

RENFROE LIFTING CLAMPS



VERTICAL



HORIZONTAL



PULL





J.C. RENFROE® & SONS, INCORPORATED of Jacksonville, Florida, has been an international leader in the manufacturing and marketing of Lifting Clamps for over sixty years. For information on the availability of Renfroe products in Europe and Asia, contact us at the numbers listed below.

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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, INC.

SAFETY Operating Aids (DO's and DON'TS)

- 1 DO consult Operator's Manual or RENFROE when in doubt. RENFROE factory representatives are available upon request at no charge to train and assist in establishing the proper use of RENFROE products.
- 2 DO Lock clamp closed before lifting load. NEVER lift with lock in open or "lockopen" position.
- 3 DO use hooks with latch. NEVER use a hook that may release clamp.
- 4 DO use correct clamp for job.

 NEVER use large capacity clamps to lift light loads.
- 5 DO use an adequate number of clamps to balance load. NEVER lift loads that are not balanced.
- 6 DO use clamps within their rated capacity. NEVER overload clamps.
- 7 DO inspect clamp before each lift, follow inspection and maintenance

- instructions outlined in this manual and use RENFROE replacement parts to assure proper operation of the clamp.
- 8 DON'T side load. NEVER lift from side with vertical clamp.
- 9 DON'T lift over workmen.
- 10 DON'T misuse. NEVER lift plate from bottom of plate stack.
- DON'T rush. NEVER lift more than one plate at a time with a vertical clamp.
- 12 DON'T improvise. Always use correct clamp for job. **NEVER** lift horizontally with a vertical clamp.
- 13 DON'T use clamp that has been overloaded.
- 14 DON'T alter clamp. NEVER grind, weld or modify the clamp in any manner.



Mode		Page
AST ASTL BD DG FR FRD R RO S SD SEA SX 300-S 400-M	VERTICAL ONLY Non-Locking Type Non-Locking Type Locking Type	
J LJ NM SP TL	VERTICAL + 90° TURN Locking Type Locking Type Locking, Screw Type Locking Type Locking Type	14
JP	VERTICAL + 90° TURN + SIDE PULL Locking Type	18
DC JA RSC SCP SCSL TLA	VERTICAL + 180° TURN Locking Type Locking Type Locking Type Locking, Screw Type Locking, Screw Type Locking Type	20 21 22 23
JPA SCPA	VERTICAL + 180° TURN + SIDE PULL Locking Type	25
DWS HDR HR M WHSR	HORIZONTAL Locking Type Non-Locking Type Non-Locking Type Locking Type Non-Locking Type Non-Locking Type	28 28 29
A-1 AC ACP B-1 B-2 PB PC	PULL Locking Type Locking, Screw Type Locking, Screw Type Locking Type Trolley Clamp Locking Type Locking Type Locking Type Locking, Screw Type	32 32 33 34 35
вс	PULL + VERTICAL + SUSPENSION Locking Type	37
	MISCELLANEOUS Definitions Operators Manuals & Repair Kits General Information	



Model AST & ASTL VERTICAL LIFTING NON-Locking

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.



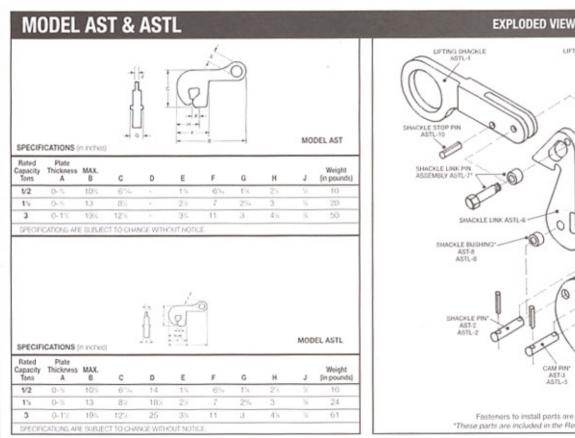


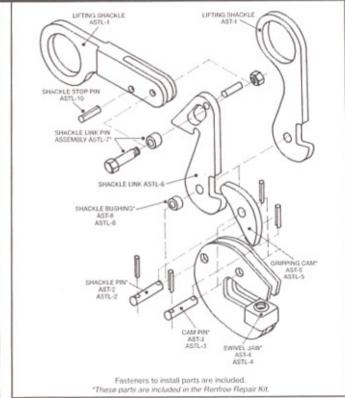


MODEL ASTL









Model BD

Vertical Lifting NON-Locking

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.

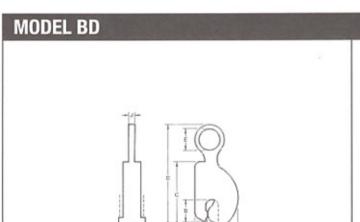


MODEL BD





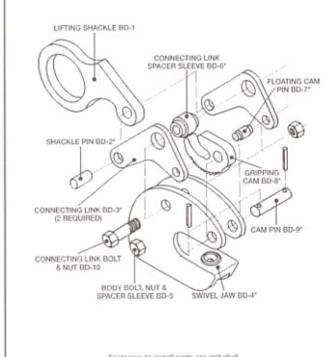
An economical tool for loading and unloading plate racks.



SPECIFICATIONS (in inches)

Rated Capacity Tons	Ptate Thickness A	В	С	MAX. D	E	F	G	н	J	Weight (in pounds)
1/2	0-1	2%	6%	10%	1%	4%	2%	1%	7.	6
1	0-1%	3%	7%	12%	2%	5%	2%	1%	36	11
2	0-1%	3%	8%	14%	3%	6%	3	2%	%	16
4	0-1%	3%	10%	17%	3%	7%	3%	2%	34	27
7	%-2%	5	12%	22%	3%	9%	5	3	1	65

EXPLODED VIEW



Fasteners to install parts are included.
*These parts are included in the Rentroe Repair Kit.



Model DG VERTICAL LIFTING LOCKING

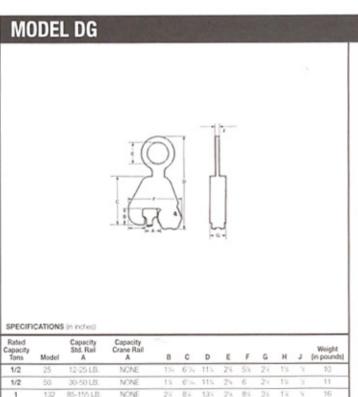
The Model DG rail clamp is used for lifting and transporting crane rails and railroad rails. Lightness of weight allows it to be hand applied and hand removed. The Model DG possesses all the features of the Model FR. All the repair parts are identical to same tonnage of the FR, except the swivel jaw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

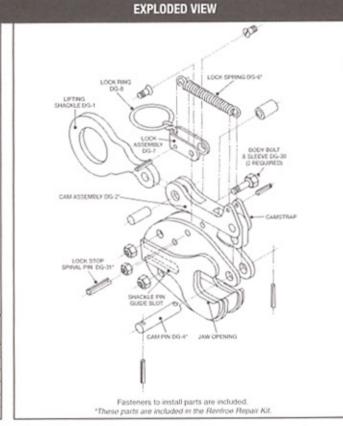




MODEL DG







2

2

60-155 LB.

104 & 106 LB

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. OTHER CAPACITIES AVAILABLE UPON REQUEST

NONE 135, 171, 175 LB.

Model FR

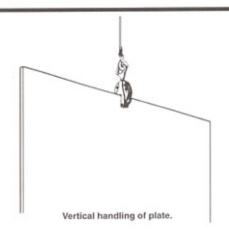
Vertical Lifting Locking

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.

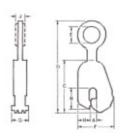


MODEL FR



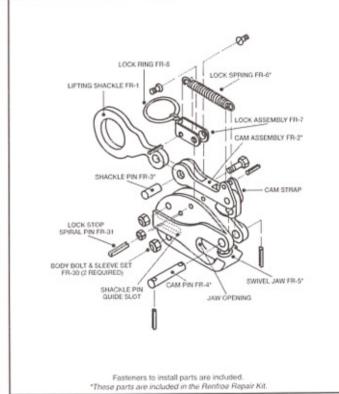






SPECIFICATIONS (n inches)

Rated Capacity Tons	Plate Thickness A	В	С	MAX. D	E	F	G	н	J	Weight (in pounds)
1/2	0-% %-1 %-1% 1-1% 1%-1%	2% 2% 2% 2% 2% 2%	7 7 7 7 7	11% 11% 11% 11% 11%	2% 2% 2% 2% 2% 2%	4% 4% 5% 5% 5%	2% 2% 2% 2% 2% 2%	1% 1% 1% 1% 1%	% % % %	6 8 9 10 11
1	0-% %-1 %-1% 1-1% 1%-1% 1%-2	3% 3% 3% 3% 3% 3% 3%	99099	13% 13% 13% 13% 13% 13%	2% 2% 2% 2% 2% 2% 2%	5% 6% 6% 6% 6% 7%	3% 3% 3% 3% 3% 3%	1% 1% 1% 1% 1% 1%	% % % %	14 15 15 16 17
2	0-1 %-1% 1%-2 1%-2%	3% 3% 3% 3%	9 9 9	16% 16% 16% 16%	3% 3% 3% 3%	6% 7% 7% 8%	3% 3% 3% 3%	2% 2% 2% 2%	XXX	23 23 23 24
3	0-1% %-1% 1%-2 1%-2%	4% 4% 4% 4%	10% 10% 10% 10%	18% 18% 18% 18%	3% 3% 3% 3%	7% 7% 8% 8%	3% 3% 3% 3%	2% 2% 2% 2% 2%	X	30 31 32 33





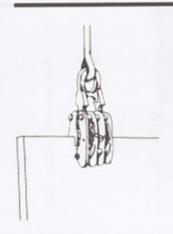
Model FRD

VERTICAL LIFTING LOCKING

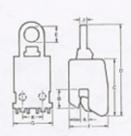
The Model FRD is a vertical lifting clamp that incorporates two Model FR clamps into one and is used for heavy duty work where it is desirable to spread the gripping surfaces with two points of contact. The clamp contains two "Lock Closed" mechanisms which are activated by a single chain and a manually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



MODEL FRD

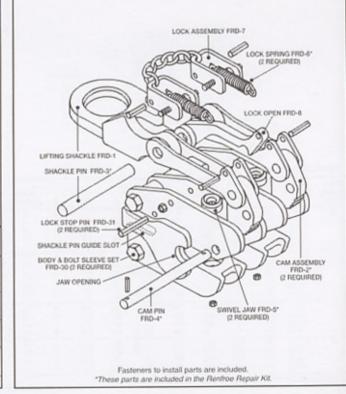


MODEL FRD



SPECIFICATIONS (n inches)

Rated Capacity Tons	Plate Thickness A	В	c	MAX.	E	F	G	н	1	J	Weight (in pounds)
1	0-% 0-% %-1% 1%-1%	2% 2% 2% 2% 2%	7% 7% 7% 7%	14 14 14 14	2% 2% 2% 2%	4% 5% 5% 5%	5% 5% 5% 5%	1% 1% 1% 1%	% % %	3333	16 18 20 24
2	0-% %-1% 1%-1%	3% 3% 3%	9 9	15% 15% 15%	2% 2% 2%	6 6% 7	6% 6% 6%	1% 1% 1%	% %	3% 3% 3%	26 30 34
4	0-1 1-1% 1%-2%	3% 3% 3%	9% 9% 9%	17% 17% 17%	2% 2% 2%	6% 7% 7%	6% 6% 6%	2% 2% 2%	X X	3% 3% 3%	40 44 48
6	0-1% 1%-2% 2%-3%	4% 4% 4%	11% 11% 11%	20% 20% 20%	3% 3% 3%	7 8% 9%	7% 7% 7%	2 2 2	1% 1% 1%	4% 4% 4%	58 67 66



Model R & RO VERTICAL LIFTING

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.

The Model ROH 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.



MODEL R: Locking



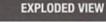
MODEL RO: Non-locking

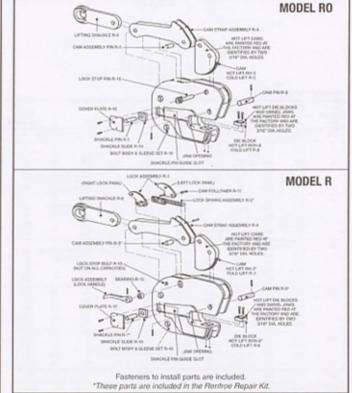


MODEL R & RO

SPECIFICATIONS (in inches)

Rated Capacity	Plate Thickness			11.10				Weight	
Tons	A	В	C	0	E	F	G	(in pounds)	
35	%- 4% 4- 8	8% 8%	23% 23%	5% 5%	5	21% 25%	8	470 515	
50	%- 6% 6- 12	13 13	44% 44%	9	5	36 41%	13% 13%	1370 1500	
75	%-6% 3-9 6-12 8-14	16% 16% 16% 16%	46% 46% 46% 46%	14% 14% 14% 14%	11 11 11 11	42% 45 48 50	12% 12% 12% 12%	2700 2775 2850 2900	







Model S

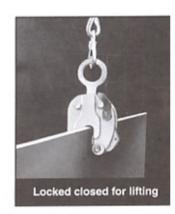
Vertical Lifting Locking

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.

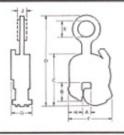


MODEL S





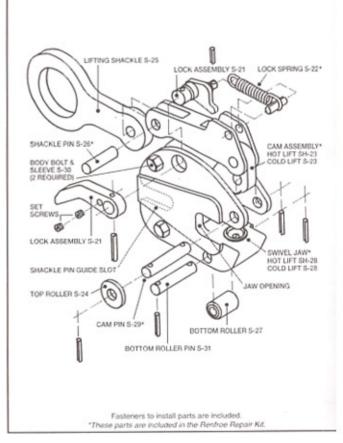
MODEL S



SPECIFICA	ATIONS (in inches)
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Rated Capacity Tons	Plate Thickness A	в	С	MAX.	c	F	G	н	J	Weight (in pounds)
1/2	0-%	2	5%	7%	1%	4%	. 2%	1%	- %	-4
1	10-%	2	5%	7%	1%	4%	2%	1%	56	5
2	0-1 %-1% 13-2 15-2%	3% 3% 3% 3% 3%	10 10 10	17 17 17 17	3% 3% 3% 3%	8% 9 9% 10	3% 3% 3% 3%	2% 2% 2% 2%	X X X	32 33 33 36
4	0-1% 1-2 1%-2% 2%-3% 3%-4%	4% 4% 4% 4% 4%	11% 11% 11% 11% 11%	19% 19% 19% 19% 19%	3% 3% 3% 3% 3%	10 10% 11% 12% 13	4% 4% 4% 4% 4%	3% 3% 3% 3% 3% 3%	X X X X	41 43 43 52 60
8	0-1% 1-2 2-3 2%-4 3%-5	4% 4% 4% 4% 4%	13% 13% 13% 13% 13%	22% 22% 22% 22% 22% 22%	3% 3% 3% 3% 3%	10% 11 12 13 14	5% 5% 5% 5%	3% 3% 3% 3% 3%	1 1 1 1 1	70 73 77 51 85
12	0-2% %-3 2-4 4-6 5%-7%	6% 6% 6% 6%	18 18 18 18	28 28 28 28 28 28	3% 3% 3% 3% 3%	13% 14 15 17 18%	6% 6% 6% 6%	3% 3% 3% 3% 3%	1% 1% 1% 1% 1%	140 140 143 150 160
20	%-3 3-5 5-7 7-9	7% 7% 7% 7% 7%	22% 22% 22% 22% 22%	35 35 35 35	4% 4% 4% 4% 4%	17 19 21 23	7% 78 7% 7%	5 5 5 5	2% 2% 2% 2%	265 294 324 350
50*	×-3	8%	27%	41	4%	22	9%	6%	3	470
100°	1/-3	13%	34	-44	4%	26	12%	10%	4	1350

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



Model SD

Vertical Lifting Locking

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.



MODEL SD

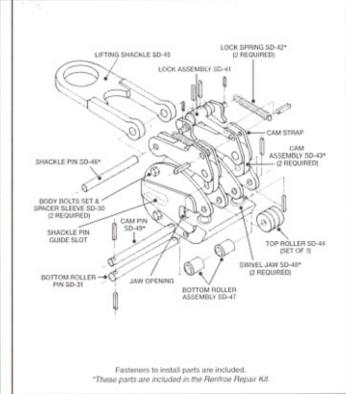




MODEL SD

SPECIFICATIONS (in inches)

Rated Capacity Tons	Plate Thickness A	В	С	D	E	F	G	н	ı	J	Weight (in pounds)
6	0-1 %-1%	3% 3%	9% 9%	15% 15%	3	7% 8	6% 6%	2% 2%	4% 4%	% %	60 62
8	0-1% 1-2	4%	11%	17	3	8% 9%	6% 6%	3 3	4% 4%	1	77 81





Model SEA VERTICAL LIFTING LOCKING

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.



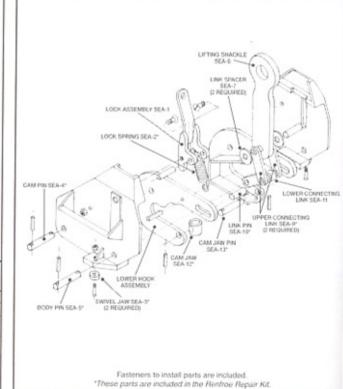




MODEL SEA

SPECIFICATIONS (in inches)

Rated Capacity Tons	Jaw Opening A	Flange Width B	C	MAX. D	E	F	G	Weight (in pounds)
1	0-14	3-8	11%	17%	1%	9%	5%	22
2	0-1	5-12	17%	21%	1%	14%	614	73
4	0-1 %-1%	7-14 7-14	19% 20%	27% 28%	1% 1%	17% 17%	8"% 6"%	116 120
8	0-1% 1-2%	10-20 10-20	25% 26%	31 32	2 2	21% 21%	9%	200 204
15	%-2% 2-3%	10-20 10-20	31 32%	41% 42%	3% 3%	21%	10%	343 350



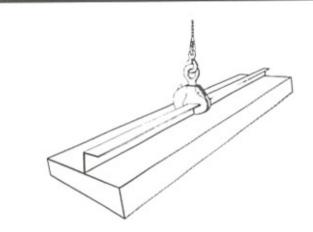
Model SX VERTICAL LIFTING LOCKING

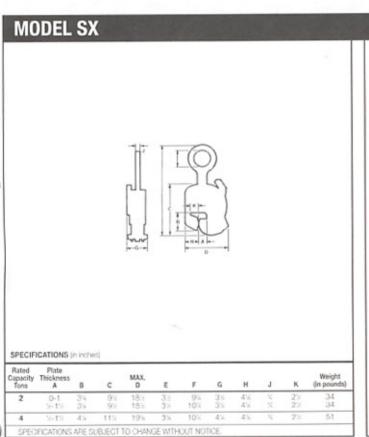
The Model SX clamp is used for lifting and transporting of angles both in fabrication and erection of steel. It possesses all the feature of the Model S. All repair parts are identical to the same tonnage Model S parts.

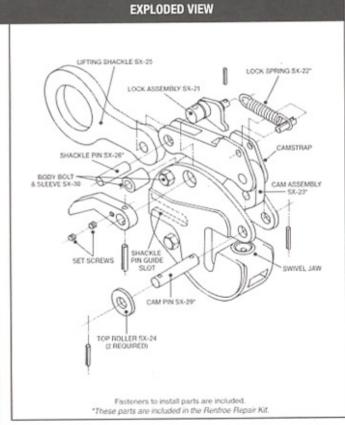


MODEL SX











Model 300-S & 400-M

VERTICAL LIFTING LOCKING

The Models 300-S and 400-M are 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 whereas the Model 400-M is capable of handling four drums.



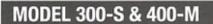


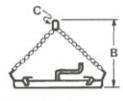


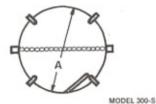
MODEL 400-M







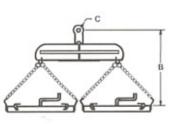




SPECIFICATIONS (in inches)

Rated Capacity (in pounds) Weight (in pounds) Standard Standard Model Drum Diameter 3,000 lbs. 300-S 3 x 6 300-S 3,000 lbs 3 x 6 23

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

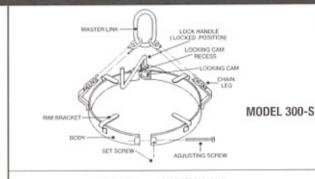


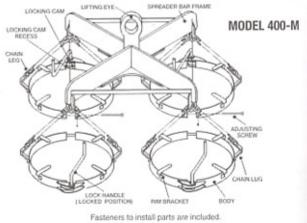
SPECIFICATIONS (in inches)

Model	Rated Capacity (in pounds)	Drum Diameter	Standard B	Standard C	Weight (in pounds)
400-M	12,000 lbs.	22%	24	3%	275
400-M	12,000 lbs.	16%	24	3%	270

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

EXPLODED VIEW





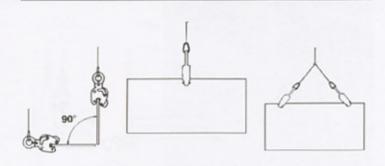
MODEL 400-M

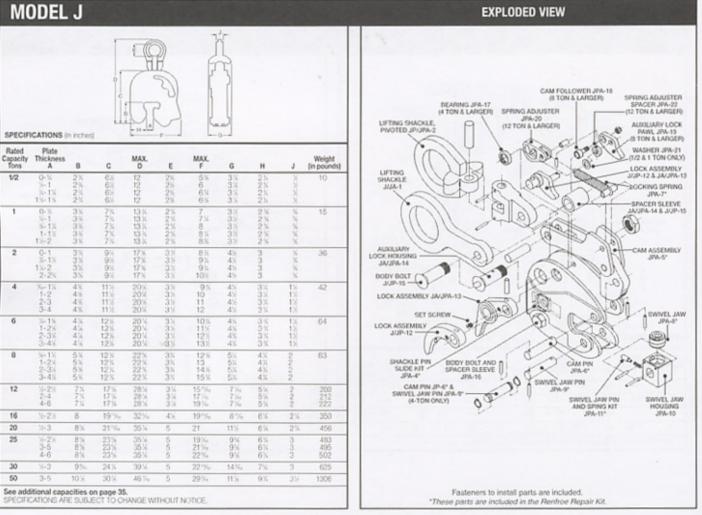
Model J VERTICAL LIFTING LOCKING

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.



MODEL J







Model LJ VERTICAL LIFTING CLAMP

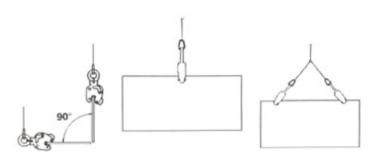
The MODEL LJ is a vertical lifting clamp capable of turning a plate from horizontal to vertical and back through the same ninety-degree arc. It is small and easy to handle in capacities through three tons. The MODEL LJ incorporates a "Lock Closed" feature, which facilitates attaching the clamp to the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

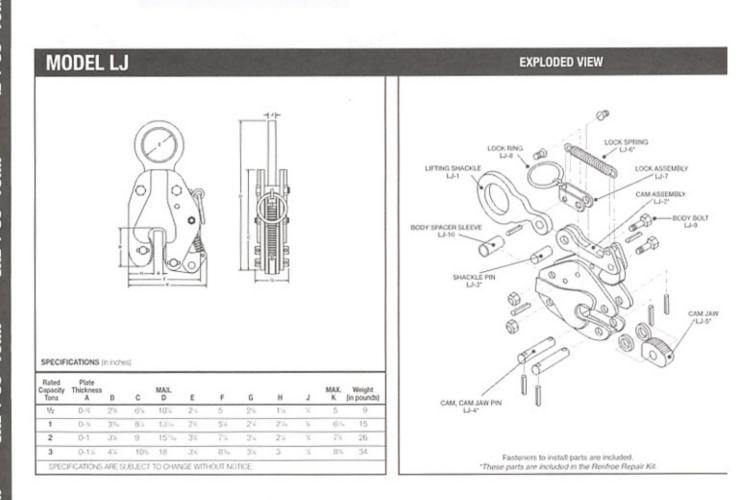


MODEL LJ CLOSED



MODEL LJ OPEN





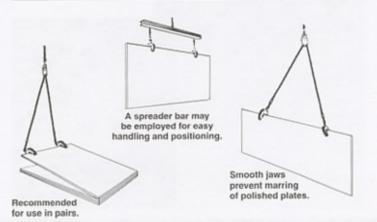
Model NM VERTICAL LIFTING LOCKING SCREW

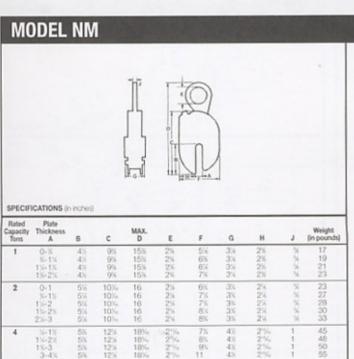
The Model NM clamp (non-marring) is manufactured with smooth gripping surfaces to prevent marring when gripping stainless steel, copper, aluminum and other polished metal plates. Due to the variety of conditions that may exist in handling these plates, it is recommended that these clamps be used in pairs 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.



MODEL NM



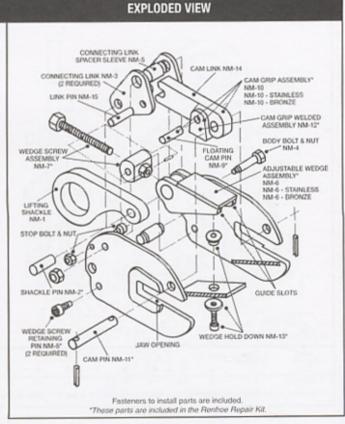




16% 17% 18% 5% 5%

20% 20% 20%

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE



193 195



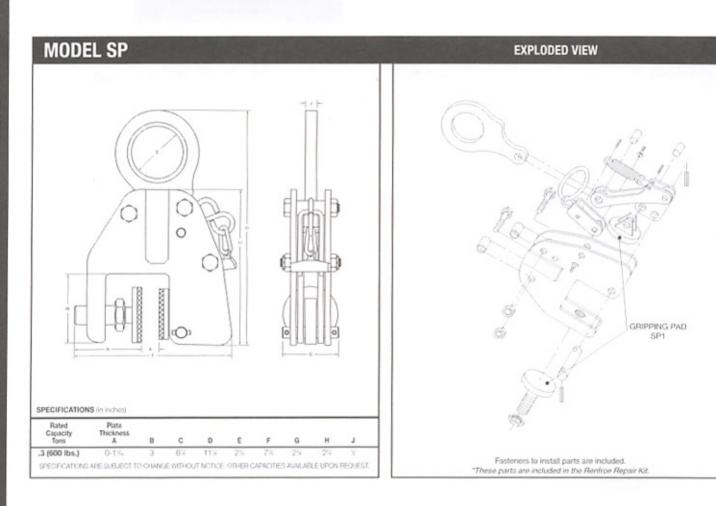
Model SP

Vertical Lifting Locking

Model SP is a light duty vertical lifting clamp with a 0 - 13/16" jaw opening, manufactured with friction pads as the gripping surfaces to prevent marring when gripping polished surfaces. This clamp also has the convenient Renfroe "locked-closed" feature.



MODEL SP



Model TL

VERTICAL LIFTING LOCKING

The "Lock Open," "Lock Closed" feature facilitates attaching and removing the clamp from the plate.

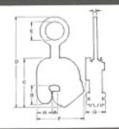
The Model TL is identical to the Model TLA except that is does not contain the auxiliary lock. The Model TL is capable of turning a plate from horizontal to vertical and back through the same 90 degree arc.



MODEL TL: Locking

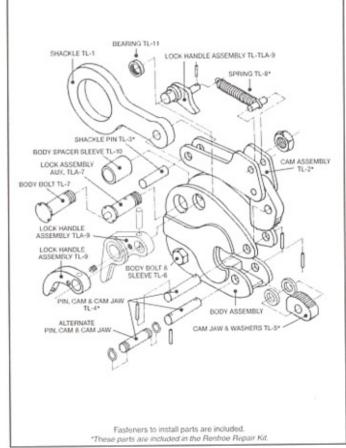






SPECIFICATIONS (minches)

Rated Capacity Tons	Plate Thickness A	В	С	MAX. D	Е	MAX. F	G	н	1	Weight (in pounds)
1/2	0-% %-1 %-1% 1%-1%	2% 2% 2% 2%	6% 6% 6%	11% 11% 11% 11%	2% 2% 2% 2% 2%	4% 5% 5% 5%	2% 2% 2% 2%	1% 1% 1% 1%	% % %	9 10 11 13
1	0-% %-1 %-1% 1-1% 1%-2	33333	7% 7% 78 7% 7%	13% 13% 13% 13% 13%	2% 2% 2% 2% 2%	6 6% 6% 6% 7%	2 % 2 % 2 % 2 % 2 %	2 2 2 2 2 2	XXXXX	14 15 16 17 18
2	0-1 %-1% 1%-2 2-2%	3% 3% 3% 3%	9% 9% 9%	16% 16% 16%	3% 3% 3% 3%	8% 9% 9% 10%	3% 3% 3% 3%	2% 2% 2% 2%	K	32 33 35 37
4	%-1% 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%	3333	% % %	36 37 40 43
6	%-1% 1-2% 2-3% 3-4%	4% 4% 4% 4%	11% 11% 11% 11%	20% 20% 20% 20%	3% 3% 3%	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% 4% 4% 4%	12% 12% 12% 12%	21% 21% 21% 21%	3% 3% 3% 3%	11% 12% 13% 14%	4% 4% 4% 4%	3% 3% 3% 3%	1	72 74 77 80
12	%-2% 2-4 3-5 4-6	6% 6% 6%	15% 15% 15% 15%	26 % 26 % 26 % 26 %	3% 3% 3% 3%	14% 16 17 18	6% 6% 6%	4% 4% 4% 4%	1% 1% 1% 1%	142 150 154 158
20	2%-4% 3-5 5-7	8% 8% 8%	21% 21% 21% 21%	36 1% 36 1% 36 1% 36 1%	5 5 5	20 1/4 22 1/4 22 1/4 24 1/4	8% 8% 8% 8%	6 % 6 % 6 %	2% 2% 2% 2%	415 426 430 445



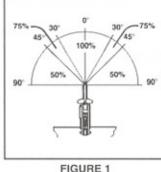


Model JP VERTICAL LIFTING LOCKING

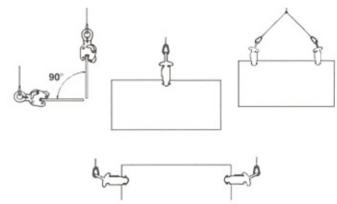
The Model JP is a vertical lifting clamp capable of turning a single plate or member from horizontal to vertical and back to horizontal through the same 90 degree arc. Permits side loading of lifting shackle up to 90 degrees by derating of clamp's rated capacity. Refer to FIGURE 1 for derated capacities.

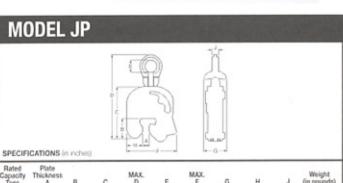
Model JP incorporates a pivoting shackle that permits side loading of the lifting shackle at 100 percent of rated capacity from vertical to 30 degrees, 75 percent of rated capacity between 30 and 45 degrees and 50 percent of rated capacity between 45 and 90 degrees.



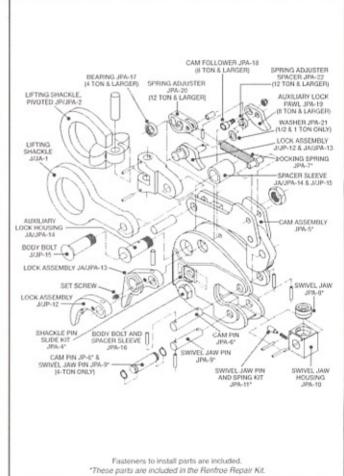


MODEL JP





Rated Capacity Tons	Plate Thickness A	В	С	MAX. D	E	MAX. F	G	н	J	Weight (in pounds)
1/2	0-% %-1 %-1% 1%-1%	2% 2% 2% 2%	6% 6% 6% 6%	12 12 12 12	2% 2% 2% 2% 2%	5% 6 6% 6%	3 X 3 X 3 X 3 X	2% 2% 2% 2%	% % %	12
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 7% 8 8% 8%	3% 3% 3% 3% 3% 3%	2 % 2 % 2 % 2 % 2 %	N N N N N N N N N N N N N N N N N N N	20
2	0-1 %-13 1%-2 2-2%	3% 3% 3% 3%	9% 9% 9%	17% 17% 17% 17%	3% 3% 3% 3%	8% 9% 9% 10%	4% 4% 4% 4%	3 3 3	X X X	40
4	%-1% 1-2 2-3 3-4	4% 4% 4% 4%	11 % 11 % 11 %	20% 20% 20% 20%	3% 3% 3% 3%	9% 10 11 12	4% 4% 4% 4%	3% 3% 3% 3%	136 136 136 136 136	50
6	%-1% 1-2% 2-3% 3-4%	4% 4% 4% 4%	12% 12% 12% 12%	20% 20% 20% 20%	3 X 3 X 3 X 3 X	10% 11% 12% 13%	4% 4% 4% 4%	3% 3% 3% 3%	1% 1% 1% 1%	72
8	%-1% 1-2% 2-3% 3-4%	5% 5% 5% 5%	12% 12% 12% 12%	22 % 22 % 22 % 22 %	3% 3% 3% 3%	12% 13 14% 15%	5% 5% 5% 5%	4% 4% 4% 4%	2222	93
12	%-2% 2-4 4-6	7% 7% 7%	17 % 17 % 17 %	28 % 28 % 28 %	3% 3% 3%	15 % 17 % 19 %	7% 7% 7%	5% 5% 5%	2 2 2	203 212 222
16	%-2%	8	19 %	32%	4%	19%	81%	6%	2%	350
20	V-3	8%	21%	35%	5	21	11%	.6%	214	456
25	%-2% 3-5 4-6	8% 8% 8%	23% 23% 23%	35 % 35 % 35 %	5 5 5	19% 21% 22%	9% 9% 9%	6% 6% 6%	3 3 3	483 495 502
30	16-3	9%	24%	39%	- 5	22.%	14%	7%	3	625
50	3-5	10%	30%	46%	5	29%	11%	9%	3%	1306



Model DC LOCKING

Model DC is a 1/2 ton 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 to 1,000 lbs with a 300 Brinell hardness or less.

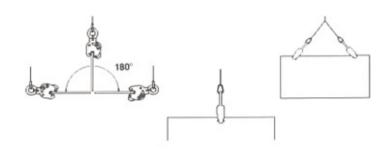
■ DC-A: 0-5/8" opening

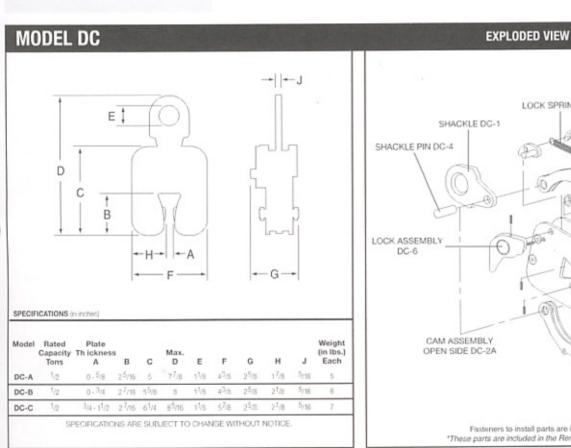
■ DC-B: 0-3/4" opening

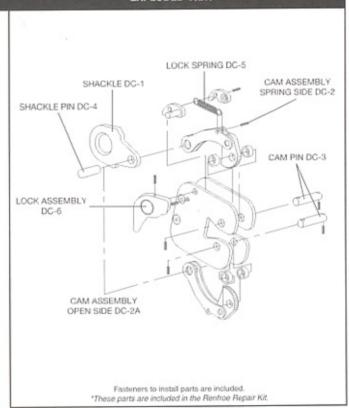
■ DC-C: 3/4-11/2" opening



MODEL DC









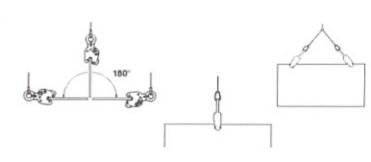
Model JA

VERTICAL LIFTING LOCKING

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. Incorporates a push button auxiliary lock.



MODEL JA



EXPLODED VIEW

| SPECIFICATIONS (n inches) | F | G | H | J | SPECIFICATIONS (n inches) | Thickness | Tons | A | B | C | D | E | F | G | H | J | SPECIFICATIONS (n inches) | Tons | A | B | C | D | E | F | G | H | J | SPECIFICATIONS (n inches) | Tons | A | B | C | D | E | F | G | H | J | SPECIFICATIONS (n inches) | Tons | A | B | C | D | E | F | G | H | J | SPECIFICATIONS (n inches) | Tons | A | B | C | D | E | F | G | H | J | SPECIFICATIONS (n inches) | Tons | To

Rated Capacity Tons	Plate Thickness A	В	С	MAX. D	E	MAX.	G	Н	J	Weight (in pounds)
1/2	0-% %-1 %-1% 1%-1%	2 X 2 X 2 X 2 X	6% 6% 6%	t2 12 t2 t2	2% 2% 2% 2%	5% 6 6% 6%	3 X 3 X 3 X 3 X	2 % 2 % 2 %	N M M N	10
1	0-% %-1 %-1% 1-1% 1%-2	3% 3% 3% 3%	7% 7% 7% 7% 7%	13 % 13 % 13 % 13 %	2% 2% 2% 2% 2%	7 7% 8 8% 8%	3% 3% 3% 3% 3%	2%	****	15
2	0-1 %-1% 1%-2 2-2%	3% 3% 3% 3%	9% 9% 9% 9%	17 % 17 % 17 % 17 %	3% 3% 3%	8% 9% 9% 10%	4% 4% 4% 4%	3333	X X X	36
4	%-1% 1-2 2-3 3-4	4% 4% 4% 4%	11% 11% 11% 11%	20% 20% 20% 20%	3% 3% 3% 3%	9% 10 11 12	4% 4% 4% 4%	3% 3% 3% 3%	1% 1% 1%	42
6	%-1% 1-2% 2-3% 3-4%	4% 4% 4% 4%	12% 12% 12% 12%	20 % 20 % 20 % 20 %	3% 3% 3%	10% 11% 12% 13%	4% 4% 4% 4%	3% 3% 3%	1% 1% 1% 1%	64
8	3-1% 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%	5% 5% 5% 5%	4% 4% 4% 4%	2222	83
12	%-2% 2-4 4-6	7% 7% 7%	17% 17% 17%	28 % 28 % 28 %	3% 3% 3%	15 1% 17 1% 19 %	7 % 7 % 7 %	5% 5%	2 2 2	203 212 222
16	%-2%	8	191%	32%	456	19 %	.81%	6%	2%	350
20	%-3	8%	21%	35%	5	21	11%	6%	2%	456
25	3-5 4-6	8% 8% 8%	23% 23% 23%	36 % 35 % 35 %	5 5 5	19 % 21 % 22 %	9% 9% 9%	6% 6% 6%	3 3 3	483 495 502
30	W-3	9%	24%	39%	5	22 1%	14%	7%	3	625
50	3-5	10%	30%	46%	5	29%	11%	9×.	31/	1306

CAM FOLLOWER JPA-18 (8 TON & LARGER) SPRING ADJUSTER SPACER JPA-22 (12 TON & LARGER) BEARING JPA-17 (4 TON & LARGER) SPRING ADJUSTER LIFTING SHACKLE PIVOTED JP/JPA-2 AUXILIARY LOCK PAWL JPA-19 (8 TON & LAPGER) WASHER JPA-21 (1/2 & 1 TON ONLY) LOCK ASSEMBLY JUP-12 & JA/JPA-13 LIFTING DOCKING SPRING SPACER SLEEVE IA/JPA-14 & J/JP-15 AUXILIARY LOCK HOUSING JA/JPA-14 CAM ASSEMBLY JPA-5* LOCK ASSEMBLY JAJJPA SET SCREW LOCK ASSEMBLY J/JP-12 SHACKLE PIN SLIDE KIT JPA-4* BODY BOLT AND SPACER SLEEVE SWIVEL JAW PIN CAM PIN JP-6" & SWIVEL JAW PIN JPA-9 (4-TON ONLY) SWIVEL JAW PIN AND SPING KIT JPA-11* Fasteners to install parts are included. se parts are included in the Rentroe Repair Kit.

Model RSC

LOCKING SCREW TYPE

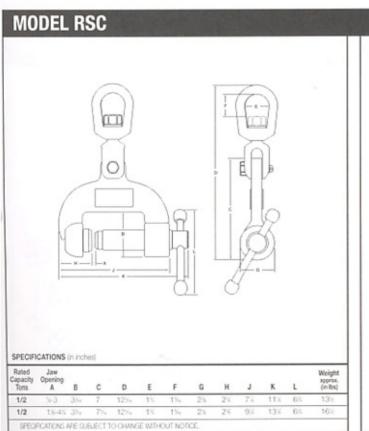
The Model RSC a lightweight screw clamp for bench work on casting of large thickness, and weigh less than 1000 lbs.

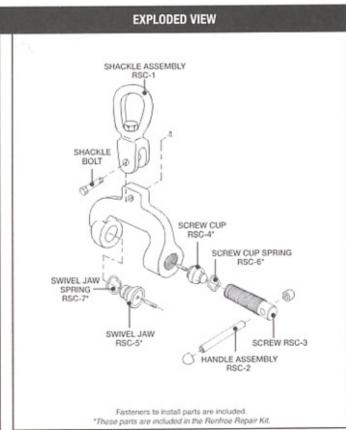


MODEL RSC



MODEL RSC







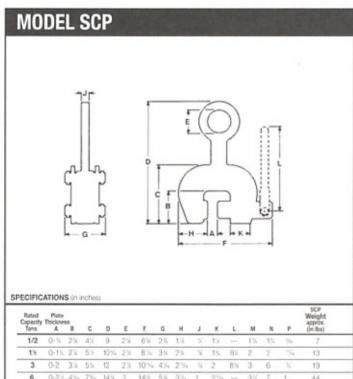
Model SCP Locking, screw type

The Model SCP clamp is capable of handling steel plate from the 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.



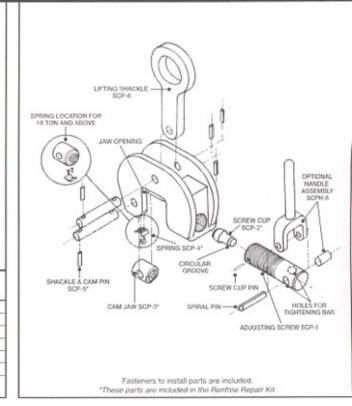
MODEL SCP





19 X 3 %

15 0-4 7% 12% 22% 3% 21% 8% 5% 1% 4 — 20, 30, 50, 100 and 150 Ton capacities available upon request. SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.



EXPLODED VIEW

93

Model SCSL

LOCKING SCREW

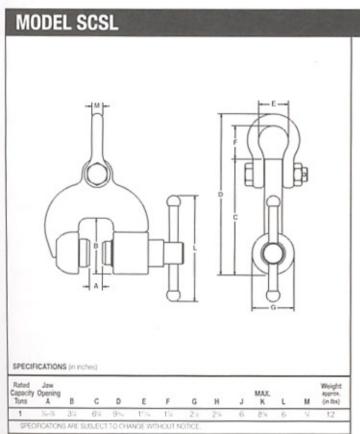
The MODEL SCSL is a locking screw clamp capable of handling a steel plate from a horizontal through a 180-degree arc. It is a lightweight clamp primarily used for bench work. It is capable of handling up to a 2,000-pound load. The MODEL SCSL incorporates a spring loaded swivel jaw and screw cup. The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

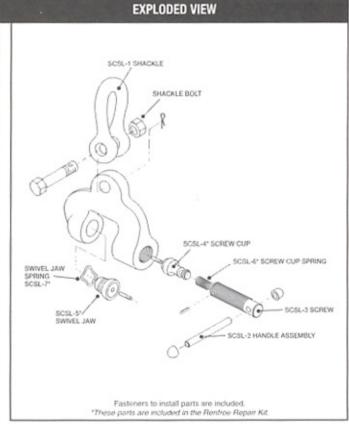


MODEL SCSL OPEN



MODEL SCSL CLOSED







Model TLA

VERTICAL LIFTING LOCKING

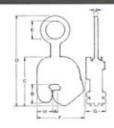
The Model TLA is a vertical lifting clamp incorporating a "Lock Open" and a "Lock Closed" feature and an auxiliary lock. The clamp is capable of turning a steel plate from horizontal to vertical to horizontal through a 180 degree arc. The "Lock Open," "Lock Closed" feature facilitates attaching and removing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



MODEL TLA: Auxiliary Lock

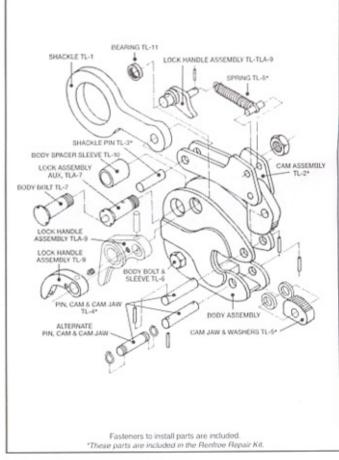






SPECIFICATIONS (in inches)

Rated Capacity Tons	Plate Thickness A	В	С	MAX. D	E	MAX. F	G	н	J	Weight (in pounds)
1/2	0-% %-1 %-1% 1%-1%	2% 2% 2% 2%	6% 6% 6% 6%	11% 11% 11% 11%	2% 2% 2% 2%	4% 5% 5% 5%	2% 2% 2% 2%	1% 1% 1% 1%	% % %	9 10 11 13
1	0-% %-1 %-1% 1-1% 10-2	3 3 3 3 3	7% 7% 7% 7% 7% 7%	13% 13% 13% 13% 13%	2% 2% 2% 2% 2%	6 6% 6% 6% 7%	2% 2% 2% 2% 2%	2 2 2 2 2	****	14 15 16 17 18
2	0-1 %-1½ 1½-2 2-2%	3% 3% 3% 3%	9% 9% 9%	16% 16% 16%	3% 3% 3% 3%	8% 9% 9% 10%	3% 3% 3% 3%	2% 2% 2% 2%	X X X	32 33 35 37
4	%-1% 1-2 2-3 3-4	4 4 4 4	9% 9% 9%	17% 17% 17% 17%	3% 3% 3% 3%	9 9% 10% 11%	3% 3% 3% 3%	3 3 3 3	K K K	36 37 40 43
6	%-1% 1-2% 2-3% 3-4%	4% 4% 4% 4%	11% 11% 11% 11%	20% 20% 20% 20%	3% 3% 3%	10% 11 12 13	3% 3% 3% 3%	3% 3% 3% 3%	K K K	49 51 54 57
8	%-1% 1-2% 2-3% 3-4%	4% 4% 4% 4%	12% 12% 12% 12%	21% 21% 21% 21%	3% 3% 3% 3%	11% 12% 13% 14%	4% 4% 4% 4%	3% 3% 3% 3%	1	72 74 77 80
12	3-2% 2-4 3-5 4-6	6% 6% 6%	15% 15% 15% 15%	26 % 26 % 26 % 26 %	3% 3% 3% 3%	14% 16 17 18	6% 6% 6%	4% 4% 4% 4%	1% 1% 1% 1%	142 150 154 158
20	%-3 2%-4% 3-5 5-7	8% 8% 8%	21% 21% 21% 21%	361% 361% 361% 361%	5 5 5	20% 22% 22% 24%	8% 8% 8% 8%	6% 6% 6%	2% 2% 2% 2%	415 426 430 445



Model JPA

VERTICAL LIFTING LOCKING

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.



MODEL JPA

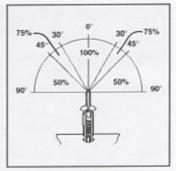
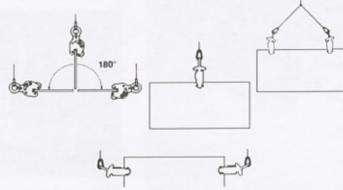
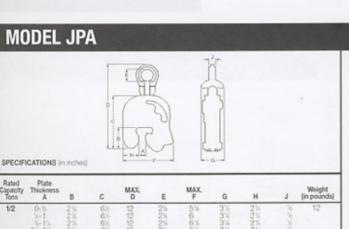


FIGURE 1





Rated apacity Tons	Plate Thickness A	В	С	MAX.	E	MAX.	G	н	J	Weight (in pounds)
1/2	0-% %-1 %-1% 1%-1%	2000 2000 2000 2000 2000 2000 2000 200	60) 60) 60) 60)	12 12 12 12	2% 2% 2% 2%	5% 6 6% 6%	3% 3% 3% 3%	2% 2% 2% 2%	76 FF 76	12
1	0-% %-1 %-1% 1-1% 1%-2	3% 3% 3% 3% 3%	7% 7% 7% 7% 7%	13 % 13 % 13 % 13 %	NIGHT STATE	7 7% 8 8% 8%	3% 3% 3% 3% 3%	22222	XXXXX	20
2	0-1 %-1% 1%-2 2-2%	3% 3% 3% 3%	9% 9% 9% 9%	17% 17% 17% 17%	3% 3% 3% 3%	8% 9% 9% 10%	4% 4% 4% 4%	3 3 3 3	XXXX	40
4	%=1% 1-2 2-3 3-4	4% 4% 4% 4%	11% 11% 11% 11%	20% 20% 20% 20%	3% 3% 3%	9% 10 11 12	4% 4% 4% 4%	3% 3% 3% 3%	1% 1% 1% 1%	50
6	%-1% 1-2% 2-3% 3-4%	4% 4% 4% 4%	12% 12% 12% 12%	20 % 20 % 20 % 20 %	3% 3% 3% 3%	10% 11% 12% 13%	4% 4% 4% 4%	3% 3% 3% 3%	1% 1% 1% 1%	72
8	%-1% 1-2% 2-3% 3-4%	55555 5555	12 % 12 % 12 % 12 %	22 % 22 % 22 % 22 %	3 N 3 N 3 N 3 N	12% 13 14% 15%	5% 5% 5% 5%	4% 4% 4% 4%	2222	93
12	%-2% 2-4 4-6	7% 7% 7%	17% 17% 17%	28 ¼ 28 ¼ 28 ¼	3% 3% 3%	151% 17% 19%	7 % 7 % 7 %	5% 5% 5%	2 2 2	203 212 222
16	16-23	8	19%	32%	4%	19%	8.1%	6%	2%	350
20	%-3	8%	21%	35%	5	21	11%	6%	2%	456
25	%-2% 3-5 4-6	8% 8% 8%	23% 23% 23%	35 % 35 % 35 %	555	19% 21% 22%	9% 9% 9%	6% 6% 6%	3 3	483 496 502
30	16-3	9%	24%	39%	5	221%	14%	7%	3	625
50	3-5	10%	30%	46 %	5	291/4	11%	9%	3%	1306

CAM FOLLOWER JPA-18 (8 TON 8 LARGER) SPRING ADJUSTER BEARING JPA-17 (4 TON & LARGER) SPACER JPA-22 (12 TON & LARGER) SPRING ADJUSTER AUXILIARY LOCK LIFTING SHACKLE PAWL JPA-19 (8 TON & LARGER) PIVOTED JIP/JP WASHER JPA-21 (1/2 & 1 TON ONLY) LOCK ASSEMBLY LIFTING SHACKLE F-12 & JA/JPA-13 DOCKING SPRING J/JA-1 PACER SLEEVE VJPA-14 & J/JP-15 AUXILIARY CAM ASSEMBLY BODY BOLT LOCK ASSEMBLY JAJJP SET SC LOCK ASSEMBLY J/JP-12 -SHACKLE PIN SLIDE KIT / JPA-4" BODY BOLT AND SPACER SLEEVE SWIVEL JAW PIN CAM PIN JP-6" & SWIVEL JAW PIN JPA-9 (4-TON ONLY) SWIVEL JAW PIN Fasteners to install parts are included. *These parts are included in the Rentroe Repair Kit.



Model HR & HDR

HORIZONTAL LIFTING NON-LOCKING

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 horizontal. 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 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.

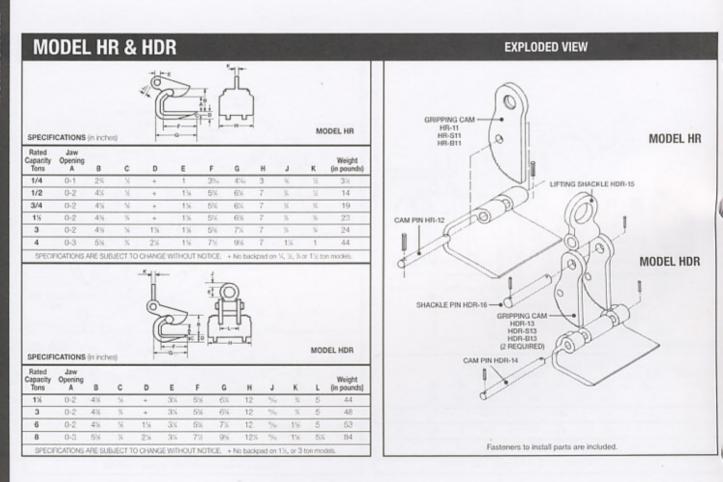


MODEL HR



MODEL HDR





Model M

HORIZONTAL LIFTING Locking

The Model M is a multipurpose clamp used for positioning, sorting, erection and handling of prefabricated sections. The split lower iaw 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, or sets of pairs, or in a tripod arrangement for transporting plate horizontally.

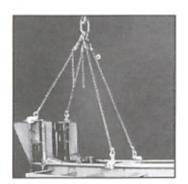
Handle is available on 8 ton clamp only.

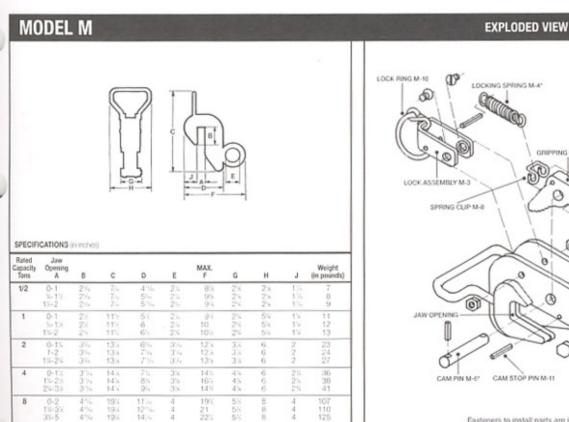
SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

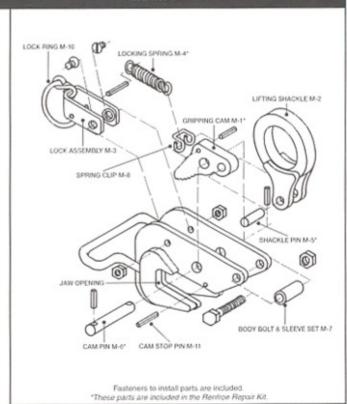


MODEL M











Model WHSR

HORIZONTAL LIFTING NON-LOCKING

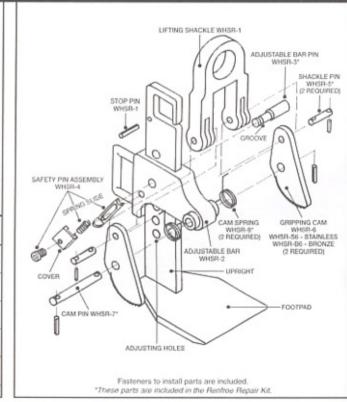
The Model WHSR is an adjustable, horizontal clamp intended to be used in pairs, sets of pairs, or in a tripod arrangement for transporting steel plates horizontally. In addition to incorporating two gripping cams, the jaw opening may be adjusted by the positioning of a pin in the body of the clamp. The 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.



MODEL WHSR



| SPECIFICATIONS (in inches) | SPECIFICATIONS



EXPLODED VIEW

3

6

8

0-6 0-12 0-16

0-6 0-12 0-16

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

70 94

112

130 141 220

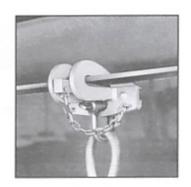
5% 5%

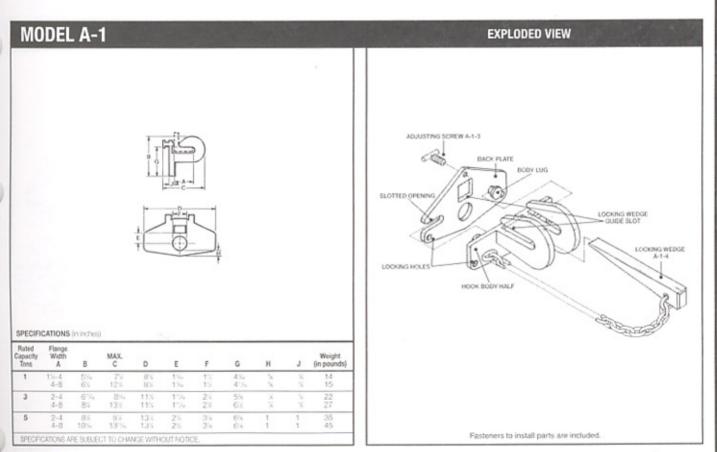
Model A-1

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.



MODEL A-1







Model AC & 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.

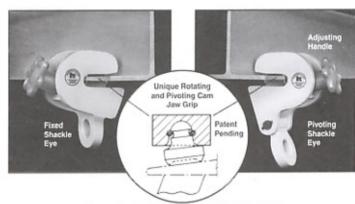
The Model AC has a fixed Shackle Eye and the Model ACP has a pivoting Shackle Eye. These clamps are especially useful in the construction and maintenance for shipbuilding and other industries.



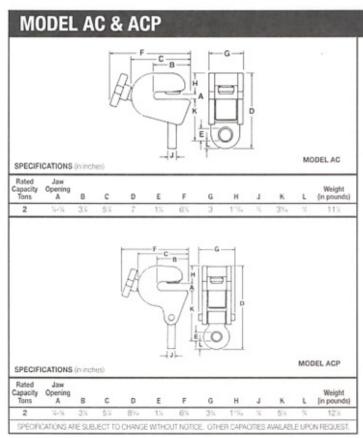
MODEL AC

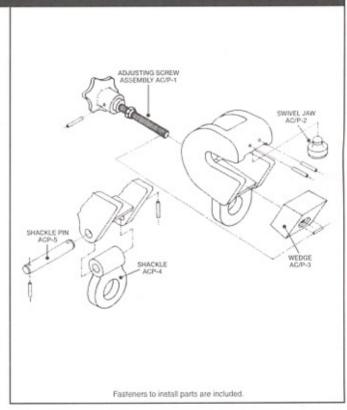


MODEL ACP



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





Model B-1

LOCKING SUSPENSION

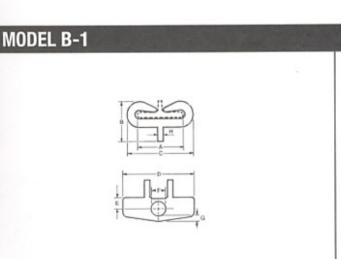
The Model B-1 is a portable beam clamp that provides easy suspension of hoists from beams or girders thereby eliminating the need for nuts, bolts, shackles and so on. The Model B-1 is intended for use on the American standard or wide flange beams. This model is furnished with a fluted tool steel locking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



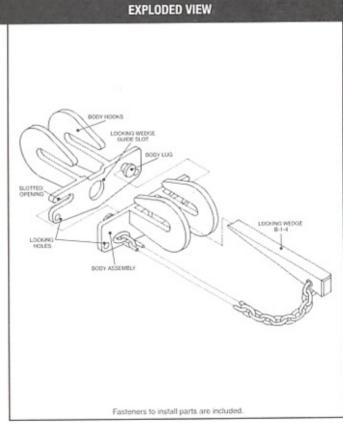
MODEL B-1







Rated Capacity Tons	Flange Width A	В	С	D	Ε	F	G	н	Weight (in pounds)
1	1½-4 2-6 4-12	4% 5% 6%	6% 9% 18%	8% 8% 8%	1% 1% 1%	1% 1% 1%	% % %	×	12 13 22
3	4-6 4-12	674 774	10% 18%	11% 11%	2 2	2% 2%	W- 54	% %	20 38
5	4-8 4-14	9%	15 21%	14% 14%	3	3% 3%	1	1	45 62
8	6-12 6-17 6-24	11% 15% 15%	18% 26% 34%	18% 18% 18%	4 4 4	3½ x 4% 3½ x 4% 3½ x 4%	1% 1% 1%	1	96 151 207
12	6-12 6-17 6-24	11% 15% 15%	19% 26% 34%	18% 18% 18%	4 4 4	3% x 4% 3% x 4% 3% x 4%	1% 1% 1%	1% 1% 1%	98 153 209



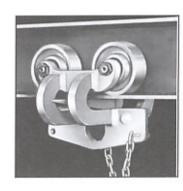


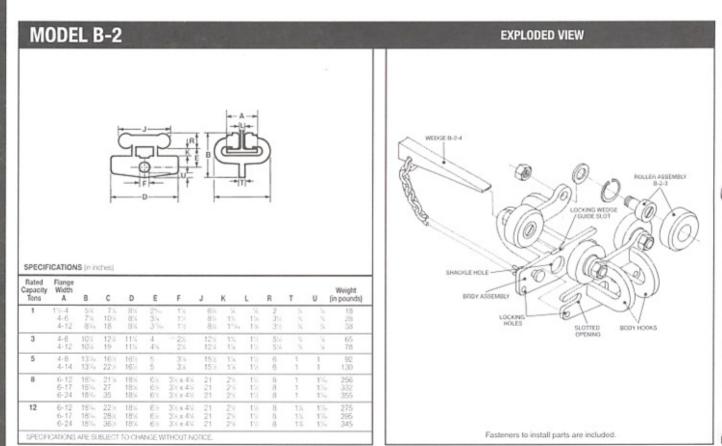
Model B-2 SUSPENSION

The Model B-2 is a beam trolley clamp that provides connection of a hoist or chain falls to an overhead beam and enables it to be moved along the beam as a 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.









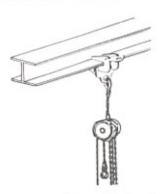
Model PB LOCKING SUSPENSION

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.

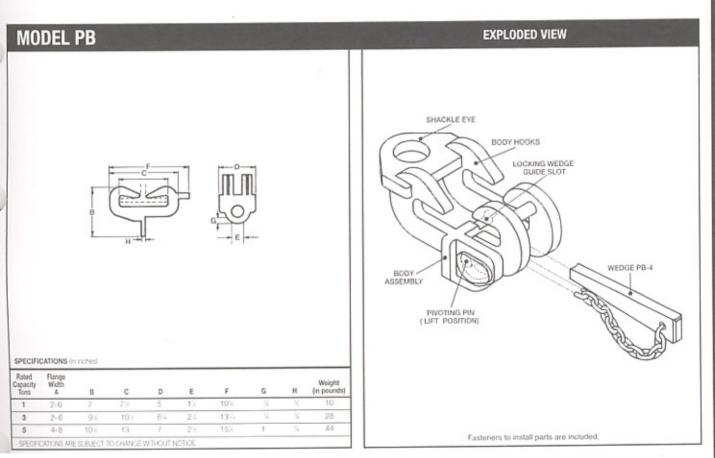


MODEL PB





As beam Attachment.



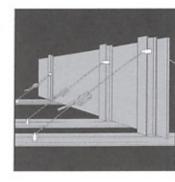


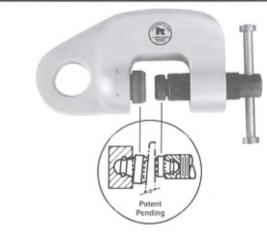
Model PC

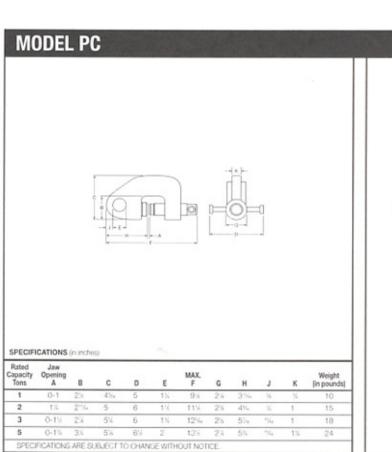
LOCKING SCREW TYPE

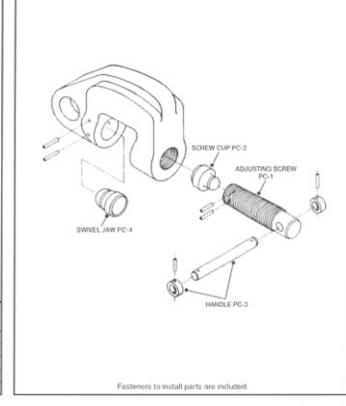
Eliminate expensive pad eyes with the Model PC...a new, light "pull clamp" used for pulling and aligning structural members and fabricated sections in the construction and maintenance for shipbuilding and other industries. These clamps are versatile and have a wide range jaw opening. They are secured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









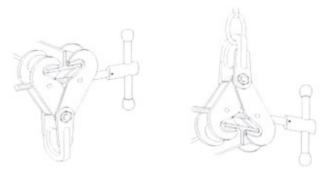


Model BC LOCKING SUSPENSION

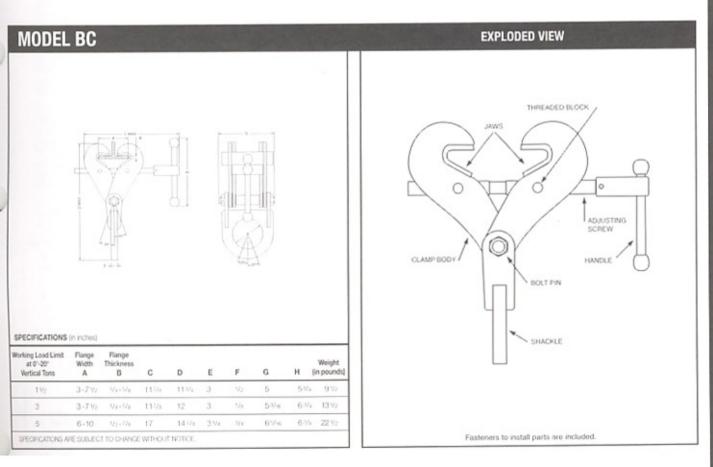
The Model BC is a multi-purpose beam clamp suitable for both lifting beams or providing suspension of hoists from beams or girders. Thereby eliminating the need for nuts, bolts and shackles. It is intended for use on the American standard or wide flange beams.



MODEL BC

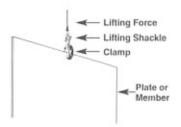


Model BC may be used to suspend hoists, chain falls, and platforms from beams, or lift beams



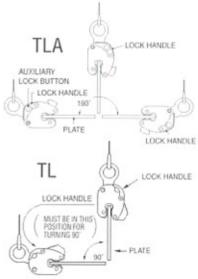
DEFINITIONS

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.



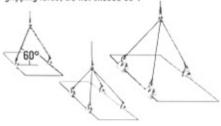
VERTICAL TURN/LIFT: A vertical turn/lift clamp is a vertical lifting clamp specifically intended to turn a single plate or member thru a ninety degree (90°) arc and back to vertical thru the same ninety degree (90°) are or from horizontal to vertical to horizontal thru a one hundred and eighty degree (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.

RATEO 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. UNDER LOADING CAN BE ALLOWED WHEN THE CONDITIONS AND WARNINGS ARE MET IN THIS MANUAL. UNDER LOADING OCCURS WHEN LESS THAN 50% OF LOAD RATING OF A CLAMP IS LIFTED

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

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 cam when the lock handle is moved to the "Lock Closed" position. When the handle is moved to the "Lock Open" the gripping cam 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" — "Lock 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

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

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.



RENFROE° repair 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 Repair Kit which includes all parts generally replaced due to normal wear. Parts not subjected to daily operating wear are not included in the Repair Kit and may be purchased separately.



KITS ARE AVAILABLE FOR THE FOLLOWING MODELS:

- MODEL AST
- 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 SCP
- MODEL SCPA
- MODEL SCSL
- MODEL SD
- MODEL SEA
- · MODEL SP

- 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 applica-

tions 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 PUR-CHASER AND OPERATOR SHOULD READ AND UNDERSTAND FULLY ALL OF THE PERTINENT INSTRUCTIONS AND RECOMMENDATIONS CON-TAINED IN THE OPERATOR'S MAN-UALS FOR THE PARTICULAR PRODUCT INVOLVED. The Operator's Manuals contain recommended application, operation and maintenance instructions for all RENFROE products listed in this catalog. A copy of the Operator's Manuals pertaining

carton with each product. In addition, Operator's Manuals may be obtained from authorized

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

to each such product is attached to the product or enclosed within the shipping

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RENFROE factory representatives are also available upon request at no charge to train and assist in establishing the proper use, inspection and maintenance of RENFROE products. Direct requests to J.C. Renfroe & Sons, Inc. at 1-800-874-8454 or by email:, sales@jcrenfroe.com.

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