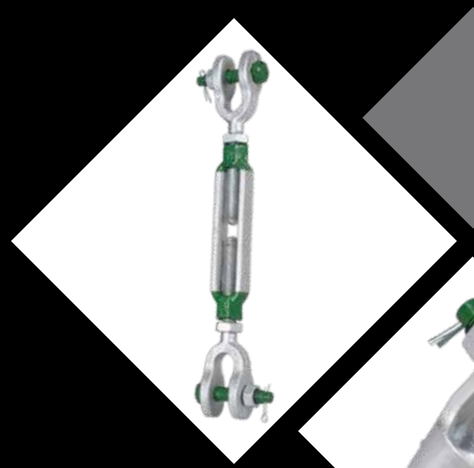

4

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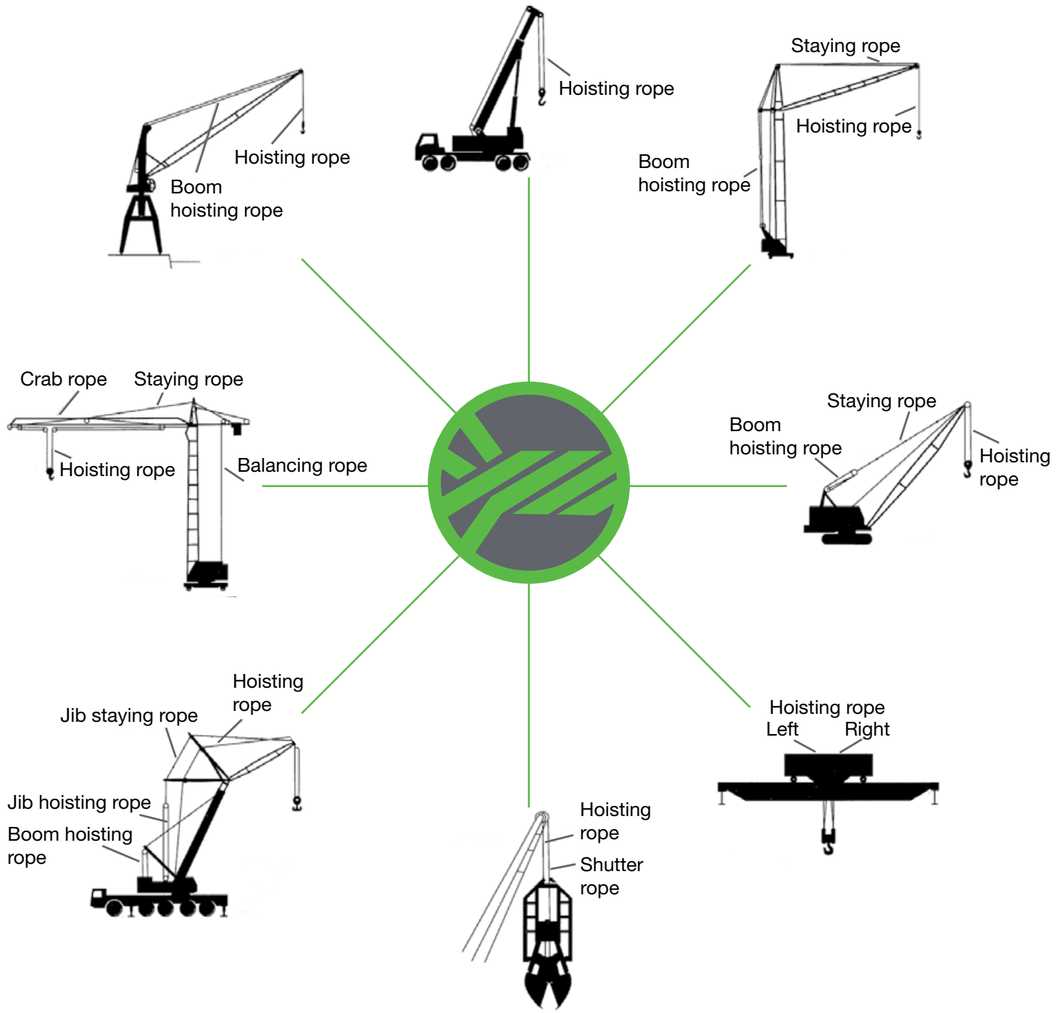
Wire Rope and Accessories

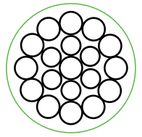
Technical information

Crane Types and Rope Names

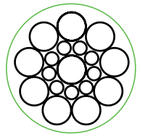


Strand Designs

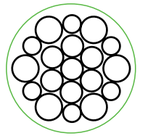
Standard constructions



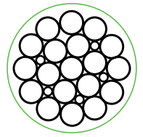
Round Strand
All rope wires have the same diameter.



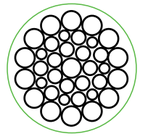
Seale 1x19 (9/9/1)
Every layer has a different wire diameter. All layers have the same amount of wires.



Warrington 1x19 (6+6/6/6/1)
The outer layer consists of wires with two different diameters.



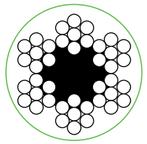
Filler wires 1x25 (12/6F+6/1)
The wires in the outer and inner layers have the same diameter. The space between the layers is filled up by wires with another diameter.



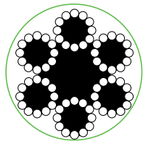
Warrington - Seale 1x36 (14/7+7/7/1)
This design is a combination of Warrington and Seale.

Example of rope sections

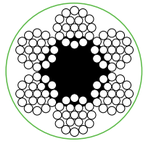
Standard constructions



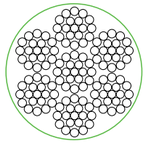
6x7 + FC



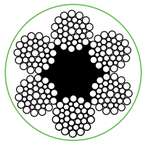
6x12 +7 FC



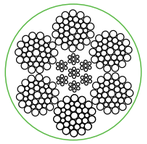
6x19 +FC



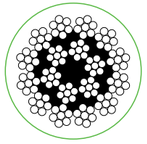
6x19 +WSC



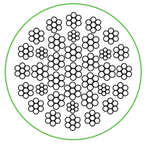
6X36 WS+FC



6x36 WS+IWRC



18x7 +WSC



35x7

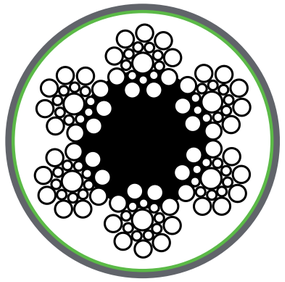
Standard steel wire

6x19 + FC

According to EN 12385-4
Construction: 6x19+FC
Surface treatment: Galvanized

Fields of application

- Cranes
- Lifting equipment
- Hoists
- Elevators
- Winches
- Ski lifts



Fill factor. F = 49%

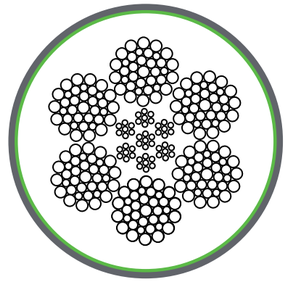
Nominal diameter D		Approx. mass mm²	Weight ca kgs/100m	Min. breaking load	
mm	tol. %			1770 N/mm² kN	180 kp/mm² kp
3	+8-0	3.2	3.0	4.9	500
4	+7-0	5.7	5.4	8.7	887
5	+7-0	9.6	9.0	14.6	1,490
6	+6-0	13.8	12.9	21.0	2,140
7	+6-0	18.8	17.6	28.6	2,920
8	+5-0	24.6	23.0	37.4	3,810
9	+5-0	31.2	29.1	47.3	4,830
10	+5-0	38.5	35.9	58.4	5,960
11	+5-0	46.5	43.3	70.7	7,210
12	+5-0	55.4	51.7	84.1	8,580
13	+5-0	65.0	60.7	98.7	10,100
14	+5-0	75.4	70.4	114	11,700
16	+5-0	98.5	91.9	150	15,300
18	+5-0	125.0	116	189	19,300
20	+5-0	154.0	144	234	23,800
22	+5-0	186.0	174	283	28,800
24	+5-0	222.0	207	336	34,300
26	+5-0	260.0	243	395	40,300
28	+5-0	302.0	281	458	46,700
32	+5-0	394.0	368	598	61,000
36	+5-0	499.0	465	757	77,200

6x36 WS + IWRC

According to EN 12385-4
Construction: 6x36 WS + IWRC
Surface treatment: Galvanized

Fields of application

- Cranes
- Winches
- Bar
- Towing
- Offshore
- Elevator
- Forrest winches
- Pile driver
- Excavator



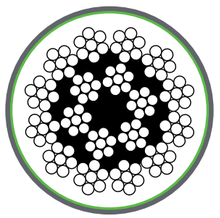
Fill factor. F = 58%

Nominal diameter D		Approx. mass mm²	Weight ca kgs/100m	Min. breaking load			
mm	tol. %			1770 N/mm² kN	180 kp/mm² kp	1960 N/mm² kN	200 kp/mm² kp
10	+5-0	46	40.9	63.0	6,420	69.8	7,120
11	+5-0	55	49.5	76.2	7,770	84.5	8,620
12	+5-0	66	58.9	90.7	9,230	100	10,200
13	+5-0	77	69.1	106	10,800	118	12,040
14	+5-0	89	80.2	124	12,600	137	13,970
16	+5-0	117	105	161	16,400	179	18,260
18	+5-0	148	133	204	20,700	226	23,050
19	+5-0	166	148	227	23,150	252	25,700
20	+5-0	182	164	252	25,900	279	28,460
22	+5-0	220	198	305	31,000	338	34480
24	+5-0	262	236	363	36,900	402	41,000
26	+5-0	308	276	426	43,400	472	48,140
28	+5-0	357	321	494	50,300	547	55,790
30	+5-0	410	376	566	57,700	628	64,060
32	+5-0	466	419	645	65700	715	72,930
34	+5-0	532	473	728	74,200	800	81,600
36	+5-0	590	530	817	83,300	904	92,200
38	+5-0	664	591	910	92,800	1,008	102,800
40	+5-0	729	654	1,010	103,000	1,120	114,200
44	+5-0	882	792	1,220	124,400	1,350	137,700
48	+5-0	1,050	942	1,450	147,900	1,610	164,200
51	+5-0	1,184	1,100	1,640	167,000	1,816	185230
54	+5-0	1,328	1,240	1,840	188,000	2,036	207,670
57	+5-0	1,479	1,390	2,050	209,000	2,269	231,440
60	+5-0	1,694	1,560	2,270	231,540	2,514	256,430
64	+5-0	1,866	1,730	2,688	274,000	2,860	291,720

Stainless steel wire

18x7 + 1 WSC

According to EN 12385-4
Construction: 18x7 + 1 WSC
Surface treatment: Galvanized



Fill factor. F = 52%

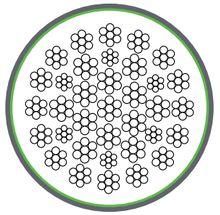
Fields of application

- Building cranes

Nominal diameter D		Approx. mass mm²	Weight ca kgs/100m	Min. breaking load	
mm	tol. %			1960 N/mm² kN	200 kp/mm² kp
5	+6-1	10.2	10	15.6	1,591
6	+5-1	14.7	14.5	23.1	2,350
7	+5-1	20.0	19.7	31.5	3,210
8	+4-1	26.1	24	41.1	4,190
9	+4-1	33.1	31	52.1	5,310
10	+4-1	40.8	38	64.3	6,550
11	+4-1	49.4	46	77.8	7,930
12	+4-1	55.8	55	92.6	9,440

35x7 Non-rotating

According to EN 12385-4
Construction: 35x7
Surface treatment: Galvanized



Fill factor. F = 61%

Fields of application

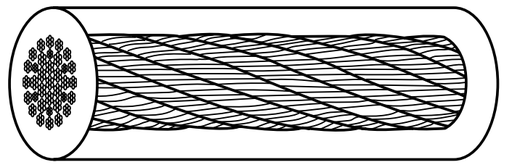
- Building cranes
- Mobile cranes

Nominal diameter D		Approx. mass mm²	Weight ca kgs/100m	Min. breaking load 1960 N/mm² kN
mm	tol. %			
8	+5-0	30.7	29.1	45.2
9	+5-0	38.9	36.8	57.2
10	+5-0	48.0	45.4	70.6
11	+5-0	58.1	54.9	85.4
12	+5-0	69.1	65.4	102.0
13	+5-0	81.1	76.7	119.0
14	+5-0	94.1	89.0	138.0
16	+5-0	123.0	116.0	181.0
18	+5-0	156.0	147.0	229.0
20	+5-0	192.0	182.0	282.0
22	+5-0	232.0	220.0	342.0
24	+5-0	276.0	262.0	406.0
26	+5-0	324.0	307.0	477.0
28	+5-0	376.0	356.0	553.0
32	+5-0	492.0	465.0	723.0
36	+5-0	622.0	588.0	914.0
38	+5-0	693.0	656.0	1,020.0

PVC-Coated Steel Wire

Fields of application

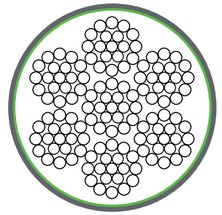
- Locking straps
- Cover wire rope



Nominal diameter mm	Rope wire	PVC application	Weight ca kgs/100m	Min. breaking load vid 1770 N/mm² kp
2.0-3.0	42 wire FZ	Clear	2.0	248
3.0-5.0	42 wire FZ	Clear	5.0	536
4.0-6.0	42 wire FZ	Clear	8.0	963
3.0-6.0	72 wire FZ TIR	Clear	6.0	338
4.0-5.5	72 wire FZ	Red	7.0	601
4.0-5.5	72 wire FZ	White	7.0	601
4.0-6.0	19 wire Stainless (1,570)	White	9.0	1,400

6 x 19 + WSC, Stainless Steel

Construction: 6x19+WSC
Material: AISI 316



Fill factor. F = 52%

Fields of application

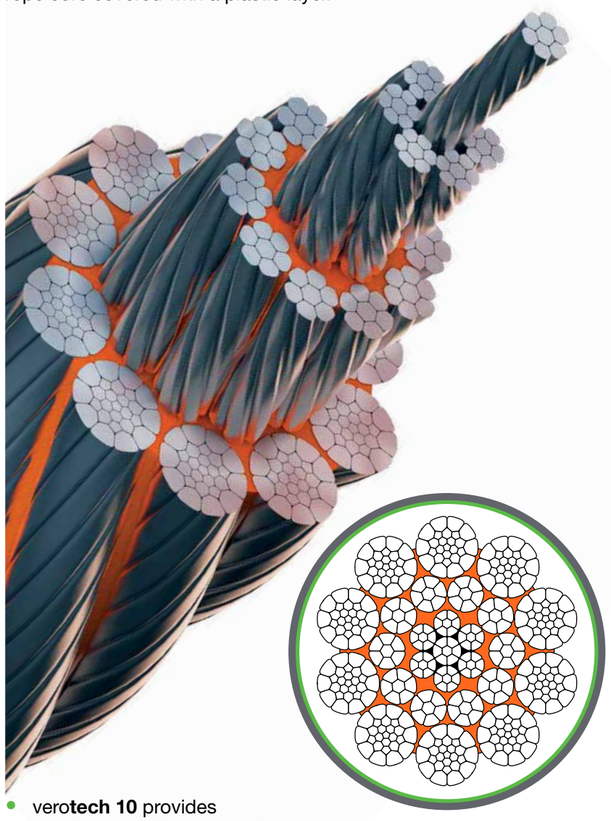
- Lifting equipment
- Cranes
- Hoists
- Winches

Nominal diameter D		Approx. mass mm²	Weight ca kgs/100m	Min. breaking load	
mm	tol. %			1570 N/mm² kN	160 kp/mm² kp
3	+7-1	3.9	3.4	4.8	488
4	+6-1	6.9	6.1	9.8	1,000
5	+6-1	10.8	9.5	13.1	1,330
6	+5-1	15.6	13.8	18.7	1,900
8	+4-1	27.6	24.3	33.4	3,400
10	+4-1	43.2	38.0	52.1	5,300
12	+4-1	62.2	54.7	75.6	7,700

High Performance Hoisting Rope

Combines unmatched bending fatigue resistance with excellent breaking strength.

vero**tech 10** is a very flexible 10-strand, Non-rotation-resistant rope in parallel lay construction with compacted strands and a rope core covered with a plastic layer.



- vero**tech 10** provides excellent breaking strength.
- vero**tech 10** has a very stable rope structure and achieves unmatched bending fatigue resistance.
- vero**tech 10** offers excellent resistance to crushing and abrasion.
- vero**tech 10** possesses perfect spooling behavior on multilayer drum.
- vero**tech 10** may not be used with a swivel.

The rope is fully lubricated. The finish available as standard is galvanized, bright Finish on request.

- Average Fill factor 0.732
- Lay type: Ordinary Lay Rope Category Number (RCN) to determine the number of visible broken outer wires, signaling discard of rope acc. ISO 4309: RCN =11

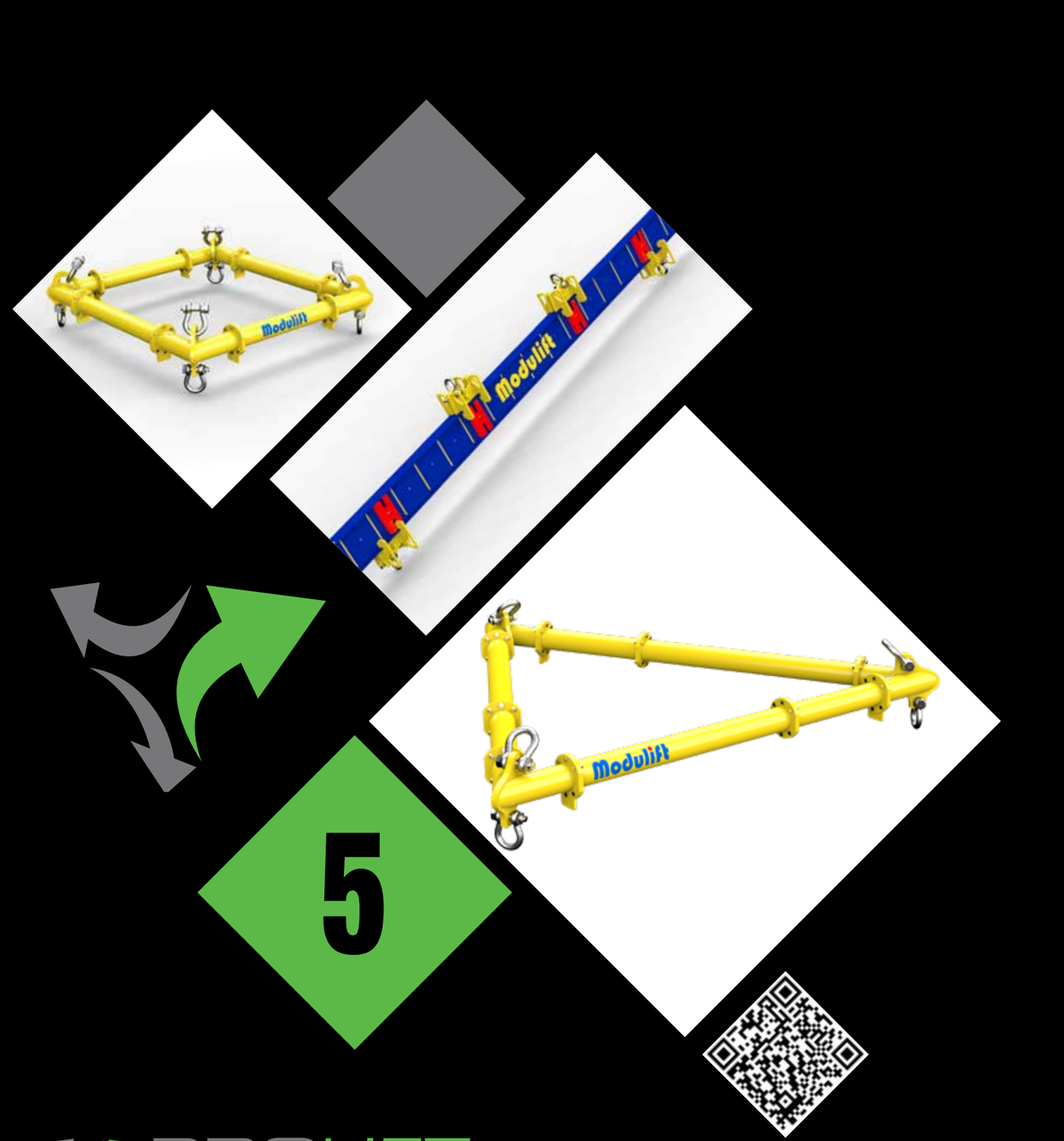
Nominal rope diameter	Approx mass	Minimum breaking force			
		Rope grade			
		1,960		2,160	
mm*	kg/m	kN	t	kN	t
6	0.178	34.9	3.6	38.0	3.9
7	0.242	47.5	4.8	51.7	5.3
8	0.316	62.0	6.3	67.6	6.9
9	0.400	78.5	8	85.5	8.7
10	0.494	96.9	9.9	105.6	10.8
11	0.598	117.3	12	127.7	13
12	0.712	139.5	14.2	152.0	15.5
12.7	0.797	156.3	15.9	170.2	17.3
13	0.836	163.8	16.7	178.4	18.2
14	0.969	189.9	19.4	206.9	21.1
15	1.112	218.0	22.2	237.5	24.2
16	1.266	248.1	25.3	270.2	27.5
17	1.429	280.1	28.5	305.1	31.1
18	1.602	314.0	32	342.0	34.8
19	1.785	349.8	35.6	381.0	38.8
20	1.978	387.6	39.5	422.2	43
21	2.180	427.4	43.6	465.5	47.4
22	2.393	469.0	47.8	510.9	52.1
22.4	2.481	486.2	49.5	529.6	54
23	2.616	512.6	52.2	558.4	56.9
24	2.848	558.2	56.9	608.0	62
25	3.090	605.7	61.7	659.7	67.2
25.4	2.190	625.2	63.7	681.0	69.4
26	3.342	655.1	66.8	713.5	72.7
27	3.604	706.5	72	769.5	78.4
28	3.876	759.8	77.4	827.5	84.3
28.6	4.044	792.7	80.8	863.4	88
29	4.158	815.0	83	887.7	90.5
30	4.450	872.2	88.9	950.0	96.8
31	4.751	931.3	94.9	1,014	103.3
32	5.063	992.3	101.1	1,081	110.2
33	5.384	1,055	107.5	1,149	117.1
34	5.716	1,120	114.1	1,220	124.3

*Standard tolerance: +2% to +4%, other tolerances possible upon agreement.

Other and special rope diameters are available upon request.

Errors and omissions excepted! The cross-section shows a typical rope diameter and can vary within the range.

Subject to modifications, this may change the specifications.



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PROLIFT HANDLING LTD

Lifting Beams and Spreader Beams