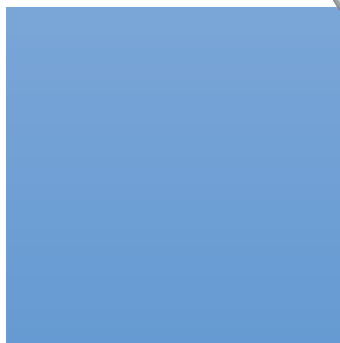
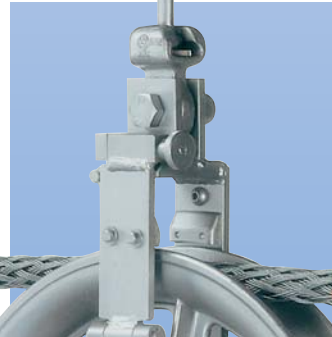
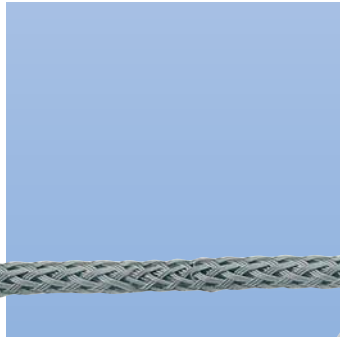
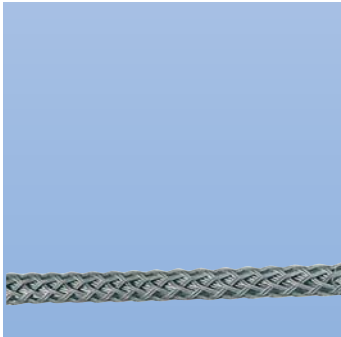
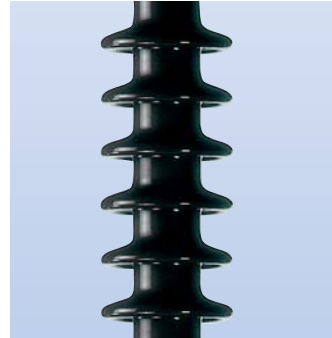
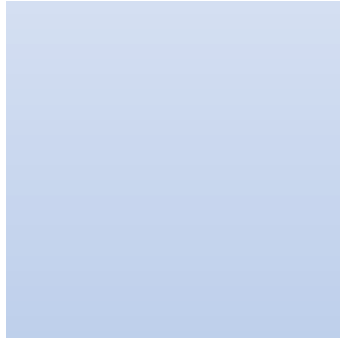


# Overhead line stringing equipment and machines

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**Overhead cable pulleys for insulated cables**

**Pulling grips of Kevlar for overhead insulated cables**

**Equipment for pulling or changing ACSR or OPGW conductors**

**Aluminium and steel mounting snatch blocks**

**Line pulleys for medium and high voltage**

**Overhead line grips, pressed loop**

**Overhead line grips, hand spliced loop**

**Overhead line connection grips**

**Connectors not swivelling for overhead lines**

**Swivels only for overhead lines, with ball bearings**

**Conductor pulling equipment, electrical conductive**

**Rope and ACSR cutters**

**Come along clamps for steel-, ACSR- and CU conductors**

**Steel rope and ratchet chain hoists**

**Dynamometers for catenaries and overhead lines**

**Pole erection and pole pulling-out equipment**

**Pole aluminium ladders**

**Overhead line pulling machines**

**Overhead line unwinding and winding units**

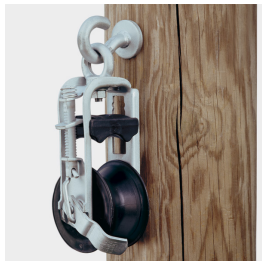
**Overhead line pull plastic ropes**



## Overhead insulated cable pulley

Overhead insulated cable pulley of polyamide with gaping hook. Steel frame galvanized.

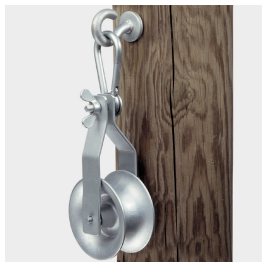
Code	Type	Pulley-D	Groove	L/W/H mm	SWL	kg
510090	LKP 150	150/90	D 46	150/100/300	300 kg	1,10



## Pulley and clamp

Overhead insulated cable pulley and clamp construction. Steel frame with swivelling eye. Roller of polyamide with soft elastomeric inlay. After the cable pull the cable can be safely fixed by simple relocating the clamp lever.

Code	Type	Pulley-D	For cable	L/W/H mm	SWL	kg
510092	LKM 108	108/80x52	2x25-4x95 mm <sup>2</sup>	115/100/300	300 kg	1,50
510094	LKM 115	115/80x65	4x95-4x150 mm <sup>2</sup>	125/100/300	300 kg	2,20



## Overhead insulated cable pulley

Overhead insulated cable pulley of alu with ball bearings, steel suspension with spring hook, galvanized.

Code	Type	Pulley-D	Groove	L/W/H mm	SWL	kg
510170	LKK 140	140/86	D 58	140/100/380	300 kg	2,30



## Pole bracket

Pole bracket for overhead cable pulleys for fixing on wooden or concrete poles, galvanized, with belt.

Code	Type	For pulley	SWL	kg
510200	MBF 140	LKK 140 / LKD 140	300 kg	1,60



## Overhead insulated cable pulley

Overhead insulated cable pulley of alu with ball bearings, steel suspension with swivelling hook, galvanized.

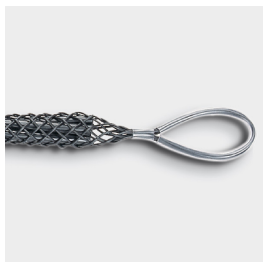
Code	Type	Pulley-D	Groove	SWL	kg
510130	LKD 140	140/86	D 58	300 kg	3,00



## Double tandem pulleys

Double tandem pulleys, steel construction galvanized. Four high wattage Polyamide pulleys with ball bearings. Mainly used in sea cable laying. The device adapt automatically to each pulling angle. The double rocker construction allows big bending radius. See pdf-drawing on the left. SWL = safe working load

Code	Type	Pull-OD/ID	Groove	Rad. 45°	SWL	L/W/H mm	kg
510243	LKT 200P	200/100	D 125	2000	150 kN	1800x250x800	182,00
510245	LKT 202P	200/100	D 125	2000	300 kN	1800x250x800	198,00
510340	LKT 300P	300/120	D 230	2800	150 kN	2500x400x850	251,00



## Overhead insulated cable grips

Overhead insulated cable grips with 1 loop, made of Kevlar strands covered with plastic. Especially for pulling insulated overhead power cables.

- L1 = the lengths without cables in. L2 = total length included the loops.
- The real length mounted on the cable can be much shorter, depending on the cable diameter.
- B = internal diameter of the loop
- D = thickness of the loop

Code	Type	C-D	B	D	kN	For cables	L 1/L2	kg
510802	LKS 20/1	10-20	55	12	1,2	4x6-4x10 mm <sup>2</sup>	1000/1100	0,10
510804	LKS 30/1	20-30	55	12	1,6	4x25-4x50 mm <sup>2</sup>	1000/1100	0,10
510806	LKS 40/1	30-40	55	12	2,2	4x50-4x70 mm <sup>2</sup>	1000/1100	0,11
510808	LKS 50/1	40-50	55	12	2,8	4x70+2x35 mm <sup>2</sup>	1000/1100	0,12



## OPGW, ADSS double tandem pulleys

Double tandem pulleys, with 4 polyamide or aluminium rollers with ball bearings. Steel construction galvanized. Safe working lead 2100 da kN. Mainly used for pulling of OPGW-lines (Optical Ground Wire) and ADSS Fibre cables, and for exchange of conductors. Due to the low weight and the distance of 500 mm from axle to axle the device adapt automatically to each pulling angle. The double rocker construction allows bending radius from min. 750 to 2750 mm. See PDF-drawing on the left.

Code	Type	Pulleys	Pulley/groove	L/W/H mm	SWL	kg
510224	LKW 140PS	4 poly.	D 140/80/58	860/150/360	63 kN	17,00
510234	LKW 140AS	4 alu	D 140/80/58	860/150/360	63 kN	17,70

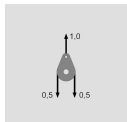


## Double and triple pulleys for conductor change

Double and triple pulleys for conductor change. Suspension of light steel construction galvanized. See table below.

- Optional polyamide-pulleys with friction bearings or alu-pulleys with ball bearings, see table below.
- Select the pulley with a aluminium clamp suitable to your rope of 8-10, see below.
- Select the pulley with a brass clamp suitable to your rope of 12-22, see below.
- Please take notice of the accessory 1 or 2 eyes on the top or/and on the bottom

Code	Type	Pulleys	Pulley/groove	SWL	For rope-D	kg
511100	DRG 132/P	2 Poly	D 130/60/68	360 kg	12-22	2,70
511101	DRG 132/P	2 Poly	D 130/60/68	360 kg	8-10	2,45
511130	DRG 132/A	2 Alu	D 130/60/68	360 kg	12-22	3,15
511131	DRG 132/A	2 Alu	D 130/60/68	360 kg	8-10	2,90
511300	DRG 133/P	3 Poly	D 130/60/68	360 kg	12-22	3,70
511301	DRG 133/P	3 Poly	D 130/60/68	360 kg	8-10	3,45
511330	DRG 133/A	3 Alu	D 130/60/68	360 kg	12-22	4,40
511331	DRG 133/A	3 Alu	D 130/60/68	360 kg	8-10	4,20
511361	DRG 134Z1	1 eye	Eye ID 20	360 kg	to 20	0,07
511362	DRG 134Z2	2 eyes	Eye ID 20	360 kg	to 20	0,14

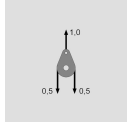


## Alu snatch pulley

Alu snatch pulley with spring hook. Very light pulley for hanging on the belt. Please pay attention to the max. allowed lifting load.

- The lifting load must not be higher than 1/2 of the hook load
- Please pay attention to the left-hand symbol

Code	Type	Pulley-D	Groove	Hook load	SWL	Dimension	kg
513050	MRK 02-80	115/80	D 15	400 kg	200 kg	300x115x85	1,20

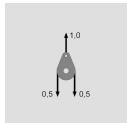


## Alu snatch blocks

Alu snatch blocks with safety hook. Pulley is recessed in the cheeks. For mounting and hoisting works in overhead line construction. Please pay attention to the max. allowed lifting load.

- The lifting load must not be higher than 1/2 of the hook load
- Please pay attention to the left-hand symbol

Code	Type	Pulley-D	Pass	Rope	Hook	SWL	Dimension	kg
513071	MRK 05-70	70/50	28	20	500 kg	250 kg	230x90x43	0,95
513076	MRK 10-120	120/96	38	26	1000 kg	500 kg	320x140x55	2,70
513078	MRK 30-120	120/100	38	35	3000 kg	1500 kg	330x140x73	3,90
513081	MRK 30-220	220/194	38	35	3000 kg	1500 kg	470x240x73	7,70
513083	MRK 50-250	250/225	44	35	5000 kg	2500 kg	500x270x73	11,90

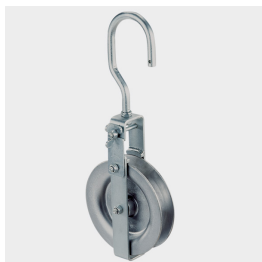


## Steel snatch blocks

Steel snatch blocks, steel pulleys with friction bearing, swivelling hook. For diversion of pulling ropes and for mounting works on poles. Please pay attention to the max. allowed lifting load.

- The lifting load must not be higher than 1/2 of the hook load
- Please pay attention to the left-hand symbol

Code	Type	Pulley-D	Groove	Hook load	SWL	Dimension	kg
548240	DSR 10	85/105	D 7	1000 kg	500 kg	305x110x25	3,30
548243	DSR 20	150/190	D 13	2000 kg	1000 kg	425x200x30	8,90
548246	DSR 30	180/220	D 15	3200 kg	1600 kg	496x230x40	15,50
548249	DSR 60	210/260	D 18	6400 kg	3200 kg	655x280x50	26,50



## Overhead line pulleys, lightweight

Overhead line pulleys of alu with ball bearings, lightweight steel suspension with swivelling hook of internal D 75 mm. Galvanized. Techn. detail see table below.

Code	Type	Pulley-D	Groove	SWL	Dimension	kg
513110	SRD 115	115/80	D 25	100 kg	370x115x80	1,50
513170	SRD 200	200/130	D 33	200 kg	480x200x85	3,10



## Overhead line pulleys

Overhead line pulleys of alu with ball bearings, sturdy steel suspension all around of the pulley, alu pulley with ball bearings. For suspension with tongue, hook or pin. accessory see below.

Code	Type	Pulley-D	Groove	SWL	Dimension	kg
513540	SRD 315	315/250	D 42	200 kg	620x315x120	6,30



## Overhead line pulleys

Overhead line pulleys of alu with ball bearings, sturdy steel suspension all around of the pulley, alu pulley with ball bearings. For suspension with tongue, hook or pin. accessory see below.

Code	Type	Pulley-D	Groove	SWL	Dimension	kg
513590	SR 315	315/250	D 42	600 kg	515x315x155	7,90



## Rotating hook

Rotating hook ID 75 mm, for pulleys SR 200 and SR 315. Steel galvanized.

Code	Type	Suitable for	SWL	Dimension	kg
516220	AHD 16	SR 200+SR 315	200 kg	240x120x75	0,70



## Pin for pulley

Pin for pulleys SR 200 and SR 315, steel galvanized.

Code	Type	Suitable for	SWL	Dimension	kg
516130	SB 250	SR 200+SR 315	200 kg	D 22x250	0,80



## Screw clamp

Screw clamp for pulleys SR 200 and SR 315. Clamping range 35-110 mm. Steel galvanized.

Code	Type	Suitable for	SWL	Clamp range	Dimension	kg
516600	SZ 310	SR 200+SR 315	200 kg	35-110	230x155x40	1,47



## Insulator mounted alu roller

Insulator mounted alu roller for 240 mm<sup>2</sup>, hinged alu casing with 3 rollers, with rubberised tensioning claws.

- Suitable for horizontal and vertical pulls to 4°.
- Can be mounted by hand without tools on any pin insulator.
- After regulation the conductor can be placed directly in the insulator groove using the conductor lifter.

Code	Type	For ACSR	SWL	Dimension	kg
516760	STR 020	to 150 mm <sup>2</sup> .	500 kg	155x355x145	3,00





## Conductor lifter

Conductor lifter suitable to take out the conductors of the insulator mounted pulley and to lay it directly into the insulator groove.

Code	Type	For	Dimension	kg
516765	SCL 025	STR 020	300x130x45	1,20



## Insulator mounted corner roller

Insulator mounted angle pulley , suitable for all pin insulators. With rubberised tensioning claws. Can be mounted by hand without tools on any pin insulator. Suitable for straight and for angle pulls up to 40°. Once the pulling motion is completed, the conductor can be placed directly in the insulator groove. Suitable for ACSR &le; 240 mm².

Code	Type	For ACSR	SWL	Dimension	kg
516790	STE 030	to 240 mm².	500 kg	500x200x140	6,70



## Overhead line pulleys

Overhead line pulleys of alu with ball bearings, sturdy steel suspension not all around only down to the axle.

Code	Type	Pulley-D	Groove	SWL	Rubber	Dimension	kg
513480	TS 315	315/250	D 42	500 kg	no	440/315x115	5,80
515110	TS 350	350/260	D 58	500 kg	no	500/350x150	9,50
517250	TS 580	580/480	D 58	1500 kg	no	730/580x150	14,25
517260	TS 580G	580/500	D 58	1500 kg	yes	730/580x150	15,25

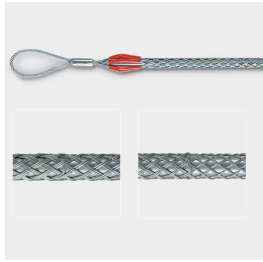


## Overhead line pulleys

Overhead line pulleys of alu with ball bearings, sturdy steel suspension all around of the pulley, alu pulley with ball bearings.

Code	Type	Pulley-D	Groove	SWL	Rubber	Dimension	kg
515170	SR 350	350/260	D 58	1500 kg	no	515/350x150	12,30
517310	SR 580	580/480	D 58	1500 kg	no	750/580x150	17,60



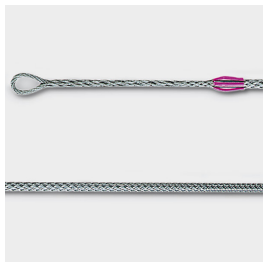


## Overhead line grips pressed loops

Overhead line grips with 1 pressed loop. Galvanized Bowden wire. Highest tensile strength over entire length and tension resulting from variable mesh 3-2-1-strand. Produced and colour-coordinated according to DIN EN 48207-2. These grips with pressed loops are for conventional pulling operations but not for negotiating capstans or tensioner heads, for this select hand spliced grips below, types MSP. All Vetter grips are handmade therefore of high flexibility. They adapt easy at any difference in conductor diameter and are therefore simple to handle.

- L1 = the lengths without cables in. L2 = total length included the loops.
- The real length mounted on the cable can be much shorter, depending on the cable diameter.
- These grips are produced according to DIN EN 48207-2
- B = internal diameter of the loop
- D = thickness of the loop
- kN = minimum breaking load

Code	Type	D	Sect. mm <sup>2</sup>	B	D	kN	L1/L2 mm	Colour	kg
540070	MS 11	6-11	25-50	30	8	18	840/1050	violet	0,20
540120	MS 16	11-16	50-120	40	10	36	960/1210	green	0,40
540170	MS 21	16-21	120-210	60	10	66	1300/1600	yellow	0,70
540220	MS 27	21-27	210-340	70	12	93	1640/2000	grey	1,40
540260	MS 38	27-38	380-680	70	14	135	1740/2140	red	1,80
540310	MS 45	38-45	680 -.....	70	14	150	1930/2330	brown	2,10



## Overhead line grips spliced loops

Overhead line grips with 1 hand-spliced loop. Galvanized Bowden wire. Highest tensile strength over entire length and tension resulting from variable mesh 3-2-1-strand. Produced and colour-coordinated according to DIN EN 48207-2. These grips with hand-spliced loops are suitable for negotiating capstans or tensioner heads. All Vetter grips are handmade therefore of high flexibility. They adapt easy at any difference in conductor diameter and are therefore simple to handle.

- L1 = the lengths without cables in. L2 = total length included the loops.
- The real length mounted on the cable can be much shorter, depending on the cable diameter.
- These grips are produced according to DIN EN 48207-2
- B = internal diameter of the loop
- D = thickness of the loop
- kN = minimum breaking load

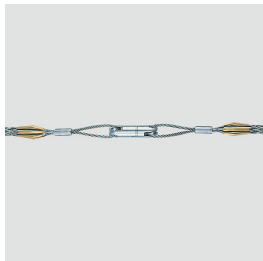
Code	Type	D	mm <sup>2</sup>	B	D	kN	L1/L2 mm	Colour	kg
540410	MSP 11	6-11	25-50	35	8	18	840/1290	violet	0,28
540420	MSP 16	11-16	50-120	45	11	36	960/1500	green	0,55
540430	MSP 21	16-21	120-210	50	16	66	1300/2000	yellow	0,90
540440	MSP 27	21-27	210-340	55	18	93	1640/2470	grey	2,10
540450	MSP 38	27-38	380-680	60	20	135	1740/2620	red	2,80
540460	MSP 45	38-45	680 -.....	72	20	150	1930/2860	brown	3,20
540470	MSP 55	45-55	680 -.....	72	22	150	2500/3540	blue	4,20



## Line connecting grips

Rope connecting grips. Suitable for changing crane ropes. Not to use for overhead lines, for this it is recommended to use 2 MS grips and 1 FVD swivel. Connecting grips would be destroyed by the torsion between two conductors. kN = Minimum Breaking Load

Code	Type	D	kN	Length	kg
540560	SVS 10	6-10	6,6	1000	0,10
540600	SVS 15	10-15	10,2	1500	0,13
540650	SVS 20	15-20	20,4	1500	0,27
540660	SVS 25	20-25	22,2	2000	0,40
540700	SVS 30	25-30	24,3	2000	0,49
540750	SVS 40	30-40	35,1	2000	0,60

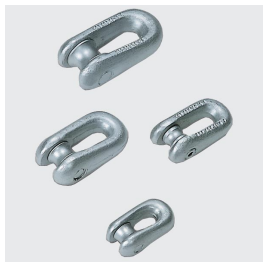


## Line connection

For connecting two lines the most reliable method is to use two overhead line grips MS or MSP 11-45, as above shown. These will be connected by a swivel type FVD to avoid torsion.

- One set for safe working consist of the followings:
- Code 540.xxx - two overhead line grips as shown above
- Code 537.xxx - one overhead line swivel with ball bearings to avoid torsion.

Code	Type	Article	Overhead line grips	
540500	MS-MSP	Article see	-	0,00
540500	MS-MSP	Article see	-	0,00

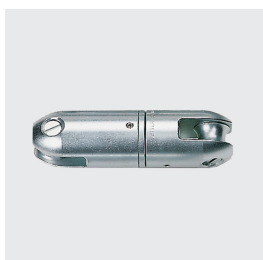


## Connector rigid

Rigid line connector for overhead line pulling, for connection of different pull ropes, slim construction for easy running through the pulleys. These swivels are suitable for pulling over capstans or line tensioner.

kN = Minimum Breaking Load

Code	Type	D	L	Fork	Bolt	kN	kg
537010	FTS 28	28	59	11	17	69	0,14
537040	FTS 41	41	74	14	19	111	0,35
537080	FTS 48	48	91	19	20	159	0,53
537120	FTS 56	56	102	19	22	219	0,77
537170	FTS 60	60	121	26	27	360	1,05



## Overhead line swivels

Overhead line swivels, colour silver, connection between pulling rope and pulling grip. With ball bearings, therefore only suitable to absolute twist-free steel ropes. Avoids untwisting the conductor. These swivels may not be used for pulling over capstans or line tensioner. For this please use above mentioned types FTS 28-60. Swivels with high electrical conductivity for working in the neighbourhood of live wires you can find in the sectors below.

kN = Minimum Breaking Load in straight pull.

Code	Type	D	L	Fork	Bolt	kN	kg
537280	FVD 18	18	80	6,5	6	21	0,11
537300	FVD 25	25	109	9	10	45	0,30
537360	FVD 30	30	128	12	12	60	0,50
537410	FVD 35	35	137	12	14	90	0,70
537490	FVD 40	40	160	14	16	120	1,10
537550	FVD 50	55	187	18	16	165	1,90
537580	FVD 55	55	190	20	18	180	2,30
537640	FVD 60	60	220	23	20	225	3,10
537670	FVD 65	65	235	26	24	300	3,50
537700	FVD 75	75	270	30	27	320	6,70
537730	FVD 85	85	305	35	30	400	9,40
537760	FVD 100	100	340	38	36	500	14,30

### Conductor pulling equipment electrical conductive

Overhead line pull connectors, for pulling conductors in the neighbourhood of live wires instead of using pulling grips. To complete the safety use only swivels with high electrical conductivity, e.g. FED tested up to 84 Ampere. Please ask for more information.

For a complete conductor pulling set the following below listed single parts are necessary:

- 1 Swivel electrical conductive
- 1 Cardan joint to connect the line pull connector with the swivel
- 1 Line pull connector according to the conductor diameter
- 1 Solid cone according to the conductor diameter

Code	Type	Needed parts	
538000	LZK-Kombi	See description above	0,00

### Swivels electrical conductive

Overhead line swivels. With high electrical conductivity to deflect induced currents in the neighbourhood of live wires. With ball bearings, therefore only suitable to absolute twist-free steel ropes. Avoids untwisting the conductor. These swivels may not be used for pulling over capstans or line tensioner. For this please use above mentioned types FTS 28-60.

Amp. = Deflecting induced currents. kN = minimum breaking load.

Code	Type	D	Amp.	L	Fork	Bolt	kN	kg
537820	FED 40	40	84	160	14	16	150	1,22
537835	FED 55	55	170	190	20	18	180	2,65
537840	FED 65	65	170	235	26	24	300	3,75





## Cardan joints

Cardan joints for connection of the pull connector with the swivels FED electrical conductive.

- Together with the swivels it functions like a globe joint.
- Important also when pulling in level differences
- kN = Minimum Breaking Load

Code	Type	For connector	Swivel	kN	kg
538855	LKG 40-40	OD 40	FED 40	150	2,16
538860	LKG 45-45	OD 45	FED 45	150	2,36
538865	LKG 50-50	OD 50	FED 50	165	2,85
538870	LKG 55-55	OD 55	FED 55	180	3,30
538875	LKG 60-60	OD 60	FED 60	180	4,10



## Line pull connectors

Overhead line pull connectors, for pulling conductors in the neighbourhood of live wires instead of using pulling grips. To complete the safety use only swivels with high electrical conductivity, e.g. FED from 84 to 170 Ampere. Please ask for more information.

- Overhead line grips are tending to burst open at a spark erosion.
- The conductor stringing clamps together with the swivels FED are continuously conductive.
- A safe connection to avoid destruction and the fall down of the conductors.
- The pulling clamp can be reused often.
- kN = Minimum Breaking Load

Code	Type	D	Cond.-D	mm <sup>2</sup>	kN	kg
538802	LZK 40-070	40	9,6-12,0	50-70	60	1,16
538805	LZK 40-125	40	13,6-16,3	95-125	60	1,16
538810	LZK 45-185	45	17,1-19,0	150-185	75	1,60
538812	LZK 50-265	50	20,3-22,4	210-265	90	2,22
538814	LZK 55-385	55	24,1-26,7	300-385	120	2,30
538818	LZK 60-570	60	27,5-32,5	385-570	125	2,90



## Solid cone taper key for connectors

Solid cone taper key for connectors

- Exact conductor diameter is needed for an offer

Code	Type	Cond-D	For connector	kg
538822	KEL 9,6	9,6-10,5	LZK 40-070	0,05
538824	KEL 11,7	11,7-13,6	LZK 40-070	0,05
538826	KEL 15,5	15,5-16,3	LZK 40-125	0,06
538828	KEL 17,1	17,1-19,0	LZK 45-185	0,06
538830	KEL 20,3	20,3-22,4	LZK 50-265	0,09
538832	KEL 24,1	24,1-25,0	LZK 55-385	0,13
538834	KEL 26,7	26,7-27,0	LZK 55-385	0,15



538836 KEL 28,8 28,8-29,5 LZK 60-570 0,18



## Mounting tool

Mounting tool for overhead line pull connectors. Made of special high quality steel. For beating in round taper keys.

Code	Type	Zu Cross section	Cond.-D	Dimension	kg
538880	LKT 40-60	40-570 mm <sup>2</sup>	9-32	30/12x160	0,40



## Rope and ACSR cutters

Rope and ACSR cutters, type Felco highest quality. For steel ropes and conductors according to table below.

Code	Type	ACSR	Open	Steel-D	Cable	kg
543090	C 9	35 mm <sup>2</sup>	12	9	9	0,80
543120	C 12	70 mm <sup>2</sup>	15	12	12	1,50
543250	C 16	95 mm <sup>2</sup>	25	16	20	2,30
543300	C 16E	185 mm <sup>2</sup>	28	10	25	2,30



## Accu-hydraulic conductor cutters

Battery operated hydraulic conductor cutter. Design with closed cutter. Light and compact structure for cutting Cu and ACSR lines. Cutting head rotating 360°. High speed feed with double hydraulic cylinder. High capacity Lithium-Ionic battery 18V/5Ah. Approximately 100-120 cuts per charge, depending on the conductor. Variable speed for positioning of the tool.

ASL 25-ASL 45 supplied in plastic cases.

- Ergonomic design for right and left hander for fatigue-proof working.
- 2 years of guaranty respectively 20.000 cycles.
- Assembly: cutter with battery 18V/5Ah, battery charger and carrying bag.
- Armour Yes means cutting of cables with light steel sheet armour.

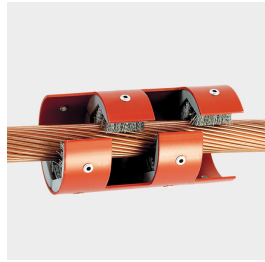
Code	Type	Cond-D	Cutter	Force	Conductor	kg
257290	ASL 25	D 25	closed	60 kN	Cu/Al/ACSR	4,20
257300	ASL 45	D 45	closed	60 kN	Cu/Al/ACSR	5,40
025732106	Accu 18V	for all	cutters	18V/5Ah	---	1,40



## Conductor cleaning brush

Conductor cleaning brush, hinged aluminium shell with stainless steel V2A bristles. Blue for AL conductors.

Code	Type	Colour	For conductor	kg
560400	SRA 40	blue	Alu-D 10-40	0,20



## Conductor cleaning brush

Conductor cleaning brush, hinged aluminium shell with stainless steel V2A bristles. Red for CU conductors.

Code	Type	Colour	For conductor	kg
560410	SRC 40	red	CU-D 10-40	0,20



## Come along clamps for St and Cu

Come along clamps for St and Cu ropes with long parallel clamping jaws made of height quality steel. Jaws hardened.

Code	Type	Cond-D	mm <sup>2</sup>	SWL	Jaw-L	Eye-D	kg
561500	SCS 5	1,0-5,0	1-16	500 kg	60	20	0,27
561510	SCS 9	3,0-9,0	6-35	1000 kg	90	22	0,85
561520	SCS 12	4,0-12,0	16-70	1700 kg	110	27	1,20
561530	SCS 18	6,0-18,0	50-150	3000 kg	120	25x38	1,85
561540	SCS 28	10,0-28,0	90-400	3500 kg	140	30x40	3,80
561550	SCS 40	20,0-40,0	240-800	4000 kg	140	30x40	6,20



## Come along clamps for Al and ACSR

Come along clamps for Al, ACSR and Aldrey conductors. With long parallel clamping jaws made of height quality steel. Jaws with fine grooves, hardened.

Code	Type	Cond-D	mm <sup>2</sup>	SWL	Jaw-L	Eye-D	kg
561580	SAA 8	5,4-8,5	25-35	1000 kg	90	22	0,80
561600	SAA 12	5,0-12,0	16-70	1700 kg	110	27	1,15
561630	SAA 18	8,0-18,0	50-150	3000 kg	120	25x38	1,79
561680	SAA 28	15,0-28,0	120-400	3500 kg	140	30x40	3,80
561685	SAA 40	20,0-40,0	240-800	4000 kg	140	30x40	5,50



## Come along clamps for bare wires

Come along clamps for all kind of bare wires, for pulling and tensioning of metal wires. Made of high quality steel. Parallel jaws. Lateral safety latch avoids the clamp leaving the rope.

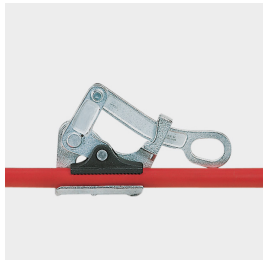
Code	Type	Cond-D	For material	SWL	Jaw-L	Eye	kg
561702	AL-20	5-22	CU/ACSR/AL	20 kN	90	32x42	1,50
561705	AL-30	5-22	CU/ACSR/AL	30 kN	90	32x42	1,70
561707	W-30	5-22	CU/ST	35 kN	90	32x42	1,70
561708	AL-50	18-36	CU/ACSR/AL	50 kN	180	43x51	4,70



## Wedge type clamps

Wedge type clamps for bare wires, for clamping or catching the line during pulling. Self-clamping, the greater the pull, the greater the clamping pressure.

Code	Type	Cond-D	SWL	Jaw-L	Dimension	kg
561720	KSP 10	5,0-10,0	1000 kg	100	275x80x35	1,20
561722	KSP 14	10,5-14,0	2000 kg	155	365x100x40	2,60
561724	KSP 21	15,0-21,0	3000 kg	240	500x150x50	5,20



## Cable clamps for insulated cables

Cable clamps for insulated cables, galvanized, with long parallel clamping round jaws of high quality steel hardened. No slipping on one-core to four-core bundle cables.

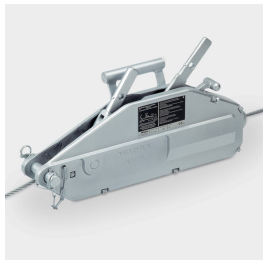
Code	Type	C-D	mm <sup>2</sup>	SWL	Eye	L mm	kg
561780	KSK 25	8,0-25,0	4x35	500 kg	27x40	70	0,90
561800	KSK 34	16,0-34,0	4x70	1200 kg	30x45	100	2,20
561810	KSK 45	28,0-45,0	4x95-150	1800 kg	30x45	100	3,10



## Clamps for insulated telecom cables

Clamps for insulated telecom air cables. Clamping jaws and guide clamps made of glass fibre reinforced plastic, housing made of galvanized sheet steel.

Code	Type	C-D	SWL	Dimension	kg
561910	KST 10,5	5,5-10,5	400 kg	174x45x32	0,17
561912	KST 13,5	10,5-13,5	700 kg	236x61x39	0,40
561914	KST 17,5	13,5-17,5	900 kg	276x70x47	0,65
561916	KST 24,0	16,5-24,0	1600 kg	437x102x53	1,35

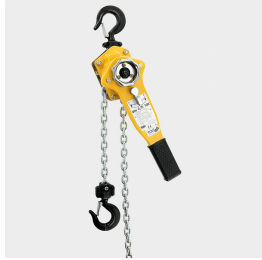


## Steel rope hoists

Steel rope hoists, lightweight alu-construction for pulling and hoisting works. Officially approved by safety institution. Including 20 m special steel rope with hook. Weight mentioned in the table below is for device inclusive 20 m steel rope.

Code	Type	Pull force	Rope	Hook load	L/W/H mm	kg
550280	SZA 08	8,0 kN	8,4	800 kg	420x60x230	15,50
550310	SZA 16	16,0 kN	11,5	1600 kg	550x80x280	26,00
550340	SZA 32	32,0 kN	16,0	3200 kg	680x90x330	44,60

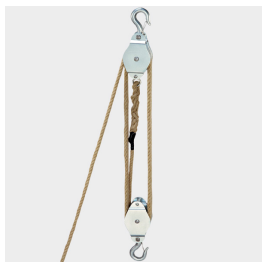




## Ratchet chain hoists

Ratchet chain hoists, especially lightweight construction, with round link chains. Chain release device. Swivelling hooks. Lift 1,50 m.

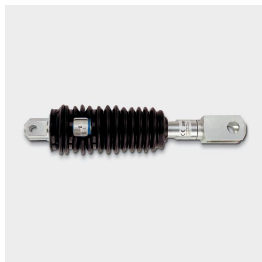
Code	Type	Pull-lift	Chain lift	Dimension	kg
550580	KRZ 02	250 kg	1,50 m	270x55x90	2,20
550581	KRZ 05	500 kg	1,50 m	270x55x90	2,80
550582	KRZ 07	750 kg	1,50 m	295x111x142	7,00
550584	KRZ 15	1500 kg	1,50 m	380x140x166	11,00
550586	KRZ 30	3000 kg	1,50 m	420x174x184	14,90



## Pulley blocks, 3 fold

Pulley blocks, 3 fold with 20 m of hemp wire, 3-grooved rollers, swivelling hook.

Code	Type	Pull-lift	Roller-D	Rope	kg
550660	FLZ 60	250 kg	60	10	2,60
550670	FLZ 70	300 kg	70	12	4,30
550680	FLZ 80	350 kg	80	12	4,40



## Dynamometer for catenaries accuracy $\pm 0,6 \%$

Dynamometer for catenary and overhead line works. High accuracy of  $\pm 0,6 \%$ . With 2 fork heads. Pull results on a black and white drum type scale. Overload protection. Complete body protected in a rubber joint. kN = Minimum Breaking Load

Code	Type	Cap.	Scale	SWL	Fixing	D/L	kg
550035	DBA 02	0-250 kg	5 kg	1250 kg	Fork-Eye	70/289	1,90
550065	DBA 05	0-500 kg	10 kg	2500 kg	Fork-Eye	70/289	1,90
550095	DBA 10	0-1000 kg	20 kg	5000 kg	Fork-Eye	70/289	1,90
550105	DBA 15	0-1500 kg	20 kg	7500 kg	Fork-Eye	70/292	2,40



## Dynamometer for overhead lines $\pm 0,6 \%$

Dynamometer for overhead line works. Accuracy of  $\pm 0,6 \%$ . Pull results on speedometer casing. MBL = Minimum Breaking Load

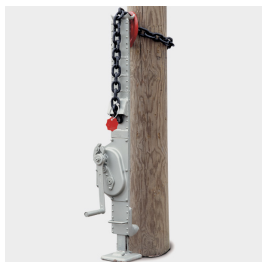
Code	Type	Cap.	Scale	SWL	Fixing	D/L	kg
550090	DYB 10	0-1000 kg	20 kg	5000 kg	Eye-Eye	50/266	1,90
550120	DYM 20	0-2000 kg	25 kg	10000 kg	Eye-Eye	86/395	7,80



## Dynamometer for overhead lines $\pm 3,0 \%$

Dynamometer for overhead line works. Accuracy of  $\pm 3,0 \%$ . Pull results on speedometer casing. MBL = Minimum Breaking Load

Code	Type	Cap.	Scale	SWL	Fixing	D/L	kg
550190	TM-05	0-500 kg	10 kg	1500 kg	Eye-Eye	65/140	0,90
550192	TM-10	0-1000 kg	20 kg	3000 kg	Eye-Eye	65/140	1,00
550194	TM-20	0-2000 kg	50 kg	6000 kg	Eye-Eye	65/150	1,10
550196	TM-30	0-3000 kg	50 kg	9000 kg	Eye-Eye	75/250	1,90
550198	TM-50	0-5000 kg	50 kg	15000 kg	Eye-Eye	90/250	2,60



## Pole extraction jack

Pole extraction jack with safety crank and pole pulling chain length 1600 mm. Big lifting height.

Code	Type	Extract force	Extract height	Min. height	kg
550810	MHW 50	5 t	700	1120	46,40



## Pole hand ground borer

Pole hand ground borer, of high quality steel furnished, consisting of borer, borer-handle and extension 700 mm.

Code	Type	Hole-D	Hole depth	For borer-D	kg
551310	MEB 1515	150	1500	---	5,30
551313	MEB 1520	200	1500	---	6,10
551316	MEB 1525	250	1500	---	8,80
551323	MEV 0718	Extension	+ 700	150-200	1,40
551324	MEV 1018	Extension	+ 1000	150-200	2,10
551327	MEV 0720	Extension	+ 700	250-300	1,80
551328	MEV 1020	Extension	+ 1000	250-300	2,60



## Pole ground anchor

Pole ground anchor, steel, galvanized,

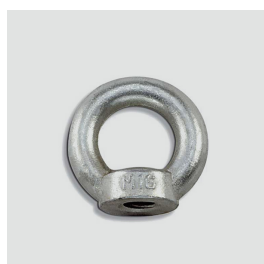
Code	Type	Anchor-D	Anchor-L	kg
551340	MES 1515	150	1500	2,80
551342	MES 1520	200	1500	3,25
551345	MES 2015	150	2000	3,60
551347	MES 2020	200	2000	4,00
551349	MES 2024	240	2000	5,00



## accessory for pole ground anchors

Socket wrench reinforced for pole ground anchors.

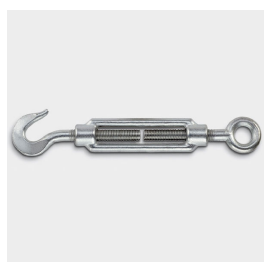
Code	Type	Suitable for	Length	kg
551352	EST 1520	Ground anchors MES 1515-MES 2024	1700	5,00



## accessory for pole ground anchors

Eye nut for screwing on the pole ground anchors. Thread M 16, galvanized, DIN 582.

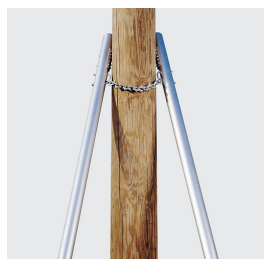
Code	Type	Suitable for	kg
551355	RIM 16	ground borer	0,24



## accessory for pole ground anchors

Turn buckle for connecting stay wires with the ground anchors. Size 16, with 1 hook and 1 eye. Galvanized, DIN 1480.

Code	Type	Suitable for	kg
551358	SPS 16	ground borer	1,00

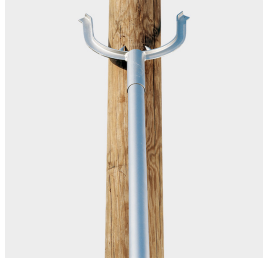


## Pole erection bars

Pole erection bars with spiked head chain of 15 links. For wooden telecom or electro overhead line poles D 100-250 mm, alu-tube rods D 54 mm. Foot rod with handles, base plate and tip

Code	Type	Total L	Tube length	kg
551200	MSG 301	3,00 m	1x3,00 m	15,00
551202	MSG 402	4,00 m	2x2,00 m	22,00
551204	MSG 502	5,00 m	2x2,50 m	25,00
551206	MSG 602	6,00 m	2x3,00 m	28,00
551208	MSG 704	7,00 m	3x2,00 m + 1x1,00 m	38,00





## Pole erection forks

Pole erection forks for telecom or electro overhead line poles D 100-250 mm, alu-tube rods D 54 mm, divisible, consisting of: 1-2 rods with fork, intermediate rods, foot rod with handles, base plate and tip.

Code	Type	Total L	Tube length	kg
551220	MGA 301	3,00 m	1x3,00 m	11,00
551222	MGA 402	4,00 m	2x2,00 m	14,00
551224	MGA 502	5,00 m	2x2,50 m	16,00
551226	MGA 602	6,00 m	2x3,00 m	18,00



## Pole fork only

Pole fork only for self-mounting on wooden rods of D 55 mm, for poles of D 100-250 mm.

Code	Type	For pole-D	Rod-D	kg
551232	MGL 250	100-250	55	3,80



## Fall arrester

Fall arrester suitable for all pole ascent ladders. Easy to mount and dismount. Can already be used for safety when mounting the ladders on the poles.

Code	Type	Suitable for	kg
585430	VST 8820	all pole ascent ladders	1,70

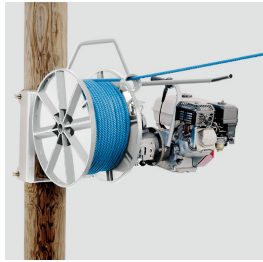


## Overhead pole capstan winch

Overhead pole capstan winch. Capstan winch designed for mounting conductors or replacing old conductors. With mechanical drive by a petrol engine. For fixing on wooden poles or with accessory also on concrete poles. The capstan gives constant output and speed.

- Pulling force through the small bollard constantly 4,0 kN at 25 m/min.
- Pulling force on big bollard constantly 2,5 kN at 40 m/min.
- Self-locking gear for securing the load in both direction.
- For transportation the winch can be dismounted and ease remounted on the site.
- These parts are: petrol engine, capstan gear box, rope drum and pole clamp.

Code	Type	Petrol	Rope drum	Wood. poles	kg
570070	PCW 400	4,8 kW	700 m/7	D 200-400	90,00



## Overhead pole drum winch

Overhead pole drum winch, designed for mounting conductors or replacing old conductors. With mechanical drive by a petrol engine. For fixing on wooden poles. This is not a capstan winch. The pull is exerted directly by the rope drum, therefore the pulling force and the speed vary from the bottom of the drum to the top.

- Direct pull on the rope drum coil of 3,5-1,75 kN at 30-60 m/min. depending on filling quantity.
- Irreversible gear for sustain of load in both directions.
- For transportation the winch can be dismantled and easily be re-assembled mounted on the site.
- These parts are: petrol engine, gear box, rope drum and pole clamp.

Code	Type	Petrol	Rope drum	Wood. poles	kg
570100	PDW 175	4,8 kW	500 m/7	D 200-400	78,00



## Overhead pole coiling winch

Overhead pole coiling winch, designed for winding old overhead lines. With mechanical drive by a petrol engine. For fixing on wooden poles. This is not a capstan winch. The pull is exerted directly by the coiling drum, therefore the pulling force and the speed vary from the bottom of the coiling drum to the top.

To withdraw old conductors and to coil them on the on the divisible coiler the following lengths are possible:

mm<sup>3</sup>: 25/4 0 = 500 m, 35/6 = 350 m, 50/8 = 250 m, 70/12 = 175 m, 95/15 = 130 m

- Direct pull on the coil winder of 3,5-1,75 kN at 30-60 m/min. depending on filling quantity.
- Self-locking gear for securing the load in both direction.
- For transportation the winch can be dismantled and ease remounted on the site.
- These parts are: petrol engine, gear box, coil winder and pole clamp.

Code	Type	Petrol	Rope drum	Wood. poles	kg
570180	PRW 175	4,8 kW	500 m/7	D 200-400	79,00



## Polyester plastic rope, extension 4 %

Polyester-rope, 3-fold, prestressed, limited extension

Code	Type	Rope	Stretch	kN	kg
571312	LKS 07-21	7	<4 %	12,0	0,04



## Swivels

Swivels with friction bearings, turnable connector between winch rope and cable grip. The friction bearing guarantees that the swivel reduces rotation and torsion with increasing pulling force. Only for underground cables, not suitable for pulling overhead lines.

kN = Minimum Breaking Load

- Swivels for underground cables must be equipped only with friction bearings.
- With increasing pulling force friction bearings twist harder and thus avoid the untwisting of the pulling rope
- Ball bearings let untwist the ropes and leads to destruction.

Code	Type	D	L	Fork	Bolt	kN	kg
243020	V 20 D	20	86	7	8	21	0,16
243040	V 25 D	25	120	9	10	30	0,32



## Drum unwind stand

Drum unwind stand for overhead line construction. Band brake is only for unintended unwinding of the drum at line pulling stop, it is not suitable for braking or sagging the line. Easy height levelling out of the two sides by hand crank, drums can be fixed horizontal in each kind of ground. Steel construction galvanized.

- Equipped with drum shaft D 70.
- Band brake for controlled unwinding.
- Drum fork and accessory.
- Device dismountable for the transportation in 3 parts.



Code	Type	Cable drum	Drum-D	Drum width	kg
570800	DST 30	to 3000 kg	1000-1800	to 1200	107,00



## Cable trailer straight or adjustable drawbar

Cable drum trailer with straight or height adjustable draw bar and overrun brake for speeds up to 80 km/h. For loading the support arms are swung down and then raised picking up the drum by a single hand winch. Rotatable aluminium shaft as accessory, see below

Payload without accessories. If accessories are mounted like hydr. drum drives etc. the payload reduces according to their weights.

- Types G - with straight draw bar can only be equipped with ball coupling
- Types H - with adjustable draw bar equipped with eye coupling, ball coupling as accessory
- Suitable for one-man operation
- Complete trailer hot galvanized
- Rotating alu shafts as accessory, please order shaft clamps separately.
- Drum band brake as accessory, see below.
- Position lighting at the front of the cable drum trailer

Code	Type	Payl.	Total	Drum-D	Hitch	Int./Ext.	kg
342088	KVS 1000/80G	980 kg	1300 kg	600-1650	75 kg	1300/2140	320,00
342131	KVS 1500/80G	1500 kg	2100 kg	600-2400	100 kg	1580/2450	581,00
342146	KVS 2000/80G	2000 kg	2600 kg	600-2400	100 kg	1580/2450	581,00
Code	Type	Payl.	Total	Drum-D	Hitch	Int./Ext.	kg
342093	KVS 1000/80H	930 kg	1300 kg	600-1650	75 kg	1300/2140	370,00
342136	KVS 1500/80H	1500 kg	2200 kg	600-2400	120 kg	1580/2450	670,00
342151	KVS 2000/80H	2000 kg	2700 kg	600-2400	120 kg	1580/2450	700,00

## Rotating drum shafts

Surcharge for rotating drum shafts. The standard trailers listed above are delivered without shaft as standard. With rotating shafts cable drums unwind much easier, they are necessary if the trailer is equipped with a drum drive or a drum disc brake.

Code	Type	Suitable for	D/length	SWL	kg
3507871	TAS 750	KVS 1000G+H	75/1450	to 5 t	23,00
350789	TAS 752	KVS 1500-2000G+H	75/1730	to 5 t	27,00





## Rear protection gate

Rear protection gate, for Cable trailers KVS 1000-2000 G+H, hot galvanized.

The need of a rear protection is subject to national regulations. Independent of this, the rear protection offers a higher safety in the road traffic.

Code	Type	Suitable for	Trailer ext. width	kg
349820	KUF 100	KVS 1000G+H	2140	16,00
349826	KUF 200	KVS 1500-2000G+H	2450	30,00



## Ball coupling

Car change coupling for ball D 50 mm incl. installation kit for all types.

Code	Type	Suitable for	kg
349190	PK 26	KVS 1000-2000	2,90



## Cable drum band brake

Cable drum band brake for KVS 1000-2000/80 without shaft, to screw on rotating alu shaft. This band brake avoids uncontrolled unwinding of the cable drum. Mostly used for unwinding overhead lines.

Code	Type	Suitable for	Braking at cable	kg
350842	BTB 202	KVS 1000-2000G+H	approx. 2,0 kN	10,00



## Drum drive one side

Drum drive one side for cable trailers KVS 1000-2000/80, but not suitable for all types, see table below. Hydraulic or pneumatic, without hoses and power packs.

Code	Type	Suitable for	Drive	Pull	m/min.	kg
351210	TZ 200	KVS 1000G+H	hydraul.	1,5 kN	0-120	69,00
351220	TZ 203	KVS 1500-2000H	hydraul.	1,5 kN	0-120	69,00



## Hydraulic power pack mobile

Hydraulic power pack for cable drum drive, with petrol- or Diesel engine equipped with rapid hose couplings. Oil presser 160 bar, tank 10 Litre, oil flow 12 l/min. l/min.

- The hydraulic power pack must not be mounted on drawing bar of the trailer, the hitch load would be too high.
- For control of the winding speed please order below mentioned hydraulic hose combination

Code	Type	Suitable for	Hydr. pack	L/W/H mm	kg
351330	THF 203B	drum drives	petrol 9,6 kW	854/457/507	74,00
351332	THF 203D	drum drives	diesel 6,8 kW	854/457/507	95,00



## Hydraulic hose set

Hydraulic hose set 7 m, with volume governor for hydraulic power packs.

Code	Type	Length	Flow governor	kg
425381	SL 7	7 m	to 30 l/min	13,20



## Covered polyester ropes, Cup, extension 3-5 %

Covered plastic polyester ropes, with core and cover exhibit low linear extensibility. Torsion-free and high tension. These ropes are proven in overhead line construction. Ropes are supplied on rings in carton boxes or on one way bobbins. Loops can be spliced against extra charge. kN = Minimum Breaking Load

- Order one or two spliced eyes separately, see block Spliced eyes below.

Code	Type	Rope	Stretch	kN	kg
571411	FKS 06-001	6	3-5 %	7	0,03
571413	FKS 08-001	8	3-5 %	13	0,05
571415	FKS 10-001	10	3-5 %	22	0,07
571417	FKS 12-001	12	3-5 %	32	0,10
571418	FKS 14-001	14	3-5 %	46	0,14
571419	FKS 16-001	16	3-5 %	65	0,18
571420	FKS 18-001	18	3-5 %	77	0,21
571421	FKS 20-001	20	3-5 %	85	0,26



## Double braided polyester ropes, Gemini, extension 4-6 %

Covered plastic polyester ropes, with core and cover exhibit low linear extensibility. Torsion-free and high tension. These ropes are proven in overhead line construction. Ropes are supplied on rings in carton boxes or on one way bobbins. Loops can be spliced against extra charge. kN = Minimum Breaking Load

- Order one or two spliced eyes separately, see block Spliced eyes below.

Code	Type	Rope	Stretch	kN	kg
571441	FKS 06-101	6	4-6 %	11	0,03
571443	FKS 08-101	8	4-6 %	15	0,04
571445	FKS 10-101	10	4-6 %	24	0,07
571447	FKS 12-101	12	4-6 %	36	0,09
571448	FKS 14-101	14	4-6 %	45	0,13
571449	FKS 16-101	16	4-6 %	65	0,18
571450	FKS 18-101	18	4-6 %	83	0,23
571451	FKS 20-101	20	4-6 %	100	0,29



## Covered Dyneema ropes, extension 1-2 %

Covered plastic Dyneema ropes, with core and cover exhibit low linear extensibility. Torsion-free and high tension. These ropes are proven in overhead line construction. Ropes are supplied on rings in carton boxes or on one way bobbins. Loops can be spliced against extra charge. kN = Minimum Breaking Load

- Order one or two spliced eyes separately, see block Spliced eyes below.

Code	Type	Rope	Stretch	kN	kg
571471	FKS 06-121	6	1-2 %	16	0,03
571473	FKS 08-121	8	1-2 %	30	0,04
571475	FKS 10-121	10	1-2 %	49	0,07
571477	FKS 12-121	12	1-2 %	75	0,10
571478	FKS 14-121	14	1-2 %	95	0,13
571479	FKS 16-121	16	1-2 %	120	0,18
571480	FKS 18-121	18	1-2 %	150	0,22
571481	FKS 20-121	20	1-2 %	190	0,28



## Covered DynaOne ropes, high tensile, extension 1-2 %

Covered plastic DynaOne ropes, with core and cover exhibit very low linear extensibility. Torsion-free and very high tension. These ropes are proven in overhead line construction. Ropes are supplied on rings in carton boxes or on one way bobbins. Loops can be spliced against extra charge. kN = Minimum Breaking Load

- Order one or two spliced eyes separately, see block Spliced eyes below.

Code	Type	Rope	Stretch	kN	kg
571486	FKS 06-201	6	1-2 %	27	0,02
571488	FKS 08-201	8	1-2 %	50	0,04
571490	FKS 10-201	10	1-2 %	85	0,07
571492	FKS 12-201	12	1-2 %	115	0,09
571493	FKS 14-201	14	1-2 %	155	0,11
571494	FKS 16-201	16	1-2 %	205	0,13
571495	FKS 18-201	18	1-2 %	220	0,17
571496	FKS 20-201	20	1-2 %	265	0,20



## Spliced loop

Spliced loop for all above mentioned plastic ropes. If you need one loop on each end please order two pieces.

Code	Type	For rope	Rope types	kg
57159804	loop	D 4-6 mm	Cup + Gemini	0,01
57159806	loop	D 8-10 mm	Cup + Gemini	0,01
57159808	loop	D 12-14 mm	Cup + Gemini	0,01
57159810	loop	D 16 mm	Cup + Gemini	0,01
57159812	loop	D 18 mm	Cup + Gemini	0,01
57159814	loop	D 20 mm	Cup + Gemini	0,01
57159816	loop	D 4-14 mm	Dyneema	0,01
57159818	loop	D 16-20 mm	Dyneema	0,01
57159820	loop	D 4-10 mm	DynaOne	0,01
57159822	loop	D 12-16 mm	DynaOne	0,01