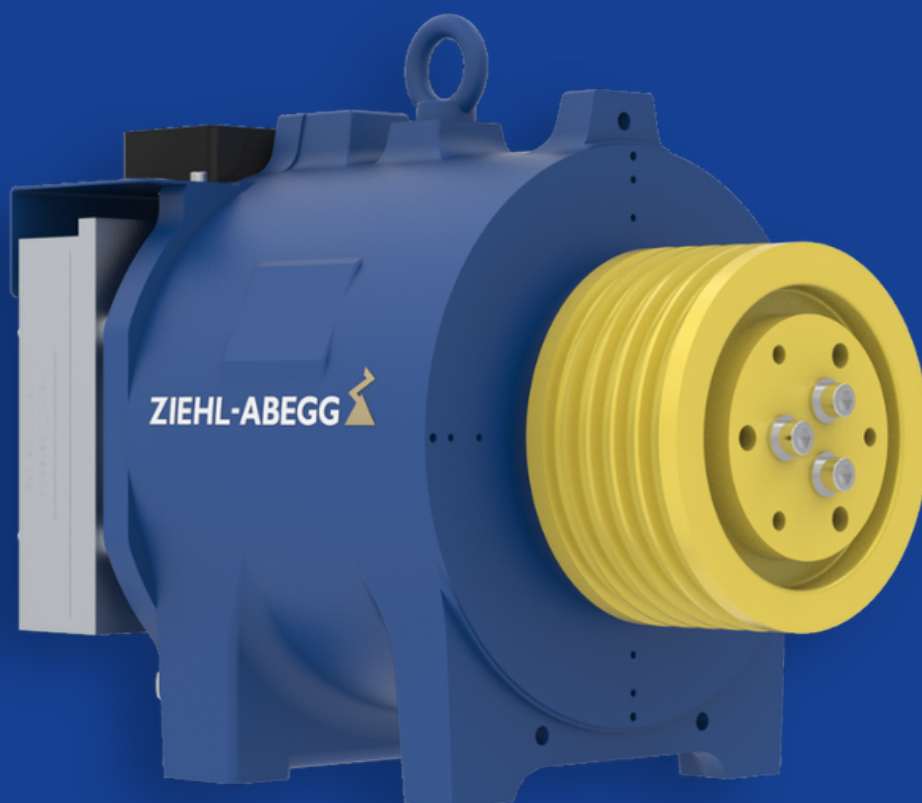


Movement by Perfection

ZAtop

gearless elevator machine



The Royal League in ventilation, control and drive technology



Welcome to the world of ZIEHL-ABEGG

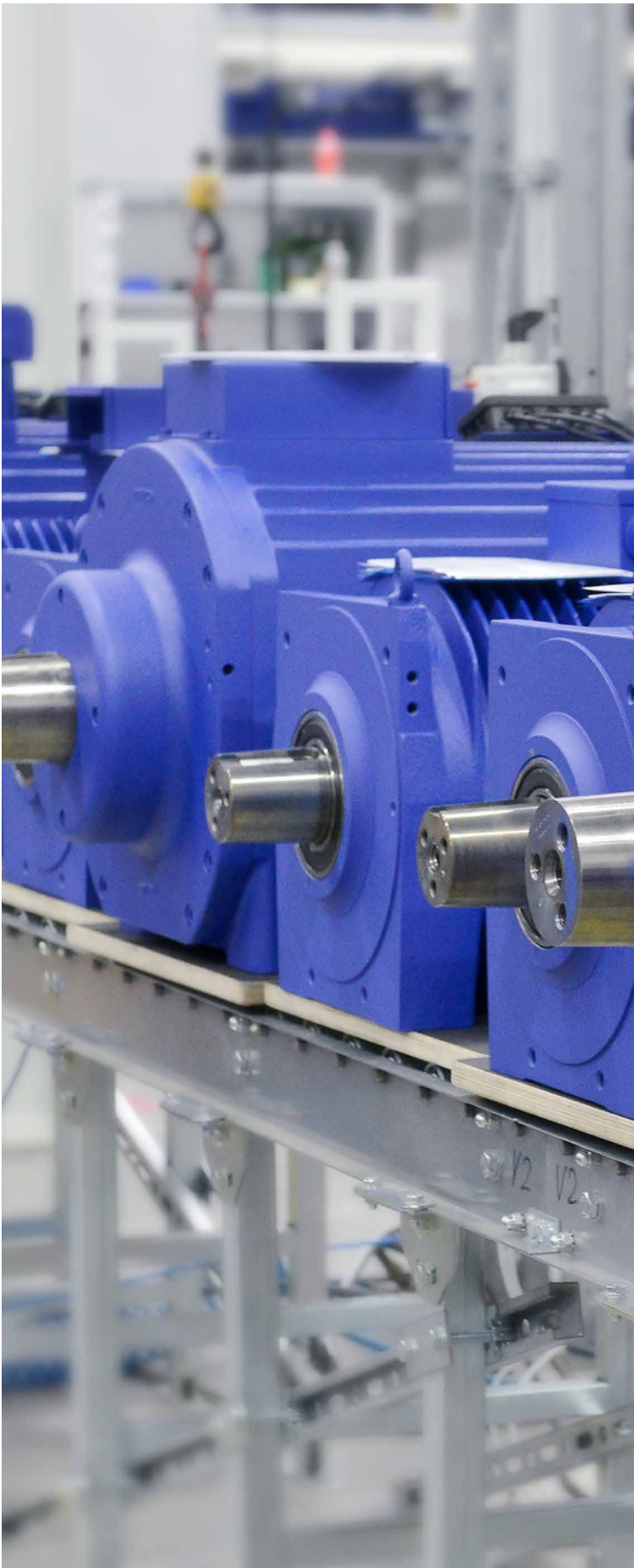
Top technology „Made by ZIEHL-ABEGG“

Apioneering spirit and thecourageofinnovation 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, economical and ecological progress.

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

Your contact into the world of ZIEHL-ABEGG

Wouldyouliketolearn more aboutthecompanyZIEHL-ABEGG,itsproducts 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 user

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 saving and environmentally 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 drive for every architectural and constructional requirement: Low-noise, with and without gear, as a synchronous or asynchronous motor, with powerful, compact drives 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 

ZAtop gearless elevator machine

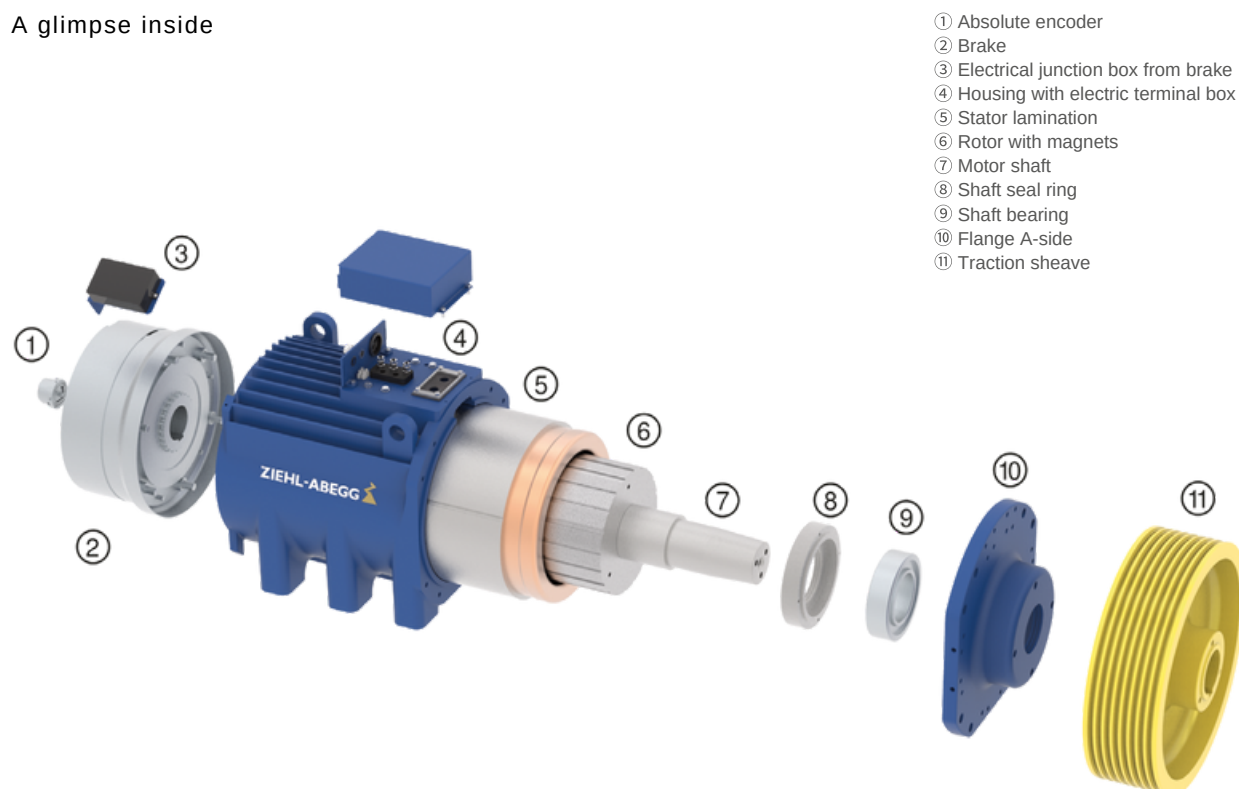
General information

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. B. EnDat, SSI, SinCos))
- Optimal package solution with ZIEHL-ABEGG ZAdyn frequency inverter

A glimpse inside



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

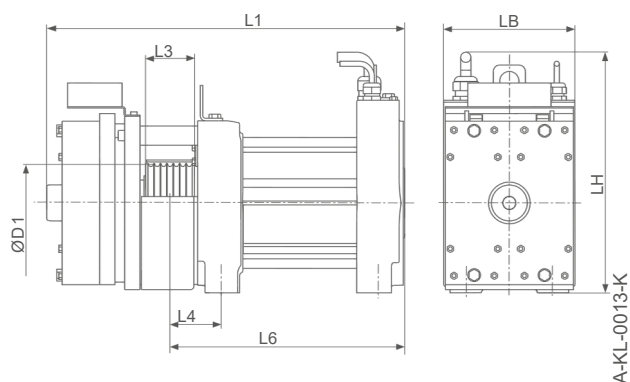
Page 70

ZAlift

Page 76

Technical data

SM132/A, SM132/AS

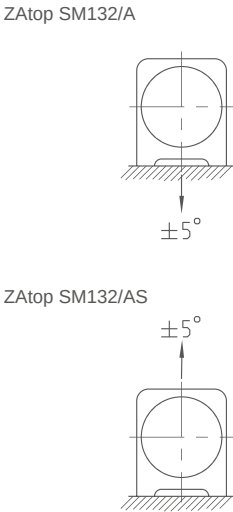


Motor type	Nominal torque Nm	Max. axle load kg	Nominal speed rpm	Rated output power kW	L1 mm	LH mm	L4 mm	L6 mm	LB mm	D1 mm	L3 mm	Weight kg
SM132.21-14/A	120	1500	162 - 510	2.0 - 6.4	468	450	70	286	205	120	56	110
										160		114
SM132.21-14/AS			162 - 324							120		112
										160		115
SM132.35-14/A	200	1700	162 - 510	3.4 - 10.7	558		80	366	205	120	76	133
										160		138
SM132.35-14/AS										120		135
										160		140

Scope of delivery and options

SM132/A	Standard	Options
Motor	Gearless elevator machine	Mechanical hand release system and bowden cables
Traction sheave	See D1	Inductive proximity switches
Brake	Certified brake system	10 m, 15 m, 20 m, 25 m halogen free BiSS-C / SSI / SinCos / TTL
Brake monitoring	Microswitch	3. Rope guard
Motor cable	5 m	PT100-thermistor
Absolute encoder	EnDat	Forced ventilation
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 diameter mm	Motor power kW	Rated current A
1:1	300	1.00	120	SM132.21-14/A	5	6.5	2.0	7.0
	480	1.00	120	SM132.35-14/A	7		3.4	11.0
2:1	450	1.00	160	SM132.21-14/A	5		3.2	10.0
	480	1.60	160	SM132.21-14/A	5		4.8	14.0
	630	1.00	120	SM132.21-14/A	5		4.1	13.0
	630	1.60	120	SM132.21-14/A	5		6.4	17.0
	800	1.60	160	SM132.35-14/A	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

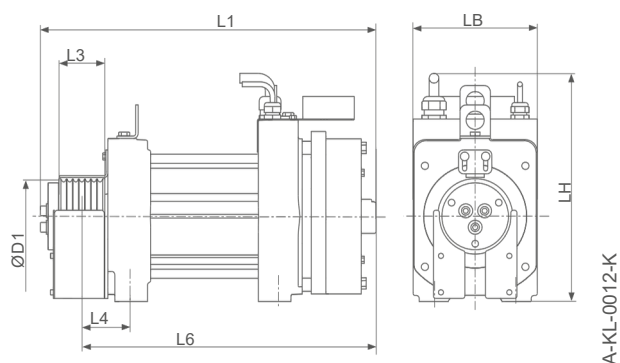
means

- Deployable as part of the protection against unintended car movement

Deflection pulleys	Page 70
ZAlift	Page 76
Machine frames	Page 63

Technical data

SM132/B, SM132/BS



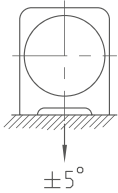
Motor type	Nominal torque Nm	Max. axle load kg	Nominal speed rpm	Rated output power kW	L1 mm	LH mm	L4 mm	L6 mm	LB mm	D1 mm	L3 mm	Weight kg
SM132.21-14/B	120	2400	162 - 510	2.0 - 6.4	465	450	70	405	205	120	56	101
										160		105
									220	200		106
SM132.21-14/BS									210	120		103
										160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

Scope of delivery and options

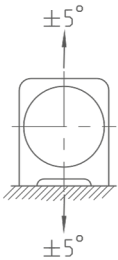
SM132/B	Standard	Options
Motor	Gearless elevator machine	Mechanical hand release system and bowden cables
Traction sheave	See D1	Inductive proximity switches
Brake	Certified brake system	10 m, 15 m, 20 m, 25 m halogen free BiSS-C / SSI / SinCos / TTL
Brake monitoring	Microswitch	3. Rope guard
Motor cable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

Resulting rope force

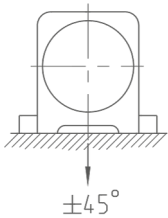
ZAtop SM132/B



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 diameter mm	Motor power kW	Rated current A
1:1	300	1.00	120	SM132.21-14/B	5	6.5	2.0	7.0
	480	1.00	120	SM132.35-14/B	7		3.4	11.0
	525	1.60	120	SM132.35-14/B	7		5.4	15.0
2:1	400	1.00	200	SM132.21-14/B	5		3.2	10.0
	450	1.00	160	SM132.21-14/B	5		3.2	10.0
	480	1.60	160	SM132.21-14/B	5		4.8	14.0
	525	1.00	200	SM132.35-14/B	7		5.4	15.0
	630	1.00	120	SM132.21-14/B	5		4.1	13.0
	630	1.60	120	SM132.21-14/B	5		6.4	17.0
	800	1.60	160	SM132.35-14/B	7		8.0	21.0
	1050	1.00	120	SM132.35-14/B	7		6.8	19.0
	1050	1.60	120	SM132.35-14/B	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

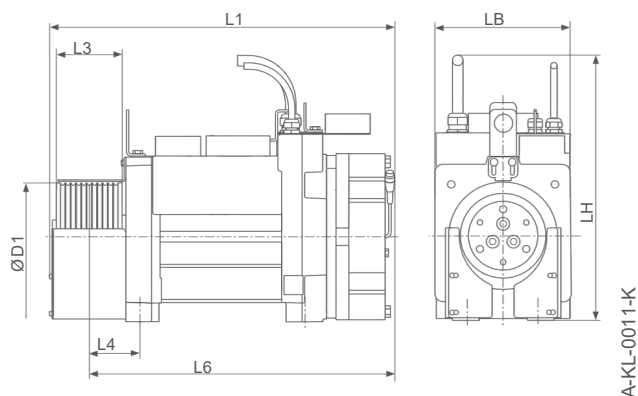
- Safety component in accordance with Lift Directive 2014/33/EU
- Separately activated brake circuits
- Deployable as an element of the ascending car overspeed protection

means

- Deployable as part of the protection against unintended car movement

Technical data

SM180



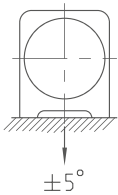
Deflection pulleys	Page 70
Forced ventilation	Page 73
ZAlift Motor	Page 76
cables	Page 111

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	215	1500	162 - 384	3.6 - 8.6	500	500	77	428	255	120	68	147		
					493					160	68	152		
										200	68	155		
										240	76	156		
											76	162		
SM180.35C	295	1850		5.0 - 11.9	566		83	490		120	76	173		
					553					160	76	178		
										200	76	182		
										240	88	183		
											76	188		
SM180.45C	385	2500	162 - 306	6.5 - 12.3	633	101	558	200	124	210				
									240	106	217			
										124	219			
										106	219			
											200	124	220	
SM180.46C	445	2500		7.5 - 13.8								106	226	
												240	124	229
												430		

Scope of delivery and options

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

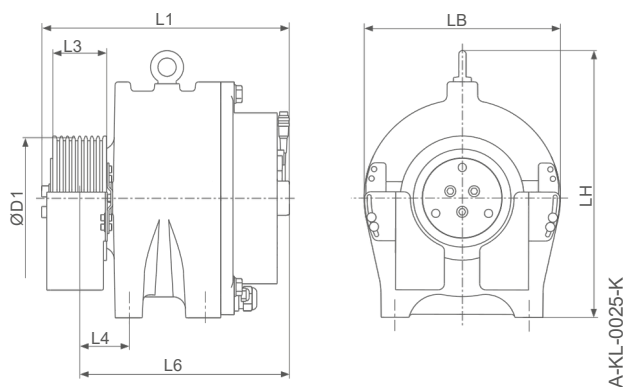
means

- Deployable as part of the protection against unintended car movement

Machine frames	Page 63
Deflection pulleys	Page 70
Adapter plates	Page 59
ZAlift	Page 76

Technical data

SM190

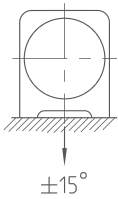


Motor type	Nominal torque Nm	Max. axle load kg	Nominal speed rpm	Rated output power kW	L1 mm	LH mm	L4 mm	L6 mm	LB mm	D1 mm	L3 mm	Weight kg
SM190.11B-20	180	1850	168 - 192	3.2 - 3.6	406	436	81	344	322	200	76	121
										240	66	125
SM190.15B-20	250		120 - 192	3.1 - 5.0						200	88	132
										240	76	137
									366	320	74	143

Scope of delivery and options

SM190	Standard	Options
Motor	Gearless elevator machine	Mechanical hand release system and bowden cables
Traction sheave	See D1	
Brake	Certified brake system	-
		-
Brake monitoring	Microswitch	EnDat
Motor cable	10 m	-
Absolute encoder	BiSS-C / SSI / SinCos	-
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	Speed	Traction sheave	Motor type	Number of ropes	Rope diameter	Motor power	Rated current
	kg	m/s	mm			mm	kW	A
1:1	300	1.60	240	SM190.15B-20	6	6.5	4.4	10.7
	375	2.00	200	SM190.15B-20	8	6.5	5.0	10.7
2:1	450	1.00	240	SM190.11B-20	4	6.5	4.4	10.0
	480	1.00	200	SM190.11B-20	5	6.5	5.0	11.0
	480	1.00	320	SM190.15B-20	3	8.0	3.1	10.7
	630	1.00	240	SM190.15B-20	6	6.5	4.4	12.8
	675	1.00	200	SM190.15B-20	7	6.5	5.0	14.3
	750	1.00	200	SM190.15B-20	8	6.5	5.0	14.3

ZAtop gearless elevator machine

SM200



SM200.15D/23D/30D



SM200.40E/45E

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

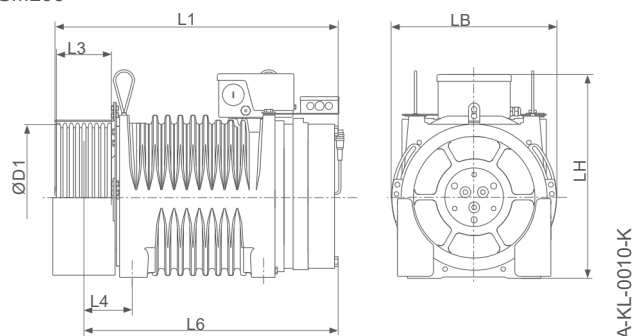
- Safety component in accordance with Lift Directive 2014/33/EU
- Separately activated brake circuits
- Deployable as an element of the ascending car overspeed protection

means

- Deployable as part of the protection against unintended car movement

Technical data

SM200



A-KL-0010-K

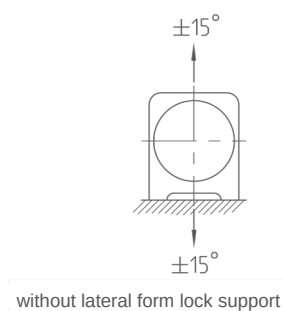
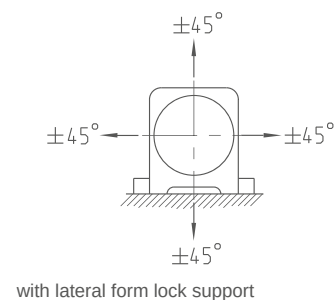
Motor cables	Page 111
Machine frames	Page 63
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Motor type	Nominal torque Nm	Max. axle load kg	Nominal speed rpm	Rated output power kW	L1 mm	LH mm	L4 mm	L6 mm	LB mm	D1 mm	L3 mm	Weight kg
SM200.15D-20	250	1855	96 - 306	2.5 - 8	491	438	81	428	320	160	76	150
										200	88	155
										240		162
									366	320	74	166
SM200.23D-20	330 - 380	2575 - 2850		3.8 - 13.3	513		96	443	320	160	106	175
					517					200	124	184
					513					240		193
									360	320	110	196
									422	400	92	208
									474	450		222
										200		214
SM200.30D-20	450 - 475	2690 - 2850	60 - 306	3.0 - 14.4	568			498	320		106	215
											124	224
										240		227
									360	320	110	239
									422	400	92	252
									474	450		280
SM200.40E-20	450 - 600	3300 - 3600	96 - 300	6.0 - 19.2	654	451	105	569	322	160	106	282
					632		97	561		200		295
										240	124	303
					681		122	586			173	307
					632		102	566	360	320	122	310
					631		97	561	422	400	95	329
									520	500	90	280
SM200.45E-20	650 - 710		60 - 300	4.5 - 20.4	654		105	569	322	160	106	282
					632		97	561		200		295
										240	124	303
					681		122	586			173	307
					632		102	566	360	320	122	310
					631		97	561	422	400	95	329
									520	500	90	

Scope of delivery and options

SM200	Standard	Options
Motor	Gearless elevator machine	Mechanical hand release system with or without bowden cables
Traction sheave	See D1	Inductive proximity switches
Brake	Certified brake system	10 m, 15 m, 20 m, 25 m halogen free BiSS-C / SSI / SinCos / TTL
Brake monitoring	Microswitch	3. Rope guard
Motor cable	5 m (SM200.15D to SM200.30D)	PT100-thermistor
Absolute encoder	EnDat	Forced ventilation
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 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	SM200.30D-20	11	6.0	4.8	14.5
	630	1.00	320	SM200.40E-20	7	8.0	6.0	16.5
	450	1.00	400	SM200.23D-20	5	8.0	3.8	12.0
2:1	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	240	SM200.45E-20	8	6.0	14.3	36.0
	1275	1.00	320	SM200.30D-20	11	8.0	8.4	23.0
	1600	1.00	240	SM200.40E-20	16	6.0	10.6	26.5
	1800	1.00	240	SM200.45E-20	8	6.0	14.3	36.0
	2000	1.00	200	SM200.45E-20	16	8.1	11.6	30.0
	2500	1.00	240	SM200.45E-20	7	6.0	19.2	46.0
			320			8.0		
4:1								

ZAtop gearless elevator machine

SM210



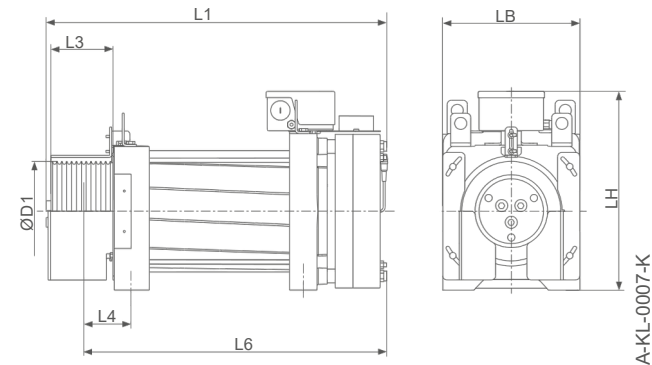
Synchronous motor actuated by permanent magnets and according to the provisions of the Lift Directive 2014/33/EU

- 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

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cables	Page 111

Technical data

SM210

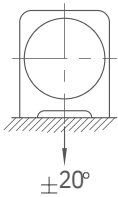


Motor type	Nominal torque Nm	Max. axle load kg	Nominal speed rpm	Rated output power kW	L1 mm	LH mm	L4 mm	L6 mm	LB mm	D1 mm	L3 mm	Weight kg
SM210.60B-20	800 - 850	4500	60 - 258	5.3 - 21.6	806	491	122	720	340	240	150	420
										320		425
									420	400		450
									543	520		480
SM210.70B-20	950 - 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	Mechanical hand release
Traction sheave	See D1	Inductive proximity switches
Brake	Certified brake system	10 m, 15 m, 20 m, 25 m halogen free
Brake monitoring	Microswitch	BiSS-C / SSI / SinCos / TTL
Motor cable	-	3. Rope guard
Absolute encoder	EnDat	PT100-thermistor
Rope guard	2 pieces	Forced ventilation
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	Speed	Traction sheave	Motor type	Number of ropes	Rope diameter	Motor power	Rated current
	kg	m/s	mm			mm	kW	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
	2500	1.00	320	SM210.60B-20	8	8.0	21.6	54.0
4:1	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

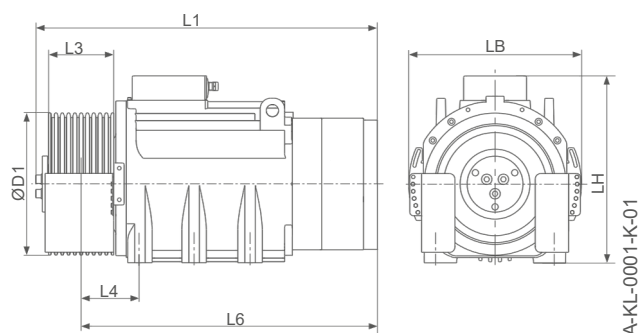
means

- Deployable as part of the protection against unintended car movement

Motor cables	Page 111
Machine frames	Page 63
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Adapter plates	Page 59
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Technical data

SM250

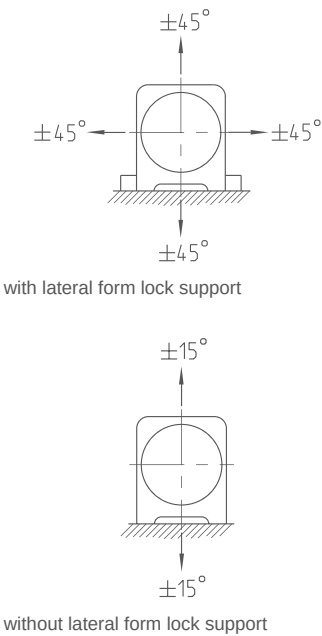


Motor type	Nominal torque Nm	Max. axle load kg	Nominal speed rpm	Rated output power kW	L1 mm	LH mm	L4 mm	L6 mm	LB mm	D1 mm	L3 mm	Weight kg
SM250.45B-20	900 - 1120	6000	60 - 336	7.0 - 31.7	922	535	163	785	410	320	182	635
									425	400	150	640
									500		186	650
									520	500	150	670
									543	520		680
									620	600		695
									660	640		750
SM250.60B-20	1200 - 1600			10.0 - 42	984			847	410	320	182	695
									425	400	150	700
									500		186	715
									520		150	735
									543	500		740
									620	520		765
									660	600		810
SM250.80D-20	2000 - 2500	8000	54 - 300	12.6 - 72.3	1147	645	170	999	474	640		1020
									546	440	200	1041
									666	520		1128
										640		

Scope of delivery and options

SM250	Standard	Options
Motor	Gearless elevator machine	Mechanical hand release
Traction sheave	See D1	Inductive proximity switches
Brake	Certified brake system	10 m, 15 m, 20 m, 25 m halogen free
Brake monitoring	Microswitch	BiSS-C / SSI / SinCos / TTL
Motor cable	-	3. Rope guard
Absolute encoder	EnDat	PT100-thermistor
Rope guard	2 pieces	Forced ventilation
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 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
	3000	1.00	440	SM250.80D-20	11	11.0	28.3	86.0
	3000	1.60	440	SM250.80D-20	11	10.0	28.9	78.0
	5000	1.00	440	SM250.80D-20	11	10.0	36.4	94.0
4:1	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
	6000	1.00	440	SM250.80D-20	8	10.0	46.5	118.0
6:1			520			10.0		

ZAtop gearless elevator machine

SM250.100C



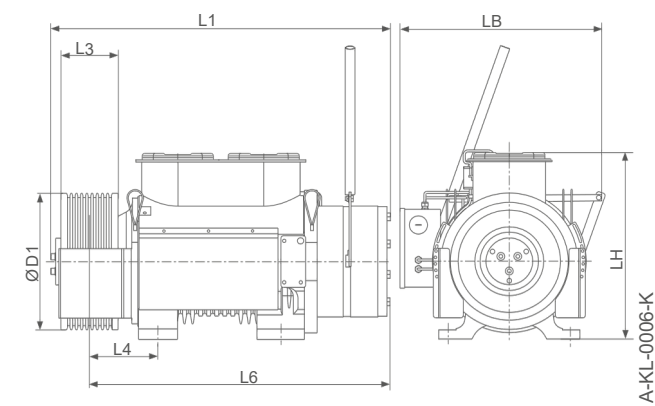
Synchronous motor actuated by permanent magnets and according to the provisions of the Lift Directive 2014/33/EU

- 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 111
Machine frames	Page 63
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Technical data

SM250.100C

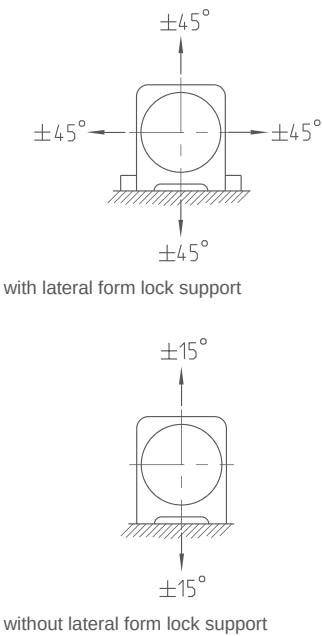


Motor type	Nominal torque Nm	Max. axle load kg	Nominal speed rpm	Rated output power kW	L1 mm	LH mm	L4 mm	L6 mm	LB mm	D1 mm	L3 mm	Weight kg
SM250.100C-20	2100 - 2650	13000	78 - 312	22 - 69	1313	729	264	1164	794	450 500 520	282 220	1250

Scope of delivery and options

SM250	Standard	Options
Motor	Gearless elevator machine	Mechanical hand release
Traction sheave	See D1	Inductive proximity switches
Brake	Certified brake system	10 m, 15 m, 20 m, 25 m halogen free
Brake monitoring	Microswitch	BiSS-C / SSI / SinCos / TTL
Motor cable	-	3. Rope guard
Absolute encoder	EnDat	PT100-thermistor
Rope guard	2 pieces	-
Temperature monitoring	PTC thermistor	
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	Speed	Traction sheave	Motor type	Number of ropes	Rope diameter	Motor power	Rated current
	kg	m/s	mm			mm	kW	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

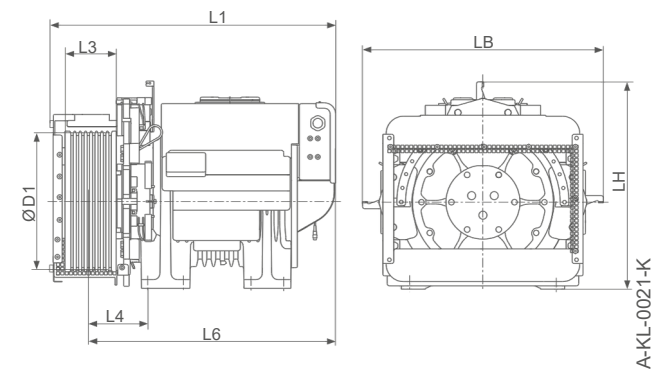
- Elevator machine
- NdFeB magnets
 - For fast elevators of up to 4 m/s
 - Insulation class F with temperature monitoring
- Brake system
- Safety component in accordance with Lift Directive 2014/33/EU
 - Separately activated brake circuits
 - Deployable as an element of the ascending car overspeed protection

- 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 111
Forced ventilation		Page 73
Deflection pulleys		Page 70
ZAlift		Page 76

Technical data

SM315.100A

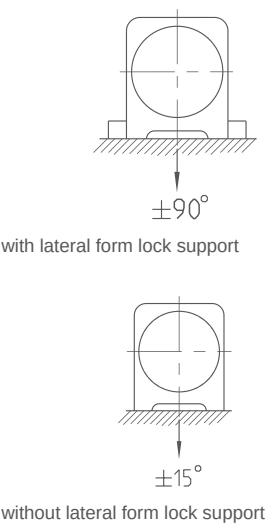


Motor type	Nominal torque Nm	Max. axle load kg	Nominal speed rpm	Rated output power kW	L1 mm	LH mm	L4 mm	L6 mm	LB mm	D1 mm	L3 mm	Weight kg
SM315.100A	5000	13000	40 - 156	20.9 - 81.7	1315	954	260	1129	1108	520	230	1884
										640		1938

Scope of delivery and options

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

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	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

The Royal League

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