

# 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:

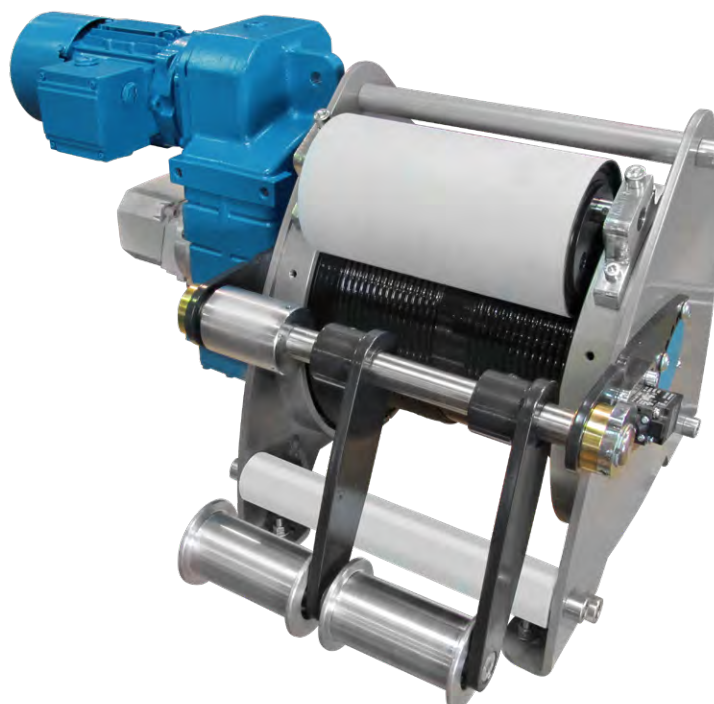
the electric wire rope winches BETA EL with their many options can be combined very well into an individual solution. The use of high-quality components offers safety and long service lives.

### 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



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Technical data															
Size	Capacity	Rope speed	FEMr	BGV	Power	Rec. rope strength	Rec. rope Ø*	Rope capacity		Weight	Dimensions in mm				
	1 <sup>st</sup> layer	1 <sup>st</sup> layer						1 <sup>st</sup> 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.

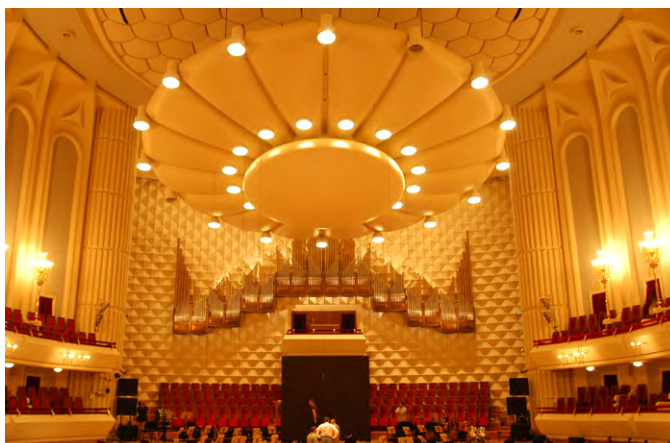
#### Equipment and processing

- 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.

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### BETA EL DGUV V17/18 (BGV C1)/BGV D8 PLUS

#### Technical data BETA EL DGUV V17/18

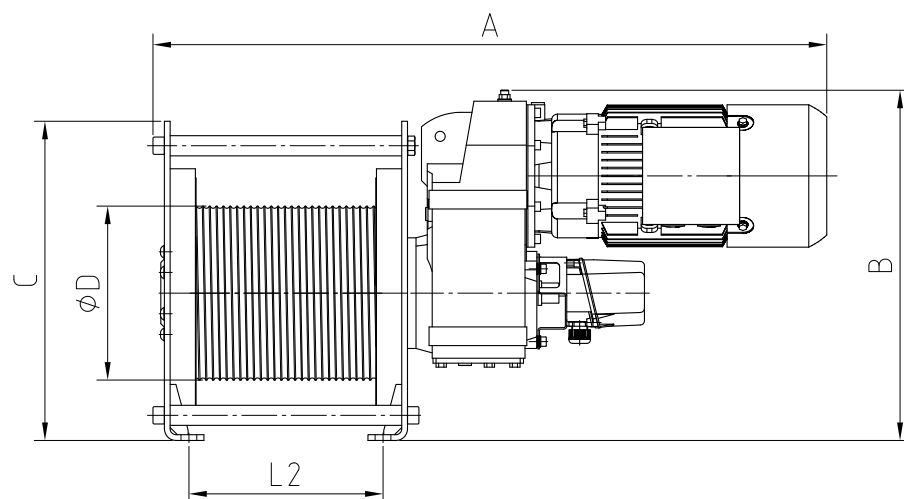
Size	Capacity 1 <sup>st</sup> layer	Rope speed 1 <sup>st</sup> layer	FEM	BGV	Power	Rec. rope strength	Rec. rope Ø*	Rope capacity 1 <sup>st</sup> layer	Weight	Dimensions in mm				
	[kg]	[m/min]								[kW]	[mm]	[m]	[kg]	A
EL1	160	5.3	2m	C1	0.18	1960	6	13.6	66	762	375	325	175	264
EL1	160	9.4	2m	C1	0.25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



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