



**SPECIALIST CATALOGUE**

**STAINLESS INDUSTRY No. 1**



**Danny Hol**  
Manager Carl Stahl Benelux B.V.

Dear customers and friends of Carl Stahl!

Herewith we introduce to you the first Stainless Industry Catalogue. This in order to enable you to be efficient running through our range of Stainless Steel products. Consider this catalogue as your guidance into the stainless possibilities.

Carl Stahl was founded in Süssen, Germany in 1880 and we developed ourselves to who we are right now. A company with over 60 subsidiaries covering the global market. A company where the customer needs are analysed and solutions are getting created on a daily basis. Within this group Carl Stahl Benelux started in 1997 with the Yachting business and became a specialised Stainless Steel supplier in the years after that. Quality and reliability became a key to our success from which you as a customer can still benefit every day.

The Industrial and Yachting market in the past had one catalogue which was our Stainless Catalogue. In order to create difidence we seperated these departments. Our I-SYS and X-TEND productranges for balustrading, facades and zoo enclosures are top of the bill and represent the quality we stand for. Stainless Steel is as versatile as its options. Therefore we ask you to carefully check our standard range and if that doesn't fit your requirements please let us know. Together we then will find your solution.

Please use this catalogue as your start into Stainless steel and please note that we are there for you when needed.

We are looking forward to your request!

Sincerely yours,

A handwritten signature in blue ink, appearing to be 'Danny Hol', is written over a white background.

Danny Hol

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## YOUR BENEFITS AT CARL STAHL

**Delivery directly from stock**

Many items listed in this catalogue are stocked in our Zaandam warehouse and are available immediately.

**Special Requests**

We develop, design and produce to your requirements.

**Expertise of the world market leader**

Benefit from more than 130 years of international experience.

**Simple ordering**

Send us your order by phone, fax or e-mail.

**Small orders? Welcome!**

Our minimum order value is only 100 €. For smaller orders we will charge a processing fee of 12 €.

**Quality**

All of our products are proved to be of the stated quality.

**Material surcharge**

The currently very unstable price situation on the world steel markets might make it necessary to impose a material surcharge on certain products. Anyway as world market leader we will try to keep prices stable during the validity period of our price lists.

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## Wire Ropes And Accessories



## Shackles, Carabines, Quicklinks, Hooks



## Wire Rope Terminals



## Turnbuckles



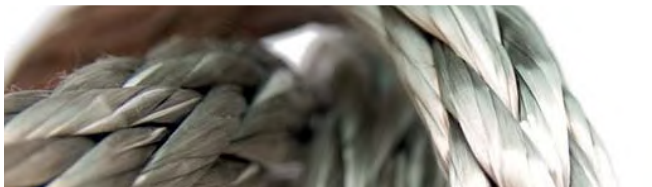
## Chain And Fittings



## Lubricants



## Ratchets And Webbing



## Fibre Ropes



## Blocks / Pulleys



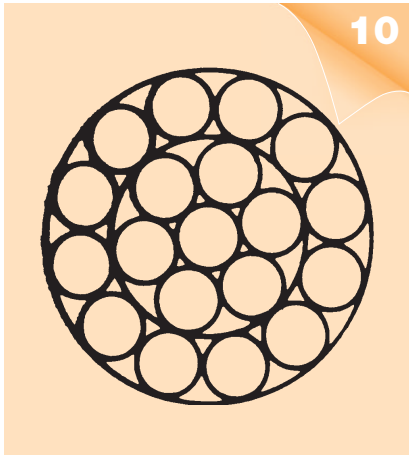
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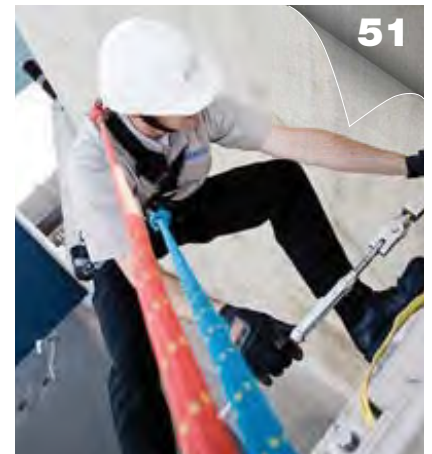
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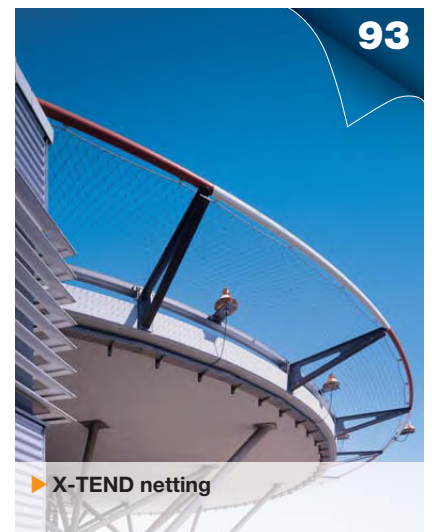
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# INTRODUCTION



## Stainless Steel Material Grades

At Carl Stahl Benelux we work with different kinds of Stainless Steel. The most common grades are AISI316 and AISI316L. These grades are also combined in some products as they work well together. The reason why we work with these grades is the corrosion resistance. We can calculate corrosion resistance with the PREN (or PRE) formula. These numbers are useful for ranking and comparing the different grades but cannot be used to predict whether a particular grade will be suitable for a given application, where pitting corrosion may be a hazard;

PREN Pitting Resistance Equivalent  $PREN = \% Cr + (\% Mo \times 3,3) + (\% N \times 16)$

The higher the PREN value is, the greater the corrosion resistance is. For your calculations you can use the PREN calculator on our website.

To ensure the right quality of stainless steel, Carl Stahl Benelux has invested in an X-ray gun and a saltspray test machine for the control of materials, this to ensure that customers always get the desired quality. Below is a table of the most frequently used types of stainless steel.

This PRE-value indicates whether a stainless steel is suitable for colder seas (as e. g. the Atlantic, North or East-Sea). If the stainless steel should be used in warmer seas (e. g. Mediterranean, Indian Ocean or Caribbean) the CPT (abbreviation for Critical Pitting Corrosion) has to be taken in consideration as well. There is a risk of corrosion in case that the water temperature is exceeding the CPT value in spite of a PRE-value of at least 33 in water and splashwater.

EN	DIN 17006	AISI/AST M	C %	Cr %	Ni %	Mo %	N %	Si < %	Mn < %	S < %	P < %	CPT (°C)	PREN
1,4301	X5CrNi 18-10	304	< 0,07	17,5 - 19,5	8,00 - 10,5	-	-	1,0	2,0	0,015	0,045	10,0	17,5 - 20,8
1,4401	X5CrNiMo 17-12-2	316	< 0,07	16,5 - 18,5	10,0 - 13,0	2,00 - 2,50	-	1,0	2,0	0,015	0,045	24,0	23,1 - 28,5
1,4404	X2CrNiMo 17-12-2	316 L	< 0,30	16,5 - 18,5	10,0 - 13,0	2,00 - 2,50	-	1,0	2,0	0,015	0,045	24,0	23,1 - 28,5
1,4462	X2CrNiMoN 22-5-3	318 LN SAF 2205	< 0,30	21,0 - 23,0	4,50 - 6,50	2,50 - 3,50	0,1 - 0,22	1,0	2,0	0,015	0,035	27,5	30,8 - 38,1

## Elongation

Two different kinds of elongation can be distinguished. Constructional elongation and material elongation which is specific to the material used in the manufacturing process.

### - Constructional elongation

After the manufacturing process of the ropes and strands, small gaps remain between each wire within the strand and between each strand in the rope. When the rope is tensioned, the wires and the strand move closer to each other, and reach their optimum position. A result of this process is, that the rope elongates to a certain extent. This constructional elongation is not the same in every rope construction. It depends on lay, lay length, rope construction and other factors.

### - Material elongation

This elongation concerns the material that the single wires are made of. It occurs, when the wire is tensioned. The material elongation is proportional to the applied load. Under normal circumstances the rope will almost regain its original length. If forces however exceeds 50% of the breakingload of the material, then plastic deformation occurs and the lifetime will be affected immediately. Therefore proofload tests are always at max 2/5 of the breakingload.

The material elongation can be calculated with following formula:

ES (elastic stretch) = Applied load (kN) x wire length in mm / E-Modulus (kN/mm<sup>2</sup>) x Cross sectional area ( diameter<sup>2</sup> x Pi/4 )





## Production

At Carl Stahl Benelux we work with high-quality materials. Working with those materials for the past decades we build ourselves an experience and machinepark which enables us to work efficiently. We can make lifting slings, static wire ropes for construction and much more. We also design your fit-to-purpose solutions for every situation where a "standard" is not an option. At the Carl Stahl facility in Zaandam we are able to provide you with all different kind of endterminations on wire ropes;

We can cut your wire ropes on specific lengths with our automatic cutting machine.

We can swage endterminals on wire ropes from 2 up to 28 mm on our WireTeknik swaging machines.

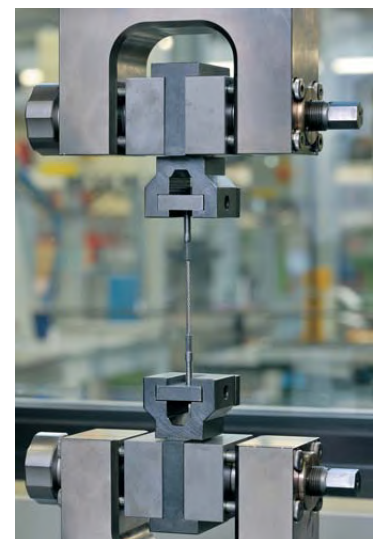
We can press taluritclamps and make soft or hard eyes (including thimbles) onto wire ropes from 1 up to 26 mm.

You can order cutlengths of wire ropes instead of full production reels. We have the machinery to re-reel it for you.

## Testing

All of the products we buy, store and sell are tested on materialgrades with our XRF analyse machine. Where needed, for instance when wire ropes go offshore and we have to show an expected lifetime, we can also provide a test in our saltwaterspray machine. Feel free to let your materials get tested in our machinery whenever needed.

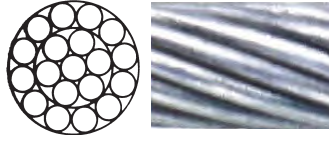
Pulltests are done when needed. Please inquire these tests when needed.



# WIRE ROPES AND ACCESSORIES

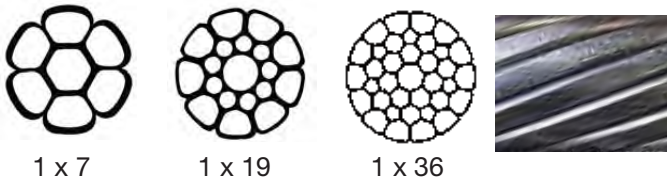
## Wire Ropes

### Stainless Steel Strand, Material AISI 316, Construction 1 x 19



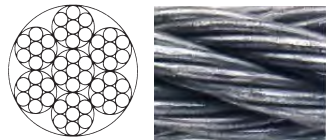
Rope Ø in mm	Minimum breaking load (MBL) 1570 N/mm <sup>2</sup>		Weight in kg/m	Item no.
	kN	kg		
1,0	0,87	99	0,005	0153.10.10
1,25	1,45	148	0,008	0153.10.12
1,5	1,86	190	0,011	0153.10.15
2,0	3,3	337	0,020	0153.10.20
2,5	5,15	525	0,031	0153.10.25
3,0	7,42	757	0,045	0153.10.30
4,0	13,2	1350	0,079	0153.10.40
5,0	20,6	2100	0,124	0153.10.50
6,0	29,7	3030	0,178	0153.10.60
7,0	37,80	3850	0,243	0153.10.70
8,0	49,4	5040	0,317	0153.10.80
10,0	72,2	7364	0,495	0153.11.00
12,0	104,0	10608	0,713	0153.11.20
14,0	131,0	13362	0,971	0153.11.40
16,0	176,0	17952	1,100	0153.11.60
19,0	233,0	23751	1,760	0153.11.90
22,0	299,0	30479	2,360	0153.12.20
26,0	416,0	42405	3,300	0153.12.60

### Stainless Steel Strand, Material AISI 316, "Compacted Strand"



Rope Ø in mm	Minimum breaking load (MBL) 1570 N/mm <sup>2</sup>		Weight in kg/m	Construction	Item no.
	kN	kg			
2,5	6,76	440	0,022	1x7	0152.10.25CS
3	9,81	1000	0,049	1x7	0152.10.30CS
4	17,46	1780	0,088	1x7	0152.10.40CS
4	17,46	1780	0,091	1x19	0153.10.40CS
5	25,49	2600	0,142	1x19	0153.10.50CS
6	35,29	3600	0,205	1x19	0153.10.60CS
7	49,02	5000	0,279	1x19	0153.10.70CS
8	61,76	6300	0,365	1x19	0153.10.80CS
10	98,04	10000	0,57	1x19	0153.11.00CS
12	142,15	14500	0,821	1x19	0153.11.20CS
14	189,33	19300	1,15	1x36	0153.11.40CS
16	251,14	25600	1,47	1x36	0153.11.60CS

### Stainless Steel Wire Rope, Material AISI 316, Construction 7x7

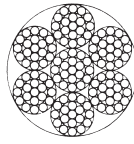


Rope Ø in mm	Minimum breaking load (MBL) 1570 N/mm <sup>2</sup>		Weight in kg/m	Item no.
	kN	kg		
1,0	0,56	57	0,004	CG07.71.00
1,5	1,26	128	0,009	CG07.71.50
1,8	1,82	186	0,013	0155.10.18
2,0	2,24	228	0,015	0155.10.20
2,5	3,49	356	0,024	0155.10.25
3,0	5,03	513	0,035	0155.10.30
4,0	8,94	912	0,061	0155.10.40
5,0	14,0	1430	0,096	0155.10.50
6,0	20,1	2050	0,138	0155.10.60
7,0	27,4	2790	0,188	0155.10.70
8,0	35,8	3650	0,246	0155.10.80
10,0	55,9	5700	0,384	0155.11.00
12,0	81,1	8270	0,553	0155.11.20

# WIRE ROPES AND ACCESSORIES

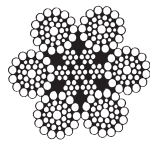
## Wire Ropes

### Stainless Steel Wire Rope, Material AISI 316, Construction 7x19



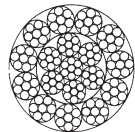
Rope Ø in mm	Minimum breaking load (MBL) 1570 N/mm <sup>2</sup>		Weight in kg/m	Item no.
	kN	kg		
1,5	1,25	128	0,009	0160.10.15
2,0	2,08	291	0,017	CG71.92.00
2,5	3,26	332	0,023	0160.10.25
3,0	4,69	478	0,034	0160.10.30
4,0	8,34	850	0,060	0160.10.40
5,0	13,0	1330	0,093	0160.10.50
6,0	18,8	1920	0,134	0160.10.60
7,0	25,5	2600	0,182	0160.10.70
8,0	33,4	3410	0,238	0160.10.80
10,0	52,1	5310	0,372	0160.11.00
12,0	75,1	7660	0,536	0160.11.20
14,0	102,0	10100	0,729	0160.11.40
16,0	133,0	13600	0,955	0160.11.60

### Stainless Steel Wire Rope, Material AISI 316, Construction 6x36WS-IWRC



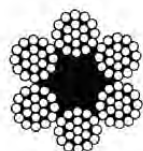
Rope Ø in mm	Minimum breaking load (MBL) 1570 N/mm <sup>2</sup>		Weight in kg/m	Item no.
	kN	kg		
8,0	35,7	3641	0,260	0164.10.80
10,0	55,9	5700	0,409	0164.11.00
12,0	80,5	8210	0,589	0164.11.20
14,0	110,0	11200	0,802	0164.11.40
16,0	143,0	14600	1,050	0164.11.60
18,0	181,0	18500	1,330	0164.11.80
20,0	224,0	22800	1,640	0164.12.00
22,0	271,0	27600	1,980	0164.12.20
24,0	322,0	32800	2,360	0164.12.40
26,0	354,0	36100	2,760	0164.12.60

### Stainless Steel Wire Rope, Material AISI 316, Construction 18x7-WSC



Rope Ø in mm	Minimum breaking load (MBL) 1570 N/mm <sup>2</sup>		Weight in kg/m	Item no.
	kN	kg		
3,0	4,66	475	0,048	0169.10.30
4,0	8,5	867	0,064	0169.10.40
5,0	12,9	1320	0,100	0169.10.50
6,0	18,5	1890	0,144	0169.10.60
7,0	25,2	2570	0,196	0169.10.70
8,0	33,0	3370	0,257	0169.10.80
10,0	51,5	5250	0,401	0169.11.00
12,0	74,2	7570	0,577	0169.11.20
14,0	100,9	10289	0,752	0169.11.40
16,0	129,3	13179	1,015	0169.11.60

### Stainless Steel Wire Rope, Material AISI 316, Construction 6x19+PP

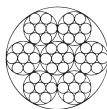


Rope Ø in mm	Minimum breaking load (MBL) 1570 N/mm <sup>2</sup>		Weight in kg/m	Item no.
	kN	kg		
4,0	7,71	786	0,055	0060.10.40
5,0	12	1220	0,086	0060.10.50
6,0	17,4	1770	0,124	0060.10.60
8,0	30,8	3140	0,22	0060.10.80

# WIRE ROPES AND ACCESSORIES

## Technocable and Coated Wire Ropes

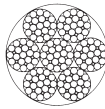
### Stainless Steel Wire Rope, Material AISI 316, Construction 7 x 7



Nominal Ø in mm	Minimum breaking load 1770 mm <sup>2</sup> N	Weight in kg/ 1000 m	Item no.
0,27	59	0,290	CG07.70.27
0,36	103	0,520	CG07.70.36
0,45	162	0,800	CG07.70.45
0,54	235	1,200	CG07.70.54
0,63	324	1,600	CG07.70.63
0,72	422*	2,100	CG07.70.722
0,81	530*	2,600	CG07.70.81
0,90	647	3,200	CG07.70.90
1,00	785	3,900	CG07.71.00
1,20	1075	5,000	CG07.71.20
1,35	1330	7,200	CG07.71.35
1,50	1800	9,200	CG07.71.50

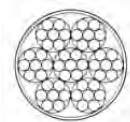
\*Only available in material 1.4301

### Stainless Steel Wire Rope, Material AISI 316, Construction 7 x 19



Nominal Ø in mm	Minimum breaking load 1770 mm <sup>2</sup> N	Weight in kg/ 1000 m	Item no.
0,45	152	0,810	CG71.90.45
0,60	270	1,440	CG71.90.60
0,75	417	2,100	CG71.90.75
0,90	613	3,500	CG71.90.90
1,00	765	4,400	CG71.91.00
1,20	976	5,600	CG71.91.20
1,35	1227	7,100	CG71.91.35
1,50	1590	9,000	CG71.91.50
1,75	2099	13,500	CG71.91.75

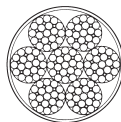
### Stainless Steel Wire Rope, Material AISI 316, Construction 7 x 7 transparant PA 12 coated



Nominal Ø Rope in mm	Outer Ø in mm	Minimum breaking load 1770 mm <sup>2</sup> N	Item no.
0,27	0,36	59	U077.27.36
0,36	0,45	103	U077.36.45
0,45	0,61	162	U077.45.61
0,54	0,70	235	U077.54.70
0,63	0,80	324	U077.63.80
0,72	0,90	422*	U077.72.90
0,81	1,00	530	U077.81.10
0,90	1,20	647	U077.90.12
1,00	1,60	785	U077.10.16
1,20	1,80	1075	U077.12.18
1,50	2,00	1800	U077.15.20
2,00	3,00	2260	U077.20.30

\*Only available in material 1.4301

### Stainless Steel Wire Rope, Material AISI 316, Construction 7 x 19 transparant PA 12 coated



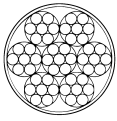
Nominal Ø Rope in mm	Outer Ø in mm	Minimum breaking load 1770 mm <sup>2</sup> N	Item no.
0,45	0,61	152	U719.45.61
0,60	0,80	270	U719.60.80
0,75	1,00	417	U719.75.10
0,90	1,10	613	U719.90.11
1,00	1,25	765	U719.10.12
1,20	1,50	976	U719.12.15
1,50	1,75	1590	U719.15.17
2,00	2,40	2768	U719.20.24
2,50	3,50	3551	U719.25.35
3,00	4,00	4690	U719.30.40
5,00	7,00	13000	U719.50.70
6,00	8,00	18800	U719.61.80

# WIRE ROPES AND ACCESSORIES

Technocable and Coated Wire Ropes



**Stainless Steel Wire Rope, Material AISI 316  
Construction 7 x 7 white PVC coated**

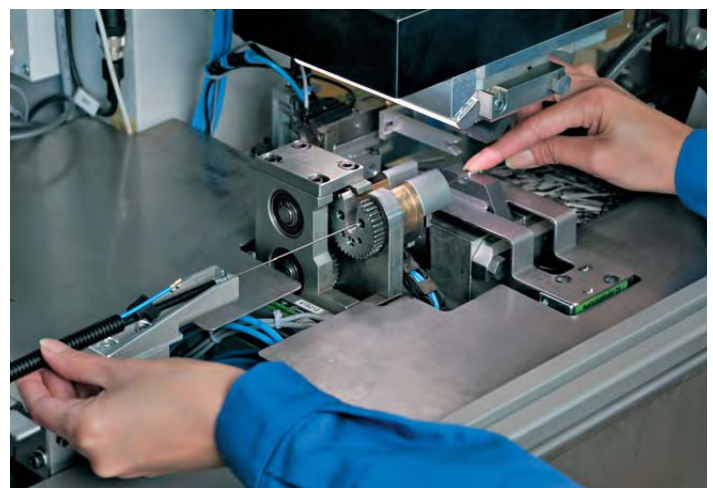
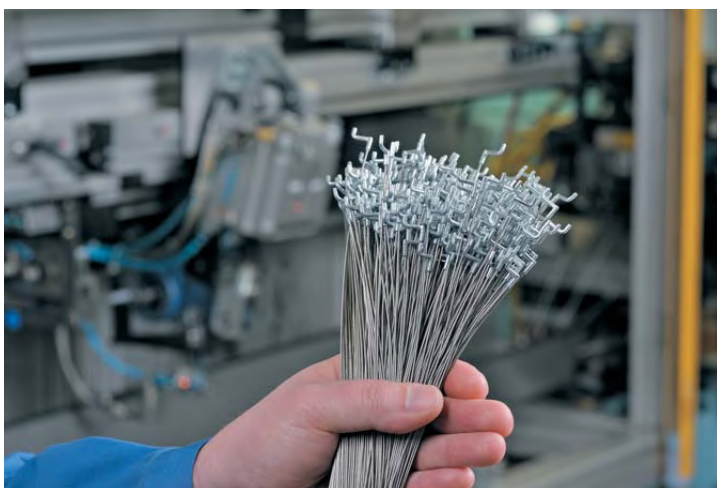


Nominal Ø Rope in mm	Outer Ø in mm	Minimum breaking load 1570 mm <sup>2</sup>		Item no.
		kN	kg	
3,00	5,00	5,03	513	1314.30.50
4,00	6,00	8,94	912	1314.40.60
5,00	7,00	14,00	1430	1314.50.70
6,00	9,00	20,10	2050	1314.60.90
8,00	12,00	33,40	3410	1314.81.20

**Stainless Steel Wire Rope, Material AISI 316  
Construction 1 x 19 white PVC coated**



Nominal Ø Rope in mm	Outer Ø in mm	Minimum breaking load 1570 mm <sup>2</sup>		Item no.
		kN	kg	
2,00	3,00	3,30	337	1344.20.30
2,50	4,00	5,15	525	1344.25.40
3,00	5,00	7,42	757	1344.30.50
4,00	6,00	13,20	1350	1344.40.60

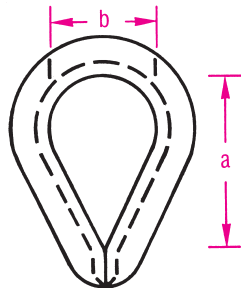


# WIRE ROPES AND ACCESSORIES

## Thimbles

### Stainless Steel Thimble, German origin

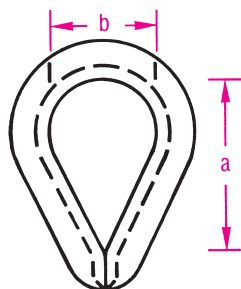
Material: AISI 316  
Finish: highly polished



Rope Ø in mm	Dimensions in mm		Weight in kg/ 100 pcs	Item no.
	a	b		
2	12	8	0,30	5970.00.02
2,5	16	10	0,30	5970.00.25
3	16	10	0,41	5970.00.03
4	17	11	0,52	5970.00.04
5	20	13	0,60	5970.00.05
6	25	16	1,00	5970.00.06
7	28	18	1,20	5970.00.07
8	32	20	1,80	5970.00.08
10	40	26	2,90	5970.00.10
12	45	28	4,60	5970.00.12
14	56	34	9,00	5970.00.14
16	62	37	10,40	5970.00.16
18	68	42	17,10	5970.00.18
20	75	46	27,70	5970.00.20
22	85	50	29,70	5970.00.22
24	94	58	54,90	5970.00.24
26	102	66	60,50	5970.00.26
28	115	75	88,00	5970.00.28
32	125	80	140,00	5970.00.32
36	160	100	185,00	5970.00.36

### Stainless Steel Thimble, Chinese origin

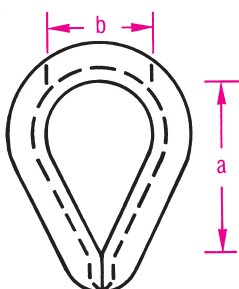
Material: AISI 316  
Finish: highly polished



Rope Ø in mm	Dimensions in mm		Weight in kg/ 100 pcs	Item no.
	a	b		
3	16	10	0,30	5970.00.03B
4	17	11	0,41	5970.00.04B
5	20	13	0,52	5970.00.05B
6	25	16	0,90	5970.00.06B
7	28	18	1,08	5970.00.07B
8	32	20	1,85	5970.00.08B
10	40	26	3,35	5970.00.10B
12	45	28	4,41	5970.00.12B
14	56	34	9,10	5970.00.14B
16	62	37	13,00	5970.00.16B
18	65	42	15,70	5970.00.18B
20	78	45	19,05	5970.00.20B

### Polyamide Thimble

Material: Polyamide

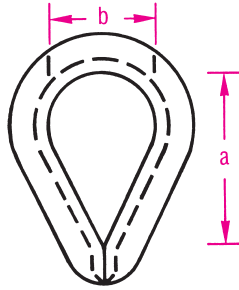


Nominal size	Dimensions in mm		Weight in kg/pce	Item no.
	a	b		
3	9	6	0,004	5950.00.03
4	13	9	0,006	5950.00.04
6	18	12	0,018	5950.00.06
7	21	14	0,027	5950.00.07
9	29	20	0,046	5950.00.09
12	42	24	0,100	5950.00.12
13	45	26	0,126	5950.00.13
16	49	30	0,170	5950.00.16
18	53	36	0,280	5950.00.18

## Thimbles

### Stainless Steel Rope Thimbles

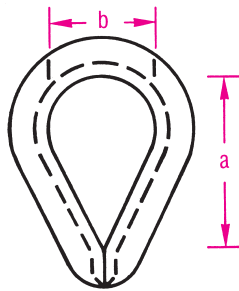
Material: AISI 316  
 Finish: highly polished  
 Because of the smooth finish  
 extremely suitable for fibre rope



Nominal size	Dimensions in mm		Weight in kg/pce	Item no.
	a	b		
2	17	9	0,2	BW11.00.02
3	18	10	0,3	BW11.00.03
4	20	11	0,5	BW11.00.04
5	21	13	0,7	BW11.00.05
6	27	15	1,2	BW11.00.06
7	33	19	1,5	BW11.00.07
8	38	22	2,7	BW11.00.08
9	41	24	2,9	BW11.00.09
10	48	27	5,2	BW11.00.10
12	53	29	5,5	BW11.00.12
14	57	32	11	BW11.00.14
16	67	40	12	BW11.00.16
18	75	45	21,5	BW11.00.18
20	84	52	32	BW11.00.20
22	96	56	47	BW11.00.22
26	115	65	80	BW11.00.26
28	135	76	110	BW11.00.28
32	160	88	156	BW11.00.32
34	160	100	176	BW11.00.34
36	176	110	192	BW11.00.36
38	184	115	292	BW11.00.38
40	192	120	320	BW11.00.40
42	240	150	364	BW11.00.42

### Stainless Steel Reinforced Thimble

Material: AISI 316  
 Finish: highly polished



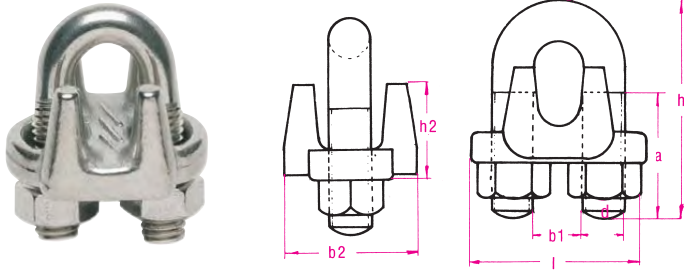
Nominal size	Dimensions in mm		Weight in kg/ 100 pcs	Item no.
	a	b		
8	38	24	3,2	BW11.99.09
10	48	27	5,9	BW11.99.10
12	53	29	6,3	BW11.99.12
14	57	32	12,3	BW11.99.14
16	67	40	13,6	BW11.99.16
18	75	45	24	BW11.99.18
20	84	50	34,8	BW11.99.20
22	96	56	51,8	BW11.99.22
26	115	60	85,6	BW11.99.26

# WIRE ROPES AND ACCESSORIES

## Wire Rope Clips

### Stainless Steel Wire Rope Clip, heavy Version

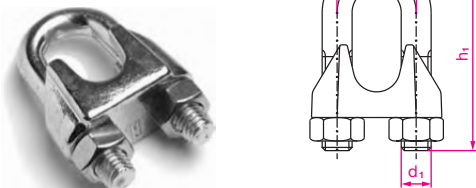
Similar DIN 741  
Material: AISI 316  
Finish: polished



Nominal size	Dimensions in mm							Weight in kg /100 pcs	Item no.
	a	b1	b2	d	h1	h2	l		
2	9	4	13	M 3	18	11	14	0,8	5870.00.02
3	12	5	16	M 4	25	12	17	1,5	5870.00.03
4	13	6	18	M 4	25	14	19	2,9	5870.00.04
5	15	7	20	M 5	29	15	24	3,1	5870.00.05
6	18	8	21	M 6	31	17	27	4,0	5870.00.06
8	23	10	27	M 8	41	21	34	7,7	5870.00.08
10	28	12	34	M 10	52	25	45	17,0	5870.00.10
12	35	14	38	M 12	61	28	51	26,5	5870.00.12
14	42	15	43	M 12	68	32	53	31,0	5870.00.14
16	42	18	47	M 14	76	36	60	50,0	5870.00.16
19	50	20	51	M 14	79	40	62	58,0	5870.00.19
22	60	26	61	M 16	98	46	72	80,0	5870.00.22
25	62	29	61	M 16	110	49	76	108	5870.00.25

### Stainless Steel Wire Rope Clip, light Version

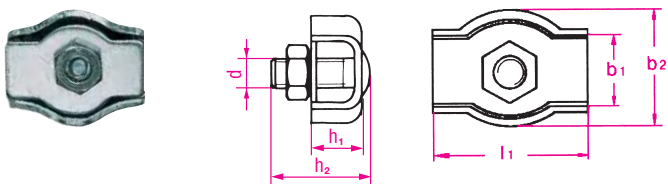
Similar DIN 741  
Material: AISI 316  
Finish: polished



Nominal size	Dimensions in mm			Weight in kg /100 pcs	Item no.
	d1	h1	a		
2	M3	17	4	0,69	5871.00.02
3	M4	20	5	1,20	5871.00.03
4	M4	22	6	1,30	5871.00.04
5	M5	24	6	1,40	5871.00.05
6	M5	28	8	1,72	5871.00.06
8	M6	34	10	4,10	5871.00.08
10	M8	42	12	5,89	5871.00.10
16	M12	63	18	21,0	5871.00.15
19	M12	75	21	28,0	5871.00.19
22	M14	85	24	40,0	5871.00.22

### Stainless Steel Simplex Clip with 1 Bolt

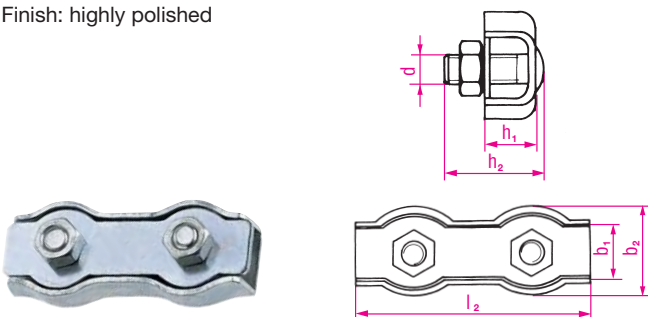
Material: AISI 316  
Finish: polished



Nominal size	Dimensions in mm						Weight in kg /100 pcs	Item no.
	b1	b2	d	h1	h2	l1		
2	4	12	M 4,0	5	14	15	0,46	5855.00.02
3	6	14	M 4,0	7	14	17	0,72	5855.00.03
4	8	17	M 5,0	7	17	20	1,27	5855.00.04
5	10	21	M 5,0	8,5	17	25	1,46	5855.00.05
6	12	25	M 6,0	10	23	30	2,52	5855.00.06
8	17	31	M 8,0	14	25	37	5,42	5855.00.08

### Stainless Steel Duplex Clip with 2 Bolts

Material: AISI 316  
Finish: highly polished



Nominal size	Dimensions in mm						Weight in kg /100 pcs	Item no.
	b1	b2	d	h1	h2	l2		
2	4	12	M 4,0	5	14	30	0,97	5865.00.02
3	6	14	M 4,0	7	14	35	1,41	5865.00.03
4	8	17	M 5,0	7	17	40	2,45	5865.00.04
5	10	21	M 5,0	8,5	17	50	2,91	5865.00.05
6	12	25	M 6,0	10	23	60	5,00	5865.00.06
8	17	31	M 8,0	14	25	75	10,63	5865.00.08
10	21	35	M 10,0	16	32	95	17,13	5865.00.10



### Oval Loop Sleeves

For self assembly of loops.

For rope Ø in mm	Minimum order quantity in pcs.	Material	Suitable crimping tool	Item no. Nicopress	Item no. Savapress
0,45 - 0,60	100	brass	T185	n.a.	TM45.58.65
0,61 - 0,68	100	brass	T185	n.a.	TM63.68.65
0,72 - 1,00	100	zinc-plated copper	T185	NICO10.08	TK72.10.70
1,20 - 1,50	100	zinc-plated copper	T185 / T188	NICO10.10	TK12.15.10
1,80 - 2,00	100	zinc-plated copper	T185 / T188	NICO10.20	TK18.20.10
2,50	50	zinc-plated copper	T188	NICO10.25	TK25.01.20
3,00	50	zinc-plated copper	T188	NICO10.30	TK30.01.90
4,00	50	zinc-plated copper	T188	NICO10.40	TK40.02.10
5,00	50	zinc-plated copper	T188	NICO10.50	TK50.03.40
6,00	50	zinc-plated copper	T3060	NICO10.60	TK60.02.70
6,50 - 7,00	25	zinc-plated copper	T3070	NICO10.70	TK70.03.80
8,00	25	zinc-plated copper	T3080	NICO10.80	TK80.04.30

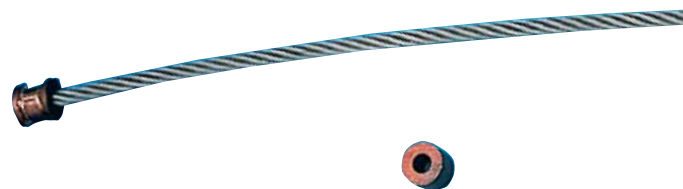


For pressing tools see chapter cutting and swaging tools on page 19

### Round Stop Sleeves

For self assembly of stop sleeves.

For rope Ø in mm	Minimum order quantity in pcs.	Material	Suitable crimping tool	Item no. Nicopress	Item no. Savapress
0,72-1,00	10	copper	T185	NICO2008	TK721000
1,2-1,5	10	copper	T185	NICO2010	TK121500
1,8-2,0	10	copper	T185	NICO2020	TK182000
2,5	10	copper	T4064	NICO2025	TK250000
3	10	copper	T4064	NICO2030	TK300000
4	10	copper	T188	NICO2040	TK400000
5	10	copper	T188	NICO2050	TK500000
6	10	copper	T188	NICO2060	n.a.



For pressing tools see chapter cutting and swaging tools on page 19

### Talurit Clamps

Rope-Ø in mm	Aluminium item no.	Copper item no.	Stainless item no.
1	T100.54.30	KU50.00.10	P5E0.00.10
1,5	T151.20.42	KU50.00.15	P5E0.00.15
2	T201.60.42	KU50.00.20	P5E0.00.20
2,5	P500.00.25	KU50.00.25	P5E0.00.25
3	P500.00.30	KU50.00.30	P5E0.00.30
3,5	P500.00.35	KU50.00.35	P5E0.00.35
4	P500.00.40	KU50.00.40	P5E0.00.40
4,5	P500.00.45	KU50.00.45	P5E0.00.45
5	P500.00.50	KU50.00.50	P5E0.00.50
6	P500.00.60	KU50.00.60	P5E0.00.60
8	P500.00.80	KU50.00.80	P5E0.00.80
10	P500.01.00	KU50.01.00	P5E0.01.00
12	P500.01.20	KU50.01.20	P5E0.01.20
14	P500.01.40	KU50.01.40	P5E0.01.40
16	P500.01.60	KU50.01.60	P5E0.01.60
18	P500.01.80	KU50.01.80	P5E0.01.80
20	P500.02.00	KU50.02.00	P5E0.02.00
22	P500.02.20	KU50.02.20	P5E0.02.20
24	P500.02.40	KU50.02.40	P5E0.02.40
26	P500.02.60	KU50.02.60	P5E0.02.60



# WIRE ROPES AND ACCESSORIES

## Cutting Tools

### Manual Wire Rope and Cable Cutter

Material is cut smoothly without crushing. Handles forged of light alloy, hand grips plastic coated.

Application: For cutting wire ropes, steel rods, wires of all kind and wire mesh.

Type	Max. cutting capacity in mm		Length in cm	Weight in kg	Item no.
	1 x 19	7--strand			
7	4	5	19	0,27	5090.00.20
9	6	7	32,5	0,75	5090.00.30
12	8	10	50	1,5	5090.00.31
16	10	12	63	2,3	5090.00.32
108	8	10	56	1,95	5090.00.33
112	12	14	73	3,6	5090.00.34



Model 7

Model 9

Model 16

Model 112

### Hydraulic Wire Rope and Cable Cutter

Type	Cutting force in T	Max. cutting capacity in mm		Length in cm	Weight in kg	Item no.
		1 x 19	7--strand			
CT20	6	16	20	39	2,8	78CT0020
CT40	6	25	25	63	6	78CT0040



Spare blades available



### Hand Swaging Tools for mechanical swaging of Aluminium Sleeves

Rope Ø in mm	Length in mm	Weight in kg	Item no.
1	625	2,5	5090.00.40
1,5	625	2,5	5090.00.41
2,0	625	2,5	5090.00.42
2,5	625	2,5	5090.00.43
3,0	625	2,5	5090.00.44
3,5	625	2,5	5090.00.45
4	1000	8	5090.00.46
4,5	1000	8	5090.00.47
5	1000	8	5090.00.48
6	1000	8	5090.00.49



Includes 1 swaging die

### Replacement Swaging Dies

Rope Ø in mm	Item no.
1	5090.01.40
1,5	5090.01.41
2	5090.01.42
2,5	5090.01.43
3	5090.01.44
3,5	5090.01.45
4	5090.01.46
4,5	5090.01.47
5	5090.01.48
6	5090.01.49



### Crimping Tool for Nicopress and Savapress sleeves

Due to the tolerances in rope diameters it is recommendable to verify the actual pull-off force by trials. In case of strand constructions (1x7, 1x19) it is advisable to use 2 sleeves.

For rope Ø in mm	Type	Length in mm	Weight in kg	Shape of crimp	Item no.
0,45 - 2,00	T185	220	0,4	hexagonal	CGT0.01.85
1,20 - 5,00	T188	510	2,27	round	CGT0.01.88
5,00	T3050	465	2,6	round	NICO30.50
6,00	T3060	465	2,6	round	NICO30.60
7,00	T3070	840	6,46	round	NICO30.70
8,00	T3080	840	6,46	round	NICO30.80



Applies to all swaging tools:

- Swaging jaws of chrome alloy steel
- Hand grips are plastic coated

### Portable Swaging Machines

#### Portable Roller Swagers

For those who make wire rope assemblies regularly and which prefer flexibility there are portable roller swagers. To do the job onsite or to be costeffective in your own production plant. These roller swagers are produced in Sweden and are marked with the well-known Wireteknik logo on it. Carl Stahl proudly distributes all of the machines, hydraulic pumps, electric units and machine accessories.

The principle is simple. The terminal itself drives the roller dies. The machine works with a freely rotating pair of rollers, driven when the terminal is drawn between them. It is a simple and robust design with the minimum of movable parts, making it reliable both in the field and in rational production. The machines perform quality effectively on solid rod as they do on full-steel wire rope.

#### Electricity, Air or Manpower

A big advantage with these swagers is their portability. One man can do the job, whether he uses a manual pump, an electric motor or compressed air. Due to the portability, a permanent on site solution can be achieved in all circumstances. The range is wide, and the capacity is from 1,6 mm – 40 mm, wire or rod.

#### LLOYD'S Certificate

Evidence of the strength and reliability of the technique is the approval from Lloyd's Register of Shipping.

#### Personal advice

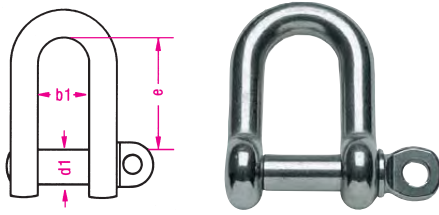
Considering a machine or just curious; please contact us for the actual machine possibilities with prices and delivery times. Normally machines are delivered within 1 week after order.



# SHACKLES

## D-Shackle, far east production

Stainless steel  
Material: AISI 316  
Finish: highly polished



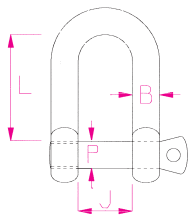
Nominal size	Minimum Breaking Load		Dimensions in mm			Weight in kg /100 pcs	Item no.
	in kg		b1	d1	e		
4	550		8	4	14	0,75	5670.00.04
5	1000		10	5	17	1,60	5670.00.05
6	1700		12	6	21	2,52	5670.00.06
8	2500		16	8	28	5,80	5670.00.08
10	4100		20	10	35	11,10	5670.00.10
12	5400		24	12	42	21,00	5670.00.12
13	6100		26	13	45	28,00	5670.00.13
16	8800		32	16	56	47,40	5670.00.16
19	10000		38	19	66	79,30	5670.00.19
22	19000		44	22	77	126,00	5670.00.22
25	21000		50	25	87	186,40	5670.00.25
32	26000		64	32	112	426,00	5670.00.32



This product cannot be used for lifting and transport of loads!  
Load capacity is approx. 20% of the breaking load.

## D-Shackle, European Production

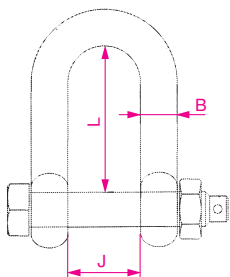
Stainless Steel material,  
Safety factor 6:1  
Material: AISI 316  
Marking: stamped with CE, WLL and batchnumber



WLL in kg	Nominal size p	Dimensions in mm			Weight in kg/100 pcs	Item no.
		b	j	L		
130	4	4	8	16	0,70	FS030040
250	5	5	10	20	1,30	FS030050
325	6	6	13	25	2,40	FS030060
500	8	8	16	32	5,30	FS030080
800	9,5	9,5	19	38	9,70	FS030095
1000	11	11	22	44	15,20	FS030110
1250	12,7	12,7	26	52	23,70	FS030127
1660	16	14,3	29	58	45,00	FS030160
2330	19	16	32	64	58,50	FS030190
3500	22,2	19	38	76	100,00	FS030222
4500	25,4	22,2	44	88	190,00	FS030254
5500	28,6	25,4	51	102	290,00	FS030286
6500	31,8	28,6	57	114	310	FS030318
7500	34,9	31,8	64	128	435	FS030349
9000	38	34,9	70	140	530	FS030380

## Stainless Steel D-Shackle with nut and pin

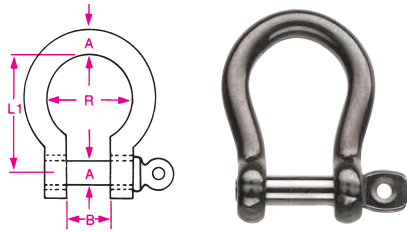
Stainless steel material,  
Safety factor 6:1  
Material: AISI 316  
Marking: stamped with CE, WLL and batchnumber



WLL in kg	Nominal size	Dimensions in mm			Weight in kg/pcce	Item no.
		b	j	L		
350	M6	6	13	25	0,048	5673.00.06
500	M8	8	16	32	0,075	5673.00.08
800	M10	9,5	19	38	0,136	5673.00.10
1000	M12	11	22	44	0,212	5673.00.12
1250	M12	12,7	26	52	0,331	5673.00.13
1800	M16	14,3	29	58	0,585	5673.00.16
2800	M20	16	32	64	0,760	5673.00.20
3300	M22	19	38	76	1,180	5673.00.22
4500	M24	22	44	88	1,750	5673.00.24
5000	M27	25,4	50	100	2,600	5673.00.27

## Bow Shackle, far east production

Stainless steel  
Material: AISI 316  
Finish: highly polished



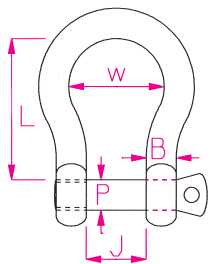
Nominal size	Minimum Breaking Load in kg	Dimensions in mm				Weight in kg /100 pcs	Item no.
		A	B	R	L1		
4	550	4	8	14	21	0,80	5671.00.04
5	1000	5	10	17	25	1,80	5671.00.05
6	1700	6	12	21	27	2,60	5671.00.06
8	2500	8	16	28	40	5,80	5671.00.08
10	4100	10	20	35	43	11,30	5671.00.10
12	5400	12	24	42	54	22,50	5671.00.12
13	6100	13	26	45	65	30,00	5671.00.13
16	8800	16	32	56	72	49,80	5671.00.16
19	10000	19	38	66	92	92,50	5671.00.19
22	19000	22	44	77	102	136,00	5671.00.22
25	21000	25	50	88	112	192,40	5671.00.25
32	26000	32	64	114	154	326,00	5671.00.32



This product cannot be used for lifting and transport of loads!  
Load capacity is approx. 20% of the breaking load.

## Bow Shackle, European Production

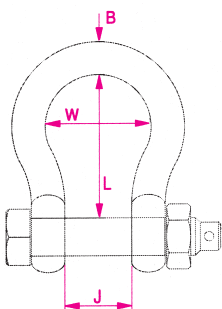
Stainless Steel material,  
Safety factor 6:1  
Material: AISI 316  
Marking: stamped with CE, WLL and batchnumber



WLL in kg	Nominal size p	Dimensions in mm				Weight in kg/100 pcs	Item no.
		b	j	w	l		
130	4	4	8	12	16	0,90	FS040040
200	5	5	10	16	22	1,40	FS040050
260	6	6	13	19	28	2,80	FS040060
400	8	8	16	25	35	5,90	FS040080
630	9,5	9,5	19	28	38	10,60	FS040095
800	11	11	22	33	46	16,10	FS040110
1000	12,7	12,7	26	38	52	27,00	FS040127
1330	16	14,3	29	43	60	50,00	FS040160
2000	19	16	32	50	68	63,00	FS040190
2750	22,2	19	38	57	76	105,00	FS040222
3750	25,4	22,2	44	66	88	199,50	FS040254
4500	28,6	25,4	51	76	102	304,50	FS040286
5500	31,8	28,6	57	86	114	325,5	FS040318
6500	34,9	31,8	64	95	128	456,8	FS040349
7500	38	34,9	70	105	140	556,5	FS040380

## Stainless Steel Bow Shackle with nut and pin

Stainless steel material,  
Safety factor 6:1  
Material: AISI 316  
Marking: stamped with CE, WLL and batchnumber



WLL in kg	Nominal size	Dimensions in mm				Weight in kg/pc	Item no.
		b	j	W	L		
280	M6	6	13	19	28	0,052	5674.00.06
400	M8	8	16	25	35	0,081	5674.00.08
600	M10	9,5	19	28	38	0,147	5674.00.10
800	M12	11	22	33	46	0,221	5674.00.12
1000	M12	12,7	26	38	52	0,354	5674.00.13
1500	M16	14,3	29	43	60	0,635	5674.00.16
2500	M20	16	32	50	68	0,805	5674.00.20
3000	M22	19	38	58	76	1,250	5674.00.22
4000	M24	22	44	66	88	1,820	5674.00.24
4500	M27	25,4	50	76	100	2,700	5674.00.27

# SHACKLES

## High Strength Stainless Steel D-shackle, forged, stamped with Load Capacity

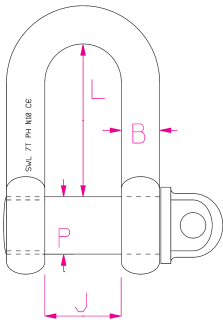
### Product Features

- Manufactured from 17/4PH precipitation hardening martensitic stainless steel
- Excellent for general lifting applications - high tensile properties while avoiding work hardening
- Corrosion resistance similar to 18/8 grade steels
- Factor of Safety 6:1
- Available with 4 pin types - Standard Screw Collar Pin (A Type), Extended Screw Collar Pin (AL Type), Countersunk Head (B Type), E Type Safety Pin (E Type)
- Manufactured using the latest technology in electrical upset forging

### Quality Features

- Every shackle is proof tested to 2 x WLL and certified at our European manufacturer.
- All shackles are manufactured in accordance with the Machine Directive 2006/42/EC
- Inspection certificate BS EN 10204 3.1b available on request
- High quality finish and excellent polish

Stainless steel material,  
Safety factor 6:1  
Material: AISI 630



WLL in kg	Dimensions in mm				Weight in kg/100 pcs	Item no.			
	P	B	J	L		Type A	Type AL	Type B	Type E
1000	10	8	16	32	8,50	5672.00.10	FS11.60.10	FS11.70.10	FS11.80.10
2000	12,7	10	20	40	15,00	5672.00.13	FS11.60.20	FS11.70.20	FS11.80.20
3000	16	12,7	25	50	35,00	5672.00.16	FS11.60.30	FS11.70.30	FS11.80.30
5000	19	16	32	64	55,00	5672.00.19	FS11.60.50	FS11.70.50	FS11.80.50
7000	22,2	19	38	76	100,00	5672.00.22	FS11.60.70	FS11.70.70	FS11.80.70
9000	25,4	22,2	44	88	190,00	5672.00.25	FS11.60.90	FS11.70.90	FS11.80.90
11000	28,6	25,4	51	102	290,00	5672.00.29	FS11.61.10	FS11.71.10	FS11.81.10
13000	31,8	28,6	57	114	310,00	5672.00.32	FS11.61.30	FS11.71.30	FS11.81.30
15000	34,9	31,8	64	128	435,00	5672.00.35	FS11.61.50	FS11.71.50	FS11.81.50
18000	38	34,9	70	140	530,00	5672.00.38	FS11.61.80	FS11.71.80	FS11.81.80



## High Strength Stainless Steel Bow shackle, forged, stamped with Load Capacity

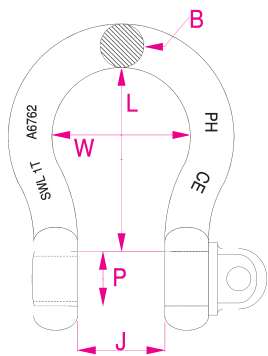
### Product Features

- Manufactured from 17/4PH precipitation hardening martensitic stainless steel
- Excellent for general lifting applications - high tensile properties while avoiding work hardening
- Corrosion resistance similar to 18/8 grade steels
- Factor of Safety 6:1
- Available with 4 pin types - Standard Screw Collar Pin (A Type), Extended Screw Collar Pin (AL Type), Countersunk Head (B Type), E Type Safety Pin (E Type)
- Manufactured using the latest technology in electrical upset forging

### Quality Features

- Every shackle is proof tested to 2 x WLL and certified at our European manufacturer.
- All shackles are manufactured in accordance with the Machine Directive 2006/42/EC
- Inspection certificate BS EN 10204 3.1b available on request
- High quality finish and excellent polish

Stainless steel material,  
Safety factor 6:1  
Material: AISI 630



WLL in kg	Dimensions in mm					Weight in kg/100 pcs	Item no.			
	P	B	J	W	L		Type A	Type AL	Type B	Type E
800	10	8	16	24	32	9,50	FS12.50.08	FS12.60.08	FS12.70.08	FS12.80.08
1500	12,7	10	20	30	40	15,80	FS12.50.15	FS12.60.15	FS12.70.15	FS12.80.15
2500	16	12,7	25	38	50	36,80	FS12.50.25	FS12.60.25	FS12.70.25	FS12.80.25
4000	19	16	32	48	64	57,80	FS12.50.40	FS12.60.40	FS12.70.40	FS12.80.40
5500	22,2	19	38	57	76	105,00	FS12.50.55	FS12.60.55	FS12.70.55	FS12.80.55
7500	25,4	22,2	44	66	88	199,50	FS12.50.75	FS12.60.75	FS12.70.75	FS12.80.75
9000	28,6	25,4	51	76	102	304,50	FS12.50.90	FS12.60.90	FS12.70.90	FS12.80.90
11000	31,8	28,6	57	86	114	325,50	FS12.51.10	FS12.61.10	FS12.71.10	FS12.81.10
13000	34,9	31,8	64	95	128	456,80	FS12.51.30	FS12.61.30	FS12.71.30	FS12.81.30
15000	38	34,9	70	105	140	556,50	FS12.51.50	FS12.61.50	FS12.71.50	FS12.81.50



# SHACKLES

## Stainless Steel Chain Link D Shackle

### Product Features

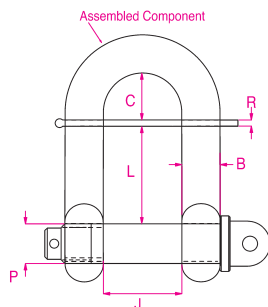
- Manufactured from Stainless Steel EN10088 AISI 316L (1.4404)
- Excellent for lifting applications where a high level of corrosion resistance is required.
- Factor of Safety 6:1
- Unique design enabling the shackle to be made captive to a chain sling without the need for welding.
- The special Brace pin allows the shackle to be permanently attached to the chain on-site. This results in the shackle becoming part of the chain assembly.
- The extended load pin is fitted with a split pin to ensure that the load pin remains in position even under vibration.
- All shackles CE marked and supplied with instruction leaflet on safe use and storage.

### Quality Features

- Every shackle is proof tested to 2 x WLL and certified at our European manufacturer.
- All shackles are manufactured in accordance with the Machine Directive 2006/42/EC
- Inspection certificate BS EN 10204 3.1b available on request
- High quality finish and excellent polish
- Manufactured using the latest technology in electrical upset forging.

Stainless steel material,  
Safety factor 6:1  
Material: AISI 316

WLL in kg	Dimensions in mm						Weight in kg/100 pcs	Item no.
	P	B	J	L	R	C		
1000	12,5	9,5	20	25	2	15	15,00	FS14.60.10
2000	19	16	32	40	3	22	55,00	FS14.60.20
3200	22	19	38	45	4	28	100,00	FS14.60.32
5000	25	22	44	55	4	29	190,00	FS14.60.50
6000	28	25	51	65	4	34	230,00	FS14.60.60





## Tylaska Snapshackle with standard bail

Material: AISI 630  
Finish: highly polished

Breaking load in kg	SWL in kg	Dimensions in mm					Weight in kg/100 pcs.	Item no.
		a	b	c	d	e		
2250	1125	14,2	14,2	13,5	14,2	74,6	5,9	TYL0.00.T5
3600	1800	15,7	16,7	15,1	16,7	87,3	9,7	TYL0.00.T8
5450	2725	19,1	19,8	19,1	19,1	101	15,9	TYL0.0T.12
9050	4525	24,6	23,8	23,8	24,6	127	33,8	TYL0.0T.20
13600	6800	31,8	28,6	28,6	31,8	161,9	63,6	TYL0.0T.30
18150	9075	45,7	42,6	47,1	45,2	243	282	TYL0.0T.40
22700	11350	50,8	47,6	52,4	50,3	270	313	TYL0.0T.50



## Tylaska Snapshackle with large bail

Material: AISI 630  
Finish: highly polished

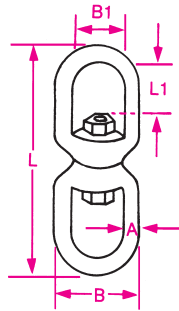
Breaking load in kg	SWL in kg	Dimensions in mm					Weight in kg/100 pcs.	Item no.
		a	b	c	d	e		
2250	1125	14,2	14,2	20,6	22,2	84,1	7,4	TYL0.00.T5L
3600	1800	15,7	16,7	24,6	25,4	92,1	11,6	TYL0.00.T8L
5450	2725	19,1	19,8	28,6	30,2	114,3	20,5	TYL0.0T.12L
9050	4525	24,6	23,8	34,9	38,1	141,3	40,6	TYL0.0T.20L
13600	6800	31,8	28,6	46,9	48,4	182,6	82,4	TYL0.0T.30L
18150	9075	45,7	42,6	72,8	74	274	390	TYL0.0T.40L
22700	11350	50,8	47,6	81	82,3	304,8	432	TYL0.0T.50L



# SWIVELS

## Stainless Steel Swivel with 2 Eyes

Material: AISI 316  
Finish: highly polished



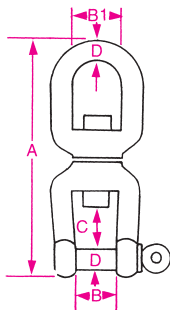
Breaking load in kg	Dimensions in mm					Weight in kg /100 pcs	Item no.
	A	L	B	B1	L1		
400	4	50	19	11	13	2,2	5545.00.40
650	5	60	23	14	13	3,4	5545.00.50
1140	6	66	27	15	15	5,1	5545.00.60
1600	8	90	36	20	22	13,1	5545.00.80
2500	10	112	44	24	27	26	5545.01.00
5000	13	149	58	32	35	58	5545.01.30
8500	16	186	70	38	45	105	5545.01.60
10000	19	223	79	41	50	220	5545.01.90
12000	22	258	92	48	52	285	5545.02.20
13000	25	290	115	65	67	455	5545.02.50



**This product must not be used for lifting and transport of loads!**

## Stainless Steel Swivel Fork-Eye

Material: AISI 316  
Finish: highly polished



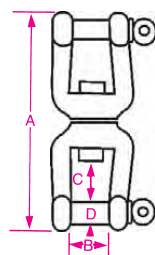
Breaking load in kg	Dimensions in mm					Weight in kg /100 pcs	Item no.
	D	A	B1	B	C		
1140	6	66	14	12	11	4,9	IL27.41.06
1600	8	90	20	16	16	15	IL27.41.08
2500	10	111	24	20	21	29,5	IL27.41.10
5000	13	149	32	26	26	66,7	IL27.41.13
8500	16	188	39	32	36	120,5	IL27.41.16
10000	19	218	41	38	41	250	IL27.41.19



**This product must not be used for lifting and transport of loads!**

## Stainless Steel Swivel Fork-Fork

Material: AISI 316  
Finish: highly polished



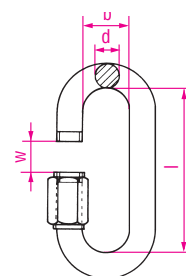
Breaking load in kg	Dimensions in mm				Weight in kg /100 pcs	Item no.
	D	A	C	B		
1140	6	65	11	12	4,4	IL27.42.06
1600	8	87	16	16	16,5	IL27.42.08
2500	10	111	22	20	33	IL27.42.10
5000	13	145	28	26	74,5	IL27.42.13
8500	16	178	37	32	134,5	IL27.42.16
10000	19	213	45	38	280	IL27.42.19



**This product must not be used for lifting and transport of loads!**

## Stainless Steel Quick Link

Material: AISI 316  
Finish: highly polished



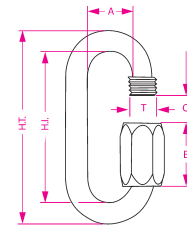
Nominal size	Dimensions in mm					Weight in kg /100 pcs	Item no.
	l	b	w	d	c		
4	32	12	5,5	4	6,0	1,25	6585.00.04
5	39	13	6,5	5	7,0	2,20	6585.00.05
6	45	14	7,5	6	9,0	3,60	6585.00.06
7	52	16	8,5	7	9,5	5,00	6585.00.07
8	58	18	10,0	8	11,0	7,80	6585.00.08
10	69	22	12,0	10	13,0	13,80	6585.00.10



**This product must not be used for lifting and transport of loads!**

## Stainless Steel Normal Quicklink CE

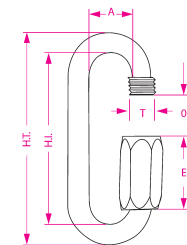
Material: AISI 316 L  
Finish: highly polished  
Marked with CE and WLL



WLL in kg	Ø	Dimensions in mm							Weight in kg/ 100 pcs	Item no.
		HT	HI	A	T	O	E			
100	2,5	26	21	7	3,5	3,5	8	3,1	MRN0.00.25	
160	3	31	25	8,5	4	4	9	5,3	MRN0.00.30	
220	3,5	36	29	10	5	5	11	8,1	MRN0.00.35	
280	4	39,5	31,5	11,5	6	5,5	12,5	12	MRN0.00.40	
450	5	49,5	39,5	13	7	6,5	16	21	MRN0.00.50	
650	6	57	45	14,5	9	7,5	19	35,4	MRN0.00.60	
900	7	66	52	16	10	8,5	21,5	52,3	MRN0.00.70	
1100	8	74	58	17,5	11	11	24	79	MRN0.00.80	
1800	10	89	69	20,5	13	12	29	140,5	MRN0.01.00	

## Stainless Steel Wide Quicklink CE

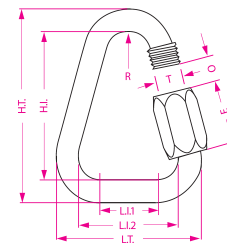
Material: AISI 316 L  
Finish: highly polished  
Marked with CE and WLL



WLL in kg	Ø	Dimensions in mm							Weight in kg/ 100 pcs	Item no.
		HT	HI	A	T	O	E			
90	2,5	33	28	7	3,5	7	12	3,6	MRG0.00.25	
145	3	39,5	33,5	8,5	4	8,5	13,5	7	MRG0.00.30	
200	3,5	46	39	10	5	10	16	10,5	MRG0.00.35	
250	4	53	45	11,5	6	11,5	19	15,4	MRG0.00.40	
400	5	62	52	13	7	13	22	25,7	MRG0.00.50	
580	6	70,5	58,5	14,5	9	14,5	25	42	MRG0.00.60	
800	7	79	65	16	10	16	28	61,5	MRG0.00.70	
980	8	88	72	17,5	11	17,5	31,5	93,3	MRG0.00.80	
1600	10	105,5	85,5	20,5	13	20,5	36	161	MRG0.01.00	
2200	12	124	100	23,5	15	23,5	43	274,7	MRG0.01.20	
3100	14	142	114	26,5	17	26,5	49	430,5	MRG0.01.40	
4000	16	161	129	29,5	19	29,5	54	645,8	MRG0.01.60	

## Stainless Steel Delta Quicklink CE

Material: AISI 316 L  
Finish: highly polished  
Marked with CE and WLL

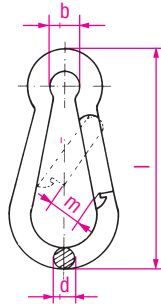


WLL in kg	Ø	Dimensions in mm										Weight in kg/ 100 pcs	Item no.
		HT	HI	LT	LI1	LI2	E	O	R	T			
70	2,5	27	22	22	10	17	8	3,5	3,5	3,5	2,6	MRD0.00.25	
110	3	30	24	27	12,5	21	9	4	4,25	4	6,1	MRD0.00.30	
200	4	40	32	35,5	16	27,5	12,5	5,5	5,75	6	13,9	MRD0.00.40	
325	5	48	38	40	17	30	16	6,5	6,5	7	23,6	MRD0.00.50	
450	6	56	44	47	20,5	35	19	7,5	7,25	8	39,5	MRD0.00.60	
625	7	63	49	51	21	37	21,5	8,5	8	10	59	MRD0.00.70	
770	8	73	57	56	22,5	40	24	10	8,85	11	88,2	MRD0.00.80	
1250	10	87	67	66	25,5	46	29	12	10,25	13	156,4	MRD0.01.00	
1750	12	104	80	75	27,5	51	33	15	11,75	15	262,4	MRD0.01.20	
2450	14	123	95	85	30,5	57	38,5	17	13,25	17	413,6	MRD0.01.40	
3150	16	138	106	93	31,5	61	45	19	14,75	19	627,3	MRD0.01.60	

# HOOKS

## Stainless Steel Snap Hook

Material: AISI 316  
Finish: highly polished

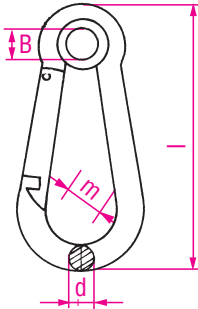


Breaking load in kg	Dimensions in mm				Weight in kg /100 pcs	Item no.
	d	l	b	m		
180	4	40	7	6	1	IL22.01.04
220	5	50	8	7	1,8	5145.00.10
272	6	60	9	8	2,8	5145.00.15
364	7	70	10	9	4,6	5145.00.23
508	8	80	12	10	7	5145.00.27
728	10	100	15	12	14,6	5145.00.40
816	11	120	19	16	19,5	5145.00.55
908	12	140	22	21	27,5	IL22.01.14
1000	13	160	22	24	36,3	IL22.01.16

**!** This product must not be used for lifting and transport of loads!

## Stainless Steel Snaphook with eye

Material: AISI 316  
Finish: highly polished

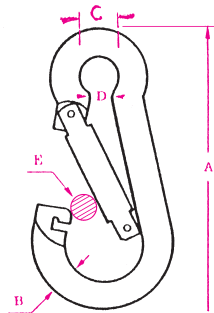


Breaking load in kg	Dimensions in mm				Weight in kg /100 pcs	Item no.
	d	l	m	B		
180	4	40	7	5	1,1	IL22.02.04
220	5	50	8	7	1,9	IL22.02.05
272	6	60	9	7,5	2,9	IL22.02.06
364	7	70	10	8	4,7	IL22.02.07
508	8	80	12	10	7,3	IL22.02.08
728	10	100	15	13,5	14,9	IL22.02.10
816	11	120	19	15	19,9	IL22.02.12
908	12	140	22	18	27,9	IL22.02.14
1000	13	160	22	22	37	IL22.02.16

**!** This product must not be used for lifting and transport of loads!

## Kong Stainless Steel Snaphook

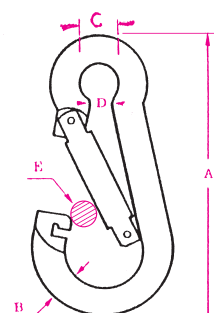
Material: AISI 316  
Finish: highly polished  
With Key Lock system



Breaking load in kg	Dimensions in mm					Weight in kg /100 pcs	Item no.
	A	B	C	D	E		
-	50	5	8	5,5	7,5	1,6	KO05.55.05
-	60	6	9	6,5	9	2,7	KO05.55.06
-	70	7	10	8	9	4,4	KO05.55.07
800	80	8	11	8,5	11	6,6	KO05.55.08
1200	100	10	15	10,5	15	12,8	KO05.55.10
2000	120	11	18	12	17	18,4	KO05.55.12
2400	160	13	23	17,5	30	35,3	KO05.55.16

## Kong Stainless Steel Snaphook with eye

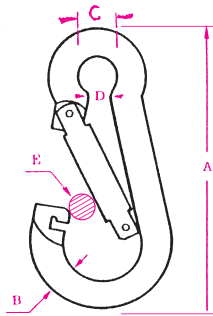
Material: AISI 316  
Finish: highly polished  
With Key Lock system



Breaking load in kg	Dimensions in mm				Weight in kg /100 pcs	Item no.
	A	B	C	E		
-	50	5	8	7,5	1,7	KO05.57.05
-	60	6	9	9	2,8	KO05.57.06
-	70	7	10	9	4,5	KO05.57.07
800	80	8	11	11	6,7	KO05.57.08
1200	100	10	15	15	18,5	KO05.57.10
2000	120	11	18	17	35,4	KO05.57.12

## Kong Stainless Steel Snaphook with eye and threaded locking sleeve

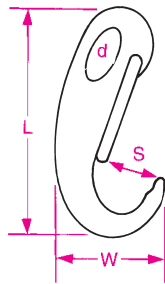
Material: AISI 316  
Finish: highly polished  
With Key Lock system



Breaking load in kg	Dimensions in mm				Weight in kg /100 pcs	Item no.
	A	B	C	E		
1200	100	10	14	13	1,7	KO05.58.10
2000	120	11	17	16	2,8	KO05.58.12

## Stainless Steel Springsnap

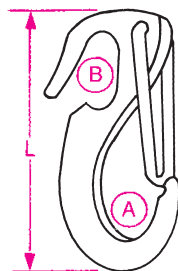
Material: AISI 316  
Finish: highly polished



Breaking load in kg	Dimensions in mm				Weight in kg /100 pcs	Item no.
	L	W	S	d		
220	50	24	10	8	2	IL22.20.50
500	69	31	12	12	5	IL22.20.70
900	96	47	20	16	15	IL22.21.00

## Stainless Steel Springsnap Open End

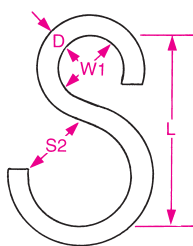
Material: AISI 316  
Finish: highly polished



Breaking load in kg	Dimensions in mm			Weight in kg /100 pcs	Item no.
	L	A	B		
220	50	7,5	6,5	2	IL22.50.50
500	65	11	10	5	IL22.50.65
900	90	17	13	15	IL22.50.90

## Stainless Steel S-hook

Material: AISI 304  
Finish: highly polished

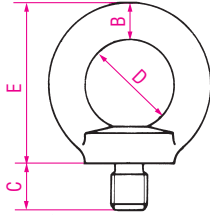


D	Dimensions in mm			Weight in kg /100 pcs	Item no.
	L	W1	S2		
3	30	6	5	0,3	IL22.40.03
4	36	11	6	0,8	IL22.40.04
5	43	14	10	1,5	IL22.40.05
6	55	16	18	2,6	IL22.40.06
8	75	23	20	6,5	IL22.40.08

# EYE BOLT, EYE NUT

## Stainless Steel Eye Bolt, DIN 580, Material AISI316, casted

Material: AISI 316  
 Finish: highly polished  
 Marking: No load capacity marked



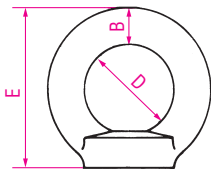
Breaking load in kg	Nominal size	Dimensions in mm				Weight in kg/ 100 pcs	Item no.
		B	C	D	E		
420	M6	6	13	17	28	6	5551.30.06
840	M8	8	13	20	33	6	5551.30.08
1380	M10	10	17	25	42	11	5551.30.10
2040	M12	12	21	30	51	18	5551.30.12
4200	M16	14	27	35	60	28	5551.30.16
7200	M20	16	30	40	69	45	5551.30.20
10800	M24	20	36	50	87	74	5551.30.24



Must not be used for lifting

## Stainless Steel Eye Nut, DIN 582, Material AISI316, casted

Material: AISI 316  
 Finish: highly polished  
 Marking: No load capacity marked



Breaking load in kg	Nominal size	Dimensions in mm			Weight in kg/ 100 pcs	Item no.
		B	D	E		
420	M6	6	17	28	6	5552.30.06
840	M8	8	20	33	6	5552.30.08
1380	M10	10	25	42	11	5552.30.10
2040	M12	12	30	51	18	5552.30.12
4200	M16	14	35	60	28	5552.30.16
7200	M20	16	40	69	45	5552.30.20
10800	M24	20	50	87	74	5552.30.24



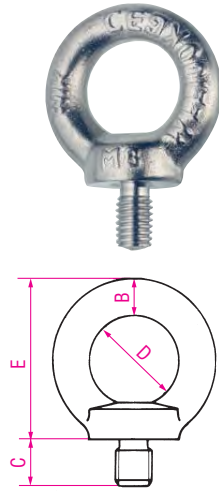
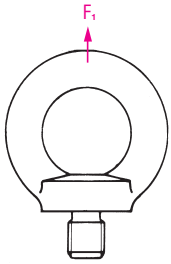
Must not be used for lifting



# EYE BOLT, EYE NUT

## Stainless Steel Eye Bolt, DIN 580, Material: AISI316, forged

Precisely drop-forged  
Material: AISI316  
Finish: highly polished  
Marking: Manufacturer's Mark, load capacity (WLL/kg)

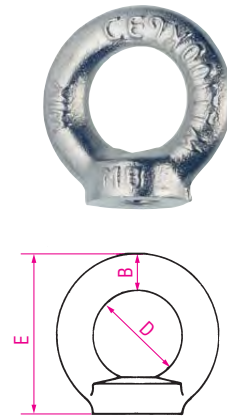
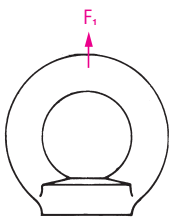


Load capacity in t	Nominal size	Load capacity F1 in kg	Dimensions in mm				Weight in kg/ 100 pcs	Item no.
			B	C	D	E		
0,07	M6	70	8	13	20	36	6,00	5551.60.06
0,14	M8	140	8	13	20	36	6,00	5551.60.08
0,23	M10	230	10	17	25	45	11,00	5551.60.10
0,34	M12	340	12	20,5	30	54	18,00	5551.60.12
0,70	M16	700	14	27	35	63	28,00	5551.60.16
1,20	M20	1200	16	30	40	72	45,00	5551.60.20
1,80	M24	1800	20	36	50	90	74,00	5551.60.24

**!** Load capacity (WLL/kg) indicated on the eye bolts must not be exceeded!

## Stainless Steel Eye Nut, DIN 582, Material: AISI316, forged

Precisely drop-forged  
Material: AISI316  
Finish: highly polished  
Marking: Manufacturer's Mark, load capacity (WLL/kg)



Load capacity in t	Nominal size	Load capacity F1 in kg	Dimensions in mm			Weight in kg/ 100 pcs	Item no.
			B	D	E		
0,07	M6	70	8	20	36	5,00	5552.60.06
0,14	M8	140	8	20	36	5,00	5552.60.08
0,23	M10	230	10	25	45	9,00	5552.60.10
0,34	M12	340	12	30	53	16,00	5552.60.12
0,70	M16	700	14	35	62	24,00	5552.60.16
1,20	M20	1200	16	40	71	36,00	5552.60.20
1,80	M24	1800	20	50	90	72,00	5552.60.24

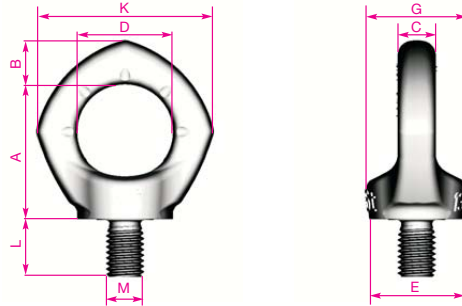
**!** Load capacity (WLL/kg) indicated on the eye nuts must not be exceeded!



# EYE BOLT, LIFTING RING

## Stainless Steel Eye Bolt Type INOX-STAR

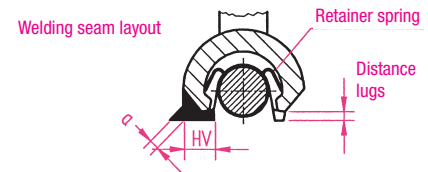
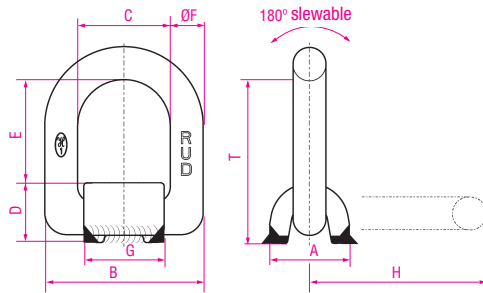
Stainless steel  
50% higher load capacity than DIN  
Can be loaded in all directions!



Also available as attachment point for fall protection systems.  
For more information please refer to our free catalogue „Fall Protection Systems” which is now available!

Type	Nominal load capacity in t	Dimensions in mm										Weight in kg/pce	Item no.
		A	B	C	D	E	G	K	L	M	SW		
INOX-STAR M12	0,5	43	14	10	30	30	32	56	18	M12	8	0,2	5555.E0.12
INOX-STAR M16	1,0	50	16	14	35	35,5	38	65	24	M16	10	0,3	5555.E0.16
INOX-STAR M20	2,0	57	19	16	40	41,5	46,5	74	30	M20	12	0,6	5555.E0.20
INOX-STAR M24	2,5	70	24	19	48	50	56	92	36	M24	14	1,0	5555.E0.24

## Weld-on Stainless Steel Lifting Ring LBS, Material 1.4571



Load capacity in t	Type	Welding seam	Dimensions in mm									Weight in kg/pce	Item no. LBS stainless steel
			A	B	C	D	E	ØF	G	H	T		
0,5	LBS (1) RS 0,5t	HV 5+3	32	65	36	25	39	13,5	33	85	64	0,3	5563.10.05
1	LBS (3) RS 1t	HV 8+3	42	85	50	31	50	16,5	46	108	81	0,6	5563.10.10
2	LBS (5) RS 2t	HV 12+4	61	110	65	44	72	22,2	60	155	116	1,6	5563.10.20

## Maximum transport weight G in ton with different lifting methods

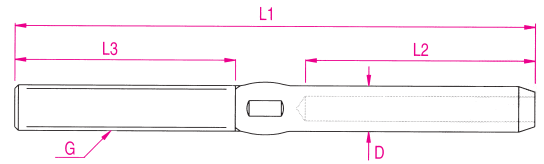
Lifting method										
Number of legs	1	2	1	2	2	2	2	3 und 4	3 und 4	3 und 4
Inclination angle	0°	0°	90°	90°	0°-45°	45°-60°	asymmetric	0°-45°	45°-60°	asymmetric
LBS RS 0,5	0,5	1	0,5	1	0,7	0,5	0,5	1,05	0,75	0,5
LBS RS 1	1	2	1	2	1,4	1	1	2,1	1,5	1
LBS RS 2	2	4	2	4	2,8	2	2	4,2	3	2



# WIRE ROPE TERMINALS

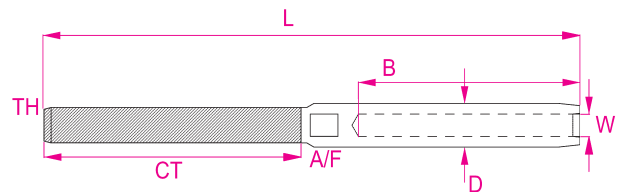
## Swage Terminals

### Blue Wave Threadterminals, Material AISI316



Wire in mm	Breaking load in kg	L1	L2 PIN	L3	D	G metric	weight in kg/100 pcs	Item no. RIGHT	Item no. LEFT
2	800	87	32	42	5,5	M5	1,4	BW900205	BW910205
3	1250	100	38	48	6,35	M6	2	BW900306	BW910306
4	1250	110	45	48	7,5	M6	2,4	BW900406	BW910406
4	2350	117	45	57	7,5	M8	3	BW900408	BW910408
5	2350	125	51	57	9	M8	4	BW900508	BW910508
5	3500	130	51	63	9	M10	4,5	BW900510	BW910510
6	3500	145	64	63	12,58	M10	8,4	BW900610	BW910610
6	5100	162	64	80	12,58	M12	11	BW900612	BW910612
7	5100	170	70	80	14,2	M12	13,3	BW900712	BW910712
7	5900	180	70	89	14,2	M14	16	BW900714	BW910714
8	5100	185	83	80	16	M12	19,2	BW900812	BW910812
8	5900	194	83	89	16	M14	20	BW900814	BW910814
8	8000	203	83	100	16	M16	23	BW900816	BW910816
10	8000	210	89	100	17,8	M16	35	BW901016	BW911016
10	13000	230	89	120	17,8	M20	35	BW901020	BW911020
12	13000	249	105	120	20	M20	45	BW901220	BW911220
12	13000	265	120	120	21,4	M20	50	BW901220X	BW911220X
14	17000	308	140	140	25	M22	76,8	BW901422	BW911422
16	17000	333	160	140	28	M22	97,8	BW901622	BW911622
16	20000	363	160	170	28	M24	111	BW901624	BW911624
19	25500	425	200	180	34,5	M27	209	BW901927	BW911927
22	31000	480	230	200	40,5	M30	314	BW902230	BW912230
26	43000	550	280	220	46	M36	470	BW902636	BW912636

### HI-MOD Threadterminals, Material AISI316

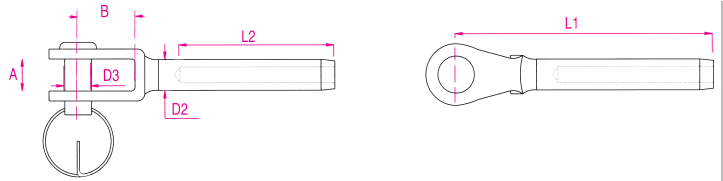


Wire in mm	TH	D	B	L	CT	A/F	weight in kg/100 pcs	Item no.
3	M6	6,3	39	97	47	5	2,4	PSSCM63
4	M6	7,5	45	105	47	6	3,3	PSSCM64
4	M8	7,5	45	113	54	6	3,6	PSSCM84
5	M8	9,1	52	122	54	8	5,4	PSSCM85
5	M10	9,1	52	135	68	8	6	PSSCM105
6	M10	12,5	64	154	75	11	10,8	PSSCM106
6	M12	12,5	64	170	90	11	11,9	PSSCM126
7	M12	14,3	70	177	90	12	16,2	PSSCM127
8	M12	16	80	190	90	14	19,6	PSSCM128
8	M16	16	80	201	100	14	26	PSSCM168
10	M16	18	100	223	100	16	30,6	PSSCM1610
12	M20	21,4	132	277	120	19	55	PSSCM2012
14	M22	25	156	325	140	22	87,4	PSSCM2214
16	M27	28,2	176	371	160	25	127,5	PSSCM2716
19	M30	34,5	210	425	180	28	205	PSSCM3019
22	M36	40,3	242	482	200	32	320	PSSCM3622
26	M42	45,9	290	557	220	36	400	PSSCM4226

# WIRE ROPE TERMINALS

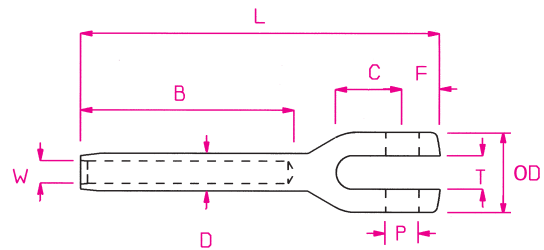
## Swage Terminals

### Blue Wave Forkterminals, Material AISI316



Wire in mm	Breaking load in kg	D2	D3 PIN	Dimensions in mm				weight in kg/100 pcs	Item no.
				L1	L2	A	B		
2	800	5,5	5	58	32	7,5	12	2	BW100502
3	800	6,35	5	67	38	7,5	12	2,3	BW100503
3	1300	6,35	6	68	38	9,5	13	2,8	BW100603
4	1300	7,5	6	73	45	9,5	13	3,4	BW100604
4	2350	7,5	8	77	45	11	15	4,9	BW100804
5	2350	9	8	87	51	11	15	5,5	BW100805
5	3500	9	9,5	91	51	12	19	7,2	BW109505
6	3500	12,58	9,5	104	64	12	19	11,3	BW109506
6	5100	12,58	12	110	64	14	25	17,6	BW101206
7	5100	14,2	12	119	70	14	25	18,1	BW101207
8	5100	16	12	136	83	14	25	21,6	BW101208
8	7600	16	16	145	83	18	33	25,5	BW101608
10	7600	17,8	14	151	89	18	40	35	BW101410
10	7600	17,8	14	149	89	22	30	36	BW101410L
10	8000	17,8	19	168	89	24	50,5	52,4	BW101910
12	13000	20	19	187	105	30	47	66	BW101912L
12	13000	21,4	19	205	120	24	48	75	BW101912X
14	17000	22	25,4	232	140	30	57	112,7	BW102214
16	24000	28	25,4	264	160	30	62	140	bw102516
19	25500	34,5	28	309	200	32	68	246	BW102819
22	31000	40,5	32	354	230	35	76	372	BW103222
26	43000	46	35	420	280	40	86	548	BW103526

### HI-MOD Forkterminals, Material AISI316

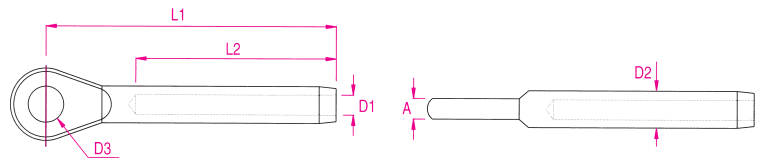


Wire in mm	Breaking load in kN	P	D	F	C	T	B	OD	L	weight in kg/100 pcs	Item no.
3	13,3	6	6,3	7	13	6,3	39	14,3	70	2	PS030103
4	17	8	7,5	9	16	8	45	18	83	3,6	PS030104
5	25	9,5	9,1	10	19	10	52	22,2	97	6,4	PS030105
6	56	11	12,5	12	22	11	64	25,4	113	14,2	PS030106
7	72	12	14,3	15	25	12,7	70	28,6	128	17,2	PS030107
8	92,6	14	16	16,5	28	14	80	34,9	144,5	27,8	PS030108
10	101	16	18	18	32	16	100	38,1	174	37,6	PS030110
12	126	19	21,4	23	38	19	132	47,6	227	110	PS030112
14	174	22	25	26	45	22,2	156	54	258	111	PS030114
16	218	25,4	28,2	30,6	50	25,4	176	63,5	295,5	168	PS030116
19	341	28	34,5	33	58	28,6	210	69,9	342	258	PS030119
22	459	32	40,3	39	64	32	242	76,2	391	361	PS030122
26	564	35	45,9	43,5	70	35	290	82,5	451,5	502	PS030126

# WIRE ROPE TERMINALS

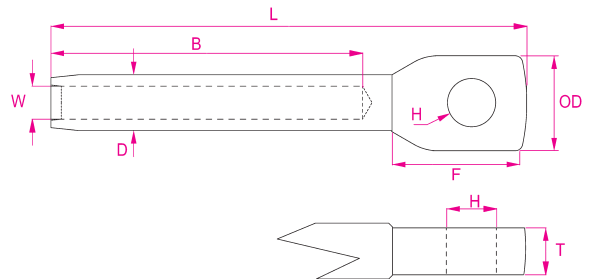
## Swage Terminals

### Blue Wave Eyeterminals, Material AISI316



Wire in mm	Breaking load in kg	Dimensions in mm					weight in kg/100 pcs	Item no.
		D2	D3	L1	L2	A		
2	800	5,5	5,5	49	32	3	0,9	BW190002
3	1300	6,35	6,5	58	38	4	1,3	BW190003
4	2350	7,5	8,5	67	45	5	2,3	BW190004
5	3500	9	10,5	79	51	6	3,9	BW190005
6	5600	12,58	13	94	64	8	8,7	BW190006
7	5600	14,2	13	104	70	9	13,5	BW190007
8	7600	16	14,5	124	83	10	17	BW190008
10	9800	17,8	16,3	137	89	11	25	BW190010
12	13000	20	19,3	156	105	15	41,5	BW190012
12	13000	21,4	19,3	178	105	15	41,9	BW190012X
14	17000	14,8	23	206	140	18	75,6	BW190014
16	24000	28	26	232	160	20	102	BW190016
19	27000	34,5	28,5	302	200	25	209	BW190019
22	31000	40,4	33	348	230	30	314	BW190022
26	43000	46	36	400	280	30	425	BW190026

### HI-MOD Eyeterminals, Material AISI316

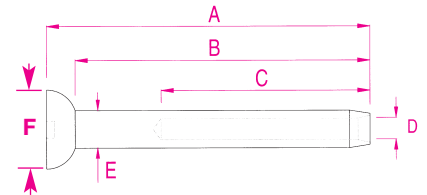


Wire in mm	Breaking load in kN	Dimensions in mm							weight in kg/100 pcs	Item no.
		H	D	B	F	T	OD	L		
4	17	8,3	7,5	45	20	6,5	16	69	2,3	PS040204
5	25	9,7	9,1	52	26	7,8	19	82	4,2	PS040205
6	56	11,3	12,5	64	31	9,5	25	99	10	PS040206
7	72	12,8	14,3	70	35	11,5	27	113	12,9	PS040207
8	92,6	14,3	16	80	40	14	32	128	17,8	PS040208
10	101	16,2	18	100	45	15	34	155	24,5	PS040210
12	126	19,3	21,4	132	53	18	38	197	46,2	PS040212
14	174	22,3	25	156	62	22	51	232	72,1	PS040214
16	218	25,5	28,2	176	70	24	54	262	109	PS040216
19	341	28,6	34,5	210	76	28	58	302	178	PS040219
22	459	32,5	40,3	242	86	32	71	347	270	PS040222
26	564	35,5	45,9	290	97	34	75	408	396	PS040226

# WIRE ROPE TERMINALS

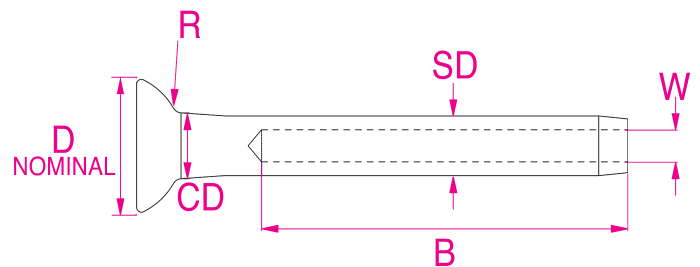
## Swage Terminals

### Blue Wave Stemballterminals, Material AISI316



Wire in mm	Dimensions in mm						weight in kg/100 pcs	Item no.
	A	B	C	D	E	F		
3	58	54	38	3,5	6,35	13	1,1	BW620003
4	69	63	45	4,4	7,5	16	2,4	BW620004
5	79	72	51	5,3	9	19	3,8	BW620005
6	90	84	64	6,5	12,58	20	7,9	BW620006
7	94	87	70	7,5	14,2	21,3	10	BW620007
8	116	108	83	8,4	16	26,3	16,9	BW620008
10	129	119	89	10,5	17,8	27,5	23,5	BW620010
12	145	135	105	12,5	20	28	26,7	BW620012
12	150	138	105	12,5	20	35,6	38	BW620012A
14	195	183	140	14,8	25	40,2	58,5	BW620014A
16	210	199	160	17	28	44,6	71,6	BW620016A

### Hi-Mod Stemballterminals, Material AISI316

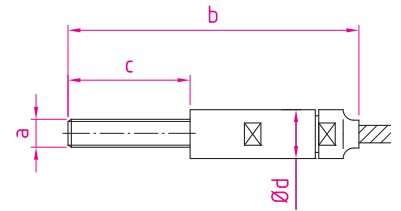


Wire in mm	Dimensions in mm						weight in kg/100 pcs	Item no.
	D	B	SD	CD	W	R		
3	12,5	39	6,3	7,5	3,4	6,3	1,1	PS050103
4	17	45	7,5	8,5	4,4	8,8	2,5	PS050104
5	17	52	9,1	10	5,4	8,8	2,9	PS050105
5	21	52	9,1	10	5,4	10,8	4,3	PS0501051
6	21	64	12,5	13,5	6,5	10,8	7,4	PS050106
7	21	70	14,3	15	7,5	10,8	10,2	PS050107
7	27	70	14,3	15	7,5	13,8	11,9	PS0501071
8	27	80	16	18,5	8,5	13,8	15,5	PS050108
10	31	100	18	19,5	10,6	15,8	21,5	PS050110
12	35	132	21,4	23	12,8	17,8	37,4	PS050112

# WIRE ROPE TERMINALS

## Swageless Terminals

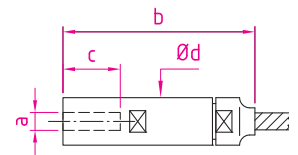
### External thread swageless connection , Material AISI316



Ø rope	a	Ø d	Dimensions in mm		kN	Item no. RH thread	Item no. LH thread
			b	c			
2	M6	13	85	30	2	826-0200-030	827-0200-030
2	M6	13	115	60	2	826-0200-060	827-0200-060
3	M6	13	85	30	4,5	826-0300-030	827-0300-030
3	M6	13	115	60	4,5	826-0300-060	827-0300-060
4	M6	13	85	30	8	826-0400-030	827-0400-030
4	M6	13	115	60	8	826-0400-060	827-0400-060
5	M8	15	87	30	12,6	826-0500-030	827-0500-030
5	M8	15	117	60	12,6	826-0500-060	827-0500-060
6	M8	15	87	30	18,1	826-0600-030	827-0600-030
6	M8	15	117	60	18,1	826-0600-060	827-0600-060
8	M10	20	167	80	32,2	826-0800-080	827-0800-080
10	M14	28	223	100	46,8	826-1000-100	827-1000-100
12	M16	30	257	120	67,6	826-1200-120	827-1200-120

Not suitable for strand 1 x 19

### External thread swageless connection, Material AISI316



Ø rope	a	b	Dimensions in mm		kN	Item no. RH thread	Item no. LH thread
			c	Ø d			
2	M6	55	18	13	2	831-0200	832-0200
3	M6	55	18	13	4,5	831-0300	832-0300
4	M6	55	18	13	8	831-0400	832-0400
5	M8	57	20	15	12,6	831-0500	832-0500
6	M8	57	20	15	18,1	831-0600	832-0600
8	M10	87	40	20	32,2	831-0800	832-0800
10	M14	123	60	28	46,8	831-1000	832-1000
12	M16	137	60	30	67,6	831-1200	832-1200

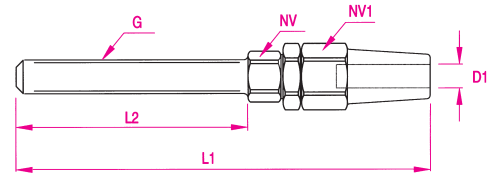
Not suitable for strand 1 x 19



# WIRE ROPE TERMINALS

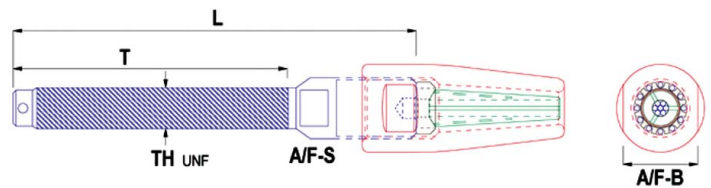
## Swageless Terminals

### Blue Wave Swageless threadterminals, Material AISI316



Wire in mm	Breaking load in kg	Dimensions in mm				G metric	weight in kg/100 pcs	Item no.	Item no.
		L1	L2	NV	NV1			RIGHT	LEFT
3	750	79	42	10	12	M5	4,2	BW800305	BW810305
3	750	85	47	10	12	M6	4,5	BW800306	BW810306
4	1500	92	47	12	14	M6	5,6	BW800406	BW810406
4	1500	102	57	12	14	M8	6,6	BW800408	BW810408
5	2180	111	57	13	16	M8	9	BW800508	BW810508
5	2180	117	63	13	16	M10	10	BW800510	BW810510
6	3500	128	63	16	19	M10	15	BW800610	BW810610
6	3700	145	80	16	19	M12	17	BW800612	BW810612
7	4700	153	80	18	22	M12	22	BW800712	BW810712
7	4700	162	89	18	22	M14	25	BW800714	BW810714
8	5100	162	80	19	24	M12	28	BW800812	BW810812
8	5600	171	89	19	24	M14	31	BW800814	BW810814
8	5600	182	10	19	24	M16	40	BW800816	BW810816
10	8300	190	10	24	27	M16	48	BW801016	BW811016
12	12000	227	120	27	32	M20	79	BW801220	BW811220
14	17000	264	140	30	36	M22	124	BW801422	BW811422
16	21000	308	170	32	41	M24	175	BW801624	BW811624

### Hi-Mod Swageless threadterminals, Material AISI316



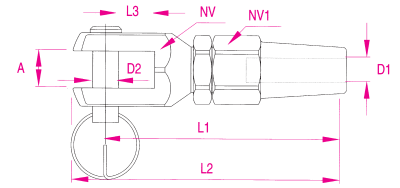
Wire in mm	TH	T	Dimensions in mm			weight in kg/100 pcs	Item no.	Item no.
			L	A/F S	A/F B		RIGHT	LEFT
3	M6	47	63	6	9,5	2,4	PSCTSM0603	PSCTSM0603L
4	M6	47	68	8	11	3,5	PSCTSM0604	PSCTSM0604L
4	M8	54	74	8	11	4,2	PSCTSM0804	PSCTSM0804L
5	M8	54	80	9	14	6,5	PSCTSM0805	PSCTSM0805L
5	M10	68	90	9	14	7,5	PSCTSM1005	PSCTSM1005L
6	M10	68	95	11	17	11	PSCTSM1006	PSCTSM1006L
6	M12	90	117	11	17	14,5	PSCTSM1206	PSCTSM1206L
7	M12	90	123	14	20	19,9	PSCTSM1207	PSCTSM1207L
8	M12	90	129	16	22	29,7	PSCTSM1208	PSCTSM1208L
8	M16	100	134	16	22	34	PSCTSM1608	PSCTSM1608L
10	M16	100	139	17	26	45,3	PSCTSM1610	PSCTSM1610L
10	M20	120	158	19	26	80	PSCTSM2010	PSCTSM2010L

Please specify wire rope construction at order. Standard these fittings are supplied with 1 x 19 cones and crown rings.

# WIRE ROPE TERMINALS

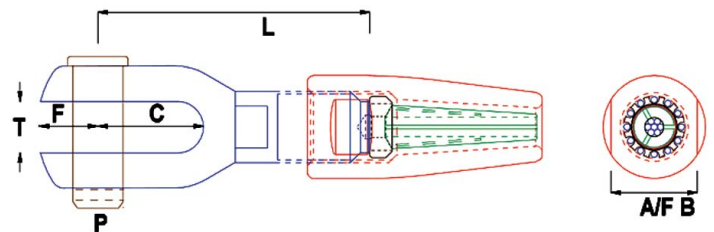
## Swageless Terminals

### Blue Wave Swageless forkterminals, Material AISI316



Wire in mm	Breaking load in kg	Dimensions in mm								weight in kg/100 pcs	Item no.
		A	L1	L2	L3	D2 PIN	NV	NV1			
3	750	6	55	63	8	6	14	12	5,5	BW840603	
4	1500	8	62	73	8	8	19	14	9	BW840804	
5	2180	10	72	83	10	10	22	16	15	BW841005	
6	3700	12	82	95	12	12	27	19	23	BW841206	
7	4700	12	102	115	13	12	29	22	29	BW841207	
8	5600	14	103	118	14	14	30	24	38	BW841408	
10	8300	16	117	135	16	16	36	27	63	BW841610	
12	12000	18	142	162	16	19	42	32	97	BW841912	
14	17000	21	162	190	19	22	46	36	135	BW842214	
16	23000	23	184	217	22	25	55	41	215	BW842516	

### Hi-Mod Swageless forkterminals, Material AISI316



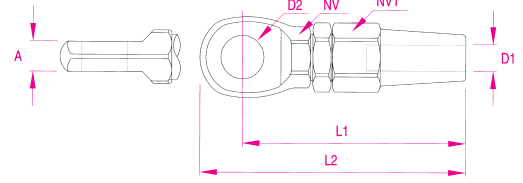
Wire in mm	Dimensions in mm						weight in kg/100 pcs	Item no.
	P	F	C	T	L PIN	A/F B		
3	6	7	13	6,3	30	9,5	2,9	PSCTF03
4	8	9	16	8	40	11	6	PSCTF04
5	9,5	11	19	10	47	14	10,3	PSCTF05
6	11	12	22	11	50	19	15,9	PSCTF06
7	12	15	25	12,7	58	20	23,9	PSCTF07
8	14	16,5	28	14	70	22	39,5	PSCTF08
10	16	18	32	16	78	26	54,2	PSCTF10
12	19	23	38	19	93	32	91,8	PSCTF12
14	22	26	45	22,2	106	36	146,4	PSCTF14
16	25,4	30,5	50	25,4	126	40	212,5	PSCTF16
19	28	33	58	28,6	133	44	261,6	PSCTF19
22	32	39	64	32	146	52	389	PSCTF22
26	35	43,5	70	35	167	64	639,3	PSCTF26

Please specify wire rope construction at order. Standard these fittings are supplied with 1 x 19 cones and crown rings.

# WIRE ROPE TERMINALS

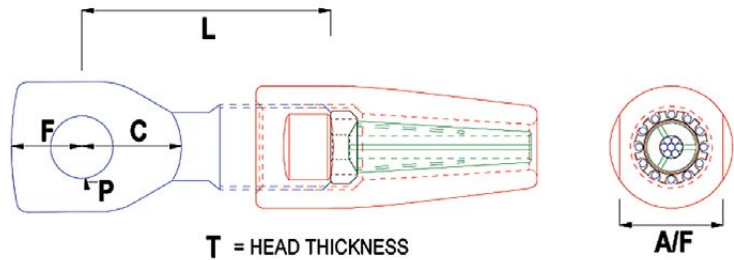
## Swageless Terminals

### Blue Wave Swageless eyeterminals, Material AISI316



Wire in mm	Breaking load in kg	A	L1	Dimensions in mm				weight in kg/100 pcs	Item no.
				L2	D2	NV	NV1		
3	750	5,5	50	58	6,3	10	12	4	BW821903
4	1500	7	58	68	8,3	13	14	7,3	BW821904
5	2180	8	70	81	10,3	14	16	9,8	BW821905
6	3700	9	83	97	13	17	19	15	BW821906
7	4700	9	89	105	13	18	22	21,2	BW821907
8	5600	10	103	121	14,5	19	24	28,1	BW821908
10	8300	13	116	135	16,2	24	27	46	BW821910
12	12000	15	137	160	19,5	27	32	72	BW821912
14	14000	18	159	185	22	30	36	110	BW821914
16	23000	20	180	197	25	32	41	160	BW821916

### Hi-Mod Swageless eyeterminals, Material AISI316

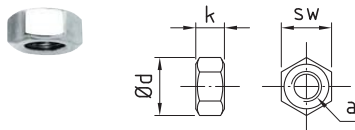


Wire in mm	Dimensions in mm						weight in kg/100 pcs	Item no.
	P	F	C	L	T	A/F		
3	6,3	7	9	22	6	9,5	2,1	PSCTE03
4	8	9	12	28	7	11	3,9	PSCTE04
5	9,5	11	16	32	8	14	6,5	PSCTE05
6	11	13	19	38	9,5	17	12,6	PSCTE06
7	12,7	13	20	45	11	20	16,5	PSCTE07
8	14,3	16	23	52	13	22	35,5	PSCTE08
10	16	19	28	59	15	26	46,2	PSCTE10
12	19	22	34	79	18	32	91,2	PSCTE12
14	22,2	26	36	86	22	36	134,4	PSCTE14
16	25,4	29	41	94	24	40	186,7	PSCTE16
19	28,6	32	44	98	28	44	222,7	PSCTE19
22	32	36	50	108	32	52	344	PSCTE22
26	35	42	55	144	34	64	557,5	PSCTE26

Please specify wire rope construction at order. Standard these fittings are supplied with 1 x 19 cones and crown rings.



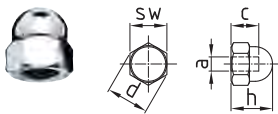
## Hexagon nut



Dimensions in mm				Item no.	Item no.
a	d	k	SW	RH thread	LH thread
M4	7,7	3,2	7	892-0400	893-0400
M5	8,8	4	8	892-0500	893-0500
M6	11,1	5	10	892-0600	893-0600
M8	14,4	6,5	13	892-0800	893-0800
M10	18,9	8	17	892-1000	893-1000
M12	21,1	10	19	892-1200	893-1200
M14	24,5	11	22	892-1400	893-1400
M16	26,8	13	24	892-1600	893-1600
M20	33,5	16	30	892-2000	893-2000
M22	35	18	32	892-2200	893-2200
M24	39,5	19	36	892-2400	893-2400
M27	48	24	41	892-2700	893-2700
M30	50,8	24	46	892-3000	893-3000
M36	64	31	55	892-3600	893-3600

Material: AISI316

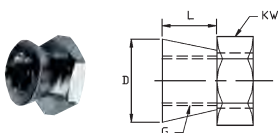
## Dome nut RH



Dimensions in mm					Item no.
a	c	h	d	SW	
M4	4,1	8	7,7	7	894-0400
M5	5,9	10	8,8	8	894-0500
M6	6	12	11,1	10	894-0600
M8	8,5	15	14,4	13	894-0800
M10	10	18	18,9	17	894-1000
M12	11,7	22	21,1	19	894-1200
M14	13	25	24,5	22	894-1400
M16	16	28	26,8	24	894-1600
M20	19,7	34	33,5	30	894-2000

Material: AISI316

## Security nut

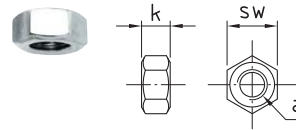


The security nut is the ideal solution where the nut has to remain permanently tightened. Once tightened, the KEY part breaks off and only a cone is left.

Dimensions in mm				Item no.
G	L	D	KW	
M6	5	10	10	BW044306
M8	6	13	13	BW044308
M10	8	17	17	BW044310
M12	10	19	19	BW044312
M16	13	24	24	BW044316
M20	18	30	30	BW044320

Material: AISI316

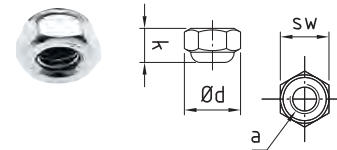
## Locking nut



Dimensions in mm			Item no.	Item no.
a	k	SW	RH thread	LH thread
M5	4	8	BW041205	BW051205
M6	4	8	BW041206	BW051206
M8	5	10	BW041208	BW051208
M10	7	13	BW041210	BW051210
M12	8	17	BW041212	BW051212
M14	10	19	BW041214	BW051214
M16	11	22	BW041216	BW051216
M20	13	24	BW041220	BW051220
M22	17	30	BW041222	BW051222
M24	18	36	BW041224	BW051224
M27	22	41	BW041227	BW051227
M30	24	46	BW041230	BW051230
M36	29	55	BW041236	BW051236

Material: AISI316

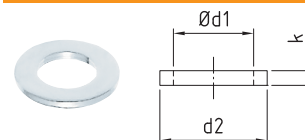
## Lock nut with nylon Insert RH



Dimensions in mm				Item no.
a	d	k	SW	
M4	7,7	5	7	892-0400-02
M5	8,8	5	8	892-0500-02
M6	11,1	6	10	892-0600-02
M8	14,4	8	13	892-0800-02
M10	18,9	10	17	892-1000-02
M12	21,1	12	19	892-1200-02
M14	24,5	14	22	892-1400-02
M16	26,8	16	24	892-1600-02
M20	33	20	30	892-2000-02

Material: AISI316

## Flat washer



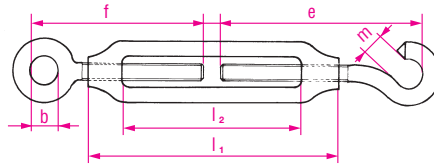
Dimensions in mm			Item no.
ø d1	ø d2	k	
M4	8	0,5	896-0400
M5	9	1	896-0500
M6	11	1,6	896-0600
M8	15	1,6	896-0800
M10	18	1,6	896-1000
M12	20	2	896-1200
M14	15	2,5	896-1400
M20	34	3	896-2000
M22	39	3	896-2200
M24	44	4	896-2400

Material: AISI316

# TURNBUCKLES

## Turnbuckle similar to DIN 1480, with Hook and Eye

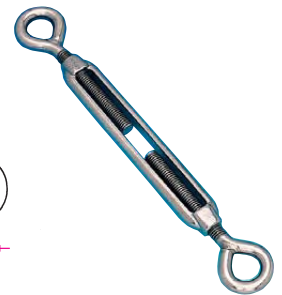
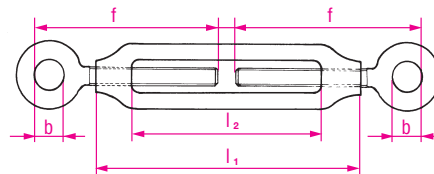
Hook and eye are forged  
Material: AISI 316  
Finish: highly polished



Nominal size = thread	b	e	Dimensions in mm				Weight in kg /100 pcs	Item no.
			f	l1	l2	m		
M5	8	53	58	70	55	9	5,03	5780.00.70
M6	10	85	80	110	65	10	9,50	5780.00.90
M8	11	85	84	110	95	11	16,50	5780.01.20
M10	12	112	105	125	120	12	29,00	5780.01.50
M12	14	117	115	125	165	14	43,00	5780.02.00
M16	16	138	165	170	215	16	92,00	5780.02.50

## Turnbuckle similar to DIN 1480, with 2 Eyes

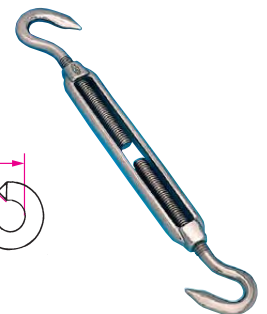
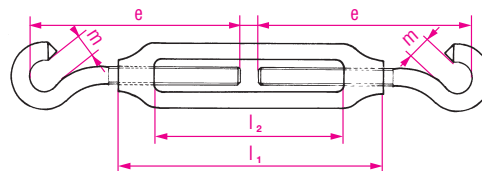
Eyes are forged  
Material: AISI 316  
Finish: highly polished



Nominal size = thread	b	Dimensions in mm			Weight in kg /100 pcs	Item no.
		f	l1	l2		
M5	8	58	70	55	5,21	5781.00.70
M6	10	80	110	65	9,00	5781.00.90
M8	11	84	110	95	15,50	5781.01.20
M10	12	105	125	120	27,00	5781.01.50
M12	14	115	125	165	41,00	5781.02.00
M16	16	165	170	215	100,00	5781.02.50

## Turnbuckle similar to DIN 1480, with 2 Hooks

Hooks are forged  
Material: AISI 316  
Finish: highly polished

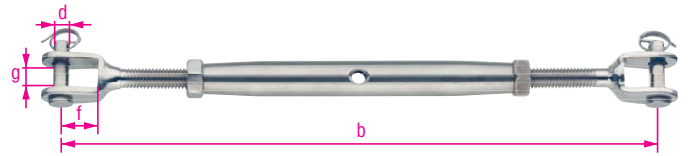


Nominal size = thread	e	Dimensions in mm			Weight in kg /100 pcs	Item no.
		l1	l2	m		
M5	53	70	55	9	4,85	5782.00.70
M6	85	110	65	10	9,50	5782.00.90
M8	85	110	95	11	17,00	5782.01.20
M10	112	125	120	12	30,00	5782.01.50
M12	117	125	165	14	44,00	5782.02.00
M16	138	170	215	16	95,00	5782.02.50



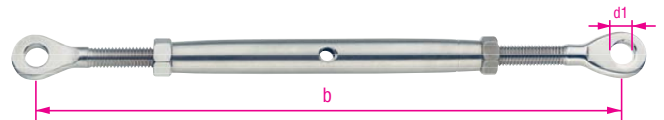
All products on this page must not be used for lifting and transport of loads!

## Turnbuckle with 2 Forks, Material AISI 316, far east production



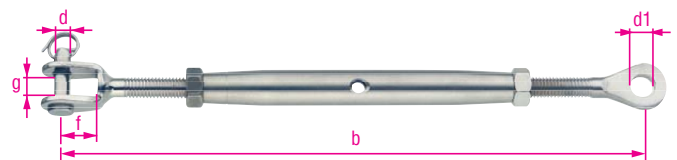
Thread	Dimensions in mm				Item no.
	b	d	g	f	
M6	180	5	7,5	12	I8712-060
M8	214	6	10	13	I8712-080
M10	238	8	11	15	I8712-100
M12	308	12	14	25	I8712-120
M16	388	14	22	31	I8712-160

## Turnbuckle with 2 Eyes, Material AISI 316, far east production



Thread	Dimensions in mm			Item no.
	b	d1	g	
M6	168	6,5	7,5	I8856-060
M8	212	8,5	10	I8856-080
M10	238	10,5	11	I8856-100
M12	290	13	14	I8856-120
M16	356	14,5	22	I8856-160

## Turnbuckle with Fork and Eye, Material AISI 316, far east production



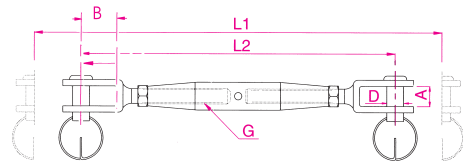
Thread	Dimensions in mm					Item no.
	b	d	d1	g	f	
M6	174	5	6,5	7,5	12	I8788-060
M8	213	6	8,5	10	13	I8788-080
M10	238	8	10,5	11	15	I8788-100
M12	299	12	13	14	25	I8788-120
M16	372	14	14,5	22	31	I8788-160



All products on this page must not be used for lifting and transport of loads!

# TURNBUCKLES

## Blue Wave Rigging screw Fork-Fork, Material AISI 316

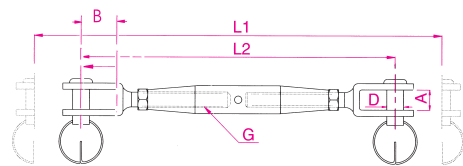


Breaking load in kg	G metric	Dimensions in mm					weight in kg/100 pcs	Item no.
		L1	L2	A	D PIN	B		
800	M5	180	126	7,5	5	12	5,1	BW120005
1250	M6	200	138	7,5	5	12	9	BW120006
1300	M6	202	140	9,5	6	13	14	BW120006X
1300	M8	234	158	9,5	6	13	15	BW120008
2350	M8	240	166	11	8	15	15	BW120008X
2350	M10	272	188	11	8	15	24	BW120010
3500	M10	280	196	12	9,5	19	26	BW120010X
5100	M12	350	244	14	12	25	52,5	BW120012
5900	M14	387	267	14	12	25	63,5	BW120014
5900	M14	403	283	18	14	33	63,5	BW120014X
8000	M16	442	309	22	14	31	100	BW120016L
8000	M16	446	313	18	14	33	100	BW120016L
8000	M16	446	313	18	16	33	100	BW120016X
13000	M20	546	386	30	19	50,5	197	BW120020L
13000	M20	550	390	24	19	50,5	197	BW120020L
17000	M22	653	472	30	22	57,5	430	BW120022
20000	M24	769	536	30	25,4	62,5	638	BW120024
25500	M27	825	590	32	28	68	770	BW120027
31000	M30	907	647	35	32	76	1060	BW120030
43000	M36	990	715	40	35	86	1657	BW120036



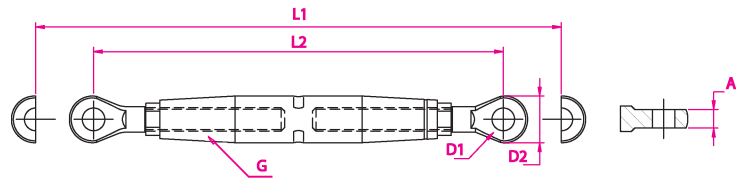
For suitable pelicanhooks check page 48

## Blue Wave Machined Rigging screw Fork-Fork, Material AISI 316 with bronze inserts



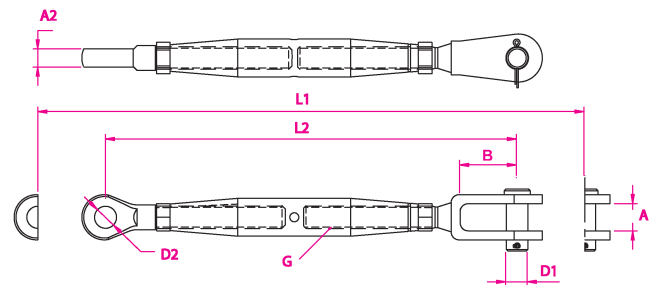
Breaking load in kg	G metric	Dimensions in mm					weight in kg/100 pcs	Item no.
		L1	L2	A	D PIN	B		
13000	M20	619	453	20	19	45	330	BW740020
17000	M22	637	456	22	22	49	892	BW740022
20000	M24	763	530	25	25	52	1193	BW740024
25500	M27	813	578	30	28	55	1803	BW740027
31000	M30	918	656	35	32	67	2614	BW740030
43000	M36	970	696	35	35	67	3390	BW740036

## Blue Wave Rigging screw Eye-Eye, Material AISI 316



Breaking load in kg	G metric	Dimensions in mm					weight in kg/100 pcs	Item no.
		L1	L2	D1	A	D2		
800	M5	190	131	5,5	3	12	3,5	BW191905
1300	M6	204	136	6,5	4	14	10,7	BW191906
2350	M8	244	164	8,5	5	17	14,4	BW191908
3500	M10	270	187	10,5	6	22	22,9	BW191910
5100	M12	334	226	13	8	25	37,8	BW191912
5900	M14	376	257	13	9	28	51	BW191914
8000	M16	408	279	14,5	10	31	72,5	BW191916
13000	M20	488	334	19,5	15	40	104,5	BW191920
17000	M22	597	416	23	18	47	354	BW191922
20000	M24	713	480	26	20	53	670	BW191924
27000	M27	759	527	28,5	25	65	710	BW191927
31000	M30	861	581	33	30	70	991	BW191930
43000	M36	892	618	36	30	80	1288	BW191936

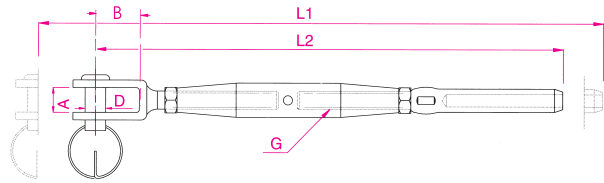
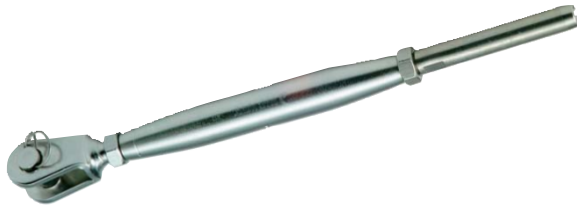
## Blue Wave Rigging screw Fork-Eye, Material AISI 316



Breaking load in kg	G metric	Dimensions in mm							weight in kg/100 pcs	Item no.
		L1	L2	A	A2	B	D1 PIN	D2		
800	M5	188	129	7,5	3	12	5	5,5	3,5	BW191205
1300	M6	206	138	7,5	4	12	5	6,5	10,7	BW191206
2350	M8	244	164	9,5	5	13	6	8,5	14,4	BW191208
3500	M10	271	188	11	6	15	8	10,5	22,9	BW191210
5100	M12	343	235	14,5	8	25	12	13	37,8	BW191212
5900	M14	381	262	14,5	9	25	12	13	51	BW191214
8000	M16	426	296	18	10	33	14	14,5	72,5	BW191216
13000	M20	518	364	24	15	50	19	19,5	104,5	BW191220
17000	M22	625	444	30	18	57	22	23	354	BW191222
20000	M24	741	508	30	20	62	25,4	26	670	BW191224

# TURNBUCKLES

## Blue Wave Fork-Swage Rigging Screws, Material AISI316

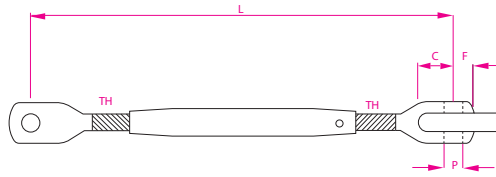


Wire in mm	Breaking load in kg	G metric	Dimensions in mm						weight in kg/100 pcs	Item no.
			L1	L2	A	D PIN	B	C		
2	800	M5	206	152	7,5	5	9,4	5,5	4,5	BW120205
2,5	800	M5	206	152	7,5	5	9,4	5,5	4,6	BW122505
3	1250	M6	232	170	7,5	5	9,4	6,35	8,5	BW120306
3	1300	M6	233	171	9,5	6	10,4	6,35	8,5	BW120306X
4	1250	M6	242	180	7,5	5	10,4	7,5	8,7	BW120406
4	1300	M6	242	180	9,5	6	10,4	7,5	9,1	BW120406X
4	1300	M8	275	199	9,5	6	10,4	7,5	13	BW120408
4	2350	M8	277	201	11	8	12,2	7,5	13	BW120408X
5	1300	M8	281	205	9,5	6	13	9	13,2	BW120508
5	2350	M8	284	208	11	8	12,2	9	14,8	BW120508X
5	2350	M10	312	228	11	8	14	9	22,5	BW120510
5	3500	M10	316	232	12	9,5	14	9	22,5	BW120510X
6	2350	M10	327	243	11	8	15	12,58	25,6	BW120610
6	3500	M10	330	250	12	9,5	18,5	12,58	27,4	BW120610X
6	5100	M12	393	287	14	12	18,5	12,58	47,5	BW120612
7	5100	M12	401	295	14	12	25	14,2	50	BW120712
8	5100	M12	416	310	14	12	25	16	53,5	BW120812
7	5900	M14	439	319	14	12	25	14,2	58	BW120714
7	5900	M14	453	335	18	14	33	14,2	68,8	BW120714X
8	5900	M14	453	333	14	12	25	16	63,5	BW120814
8	8000	M16	498	365	18	14	32	16	89,5	BW120816
8	8000	M16	494	361	22	14	30	16	89,5	BW120816L
8	8000	M16	499	366	18	16	33,3	16	89,5	BW120816X
10	8000	M16	506	373	18	14	33	17,8	93	BW121016
10	8000	M16	504	371	22	14	33	17,8	93	BW121016L
10	8000	M16	510	376	18	16	33	17,8	93	BW121016X
10	13000	M20	587	427	24	19	38,3	17,8	170,1	BW121020
12	13000	M20	606	446	24	19	38,3	20	170,1	BW121220
12	13000	M20	622	462	24	19	38,3	21,4	170,1	BW121220X
14	17000	M22	736	555	30	22	46	25	452	BW121422
16	17000	M22	696	588	30	22	57,5	28	490	BW121622
14	20000	M24	846	613	30	25,4	47,8	25	642	BW121424
16	20000	M24	874	641	30	25,4	47,8	28	662	BW121624
19	25500	M27	968	734	32	28	68	34,5	720	BW121927
22	31000	M30	1076	814	35	32	76	40,5	1074	BW122230
26	43000	M36	1195	921	40	35	86	46	1682	BW122636

# TURNBUCKLES

## Bottle Screw Fork-Fork

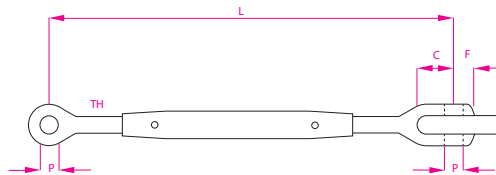
Stainless Steel material AISI316L  
 Safety factor 6:1  
 Material: AISI 316  
 Marking: stamped with CE, WLL and batchnumber  
 Proofloaded to 2 x WLL and certified



WLL in kg	G UNF	PIN	Dimensions in mm					weight in kg/100 pcs	Item no.
			C	T	Min L	Max L PIN			
200	1/4"	6	12,5	6,2	135	205	8	PS020103	
325	5/16"	8	17	7,9	165	240	17	PS020104	
500	3/8"	9,5	19	9,9	200	300	28,2	PS020105	
700	7/16"	11	20	10,9	220	330	39,8	PS020106	
825	1/2"	12	25	12,7	260	390	61,4	PS020107	
1325	5/8"	14	28	13,5	325	480	126	PS020108	
1325	5/8"	16	32	15,8	345	500	143,4	PS020110	
1825	3/4"	19	38	17,8	400	570	241,8	PS020112	
2500	7/8"	22	45	22	450	640	357,7	PS020114	
3300	1"	25	50	25	520	760	534	PS020116	
4300	1 1/8"	28	58	28,2	585	855	561,8	PS020119	
5500	1 1/4"	32	64	31,5	635	920	771,1	PS020122	
6600	1 3/8"	35	70	34,8	715	1040	1408,5	PS020126	

## Bottle Screw Fork-Eye

Stainless Steel material AISI316L  
 Safety factor 6:1  
 Material: AISI 316  
 Marking: stamped with CE, WLL and batchnumber  
 Proofloaded to 2 x WLL and certified

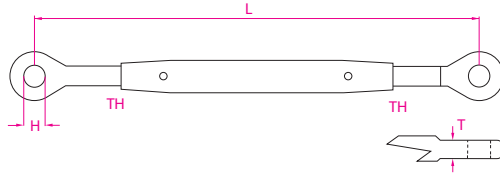


WLL in kg	G UNF	PIN	H	Dimensions in mm					weight in kg/100 pcs	Item no.
				C	T	F	Min L	Max L		
200	1/4"	6	6,35	12,5	5	6,2	127	197	6,7	PS020203
325	5/16"	8	8	17	6,5	7,9	154	232	13,5	PS020204
500	3/8"	9,5	9,53	19	7,8	9,9	189	289	23,5	PS020205
700	7/16"	11	11,1	20	9,5	10,9	207	316	33,2	PS020206
825	1/2"	12	12,7	25	11,5	12,7	244	376	52,1	PS020207
1325	5/8"	14	14,3	28	13,5	13,5	300	456	109,3	PS020208
1325	5/8"	16	16	32	15	15,8	325	380	119,8	PS020210
1825	3/4"	19	19,05	38	17,5	17,8	373	544	195,2	PS020212
2500	7/8"	22	22,2	45	21,5	22	415	610	304,8	PS020214
3300	1"	25	25,4	50	23,5	25	485	724	440,7	PS020216
4300	1 1/8"	28	28,58	58	7,5	28,2	548	818	436,4	PS020219
5500	1 1/4"	32	32	64	31	31,5	595	879	599,2	PS020222
6600	1 3/8"	35	35	70	33,5	34,8	672	996	1212,2	PS020226

# TURNBUCKLES

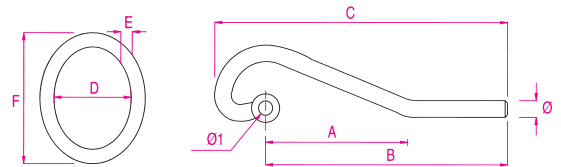
## Bottle Screw Eye-Eye

Stainless Steel material AISI316L  
 Safety factor 6:1  
 Material: AISI 316  
 Marking: stamped with CE, WLL  
 and batchnumber  
 Proofloaded to 2 x WLL and certified



WLL in kg	G UNF	Dimensions in mm				weight in kg/100 pcs	Item no.
		H	T	Min L	Max L PIN		
200	1/4"	6,35	5	120	190	5,4	PS020403
325	5/16"	8	6,5	143	221	10	PS020404
500	3/8"	9,53	7,8	177	277	18,8	PS020405
700	7/16"	11,1	9,5	193	301	26,6	PS020406
825	1/2"	12,7	11,5	221	363	42,8	PS020407
1325	5/8"	14,3	13,5	279	435	92,6	PS020408
1325	5/8"	16	15	303	459	96,2	PS020410
1825	3/4"	19,05	17,5	346	517	148,6	PS020412
2500	7/8"	22,2	21,5	383	580	251,9	PS020414
3300	1"	25,4	23,5	452	691	347,4	PS020416
4300	1 1/8"	28,58	27,5	510	780	371	PS020419
5500	1 1/4"	32	31	557	841	427,3	PS020422
6600	1 3/8"	35	33,5	628	952	1015,9	PS020426

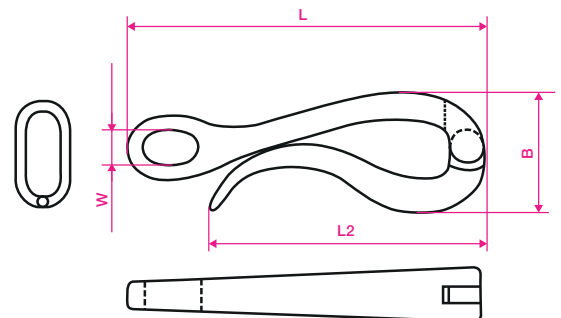
## Pelican Hook AISI 316



							Dimensions in mm		weight in kg/100 pcs	Item no.
A	B	C	ø	ø1	D	E	F			
75	125	142	6	6,4	20	5	35	4,84	BW450606	
113	163	192	8	8,7	27	5	42	12,65	BW450808	
130	195	235	12	13,4	34	6	54	52	BW451212	

## Pelican Hook

Material: AISI 316  
 Finish: highly polished



					weight in kg/100 pcs	Item no.
L	L2	Dimensions in mm		B		
100	73			39	3,24	IL31.10.10
150	110			48	8,81	IL31.10.15

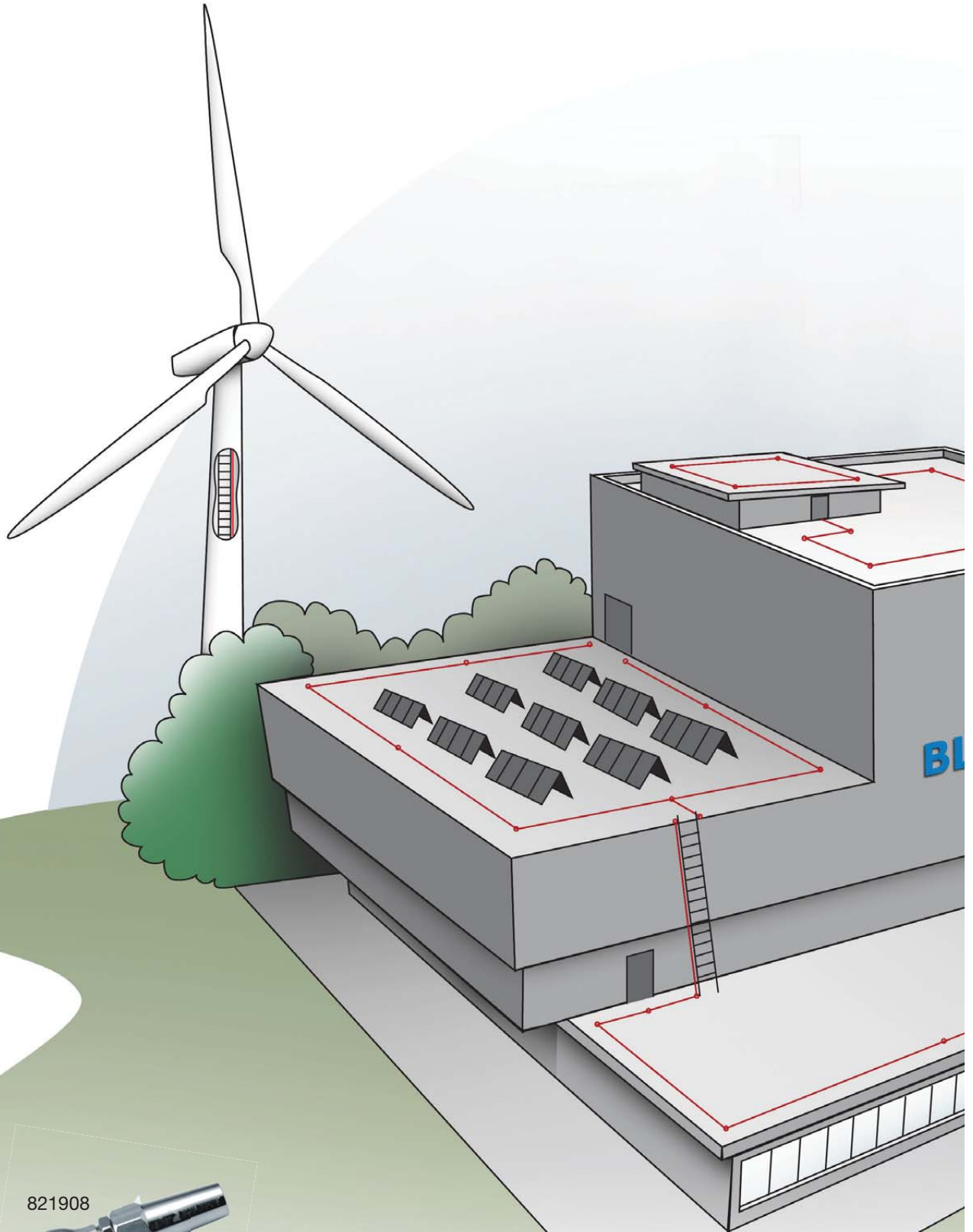


## Spare parts available upon request.

Carl Stahl offers a variety of spare parts for rigging screws. You have to think of pins, bolts, turnbuckle bodies and more. Please inquire every Stainless part which you need and we will be able to quote you a fitted solution. Also „custom” parts are available so if you need anything which you did not find in our catalogue then please be informed by one of our employees.

Carl Stahl also offers a yachting range of turnbuckles and fittings. Mainly with imperial threadsizes like 1/4” and 1/2”. These parts are available with righthand and lefthand thread and with open or closed turnbuckle bodies.





821908



Lloyd's  
Register

TYPE APPROVED

841408



8708ATFM

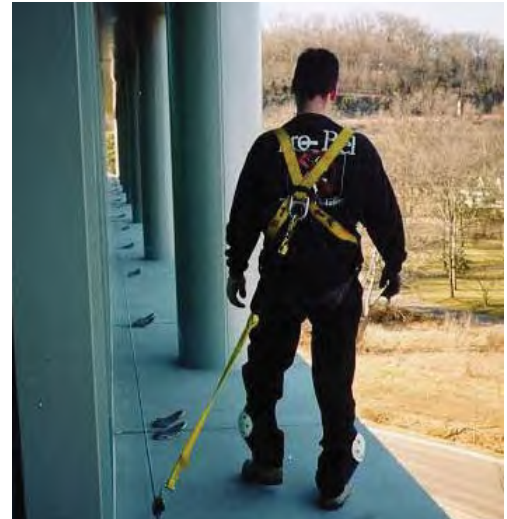
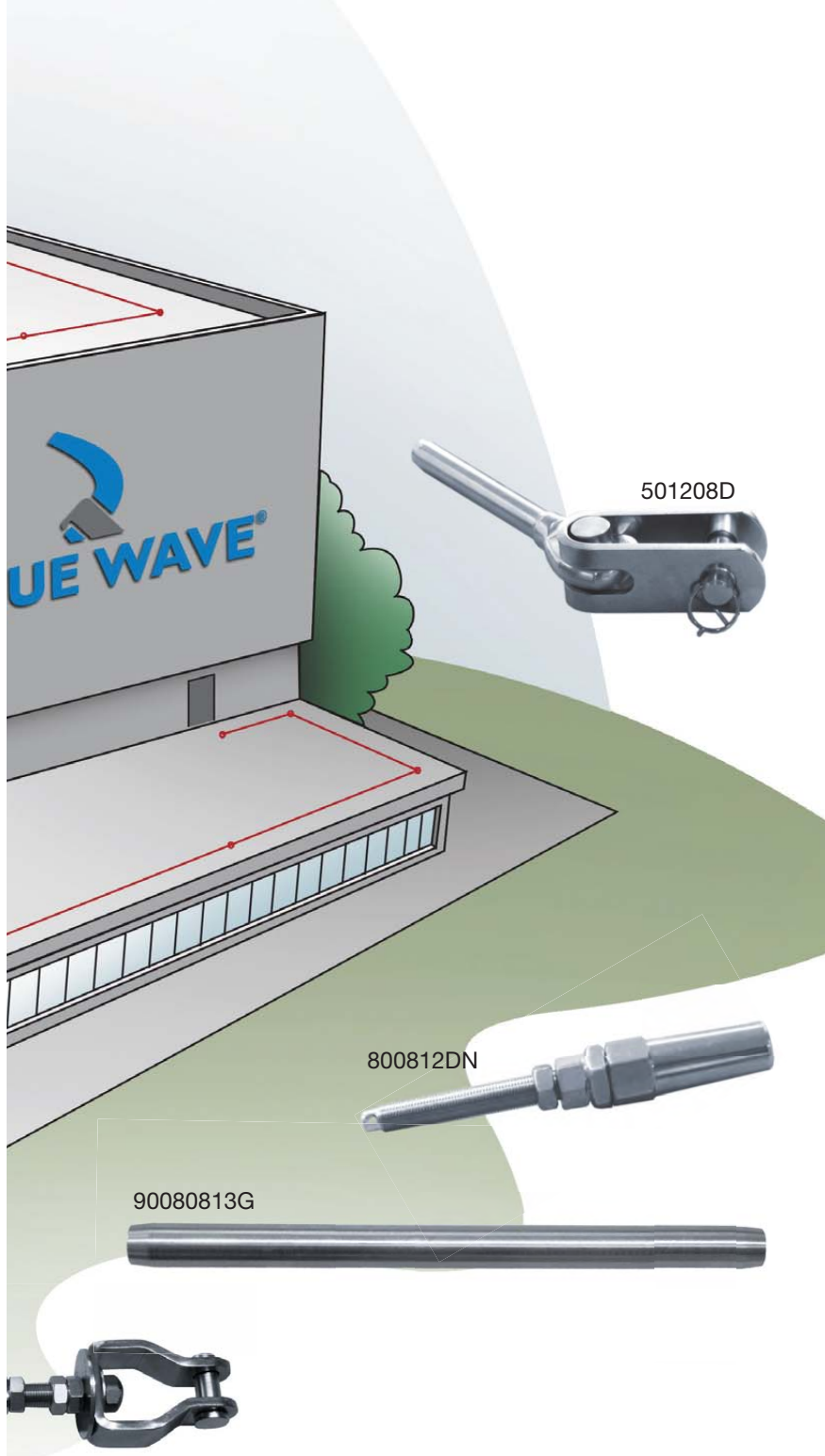


## Fallprotection - and lifeline fittings

The quality as well as the fast and easy assembly of the Blue Wave swageless end fittings has over the years made them a favorite choice when it comes to installation of lifelines. In combination with other Blue Wave products a whole range of stainless steel lifeline fittings with 1/2" thread for 8 mm wire was designed. The end fittings are suitable for swaging and pressing as well as hand crimping.

Fall Protection and safety specialists can with the Blue Wave fittings design a lifeline system - horizontal or vertical, to accommodate the special characteristics of almost any work space.

**8mm Endfittings and customized products on request.**

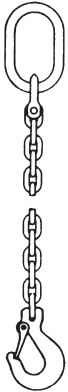


Horizontal Lifeline applications where the fittings are used today are e.g. within the construction area, on roof tops, window washing as well as bridge maintenance and on aircraft hangars.

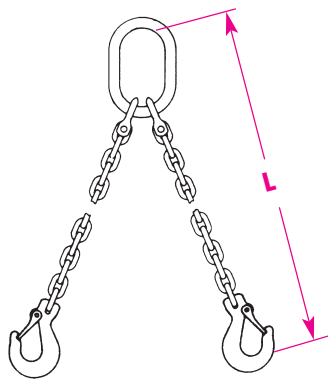


# CHAIN AND FITTINGS

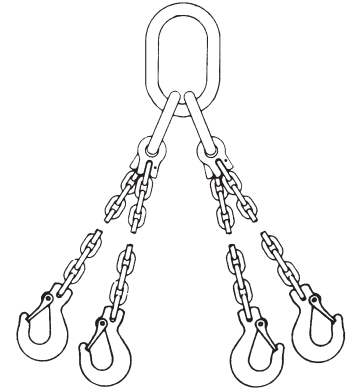
## 1-leg Chain Sling Grade 6 with Safety Hook CML1



## 2-leg Chain Sling Grade 6 with Safety Hook CML2



## 4-leg Chain Sling Grade 6 with Safety Hook CML4



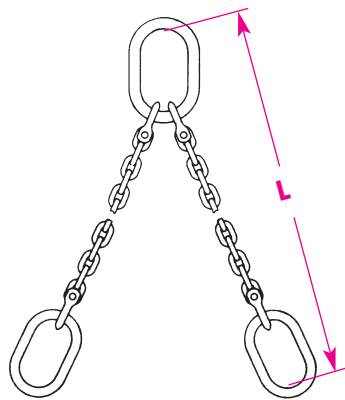
Nominal chain size in mm	Load capacity 1-leg single direct in kg	Item no.	Load capacity 2-leg in kg at angle		Item no.	Load capacity 4-leg in kg at angle		Item no.
			0-45°	45-60°		0-45°	45-60°	
6	900	6101.0E.06	1250	900	6201.0E.06	1900	1350	6401.0E.06
8	1500	6101.0E.08	2100	1500	6201.0E.08	3150	2250	6401.0E.08
10	2400	6101.0E.10	3350	2400	6201.0E.10	5000	3600	6401.0E.10

On request, nominal sizes 13 and 16 mm are also available with eye hook

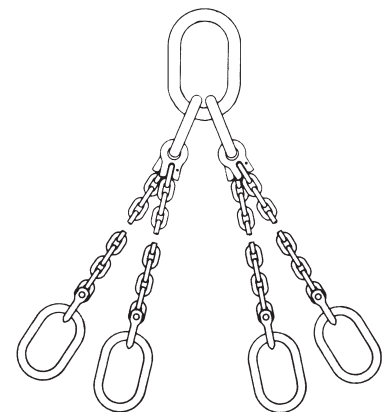
## 1-leg Chain Sling Grade 6 with Master Link CME1



## 2-leg Chain Sling Grade 6 with Master Link CME2



## 4-leg Chain Sling Grade 6 with Master Link CME4

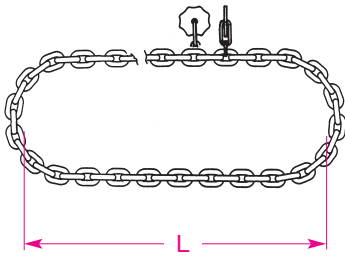


Nominal chain size in mm	Load capacity 1-leg single direct in kg	Item no.	Load capacity 2-leg in kg at angle		Item no.	Load capacity 4-leg in kg at angle		Item no.
			0 - 45°	45 - 60°		0 - 45°	45 - 60°	
6	900	6102.0E.06	1250	900	6202.0E.06	1900	1350	6402.0E.06
8	1500	6102.0E.08	2100	1500	6202.0E.08	3150	2250	6402.0E.08
10	2400	6102.0E.10	3350	2400	6202.0E.10	5000	3600	6402.0E.10
13	3850	6102.0E.13	5400	3850	6202.0E.13	8000	5700	6402.0E.13
16 (G5)	5000	6102.0E.16	7000	5000	6202.0E.16	10000	7500	6402.0E.16



Other end fittings like shackles or eye hooks are available on request

## Endless Stainless Steel Chain, welded, Grade 6, 1.4404

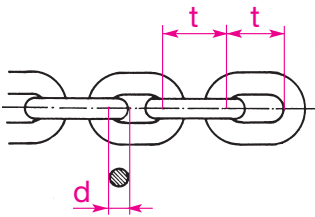


Grade 6  
Material: 1.4404 (AISI 316L)  
Surface: bright

Nutzlänge „L“ 1 m = Umfang 2 m

Nominal chain size in mm	Load capacity (WLL) in kg at angle of			Useful length L in mm	Item no.
	choker hitch	0 - 45°	45 - 60°		
6	1800	1250	1000	1	6207.0E.06
8	3000	2100	1650	1	6207.0E.08
10	4800	3350	2700	1	6207.0E.10
13	7700	5400	4300	1	6207.0E.13
16 (G5)	10000	7000	5600	1	6207.0E.16

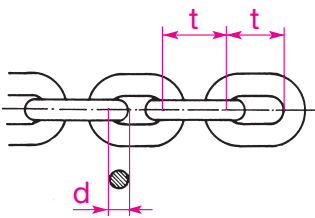
## Stainless steel round steel chain (sling chain) 1.4404 (AISI 316L), grade 6, similar DIN 5687



Grade 6  
Material: 1.4404 (AISI 316L)  
Surface: bright

Chain size d x t in mm	Load capacity (WLL) in kg	Weight in kg/m	Item no.
6 x 18	900	0,80	6000.E0.06
7 x 21	1200	1,10	6000.E0.07
8 x 24	1500	1,40	6000.E0.08
10 x 30	2400	2,20	6000.E0.10
13 x 39	3850	3,80	6000.E0.13
16 x 48 (G5)	5000	5,70	6000.E0.16

## Stainless Steel Lifting Gear Chain, 1.4404, similar DIN 5684, tested, calibrated



Grade 6  
Material: 1.4404 (AISI 316L)  
Surface: bright

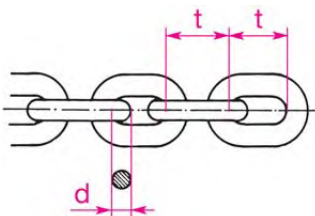
**!** Other sizes available on request

Chain size d x t in mm	Calculated breaking load in kN	Load capacity (WLL) in kg		Weight in kg/m	Item no.
		a*	b*		
5 x 15	25	630	500	0,54	6003.E0.05
6 x 18	37,5	900	750	0,80	6003.E0.06
7 x 21	50	1250	1000	1,10	6003.E0.07
8 x 24	63	1600	1250	1,40	6003.E0.08

a\* Manual hoist SF 4:1    b\* Electrical hoist 1 Bm SF 5:1

## Stainless Steel Short Link Chain, Dimensions acc. to DIN 766

Material 1.4401 (AISI 316), not tested, calibrated, short link.

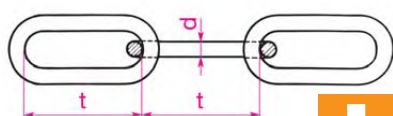


**!** Must not be used for lifting purposes!

Chain size d x t in mm	Breaking load in kg	Weight kg/m	Item no.
2 x 12*	125	0,07	6011.00.02
3 x 16*	280	0,16	6011.00.03
4 x 16	800	0,30	6011.00.04
5 x 18,5	1250	0,50	6011.00.05
6 x 18,5	1600	0,73	6011.00.06
7 x 22	2500	1,10	6011.00.07
8 x 24	3200	1,35	6011.00.08
10 x 28	5000	2,25	6011.00.10

## Stainless Steel Long Link Chain, Dimensions acc. to DIN 763

Material 1.4401 (AISI 316), not tested, calibrated, short link.



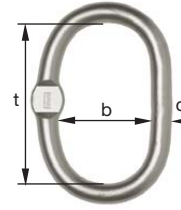
**!** Must not be used for lifting purposes!

Chain size d x t in mm	Breaking load in kg	Weight kg/m	Item no.
2 x 22*	125	0,06	6021.00.02
3 x 26*	280	0,15	6021.00.03
4 x 32	630	0,27	6021.00.04
5 x 35	1000	0,43	6021.00.05
6 x 42	1250	0,63	6021.00.06
8 x 52	2500	1,10	6021.00.08
10 x 65	4000	1,75	6021.00.10

# CHAIN AND FITTINGS

## Stainless Steel Master Link CAGF, 1- and 2-leg, with flattened Section

Grade 6  
Material: 1.4404 (AISI 316L)  
Surface: blasted

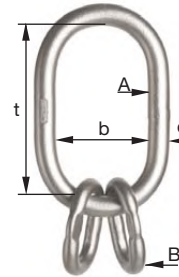


All master links and master link assemblies have a flattened section for fitting of connecting elements (e.g. clevis shackle typee CGS).

Type	Load capacity in kg (WLL)	Suitable for chain size		Dimensions in mm			Weight in kg/pce	Item no.
		1-leg	2-leg 0-45°	d	t	b		
CAGF 10	600	5	4	10	80	50	0,15	5020.E0.06
CAGF 13	1500	6/7/8	5/6	13	110	60	0,34	5020.E0.07
CAGF 16	2400	10	7/8	16	110	60	0,53	5020.E0.12
CAGF 18	3350	-	10	18	135	75	0,80	5020.E0.20
CAGF 22	6000	13/16	13	22	160	90	1,50	5020.E0.32
CAGF 26	8000	18	16	26	180	100	2,30	5020.E0.50
CAGF 32	12000	20	18	32	200	110	3,90	5020.E0.71

## Stainless Steel Master Link CAKF, 3- and 4-leg, with flattened section on B-links

Grade 6  
Material: 1.4404 (AISI 316L)  
Surface: blasted

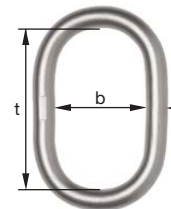


All master links and master link assemblies have a flattened section for fitting of connecting elements (e.g. clevis shackle typee CGS).

Type	Load capacity in kg (WLL)		Chain size	Dimensions in mm		Weight in kg/pce	Item no.
	Inclination angle 0°-45°	Inclination angle 45°-60°		d x t x b			
				A-Link	B-Link		
CAKF 13/10	1250	900	5	13 x 110 x 60	10 x 44 x 25	0,52	5040.E0.10
CAKF 16/13	2500	1800	6/7	18 x 135 x 75	13 x 54 x 25	0,97	5040.E0.16
CAKF 18/16	3150	2250	8	22 x 160 x 90	16 x 70 x 34	1,60	5040.E0.26
CAKF 22/18	5000	3600	10	26 x 180 x 100	18 x 85 x 40	2,76	5040.E0.42
CAKF 26/22	8000	5700	13	32 x 200 x 110	22 x 115 x 50	4,45	5040.E0.67
CAKF 32/26	10000	7500	16	36 x 260 x 140	26 x 140 x 65	7,55	5040.E1.00

## Stainless Steel Master Link CAG for 1- and 2-leg Wire Rope Slings, without flattened Section

Grade 6  
Material: 1.4404 (AISI 316L)  
Surface: blasted



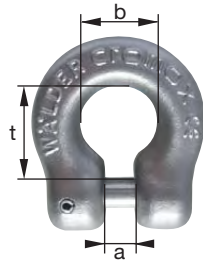
Type	Load capacity in kg (WLL)	Suitable for chains (ND)		Dimensions in mm			Weight in kg/pce	Item no.
		1-leg	2-leg 0-45°	d	t	b		
CAG 8	350	4	-	8	54	30	0,07	5021.E0.03
CAG 10	600	5	4	10	80	50	0,15	5021.E0.05
CAG 13	1500	6/7/8	5/6	13	110	60	0,34	5021.E0.10
CAG 16	2400	10	7/8	16	110	60	0,53	5021.E0.12
CAG 18	3350	-	10	18	135	75	0,80	5021.E0.20
CAG 22	6000	13/16	13	22	160	90	1,50	5021.E0.32
CAG 26	8000	18	16	26	180	100	2,30	5021.E0.50
CAG 32	12000	20	18	32	200	110	3,90	5021.E0.71
CAG 36	16000	-	20	36	260	140	6,35	5021.E0.80

# CHAIN AND FITTINGS

## Hooks, Shortener

### Stainless Steel Clevis Shackle CGS

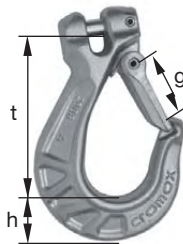
Grade 6  
Material: 1.4404 (AISI 316L)  
Surface: blasted



Nominal size	Load capacity in kg (WLL)	Dimensions in mm			Weight in kg/pce	Item no.
		t	b	a		
6	900	26	20	7	0,160	6561.E0.06
7/8	1500	30	23	9	0,230	6561.E0.08
10	2400	40	28	11	0,460	6561.E0.10
13	3850	48	38	14	0,675	6561.E0.13
16	5000	50	44	17	1,130	6561.E0.16

### Stainless Steel Clevis Hook CGHF with Safety Latch

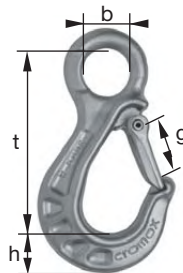
Grade 6  
Material: 1.4462 (AISI 318LN)  
Surface: blasted



Nominal size	Load capacity in kg (WLL)	Dimensions in mm			Weight in kg/pce	Item no.
		t	g	h		
5	600	79	25	22	0,400	6550.E0.05
6	900	78	25	22	0,400	6550.E0.06
7/8	1500	97	32	28	0,760	6550.E0.08
10	2400	121	41	34	1,440	6550.E0.10

### Stainless Steel Eye Hook COHF with Safety Latch

Grade 6  
Material: 1.4462 (AISI 318LN)  
Surface: blasted



Nominal size	Load capacity in kg (WLL)	Dimensions in mm				Weight in kg/pce	Item no.
		t	g	b	h		
4	350	75	20	17	17	0,185	5180.0E.04
5/6	900	100	25	25	22	0,350	5180.0E.07
7/8	1500	126	32	27	28	0,790	5180.0E.12
10	2400	160	39	37	34	1,370	5180.0E.20
13	3850	190	51	48	45	3,000	5180.0E.32
16	5000	230	66	55	51	4,800	5180.0E.50
18	7000	230	66	55	51	4,800	5180.0E.50

### Swivel Load Hook CWHF, grade 6 for direct connection to hoist chain

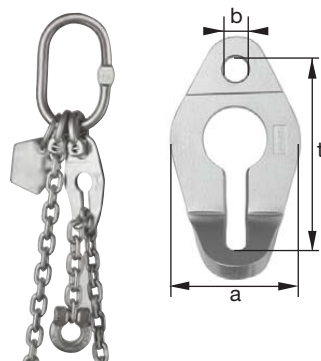
Grade 6  
Material: 1.4462 (AISI 318LN)  
Surface: blasted



Type	Suitable for chain ø in mm	Tragf. in kg (WLL)	Maß g in mm	Weight in kg/pce	Item no.
CWHF 40	4x12/12,1/12,3	400	20	0,450	5171.E0.40
CWHF 43	4,3 x 12	400	20	0,450	5171.E0.43
CWHF 50	5x15/15,1/15,3	630	20	0,450	5171.E0.50
CWHF (NWHF) 60	6 x 18/16,7	900	25	1,100	5171.E0.60
CWHF (NWHF) 63	6,3x19,1	1000	25	1,100	5171.E0.63
CWHF (NWHF) 70	7x21/22	1250	25	1,100	5171.E0.70
CWHF (NWHF) 71	7,1 x 20,5/21,2	1250	25	1,100	5171.E0.71

### Stainless Steel Shortener CV

Grade 6  
Material: 1.4404 (AISI 316L)  
Surface: blasted



Nominal size	Tragfähigkeit in kg (WLL)	Abmessungen in mm			Weight in kg/pce	Item no.
		a	b	t		
6	900	47	10	81	0,18	6612.E0.06
8	1500	70	12	94	0,38	6612.E0.08
10	2400	80	15	120	0,71	6612.E0.10
13	3850	91	20	150	1,18	6612.E0.13
16*	5000	100	21	175	2,30	6612.E0.16

\*Grade 5

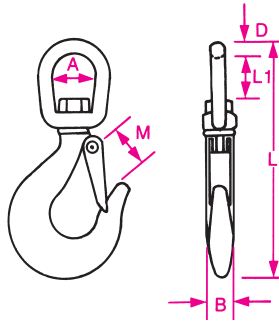
 Scope of delivery: Shortening element only (w/o chain and oblong ring)

# CHAIN AND FITTINGS

## Hooks

### Stainless Steel Safety Carbine Hook

Material: AISI 316  
Finish: highly polished



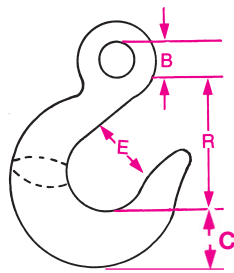
Nominal size	Load capacity in kg	Dimensions in mm						Weight in kg	Item no.
		A	B	D	L	L1	M		
1/4	300	20	12	7	119	22	16	0,190	5340.00.03
5/16	500	28	14	8,5	141	28	19	0,330	5340.00.05
3/8	700	28	16	10	170	28	20	0,530	5340.00.07
1/2	1000	32	20	13	199	36	30	1,040	5340.00.10



**Must not be used for lifting**

### Stainless Steel Eye Hook

Material: AISI 316  
Finish: Highly polished



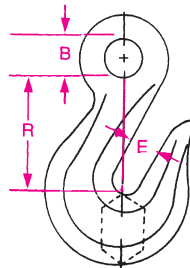
Nominal size	Load capacity in kg (WLL)	Dimensions in mm				Weight in kg/pce	Item no.
		B	C	E	R		
1/4	300	12,5	20	15	50	16,5	IL22.11.10
5/16	500	16	30	16,5	57	28,5	IL22.11.20
3/8	700	18	32	22	65	41,5	IL22.11.30
1/2	1000	23,5	32	30	85	94,5	IL22.11.50



**Must not be used for lifting**

### Stainless Steel Grab Hook

Material: AISI 316  
Finish: Highly polished



Nominal size	Load capacity in kg (WLL)	Dimensions in mm			Weight in kg/pce	Item no.
		B	E	R		
1/4	1500	12,7	8,2	38	16,5	IL22.11.10
5/16	2500	14	10,7	42	28,5	IL22.11.20
3/8	3500	19	12,3	48	41,5	IL22.11.30
1/2	5000	22	15,8	60	94,5	IL22.11.50



**Must not be used for lifting**



## CondorLube Environmentally friendly Rope and Chain Lubricant

- Excellent lubrication, penetration, conservation, and corrosion protection
- Nontoxic, bio-degradable, without harmful propellant
- According to HOCNF (Harmonised Offshore Chemical Notification Format) suitable for use in marine environments
- For use with moveable parts like ropes and chains but also for machine parts, hinges, padlocks etc.



### Product Application Chart

Application area	CondorLube Wire Grease 50-70 G NEW + CLASSIC	CondorLube Coating 10-15 G	CondorLube Universal Grease 54	CondorLube Coating 20-10 G	CondorLube EP Grease 53	CondorLube Wire & Chain Spray	CondorLube Bio Spray 2 in 1 81-10 G	CondorLube Storage Spray	CondorLube Paste 51-70 G	CondorLube Metal Polish 80-05 G
Machine Parts	*	**	***	**	***	**	*	**	**	
Anchors & shackles, hinges etc.	*	*	*	*		**	*	**	***	
Battery terminals							*			
Tools	*	**	***	**	**	**	**	**	***	**
Chains	*	**		**		*	*	*		
Auto Rustproofing	**	*		*	***	*		**		
Heavy Machinery	**	*	***	*	***	*		*		
Wire rope preservation / lubrication	***	**	*	**		***		*	**	
Irrigation plant & pipes		*					*		**	
Propellers & skegs		*		*		*		*		
Rubber gaskets & seals	*	**	*	*		*	*	*	*	**
Stabilizer Tank & Ballast Tank		*							***	
Rustproofing & preservation	**	***	*	**	*	**	*	***	**	
Trailers / trains / railways	*	**	***	**	***	**	*	**	***	**
Steel Preservations / Polish	***	***		**		*	*	**	***	***
Yacht Standard Rigging	*	*	**	*		*		*		
Leather									*	
Low / high volt connections									*	
Outboard motors	*	*	***	*	***	**		**	***	
Components vulnerable for corrosion	**	***	*	***		*		*	***	
Sporting equipment		*		*					*	**
Roller-bearing			***		***					
Stern drive legs	*		***		***	*		*	**	
Heavy gears and transmission	*				*				*	
Cleaning, rinse and protection							***			***

Excellent           \*\*\*  
 Good               \*\*  
 Suitable           \*

# LUBRICANTS

## CondorLube Wire Grease 50-70 G



CondorLube Wire Grease 50-70 G is a biodegradable lubrication and protection for steel wire ropes. It lubricates between the individual wires to avoid friction that can damage the steel wire rope.

### Application

For all kinds of steel wire ropes, lead-in wires, seismological cables and yacht rigging.

Type	Package size	Type of packaging	Item no.
CondorLube Wire Grease 50 70G NEW	5 kg	Tin bucket	1XCLLP15
CondorLube Wire Grease 50 70G NEW	18 kg	Tin bucket	1XCLLP12
CondorLube Wire Grease 50 70G NEW	180 kg	Tin bucket	1XCLLP13

## CondorLube Coating 10-15 G



CondorLube Coating 10-15 G is a light brown thin coating. It penetrates to the pores of the material and has excellent corrosion resisting properties.

### Application

For machine parts, anchors, shackles, hinges, tools, chains, irrigation plants and pipes it offers excellent corrosion protection.

Type	Package size	Type of packaging	Item no.
CondorLube Coating 10-15 G	5 L	Plastic canister	1XCLLP01
CondorLube Coating 10-15 G	20 L	Plastic canister	1XCLLP02
CondorLube Coating 10-15 G	196 L	Metal drum	1XCLLP03
CondorLube Coating 10-15 G	1000 L	Metal drum	1XCLLP04

## CondorLube Corrosion Protection and Lubrication 20-10 G



CondorLube 20-10 G is a light brown and semi-dry thin coating. It has excellent penetration and corrosion resisting properties. It was developed for maximum corrosion protection.

### Application

For machine parts, anchors, shackles, hinges, tools, chains, irrigation plants and pipes. Ideal for all corrosion protection applications.

Type	Package size	Type of packaging	Item no.
CondorLube Coating 20-10 G	5 L	Plastic canister	1XCLLP08
CondorLube Coating 20-10 G	20 L	Plastic canister	1XCLLP09
CondorLube Coating 20-10 G	196 L	Metal drum	1XCLLP10
CondorLube Coating 20-10 G	1000 L	Metal drum	1XCLLP11

## CondorLube Metal Polish 80-05 G



CondorLube Metal Polish 80-05 G is a polish and protection product with excellent penetration and cleaning properties. It removes stains of dirt or other impurities and develops a thin protective film on the surface.

### Application

Suitable for cleaning, maintenance and industrial applications (workshops, cranes, commercial vehicle and automotive industry). Also suitable for cleaning and protection of aluminium surfaces.

Type	Package size	Type of packaging	Item no.
CondorLube Metal Polish 80-05 G	0,5 L	Spray can	1XCLLP25
CondorLube Metal Polish 80-05 G	5 L	Plastic canister	1XCLLP26
CondorLube Metal Polish 80-05 G	20 L	Plastic canister	1XCLLP27
CondorLube Metal Polish 80-05 G	196 L	Metal drum	1XCLLP28

# LUBRICANTS

## CondorLube Wire and Chain Spray 52-10 G



CondorLube Wire & Chain Spray 52-10 G is oily coating product which is completely non-toxic and leaves no environmental footprint. It is a premium grade coating and lubrication agent which has been specially developed for frequent use under extreme conditions. It also minimises lubricant build-up and contamination with abrasive particles.

### Application

Chains, protection of steel wire ropes and parts, anchors, shackles, hinges, machine parts etc.

Type	Package size	Type of packaging	Item no.
CondorLube Wire & Chain Spray 52-10 G	510 ml	Spray can	1XCLLP18

## CondorLube Storage Spray 11-10 G



CondorLube Storage Spray 11-10 G is an aerosol spray which leaves a thin brown protective film. It penetrates deeply into the pores of the material and has excellent corrosion protection properties. It is completely non-toxic and leaves no environmental footprint.

### Application

Suitable for trailers, railway rolling stock, machine parts, outboard motors, yacht rigging, for protection of steel parts, rubber seals, irrigation plants and pipes.

Type	Package size	Type of packaging	Item no.
CondorLube Storage Spray 11-10 G	510 ml	Spray can	1XCLLP05

## CondorLube Bio Spray 81-10 G



CondorLube Bio Spray 81-10 G is an aerosol spray which can be used for cleaning, rinsing and protection of surfaces. It penetrates deeply into the pores of the material and has excellent cleaning properties. It is a very versatile spray that has been specially developed for frequent use under extreme conditions. It dissolves oil and grease in many different areas and leaves a thin protective film.

### Application

For cleaning, rinsing and corrosion protection

Type	Package size	Type of packaging	Item no.
CondorLube Bio Spray 2 in 1 81-10 G	510 ml	Spray can	1XCLLP29

## CondorLube EP Grease 53



Together with the thickener, biodegradable esters make this product perfect for excellent lubrication of heavily stressed bearings and under wet and corrosive conditions.

### Application

For use in seawater, for agricultural, forestry, and construction vehicles.

Type	Package size	Type of packaging	Item no.
CondorLube EP Grease 53	400 g	Plastic cartridge	1XCLLP19
CondorLube EP Grease 53	18 kg	Tin bucket	1XCLLP20
CondorLube EP Grease 53	180 kg	Metal drum	1XCLLP21

## CondorLube Universal Grease 54



This is a modern, high-performance biodegradable grease for both industrial and automotive applications. The product's excellent all-round properties make it first choice for all kinds of bearings.

### Application

For industrial and automotive applications as well as for all kinds of bearings.

Type	Package size	Type of packaging	Item no.
CondorLube Universal Grease 54	400 g	Plastic cartridge	1XCLLP22
CondorLube Universal Grease 54	18 kg	Tin bucket	1XCLLP23
CondorLube Universal Grease 54	180 kg	Metal drum	1XCLLP24

## CondorLube Lube Paste 51-70 G



CondorLube Lube Paste 51-70 G is a biodegradable lubricating grease with amorphous silica gel compound which has excellent greasing, penetration and corrosion protection properties.

### Application

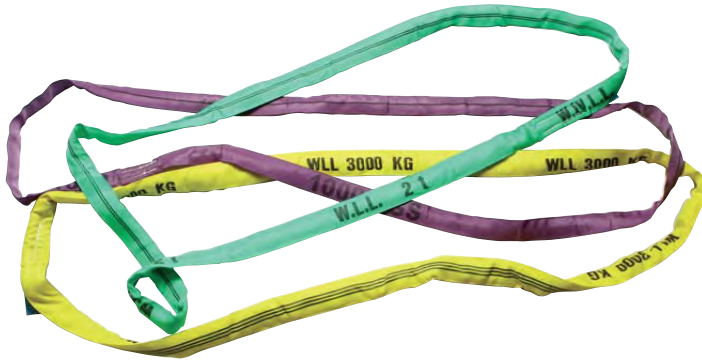
Suitable for all moveable parts, which are not subject to high stress (e.g. doors, hatches, slowly moving parts etc.) or as sliding agent. Suitable also for chains, steel wire ropes, drilling tools etc.

Type	Package size	Type of packaging	Item no.
CondorLube Paste 51-70 G	400 g	Plastic cartridge	1XCLLP17
CondorLube Paste 51-70 G	18 kg	Tin bucket	1XCLLP16

# RATCHETS AND WEBBING

## Lifting Slings

**Polyester round lifting slings endless according to EN 1492-2, safety factor 7:1**



WLL in kgs	width (mm)	WLL straight in kgs	WLL choked in kgs	WLL basket in kgs	WLL 7-45 degree in kgs	WLL 45-60 degree in kgs
1	44	1000	800	2000	1400	1000
2	46	2000	1600	4000	2800	2000
3	60	3000	2400	6000	4200	3000
4	67	4000	3200	8000	5600	4000
5	78	5000	4000	10000	7000	5000
6	83	6000	4800	12000	8400	6000
8	95	8000	6400	16000	11200	8000
10	112	10000	8000	20000	14000	10000

**Flat webbing slings, duplex double ply, according to EN 1492-1, safety factor 7:1**



WLL in kgs	width (mm)	WLL straight in kgs	WLL choked in kgs	WLL basket in kgs	WLL 7-45 degree in kgs	WLL 45-60 degree in kgs
1	25	1000	800	2000	1400	1000
2	50	2000	1600	4000	2800	2000
3	75	3000	2400	6000	4200	3000
4	100	4000	3200	8000	5600	4000
5	125	5000	4000	10000	7000	5000
6	150	6000	4800	12000	8400	6000
8	200	8000	6400	16000	11200	8000
10	250	10000	8000	20000	14000	10000

# RATCHETS AND WEBBING

## Ratchets, Hooks, Buckles

### Stainless Steel Ratches, material AISI316



Webbing Size in mm	Lashing Capacity daN	Item no.
25	350	4SS00025L
25	750	4SS00025
35	1000	4SS00035
50	1500	4SS00050

### Stainless Steel hooks for webbing, Material AISI316



Webbing Size in mm	Lashing Capacity daN	Item no.
25	400	4SS00125
35	1000	4SS00135
50	2000	4SS00150

### Stainless Steel buckle for webbing, Material AISI316



Webbing Size in mm	Item no.
25	4SS00225



# FIBRE ROPES

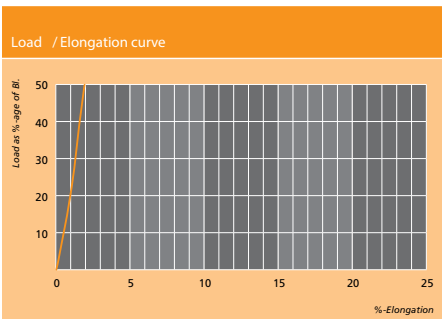
## Gleistein Fibre Ropes

### DynaOne®



**Elongation at 10% of break load: 0,6%**

- Referring to ISO 10325
- Braided 12-plait made of Dyneema® SK78 fibres
- Geothane coating for improved protection against weathering and abrasion
- A real rope with balanced universal properties and long service life
- Very good abrasion resistance
- Excellent UV resistance
- High-performance universal rope



Ø [mm]	kg/100 m	Bl. real [kN]*	Bl. linear [kN]**	Break length [km]***
2	0,3	3,5	3,9	137,2
2,5	0,4	5,0	5,5	125,6
3	0,5	7,1	7,8	144,1
4	0,8	13,0	14,3	159,3
5	1,4	24,0	26,4	168,0
6	2,0	27,0	29,7	132,3
8	3,5	55,0	60,5	154,0
10	5,0	90,0	99,0	176,4
12	8,5	120,0	132,0	138,4
14	10,5	145,0	159,5	135,3
16	12,7	190,0	209,0	146,6
18	16,5	240,0	264,0	142,5
20	20,0	290,0	319,0	142,1
22	24,3	350,0	385,0	141,2
24	28,5	410,0	451,0	141,0
26	33,0	470,0	517,0	139,6
28	39,0	550,0	605,0	138,2
30	45,6	650,0	715,0	139,7
32	50,7	720,0	792,0	139,2
34	55,7	810,0	891,0	142,5
36	60,8	880,0	968,0	141,8
38	71,0	960,0	1.056,0	132,5
40	76,0	1.003,0	1.103,3	129,3
44	91,5	1.200,0	1.320,0	128,5
46	99,2	1.300,0	1.430,0	128,4
48	106,5	1.405,0	1.545,5	129,3

\* Spliced break load

\*\* Break load in accordance with DIN EN ISO 2307

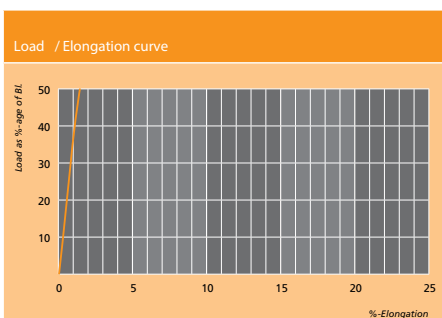
\*\*\* Break length in spliced condition

### DynaOne® HS



**Elongation at 10% of break load: 0,3%**

- Referring to ISO 10325
- Braided 12-plait made of Dyneema® SK78 fibres
- Heat-set for greater strength and minimised construction stretch and diameter
- Geothane coating for improved protection against weathering and abrasion
- A real rope with balanced universal properties and long service life
- Very good abrasion resistance
- Excellent UV resistance
- High-performance universal rope



Ø [mm]	kg/100 m	Bl. real [kN]*	Bl. linear [kN]**	Break length [km]***
3	0,6	10,0	11,0	163,3
4	0,9	17,0	18,7	185,1
5	1,6	30,0	33,0	183,8
6	2,1	38,0	41,8	177,3
8	4,2	75,0	82,5	175,0
10	5,5	100,0	110,0	178,2
12	9,6	170,0	187,0	173,5
14	13,5	230,0	253,0	167,0
16	15,3	280,0	308,0	179,3
18	20,5	375,0	412,5	179,3
20	23,5	430,0	473,0	179,3
22	27,5	505,0	555,5	180,0
24	31,5	575,0	632,5	178,9
26	35,5	665,0	731,5	183,6
28	39,5	740,0	814,0	183,6
30	43,5	815,0	896,5	183,6
32	47,5	890,0	979,0	183,6
34	55,0	1.025,0	1.127,5	182,6
36	58,5	1.100,0	1.210,0	184,3
38	71,0	1.320,0	1.452,0	182,2
40	82,5	1.500,0	1.650,0	178,2
44	100,0	1.650,0	1.815,0	161,7
46	110,0	1.800,0	1.980,0	160,4
48	120,0	2.000,0	2.200,0	163,3

\* Spliced break load

\*\* Break load in accordance with DIN EN ISO 2307

\*\*\* Break length in spliced condition



# FIBRE ROPES

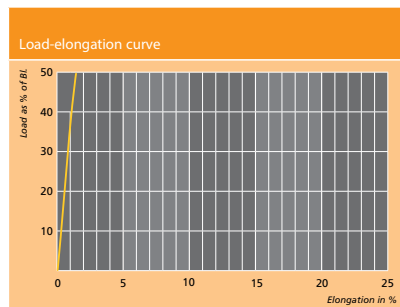
## Gleistein Fibre Ropes

### DynaOne® MAX



**Elongation at 10% of break load: 0,6%**

- With Dyneema® Max Technology
- No creep (inelastic elongation) under load
- Ideal as control line for steering systems and centerboard lines
- Due to the bigger leverage effect, a lighter rig significantly increasing the righting moment and enables use of a substantially lighter keel
- Abrasion and UV resistant like all ropes in the DynaOne® family
- A real rope with balanced universal properties and long service life even without a protective cover. Besides its coating, this is chiefly attributable to its firm braid structure
- Always identifiable by the red marker



Ø [mm]	kg/100 m	Bl. real [daN]*	Bl. linear [daN]**
2	0,30	350	385
3	0,50	706	777
4	0,80	710	781
5	1,40	2.400	2.640
6	2,00	2.700	2.970
8	3,50	5.500	6.050
10	5,00	9.000	9.900
12	8,50	12.000	13.200
14	10,50	14.500	15.950
16	12,70	19.000	20.900
18	16,50	24.000	26.400
20	20,00	29.000	31.900
22	24,30	35.000	38.500
24	28,50	41.000	45.100
26	33,00	47.000	51.700
28	39,00	55.000	60.500
30	45,60	65.000	71.500
32	50,70	72.000	79.200
36	60,80	88.000	96.800
40	76,00	100.300	110.300
44	91,50	120.000	132.000
48	106,50	140.500	154.600

\* Spliced break load

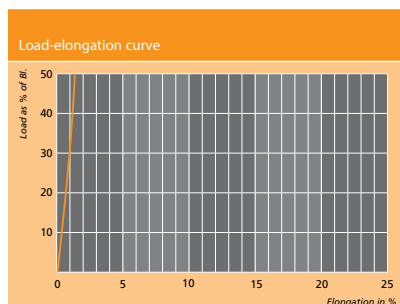
\*\* Linear break load according to DIN EN ISO 2307

### DynaOne® HS MAX



**Elongation at 10% of break load: 0,3%**

- With Dyneema® Max Technology
- Heat set for greater strength and minimised constructional stretch
- No creep (inelastic elongation) under load
- Due to the bigger leverage effect, a lighter rig significantly increasing the righting moment and enables use of a substantially lighter keel
- Increased density of rope cross-section due to the heat setting process minimises area subject to wind drag
- Abrasion and UV resistant like all ropes in the DynaOne® family
- A real rope with balanced universal properties and long service life even without a protective cover. Besides its coating, this is chiefly attributable to its firm braid structure
- Always identifiable by the red marker



Ø [mm]	kg/100 m	Bl. real [daN]*	Bl. linear [daN]**
3	0,60	1.000	1.100
4	0,90	1.700	1.870
5	1,60	3.000	3.300
6	2,10	3.800	4.180
8	4,20	7.500	8.250
10	5,50	10.000	11.000
12	9,60	17.000	18.700
14	13,50	23.000	25.300
16	15,30	28.000	30.800
18	20,50	37.500	41.250
20	23,50	43.000	47.300
22	27,50	50.500	55.550
24	31,50	57.500	63.250
26	35,50	66.500	73.150
28	43,00	74.000	81.400
30	48,00	81.500	89.650
32	55,50	89.000	97.900
36	66,50	110.000	121.000
40	84,00	150.000	165.000
44	100,00	165.000	181.500
48	120,00	200.000	220.000

\* Spliced break load

\*\* Linear break load according to DIN EN ISO 2307

# FIBRE ROPES

## Gleistein Fibre Ropes

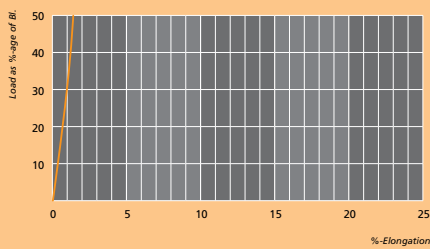
### Dyna07



#### Elongation at 10% of break load: 0,6%

- Referring to ISO 10325
- Braided 12-plait made of Dyneema® with black marker
- Geothane coating for improved protection against weathering and abrasion
- Due to inelastic elongation (creep) under continuous loads, less suited for static applications
- Very good abrasion resistance
- Excellent UV resistance
- High-performance universal rope
- Alternative coatings available on request
  - AntiRub for improved abrasion resistance
  - GeoFlex for improved flex-fatigue resistance

Load / Elongation curve



Ø [mm]	kg/100 m	Bl. real [kN]*	Bl. linear [kN]**	Break length [km]***
6	1,9	22,5	25,0	121
8	3,8	40,0	44,4	107
10	5,7	60,0	66,7	107
12	8,6	90,0	100,0	107
14	10,0	105,0	116,7	107
16	13,3	139,0	154,4	106
18	17,1	178,0	197,8	106
20	22,8	235,0	261,1	105
22	25,7	263,0	292,2	105
24	30,4	310,0	344,4	104
26	34,2	347,0	385,6	103
28	41,8	422,0	468,9	103
30	57,5	476,0	528,9	84
32	41,3	528,0	586,7	130
34	57,0	580,0	644,4	104
36	62,7	632,0	702,2	103
38	71,3	710,0	788,9	102
40	76,0	760,0	844,4	102
44	81,2	910,0	1.011,1	114
46	99,8	990,0	1.100,0	101
48	108,4	1.075,0	1.194,4	101
52	125,5	1.240,0	1.377,8	101

- \* Spliced break load
- \*\* Break load in accordance with DIN EN ISO 2307
- \*\*\* Break length in spliced condition

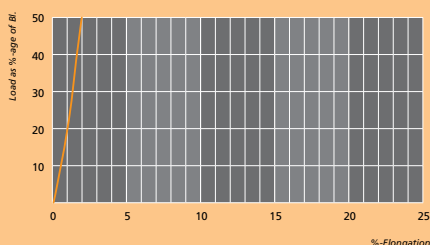
### DynaOne® ISO



#### Elongation at 10% of break load: 0,6%

- According to ISO 10325. Enhanced strength due to full exploitation of the standardised cross-section
- Braided 12-plait made of Dyneema® SK78 fibres with white marker
- Geothane coating for improved protection against weathering and abrasion
- Very good abrasion resistance
- Excellent UV resistance
- High-performance universal rope
- Alternative coatings available on request
  - AntiRub for improved abrasion resistance
  - GeoFlex for improved flex-fatigue resistance

Load / Elongation curve



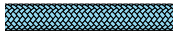
Ø [mm]	kg/100 m	Bl. real [kN]*	Bl. linear [kN]**	Break length [km]***
6	2,2	36,0	40,0	171
8	3,8	64,0	71,1	171
10	5,7	96,0	106,7	171
12	8,6	143,0	158,9	170
14	11,5	190,0	211,1	169
16	15,0	250,0	277,8	169
18	18,4	290,0	322,2	161
20	22,9	350,0	388,9	156
22	26,7	410,0	455,6	156
24	31,7	490,0	544,4	157
26	37,2	570,0	633,3	156
28	43,0	650,0	722,2	154
30	48,7	710,0	788,9	149
32	55,6	790,0	877,8	145
34	62,1	870,0	966,7	143
36	68,7	950,0	1.055,6	141
38	76,4	1.050,0	1.166,7	140
40	85,9	1.140,0	1.266,7	135
44	103,1	1.360,0	1.511,1	135
46	112,7	1.430,0	1.588,9	129
48	119,3	1.580,0	1.755,6	135
52	140,6	1.860,0	2.066,7	135

- \* Spliced break load
- \*\* Break load in accordance with DIN EN ISO 2307
- \*\*\* Break length in spliced condition

# FIBRE ROPES

## Gleistein Fibre Ropes

### GeoMooring WinchMaster



**Elongation at 10% of break load: 1,8%**

- Manufactured to company norm
- Seven parallel cores made of special 12-strand braided polyolefin XS yarns
- Robust cover braid material made of Gleistein Plus yarns (polyester / polyolefin mix) with GeoGard impregnation
- Low elongation and highest tenacity in a compact and robust construction
- Good abrasion resistance
- Very good UV resistance
- Buoyant
- OCIMF-conforming mooring line for tankers

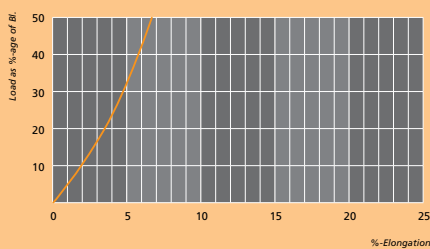
Ø [mm]	kg/100 m	Bl. real [kN]*	Bl. linear [kN]**	Break length [km]***
80	321,1	1.100,0	1.222,2	35
88	349,3	1.240,0	1.377,8	36
96	423,7	1.430,0	1.588,9	34
104	489,6	1.760,0	1.955,6	37
112	596,6	2.100,0	2.333,3	36
120	649,2	2.370,0	2.633,3	37
128	735,2	2.640,0	2.933,3	37
136	862,8	2.900,0	3.222,2	34
144	1.057,5	3.500,0	3.888,9	34
152	1.125,9	3.800,0	4.222,2	34
160	1.267,7	4.200,0	4.666,7	34
168	1.342,4	4.500,0	5.000,0	34
176	1.530,4	5.150,0	5.722,2	34
184	1.653,3	5.700,0	6.333,3	35
192	1.812,7	6.150,0	6.833,3	35
200	1.903,1	6.600,0	7.333,3	35

\* Spliced break load

\*\* Break load in accordance with DIN EN ISO 2307

\*\*\* Break length in spliced condition

Load / Elongation curve



### GeoTwin WinchMaster



**Elongation at 10% of break load: 2,8%**

- Manufactured to company norm
- 12-plait core made of special braided polyolefin XS yarns
- Robust cover braid material made of Gleistein Plus yarns (polyester / polyolefin mix) with GeoGard impregnation
- Low elongation and highest tenacity in a compact and robust construction
- Good abrasion resistance
- Very good UV resistance
- Buoyant
- Especially well suited for use with mooring winches
- OCIMF-conforming mooring line for tankers

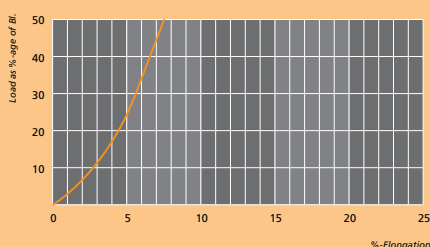
Ø [mm]	kg/100 m	Bl. real [kN]*	Bl. linear [kN]**	Break length [km]***
36	74,5	230,0	255,6	31
40	87,0	280,0	311,1	33
44	100,0	375,0	416,7	38
48	129,0	460,0	511,1	36
52	140,0	520,0	577,8	38
56	169,0	600,0	666,7	36
60	192,0	690,0	766,7	37
64	215,0	800,0	888,9	38
68	230,0	900,0	1.000,0	40
72	295,0	1.040,0	1.155,6	36

\* Spliced break load

\*\* Break load in accordance with DIN EN ISO 2307

\*\*\* Break length in spliced condition

Load / Elongation curve



# FIBRE ROPES

## Gleistein Fibre Ropes

### DynaOne® HS GeoBend



#### Elongation at 10% of break load: 0,3%

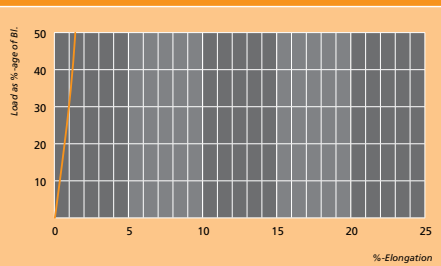
- Braided 12-plait made of Dyneema® SK78 fibres combined with Geo-Bend fibre
- Heat set for greater strength and minimised construction stretch
- Special Geoflex coating finish
- Exceptional attributes for frequently alternating bends under load
- Very good abrasion resistance
- Excellent UV resistance
- A real rope with balanced universal properties and long service life even without a protective cover. Besides its coating, this is chiefly attributable to its firm braid structure.
- Ideal as a replacement for wire crane cable
- German Lloyd certified davit rope for manned tender boats

Ø [mm]	kg/100 m	Bl. real [daN]*	Bl. linear [daN]**
10	5,50	9.600	10.560
12	9,60	16.500	18.150
14	13,50	22.800	25.080
16	15,30	27.000	29.700
18	20,50	37.000	40.700
20	23,50	42.500	46.750
22	27,50	50.000	55.000
24	31,50	57.000	62.700
26	35,50	64.500	70.950
28	43,00	71.500	78.650
30	48,00	79.000	86.900
32	56,00	86.000	94.600
36	67,00	106.000	116.600
40	84,00	140.000	154.000
44	100,00	155.000	170.500
48	120,00	180.000	198.000

\* Spliced break load

\*\* Linear break load according to DIN EN ISO 2307

Load / Elongation curve



### TechnaOne



#### Elongation at 10% of break load: 0,9%

- Manufactured to company norm
- Braided 12-plait made of Technora® aramid fibres
- Cold stretching optionally available to minimise stretch and enable a more uniform braid structure
- Coatings in various colours for improved protection against weathering and abrasion
- Very good abrasion resistance
- Reasonable UV resistance
- Suited for static applications – even under high temperatures

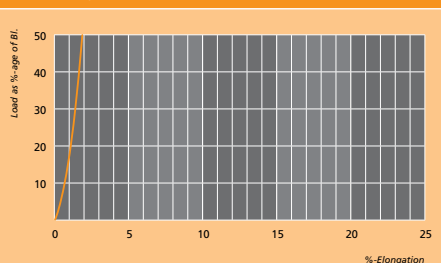
Ø [mm]	kg/100 m	Bl. real [kN]*	Bl. linear [kN]**	Break length [km]***
4	1,1	14,0	15,4	124,7
5	2,0	23,0	25,3	112,7
6	2,8	32,5	35,8	113,8
8	5,0	58,0	63,8	113,7
10	8,0	95,0	104,5	116,4
12	12,0	140,0	154,0	114,3
14	15,0	170,0	187,0	111,1
16	19,6	215,0	236,5	107,5
18	24,8	265,0	291,5	104,7
20	30,6	320,0	352,0	102,5
22	37,0	380,0	418,0	100,6
24	44,0	445,0	489,5	99,1
26	51,5	520,0	572,0	99,0
28	60,0	600,0	660,0	98,0
30	69,0	680,0	748,0	96,6
32	78,0	760,0	836,0	95,5
34	88,0	850,0	935,0	94,7
36	99,0	950,0	1.045,0	94,0
38	110,0	1.050,0	1.155,0	93,5
40	122,0	1.150,0	1.265,0	92,4
44	148,0	1.350,0	1.485,0	89,4
46	162,0	1.470,0	1.617,0	88,9
48	176,0	1.600,0	1.760,0	89,1

\* Spliced break load

\*\* Break load in accordance with DIN EN ISO 2307

\*\*\* Break length in spliced condition

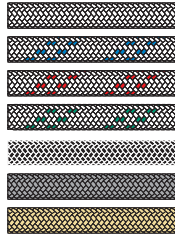
Load / Elongation curve



# FIBRE ROPES

## Gleistein Fibre Ropes

### MegaTwin Dyneema®



Elongation at 10% of break load: 0,7%

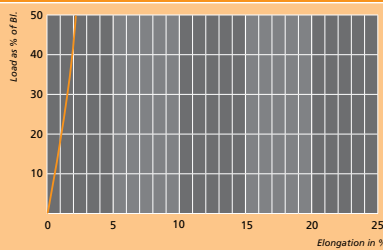
- Core 12-strand braid of Dyneema® SK78 fibres
- Intermediate cover of polyester staple fibre
- 24 or 32-plait HT Polyester cover
- Excellent breaking load with smallest elongation
- Extremely abrasion resistant cover
- Exceptional performance with stoppers
- Very stable cross-section yet remains flexible
- Universal line: Ideal for halyards, sheets, guys and downhauls
- Creep-free version optionally available: **MegaTwin Dyneema® MAX** is ideally suited for continuous static loads

Ø [mm]	kg/100 m	Bl. real [daN]*	Bl. linear [daN]**
2	0,30	150	165
3	0,70	330	363
4	1,00	850	935
5	2,10	1.400	1.540
6	2,60	1.650	1.815
8	4,00	3.000	3.300
10	6,80	4.900	5.390
12	9,90	7.500	8.250
14	13,30	9.500	10.450
16	17,50	12.000	13.200
18	22,30	15.000	16.500
20	28,00	19.000	20.900
22	33,00	23.000	25.300
24	39,00	25.500	28.050
26	44,00	27.500	30.250
28	46,00	31.700	34.870
30	58,00	36.000	39.600
32	60,00	41.000	45.100
36	76,00	51.000	56.100

\* Spliced break load

\*\* Linear break load according to DIN EN ISO 2307

Load-elongation curve



### MegaTwin Dyneema® 07



Elongation at 10 % of break load: 1,2 %

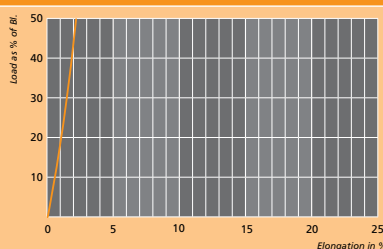
- Core 12-strand braid of Dyneema® 07 fibres
- Intermediate cover of polyester staple fibre
- 24 or 32-plait HT Polyester cover
- Excellent breaking load with smallest elongation
- Extremely abrasion resistant cover
- Exceptional performance with stoppers
- Very stable cross-section yet remains flexible
- Universal line

Ø [mm]	kg/100 m	Bl. real [daN]*	Bl. linear [daN]**
6	2,60	1.100	1.210
8	4,00	2.100	2.310
10	6,80	3.400	3.740
12	9,90	5.200	5.720
14	13,30	6.600	7.260
16	17,50	8.400	9.240

\* Spliced break load

\*\* Linear break load according to DIN EN ISO 2307

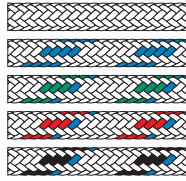
Load-elongation curve



# FIBRE ROPES

## Gleistein Fibre Ropes

### Cup



**Elongation at 10% of break load: 1,4%**

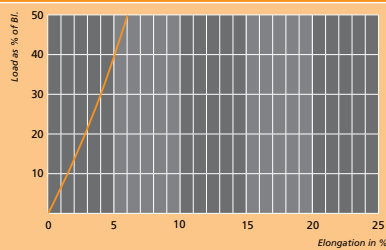
- Core of parallel HT continuous filament Polyester
- Inner braided sheath of coarse synthetic fibre (8 mm diameter and above) binds the core yarns
- Outer braided cover of HT Polyester
- Cup has the lowest stretch possible in a polyester fibre rope due to zero constructional stretch
- Compact construction, high strength
- Very high life expectancy
- No creep
- Very good characteristics for use with cleats
- Initial stiffness will soften up in use

Ø [mm]	kg/100 m	Bl. real [daN]*	Bl. linear [daN]**
3	0,70	170	187
4	1,10	350	385
5	1,80	600	660
6	2,70	780	858
8	4,50	1.300	1.430
10	7,30	2.200	2.420
12	9,50	3.200	3.520
14	13,50	4.600	5.060
16	18,30	6.500	7.150

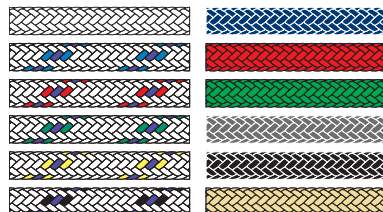
\* Spliced break load

\*\* Linear break load according to DIN EN ISO 2307

Load-elongation curve



### Tasmania



**Elongation at 10% of break load: 2,0%**

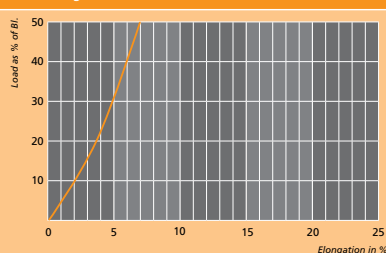
- Core 12-strand braided made of HT Polyester
- Flexible braided cover made of the same material
- This double braid construction shares the load equally between cover and core
- Outstanding flexibility and handling characteristics
- Excellent durability
- Highly cost-effective
- Ideal for deployment as a sheet and universal line
- With an end-to-end splice, Tasmania can be made into a flat sling

Ø [mm]	kg/100 m	Bl. real [daN]*	Bl. linear [daN]**
5	1,60	700	770
6	2,60	800	880
8	4,00	1.300	1.430
10	6,80	2.000	2.200
12	9,30	3.000	3.300
14	13,00	3.700	4.070
16	18,80	4.800	5.280
18	24,10	6.100	6.710
20	30,00	8.500	9.350

\* Spliced break load

\*\* Linear break load according to DIN EN ISO 2307

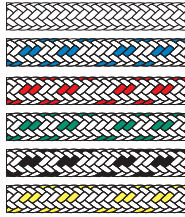
Load-elongation curve



# FIBRE ROPES

## Gleistein Fibre Ropes

### Gemini X



**Elongation at 10% of break load: 2,0%**

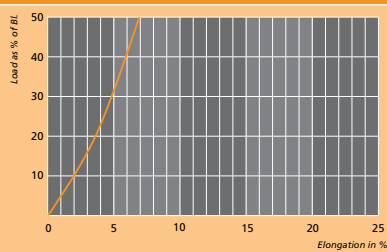
- Core 12-strand HT Polyester with special finish for higher strength and improved abrasion resistance
- Flexible cover made from the same material
- Gemini – the twin: Shares the load equally between cover and core
- Very high strength for a polyester rope
- Outstanding flexibility and handling characteristics
- Excellent longevity and durability due to improved UV protection abrasion resistance
- With an end-to-end splice, Gemini X can be made into a flat sling

Ø [mm]	kg/100 m	Bl. real [daN]*	Bl. linear [daN]**
6	2,60	1.100	1.210
8	4,00	1.500	1.650
10	6,80	2.400	2.640
12	9,30	3.600	3.960
14	13,00	4.500	4.950
16	18,00	6.500	7.150
18	23,40	8.300	9.130
20	30,00	10.000	11.000
22	37,30	12.200	13.420

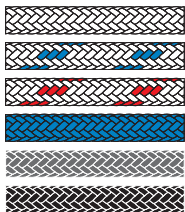
\* Spliced break load

\*\* Linear break load according to DIN EN ISO 2307

Load-elongation curve



### Standard



**Elongation at 10% of break load: 1,6%**

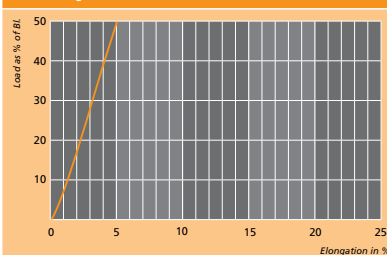
- Core of 12-strand braided HT Polyester
- Cover made of polyester staple fibres as a flexible 1 over 2 braid
- The braiding process of the cover combines flexibility and good abrasion resistance
- Grippy and supple surface – optimised for handling
- High-quality sheet at an attractive price
- Best used on winches with a smooth drum surface

Ø [mm]	kg/100 m	Bl. real [daN]*	Bl. linear [daN]**
4	1,00	230	253
5	1,60	360	396
6	2,55	500	550
8	3,80	750	825
10	6,10	1.250	1.375
12	8,70	2.000	2.200
14	12,00	2.500	2.750

\* Spliced break load

\*\* Linear break load according to DIN EN ISO 2307

Load-elongation curve



# FIBRE ROPES

## Gleistein Fibre Ropes

### GeoTwin Polyamid(e)



**Elongation at 10% of break load: 7,2%**

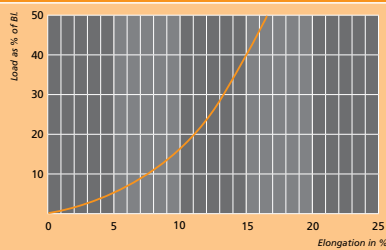
- Stabilised 12-strand core made of HT Polyamide
- Flexible braided cover made of the same material with GeoGard Marine Finish
- Excellent break load
- Excellent elongation characteristics for comfortable mooring
- GeoGard finish minimises hardening and water absorption due to raw material characteristics
- Good abrasion resistance
- According to ISO 10554

Ø [mm]	kg/100 m	Bl. real [daN]*	Bl. linear [daN]**
20	22,50	8.500	9.350
22	30,40	11.500	13.090
24	35,30	13.600	14.960
26	42,00	16.000	17.600
28	48,00	18.300	20.130
30	56,00	21.000	23.100
32	63,50	23.500	25.850
36	80,50	30.000	33.000
40	99,00	37.500	41.250
44	120,00	43.000	47.300
48	142,00	50.500	55.550
52	167,00	60.000	66.000
56	194,00	69.000	75.900
60	222,00	78.100	85.910
64	253,00	90.000	99.000

\* Spliced break load

\*\* Linear break load according to DIN EN ISO 2307

Load-elongation curve



### GeoTwin Polyester



**Elongation at 10% of break load: 2,0%**

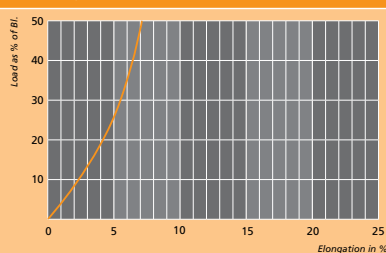
- Core 12-strand made of HT Polyester
- Cover 24 or 32-plait (depending on diameter) made of the same material with GeoGard Marine Finish
- Excellent break load
- Balanced elongation characteristics
- Lifetime flexibility without work-hardening
- Excellent abrasion resistance
- Minimum water absorption
- According to ISO 10547

Ø [mm]	kg/100 m	Bl. real [daN]*	Bl. linear [daN]**
20	30,00	8.000	8.800
22	37,30	9.900	10.890
24	43,40	11.500	12.650
26	51,00	13.100	14.410
28	59,00	15.800	17.380
30	68,00	17.400	19.140
32	78,00	19.800	21.780
36	99,00	26.200	28.820
40	121,00	32.600	35.860
44	147,00	38.000	41.800
48	177,00	45.500	50.050
52	204,00	53.500	58.850
56	239,00	62.500	68.750
60	274,00	71.500	78.650
64	313,00	81.000	89.100

\* Spliced break load

\*\* Linear break load according to DIN EN ISO 2307

Load-elongation curve





# FIBRE ROPES

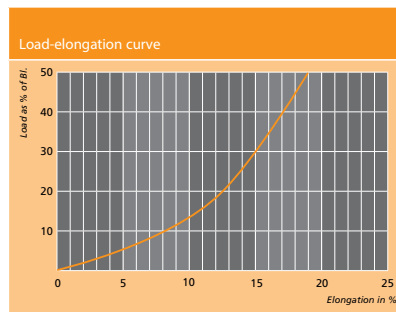
## Gleistein Fibre Ropes

### GeoOne Polyamid(e)



**Elongation at 10% of break load: 8,2%**

- 12-strand round braid made of HT Polyamide with GeoGard Marine Finish
- Excellent break load
- Excellent elongation characteristics for comfortable mooring
- GeoGard finish minimises hardening and water absorption due to raw material characteristics
- Good abrasion resistance



Ø [mm]	kg/100 m	Bl. real [daN]*	Bl. linear [daN]**
20	24,70	8.400	9.240
22	29,90	10.500	11.550
24	35,50	12.400	13.640
26	41,70	14.500	15.950
28	48,40	16.800	18.480
30	55,50	19.000	20.900
32	63,20	21.500	23.650
36	80,00	27.500	30.250
40	98,70	33.000	36.300
44	119,00	40.000	44.000
48	142,00	47.500	52.250
52	167,00	55.500	61.050
56	193,00	63.800	70.180
60	222,00	73.000	80.300
64	253,00	83.000	91.300

\* Spliced break load

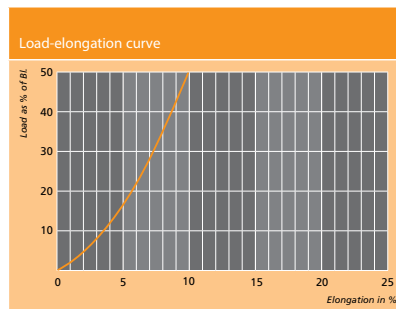
\*\* Linear break load according to DIN EN ISO 2307

### GeoOne Polyester



**Elongation at 10% of break load: 3,4%**

- 12-strand round braid from HT Polyester with GeoGard Marine Finish
- Excellent break load
- Balanced elongation characteristics
- Lifetime flexibility without work-hardening
- Very good abrasion resistance
- Minimal water absorption



Ø [mm]	kg/100 m	Bl. real [daN]*	Bl. linear [daN]**
20	30,30	8.000	8.800
22	36,70	9.700	10.670
24	43,70	11.000	12.100
26	51,20	12.200	13.420
28	59,40	14.000	15.400
30	68,20	15.900	17.490
32	77,80	18.000	19.800
36	98,20	22.600	24.860
40	121,00	27.500	30.250
44	147,00	35.000	38.500
48	175,00	43.000	47.300
52	205,00	51.800	56.980
56	238,00	60.200	66.220
60	273,00	68.500	75.350
64	311,00	77.800	85.580

\* Spliced break load

\*\* Linear break load according to DIN EN ISO 2307

# FIBRE ROPES

## Gleistein Fibre Ropes

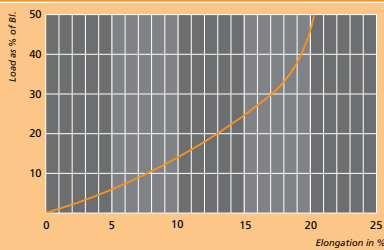
### GeoSquare Polyamid(e)



**Elongation at 10% of break load: 7,2%**

- Square-plaited construction made of HT Polyamide
- Thermally stabilised for higher service life and improved handling
- Polyamide mooring lines have outstanding elasticity and therefore absorb shock loads very well
- Square-plaited mooring lines do not kink
- Highly suitable as mooring lines, towing springs and anchor warps
- According to ISO 1140

Load-elongation curve



Ø [mm]	kg/100 m	Bl. real [daN]*	Bl. linear [daN]**
12	8,90	3.800	4.180
14	12,10	4.800	5.280
16	15,80	5.900	6.490
18	20,00	6.800	7.480
20	24,70	8.400	9.240
22	29,90	10.500	11.550
24	35,50	12.400	13.640
26	41,70	14.500	15.950
28	48,40	16.800	18.480
30	55,50	19.000	20.900
32	63,20	21.500	23.650
36	80,00	27.500	30.250
40	98,70	33.000	36.300
44	119,00	40.000	44.000
48	142,00	47.500	52.250
52	167,00	55.500	61.050
56	193,00	63.800	70.180
60	222,00	73.000	80.300
64	253,00	83.000	91.300

\* Spliced break load

\*\* Linear break load according to DIN EN ISO 2307

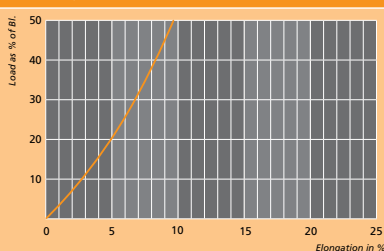
### GeoSquare Polyester



**Elongation at 10% of break load: 2,5%**

- Square-plaited construction made of HT Polyester in white, navy blue and black
- Thermally stabilised for higher service life and improved handling
- Polyester fibres combine best abrasion resistance with outstanding UV stability
- Remains flexible throughout its usable life
- Square-plaited ropes cannot kink
- Highly suitable as mooring line, towing spring or anchor warp
- According to ISO 1140

Load-elongation curve



Ø [mm]	kg/100 m	Bl. real [daN]*	Bl. linear [daN]**
12	10,90	2.700	2.970
14	14,90	3.700	4.070
16	19,40	4.700	5.170
18	24,60	6.300	6.930
20	30,30	8.000	8.800
22	36,70	9.700	10.670
24	43,70	11.000	12.100
26	51,20	12.200	13.420
28	59,40	14.000	15.400
30	68,20	15.900	17.490
32	77,80	18.000	19.800
36	98,20	22.600	24.860
40	121,00	27.500	30.250
44	147,00	35.000	38.500
48	175,00	43.000	47.300
52	205,00	51.800	56.980
56	238,00	60.200	66.220
60	273,00	68.500	75.350
64	311,00	77.800	85.580

\* Spliced break load

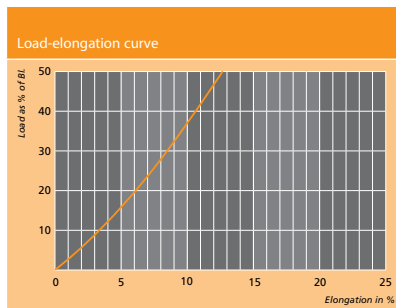
\*\* Linear break load according to DIN EN ISO 2307

### GeoSquare GeoProp



**Elongation at 10% of break load: 3,2%**

- Square-plaited construction made of HT Polypropylene multifilament (our trade name GeoProp)
- High strength, medium elongation
- GeoProp boasts better UV stability in dark colours than in light colours
- GeoProp lines retain their flexibility and do not stiffen in use
- Due to its buoyancy GeoProp avoids coming near to the propeller and can be fished out of the water
- Highly suited as a towing line
- The light material is less suited for use as an anchor warp



Ø [mm]	kg/100 m	Bl. real [daN]*	Bl. linear [daN]**
12	6,50	2.000	2.200
14	9,00	2.400	2.640
16	11,60	3.400	3.740
18	14,60	4.400	4.840
20	18,10	5.300	5.830
22	21,90	5.500	6.050
24	26,00	6.700	7.370
26	30,60	10.400	11.440
28	35,40	11.900	13.090
30	40,70	13.600	14.960
32	46,30	15.400	16.940
36	58,60	19.100	21.010
40	72,30	23.300	25.630
44	87,50	27.800	30.580
48	104,00	32.700	35.970
52	122,00	37.900	41.690
56	142,00	43.600	47.960
60	163,00	49.500	54.450
64	185,00	55.800	61.380

\* Spliced break load

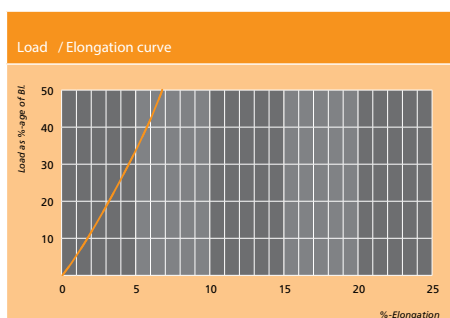
\*\* Linear break load according to DIN EN ISO 2307

### GeoSquare PowerPlus



**Elongation at 10% of break load: 1,9%**

- Manufactured to company norm
- 8-strand square plait (4x2) with inner yarns made of polyolefin and outer yarns of Gleistein Plus yarns
- Geolan impregnation for minimised inter-fibre friction, higher break loads and better abrasion protection
- Very good break load and abrasion resistance
- Very good UV resistance and moderate elongation
- Specific gravity approx. 1g/cm<sup>3</sup>, neutral buoyancy
- OCIMF-conforming mooring line for tankers



Ø [mm]	kg/100 m	Bl. real [kN]*	Bl. linear [kN]**	Break length [km]***
16	12,4	40,3	44,3	31,9
18	15,7	50,5	55,6	31,5
20	19,4	61,8	68,0	31,2
22	23,5	73,9	81,3	30,8
24	27,5	107,0	117,7	38,1
26	32,8	120,0	132,0	35,9
28	35,5	138,0	151,8	38,1
30	42,5	164,0	180,4	37,8
32	48,5	186,0	204,6	37,6
36	61,5	235,0	258,5	37,4
40	76,0	287,0	315,7	37,0
44	93,0	350,0	385,0	36,9
48	110,0	414,0	455,4	36,9
52	128,0	479,0	526,9	36,7
56	150,0	558,0	613,8	36,5
60	170,0	629,0	691,9	36,3
64	194,0	714,0	785,4	36,1
68	215,0	789,0	867,9	36,0
72	245,0	899,0	988,9	36,0
80	300,0	1.100,0	1.210,0	35,9
88	365,0	1.332,0	1.465,2	35,8
96	435,0	1.577,0	1.734,7	35,5

\* Spliced break load

\*\* Break load in accordance with DIN EN ISO 2307

\*\*\* Break length in spliced condition

# FIBRE ROPES

## Gleistein Fibre Ropes

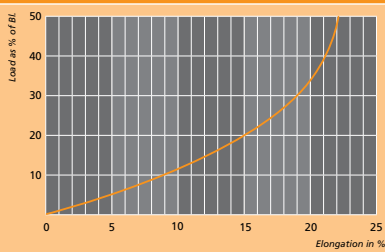
### GeoTwist Polyamid(e)



**Elongation at 10% of break load: 9,0%**

- 3-strand laid construction made of HT Polyamide
- Thermally stabilised for higher service life, improved handling and reduced stiffening due to weathering
- Polyamide mooring lines have outstanding elasticity and therefore absorb shock loads very well
- Highly suitable as mooring lines, towing springs, towing lines and anchor warps
- According to ISO 1140

Load-elongation curve

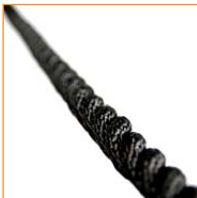


Ø [mm]	kg/100 m	Bl. real [daN]*	Bl. linear [daN]**
4	1,00	338	371
5	1,50	405	445
6	2,30	900	990
8	4,00	1.480	1.628
10	6,20	2.300	2.530
12	8,90	4.000	4.400
14	12,20	5.000	5.500
16	15,80	6.000	6.600
18	20,00	7.500	8.250
20	24,50	9.200	10.120
22	30,00	11.200	12.320
24	35,50	12.600	13.860
26	42,00	14.700	16.170
28	48,50	16.700	18.370
30	55,50	19.600	21.560
32	63,00	21.000	23.100
36	80,00	26.500	29.150
40	99,00	32.000	35.200
44	120,00	39.000	42.900
48	142,00	45.600	50.160
52	166,00	53.500	58.850
56	193,00	62.500	68.750
60	221,00	71.000	78.100
64	252,00	81.000	89.100

\* Spliced break load

\*\* Linear break load according to DIN EN ISO 2307

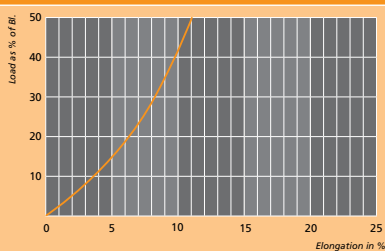
### GeoTwist Polyester



**Elongation at 10% of break load: 4,0%**

- 3-strand laid construction made of HT Polyester
- Thermally stabilised for higher service life and improved handling
- Polyester fibres combine best abrasion resistance with outstanding UV stability
- Remains flexible throughout its usable life
- The light resistance of solid colour versions is even more superior than that of the white coloured version
- Highly suitable as mooring
- According to ISO 1141

Load-elongation curve



Ø [mm]	kg/100 m	Bl. real [daN]*	Bl. linear [daN]**
4	1,20	252	277
5	1,90	382	420
6	2,70	650	715
8	4,80	1.150	1.265
10	7,60	1.850	2.035
12	11,00	3.000	3.300
14	14,80	3.900	4.290
16	19,50	5.000	5.500
18	24,50	6.400	7.040
20	30,30	8.400	9.240
22	36,70	9.800	10.780
24	43,70	11.500	12.650
26	51,20	12.800	14.080
28	59,40	15.400	16.940
30	68,20	17.400	19.140
32	77,80	20.000	22.000
36	98,20	25.200	27.720
40	121,00	31.000	34.100
44	147,00	37.000	40.700
48	175,00	44.000	48.400
52	205,00	51.500	56.650
56	238,00	59.500	65.450
60	273,00	68.500	75.350
64	311,00	77.800	85.580

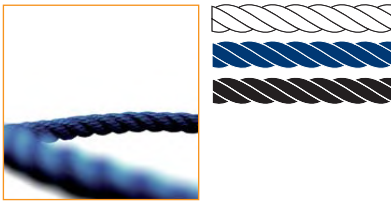
\* Spliced break load

\*\* Linear break load according to DIN EN ISO 2307

# FIBRE ROPES

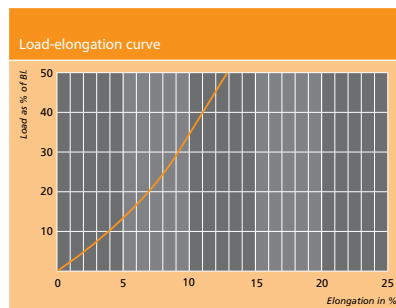
## Gleistein Fibre Ropes

### GeoTwist GeoProp



**Elongation at 10% of break load: 4,0%**

- 3-strand laid construction made of HT Polypropylene (our trade name GeoProp)
- GeoProp boasts better UV stability in dark colours than in light colours
- GeoProp lines retain their flexibility and do not stiffen in use
- Due to its buoyancy GeoProp avoids coming near to the propeller and can be fished out of the water
- Highly suited as a towing line
- The light material is less suited for use as an anchor warp
- According to ISO 1346



Ø [mm]	kg/100 m	Bl. real [daN]*	Bl. linear [daN]**
4	0,70	284	312
5	1,10	428	470
6	1,60	672	739
8	2,90	1.160	1.276
10	4,50	1.750	1.925
12	6,50	2.470	2.717
14	8,90	3.290	3.619
16	11,60	4.210	4.631
18	14,60	5.250	5.775
20	18,10	6.400	7.040
22	21,90	7.640	8.404
24	26,00	8.960	9.856
26	30,60	10.400	11.440
28	35,40	11.900	13.090
30	40,70	13.600	14.960
32	46,30	15.400	16.940
36	58,60	19.100	21.010
40	72,30	23.300	25.630
44	87,50	27.800	30.580
48	104,00	32.700	35.970
52	122,00	37.900	41.690
56	142,00	43.600	47.960
60	163,00	49.500	54.450
64	185,00	55.800	61.380

\* Spliced break load

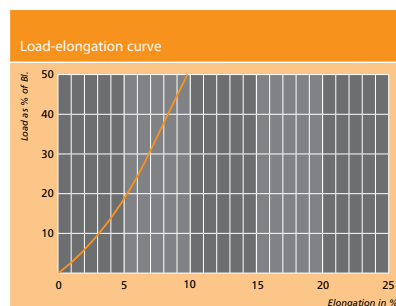
\*\* Linear break load according to DIN EN ISO 2307

### GeoTwist Thempest



**Elongation at 10% of break load: 3,2%**

- 3-strand, laid construction made of doubled yarns
- Material composed of Polyester and specially developed polypropylene
- The silky matt finish gives the outer appearance of natural fibre ropes
- High break loads compared to other traditional looking synthetic fibre ropes
- Very good abrasion resistance, UV stability and protection against weathering
- Balanced load-elongation properties makes this universal line suitable for a wide variety of applications
- All running rigging on board of the trainee sailing vessel "Gorch Fock" of the German navy comprises from GeoTwist Thempest



Ø [mm]	kg/100 m	Bl. real [daN]*	Bl. linear [daN]**
6	2,40	650	715
8	3,70	1.050	1.155
10	5,30	1.550	1.705
12	8,40	2.250	2.475
14	10,60	2.600	2.860
16	14,10	3.600	3.960
18	18,30	4.800	5.280
20	22,60	5.500	6.050
22	27,30	6.800	7.480
24	32,50	8.700	9.570
26	38,20	9.500	10.450
28	44,30	11.000	12.100
30	50,80	12.500	13.750
32	57,80	14.200	15.620
36	73,20	17.900	19.690
40	90,40	22.000	24.200

\* Spliced break load

\*\* Linear break load according to DIN EN ISO 2307

# FIBRE ROPES

## Gleistein Fibre Ropes

### Dyneema® Trimm



**Elongation at 10% of break load: 0,7%**

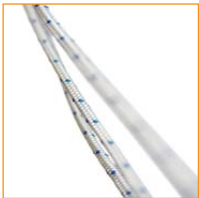
- Round 8 or 12-plait braid made of Dyneema® SK78
- Ideal trim, leech and control line
- Extremely strong, low elongation and lightweight
- Smooth, abrasion resistant surface

Ø [mm]	kg/100 m	Bl. real [daN]*	Bl. linear [daN]**
1	0,08	100	110
1,5	0,13	180	198
2	0,16	240	264
2,5	0,27	485	534
3	0,39	527	580
4	0,64	600	660

\* Spliced break load

\*\* Linear break load according to DIN EN ISO 2307

### GeoOne Polyester



**Elongation at 10% of break load: 3,4%**

- Round 8 or 16-plait braid made of HT Polyester
- Very good abrasion resistance
- High strength, low elongation
- Very good UV resistance
- Multi-purpose rope with a large variety of possible applications

Ø [mm]	kg/100 m	Bl. real [daN]*	Bl. linear [daN]**
1	0,08	50	55
1,5	0,14	70	77
2	0,22	110	121
2,5	0,35	160	176
3	0,61	220	242
4	1,10	330	363
5	1,72	500	550
6	2,44	650	715
8	4,35	1.150	1.265
10	6,80	1.750	1.925

\* Spliced break load

\*\* Linear break load according to DIN EN ISO 2307

### GeoOne Polyamid(e)



**Elongation at 10% of break load: 8,2%**

- Round 8 or 16-plait braid made of HT Polyamide
- High break load
- High material stretch
- Good abrasion and UV resistance
- Ideally suited as a flag halyard and whipping twine

Ø [mm]	kg/100 m	Bl. real [daN]*	Bl. linear [daN]**
1	0,07	30	33
1,5	0,13	49	54
2	0,18	93	102
2,5	0,28	137	151
3	0,51	155	171
4	0,90	270	297
5	1,40	420	462
6	2,00	610	671
8	3,60	1.090	1.199
10	5,60	1.650	1.815

\* Spliced break load

\*\* Linear break load according to DIN EN ISO 2307

# FIBRE ROPES

## Gleistein Fibre Ropes

### GeoOne GeoProp



Elongation at 10% of break load: 4,5%

- Round 8 or 16-plait braid made of multifilament HT Polypropylene
- Good break load
- Moderate abrasion and UV resistance
- Low weight and attractively priced
- Suited for numerous applications

Ø [mm]	kg/100 m	Bl. real [daN]*	Bl. linear [daN]**
1	0,08	30	33
1,5	0,10	38	42
2	0,16	70	77
2,5	0,23	95	105
3	0,40	150	165
4	0,70	300	330
5	1,10	450	495
6	1,55	520	572
8	2,60	900	990
10	4,00	1.300	1.430

\* Spliced break load

\*\* Linear break load according to DIN EN ISO 2307

### GeoLink, soft shackle



- Rope shackle made from DynaOne® (100% Dyneema® SK78)
- GeoLink will tighten under tension and can be easily opened again when relaxed
- Non-metallic end termination with remarkable break load at ultra-low weight

GeoLink Ø [mm]	overall length in closed condition [mm]	SWL [daN]	Bl. real [daN]	Colour
4	85	450	900	grey
8	110	600	1.200	red
10	110	1.750	3.500	blue
12	125	2.125	4.250	yellow
14	150	3.500	7.000	blue
18	175	5.000	10.000	grey

### Special lifting slings on request



# FIBRE ROPES

## Gleistein Fibre Ropes

### GeoStatic NE



#### DIN EN 1891

- Kernmantle construction
- Polyamide core, parallel twines
- Polyamide cover, 32 plait
- Thermostabilised
- UIAA safety label from the International Mountaineering and Climbing Federation
- Standard: DIN EN 1891, Form A
- GeoStatic NE fulfils the requirements of a static safety rope across the four available diameters (9, 10.5, 11 und 12 mm)
- Even the smallest diameter rope is DIN EN 1891 Form A certified and bears the CE mark
- All components of a PSE (Personal Safety Equipment) system must be attuned to each other, approved by an accredited institute and be CE certified. PSE systems not carrying the CE mark cannot be used.

Ø [mm]	9	10,5	11	12
Core-cover slack [mm]	0,0	0,0	0,0	0,1
Extension [%]	4,0	3,2	2,8	2,5
Sheath's mass [%]	38,8	36,5	36,5	39,1
Core's mass [%]	61,2	63,5	63,5	60,9
Shrinkage [%]	-0,7	-0,5	2,3	-1,5
Breaking strength linear [kN]	27,0	31,0	39,0	42,0
Weight [kg/100 m]	5,4	6,7	7,7	8,4
Accredited testing station	CE 1015			

#### Static Ropes

The low elongation GeoStatic NE kernmantel ropes are ideal for carrying static loads. Each rope size is certified to the strict EN 1891 Type A "Low Stretch Kernmantle Ropes" standard – irrespective of diameter – and bears the UIAA safety label of the International Mountaineering and Climbing Federation.

### Cougar



#### DIN EN 1891

- Kernmantle construction
- Polyamide core, parallel twines with GEOGARD finish
- Polyamide cover, 16 plait
- Thermostabilised
- Colour: white/yellow
- No measurable core-cover slack
- Due to its negligible elongation, Cougar provides high precision and is particularly suited for static applications
- Standard: DIN EN 1891, Form A
- CE certified
- Climbing ropes may only be used if CE certified in accordance with DIN EN 1981. They are positioned on the boundary between PSE (Personal Safety Equipment) and systems for positioning at workplace, and are therefore subject to the EU machinery directive, which prescribes mandatory CE certification.

Ø [mm]	12
Core-cover slack [mm]	0,0
Extension [%]	2,6
Sheath's mass [%]	69,0
Core's mass [%]	31,0
Shrinkage [%]	1,7
Breaking strength linear [kN]	29,4
Weight [kg/100 m]	8,8
Accredited testing station	CE 0158

#### Climbing ropes

What does a professional arborist need to hit the treetops in a flash? Good climbing skills and the right ropes. You'll need to hone your technique yourself – but we'll provide you with the perfect ropes! Gleistein offers diverse choices with varying weights, surface finishes and strengths.



# FIBRE ROPES

## Gleistein Fibre Ropes

### Lizard



#### DIN EN 1891

- Kernmantle construction, braided core, uniform load distribution
- Core of polyamide, 16 plait
- Cover of polyamide, 32 plait
- Thermostabilised
- Equipped with a special coating to reduce the absorption of water
- Colour: orange/black or green/black
- Lizard always remains light and flexible even after extended periods in the wet due to its water repelling properties
- High life expectancy due to robust cover and special coating for excellent abrasion resistance
- Comfortable handling and easy to splice (splicing service available from Gleistein or its trade partners, if required)
- Standard: DIN EN 1891, Form A
- CE certified
- Climbing ropes may only be used if CE certified in accordance with DIN EN 1891. They are positioned on the boundary between PSE (Personal Safety Equipment) and systems for positioning at workplace, and are therefore subject to the EU machinery directive, which prescribes mandatory CE certification.

Ø [mm]	11
Core-cover slack [mm]	4,5
Extension [%]	4,3
Sheath's mass [%]	54,0
Core's mass [%]	46,0
Shrinkage [%]	1,5
Breaking strength linear [kN]	33,0
Weight [kg/100 m]	8,2
Accredited testing station	CE 0158

#### Climbing ropes

What does a professional arborist need to hit the treetops in a flash? Good climbing skills and the right ropes. You'll need to hone your technique yourself – but we'll provide you with the perfect ropes! Gleistein offers diverse choices with varying weights, surface finishes and strengths.

### ArborTwin



#### DIN EN 1891

- Double braid construction, uniform load distribution
- Polyamide core, 16 plait
- Polyamide cover, 20 plait
- Thermostabilised
- Colour: white/red
- Standard: DIN EN 1891, Form A
- Flexible cover for comfortable handling and excellent spliceability (splicing service available from Gleistein or its trade partners, if required)
- CE certified
- Climbing ropes may only be used if CE certified in accordance with DIN EN 1891. They are positioned on the boundary between PSE (Personal Safety Equipment) and systems for positioning at workplace, and are therefore subject to the EU machinery directive, which prescribes mandatory CE certification.

Ø [mm]	12
Core-cover slack [mm]	0,0
Extension [%]	3,4
Sheath's mass [%]	52,0
Core's mass [%]	48,0
Shrinkage [%]	1,6
Breaking strength linear [kN]	34,2
Weight [kg/100 m]	9,0
Accredited testing station	CE 0158

#### Climbing ropes

What does a professional arborist need to hit the treetops in a flash? Good climbing skills and the right ropes. You'll need to hone your technique yourself – but we'll provide you with the perfect ropes! Gleistein offers diverse choices with varying weights, surface finishes and strengths.

# FIBRE ROPES

## Gleistein Fibre Ropes

### GeoSafe Polyamid(e)



#### DIN EN 1891

- Double braid construction, uniform load distribution
- Polyamide core, 12 or 16 plait
- Polyamide cover, 32 plait
- Thermostabilised on request
- Standard: DIN EN 1891, Form A and B
- 9 mm and 10 mm  $\varnothing$  fulfil the requirements for Form B. Form A with free ends.
- 11 mm and 12 mm  $\varnothing$  fulfil the requirements for Form A and B without restrictions
- Most common application of 9 mm and 10 mm for rappelling and rescue systems, 11 mm and 12 mm for fasteners and lanyards
- Especially resistant against abrasion, highly dimensionally stable cover
- Further diameters available on request
- CE certified
- All components of a PSE (Personal Safety Equipment) system must be attuned to each other, approved by an accredited institute and be CE certified. PSE systems not carrying the CE mark cannot be used.

$\varnothing$ [mm]	9	10	11	12
Core-cover slack [mm]	0,0	0,0	7,0	5,0
Extension [%]	4,9	4,7	3,1	3,0
Sheath's mass [%]	60,1	51,5	54,0	56,0
Core's mass [%]	39,9	48,5	46,0	44,0
Shrinkage [%]	4,8	5,2	4,5	5,3
Breaking strength linear [kN]	20,0	25,0	34,5	35,6
Weight [kg/100 m]	5,4	6,4	7,6	9,5
Accredited testing station	CE 0158			

#### Double-braided safety lines

They are torque-free, boast high strength and feature no measurable core to cover slack. This product admirably demonstrates our ability to deliver ropes perfectly matched to requirements of any type of installation. GeoSafe Polyamid complies with all DIN EN 354 criteria.

# FIBRE ROPES

## Splicing tools

### Product overview



▶ Selma splicing kits



▶ Splicing needles per 5 or 10 pcs



▶ Hotknife 220V without blade



▶ Blade for hotknife



▶ D-splicer



▶ Splicing spike 175, 280 or 385 mm length



▶ Sewing palm RH/LH



▶ Dyneema scissors










▶ Pusher, big and small

# PULLEYS

## Technocable Pulleys

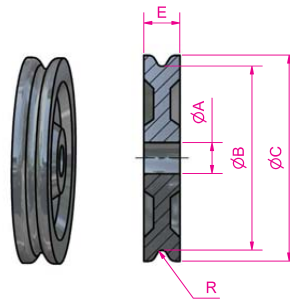
### Selection of the right Pulley:

	Operational demands			Recommended pulley	Image
	Low	Medium	High		
Ropes up to $\varnothing$ 3 mm	✓			BP pulley	
		✓		MP pulley	
			✓	UP pulley	
			✓	SP pulley	
Ropes up to $\varnothing$ 8 mm	✓			LP pulley without bearing	
		✓		LP pulley with plain bearing	
			✓	LP pulley with needle roller bearing	

### Pulley Type BP

The chemical composition, regular structure, and high crystallinity of Delrin® give Carl Stahl BP pulleys the following physical properties:

- High mechanical strength
- Long working life
- Self-lubricating
- Excellent resistance against moisture, gasoline, and sunlight (UV-stabilised)
- Excellent dimensional stability and wide useful temperature range up to 110°C (230°F)



Minimum order quantity: 5 pcs.

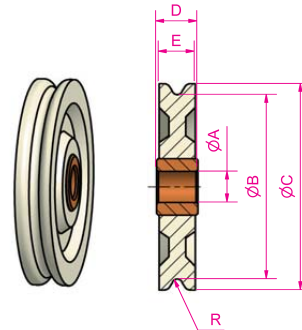
For rope $\varnothing$ up to mm	Dimensions in mm					Item no.
	A	B	C	E	R	
	+ 0,17 - 0,10	$\pm$ 0,50	$\pm$ 0,50	+ 0,20 - 0,30		
0,80	3,20	8,0	9,5	2,4	0,4	BPU0.80.32
1,20	3,20	11,0	13,0	3,2	0,6	BPU1.10.32
1,20	3,20	16,0	19,0	4,0	0,6	BPU1.60.32
1,20	4,80	20,5	25,5	4,3	0,6	BPU2.05.48
1,60	4,80	27,0	32,0	5,6	0,8	BPU2.70.48
2,40	6,40	32,0	38,0	7,2	1,2	BPU3.20.64
3,00	6,40	35,0	44,0	7,2	1,6	BPU3.50.64

# PULLEYS

## Technocable Pulleys

### Pulley Type MP

These polyamide pulleys feature a bushing of sintered self-lubricating bronze which is oil-impregnated. The oil complements the mere bronze structure and acts as a kind of damping element that can absorb extraordinary impacts, allowing high load capacities for these pulleys. Sintered bronze is highly corrosion and wear resistant.



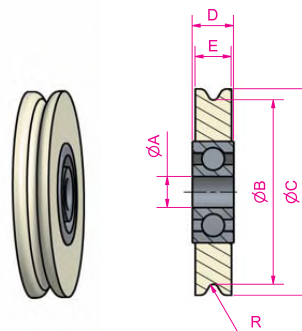
Minimum order quantity: 5 pcs.

For rope Ø up to mm	Dimensions in mm						Item no.
	A	B	C	D	E	R	
	+ 0,07 - 0,08	± 0,5	± 0,5	+ 0,20 - 0,30	+ 0,20 - 0,30		
1,20	3,20	16,0	19,5	4,8	4,0	0,6	MPU1.60.32
1,20	4,80	22,5	27,0	6,4	5,6	0,6	MPU2.25.48
1,20	6,40	22,5	27,0	6,4	5,6	0,6	MPU2.25.64
1,60	4,80	27,0	32,0	6,4	5,6	0,8	MPU2.70.48
1,60	6,40	27,0	32,0	6,4	5,6	0,8	MPU2.70.64
2,40	6,40	32,0	38,0	8,0	7,2	1,2	MPU3.20.64
2,40	9,60	32,0	38,0	8,0	7,2	1,2	MPU3.20.96
3,00	6,40	35,0	44,5	8,0	7,2	1,6	MPU3.50.64
3,00	9,60	35,0	44,5	8,0	7,2	1,6	MPU3.50.96

### Pulley Type UP

Carl Stahl UP pulleys have the following features:

- Standard polyamide pulley for universal applications
- With open-type precision machined ball bearing
- For moderate load and speed applications



Minimum order quantity: 5 pcs.

For rope Ø up to mm	Dimensions in mm						Dynamic load capacity at 500 rpm in N	Item no.
	A	B	C	D	E	R		
	± 0,10	± 0,30	± 0,30	± 0,30	± 0,30			
1,20	3,2	11,0	13,0	4,0	3,2	0,6	45	UPU1.10.32
0,80	3,2	13,0	16,0	4,0	3,2	0,4	45	UPU1.30.32
1,20	3,2	16,0	19,0	4,0	4,0	0,6	45	UPU1.60.32
1,20	4,8	22,5	27,0	6,4	5,5	0,6	150	UPU2.25.48
1,60	4,8	27,0	32,0	6,4	5,5	0,8	200	UPU2.70.48
1,20	6,4	22,5	27,0	6,4	5,5	0,6	150	UPU2.25.64
1,60	6,4	27,0	32,0	6,4	5,5	0,8	200	UPU2.70.64
2,40	6,4	32,0	38,0	8,0	7,2	1,2	350	UPU3.20.64
3,00	6,4	35,0	44,5	8,0	7,2	1,6	350	UPU3.50.64
3,00	9,6	35,0	44,5	8,0	7,2	1,6	300	UPU3.50.96

# PULLEYS

## Technocable Pulleys

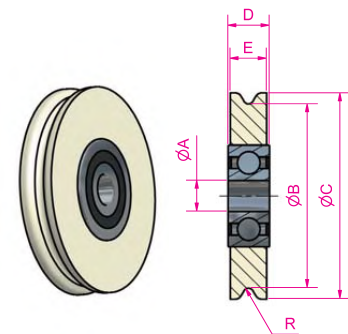
### Pulley Type SP

This range of pulleys has the following features:

- Polyamide pulley for highest operational demands
- Precise shielded bearing with tight tolerances, lubrication and protection against grime
- High rpm and load capacity

The loads indicated in the chart below represent approximate dynamic load capacities of the bearing under normal conditions, with constant load and speed, at an average working life of 2500 hrs. assuming correct installation, clean working conditions and proper lubrication.

For speeds other than 500 rpm the load capacity can be calculated with the following multiplication factors:



RPM n	( $\frac{1}{\text{min.}}$ )	Multiplication factor
50		2.5
100		1.9
300		1.23
800		0.83
1000		0.76



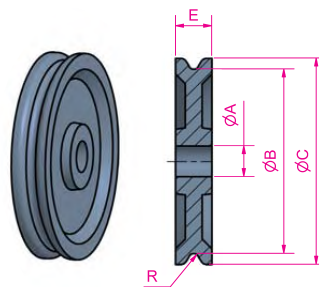
Minimum order quantity: 5 pcs.

For rope $\phi$ up to mm	Dimensions in mm						Dynamic load capacity at 500 rpm in N	Item no.
	A $\pm 0,01$	B $\pm 0,38$	C $\pm 0,30$	D $+ 0,25$	E $\pm 0,13$	R		
0,80	3,175	8,0	9,5	2,8	2,4	0,4	45	SPU0.78.32
1,20	3,175	11,0	13,0	4,0	3,2	0,6	45	SPU1.10.32
0,80	3,175	13,0	16,0	4,0	3,2	0,4	45	SPU1.27.32
1,20	3,175	16,0	19,0	4,0	4,0	0,6	45	SPU1.60.32
1,20	4,763	22,5	27,0	6,4	5,6	0,6	400	SPU2.25.48
1,20	6,350	22,5	27,0	7,2	5,6	0,6	400	SPU2.25.64
1,60	4,763	27,0	32,0	6,4	5,6	0,9	400	SPU2.70.48
2,40	6,350	32,0	38,0	7,2	7,2	1,2	400	SPU3.20.64
3,00	6,350	35,0	44,5	7,2	7,2	1,6	400	SPU3.50.64

### Pulley Type LP without Bearing

On lightly loaded applications (working load less than 10% of the maximum load) it is possible to use LP pulleys without bearings. Analysing the wear characteristics of LP pulleys it was found that pressure and surface velocity have a decisive influence on wear.

For best results use shafts of hardened steel with a surface hardness of 0.4-0.8 Ra ( $\mu\text{m}$ ).



Minimum order quantity: 5 pcs.

For rope $\phi$ up to mm	Dimensions in mm					Maximum load capacity in N*	Item no.
	A $\pm 0,01$	B $\pm 0,30$	C $\pm 0,50$	E $\pm 0,3$	R		
2,00 - 2,50	10,0	56,0	63,5	6,4	1,3	880	LPB0.56.10
3,00 - 5,00	12,0	63,5	76,0	11,2	2,8	3550	LPB0.63.12
3,00 - 5,00	12,0	76,0	89,0	11,2	2,8	3550	LPB0.76.12
5,00 - 6,00	18,0	98,5	114,5	12,7	3,5	6220	LPB0.98.18
5,00 - 6,00	18,0	111,0	127,0	12,7	3,5	6220	LPB1.11.18
6,00 - 8,00	20,0	133,5	152,5	15,8	4,3	7110	LPB1.33.20

\*The maximum load capacity indicates the permissible load in static operation. For a long service life in continuous operation a load of less than 10% of the maximum load is recommended.

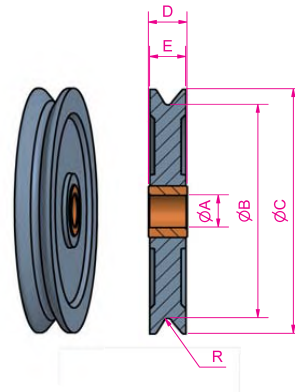
# PULLEYS

## Technocable Pulleys

### Pulley Type LP with sintered Bronze Bushing

These LP pulleys have a plain bearing which is oil-impregnated. The oil impregnation lasts for the whole life of the bearing.

Friction coefficient of oil lubrication:	0.05-0.10
Friction coefficient of dry lubrication:	0.15-0.25
Maximum velocity:	5 m/s
Maximum operating temperature:	90°C (194°F)



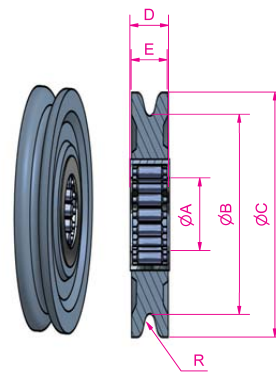
Minimum order quantity: 5 pcs.

For rope Ø up to mm	Dimensions in mm						Maximum load capacity in N*	Item no.
	A Ø E8	B ± 0,30	C + 0,50	D ± 0,3	E ± 0,3	R		
2,00 - 2,50	10,0	56,0	63,5	8,0	6,4	1,3	880	LPG0.56.10
3,00 - 5,00	10,0	63,5	76,0	12,0	11,2	2,8	3550	LPG0.63.10
3,00 - 5,00	10,0	76,0	89,0	12,0	11,2	2,8	3550	LPG0.76.10
5,00 - 6,00	16,0	98,5	114,5	14,0	12,7	3,5	6220	LPG0.98.16
5,00 - 6,00	16,0	111,0	127,0	14,0	12,7	3,5	6220	LPG1.11.16
6,00 - 8,00	18,0	133,5	152,5	16,0	15,8	4,3	7110	LPG1.33.18

\*The maximum load capacity indicates the permissible load in static operation. For a long service life in continuous operation a load of less than 25% of the maximum load is recommended.

### Pulley Type LP with Needle Roller Bearing

Equipped with needle roller bearings, these pulleys reach a longer working life especially at higher velocities. Wear resistance is also improved if the recommended maximum load is not exceeded.



Minimum order quantity: 5 pcs.

For rope Ø up to mm	Dimensions in mm						Maximum load capacity in N*	Item no.
	A F8	B ± 0,30	C ± 0,50	D ± 0,3	E ± 0,3	R		
2,00 - 2,50	8,0	56,0	63,5	8,0	6,4	1,3	880	LPN0.56.08
3,00 - 5,00	10,0	63,5	76,0	12,0	11,2	2,8	3550	LPN0.63.12
3,00 - 5,00	10,0	76,0	89,0	12,0	11,2	2,8	3550	LPN0.76.10
5,00 - 6,00	16,0	98,5	114,5	16,0	12,7	3,5	6220	LPN0.98.16
5,00 - 6,00	16,0	111,0	127,0	16,0	12,7	3,5	6220	LPN1.11.16
6,00 - 8,00	18,0	133,5	152,5	16,0	15,8	4,3	7110	LPN1.33.18

\*The maximum load capacity indicates the permissible load in static operation. For a long service life in continuous operation a load of less than 25% of the maximum load is recommended.

# BLOCKS

## Tufnol Wire Rope Blocks

### Single with eye

For rope up to mm	Sheave diameter in mm	WLL in kg	Item No.
4	35	230	HYE40004
5	43	240	HYE40005
6	50	400	HYE40006
7	63	400	HYE40007



### Single with pin

For rope up to mm	Sheave diameter in mm	WLL in kg	Item No.
4	60	230	HYE40504
5	75	240	HYE40505
6	90	400	HYE40506
7	100	400	HYE40507



### Industrial Wire Rope blocks

For rope up to mm	Sheave diameter in mm	WLL in kg	Item No.	
			Single with swivel and becket	Double with swivel and becket
5	50	875	HYE80005	HYE85005
6	63	875	HYE80006	HYE85006
8	80	1400	HYE80008	HYE85008
10	100	2150	HYE80010	HYE85010



Also available without becket

### Sheaves

For rope up to mm	Sheave diameter in mm	Sheave thickness in mm	Hole in mm	Item No.
4	25	9	6	HYE47525
4	30	9	6	HYE47530
4	35	9	6	HYE47535
4	40	9	6	HYE47540
5	50	11	8	HYE47550
5	60	11	8	HYE47560
6,5	70	13	10	HYE47570
6,5	80	13	10	HYE47580
8	90	15	10	HYE47590
8	100	15	10	HYE47600



Other sizes on request



### Lifting Blocks

#### Product Features

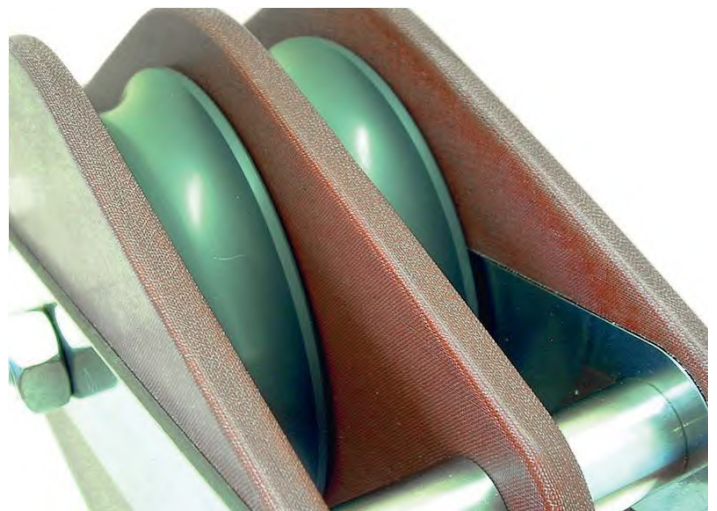
- Manufactured from Stainless Steel EN10088 1.4404 (Marine Grade 316L)
- Excellent for lifting applications where a high level of corrosion resistance is required
- Factor of Safety 6:1. All sizes are of a bolted construction and can simply be dismantled for replacement of sheaves or other damaged parts. All shackles CE marked and supplied with instruction leaflet on safe use and storage

#### Quality Features

- Every block is proof load tested to 2 x WLL and certified at our European manufacturer.
- All blocks are manufactured in accordance with the Machine Directive 2006/42/EC
- Inspection certificate BS EN 10204 3.1b available on request. High quality finish and excellent polish

For rope up to mm	For wire rope up to mm	Sheave diameter in mm	Sheave width in mm	WLL in kg 1:6	Item No. Single with swivel and becket	Item No. Double with swivel and becket	Item No. Triple with swivel and becket
16	6	83	19	1000	BBSE04	BBDE04	BBTE04
19	8	95	22	1500	BBSE06	BBDE06	BBTE06
25	10	121	30	3000	BBSE10	BBDE10	BBTE10
32	12	144	36	3500	BBSE12	BBDE12	BBTE12

Suffix item no. with WR for WIRE ROPE version



# BLOCKS

## Tufnol Rope Blocks

### Single rope blocks



For rope up to mm	Sheave diameter in mm	Minimum breaking load in kg	Item No. with eye	Item No. with bow	Item No. with swivel
10	30	800	HYE30510	HYE30010	HYE31010
12	35	1050	HYE30512	HYE30012	HYE31012
13	43	1150	HYE30513	HYE30013	HYE31013
14	50	1950	HYE30514	HYE30014	HYE31014
16	63	2100	HYE30516	HYE30016	HYE31016

Also available with becket

### Double rope blocks



For rope up to mm	Sheave diameter in mm	Minimum breaking load in kg	Item No. with bow	Item No. with swivel
10	30	580	HYE33010	HYE33510
12	35	850	HYE33012	HYE33512
13	43	850	HYE33013	HYE33513
14	50	1650	HYE33014	HYE33514
16	63	1950	HYE33016	HYE33516

Also available with becket

### Triple rope blocks



For rope up to mm	Sheave diameter in mm	Minimum breaking load in kg	Item No. with bow	Item No. with swivel
13	43	800	HYE38013	n.a.
16	63	4125	HYE38016	HYE39016

Also available with becket

# BLOCKS

## Tufnol Rope Blocks

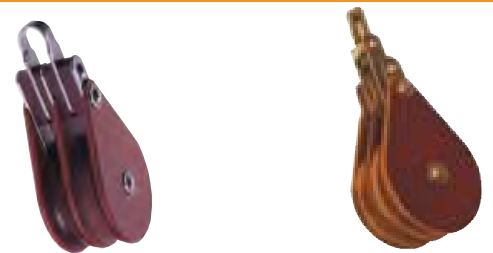
### Single rope blocks, heavy type



For rope up to mm	Sheave diameter in mm	Minimum breaking load in kg	Item No. with bow	Item No. with swivel
10	60	1400	HYE41010	n.a.
13	75	1775	HYE41013	n.a.
16	90	3620	HYE41016	HYE43016
20	100	4400	HYE41020	HYE43020
22	120	6180	HYE41022	HYE43022

Also available with becket

### Double rope blocks, heavy type



For rope up to mm	Sheave diameter in mm	Minimum breaking load in kg	Item No. with bow	Item No. with swivel
10	60	1850	HYE42010	n.a.
13	75	2150	HYE42013	n.a.
16	90	4120	HYE42016	HYE44016
20	100	5050	HYE42020	HYE44020
22	120	6230	HYE42022	HYE44022

Also available with becket

### Industrial blocks



For rope up to mm	Sheave diameter in mm	Minimum breaking load in kg	Item No. Single with swivel and becket	Item No. Double with swivel and becket
12	50	4250	HYE80012	HYE85012
14	63	4250	HYE80014	HYE85014
16	80	7000	HYE80016	HYE85016
18	100	10750	HYE80018	HYE85018

Also available without becket

# BLOCKS

## Tufnol Rope Blocks

### Sheaves



For rope up to mm	Sheave diameter in mm	Sheave thickness in mm	Item No.
10	25	11	HYE47025
10	30	11	HYE47030
10	35	11	HYE47035
10	40	11	HYE47040
12	50	13	HYE47050
12	60	13	HYE47060
14	70	16	HYE47070
14	80	16	HYE47080
16	90	18	HYE47090
16	100	18	HYE47100

Other sizes on request

# X-TEND® NETTING

X-TEND® Safety netting



# X-TEND® NETTING

## X-TEND® Safety netting

Carl Stahl is the official manufacturer of X-TEND netting. Started off with the product in the architecture and developed to a versatile product due to its flexibility we now have multiple advantages for usage in Industry compared to alternative materials. Complete with our quality assurance, DNV, CE and ISO we know that the manufacturing facility of Carl Stahl GmbH is off the highest possible quality. Together with the I-SYS wire ropes you are assured of a safe system.

### Examples of when to use X-TEND:

- horizontal safety netting
- helipads, DNV approved
- bird defense on oil platforms
- protection against falling objects or persons
- vertical safety netting
- protection against falling from heights
- protection of explosive objects
- protection of bridges or viaducts
- closed environments
- X-TEND helps absorption of magnetic fields so if enclosed this reduces the magnetism
- bird defense on, for example, oil platforms
- underwater enclosures for animals like dolphins
- viewing platforms on height
- specialist structures
- zoo-enclosures
- facade of parking garages, due to the transparency in some cases no need for extra ventilation.
- balustrading
- green-wall systems

### Why use X-TEND:

- quality, all of the wire ropes are from AISI316 and the clamps are AISI316Ti
- the options are versatile due to the flexibility of the ropes
- long lifetime compared to synthetic solutions
- one stop shop due to our delivery scope

Please know that the above are only examples of the usage of the product. This is based on our experience and already realized projects.

The product X-TEND is versatile. It can be made in different diameters of wire ropes from 1 up to 4 mm. Next to that you can choose the mesh width of the netting. This is, depending on wire rope diameter, available from 25 mm up to 200 mm.

The netting is from European origin and has an up to date European Technical Approval which means that it is CE qualified. On request we can make the complete netting with 100 % European fabricated material proven by the right documents.

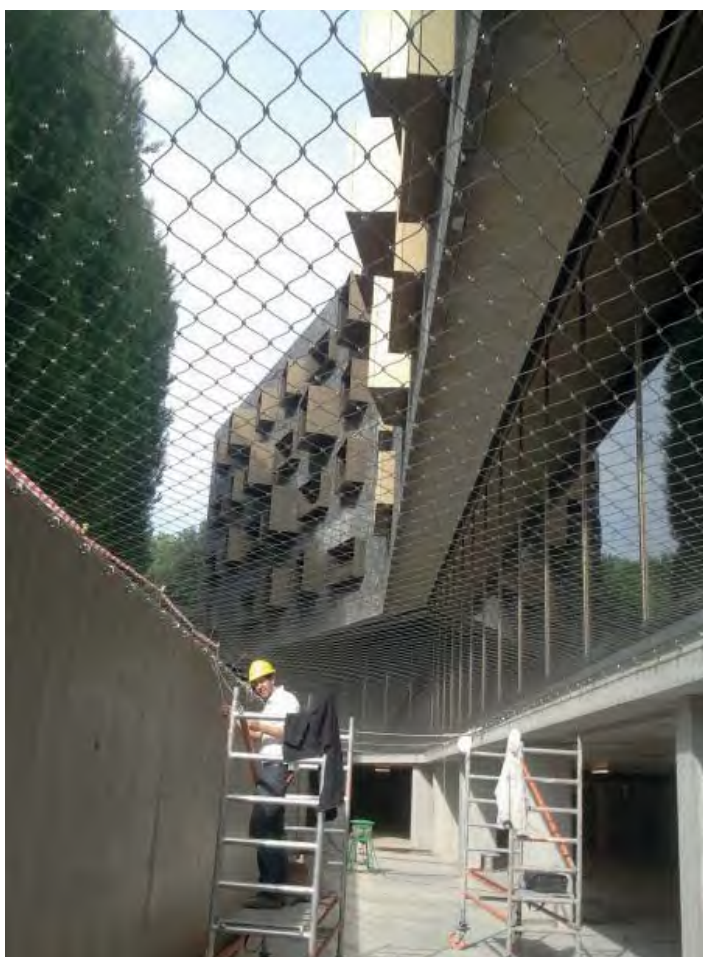
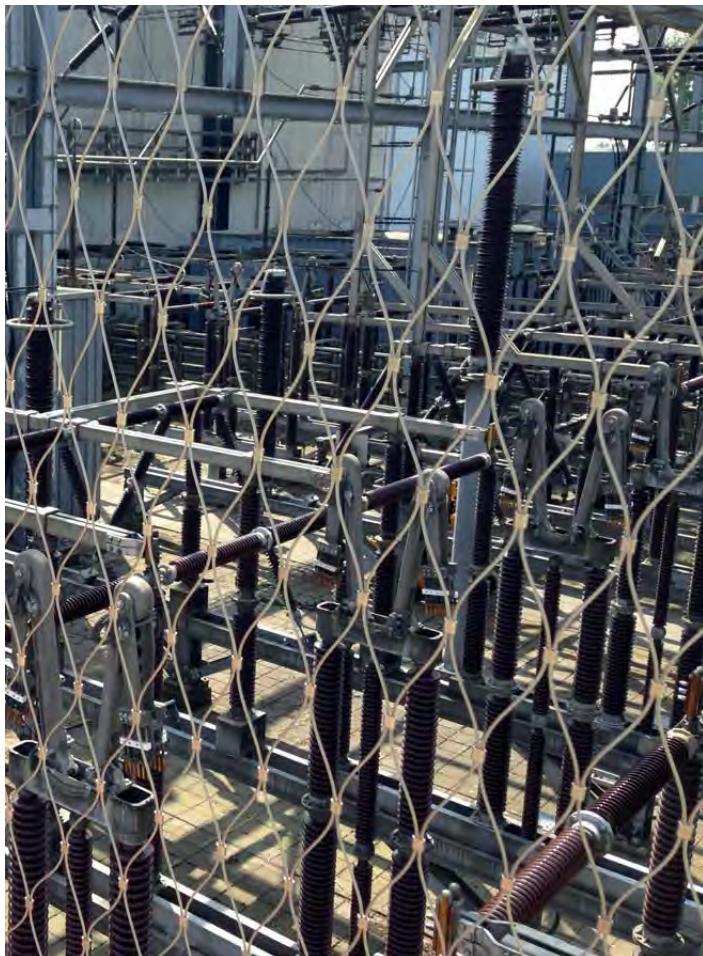
We don't only supply X-TEND netting. We have an in-house engineering department, architects, projectmanagers and fitters which means we guide your project from A to Z and, all around the globe!

Please submit the inquiry form on our website or just contact us by phone or mail and be informed about the advantage of X-TEND usage in your particular case.



# X-TEND® NETTING

X-TEND® Safety netting



# X-TEND® NETTING

X-TEND® Safety netting





# X-TEND® NETTING

X-TEND® Safety netting



# TRADING TERMS & CONDITIONS

## 1. Scope:

All service agreements made with us are subject to our general terms of business as listed below. We do not recognize buyer's terms that contradict or differ from our conditions of sale insofar as we have not expressly agreed to the same. Our terms of business are also valid for all future transactions with the buyer.

## 2. Conclusion of a Contract:

Any orders that are placed with us or any changes or additions to the contract or supplementary agreements must be made in writing. Orders placed by phone or in another form are only considered to have been accepted following our confirmation, shipping or delivery of the goods and issuance of the invoice.

## 3. Prices / Packaging Costs:

Prices are valid as at the time the order was placed. Insofar as no agreement to the contrary is made in the order confirmation our prices are valid per delivered unit, net, ex works excluding packaging and including statutory value-added tax, which is stated separately in the invoice.

We will carry out shipping and packaging at our discretion. Any goods accepted by the shipper, carrier or recipient without dispute are considered to have been packaged correctly.

## 4. Conditions of Payment / Compensation:

- 4.1 Our invoices are payable within 30 days of invoice date insofar as no other agreement has been reached in the order confirmation. In the event of a delay in payment we are entitled to charge interest on arrears at a rate 8% p.a. above the basic interest rate in accordance with §1 of the bank rate law, whereby we reserve the right to also assert the right to damages for arrears at a higher rate.
- 4.2 The buyer may only offset charges against our claims for payment if his counterclaim is found to be legally binding, undisputed or expressly recognized by us.

## 5. Delivery and Delivery Delays:

- 5.1 The start date for a delivery deadline or delivery period that has been confirmed by us presumes the clarification of all technical and business-related questions.
- 5.2 Our delivery obligations exist on condition of complete and correct availability of supplies to us, except if we are responsible for the non-delivery or delay.
- 5.3 In the event of a delay in delivery the buyer is entitled to set a reasonable extension, which must be at least 2 weeks, in connection with the threat of refusal and may withdraw from the contract following expiry of this extended deadline. In the event of unforeseeable events that are beyond our control, such as strike, lockout, stoppage, delays in the supply or advance materials, we do not accept responsibility if we are in arrears, irrespective of whether these hindrances occur with us or with our suppliers.
- 5.4 Claims for compensation due to the violation of service obligations or non service-related auxiliary obligations can only be made if we are guilty of intent or gross negligence and this is proven. We do not rule out our liability for damages resulting from injury to life, limb or health as a proven consequence of negligent breach of duty on our part.
- 5.5 For specially manufactured goods delivery quantities can vary by up to 10% plus or minus. This discrepancy will be taken into account in the invoice.
- 5.6 For all delivered goods we reserve the right to allow industry-standard discrepancies in dimensions as other technical specifications except where we have expressed assumed adherence to dimensions.
- 5.7 We are entitled to make deliveries in reasonable partial quantities.
- 5.8 In the event that the buyer delays his acceptance of the goods or if he violates other cooperation obligations we are entitled to claim for damage we have incurred, including any additional costs.
- 5.9 In the event that the buyer delays his acceptance of the goods the risk of chance destruction or chance deterioration of the ordered goods is transferred to the buyer as of the time the buyer delays the acceptance.
- 5.10 Responsibility for transportation Once goods are transferred to the carrier transfer of risk is also determined by the statutory regulations

## 6. Claims for Defects / Liability:

- 6.1 In the event that the newly manufactured goods delivered by us are defective then the buyer is entitled to demand subsequent fulfilment. We reserve the right to choose between repair of the defect and subsequent delivery of non-defective goods.
- 6.2 Further claims for withdrawal, reduction in costs or compensation are not possible except if the subsequent fulfilment is not successful. In this event the buyer can reduce the purchase price or, as long as the defect is not a construction service, withdraw from the contract if he so chooses. Claims for compensation based on accountable and provable intentional or grossly negligent breach of duty or claims for compensation that result from injury to life, limb or health are not excluded.
- 6.3 The buyer is not permitted to claim for withdrawal or compensation in the case of insignificant defects.
- 6.4 We are not liable to the buyer for properties that he expects in accordance with public statements by the seller or the manufacturer or their agents, particularly in advertisements, except if these statements explaining properties are expressly confirmed by us in writing.
- 6.5 We do not guarantee any property or durability where this is not expressly agreed in writing.
- 6.6 We do not accept liability for defective installation instructions from suppliers and other companies except if grossly negligent breach of duty is proven against us in this regard.
- 6.7 The statutory regulations are valid for required examination and notice. We expressly contradict the commercial requirement for examination and notice by the buyer in accordance with § 377 HGB. The buyer must subject the goods to a comprehensive check of incoming goods.

## 7. Period of Limitation:

- 7.1 Insofar as no individual period of limitation has been agreed between the contractual parties the guarantee period for claims regarding defects in newly manufactured goods will be two years. This is not valid for the period of limitation for compensations claims following injury to life, limb or health insofar as this damage is a result of accountable and provable grossly negligent or intentional breach of duty on our part. This period of limitation is also not valid for claims for reimbursement for other damage caused by accountable grossly negligent or intentional breach of duty on our part.
- 7.2 In the case of the sale of consumer goods the limitation period for claims regarding defects is two years for newly manufactured goods and one year for used good.

## 8. Sale of Consumer Goods:

The regulations in figure 6, above, are not valid when based on the sale of consumer goods. However claims for compensation are also not permissible in this case except if they are caused by intentional or grossly negligent breach of duty on our part or from injury to life, limb or health resulting from intentional or grossly negligent breach of duty.

## 9. Reservation of Proprietary Rights:

- 9.1 We reserve the proprietary rights to the delivered goods until all payments from the delivery contract are paid. In the event of behaviour by us up to the buyer that contradicts the contract, particularly payment arrears, we are entitled to recover the delivered goods. This recuperation does not represent withdrawal from the contract insofar as we do not state this expressly in writing.
- 9.2 If we have a continuous business relationship with the buyer then the reservation of proprietary rights to the delivery goods also extends to delivery goods in all previously unpaid claims.
- 9.3 The buyer is entitled to dispose of and process the delivered goods within orderly business processes. He does, however, immediately transfer all claims he incurs resulting from the disposal to his customers or third parties to us up to the total of all unpaid claims. The buyer retains his authorization to collect the claim himself; this does not affect our authority to collect claims. We are, however, obliged not to report transfer in relation to customers or third parties as long as the buyer fulfils his payment obligations to us and no application has been made for the initiation of process of bankruptcy or settlement or payments are otherwise stopped. The buyer is obliged to provide us with all necessary information on the transferred claims on demand and to submit the corresponding documentation to us.
- 9.4 In the event that the buyer processes or converts the goods delivered by us then we have partial proprietary rights to the new object in proportion to the value of our goods in comparison to the value of the other processed objects at the time of processing. The above regulations apply to the new object created by this process in the same way.
- 9.5 The buyer will also transfer to us those claims on third parties in accordance with the above regulations that are created by the combination of our delivered goods with a piece of land.
- 9.6 Insofar as the value of all securities exceeds our claims by more than 20% because of the agreed reservation of proprietary rights, we are obliged to release securities to the excess value as we wish when requested by the buyer to do so.

## 10. Place of Fulfilment / Court of Jurisdiction / Choice of Law:

- 10.1 The place of fulfilment for all obligations resulting from the contractual relationship is Suessen and/or the location of an affiliated company or branch insofar as no other regulation is contained in the order confirmation.
- 10.2 If the buyer is a merchant in the German commercial register then we will agree Suessen and/or the location of an affiliated company or branch as the court of jurisdiction. We do, however, retain the right to taken the buyer to court at his general court of jurisdiction.
- 10.3 The law of the Federal Republic of Germany is valid for our contractual relationships under exclusion of the UN Convention on the International Sale of Goods.

## 11. Partial Invalidity:

If any contractual regulation is invalid this will not affect the validity of the remaining regulations.

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## YOUR BENEFITS AT CARL STAHL

### Delivery directly from stock

Many items listed in this catalogue are stocked in our Zaandam warehouse and are available immediately.

### Special Requests

We develop, design and produce to your requirements.

### Expertise of the world market leader

Benefit from more than 130 years of international experience.

### Simple ordering

Send us your order by phone, fax or e-mail.

### Small orders? Welcome!

Our minimum order value is only 100 €. For smaller orders we will charge a processing fee of 12 €.

### Quality

All of our products are proved to be of the stated quality.

### Material surcharge

The currently very unstable price situation on the world steel markets might make it necessary to impose a material surcharge on certain products. Anyway as world market leader we will try to keep prices stable during the validity period of our price lists.

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