

Forged Wire Rope Clips



SEE APPLICATION AND WARNING INFORMATION

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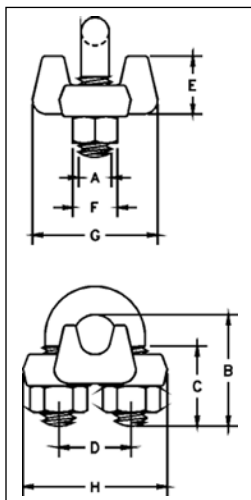
G-450



- Each base has a Product Identification Code (PIC) for material traceability, the name CROSBY or CG, and a size forged into it.
- Based on the catalog breaking strength of wire rope, Crosby wire rope clips have an efficiency rating of 80% for 3-4mm to 22mm sizes, and 90% for sizes 24-26mm through 90mm.
- Entire Clip-Galvanized to resist corrosive and rusting action.
- Sizes 1/8" through 2-1/2" and 3" (3mm through 65mm and 75-78mm) have forged bases.
- All Clips are individually bagged or tagged with proper application instructions and warning information.
- Clip sizes up through 1-1/2" (38mm) have rolled threads.
- Meets or exceeds all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, these wire rope clips meet other critical performance requirements including fatigue life, impact properties and material traceability, not addressed by ASME B30.26.
- Look for the Red-U-Bolt®, your assurance of Genuine Crosby Clips.

Crosby Clips, all sizes except 68-72mm and 85-90mm meet the performance requirements of EN13411:2003. Crosby Clips, all sizes 6 mm and larger, meet the performance requirements of Federal Specification FF-C-450 TYPE 1 CLASS 1, except for those provisions required of the contractor. For additional information, see page 444.

G-450 Crosby® Clips



Rope Size		G-450 Stock No.	Std. Package Qty.	Weight Per 100 (kg)	Dimensions (mm)							
(mm)	(in.)				A	B	C	D	E	F	G	H
3-4*	1/8*	1010015	100	2.72	5.60	18.3	11.2	11.9	10.4	9.65	20.6	23.9
5*	3/16*	1010033	100	4.54	6.35	24.6	14.2	15.0	12.7	11.2	23.9	29.5
6-7	1/4	1010051	100	8.62	7.85	26.2	12.7	19.1	16.8	14.2	30.2	36.6
8	5/16	1010079	100	12.7	9.65	35.1	19.1	22.4	18.3	17.5	33.3	42.9
9-10	3/8	1010097	100	21.8	11.2	38.1	19.1	25.4	23.1	19.1	41.4	49.3
11	7/16	1010113	50	35.4	12.7	47.8	25.4	30.2	26.2	22.4	46.0	58.0
12-13	1/2	1010131	50	36.3	12.7	47.8	25.4	30.2	28.7	22.4	48.5	58.0
14-15	9/16	1010159	50	49.4	14.2	57.0	31.8	33.3	31.0	23.9	52.5	63.5
16	5/8	1010177	50	49.9	14.2	60.5	31.8	33.3	34.0	23.9	52.5	63.5
18-20	3/4	1010195	25	64	15.7	70.0	36.6	38.1	35.8	26.9	57.0	72.0
22	7/8	1010211	25	96	19.1	79.0	41.1	44.5	40.4	31.8	62.0	80.5
24-26	1	1010239	10	114	19.1	89.0	46.0	47.8	45.2	31.8	67.0	88.0
28-30	1-1/8	1010257	10	128	19.1	98.5	51.0	51.0	48.5	31.8	71.5	91.0
32-34	1-1/4	1010275	10	199	22.4	108	54.0	59.4	55.5	36.6	79.5	105
36	1-3/8	1010293	10	200	22.4	118	58.5	59.4	58.5	36.6	79.5	106
38	1-1/2	1010319	10	247	22.4	125	60.5	66.5	62.0	36.6	86.5	113
41-42	1-5/8	1010337	Bulk	319	25.4	135	66.5	70.0	67.5	41.4	92.0	121
44-46	1-3/4	1010355	Bulk	424	28.7	146	70.0	77.5	74.5	46.0	97.0	134
48-52	2	1010373	Bulk	590	31.8	164	76.0	86.0	77.0	51.0	113	149
56-58	2-1/4	1010391	Bulk	726	31.8	181	81.0	98.5	81.0	51.0	114	162
62-65	2-1/2	1010417	Bulk	862	31.8	195	87.5	105	93.5	51.0	119	168
** 68-72	** 2-3/4	1010435	Bulk	1043	31.8	211	90.5	111	124	51.0	127	175
75-78	3	1010453	Bulk	1406	38.1	233	98.5	121	119	60.5	149	194
** 85-90	** 3-1/2	1010426	Bulk	1814	38.1	273	114	140	152	60.5	157	213

* Electro-plated U-Bolt and Nuts. ** 70mm and 89mm base is made of cast steel.

- Each base has a Product Identification Code (PIC) for material traceability, the name CROSBY or "CG", and a size forged into it.
- Entire clip is made from 316 Stainless Steel to resist corrosive and rusting action.
- All components are Electro-Polished.
- All Clips are individually bagged or tagged with proper application instructions and warning information.

SS-450



SS-450 Stainless Steel Wire Rope Clips

Rope Size		SS-450 Stock No.	Std. Package Qty.	Weight Per 100 (kg)	Dimensions (mm)							
(mm)	(in.)				A	B	C	D	E	F	G	H
3-4	1/8	1011250	Bulk	2.72	5.60	18.3	11.2	11.9	10.4	9.65	20.6	23.9
5	3/16	1011261	Bulk	4.54	6.35	24.6	14.2	15.0	12.7	11.2	23.9	29.5
6-7	1/4	1011272	Bulk	9.07	7.85	26.2	12.7	19.1	16.8	14.2	30.2	36.6
9-10	3/8	1011283	Bulk	21.3	11.2	38.1	19.1	25.4	23.1	19.1	41.4	49.3
12-13	1/2	1011305	Bulk	34.9	12.7	47.8	25.4	30.2	28.7	22.4	48.5	58.0
16	5/8	1011327	Bulk	48.1	14.2	60.5	31.8	33.3	34.0	23.9	52.5	63.5

CROSBY® CLIPS WARNINGS AND APPLICATION INSTRUCTIONS



G-450
(Red-U-Bolt®)



SS-450
(316 Stainless Steel)

⚠ WARNING

- Failure to read, understand, and follow these instructions may cause death or serious injury.
- Read and understand these instructions before using clips.
- Match the same size clip to the same size wire rope.
- Prepare wire rope end termination only as instructed.
- Do not use with plastic coated wire rope.
- Apply first load to test the assembly. This load should be of equal or greater weight than loads expected in use. Next, check and retighten nuts to recommended torque (See Table 1).

Efficiency ratings for wire rope end terminations are based upon the minimum breaking force of wire rope. The efficiency rating of a properly prepared loop or thimble-eye termination for clip sizes 32 mm through 22mm is 80%, and for sizes 25.5 mm through 88.9 mm is 90%.

The number of clips shown (see Table 1) is based upon using RRL or RLL wire rope, 6 x 19 or 6 x 36 Class, FC or IWRC; IPS or XIP, XXIP. If Seale construction or similar large outer wire type construction in the 6 x 19 Class is to be used for sizes 1 inch and larger, add one additional clip. If a pulley (sheave) is used for turning back the wire rope, add one additional clip.

The number of clips shown also applies to rotation-resistant RRL wire rope, 8 x 19 Class, IPS, XIP, XXIP sizes 1-1/2 inch and smaller; and to rotation-resistant RRL wire rope, 19 x 7 Class, IPS, XIP, XXIP sizes 1-3/4 inch and smaller.

For other classes of wire rope not mentioned above, we recommend contacting Crosby Engineering to ensure the desired efficiency rating.

For elevator, personnel hoist, and scaffold applications, refer to ANSI A17.1 and ANSI A10.4. These standards do not recommend U-Bolt style wire rope clip terminations. The style wire rope termination used for any application is the obligation of the user.

For OSHA (Construction) applications, see OSHA 1926.251.

1. Refer to Table 1 in following these instructions. Turn back specified amount of rope from thimble or loop.



Figure 1

Apply first clip one base width from dead end of rope. Apply U-Bolt over dead end of wire rope – live end rests in saddle (Never saddle a dead horse!). Use torque wrench to tighten nuts evenly, alternate from one nut to the other until reaching the recommended torque. (See Figure 1)

2. When two clips are required, apply the second clip as near the loop or thimble as possible. Use torque wrench to tighten nuts evenly, alternating until reaching the recommended torque. When more than two clips are required, apply the second clip as near the loop or thimble as possible, turn nuts on second clip firmly, but do not tighten. (See Figure 2)



Figure 2

3. When three or more clips are required, space additional clips equally between first two – take up rope slack – use torque wrench to tighten nuts on each U-Bolt evenly, alternating from one nut to the other until reaching recommended torque. (See Figure 3)



Figure 3

4. If a pulley (sheave) is used in place of a thimble, add one additional clip. Clip spacing should be as shown. (See Figure 4)

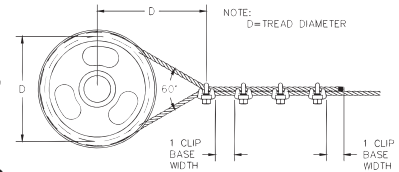


Figure 4

5. WIRE ROPE SPLICING PROCEDURES:

The preferred method of splicing two wire ropes together is to use inter-locking turnback eyes with thimbles using the recommended number of clips on each eye (See Figure 5).

An alternate method is to use twice the number of clips as used for a turnback termination. The rope ends are placed parallel to each other, overlapping by twice the turnback amount shown in the application instructions. The minimum number of clips should be installed on each dead end (See Figure 6). Spacing, installation torque, and other instructions still apply.

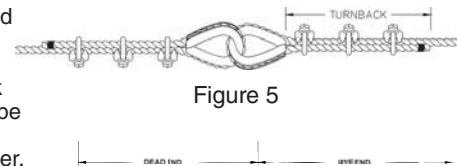


Figure 5



Figure 6

6. IMPORTANT

Apply first load to test the assembly. This load should be of equal or greater weight than loads expected in use. Next, check and use torque wrench to retighten nuts to recommended torque. In accordance with good rigging and maintenance practices, the wire rope end termination should be inspected periodically for wear, abuse, and general adequacy.

Table 1

Clip Size (in.)	Rope Size (mm)	Minimum No. of Clips	Amount of Rope to Turn Back in mm	* Torque in Nm
1/8	3-4	2	85	6.1
3/16	5	2	95	10.2
1/4	6-7	2	120	20.3
5/16	8	2	133	40.7
3/8	9-10	2	165	61.0
7/16	11-12	2	178	68
1/2	13	3	292	88
9/16	14-15	3	305	129
5/8	16	3	305	129
3/4	18-20	4	460	176
7/8	22	4	480	305
1	24-25	5	660	305
1-1/8	28-30	6	860	305
1-1/4	33-34	7	1120	488
1-3/8	36	7	1120	488
1-1/2	38-40	8	1370	488
1-5/8	41-42	8	1470	583
1-3/4	44-46	8	1550	800
2	48-52	8	1800	1017
2-1/4	56-58	8	1850	1017
2-1/2	62-65	9	2130	1017
2-3/4	68-72	10	2540	1017
3	75-78	10	2690	1627
3-1/2	85-90	12	3780	1627

If a pulley (sheave) is used for turning back the wire rope, add one additional clip. See Figure 4.

If a greater number of clips are used than shown in the table, the amount of turnback should be increased proportionately.

*The tightening torque values shown are based upon the threads being clean, dry, and free of lubrication.