

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 DGUV V54 (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 SLO



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	Rope capacity top layer	A	B	C Ø	F	G	H	L	M Ø	Weight
		[kg]	[m/min]			[V]	[kW]	[mm]	[m]	[m]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]
	Type code																		
40063758	SL0	250	2.5	1 Bm	D8	400V	0.25	4	7	46.7	185	170	12	488	469**	243	180	64	22
31140006	SL0	250	5.0	1 Bm	D8	400V	0.37	4	7	46.7	185	170	12	488	469**	243	180	64	22
40062946	SL1	500	7.1	1 Bm	D8	400V	0.75	6	6.7	48.9	215	300	13.5	751	340	319	200	86	64
40062989	SL1	630	7.1	1 Bm	D8	400V	0.75	6	6.7	48.9	215	300	13.5	751	340	319	200	86	64
40062990	SL2	980	6.3	1 Am	D8	400V	1.1	9	11	77.5	270	400	18	937	465	487	250	175	119
40062993	SL2	1250	6.3	1 Am	D8	400V	1.1	9	11	77.5	270	400	18	937	465	487	250	175	119
40062996	SL3	2000	6.8	1 Bm	D8	400V	2.2	12	9.8	73.8	320	510	22	1096	570	599	300	175	207

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

**Size SLO to motor fan over (worm gear)

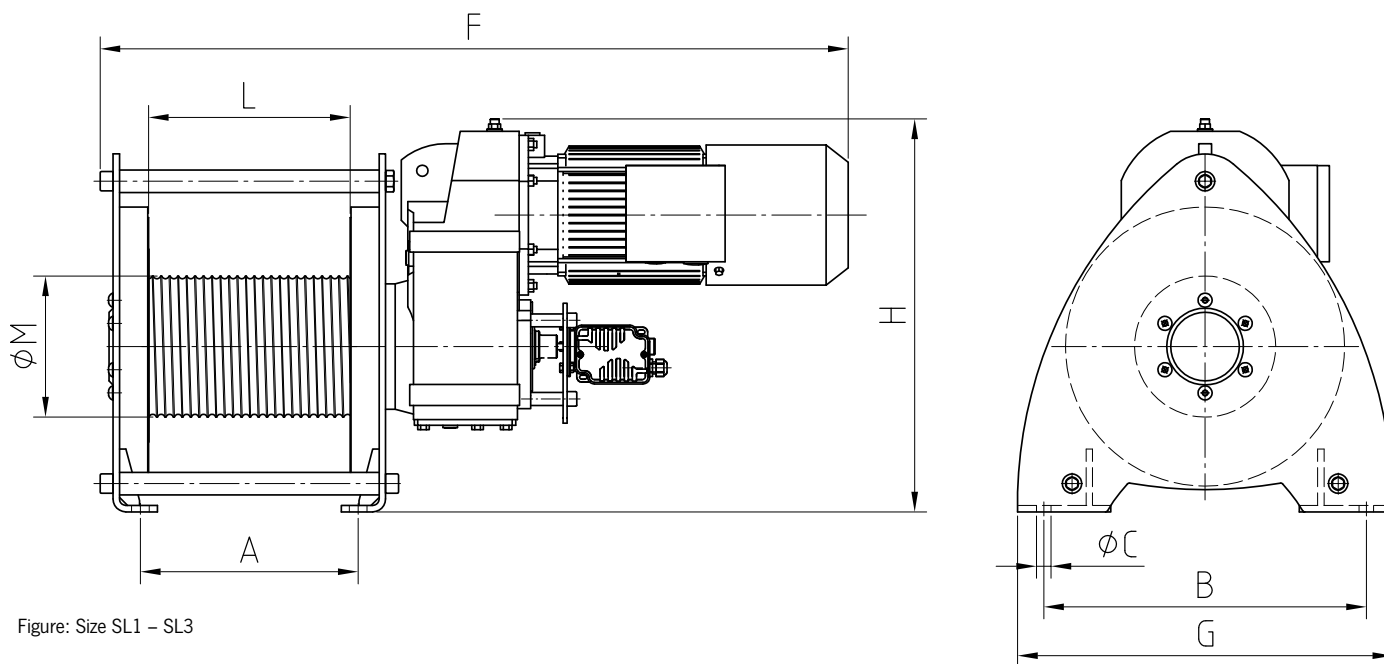


Figure: Size SL1 – SL3

CAD & go



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 DGUV V54 (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	3.1	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 DGUV V17/18 (BGV C1)/BGV D8 PLUS

Lifts loads over persons perfectly safely: the BETA EL with DGUV V17/18 approval lifts and positions equipment and decorations precisely in trade, industry and public use. The BETA DGUV V17/18 is also used in theaters together with

the tried and tested DELTA theater winch. The electric wire rope winch BETA EL DGUV V17/18 is also offered in the BGV D8 PLUS design for positioning of structural elements.

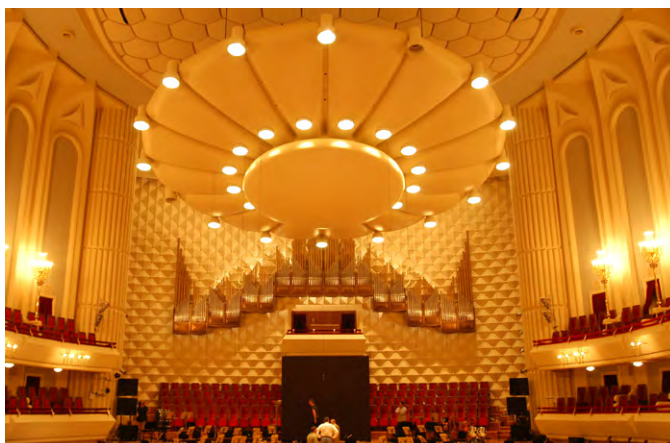
Equipment and processing

- Tensile loads from 160 – 1200 kg
- Additional equipment as in the rope winch BETA EL



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 DGUV V17/18 (BGV C1)/BGV D8 PLUS

Technical data BETA EL DGUV V17/18

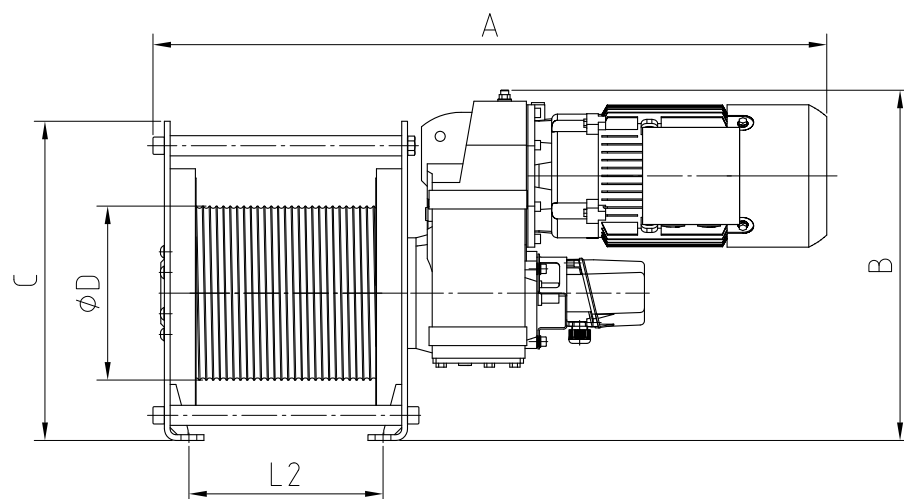
Size	Capacity 1 st layer	Rope speed 1 st layer	FEM	BGV	Power	Rec. rope strength	Rec. rope Ø*	Rope capacity 1 st layer	Weight	Dimensions in mm				
	[kg]	[m/min]								[kW]	[mm]	[m]	[kg]	A
EL1	160	5.3	2m	C1	0.18	1960	6	13.6	66	762	375	325	175	264
EL1	160	9.4	2m	C1	0.25	1960	6	13.6	66	762	375	325	175	264
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



CAD & go




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
- According to directive 2014/34/EU (ATEX) 

Options

- Electric control according to directive 2014/34/EU (ATEX) 
- 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 according to directive 2014/34/EU) 



Dimensions and technical data on request

Electrical wire rope winches

Electrical wire rope THETA

The compact Pfaff-silberblau THETA series offers reliable safety, besides being suitable for a wide range of applications and very easy to use. Its high safety standard is achieved, amongst other things, by a mechanical double safety drum brake, separate from the drive, for safe and firm holding of the load.

Factory-specified features make this safety electric wire rope winch interesting for many applications, such as construction sites, in building technology or sports facilities – and thus also for individuals, craftsmen, local councils and construction yards. The Pfaff-silberblau THETA wire rope winch is operated with a supply voltage of 230 V (50 Hz).

Equipment and processing

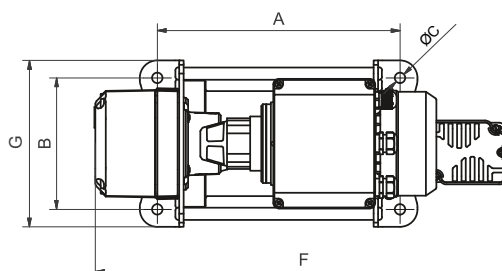
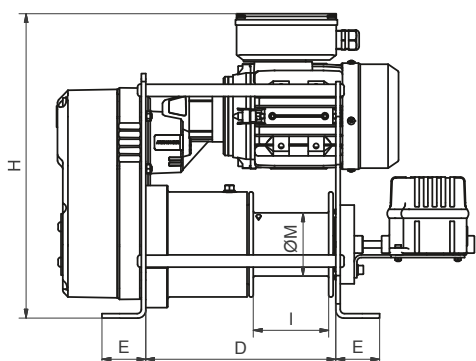
- **Capacity 100 kg**
 - Compact design
 - Two independently acting brakes
 - Ready for use with control/limit switch
 - Connection cable with plug
 - Test and maintenance friendly
 - Made in Germany
- **Available from stock**
 - In accordance with the accident prevention regulations DGUV V54 (BGV D8) with special release for static suspension of loads above persons incl. expert test certificate



Technical data

Model	Art.-No.	Capacity	Rope speed	FEM	BGV	Voltage	Motor power	Rope Ø*	Rope capacity	A	B	C Ø	D	E	F	G	H	I	M Ø
		[kg]	[m/min]				[kW]	[mm]	[m]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
THETA	192054528	100	3.0	1 Am	D8	230V	0.12	4	10	277	150	12	217	50	476	190	348	86	72

* recommended rope EN12385-2 1-x7WC 1960 BsZ (DIN 3069 - SE1960N/mm²)



Electrical wire rope winches

Application

Hans Segmüller Polstermöbelfabrik, headquartered in Friedberg, uses a total of 21 Pfaff-silberblau BETA EL electric wire rope winches with radio control to move the decoration in the foyer of their furniture store in Pulheim in order to create an informative and appealing ambience for an inspiring shopping experience. The BETA EL with a BGV C1 approval wire rope winches are divided into four groups, which allows each specific area (zones) to be attractively and individually designed. Via a radio transmitter, up to

eight wire rope winches per zone can be selected and operated by remote control individually or in groups. This allows many different decoration scenarios to be comfortably created.

When using the control, a display informs the operator of the status of the wire rope winches in the respective zone. During service work, a plug-in backup operating terminal allows normal operation without the use of the radio transmitter.



Image source: Segmüller, Friedberg

Manual wire rope winches

Overview

The most important criteria for quick product selection

Selection criteria per product model:

- Max. possible lifting capacity
- Attachment/consoles/wall attachments
- Coating (inner-outer attachment): alu, galvanized, stainless steel, painted



Console-mounted wire rope winch SW-K-LB, galvanized design



Console-mounted wire rope winch SW-K-LB-VA, stainless steel design



Wall-mounted wire rope winch SW-W ALPHA



Wall-mounted wire winch SW-W



Aluminum console wire rope winch SW-K GAMMA



Compact aluminum wire rope winch SW-KAL with free-wheeling



Console-mounted wire rope winch OMEGA



Console-mounted wire rope winch SW-K LAMBDA, BGV C1

Criteria for quick product selection

Model	Norm	Mounting	Gearbox	Coating	Tensile loads 1 st rope position across entire series						Page
					250	500	750	1000	1500	2000	
SW-K-LB galvanized	BGV D8	Console	Spur gear	Galvanized					1200		14
SW-K-LB stainless steel	BGV D8	Console	Spur gear	Stainless steel				900			14
SW-W ALPHA	BGV D8	Wall	Spur gear	Galvanized				1000			16
SW-W	BGV D8	Wall	Spur gear	Alu (-125kg) painted			750				17
SW-K GAMMA	BGV D8	Console	Spur gear	Alu				800			18
SW-KAL	BGV D8	Console	Worm gear	Alu					1120		19
OMEGA BGV D8	BGV D8	Console	Spur gear	Painted				1000			20
OMEGA ATEX	BGV D8	Console	Spur gear	Painted				1000			20
OMEGA OFFSHORE	BGV D8	Console	Spur gear	Painted				800			20
SW-K LAMBDA	BGV C1	Console	Spur gear	Painted		300					21

Manual wire rope winches

Console-mounted wire rope winch SW-K-LB

The rope winch SW-K-LB, originally developed as a vehicle winch, is now used to lift and pull many different loads. It is available in two

designs, „galvanized“ and „stainless steel“.

Equipment and processing of the galvanized design

- Carrying loads 150 – 1200 kg
- Robust steel sheet housing with low weight
- Smoothly running spur gear
- Attached load pressure brake securely holds load in any position
- All parts galvanized, rope drum additionally coated for increased corrosion protection (KTL)
- Simple and quick console attachment



Figure:
galvanized design, 150-350 kg



Figure:
galvanized design, 650–900 kg

Equipment and processing of the stainless steel design

- Carrying loads 250 – 900 kg
- All parts in high-quality stainless steel design V2A
- Robust steel sheet housing with low weight
- Smoothly running spur gear
- Attached load pressure brake securely holds load in any position
- Rope drum is additionally coated with KTL
- Simple and quick console attachment



Figure:
stainless steel design, 650 kg



Figure:
stainless steel design, 900 kg

Technical data

Model	Art. no. Galvanized design	Art. no. Stainless steel version	Capacity 1 st layer [kg]	Capacity top layer [kg]	Rope-Ø [mm]	Useable rope length 1 st layer [m]	Useable rope length top layer [m]	Lift per crank rotation [mm]	Req. crank effort [daN]	Weight w/o rope [kg]
LB 150 VZ	30239016	-	150	75	4*	0.8	11	125	17	4.2
LB 350 VZ	30239015	-	350	170	4*	1.8	20	125	25	4.8
LB 650 VZ	40239004	-	650	290	6*	1	20	55	22	7.3
LB 900 VZ	40239006	-	900	400	7*	0.8	14	58	24	10
LB 1200 VZ	40239008	-	1200	430	7**	1	26	45	24	12.1
LB 250 VA	-	30239017	250	125	4*	1.8	19.5	125	20	4.8
LB 650 VA	-	40239012	650	290	6*	1	20	55	22	7.6
LB 900 VA	-	30239013	900	320	7*	1	26	45	24	12.1

*recommended rope: DIN 3060 FE-znk 1770 sZ-spa

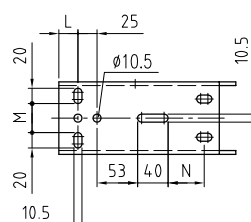
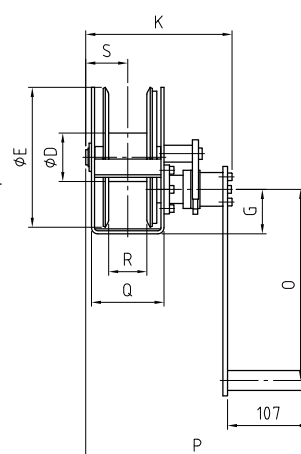
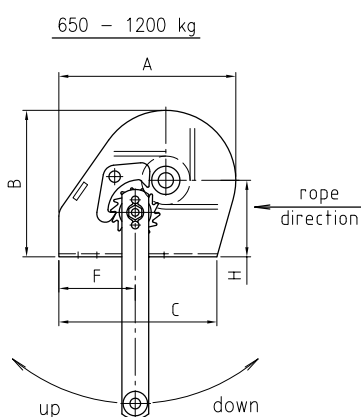
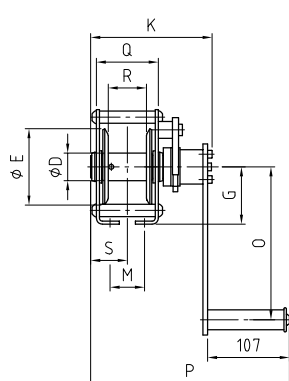
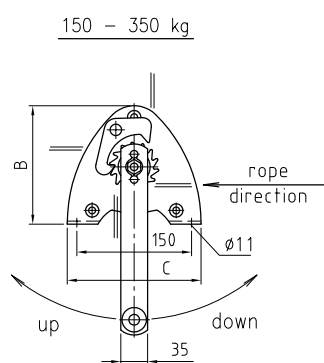
**recommended rope: DIN 3069 SE-znk 2160 sZ-spa

Manual wire rope winches

Console-mounted wire rope winch SW-K-LB

Dimensions

Model	LB 150 VZ	LB 350 VZ	LB 650 VZ	LB 900 VZ	LB 1200 VZ	LB 250 VA	LB 650 VA	LB 900 VA
Art. no. Galvanized design	30239016	30239015	40239004	40239006	40239008	-	-	-
Art. no. Stainless steel version	-	-	-	-	-	30239017	40239012	30239013
A, mm	-	-	232	273	273	-	232	273
B, mm	155	155	192	192	266	155	192	266
C, mm	175	175	210	210	240	175	210	240
Ø D, mm	36	36	63.5	63.5	63.5	36	63.5	63.5
Ø E, mm	100	100	183	183	255	100	183	255
F, mm	-	-	100	100	78	-	100	78
G, mm	75	75	58	58	75	75	58	75
H, mm	-	-	100	100	138	-	100	138
K, mm	159	189	192	192/226	192/226	191.5	190	190
L, mm	-	-	25	25	35	-	25	35
M, mm	45	75	38	38	30	75	38	30
N, mm	-	-	-	-	53	-	-	53
O, mm	200	320	250	320	320	320	250	250
P, mm	260	290	293	293/303	293/303	292.5	291	291
Q, mm	81	111	95	95	95	111	95	95
R, mm	50	80	50	50	50	80	50	50
S, mm	48	63	55	55	55	65.5	55	55



Manual wire rope winches

Wall-mounted wire rope winch SW-W ALPHA

SW-W ALPHA is the versatile wall-mounted wire rope winch for lifting loads.

Equipment and processing

- Carrying loads 300 – 1000 kg
- Robust steel sheet housing with low weight and flat build
- Smoothly running spur gear for high efficiency
- Rope output possible in all directions
- All parts galvanized, the rope drum is additionally coated with KTL
- Attached hand crank with load pressure brake ensures secure hold of the load in any position
- Simple and quick attachment to walls



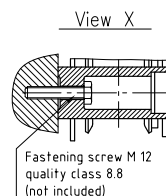
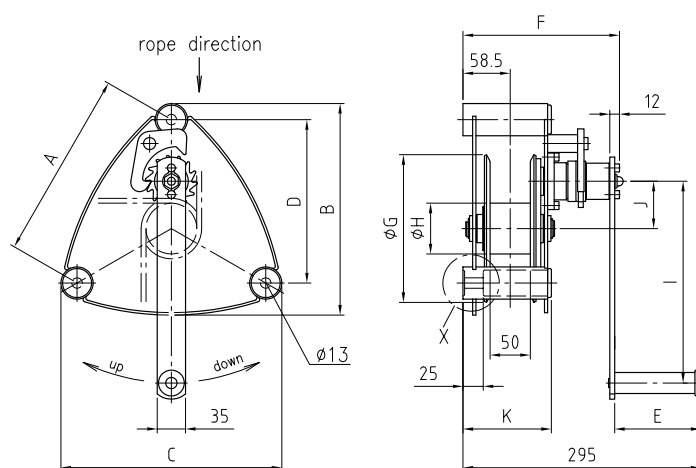
Technical data

Model	Art. no.	Capacity 1 st layer [kg]	Capacity top layer [kg]	Drum length [mm]	Rope-Ø* [mm]	Useable rope length 1 st layer [m]	Useable rope length top layer [m]	Lift per crank rotation [mm]	Req. crank effort [daN]	Weight w/o rope [kg]
ALPHA 300	30272006	300	130	50	5	1.3	28	57	13	10
ALPHA 500	30272005	500	230	50	6	1	20	55	17	10
ALPHA 750	30272002	750	270	50	7	1	26	45	17	16
ALPHA 1000	30272001	1000	360	50	7	1	26	45	18	16

*recommended rope: DIN 3060 FE-znk 1770 sZ-spa

Dimensions

Model	ALPHA 300	ALPHA 500	ALPHA 750	ALPHA 1000
Art. no.	30272006	30272005	30272002	30272001
A, mm	234	234	306	306
B, mm	262	262	337	337
C, mm	274	274	357	357
D, mm	203	203	265	265
E, mm	107	107	107	107
F, mm	194	194	194	194
G, mm	183	183	255	255
Ø H, mm	63	63	63.5	63.5
I, mm	200	250	250	320
J, mm	58.6	58.6	92.5	92.5
K, mm	109.5	109.5	107	107



Manual wire rope winches

Wall-mounted wire rope winch SW-W

The wall rope winches SW-W are intended for stationary installation.

Equipment and processing

- Carrying loads 80 – 750 kg
- Robust aluminum housing for SW-W 80 and 125 kg
- Tried and tested steel sheet design for rope winches 300 to 750 kg
- Smoothly running spur gear for high efficiency (300 – 750 kg)
- Direct drive for carrying loads up to 125 kg
- Low-noise safety spring brake holds the load securely in any position
- Removable hand crank for wall rope winch 80 and 125 kg
- Folding crank for design 300 to 750 kg
- Simple and quick attachment to walls



Figure:
SW-W 80 kg/125 kg

Technical data

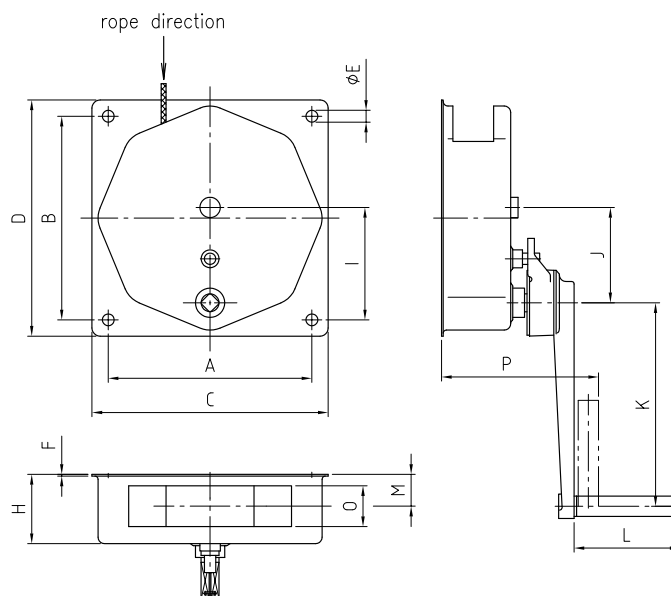
Model	Art. no.	Capacity 1 st layer [kg]	Capacity top layer [kg]	Drum length [mm]	Rope-Ø* [mm]	Useable rope length 1 st layer [m]	Useable rope length top layer [m]	Lift per crank rotation [mm]	Req. crank effort [daN]	Weight w/o rope [kg]
SW-W 80	40271017	80	45	51	3*	2.4	30	170	12	3
SW-W 125	40271008	125	65	40	4*	2	12	138	13	3
SW-W 300	30271001	300	220	108	5**	2.1	15	68	15	10
SW-W 500	30271136	500	350	108	6**	2.4	15	35	13	11
SW-W 750	30271019	750	550	108	7**	2	10	35	20	11

*recommended rope: DIN 3055 FE-znk 1770 sZ-spa

**recommended rope: DIN 3060 FE-znk 1770 sZ-spa

Dimensions

Model	SW-W 80	SW-W 125	SW-W 300	SW-W 500	SW-W 750
Art. no.	40271017	40271008	30271001	30271136	30271019
A, mm	110	110	250	250	250
B, mm	110	110	250	250	250
C, mm	130	130	290	290	290
D, mm	130	130	290	290	290
Ø E, mm	9	9	14.5	14.5	14.5
F, mm	15	15	2	2	2
H, mm	121	121	85	85	85
I, mm	55	55	138	138	138
J, mm	-	-	117	117	117
K, mm	250	250	250	250	250
L, mm	130	130	130	130	130
M, mm	68	68	39	39	39
O, mm	60	60	50	50	50
P, mm	275	275	192	192	192



Manual wire rope winches

Console-mounted aluminum wire rope winch SW-K GAMMA

The alu console-mounted wire rope winch SW-K GAMMA is suitable for use outdoors with its robust build.

Equipment and processing

- Carrying loads 200 – 800 kg
- Compact aluminum housing and closed chain drive
- As of 500 kg carrying load with fast gear for small loads and faster coiling and uncoiling of the unloaded rope
- Smoothly running spur gear for high efficiency
- Low-friction shaft with plain bearings for better rope unwinding and a longer service life of the winch
- Wide rope drum for large rope holder and two rope attachments
- Simple and quick attachment
- Integrated safety spring brake system and removable hand crank
- Winch can be operated from either side



Figure:
GAMMA 800 kg

Technical data

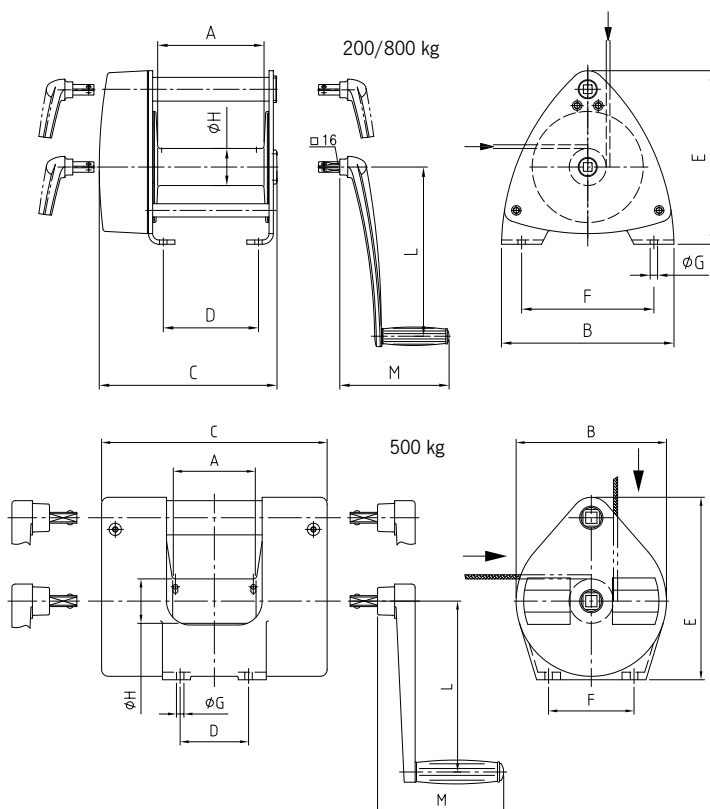
Model	Art. no.	Capacity 1 st layer [kg]	Capacity top layer [kg]	Rope-Ø* [mm]	Useable rope length 1 st layer [m]	Useable rope length top layer [m]	Lift per crank rotation [mm]	Req. crank effort [daN]	Ratio	Weight w/o rope [kg]
GAMMA 200	40270004	200	110	4	3.6	40	195	19	-	6
GAMMA 500	40270001	500	200	6	4.2	50	60/400**	12	6.57:1	14
GAMMA 800	40270006	800	350	7	5.3	78	36/280**	18	7.57:1	16

*recommended rope: DIN 3060 FE-znk 1770 sZ-spa

**load/fast speed gear

Dimensions

Model	GAMMA 200	GAMMA 500	GAMMA 800
Art. no.	40270004	40270001	40270006
A, mm	120	120	200
B, mm	160	220	326
C, mm	192	330	336
D, mm	152	100	180
E, mm	165	267	327
F, mm	135	125	250
ØG, mm	9.5	11	14
ØH, mm	50	60	70
L, mm	320	250	320
M, mm	207	165	207



Manual wire rope winches

Aluminum console rope winch

SW-KAL with drum free-wheeling

The alu console rope winch SW-KAL with drum free-wheeling is used for setup on vehicles and trailers as well as for lifting and lowering of loads.

Equipment and processing

- Carrying loads 750 – 1120 kg
- Self-locking worm gear
- Drum free-wheeling for direct pulling off of the wire rope from the drum when there is no tension on the drum
- Closed gear to protect the inner parts, even when in rough use
- Low-friction shaft bearings for a longer service life of the rope winch
- Simple and quick attachment



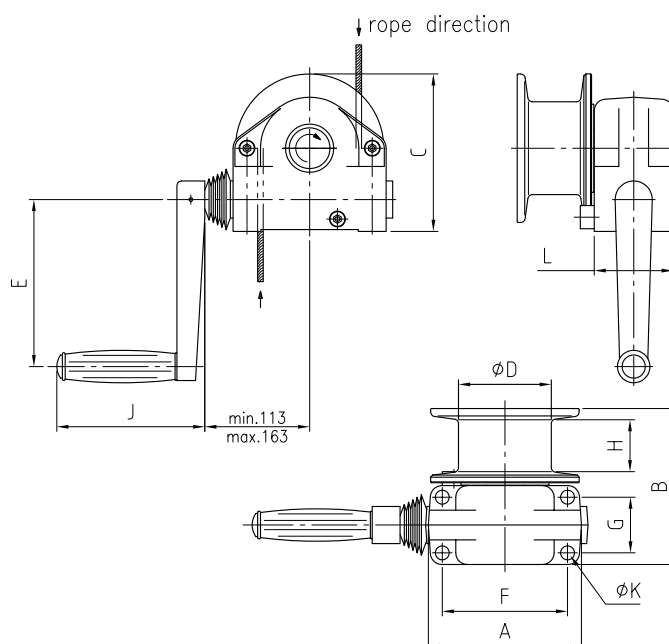
Technical data

Model	Art. no.	Capacity 1 st layer [kg]	Capacity top layer [kg]	Drum-Ø [mm]	Rope-Ø* [mm]	Useable rope length 1 st layer [m]	Useable rope length max. [m]	Lift per crank rotation [mm]	Lift per crank rotation top layer [mm]	Req. crank effort [daN]	Weight w/o rope [kg]
KAL 750	30207004	750	600	100	6	1.3	10	15	17	20	7
KAL 1120	30208000	1120	600	63	7	0.5	10	11	16	22	7

*recommended rope: DIN 3060 SE-znk 1770 sZ-spa

Dimensions

Model	KAL 750	KAL 1120
Art. no.	30207004	30208000
A, mm	165	165
B, mm	168	168
C, mm	170	170
ØD, mm	100	63
E, mm	180	180
F, mm	135	135
G, mm	60	60
H, mm	56	50
J, mm	160	160
ØK, mm	13	13
L, mm	85	85



Manual wire rope winches

Console-mounted wire rope winch OMEGA

Developed for special challenges: the OMEGA console-mounted wire rope winch offers perfect functional safety in areas such as the ATEX (explosion protection) or offshore ones.

The OMEGA DGUV V54 (BGV D8) and OMEGA OFFSHORE versions are prepared for manual operation and operation via an external motor-powered drive.

Equipment and processing

OMEGA BGV D8

- Carrying loads 1000 kg

OMEGA Offshore

- Carrying loads 800 kg
- External motorized drive possible

OMEGA ATEX

- Carrying loads 1000 kg
- Use according to directive 2014/34/EU (ATEX)

Standard equipment

- Removable hand crank
- Encapsulated gearbox – running in oil bath
- High-quality painting to improve corrosion protection



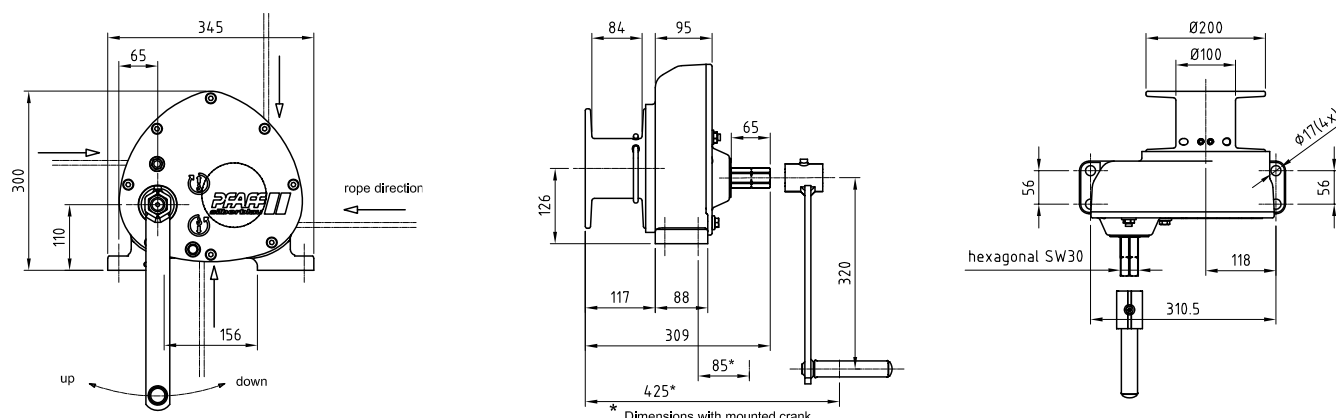
Technical data

Model	Art. no.	Capacity 1 st layer [kg]	Capacity 4 th layer top layer [kg]	Rope-Ø [mm]	Useable rope length 1 st layer [m]	Useable rope length 4 th layer [m]	Lift per crank rotation 1 st layer [mm]	Lift per crank rotation 4 th layer [mm]
OMEGA BGV D8	192010587	1000	692	8*	1.6	13.1	29	42
OMEGA ATEX	192010588	1000	692	8*	1.6	13.1	29	42
OMEGA Offshore	192010589	800	800	10**	1.2	4.3	30	35

Model	Art. no.	Req. crank effort (full load) [daN]	Driving torque M _{ta} [Nm]	Max. load cycles per hour full load	Input speed M _{ta} [1/min]	Duty ratio	Weight w/o rope max. [kg]
OMEGA BGV D8	192010587	17	54	-	100	S3-50%	ca. 38
OMEGA ATEX	192010588	17	3	3	-	-	ca. 38
OMEGA Offshore	192010589	17	54	-	100	S3-50%	ca. 38

*recommended rope: DIN 3069 SE 1960 N/mm²

**recommended rope: DIN 3069 SE 1770 N/mm²



* Dimensions with mounted crank

Manual wire rope winches

Console-mounted wire rope winch

SW-K LAMBDA DGUV V17/18 (BGV C1)

The console-mounted rope winch SW-K LAMBDA DGUV V17/18 has been developed for use in shopping galleries, churches, sports

facilities and performing areas (stages, studios, theaters, etc.).

Equipment and processing

- Carrying loads 300 kg
- Modern design with galvanized sides for simple handling
- Grooved drum for single-layer coiling of the steel rope
- Long service life of the rope by 18-fold drum diameter
- With spring-loaded rope pressure roller against the jump of the unstressed rope at the drum
- Gear design for double nominal load
- Smoothly running spur gear for high efficiency
- Attached safety crank with two spring brakes acting independently of each other for safe hold of the load in any position

Options

- Drum extension for a larger rope intake
- Special grooving (multiple ropes)



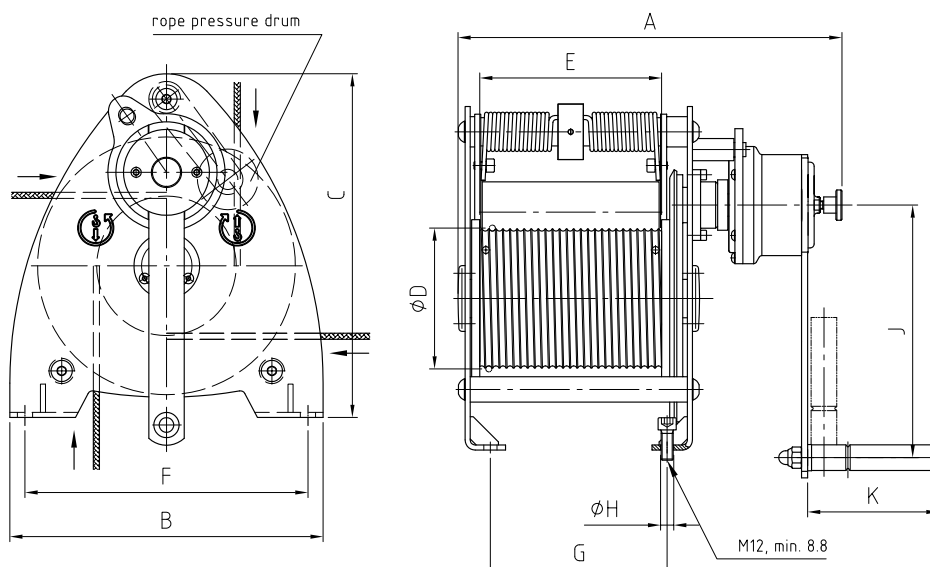
Technical data

Art. no.	Capacity	Rope-Ø*	Useable rope length max. 1 st layer	Lift per crank rotation	Req. crank effort	Ratio	Weight w/o rope
	[kg]	[mm]	[m]	[mm]	[daN]		[kg]
30272015	300	6	10	50	18	8.83:1	30
30272017	300	6	15	50	18	8.83:1	36

*recommended rope: 6 DIN 3069 SE-znk 1960 sZ-spa (calculated breaking forces min. 30.4 kN)

Dimensions

Art. no.	30272015	30272017
A, mm	379	469
B, mm	310	310
C, mm	340	340
Ø D, mm	139.4	139.4
E, mm	180	270
F, mm	280	280
G, mm	175	265
Ø H, mm	13	13
J, mm	250	250
K, mm	130	130



Electrical wire rope winches

Application

Columbus McKinnon Engineered Products supplied three BGV C1 BETA wire rope winches for this year's stage programme on the lake stage of the Bregenz Festival. The winches adjust the heavy sections of the stage floor, the so-called collar. The movements of the stage character provide a real show experience at the performances of Rigoletto, an opera by Giuseppe Verdi. The collar is an inclined surface and consists of a fixed part and three movable sections. The three collar sections on the spectator side of the

stage figure are opened and closed during the performance from a closed compound. The stage parts run on a ramp, a rail construction, and are moved by the three BETA wire rope winches. The electric winches are suitable for high loads and move platform parts with dead weights of up to 20 tons effortlessly. They are characterized by shaft encoders on the drum and motor shaft for drive and travel monitoring, brake air monitoring and a wire rope pressure drum.



Image source: Bregenzer Festspiele/Anja Köhler

Worm gear drive unit

Worm gear drive unit S

The S 20 and S 24 drive units with self-locking worm gear (at standstill) secure the load in any position and can be used universally.

The spectrum ranges from applications in constructions for moving or rotating loads, as gearboxes for rope drums, for sprockets, or as a rotary drive.

Equipment and processing

- Enclosed housing for the protection of parts inside
- Enclosed and precisely machined gear for little effort and a long service life
- Ratio 20:1 and 24:1

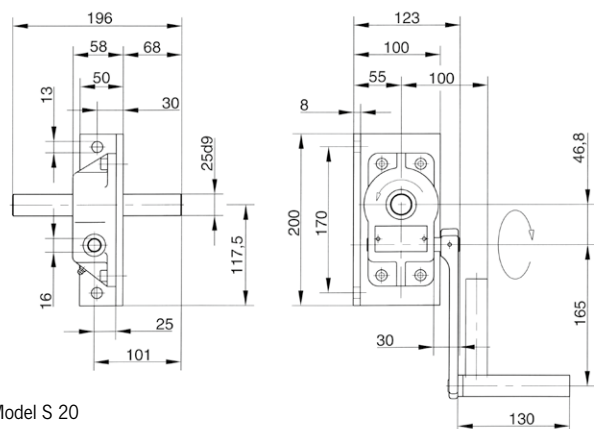


Model S 20

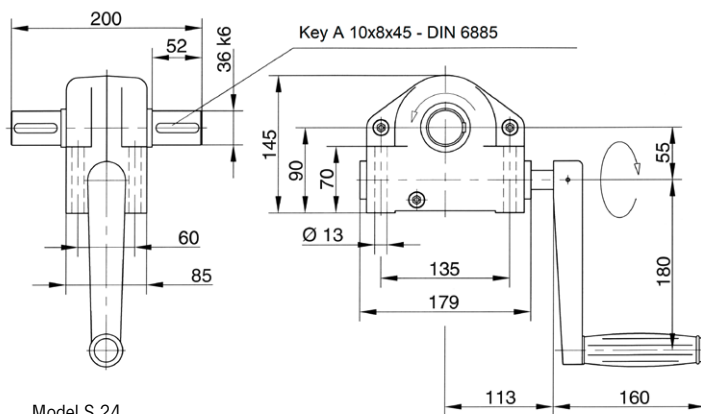
Model S 24

Technical data

Model	Art. no.	Ratio	Drive torque [daNm]	Req. crank effort [daN]	Shaft length [mm]	Shaft-Ø [mm]
S 20	32626004	20:1	12	16	196	25
S 24	32626020	24:1	36	22	200	36



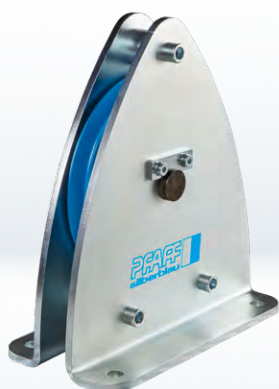
Model S 20



Model S 24

Accessories electrical & manual wire rope winches

Wire rope pulley block DSRB, sheave DSR, standard wire ropes



DSRB 270



DSR 400



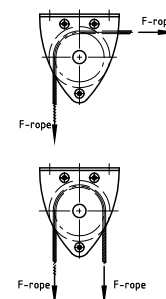
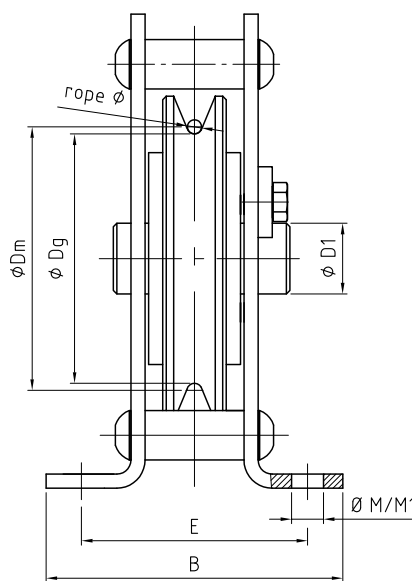
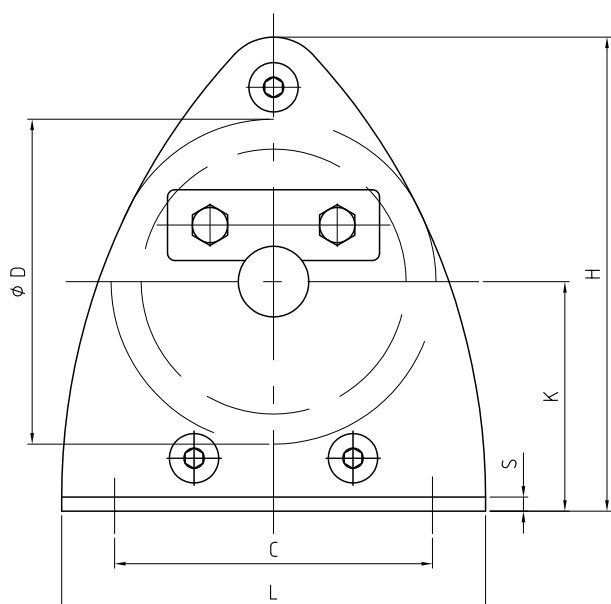
Standard wire rope

Technical data and dimensions: wire rope pulley block DRSB

Model	Art. no.	D Ø [mm]	Rope Ø [mm]	Dm Ø [mm]	FEM FEM	Max. tensile load at deflection		Ball bearing	Dimensions in mm								
						90°	180°		D ₁ Ø	L	C	H	B	E	S	K	M/M ₁ Ø
DSRB 90/4	33447103	90	3-4	80	2m	700	500	6004ZZ	20	120	90	134	85	62	4	65	9/9
DSRB 90/6	33447413	90	5-6	78	1Dm	700	500	6205ZZ	25	120	90	134	85	62	6	65	9/9
DSRB 145/7	33447106	145	7	126	1Am	1100	800	6306ZZ	25	200	160	224	125	88	6	110	11.5/13
DSRB 185/8	33447107	185	8	160	2m	2300	1630	6306ZZ	30	245	195	273	138	106	8	135	13.5/15
DSRB 270/12	33447111	270	9-12	246	2m	2500	1800	6208ZZ	40	360	290	407	191	138	10	202	18/20
DSRB 400/16	33447113	400	13-16	368	3m	5000	3800	6310ZZ	50	530	430	612	302	212	15	310	26/30
DSRB 490/20	33447115	490	20	450	3m	8000	6000	6313ZZ	65	650	580	694	313	220	16	340	34/40

On request, all wire rope pulley blocks are also available individually.

Also available according to directive 2014/34/EU (ATEX).



CAD & go



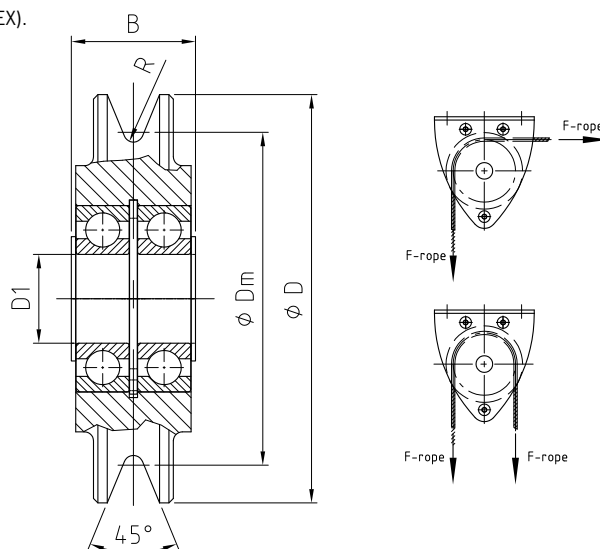
Accessories electrical & manual wire rope winches

Wire rope pulley block DSRB, sheave DSR, standard wire ropes

Technical data and dimensions: sheave DSR

Model	Art. no.	D Ø [mm]	Rope Ø [mm]	Dm Ø [mm]	FEM	Max. tensile load at deflection		Ball bearing	Dimensions in mm		
						90°	180°		D ₁ Ø	R	B
DSR 80/4	33447202	80	4	66	1Bm	700	500	6004ZZ	20	2.2	28
DSR 90/6	33447403	90	6	80	1Dm	700	500	6004ZZ	20	3.2	28
DSR 145/5	33447204	145	5	125	4m	1100	800	6205ZZ	25	2.7	34
DSR 145/6	33447205	145	6	125	2m	1100	800	6205ZZ	25	3.2	34
DSR 145/7	33447206	145	7	126	1Am	1100	800	6205ZZ	25	3.7	34
DSR 185/8	33447207	185	8	160	2m	2300	1630	6306ZZ	30	4.2	42
DSR 185/9	33447208	185	9	162	1Am	2300	1630	6306ZZ	30	4.8	42
DSR 270/10	33447209	270	10	245	3m	2500	1800	6208ZZ	40	5.3	41
DSR 270/11	33447210	270	11	248	3m	2500	1800	6208ZZ	40	6.0	41
DSR 270/12	33447211	270	12	246	2m	2500	1800	6208ZZ	40	6.5	41
DSR 270/13	33447212	270	13	244	1Am	2500	1800	6208ZZ	40	7.0	41
DSR 325/14	33447217	325	14	297	2m	4500	3200	6310ZZ	50	7.5	60
DSR 400/16	33447213	400	16	368	3m	5000	3800	6310ZZ	50	8.6	61
DSR 400/18	33447214	400	18	364	2m	5000	3800	6310ZZ	50	9.7	61
DSR 490/20	33447215	490	20	450	3m	8000	6000	6313ZZ	65	10.8	72

Also available according to directive 2014/34/EU (ATEX).



CAD & go



Technical data: Rope selection for manual wire rope winches

Rope diameter Ø	Calculated breaking force [kN]	Rope length				Tensile load eye hook [kg]
		5 m	10 m	15 m	20 m	
4 mm – DIN 3060	10.1	33600405	33600410	33600415	33600420	500
5 mm – DIN 3060	15.8	33600505	33600510	33600515	33600520	1000
6 mm – DIN 3060	22.8	33600605	33600610	33600615	33600620	1000
7 mm – DIN 3060	31.0	33600705	33600710	33600715	33600720	1000
7 mm – DIN 3069 *	43.9	-	-	33601715	-	1600

*Rope with higher breaking strength for winch LB 1200 kg

Wire ropes for electric wire rope winches on request.

Electrical wire rope winches

Application

The Pfaff-silberblau wire rope winch BETA EL4 from Columbus McKinnon Engineered Products is also being used in sophisticated radiation applications, primarily in test benches in the automotive sector, where it is used as the transport system for the vertical adjustment of a sun simulation system in an environmental chamber. Since persons can stand under the system, the electric wire rope winch is designed with BGV-C1 certification. This means that it satisfies the accident prevention regulations for produc-

tion-related areas, in which persons move under the load, and is thus ideally suited for test bench applications. The robust electric wire rope winch BETA EL4 with a load capacity of up to 1,600 kg and electronic overload protection from 1,000 kg is used in the sun simulation systems for lifting, lowering and pulling the panels including the lights and is also suitable for use in an environmental chamber with temperatures between -40 to +60 °C.



Columbus McKinnon Catalog overview

Catalog overview

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