EN

Movement by Perfection



Drive Technology

for elevators
2026 Edition

The Royal League in ventilation, control and **drive technology**

ZIEHL-ABEGG

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Welcome to the world of ZIEHL-ABEGG

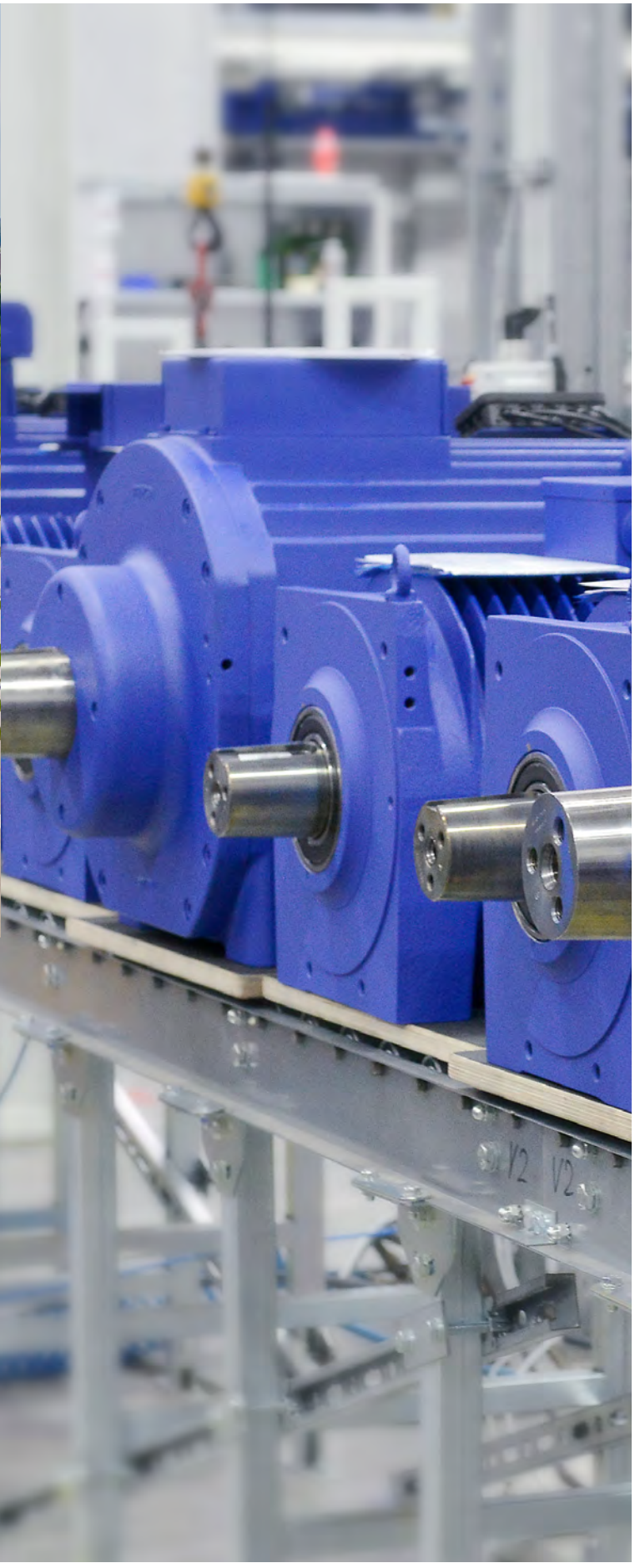
Top technology “Made by ZIEHL-ABEGG”

A pioneering spirit and the courage of innovation were the driving forces behind Emil Ziehl’s development of his first external rotor motor over a hundred years ago. With this he laid the corner stone for the success story of ZIEHL-ABEGG in 1910. Today, the family company ZIEHL-ABEGG, with its headquarters in Künzelsau, develops, produces and sells high quality, high-tech components: Fans, special electric motors and their perfectly adapted, state-of-the-art control technology. Still today, Emil Ziehl’s pioneering spirit is the motivator for making good even better and finding new, revolutionary solutions. ZIEHL-ABEGG is based in Southern Germany but is at home all over the world. At the world-wide production and sales sites, thousands of employees develop, produce and sell technical, economic and ecological progress.

Welcome to the world of ventilation, control and drive technology.

Your contact into the world of ZIEHL-ABEGG

Would you like to learn more about the company ZIEHL-ABEGG, its products and applications? Your current direct contact partners can always be found at www.ziehl-abegg.com



Reliability
Output
Drive comfort

Elevator technology from ZIEHL-ABEGG

Millions of people ride elevators day for day all over the world. They ride quickly, safely and comfortably up to their offices, apartments or hotel rooms and back down again. They have good reason to trust this technology because many elevator manufacturers put their trust in the decisive contribution that ZIEHL-ABEGG makes to reliability and drive comfort. It is the drive and control engineering, the “heart” and “soul” of the elevator. One of the reasons for this trust is ZIEHL-ABEGG’s ability to adapt the motor and control engineering to the manufacturer’s specific requirements regardless of how far up or down the elevator is to travel and how much space is available. Another good reason is the ZIEHL-ABEGG know-how based on their 100 years of experience. It is the visions of the elevator manufacturers that become reality in the drive and control systems made by ZIEHL-ABEGG.

The Royal League of elevator machines

Maximum benefit for manufacturers and users

Meeting the requirements of elevator builders, owners and passengers is the decisive success factor for elevator manufacturers. As a partner to leading manufacturers, ZIEHL-ABEGG constantly strives to make the maximum contribution to satisfying these needs. This goal is reflected in many ways. For example in the cost savings and environmental friendliness of the elevators thanks to the high efficiency of the ZIEHL-ABEGG motor technology with the precisely adapted control technology. Or in the certainty of getting the ideal elevator machine for every architectural and constructional requirement: Low-noise, with and without gear, as a synchronous or asynchronous motor, with powerful, compact elevator machines right down to small motors for minimal shaft volumes. ZIEHL-ABEGG also demonstrates their solution competence in highly intelligent frequency inverters and evacuation units and in user-friendly diagnostic software. But the root of all considerations is still the passenger and the fulfilment of his needs: Maximum reliability and greatest drive comfort. ZIEHL-ABEGG makes the best possible contribution to this.


BEGG



Gearless elevator machine ZAtop

Product overview

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ZAtop gearless elevator machine

General information

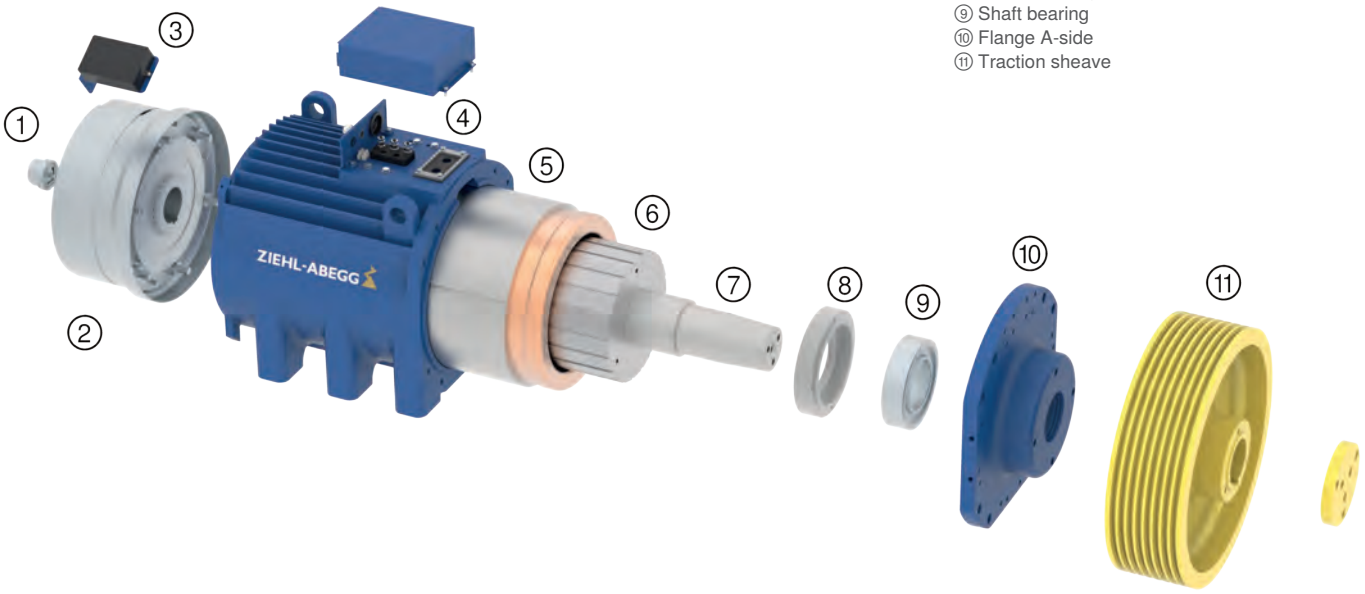
The TOP solution for elevators with and without machine rooms

Properties

- Gearless synchronous motor actuated by NdFeB permanent magnets
- Internal rotor motor
- In accordance with the provisions of the Lift Directive 2014/33/EU
- Different sizes for optimal shaft and shaft head dimensions
- High level of efficiency
- Noise emissions < 50 dB(A)
- Insulation class F (155 °C) with temperature monitoring via PTC thermistor
- Travelling speeds of up to 4.0 m/s
- Rope diameter from 4.0 mm to 16.0 mm
- Traction sheaves:
  - Diameter from 120 mm to 640 mm
  - Various groove geometries
- Motor brake:
  - Safety component in accordance with Lift Directive 2014/33/EU
  - Separately controllable brake circuits
  - Deployable as an element of the ascending car overspeed protection means
  - Deployable as part of the protection against unintended car movement
  - Mechanical hand release system and bowden cable system (optional)
- Can be equipped with conventional encoder systems (e.g. EnDat, SSI, SinCos))
- Optimal package solution with ZIEHL-ABEGG ZAdyn frequency inverter

A glimpse inside

① Absolute encoder
② Brake
③ Electrical junction box for the brake
④ Housing with electric terminal box
⑤ Stator lamination
⑥ Rotor with magnets
⑦ Motor shaft
⑧ Shaft seal ring
⑨ Shaft bearing
⑩ Flange A-side
⑪ Traction sheave



Product portfolio ZAtop

ZIEHL-ABEGG offers you the most comprehensive range of gearless elevator machines with the greatest flexibility and variability.

Suspension	Max. payload kg	Traction sheave diameter mm	Max. axle load kg	Nominal torque Nm	Motor type		
2:1	900	120 - 160	1700	120 - 200	SM132/A		Page 9
	1050	120 - 200	2400	120 - 200	SM132/B		Page 11
	1275	160 - 240	2500	215 - 445	SM180		Page 13
	480	200 - 240	1850	180	SM190		Page 15
	2000	160 - 500	3600	250 - 710	SM200		Page 17
1:1	1000	160 - 200	4850	600 - 710	SM205		Page 19
2:1	2500	240 - 520	4500	850 - 1000	SM210		Page 21
	3000	320 - 640	8000	1120 - 2500	SM250.45 SM250.60 SM250.80		Page 23
	3700	420 - 520	13000	2100 - 2650	SM250.100		Page 25
	5000	520 - 640	13000	5000	SM315		Page 27

ZAtop gearless elevator machine

SM132/A, SM132/AS



Synchronous motor actuated by permanent magnets and according to the provisions of the Lift Directive 2014/33/EU

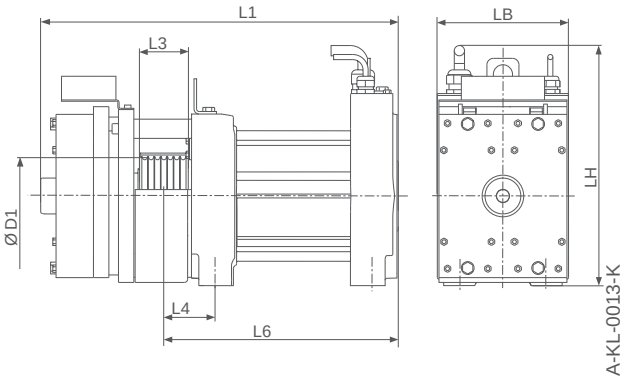
Elevator machine
- NdFeB magnets
- Structural width ≤ 205 mm for the narrowest shaft dimensions
- Noise emissions: < 50 dB(A)
- Insulation class F with temperature monitoring

Brake system
- Safety component in accordance with Lift Directive 2014/33/EU
- Separately activated brake circuits
- Deployable as an element of the ascending car overspeed protection means
- Deployable as part of the protection against unintended car movement

Deflection pulleys	Page 74
ZAlift	Page 80

Technical data

SM132/A, SM132/AS



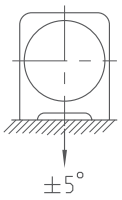
Motor type	Nominal torque Nm	Max. axle load kg	Nominal speed rpm	Rated output power kW	L1 mm	LH mm	L4 mm	L6 mm	LB mm	D1 mm	L3 mm	Weight kg
SM132.21-14A	120	2400	162 - 510	2.0 - 6.4	468	450	70	286	205	120	56	110
										160		114
SM132.21-14AS			162 - 324	2.0 - 4.1					210	120		112
										160		115
SM132.35-14A	200		162 - 510	3.4 - 10.7	558		80	366	205	120	76	133
										160		138
SM132.35-14AS									210	120		135
										160		140

Scope of delivery and options

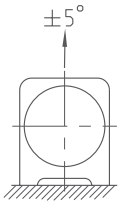
SM132/A	Standard	Options
Motor	Gearless elevator machine	-
Traction sheave	See D1	-
Brake	Certified brake system	Mechanical hand release system and bowden cables
Brake monitoring	Microswitch	Inductive proximity switches
Motor cable	5 m	10 m, 15 m, 20 m, 25 m halogen free
Absolute encoder	EnDat	BiSS-C / SSI / SinCos / TTL
Rope guard	2 pieces	3. Rope guard
Temperature monitoring	PTC thermistor	PT100-thermistor
Cooling	Surface cooling	Forced ventilation

Resulting rope force

ZAtop SM132/A



ZAtop SM132/AS



Example configurations

Other configurations, also outside of the examples listed below, are possible.
Our calculation software ZAlift is available to you for fast and convenient calculation of your elevator machine.

Suspension	Payload kg	Speed m/s	Traction sheave mm	Motor type	Number of ropes	Rope diameter mm	Motor power kW	Rated current A
1:1	300	1.00	120	SM132.21-14A	5	6.5	2.0	7.0
	480	1.00	120	SM132.35-14A	7		3.4	11.0
2:1	450	1.00	160	SM132.21-14A	5		3.2	10.0
	480	1.60	160	SM132.21-14A	5		4.8	14.0
	630	1.00	120	SM132.21-14A	5		4.1	13.0
	630	1.60	120	SM132.21-14A	5		6.4	17.0
	800	1.60	160	SM132.35-14A	7		8.0	21.0

ZAtop gearless elevator machine

SM132/B, SM132/BS



Synchronous motor actuated by permanent magnets and according to the provisions of the Lift Directive 2014/33/EU

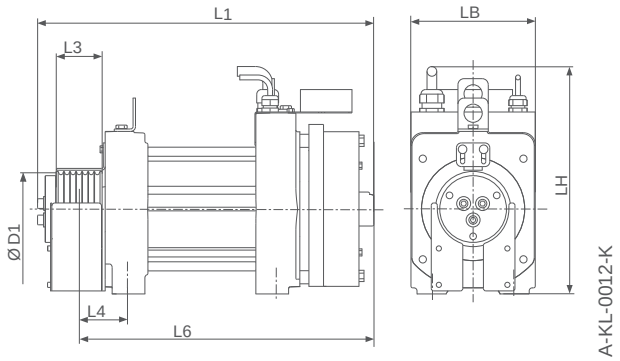
Elevator machine
- NdFeB magnets
- Structural width ≤ 205 mm for the narrowest shaft dimensions
- Noise emissions: < 50 dB(A)
- Insulation class F with temperature monitoring

Brake system
- Safety component in accordance with Lift Directive 2014/33/EU
- Separately activated brake circuits
- Deployable as an element of the ascending car overspeed protection means
- Deployable as part of the protection against unintended car movement

Deflection pulleys	Page 74
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Machine frames	Page 65

Technical data

SM132/B, SM132/BS



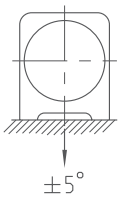
Motor type	Nominal torque Nm	Max. axle load kg	Nominal speed rpm	Rated output power kW	L1 mm	LH mm	L4 mm	L6 mm	LB mm	D1 mm	L3 mm	Weight kg
SM132.21-14B	120	2400	162 - 510	2.0 - 6.4	465	450	70	405	205	120	56	101
										160		105
									220	200		106
SM132.21-14BS									210	120		103
										160		107
SM132.35-14B	200			3.4 - 10.7	555		80	485	205	120	76	124
										160		129
									220	200		130
SM132.35-14BS									210	120		126
										160		131

Scope of delivery and options

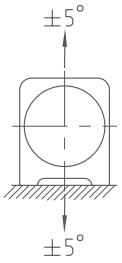
SM132/B	Standard	Options
Motor	Gearless elevator machine	-
Traction sheave	See D1	-
Brake	Certified brake system	Mechanical hand release system and bowden cables
Brake monitoring	Microswitch	Inductive proximity switches
Motor cable	5 m	10 m, 15 m, 20 m, 25 m halogen free
Absolute encoder	EnDat	BiSS-C / SSI / SinCos / TTL
Rope guard	2 pieces	3. Rope guard
Temperature monitoring	PTC thermistor	PT100-thermistor
Cooling	Surface cooling	Forced ventilation

Resulting rope force

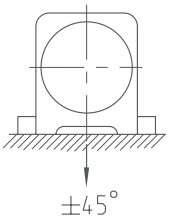
ZAtop SM132/B



ZAtop SM132/BS



ZAtop SM132/BS



with lateral form lock support

Example configurations

Other configurations, also outside of the examples listed below, are possible.
Our calculation software ZAlift is available to you for fast and convenient calculation of your elevator machine.

Suspension	Payload kg	Speed m/s	Traction sheave mm	Motor type	Number of ropes	Rope diam-eter mm	Motor power kW	Rated current A
1:1	300	1.00	120	SM132.21-14B	5	6.5	2.0	7.0
	480	1.00	120	SM132.35-14B	7		3.4	11.0
	525	1.60	120	SM132.35-14B	7		5.4	15.0
2:1	400	1.00	200	SM132.21-14B	5		3.2	10.0
	450	1.00	160	SM132.21-14B	5		3.2	10.0
	480	1.60	160	SM132.21-14B	5		4.8	14.0
	525	1.00	200	SM132.35-14B	7		5.4	15.0
	630	1.00	120	SM132.21-14B	5		4.1	13.0
	630	1.60	120	SM132.21-14B	5		6.4	17.0
	800	1.60	160	SM132.35-14B	7		8.0	21.0
	1050	1.00	120	SM132.35-14B	7		6.8	19.0
	1050	1.60	120	SM132.35-14B	7		10.7	30.0

ZAtop gearless elevator machine

SM180



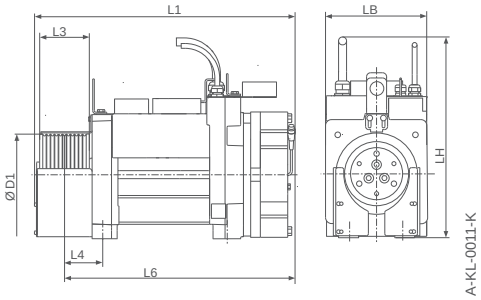
Synchronous motor actuated by permanent magnets and according to the provisions of the Lift Directive 2014/33/EU

Elevator machine
- NdFeB magnets
- Structural width ≤ 255 mm for the narrowest shaft dimensions
- Noise emissions: < 50 dB(A)
- Insulation class F with temperature monitoring

Brake system
- Safety component in accordance with Lift Directive 2014/33/EU
- Separately activated brake circuits
- Deployable as an element of the ascending car overspeed protection means
- Deployable as part of the protection against unintended car movement

Technical data

SM180



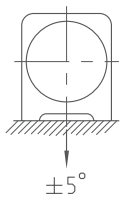
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Motor type	Nominal torque Nm	Max. axle load kg	Nominal speed rpm	Rated output power kW	L1 mm	LH mm	L4 mm	L6 mm	LB mm	D1 mm	L3 mm	Weight kg
SM180.24C-14	215	1750	162 - 384	3.6 - 8.6	500	500	77	428	255	120	68	147
										160	68	152
										200	68	155
					493						76	156
										240	76	162
SM180.35C-14	295	2500		5.0 - 11.9	566		83	490		120	76	173
										160	76	178
										200	76	182
					553						88	183
										240	76	188
											90	190
SM180.45C-14	385	3450	162 - 306	6.5 - 12.3	633		101	558		200	106	209
											124	210
										240	106	217
											124	219
SM180.46C-14	445			7.5 - 13.8						200	106	219
											124	220
										240	106	226
	430										124	229

Scope of delivery and options

SM180	Standard	Options
Motor	Gearless elevator machine	-
Traction sheave	See D1	-
Brake	Certified brake system	Mechanical hand release system with or without bowden cables
Brake monitoring	Microswitch	Inductive proximity switches
Motor cable	-	10 m, 15 m, 20 m, 25 m halogen free
Absolute encoder	EnDat	BiSS-C / SSI / SinCos / TTL
Rope guard	2 pieces	3. Rope guard
Temperature monitoring	PTC thermistor	PT100-thermistor
Cooling	Surface cooling	Forced ventilation

Resulting rope force



Example configurations

Other configurations, also outside of the examples listed below, are possible.
Our calculation software ZAlift is available to you for fast and convenient calculation of your elevator machine.

Suspension	Payload kg	Speed m/s	Traction sheave mm	Motor type	Number of ropes	Rope diam-eter mm	Motor power kW	Rated current A
2:1	480	1.00	240	SM180.24C-14	7	6 - 6.7	3.6	10.0
	480	2.00	200	SM180.24C-14	7		8.6	22.0
	630	1.60	200	SM180.24C-14	7		6.9	17.0
	675	1.00	200	SM180.24C-14	7		4.3	11.0
	675	1.00	240	SM180.35C-14	8		5.0	13.0
	675	1.60	240	SM180.35C-14	8		8.0	19.0
	800	1.60	200	SM180.35C-14	8		9.5	21.0
	800	1.60	240	SM180.45C-14	11		10.4	27.0
	1000	1.00	240	SM180.45C-14	11		6.5	17.5
	1150	1.60	200	SM180.45C-14	11		12.3	30.0
	1250	1.60	240	SM180.46C-14	11		12.0	31.0
	1275	1.00	240	SM180.46C-14	11		7.5	20.0

ZAtop gearless elevator machine

SM190



Synchronous motor actuated by permanent magnets and according to the provisions of the Lift Directive 2014/33/EU

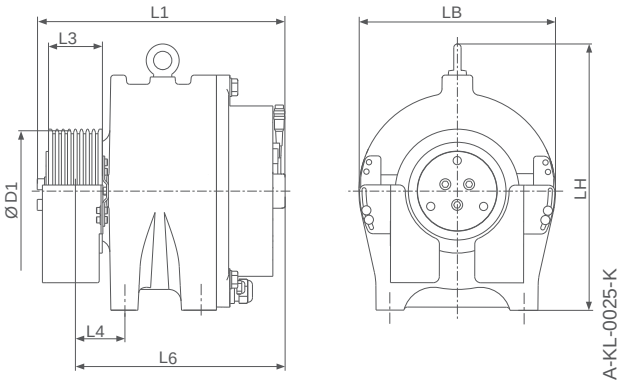
Elevator machine
- NdFeB magnets
- Structural width ≤ 322 mm for the narrowest shaft dimensions
- Noise emissions: < 50 dB(A)
- Insulation class F with temperature monitoring

Brake system
- Safety component in accordance with Lift Directive 2014/33/EU
- Separately activated brake circuits
- Deployable as an element of the ascending car overspeed protection means
- Deployable as part of the protection against unintended car movement

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Technical data

SM190

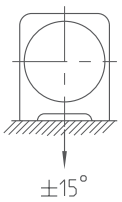


Motor type	Nominal torque	Max. axle load	Nominal speed	Rated output power	L1	LH	L4	L6	LB	D1	L3	Weight
	Nm	kg	rpm	kW	mm	mm	mm	mm	mm	mm	mm	kg
SM190.11B-20	180	1850	186-192	3.2-3.6	406	436	81	344	322	200	76	121
										240	66	125

Scope of delivery and options

SM190	Standard	Options
Motor	Gearless elevator machine	-
Traction sheave	See D1	-
Brake	Certified brake system	Mechanical hand release system and bowden cables
Brake monitoring	Microswitch	-
Motor cable	10 m	-
Absolute encoder	BiSS-C / SSI / SinCos	EnDat
Rope guard	2 pieces	-
Temperature monitoring	PTC thermistor	-
Cooling	Surface cooling	-

Resulting rope force



Example configurations

Other configurations, also outside of the examples listed below, are possible.
Our calculation software ZAlift is available to you for fast and convenient calculation of your elevator machine.

Suspension	Payload kg	Speed m/s	Traction sheave mm	Motor type	Number of ropes	Rope diam-eter mm	Motor power kW	Rated current A
2:1	450	1.00	240	SM190.11B-20	4	6.5	4.4	10.0
	450	1.00	200	SM190.11B-20	4	6.5	5.0	11.0

ZAtop gearless elevator machine

SM200



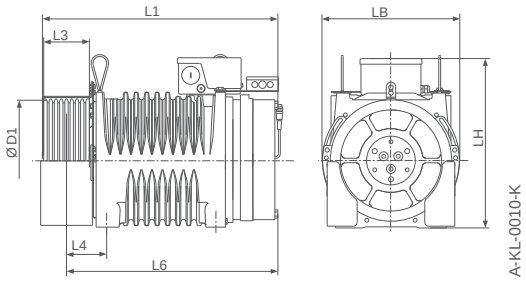
SM200.15D/23D/30D



SM200.40E/45E

Technical data

SM200



Synchronous motor actuated by permanent magnets and according to the provisions of the Lift Directive 2014/33/EU

Elevator machine
- NdFeB magnets
- Structural width ≤ 320 mm for the narrowest shaft dimensions
- Noise emissions: < 50 dB(A)
- Insulation class F with temperature monitoring

Brake system
- Safety component in accordance with Lift Directive 2014/33/EU
- Separately activated brake circuits
- Deployable as an element of the ascending car overspeed protection means
- Deployable as part of the protection against unintended car movement

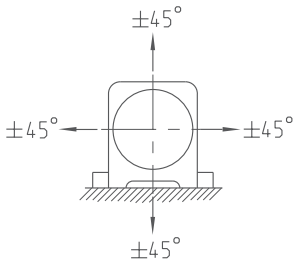
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Motor type	Nominal torque Nm	Max. axle load kg	Nominal speed rpm	Rated output power kW	L1 mm	LH mm	L4 mm	L6 mm	LB mm	D1 mm	L3 mm	Weight kg
SM200.15D-20	250	1855	96 - 306	2.5 - 8.0	491	438	81	428	320	160	76	150
										200	88	155
										240		162
									366	320	74	166
SM200.23D-20	380	2575 - 2850		3.8 - 12.2	513		96	443	320	160	106	175
										200	124	184
					517					240		193
					513				360	320	110	196
									422	400	92	208
									474	450		222
SM200.30D-20	450 - 475	2690 - 2850	60 - 306	3.0 - 14.4	568			498	320	200	106	214
											124	215
										240		224
									360	320	110	227
									422	400	92	239
									474	450		252
SM200.40E-20	600	3300 - 3600	96 - 300	6.0 - 18.8	654	451	105	569	322	160	106	280
					632		97	561		200		282
										240	124	295
					681		122	586			173	303
					632		102	566	360	320	122	307
					631		97	561	422	400	95	310
									520	500	90	329
SM200.45E-20	650 - 710		60 - 300	4.5 - 20.4	654		105	569	322	160	106	280
					632		97	561		200		282
										240	124	295
					681		122	586			173	303
					632		102	566	360	320	122	307
					631		97	561	422	400	95	310
									520	500	90	329

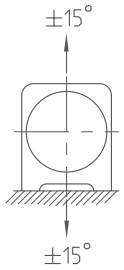
Scope of delivery and options

SM200	Standard	Options
Motor	Gearless elevator machine	-
Traction sheave	See D1	-
Brake	Certified brake system	Mechanical hand release system with or without bowden cables
Brake monitoring	Microswitch	Inductive proximity switches
Motor cable	5 m (SM200.15D to SM200.30D)	10 m, 15 m, 20 m, 25 m halogen free
Absolute encoder	EnDat	BiSS-C / SSI / SinCos / TTL
Rope guard	2 pieces	3. Rope guard
Temperature monitoring	PTC thermistor	PT100-thermistor
Cooling	Surface cooling	Forced ventilation

Resulting rope force



with lateral form lock support



without lateral form lock support

Example configurations

Other configurations, also outside of the examples listed below, are possible.
Our calculation software ZAlift is available to you for fast and convenient calculation of your elevator machine.

Suspension	Payload kg	Speed m/s	Traction sheave mm	Motor type	Number of ropes	Rope diameter mm	Motor power kW	Rated current A
1:1	375	1.00	400	SM200-30D-20	5	10.0	3.0	10.5
	450	1.00	160	SM200-15D-20	6	8.1	3.1	10.7
	450	1.00	400	SM200-40E-20	5	10.0	6.0	16.5
	480	1.00	240	SM200-23D-20	11	6.0	3.8	12.0
	525	1.60	320	SM200-45E-20	7	8.0	7.1	20.0
	630	1.00	240	SM200-15D-20	11	6.0	4.8	14.5
	630	1.00	320	SM200-40E-20	7	8.0	6.0	16.5
2:1	450	1.00	400	SM200-23D-20	5	8.0	3.8	12.0
	480	1.00	320	SM200-15D-20	4	8.0	4.4	13.0
	630	1.00	450	SM200-30D-20	5	8.0	4.8	14.5
	630	1.60	240	SM200-15D-20	8	6.0	6.8	19.0
	630	1.60	320	SM200-23D-20	6	8.0	7.6	21.0
	675	1.60	200	SM200-15D-20	8	6.0	8.0	22.0
	800	1.00	500	SM200-40E-20	5	8.0	6.0	16.5
	800	1.60	320	SM200-30D-20	6	8.0	9.6	26.0
	1000	1.00	240	SM200-23D-20	10	6.0	6.7	18.5
	1000	1.00	320	SM200-40E-20	7	8.0	7.5	20.0
	1000	1.00	400	SM200-45E-20	5	10.0	7.1	20.0
	1000	1.60	240	SM200-30D-20	11	6.0	12.8	34.0
	1250	1.60	320	SM200-45E-20	8	8.0	14.3	36.0
	1275	1.00	240	SM200-30D-20	11	6.0	8.4	23.0
	1600	1.00	240	SM200-40E-20	16	6.0	10.6	26.5
	1800	1.00	200	SM200-45E-20	8	8.1	14.3	36.0
	2000	1.00	240	SM200-45E-20	16	6.0	11.6	30.0
4:1	2500	1.60	320	SM200-45E-20	7	8.0	19.2	46.0

ZAtop gearless elevator machine

SM205



Synchronous motor actuated by permanent magnets and according to the provisions of the Lift Directive 2014/33/EU

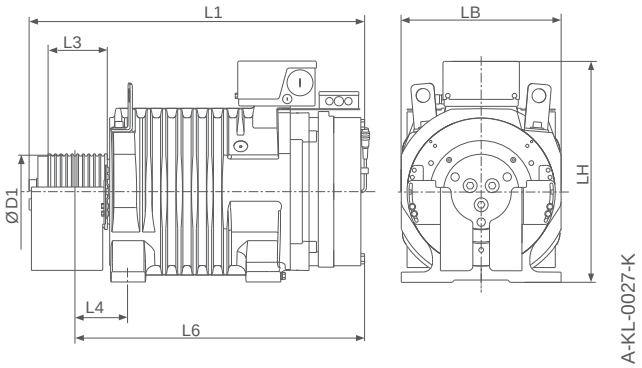
Elevator machine
- NdFeB magnets
- Structural width ≤ 345 mm for the narrowest shaft dimensions
- Noise emissions: < 50 dB(A)
- Insulation class F with temperature monitoring

Brake system
- Safety component in accordance with Lift Directive 2014/33/EU
- Separately activated brake circuits
- Deployable as an element of the ascending car overspeed protection means
- Deployable as part of the protection against unintended car movement

Motor cables	Page 115
Machine frame	Page 69
Deflection pulleys	Page 74
Forced ventilation	Page 77
ZAlift	Page 80

Technical data

SM205

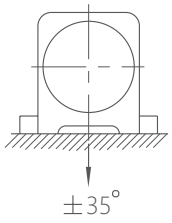


Motor type	Nominal torque	Max. axle load	Nominal speed	Rated output power	L1	LH	L4	L6	LB	D1	L3	Weight
	Nm	kg	rpm	kW	mm	mm	mm	mm	mm	mm	mm	kg
SM205.40A-20	600	4850	96 - 192	6.0 - 12.1	735	496	105	630	345	160	128	342
					728					200		351
SM205.45A-20			96 - 156	7.1 - 11.6	735					160		352
					728					200		362

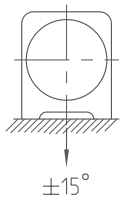
Scope of delivery and options

SM205	Standard	Options
Motor	Gearless elevator machine	-
Traction sheave	See D1	-
Brake	Certified brake system	Mechanical hand release system with or without bowden cables
Brake monitoring	Microswitch	Proximity switches
Motor cable	-	5 m, 10 m, 15 m, 20 m, 25 m halogen free
Absolute encoder	EnDat	BiSS-C / SSI / SinCos / TTL
Rope retainer	2 pieces	-
Temperature monitoring	PTC thermistor	PT100-thermistor
Cooling	Surface cooling	Forced ventilation

Resulting rope force



with lateral form lock support



without lateral form lock support

Example configurations

Other configurations, also outside of the examples listed below, are possible.
Our calculation software ZAlift is available to you for fast and convenient calculation of your elevator machine.

Suspension	Payload kg	Counter-weight balancing %	Speed m/s	Traction sheave mm	Motor type	Number of ropes	Rope diam-eter mm	Motor power kW	Rated current A
1:1	1000	50	1.60	160	SM205.40A-20	8	8.1	10.2	25.6
	1000	50	1.60	200	SM205.40A-20	6	10.0	10.4	29.4
	1250	50	1.00	160	SM205.40A-20	10	8.1	7.8	21.0
	1000	40	1.25	160	SM205.45A-20	8		9.5	30.9
	1000	40	1.60	160	SM205.45A-20	8		12.2	30.9

ZAtop gearless elevator machine

SM210



Synchronous motor actuated by permanent magnets and according to the provisions of the Lift Directive 2014/33/EU

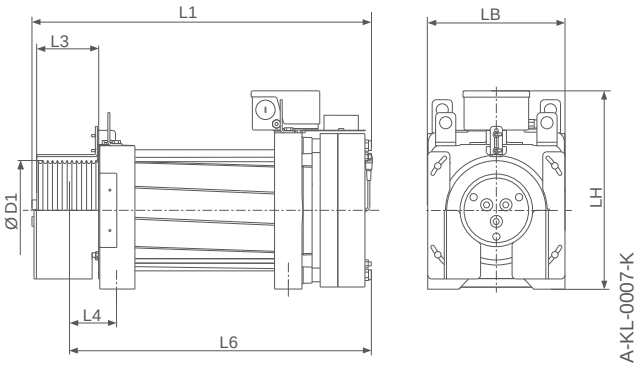
Elevator machine
- NdFeB magnets
- Structural width ≤ 340 mm for the narrowest shaft dimensions
- Noise emissions: < 50 dB(A)
- Insulation class F with temperature monitoring

Brake system
- Safety component in accordance with Lift Directive 2014/33/EU
- Separately activated brake circuits
- Deployable as an element of the ascending car overspeed protection means
- Deployable as part of the protection against unintended car movement

Deflection pulleys	Page 74
Forced ventilation	Page 77
ZAlift	Page 80
Motor cables	Page 115

Technical data

SM210

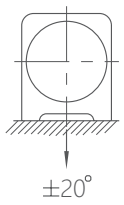


Motor type	Nominal torque	Max. axle load	Nominal speed	Rated output power	L1	LH	L4	L6	LB	D1	L3	Weight
	Nm	kg	rpm	kW	mm	mm	mm	mm	mm	mm	mm	kg
SM210.60B-20	800 - 850	4500	60 - 258	5.3 - 21.6	806	491	122	720	340	240	150	420
										320		425
									420	400		450
									543	520		480
SM210.70B-20	950 - 1000			6.3 - 25.7	856			770	340	240		445
										320		450
									420	400		470
									543	520		490

Scope of delivery and options

SM210	Standard	Options
Motor	Gearless elevator machine	-
Traction sheave	See D1	-
Brake	Certified brake system	Mechanical hand release
Brake monitoring	Microswitch	Inductive proximity switches
Motor cable	-	10 m, 15 m, 20 m, 25 m halogen free
Absolute encoder	EnDat	BiSS-C / SSI / SinCos / TTL
Rope guard	2 pieces	3. Rope guard
Temperature monitoring	PTC thermistor	PT100-thermistor
Cooling	Surface cooling	Forced ventilation

Resulting rope force



Example configurations

Other configurations, also outside of the examples listed below, are possible.
Our calculation software ZAlift is available to you for fast and convenient calculation of your elevator machine.

Suspension	Payload kg	Speed m/s	Traction sheave mm	Motor type	Number of ropes	Rope diam-eter mm	Motor power kW	Rated current A
1:1	480	1.00	520	SM210.60B-20	7	12.0	5.3	16.5
	525	1.00	520	SM210.70B-20	7	12.0	6.3	19.0
	675	1.00	400	SM210.60B-20	8	10.0	5.3	16.5
	675	1.60	400	SM210.60B-20	8	10.0	8.5	23.5
	800	1.00	320	SM210.60B-20	10	8.0	5.3	16.5
	800	1.60	320	SM210.60B-20	10	8.0	8.5	23.5
	1000	1.60	320	SM210.70B-20	10	8.0	10.1	28.0
2:1	1250	1.60	400	SM210.60B-20	8	10.0	13.9	35.5
	1600	1.00	320	SM210.60B-20	10	8.0	10.7	29.0
	1600	1.00	400	SM210.70B-20	8	10.0	10.1	28.0
	1600	1.60	400	SM210.70B-20	8	10.0	16.3	42.0
	2000	1.00	320	SM210.70B-20	10	8.0	12.6	33.0
	2500	1.00	240	SM210.60B-20	14	6.5	13.9	35.5
	2650	1.00	240	SM210.70B-20	14	6.5	16.3	42.0
4:1	2500	1.00	320	SM210.60B-20	8	8.0	21.6	54.0
	3000	1.00	400	SM210.70B-20	8	10.0	20.1	51.0

ZAtop gearless elevator machine

SM250.45, SM250.60, SM250.80



SM250.45B/60B



SM250.80D

Synchronous motor actuated by permanent magnets and according to the provisions of the Lift Directive 2014/33/EU

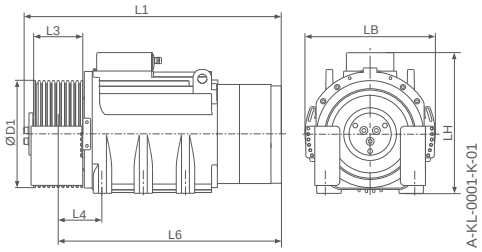
Elevator machine
- NdFeB magnets
- For fast elevators of up to 4 m/s
- Noise emissions: < 50 dB(A)
- Insulation class F with temperature monitoring

Brake system
- Safety component in accordance with Lift Directive 2014/33/EU
- Separately activated brake circuits
- Deployable as an element of the ascending car overspeed protection means
- Deployable as part of the protection against unintended car movement

Motor cables	Page 115
Machine frames	Page 65
Deflection pulleys	Page 74
Adapter plates	Page 61
Forced ventilation	Page 77
ZAlift	Page 80

Technical data

SM250

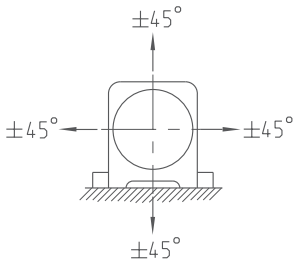


Motor type	Nominal torque Nm	Max. axle load kg	Nominal speed rpm	Rated output power kW	L1 mm	LH mm	L4 mm	L6 mm	LB mm	D1 mm	L3 mm	Weight kg
SM250.45B-20	900 - 1120	6000	60 - 336	7.0 - 31.7	922	535	163	785	410	320	182	635
									425	400	150	640
									500		186	650
									520	500	150	670
									543	520		680
									620	600		695
									660	640		750
SM250.60B-20	1200 - 1600			10.0 - 42.0	984			847	410	320	182	695
									425	400	150	700
									500		186	715
									520	500	150	735
									543	520		740
									620	600		765
									660	640		810
SM250.80D-20	2000 - 2500	8000	54 - 300	12.6 - 72.3	1147	645	170	999	474	440	200	1020
									546	520		1041
									666	640		1128

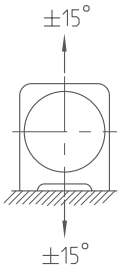
Scope of delivery and options

SM250	Standard	Options
Motor	Gearless elevator machine	-
Traction sheave	See D1	-
Brake	Certified brake system	Mechanical hand release
Brake monitoring	Microswitch	Inductive proximity switches
Motor cable	-	10 m, 15 m, 20 m, 25 m halogen free
Absolute encoder	EnDat	BiSS-C / SSI / SinCos / TTL
Rope guard	2 pieces	3. Rope guard
Temperature monitoring	PTC thermistor	PT100-thermistor
Cooling	Surface cooling	Forced ventilation

Resulting rope force



with lateral form lock support



without lateral form lock support

Example configurations

Other configurations, also outside of the examples listed below, are possible.
Our calculation software ZAlift is available to you for fast and convenient calculation of your elevator machine.

Suspension	Payload kg	Speed m/s	Traction sheave mm	Motor type	Number of ropes	Rope diameter mm	Motor power kW	Rated current A
1:1	630	1.60	520	SM250.45B-20	7	12.0	7.0	22.0
	1000	1.60	520	SM250.60B-20	7	13.0	10.0	30.0
	1000	2.00	320	SM250.45B-20	10	8.0	14.1	37.0
	1000	2.00	520	SM250.80D-20	9	12.0	18.8	52.0
	1250	1.60	640	SM250.80D-20	7	16.0	14.1	50.0
	1250	2.00	400	SM250.60B-20	10	10.0	16.0	43.0
2:1	1000	1.00	640	SM250.45B-20	8	10.0	7.0	22.0
	1050	1.60	600	SM250.45B-20	7	13.0	12.7	34.0
	1250	1.60	640	SM250.60B-20	8	11.0	16.0	43.0
	1275	1.00	500	SM250.45B-20	8	8.0	11.3	31.5
	1600	1.00	320	SM250.45B-20	10	8.0	14.1	37.0
	1600	1.60	320	SM250.45B-20	10	8.0	20.1	50.0
	1600	2.50	320	SM250.45B-20	10	8.0	31.7	73.0
	1600	2.50	640	SM250.80D-20	9	13.0	36.4	94.0
	2000	1.60	320	SM250.45B-20	10	8.0	20.1	50.0
	2000	1.60	520	SM250.80D-20	11	10.0	25.1	67.0
	2000	2.50	500	SM250.60B-20	9	10.0	32.0	80.0
	2500	2.00	520	SM250.80D-20	9	13.0	40.8	120.0
	2800	1.00	440	SM250.80D-20	11	10.0	28.3	86.0
	3000	1.00	440	SM250.80D-20	11	11.0	28.3	86.0
4:1	5000	1.00	440	SM250.80D-20	11	10.0	36.4	94.0
	6300	1.00	440	SM250.80D-20	11	10.0	53.4	150.0
	6500	0.80	440	SM250.80D-20	11	10.0	40.8	120.0
6:1	6000	1.00	520	SM250.80D-20	8	10.0	46.5	118.0

ZAtop gearless elevator machine

SM250.100C



Synchronous motor actuated by permanent magnets and according to the provisions of the Lift Directive 2014/33/EU

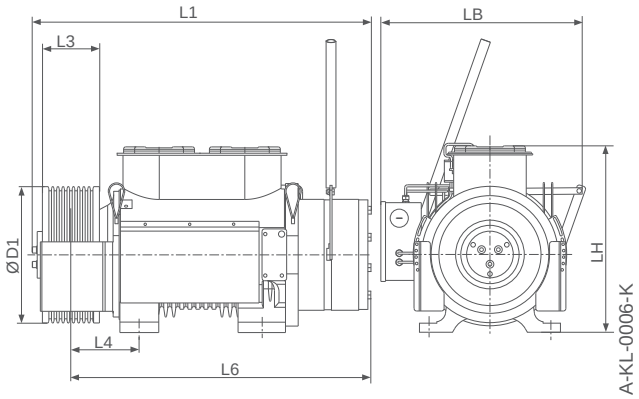
Elevator machine
- NdFeB magnets
- For fast elevators of up to 4 m/s
- Noise emissions: < 50 dB(A)
- Insulation class F with temperature monitoring

Brake system
- Safety component in accordance with Lift Directive 2014/33/EU
- Separately activated brake circuits
- Deployable as an element of the ascending car overspeed protection means
- Deployable as part of the protection against unintended car movement

Motor cables	Page 115
Machine frames	Page 65
Deflection pulleys	Page 74
ZAlift	Page 80

Technical data

SM250.100C

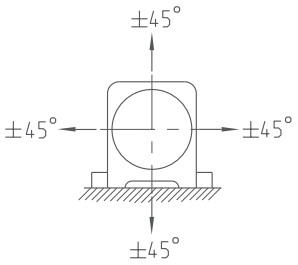


Motor type	Nominal torque	Max. axle load	Nominal speed	Rated output power	L1	LH	L4	L6	LB	D1	L3	Weight
	Nm	kg	rpm	kW	mm	mm	mm	mm	mm	mm	mm	kg
SM250.100C-20	2100 - 2650	13000	78 - 312	22 - 69	1313	729	264	1164	794	450	282	1250
										500	220	
										520		

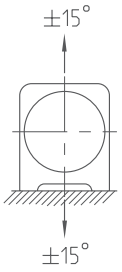
Scope of delivery and options

SM250	Standard	Options
Motor	Gearless elevator machine	-
Traction sheave	See D1	-
Brake	Certified brake system	Mechanical hand release
Brake monitoring	Microswitch	Inductive proximity switches
Motor cable	-	10 m, 15 m, 20 m, 25 m halogen free
Absolute encoder	EnDat	BiSS-C / SSI / SinCos / TTL
Rope guard	2 pieces	3. Rope guard
Temperature monitoring	PTC thermistor	PT100-thermistor
Cooling	Forced ventilation	-

Resulting rope force



with lateral form lock support



without lateral form lock support

Example configurations

Other configurations, also outside of the examples listed below, are possible.
Our calculation software ZAlift is available to you for fast and convenient calculation of your elevator machine.

Suspension	Payload kg	Speed m/s	Traction sheave mm	Motor type	Number of ropes	Rope diameter mm	Motor power kW	Rated current A
1:1	1250	3.50	520	SM250.100C-20	10	11.0	33.0	77.0
	1600	1.00	500	SM250.100C-20	10	11.0	22.0	62.0
	2000	1.60	450	SM250.100C-20	10	11.0	22.0	62.0
2:1	2400	2.50	500	SM250.100C-20	8	12.0	42.0	98.0
	3000	2.00	520	SM250.100C-20	10	12.0	41.6	82.0
	3500	1.00	450	SM250.100C-20	11	11.0	30.0	82.0
	3700	1.60	450	SM250.100C-20	10	11.0	37.0	98.0
4:1	4300	1.00	520	SM250.100C-20	7	11.0	50.0	125.0
	6300	1.00	450	SM250.100C-20	10	10.0	50.0	125.0

ZAtop gearless elevator machine

SM315



Synchronous motor actuated by permanent magnets and according to the provisions of the Lift Directive 2014/33/EU

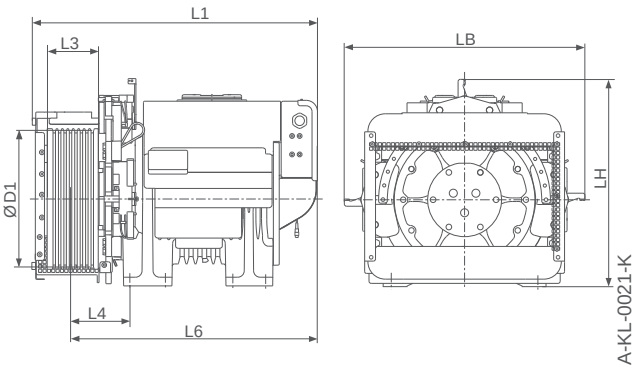
Elevator machine
- NdFeB magnets
- For fast elevators of up to 4 m/s
- Insulation class F with temperature monitoring

Brake system
- Safety component in accordance with Lift Directive 2014/33/EU
- Separately activated brake circuits
- Deployable as an element of the ascending car overspeed protection means
- Deployable as part of the protection against unintended car movement
- If the brake is not pre-assembled, it is recommended to use the assembly kit 70031407

Motor cables	Page 115
Forced ventilation	Page 77
Deflection pulleys	Page 74
ZAlift	Page 80

Technical data

SM315.100A

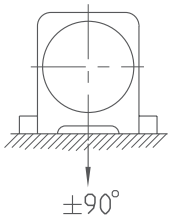


Motor type	Nominal torque Nm	Max. axle load kg	Nominal speed rpm	Rated output power kW	L1 mm	LH mm	L4 mm	L6 mm	LB mm	D1 mm	L3 mm	Weight kg
SM315.100A	5000	13000	40 - 156	20.9 - 81.7	1315	954	260	1129	1108	520	230	1884
										640		1938

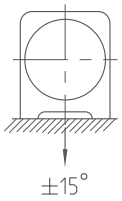
Scope of delivery and options

SM315	Standard	Options
Motor	Gearless elevator machine	-
Traction sheave	See D1	-
Brake	Certified brake system	Mechanical hand release system with bowden cables
Brake monitoring	Inductive proximity switches	Microswitch
Motor cable	-	10 m, 15 m, 20 m, 25 m halogen free
Absolute encoder	EnDat	BiSS-C / SSI
Rope guard	2 pieces	-
Protection at traction sheave	Traction sheave cover	-
Temperature monitoring	PT100-thermistor	-
Cooling	Surface cooling	Forced ventilation
Retrieval device for pulling out of the catch	-	Retrieval device with rope clamp

Resulting rope force



with lateral form lock support

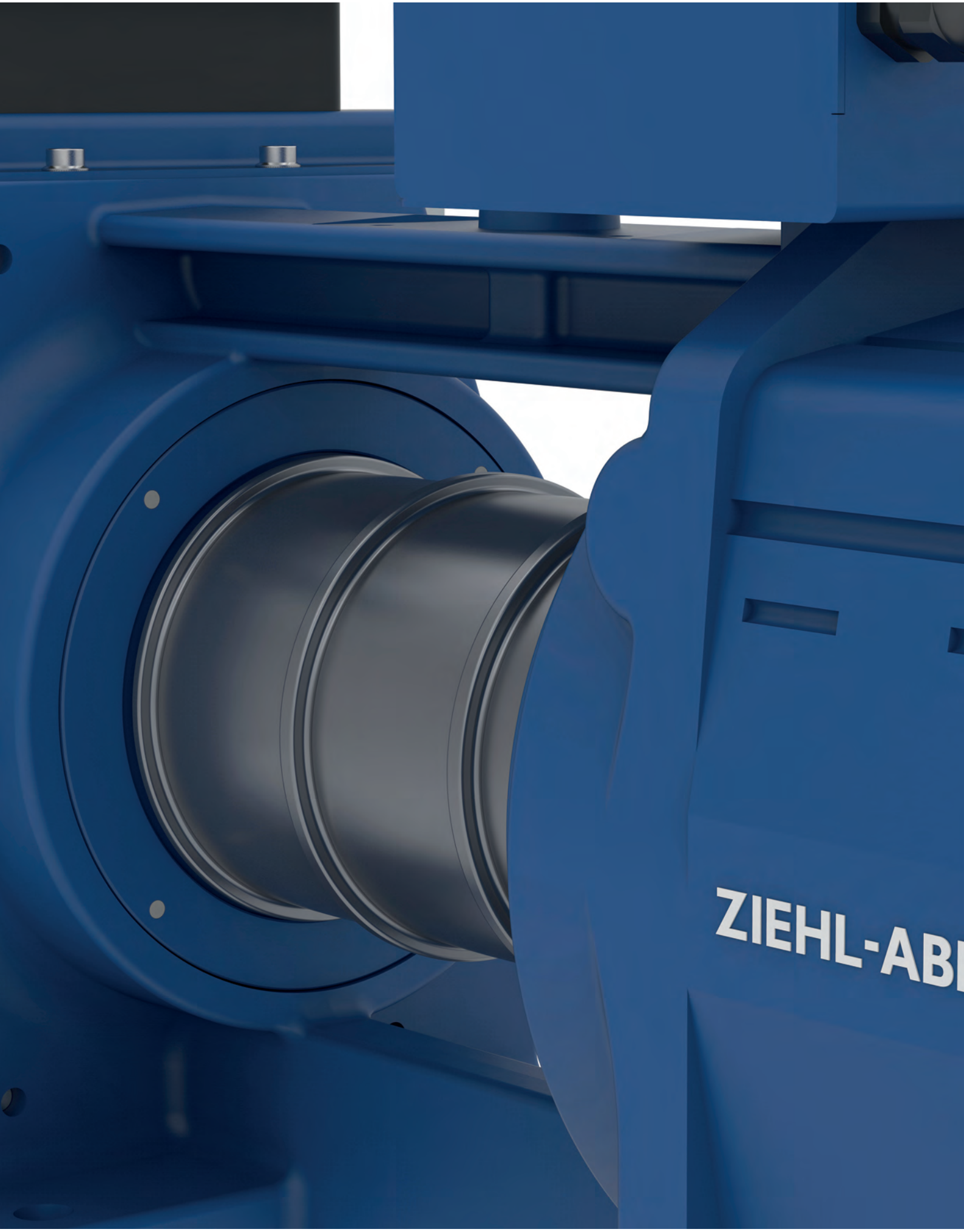


without lateral form lock support

Example configurations

Other configurations, also outside of the examples listed below, are possible.
Our calculation software ZAlift is available to you for fast and convenient calculation of your elevator machine.

Suspension	Payload kg	Speed m/s	Traction sheave mm	Motor type	Number of ropes	Rope diameter mm	Motor power kW	Rated current A
1:1	2500	1.0	640	SM315.100A-30	7	13	20.9	60
	3000	1.0	520	SM315.100A-30	10	13	20.9	60
2:1	5000	2.5	640	SM315.100A-30	7	16	81.7	200
		2.0	520	SM315.100A-30	9	13	81.7	200
		1.6	640	SM315.100A-30	9	13	54.5	133
4:1	10000	1.0	640	SM315.100A-30	8	13	62.8	150
		1.0	520	SM315.100A-30	10	13	81.7	200


ZIEHL-ABE



ZAtopx gearless elevator machine for belts

Product overview

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ZAtopx BD132 Page 33

ZAtopx gearless elevator machine for belts

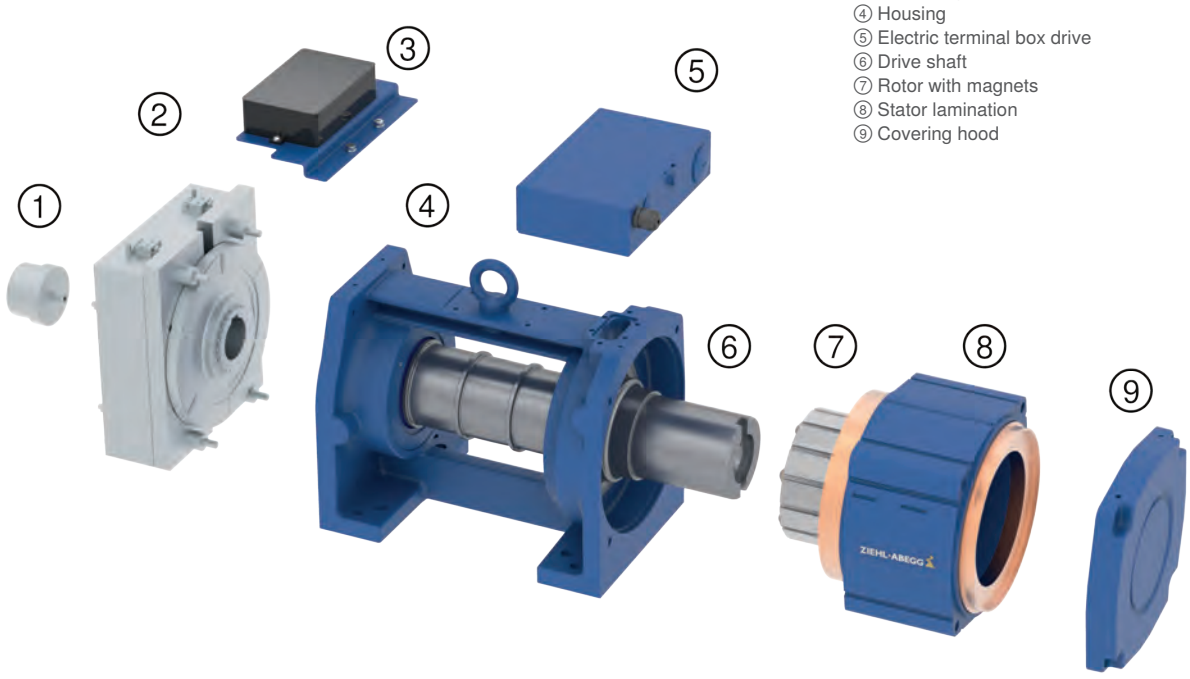
General information

The elevator machine with flat belts as suspension means for elevators with or without machine room

Properties

- Elevator machine with belt as suspension means
- According to the provisions of the Lift Directive 2014/33/EU
- High efficiency
- Noise emissions < 50 dB(A)
- Insulation class F (155 °C) with temperature monitoring via PTC thermistor
- Travel speeds up to 1.6 m/s
- Traction shaft:
  - Diameter 100 mm
  - 2 to 5 belts
- Motor brake:
  - Safety component in accordance with Lift Directive 2014/33/EU
  - Separately actuated brake circuits
  - Deployable as an element of the ascending car overspeed protection means
  - Deployable as part of the protection against unintended car movement
  - Mechanical hand release (optional)
- Can be equipped with conventional encoder systems (e. g. EnDat, SSI)
- Optimum package solution with ZAdyn frequency inverter from ZIEHL-ABEGG

A glimpse inside



① Absolute encoder
② Brake
③ Electrical junction box from brake
④ Housing
⑤ Electric terminal box drive
⑥ Drive shaft
⑦ Rotor with magnets
⑧ Stator lamination
⑨ Covering hood

Product portfolio ZAtopx

ZIEHL-ABEGG offers you the most comprehensive range of gearless elevator machines with the greatest flexibility and variability.

Suspension	Max. payload kg	Traction shaft diameter mm	Max. axle load kg	Nominal torque Nm	Motor type	
2:1	675	100	2500	105	BD132.21A 	Page 33
	1050	100	2500	175	BD132.35A 	Page 33

ZAtopx gearless elevator machine for belts

BD132



The drive with flat belts as suspension means in accordance to the provisions of the Lift Directive 2014/33/EU

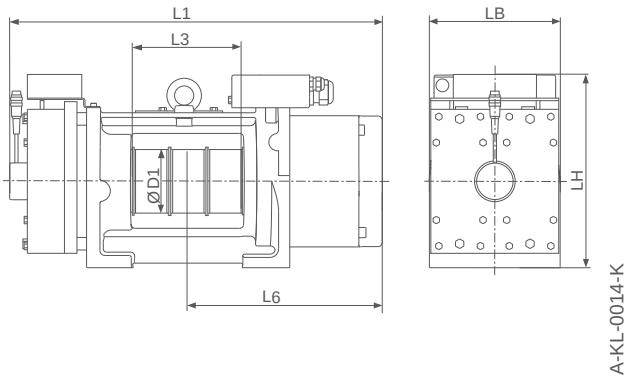
Elevator machine
- NdFeB magnets
- Structural width ≤ 205 mm for narrowest shaft dimensions
- Noise emissions: < 50 dB(A)
- Insulation class F with temperature monitoring

Brake system
- Safety component in accordance with Lift Directive 2014/33/EU
- Separately actuated brake circuits
- Deployable as an element of the ascending car overspeed protection means
- Deployable as part of the protection against unintended car movement

Motor cables	Page 115
Deflection pulleys	Page 74
ZAlift	Page 80

Technical data

BD132

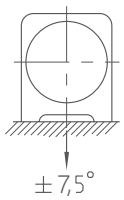


Motor type	Nominal torque Nm	Max. axle load kg	Nominal speed rpm	Rated output power kW	L1 mm	LH mm	L6 mm	LB mm	D1 mm	L3 mm	Weight kg
BD132.21A-14/3	105	2500	384 - 612	4.2 - 6.7	581	305	302	205	100	169	106
BD132.35A-14/3	175			7.0 - 11.2	651		372				123
BD132.35A-14/5					767		430			285	133

Scope of delivery and options

BD132	Standard	Options
Motor	Gearless elevator machine for belts as suspension means	-
Traction shaft	See D1	-
Brake	Certified brake system	Mechanical hand release
Brake monitoring	Microswitch	Inductive proximity switches
Motor cable	-	10 m, 15 m, 20 m, 25 m halogen free
Absolute encoder	EnDat	BiSS-C / SSI / SinCos / TTL
Belt guard	2 pieces	-
Temperature monitoring	PTC thermistor	PT100-thermistor
Cooling	Surface cooling	Forced ventilation

Resulting suspension force



Example configurations

Other configurations, also outside of the examples listed below, are possible.
Our calculation software ZAlift is available to you for fast and convenient calculation of your elevator machine.

Suspension	Payload kg	Speed m/s	Traction shaft mm	Motor type	Number of belts	Belt width mm	Motor power kW	Rated current A
2:1	675	1.00	100	BD132.21A-14/3	3	30.0	4.2	11.0
	675	1.60	100	BD132.21A-14/3	3	30.0	6.7	15.5
	1050	1.00	100	BD132.35A-14/3	3	30.0	7.0	17.0
	1050	1.00	100	BD132.35A-14/5	5	30.0	7.0	17.0
	1050	1.60	100	BD132.35A-14/3	3	30.0	11.2	25.0
	1050	1.60	100	BD132.35A-14/5	5	30.0	11.2	25.0


ZIEHL-ABEGG



Gearless elevator machine ZAsyn

Product overview

Information	Page 37
ZAsyn SM700	Page 39
ZAsyn SM860	Page 41
ZAsyn2 SM500	Page 43

ZAsyn Gearless elevator machine

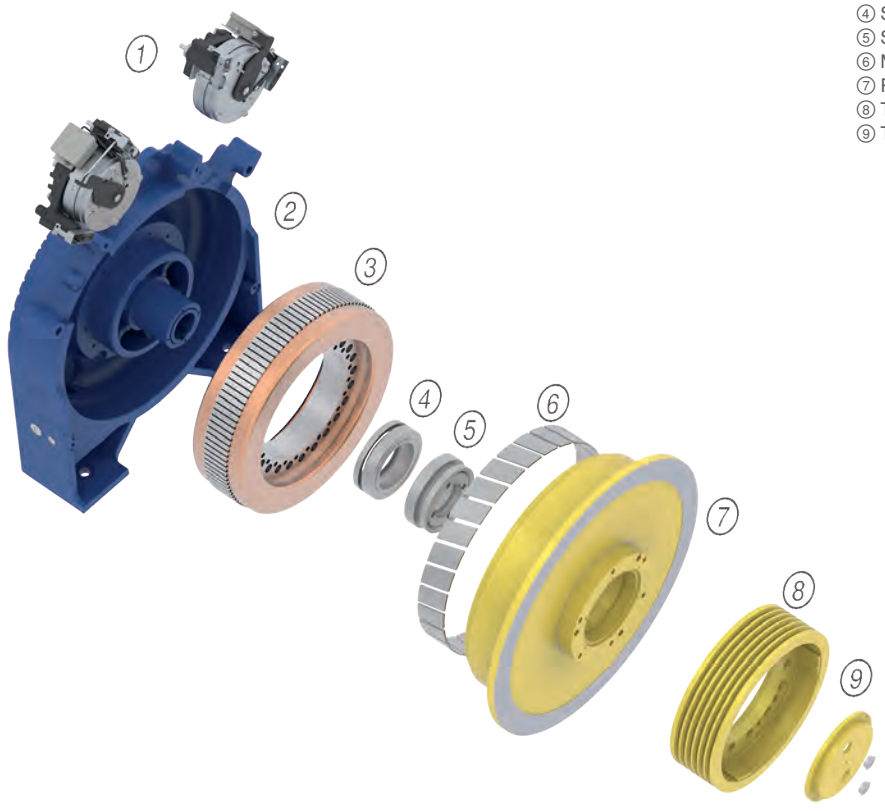
General information

The flat elevator machine for elevators with and without a machine room

Properties

- Gearless synchronous motor actuated by NdFeB permanent magnets
- External rotor motor
- According to the provisions of the Lift Directive 2014/33/EU
- Very flat design for optimum shaft dimensions
- Optimised for easy installation in the shaft
- High efficiency
- Noise emissions < 50 dB(A)
- Insulation class F (155 °C) with temperature monitoring via PTC thermistor
- Travel speeds of up to 3.0 m/s
- Rope diameter of 8.0 mm to 16.0 mm
- Traction sheaves:
  - Replaceable
  - Diameter of 400 mm to 680 mm
- Motor brake:
  - Safety component in accordance with Lift Directive 2014/33/EU
  - Separately actuated brake circuits
  - Deployable as an element of the ascending car overspeed protection means
  - Deployable as part of the protection against unintended car movement
  - Mechanical hand release (optional)
- Can be equipped with conventional encoder systems (e.g. EnDat, SSI, SinCos)
- Optimum package solution with ZAdyn frequency inverter from ZIEHL-ABEGG

A glimpse inside



① Brake
② Housing
③ Stator lamination
④ Shaft seal ring
⑤ Shaft bearing
⑥ Magnets
⑦ Rotor
⑧ Traction sheave
⑨ Traction sheave bracket

Product portfolio ZAsyn

ZIEHL-ABEGG offers you the most comprehensive range of gearless elevator machines with the greatest flexibility and variability.

Suspension	Max. payload kg	Traction sheave diameter mm	Max. axle load kg	Nominal torque Nm	Motor type		
2:1	1600	400	3000 - 3600	500 - 1150	SM700		Page 39
	2500	480 - 680	8000	1900 - 2200	SM860		Page 41
	1125	400	3000	510 - 640	SM500		Page 43

ZAsyn gearless elevator machine

SM700



Synchronous motor actuated by permanent magnets and according to the provisions of the Lift Directive 2014/33/EU

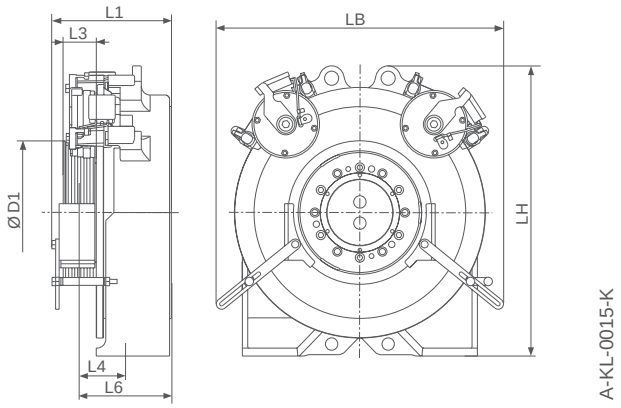
Drive
- NdFeB magnets
- Installation depth of ≤ 336 mm makes it perfect for mounting on the wall of the elevator shaft
- Noise emissions: < 50 dB(A)
- Insulation class F with temperature monitoring

Brake system
- Safety component in accordance with Lift Directive 2014/33/EU
- Separately activated brake circuits
- Deployable as an element of the ascending car overspeed protection means
- Deployable as part of the protection against unintended car movement

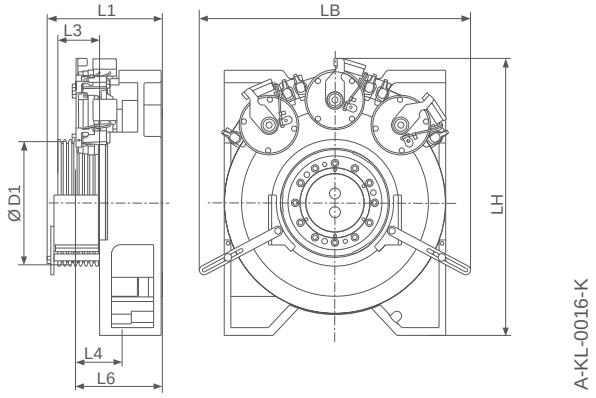
Motor cables	Page 115
Deflection pulleys	Page 74
ZAlift	Page 80

Technical data

SM700.09AL-14AL



SM700.16AL3-A

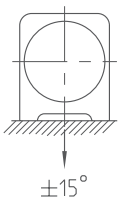


Motor type	Nominal torque	Max. axle load	Nominal speed	Rated output power	L1	LH	L4	L6	LB	D1	L3	Weight
	Nm	kg	rpm	kW	mm	mm	mm	mm	mm	mm	mm	kg
SM700.09AL-30	500	3000	60 - 96	3.0 - 5.0	306	838	106	276	710	400	60	530
SM700.12AL-30	750		60 - 168	4.5 - 13.0	336		121	306			90	535
SM700.14AL-30	850		60 - 192	5.5 - 17.0	366		106	276			120	540
SM700.16AL3-A-30	1150	3600	96 - 156	11.6 - 18.8	326	888	110	250			90	580
					356		125	265			120	595
					366		130	270			130	605
SM700.16AL-A-30	800 - 1000		60 - 240	6.5 - 20.0	326	850	110	250			90	565
					356		125	265			120	570
					366		130	366			130	575

Scope of delivery and options

SM700	Standard	Options
Motor	Gearless elevator machine	-
Traction sheave	See D1	-
Brake	Certified brake system	Mechanical hand release system with bowden cables
Brake monitoring	Microswitch	-
Motor cable	-	10 m, 15 m, 20 m, 25 m halogen free
Absolute encoder	EnDat	SSI / SinCos
Rope guard	2 pieces	-
Temperature monitoring	PTC thermistor	PT100-thermistor
Cooling	Surface cooling	-
Mounting	-	Console for wall mounting

Resulting rope force



Example configurations

Other configurations, also outside of the examples listed below, are possible.
Our calculation software ZAlift is available to you for fast and convenient calculation of your elevator machine.

Suspension	Payload kg	Speed m/s	Traction sheave mm	Motor type	Number of ropes	Rope diameter mm	Motor power kW	Rated current A
1:1	375	1.00	400	SM700.09AL-30	3	10	3.0	7.6
	525	0.63	400	SM700.12AL-30	5		4.5	11.5
	630	1.00	400	SM700.12AL-30	5		4.5	11.5
	675	0.63	400	SM700.16AL-A-30	6		6.5	16.5
	800	2.00	400	SM700.16AL3-A-30	7		11.6	29.0
2:1	675	1.00	400	SM700.09AL-30	3		5.0	11.5
	1000	1.60	400	SM700.14AL-30	5		14.0	33.5
	1000	1.60	400	SM700.16AL-A-30	5		16.0	41.5
	1000	1.75	400	SM700.12AL-30	4		13.0	32.5
	1000	2.00	400	SM700.14AL-30	5		17.0	40.5
	1250	2.50	400	SM700.16AL-A-30	6		20.0	50.0
	1275	1.75	400	SM700.14AL-30	5		15.0	36.5
	1275	2.50	400	SM700.16AL-A-30	5		20.0	50.0
	1350	1.00	400	SM700.16AL-A-30	6		10.0	25.0
	1500	1.60	400	SM700.16AL3-A-30	7		18.8	48.0

ZAsyn gearless elevator machine

SM860



Synchronous motor actuated by permanent magnets and according to the provisions of the Lift Directive 2014/33/EU

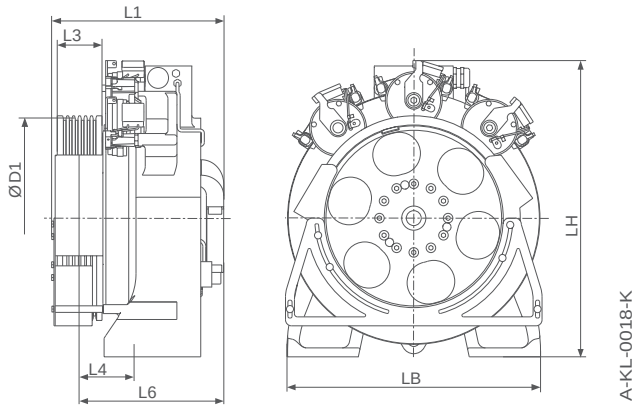
Drive
- NdFeB magnets
- Perfect for mounting in tight spaces
- Noise emissions: < 50 dB(A)
- Insulation class F with temperature monitoring

Brake system
- Safety component in accordance with Lift Directive 2014/33/EU
- Separately activated brake circuits
- Deployable as an element of the ascending car overspeed protection means
- Deployable as part of the protection against unintended car movement

Motor cables	Page 115
Deflection pulleys	Page 74
ZAlift	Page 80

Technical data

SM860.28AL

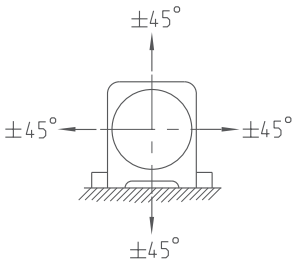


Motor type	Nominal torque Nm	Max. axle load kg	Nominal speed rpm	Rated output power kW	L1 mm	LH mm	L4 mm	L6 mm	LB mm	D1 mm	L3 mm	Weight kg
SM860.28AL-30	2200	8000	40 - 160	9.2 - 37.0	586	1080	153	406	850	480	150	1004
										520		1010
										600		1027
										680		1050

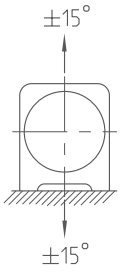
Scope of delivery and options

SM860	Standard	Options
Motor	Gearless elevator machine	-
Traction sheave	See D1	-
Brake	Certified brake system	Mechanical hand release system with bowden cables
Brake monitoring	Microswitch	-
Motor cable	-	10 m, 15 m, 20 m, 25 m halogen free
Absolute encoder	EnDat	SSI / SinCos
Rope guard	2 pieces	-
Temperature monitoring	PTC thermistor	PT100-thermistor
Cooling	Forced ventilation	-

Resulting rope force



with lateral form lock support



without lateral form lock support

Example configurations

Other configurations, also outside of the examples listed below, are possible.
Our calculation software ZAlift is available to you for fast and convenient calculation of your elevator machine.

Suspension	Payload kg	Speed m/s	Traction sheave mm	Motor type	Number of ropes	Rope diam-eter mm	Motor power kW	Rated current A
1:1	1250	1.00	520	SM860.28AL-30	7	12	9.2	25.5
	1250	2.00	480	SM860.28AL-30	7		22.0	53.5
2:1	1600	2.50	600	SM860.28AL-30	6	10	37.0	80.5
	2000	1.60	680	SM860.28AL-30	6	13	22.0	53.5
	2000	2.50	680	SM860.28AL-30	6	10	37.0	80.5
	2500	1.00	520	SM860.28AL-30	7	13	17.0	43.0
	2500	1.60	520	SM860.28AL-30	7	12	30.0	68.5
	2500	2.00	480	SM860.28AL-30	7		37.0	80.5

ZAsyn2 Gearless elevator machine

SM500



Synchronous motor actuated by permanent magnets and according to the provisions of the Lift Directive 2014/33/EU

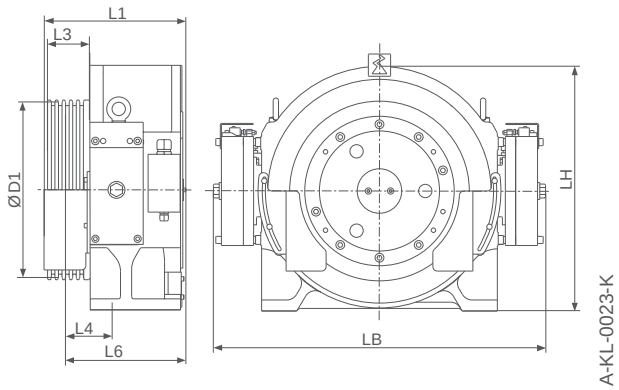
Drive
- NdFeB magnets
- Perfect for mounting in tight spaces
- Noise emissions: < 50 dB(A)
- Insulation class F with temperature monitoring

Brake system
- Safety component according to the Lift Directive 2014/33/EU
- Separately activated brake circuits
- Deployable as an element of the ascending car overspeed protection means
- Deployable as part of the protection against unintended car movement

Motor cables	Page 115
Deflection pulleys	Page 74
ZAlift	Page 80

Technical data

SM500

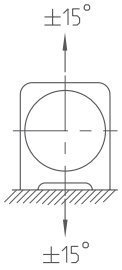


Motor type	Nominal torque	Max. axle load	Nominal speed	Rated output power	L1	LH	L4	L6	LB	D1	L3	Weight
	Nm	kg	rpm	kW	mm	mm	mm	mm	mm	mm	mm	kg
SM500.12AL-B	510	3000	48 - 167	2.6 - 8.9	318	550	84	265	747	400	90	315
SM500.16AL-B	640			3.2 11.0								

Scope of delivery and options

SM500	Standard	Options
Motor	Gearless elevator machine	-
Traction sheave	See D1	-
Brake	Certified brake system with mechanical hand release	-
Brake monitoring	Microswitch	-
Motor cable	-	10 m
Absolute encoder	EnDat	SinCos
Rope guard	2 pieces	-
Temperature monitoring	Thermal switch	-
Cooling	Surface cooling	-

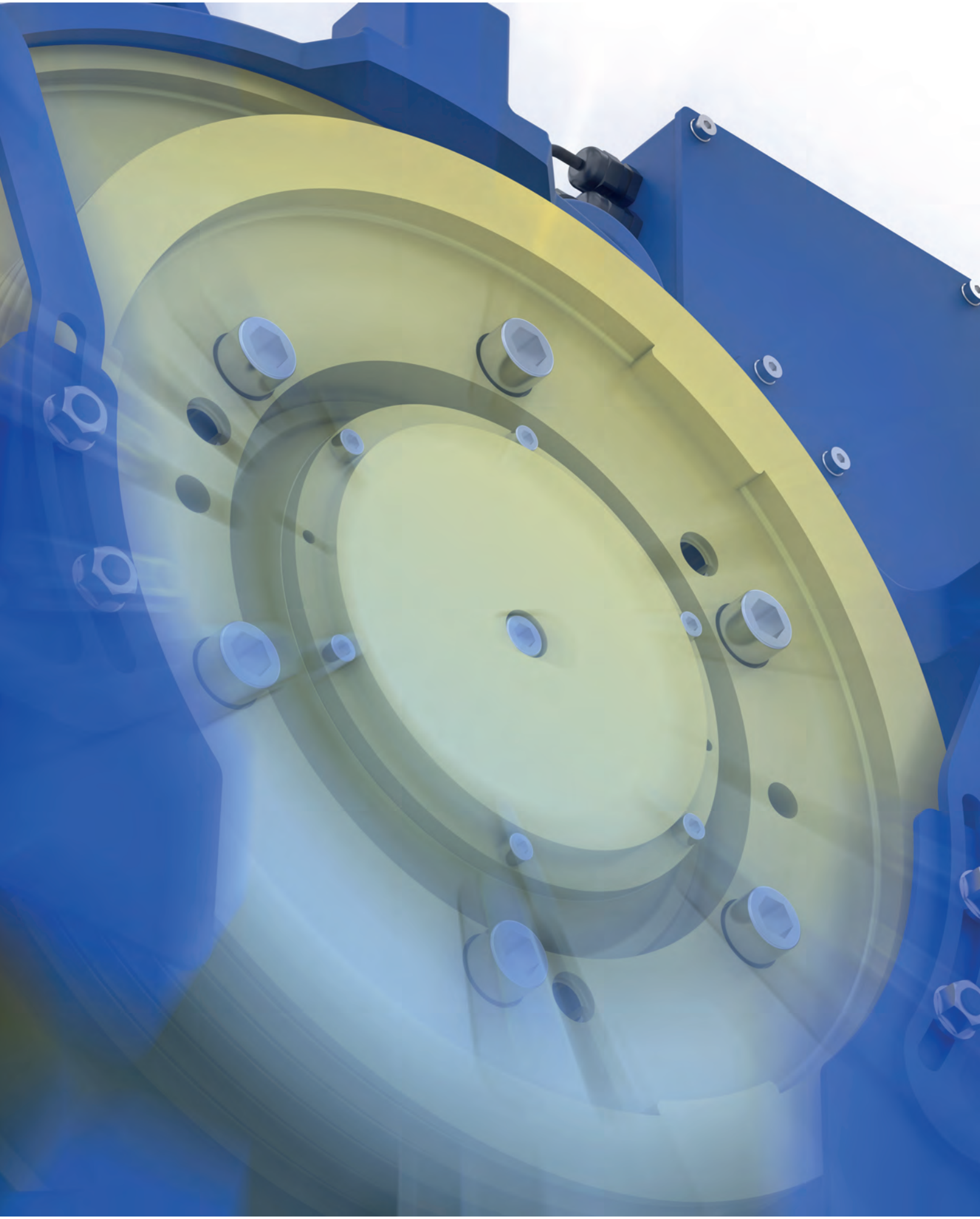
Resulting rope force



Example configurations

Other configurations, also outside of the examples listed below, are possible.
Our calculation software ZAlift is available to you for fast and convenient calculation of your elevator machine.

Suspension	Payload kg	Speed m/s	Traction sheave mm	Motor type	Number of ropes	Rope diameter mm	Motor power kW	Rated current A
1:1	450	1.0	400	SM500.12AL-B	3	10.0	2.6	7.0
	600	1.6		SM500.16AL-B	5	8.0	6.4	15.0
2:1	800	1.6		SM500.12AL-B	4		8.9	20.5
	1125	1.6		SM500.16AL-B	5		11.0	26.0





Gearless elevator machine ZAdisc

Product overview

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ZAdisc SL506, SL510 Page 49

ZAdisc gearless elevator machine

General information

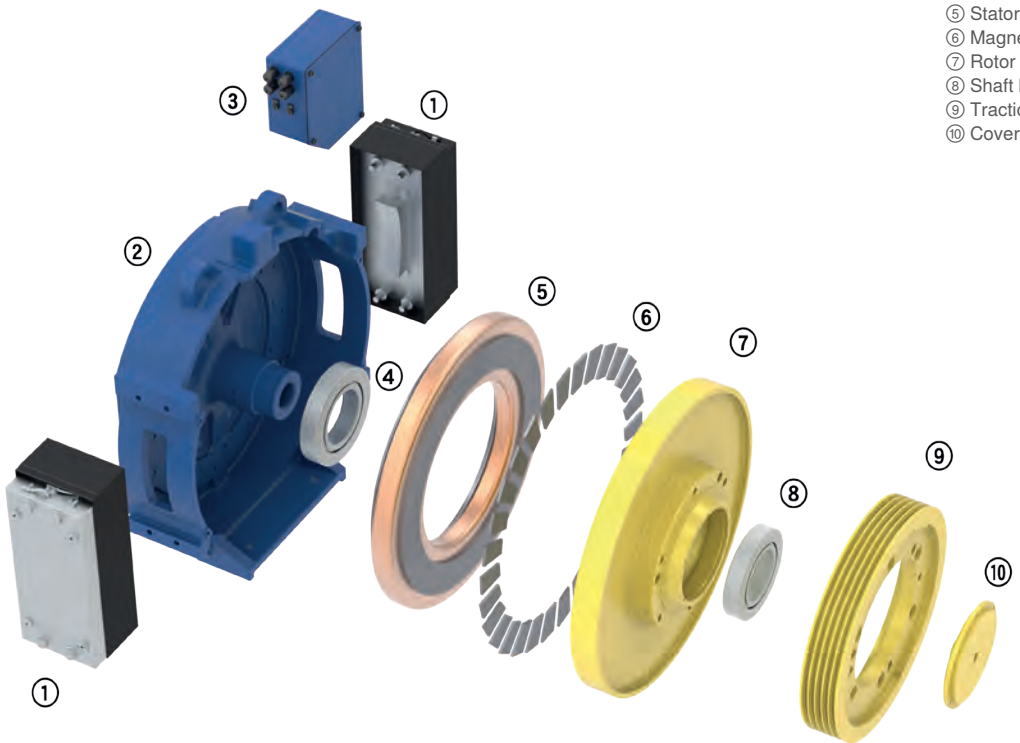
The flat elevator machine for elevators with and without a machine room

Properties

- Gearless synchronous motor actuated by NdFeB permanent magnets
- Disc rotor motor
- According to the provisions of the Lift Directive 2014/33/EU
- Very flat design for optimum shaft dimensions
- Optimised for fixing at the guide rail
- High efficiency
- Noise emissions <50 dB(A)
- Insulation class F (155 °C) with temperature monitoring via PTC thermistor
- Travel speeds of up to 1.6 m/s
- Rope diameter of 8.0 mm to 12.0 mm
- Traction sheaves:
  - Replaceable
  - Diameter of 400 mm and 480 mm
- Motor brake:
  - Safety component in accordance with Lift Directive 2014/33/EU
  - Separately actuated brake circuits
  - Deployable as an element of the ascending car overspeed protection means
  - Deployable as part of the protection against unintended car movement
- Can be equipped with conventional encoder systems (e.g. EnDat, SSI, SinCos)
- Optimum package solution with ZAdyn frequency inverter from ZIEHL-ABEGG

A glimpse inside

① Brake
② Housing
③ Junction box
④ Shaft bearing
⑤ Stator lamination
⑥ Magnets
⑦ Rotor
⑧ Shaft bearing
⑨ Traction sheave
⑩ Cover plate



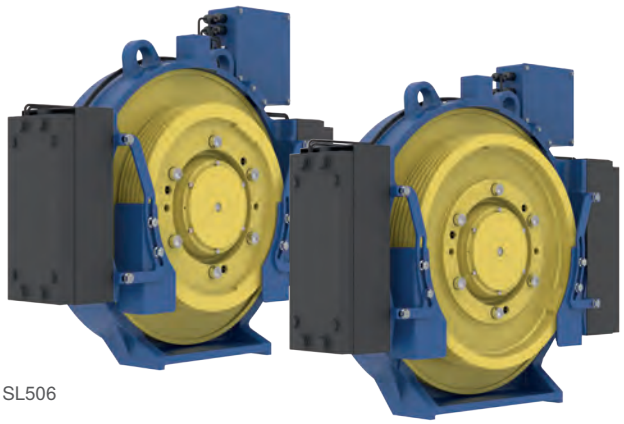
Product portfolio ZAdisc

With the gearless elevator machines ZAdisc ZIEHL-ABEGG offers you the greatest flexibility and variability.

Suspension	Max. payload kg	Traction sheave diameter mm	Max. axle load kg	Nominal torque Nm	Motor type	
2:1	675	400	1800	500	SL506 	Page 49
	1125	480	2400	870	SL510 	Page 49

ZAdisc gearless elevator machine

SL506, SL510



SL506

SL510

Synchronous motor actuated by permanent magnets and according to the provisions of the Lift Directive 2014/33/EU

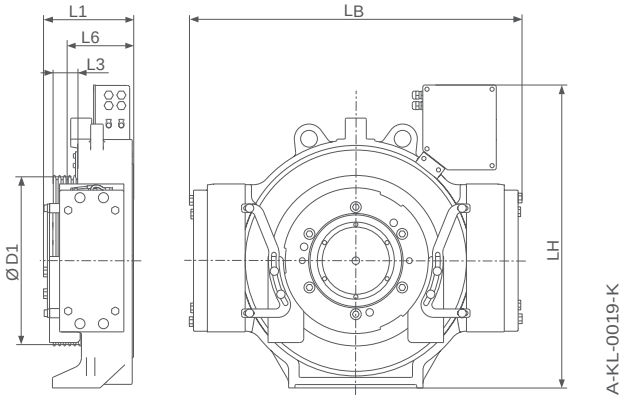
Elevator machine
- NdFeB magnets
- Installation depth ≤ 200 mm
- Optimised for attaching to the guide rail
- Noise emissions: < 50 dB(A)
- Insulation class F with temperature monitoring

Brake system
- Safety component in accordance with Lift Directive 2014/33/EU
- Separately activated brake circuits
- Deployable as an element of the ascending car overspeed protection means
- Deployable as part of the protection against unintended car movement

Motor cables	Page 115
Deflection pulleys	Page 74
ZAlift	Page 80

Technical data

SL506 / SL510

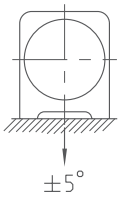


Motor type	Nominal torque	Max. axle load	Nominal speed	Rated output power	L1	LH	L6	LB	D1	L3	Weight
	Nm	kg	rpm	kW	mm	mm	mm	mm	mm	mm	kg
SL506.12-30	500	1800	96 - 156	5.0 - 8.2	217	721	158	793	400	66	310
SL510.17-28	870	2400	81 - 198	7.4 - 18.0	222	746	159	854	480	74	380

Scope of delivery and options

SL506 / SL510	Standard	Options
Motor	Gearless elevator machine	-
Traction sheave	See D1	-
Brake	Certified brake system	-
Brake monitoring	Microswitch	Inductive proximity switches
Motor cable	-	10 m, 15 m, 20 m, 25 m halogen free
Absolute encoder	EnDat	SSI / SinCos / TTL
Rope guard	2 pieces	3. Rope guard
Temperature monitoring	PTC thermistor	PT100-thermistor
Cooling	Surface cooling	-
Mounting	-	Mounting bracket and bracket for rail mounting

Resulting rope force



Example configurations

Other configurations, also outside of the examples listed below, are possible.
Our calculation software ZAlift is available to you for fast and convenient calculation of your elevator machine.

Suspension	Payload kg	Speed m/s	Traction sheave mm	Motor type	Number of ropes	Rope diam-eter mm	Motor power kW	Rated current A
2:1	480	1.00	400	SL506.12-30	3	10	5.0	19.4
	480	1.60	400	SL506.12-30	3		8.2	30.0
	630	1.00	400	SL506.12-30	3		5.0	19.4
	675	1.00	400	SL506.12-30	3		5.0	19.4
	675	1.60	400	SL506.12-30	3		8.2	30.0
	1050	1.00	480	SL506.12-30	4		7.4	28.0
	1050	1.60	480	SL510.17-28	4		11.8	42.0
	1050	2.00	480	SL510.17-28	4		14.5	50.0
	1050	2.50	480	SL510.17-28	4		18.0	61.0
	1125	1.00	480	SL510.17-28	4		7.4	28.0





Gearless elevator machine ZAtop AM

Product overview

Information Page 53

ZAtop AM200 Page 55

ZAtop AM210 Page 57

ZAtop AM Gearless elevator machine

General information

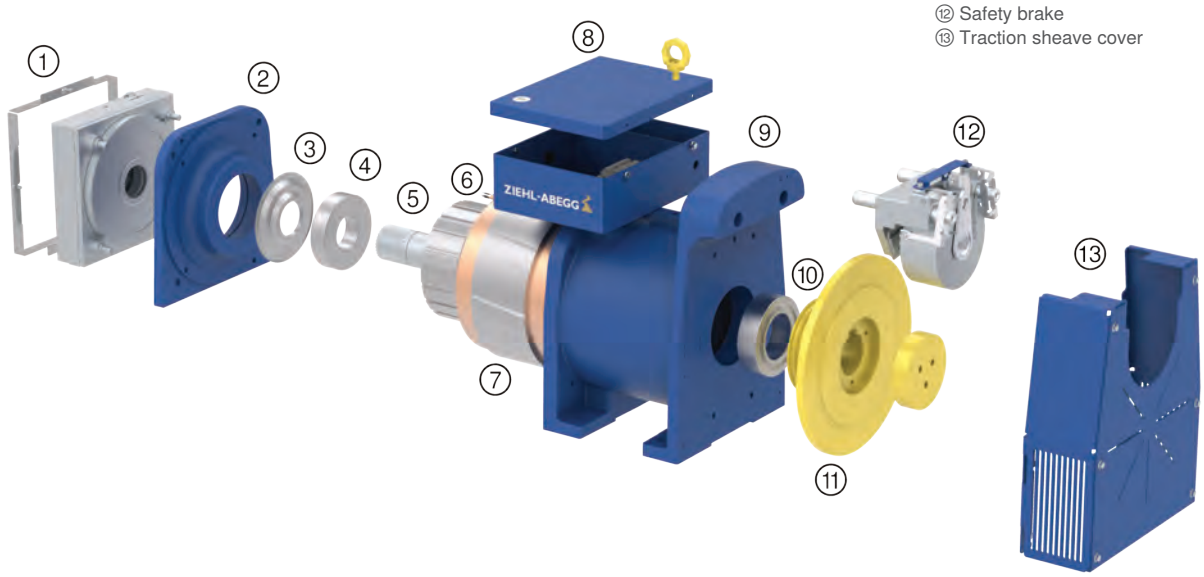
The TOP solution for elevators with and without machine rooms

Properties

- Gearless synchronous motor actuated by NdFeB permanent magnets
- Internal rotor motor
- UL-Certified for the US- and Canadian market
- Elevator machine designed in accordance with ASME A17.1
- Different sizes for optimal shaft and shaft head dimensions
- High level of efficiency
- Noise emissions ≤55 dB(A)
- Insulation class F (155 °C / 311 °F) with temperature monitoring via PTC thermistor
- Travelling speeds up to 1.75 m/s (350 fpm) at 2:1 suspension
- Motor Brake:
  - Separate service brake and safety brake
  - Deployable as an element of the ascending car overspeed protection means
  - Deployable as part of the protection against unintended car movement
  - Mechanical hand release system prepared for bowden cable (optional)
- Can be equipped with conventional EnDat encoder system

A glimpse inside

① Service brake
② Flange B-Side
③ Shaft seal ring
④ Shaft bearing
⑤ Motor shaft
⑥ Rotor with magnets
⑦ Stator lamination
⑧ Electric terminal box
⑨ Motor housing
⑩ Shaft bearing
⑪ Traction sheave
⑫ Safety brake
⑬ Traction sheave cover



Product portfolio ZAtop AM

ZIEHL-ABEGG offers you the most comprehensive range of gearless elevator machines with the greatest flexibility and variability.

Imperial units

Suspension	Max. payload lb	Traction sheave diameter inch	Max. axle load lb	Nominal torque ft lb	Motor type	
2:1	3000	6.3 & 9.76	6000	177 - 325	AM200 	Page 55
	5000	6.3 & 9.76	9890	325 - 410	AM210 	Page 57

SI-units

Suspension	Max. payload kg	Traction sheave diameter mm	Max. axle load kg	Nominal torque Nm	Motor type	
2:1	1360	160 & 248	2750	240 - 440	AM200 	Page 55
	2270	160 & 248	4485	440 - 555	AM210 	Page 57

ZAtop AM Gearless elevator machine

AM200



Synchronous motor actuated by permanent magnets and according to the provisions of the ASME A17.1

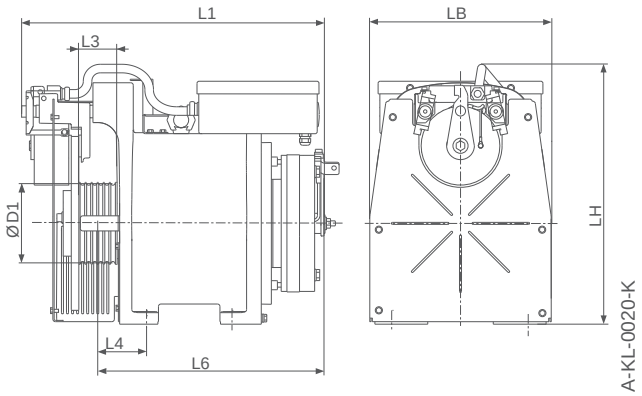
Elevator machine
- NdFeB magnets
- Structural width ≤ 385 mm (15.16 inch) for the narrowest shaft dimensions
- Noise emissions: ≤ 55 dB(A)
- Insulation class F with temperature monitoring

Brake system
- Separate operation brake and emergency brake circuits
- Deployable as an element of the ascending car overspeed protection means
- Deployable as part of the protection against unintended car movement

Deflection pulleys	Page 74
ZAlift	Page 80

Technical data

AM200



Imperial units

Motor type	Nominal torque ft-lb	Max. axle load lb	Nominal speed rpm	Rated output power kW	L1 inch	LH inch	L4 inch	L6 inch	LB inch	D1 inch	L3 inch	Weight lb
AM200.15A	177	6050	186-426	4.7 - 10.7	23.62	20.31	3.82	17.60	14.25	6.30	3.03	500
AM200.23A	243			6.4 - 14.7								540
AM200.30A	325		120-276	5.5 - 12.7	23.66	20.79		17.64	15.16	9.76	3.11	635

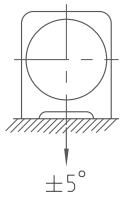
SI-units

Motor type	Nominal torque Nm	Max. axle load kg	Nominal speed rpm	Rated output power kW	L1 mm	LH mm	L4 mm	L6 mm	LB mm	D1 mm	L3 mm	Weight kg
AM200.15A	240	2750	186-426	4.7 - 10.7	600	516	97	447	362	160	77	227
AM200.23A	330			6.4 - 14.7								245
AM200.30A	440		120-276	5.5 - 12.7	601	528		448	385	248	79	288

Scope of delivery and options

AM200	Standard	Options
Motor	Gearless elevator machine	-
Traction sheave	See D1	-
Brake	Certified brake system	Mechanical hand release system prepared for bowden cable
Brake monitoring	Microswitch	-
Absolute encoder	EnDat	-
Rope guard	2 pieces	-
Protection at traction sheave	Traction sheave cover	-
Temperature monitoring	PTC thermistor	PT100-thermistor
Cooling	Surface cooling	-

Resulting rope force



Example configurations

Imperial units

Suspension	Payload lb	Speed fpm	Traction sheave inch	Motor type	Number of ropes	Rope diameter inch	Motor power kW
2:1	2100	150	6.30	AM200.15A-20	5	0.319	4.7
		150	9.76	AM200.30A-20			5.5
		200	6.30	AM200.15A-20			6.2
		200	9.76	AM200.30A-20			7.5
		350	6.30	AM200.15A-20			10.7
		350	9.76	AM200.30A-20			12.7
	2500	150	6.30	AM200.23A-20	6		6.4
		200	6.30	AM200.23A-20			8.5
		350	6.30	AM200.23A-20			14.7

SI-units

Suspension	Payload kg	Speed m/s	Traction sheave mm	Motor type	Number of ropes	Rope diameter mm	Motor power kW
2:1	950	0.75	160	AM200.15A-20	5	8.1	4.7
	950	0.75	248	AM200.30A-20			5.5
	950	1.00	160	AM200.15A-20			6.2
	950	1.00	248	AM200.30A-20			7.5
	950	1.75	160	AM200.15A-20			10.7
	950	1.75	248	AM200.30A-20			12.7
	1130	0.75	160	AM200.23A-20	6		6.4
	1130	1.00	160	AM200.23A-20			8.5
	1130	1.75	160	AM200.23A-20			14.7

ZAtop AM Gearless elevator machine

AM210



Synchronous motor actuated by permanent magnets and according to the provisions of the ASME A17.1

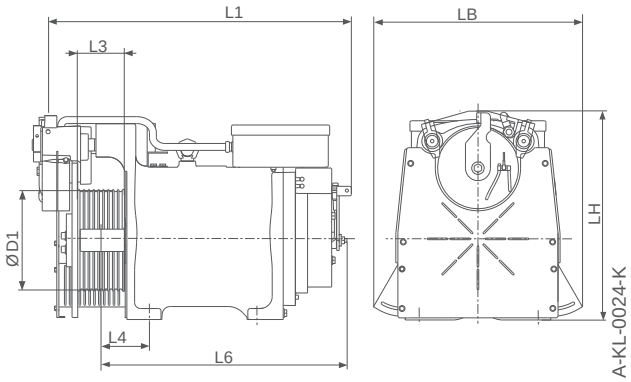
Elevator machine
- NdFeB magnets
- Structural width ≤ 395 mm (15,55 inch) for the narrowest shaft dimensions
- Noise emissions: ≤ 55 dB(A)
- Insulation class F with temperature monitoring

Brake system
- Separate operation brake and emergency brake circuits
- Deployable as an element of the ascending car overspeed protection means
- Deployable as part of the protection against unintended car movement

Deflection pulleys	Page 74
ZAlift	Page 80

Technical data

AM210



Imperial units

Motor type	Nominal torque ft-lb	Max. axle load lb	Nominal speed rpm	Rated output power kW	L1 inch	LH inch	L4 inch	L6 inch	LB inch	D1 inch	L3 inch	Weight lb
AM210.30A	325	9890	186-426	8.6 - 19.6	29.72	19.76	4.65	23.07	15.55	6.30	4.49	734
AM210.40A	409		120-426	7.0 - 24.8						6.30		778
										9.76		829

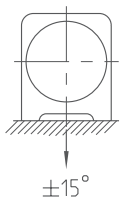
SI-units

Motor type	Nominal torque Nm	Max. axle load kg	Nominal speed rpm	Rated output power kW	L1 mm	LH mm	L4 mm	L6 mm	LB mm	D1 mm	L3 mm	Weight kg
AM210.30A	440	4485	186-426	8.6 - 19.6	755	502	118	586	395	160	114	333
AM210.40A	555		120-426	7.0 - 24.8						160		353
										248		376

Scope of delivery and options

AM210	Standard	Options
Motor	Gearless elevator machine	-
Traction sheave	See D1	-
Brake	Certified brake system	Mechanical hand release system prepared for bowden cable
Brake monitoring	Microswitch	-
Absolute encoder	EnDat	-
Rope guard	2 pieces	-
Protection at traction sheave	Traction sheave cover	-
Temperature monitoring	PTC thermistor	PT100-thermistor
Cooling	Surface cooling	-

Resulting rope force



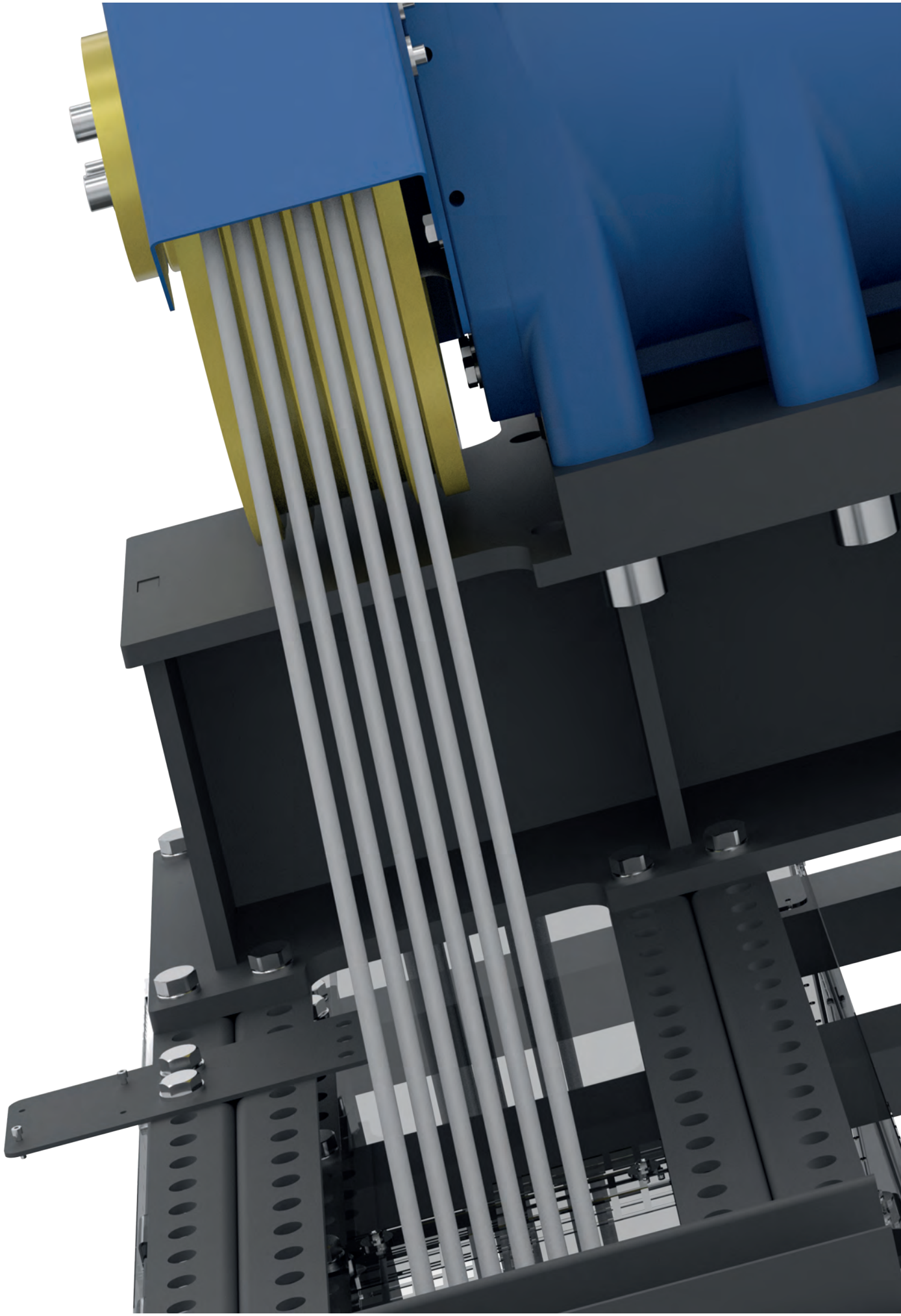
Example configurations

Imperial units

Suspension	Payload lb	Speed fpm	Traction sheave inch	Motor type	Number of ropes	Rope diameter inch	Motor power kW
2:1	3000	150	9.76	AM210.40A-20	6	0.319	7.0
		200					9.4
		350					16.0
	3500	150	6.30	AM210.30A-20	7		8.6
		200					11.3
		350					19.6
	4500	150		AM210.40A-20	8		10.8
		200					14.3
		350					24.8

SI-units

Suspension	Payload kg	Speed m/s	Traction sheave mm	Motor type	Number of ropes	Rope diameter mm	Motor power kW
2:1	1360	0.75	248	AM210.40A-20	6	8.1	7.0
		1.00					9.4
		1.75					16.0
	1585	0.75	160	AM210.30A-20	7		8.6
		1.00					11.3
		1.75					19.6
	2040	0.75		AM210.40A-20	8		10.8
		1.00					14.3
		1.75					24.8





System components

Product overview

Adapter plate	Page 61
ZAframe MF2800 / MF4000 / MF6000	Page 62
ZAframe MH3000A	Page 64
ZAframe MH4000	Page 65
ZAframe MH6000B	Page 66
ZAframe MK2850B	Page 67
ZAframe MK2850B Retrofit	Page 68
ZAframe MK4850A	Page 69
ZAframe MN3300	Page 70
ZAframe MS4000 / MS8000B	Page 71
ZAframe MD13000	Page 73
Deflection pulleys	Page 74
Forced ventilation for ZAtop and ZAtopx	Page 77
Oil heating motors	Page 78
Tool kit	Page 79
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ZAframe MP400, MP550, MP3300, MH6000B

Mechanical adapter / motor bracket

MP400 / MP550

Adapter plates for ZAtop SM190 - SM250.80D



Description

- Adapter for existing substructures
- For bolted/welded assembly
- Static load MP3300: up to 3300 kg

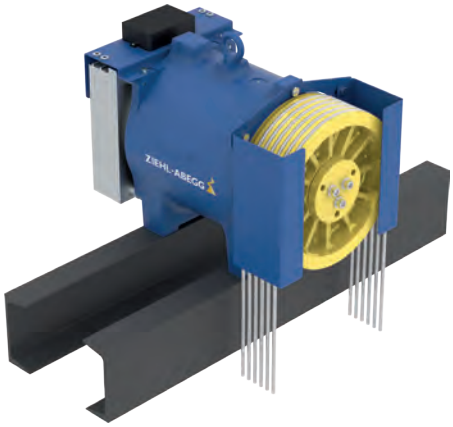
Scope of delivery

- Adapter plates or adapter rail
- Disassembled frame with fastening material

Motor type	Article no.	Dimensions (W x H x D) mm	Weight kg
SM190	70031475	400 x 40 x 400	50
SM200.15D/23D/30D			
SM200.40E/45E	70031476		
SM210.60B/70B	70031477	550 x 40 x 550	92
SM250.45B/60B/80D	70031478		90

MP3300

Adapter rail for ZAtop SM190 - SM200.45E longitudinal or transversal to traction sheave shaft



Motor type	Mounting	Article no.	Length mm	Weight kg
SM190.11B	transversal	70027242	1000	38
SM200.15D/23D/30D	longitudinal	70028535		
	transversal	70027242		
SM200.40E/45E	longitudinal	70028536		
	transversal	70027243		

MH6000B Motor bracket

Adapter bracket for ZAtop SM210 - SM250



Description

- Adapter for existing substructures
- For bolted/welded assembly
- Static load up to 6000 kg

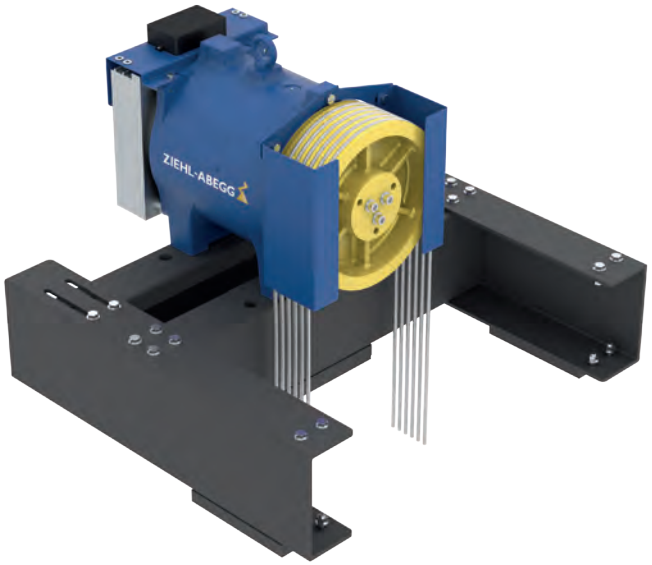
Scope of delivery

- Motor bracket
- Increases
- Fastening material

Motor type	Dimensions (W x H x D) mm	Weight kg
SM210.70B	800 x 240 x 364	88 - 146
SM250.45B		90 - 174
SM250.60B		90 - 174
SM250.80D		90 - 140

ZAframe MF2800 + MF4000

Flat frame for ZAtop SM200.15D - SM200.45E



Description

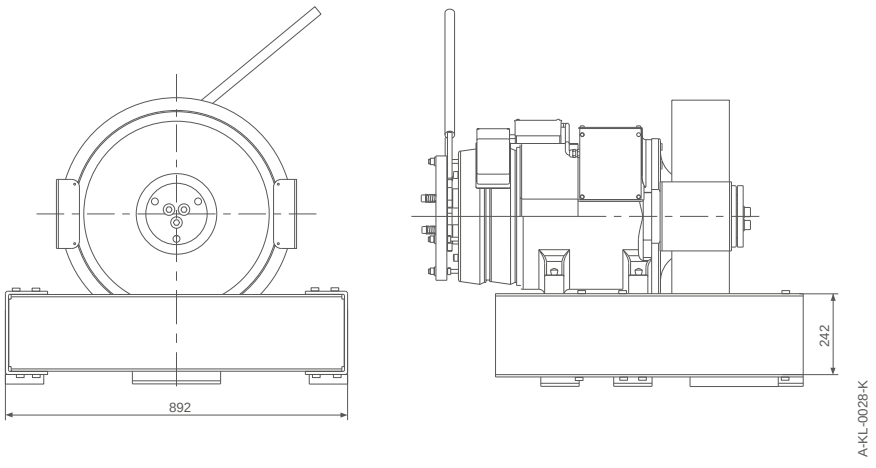
- Flat machine frame
- Bolted sheet metal construction
- Static load: up to 4000 kg
- Typical payload: 630 kg to 1600 kg
- Delivery is disassembled

Scope of delivery

- Disassembled frame with fastening material
- Vibration insulation

MF2800 / MF4000		
Motor type	Traction sheave mm	Max. static load kg
SM200.15D/23D/30D	160 - 450	2800
SM200.40E/45E	160 - 500	4000

Dimensions mm



ZAframe MF6000

Flat frame for ZAtop SM250.45B - SM250.80D



Description

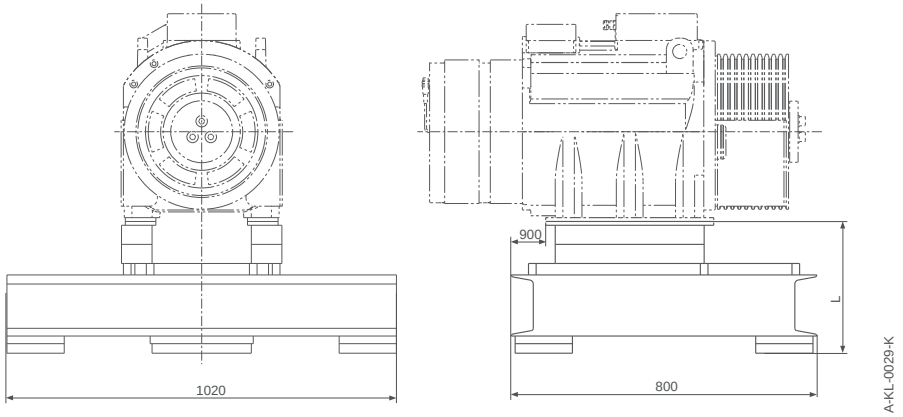
- Flat machine frame
- Welded sheet metal construction
- Static load: up to 6000 kg
- Typical payload: 1000 kg to 3600 kg
- Delivery is disassembled

Scope of delivery

- Disassembled frame with fastening material
- Vibration insulation

MF6000			
Motor type	Traction sheave	L	Max. static load
	mm	mm	kg
SM250.45B	320	245	6000
	400		
	500	295	
	520		
	600	355	
	640		
SM250.60B	320	245	
	400		
	500	295	
	520		
	600	355	
	640		
SM250.80D	440	235	
	520	285	
	640	335	

Dimensions mm



ZAframe MH3000A

Elevated frame for ZAsyn2 SM500



Description

- Elevated frame with one deflection pulley
- Bolted sheet construction
- Static load: up to 3000 kg
- Rope distance (ASL): 490 mm to 850 mm
- For screwed/ welded mounting
- Deflection pulley 400 mm
- Delivery is disassembled

Scope of delivery

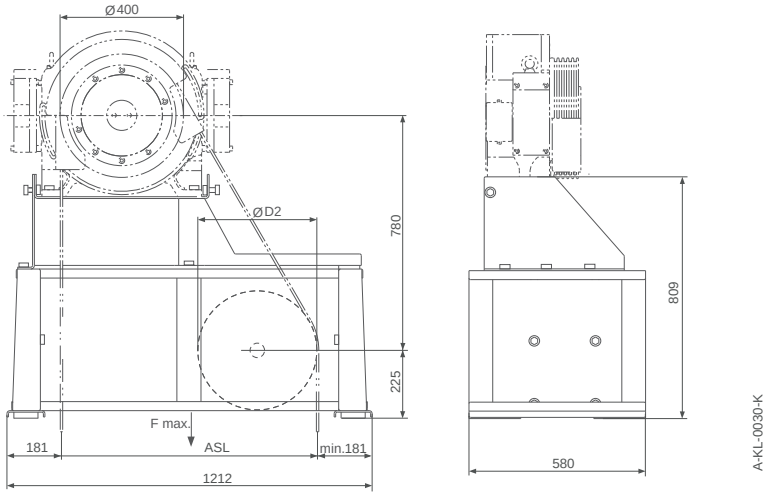
- frame with fastening material
- Deflection pulley
- Vibration insulation

Options

- rope guard
- Deviating traction sheaves and deflection pulleys

MH3000A				
Motor type	Traction sheave	Deflection pulley D2	ASL	Max. static load Fmax.
	mm	mm	mm	kg
SM500AL-B	400	320 400	490 - 850	3000

Dimensions mm



ZAframe MH4000

Elevated frame for ZAtop SM200.15D - SM200.45E



Description

- Elevated frame with one deflection pulley
- Bolted sheet metal construction
- Static load: up to 4000 kg
- Typical payload: 630 kg to 1600 kg
- Rope distance (ASL): 400 mm to 1330 mm, adjustable in 40 mm steps
- For traction sheave from 160 mm to 500 mm
- Deflection pulley: 160 mm to 520 mm
- Version as shown or machine rotated by 180°
- Delivery is disassembled

Scope of delivery

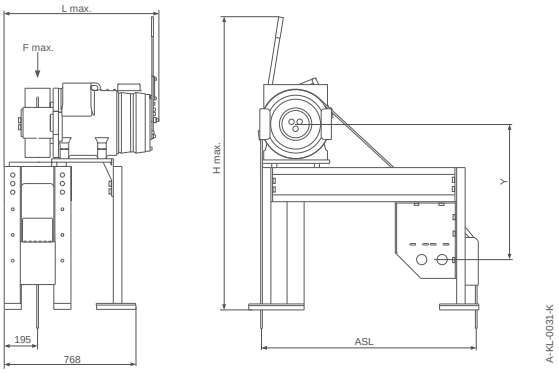
- Disassembled frame with fastening material
- Deflection pulley with fastening material
- Vibration insulation

Options

- Rope guard

MH4000				
Motor type	Traction sheave	Deflection pulley	ASL	Max. static load
	mm	mm	mm	kg
SM200.15D/23D/30D	240	240	420 - 1140	4000
SM200.15D/23D/30D	320	320	500 - 1220	
SM200.15D/23D/30D	400	400	500 - 1260	
SM200.40E/45E	160	160	420 - 1060	
SM200.40E/45E	240	240	420 - 1140	
SM200.40E/45E	320	320	500 - 1220	
SM200.40E/45E	400	400	500 - 1260	
SM200.40E/45E	500	520	500 - 1280	

Dimensions mm



Motor type	Y	H max.	L max.
	mm	mm	mm
SM200.15D/23D/30D	680	1323	763
SM200.40E/45E	797	2045	879

ZAframe MH6000B

Elevated frame for ZAtop SM210.70B - SM250.80D



Description

- Elevated frame with one deflection pulley
- Screwed sheet metal design
- Static load: up to 6000 kg
- Typical payload: 520 kg to 3000 kg
- Rope distance (ASL): 545 mm to 1080 mm
- Deflection pulley: 400 mm to 520 mm
- Version as illustrated or motor turned through 180°
- Delivery is disassembled

Scope of delivery

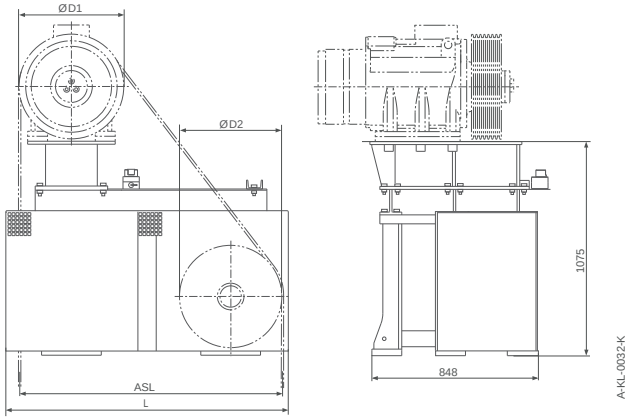
- Disassembled frame with fastening material
- Deflection pulley with fastening material
- Insulating elements

Options

- Enclosure
- Emergency stop switch retrofit kit

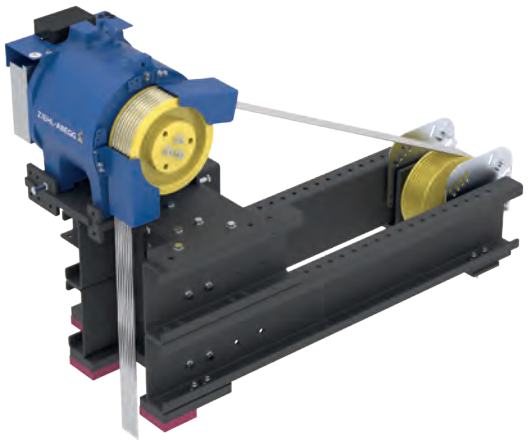
MH6000B					
Motor type	Traction sheave	Deflection pulley D2	L	ASL	Max. static load
	mm	mm	mm	mm	kg
SM210.70B	320	320	1260	540 - 1120	6000
	400	320	1300	540 - 1160	
	400	400	1340	620 - 1200	
	520	520	1420	740 - 1320	
SM250.45B / SM250.60B	320	320	1260	620 - 1120	
	400	320	1300	620 - 1160	
	400	400	1340	620 - 1200	
	500	520	1420	730 - 1310	
	520	520	1420	740 - 1320	
	600	520	1420	780 - 1320	
	640	520	1420	800 - 1340	
SM250.80D	440	440	1340	660 - 1240	
	520	520	1420	740 - 1320	
	640	520	1380	800 - 1260	

Dimensions mm



ZAframe MK2850B

Machine frame for ZAtop SM132.21/BS - SM200.30D



Description

- Frame with one deflection pulley
- Bolted sheet metal construction
- Static load: up to 2850 kg
- Typical payload: 300 kg to 1000 kg
- Rope distance (ASL): 400 mm to 1100 mm, adjustable in 50 mm steps
- Traction sheave: 120 mm to 240 mm
- Deflection pulley: 160 mm to 240 mm
- Version as shown or machine rotated by 180°
- Delivery is disassembled

Scope of delivery

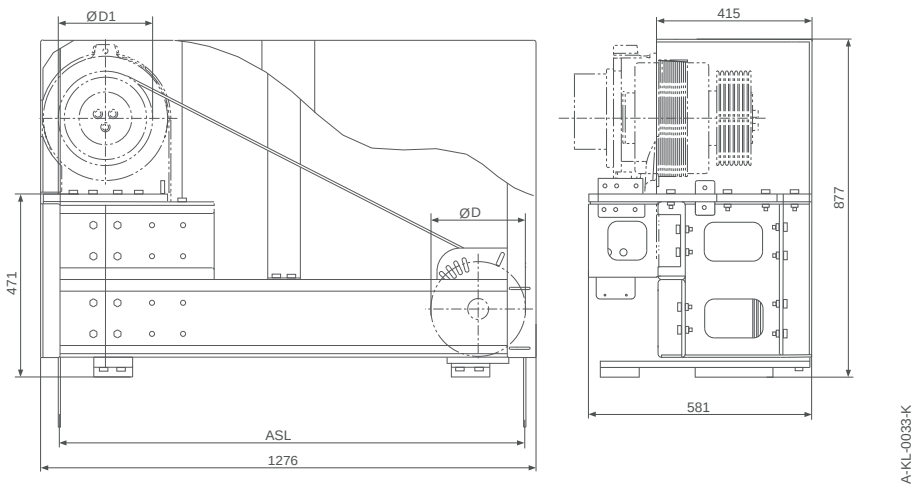
- Disassembled frame with fastening material
- Deflection pulley with fastening material
- Rope guard
- Vibration insulation

Options

- Enclosure
- Emergency stop switch retrofit kit

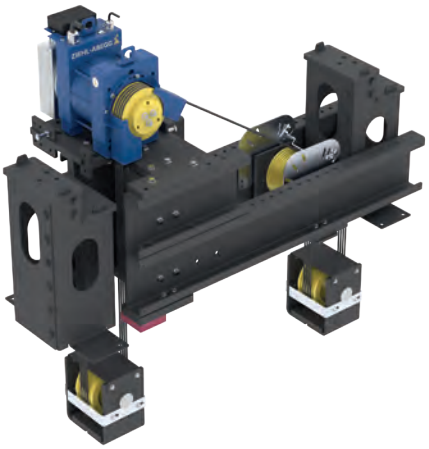
MK2850B				
Motor type	Traction sheave D1 mm	Deflection pulley D2 mm	ASL mm	Max. static load kg
SM132.21/BS SM132.35/BS	120 160	160 160	420 - 1100 440 - 1120	2850
SM200.15D/23D	160 200 210 240	160 240 240 240	440 - 1100 500 - 1180 505 - 1185 520 - 1200	
SM200.30D	200 210 240	240 240 240	500 - 1180 505 - 1185 520 - 1200	

Dimensions mm



ZAframe MK2850B Retrofit

Frame for ZAtop SM132.21/BS - SM200.23D



Description

- Frame with three deflection pulleys
- Bolted steel metal construction
- Static load: up to 2850 kg
- Payload: up to 1250 kg
- ASL: 420 mm to 1120 mm, adjustable in 40 mm increments
- Traction sheave D1: 160 mm
- Deflection pulley D2: 160 mm
- The frame can be mounted in the “left” or “right” version due to its symmetrical design
- For plastic-coated ropes: 6.5 mm - 8.1 mm
- Delivery is disassembled

Scope of delivery

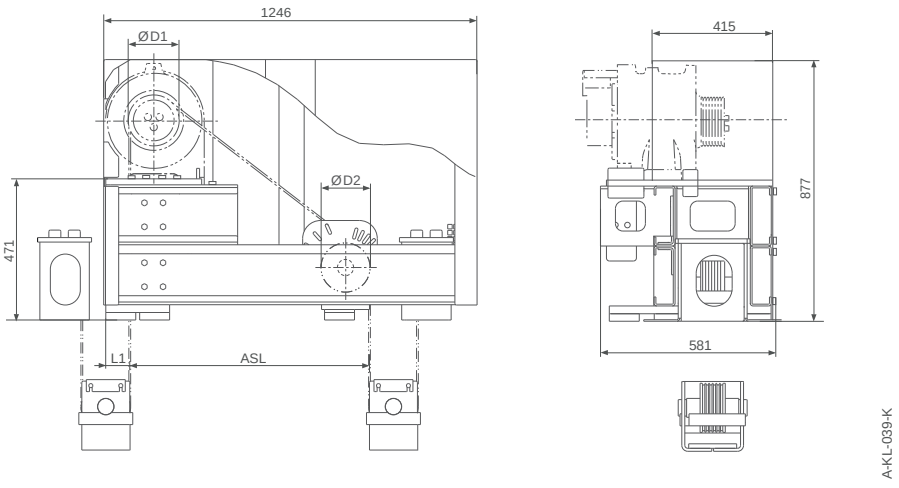
- Frame components
- Deflection pulleys, with axles and spacer sleeves
- Vibration insulation
- Rope guard
- Adjustment blocks for lateral support and precise mounting of the machine
- Required fastening material
- Two rope end terminations
- Two deflection pulleys with axles and mounting plates for installation on the car and counterweight

Options

- Complete housing
- Emergency stop switch

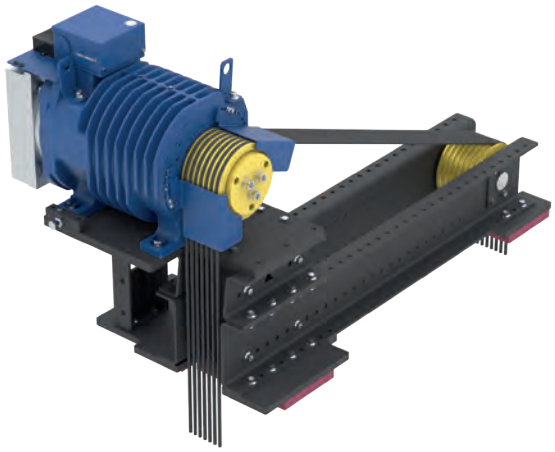
MK2850B Retrofit				
Motor type	Traction sheave D1	Deflection pulley D2	ASL	Max. static load
	mm	mm	mm	kg
SM132/BS	160	160	420 - 1120	2350
SM200.15D			420 - 800	1820
SM200.23D			420 - 1120	2800

Dimensions mm



ZAframe MK4850A

Frame for ZAtop SM205A



Description

- Frame with a deflection pulley
- Bolted steel structure
- Static load: up to 4850 kg
- Maximum payload: 1050 kg (1:1 suspension)
- Rope distance (ASL): can be adjusted on the motor side in 40 mm steps within a range of 540 to 1280 mm
- Machine traction sheave diameter: 160 mm, 200 mm
- Deflection pulley diameter: 200 mm
- Symmetrical design allows the machine frame to be mounted on either the “left” or “right” side
- The frame is delivered disassembled as individual parts or as an assembly kit

Scope of delivery

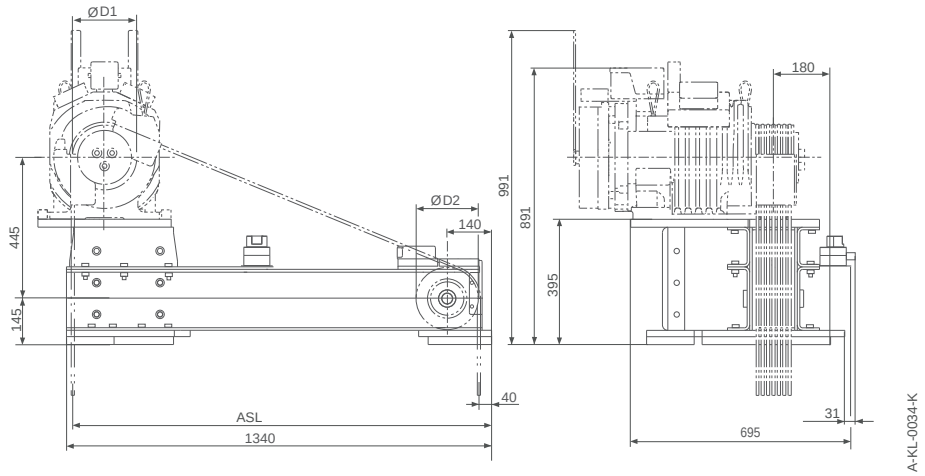
- Frame parts
- Deflection pulley with axle and spacer sleeves
- Vibration insulation
- Adapter plate
- Adjustment blocks for lateral support and precise installation for the motor
- Fastening material

Options

- Emergency stop switch

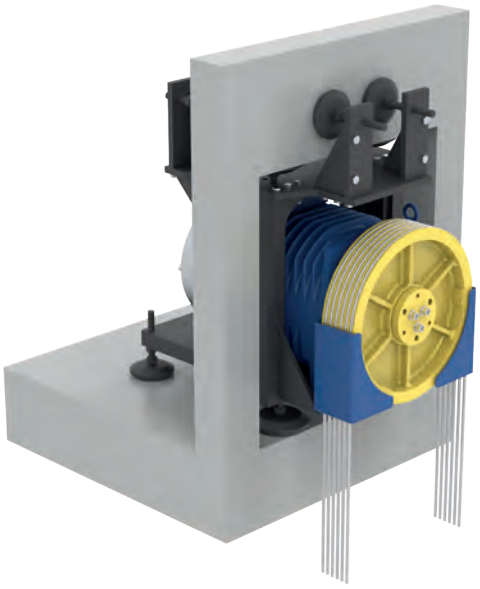
MK4850A				
Motor type	Traction sheave D1	Deflection pulley D2	ASL	Max. static load
	mm	mm	mm	kg
SM205.40A	160	200	540 - 1260	4850
	200		560 - 1280	
SM205.45A	160		540 - 1260	
	200		560 - 1280	

Dimensions mm



ZAframe MN3300

Machine frame for ZAtop SM200.15D - SM200.45E



Description

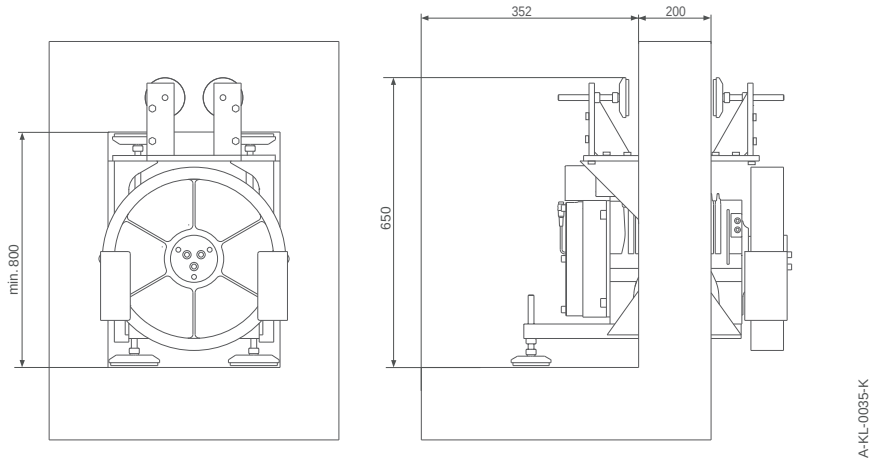
- Frame for installation position traction sheave in the shaft
- Welded / screwed construction
- Static load: up to 3300 kg
- Typical payload: 450 kg to 1600 kg
- Delivery is disassembled

Scope of delivery

- Disassembled frame with fastening material

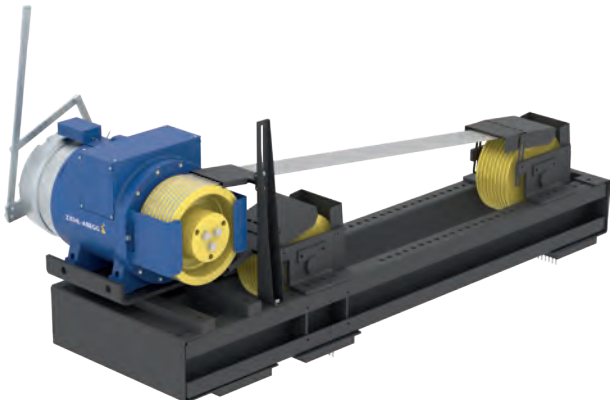
MN3300		
Motor type	Traction sheave	Max. static load
	mm	kg
SM200.15D/23D/30D	320	3300
SM200.40E/45E	320	
SM200.23D/30D	400	
SM200.40E/45E	400	
SM200.23D/30D	450	
SM200.40E/45E	500	

Dimensions mm



ZAframe MS4000

Frame S-wrap for ZAtop SM200.15D - SM200.45E



Description

- Frame with two deflection pulleys
- Bolted sheet metal construction
- Static load: up to 4000 kg
- Typical payload: 630 kg to 1600 kg
- Rope distance (ASL): 360 mm to 1200 mm, adjustable in 40 mm steps:
- Traction sheave: 200 mm to 400 mm
- Deflection pulley: 240 mm to 400 mm
- Version as shown or machine rotated by 180°
- Delivery is disassembled

Scope of delivery

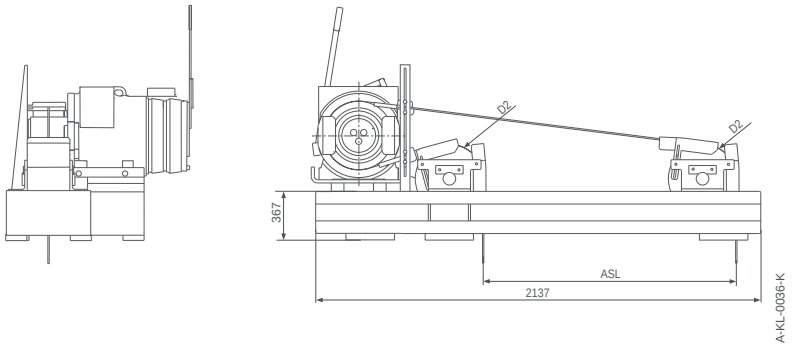
- Disassembled frame with fastening material
- Deflection pulley with fastening material
- Vibration insulation

Options

- Rope guard

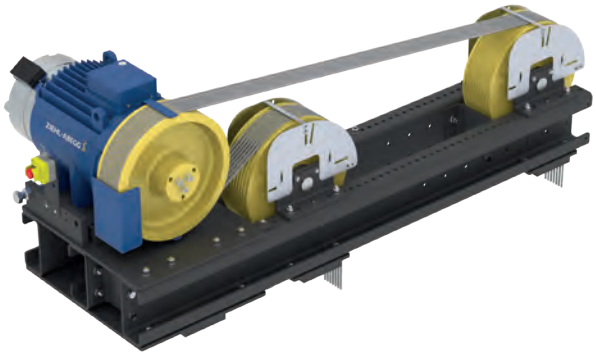
MS4000				
Motor type	Traction sheave	Deflection pulley D2	ASL	Max. static load
	mm	mm	mm	kg
SM200.15D/23D/30D	240	240	400 - 1200	4000
SM200.15D/23D/30D	320 400	240 320	440 - 1200 520 - 1200	
SM200.40E/45E	240	400	400 - 1200	
SM200.40E/45E	320 400	320 400	440 - 1200 520 - 1200	

Dimensions mm



ZAframe MS8000B

Frame S-wrap for ZAtop SM250.45B - SM250.80D



Description

- Frame with two deflection pulleys
- Bolted sheet metal construction
- Static load: up to 8000 kg
- Typical payload: 1000 kg to 3000 kg
- Rope distance (ASL): 400 mm to 1400 mm, adjustable in 40 mm steps
- Traction sheave: 320 mm to 520 mm
- Deflection pulley: 320 mm to 520 mm
- Version as shown or machine rotated by 180°
- Delivery is disassembled

Scope of delivery

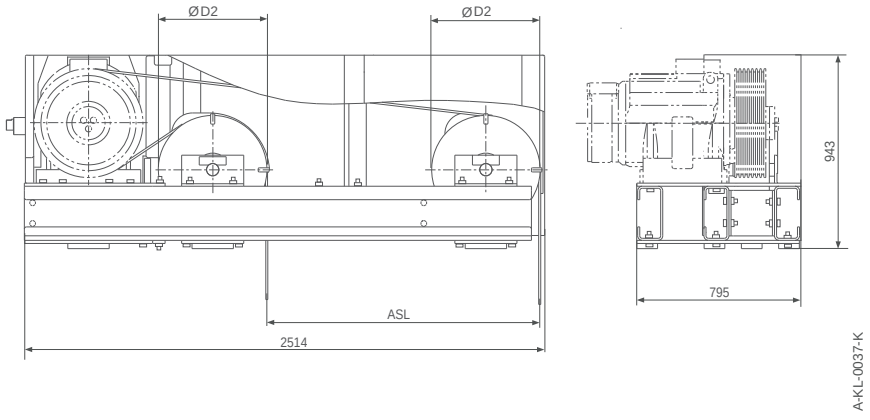
- Disassembled frame with fastening material
- Deflection pulley with fastening material
- Vibration insulation

Options

- Rope guard
- Emergency stop switch retrofit kit

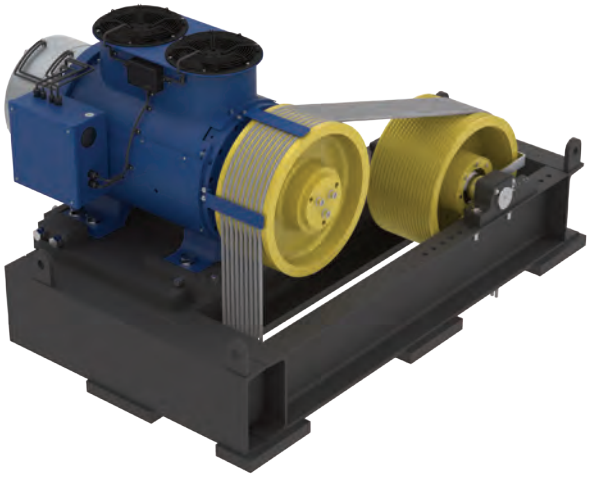
MS8000B				
Motor type	Traction sheave mm	Deflection pulley D2 mm	ASL mm	Max. static load kg
SM250.45B/60B	320	320	480 - 1440	8000
SM250.45B/60B	400	400	480 - 1400	
SM250.45B/60B	520	520	560 - 1320	
SM250.80D	440	440	520 - 1360	
SM250.80D	520	520	560 - 1320	

Dimensions mm



ZAframe MD13000

Frame for double wrap for ZAtop SM250.100C



Description

- Frame with one deflection pulley
- Welded/bolted construction
- Static load: up to 13000 kg
- Typical payload: 1000 kg to 3500 kg
- Rope distance (ASL): 1020 mm to 1455 mm, adjustable in 50 mm steps
- Traction sheave: 450 mm to 520 mm
- Deflection pulley: 520 mm
- Version as shown or machine rotated by 180°
- Delivery is disassembled

Scope of delivery

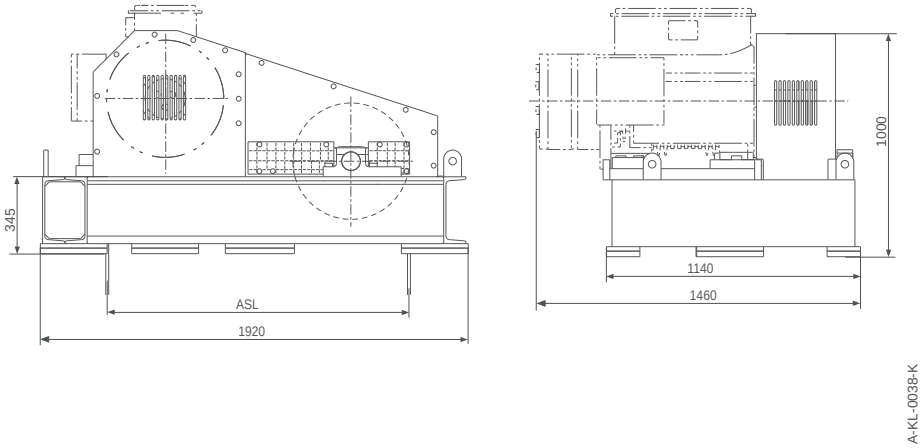
- Disassembled frame with fastening material
- Deflection pulley with fastening material
- Rope guard
- Rope retainer
- Vibration insulation

Options

- Rope guard

MD13000				
Motor type	Traction sheave mm	Deflection pulley mm	ASL mm	Max. static load kg
SM250.100C	450	520	1020 - 1420	13000
SM250.100C	500		1045 - 1445	
SM250.100C	520		1055 - 1455	

Dimensions mm



Deflection pulleys

For traction ropes



Scope of delivery

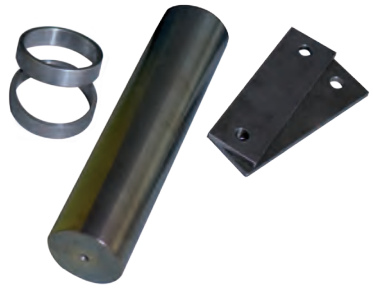
- Pulley with bearings

Deflection pulleys for traction ropes							
Deflection pulley	Number of belts x Rope diameter	Groove distance	Rim width	Axle diameter	Max. axle load	Article no.	Article no.
mm		mm	mm	mm	kg	Assembling kit (optional)	Deflection pulley
120	6 x 6.0-6.5	10	70	40	2500	70031447	02013468
160	8 x 6.0-6.5	10	90	55	2800	70031450	02013921
160	7 x 4	10	80	55	1000	70031449	02011795
160	12 x 4	10	126	55	1650	70031408	02011793
160	4 x 8.1	12	54	55	2000	70031448	02013234
160	6 x 8.1	12	84	55	2000	70031449	02013235
160	6 x 8.1	12	90	55	3000	70031450	02501246
160	8 x 8.1	12	104	55	2500	70031449	02501467
210	7 x 6	12	82	55	2000	70031450	02013344
210	10 x 6	10	112	55	2500	70031451	02013345
210	7 x 6.5-6.7	10	82	55	2000	70031450	02012909
210	10 x 6.5-6.7	10	112	55	2500	70031451	02012908
240	6x10	17	110	55	3000	70031926	02501421
240	7 x 6	10	82	55	2000	70031450	02013346
240	10 x 6	10	112	55	2500	70031451	02013347
240	12 x 6	10	134	55	2500	70031451	02013425
240	7 x 6.5-6.7	10	82	55	2000	70031450	02012910
240	10 x 6.5-6.7	10	112	55	2500	70031451	02012911
240	12 x 6.5-6.7	10	134	55	2500	70031451	02013217
240	14 x 6.5-6.7	10	156	55	3000	70031452	02013186
320	10 x 6.5-6.7	10	116	60	3000	70031453	02013241
320	6 x 8	17	116	60	3000	70031453	02007636
320	7 x 8	14	116	60	3000	70031453	02011725
320	8 x 8	17	150	60	3000	70031454	02016855
320	10 x 8	17	182	60	5000	70031455	02008315
320	12 x 8	14	182	60	5000	70031455	02010922
400	6 x 8	17	116	60	3000	70031453	02007637
400	7 x 8	14	116	60	3000	70031453	02012270
400	10 x 8	17	182	60	5000	70031455	02007638
400	12 x 8	14	182	60	5000	70031455	02007509
400	5 x 10	17	116	60	3000	70031453	02006714
400	7 x 10	17	138	60	5000	70031456	02006715
400*	10 x 10	17	182	60	5000	70031455	02007604
400*	10 x 10	17	182	60	6000	70031457	02013188
440	10 x 11	17	188	60	5230	70031458	02016067
520	7 x 10	17	133	60	6000	70031456	02500477
520	9 x 11	17	170	60	5000	70031457	02013689
520	6 x 12	20	145	60	5000	70031459	02006717
520	6 x 13	20	145	60	5000	70031459	02013278
520	8 x 13	20	170	60	5000	70031457	02006734

*Please note the max. load of the deflection pulley - see dimension sheet

Deflection pulleys

Assembling kit



Scope of delivery

- Axle
- Axle supports
- Axle keep plate

Assembling kit		
Axle diameter	Axle length	**Article no.**
mm	mm	
40	132	**70031447**
55	170	**70031448**
55	170	**70031449**
55	170	**70031450**
55	190	**70031408**
55	190	**70031451**
55	190	**70031926**
55	230	**70031452**
60	170	**70031453**
60	210	**70031456**
60	210	**70031459**
60	230	**70031454**
60	250	**70031455**
60	250	**70031457**
60	250	**70031458**

Mounting bracket



Scope of delivery

- Mounting brackets

mounting bracket	
Deflection pulley diameter	**Article no.**
mm	
120	**01009334**
160	**01005500**
210	**01005500**
240	**01005500**
320	**01005212**
400	**01005212**
440	**01005212**
520	**01005212**

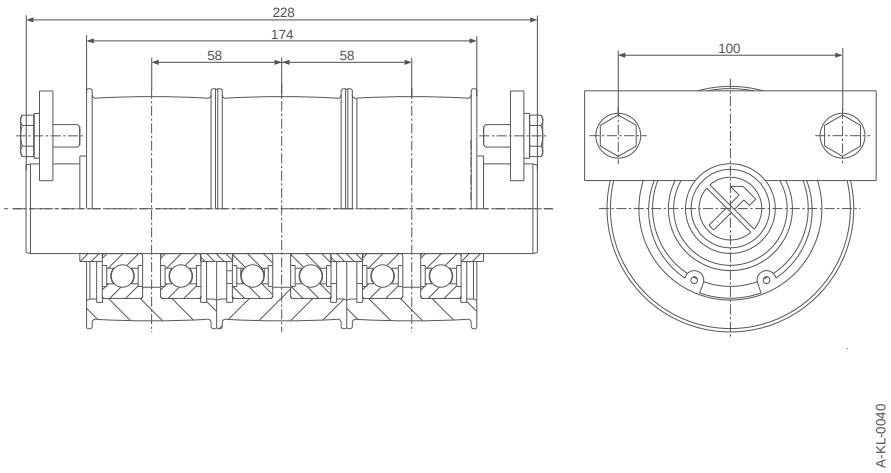
For use with a deflection pulley, two mounting brackets are required

Deflection pulleys



Deflection pulley with axle and axle keep plates ZAtopx										
Deflection pulley	Belt width	Number of belts	**Article no.**	Groove width	Rim width	Axle diam-eter	Axle length	Bearing type	Max. axle load	Weight without axle
mm	mm			mm	mm	mm	mm		kg	kg
100	30 - 33	2	**70029155**	58	116	40	228	6208-CO	2500	4.2
		2	**70029135**		116		344			4.2
		3	**70029156**		174		228			6.3
		3	**70029136**		174		344			6.3
		3	**70029169**		174		414			6.3
		4	**70029157**		232		344			8.4
		4	**70029137**		232		414			8.4
		5	**70029158**		290		344			10.5
		5	**70029138**		290		414			10.5

Dimensions in mm (shown as example)



Forced ventilation ZAtop and ZAtopx



Example of axial forced ventilation ZAtop SM250.60B

Description

For mounting on elevator machines of the ZAtop series



Example of forced cooling ZAtop SM200.30D

Forced ventilation for ZAtop				
Elevator machine	Mounting type	**Article no.**	Comment	
SM132.21, SM132.35	On top	**70031101**	With and without hand release	
SM180.24/B, SM180.35/B	On top	**70030517**	With and without hand release	
SM180.45/B, SM180.46/B	On top	**70029824**	With and without hand release	
SM200.15D - SM200.30D	On top	**70031227**	With and without hand release	
SM200.40E, SM200.45E	On top	**70030884**	With and without hand release	
SM205.40A, SM205.45A	On top	**70032186**	With and without hand release	
SM210.60B	On top	**70029725**	With and without hand release	
SM210.70B	On top	**70029727**	With and without hand release	
SM250.45B	Side B	**70029708**	With and without hand release	
	On top	**70029067**	With and without hand release	
SM250.60B	Side B	**70028260**	Without hand release system	
	Side B	**70028262**	With hand release	
	On top	**70031234**	With and without hand release	
SM250.80D	On top	**70031234**	With and without hand release	
SM250.100C	On top	**70029022**	With and without hand release	Terminal box right
	On top	**70029023**	With and without hand release	Terminal box left
SM315.100A	On top	**70031160**	With and without hand release	

Forced ventilation for ZAtopx			
Elevator machine	Mounting type	**Article no.**	Comment
BD132.21A	On top	**70031649**	With and without hand release
BD132.35A	On top	**70031650**	With and without hand release

Oil heating motors

The solution for oil tanks in elevator and industrial hydraulics





Description

- Short-circuit proof motor for heating up hydraulic oils
- Gently heat the oil, keep it moving through rotation and prevent cracking
- Nearly the entire electrically absorbed energy is converted into heat
- For hydraulic oil types HL and HLP with viscosity class 22-46

FZ023-4EA.OC.V7

- Bracket with magnetic clamps
- Temperature controller
  - Closing temperature 15 °C ± 3 °C
    Opening temperature 23 °C ± 3 °C
- Terminal box

FZ025-4DA.4C.A6

- Terminal box

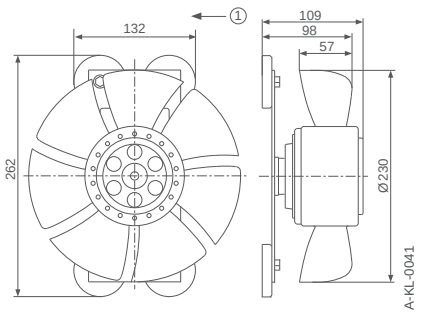
Options FZ025-4DA.4C.A6

- Temperature controller (article no. 02001138)
  - Closing temperature 15 °C ± 3 °C
    Opening temperature 23 °C ± 3 °C

Oil heating motors			
Type		**FZ023-4EA.OC.V7**	**FZ025-4DA.4C.A6**
Article no.		**880004751**	**104873**
Thermal output at 100 rpm	kW	0.5	1.4
Current consumption at 100 rpm	A	2.2	2.8
Connection voltage		1~ 230 V / 50 Hz	3~ 400 V AC / 50 Hz
Insulation class		F	F
Weight	kg	4.0	9.0
Blade diameter	mm	230	250

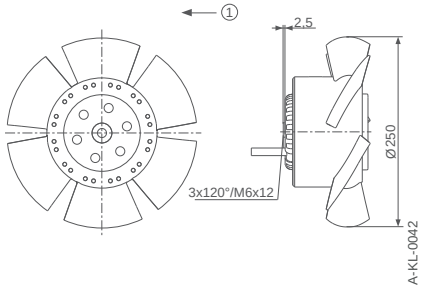
Dimensions mm

FZ023-4EA.OC.V7



① Direction of oil flow

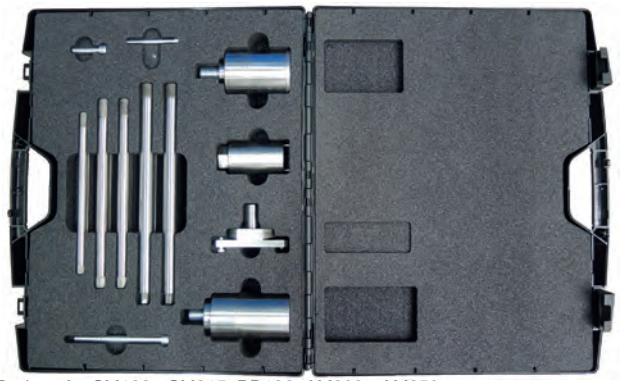
FZ025-4DA.4C.A6



① Direction of oil flow

Tool set

Tool set for replacing the brake on ZAtop and ZAtopx



Tool set for SM132 - SM315, BD132, AM200 - AM250.

Description

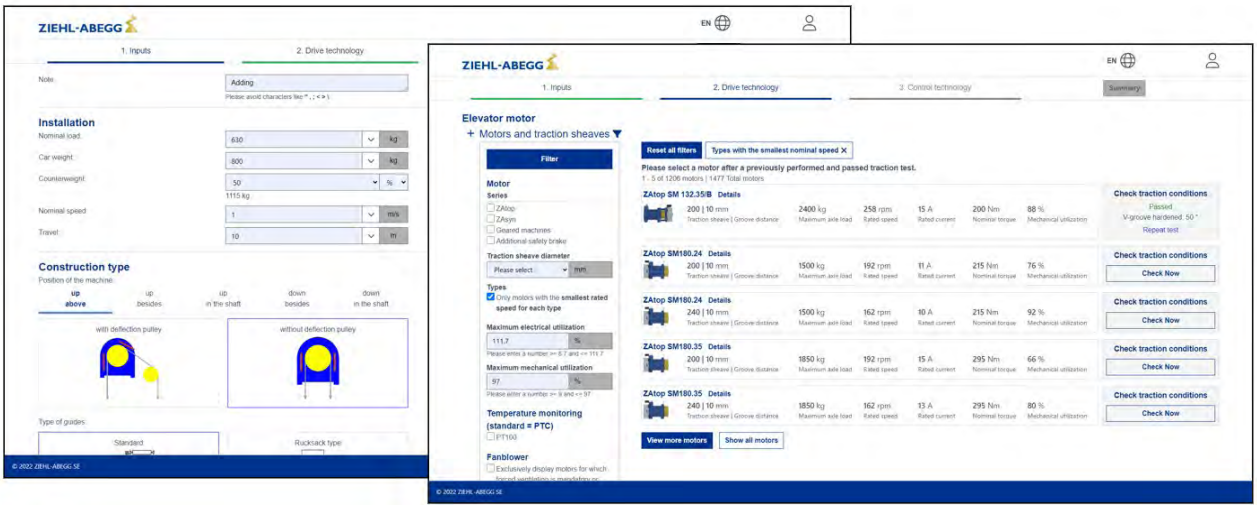
Case with auxiliary equipments and tools for installing the brake.

Tool kit	
Elevator machine	**Article no.**
ZAtop SM132	**70030741**
ZAtop SM160	
ZAtop SM180	
ZAtop SM190	
ZAtop SM200	
ZAtop SM205	
ZAtop SM210	
ZAtop SM225	
ZAtop SM250	
ZAtopx BD132	
ZAtop SM190B	**70032109**
ZAtop SM315	**70031407**
ZAtop AM200	**70031730**
ZAtop AM210	
ZAtop AM250	

ZAlift Calculation software

Calculation software for elevator machines from ZIEHL-ABEGG

ZAlift - the tool for selection of your elevator components. Based on the entered plant data, ZAlift calculates the matching package of elevator machine and frequency inverter. ZAlift provides helpful information for installation, operation and final inspection of the elevator.



ZAlift is available at www.ziehl-abegg.com.

The functions

- Selection of the drive package based on the entered plant data
  - Gearless elevator machine ZAtop, ZAtop AM, ZAtopx, ZAsyn and ZAdisc
  - Frequency inverter ZAdyn
  - Power recuperation unit ZArec4C

- Helpful information for the final inspection
  - Traction conditions according to EN 81
  - Stopping distance according to EN 81 (unintended car movement)
  - Energy efficiency class of the elevator according to VDI 4707
  - Calculations in accordance with ASME A17.1
- Helpful information for the installation
  - Calculation of the power and current consumption of the elevator machine

- Extensive database with available suspension means
- Backup of the calculation (incl. data)


ZIEHL-ABEGG
ZA dyn pro
X-SBY
X-STO
X-ENC0
X-ENC1 S
X-CAN
ZApad
ZAdynpro
Startup
Statistik
Memory Card
esc
ZIEHL-ABEGG

Control technology



Product overview

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ZAdynpro	Page 89
ZAdyn4Bplus	Page 91
EVAC 3C	Page 93
ZArec4C	Page 95

Control technology

General information



Operators, residents and passengers have high demands when it comes to a cutting-edge elevator system. In addition to travelling comfort, the noise emissions play an especially significant role in the evaluation of the elevator. The contactorless frequency inverters from the ZAdyn4C and ZAdynpro series enable very low-noise operation of the elevator machine. In this way, they make a major contribution to the realisation of a modern elevator.

STO (Safe Torque Off) - contactor-less operation according to EN 81-20

The contactor-less operation of the elevator machine according to operating mode STO (Safe Torque Off according to IEC 61800-5-2 (SIL 3)) meets the requirements of EN 81-20 to the separation of the power supply of the elevator machine.

Electronic short-circuit

The short-circuiting of the motor windings of synchronous motors avoids in many cases uncontrolled acceleration of the elevator machine and therefore ensures controllable evacuation of persons by manual opening of the motor brakes. The ZAdyn4C also has this function which was so well appreciated in its predecessors. It was implemented with consistent pursuance of the principle of the contactor-less frequency inverter and an electronic variant was developed. This is also active when no operating voltage exists!



ZAsbc4 - 100 % noiseless

The contactor-less operation of the elevator machine already makes a major contribution towards a low-noise elevator system.
The ZAsbc4 increases this to 100 %! Electronic switching of the brakes enables completely contactor-less operation of the elevator machine. This ensures minimum noise emissions and maximum comfort in the building.

Contactor-less operation - your benefit

- No switching noises
- Lower costs
- Lower power consumption
- Lower wiring costs
- No wearing components
- Reduced space requirements for the controller
- Safe operation





Specialists for elevator technology

Units for the ZAdyn series are frequency inverters solely developed for elevator technology. The various housing designs and the continuously compact construction make them perfectly suitable for both switch cabinet mounting as well as for wall installation in the machine room or elevator shaft.

Both in rope elevators with synchronous or asynchronous motors as well as in hydraulic elevators, type ZAdyn frequency inverters provide the greatest travelling comfort and the most precise stopping accuracy.

The software, specifically matched to elevator technology, facilitates intuitive operation and fast commissioning. The wide variety of interfaces facilitates fast connection to the elevator controller.

Made by ZIEHL-ABEGG

A high degree of vertical integration means great flexibility. And an ultra-modern machine fleet is available to ensure that. From component placing in the boards up to the final test and inspection of the frequency inverter and their accessories, the entire ZAdyn series is produced in our headquarters in Künzelsau. That enables us to meet our partners' demands for flexibility and speed.



EMC-conform without any great effort

All standards which are obligatory for elevator systems are complied with through the line choke and the radio interference filter integrated in the ZAdyn4C.

EN 12015: Electromagnetic compatibility - Product family standard for lifts, escalators and moving walks - Emission
EN 12016: Electromagnetic compatibility - Product family standard for lifts, escalators and moving walks - Immunity

With the integration of the EMC components, the ZAdyn4 provides the user with even more advantages:

- No mounting and wiring effort
- Use of components specifically matched to the ZAdyn4
- No risk regarding the compliance with EMC standards
- No additional space requirement

Control technology

General information



Better energy efficiency for your system!

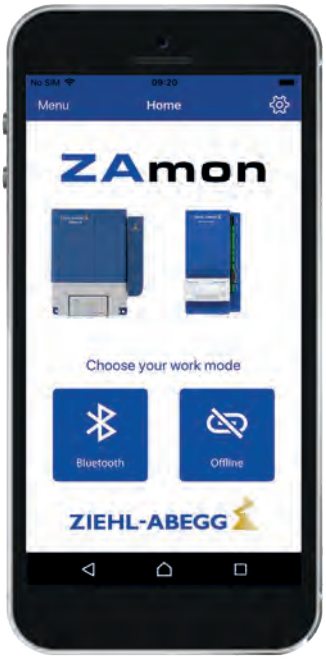
In a typical elevator system, the unused energy generated during travel is converted by a brake resistor into waste heat. From an environmental perspective, this approach is put into question by increasing resource scarcity, rising energy costs and the resulting increasing demands for energy efficiency and sustainability, which require ways of using the unexploited energy potential.The use of the ZArec regeneration unit takes these demands into account. The generated energy is stored and fed back into the supply network. ZArec has been developed especially for brief, highly dynamic regenerative operation, such as that which occurs in elevator systems.



More competence.
More experience.
More commitment.

In addition to excellent, easy to use products, personal customer support and fast, on-time delivery, customer-orientated service is also one of our special strengths. Competent support by specialised, experienced service staff is a prerequisite for saving time and costs on site. With our comprehensive service package we therefore make an essential contribution to fast start-up of your elevator system.

- Technical design of drive systems
- Application-engineering consulting when selecting frequency inverters, elevator machines, evacuation units, recuperation units and their system components
- Preset of all parameters of the ZAdyn before delivery when ordering drive packages (machine with frequency inverter) from ZIEHL-ABEGG
- Service hotline for start-up or technical questions
- Technical service and training on-site



Smart and mobile

The ZAmon Mobile app is the ideal tool for operating ZAdyn frequency inverters with mobile devices such as smartphones or tablets.
The clearly structured user interfaces with self-explanatory icons, informative texts for each parameter and online help provide the perfect conditions for fast and independent work.

For iOS and Android

- Parametrisation online and offline
- Start-up assistance
- Data backup
- Detailed description of events and solutions
- Analysis by recording travel curves
- Direct e-mail contact to ZIEHL-ABEGG customer service

ZAdyn frequency inverter for elevator machines

4C - The solution for wall installation



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Bluetooth® wireless technology ZAmon STICK	Page 99
Brake resistors BR	Page 100
Brake control ZAsbc4	Page 101
Control and connection cables	Page 110
Encoder cables	Page 120
Evacuation unit EVAC 3C	Page 93
Power recuperation unit ZArec4C	Page 95

Contactor-less operation:

- STO (Safe Torque Off) according to IEC 61800-5-2 (SIL 3).
- Requirements of EN 81-20 to the disconnection of the power supply of the elevator machine are met!

Description

- Wall mounting in the machine room or elevator shaft
- Mounting in the control cabinet
- Line choke, radio interference filter integrated
- Space-saving installation by compact design
- Operation of synchronous motors (ZAdyn4CS) and asynchronous motors (ZAdyn4CA)
- Open-Loop-Operation of asynchronous motors
- Standby function
- 4-line display with plain text display
- Minimal noise generation and low energy consumption through controlled ventilation
- Automatic operating-curves default
- Switching frequency: 4...16 kHz (automatic adaptation)
- Applied EMC standards: EN 12015 and EN 12016
- Protection class: IP20

Interfaces

Controller

- Programmable inputs and outputs
  - 5 x relay output (potential-free)
  - 12 x digital input (24 VDC)
- DCP
- CANopen-Lift
- All interfaces galvanically isolated

Encoder

- Incremental
  - HTL / TTL / Sine
- Absolute
  - EnDat / SSI / SinCos / Hiperface / BiSS-C
- Simulation for controller

Monitorings

- Temperature monitoring brake resistor
- Temperature monitoring motor (in accordance with EN 61800-5-1:2008-04)
- Motor contactor monitoring (with optional use of motor contactors)
- Brake monitoring in accordance with EN 81-20

Type	Article no.	Mains voltage type	Nominal voltage	Mains frequency	Motor power typ.	Nominal current	Current max.	Duty cycle	Weight
			VAC	Hz	kW	A	A	%	kg
ZAdyn4CA 011	352194	3~	400	50/60	4.6	11	20	60	11.80
ZAdyn4CS 011	352201								12.00
ZAdyn4CA 013	352195				5.5	13	24		12.60
ZAdyn4CS 013	352202								12.80
ZAdyn4CA 017	352196				7.5	17	31		13.00
ZAdyn4CS 017	352203								13.20
ZAdyn4CA 023	352197				11	23	42		14.10
ZAdyn4CS 023	352204								14.30
ZAdyn4CA 032	352198				14	32	58		16.40
ZAdyn4CS 032	352205								16.60
ZAdyn4CA 040	352206				19	40	72		32.40
ZAdyn4CS 040	352216								32.60
ZAdyn4CA 050	352207				24	50	90		33.30
ZAdyn4CS 050	352217								33.50
ZAdyn4CA 062	352208				30	62	112		36.20
ZAdyn4CS 062	352218								36.40
ZAdyn4CA 074	352209				37	74	134		36.40
ZAdyn4CS 074	352219								36.60

Features
- MMC / SD card interface for data backup and exchange
- USB interface for ZAmon software (via ZApad)

Options
- External ZApad operating terminal; 4-line display with plain text display
- Electronic brake control ZAsbc4
- ZAmon (app or version for pc)
- Bluetooth® wireless technology ZAmon STICK

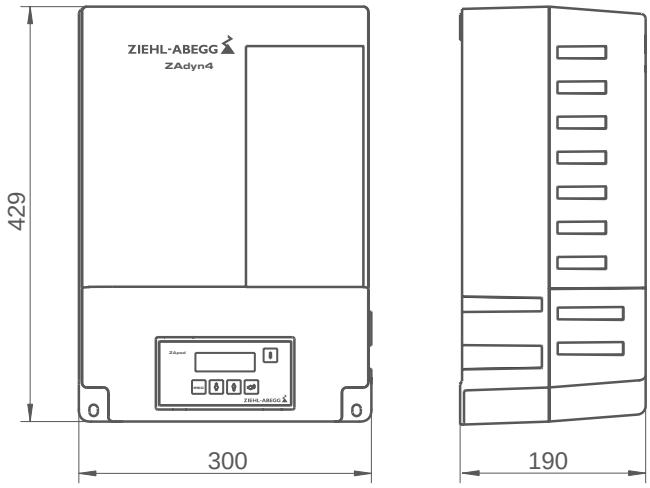
Evacuation mode
Supply during power failure through:
- EVAC 3C evacuation unit
- Uninterruptible power supply (UPS)

Electromagnetic compatibility
Compliance with EN 12015 and EN 12016 through integration of line choke and radio interference filter in the ZAdyn4C.

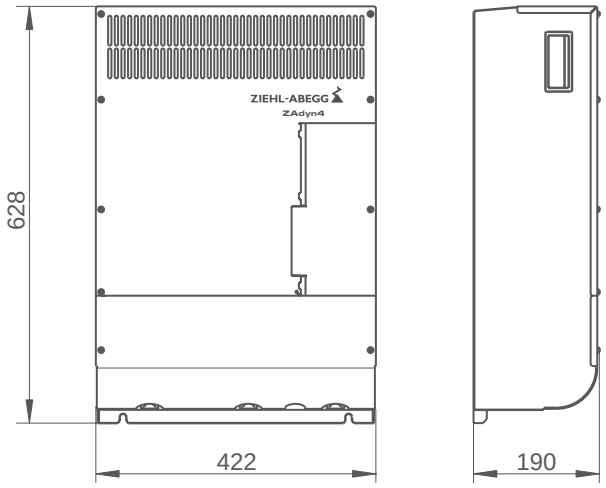
Frequency inverter	Brake resistor	Article no.
ZAdyn4C 011	**BR11-A** **BR17**	**357171** **357216**
ZAdyn4C 013	**BR17**	**357216**
ZAdyn4C 017	**BR17**	**357216**
ZAdyn4C 023	**BR25**	**357217**
ZAdyn4C 032	**BR25** **BR50**	**357217** **357218**
ZAdyn4C 040	**BR50**	**357218**
ZAdyn4C 050	**BR50**	**357218**
ZAdyn4C 062	**BR50**	**357218**
ZAdyn4C 074	**BR50** **BR100-A**	**357218** **357214**

Dimensions mm

ZAdyn4C 011-032



ZAdyn4C 040-074



ZAdyn frequency inverter for elevator machines

Pro - the solution for control cabinet mounting



Description

- Mounting in the control cabinet
- Radio interference filter integrated
- Space-saving installation by compact design
- Operation of synchronous motors and asynchronous motors
- Open-Loop-Operation of asynchronous motors
- Standby function
- 4-line display with plain text display
- Minimal noise generation and low energy consumption through controlled ventilation
- Automatic operating-curves default
- Switching frequency: 4...16 kHz (automatic adaptation)
- Applied EMC standards: EN 12015 and EN 12016
- Protection class: IP20

Interfaces

Controller

- Inputs (24 VDC)
  - 8 x digital input, freely programmable
  - 3 x digital input monitoring of motor brakes
  - 1 x digital input monitoring of braking resistor
- Outputs
  - 3 x relay output (potential-free)
  - 2 x mini relay output (potential-free)
- CANopen-Lift / DCP
- All interfaces galvanically isolated

Encoder

- Incremental
  - TTL / Sine
- Absolute
  - EnDat / SSI / SinCos / BiSS-C
- Simulation for controller

Monitorings

- Temperature monitoring brake resistor
- Brake monitoring in accordance with EN 81-20

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Brake resistors BR	Page 100
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Evacuation unit EVAC 3C	Page 93
Power recuperation unit ZArec4C	Page 95

Contactor-less operation:

- STO (Safe Torque Off) according to IEC 61800-5-2 (SIL 3) or EN ISO 13849 category 4, Performance Level e with protection class IP20.
- Requirements of EN 81-20 to the disconnection of the power supply of the elevator machine are met!

Type	Article no.	Mains voltage type	Nominal voltage	Mains frequency	Motor power typ.	Nominal current	Current max.	Duty cycle	Weight
			VAC	Hz	kW	A	A	%	kg
ZAdynpro 011	**352250**	3~	400	50/60	4.6	11	20	40	4.70
ZAdynpro 013	**352251**				5.5	13	24		4.70
ZAdynpro 017	**352252**				7.5	17	31		4.80
ZAdynpro 023	**352253**				11	23	42		6.00
ZAdynpro 032	**352254**				14	32	58		6.30
ZAdynpro 040	**352255**				19	40	72		16.00
ZAdynpro 050	**352256**				24	50	90		16.30
ZAdynpro 062	**352257**				30	62	112		17.00
ZAdynpro 074	**352258**				37	74	134		17.00

Features

- MMC / SD card interface for data backup and exchange
- USB interface for ZAmon software (via ZApadpro)

Options

- External ZApadpro operating terminal; 4-line display with plain text display
- Electronic brake control ZAsbc4
- ZAmon-Software (App or version for pc)
- Bluetooth® wireless technology ZAmon STICK

Evacuation mode

Supply during power failure through:

- EVAC 3C evacuation unit
- Uninterruptible power supply (UPS)

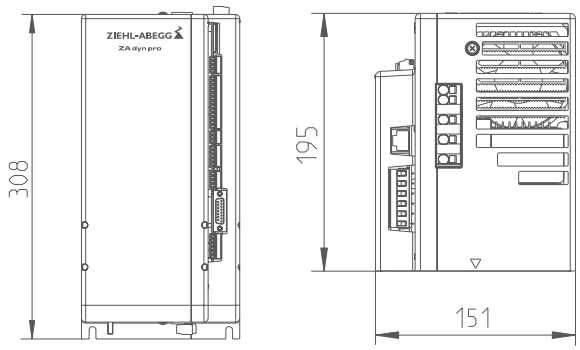
Electromagnetic compatibility

Compliance with EN 12015 and EN 12016 through integration of a line choke type ND... in the mains supply.

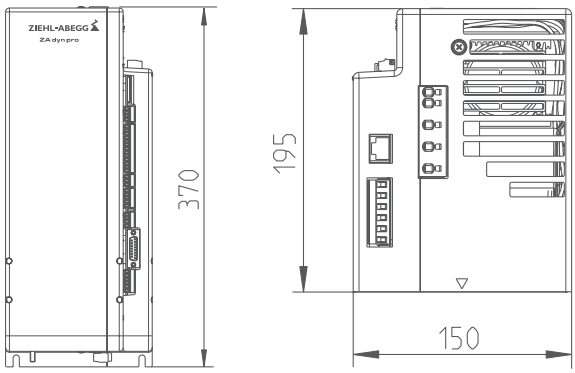
Frequency inverter	Brake resistor	Article no.
ZAdynpro 011	**BR11-A** **BR17**	**357171** **357216**
ZAdynpro 013	**BR17**	**357216**
ZAdynpro 017	**BR17**	**357216**
ZAdynpro 023	**BR25**	**357217**
ZAdynpro 032	**BR25** **BR50**	**357217** **357218**
ZAdynpro 040	**BR50**	**357218**
ZAdynpro 050	**BR50**	**357218**
ZAdynpro 062	**BR50**	**357218**
ZAdynpro 074	**BR50** **BR100-A**	**357218** **357214**

Dimensions mm

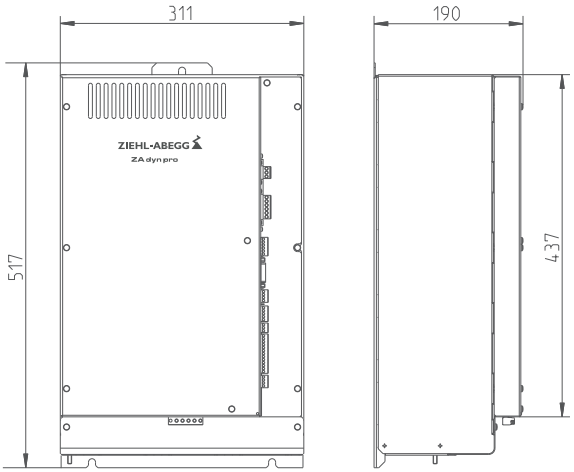
ZAdynpro 011-017



ZAdynpro 023-032



ZAdynpro 040-074



ZAdyn frequency inverter for elevator machines

4Bplus -The solution for high performances



Description

- Mounting in the control cabinet
- Space-saving installation through compact design
- Operation of synchronous motors (ZAdyn4BSplus) and asynchronous motors (ZAdyn4BAplus)
- Open-Loop-Operation of asynchronous motors
- Standby function
- 4-line display with plain text display
- Minimal noise development and low energy consumption by controlled ventilation
- Automatic operating-curves default
- Switching frequency: 3.7...8 kHz (automatic adaptation)
- Applied standards: EN 12015 and EN 12016
- Protection class: IP10

Interfaces

Control

- Programmable inputs and outputs
  - 5 x relay output (potential-free)
  - 12 x digital input (24 VDC)
- DCP
- CANopen-Lift
- All interfaces electrically isolated

Encoder

- Incremental
  - HTL / TTL / sine
- Absolute
  - EnDat / SSI / SinCos / BiSS-C
- Encoder simulation for controller

Monitoring

- Temperature monitoring brake resistor
- Temperature monitoring motor (according to IEC 61800-5-1:2008-04)
- Motor contactor monitoring
- Brake monitoring according to EN 81-20

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Line choke ND	Page 103
Radio interference filter FEF	Page 104
Brake resistors BR	Page 100
Brake control ZAsbc4	Page 101
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Contactor-less operation:

- STO (Safe Torque Off) according to IEC 61800-5-2 (SIL 3).
- Requirements of EN 81-20 to the disconnection of the power supply of the elevator machine are met!

Type	Article no.	Mains voltage type	Nominal voltage	Mains frequency	Motor power typ.	Nominal current	Current max.	Duty cycle	Weight
			VAC	Hz	kW	A	A	%	kg
ZAdyn4BAplus 110	**352300**	3~	400	50/60	55	110	198	60	56
ZAdyn4BSplus 110	**352310**								58
ZAdyn4BAplus 150	**352301**				75	150	270		62
ZAdyn4BSplus 150	**352311**								65
ZAdyn4BAplus 180	**352302**				90	180	324		62
ZAdyn4BSplus 180	**352312**								65
ZAdyn4BAplus 220	**352303**				110	220	330		62
ZAdyn4BSplus 220	**352313**								65

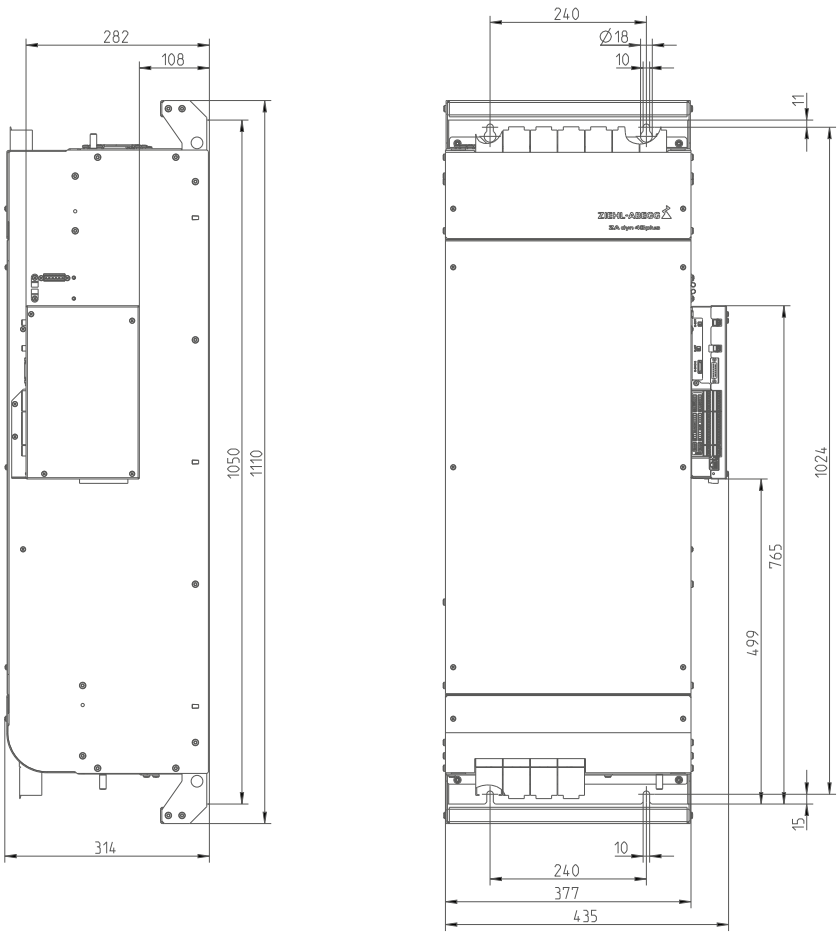
Features
- MMC / SD card interface for data backup and exchange
- USB interface for ZAmon software (by ZApad)

Options
- External operating terminal ZApad; 4-line display with plain text display
- Electronic brake control ZAsbc4
- ZAmon (app or version for pc)
- Bluetooth® wireless technology ZAmon STICK

Electromagnetic compatibility
Compliance with EN 12015 by use of:
- Line choke ND
- Radio interference filter FEF

Frequency inverter	Brake resistor	Article no.
4Bplus 110	**BR100-3B**	**357215**
4Bplus 150	**BR100-3B**	**357215**
4Bplus 180	**BR100-3B**	**357215**
4Bplus 220	**BR100-3B**	**357215**

Dimensions mm



Evacuation unit

EVAC 3C - The solution for wall installation



Monitoring of the power supply and activation of the evacuation travel

The evacuation unit EVAC 3C monitors the mains power supply of the elevator system. If one or more supply phases fail, the frequency inverter is disconnected from the supply network. The elevator control system and frequency inverter are simultaneously informed of the power failure. The battery power supply is then connected with a time delay. The frequency inverter switches to emergency mode (reduced speed) and an evacuation can be started via the elevator control system regardless of the current load ratios.

The alternative to a complex and drawn-out process of having trapped individuals freed by third-party personnel.

Operating terminal ZApad	Page 99
Frequency inverter ZAdyn4C	Page 87
Frequency inverter ZAdynpro	Page 89
EVAC Battery set and cable set	Page 119

Description

- Wall installation in machine room or elevator shaft
- For synchronous and asynchronous motors
- For frequency inverters ZAdyn
- 60 min availability (with restricted number of trips)
- Integrated mains monitoring
- Integrated charger for controlled charging of lead-gel rechargeable battery
- Operation and configuration via the ZApad operating terminal
- Monitoring of the battery temperature
- Function test via digital input
- LED display for operation / fault
- 4 x relay output
- 4 x digital input (24 VDC)
- External main switch; that permits installation in the elevator shaft
- Prefabricated cables for fast installation
- Power contactors for switching from normal to battery mode
- Integrated inverter 230 VAC / 500 W to supply:
  - Elevator controller
  - Cabin light
  - Door drive
  - Motor brake
- SD card slot for data backup

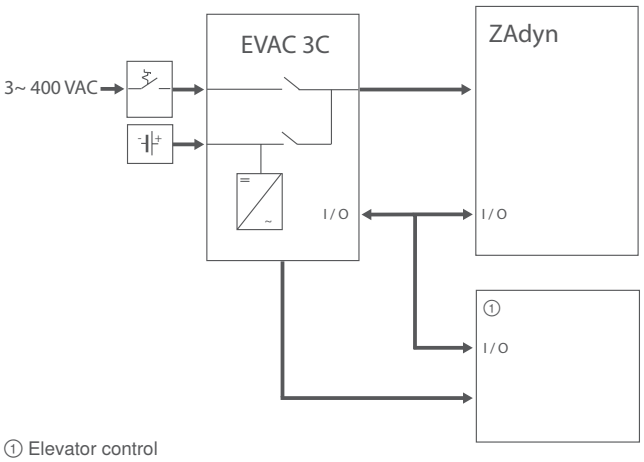
Type	Article no.	Mains voltage type	Nominal voltage VAC	Mains frequency Hz	Nominal current A	Battery voltage VDC	Battery type	Time limit evac. min	Weight kg
EVAC 3C032	**357231**	3~	400	50/60	32	120-180	Lead-Gel	60	33.20
EVAC 3C050	**357232**				50			60	34.70
EVAC 3C074	**357233**				74			60	38.40

Features
- External operating terminal ZApad
- MMC/SD card interface for data backup and exchange

Options
- Cable set LS-EVAC3C-03-HX-...-ZA3/4
- Cable set LS-EVAC3C-..-HX-ST

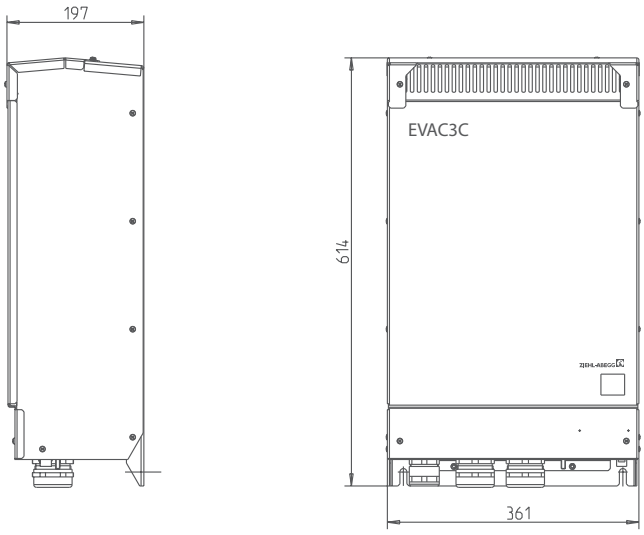
Additionally required components
- Battery set corresponding to the required output
- 4-pole main switch

Simplified diagram



① Elevator control

Dimensions mm



Power recuperation units

ZArec4C - The solution for improving energy efficiency and sustainability



With the ZArec power recuperation unit the demands for energy efficiency and sustainability of elevator systems are met. The generated energy is preprocessed and fed back into the power supply. ZArec has been developed especially for brief, highly dynamic recuperation operation, such as occurs in elevator systems.

Description

- Extremely flat design
- Perfect for the elevator shaft
  - ZArec4C 013: Mounting above the landing door
  - ZArec4C 026 / 039: Mounting between the guiding rails
- Wall mounting in the machine room or elevator shaft
- Can be used for ZAdyn frequency inverters
- Integrated standby function for saving energy
- Prefabricated cables for fast assembly
- Applied standards: EN 12015 and EN 12016
- Protection class: IP20
- Max. on-time: 20%

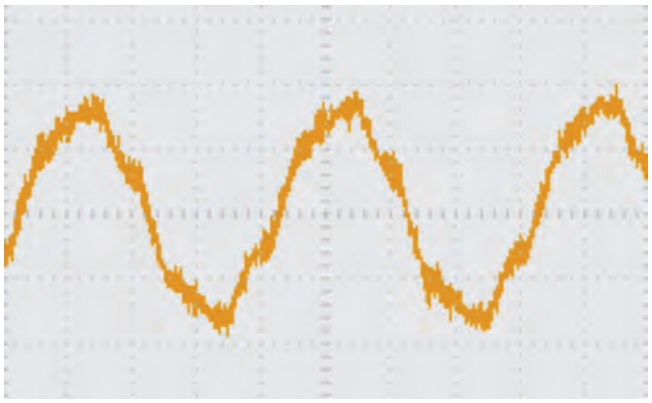
Operating terminal ZApad	Page 99
Frequency inverter ZAdyn4C	Page 87
Frequency inverter ZAdynpro	Page 89
Cable set	Page 119
Brake resistors BR	Page 100

Interfaces

- 2x relay output
- 2x digital input

Regeneration “Clean energy”

- Sinusoidal regenerative power through integrated EMC components
- Harmonic waves: I1/I5 < 5 %
- Distortion factor THD: < 5 %
- Requirements of EN 12015 for the electromagnetic compatibility are met
- No interference with network infrastructure
- No interference with the function of other devices connected to the mains power supply, e.g. computers, medical devices or radios



Sinusoidal power feed-in

Type	Article no.	Mains voltage type	Nominal voltage VAC	Mains frequency Hz	Recuperation power kW	Max. recuperation current A	Power loss standby W	Weight kg
ZArec4C 013	**357269**	3~	400	50	5	7	< 10	42.50
ZArec4C 026	**357294**				10	14.4	13	61.00
ZArec4C 039	**357295**				15	21.7		78.00

No additional brake resistor for evacuations

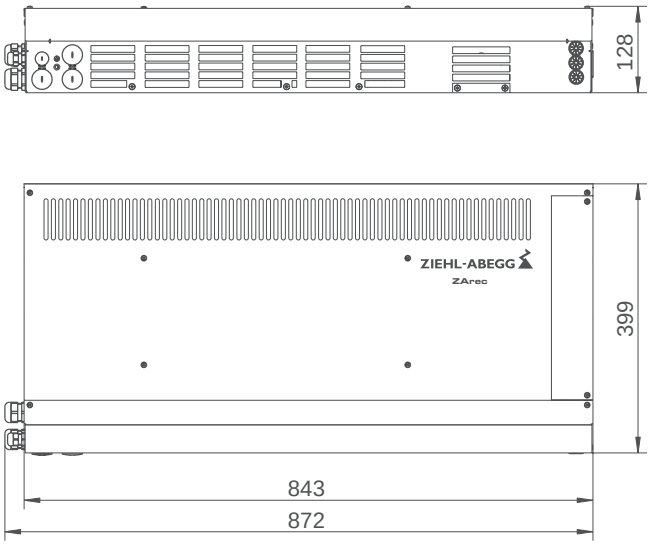
During evacuation travel, the brake resistor belonging to the ZArec converts the created energy into heat. Additional costs for an additional brake resistor are saved.

Brake resistor allocation

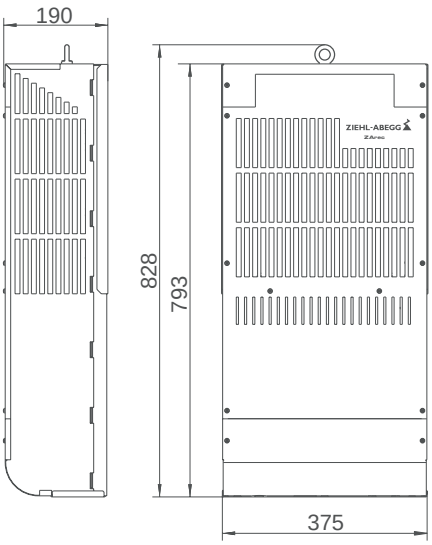
Type	Brake resistor	Article no.
ZArec4C 013	**integrated**	**-**
ZArec4C 026	**BR25-3**	**357217**
ZArec4C 039	**BR50-3**	**357218**

Dimensions mm

ZArec4C 013



ZArec4C 026-039




ZA pad
ZAdynPro
>Startup
Statistik
Memory Card
esc
ZIEHL-ABEGG



System components control technology

Product overview

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Brake resistor BR	Page 100
Electronic brake control ZAsbc4	Page 101
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Radio interference filter	Page 104
Retrofit kits	Page 105
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Control and connection cables ZAsbc4	Page 113
Connection cables ZApad	Page 114
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EVAC Battery set and cable set	Page 119
Encoder cables	Page 120
Encoder incremental	Page 123
Absolute encoder / adapter cables	Page 125
ZAmon Mobile	Page 126

ZApad





Operating terminals can be used across products.

Description

- External operating terminal
- 4-line display with plain text display

ZApad for:
- ZAdyn4
- ZAdynpro 040-074
- ZArec4C
- EVAC 3C

Article no. 357256

ZApadpro for:
- ZAdynpro 011-032

Article no. 357300

ZAmon STICK



Bluetooth® wireless technology for operation by mobile device in combination with the app ZAmon

Description

- For ZAdyn
- Bluetooth Low Energy
- Connection by network cable
- Optimal wireless connection due to different possibilities for installation in the machine room or elevator shaft

Article no. 357316

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BR100-BOX



For connection of two or three BR100-3B type brake resistors to ZAdyn4Bplus.

Description

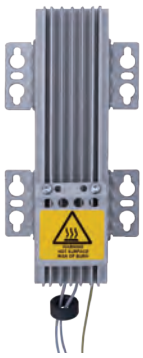
- Connection box with integrated terminals
- For parallel connection of up to three BR100-3B type brake resistors

BR100-BOX
Article no. 357261

Brake resistor BR



BR17 - BR100



BR11 - BR14

For converting the energy generated during regenerative travel into heat.

Description

- Prepared for wall installation
- Compact design
- Integrated temperature monitoring (only BR...-3)
- Integrated connection cable (only BR...-A)

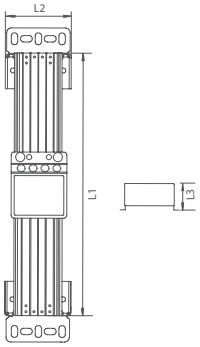
Technical data

Type	Article no.	Max. peak current	Continuous braking power	Temperature monitor trigger	Cable length	Protection class	Weight
		A	kW	°C	m		kg
BR11-A	**357171**	11.0	0.45	-	1.0*	IP50	1.8
BR14-A	**357195**	14.0	0.85	-	1.0*	IP50	2.9
BR17-3	**357216**	17.0	1.75	137 ± 4 K	5.0**	IP20	2.6
BR25-3	**357217**	25.0	1.75	137 ± 4 K	5.0**	IP20	2.6
BR50-3	**357218**	50.0	3.3	137 ± 4 K	5.0**	IP20	4.8
BR100-3A	**357214**	100.0	6.5	125 ± 4 K	5.0**	IP20	8.5
BR100-3B	**357215**	100.0	6.5	125 ± 4 K	5.0**	IP20	8.5

* Connection cable integrated
** Connection cable separate

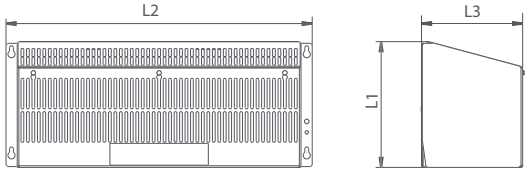
Dimensions mm

BR11 - BR14



Type	L1	L2	L3
BR011-A	225	124	120
BR014-A	426	124	120

BR17 - BR100



BR017-3	230	300	185
BR025-3	230	300	185
BR050-3	230	560	185
BR100-3A	414	560	185
BR100-3B	414	560	185

Electronic brake control

ZAsbc4



ZAsbc4C

The following conditions are necessary for comfortable travel behaviour of the elevator:
- Correctly timed switching of the brake
- Noiseless activation of the brake
- Low-noise switching of the brake

The electronic brake control ZAsbc4 meets these requirements.
The ZAsbc4 is available for mounting on to the ZAdyn4C frequency inverter and for installation in the switch cabinet.

Description

- Noiseless activation of the mechanical brake
- Correctly timed switching of the mechanical brake
- For brakes of synchronous and asynchronous motors
- Low-noise switching of the mechanical brake
- Minimum cable lengths for elevators without machine room
- Low space requirement for the controller



ZAsbc4B

Electronic brake control

- For brakes with and without overexcitation
- Operating voltage brake: 207 VDC / 103 VDC
- Evaluation of safety chain and enabling of contactor-less operation
- Retrofittable
- Prefabricated cables for connection to elevator controller

- Control inputs:
  - Activation of brake
  - Evaluation of safety chain
  - Push-buttons emergency operation and brake test

- Control outputs:
  - Activation of contactor-less operation ZAdyn
  - Status monitoring
  - Fault

Safety component according to the Lift Directive 2014/33/EU. The requirements relating to the disconnection of the energy supply to the brakes as stated in EN 81-20 are met!

Control and connection cables Page 113

Technical data

ZAsbc4C

- For mounting on ZAdyn4C
- Prefabricated cables for connection to ZAdyn4C

Type	Article no.	Voltage safety chain VAC	Voltage supply brake U~ VAC	Motor brake output voltage VDC	Output current A
ZAsbc4C 110	**357292**	110	230	0.9 x U~ 0.45 x U~	2 x 1.1
ZAsbc4C 230	**357293**	230			

ZAsbc4B

- For control cabinet installation

Type	Article no.	Voltage safety chain VAC	Voltage supply brake U~ VAC	Motor brake output voltage VDC	Output current A
ZAsbc4B 110	**357290**	110	230	0.9 x U~ 0.45 x U~	2 x 1.1
ZAsbc4B 230	**357291**	230			

Line reactors ND



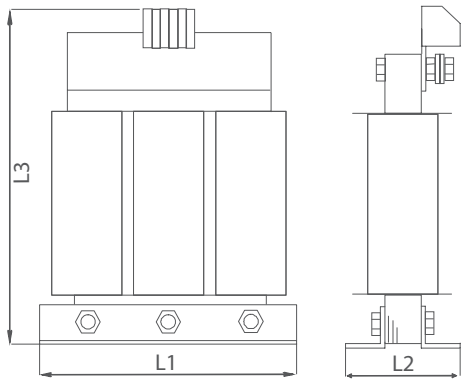
Description

- For ZAdynpro and ZAdyn4Bplus
- For compliance with the limits required by EN 12015 (interference emission)
- Reduction of the harmonics
- Damping of commutation notches and mains feedback

Technical data

Type	Article no.	Nominal current A	Protection class	Weight kg	Frequency inverter
ND011	**357180**	11	IP00	2.40	ZAdynpro 011
ND013	**357181**	13		2.50	ZAdynpro 013
ND017	**357182**	17		3.30	ZAdynpro 017
ND023	**357183**	23		4.00	ZAdynpro 023
ND032	**357184**	32		6.70	ZAdynpro 032
ND040	**357185**	40		7.70	ZAdynpro 040
ND050	**357186**	50		8.70	ZAdynpro 050
ND062	**357187**	62		12.10	ZAdynpro 062
ND074	**357188**	74		12.30	ZAdynpro 074
ND110	**357196**	110		14.00	ZAdyn4Bplus 110
ND180	**357197**	180		21.00	ZAdyn4Bplus 180
ND150	**357326**	150		21.00	ZAdyn4Bplus 150
ND220	**357327**	220		25.00	ZAdyn4Bplus 220

Dimensions mm



Type	L1	L2	L3
ND011	125	61	135
ND013	125	71	135
ND017	125	71	135
ND023	155	80	160
ND032	155	95	170
ND040	190	85	200
ND050	190	120	200
ND062	190	120	200
ND074	190	120	200
ND110	230	150	280
ND180	230	150	305
ND150	230	150	293
ND220	240	150	297

Radio interference filter FEF



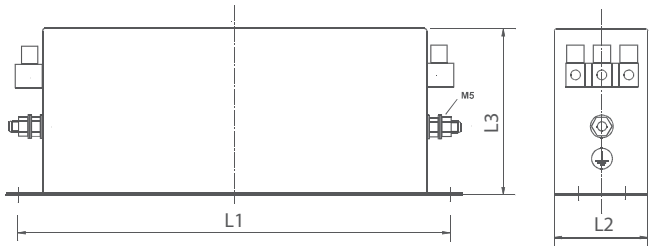
Description

- For ZAdyn4Bplus
- For compliance with the limits required by EN 12015 (interference emission)
- Reduces high-frequency electromagnetic emission

Technical data

Type	Article no.	Nominal current A	Protection class	Weight kg	Frequency inverter
FEF180KK4D-02	357199	180	IP20	6.00	ZAdyn4Bplus 110 ZAdyn4Bplus 150 ZAdyn4Bplus 180
FEF220KK4D	357328	220		8.30	ZAdyn4Bplus 220

Dimensions mm



Type	L1	L2	L3
FEF180KK4D-02	450	130	180
FEF220KK4D	450	130	180

Retrofit kits

Retrofit kit DISCcontrol

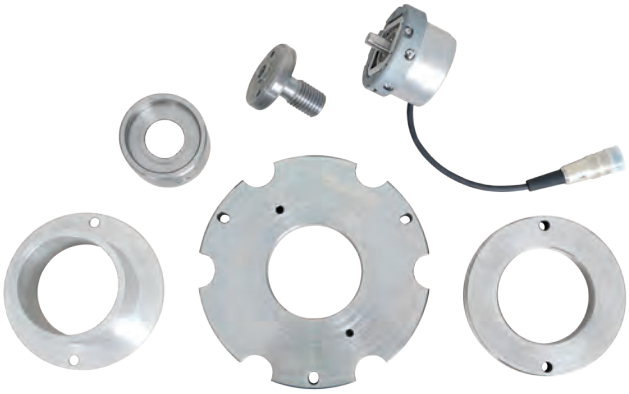


Description
- Retrofit kit for operation of permanently excited disc motors with ZA-dyn4CS
- Quick frequency inverter replacement in combination with a commonly available elevator controller
- Simple attachment of the incremental encoder and hall sensor
- Fail-safe connection of incremental encoder and hall sensor thanks to pre-assembled cables
- Extremely safe operation thanks to adjustment of the number of correction magnets on the existing motor type
- Software-supported magnet positioning
- Existing brake resistor can continue to be used

Scope of delivery
- Attachment kit with incremental encoder and hall sensor
- Magnets for determining the rotor position
- Adhesive and template for magnet assembly
- Assembly instructions

Article no. 357299

Retrofit kit DISCcontrol-18



Description
- Retrofit kit for operation of permanently excited disc motors with ZA-dyn4CS
- Quick frequency inverter replacement in combination with a commonly available elevator controller
- Simple attachment of the absolute encoder thanks to the mechanical attachment kit
- Fail-safe connection of the absolute encoder thanks to pre-assembled cables
- Existing brake resistor can continue to be used

Scope of delivery
- Absolute encoder with attachment kit

Article no. 70030968

Retrofit kit SMART



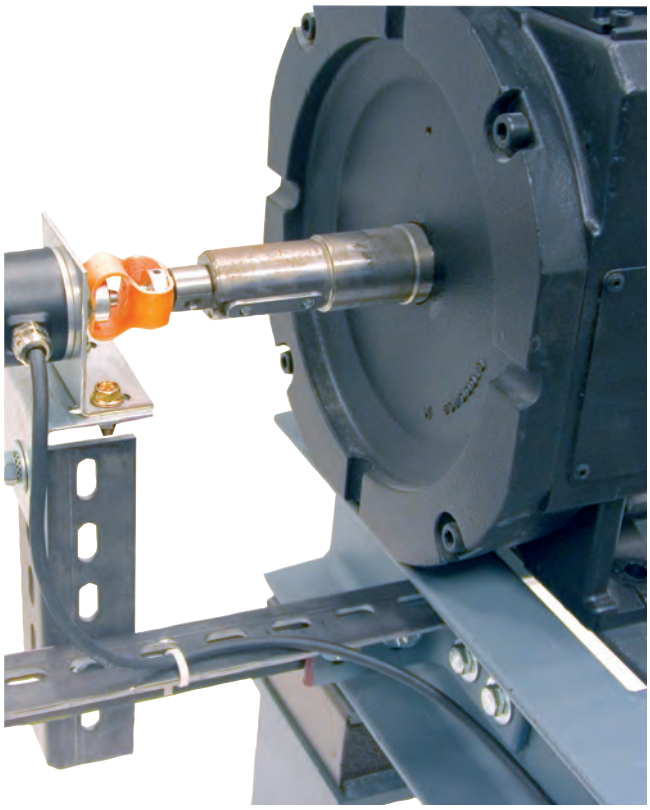
Description
- Retrofit kit for replacement of the frequency inverter on Schindler Smart type elevator systems based on ZAdyn4CA
- No replacement of the controller
- With incremental encoder for improved travel comfort

Scope of delivery
- Incremental encoder
- Adapter M16 for incremental encoder
- 3 relays (110 VAC) for signal adaptation

Article no. 357281

Retrofit kits

Retrofit kit incremental encoder with solid shaft



Description

- Retrofit kit for fast and simple mounting of an incremental encoder with solid shaft
- Mounting with and without hand wheel possible
- Prefabricated encoder cable

Scope of delivery

- Incremental encoder
  - Incl. cable with plug D-SUB 15-pin for ZAdyn4 and ZAdynpro
- Flex coupling
  - Thermoplastic compensation element for connection between incremental encoder and motor shaft
- Adaptor
  - For mounting the flex coupling on the motor shaft
- Motor add-on kit
  - Solid angles and struts for rigid connection to the machine frame or floor





Technical data

Type	Threaded nipple	Operating voltage incremental encoder VDC	Signal shape	Cable length m	Article no.
Retrofit kit Incremental encoder	M8	4.75 ... 30	RS422 Incremental	10.0	**70028208**
	M10				**70028209**
	M12				**70028210**
	M14				**70028211**
	M16				**70028212**
	M20				**70028327**

Retrofit kits

Incremental encoder retrofit kit with hollow shaft



Description

- Adapter for quick and simple assembly of an incremental encoder with hollow shaft
- Assembly with or without handwheel

Centring thread Motor shaft	Shaft diameter Adapter mm	Article no.
M10	28	70024258
M12		70024259
M16		70024260
M20		70025581

ZAdyn4C retrofit kit



Description

- Adapter for fast and error-proof conversion of ZETADYN to ZAdyn4C
- No new control cables required
- Integrated mini contactors for activating contactor-free operation
- For 110 VAC and 230 VAC safety circuits
- Integrated outputs for existing monitoring of the motor contactors by the elevator control

Type	Article no.	Voltage safety chain VAC
ZETADYN 2 - ZAdyn4C 110	357315	110
ZETADYN 2 - ZAdyn4C 230	357314	230
ZETADYN 3C - ZAdyn4C 110	357318	110
ZETADYN 3C - ZAdyn4C 230	357317	230

Control and connection cables ZAdyn4

Brake release monitoring micro switches

- For ZAtop and ZAdisc
- Connection of the micro-switches for the brake release monitoring to the ZAdyn4C frequency inverter
- Prefabricated:
  - Connection side ZAdyn4: plug 5-pin
  - Connection side brake: wire end sleeves
- Halogen-free



Type	Article no.	Length m	Cable cross section mm²
L-BL-018-HX-ZA4-AE	00165936-018M	1.8	3 x 0.75
L-BL-03-HX-ZA4-AE	00165936-03M	3.0	
L-BL-05-HX-ZA4-AE	00165936-05M	5.0	
L-BL-10-HX-ZA4-AE	00165936-10M	10.0	
L-BL-15-HX-ZA4-AE	00165936-15M	15.0	
L-BL-20-HX-ZA4-AE	00165936-20M	20.0	
L-BL-25-HX-ZA4-AE	00165936-25M	25.0	

Brake release monitoring inductive proximity switches

- For ZAtop and ZAdisc
- Connection of the inductive proximity switches for the brake release monitoring to the ZAdyn4 frequency inverter
- Prefabricated:
  - Connection side ZAdyn4: plug 5-pin
  - Connection side brake: wire end sleeves
- Halogen-free

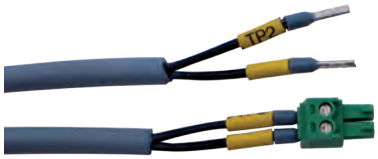


Type	Article no.	Length m	Cable cross sec-tion mm²
L-BL-018-HX-ZA4-AE-INI	00166085-018M	1.8	4 x 0.75
L-BL-03-HX-ZA4-AE-INI	00166085-03M	3.0	
L-BL-05-HX-ZA4-AE-INI	00166085-05M	5.0	
L-BL-10-HX-ZA4-AE-INI	00166085-10M	10.0	
L-BL-15-HX-ZA4-AE-INI	00166085-15M	15.0	
L-BL-20-HX-ZA4-AE-INI	00166085-20M	20.0	
L-BL-25-HX-ZA4-AE-INI	00166085-25M	25.0	

Control and connection cables neutral

Motor protection PTC thermistor

- Connection of the PTC thermistor for motor protection
- Prefabricated:
  - Both connection sides: wire end sleeves
- Halogen-free



Type	Article no.	Length m	Cable cross section mm²
L-KL-018-HX-AE-AE	00165835	1.8	2 x 0.75
L-KL-03-HX-AE-AE	00165836	3.0	
L-KL-05-HX-AE-AE	00165837	5.0	
L-KL-10-HX-AE-AE	00165838	10.0	
L-KL-15-HX-AE-AE	00165839	15.0	
L-KL-20-HX-AE-AE	00165838-20M	20.0	
L-KL-25-HX-AE-AE	00165838-25M	25.0	

Brake release monitoring inductive proximity switches

- Connection of the inductive proximity switches for the brake release
- Prefabricated:
  - Both connection sides: wire end sleeves
- Halogen-free



Type	Article no.	Length m	Cable cross section mm²
L-BL-018-HX-AE-AE-INI	02013434-1.8M	1.8	4 x 0.75
L-BL-03-HX-AE-AE-INI	02013434-03M	3.0	
L-BL-05-HX-AE-AE-INI	02013434-05M	5.0	
L-BL-10-HX-AE-AE-INI	02013434-10M	10.0	
L-BL-15-HX-AE-AE-INI	02013434-15M	15.0	
L-BL-20-HX-AE-AE-INI	02013434-20M	20.0	
L-BL-25-HX-AE-AE-INI	02013434-25M	25.0	

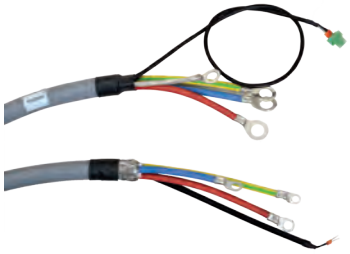
Control and connection cables ZAdyn4

Brake resistor cable

- Cable to connect the brake resistor BR..-3 to the ZAdyn4 frequency inverter and BR100-BOX
- Prefabricated
- Integrated conductors for temperature monitoring
- Halogen-free



L-BR-..-HX-2.5-ZA4
L-BR-..-HX-6-ZA4

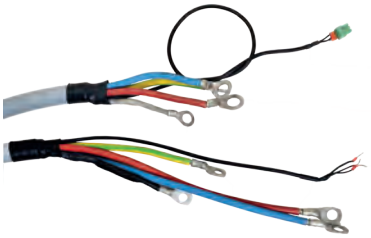


L-BR-..-HX-16-ZA3/4

Frequency inverter type	Type	Article no.	Cable length m	Cable cross section mm²
ZAdyn4C 011 ZAdyn4C 013 ZAdyn4C 017 ZAdyn4C 023	**L-BR-03-HX-2.5-ZA4** **L-BR-05-HX-2.5-ZA4**	**00165932-03M** **00165932-05M**	3.0 5.0	3 x 2.5 + 2 x 0.5
ZAdyn4C 032 ZAdyn4C 040 ZAdyn4C 050 ZAdyn4C 062 ZAdyn4C 074	**L-BR-03-HX-6-ZA4** **L-BR-05-HX-6-ZA4**	**00165933-03M** **00165933-05M**	3.0 5.0	3 x 6.0 + 2 x 0.5
ZAdyn4Bplus 110 ZAdyn4Bplus 150 ZAdyn4Bplus 180 ZAdyn4Bplus 220	**L-BR-03-HX-16-ZA3/4** **L-BR-05-HX-16-ZA3/4**	**00165724** **00165725**	3.0 5.0	3 x 16.0 + 2 x 0.5

Cable BR100-BOX

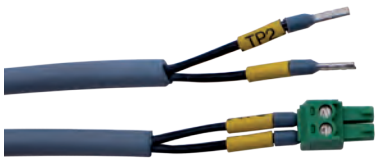
- Cable for connecting the BR100-BOX to ZAdyn4Bplus
- Prefabricated
- Integrated wires for temperature monitoring
- Halogen-free



Frequency inverter type	Type	Article no.	Cable length m	Cable cross section mm²
ZAdyn4Bplus	**L-BR-03-HX-16-BR-BOX**	**00165953-03M**	3.0	3x16.0 + 2x0.5

Connection cable motor temperature monitoring PTC thermistor

- Connection of the PTC to the ZAdyn4 frequency inverter
- Prefabricated:
  - Connection side ZAdyn4: plug 4-pin
  - Connection side motor: wire end sleeves
- Halogen-free



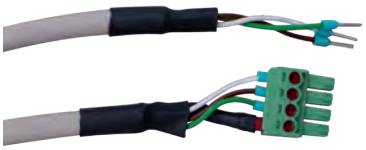
Type	Article no.	Cable length m	Cable cross section mm²
L-KL-018-HX-ZA3/4-AE	**00165801**	1.8	2 x 0.75
L-KL-03-HX-ZA3/4-AE	**00165650**	3.0	
L-KL-05-HX-ZA3/4-AE	**00165846**	5.0	
L-KL-10-HX-ZA3/4-AE	**00165800**	10.0	
L-KL-15-HX-ZA3/4-AE	**00165847**	15.0	
L-KL-20-HX-ZA3/4-AE	**00165801-20M**	20.0	
L-KL-25-HX-ZA3/4-AE	**00165801-25M**	25.0	

Control and connection cables ZAdyn4

Control cable DCP

Standard cables

- Prefabricated:
  - Connection side ZAdyn4: plug 4-pin
  - Connection side elevator controller: wire end sleeves
- Halogen-free



Type	Article no.	Cable length m	Cable cross section mm²
L-SL-03-HX-ZA-DCP	00164123	3.0	2 x 2 x 0.25
L-SL-05-HX-ZA-DCP	00165925	5.0	
L-SL-10-HX-ZA-DCP	00164136	10.0	
L-SL-25-HX-ZA-DCP	00164137	25.0	
L-SL-50-HX-ZA-DCP	00164138	50.0	

Control-dependent special cable NEW LIFT

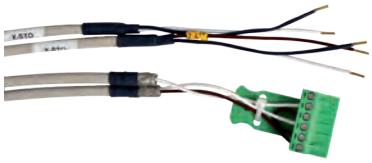
- Prefabricated:
  - Connection side ZAdyn4: plug 4-pin
  - Connection side elevator controller: D-SUB 9-pin
- Halogen-free

Type	Article no.	Cable length m	Cable cross section mm²
L-SL-03-HX-ZA-DCP-1	00164048	3.0	2 x 2 x 0.25
L-SL-05-HX-ZA-DCP-1	00165926	5.0	
L-SL-10-HX-ZA-DCP-1	00164049	10.0	
L-SL-25-HX-ZA-DCP-1	00164050	25.0	
L-SL-50-HX-ZA-DCP-1	00164051	50.0	

Control and connection cables ZAdyn4

STO control cable

- Activation of the Safe Torque Off (STO) function
- Prefabricated:
  - Connection side ZAdyn4: plug 6-pin
  - Connection side elevator controller: wire end sleeves
- Halogen-free



Type	Article no.	Cable length m	Cable cross section mm²
L-SL-03-HX-ZA4-STO	00165938-03M	3.0	3 x 0.5
L-SL-05-HX-ZA4-STO	00165938-05M	5.0	
L-SL-10-HX-ZA4-STO	00165938-10M	10.0	
L-SL-25-HX-ZA4-STO	00165938-25M	25.0	
L-SL-50-HX-ZA4-STO	00165938-50M	50.0	

Control cable digital inputs

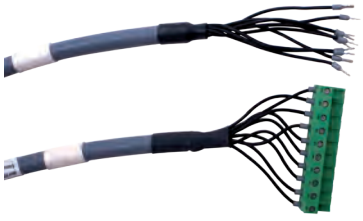
- Activation of the digital inputs through the elevator controller
- Prefabricated:
  - Connection side ZAdyn4: plug, 13-pin
  - Connection side elevator controller: wire end sleeves
- Halogen-free



Type	Article no.	Cable length m	Cable cross section mm²
L-SL-03-HX-ZA4-IN	00165934-03M	3.0	12 x 0.5
L-SL-05-HX-ZA4-IN	00165934-05M	5.0	
L-SL-10-HX-ZA4-IN	00165934-10M	10.0	
L-SL-25-HX-ZA4-IN	00165934-25M	25.0	
L-SL-50-HX-ZA4-IN	00165934-50M	50.0	

Control cable digital outputs

- Evaluation of the digital outputs through the elevator controller
- Prefabricated:
  - Connection side ZAdyn4: plug, 10-pin
  - Connection side elevator controller: wire end sleeves
- Halogen-free



Type	Article no.	Cable length m	Cable cross section mm²
L-SL-03-HX-ZA4-OUT	00165935-03M	3.0	10 x 0.5
L-SL-05-HX-ZA4-OUT	00165935-05M	5.0	
L-SL-10-HX-ZA4-OUT	00165935-10M	10.0	
L-SL-25-HX-ZA4-OUT	00165935-25M	25.0	
L-SL-50-HX-ZA4-OUT	00165935-50M	50.0	

Plug kit ST4C

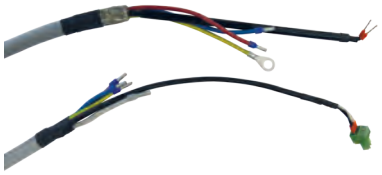
- Consisting of all connectors for connecting the ZAdyn4

Article no. 357258

Connection cables ZAdynpro

Brake resistor cable

- Cable to connect the brake resistor BR..-3 to the ZAdynpro frequency inverter
- Prefabricated
- Integrated conductors for temperature monitoring
- Halogen-free

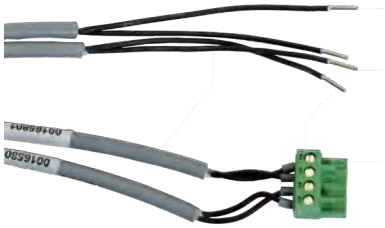


Frequency inverter type	Type	Article no.	Cable length m	Cable cross section mm²
ZAdynpro 011-032	L-BR-03-HX-2,5-ZAp	00166112-03M	3.0	3 x 6.0 + 2 x 0.5
	L-BR-03-HX-6-ZAp	00166113-03M	3.0	3 x 6.0 + 2 x 0.5
ZAdynpro 040-074	L-BR-03-HX-6-ZAp	00166155-03M	3.0	6 x 6.0 + 2 x 0.5

Control and connection cables ZAsbc4

Brake control

- For ZAtop and ZAdisc
- Connection of the brake coils on ZAsbc4
- Prefabricated:
  - Connection side ZAsbc4: plug 4-pin
  - Connection side brake: wire end sleeves
- Halogen-free



Type	Article no.	Cable length m	Cable cross section mm²
L-BA-018-HX-SBC4-AE	00166059-018M	1.8	2 x 2 x 1.0
L-BA-03-HX-SBC4-AE	00166059-03M	3.0	
L-BA-05-HX-SBC4-AE	00166059-05M	5.0	
L-BA-10-HX-SBC4-AE	00166059-10M	10.0	
L-BA-15-HX-SBC4-AE	00166059-15M	15.0	
L-BA-20-HX-SBC4-AE	00166059-20M	20.0	
L-BA-25-HX-SBC4-AE	00166059-25M	25.0	

ZAsbc4C cable set

- 5-part prefabricated cable set for connecting the elevator controller to ZAsbc4C
  - Supply voltage
  - Monitoring safety circuit
  - Activation. emergency operation and brake test
  - Test overvoltage protection
  - Status monitoring
- Prefabricated
  - Connection side ZAsbc4: plugs
  - Connection side controller: wire end sleeves
- Halogen-free

Type	Article no.	Cable length m	Cable cross section mm²
LS-SBC4-03-HX-ST	357289-03M	3.0	3 x 1.5 (Supply) 5 x 0.75 (Monitoring, safety circuit) 3 x 0.75 (Activation, emergency operation and brake test) 2 x 0.75 (Test overvoltage protection) 2 x 0.75 (Status monitoring)
LS-SBC4-05-HX-ST	357289-05M	5.0	
LS-SBC4-10-HX-ST	357289-10M	10.0	
LS-SBC4-25-HX-ST	357289-25M	25.0	
LS-SBC4-50-HX-ST	357289-50M	50.0	

Connection cables ZApad



Data cable ZApad / ZAmon STICK

Connection of the ZApad and ZAmon STICK to
- ZAdyn4
- ZAdynpro
- ZArec4C
- EVAC 3C (only ZApad)

Type	Article no.	Cable length m
L-DL-005-HX-RJ45	00159973	0.5
L-DL-10-HX-RJ45	00159967	10.0
L-DL-25-HX-RJ45	00159968	25.0
L-DL-50-HX-RJ45	00164122	50.0



Modular coupler RJ

- Coupler to connect the cable type L-DL-...-HX-RJ45
- Double jack RJ45

Article no. 00155975



ZAmon data cable

- Connection of the ZApad to a notebook or PC to be able to use the ZAmon software
- USB 2.0 connection line A/B
- Halogen-free
- Length: 1.8 m
- Type: L-DL-018-HX-USB-A-B

Article no. 00159946

ZArec cable set

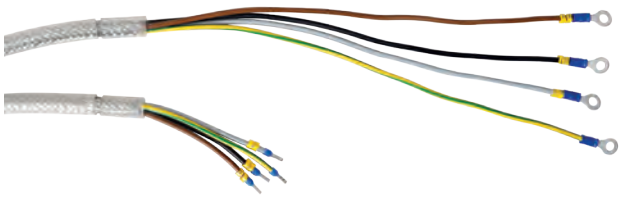
LS-ZArec4C-..-HX-...-ZA3/4

- 2-part prefabricated cable set for connecting the ZArec to ZETADYN 3 and ZAdyn4:
  - Signal transmission ZArec - ZETADYN 3 / ZAdyn4
  - Connection DC-link voltage ZArec - ZETADYN 3 / ZAdyn4
  - Halogen-free

Type	Article no.	Frequency inverter	Cable length m	Cable cross section mm²
LS-ZArec4C-03-HX-023-ZA3/4	357276	ZAdyn4C 011-023 ZAdynpro 011-023	3.0	6 x 0.75 (Signals) 3 x 2.5 (DC-link)
LS-ZArec4C-05-HX-023-ZA3/4	357277		5.0	6 x 0.75 (Signals) 3 x 2.5 (DC-link)
LS-ZArec4C-03-HX-074-ZA3/4	357278	ZAdyn4C 032-074 ZAdynpro 032	3.0	6 x 0.75 (Signals) 3 x 6.0 (DC-link)
LS-ZArec4C-05-HX-074-ZA3/4	357279		5.0	6 x 0.75 (Signals) 3 x 6.0 (DC-link)

Motor cables

Standard



For motor types ZAtop and ZAsyn

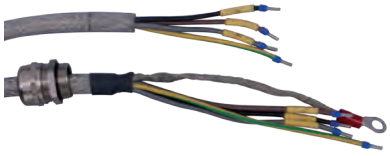
- Cable for connecting the motor to the ZAdyn frequency inverter
- Large-area contacting of the shield
- Prefabricated:
  - Connection side motor: ring cable lug
  - Connection side ZAdyn: wire end sleeves

Max. rated current * A	Cable cross section mm²	Ring cable lug for terminal board	Fits motor	Line length m	Type	Article no.
20	4 x 2.5	M6	BD132 SM180	5.0	L-ML-05-YY-2.5-M6e-AE	02500500-05M
				10.0	L-ML-10-YY-2.5-M6e-AE	02500500-10M
				15.0	L-ML-15-YY-2.5-M6e-AE	02500500-15M
				20.0	L-ML-20-YY-2.5-M6e-AE	02500500-20M
				25.0	L-ML-25-YY-2.5-M6e-AE	02500500-25M
		M8	SM200.40/45 SM205 SM210 SM860	5.0	L-ML-05-YY-2.5-M8e-AE	02500530-05M
				10.0	L-ML-10-YY-2.5-M8e-AE	02500530-10M
				15.0	L-ML-15-YY-2.5-M8e-AE	02500530-15M
				20.0	L-ML-20-YY-2.5-M8e-AE	02500530-20M
				25.0	L-ML-25-YY-2.5-M8e-AE	02500530-25M
25	4 x 4.0	M6	BD132 SM180	5.0	L-ML-05-YY-4-M6e-AE	02500501-05M
				10.0	L-ML-10-YY-4-M6e-AE	02500501-10M
				15.0	L-ML-15-YY-4-M6e-AE	02500501-15M
				20.0	L-ML-20-YY-4-M6e-AE	02500501-20M
				25.0	L-ML-25-YY-4-M6e-AE	02500501-25M
		M8	SM200.40/45 SM205 SM210 SM860	5.0	L-ML-05-YY-4-M8e-AE	02500531-05M
				10.0	L-ML-10-YY-4-M8e-AE	02500531-10M
				15.0	L-ML-15-YY-4-M8e-AE	02500531-15M
				20.0	L-ML-20-YY-4-M8e-AE	02500531-20M
				25.0	L-ML-25-YY-4-M8e-AE	02500531-25M
35	4 x 6.0	M6	BD132 SM180	5.0	L-ML-05-YY-6-M6e-AE	02500502-05M
				10.0	L-ML-10-YY-6-M6e-AE	02500502-10M
				15.0	L-ML-15-YY-6-M6e-AE	02500502-15M
				20.0	L-ML-20-YY-6-M6e-AE	02500502-20M
				25.0	L-ML-25-YY-6-M6e-AE	02500502-25M
		M8	SM200.40/45 SM250 SM860	5.0	L-ML-05-YY-6-M8e-AE	02500532-05M
				10.0	L-ML-10-YY-6-M8e-AE	02500532-10M
				15.0	L-ML-15-YY-6-M8e-AE	02500532-15M
				20.0	L-ML-20-YY-6-M8e-AE	02500532-20M
				25.0	L-ML-25-YY-6-M8e-AE	02500532-25M
50	4 x 10.0	M8	SM200.40/45 SM210 SM250 SM860	5.0	L-ML-05-YY-10-M8e-AE	02500533-05M
				10.0	L-ML-10-YY-10-M8e-AE	02500533-10M
				15.0	L-ML-15-YY-10-M8e-AE	02500533-15M
				20.0	L-ML-20-YY-10-M8e-AE	02500533-20M
				25.0	L-ML-25-YY-10-M8e-AE	02500533-25M
63	4 x 16.0	M8	SM200.40/45 SM250 SM315 SM860	5.0	L-ML-05-YY-16-M8e-AE	02500534-05M
				10.0	L-ML-10-YY-16-M8e-AE	02500534-10M
				15.0	L-ML-15-YY-16-M8e-AE	02500534-15M
				20.0	L-ML-20-YY-16-M8e-AE	02500534-20M
				25.0	L-ML-25-YY-16-M8e-AE	02500534-25M

* The stated rated currents are rated according to DIN VDE 0298-4 for laying system B2 and a max. ambient temperature of 40 °C.

Max. rated current* A	Cable cross section mm²	Ring cable lug for terminal board	Fits motor	Cable length m	**Type**	Article no.
80	4 x 25.0	M8	SM250 SM315 SM860	5.0	**L-ML-05-YY-25-M8e-AE**	**02500535-05M**
				10.0	**L-ML-10-YY-25-M8e-AE**	**02500535-10M**
				15.0	**L-ML-15-YY-25-M8e-AE**	**02500535-15M**
				20.0	**L-ML-20-YY-25-M8e-AE**	**02500535-20M**
				25.0	**L-ML-25-YY-25-M8e-AE**	**02500535-25M**
100	4 x 35.0	M10	SM250 SM315 SM860	5.0	**L-ML-05-YY-35-M10e-AE**	**02500546-05M**
				10.0	**L-ML-10-YY-35-M10e-AE**	**02500546-10M**
				15.0	**L-ML-15-YY-35-M10e-AE**	**02500546-15M**
				20.0	**L-ML-20-YY-35-M10e-AE**	**02500546-20M**
				25.0	**L-ML-25-YY-35-M10e-AE**	**02500546-25M**
125	4 x 50.0	M10	SM250 SM315	5.0	**L-ML-05-YY-50-M10e-AE**	**02500547-05M**
				10.0	**L-ML-10-YY-50-M10e-AE**	**02500547-10M**
				15.0	**L-ML-15-YY-50-M10e-AE**	**02500547-15M**
				20.0	**L-ML-20-YY-50-M10e-AE**	**02500547-20M**
				25.0	**L-ML-25-YY-50-M10e-AE**	**02500547-25M**
160	4 x 70.0	M12	SM250 SM315	5.0	**L-ML-05-YY-70-M12e-AE**	**02500558-05M**
				10.0	**L-ML-10-YY-70-M12e-AE**	**02500558-10M**
				15.0	**L-ML-15-YY-70-M12e-AE**	**02500558-15M**
				20.0	**L-ML-20-YY-70-M12e-AE**	**02500558-20M**
				25.0	**L-ML-25-YY-70-M12e-AE**	**02500558-25M**
200	4 x 95	M12	SM250 SM315	5.0	**L-ML-05-YY-95-M12e-AE**	**02500559-05M**
				10.0	**L-ML-10-YY-95-M12e-AE**	**02500559-10M**
				15.0	**L-ML-15-YY-95-M12e-AE**	**02500559-15M**
				20.0	**L-ML-20-YY-95-M12e-AE**	**02500559-20M**
				25.0	**L-ML-25-YY-95-M12e-AE**	**02500559-25M**

* The stated rated currents are rated according to DIN VDE 0298-4 for laying system B2 and a max. ambient temperature of 40° C.



For motor types ZAsyn and ZAdisc

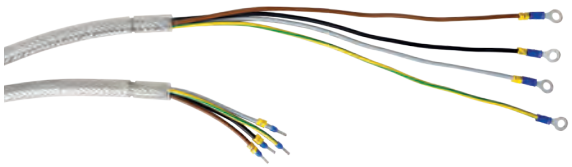
- Cable for connecting the motor to frequency inverter type ZAdyn
- Including cable gland
- Prefabricated:
  - Connection side motor: wire end sleeves
  - Connection side ZAdyn: wire end sleeves

Max. rated current* A	Cable cross section mm²	Cable gland	Fits motor	Cable length m	**Type**	**Article no.**
20.0	4 x 2.5	M25	SL506 SL510 SM700	10.0	**L-ML-10-YY-2.5-AE-AE**	**356016-10M**
20.0	4 x 2.5	M32	SM500	10.0	**L-ML-10-YY-2.5-AE-AE**	**02023469-10M**
25.0	4 x 4.0	M32	SL506 SL510 SM700	10.0	**L-ML-10-YY-4-AE-AE**	**356017-10M**
20.0	4 x 4.0	M32	SM500	10.0	**L-ML-10-YY-4-AE-AE**	**02023471-10M**
35.0	4 x 6.0	M32	SL506 SL510 SM700	10.0	**L-ML-10-YY-6-AE-AE**	**356018-10M**
35.5	4 x 6.0	M32	SM500	10.0	**L-ML-10-YY-6-AE-AE**	**02023472-10M**
50.0	4 x 10.0	M25	SL510 SM700	10.0	**L-ML-10-YY-10-AE-AE**	**356019-10M**
63.0	4 x 16.0	M40	SL510 SM700	10.0	**L-ML-10-YY-16-AE-AE**	**356020-10M**
80.0	4 x 25.0	M50	SM700	10.0	**L-ML-10-YY-25-AE-AE**	**356021-10M**

* The stated rated currents are rated according to DIN VDE 0298-4 for laying system B2 and a max. ambient temperature of 40° C.

Motor cables

Halogen-free



For motor types ZAtop and ZAsyn

- Cable for connecting the motor to frequency inverter type ZAdyn
- Prefabricated:
  - Connection side motor: ring cable lug
  - Connection side ZAdyn: wire end sleeves

Max. rated current * A	Cable cross section mm²	Cable gland	Ring cable lug for terminal board	Fits motor	Cable length m	**Type**	Article no.
20	4 x 2.5	M25	M8	SM200.40/45 SM205 SM210	10.0	**L-ML-10-HX-2.5-M8e-AE**	**02500630-10M**
					15.0	**L-ML-15-HX-2.5-M8e-AE**	**02500630-15M**
					20.0	**L-ML-20-HX-2.5-M8e-AE**	**02500630-20M**
					25.0	**L-ML-25-HX-2.5-M8e-AE**	**02500630-25M**
25	4 x 4.0	M32	M8	SM200.40/45 SM205 SM210 SM860	10.0	**L-ML-10-HX-4-M8e-AE**	**02500631-10M**
					15.0	**L-ML-15-HX-4-M8e-AE**	**02500631-15M**
					20.0	**L-ML-20-HX-4-M8e-AE**	**02500631-20M**
					25.0	**L-ML-25-HX-4-M8e-AE**	**02500631-25M**
35	4 x 6.0	M32	M8	SM200.40/45 SM210 SM250 SM860	10.0	**L-ML-10-HX-6-M8e-AE**	**02500632-10M**
					15.0	**L-ML-15-HX-6-M8e-AE**	**02500632-15M**
					20.0	**L-ML-20-HX-6-M8e-AE**	**02500632-20M**
					25.0	**L-ML-25-HX-6-M8e-AE**	**02500632-25M**
50	4 x 10.0	M40	M8	SM200.40/45 SM210 SM250 SM860	10.0	**L-ML-10-HX-10-M8e-AE**	**02500633-10M**
					15.0	**L-ML-15-HX-10-M8e-AE**	**02500633-15M**
					20.0	**L-ML-20-HX-10-M8e-AE**	**02500633-20M**
					25.0	**L-ML-25-HX-10-M8e-AE**	**02500633-25M**
63	4 x 16.0	M40	M8	SM200.40/45 SM210 SM250 SM315 SM860	10.0	**L-ML-10-HX-16-M8e-AE**	**02500634-10M**
					15.0	**L-ML-15-HX-16-M8e-AE**	**02500634-15M**
					20.0	**L-ML-20-HX-16-M8e-AE**	**02500634-20M**
					25.0	**L-ML-25-HX-16-M8e-AE**	**02500634-25M**
80	4 x 25.0	M50	M8	SM250 SM315 SM860	10.0	**L-ML-10-HX-25-M8e-AE**	**02500635-10M**
					15.0	**L-ML-15-HX-25-M8e-AE**	**02500635-15M**
					20.0	**L-ML-20-HX-25-M8e-AE**	**02500635-20M**
					25.0	**L-ML-25-HX-25-M8e-AE**	**02500635-25M**
100	4 x 35.0	M50	M10	SM250 SM315 SM860	10.0	**L-ML-10-HX-35-M10e-AE**	**02500646-10M**
					15.0	**L-ML-15-HX-35-M10e-AE**	**02500646-15M**
					20.0	**L-ML-20-HX-35-M10e-AE**	**02500646-20M**
					25.0	**L-ML-25-HX-35-M10e-AE**	**02500646-25M**

* The stated rated currents are rated according to DIN VDE 0298-4 for laying system B2 and a max. ambient temperature of 40 °C.

Connection box for shielded motor cables



Description

- Simple and EMC-conform extension of ZIEHL-ABEGG motor cables
- Wire cross section from 4 x 2.5 mm² to 4 x 16 mm²

Article no. 70026751

EMC cable glands



Type	Article no.	EMC lock nut* Article no.	∅ Motor cable mm
M25 x 1.5	02018241	02002803	4 x 2.5
M32 x 1.5	02021912	02002198	4 x 4.0 4 x 6.0
M40 x 1.5	02021913	02002199	4 x 10 4 x 16
M50 x 1.5	02021914	02002200	4 x 25 4 x 35

* With cutting edge for secure contacting even on painted housings

EVAC battery set and cable set

Battery set EVAC-BATT



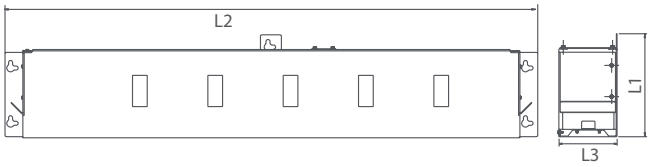
Description

- Selection is made depending on the nominal current of the motor and the duration or number of evacuations

Technical data

Type	Article no.	Rated voltage	Rated capacity	Rated current	Weight
		VDC	Ah	A	kg
032-120-24	357234	120	24.0	32	2 x 50
050-120-24	357235	120	24.0	50	2 x 50
074-120-24	357236	120	24.0	74	2 x 50
032-180-7.2	357238	180	7.2	32	24 + 26
032-180-24	357242	180	24.0	32	3 x 50
050-180-24	357243	180	24.0	50	3 x 50
074-180-24	357244	180	24.0	74	3 x 50

Dimensions mm



Type	L1	L2	L3
032-120-24	231	1195	130
050-120-24			
074-120-24			
032-180-7.2	205	948	116
032-180-24	231	1195	130
050-180-24			
074-180-24			

EVAC 3C cable set

LS-EVAC3C-..-HX-...-ZA3/4

- 3-part cable set for connecting the ZAdyn4 and the EVAC BATT to EVAC 3C:
  - Power supply of the ZAdyn4 by EVAC 3C
  - Signal transmission EVAC 3C ⇄ ZAdyn4
  - Connection of the EVAC BATT battery set
- Halogen-free

Type	Article no.	Cable length	Cable cross-section EVAC 3C ⇄ ZAdyn4	Cable cross-section EVAC 3C ⇄ EVAC BATT
		m	mm²	mm²
LS-EVAC3C-03-HX-032-ZA3/4	357239	3.0	4 x 6.0 (supply) 4 x 0.5 (signals)	3 x 6.0 + 2 x 0.5
LS-EVAC3C-03-HX-050-ZA3/4	357240	3.0	4 x 10.0 (supply) 4 x 0.5 (signals)	3 x 6.0 + 2 x 0.5
LS-EVAC3C-03-HX-074-ZA3/4	357241	3.0	4 x 25.0 (supply) 4 x 0.5 (signals)	4 x 10.0 + 2 x 1.0

LS-EVAC3C-..-HX-ST

- 3-part cable set for connecting the elevator controller and the main switch monitoring to EVAC 3C:
  - Control power supply through EVAC 3C
  - Signal transmission EVAC 3C ⇄ Controller
  - Main switch monitoring
- Halogen-free

Type	Article no.	Cable length	Cable cross-section EVAC 3C ⇄ Controller	Cable cross-section EVAC 3C ⇄ Main switch
		m	mm²	mm²
LS-EVAC3C-03-HX-ST	357247	3.0	3 x 1.5 (supply) 3 x 0.5 (signals)	2 x 0.75 (monitoring)
LS-EVAC3C-10-HX-ST	357248	10.0	3 x 1.5 (supply) 3 x 0.5 (signals)	2 x 0.75 (monitoring)

Encoder cables

Standard



For absolute encoder (synchronous motors)

- Cable for connecting the absolute encoder to frequency inverter type ZAdyn
- For ZAtop, ZAsyn and ZAdisc type motors
- Prefabricated

Encoder type	Frequency inverter	Encoder connection	Frequency inverter connection	Cable cross section mm²	Cable length m	Type	Article no.
ECN1313	ZAdyn	Jack 12 pin	Plug D-SUB 15-pin	6 x 2 x 0.14	1.8	-	02013880-01.8M
ECN113 ECN1313	ZETADYN 3 ZAdyn	Jack M16 x 0.75 (KV120)	Plug D-SUB 15-pin	6 x 2 x 0.14	5.0	L-GL-05-YY-ZA-ECN	00159923
					10.0	L-GL-10-YY-ZA-ECN	00155050
					15.0	L-GL-15-YY-ZA-ECN	00166102
					20.0	L-GL-20-YY-ZA-ECN	00166103
					25.0	L-GL-25-YY-ZA-ECN	00159925
ERN1387	ZETADYN 3 ZAdyn	Jack M23 x 1	Plug D-SUB 15-pin	8 x 2 x 0.14	10.0	L-GL-10-YY-ZA3-ERN1387	00159964
						L-GL-10-YY-ZA4-ERN1387	00165948-10M

Halogen-free

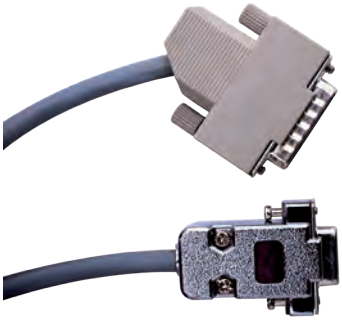
For absolute encoders (synchronous motors)

- Cable to connect the absolute encoder to frequency inverter type ZAdyn
- For ZAtop, ZAsyn and ZAdisc type motors
- Prefabricated
- Halogen-free

Encoder type	Frequency inverter	Encoder connection	Frequency inverter connection	Cable cross section mm²	Cable length m	Type	Article no.
ECN113 ECN1313	ZETADYN 3 ZAdyn	Jack M16 x 0.75 (KV120)	Plug D-SUB 15-pin	6 x 2 x 0.14	1.8	L-GL-018-HX-ZA-ECN	00165713
					3.0	L-GL-03-HX-ZA-ECN	00165644
					5.0	L-GL-05-HX-ZA-ECN	00166095
					10.0	L-GL-10-HX-ZA-ECN	00165615
					15.0	L-GL-15-HX-ZA-ECN	00157818
					20.0	L-GL-20-HX-ZA-ECN	00166104
					25.0	L-GL-25-HX-ZA-ECN	00165616

Encoder cables / adapter cables

Adapter



Adapter for encoder cables

- Connection of cables with D-SUB plug to ZAdyn4
- Prefabricated
- Halogen-free

Elevator machine	Encoder	Connection side encoder cable	Frequency inverter connection	Cable cross section mm²	Cable length m	Type	Article no.
ZIEHL-ABEGG	Incremental	Jack D-SUB 9-pin	Plug D-SUB 15-pin	6 x 2 x 0.14	0.4	**L-GL-004-HX-ZA-ASM-9-15**	**00165930-004M**
	Incremental	Jack D-SUB 15-pin	Plug D-SUB 9-pin			**L-GL-004-HX-ZA-ASM-15-9**	**00165931-004M**
Thyssen	Absolute	Jack D-SUB 15-pin	Plug D-SUB 15-pin			**L-GL-004-HX-ZA-SYN-THY**	**00166089-004M**
	Incremental	Jack D-SUB 9-pin	Plug D-SUB 15-pin			**L-GL-004-HX-ZA-ASM-THY**	**00166090-004M**



Adapter plug encoder

- Adapter plug for connecting encoder to ZAdyn
- D-SUB 15-pin to screw connection

Article no. 357320

Adapter cable encoder ⇆ encoder cable



Encoder type	Article no.	Cable length m	Encoder connection	Encoder cable connection	Cable cross section mm²
ECN 1313	**00159930**	0.245	Jack 12 pin	Plug M16 x 0.75 (SV120)	12 x 0.14
	00159953	0.560			
	00159933	0.245		Plug M23 x 1	12 x 0.14
ERN 1387	**00159931**	0.245	Jack 14 pin	Plug M16 x 0.75 (SV120)	14 x 0.14
	00159934	0.245		Plug M23 x 1	14 x 0.14
ERN 1326	**00159942**	0.245	Jack 16 pin	Plug M23 x 1	16 x 0.14

Encoder cables

Extension cables

- For absolute encoder with communication protocol EnDat or BiSS-C and connection D-SUB 15-pin*
- For incremental encoder with connection D-SUB 15-pin*
- Prefabricated
- Only in combination with encoder cable

Connection side encoder cable	Frequency inverter connection	Cable cross section mm²	Cable length m	Type	Article no.
Jack D-SUB 15-pin	Plug D-SUB 15-pin	6 x 2 x 0.25	5.0	L-GL-05-YY-ZA-SYN-EXT	00159952-05M
			10.0	L-GL-10-YY-ZA-SYN-EXT	00159952
			15.0	L-GL-15-YY-ZA-SYN/ASM-EXT	00159952-15M
Jack M16 x 0.75 (KV120)	Plug M16 x 0.75 (SV120)	6 x 2 x 0.14	10.0	L-GL-10-HX-ECN-EXT-KV120	00165665-10M

* for incremental encoder with connection D-SUB 9-pin the adapter article no. 00165930-004M is required in addition

For frequency inverters from other manufacturers

For absolute encoders (synchronous motors)

- Cable to connect the absolute encoder to frequency inverters from other manufacturers
- For ZAtop, ZAsyn and ZAdisc type motors
- Prefabricated

Encoder type	Frequency inverter	Encoder connection	Frequency inverter connection	Cable cross section mm²	Cable length m	Type	Article no.
ECN113 ECN1313	Arkel Step	Jack M16 x 0.75 (KV120)	Plug D-SUB 15-pin	6 x 2 x 0.14	10.0	L-GL-10-YY-AR/ST-ECN	00166052-10M
	FUJI		Plug 16-pin MC1.5 / Phoenix		5.0	L-GL-05-YY-FUJI-LM1-ENC L-GL-05-YY-FUJI-LM2-ENC	00165827-05M 00166097-05M
					10.0	L-GL-10-YY-FUJI-LM1-ENC L-GL-10-YY-FUJI-LM2-ENC	00165827 00166097-10M
	KEB		Plug D-SUB 15-pin		5.0	L-GL-05-YY-KEB-F5-ENC	00157813
					10.0	L-GL-10-YY-KEB-F5-ENC	00159734
	Nidec/Control Techniques		Plug D-SUB 15-pin		5.0 10.0	L-GL-05-YY-CT-E300-ECN L-GL-10-YY-CT-E300-ECN	02500725-05M 02500725-10M
	Schindler		Plug D-SUB 15-pin		5.0	L-GL-05-YY-SCH-ENC	00159922
					10.0	L-GL-10-YY-SCH-ENC	00159951
					20.0	L-GL-20-YY-SCH-ENC	00159954
	independent		Wire-end sleeves		5.0	L-GL-05-YY-ECN/ERN-AE	02013478-05M
					10.0	L-GL-10-YY-ECN/ERN-AE	02013478-10M
ERN1387	GEFRAN / SIEI		Plug D-SUB 15-pin		10.0	L-GL-10-YY-SIEI-ERN1387	00159941
	Monarch		Plug D-SUB 15-pin 3 rows		10.0	L-GL-10-YY-MO-ERN1387	00166063-10M
	Step		Plug D-SUB 15-pin 3 rows		10.0	L-GL-10-YY-ST-ERN1387	00166062-10M
AE-S64-SSI-xx-ZA	independent	Jack D-SUB 15-pin	Wire-end sleeves		0.4	L-GL-004-HX-SSI-15-AE	02500724-004M
ERN1326	OTIS	Jack M23 x 1	Jack M23 x 1	3 x 2 x 0.25	10.0	L-GL-10-YY-OTIS-ERN1326	02013893-10M
			WAGO 734-108		20.0	L-GL-20-YY-OTIS-ERN1326	02013893-20M

Incremental encoder

Hollow shaft



Description

- For motor types VFD and other asynchronous motors
- Signal shape: sine or square
- Speed: max. 3500 rpm
- Phase shift: 90°
- With prefabricated connection cable
- Protection class: IP54

Type	Article no.	Shaft diameter mm	Signal shape	Reso-lution ppr	Signal tracks	Operating voltage VDC	Frequency inverter connection	Cable length m	For frequency inverter
ET2R-1024/28/05V	359010	28	TTL	1024	A, B, /A, /B	5.0	Wire-end sleeves	10.0	-
ET2R-1024/28/05V-1	359026		TTL	1024	A, B, /A, /B, N	5.0	D-SUB 9-pin	10.0	ZETADYN / ZAdyn*
ET2S-1024/28/05V-15	02014700		1 V_{SS}	1024	A, B, /A, /B	5.0	D-SUB 15-pin	10.0	ZETADYN** / ZAdyn
ET2R-1024/28/30V	359004		HTL	1024	A, B	10…30	Wire-end sleeves	10.0	-
ET2R-1024/38/05V	359011	38	TTL	1024	A, B, /A, /B	5.0	Wire-end sleeves	10.0	-
ET2R-1024/38/05V-1	359027		TTL	1024	A, B, /A, /B, N	5.0	D-SUB 9-pin	10.0	ZETADYN / ZAdyn*
ET2S-1024/38/05V-15	02014701		1 V_{SS}	1024	A, B, /A, /B	5.0	D-SUB 15-pin	10.0	ZETADYN** / ZAdyn
ET2S-1024/38/05V-2	02006794		1 V_{SS}	1024	A, B, /A, /B	5.0	M16 x 0.75 (SV120) 12-pin	0.5	-
ET2R-1024/38/30V	359005		HTL	1024	A, B	10…30	Wire-end sleeves	10.0	-
ET2R-1024/42/05V	359012	42	TTL	1024	A, B, /A, /B	5.0	Wire-end sleeves	10.0	-
ET2R-1024/42/05V-1	359028		TTL	1024	A, B, /A, /B, N	5.0	D-SUB 9-pin	10.0	ZETADYN / ZAdyn*
ET2R-1024/42/30V	359006		HTL	1024	A, B	10…30	Wire-end sleeves	10.0	-

* ZAdyn4 and ZAdynpro only with D-SUB 9 ⇄ D-SUB 15 adapter article no. 00165930-004M
** ZETADYN 2 and ZETADYN 3 (older than May 2012) only with D-SUB 15 ⇄ D-SUB 9 adapter article no. 00165931-004M

Incremental encoder

Solid shaft



Description

- For VFD motor types and other asynchronous motors
- Signal shape: square
- Speed: max. 3500 rpm
- Phase shift: 90°
- With prefabricated connection cable
- Protection class: IP54

Type	Article no.	Shaft diameter mm	Signal shape	Resolution ppr	Signal tracks	Operating voltage VDC	Frequency inverter connection	Cable length m	For frequency inverter
ET2R-1024/10/30V	359020	10	HTL	1024	A, B	10...30	Wire-end sleeves	10.0	-

Absolute encoder

Hollow shaft



Description

- For ZAtop motor type
- Signal shape speed: sine
- Speed: max. 3500 rpm
- Phase shift: 90°
- Prefabricated connection cable
- Protection class: IP64

Type	Article no.	Shaft diameter mm	Interface absolute value	Resolution ppr	Signal tracks	Operating voltage VDC	Connection	Cable length m
ECN113 EnDat 2048 Hiatus	01009635	50	EnDat 01	2048	A, B, /A, /B	3.6...14	M16 x 0.75 (SV120) 12-pin	0.5

Solid shaft



Absolute encoder set with solid shaft

- For ZAtop, ZAsyn and ZAdisc motor types
- Signal shape speed: sine
- Speed: max. 3500 rpm
- Phase shift: 90°
- Connected adapter cable
- Protection class: IP40
- Shaft diameter: 9.25 mm / Cone 1:10

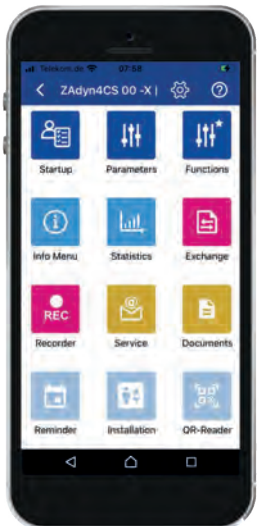
Type	Article no.	Interface absolute value	Resolution ppr	Signal tracks	Operating voltage VDC	Connection	Cable length mm
ECN1313 EnDat-M16-245mm	70030034	EnDat01	2048	A, B, /A, /B	3.6...14	Plug M16 x 0.75 (SV120)	245
ECN1313 EnDat-M16-560mm	70030035						560
ECN1313 EnDat-M23-245mm	70030036					Plug M23 x 1	245
ECN1313 EnDat-DSUB-1.8m	70030037					Plug D-SUB 15-pin	1800
ECN 1313 SSI-M16-245mm	70030038	SSI				Plug M16 x 0.75 (SV120)	245
ECN 1313 SSI-M16-560mm	70030039						560
ECN 1313 SSI-M23-245mm	70030040					Plug M23 x 1	245
ERN 1326-4096-M23-245mm	70030042	U, V, W ⊓⊔	4096		5.0	Plug M23 x 1	245
ERN 1326-8192-M23-245mm	70030043		8192			Plug M23 x 1	245
ERN 1326-8192-AMP20-7m	70030044		8192			AMP20	7000
ERN 1387-M16-245mm	70030045	Z* SinCos	2048		5.0	Plug M16 x 0.75 (SV120)	245
ERN 1387-M23-245mm	70030046					Plug M23 x 1	245
ERN 1387-DSUB15-350mm	70030047					Plug D-SUB 15-pin	350
AE-S64-BISSC-ZA-5m	70030744	BiSS-C	2048		4.0...30.0	Plug D-SUB 15-pin	5000
AE-S64-BISSC-ZA-10m	70031326					Plug D-SUB 15-pin	10000
AE-S64-SinCos-AE-7m	70031263	SinCos	2048		5.0	Ferrules	7000
AE-S64-SinCos-ST-10m	70031264					Plug D-SUB 15-pin Step AS380	10000
AE-S64-SinCos-SCH-1,8m	70031277					Plug D-SUB 15-pin Schindler VAF	1800
AE-S64-SinCos-MO-10m	70031278					Plug D-SUB 15-pin Monarch Nice3000	10000

* 1 sine period / revolution

ZAmon Mobile

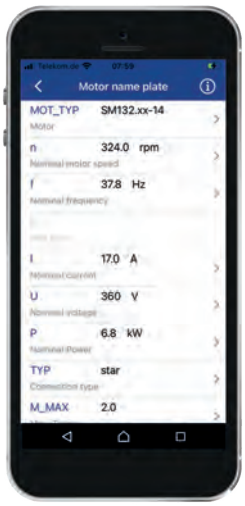
Fast - Easy - Intuitive

The ZAmon Mobile app is the ideal tool for operating ZAdyn frequency inverters with mobile devices such as smartphones or tablets.
The clearly structured user interfaces with self-explanatory icons, informative texts for each parameter and online help provide the perfect conditions for fast and independent work.



Start-up assistance

- The start-up wizard guides you through all the necessary parameters in simple steps and with explanations, right up to the optimal configuration of the terminal.
- Time for commissioning < 10 minutes

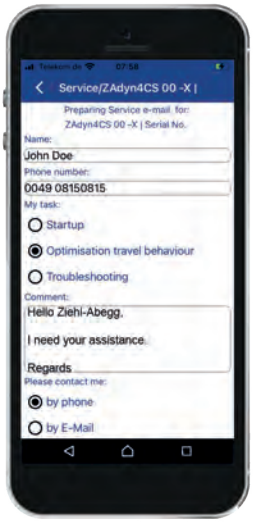


Parametrisation

- Clear summary of menus in function blocks (e.g. function block “Travel curve”)
- Downloading, backing up and loading of parameter files
- Read-out of the technical data via the QR code on the name plates of ZIEHL-ABEGG elevator machines, frequency inverters, power feedback units and system components, including automatic transfer to the parameter file.

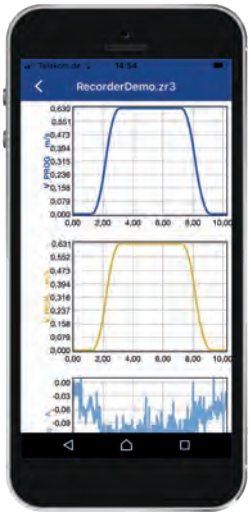
Offline parameterisation

- Parameter files can be created and saved in the office or in the workshop, for example, without needing a connection to the end device
- As soon as the Bluetooth connection is established via ZAmon STICK, the parameter transfer can be started



Analysis

- Detailed description of events and possible solutions
- Recording and evaluation of travel curves for analysis and diagnostic processes
- 4 analog measuring channels
- 1 digital measuring channel
- Recording saving function
- FFT analysis
- Mathematical analysis functions



Customer service contact

- Direct e-mail contact to ZIEHL-ABEGG customer service
- Automatic collation of all important data and preparation of the e-mail with one click
- Sending of e-mails via the local e-mail client on the mobile device

Data backup and exchange

- Parameter file
- Parameter list
- Error lists
- Assignment of individual file names



Documentation

- Access to name plate via QR code
- Operating instructions
- Declaration of conformity
- Certificates

Laden im App Store

JETZT BEI Google Play

General notes

The information and data contained in this catalogue were composed to the best of our ability and do not absolve the user from their duty to check the suitability of the products with respect to its intended application.

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The Royal League

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