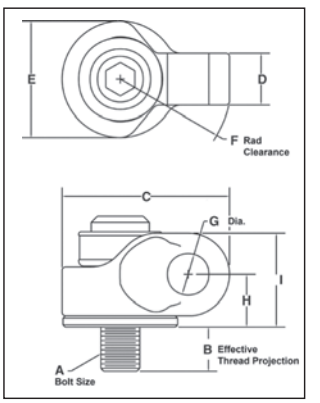
HR-1200 Side Pull Hoist Rings

HR-1200

- Wide range of capacities available:
  - 650 lbs. to 29,000 lbs.
  - Metric sizes from 0.3 tonnes to 13 tonnes.
- Body components are Alloy Steel - Quenched and Tempered.
- Rated at 100% of Working Load Limit for angles up to 90 degrees.
- Each product is stamped with a Product Identification Code (PIC) for material traceability, along with a Working Load Limit, and the name Crosby or "CG".
- Hoist Ring body is furnished with Yellow Chromate finish for improved corrosion resistance.
- Utilize standard Crosby Red Pin® Shackles to connect to wire rope or synthetic slings. (sold separately)
- Multiple bolt lengths available to meet specific application requirements.
- Individually Proof Tested to 2-1/2 times Working Load Limit.
- All sizes are **RFID EQUIPPED.**



Load Rated®

SEE APPLICATION AND WARNING INFORMATION
On Pages 206 - 207
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HR-1200 UNC Side Pull Hoist Rings

Weight Each (lbs.)	Working Load Limit (lbs.)*	HR-1200 Stock No.	Hoist Ring Bolt Torque (Ft.Lbs.)	Bolt Size A	Eff. Thread Proj. (In.) B	Dimensions (in) C	D	E	F	Dia. G	H	I	Recommended Shackles: Red Pin® Shackles 209,210,213, 215,2130,2150 Nominal Size (in.)	WLL (t)	Red Pin Web Shackles S-281 Web Size (in.)	WLL (t)
.35	650	1067700	7	5/16-18x1.50	.59	1.93	.72	1.00	1.56	.80	.85	1.43	1/2, 5/8	2, 3-1/4	2	3-1/4
.36	800	1067704	12	3/8-16x1.50	.59	1.93	.72	1.00	1.56	.80	.85	1.43	1/2, 5/8	2, 3-1/4	2	3-1/4
1.4	2000	1067708	28	1/2-13x2.00	.71	2.97	.97	2.00	2.13	.93	1.07	1.79	5/8, 3/4	3-1/4, 4-3/4	2, 1.5	3-1/4, 4-1/2
1.4	2000	1067712	28	1/2-13x2.50	1.21	2.97	.97	2.00	2.13	.93	1.07	1.79	5/8, 3/4	3-1/4, 4-3/4	2, 1.5	3-1/4, 4-1/2
1.5	3000	1067716	60	5/8-11x2.00	.71	2.97	.97	2.00	2.13	.93	1.07	1.79	5/8, 3/4	3-1/4, 4-3/4	2, 1.5	3-1/4, 4-1/2
1.5	3000	1067720	60	5/8-11x2.75	1.46	2.97	.97	2.00	2.13	.93	1.07	1.79	5/8, 3/4	3-1/4, 4-3/4	2, 1.5	3-1/4, 4-1/2
4.5	5000	1067724	100	3/4-10x2.75	.90	4.32	1.34	3.00	3.00	1.07	1.35	2.42	7/8	6-1/2	2	6-1/4
4.6	5000	1067728	100	3/4-10x3.50	1.65	4.32	1.34	3.00	3.00	1.07	1.35	2.42	7/8	6-1/2	2	6-1/4
4.6	6500	1067732	160	7/8-9x2.75	.90	4.32	1.34	3.00	3.00	1.07	1.35	2.42	7/8	6-1/2	2	6-1/4
4.8	6500	1067736	160	7/8-9x3.50	1.65	4.32	1.34	3.00	3.00	1.07	1.35	2.42	7/8	6-1/2	2	6-1/4
4.8	8000	1067740	230	1 -8x3.00	1.15	4.32	1.34	3.00	3.00	1.07	1.35	2.42	7/8	6-1/2	2	6-1/4
5.0	8000	1067744	230	1 -8x4.00	2.15	4.32	1.34	3.00	3.00	1.07	1.35	2.42	7/8	6-1/2	2	6-1/4
10.2	14000	1067748	470	1-1/4-7x4.5	2.22	5.59	1.57	3.75	3.91	1.47	1.92	3.42	1, 1-1/8, 1-1/4	8-1/2, 9-1/2, 12	3	8-1/2
23.5	17200	1067756	800	1-1/2-6x6.5	2.98	7.31	2.06	4.75	5.19	2.11	2.41	4.29	1-3/8, 1-1/2, 1-3/4	13-1/2, 17, 25	-	-
25.3	29000	1067764	1100	2 -4.5x6.5	2.98	7.31	2.06	4.75	5.19	2.11	2.41	4.29	1-3/8, 1-1/2, 1-3/4	13-1/2, 17, 25	-	-

*Ultimate Load is 5 times the Working Load Limit.

HR-1200M Metric Side Pull Hoist Rings

Weight Each (kg)	Working Load Limit (kg)*	HR-1200M Stock No.	Hoist Ring Bolt Torque (Nm)	Bolt Size A	Eff. Thread Proj. (mm) B	Dimensions (mm) C	D	E	F	G	H	I	Recommended Shackles: Red Pin® Shackles 209,210,213, 215,2130,2150 Nominal Size (in.)	WLL (t)	Red Pin Web Shackles S-281 Web Size (in.)	WLL (t)
.18	300	1067803	10	M8x1.25x40	16.9	49.0	18.3	25.4	39.6	20.3	21.6	36.3	1/2, 5/8	2, 3-1/4	2	3-1/4
.18	400	1067807	16	M10x1.50x40	16.9	49.0	18.3	25.4	39.6	20.3	21.6	36.3	1/2, 5/8	2, 3-1/4	2	3-1/4
.63	1000	1067811	38	M12x1.75x50	17.2	75.4	24.6	50.8	54.1	23.6	27.2	45.5	5/8, 3/4	3-1/4, 4-3/4	2, 1.5	3-1/4, 4-1/2
.68	1400	1067815	81	M16x2.0x60	27.2	75.4	24.6	50.8	54.1	23.6	27.2	45.5	5/8, 3/4	3-1/4, 4-3/4	2, 1.5	3-1/4, 4-1/2
2.0	2250	1067823	136	M20x2.5x75	28.1	110	34.0	76.2	76.2	27.2	34.4	61.5	7/8	6-1/2	2	6-1/4
2.2	3500	1067827	312	M24x3.0x80	33.1	110	34.0	76.2	76.2	27.2	34.4	61.5	7/8	6-1/2	2	6-1/4
4.5	6250	1067831	637	M30x3.5x120	65.1	142	39.9	95.3	99.3	37.3	48.8	86.9	1, 1-1/8,1-1/4	8-1/2, 9-1/2, 12	3	8-1/2
10.4	7750	1067835	1005	M36x4.0x150	60.6	186	52.3	121	132	53.6	61.2	109	1-3/8, 1-1/2,1-3/4	13-1/2, 17, 25	-	-
10.7	10000	1067839	1005	M42x4.5x160	70.6	186	52.3	121	132	53.6	61.2	109	1-3/8, 1-1/2,1-3/4	13-1/2, 17, 25	-	-
11.0	13000	1067843	1350	M48x5.0x160	70.6	186	52.3	121	132	53.6	61.2	109	1-3/8, 1-1/2,1-3/4	13-1/2, 17, 25	-	-

*Ultimate Load is 5 times the Working Load Limit.

SIDE PULL HR-1200

WARNINGS & APPLICATION INSTRUCTIONS

HR-1200

Hoist Ring Application / Assembly Instruction

- The Crosby side pull swivel hoist ring is designed to accept standard Crosby fittings to facilitate wider slings and quick attachment. In order to use the larger fittings, the load rating on the (shackle) fitting may be greater than the hoist ring frame. **Never exceed the Working Load Limit of the hoist ring frame.**
- Use swivel hoist ring only with a ferrous metal (steel, iron) or non-ferrous (i.e., aluminum) loads (workpiece). Do not leave threaded end of hoist ring in aluminum loads for long time periods due to corrosion.
- After determining the loads on each hoist ring, select the proper size hoist ring using the Working Load Limit ratings in Table 1 for UNC threads and Table 2 for Metric threads (on next page.)
- For Subsea or Metric environment application, use the HR-1200 CT Series hoist ring only.
- Drill and tap the workpiece to the correct size to a minimum depth of one-half the threaded shank diameter plus the threaded shank length.
- Install hoist ring to recommended torque with a torque wrench making sure the bushing flange is fully supported by the load (workpiece) surface. See rated load limit and bolt torque requirements imprinted on hoist ring body (See Table 1 or Table 2).
- Never use spacers between bushing flange and mounting surface.
- Always select proper lifting device for use with Swivel Hoist Ring (See Tables 1 & 2 on next page).
- Attach lifting device ensuring free fit to hoist shackle (See Figure 3).
- Apply partial load and check proper rotation and alignment of shackle. There should be no interference between load (workpiece) and hoist shackle (See Figure 1 and Figure 3).
- The Hoist ring should rotate into normal operating position, with shackle aligned with load as shown in Figure 3. If shackle is oriented as shown in Figure 4, **DO NOT LIFT**.
- **Special Note:** when a Hoist Ring is installed with a retention nut, the nut must have full thread engagement and must meet one of the following standards to develop the Working Load Limit (WLL).
  1. ASTM A-563 (A) Grade D Hex Thick
  2. (B) Grade DH Standard Hex
  3. SAE Grade 8 - Standard Hex

Hoist Ring Inspection / Maintenance

- Always inspect hoist ring before use.
- Regularly inspect hoist ring parts (Figure 2).
- For hoist rings used in frequent load cycles or on pulsating loads, the bolt threads should be periodically inspected by magnetic particle or dye penetrant.
- Do not use part showing cracks, nicks or gouges.
- Repair minor nicks or gouges to hoist frame by lightly grinding until surfaces are smooth. Do not reduce original dimension more than 10%. Do not repair by welding.

⚠ WARNING

- **Loads may slip or fall if proper Hoist Ring assembly and lifting procedures are not followed.**
- **A falling load may cause serious injury or death.**
- **Install hoist ring bolt to torque requirements listed in tables.**
- **The side pull hoist ring frame will be only one part of a lifting system with several components (i.e., shackles and slings). Never exceed the Working Load Limit of the hoist ring frame.**
- **Do not use damaged slings or chain. For inspection criteria, see ASME B30.9.**
- **Read and understand these instructions before using hoist ring.**
- **Use only genuine Crosby parts as replacements.**

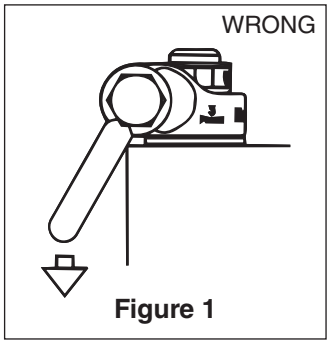


Figure 1

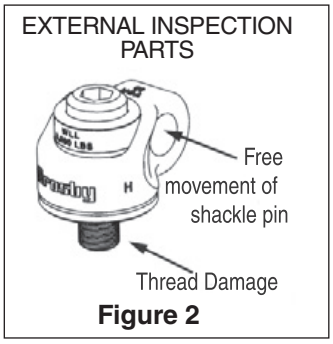


Figure 2

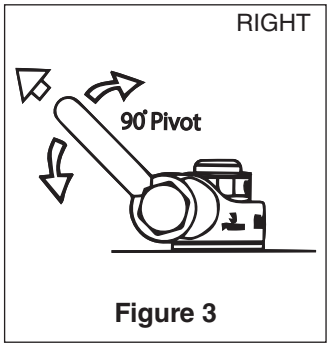


Figure 3

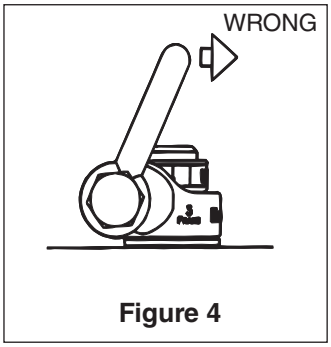


Figure 4

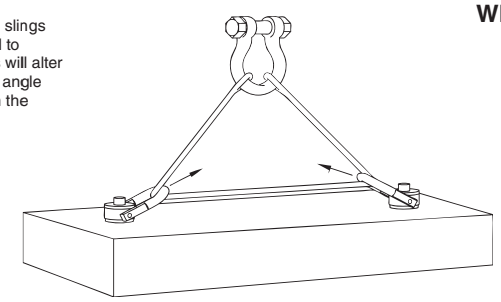
- Never use hoist ring that shows signs of corrosion, wear or damage.
- Never use hoist ring if components are bent or elongated.
- Always be sure threads on bolt and receiving tapped holes are clean, undamaged, and fit properly.
- Always check with torque wrench before using an already installed hoist ring.
- Always make sure there are no spacers (washers) used between bushing flange and the mounting surface. Remove any spacers (washers) and retorque before use.
- Always ensure free movement of shackle. The shackle should pivot 90° and the hoist ring should swivel 360° (See Figure 3).
- Always be sure total workpiece surface is in contact with hoist ring bushing mating surface. Drilled and tapped hole must be 90° to load (workpiece) surface.

OPERATING SAFETY

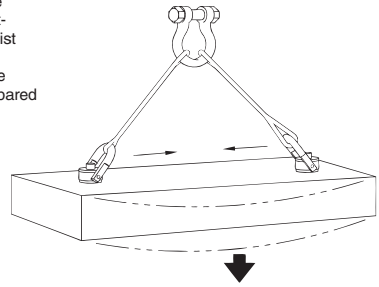
- Never exceed the capacity of the hoist ring, see Table 1 for UNC threads and Table 2 for Metric threads.
- When using lifting slings of two or more legs, make sure the forces in the legs are calculated using the angle from the horizontal sling angle to the leg and select the proper size swivel hoist ring to allow for the angular forces.

WRONG

Do not reeve slings from one bail to another. This will alter the load and angle of loading on the hoist ring



After slings have been properly attached to the hoist ring, apply force slowly. Watch the load and be prepared to stop applying force if the load starts buckling.



Buckling may occur if the load is not stiff enough to resist the compressive forces which result from the angular loading.

HR1200 Threads — TABLE 1

Frame Size	Working Load Limit * (lbs.)	Hoist Ring Bolt Torque in Ft. Lbs. †	Bolt Size ‡ (in.)	Effective Thread Projection Length (in.)	Recommended Shackles	
					Red Pin ® Shackles 209, 210, 213 215, 2130, 2150	Red Pin ® Web Shackles S-281
1	650†† 800††	7 12	5/16 - 18 x 1.5 3/8 - 18 x 1.5	.59 .59	1/2" - (2) 5/8" - (3-1/4)	2" - (3-1/4)
2	2000 2000†† 3000 3000††	28 28 60 60	1/2 - 13 x 2.0 1/2 - 13 x 2.5 5/8 - 11 x 2.0 5/8 - 11 x 2.75	.71 1.21 .71 1.46	5/8" - (3-1/4) 3/4" - (4-3/4)	2" - (3-1/4) 1-1/2" - (4-1/2)
3	5000 5000†† 6500 6500†† 8000 8000††	100 100 160 160 230 230	3/4 - 10 x 2.75 3/4 - 10 x 3.5 7/8 - 9 x 2.5 7/8 - 9 x 3.5 1 - 8 x 3.0 1 - 8 x 4.0	1.46 1.63 .90 1.68 1.15 2.15	7/8" - (6-1/2)	2" - (6-1/4)
4	14000	470	1-1/4 - 7 x 4.5	2.22	1" - (8-1/2) 1-1/8" - (9-1/2) 1-1/4" - (12)	3" - (8-1/2)
5	17200 29000	800 1100	1-1/2 - 6 x 6.5 2 - 4-1/2 x 6.5	2.88 2.98	1-3/8" - (13-1/2) 1-1/2" - (17) 1-3/4" - (25)	—

HR1200M UNC Metric Threads — TABLE 2

Frame Size	Working Load Limit * (kg)	Hoist Ring Bolt Torque in Nm †	Bolt Size ‡ (mm)	Effective Thread Projection Length (mm)	Recommended Shackles	
					Red Pin ® Shackles 209, 210, 213 215, 2130, 2150	Red Pin ® Web Shackles S-281
1	300 400	10 16	M8 x 1.25 x 40 M10 x 1.5 x 40	16.9 16.9	1/2" - (2) 5/8" - (3-1/4)	2" - (3-1/4)
2	1000 1400	38 81	M12 x 1.75 x 50 M16 x 2.00 x 60	17.2 27.2	5/8" - (3-1/4) 3/4" - (4-3/4)	2" - (3-1/4) 1-1/2" - (4-1/2)
3	2250 3500	136 312	M20 x 2.50 x 75 M24 x3.00 x 80	28.1 33.1	7/8" - (6-1/2)	2" - (6-1/4)
4	6250	637	M30 x 3.5 x 120	65.1	1" - (8-1/2) 1-1/8" - (9-1/2) 1-1/4" - (12)	3" - (8-1/2)
5	7750 10000 13000	1005 1005 1350	M36 x 4.0 x 150 M42 x 4.5 x 160 M48 x 5.0 x 160	60.6 70.6 70.6	1-3/8" - (13-1/2) 1-1/2" - (17) 1-3/4" - (25)	—

Designed to be used with Ferrous workpiece only.

* Ultimate load is 5 times the Working Load Limit. Individually proof tested to 2-1/2 times the Working Load Limit.
† Tightening torque values shown are based upon threads being clean, dry and free of lubrication.
†† Long bolts are designed to be used with soft metal (i.e., aluminum) workpiece. While the long bolts may also be used with ferrous metal (i.e., steel & iron) workpieces, short bolts are designed for ferrous workpieces only.
‡ Bolt specification is a Grade 8 Alloy socket head cap screw to ASTM A574. All threads are UNC - 3A.
‡‡ Bolt specification is a Grade 12.9 Alloy socket head cap to DIN 912. All threads are metric (ASME/ANSI B18.3.1m).