

Wire Rope Winches

High-quality system solutions



Wire rope winches

by Columbus McKinnon – Pfaff-silberblau

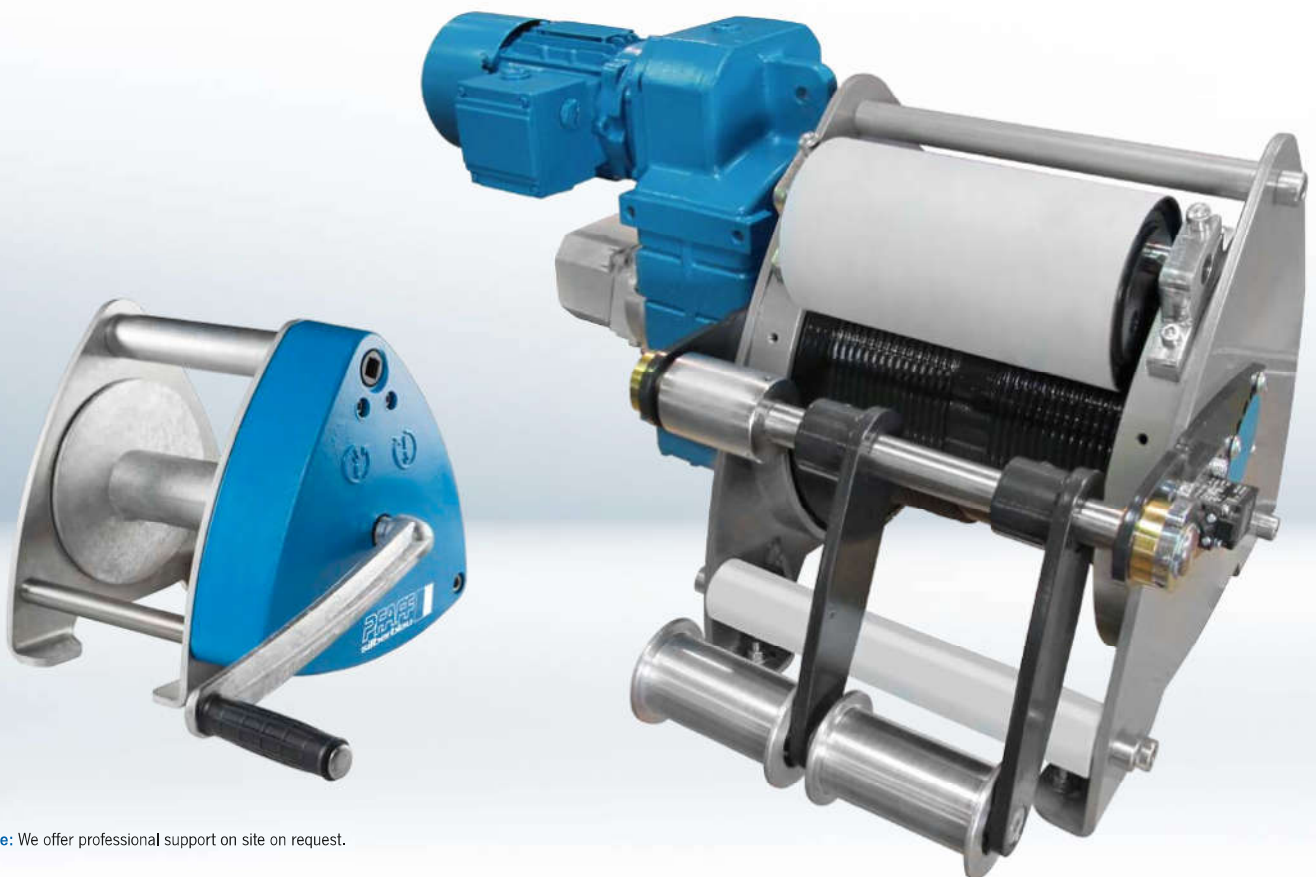
Wire rope winches: safely upwards.

Wire rope winches from Columbus McKinnon offer variable and always innovative solutions for efficient lifting, pulling and positioning of loads. The designs and options of these wire rope winches are as diverse as their uses by the customer. The lifting technology has proven its worth in industry, trade, stage technology and even under extreme climate conditions, e.g. in the offshore area.

What is the possible lifting load? How is the wire rope winch installed and how is it coated? The robustly constructed wire rope winches of our Pfaff-silberblau brand are aligned with customer-specific

requirements. Decades of experience result in a broad product range. This goes from manual wire rope winches for standard applications to winches powered by electrical motors with maximum load capacity.


Efficient power transmission, safe operation and low maintenance effort: the wire rope winches of the Pfaff-silberblau brand meet these demands in all power classes. Since we offer outstanding service as well, these wire rope winches will continue to be synonymous with efficient and safe load movement around the world.



Service: We offer professional support on site on request.

Wire rope winches

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Electrical wire rope winches

Electrical wire rope winch BETA SL

Short times to delivery are followed by long periods in operation: the electric wire rope winch BETA SL in its standard design works permanently reliably due to enclosed worm gear pairs or spur gears

with high-quality brake motors. The electric wire rope winches BETA SL are available with a contactor control system including a gear limit switch.

Equipment

- Maintenance-free worm gear pairs or low-maintenance spur gear with milled and ground gears – running in oil bath
- Very quiet running by diagonal interlock
- Electrically released spring-applied disk brake
- Duty ratio S3 – 40 %
- Range of temperature: -20 °C – +40 °C
- Powerful three-phase motor for multi-range voltage 380 – 420 V / 50 Hz or 440 – 460 V / 60 Hz
- Motor protection type IP 55
- Grooved rope drum
- Large wire rope capacity
- Contactor control 42 V
- Gear limit switch
- Electronic overload protection as of 1000 kg lifting load
- According to the accident prevention provisions BGV D8

Options selectable

Options

Size	Capacity	Control	Mechanical
SL0	250 kg	Control pendant	./.
SL1	500/630 kg	Control pendant or frequency converter	Pressure roller or slack rope switch, alternatively combination of pressure roller and slack-rope switch
SL2	980/1250 kg	Control pendant or frequency converter	Pressure roller or slack rope switch, alternatively combination of pressure roller and slack-rope switch
SL3	2000 kg	Control pendant or frequency converter	Pressure roller or slack rope switch, alternatively combination of pressure roller and slack-rope switch

Delivery time for versions control pendant, pressure roller or slack rope switch approx. 10 days

Delivery time for version frequency converter approx. 25 days



Option: pressure roller



Option: slack rope switch



Option: control pendant



Option: frequency converter



BETA SL0



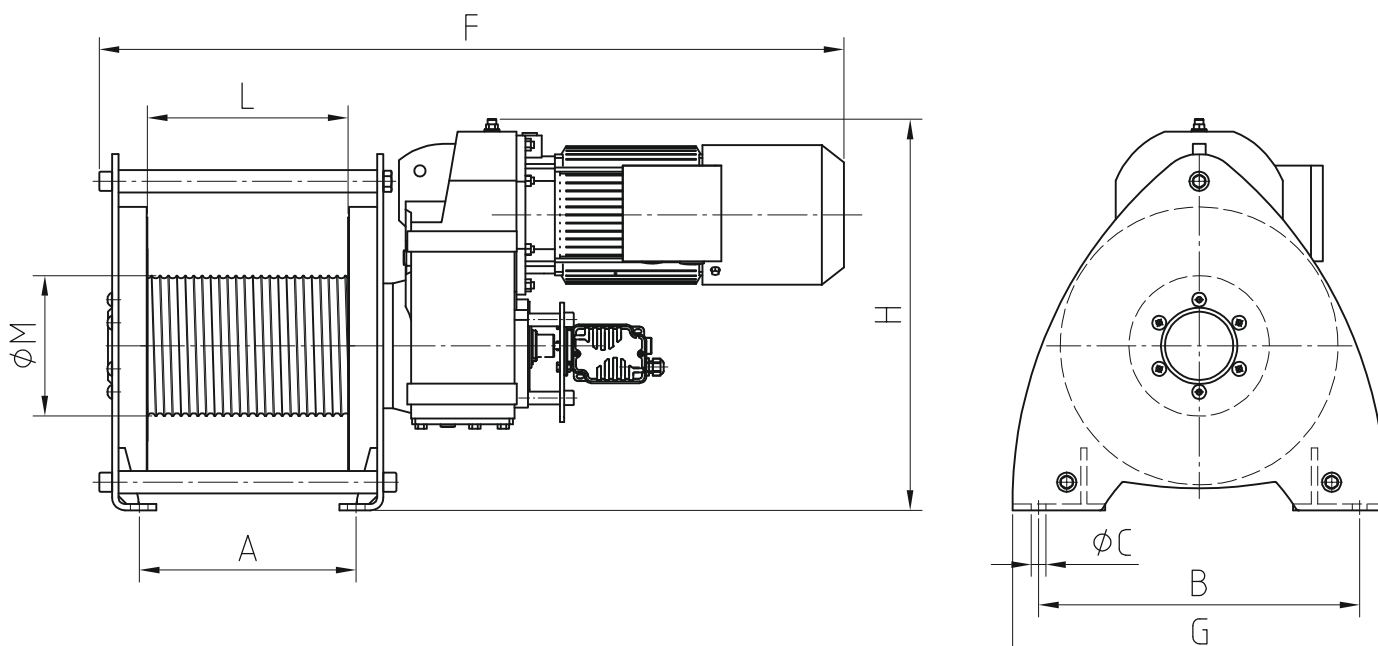
BETA SL1 – SL3

Electrical wire rope winches

Electrical wire rope winch BETA SL

Technical data																		
Art. no.	Size	Capacity 1 st layer	Rope speed	FEM	BGV	Voltage	Power	Rope Ø*	Rope capacity 1 st layer	top layer	A	B	C Ø	F	G	H	L	M Ø
Contactor control with gear limit switch		kg m/min.				kW		mm	m	m	mm	mm	mm	mm	mm	mm	mm	mm
		Type code																
40063758	SL0	250	2.5	1 Bm	D8	400V	0.25	4	7	46.7	185	170	12	389	432	241	180	64
31140006	SL0	250	4.7	1 Bm	D8	400V	0.37	4	7	46.7	185	170	12	389	432	241	180	64
40062946	SL1	500	6.8	1 Am	D8	400V	0.75	6	6.7	48.9	215	300	13.5	740	340	340	200	86
40062989	SL1	630	6.8	1 Bm	D8	400V	0.75	6	6.7	48.9	215	300	13.5	750	340	345	200	86
40062990	SL2	980	6.0	1 Am	D8	400V	1.1	9	11	77.5	270	400	18	920	465	475	250	175
40062993	SL2	1250	6.0	1 Am	D8	400V	1.1	9	11	77.5	270	400	18	930	465	480	250	175
40062996	SL3	2000	6.8	1 Bm	D8	400V	2.2	12	10	74.5	320	510	22	1070	570	614	300	175

*recommended rope: DIN 3069 FE-znk-1960 sZ-spa



Electrical wire rope winches

Electrical wire rope winch BETA EL

The robust and elegant electric wire rope winches BETA EL are used for lifting, lowering and pulling all types of loads in all applications. The proven technology and the high quality standard of the electric wire rope winch BETA EL guarantee trouble-free, reliable and durable operation. The construction kit system permits high flexibility:

the electric wire rope winches BETA EL with their many options can be combined very well into an individual solution. The use of high-quality components offers safety and long service lives.

Equipment

- Maintenance-free worm gear pairs or low-maintenance spur gear with milled and ground gears – running in oil bath
- Very quiet running by diagonal interlock
- Electrically released spring-applied disk brake
- Duty ratio S3 – 40 %
- Contactor control 42 V
- Range of temperature: -20 °C – +40 °C
- Powerful three-phase motor for multi-range voltage
- 380 – 420 V / 50 Hz or 440 – 460 V / 60 Hz
- Motor protection type IP 55
- Grooved wire rope drum
- Large wire rope capacity
- 2 rope fasteners for variable rope direction
- Modular construction system with many versions
- Electronic overload protection as of 1000 kg lifting load
- According to the accident prevention provisions BGV D8

Options

- External operation via control pendant / radio
- Gear limit switch, adjustable
- Slack rope switch
- Rope pressure roller
- Special wire rope drums for multi-rope operation
- Drum extensions for higher stroke travel
- Special preservation
- Other operating voltages
- Other motor protection types
- Absolute and incremental encoders
- Control with frequency converter for continuously adjustable variable speeds



Electrical wire rope winches

Electrical wire rope winch BETA EL

Technical data															
Size	Capacity	Rope speed	FEMr	BGV	Power	Rec. rope strength	Rec. rope Ø*	Rope capacity		Weight	Dimensions in mm				
	1 st layer	1 st layer						1 st layer	top layer		A	B	C	ØD	L2
	kg	m/min			kW		mm	m	m	kg					
EL1	320	5.9	2m	D8	0.37	1960	6	13.6	48.5	62	698	375	325	175	264
EL1	320	14.7	2m	D8	0.75	1960	6	13.6	48.5	67	767	375	325	175	264
EL1	320	27.4	2m	D8	1.5	1960	6	13.6	48.5	72	839	375	325	175	264
EL1	500	9.1	2m	D8	0.75	1960	6	13.6	48.5	67	767	375	325	175	264
EL1	500	16.6	2m	D8	1.5	1960	6	13.6	48.5	72	879	375	325	175	264
EL1	500	3.7	1Am	D8	0.37	1960	6	8.4	58.5	62	698	375	325	108	264
EL1	630	7.2	1Am	D8	0.75	1960	6	10.8	54.8	67	767	375	325	138	264
EL1	630	13.1	1Am	D8	1.5	1960	6	10.8	54.8	72	879	375	325	138	264
EL1	630	2.9	1Bm	D8	0.37	1960	6	6.7	48.9	62	698	375	325	86	264
EL2	800	5.5	2m	D8	0.75	1960	8	17.1	61.4	87	865	475	444	242	338
EL2	800	8.6	2m	D8	1.1	1960	8	17.1	61.4	92	937	475	444	242	338
EL2	800	20.6	2m	D8	3	1960	8	17.1	61.4	106	1042	475	444	242	338
EL2	980	4.0	1Am	D8	0.75	1960	9	11	77.4	87	865	475	444	175	338
EL2	980	6.3	1Am	D8	1.1	1960	9	11	77.4	92	937	475	444	175	338
EL2	980	14.9	1Am	D8	3	1960	9	11	77.4	106	1042	475	444	175	338
EL2	1250	3.2	1Bm	D8	0.75	1960	9	8.7	64.1	87	865	475	444	138	338
EL2	1250	5.0	1Bm	D8	1.1	1960	9	8.7	64.1	92	937	475	444	138	338
EL2	1250	11.8	1Bm	D8	3	1960	9	8.7	64.1	106	1042	475	444	138	338
EL3	1250	5.4	2m	D8	1.1	1770	12	16.3	61.3	142	1035	596	547	295	406
EL3	1250	11.2	2m	D8	2.2	1770	12	16.3	61.3	152	1136	596	547	295	406
EL3	1250	14.3	2m	D8	3	1770	12	16.3	61.3	156	1136	596	547	295	406
EL3	1600	4.0	1Am	D8	1.1	1960	12	12.1	87.7	142	1035	596	547	218	406
EL3	1600	8.3	1Am	D8	2.2	1960	12	12.1	87.7	152	1136	596	547	218	406
EL3	1600	10.6	1Am	D8	3	1960	12	12.1	87.7	156	1136	596	547	218	406
EL3	2000	3.2	1Bm	D8	1.1	1960	12	9.4	73.8	142	1035	596	547	175	406
EL3	2000	6.7	1Bm	D8	2.2	1960	12	9.4	73.8	152	1136	596	547	175	406
EL3	2000	8.6	1Bm	D8	3	1960	12	9.4	73.8	156	1136	596	547	175	406
EL3.5	2500	4.7	2m	D8	2.2	1960	14	13.8	53.9	193	1154	672	547	295	406
EL3.5	2500	9.2	2m	D8	4	1960	14	13.8	53.9	205	1119	672	547	295	406
EL3.5	3200	3.9	1Am	D8	2.2	2160	14	11.4	64.5	193	1154	672	547	242	406
EL3.5	3200	7.5	1Am	D8	4	2160	14	11.4	64.5	205	1119	672	547	242	406
EL4	3200	7.2	2m	D8	4	1770	18	15.6	37.8	370	1257	795	687	364	480
EL4	4000	5.8	1Am	D8	4	1960	18	12.7	73.9	370	1257	795	687	295	480
EL4	5000	4.8	1Bm	D8	4	1960	18	10.4	84.3	370	1257	795	687	242	480
EL5	5000	5.6	2m	D8	5.5	1960	20	20.3	48.7	878	1513	1033	844	451	568
EL5	6300	4.6	1Am	D8	5.5	2160	20	16.4	93.4	878	1513	1033	844	364	568
EL5	7500	3.7	1Bm	D8	5.5	2160	20	13.4	104.8	878	1513	1033	844	295	568

*recommended rope: DIN EN 12385-2 19x7 WC -B-sZ

Technical drawing see page 9.

Electrical wire rope winches

Electrical wire rope winch

BETA EL BGV C1/BGV D8 PLUS

Lifts loads over persons perfectly safely: the BETA EL with BGV C1 approval lifts and positions equipment and decorations precisely in trade, industry and public use. The BETA BGV C1 is also used in theaters together with the tried and tested DELTA

theater winch. The electric wire rope winch BETA EL BGV C1 is also offered in the BGV D8 PLUS design for positioning of structural elements.

Equipment and processing

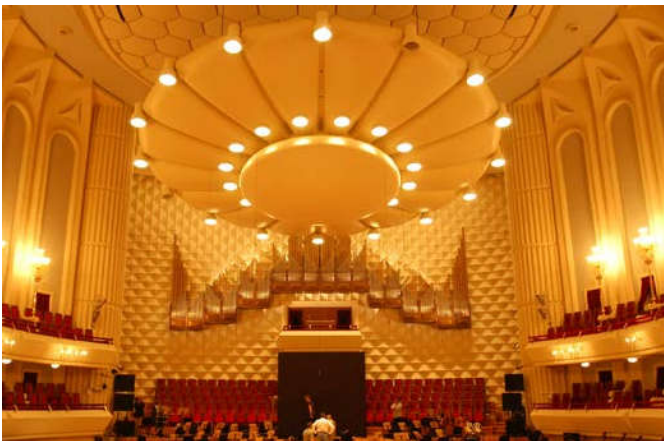
- Tensile loads from 180 – 3200 kg
- Additional equipment as in the rope winch BETA EL

Image source: Stadthalle Gersthofen



Stadthalle Gersthofen near Augsburg, Germany

Theater, concert, gala: the Gersthofen city hall is a diverse event venue. Flying bars with decoration elements for theater effects can be moved safely, precisely and silently, thanks to BETA theater winches in the above-stage machinery.



Tbilisi Centre of Music and Culture, Tiflis

A sound element weighing approx. 35 tons is impressively suspended above the audience's heads in the Tbilisi Centre of Music and Culture in Tiflis, Georgia. Three redundant DELTA theater winches handle this object. Two redundantly arranged gear motors with brakes on each winch ensure maximum safety.



Königsgalerie Duisburg, Germany

A huge crown welcomes visitors to the Königsgalerie in Duisburg from high above. Seven individual segments of a crown continually move on steel ropes in the open space. They are held by several BETA winches with different lifting paths. Once every hour, the parts merge into the overall image of the crown.

Electrical wire rope winches

Electrical wire rope winch

BETA EL BGV C1/BGV D8 PLUS

Technical data BETA EL BGV C1

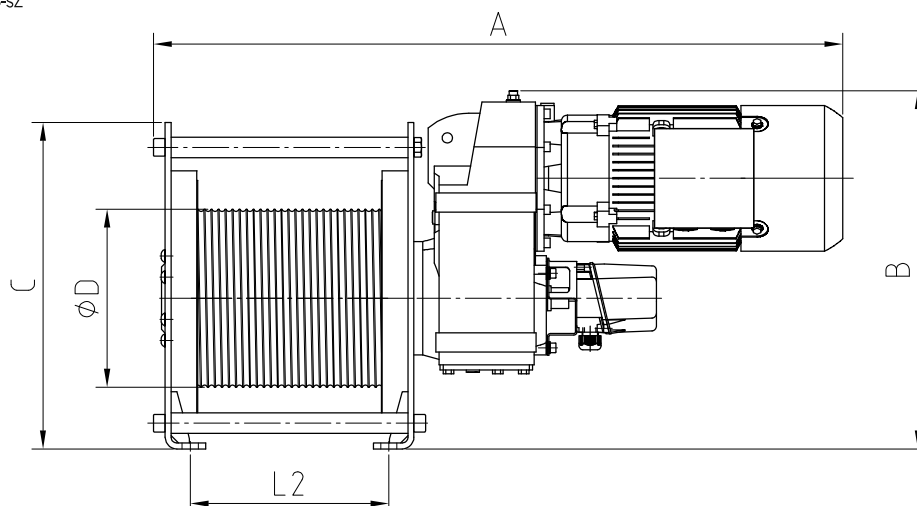
Size	Capacity 1 st layer	Rope speed 1 st layer	FEM	BGV	Power	Rec. rope strength	Rec. rope Ø*	Rope capacity 1 st layer	Weight	Dimensions in mm				
	kg	m/min								kW	mm	m	kg	A
EL1	160	5.3	2m	C1	0.18	1960	6	13.6	66	762	375	325	175	264
EL1	160	9.4	2m	C1	0.25	1960	6	13.6	66	762	375	325	175	264
EL1	320	4.3	2m	C1	0.25	1960	6	13.6	66	782	375	325	175	264
EL1	320	8.9	2m	C1	0.55	1960	6	13.6	70	844	375	325	175	264
EL1	320	12.3	2m	C1	0.75	1960	6	13.6	72	844	375	325	175	264
EL1	320	18.0	2m	C1	1.1	1960	6	13.6	76	867	375	325	175	264
EL2	400	4.7	2m	C1	0.37	1960	8	17.1	90	856	475	444	242	338
EL2	400	8.5	2m	C1	0.55	1960	8	17.1	93	921	475	444	242	338
EL2	400	14.9	2m	C1	1.1	1960	8	17.1	99	944	475	444	242	338
EL2	250	20.0	2m	C1	1.1	1960	8	17.1	99	944	475	444	242	338
EL2	250	41.8	2m	C1	2.2	1960	8	17.1	113	944	475	444	242	338
EL3	630	4.8	2m	C1	0.55	1960	12	16.3	142	1019	596	547	295	406
EL3	630	14.2	2m	C1	1.5	1960	12	16.3	152	1067	596	547	295	406
EL3.5	1200	4.2	2m	C1	1.1	1960	14	13.8	188	1061	672	547	295	406
EL3.5	1200	10.6	2m	C1	2.2	1960	14	13.8	201	1177	672	547	295	406

*recommended rope: DIN EN 12385-2 19x7 WC 1960 -B-sZ

Technical data BETA EL BGV D8 plus

Size	Capacity 1 st layer	Rope speed 1 st layer	EM	BGV	Power	Rec. rope strength	Rec. rope Ø**	Rope capacity 1 st layer	Weight	Dimensions in mm				
	kg	m/min								kW	mm	m	kg	A
EL1	160	5.3	2m	D8 plus	0.18	1960	6	13.6	66	762	375	325	175	264
EL1	160	9.4	2m	D8 plus	0.25	1960	6	13.6	66	762	375	325	175	264
EL1	320	4.3	2m	D8 plus	0.25	1960	6	13.6	66	782	375	325	175	264
EL1	320	8.9	2m	D8 plus	0.55	1960	6	13.6	70	844	375	325	175	264
EL2	400	4.7	2m	D8 plus	0.37	1960	8	17.1	90	856	475	444	242	338
EL2	400	8.5	2m	D8 plus	0.55	1960	8	17.1	93	921	475	444	242	338
EL3	630	4.8	2m	D8 plus	0.55	1960	12	16.3	142	1019	596	547	295	406
EL3	630	14.2	2m	D8 plus	1.5	1960	12	16.3	152	1067	596	547	295	406
EL3.5	1200	4.2	2m	D8 plus	1.1	1960	14	13.8	188	1061	672	547	295	406
EL3.5	1200	10.6	2m	D8 plus	2.2	1960	14	13.8	201	1177	672	547	295	406

*recommended rope: DIN EN 12385-2 19x7 WC 1960 -B-sZ



Electrical wire rope winches

Electrical wire rope winch BETA EX

The electric wire rope winch models BETA EX have been constructed for special uses. They are operationally safe where there is a danger of igniting explosive atmospheres (mixtures of air, gases, vapors or dust/air mixtures). Since the electrical wire rope winches can be

used in very different surroundings, the matching winch for each application can be assembled easily with our flexible construction kit system.

Equipment and processing

- Load 320 – 7500 kg
- High-grade surface coating
- Electrically released spring-operated disk brake (encapsulated)
- Three-phase drives for multi-range voltage 400V-50Hz, insulation class F, duty ratio 40 % ED
- Range of temperature: -20 °C – +40 °C
- Electronic overload protection as of 1000 kg lifting load (standard)
- Maintenance-free, spur gear with oil bath lubrication
- Variable rope direction by two rope fasteners (left and right)
- Gear limit switch adjustable for limiting the wire rope travel in both directions
- Gear limit switch encapsulated

Options

- Electric control with flameproof enclosure Ex II 2 GD de IIB T4 T 135 °C
- Electric control non ATEX-compliant (mounted outside ATEX area)
- Special wire rope drums
- Pressure roller
- Special voltages
- Special wire ropes with copper-plated lifting hooks
- Sheaves, wire rope pulley blocks (ATEX-compliant Ex II 2 GD IIB T4 135 °C IP 65)



Dimensions and technical data on request