



Applications

Wire rope clips are used on wire rope eye-loop connections or complete loops, end-to-end connections where socketing or splicing is not feasible or when a temporary joint is required.

Range

Van Beest offers a wide range of wire rope clips, specifically standardized models such as EN13411-5, US Federal Specification wire rope clips and DIN wire rope clips.

Design

The Green Pin® wire rope clips are drop forged and have a bridge with grooves to fasten the wire rope properly in the clip; the DIN wire rope clips have a malleable base, without grooves.

Finish

The finish is either electro-galvanized or hot dipped galvanized, unless otherwise specified.

Certification

Upon request, all wire rope clips can be supplied with a works certificate.

Instructions for use

Wire rope clips should be inspected before use to ensure that:

- all markings are legible;
- the wire rope clip is free from nicks, gouges and cracks;
- a wire rope clip with the correct dimension has been selected;
- never repair or reshape a wire rope clip by welding, heating or bending as this may affect the performance.

The wire rope clip should be fitted to the wire rope as shown in the figures.

The bridge of the wire rope clip should always be placed on the load bearing part of the rope. The U-bolt of the clip should be placed on the rope tail, also known as the dead end of the rope.

Turn back enough wire rope length so that the required minimum number of clips can be installed according to the instructions below.

The first clip must be placed one bridge width from the turned back rope tail or dead end of the rope, according to figure 1. Tighten the nuts to the specified torque.

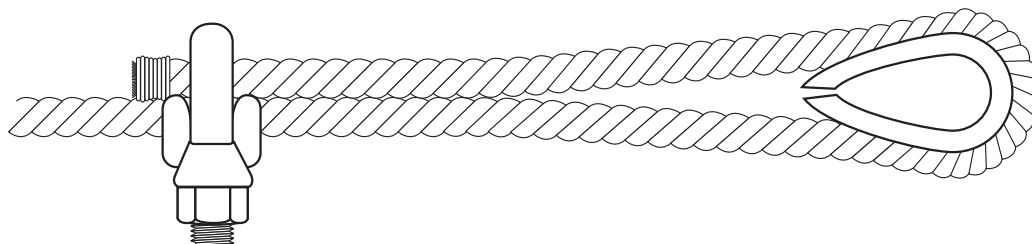


Figure 1

The second clip must be placed immediately against the thimble but nevertheless in such a position that the correct tightening of the clip does not damage the outer wires of the wire rope (figure 2). Tighten the nuts firmly but not yet to the specified torque.

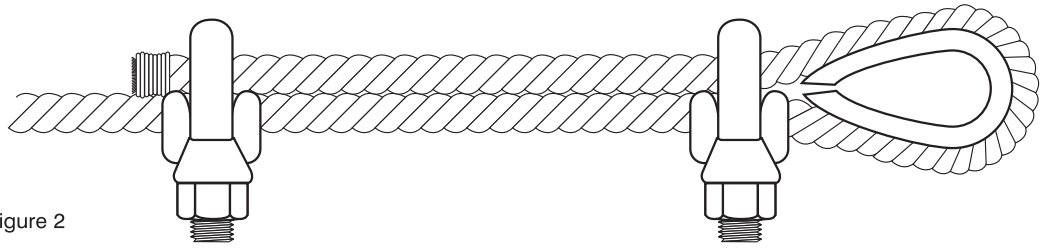


Figure 2

The following clips should be placed on the wire rope between the first and second clip in such a way that they are separated by at least 1½ times the clip-width with a maximum of 3 times the clip-width, according to figure 3.

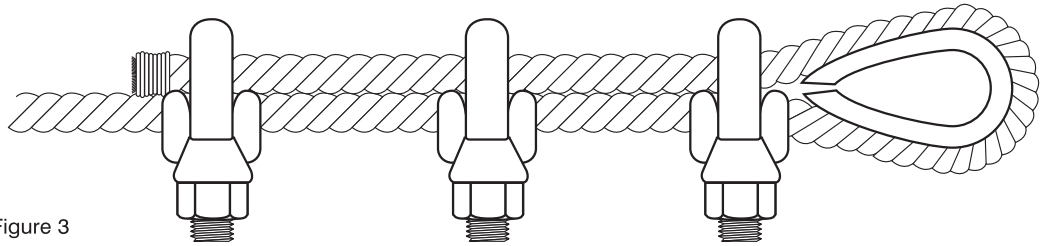


Figure 3

Apply light tension on the rope and tighten all nuts evenly, alternating until reaching the specified torque.

During assembly and before the rope is taken into service, the nuts must be tightened once again to the prescribed torque. After the load is applied for the first time, the torque value must be checked again and corrected if necessary. Periodically re-tightening of the nuts must be done at 10.000 cycles (heavy usage), 20.000 cycles (moderate usage) or 50.000 cycles (light usage). If cycles are unknown, a fixed time period could be used, e.g. every 3 months, 6 months, annually.

The torque values and the minimum number of clips to be applied, in relation to the rope size, are given in the following tables.

diameter wire rope inches	diameter wire rope mm	min. no of clips required	length of rope to turn back mm	torque value Nm	torque value Ft.Lbs
1/8	3-4	2	85	6.1	4.5
3/16	5	2	95	10.2	7.5
1/4	6-7	2	120	20.3	15
5/16	8	3	133	40.7	30
3/8	9-10	3	165	61	45
7/16	11-12	3	178	88	65
1/2	13	3	292	88	65
9/16	14-15	3	305	129	95
5/8	16	3	305	129	95
3/4	18-20	4	460	176	130
7/8	22	4	480	305	225
1	24-25	5	660	305	225
1 1/8	28-30	6	860	305	225
1 1/4	32-34	7	1120	488	360
1 3/8	36	7	1120	488	360
1 1/2	38-40	8	1370	488	360
1 5/8	41-42	8	1470	583	430
1 3/4	44-46	8	1550	800	590
2	48-52	8	1800	1017	750
2 1/4	56-58	8	1850	1017	750
2 1/2	62-65	9	2130	1017	750
2 3/4	68-72	10	2540	1017	750
3	75-78	10	2690	1627	1200

Table 1, Green Pin® wire rope clips generally to EN 13411-5 Type B, required number and torque value

diameter wire rope	min. no of clips required	torque value	torque value
mm		Nm	Ft.Lbs
5	3	2	1.5
6.5	3	3.5	2.6
8	4	6	4.4
10	4	9	6.6
12	4	20	14.8
13	4	33	24.3
14	4	33	24.3
16	4	49	36
19	5	68	50
22	5	107	79
26	5	147	108
30	6	212	156
34	6	296	218
40	6	363	268

Table 2, Wire rope clips generally to EN 13411-5 Type A, required number and torque value

The efficiency of a wire rope termination made with wire rope clips will depend on the correct placement on the ropes and on the care and skill of the fitting and tightening of the clips. With inadequately tightened nuts or with an insufficient number of wire rope clips the rope end may slide through the clips at a very early stage in loading.

A number of factors can adversely affect the tightness of the clips on ropes, such as:

- the nut may be tight on the thread, yet not tight against the bridge;
- contamination of the thread by dirt, oil or corrosion products, which may prevent the correct tightening of the nut.

Forged wire rope clips provide greater bearing surface and more consistent strength than malleable cast iron clips.

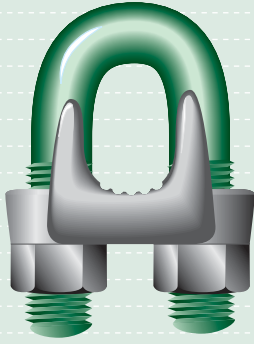
Suitable use of wire rope clips to EN13411-5 standards include suspending static loads and single use lifting operations which have been assessed by a competent person taking into account appropriate safety factors.

Wire rope clips should not be used on the following applications:

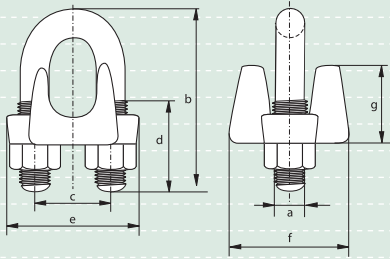
- hoist ropes in mines;
- rope drives for cranes in steel works and rolling mills;
- permanent fastening of ropes in other rope drives;
- rope terminations for load suspension devices in the operation of lifting appliances except in the case of lifting tackles where these are produced for a special application and are not re-used.

It is required that the products are regularly inspected and that the inspection should take place in accordance with the safety standards given in the country of use. This is required because the products in use may be affected by wear, misuse, overloading etc. with a consequence of deformation and alteration of the material structure.

Inspection should take place at least every six months and even more frequently when the products are used in severe operating conditions.



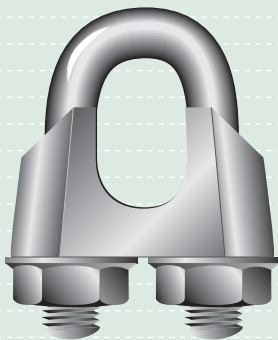
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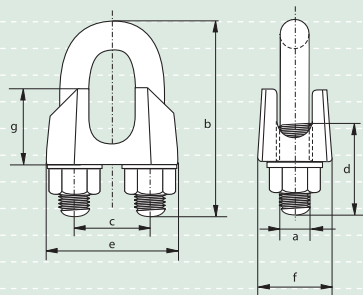
Green Pin® wire rope clips generally to EN 13411-5 Type B

- **Material** : Bridge : drop forged high tensile steel SAE 1035 or SAE 1045
U-bolt : SAE 1015
- **Standard** : EN 13411-5 Type B
Formerly U.S. Federal Specification FF-C-450D
- **Finish** : hot dipped galvanized
nuts for diameter bow 5 and 6 mm are electro-galvanized
- **Certification** : a works certificate can be supplied upon request

diameter wire rope	diameter	length bow	width inside	length thread	length base	thickness base	height base	weight per 100 pcs	
	a mm	b mm	c mm	d mm	e mm	f mm	g mm	mm	
$\frac{1}{8}$	4	5	24	12	11	24	21	10	2
$\frac{3}{16}$	5	6	31	15	13	29	24	13	4
$\frac{1}{4}$	7	8	34	19	13	37	30	18	8
$\frac{5}{16}$	8	10	45	22	19	43	33	19	14
$\frac{3}{8}$	10	11	49	26	19	49	42	25	19
$\frac{7}{16}$	11	12	60	30	25	58	46	26	31
$\frac{1}{2}$	13	13	61	30	25	58	48	31	34
$\frac{9}{16}$	15	14	72	33	32	63	52	31	36
$\frac{5}{8}$	16	14	74	33	32	64	54	36	45
$\frac{3}{4}$	20	16	86	38	37	72	57	38	68
$\frac{7}{8}$	22	19	98	45	41	80	62	40	108
1	26	19	108	48	46	88	67	47	113
$1 \frac{1}{8}$	30	19	117	51	51	91	73	48	140
$1 \frac{1}{4}$	34	22	130	59	54	105	79	56	207
$1 \frac{3}{8}$	36	22	140	60	59	108	79	58	234
$1 \frac{1}{2}$	40	22	147	66	60	112	85	64	266
$1 \frac{5}{8}$	42	25	161	70	67	121	92	67	329
$1 \frac{3}{4}$	46	29	174	78	70	134	97	76	441
2	52	32	195	86	78	150	113	85	603
$2 \frac{1}{4}$	58	32	213	98	81	162	116	100	707
$2 \frac{1}{2}$	65	32	227	105	87	168	119	113	806
$2 \frac{3}{4}$	72	32	243	112	91	174	127	124	1000
3	78	38	271	121	98	194	135	136	1440



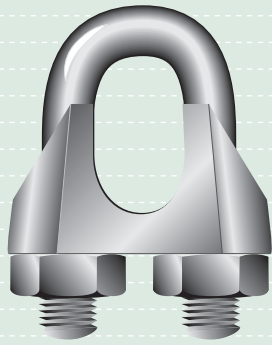
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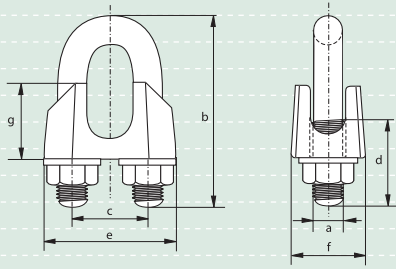
Wire rope clips generally to EN 13411-5 Type A

- **Material** : Bridge : malleable steel
U-bolt : mild steel
- **Standard** : EN 13411-5 Type A
Formerly DIN 1142
- **Finish** : electro-galvanized
- **Certification** : a works certificate can be supplied upon request

diameter wire rope	diameter	length bow	width inside	length thread	length base	thickness base	height base	weight per 100 pcs
	a mm	b mm	c mm	d mm	e mm	f mm	g mm	kg
5	4	25	12	14	25	13	13	2
6.5	5	32	14	17	30	16	14	4
8	7	41	18	20	39	20	18	8.2
10	7	46	20	24	40	20	21	9.2
12	10	56	24	28	50	25	24	21.5
13	11	64	29	29	55	28	29	27.5
14	12	66	28	31	59	30	28	39.5
16	12	76	34	35	64	32	35	43
19	12	83	37	36	68	33	40	49
22	14	96	41	40	74	34	44	68
26	18	111	46	50	84	38	51	117
30	18	127	54	55	95	41	59	140
34	22	141	60	60	105	45	67	213
40	24	159	68	65	117	49	77	268



E-6220



Wire rope clips generally to DIN 741

- **Material** : Bridge : casted
: U-bolt : mild steel
- **Standard** : DIN 741
- **Finish** : electro-galvanized
- **Certification** : a works certificate can be supplied upon request

diameter wire rope	diameter a	length bow b	width inside c	length thread d	length base e	thickness base f	height base g	weight per 100 pcs
mm	mm	mm	mm	mm	mm	mm	mm	kg
3	4	20	9	12	21	10	10	1.4
5	5	24	11	13	23	11	10	1.5
6	5	28	13	15	26	12	11	2.1
8	6	34	16	19	30	14	15	4.1
10	8	42	19	22	34	18	17	6.8
11	8	44	20	22	36	19	18	7.2
13	10	55	24	30	42	23	21	13
14	10	57	25	30	44	23	22	13.5
16	12	63	29	33	50	26	26	21
19	12	75	32	38	54	29	30	28
22	14	85	37	44	61	33	34	40
26	14	95	41	45	65	35	37	44
30	16	110	48	50	74	37	43	66
34	16	120	52	55	80	42	50	85
40	16	140	58	60	88	45	55	104