acc, to DIN 15400 SHANK LENGTH : I1 = DIN ; in case of I1 > DIN :contact please



Mobile Crane Blocks

Available up to 1000 Ton capacity 3 Ton to 50 Ton Made in USA





MOBILE CRANE BLOCK DATA

DIA. (inches)	Number of Sheaves	Hook Throat Opening (inches)	DIN Hook Number	Approx. Overall Length (inches)	Approx. Thickness (inches)
1OT E	1	2000000			
8	1	1.57	1	26	6
10	1	1.57	1	28	6
12	1	1.57	1	30	6
14	1	1.57	1	32	6
8	2	1.57	1	26	9
10	2	1.57	1	28	9
12	2	1.57	1	30	9
14	2	1,57	1	32	9
5 TOI	1				
10	1	1.77	1.6	31	6
12	1	1.77	1.6	33	6
14	1	1.77	1.6	35	6
16	1	1.77	1.6	37	6
10	2	1.77	1.6	31	9
12	2	1.77	1.6	33	9
14	2	1.77	1.6	35	9
16	2	1.77	1.6	37	9
10	3	1.77	1.6	31	12
12	3	1.77	1.6	33	12
14	3	1.77	1.6	35	12
16	3	1.77	1.6	37	12





DIA. (inches)	Number of Sheaves	Hook Throat Opening (inches)	DIN Hook Number	Approx. Overall Length (inches)	Approx. Thickness (inches)
7.5 T	ON				
12	1	1.97	2.5	33	6
14	1	1.97	2.5	35	6
16	1	1.97	2.5	37	6
18	1	1.97	2.5	39	6
12	2	1.97	2.5	33	9
14	2	1.97	2.5	35	9
16	2	1.97	2.5	37	9
18	2	1.97	2.5	39	9
12	3	1.97	2.5	33	12
14	3	1.97	2,5	35	12
16	3	1.97	2.5	37	12
18	3	1.97	2.5	39	12
10 TO	N				
12	1	2.2	4	33	6
14	1	2.2	4	35	6
16	1	2.2	4	37	6
18	1	2.2	4	39	6
12	2	2.2	4	33	9
14	2	2.2	4	35	9
16	2	2.2	4	37	9
18	2	2.2	4	39	9
12	3	2.2	4	33	12
14	3	2.2	4	35	12
16	3	2.2	4	37	12
18	3	2.2	4	39	12
15 TO	N				
14	1	2.48	5	35	6
16	- 1	2.48	5	37	6
18	1	2.48	5	39	6
14	2	2.48	5	35	9
16	2	2.48	5	37	9
18	2	2.48	5	39	9
14	3	2.48	5	35	12
16 18	3	2.48	5	37	12
14	4	2.48	5 5	39 35	15
16	4	2.48	5	37	15
18	4	2.48	5	39	15
20 TC		2.40		00	10
		0.00			
14	1	2.79	6	.37	8
16	1	2.79	6	39	8
18 20	1	2.79 2.79	6	43 45	8
14	2	2.79	6	37	11
16	2	2.79	6	40	11
18	2	2.79	6	43	11
20	2	2.79	6	45	11
14	3	2.79	6	37	14
16	3	2.79	6	40	14
18	3	2.79	6	43	14
20	3	2.79	6	45	14
14	4	2.79	6	37	17
16	4	2.79	6	40	17
18	4	2.79	6	43	17
20	4	2.79	6	45	17

Mobile Crane Block Data



DIA.	Number of Sheaves	Hook Throat Opening	DIN Hook Number	Approx. Overall Length	Approx. Thickness
(inches)	Sheaves	(inches)	Number	(inches)	(inches)
25 TC	N				
14	1	3.15	8	37	8
16	1	3.15	8	39	8
18	1	3.15	8	43	8
20	1	3.15	8	46	8
14	2	3.15	8	37	11
16	2	3.15	8	39	11
18	2	3.15	8	43	11
20	2	3.15	8	46	11
14	3	3.15	8	37	14
16	3	3.15	8	39	14
18	3	3.15	8	43	14
20	3	3.15	8	46	14
14	4	3.15	8	37	17
16	4	3.15	8	39	17
18	4	3.15	8	43	17
20	4	3.15	8	46	17
30 TC	N				
16	1	3.54	10	43	8
18	1	3.54	10	45	8
20	1	3.54	10	47	8
24	1	3.54	10	49	8
16	2	3.54	10	43	11
18	2	3.54	10	45	11
20	2	3.54	10	47	11
24	2	3.54	10	49	11
16	3	3.54	10	43	14
18	3	3.54	10	45	14
20	3	3.54	10	47	14
24 16	3	3.54 3.54	10	49	14 17
18	4	3.54	10	43 45	17
20	4	3.54	10	47	17
24	4	3.54	10	49	17
SAME.	- 22	0101	10	79	
35 TC		2.0	- 40	45	
18 20	1	3.9	12 12	45 47	8
24	1	3.9	12	49	8
16	2	3.9	12	43	11
18	2	3.9	12	45	11
20	2	3.9	12	47	11
24	2	3.9	12	49	11
16	3	3.9	12	43	14
18	3	3.9	12	45	14
20	3	3.9	12	47	14
24	3	3.9	12	49	14
16	4	3.9	12	43	17
18	4	3.9	12	45	17
20	4	3.9	12	47	17
24	4	3.9	12	49	17
16	5	3.9	12	43	20
18	5	3.9	12	45	20
20	5	3.9	12	47	20
24	5	3.9	12	49	20



Mobile Crane Block Data

DIA. (inches)	Number of Sheaves	Hook Throat Opening (inches)	DIN Hook Number	Approx. Overall Length (inches)	Thickness (inches)
40 TC	N				
20	1	3.9	12	53	8
24	1	3.9	12	56	8
18	2	3.9	12	48	11
20	2	3.9	12	50	11
24	2	3.9	12	55	11
16	3	3.9	12	47	14
18	3	3.9	12	48	14
20	3	3.9	12	50	14
24	3	3.9	12	55	14
16	4	3.9	12	47	17
18	4	3.9	12	48	17
20	4	3.9	12	50	17
24	4	3.9	12	55	17
16	5	3.9	12	47	20
18	5	3.9	12	48	20
20	5	3.9	12	50	20
24	5	3.9	12	55	20
45 TC	N				
24	1	4.4	16	58	9
20	2	4,4	16	50	12
24	2	4,4	16	54	12
18	3	4.4	16	48	15
20	3	4.4	16	50	15
24	3	4.4	16	54	15
16	4	4.4	16	47	18
18	4	4,4	16	49	18
20	4	4,4	16	51	18
24	4	4,4	16	55	18
16	5	4.4	16	47	21
18	5	4.4	16	49	21
20	5	4.4	16	51	21
24	5	4,4	16	55	21
50 TC		2000		2000	
24	1	4.4	16	60	9
24	2	4,4	16	60	12
18	3	4,4	16	53	15
20	3	4,4	16	56	15
24	3	4.4	16	59	15
16	4	4.4	16	50	18
18	4	4.4	16	52	18
20	4	4.4	16	54	18
24	4	4,4	16	60	18
16	5	4,4	16	50	21
18	5	4.4	16	52	21
20	5	4.4	16	54	21

Larger Capacities Available to 1000 Ton.

Refer to Hook Dimension Chart.

Available in Various Weights / Block Thickness Increases with Weight.

Block Maintenance And Inspection



Renfroe Blocks

The following are the minimum suggested maintenance practices we recommend based upon normal use. Product application, environment and use may dictate a more stringent inspection and maintenance program.

Inspect for:

- Wear on pins, axles, rope grooves, side plates, bearings, bushings, and fittings. Excessive wear may be cause to replace parts or remove block from service.
- 2. Misalignment or wobble in sheaves.
- Deformation in side plates, pins, axle fitting attachment points. Deformation may be cause to remove block from service.
- Deformation or corrosion of hook and nut threads.
- Weld corrosion or weld cracking on welded side plates.
- Proper fit, deformation and operation of the hook latch.
- Security of nuts, bolts, and other locking methods, especially after reassembly following a repair or inspection.
- 8. Deformation and wear of hook.

Lubrication Schedule:

Lubricate at regular intervals to prevent damage to the bearing. Lubrication intervals are difficult to determine. If plant practice or experience with other applications is not available, consult your lubricant supplier.



Block Inquiry & Order Form



Be sure to make extra copies for future orders.

Customer Name			Date	
Address	City		State/Zip	Country
Phone	Fax		E-mail	
Customer Contact Name				
P.O. Number			Inquiry Number	
Sheeve Size	B. A.B. For Bri		Blocks Specificat	tions Only
	AN AN L	Block Specif	fications	Can.
;⊕}	Sheave D		Number of	Sheaves
		g Type ze Bushing	Rolle	er Bearing
	Ball E	8 (6760 475), U		
		Specification Load Limit	Nire Rope Diame	eter (Size)
	CMMA R			
ower Fitting Type				
Single Point Hook	Swivel Hook	□ O	ther	
Duplex Hook	Latch			
Application Informat	ion			
Overhaul Weight Requiremen	nts Lead	Line Speed	Envir	onment
	ts (For Crane Block	s)		
Special Requiremen	to (i oi oi allo blook	575		
Special Requirement Special Testing	to (i oi oidile block	- 55		
3	to (r or orano zioon			

Contact:

J.C. RENFROE & SONS Jacksonville, Florida

Telephone: 904/356-4181 Toll Free: 800-874-8454 Fax: 904/354-7865 **COPY & FAX**

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www.jcrenfroe.com





WARNING:
BEFORE PUTTING
TOOL IN SERVICE,
TAKE THE TOOL OR
THIS BOOKLET TO
YOUR IMMEDIATE
SUPERVISOR.

Operator's Manual

This Operator's Manual covers the Application, Operation and Maintenance of this RENFROE product. Operator's Manuals for other current RENFROE products are available upon request. Direct requests to J.C. Renfroe & Sons, Jacksonville, Florida 32206.

Block Operator's Manual



THIS PUBLICATION SUPERSEDES ALL PREVIOUSLY PUBLISHED AND/OR DISTRIBUTED INFORMATION BY MANUFACTURER AND/OR ITS DISTRIBUTORS WITH RESPECT TO APPLICABLE RENFROE PRODUCTS AND SUBJECT MATTER DESCRIBED OR CONTAINED HEREIN.

WARNING:

Prior to selection, operation and/or maintenance of RENFROE products, read and understand the information provided in this manual. The understanding and use of the Definitions are important in determining the limitations and proper application of RENFROE products. Failure to review and utilize recommended

applications, operation and maintenance instructions may result in serious injury, or death to operator and others.

NOTICE OF EXCLUSION OF WARRANTY

RENFROE HAS HEREIN SET FORTH IN CONSPICUOUS LANGUAGE AN EXCLUSION OF ANY WARRANTY EITHER EXPRESSED OR IMPLIED, WHICH IS NOT SPECIFICALLY AND PARTICULARLY CONTAINED HEREIN. PLEASE REFER TO THAT STATEMENT FOR REPRESENTATIONS AND WARRANTIES OF PRODUCTS MANUFACTURED BY J.C. RENFROE & SONS.

CRANE BLOCK AND SHEAVE ASSEMBLY WARNING, USE & MAINTENANCE INFORMATION

WARNING

Failure to use this product properly could result in injury or death. Read, understand and follow these instructions to insure the proper use, selection and maintenance of this product

A crane 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 and or loads.

Use only genuine Renfroe parts as replacement.

Read, understand and follow these instructions to select, use and maintain tackle block systems.

When ordering a Renfroe product, the ultimate responsibility for selecting the correct product lies with the end user since only the end user has the knowledge of the application and the environment in which the product will be used. Read these instructions carefully and completely.

NEVER side load a Renfroe product.

The hook latch must NEVER support the load. Always make sure the hook supports the load.

Never use the yielding point of the hook as a "gauge" of it's capacity.

NEVER weld on any Renfroe product.

NEVER modify any Renfroe product.

Do not immerse standard Renfroe products in water.

In the event the stenciling is worn and not legible or the tag containing the model, capacity or other pertinent information is missing, do no not use block until it has been properly labeled. Renfroe will replace the tag at no charge.





MODEL: Bridge Crane Block

Failure to use this product properly could result in injury or death. Read, understand and follow these instructions to insure the proper use, selection and maintenance of this product.

Application

Renfroe crane block systems are used in a wide range of applications, each of which has specifications and technical requirements that are unique to that application. When ordering a Renfroe product, the ultimate responsibility for selecting the correct product lies with the end user since only the end user has the knowledge of the application and the environment in which the product will be used. Read these instructions carefully and completely. If you do not understand all words, diagrams, and definitions in this literature contact Renfroe for assistance. Ratings shown in Renfroe literature are based on the products being in a new and unused condition.

Features, Advantages and Benefits of a Renfroe Crane Block

FEATURES	ADVANTAGES	BENEFITS	
Forged Alloy Hook	Hook will not break but will straighten-out before failure	Visual sign of overload	
Safety Latch	Prevents disconnection from anchor point	Prevents load hook from disconnecting when not under load	
Safety Latch	Visual sign of overload	Alerts operator to distortion of the hook	
Shaft lubrication fitting	Allows lubrication of sheave bearings without disassembly of crane block	Reduced friction promoting increased sheave bearing life	
Selective Sheave and shaft materials	Reliable material quality	Correct material for environmental conditions	
Sheave fleet angle	Wide angle of rope lead in	Promotes increased life of rope	
Proof tested	Design integrity	Assures operation at WLL	



TERMINOLOGY

STATIC LOAD - The load resulting from a constantly applied force or load.

WORKING LOAD LIMIT – The maximum force or mass that the product is authorized to support when used within the guidelines of the severity of service rating. The term applies only to static loads held firmly in direct tension. Working Load Limit is used interchangeably with the following terms:

- WLL
- Safe Working Load
- SWL
- Resultant Safe Working Load

WLL of the Crane Block System – The WLL of a Renfroe Block applies only to the block. The WLL of a crane block system can be limited by other parts of the system such as the WLL of the wire rope.

PROOF LOAD – The average load to which a product may be subjected before visible deformation occurs.

PROOF TEST – A test applied to a product solely to determine the manufacturing integrity of the product.

SHOCK LOAD – A significantly increased load factor caused by the sudden shift, jerk or impacting of the load.

ULTIMATE LOAD – The average load or force at which the product fails, or no longer supports the load.

DESIGN FACTOR – A theoretical reserve capability; usually computed by dividing the ultimate load by the working load limit.

SHORT TON – The avoirdupois weight on which Renfroe product capacities are based. Commonly used throughout the United States and Canada, the term implies a weight of 2,000 pounds and differs from the "long ton", which amounts to 2,240 pounds.

METRIC TON A unit of mass equal to 2,205 pounds.

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. (See Illustration A next page) For optimum efficiency, the angle here should not exceed 1 1/2 degrees for a smooth drum, or 2 degrees 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 grooves. Too small a fleet angle should also be avoided since it will cause the rope to pile up against the flange head.

BLOCK – A term applied to a wire rope sheave enclosed in side plates and fitted with some attachment such as a hook or shackle.

SHEAVE - A grooved pulley for wire rope.

GROOVES – Depressions – helical or parallel – in the surface of a sheave or drum that are shaped to position and support the rope.

TREAD DIAMETER – The measurement from the deepest point of the sheave groove on one side of the sheave to the deepest point of the sheave groove on the other side (See Illustration B next page)

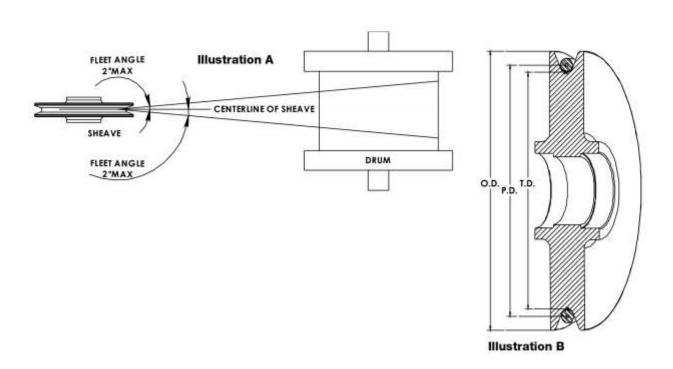
PITCH DIAMETER – A true measurement of the bend of the rope around the sheave

WIRE ROPE – A plurality of wire strands helically laid about an axis

DRUM – A cylindrical barrel, either of uniform or tapering diameter, on which rope is wound either for operation or storage; its surface may be smooth or grooved.

HOOK SWIVEL – The platform from which the hook is housed and suspended from the shaft.





Sheave Diameter and its Effect on Wire Rope Strength.

When wire rope is bent, it's strength is reduced. Refer to the chart to determine the effect of bend radius on wire rope strength when selecting a sheave diameter.

Ratio A: Divide Sheave Dia. by Wire Rope

Dia. to find Ratio.

Compare this ratio to the table to determine the strength efficiency

of the wire rope.

Example: 10"÷.50" = 20 → 91% strength

efficiency compared to catalog

strength.

Ratio A	Strength Efficiency Compared To Catalog Strength In Percentage
40	95
30	93
20	91
15	89
10	86
8	83
6	79
4	75
2	65
1	50



MAINTENANCE AND INSPECTION

Full and total responsibility for inspection, maintenance and the continued use of the product, lies solely with the owner/user. Product application, environment and manner of use may imply a more thorough inspection and maintenance program is needed. It is the responsibility of the owner/user to assure that all government and industry guidelines are met.

Inspect for:

- Wear on pins, axles, rope grooves, side plates, bearings, bushings and fittings.
 Excessive wear is cause to replace parts or remove block from service.
- Deformation in side plates, pins, axle fitting attachment points. Deformation is cause to remove block from service.
- Deformation or corrosion of hook and nut threads.

- · Weld corrosion or weld cracking.
- Hook latch for proper fit, deformation and operation.
- Security of nuts, bolts and other locking methods, especially after reassembly following a repair or inspection.
- · Check for deformation of hook and for wear.

Any hook or fitting with a crack, gouge or distortion should be removed from service immediately.

LUBRICATION SCHEDULE:

Lubricate at regular intervals to prevent damage to the bearing.

Lubrication intervals are difficult to determine. If plant practice or experience with other applications is not available, consult your lubricant supplier.

OPERATION

INSTRUCTIONS FOR INSTALLATION, WORKING AND MAINTENANCE

General:

The present instructions are applicable to wire pulleys and blocks supplied as complete units, either with bearings or bushings.

WORKING LOAD LIMIT – The maximum force or mass that the product is authorized to support when used within the guidelines of the severity of service rating. The term applies only to static loads held firmly in direct tension.

The working Load Limits of this Renfroe product should never be exceeded regardless of the strength of the wire rope being used.

The Working Load Limits apply only to new products shipped from the factory.

Age, type of service and environmental conditions can subsequently affect these limits, and periodic inspections should be performed to assure the product will perform in accord with existing regulations.

Caution:

Activities such as, but not limited to, pile driving can have adverse effects upon the life of the product.

Inspect your equipment regularly for excessive wear. When using wedge sockets, note that two precautions should be taken.

- Make sure that a sudden jolt or impact does not dislodge a wedge. When installing wire rope, always pre-load the wedge with wire rope in place. Check frequently to re-tighten or reposition as necessary.
- Make allowance for the crimping effect common with all types of wedge sockets. Experience shows that it will reduce the Safe Working Limit of a line by 20 percent.



INSTRUCTIONS FOR SERVICE AND CONTROL OF SHEAVE GROOVES:

The sheave grooves of each sheave must be covered by grease before putting them into service. This condition of greasing must be controlled continuously during the working of the crane. This also implies that all the wire ropes must be greased. In order to protect the sheave groove from undue wear, be sure not to allow the fleet angle to exceed 2 degrees.

The working of the wire rope must be fitted in a way that in the start and the end of each operation, any rope sliding which may cause undue wear of the rope and the sheaves does not happen. You must give a good initial tension to the ropes in order to avoid the axial and the radial deformation in the sheave groove.

In case you find excessive wear, the sheave must be replaced by a new one.

In case of sheaves assembled horizontally, there are holes placed in the cover assemblies. These holes must be cleaned every 3 months in order to avoid water collection in the concavity of these sheaves.

MODEL	
SERIAL No.	
WORKING LOAD LIMIT	LBS.
CABLE SIZE	
SHEAVE DIA.	
CLASS	

EXCLUSION OF WARRANTY

THERE EXISTS NO
WARRANTIES NEITHER
EXPRESSED NOR IMPLIED
WHICH EXTEND BEYOND
THE DESCRIPTIONS OR
STATEMENTS CONTAINED
IN THE FACE OR ANY PART
HEREOF.

The best safety device on the block

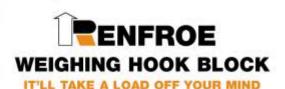
Now you can watch your weight with the new weighing hook block that displays to the nearest pound what you're lifting, carrying or weighing. Reassuring? Certainly. Renfroe? Obviously. And you can be assured our weighing blocks feature the same quality, dependability and proof testing as all of our Renfroe products.

Accuracy is within 0.1% of the actual load weight

- , Failure of a load cell doesn't make the load fall
- . Large digital display

Possibility of transmission of weight via radio to a remote display, a computer or to a printer

- . Available for any capacity from 1 ton to 300 tons
- . No height loss





LOAD WEIGHING & MOTORIZED ROTATION

CRANE BLOCKS



1 SHEAVE STANDARD



2 SHEAVE STANDARD





4 SHEAVE SPECIAL



4 SHEAVE **55 TON**



4 SHEAVE MOTORIZED



2 SHEAVE SPECIAL

No Display / Shielded For Foundry Application

Weight Transmitted via Radio Signal to Remote Display



6 SHEAVE MOTORIZED ROTATION



Fast, accurate weight readings are essential requirements in order for buyers to be assured they are receiving what they ordered. Shippers can verify they are shipping the correct amount of product to their customers to avoid over or under weight shipments. Also you can control material flow within your facility.

Available In Capacities 1 Ton to 300 Ton

The Weighing Block has the same configuration as a conventional Bridge Crane Block, but it incorporates a highly reliable load cell with a precision of +/- 0.1%. It has a digital display 1" (26mm) tall for easy reading at a distance. It can be supplied with a larger display 1 3/4" or 2 3/8" (45mm/ 60 mm) or a larger 5" (130mm) digital display mounted on the crane within a 300 ft. radius.

Advantages:

- Direct reading of the load weight, avoiding repeated trips to centrally located scales.
- · No head room loss. Compact unit.
- · Totally independent of crane system.
- Precise load weighing, +/- 0.1% accurate.
- Electronic components are protected.
- A failure of the load cell does not release the load, and does not affect the normal operation of the block.



MTV-6000

4 digits U.U display 13 mm height with LED illumination, Suitable to work indoors and a tricory. Ideal to be incorparated to crane cabin, partel, decid econ.



TELEBOX-25

a digits LLU display 25 mm height or 1/5 digits LED display 25 mm. Suitable to be installed into the crane cabin.



TELEBOX-50/E

5 digits LEO clearly 50 mm height, Suitable to work outdoors and to be installed in the trailey of the prace.



P-130 IP-130/E

s flights. In risplay (30 mm height, Suitable to work indoors and our doors (IP-130/E risude) and to be crane.

- Automatic weighing system.
- · Robust design, built for safety.

Standard:

- Interior use, normal environment.
- Digital screen 1, 1 3/4 or 2 3/8 inch (26, 45 or 60mm) depending on block size.
- Remote control for functions (ON/OFF, TARE).
- TARE 100% of nominal load.
- Totally independent, powered by batteries.
- Separate battery charger (supplied only with units that have interchangeable batteries).
- · 24 hour battery life for display.
- Indicator for low battery charge.

Optional:

- Interior use, severe environment, foundry or corrosive atmosphere.
- Heavy/continuous duty rating.
- Remote readout, wired or radio.
- Radio connection to computer or printer.
- Task memory.
- Continuous 110, 220 or 380V AC power supplied by cable reel.
- Maximum tension indicator.

Replace that old Bridge Crane Block with a new Load Weighing Block. Work Safer, Know Your Exact Load.



TELECONTROL-2000

I digita LCD display or 1/5 digits LED display 25 mm height. Sitzble to be installed into the crane cabin or it's deck. Weight reception by radio. The viewer is intentical in Telehox-25 but with printer.



TELEBOX-50

S digits LEO display 60 mm height. Suitable to work indoors and to be installed in the project of the crone.



TELECONTROL-4000

Multifunction and dasic models, a digital LCD display. Obtained printer. Suitable to work in trollegs, cire upilities and general purpose, applications.

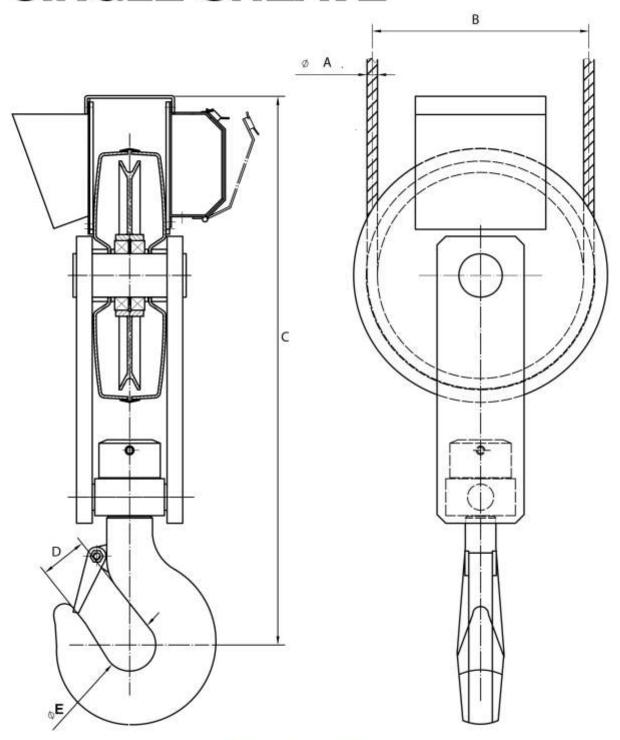


MK-R

Weight Tare viewer, 4 sigits ED display.



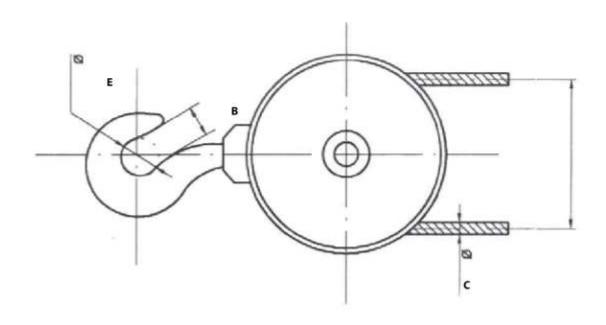
RENFROE LOAD WEIGHING BLOCK SINGLE SHEAVE

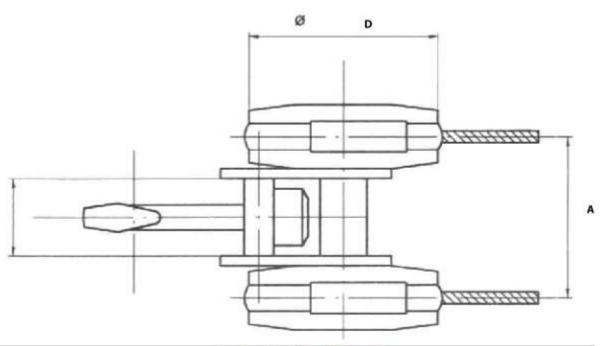


Α	В	С	D	E	Capacity		
Wire Rope Diameter	Sheave Diameter	Overall Length	Hook Throat	Hook Diameter	Tons		



RENFROE LOAD WEIGHING BLOCK 2 SHEAVE

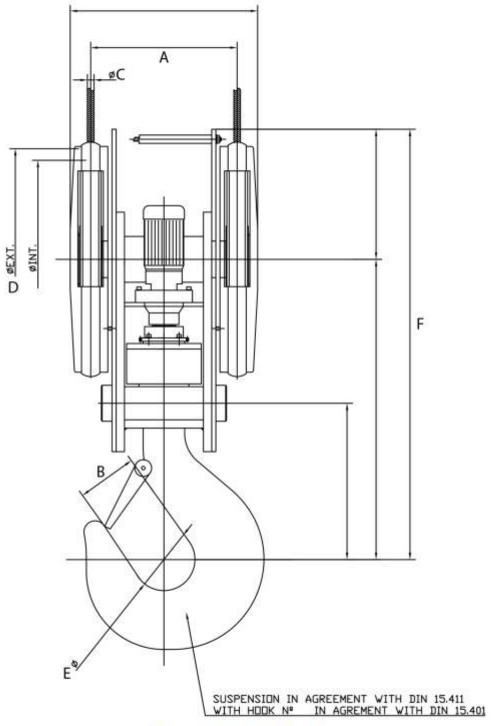




Dimensions Needed to Quote									
A B C D E F									
Center of Sheave to Center of Sheave	Hook Throat	Wire Rope Diameter	Sheave Diameter	Hook Diameter	Overall Length				



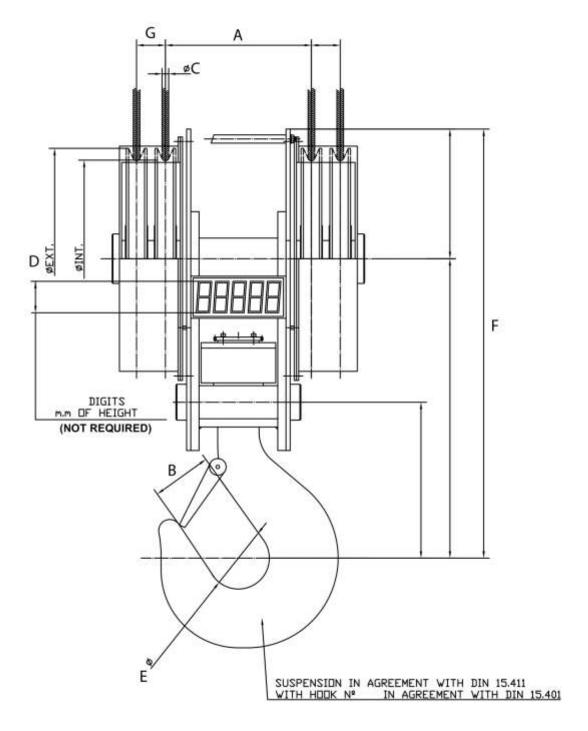
RENFROE LOAD WEIGHING BLOCK MOTORIZED ROTATION



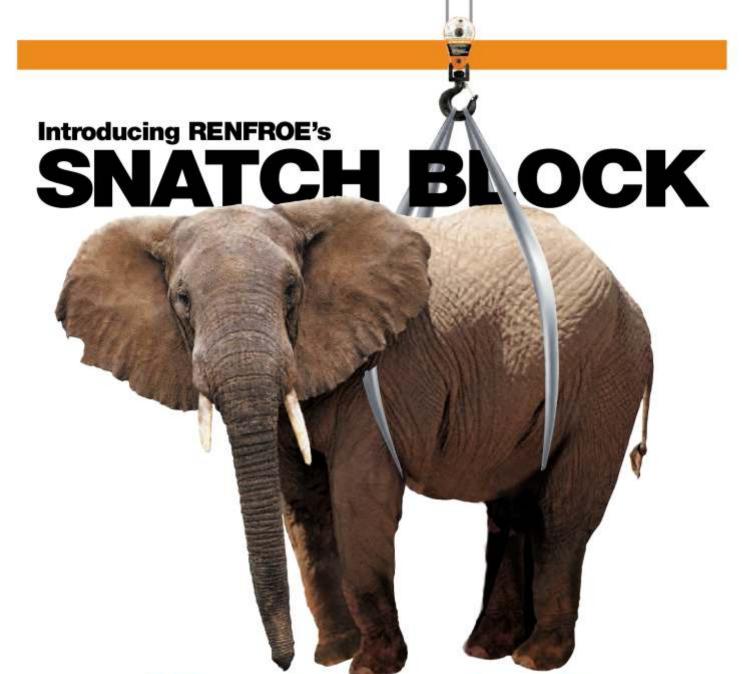
	Dime	ensions Needed to	Quote			
A B C D E						
Center of Sheave to Center of Sheave	Hook Throat	Wire Rope Diameter	Sheave Diameter	Hook Diameter	Overall Length	



RENFROE LOAD WEIGHING BLOCK 4 SHEAVE



Dimensions Needed to Quote								
A	В	С	D	E	F	G		
Center of Sheave to Center of Sheave	Hook Throat	Wire Rope Diameter	Sheave Diameter	Hook Diameter	Overall Length	Outside Sheave Spacing		



We've got a lot hanging on it.

Just as with any Renfroe product, we have our reputation, experience and our proven dependability hanging from every lifting and rigging product we manufacture. And now we're proud to offer a new line of snatch blocks, from hook to shackle to tailboard, featuring the same quality and proof testing, as all of our Renfroe products. Reach for our new snatch block with the reassurance that it's Renfroe.

- Forged alloy heat-treated hooks and shackles, which will not break but straighten out before failure
- Openings that allow rope insertion while block is suspended
- · Swivel pin stop will stay in swivel while reeving
- Safety latch prevents disconnection from anchor point



IT'LL TAKE A LOAD OFF YOUR MIND





SNATCH BLOCKS

- · Forged alloy heat treated hooks
- · Forged alloy heat treated shackles
- · Can be furnished with bronze bushings or roller bearings
- · Furnished with hook latch
- Pressure lube fitting (7 1/2 through 15 Ton)
- Opening feature permits insertion of rope while block is suspended
- Hook and shackle blocks have bolt retaining system to assure no lost bolts

For further information please contact your nearest Renfroe distributor or J. C. Renfroe & Sons.

FEATURES	ADVANTAGES	BENEFITS		
Moveable Side	Allows rope insertion while hanging	Don't have to disconnect and re-connect wire rope		
Forged Alloy Hook	Hook will not break but will straighten out before failure	Visual sign of overload		
Swivel pin stop	Pivot pin will stay in swivel while reeving	No lost pins		
Safety Latch	Prevents disconnection from anchor point	Prevents load hook from disconnecting when not under load		
Safety Latch	Visual sign of overload	Alerts operator to bad hook		
Sheave Pin Diameter	Low surface velocity between sheave and sheave pin	Promotes longer sleeve bearing life		
Sheave pin lubrication Allows lubrication of sleeve bearing without disassembly of snatch block		Reduced friction between sleeve bearing and sheave pin promoting increased sleeve bearing life		
Selective Sheave and swivel pin materials	Reliable material quality	Predictable shear properties		
Sheave fleet angle	Wide angle of rope lead in	Promotes increased life of rope		
Selective side plate material	Harder material surface	Allows Snatch Block use in adverse conditions		
Proof tested	Product integrity	Assures safe operation at WLL		



SNATCH BLOCKS



Snatch Blocks With HOOKS

Working Load Limit Tons	Load Limit Sheave		Weight Each (lbs)	Option 1 with Bronze Bushing	Option 2 with Roller Bearing	
2.	3*	5/16"-3/8*	4.5	SB02.0S03BH	Tà	
5	4 1/2"	1/2"	11.5	SB05,S4.5BH	8	
7/1/2	6*	3/4"	27	SB07,5S06BH	SB07.5S06RH	
7 1/2	8"	3/41	33	SB07.5S08BH	SB07.5S08RH	
7 1/2	101	3/4*	42	SB07.5S10BH	SB07.5S10RH	
7 1/2	12"	3/4*	49	SB07.5S12BH	SB07.5S12RH	
7 1/2	14"	3/4*	54	SB07.5S14BH	SB07.5S14RH	
12	10"	7/8"	67	SB012.S10BH	SB012.S10RH	
12	12*	7/8*	76	SB012.S12BH	SB012.S12RH	
12	14"	7/8*	92	SB012.S14BH	SB012.S14RH	
12	16"	7/8*	120	SB012.S16BH	SB012.S16RH	
15	18"	1*	152	SB015.S18BH	SB015.S18RH	
15	20"	1*	185	SB015.S20BH	SB015.S20RH	



Snatch Blocks With SHACKLES

Load Limit Tons			Weight Each (lbs)	Option 1 with Bronze Bushing	Option 2 with Roller Bearing
2	3*	5/16"-3/8"	4.5	SB02.0S03BS	(9)
-5	4 1/2"	1/2"	11.5	SB05.S4.5BS	(4)
7 1/2	6*	3/4*	27	SB07.5S06BS	SB07.5S06RS
71/2	8"	3/4*	33	SB07.5S08BS	SB07.5S08RS
7 1/2	10"	3/4"	42	SB07.5S10BS	SB07.5S10RS
7 1/2	12"	3/4"	49	SB07.5S12BS	SB07.5S12RS
7 1/2	14"	3/4*	54	SB07.5S14BS	SB07.5S14RS
12	10"	7/8*	67	SB012.S10BS	SB012.S10RS
12	12"	7/8*	76	SB012.S12BS	SB012.S12RS
12	14"	7/8*	92	SB012.S14BS	SB012.S14RS
12	16"	7/8*	120	SB012.S16BS	SB012.S16RS
15	18"	1*	152	SB015.S18BS	SB015.S18RS
15	20"	1*	185	SB015.S20BS	SB015.S20RS

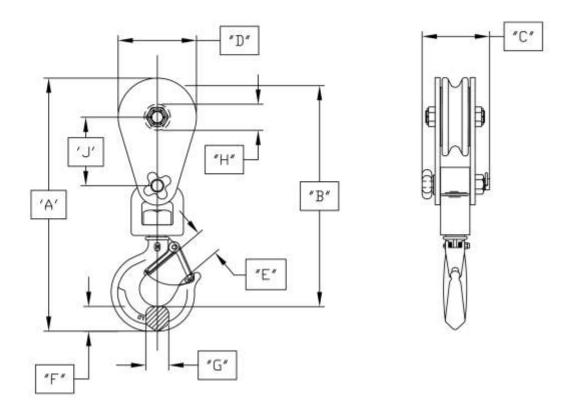


Snatch Blocks TAILBOARD

Working Load Limit Tons	oad Limit Sheave			Option 1 with Bronze Bushing	Option 2 with Roller Bearing	
2	3"	5/16"- 3/8"	3	SB02.0S038T	3.5	
5	4 1/2"	1/2"	6	SB05.S4.5BT		
7 1/2	6"	3/4"	15	SB07,5S06BT	SB07.5S06RT	
7 1/2	8*	3/4*	21	SB07.5S08BT	SB07.5S08RT	
7 1/2	10"	3/4*	29	SB07.5S10BT	SB07.5S10RT	
7 1/2	12*	3/4"	36	SB07.5S12BT	SB07.5S12RT	



HOOK ASSEMBLY DIMENSIONS

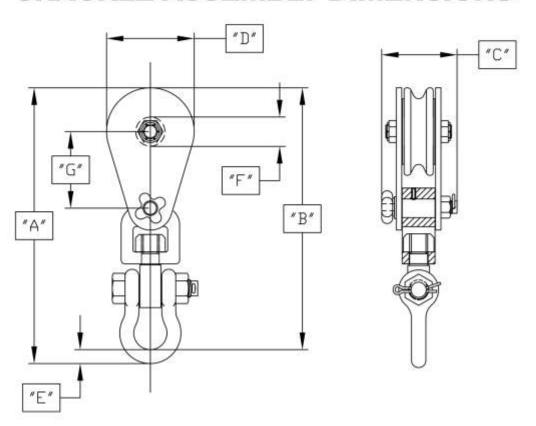


SNATCH BLOCK ASSEMBLY DIMENSIONS

MODEL	A	В	C	D	E	F	G	Н	J
2 Ton	9 3/4"	8 3/4"	2 9/16"	3"	1 1/32"	1 1/16"	7/8"	1"Ø	2 5/8"
5 Ton	13 3/4"	12 7/16"	3 9/16"	4 1/2"	1 13/32"	1 7/16"	1 5/16"	2"Ø	3 29/32"
7 1/2 Ton	18 1/4"	16"	4 7/16"	6"	2 7/16"	2 1/4"	1 7/8"	2"Ø	5 1/4"
7 1/2 Ton	20 1/4"	18"	4 7/16"	8"	2 7/16"	2 1/4"	1 7/8"	2"Ø	6 1/4"
7 1/2 Ton	22 1/4"	20"	4 7/16"	10"	2 7/16"	2 1/4"	1 7/8"	2"Ø	7 1/4"
7 1/2 Ton	24 1/4"	22"	4 7/16"	12"	2 7/16"	2 1/4"	1 7/8"	2"Ø	8 1/4"
7 1/2 Ton	26 1/4"	24"	4 7/16"	14"	2 7/16"	2 1/4"	1 7/8"	2"Ø	9 1/4"
12 Ton	23 1/8"	23 1/8"	5 7/16"	10"	2 9/32"	2 1/16"	1 7/8"	2 3/4"Ø	8 1/8"
12 Ton	27 1/8"	25 1/8"	5 7/16"	12"	2 9/32"	2 1/16"	1 7/8"	2 3/4"Ø	9 1/8"
12 Ton	29 1/8"	27 1/8"	5 7/16"	14"	2 9/32"	2 1/16"	1 7/8"	2 3/4°Ø	10 1/8"
12 Ton	31 1/8"	29 1/8"	5 7/16"	16"	2 9/32"	2 1/16"	1 7/8"	2 3/4"Ø	11 1/8"
15 Ton	34 1/8"	32"	6 3/16"	18"	2 1/2"	2 1/4"	2 1/4"	3 3/8"Ø	12"
15 Ton	36 1/8"	34"	6 3/16"	20"	2 1/2"	2 1/4"	2 1/4"	3 3/8"Ø	13"



SHACKLE ASSEMBLY DIMENSIONS

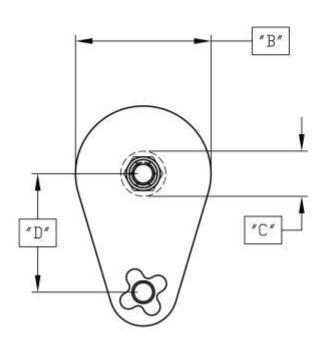


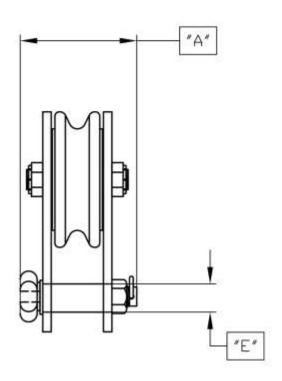
SNATCH BLOCK ASSEMBLY DIMENSIONS

MODEL	A	В	C	D	E	F	G
2 Ton	9 3/4"	8 3/4"	2 9/16"	3"	1/2"	1"Ø	2 5/8"
5 Ton	13 3/4"	12 7/16"	3 9/16"	4 1/2"	7/8"	2"Ø	3 29/32'
7 1/2 Ton	18 1/4"	16"	4 7/16"	6"	1"	2"Ø	5 1/4"
7 1/2 Ton	20 1/4"	18"	4 7/16"	8"	1"	2"Ø	6 1/4"
7 1/2 Ton	22 1/4"	20"	4 7/16"	10"	1"	2"0	7 1/4"
7 1/2 Ton	24 1/4"	22"	4 7/16"	12"	1"	2"0	8 1/4"
7 1/2 Ton	26 1/4"	24"	4 7/16"	14"	1"	2"0	9 1/4"
12 Ton	23 1/8"	23 1/8"	5 7/16"	10"	1 1/2"	2 3/4"0	8 1/8"
12 Ton	27 1/8"	25 1/8"	5 7/16"	12"	1 1/2"	2 3/4"Ø	9 1/8"
12 Ton	29 1/8"	27 1/8"	5 7/16"	14"	1 1/2"	2 3/4"0	10 1/8"
12 Ton	31 1/8"	29 1/8"	5 7/16"	16"	1 1/2"	2 3/4"Ø	11 1/8"
15 Ton	34 1/8"	32"	6 3/16"	18"	1 1/2"	3 3/8ӯ	12"
15 Ton	36 1/8"	34"	6 3/16"	20"	1 1/2"	3 3/8"Ø	13"



TAILBOARD ASSEMBLY DIMENSIONS





SNATCH BLOCK ASSEMBLY DIMENSIONS

MODEL	A	В	C	D	E
2 Ton	2 9/16"	3"	1"Ø	2 5/8"	0.625"
5 Ton	3 9/16"	4 1/2"	2"Ø	3 29/32"	0.874"
7 1/2 Ton	4 7/16"	6"	2"Ø	5 1/4"	1.246"
7 1/2 Ton	4 7/16"	8"	2"Ø	6 1/4"	1.246"
7 1/2 Ton	4 7/16"	10"	2"Ø	7 1/4"	1.246"
7 1/2 Ton	4 7/16"	12"	2"Ø	8 1/4"	1.246"
7 1/2 Ton	4 7/16"	14"	2"Ø	9 1/4"	1.246"
12 Ton	5 7/16"	10"	2 3/4"0	8 1/8"	1.375"
12 Ton	5 7/16"	12"	2 3/4"Ø	9 1/8"	1.375"
12 Ton	5 7/16"	14"	2 3/4"Ø	10 1/8"	1.375"
12 Ton	5 7/16"	16"	2 3/4"Ø	11 1/8"	1.375"
15 Ton	6 3/16"	18"	3 3/8"Ø	12"	1.494"
15 Ton	6 3/16"	20"	3 3/8"Ø	13"	1.494"



TACKLE BLOCK USE & MAINTENANCE INFORMATION

WARNING

Failure to use this product properly could result in injury or death.

Read, understand and follow these instructions to insure the proper use, selection and maintenance of this product.

IMPORTANT

Renfroe tackle block systems are used in a wide range of applications each of which has specifications and technical requirements that are unique to that application.

NOT FOR LIFTING PERSONNEL!!!

When ordering a Renfroe product the ultimate responsibility for selecting the correct product lies with the end user since only he has the knowledge of the application and its environment. Read these instructions carefully and completely.

If you do not understand all words and definitions in this literature, call Renfroe for assistance.

GENERAL WARNINGS

Ratings shown in Renfroe literature are based on the products being in "as new" condition.

Working Load Limit (WLL) ratings indicate the maximum load a product can carry under given operating conditions. Shock loading and other conditions must be taken into account when selecting products for use in tackle block systems.

Regular inspections must be conducted to determine whether use can be continued at the Working Load Limit (WLL) stated in the literature, or withdrawn from service.

NEVER side load a Renfroe product.

The hook latch must **NEVER** support the load. Always make sure the hook supports the load.

NEVER weld on any Renfroe product. **NEVER** modify any Renfroe product.

TERMINOLOGY

Static Load - The load resulting from a constantly applied force or weight.

Working Load Limit - The maximum load that

the product is authorized to support in general service. Working Load Limit is used interchangeably with the following terms:

- WLL Working Load Limit
- SWL Safe Working Load

WLL of the Tackle Block System – The WLL of a Renfroe Block applies only to the block. The WLL of a tackle block system can be limited by other parts of the system such as the WLL of the wire rope.

Proof Load – The average load to which a product may be subjected before permanent deformation occurs; the load applied in the performance of a proof test.

Proof Test – A test applied to a product solely to determine the conformity of materials and manufacturing to design parameters.

Shock Load – A sudden increased load caused by the sudden shift, jerk, or impacting of the load.

Ultimate Load – The average load or force at which the product fails, or no longer supports the load.



GENERAL WARNINGS

TERMINOLOGY

Design Factor – A theoretical reserve capability; usually computed by dividing the ultimate load by the working load limit.

Short Ton – The weight on which Renfroe product capacities are based. Commonly used throughout the United States and Canada, the term implies a weight of 2,000 pounds and differs from the "long ton," which amounts to 2,240 pounds.

Block – A term applied to a wire rope sheave enclosed in side plates and fitted with some attachment such as a hook or shackle.

Sheave – A grooved pulley for wire rope.

Grooves – Depressions – helical or parallel – in the surface of a sheave or drum that are shaped to position and support the rope.

Wire Rope – A plurality of wire strands helically laid about an axis.

MAINTENANCE AND INSPECTION

Full and total responsibility for inspection, maintenance and the continued use of the product, lies solely with the owner/user. Product application, environment and manner of use may imply a more thorough inspection and maintenance program is needed. It is the responsibility of the owner/user to assure that all government and industry guidelines are met.

Inspect for:

- Wear on pins, axles, rope grooves, side plates, bearings, bushings and fittings.
 Excessive wear is cause to replace parts or remove block from service.
- Misalignment or wobble in sheaves.
- Deformation in side plates, pins, axle fitting attachment points. Deformation is cause to remove block from service.
- Deformation or corrosion of hook and nut threads.
- Weld corrosion or weld cracking.
- Proper fit, deformation and operation of the hook latch.
- Security of nuts, bolts and other locking methods, especially after reassembly following a repair or inspection.
- Deformation of hook and for wear.

LUBRICATION SCHEDULE

Lubricate at regular intervals to prevent damage to the bearing.

Lubrication intervals are difficult to determine. If plant practice or experience with other applications is not available, consult your lubricant supplier.



ROLLER BEARING SWIVELS

If you got them any faster, they'd have wings! Our Roller Bearing Swivels are proof tested to handle any job, any application. We'll have it winging your way before you hang up the phone!

6 CONFIGURATIONS FOR ANY JOB

Eye & Hook

Eye & Jaw

Eye & Eye

Jaw & Hook

Jaw & Jaw

Jaw & Eye

















ROLLER BEARING AND ANGULAR CONTACT BEARING SWIVELS



Roller Bearing Swivels

- Hex Shaped for Maximum Strength
- · Made of Alloy Steel
- · Zinc Plated to Protect from Corrosion
- Roller Bearings
- Sealed to Retain Lubricant



Angular Contact Bearing Swivels

- Streamlined Design
- Designed for High Rotational Speeds and Longer Ropes and Cables
- Made from Aircraft Grade Steel and Heat Treated for Extra Strength
- Zinc Plated to Protect from Corrosion
- · Sealed to Retain Lubricant
- Two or More Angular Contact Ball Bearings



SWIVEL PART NUMBERS

ANGULAR CONTACT BEARING

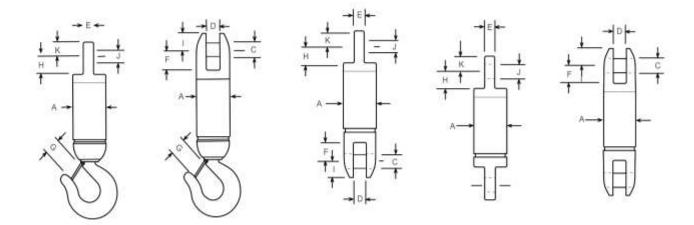
SWL	E/H	J/H	E/J	E/E	J/J	J/E
1/2	ACS0050EH	ACS0050JH	ACS0050EJ	ACS0050EE	ACS0050JJ	ACS0050JE
3/4	ACS0075EH	ACS0075JH	ACS0075EJ	ACS0075EE	ACS0075JJ	ACS0075JE
1 1/2	ACS0150EH	ACS0150JH	ACS0150EJ	ACS0150EE	ACS0150JJ	ACS0150JE
3	ACS0300EH	ACS0300JH	ACS0300EJ	ACS0300EE	ACS0300JJ	ACS0300JE
5	ACS0500EH	ACS0500JH	ACS0500EJ	ACS0500EE	ACS0500JJ	ACS0500JE
8 1/2	ACS0850EH	ACS0850JH	ACS0850EJ	ACS0850EE	ACS0850JJ	ACS0850JE
10	ACS1000EH	ACS1000JH	ACS1000EJ	ACS1000EE	ACS1000JJ	ACS1000JE
15	ACS1500EH	ACS1500JH	ACS1500EJ	ACS1500EE	ACS1500JJ	ACS1500JE
35	ACS3500EH	ACS3500JH	ACS3500EJ	ACS3500EE	ACS3500JJ	ACS3500JE

ROLLER BEARING

SWL	E/H	J/H	E/J	E/E	J/J	J/E
1/2	****	*****	RS0050EJ	RS0050EE	RS0050JJ	RS0050JE
5/8	****	*****	RS0062EJ	RS0062EE	RS0062JJ	RS0062JE
3/4	*****	*****	RS0075EJ	RS0075EE	RS0075JJ	RS0075JE
1 1/2	RS0150EH	RS0150JH	RS0150EJ	RS0150EE	RS0150JJ	RS0150JE
2	RS0200EH	RS0200JH	RS0200EJ	RS0200EE	RS0200JJ	RS0200JE
3	RS0300EH	RS0300JH	RS0300EJ	RS0300EE	RS0300JJ	RS0300JE
5	RS0500EH	RS0500JH	RS0500EJ	RS0500EE	RS0500JJ	RS0500JE
8 1/2	RS0850EH	RS0850JH	RS0850EJ	RS0850EE	RS0850JJ	RS0850JE
10	RS1000EH	RS1000JH	RS1000EJ	RS1000EE	RS1000JJ	RS1000JE
15	RS1500EH	RS1500JH	RS1500EJ	RS1500EE	RS1500JJ	RS1500JE



ANGULAR CONTACT BEARING SWIVEL DIMENSIONS



ANGULAR CONTACT BEARING SWIVEL DIMENSIONS

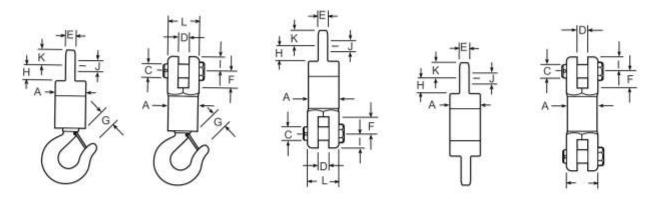
SWL	A	C	D	E	F	G	Н	1	J	K
1/2	7/8"	5/16"	5/16"	1/4"	15/32"	7/8"	3/8"	3/8"	1/4"	3/8"
3/4	1 1/4"	3/8"	19/32"	5/16"	11/16"	31/32"	1/2"	7/16"	3/8"	7/16"
1 1/2	1 1/2"	7/16"	19/32"	1/2"	13/16"	1"	23/32"	9/16"	5/8"	5/8"
3	1 7/8"	5/8"	3/4"	3/4"	15/16"	1 11/32"	15/16"	13/16"	7/8"	15/16"
5	2 7/16"	7/8"	1"	1"	1 9/16"	1 11/16"	1 5/16"	1 1/8"	1 1/4"	1 3/16"
8 1/2	2 7/8"	1"	1 9/32"	1 1/4"	2 1/8"	2 1/4"	1 5/8"	1 1/4"	1 3/8"	1 1/2"
10	3 5/8"	1 1/2"	1 3/4"	1 23/32"	3 1/2"	3"	2 27/32"	1 3/4"	1 5/8"	1 13/16"
15	3 5/8"	1 1/2"	1 3/4"	2"	3 1/2"	3"	2 25/32"	1 3/4"	2"	2 1/8"
25	4 1/2"	1 7/8"	2"	2 1/8"	3 11/16"	3 1/4"	2 7/8"	2 3/8"	2 1/4"	2 3/8"
35	5 3/8"	2"	2"	2 1/4"	3 11/16"	4"	3 1/8"	2 3/8"	2 1/4"	2 3/8"

	OVERALL	LENGTH	ALL DIMENSIONS IN INCHES				
SWL TONS	EYE &HOOK	JAW & HOOK	EYE & JAW	JAW & EYE	EYE & EYE	JAW & JAW	
1/2	5 3/8"	5 3/8"	3 1/8"	3 1/8"	3 1/8"	3 1/16"	
3/4	7 1/16"	7 1/8"	4 9/16"	4 9/16"	4 9/16"	4 1/2"	
1 1/2	7 7/8"	7 13/16"	5 1/8"	5 1/8"	5 1/8"	5 1/8"	
3	10 13/16"	10 15/16"	7 1/8"	7 1/8"	7 1/8"	7 1/8"	
5	15 1/4"	15 1/4"	10 1/2"	10 1/2"	10 1/2"	10 1/2"	
8 1/2	18 7/8"	18 7/8"	12 7/16"	12 7/16"	12 7/16"	12 7/16"	
10	24 15/16"	24 15/16"	17"	17"	17"	17"	
15	25 11/16"	25 11/16"	17 3/4"	17 3/4"	17 3/4"	17 3/4"	
25	33 13/16"	34"	20 5/16"	20 5/16"	20 5/16"	20 5/16"	
35	39 5/8"	40"	21 9/16"	21 9/16"	21 9/16"	21 9/16"	

Hook Model Dimensions are to the inside of Hook.



ROLLER BEARING SWIVEL DIMENSIONS



ROLLER BEARING SWIVEL DIMENSIONS

TONS	A	C	D	E	F	G	н	1	J	K	L
2	1 7/8"	3/4"	13/16"	11/16"	1 3/8"	1 1/16"	1"	1"	13/16"	15/16"	2"
3	2 1/4"	3/4"	1"	3/4"	1 3/8"	1 11/32"	1 3/16"	1 1/8"	1"	1 1/8"	2 1/4"
5	3"	1"	1 1/8"	1"	1 3/4"	1 11/16"	1 1/2"	1 1/4"	1 1/4"	1 1/4"	3"
8 1/2	3 1/4"	1 1/8"	1 9/16"	1 1/4"	2 1/8"	2 1/16"	1 5/8"	1 1/2"	1 3/8"	1 5/8"	3 1/4"
10	3 1/2"	1 1/4"	1 3/4"	1 7/16"	3 1/8"	2 1/4"	2 3/8"	1 7/8"	1 5/8"	1 13/16"	3 1/2"
15	4"	1 3/8"	1 3/4"	1 15/16"	3 1/8"	3"	2 3/8"	1 7/8"	2"	2 1/8"	4"

- 1	OVERALL LE	NGTH		ALL DIMENSIONS IN INCHES					
TONS	EYE & HOOK	JAW & HOOK	EYE & JAW	JAW & EYE	EYE & EYE	JAW & JAW			
2	8 1/4"	8 3/8"	8 9/16"	8 9/16"	8 9/16"	8 9/16"			
3	10 5/8"	10 3/8"	10 9/16"	10 9/16"	10 5/8"	10 1/8"			
5	13 1/8"	12 13/16"	12 7/16"	12 7/16"	12 3/4"	14"			
8 1/2	17 3/32"	16 13/16"	14 3/32"	14 3/23"	13 15/16"	14"			
10	16 11/16"	16 5/16"	16 13/16"	16 13/16"	16 1/2"	17 1/8"			
15	18 5/8"	18 1/2"	18 3/16"	18 3/16"	18 5/16"	18 1/16"			

Hook Model Dimensions are to the inside of Hook.

Hiltake a load off your mind

Always one step ahead where safety matters most — Renfroe delivers the load limiter that will not allow an overload to proceed. Reassuring? Certainly. Every Renfroe product has to outperform the specification it was designed to meet. That's why you should always say "yes" to Renfroe.

- Preconfigured for desired maximum load
- Easy to adjust easily installed on fixed end of wire rope
- Small dimensions
- Suitable for any EOT crane or lifting device with a fixed end wire rope (new or retrofit)
- Accuracy within +/- 1%

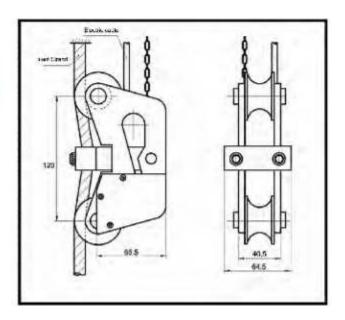


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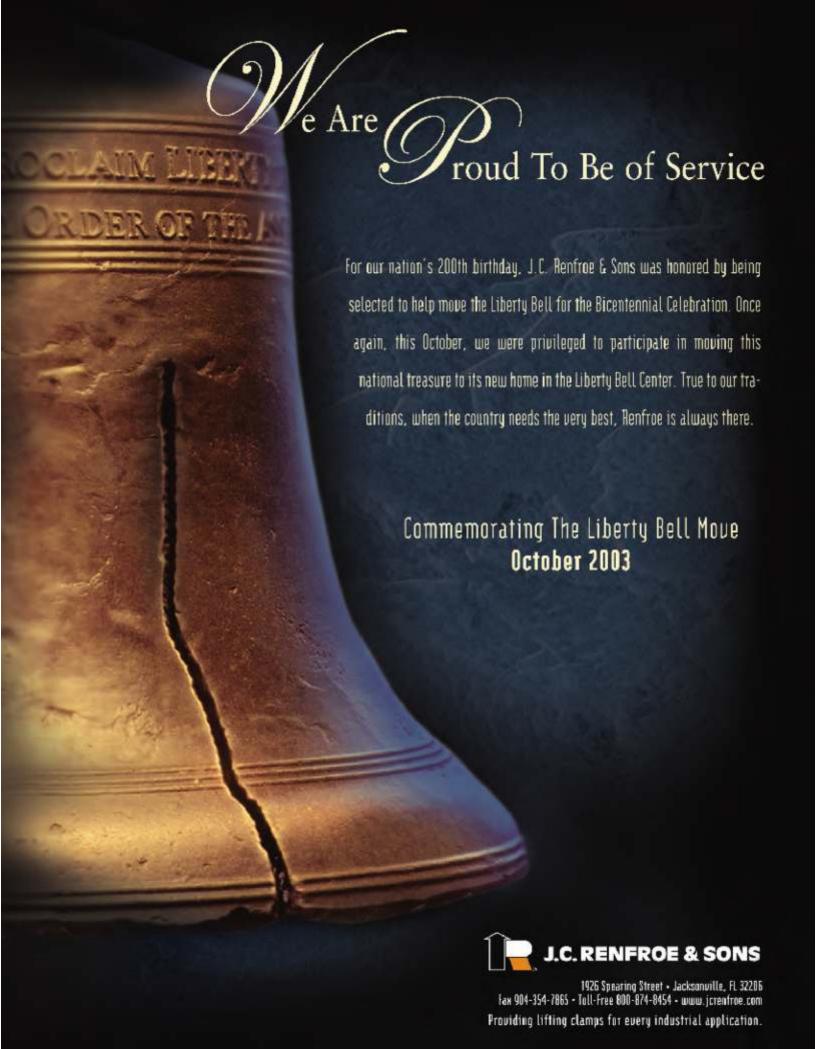






Load Limiter With Tensiometer

- The load limiter has been designed to prevent overloads that happen with hoisting equipment using wire rope, such as cranes, bridge cranes, lifts and industrial elevators.
- Overloads are dangerous and may damage the equipment because the operator is not aware that the load is greater than the working load of the hoisting equipment.
- The load limiter is manufactured with a flexible steel body that withstands heavy loads.
- Suitable for any EOT crane or lifting device with a fixed end wire rope (new or retrofit).
- Perfect for open air installations.
- Temperature range -22 degrees to 140 degrees Fahrenheit (-30 to +60 Celsius).
- Accuracy +/- 1%.
- Dimensionally small and quickly installed without removing the wire rope.
- Delivered ready to install, preset to your load requirement.
- Available in cable diameters 3/16" to 1 1/8" (5 to 30 mm).





Reliable Durable Product Tested

WORLDWIDE QUALITY, SATISFACTION & SERVICE

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