

# ALIMAK SE & SE Ex

CAPACITY	
Payload capacities:	300 – 2000 kg
Average speed up/down at rated payload:	
Direct on line (DOL) 50Hz:	0.40, 0.52, 0.59 or 0.63 m/s
Frequency control (VFC):	0.4, 0.6, 0.8 or 1.0 m/s
Max. lifting height with std. accessories:	250 m <sup>1</sup>
1. Depending on the optional equipment chosen	

DIMENSIONS	
Internal width:	780 – 1560 mm
Internal length:	1040 – 2990 mm
Internal height:	2170 mm
Bi-folding door opening width:	650 mm
Sliding door opening width:	675 mm
	alt. 945 mm
	alt. 1260 mm
	or 1530 mm
Door opening height:	2010 mm
Headroom required above landing:	4000 to 4750 mm
Min. required shaft dimension =	–
Landing enclosure outside dimension	
Mast section length:	1508 mm

CAR WEIGHT	
Car weight	750 – 2550 kg

CONTROLS	
Operation:	<ul style="list-style-type: none"> <li>• Single automatic. 2 – 3 landings</li> <li>• Semi-automatic. 3 – n landings</li> <li>• Collective / Selective. 2 – 16 landings</li> </ul>
All systems can control DOL, only collective for VFC.	
Separate power voltage:	230V AC / 110V AC
Control circuit voltage:	230V AC
Motor control:	direct on line (DOL) or variable frequency control (VFC)

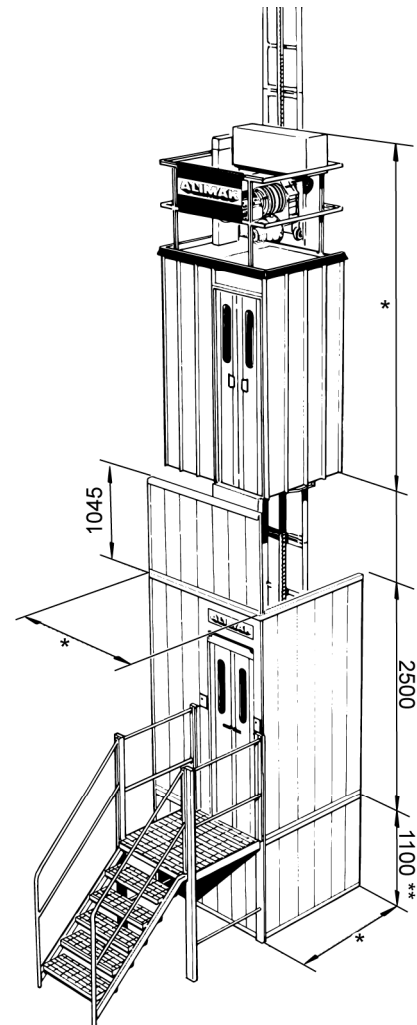


Fig B2

\* Variable

\*\* Height 1200 mm for car payload exceeding 700 kg in the US.

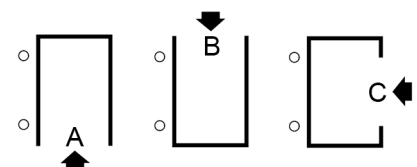


Fig B3

Car door configuration  
or combinations AB/AC/BC

## Technical Data Alimak SE Lifts

### Load & car size acc. to EN 81

**Table 1** Capacity and dimensions

Lift type	Speed at 50 Hz	Speed at 50 Hz VFC	Payload kg	Car size w × l mm	Door opening width mm				
	DOL m/s	m/s			650	675	945	1260	1530
SE 300	0.59	0.60/0.80/1.0	300	780 × 1040	x	x <sup>1</sup>	NA	NA	NA
SE 400	0.59	0.60/0.80/1.0	400	910 × 1170	x	x <sup>1</sup>	x <sup>1</sup>	NA	NA
SE 500	0.59	0.60/0.80/1.0	500	1040 × 1170	x	x	x <sup>1</sup>	NA	NA
SE 1200	0.40	0.60/0.80/1.0	1200	1300 × 2080	NA	NA	NA	x	NA
SE 2000	NA	0.4/0.6	2000	1560 × 2600	NA	NA	NA	NA	x

1. For C-door only

**Table 2** Electrical data

Lift type	Motor control	Power supply fuses A	Rated power kW	Starting current A	Power kVA
SE 300	DOL <sup>1</sup>	25	7.0	93	~ 10.5 <sup>1</sup>
SE 400	DOL <sup>1</sup>	25	7.0	93	~ 10.5 <sup>1</sup>
SE 500	DOL <sup>1</sup>	35	8.8	144	~ 11.5 <sup>1</sup>
SE 1200	DOL <sup>1</sup>	50	2 x 8.8	208	~ 16 <sup>1</sup>
SE 300	VFC <sup>2</sup>	20 – 35	13/19	15 - 28	~ 10 - 16.5
SE 400	VFC <sup>2</sup>	20 – 35	13/19	16 - 30	~ 11 - 18
SE 500	VFC <sup>2</sup>	25 – 35	13/19	17 - 33	~ 11.5 - 19
SE 1200	VFC <sup>2</sup>	50 - 63	2 × 13/19	33 - 64	~ 21 - 34.5
SE 2000	VFC <sup>2</sup>	35 - 50	2 × 13/19	29 - 51	~ 19 - 28.5

1. 400V 50Hz

2. The higher value at maximum speed

**Table 3 Weights**

Lift type	Motor control	Car weight approx kg	Mast type			
			A kg	A modified kg	FE kg	A-50 kg
SE 300	DOL	770	53	58	100	110
SE 400	DOL	830	53	58	100	110
SE 500	DOL	810	53	58	100	110
SE 1200	DOL	1470	NA	NA	100	110
SE 300	VFC	880	53	58	100	110
SE 400	VFC	910	53	58	100	110
SE 500	VFC	900	53	58	100	110
SE 1200	VFC	1560	NA	NA	100	110
SE 2000	VFC	1780	NA	NA	100	110

**Table 4 Room required**

Headroom required is determined for each installation, and depends on car size, VFC/DOL, number of motors, and type of door.

Min. required shaft dimensions: Depends on mast choice.

Enclosure w × d: Depends on mast choice.

## Alimak SE Lifts Available car sizes

### Table 5 Sizes

Lift size	No. of pass. EN	No. of pass. EN	Car size mm	Door opening width mm				
				650	675	945	1260	1530
	81-20	81-43						
SE 300	4	NA	780 × 1040	x	x	NA	NA	NA
SE 350	NA	3	780 × 1040	x	x	NA	NA	NA
SE 400	4	3	780 × 1170	x	x	x <sup>1</sup>	NA	NA
SE 400	5	4	780 × 1300	x	x	x <sup>1</sup>	NA	NA
SE 400	5	4	780 × 1430	x	x	x <sup>1</sup>	NA	NA
SE 500	6	4	780 × 1560	x	x	x <sup>1</sup>	NA	NA
SE 400	4	3	910 × 1040	x	x	x <sup>1</sup>	NA	NA
SE 400	5	4	910 × 1170	x	x	x <sup>1</sup>	NA	NA
SE 500	6	4	910 × 1300	x	x	x <sup>1</sup>	NA	NA
SE 500	6	5	910 × 1430	x	x	x <sup>1</sup>	NA	NA
SE 600	7	5	910 × 1560	x	x	x <sup>1</sup>	NA	NA
SE 400	5	4	1040 × 1040	x	x	x	NA	NA
SE 500	6	4	1040 × 1170	x	x	x	NA	NA
SE 500	6	5	1040 × 1300	x	x	x	NA	NA
SE 600	8	5	1040 × 1430	x	x	x	NA	NA
SE 700	9	6	1040 × 1560	x	x	x	NA	NA
SE 900	12	NA	1300 × 1690	NA	NA	NA	x	NA
SE 1000	13	NA	1300 × 1820	NA	NA	NA	x	NA
SE 1100	14	NA	1300 × 1950	NA	NA	NA	x	NA
SE 1200	16	NA	1300 × 2080	NA	NA	NA	x	NA
SE 1300	17	NA	1300 × 2210	NA	NA	NA	x	NA
SE 1500	20	NA	1300 × 2470	NA	NA	NA	x	NA
SE 1600	21	NA	1300 × 2730	NA	NA	NA	x	NA
SE 1800	24	NA	1300 × 2990	NA	NA	NA	x	NA
SE 1200	16	NA	1560 × 1690	NA	NA	NA	NA	x
SE 1400	18	NA	1560 × 1950	NA	NA	NA	NA	x
SE 1600	21	NA	1560 × 2210	NA	NA	NA	NA	x
SE 1800	24	NA	1560 × 2470	NA	NA	NA	NA	x
SE 2000	26	NA	1560 × 2600	NA	NA	NA	NA	x

1. For C-door only

**Table 6** Speed and power

Lift size	Car size mm	DOL (50Hz) <sup>1</sup>		VFC <sup>2</sup>	
		Speed m/s	Power kW	Speed m/s	Power kW
SE 300	780 × 1040	0,6	7,0	0,6 alt. 0,8	13 alt. 19
SE 400	780 × 1170	0,6	7,0	0,6 alt. 0,8	13 alt. 19
SE 400	780 × 1300	0,6	7,0	0,6 alt. 0,8	13 alt. 19
SE 400	780 × 1430	0,6	7,0	0,6 alt. 0,8	13 alt. 19
SE 500	780 × 1560	0,6	8,8	0,6 alt. 0,8	13 alt. 19
SE 400	910 × 1040	0,6	7,0	0,6 alt. 0,8	13 alt. 19
SE 400	910 × 1170	0,6	7,0	0,6 alt. 0,8	13 alt. 19
SE 500	910 × 1300	0,6	8,8	0,6 alt. 0,8	13 alt. 19
SE 500	910 × 1430	0,6	8,8	0,6 alt. 0,8	13 alt. 19
SE 600	910 × 1560	0,6	8,8	0,6 alt. 0,8	13 alt. 19
SE 400	1040 × 1040	0,6	8,8	0,6 alt. 0,8	13 alt. 19
SE 500	1040 × 1170	0,6	8,8	0,6 alt. 0,8	13 alt. 19
SE 500	1040 × 1300	0,6	8,8	0,6 alt. 0,8	13 alt. 19
SE 600	1040 × 1430	0,6	8,8	0,6 alt. 0,8	13 alt. 19
SE 700	1040 × 1560	0,6	13,0	0,6 alt. 0,8	13 alt. 19
SE 900	1300 × 1690	0,4	2 × 8,8	0,6 alt. 0,8 or 1,0	2 × 13 alt. 19
SE 1000	1300 × 1820	0,4	2 × 8,8	0,6 alt. 0,8 or 1,0	2 × 13 alt. 19
SE 1100	1300 × 1950	0,4	2 × 8,8	0,6 alt. 0,8 or 1,0	2 × 13 alt. 19
SE 1200	1300 × 2080	0,4	2 × 8,8	0,6 alt. 0,8 or 1,0	2 × 13 alt. 19
SE 1300	1300 × 2210	NA	NA	0,6 alt. 0,8	2 × 13 alt. 19
SE 1500	1300 × 2470	NA	NA	0,6 alt. 0,8	2 × 13 alt. 19
SE 1600	1300 × 2730	NA	NA	0,6 alt. 0,8	2 × 13 alt. 19
SE 1800	1300 × 2990	NA	NA	0,4 alt. 0,6	2 × 13 alt. 19
SE 1200	1560 × 1690	NA	NA	0,6 alt. 0,8 or 1,0	2 × 13 alt. 19
SE 1400	1560 × 1950	NA	NA	0,6 alt. 0,8	2 × 13 alt. 19
SE 1600	1560 × 2210	NA	NA	0,6 alt. 0,8	2 × 13 alt. 19
SE 1800	1560 × 2470	NA	NA	0,4 alt. 0,6	2 × 13 alt. 19
SE 2000	1560 × 2600	NA	NA	0,4 alt. 0,6	2 × 13 alt. 19

1. 400V 50Hz

2. The higher value at maximum speed

## Technical Data Alimak SE-Ex

### Load & car size acc. to EN 81

**Table 7** Capacity and dimensions

Lift type	Speed at50 Hz DOLm/s	Speed at50 Hz VFCm/s	No. ofpass. EN	Payload kg	Car sizew × lmm	Door opening width mm				
						650	675	945	1260	1530
SE-Ex 500	0,59	NA	6	500	910 × 1300	x	x	x <sup>1</sup>	NA	NA
SE-Ex 700	0,59	NA	9	700	1040 × 1560	x	x	x	NA	NA
SE-Ex 900	0,59	NA	16	900	1300 × 1690	NA	NA	NA	x	NA
SE-Ex 1200	0,59	NA	16	1200	1300 × 2080	NA	NA	NA	x	NA
Car and car doors of extruded aluminium panels										
SE-Ex 1600	NA	0,63	16	1600	1300 × 2730	NA	NA	NA	x	NA
Car and car doors of stainless steel										
SE-Ex 1200	NA	0,63	20	1200	1300 × 2080	NA	NA	NA	x	NA
SE-Ex 1500	NA	0,63	21	1500	1300 × 2470	NA	NA	NA	x	NA

1. For C-door only

**Table 8** Electrical data

Lift type	Motor control	Power supplyfuses <sup>1</sup>	Rated power <sup>1</sup>	Starting current <sup>1</sup>	Power <sup>1</sup>
			kW	A	kVA
SE-Ex 500	DOL	63	2 × 11	315	~ 18
SE-Ex 700	DOL	63	2 × 11	315	~ 21
SE-Ex 900	DOL	63	2 × 11	315	~ 26
SE-Ex 1200	DOL	63	2 × 11	315	~ 27
Car and car doors of extruded aluminium panels					
SE-Ex 1600	VFC	63	2 × 15	58	~ 35
Car and car doors of stainless steel					
SE-Ex 1200	VFC	63	2 × 15	58	~ 33
SE-Ex 1500	VFC	63	2 × 15	58	~ 36

1. 400V 50Hz

**Table 9 Weights**

Lift type	Motor control	Car weight approx. kg	Mast type			
			A kg	A mod. kg	FE kg	A-50 kg
SE-Ex 500	DOL	1700	NA	NA	100	110
SE-Ex 700	DOL	1800	NA	NA	100	110
SE-Ex 900	DOL	2500	NA	NA	100	110
SE-Ex 1200	DOL	2400	NA	NA	100	110
Car and car doors of extruded aluminium panels						
SE-Ex 1600	VFC	2450	NA	NA	100	110
Car and car doors of stainless steel						
SE-Ex 1200	VFC	2600	NA	NA	100	110
SE-Ex 1500	VFC	2650	NA	NA	100	110

**Table 10 Room required**

Lift type	Motor control	Headroom required above top landing in mm	
		1 motor	2 motors
SE-Ex 500	DOL	NA	4650
SE-Ex 700	DOL	NA	4650
SE-Ex 900	DOL	NA	4750
SE-Ex 1200	DOL	NA	4750
Car and car doors of extruded aluminium panels			
SE-Ex 1600	VFC	NA	4750
Car and car doors of stainless steel			
SE-Ex 1200	VFC	NA	4750
SE-Ex 1500	VFC	NA	4750

Min. required shaft dimensions: Depends on mast choice.

Enclosure w × d: Depends on mast choice.

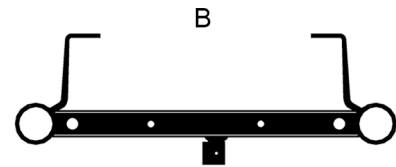
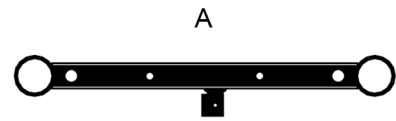
## Guide rails / masts

### GUIDE RAILS / MASTS

Type: Tubular steel with integrated rack  
Section length 1508 mm

Alternative:	Type	Weight <sup>1</sup>	Tie-distance
	A	53 kg	each 1.5 m
	A mini	58 kg	each 1.5 m
	FE	100 kg	up to 12 m
	A50	110 kg	up to 24 m

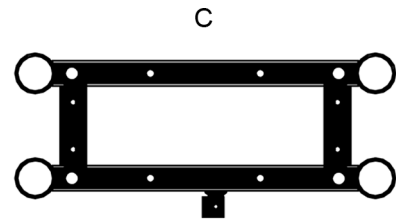
1. tube diameter 76 × 4.2 mm



## Electrical data

### POWER SUPPLY

Voltage:	DOL	380 – 420 V, 50 Hz
		or 440 – 480 V, 60 Hz
	VFC	380 – 500 V, 50/60 Hz



### ELECTRICAL MOTOR

Type AC squirrel cage motor.

Electrical motor for regular SE lifts

Alternative: (kW at 25 % intermittent duty)	DOL	1 × 7.0 kW, Star (8.5 kW at 60 Hz)
		1 × 13 kW, Star (15 kW at 60 Hz)
		1 or 2 × 8.8 kW, Delta (10 kW at 60 Hz)
	VFC	1 × 13 kW Star / 1 × 19 kW Delta
		2 × 13 kW Star / 1 × 19 kW Delta

Electrical motor for SE-Ex lifts

Alternative: (kW at continuous duty (100%))	DOL	1 or 2 × 11 kW, Delta (12.6 kW at 60 Hz)
		VFC

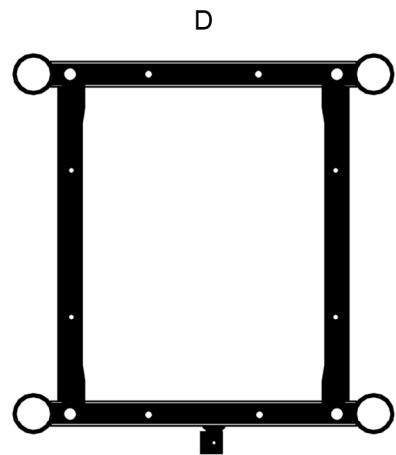


Fig B4

A. Tube guide rail type A for lifting heights up to 50 meters

B. Tube guide rail type A mini for lifting heights above 50 up to 200 meters

C. Rectangular tube mast section type FE

D. Square tube mast section type A50



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**ELECTRICAL MOTOR BRAKE**


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Type spring applied electromagnetic disc brake:

7.0 kW:s motor brake torque: 120 Nm

8.8 kW:s motor brake torque: 170 Nm

13.0 kW:s motor brake torque: 170 Nm

for motor with EN 81 approved motor brake:

13.0 kW:s motor brake torque: 130 Nm

for motor with approved Ex. proof motor brake:

11.0 kW:s motor brake torque: 150 Nm

11.0 kW:s motor brake torque: 170 Nm

15.0 kW:s motor brake torque: 170 Nm

Electrical ingress protection class: minimum IP 54

Measured noise level in car less than  $\leq 80$  db(A)

Operating temperature range + 40 °C / - 20 °C

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**SURFACE TREATMENT**

Structural parts (mast, car frame):

- Hot dip galvanized

Car and enclosure panels:

- Anodized aluminium
- Stainless steel (for extreme environment)

Other parts:

- Hot dip galvanized
- Stainless steel

**OPTIONAL FEATURES AMONG OTHERS**

- Platforms and stairs
- Automatic rack lubricator
- Ventilation fan
- Extra ventilation
- Overload detection
- Automatic return to base, automatic alarm etc
- Windows in car
- PTC-detection in motor windings
- Heater in motor windings