



Industrial sectional doors Depth 67 mm / series 60

Technical manual

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HÖRMANN

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Notice:

All information in this document can only represent the status upon document creation.
Therefore deviations from the product configurator may occur.
All dimensions in mm.
Subject to design changes.

Detailed door leaf equipment and track applications as well as fitting examples are provided in this manual.
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Product descriptions

Door type	Door leaf / wicket door
Sectional door SPU 67 Thermo, double-skinned steel sectional door with thermal break, Stucco-textured / Micrograin, door sections 625 and 750 mm high	
Door leaf	Door sections made of double-skinned, PU-foamed steel sections with thermal break (made of hot-galvanized steel). Door sections Stucco-textured on inside and outside with uniform horizontal ribbing, or Micrograin with fine horizontal embossing on outside and Stucco-textured inside, 625 and 750 mm high, depth 67 mm. All door sections without finger trap protection. Surface protection with polyester primer coating.
Wicket door	Only to be fitted in the central fields of the sectional door. Cannot be fitted in the outer fields – note the arrangement! Only opening outwards, LH or RH hinged. In doors with wicket door with trip-free threshold, the clear frame dimensions (ordering size, LZ) must not exceed the clear opening width +10 mm. Attention (for threshold rail): For grid heights 2000, 2125 and 2250, the clear opening height must not be lower than the door height.
Glazing	Glazing frames made of anodised aluminium tubular profiles with thermal break or sections with compound glazing are possible within the fitting area shown below. Fewer compound glazings or different arrangements are possible subject to the minimum distances. Glazing frames are possible from FFL and compound glazings from 625 / 750 mm above FFL.
Sectional door SPU 67 Thermo, double-skinned steel sectional door with thermal break, Stucco-textured / Micrograin, door sections 375 and 500 mm high	
Door leaf	Door sections made of double-skinned, PU-foamed steel sections with thermal break (made of hot-galvanized steel). Door sections Stucco-textured on inside and outside with uniform horizontal ribbing, or Micrograin with fine horizontal embossing on outside and Stucco-textured inside, 375 and 500 mm high, depth 67 mm. All door sections without finger trap protection. Surface protection with polyester primer coating.
Wicket door	Only to be fitted in the central fields of the sectional door. Cannot be fitted in the outer fields – note the arrangement! Only opening outwards, LH or RH hinged. In doors with wicket door with trip-free threshold, the clear frame dimensions (ordering size, LZ) must not exceed the clear opening width +10 mm. Attention (for threshold rail): For grid heights 2000 and 2125, the clear opening height must not be lower than the door height.
Glazing	Glazing frames made of anodised aluminium tubular profiles with thermal break or sections with compound glazing are possible within the fitting area shown below. Fewer compound glazings or different arrangements are possible subject to the minimum distances. Glazing frames are possible from FFL and compound glazings from 500 mm above FFL.
Sectional door APU 67 Thermo, glazed aluminium sectional door with thermal break with steel bottom section	
Door leaf	Bottom section made of double-skinned, PU-foamed steel section with thermal break (made of hot-galvanized steel), 750 mm (standard) or 1500 mm high, Stucco-textured on inside and outside with uniform horizontal ribbing, or Micrograin with fine horizontal embossing on outside and Stucco-textured inside. Surface protection with polyester primer coating. Other door sections with glazing made of anodised aluminium tubular profiles with thermal break. Depth 67 mm. All door sections without finger trap protection. Infill: Clear synthetic triple pane, 51 mm (S3).
Wicket door	Depending on the door type made of anodised aluminium tubular profiles with thermal break, installed in the centre fields of the door. Cannot be fitted in the outer fields – note the arrangement! Only opening outwards, LH or RH hinged. In doors with wicket door with trip-free threshold, the clear frame dimensions (ordering size, LZ) must not exceed the clear opening width +10 mm. Attention (for threshold rail): If the wicket door has the same number of door sections as the sectional door, the clear opening height must not be lower than the door height (RM).
Sectional door ALR 67 Thermo, glazed aluminium sectional door with thermal break	
Door leaf	Door sections made of anodised aluminium tubular profiles with thermal break. Depth 67 mm. All door sections without finger trap protection. Bottom door section consisting of PU-foamed infill with 51 mm Stucco-textured aluminium sheet cover on both sides (FU), other door sections with 51 mm clear synthetic triple panes (S3).
Wicket door	Depending on the door type made of anodised aluminium tubular profiles with thermal break, installed in the centre fields of the door. Cannot be fitted in the outer fields – note the arrangement! Only opening outwards, LH or RH hinged. In doors with wicket door with trip-free threshold, the clear frame dimensions (ordering size, LZ) must not exceed the clear opening width +10 mm. Attention (for threshold rail): If the wicket door has the same number of door sections as the sectional door, the clear opening height must not be lower than the door height (RM).
Sectional door ALR 67 Thermo Glazing, extensive glazing, aluminium sectional door with thermal break, real glass	
Door leaf	Door sections made of anodised aluminium tubular profiles with thermal break. Depth 67 mm. All door sections without finger trap protection. All door section infills with double panes made of single-pane safety glass 26 mm. Uniform infill heights.
Frame / track application	
Enclosed, moulded angle frame, made of hot-galvanized steel with screwed track and double radius 510 mm.	

Product descriptions

Door lock

Manually operated	Inside locking using a shootbolt, rotary latch (for track applications with low-mounted torsion spring shaft on request) or floor locking.
Power-driven	Inside locking using a shootbolt

Counterbalance

Torsion springs, with carrying cables on the side (with a low headroom track application, a combination of carrying chain and carrying cable). The torsion springs for N, ND, NS, NK, NA, NH, GD and GS track applications are designed for at least 25000 closing cycles and for all other track applications for at least 50000 closing cycles.

For version with direct drive operator via the operator, shaft and carrying cables on the side.

Safety-related equipment according to DIN EN 12604

- Manually operated doors using one torsion spring on both sides with approved catch safety device and integrated anti-lift kit ^{*)}
- Manually operated doors using more than one torsion spring with approved spring safety device and with approved catch safety device on both sides as well as integrated anti-lift kit (not for version with direct drive operator) ^{*)}
- Power-driven doors with break-in-resistant anti-lift kit

* European patent

Notice on trap guard:

To comply with the safety requirements of door product standard DIN EN 13241-1, the following door systems require an operator and a light grille HLG 550. The light grille must be fitted in the reveal to secure gaps resulting during door travel. This safeguarding must take place up to a height of 2500 mm above FFL or a different permanent access level:

Type of door:		SPU 67 Thermo	APU 67 Thermo	ALR 67 Thermo	ALR 67 Thermo Glazing
Track applications:	N, NA, ND, NS, NK	Door height ≤ 3125		Door height ≤ 3165	
	NH, GD, GS, GK	Door height ≤ 3000		Door height ≤ 3040	
	L, LD	Door height ≤ 3250		Door height ≤ 3290	
	H, HA, HD, HS, HK, VS after technical inspection	Door height ≤ 3125		Door height ≤ 3165	

Seals

Bottom seal made of 1-chamber profile on inside and 3-chamber EPDM profile on outside with flexible adjustment lip, side seal, lintel seal, intermediate seal between the door sections.

Notice regarding surface coating

For the following colours, sectional doors SPU 67 Thermo, APU 67 Thermo and ALR 67 Thermo with door widths from 5010 to 5500 mm in combination with track applications NH, GD, GS, GK, H, HD, HS, HK, HA, HU, RD, RS, RK, V, VA, VS, VU and WS are equipped with door leaf reinforcements to reduce the possibility of section deflection caused by sun exposure and require technical inspection.

RAL 3007 Black red
RAL 5003 Sapphire blue
RAL 5004 Black blue
RAL 5011 Steel blue
RAL 5013 Cobalt blue
RAL 5020 Ocean blue
RAL 5022 Night blue

RAL 6004 Blue green
RAL 6005 Moss green
RAL 6007 Bottle green
RAL 6008 Brown green
RAL 6009 Fir green
RAL 6012 Black green
RAL 6015 Black olive

RAL 6022 Olive drab
RAL 7016 Anthracite grey
RAL 7021 Black grey
RAL 7043 Traffic grey
RAL 8014 Sepia brown
RAL 8016 Mahogany brown
RAL 8017 Chocolate brown

RAL 8019 Grey brown
RAL 8022 Black brown
RAL 8028 Terra brown
RAL 9004 Signal black
RAL 9005 Jet black
RAL 9011 Graphite black
RAL 9017 Traffic black

Colour CH 703

Technical data overview

Construction and quality features					
		SPU 67 Thermo	APU 67 Thermo	ALR 67 Thermo	ALR 67 Thermo Glazing
Resistance to wind load EN 12424	Door without wicket door, LZ ≤ 8000, class	3 ^{6) 10)}	3 ⁶⁾	3 ⁶⁾	3 ^{4) 6)}
	Door without wicket door, LZ > 8000, class	2 ^{7) 10)}	2 ⁷⁾	2 ⁷⁾	–
	Door without wicket door, LZ ≤ 4000, class	4 ^{5) 10)}	4 ⁵⁾	4 ⁵⁾	4 ^{4) 5)}
	Door with wicket door, LZ ≤ 4000, class	4 ^{6) 10)}	4 ⁶⁾	4 ⁶⁾	–
	Door with wicket door, LZ > 4000, class	2 ^{7) 10)}	2 ⁷⁾	2 ⁷⁾	–
Water tightness EN 12425	Door without wicket door, class	3 (70 Pa)	3 (70 Pa)	3 (70 Pa)	3 (70 Pa)
Air permeability EN 12426	Door without wicket door, class	2 ⁸⁾	2 ⁸⁾	2 ⁸⁾	2 ⁸⁾
	Door with wicket door, class	1 ⁹⁾	1 ⁹⁾	1 ⁹⁾	1 ⁹⁾
Acoustic value EN 717-1	Door without wicket door R _w = . . . dB	25 ¹¹⁾	23	23 (30 ¹⁾)	30 ¹⁾
	Door with wicket door R _w = . . . dB	24 ¹¹⁾	22 (29 ¹⁾)	22 (29 ¹⁾)	–
Thermal resistance EN 13241-1, appendix B EN 12428	Door without wicket door, U = W/(m²·K) ²⁾	0.62 (0.51 ³⁾)	2.1 (2.0 ³⁾)	2.2 (2.1 ³⁾)	–
	- Optional quadruple glazing, U = W/(m²·K) ²⁾	–	1.8 (1.7 ³⁾)	1.9 (1.8 ³⁾)	–
	- Optional climatic double panes made of single-pane safety glass, U = W/(m²·K) ²⁾	–	1.6 (1.5 ³⁾)	1.7 (1.6 ³⁾)	1.8 (1.7 ³⁾)
	- Optional double panes made of single-pane safety glass, U = W/(m²·K) ²⁾	–	2.6 (2.5 ³⁾)	2.7 (2.6 ³⁾)	3.0 (2.9 ³⁾)
	Door with wicket door, U = W/(m²·K) ²⁾	0.82 (0.75 ³⁾)	2.3 (2.2 ³⁾)	2.4 (2.3 ³⁾)	–
	- Optional quadruple glazing, U = W/(m²·K) ²⁾	–	2.0 (1.9 ³⁾)	2.1 (2.1 ³⁾)	–
	- Section, U = W/(m²·K)	0,33	–	–	–
Construction	Self-supporting	●	●	●	●
	Depth, mm	67	67	67	67
Door sizes	Max. width mm, LZ	10000	10000	10000	5500
	Max. height mm, RM	7500	7500	7500	4000
Space requirement	From page 37				
Material, door leaf	Steel, double-skinned, 67 mm	●	●	–	–
	Aluminium, profile with thermal break	–	●	●	●
Surface, door leaf	Galvanized steel, coated RAL 9002	●	○	–	–
	Galvanized steel, coated RAL 9006	○	●	–	–
	Galvanized steel, coated RAL to choose	○	○	–	–
	Anodised aluminium E6 / C0	○	●	●	●
	Aluminium coated in RAL to choose	○	○	○	○
Door leaf reinforcement	From LZ, mm	5510	5510	5510	3340
	Notice regarding surface coating, see page 5 From LZ, mm	5010	5010	5010	3340
Wicket door		○	○	○	–
Side door	Matching the door	○	○	○	○
Glazings	Type A section window	○	–	–	–
	Type D section window	○	–	–	–
	Aluminium glazing frame	○	●	●	●
Seals	All-round on 4 sides	●	●	●	●
	Intermediate seal between the door sections	●	●	●	●
ThermoFrame	UPVC hard / soft seal	○	○	○	○
Locking systems	Inside locking	●	●	●	●
	Outside / inside locking	○	○	○	–
Anti-lift kit	For doors of up to 5 m height with shaft operator	●	●	●	●
Safety equipment	Side trap guards	●	●	●	●
	Spring break safeguard for manual operation	●	●	●	●
	Safety catch for doors with shaft operator	●	●	●	●
Fitting types	Concrete	●	●	●	●
	Steel	●	●	●	●
	Brickwork	●	●	●	●
	Others on request	○	○	○	○

● = Standard

○ = Optional

1) with optional double pane (single-pane safety glass)

2) for a door surface of 5000 × 5000 mm

3) Optionally with ThermoFrame

4) Door width up to 5500 mm

5) Class 4 = 1.0 kN/m² or 144 km/h

6) Class 3 = 0.7 kN/m² or 120 km/h

7) Class 2 = 0.45 kN/m² or 96 km/h

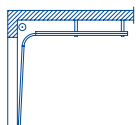
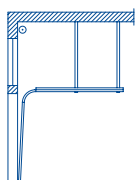
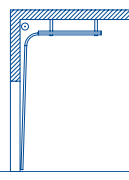
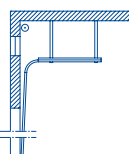
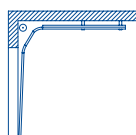
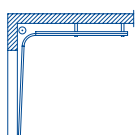
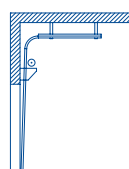
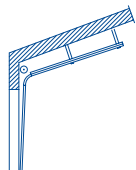
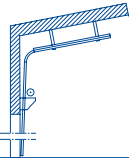
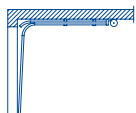
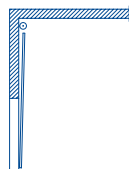
8) Class 2 = 12 m³/m²h

9) Class 1 = 24 m³/m²h

10) Lower class rating may apply for doors with compound glazing

11) For doors without glazing frame

Overview of track applications

N  Normal track application A WA 500 FU is required for track application N3 with operator!	LD  As with track application L with inclination (maximum 30°) Door height RM ≤ 5000 mm
NA  As with track application N with high-mounted torsion spring shaft Door height RM ≤ 5000 mm	H  High-lift track application
ND  As with track application N with inclination (maximum 46°) A WA 500 FU is required for track application ND3 with operator at an inclination of up to 6°!	HA  As with track application H with high-mounted torsion spring shaft Door height RM ≤ 3500 mm
NS  As with track application N with double radius Door height RM ≤ 5000 mm Version RC 2 only possible with angle C = 40° and 45°.	HD  As with track application H with inclination (maximum 30°)
NH  As with track application N with minimum high-lift Double radius 361 mm Door leaf speed up to 500 mm/s possible. Door height > 5000 mm A WA 500 FU is required for track application NH3 with operator!	HU  As with track application H with low-mounted torsion spring shaft
GD  As with track application NH with inclination (maximum 28°) Double radius 361 mm Door height RM ≤ 5000 mm	RD  As with track application HU with inclination Door height RM ≤ 5000 mm
S  Low headroom track application Door height RM ≤ 5000 mm	V  Vertical track application (Additional hand pulley required for manually operated doors!)

Overview of track applications

VA  <p>As with track application V with high-mounted torsion spring shaft (Additional hand pulley required for manually operated doors!)</p> <p>Door height RM ≤ 3500 mm</p>	VU  <p>As with track application V with low-mounted torsion spring shaft (Additional hand pulley required for manually operated doors!)</p>
Notice: An in-factory technical inspection is required for the following track applications!	
NK  <p>As with track application NS, but the degree values of both radii are adapted to the situation on-site</p> <p>Door height RM ≤ 5000 mm</p> <p>Version RC 2 only possible with angle C = 40° and 45°.</p>	GS  <p>As with track application NH with double radius</p> <p>Door height RM ≤ 5000 mm</p>
GK  <p>As with track application NH with double radius and inclination Double radius 361 mm</p> <p>Door height RM ≤ 5000 mm</p>	HS  <p>As with track application H with double radius</p>
HK  <p>As with track application H with double radius and inclination</p>	VS  <p>As with track application V, but in the top sections the tracks are diverted using radii where the ceiling is too low (Additional hand pulley required for manually operated doors!)</p>
WS  <p>As with track application VU, but in the top sections the tracks are diverted using radii where the ceiling is too low (Additional hand pulley required for manually operated doors!)</p> <p>Door height RM ≥ 2250 mm</p>	RS  <p>As with track application HU with double radius</p> <p>Door height RM ≤ 5000 mm</p>
RK  <p>As with track application HU with double radius and inclination</p> <p>Door height RM ≤ 5000 mm</p>	

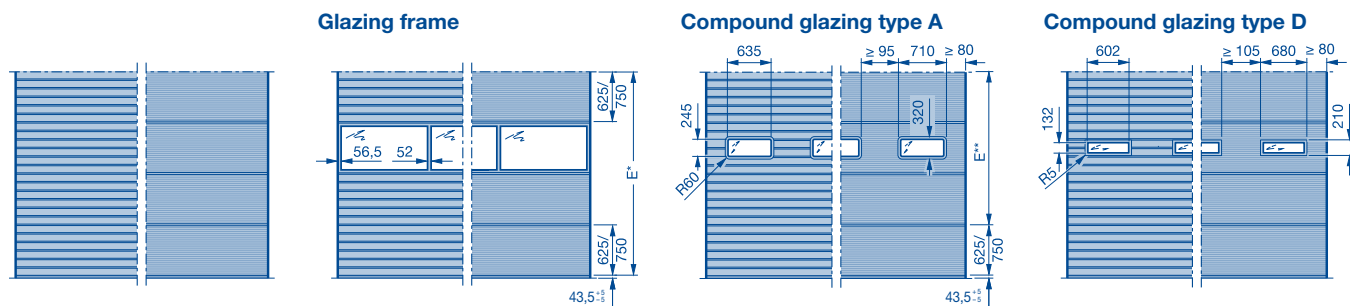
Sectional door SPU 67 Thermo

Double-skinned steel sectional door with thermal break

Stucco-textured / Micrograin

Door sections 625 and 750 mm high

External views



E* Fitting area for frames with glazing

E** Fitting area for compound glazing

Size range

The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account. Any door width in 10 mm increments possible. Intermediate heights using aluminium glazing frames or a shortened top door section are possible!

		TH 625		n ₁	TH 750	
Range 3	7500	1	+	10	1	+
	7375	2	+	9	2	+
	7250	3	+	8	3	+
	7125	4	+	7	4	+
	7000	5	+	6	5	+
	6875	6	+	5	6	+
	6750	7	+	4	7	+
	6625	8	+	3	8	+
	6500	9	+	2	9	+
	6375	10	+	1	10	+
	6250	11	+	0	11	+
	6125	12	+	-	12	+
	6000	13	+	-	13	+
	5875	14	+	-	14	+
	5750	15	+	-	15	+
	5625	16	+	-	16	+
	5500	17	+	-	17	+
	5375	18	+	-	18	+
	5250	19	+	-	19	+
	5125	20	+	-	20	+
	5000	21	+	-	21	+
	4875	22	+	-	22	+
	4750	23	+	-	23	+
Range 2	4625	24	+	-	24	+
	4500	25	+	-	25	+
	4375	26	+	-	26	+
	4250	27	+	-	27	+
	4125	28	+	-	28	+
	4000	29	+	-	29	+
	3875	30	+	-	30	+
	3750	31	+	-	31	+
	3625	32	+	-	32	+
	3500	33	+	-	33	+
	3375	34	+	-	34	+
	3250	35	+	-	35	+
Range 1	3125	36	+	-	36	+
	3000	37	+	-	37	+
	2875	38	+	-	38	+
	2750	39	+	-	39	+
	2625	40	+	-	40	+
	2500	41	+	-	41	+
	2375	42	+	-	42	+
	2250	43	+	-	43	+
	2125	44	+	-	44	+
	2000	45	+	-	45	+
	1875	46	+	-	46	+
	1750	47	+	-	47	+
		1	2	3	4	5
		[1]	2	3	4	5
		1500	2000	2250	2500	2750
		3000	3250	3500	3750	4000
		4250	4500	4750	5000	5250
		5500	5750	6000		
		SPB 52				
		LZ				

Notices:

- When using a shaft operator (fitting example 5), the door locking is always opposite the operator side.
- For a view of the matching appearance with doors with wicket door see pages 26–28.
- Doors with more than 2 glazing frames on request.
- Versions with glazing S4, U4, A4, B4, M4 on request.

- On request: torsion spring shaft or direct drive operator
- Versions with glazing frame on request
- For notice on trap guard, see page 5

- [1] Type A → 1670, Type D → 1630
n₁ No. of door sections
RM Grid height
LZ Clear frame dimensions (from 1200)
→ Up to LZ
SPB Rail width
TH Door section height
**** Top door section 500 mm

Stucco-textured / Micrograin, door sections 625 and 750 mm high

Technical drawing of a double door assembly. The drawing shows a side view of the door with a handle and lock mechanism. Dimensions are indicated by arrows and text:

- DHS**: Total height of the door assembly.
- 625/750**: Height of the upper panel (repeated three times).
- 43,5⁺⁶₋₆**: Height of the lower panel.
- DRH**: Height of the handle and lock mechanism.
- DBS**: Width of the door assembly.
- LZ**: Width of the door leaf.

Bottom door section 750 = 1085.5

		SH					TH 625		n ₁	TH 750		DHS		
RM	Range 3	7500								7500	-		10	2195
		7375								7375	-	+	9	2195
		7250								7250	2	+	8	2195
		7125								7125	3	+	7	2195
		7000								7000	4	+	6	2195
		6875								6875	5	+	5	2195
		6750								6750	-		9	2195
		6625								6625	1	+	8	2195
		6500								6500	2	+	7	2195
		6375								6375	3	+	6	2195
		6250								6250	4	+	5	2195
		6125								6125	5	+	4	2195
		6000								6000	-		8	2195
		5875								5875	1	+	7	2195
		5750								5750	2	+	6	2195
	5625								5625	3	+	5	2195	
	5500								5500	4	+	4	2195	
	5375								5375	5	+	3	2195	
	5250								5250	-		7	2195	
	5125								5125	1	+	6	2195	
	Range 2	5000								5000	2	+	5	2195
		4875								4875	3	+	4	2195
		4750								4750	4	+	3	2195
		4625								4625	5	+	2	2070
		4500								4500	-		6	2195
		4375								4375	1	+	5	2195
		4250								4250	2	+	4	2195
		4125								4125	3	+	3	2195
		4000								4000	4	+	2	2070
		3875								3875	5	+	1	1945
3750									3750	-		5	2195	
3625									3625	1	+	4	2195	
Range 1		3500								3500	2	+	3	2195
		3375								3375	3	+	2	2070
		3250								3250	4	+	1	1945
	3125								3125	5		-	1820	
	3000								3000	-		4	2195	
	2875								2875	1	+	3	2195	
	2750								2750	2	+	2	2070	
	2625								2625	3	+	1	1945	
	2500								2500	4		-	1820	
	2375								2375	4***		-	1820	
	2250								2250	-		3	2115	
	2125								2125	1	+	2	1990	
	2000								2000	2	+	1	1865	
			3					4	5	Number of infills / fields per aluminium frame				
			2		3			4	5	Number of				

n₁	No. of door sections
DHS	Clear passage heights of wicket door to grid height
SH	Threshold height (rising from 5 to 10)
SPB	Rail width
TH	Door section height
DHS	Wicket door clear passage height
RM	Grid height
DBS	Wicket door clear passage width
DRH	Lever height
LZ	Clear frame dimensions (from 1500)
***	Top door section 500 mm

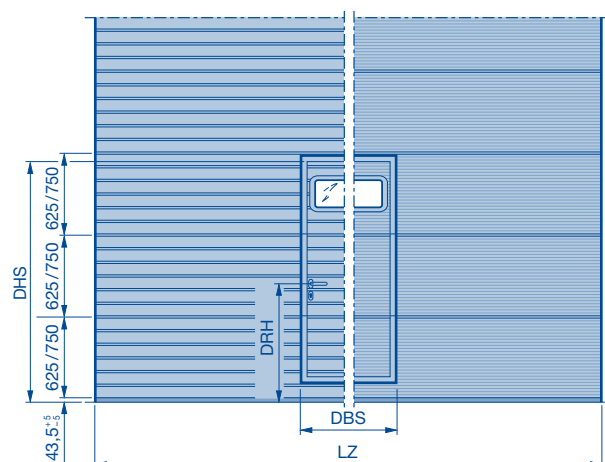
Sectional door SPU 67 Thermo

with wicket door and threshold rail

Double-skinned steel sectional door with thermal break

Stucco-textured / Micrograin, door sections 625 and 750 mm high

External views



** Notice on fitting compound glazings:

For door widths from 1750–3000 mm, a compound glazing can **only** be fitted into the wicket door. No compound glazing can be fitted to the left or right of the wicket door.

Wicket door clear passage width (DBS) = 905 mm*

* For a door width of 1750–1840 mm, the clear passage width is 798 mm.

For door widths below 1750 mm, the clear passage width (DBS) depends on the door width and is much smaller than standard dimensions.

Lever heights (DRH)

Bottom door section 625 = 960.5

Bottom door section 750 = 1085.5

Size range

The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account. Possible for any door width in 10 mm increments. Intermediate heights using aluminium glazing frames or a shortened top door section above the wicket door are possible!

	SH ₁										SH ₂	TH 625	n ₁	TH 750	DHS							
Range 3	7500											7500	–		10	2195						
	7375											7375	1	+	9	2195						
	7250											7250	2	+	8	2195						
	7125											7125	3	+	7	2195						
	7000											7000	4	+	6	2195						
	6875											6875	5	+	5	2195						
	6750											6750	–		9	2195						
	6625											6625	1	+	8	2195						
	6500											6500	2	+	7	2195						
	6375											6375	3	+	6	2195						
Range 2	6250											6250	4	+	5	2195						
	6125											6125	5	+	4	2195						
	6000											6000	–		8	2195						
	5875											5875	1	+	7	2195						
	5750											5750	2	+	6	2195						
	5625											5625	3	+	5	2195						
	5500											5500	4	+	4	2195						
	5375											5375	5	+	3	2195						
	5250											5250	–		7	2195						
	5125											5125	1	+	6	2195						
Range 1	5000											5000	2	+	5	2195						
	4875											4875	3	+	4	2195						
	4750											4750	4	+	3	2195						
	4625											4625	5	+	2	2070						
	4500											4500	–		6	2195						
	4375											4375	1	+	5	2195						
	4250											4250	2	+	4	2195						
	4125											4125	3	+	3	2195						
	4000											4000	4	+	2	2070						
	3875											3875	5	+	1	1945						
Range 0	3750											3750	–		5	2195						
	3625											3625	1	+	4	2195						
	3500											3500	2	+	3	2195						
	3375											3375	3	+	2	2070						
	3250											3250	4	+	1	1945						
	3125											3125	5	–	–	1820						
	3000											3000	–		4	2195						
	2875											2875	1	+	3	2195						
	2750											2750	2	+	2	2070						
	2625											2625	3	+	1	1945						
Range -1	2500											2500	4	–	–	1820						
	2375											2375	4***	–	–	1820						
	2250											2250	–		3	2195						
	2125											2125	1	+	2	2070						
	2000											2000	2	+	1	1945						
3										4	5	Number of infills / fields per aluminium frame										
2										3	4	5	Number of compound glazings per door section**									
1750										2000	2250	2500	3000	3500	3750	4000	4250	4500	4750	5000	5500	6000
SPB 52																						
LZ																						

Notices:

- When using a shaft operator (fitting example 5), the door locking is always opposite the operator side.
- For a view of the matching appearance with doors without wicket door see pages 26–28.
- Doors with more than 2 glazing frames on request.
- Versions with glazing S4, U4, A4, B4, M4 on request.
- For versions with real glass infill in the wicket door, the threshold height SH₂ begins at LZ 4510 mm.

- On request: torsion spring shaft or direct drive operator
- Versions with glazing frame on request
- For notice on trap guard, see page 5
- Glazings on request

- n₁ No. of door sections
- DHS Clear passage heights of wicket door to grid height
- SH₁ Threshold height (215)
- SH₂ Threshold height (312), bottom door section with 250 mm aluminium bottom section,
- SPB Rail width
- TH Door section height
- DHS Wicket door clear passage height
- RM Grid height
- DBS Wicket door clear passage width
- DRH Lever height
- LZ Clear frame dimensions (from 1500)
- *** Top door section 500 mm

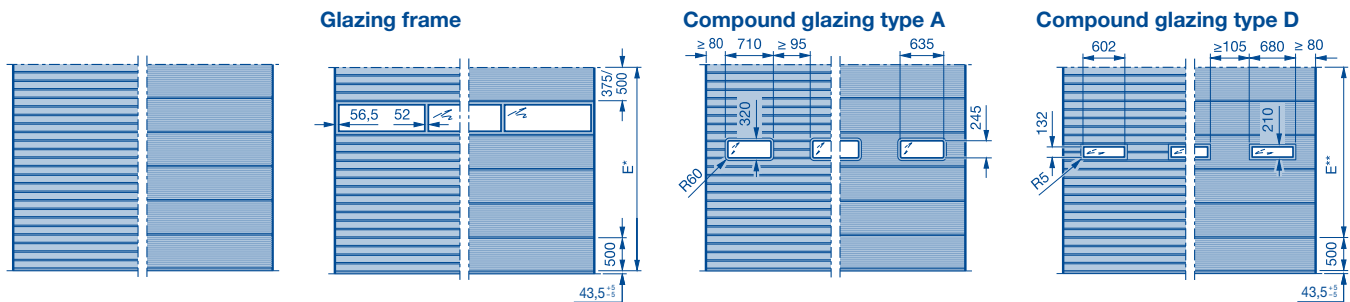
Sectional door SPU 67 Thermo

Double-skinned steel sections

Double-skinned steel sectional door with thermal break

Stucco-textured / Micrograin, door sections 375 and 500 mm high

External views



E* Fitting area for frame 500 with glazing

E** Fitting area for compound glazing

Size range

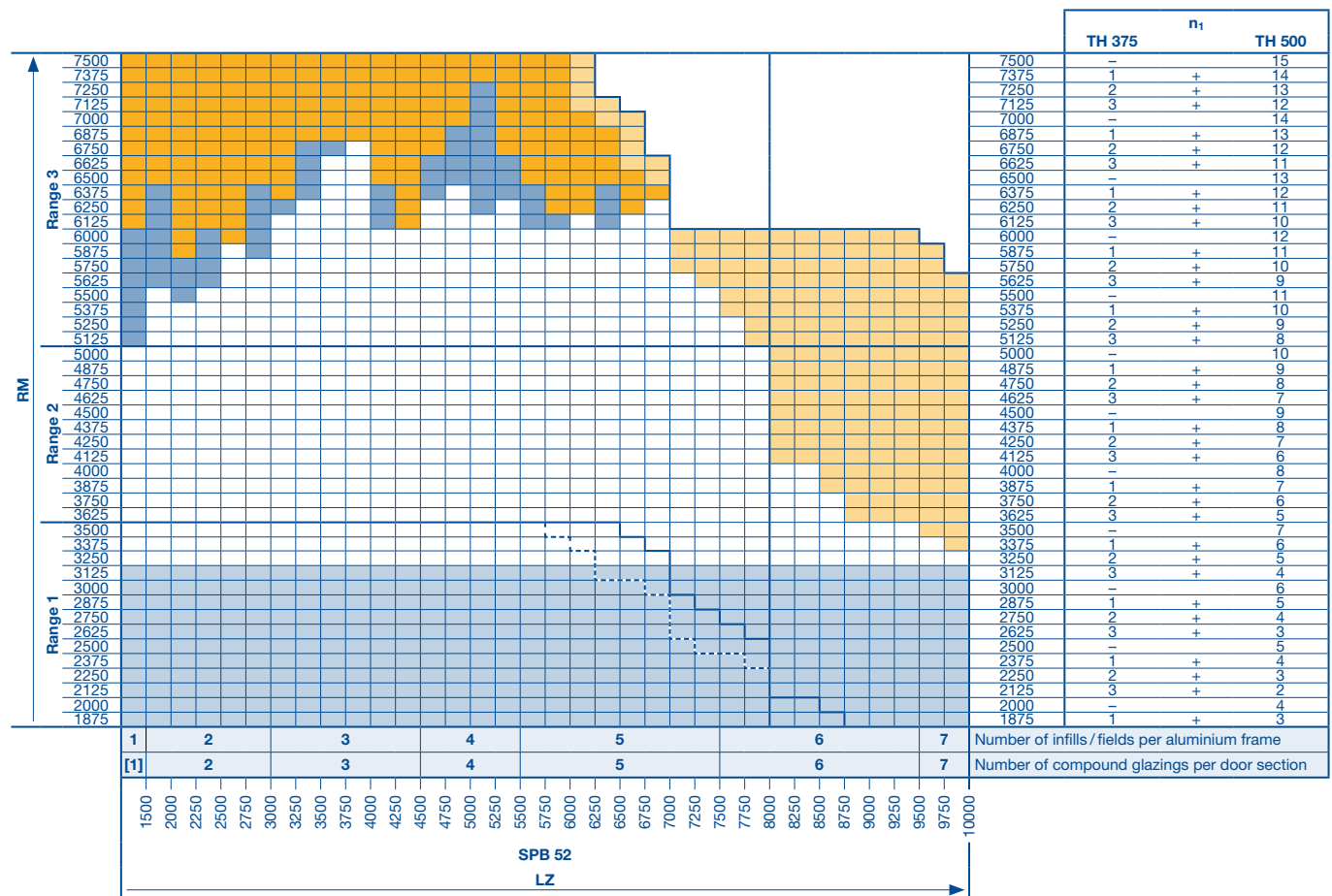
The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account. Any door width in 10 mm increments possible. Intermediate heights using aluminium glazing frames or a shortened top door section are possible!

Notices:

- For a view of the matching appearance with doors with wicket door see pages 26–28.
- Doors with more than 2 glazing frames on request.
- Versions with glazing S4, U4, A4, B4, M4 on request.

- On request: torsion spring shaft or direct drive operator
- On request and only direct drive operator S140 with track application H
- Versions with glazing frame on request
- For notice on trap guard, see page 5
- Range change
- Range change with glazing frame

- [1] Type A → 1670, Type D → 1630
- n₁ No. of door sections
- RM Grid height
- LZ Clear frame dimensions (from 1200)
- Up to LZ
- SPB Rail width
- TH Door section height



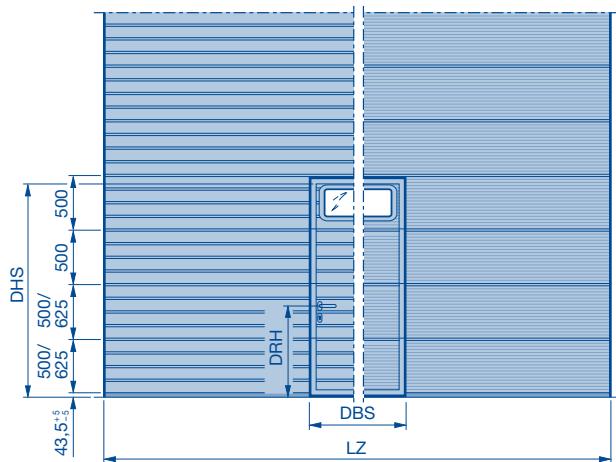
Sectional door SPU 67 Thermo

with wicket door and trip-free threshold

Double-skinned steel sectional door with thermal break

Stucco-textured / Micrograin, door sections 375 and 500 mm high

Exterior view



** Notice on fitting compound glazings:

For door widths from 1750–3000 mm, a compound glazing can **only** be fitted into the wicket door. No compound glazing can be fitted to the left or right of the wicket door.

Wicket door clear passage width (DBS) = 905 mm*

* For a door width of 1750–1840 mm, the clear passage width is 798 mm.

For door widths below 1750 mm, the clear passage width (DBS) depends on the door width and is much smaller than standard dimensions.

Lever heights (DRH)

Bottom door section 500 = 835.5

Bottom door section 625 = 960.5

Size range

The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account. Any door width in 10 mm increments possible. Intermediate heights using aluminium glazing frames or a shortened top door section above the wicket door are possible!

	SH ₁										SH ₂		n ₁		DHS
													TH 375	TH 500	
Range 3	7500												7500	15	1945
	7375												7375	1	1945
	7250												7250	2	1945
	7125												7125	3	1945
	7000												7000	–	1945
	6875												6875	1	1945
	6750												6750	2	1945
	6625												6625	3	1945
	6500												6500	–	1945
	6375												6375	1	1945
Range 2	6250												6250	2	1945
	6125												6125	3	1945
	6000												6000	–	1945
	5875												5875	1	1945
	5750												5750	2	1945
	5625												5625	3	1945
	5500												5500	–	1945
	5375												5375	1	1945
	5250												5250	2	1945
	5125												5125	3	1945
Range 1	5000												5000	–	1945
	4875												4875	1	1945
	4750												4750	2	1945
	4625												4625	3	1945
	4500												4500	–	1945
	4375												4375	1	1945
	4250												4250	2	1945
	4125												4125	3	1945
	4000												4000	–	1945
	3875												3875	1	1945
Range 0	3750												3750	2	1945
	3625												3625	3	1945
	3500												3500	–	1945
	3375												3375	1	1945
	3250												3250	2	1945
	3125												3125	3	1945
	3000												3000	–	1945
	2875												2875	1	1945
	2750												2750	2	1945
	2625												2625	3	1945
Range -1	2500												2500	–	1945
	2375												2375	1	1945
	2250												2250	2	1945
	2125												2125	3	1945
	2000												2000	–	1945
	1875												1875	1	1945
	1750												1750	2	1945
	1625												1625	3	1945
	1500												1500	–	1945
	1375												1375	1	1945
	1250												1250	2	1945
Range -2	1125												1125	3	1945
	1000												1000	–	1945
	875												875	1	1945
	750												750	2	1945
	625												625	3	1945
	500												500	–	1945
	375												375	1	1945
	250												250	2	1945
	125												125	3	1945
	0												0	–	1945

Notice:

- For a view of the matching appearance with doors without wicket door, see pages 26–28.
- Doors with more than 2 glazing frames on request.
- For versions with real glass infill in the wicket door, the threshold height **SH₂** starts at LZ 4510 mm.
- Versions with glazing S4, U4, A4, B4, M4 on request.

- On request: torsion spring shaft or direct drive operator
- Versions with glazing frame on request
- For notice on trap guard, see page 5
- Glazings on request
- Range change
- Range change with glazing frame
- n₁ No. of door sections
- DHS Clear passage heights of wicket door to grid height
- RM Grid height
- LZ Clear frame dimensions (from 1500)
- SH₁ Threshold height (rising from 5 to 10)
- SH₂ Threshold height (approx. 13)
- SPB Rail width
- TH Door section height
- DHS Wicket door clear passage height
- DBS Wicket door clear passage width
- DRH Lever height
- *** Bottom door section TH = 625

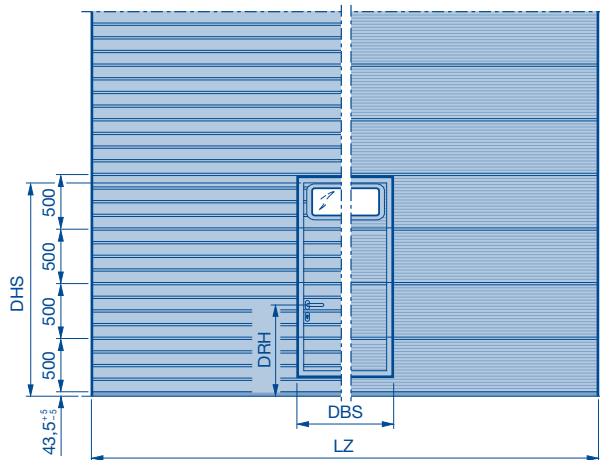
Sectional door SPU 67 Thermo

with wicket door and threshold rail

Double-skinned steel sectional door with thermal break

Stucco-textured / Micrograin, door sections 375 and 500 mm high

Exterior view



** Notice on fitting compound glazings:

For door widths from 1750–3000 mm, a compound glazing can **only** be fitted into the wicket door. No compound glazing can be fitted to the left or right of the wicket door.

Wicket door clear passage width (DBS) = 905 mm*

* For a door width of 1750–1840 mm, the clear passage width is 798 mm.

For door widths below 1750 mm, the clear passage width (DBS) depends on the door width and is much smaller than standard dimensions.

Lever heights (DRH)

Bottom door section 500 = 835.5

Bottom door section 625 = 960.5 (only for SH₂)

Size range

The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account. Any door width in 10 mm increments possible. Intermediate heights using aluminium glazing frames or a shortened top door section above the wicket door are possible!

RM	Range 3	SH ₁										SH ₂										n ₁		DHS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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		7500	7375	7250	7125	7000	6875	6750	6625	6500	6375	6250	6125	6000	5875	5750	5625	5500	5375	5250	5125	5000	4875	4750	4625	4500	4375	4250	4125	4000	3875	3750	3625	3500	3375	3250	3125	3000	2875	2750	2625	2500	2375	2250	2125	2000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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Glazing heights for matching external appearance

SPU 67 Thermo Stucco-textured / Micrograin

(Centre of window from FFL)

Door section heights 500, 625 and 750 mm

Glazing heights for matching external appearance of compound windows type A and D.

RM	Glazing heights (centre of window from FFL)											
	1160	1285	1535	1660	1785	1910	2035	2160	2285	2410	2535	2660
7500		X			X							
7375	X	X		X	X							X
7250	X	X	X	X	X		X		X		X	X
7125	X	X	X	X	X	X	X	X	X	X	X	X
7000		X			X				X			
6875	X	X		X	X			X	X			X
6750	X	X			X		X				X	X
6625	X	X		X	X	X	X			X	X	X
6500		X			X				X			
6375	X	X		X	X			X	X			X
6250	X	X	X	X	X		X	X	X		X	X
6125	X	X	X	X	X	X	X	X	X	X	X	X
6000		X			X							
5875	X	X		X	X							X
5750	X	X	X	X	X		X		X		X	X
5625	X	X	X	X	X	X	X	X	X	X	X	X
5500		X			X				X			
5375	X	X		X	X			X	X			X
5250	X	X			X		X				X	X
5125	X	X		X	X	X	X			X	X	X
5000		X			X				X			
4875	X	X		X	X			X	X			X
4750	X	X	X	X	X		X	X	X		X	X
4625	X	X	X	X	X	X		X	X	X	X	
4500		X			X							
4375	X	X		X	X							X
4250	X	X	X	X	X	X	X		X	X	X	X
4125	X	X	X	X	X	X	X	X	X	X	X	X
4000		X			X				X			
3875	X			X	X			X	X			
3750	X	X			X		X				X	X
3625	X	X		X	X	X	X			X	X	X
3500		X			X				X			
3375	X	X		X	X				X			
3250	X		X	X	X			X	X			
3125			X	X				X				
3000		X			X							
2875	X	X		X	X							X
2750	X	X	X	X	X						X	
2625	X		X	X						X		
2500									X			
2375				X				X				
2250	X	X					X					
2125	X					X						
2000					X							
1875				X								

RM Grid height

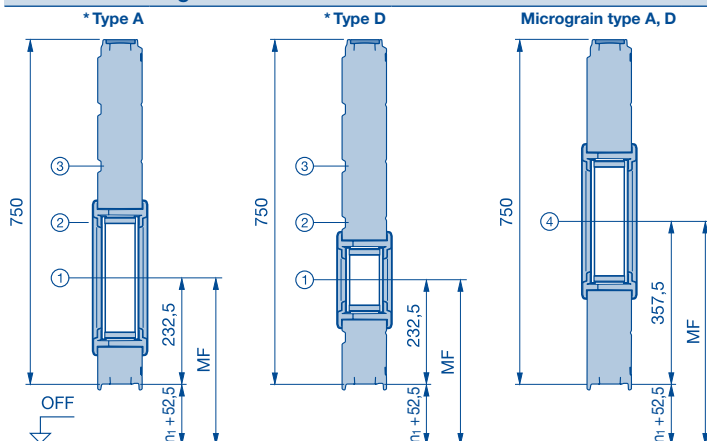
Calculating the glazing heights for SPU 67 Thermo

(Centre of window from FFL)

Door section heights 500, 625 and 750 mm

Calculating the glazing heights for compound windows type A and type D.
See door type for number of door sections and glazing areas! Depth 67 mm.

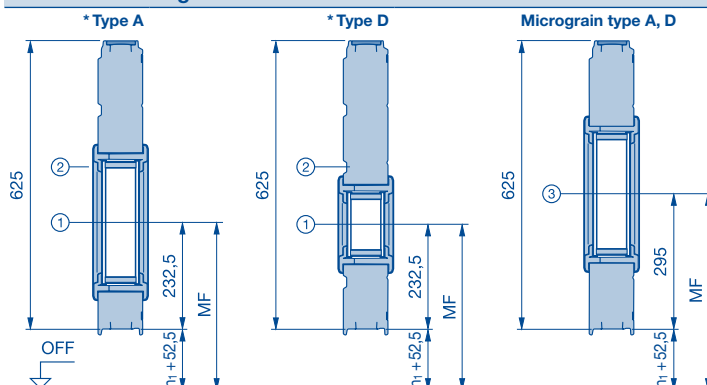
Door section height 750 mm



Glazing height type A and D

- ① = $n_1 + 52.5 + 232.5$
- ② = $n_1 + 52.5 + 232.5 + 125$
- ③ = $n_1 + 52.5 + 232.5 + 250$
- ④ = $n_1 + 52.5 + 357.5$

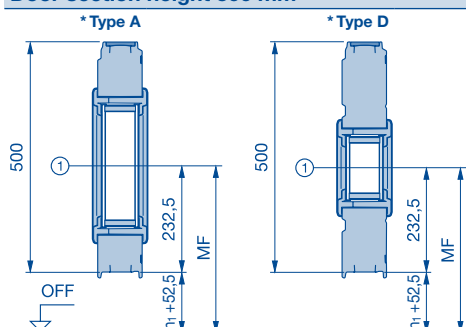
Door section height 625 mm



Glazing height type A and D

- ① = $n_1 + 52.5 + 232.5$
- ② = $n_1 + 52.5 + 232.5 + 125$
- ③ = $n_1 + 52.5 + 295$

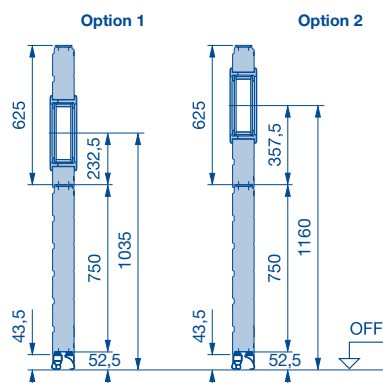
Door section height 500 mm



Glazing height type A and D

- ① = $n_1 + 52.5 + 232.5$

Calculation example



Given:

- Door type SPU 67 Thermo; grid height (RM) = 3250 mm; glazing type A; for position see number of door sections below (see table of door types)
- Door section 625 mm = 4 × door section 750 mm = 1 ×

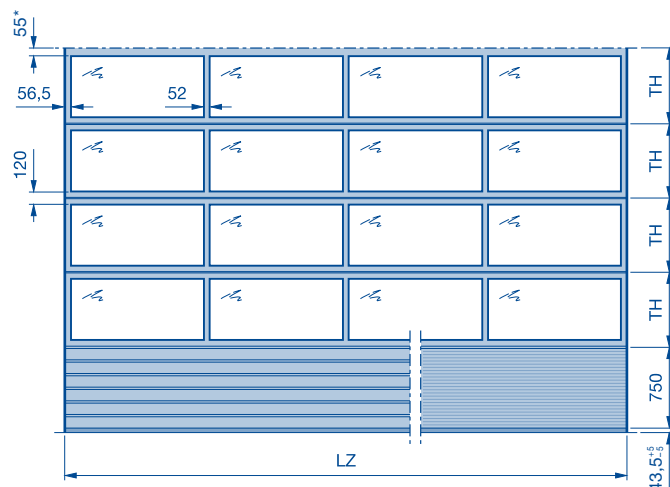
Option	Door section / position	Glazing height
1	in 2nd door section 625 mm at position 1	$750 + 52.5 + 232.5 = 1035$ mm from FFL
2	in 2nd door section 625 mm at position 2	$750 + 52.5 + 232.5 + 125 = 1160$ mm from FFL
3	in 3rd door section 625 mm at position 1	$750 + 625 + 52.5 + 232.5 = 1660$ mm from FFL
4	in 3rd door section 625 mm at position 2	$750 + 625 + 52.5 + 232.5 + 125 = 1785$ mm from FFL
etc.		

- * Stucco / Micrograin
- MF Centre of window from FFL
- n_1 No. of door sections
- FFL Finished floor level

Sectional door APU 67 Thermo

Glazed aluminium sectional door with thermal break
with steel bottom section

Exterior view



$$TH = \frac{\text{Door height - bottom section height - 35}}{\text{Number of door section frames}}$$

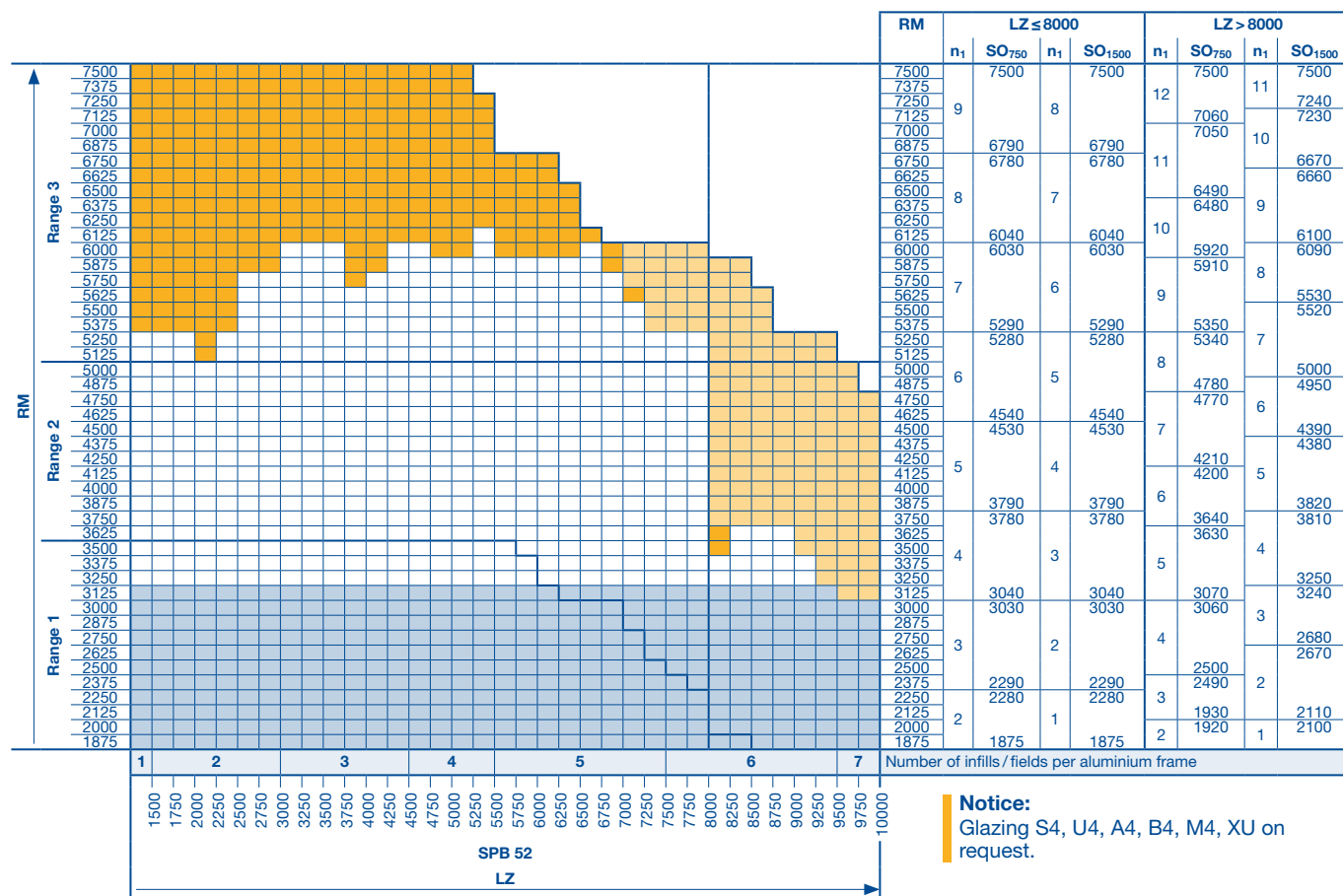
* On request 115 mm for a matching appearance to a door with wicket door and trip-free threshold with the same door height.

Notice:

- When using a shaft operator (fitting example 5), the door locking is always opposite the operator side.
- For a view of the matching appearance with doors with wicket door see pages 26–28.

Size range

The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account. Any door width in 10 mm increments possible.



Notice:

Glazing S4, U4, A4, B4, M4, XU on request.

- On request: torsion spring shaft or direct drive operator
- On request and only direct drive operator S140 with track application H
- For notice on trap guard, see page 5
- Range change

Number of door section frames:
SO₇₅₀ Bottom section height 750 mm (standard)
SO₁₅₀₀ Bottom section height 1500 mm
n₁ Number of aluminium frames
RM Grid height
LZ Clear frame dimensions (from 1200)
SPB Rail width
TH Door section height

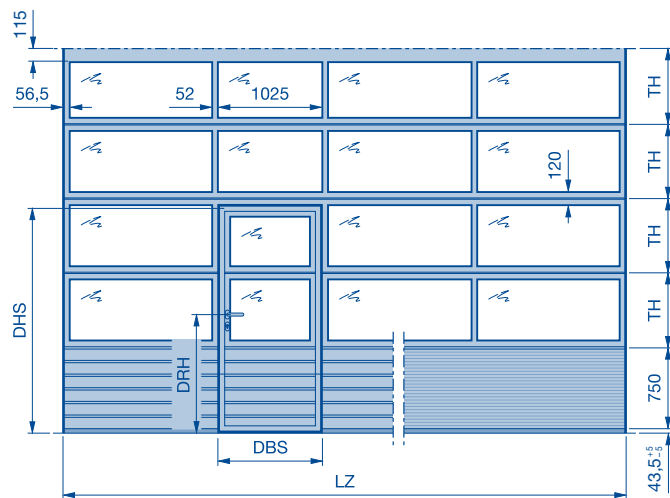
Sectional door APU 67 Thermo

with wicket door and trip-free threshold

Glazed aluminium sectional door with thermal break

With steel bottom section, bottom section height 750

Exterior view



Lever height on request

Wicket door clear passage width (DBS) = 905 mm*

Wicket door clear passage height (DHS) = $Sn_1 \times TH$ + (bottom section height - 55*)

Sn_1 Number of frames in the wicket door

* Attention: If there is no frame above the wicket door, then - 100 instead of - 55.

** For a door width of 1750–1840 mm, the clear passage width is 798 mm.

For door widths below 1750 mm, the clear passage width (DBS) depends on the door width and is much smaller than standard dimensions.

Notice:

- When using a shaft operator (fitting example 5), the door locking is always opposite the operator side.
- For a view of the matching appearance with doors without wicket door see pages 26–28.

Size range

The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account. Any door width in 10 mm increments possible.

		SH ₁										SH ₂										n ₁	Height	RM	DHS	Sn ₁	Height																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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Notices:

- For versions with real glass infill in the wicket door, the threshold height **SH₂** begins at LZ 4510 mm.
- Glazing S4, U4, A4, B4, M4, XU on request.

On request: torsion spring shaft or direct drive operator	DRH	Lever height
On request and only direct drive operator S140 with track application H	LZ	Clear frame dimensions (from 1500)
For notice on trap guard, see page 5	RM	Grid height
	SPB	Rail width
	SH ₁	Threshold height (rising from 5 to 10)
	SH ₂	Threshold height (approx. 13)
	n ₁	Number of aluminium frames
	Sn ₁	Number of aluminium frames in the wicket door
	TH	Door section height
	DHS	Wicket door clear passage height
	DBS	Wicket door clear passage width

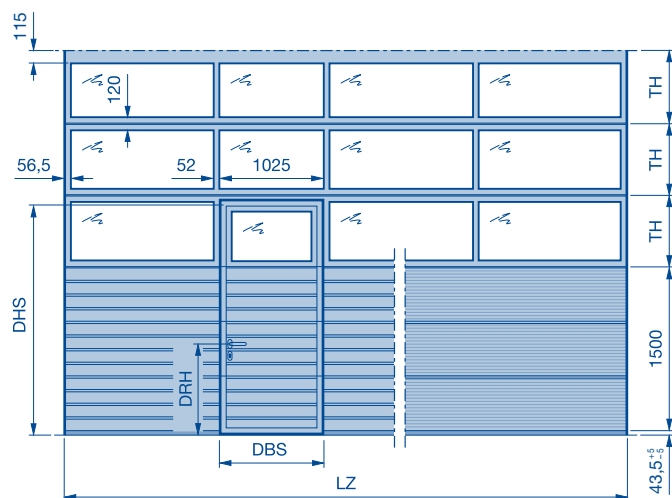
Sectional door APU 67 Thermo

with wicket door and trip-free threshold

Glazed aluminium sectional door with thermal break

With steel bottom section, bottom section height 1500

Exterior view



Lever height (DRH):

$LZ \leq 6000 = 1080,5$

$LZ > 6000 = 830,5$

Wicket door clear passage width (DBS) = 905 mm*

Wicket door clear passage height (DHS) = $Sn_1 \times TH$ + (bottom section height - 55*)

Sn_1 Number of frames in the wicket door

* Attention: If there is no frame above the wicket door, then - 100 instead of - 55.

-- For a door width of 1750 - 1840 mm, the clear passage width is 798 mm.

For door widths below 1750 mm, the clear passage width (DBS) depends on the door width and is much smaller than standard dimensions.

Notice:

- When using a shaft operator (fitting example 5), the door locking is always opposite the operator side.
- For a view of the matching appearance with doors without wicket door see pages 26 - 28.

Size range

The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account. Any door width in 10 mm increments possible.

		SH ₁		SH ₂	n ₁	Height	RM	DHS	Sn ₁	Height
RM	Range 3	7500			8	7500	7500	2191	1	
		7375				7375	2175			
		7250			7	7250	2159		1	
Range 2		7125				7125	2144			
		7000			6	7000	2128		1	
		6875				6875	2113			
Range 1		6750			5	6750	2100		1	
		6625				6625	2085			
		6500			4	6500	2070		1	
		6375				6375	2055			
		6250			3	6250	2040		1	
		6125				6125	2025			
		6000			2	6000	2010		1	
		5875				5875	1995			
		5750			1	5750	1980		1	
		5625				5625	1965			
		5500				5500	1950			
		5375				5375	1935			
		5250				5250	1920			
		5125				5125	1905			
		5000				5000	1890			
		4875				4875	1875			
		4750				4750	1860			
		4625				4625	1845			
		4500				4500	1830			
		4375				4375	1815			
		4250				4250	1800			
		4125				4125	1785			
		4000				4000	1770			
		3875				3875	1755			
		3750				3750	1740			
		3625				3625	1725			
		3500				3500	1710			
		3375				3375	1695			
		3250				3250	1680			
		3125				3125	1665			
		3000				3000	1650			
		2875				2875	1635			
		2750				2750	1620			
		2625				2625	1605			
		2500				2500	1590			
		2375				2375	1575			
		2250				2250	1560			
		2125				2125	1545			
		2000				2000	1530			
		3		4	5	Number of infields / fields per aluminium frame				
		1750		2000	2250	2500	2750	3000	3250	3500
		3		4	5	6	7	8	9	10
		SPB 52		LZ						

Notices:

- For versions with real glass infill in the wicket door, the threshold height SH_2 begins at LZ 4510 mm.
- Glazing S4, U4, A4, B4, M4, XU on request.

- On request: torsion spring shaft or direct drive operator
- On request and only direct drive operator S140 with track application H
- For notice on trap guard, see page 5

Range change

DHS Wicket door clear passage height
DBS Wicket door clear passage width

DRH Lever height
LZ Clear frame dimensions (from 1500)
RM Grid height
SPB Rail width
SH₁ Threshold height (rising from 5 to 10)
SH₂ Threshold height (approx. 13)
n₁ Number of aluminium frames
Sn₁ Number of aluminium frames in the wicket door
TH Door section height

Glazed aluminium sectional door with thermal break
With steel bottom section, bottom section height 1500

[illegible]

- When using a shaft operator (fitting example 5), the door locking is always opposite the operator side.
- Bottom door section made of 375 / 500 mm section and 2 × 125 mm aluminium bottom profile for door widths > 5500 mm.
- For a view of the matching appearance with doors without wicket door see pages 26 – 28.

[illegible]

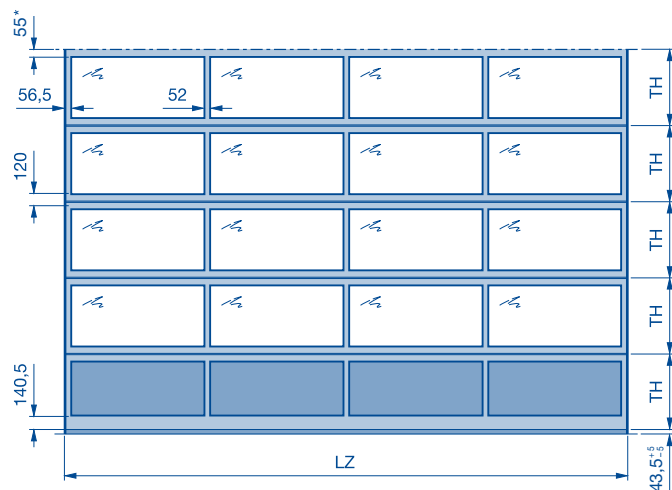
- For versions with real glass infill in the wicket door, the threshold height **SH₂** begins at LZ 4510 mm.
- Glazing S4, U4, A4, B4, M4, XU on request.

DBS	Wicket door clear passage width
DRH	Lever height
LZ	Clear frame dimensions (from 1500)
RM	Grid height
SPB	Rail width
SH ₁	Threshold height (215)
SH ₂	Threshold height (312)
n ₁	Number of aluminium frames
Sn ₁	Number of aluminium frames in the wicket door

Sectional door ALR 67 Thermo

Glazed aluminium sectional door with thermal break

Exterior view



$$TH = \frac{\text{Door height} - 35}{\text{Number of door section frames}}$$

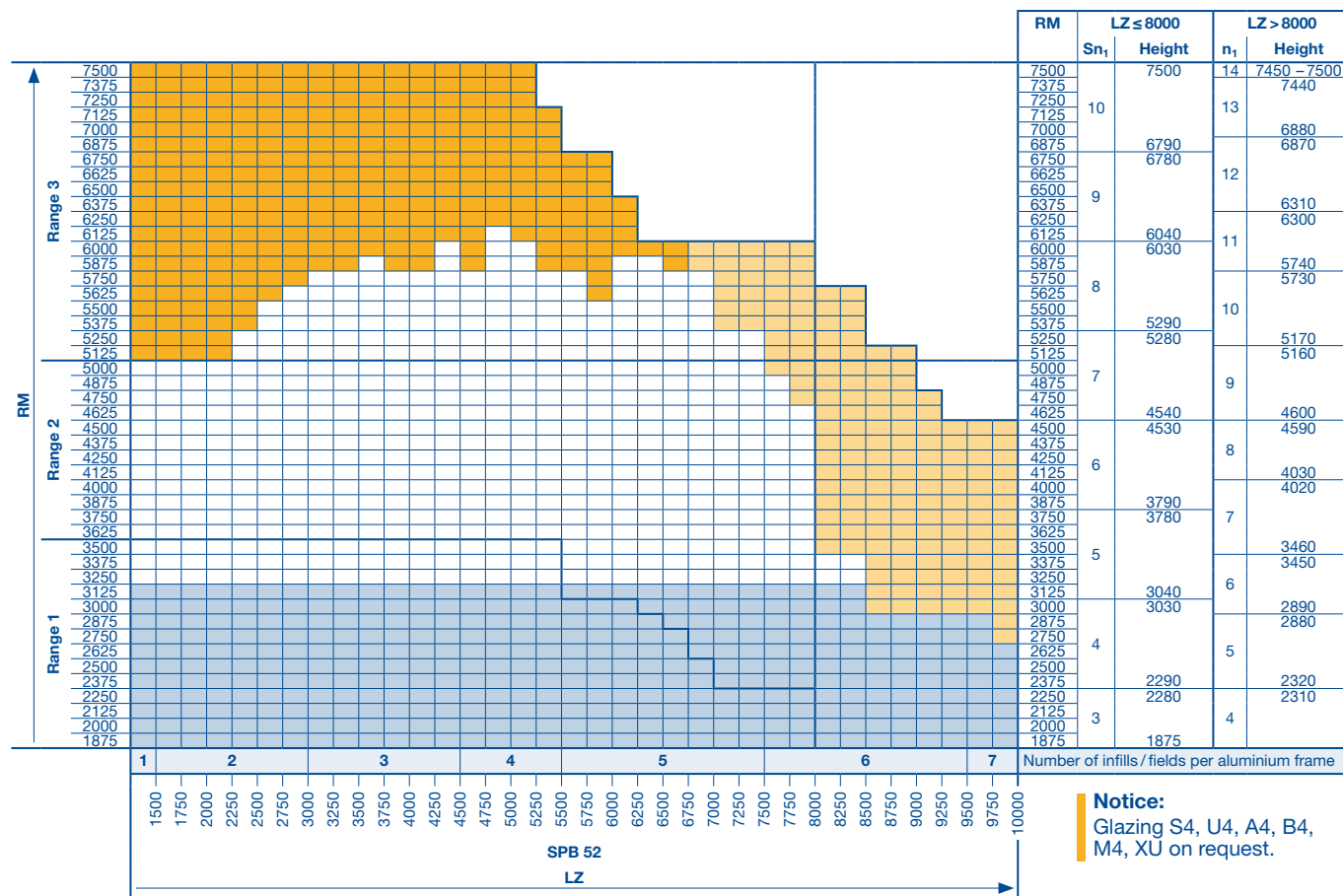
- * On request 115 mm for a matching appearance to a door with wicket door and trip-free threshold with the same door height.

Notice:

- When using a shaft operator (fitting example 5), the door locking is always opposite the operator side.
- For door widths from 5510 mm, diagonal struts are fitted into the bottom door section (not visible with closed infills).
- For a view of the matching appearance with doors with wicket door see pages 26–28.

Size range

The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account. Any door width in 10 mm increments possible.



Notice:

Glazing S4, U4, A4, B4, M4, XU on request.

- On request: torsion spring shaft or direct drive operator
- On request and only direct drive operator S140 with track application H
- For notice on trap guard, see page 5
- Range change

- n₁ Number of aluminium frames
- Sn₁ Number of aluminium frames in the wicket door
- RM Grid height
- LZ Clear frame dimensions (from 1200)
- SPB Rail width
- TH Door section height

Glazed aluminium sectional door with thermal break

Technical drawing of a rectangular panel layout. The drawing shows a grid of 20 rectangular panels arranged in 4 rows and 5 columns. The panels are labeled with 'TH' on the right side. Dimensions are indicated by arrows and numbers:

- Overall width: 115
- Overall height: 43.5 ± 0.5
- Panel width: 52
- Panel height: 1025
- Panel thickness: 120
- Panel width (inner): 140.5
- Panel height (inner): DRH
- Panel width (outer): DBS
- Panel height (outer): LZ

- When using a shaft operator (fitting example 5), the door locking is always opposite the operator side.
- For door widths from 5510 mm (from 4510 mm with real glass infill in the wicket door), diagonal struts are fitted into the bottom door section – not visible with closed infills.
- For a view of the matching appearance with doors without wicket door see pages 26 – 28.

[illegible]

- For versions with real glass infill in the wicket door, the threshold height **SH₂** begins at LZ 4510 mm.
- Glazing S4, U4, A4, B4, M4, XU on request.

23

Glazed aluminium sectional door with thermal break




[illegible]

For door widths below 1750 mm, the clear passage width (DBS) depends on the door width and is much smaller than standard dimensions.

- When using a shaft operator (fitting example 5), the door locking is always opposite the operator side.
- For a view of the matching appearance with doors without wicket door see pages 26–28.

[illegible]

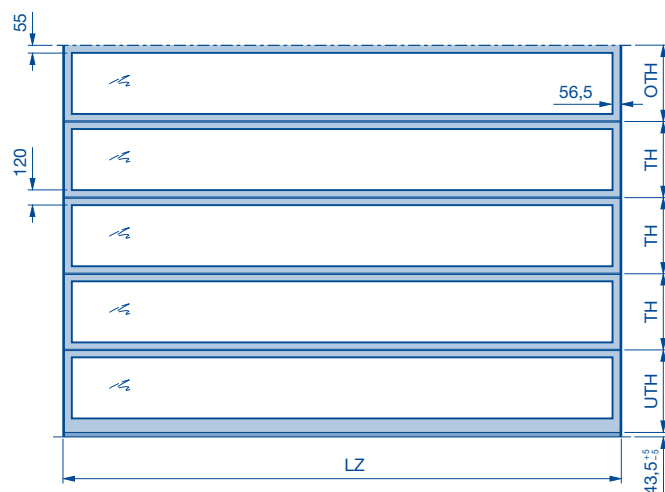
- For versions with real glass infill in the wicket door, the threshold height **SH₂** begins at LZ 4510 mm.
- Glazing S4, U4, A4, B4, M4, XU on request.

	On request: torsion spring shaft or direct drive operator	DRH	Lever height
	On request and only direct drive operator S140 with track application H	LZ	Clear frame dimensions (from 1500)
	For notice on trap guard, see page 5	RM	Grid height
		SPB	Rail width
		SH₁	Threshold height (187)
		SH₂	Threshold height (312)
		n₁	Number of aluminium frames
DHS	Wicket door clear passage height	SH₁	Number of aluminium frames in the wicket door
DBS	Wicket door clear passage width	TH	Door section height

Sectional door ALR 67 Thermo Glazing

Aluminium sectional door with extensive glazing and thermal break, real glass

Exterior view



$$TH = \frac{\text{Door height} - 119}{\text{Number of door section frames}}$$

$$UTH = TH + 84 \leq 785$$

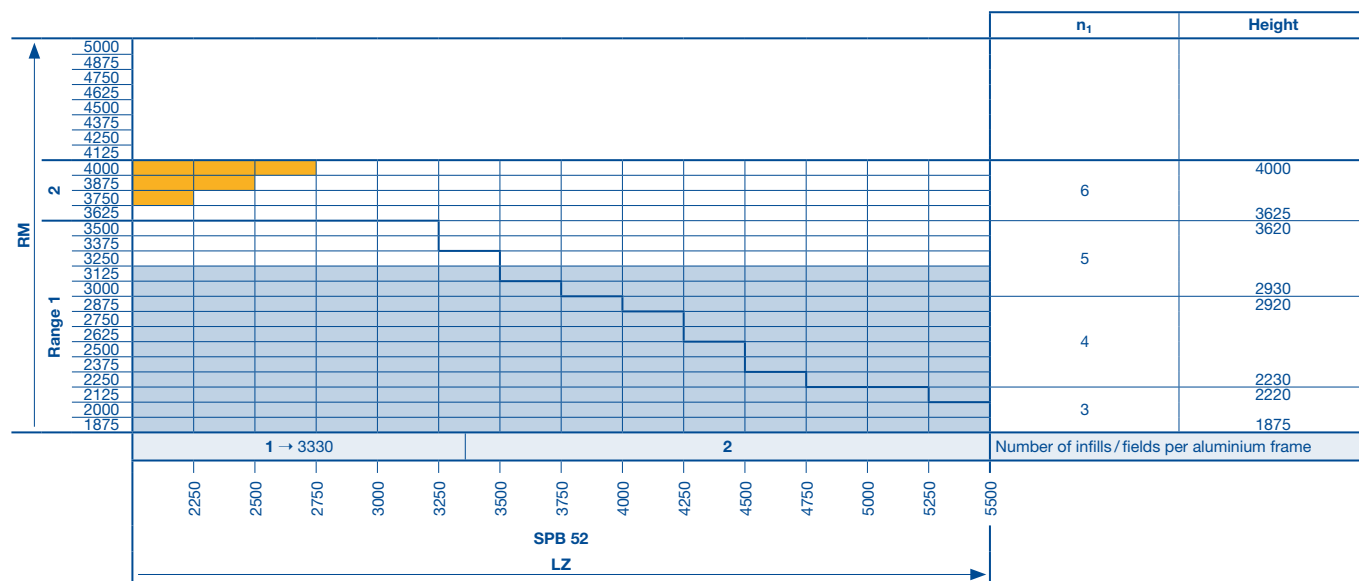
$$OTH = TH - 35$$

Notice:

- When using a shaft operator (fitting example 5), the door locking is always opposite the operator side.
- All track applications on request.

Size range

The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account. Any door width in 10 mm increments possible.



on request
 For notice on trap guard, see page 5
 Range change
RM Grid height
LZ Clear frame dimensions (from 2000)

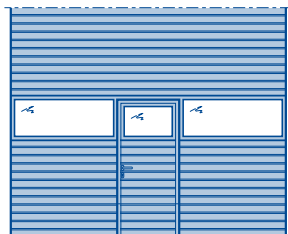
→ Up to LZ
SPB Rail width
n₁ Number of aluminium frames
UTH Bottom door section height
TH Door section height
OTH Top door section height

Glazing / wicket door arrangements

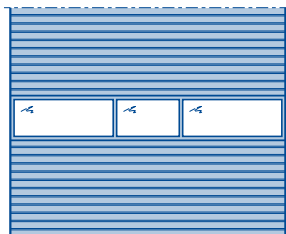
Sectional doors with 3 infills / fields

Glazing arrangements – external view

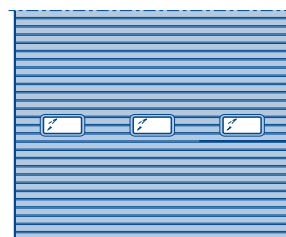
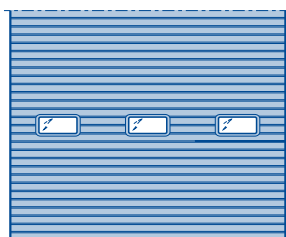
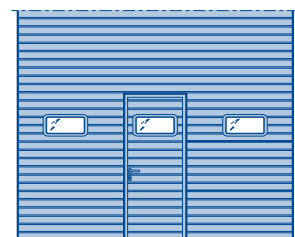
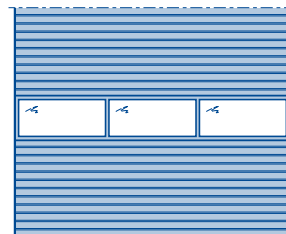
Sectional door SPU 67 Thermo with wicket door with trip-free threshold



Sectional door SPU 67 Thermo, matching doors with wicket door



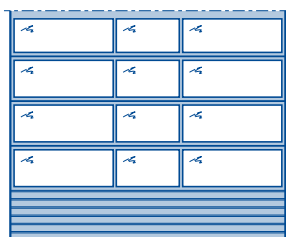
Sectional door SPU 67 Thermo with standard window division



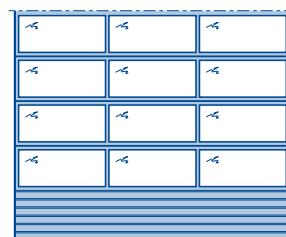
Sectional door APU 67 Thermo with wicket door with trip-free threshold



Sectional door APU 67 Thermo, matching doors with wicket door



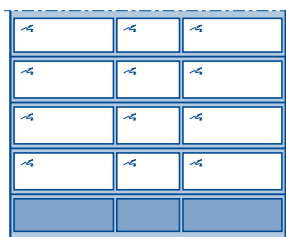
Sectional door APU 67 Thermo with standard window division



Sectional door ALR 67 Thermo with wicket door with trip-free threshold



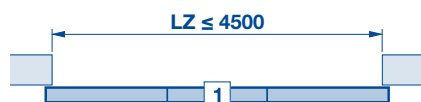
Sectional door ALR 67 Thermo, matching doors with wicket door



Sectional door ALR 67 Thermo with standard window division



Arrangement of the wicket door



Notices:

- Wicket door clear passage width (DBS) = 905 mm.
- Wicket door only opening outwards.

Wicket door with short distance to outside door edge



The short distance to the outside door edge is optionally possible on the left or right.

Notice:

- Not possible for doors with real glass.

Glazing / wicket door arrangements

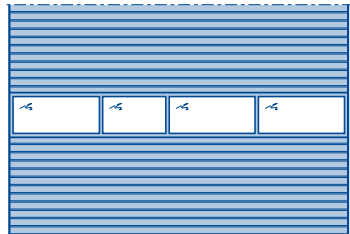
Sectional doors with 4 infills / fields

Glazing arrangements – external view

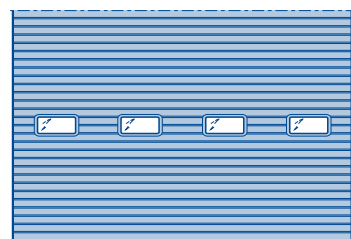
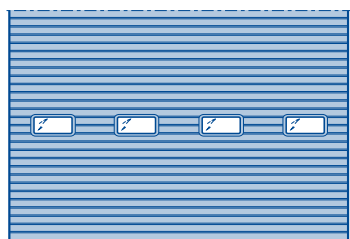
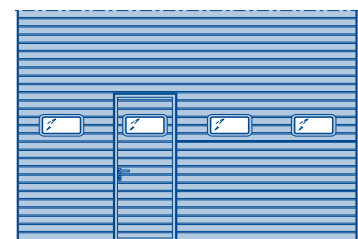
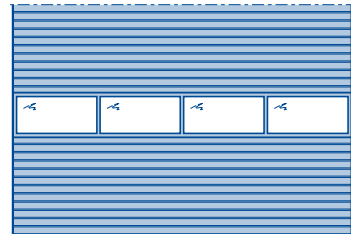
Sectional door SPU 67 Thermo with wicket door with trip-free threshold



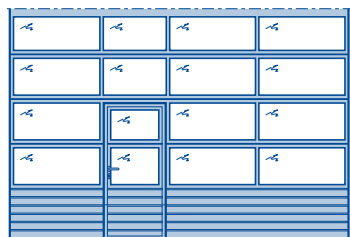
Sectional door SPU 67 Thermo, matching doors with wicket door



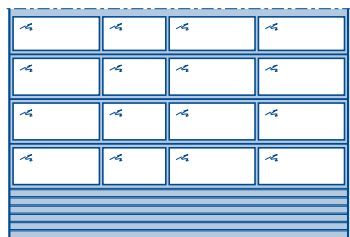
Sectional door SPU 67 Thermo with standard window division



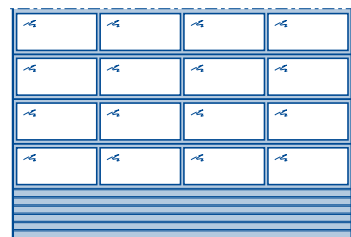
Sectional door APU 67 Thermo with wicket door with trip-free threshold



Sectional door APU 67 Thermo, matching doors with wicket door



Sectional door APU 67 Thermo with standard window division



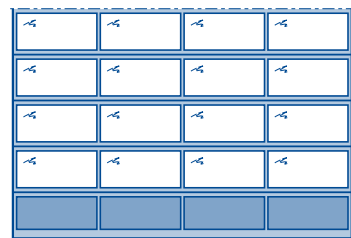
Sectional door ALR 67 Thermo with wicket door with trip-free threshold



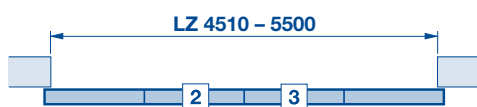
Sectional door ALR 67 Thermo, matching doors with wicket door



Sectional door ALR 67 Thermo with standard window division



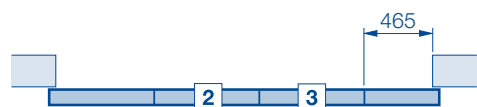
Arrangement of the wicket door



Notices:

- Wicket door clear passage width (DBS) = 905 mm.
- Wicket door only opening outwards.

Wicket door with short distance to outside door edge



The short distance to the outside door edge is optionally possible on the left or right.

Notice:

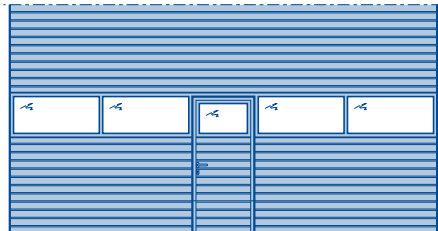
- Not possible for doors with real glass.

Glazing / wicket door arrangements

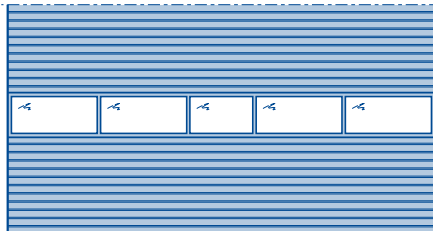
Sectional doors with 5 infills / fields

Glazing arrangements – external view

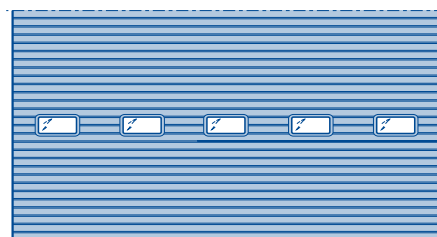
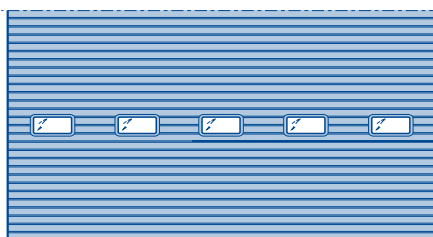
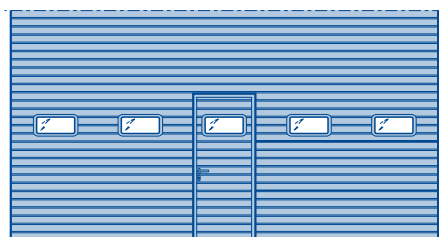
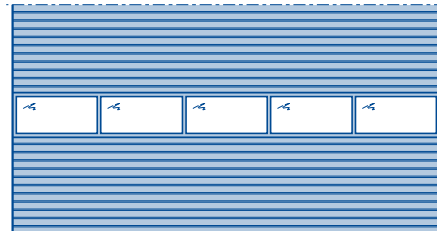
Sectional door SPU 67 Thermo with wicket door with trip-free threshold



Sectional door SPU 67 Thermo, matching doors with wicket door



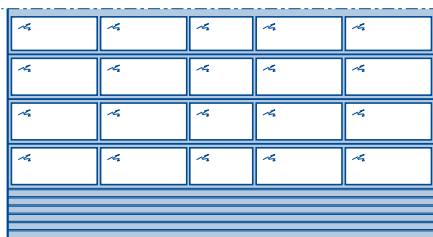
Sectional door SPU 67 Thermo with standard window division



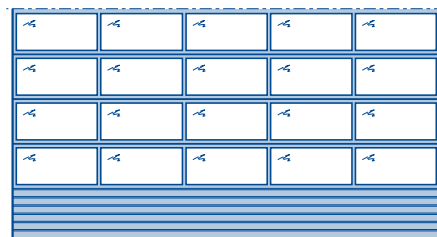
Sectional door APU 67 Thermo with wicket door with trip-free threshold



Sectional door APU 67 Thermo, matching doors with wicket door



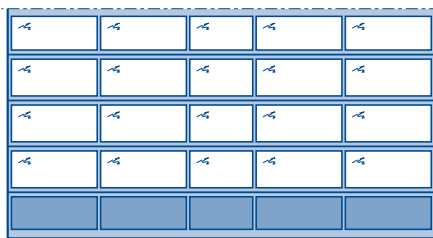
Sectional door APU 67 Thermo with standard window division



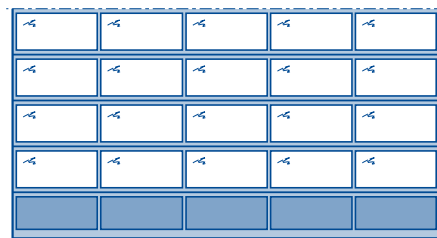
Sectional door ALR 67 Thermo with wicket door with trip-free threshold



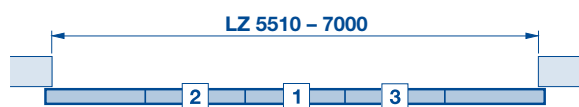
Sectional door ALR 67 Thermo, matching doors with wicket door



Sectional door ALR 67 Thermo with standard window division



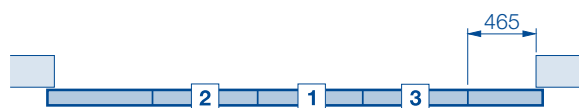
Arrangement of the wicket door



Notices:

- Wicket door clear passage width (DBS) = 905 mm.
- Wicket door only opening outwards.

Wicket door with short distance to outside door edge



The short distance to the outside door edge is optionally possible on the left or right.

Notice:

- Not possible for doors with real glass.

Side door NT 80 Thermo

Possible handing options

Fitting in the opening

Fitting next to the garage door, opening inwards or outwards, RH or LH hinged

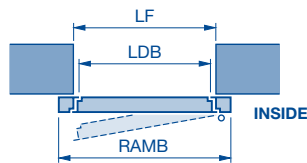


Fitting in the opening, opening inwards or outwards, RH or LH hinged



Fitting behind the opening

Only opening inwards, RH or LH hinged



Structural opening	Ordering size Overall frame dimensions RAMB × RAMH
875 × 2000	855 × 1990
875 × 2125	855 × 2115
1000 × 2000	980 × 1990
1000 × 2125	980 × 2115

Size range: width: RAMB 770 to 1300, height: RAMH 1865 to 2525 (indicate overall frame dimensions)

Doors with multiple-point locking: RAMH ≥ 1920 mm

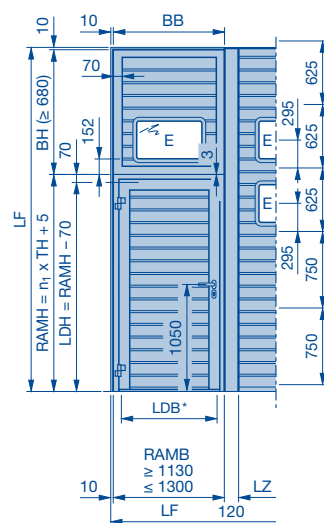
Clear passage dimensions:

Opening angle	Width	Height
136°	RAMB – 164	RAMH – 70
90°	RAMB – 215	

LF Structural opening
RAMB Overall frame width
RAMH Overall frame height
LDB Clear passage width

LDH Clear passage height
LZ Clear frame dimension

with S-ribbed Stucco-textured / L-ribbed Micrograin infills



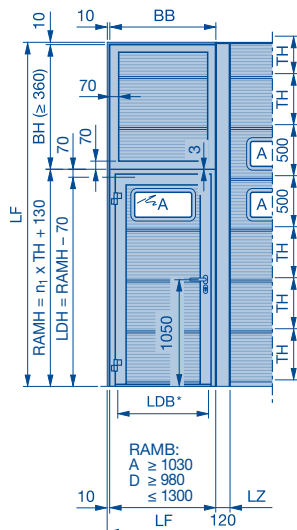
- Compound glazing not possible with RC 2 version.

TH	Door section height
SO	Bottom section height
LZ	Clear frame dimension
n ₁	Number of door sections / aluminium frames

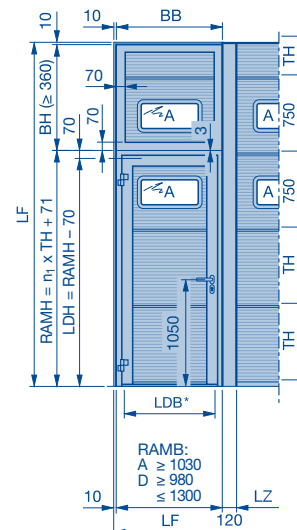
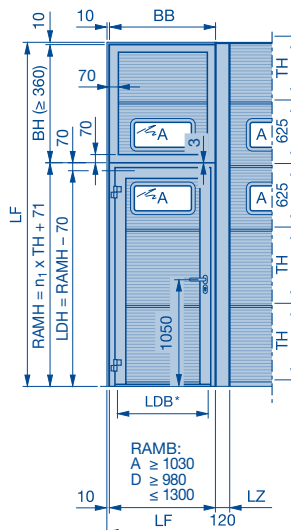
Side door NT 80 Thermo

with L-ribbed Micrograin infills

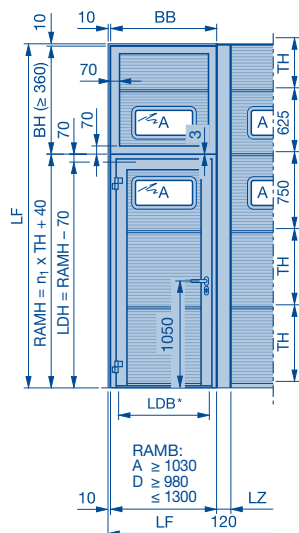
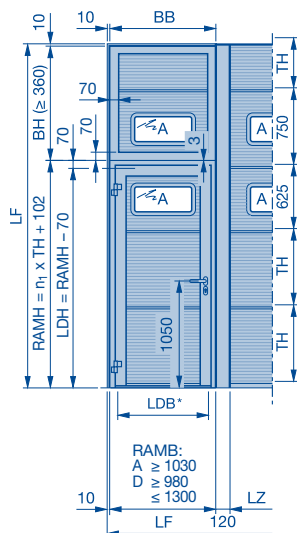
Compound glazing type A TH = 500



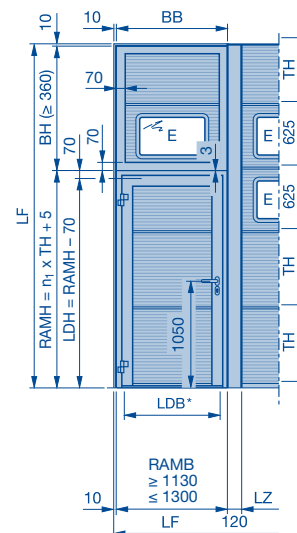
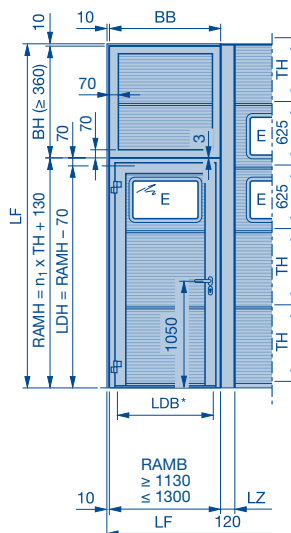
Compound glazing type A TH = 625 and 750



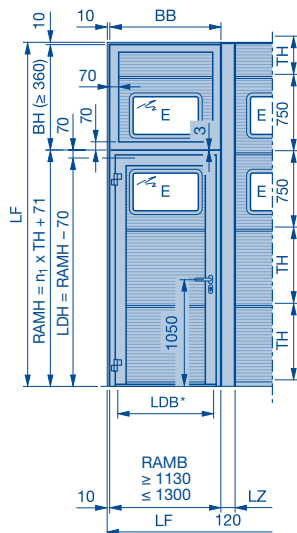
Compound glazing type A TH = 625 / 750 and 750 / 625



Compound glazing type E TH = 625



Compound glazing type E TH = 750



Notice:

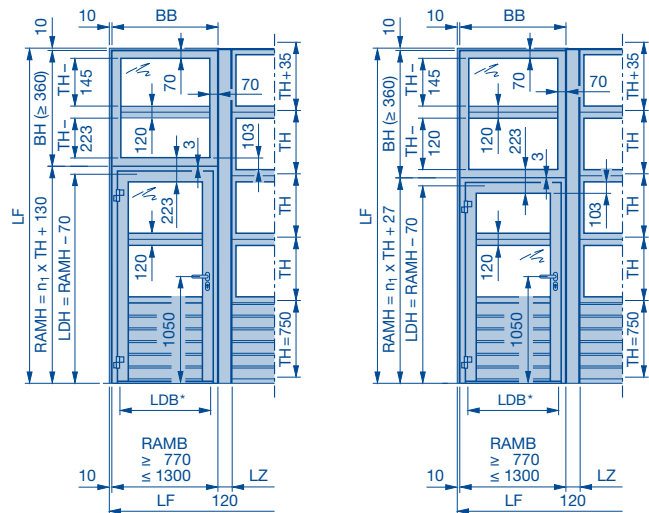
- Compound glazing not possible with RC 2 version.

(Legend see page 30)

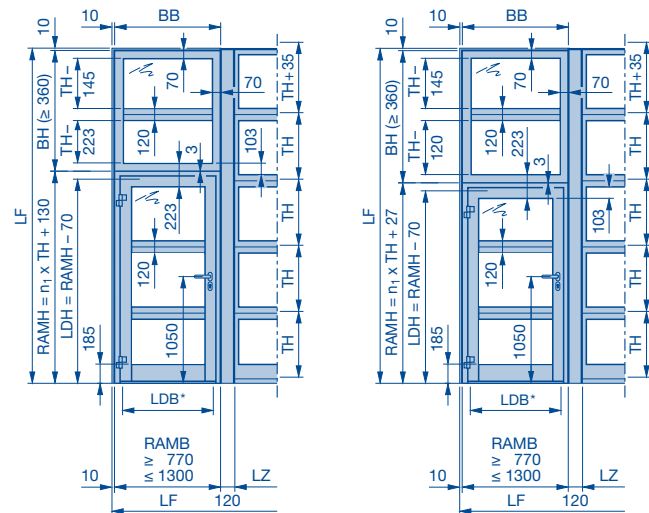
Side door NT 80 Thermo

with S-ribbed Stucco-textured / L-ribbed Micrograin infills

Side door NT 80 Thermo matching door type APU 67 Thermo



Side door NT 80 Thermo matching door type ALR 67 Thermo



* See page 29
LF Structural frame width
RAMB Overall frame width
RAMH Overall frame height

BH Panel height
BB Panel width
LDB Clear passage width
LDH Clear passage height

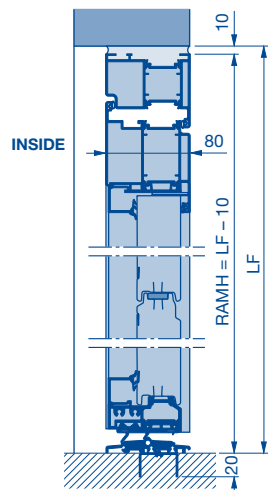
TH Door section height
SO Bottom section height
LZ Clear frame dimension
n₁ Number of door sections / aluminium frames

Side door NT 80 Thermo

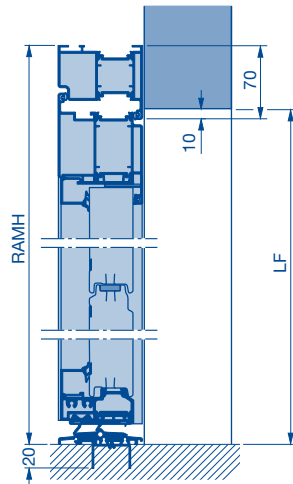
Possible fitting options

Possible fitting options

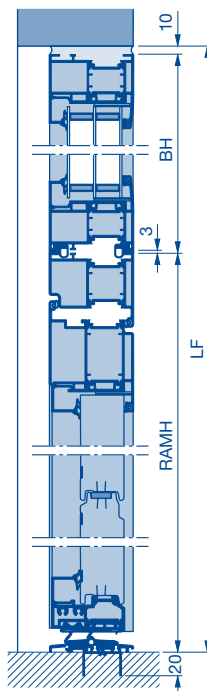
SPU in the opening
without glazing field, without
compound glazing



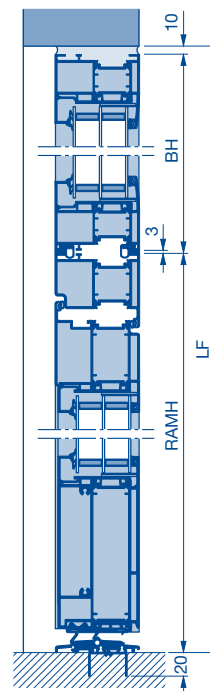
SPU behind the opening
without glazing field, without
compound glazing



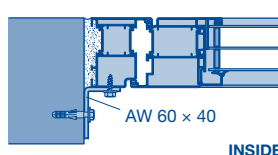
SPU, APU with fascia panel



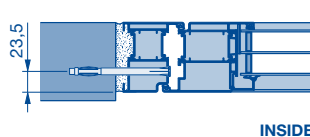
ALR with fascia panel



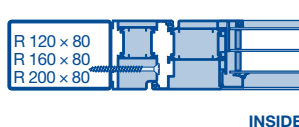
In the opening



Plugs for metal frame

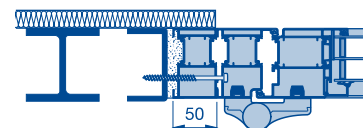


Tapping screw with countersunk head
B 6.3 x 80

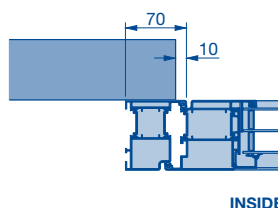


(Bottom illustration with 50 mm* extension
profile for all-over insulation)

* Optionally with 25 mm



Behind the opening



Notice:

Fitting with thermal break requires on-site
preparations.

R Box section
AW Aluminium angle
SW Steel angle

BH Panel height
RAMH Overall frame height
LF Structural opening

Side door NT 80 Thermo RC 2

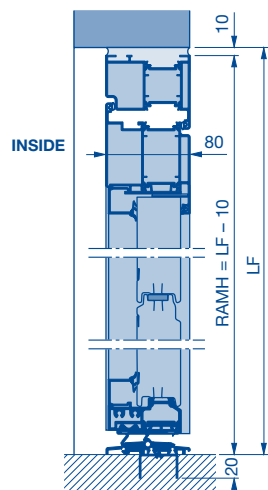
Possible fitting options

Possible fitting options

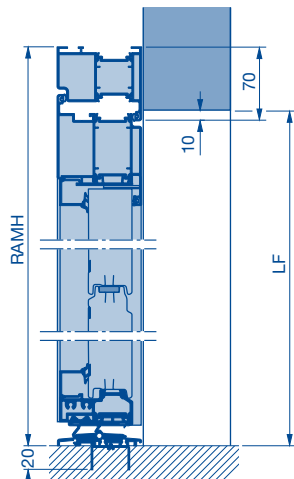
Notice:

The side door and panel must be fitted in accordance with DIN EN 1627.

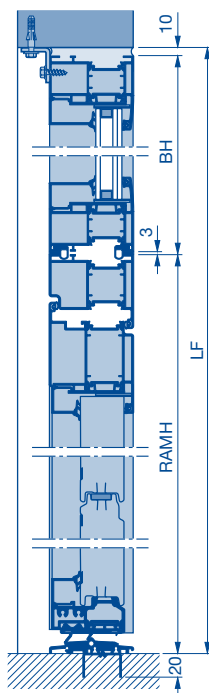
SPU in the opening
without glazing field, without
compound glazing



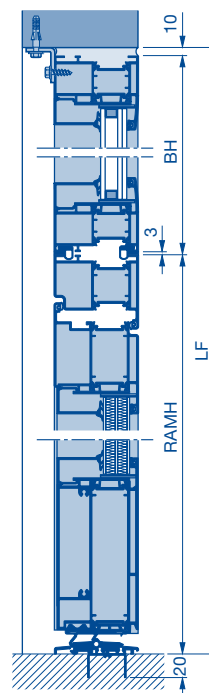
SPU behind the opening
without glazing field, without
compound glazing



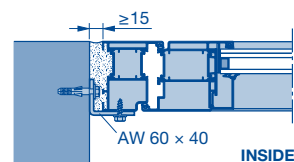
SPU, APU with fascia panel



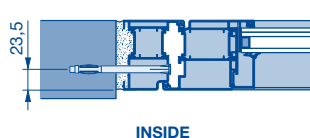
ALR with fascia panel



In the opening



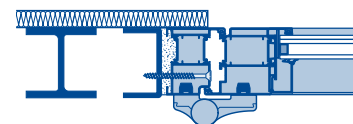
Plugs for metal frame



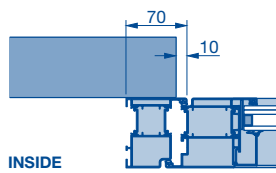
Tapping screw with countersunk head B 6.3 x 80

Notice:

Only use plugs for metal frame and tapping screw with countersunk head when fitting the side door.



Behind the opening



Notice:

Fitting with thermal break requires on-site preparations.

R Box section
AW Aluminium angle
SW Steel angle

BH Panel height
RAMH Overall frame height
LDB Clear passage width

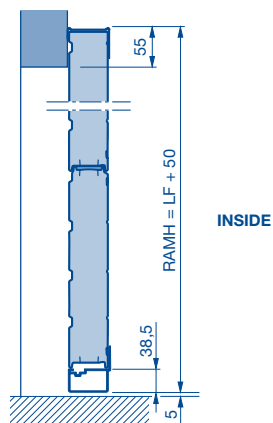
LF Structural opening

Fixed elements

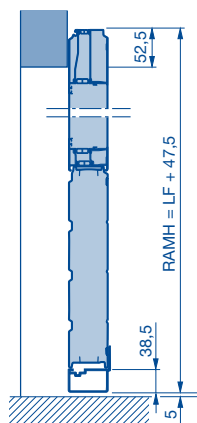
Possible fitting options and fitting examples

Possible fitting options

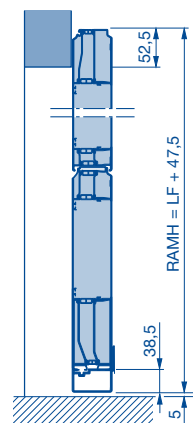
SPU 67 Thermo behind the opening
without glazing field, without compound glazing



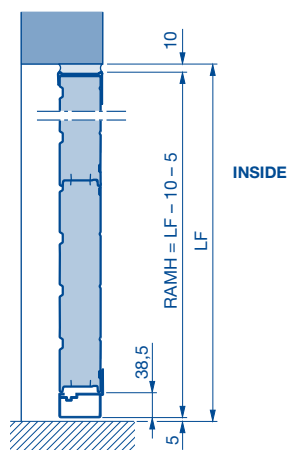
APU 67 Thermo behind the opening



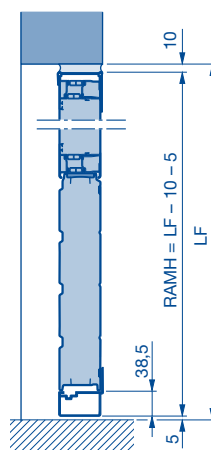
ALR 67 Thermo behind the opening



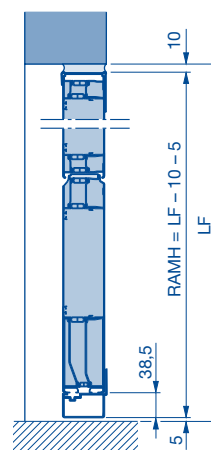
SPU 67 Thermo in the opening
without glazing field, without compound glazing



APU 67 Thermo in the opening

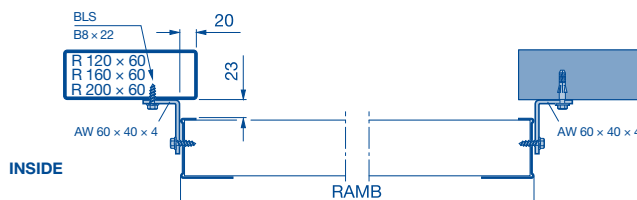
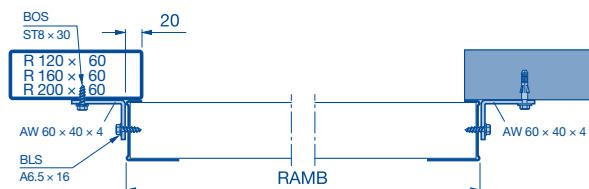


ALR 67 Thermo in the opening

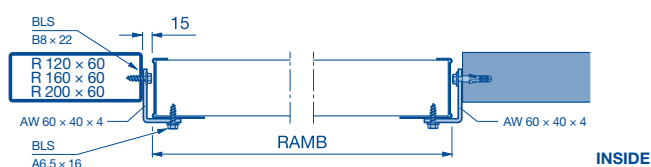


Fitting examples

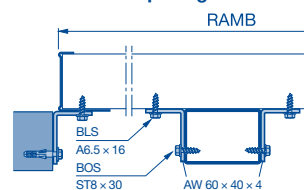
Behind the opening



In the opening



In front of the opening



Notice:
Fitting with thermal break requires on-site preparations.

AW Aluminium angle
LF Structural opening
RAMB Overall frame width

RAMH Overall frame height

Clear passage

Series 60

Track application L with swivel mechanism

	without operator and without chain hoist	Chain hoist or WA 400/500	WA 300	ITO / SupraMatic
LZ ≤ 5500				
Without wicket door*	–	RM	RM – 30	–
Wicket door with threshold rail	–	RM – 50	RM – 80	–
Wicket door without threshold rail	–	RM – 85	RM – 115	–
LZ > 5500				
Without wicket door	–	RM – 50	RM – 80	–
Wicket door with threshold rail	–	RM – 50	RM – 80	–
Wicket door without threshold rail	–	RM – 115	RM – 145	–

* For ALR F42 / ALR F42 Thermo with real glass infill VG, E2 and G2 and ALR F42 Vitraplan LZ > 3000; ALR F42 Glazing LZ > 3330 and ALR F42 / ALR F42 Thermo LZ > 5000, the calculation applies to a wicket door with threshold rail

Track application L without swivel mechanism

	without operator and without chain hoist	Chain hoist or WA 400/500	WA 300	ITO / SupraMatic
LZ ≤ 5500				
Without wicket door	RM – 325	RM – 200	RM – 230	RM – 50
Wicket door with threshold rail	RM – 375	RM – 220	RM – 250	RM – 100
Wicket door without threshold rail	RM – 440	RM – 265	RM – 315	RM – 135
LZ > 5500				
Without wicket door	RM – 375	RM – 250	RM – 280	RM – 50
Wicket door with threshold rail	RM – 375	RM – 270	RM – 300	RM – 100
Wicket door without threshold rail	RM – 475	RM – 335	RM – 365	RM – 165

Track application LD with swivel mechanism

	without operator and without chain hoist	Chain hoist or WA 400/500		WA 300		ITO / SupraMatic
a°		< 6°	6° – 10°	< 6°	6° – 10°	
LZ ≤ 5500						
Without wicket door	–	RM		30		–
Wicket door with threshold rail	–	50	30	80	60	–
Wicket door without threshold rail	–		65		95	–
LZ > 5500						
Without wicket door	–	50		80		–
Wicket door with threshold rail	–	100	80	130	110	–
Wicket door without threshold rail	–		135		195	–

Track application LD without swivel mechanism

	without operator and without chain hoist	Chain hoist or WA 400/500		WA 300		ITO / SupraMatic
a°		2° – 16°	> 16° – 30°	2° – 16°	> 16° – 30°	
LZ ≤ 5500						
Without wicket door	RM – 325	RM – 200 + (a° × 5.3)	RM – 165 + (a° × 3.2)	RM – 230 + (a° × 5.3)	RM – 195 + (a° × 3.2)	RM – 50
Wicket door with threshold rail	RM – 375	RM – 220 + (a° × 5.3)	RM – 185 + (a° × 3.2)	RM – 250 + (a° × 5.3)	RM – 215 + (a° × 3.2)	RM – 100
Wicket door without threshold rail	RM – 440	RM – 265 + (a° × 5.3)	RM – 235 + (a° × 3.2)	RM – 315 + (a° × 5.3)	RM – 280 + (a° × 3.2)	RM – 135
LZ > 5500						
Without wicket door	RM – 375	RM – 250 + (a° × 5.3)	RM – 215 + (a° × 3.2)	RM – 280 + (a° × 5.3)	RM – 245 + (a° × 3.2)	RM – 50
Wicket door with threshold rail	RM – 375	RM – 270 + (a° × 5.3)	RM – 235 + (a° × 3.2)	RM – 300 + (a° × 5.3)	RM – 265 + (a° × 3.2)	RM – 100
Wicket door without threshold rail	RM – 475	RM – 335 + (a° × 5.3)	RM – 300 + (a° × 3.2)	RM – 365 + (a° × 5.3)	RM – 330 + (a° × 3.2)	RM – 165

Track applications N / NA / ND / NS / NK

	without operator and without chain hoist	Chain hoist or WA 400/500	WA 300	ITO / SupraMatic**
LZ ≤ 5500				
Without wicket door	RM – 100	RM	RM – 30	RM
Wicket door with threshold rail	RM – 120	RM – 20	RM – 50	RM – 20
Wicket door without threshold rail	RM – 165	RM – 65	RM – 95	RM – 65
LZ > 5500				
Without wicket door	RM – 150	RM – 50	RM – 80	RM – 50
Wicket door with threshold rail	RM – 170	RM – 70	RM – 100	RM – 70
Wicket door without threshold rail	RM – 185	RM – 135	RM – 165	RM – 135

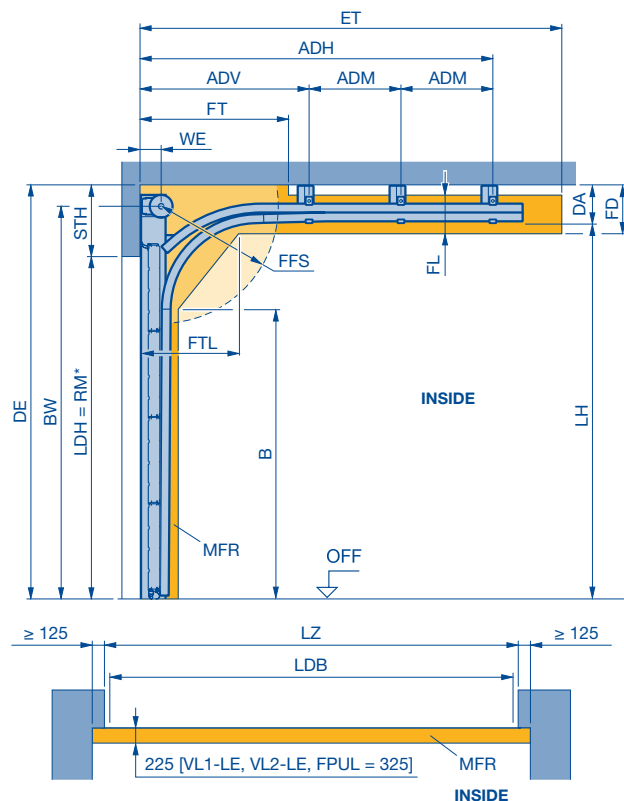
– Not possible
a° Inclination

LZ Clear frame dimension
RM Grid height

Track application: N

Normal track application

Detailed technical data can be found in the product configurator.



ADH Distance to rear ceiling anchor
ADM Distance to centre ceiling anchor
ADV Distance to front ceiling anchor
B Start of double radius
BW Position of shaft support
DA Min. distance to ceiling
DAL Anchor length
DE Min. ceiling height
ET Min. distance back
FD Min. ceiling clearance
FFS Spring tensioning clearance
FL Track clearance
FPUL Spring buffers below the track
FT Clearance for door operation

FTL Clearance of door section in the double radius
LDB Clear passage width with ThermoFrame (see page 62)
LDH Clear passage height
LH Track height
LZ Clear frame dimension
MFR Space for fitting the door
FFL Finished floor level
RM Grid height
STH Min. headroom
WE Shaft centre from lintel

Door weights for roof loads:

SPU 67 Thermo	= 450 N/m ²
APU 67 Thermo / ALR 67 Thermo	= 500 N/m ²
ALR 67 Thermo Glazing	= 600 N/m ²

Observe min. sideroom, see page 62.

Notices:

- Be sure to observe the permissible size ranges of the door types on pages 9 – 14 and 17 – 25!
- The clearance required for fitting the door must be free of supply lines, heater fans, etc.
- If using the spring buffer below the track, the clear height under the track in the area of the spring buffer is reduced by 70 mm.
- For version with wicket door, manually operated: chain hoist recommended!

* Notice:

Observe clear passage height LDH, see page 36.

	STH	WE	DA	BW	FT
N 1	425	140	203	RM + 345	2 × WE
N 2	475	160	253	RM + 370	
N 3	585	180	363	RM + 450	
with double spring shaft	795		563	RM + 450	

B	DE	FFS	FD	FL	FTL	LH
RM – 295	STH + RM	min. 90° (745)	DA + 65	250	695	RM + 222

ET***		
N 1 / N 2	RM + 415	Manual operation with short spring buffer
	RM + 685	Shaft operator with long spring buffer
N 3	RM + 685	For manual operation and shaft operator with long spring buffer

*** Simplified calculation

Min. headroom

Track size	Lintel height	Track size	Lintel height	Track size	Lintel height
N 1, NS 1, NK 1	425	GS 1, GK 1	567	V 6	RM + 560
N 2, NS 2, NK 2	475	GS 1, GK 2	617	V 7	RM + 600
N 3	585	L 1, LD 1, L 2, LD 2	250	V 9	RM + 695
NA 1	435	H 4, HD 4	780	VA 6	RM + 570
NA 2	485	H 5, HD 5	840	VS 6, VS 7	**
ND 1	445	H 8, HD 8	880	VS 9	**
ND 2	475	HA 4	790	VU 6	RM + 310
ND 3	585	HU 4, HU 5, HU 8, RD 4, RD 5, RD 8	1775	VU 7	RM + 310
ND 6	525	HS 4, HK 4	805	VU 9	RM + 310
ND 7	545	HS 5, HK 5	835	WS 6, WS 7, WS 9	**
NH 1, GD 1	579	HS 8, HK 8	875		
NH 2, GD 2	644	RS 4, RK 4, RS 5, RK 5	1477		
NH 3	719				

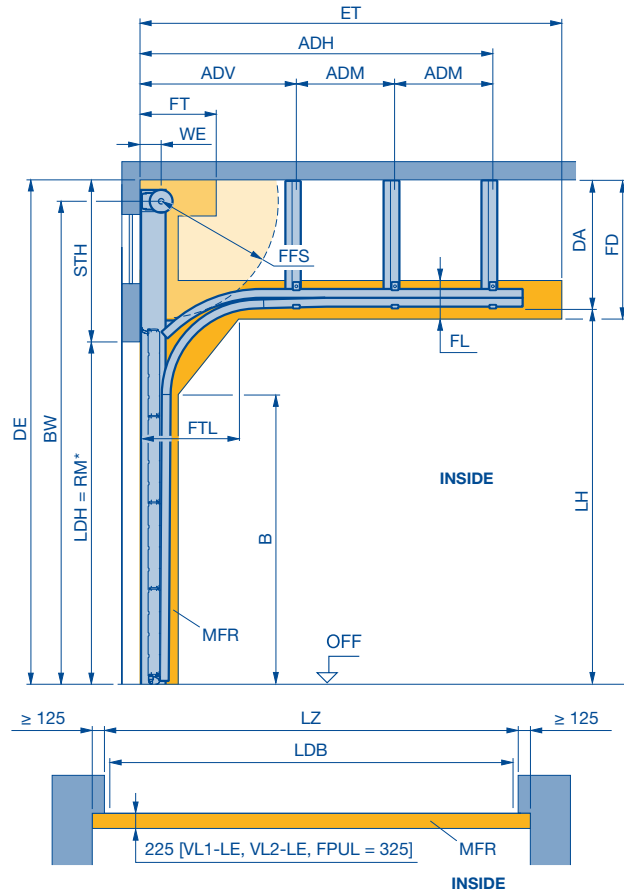
Dimensions in mm

** Dimensions can be found in the product configurator.

Track application: NA

Normal track application with high-mounted torsion spring shaft

Detailed technical data can be found in the product configurator.



ADH	Distance to rear ceiling anchor	FTL	Clearance of door section in the double radius
ADM	Distance to centre ceiling anchor	LDB	Clear passage width with ThermoFrame (see page 62)
ADV	Distance to front ceiling anchor	LDH	Clear passage height
B	Start of double radius	LH	Track height
BW	Position of shaft support	LZ	Clear frame dimension
DA	Min. distance to ceiling (depends on order)	MFR	Space for fitting the door
DE	Ceiling height (depends on order)	FFL	Finished floor level
ET	Min. distance back	RM	Grid height
FD	Ceiling clearance	STH	Max. headroom (depends on order)
FFS	Spring tensioning clearance	WE	Shaft centre from lintel
FL	Track clearance		
FPUL	Spring buffers below the track		
FT	Clearance for door operation		

Door weights for roof loads:

SPU 67 Thermo	= 450 N/m ²
APU 67 Thermo / ALR 67 Thermo	= 500 N/m ²
ALR 67 Thermo Glazing	= 600 N/m ²

Observe min. sideroom, see page 62.

Notices:

- Be sure to observe the permissible size ranges of the door types on pages 9 – 14 and 17 – 25!
- The clearance required for fitting the door must be free of supply lines, heater fans, etc.
- If using the spring buffer below the track, the clear height under the track in the area of the spring buffer is reduced by 70 mm.

* Notice:

Observe clear passage height LDH, see page 36.

	STH	WE	DA	min. BW	max. BW
NA 1	435	140	(BW + 80) – (RM + 222)	RM + 355	7820, DE – 80
NA 2	485	160	(BW + 105) – (RM + 222)	RM + 380	7995, DE – 105

FT	DE	B	FFS
2 × WE	STH + RM	RM – 295	min. 90° (745)

FD	FL	FTL	LH
DA + 65	250	695	RM + 222

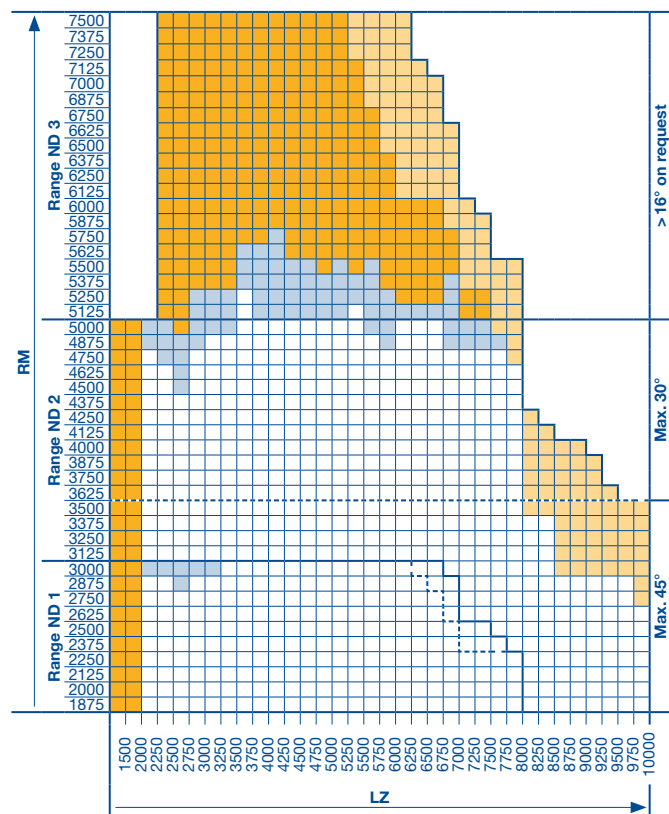
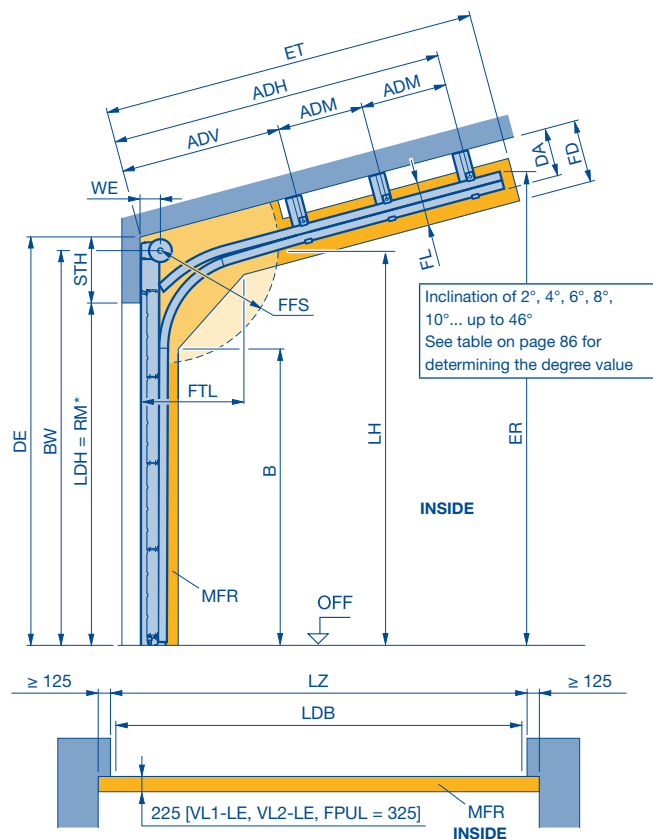
ET**		
NA 1 / NA 2	RM + 415	Manual operation with short spring buffer
	RM + 685	Shaft operator with long spring buffer

** Simplified calculation

Track application: ND

Normal track application with inclination up to max. 46°

Detailed technical data can be found in the product configurator.



a°	Inclination	FPUL	Spring buffers below the track
ADH	Distance to rear ceiling anchor	FTL	Clearance of door section in the double radius
ADM	Distance to centre ceiling anchor	LDB	Clear passage width with ThermoFrame (see page 62)
ADV	Distance to front ceiling anchor	LDH	Clear passage height
B	Start of double radius	LH	Track height
BW	Position of shaft support	LZ	Clear frame dimensions (from 1200)
DA	Distance to ceiling on request	MFR	Space for fitting the door
DE	Ceiling height	FFL	Finished floor level
ER	Corner point, top edge of track (depth and height)	RM	Grid height
ET	Min. distance back	STH	Min. headroom
FD	Ceiling clearance	WE	Shaft centre from lintel
FFS	Spring tensioning clearance		
FL	Track clearance		

Door weights for roof loads:

SPU 67 Thermo	= 450 N/m ²
APU 67 Thermo / ALR 67 Thermo	= 500 N/m ²
ALR 67 Thermo Glazing	= 600 N/m ²

Observe min. sideroom, see page 62.

Notice:

- The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account.
- The clearance required for fitting the door must be free of supply lines, heater fans, etc.
- If using the spring buffer below the track, the clear height under the track in the area of the spring buffer is reduced by 70 mm.

* Notice:

Observe clear passage height LDH, see page 36.

Notice:

- Be sure to observe the permissible size ranges of the door types on pages 9 – 14 and 17 – 25!
- ALR 67 Thermo Glazing and doors with wicket door on request.
- To determine the roof slope see page 86.
- Roof slope on request for RM ≤ 3500 and > 30° or > 3500° and > 16°.

	STH	WE	BW	FT	FTL
ND 1, ≤ 30°	435	140	RM + 365	2 × WE	695, ≤ 15°
ND 2, ≤ 30°	475	160	RM + 370		525, > 15°
ND 6, > 30°	525		RM + 420		525
ND 7, > 30°	535		RM + 440		
ND 3, ≤ 30°	585	180	RM + 450		695, ≤ 15°
with double spring shaft	795		RM + 450		525, > 15°

ET	DA	DE	FFS	FD	FL	LH	ER	B
**	**	STH + RM	min. 90° (745)	DA + 65	250	**	**	**

** Dimensions can be found in the product configurator.

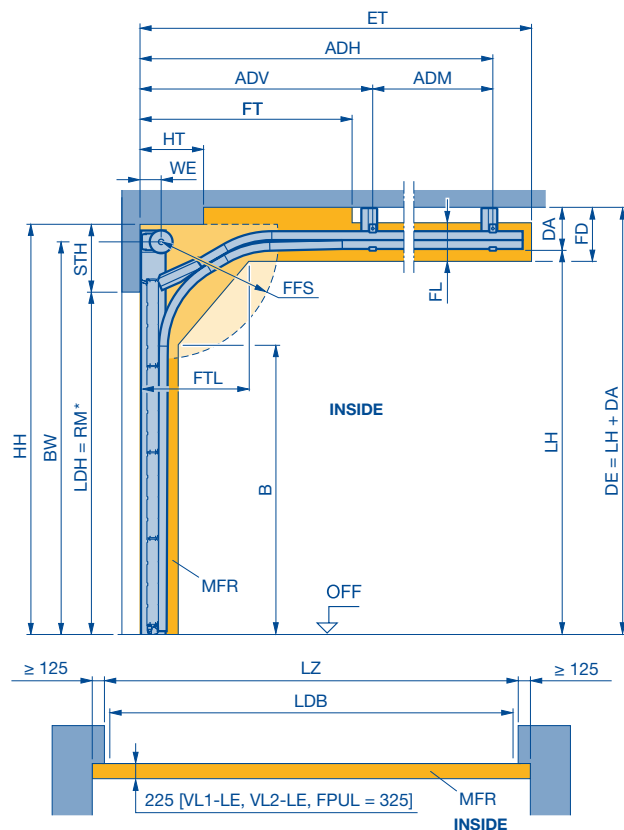
- All door types available in any version.
- Door types APU 67 Thermo and ALR 67 Thermo on request.
- Door type SPU 67 Thermo on request (APU 67 Thermo and ALR 67 Thermo not possible).
- On request
- Track limit for SPU 67 Thermo
- Track limit for APU 67 Thermo and ALR 67 Thermo

Dimensions in mm

Track application: NS

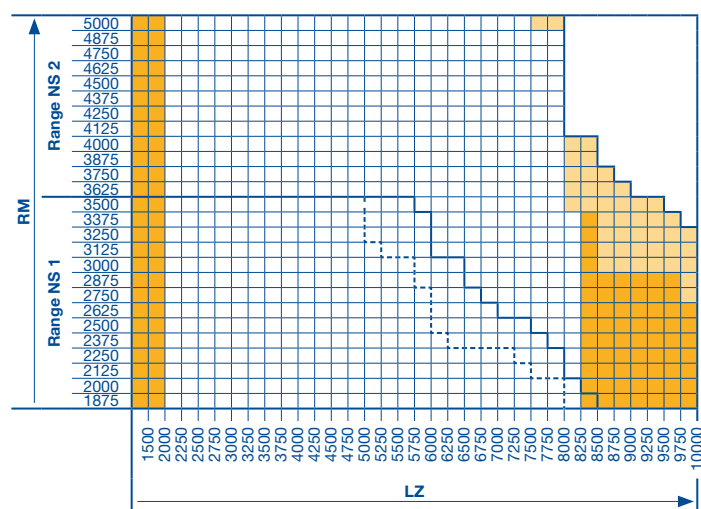
Normal track application with double radius

Detailed technical data can be found in the product configurator.



Notice:

- Be sure to observe the permissible size ranges of the door types on pages 9–14 and 17–25!
- ALR 67 Thermo Glazing and doors with wicket door on request



ADH	Distance to rear ceiling anchor	HH	Obstruction height
ADM	Distance to centre ceiling anchor	HT	Obstruction depth
ADV	Distance to front ceiling anchor	LH	Track height
B	Start of double radius	LDB	Clear passage width with ThermoFrame (see page 62)
BW	Position of shaft support	LDH	Clear passage height
DA	Min. distance to ceiling	LZ	Clear frame dimensions (from 1200)
DE	Ceiling height	MFR	Space for fitting the door
ET	Min. distance back on request	FFL	Finished floor level
FD	Ceiling clearance	RM	Grid height
FFS	Spring tensioning clearance	STH	Min. headroom
FPUL	Spring buffers below the track	WE	Shaft centre from lintel
FT	Clearance for door operation		
FTL	Clearance of door section in the double radius		

Door weights for roof loads:

SPU 67 Thermo	= 450 N/m ²
APU 67 Thermo / ALR 67 Thermo	= 500 N/m ²
ALR 67 Thermo Glazing	= 600 N/m ²

Observe min. sideroom, see page 62.

Notice:

- A technical inspection is required!
- The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account.
- The clearance required for fitting the door must be free of supply lines, heater fans, etc.
- If using the spring buffer below the track, the clear height under the track in the area of the spring buffer is reduced by 70 mm.

* Notice:

Observe clear passage height LDH, see page 36.

	STH	WE	DA	BW
NS 1	425	140	203	RM + 345
NS 2	475	160		RM + 370

FT	DE	B	ET	FFS	FD	FL	FTL	LH
2 × WE	LH + 203	**	**	min. 90° (745)	DA + 65	250	**	**

** Dimensions can be found in the product configurator.

All door types available in any version.

Door type SPU 67 Thermo on request (APU 67 Thermo and ALR 67 Thermo not possible).

On request

Track limit for SPU 67 Thermo

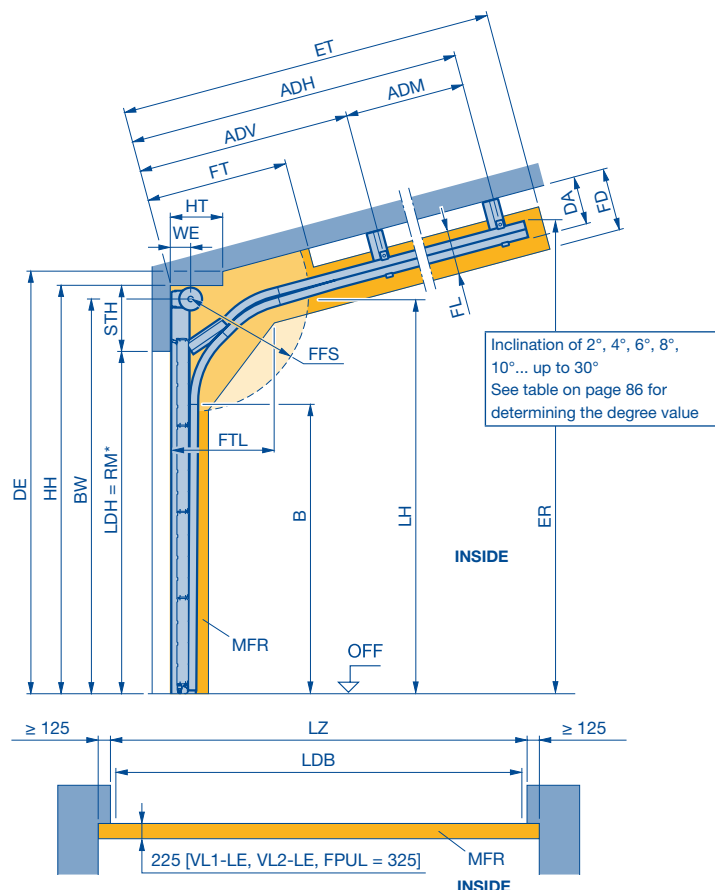
Track limit for APU 67 Thermo and ALR 67 Thermo

Dimensions in mm

Track application: NK

Normal track application with double radius and inclination up to max. 30°

Detailed technical data can be found in the product configurator.



a°	Inclination	FTL	Clearance of door section in the double radius
ADH	Distance to rear ceiling anchor	HH	Obstruction height
ADM	Distance to centre ceiling anchor	HT	Obstruction depth
ADV	Distance to front ceiling anchor	LDB	Clear passage width with ThermoFrame (see page 62)
B	Start of double radius	LDH	Clear passage height
BW	Position of shaft support	LH	Track height
DA	Distance to ceiling on request	LZ	Clear frame dimensions (from 1200)
DE	Ceiling height	MFR	Space for fitting the door
ER	Top edge corner point	FFL	Finished floor level
ET	Track height (depth and height)	RM	Grid height
FD	Min. distance back	STH	Min. headroom
FFS	Ceiling clearance	WE	Shaft centre from lintel
FL	Spring tensioning clearance		
FT	Track clearance		
FPUL	Spring buffers below the track		
FT	Clearance for door operation		

Door weights for roof loads:

SPU 67 Thermo	= 450 N/m ²
APU 67 Thermo / ALR 67 Thermo	= 500 N/m ²
ALR 67 Thermo Glazing	= 600 N/m ²

Observe min. sideroom, see page 62.

Notices:

- A technical inspection is required!
- The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account.
- The clearance required for fitting the door must be free of supply lines, heater fans, etc.
- If using the spring buffer below the track, the clear height under the track in the area of the spring buffer is reduced by 70 mm.
- Be sure to observe the permissible size ranges of the door types on pages 9–14 and 17–25!
- ALR 67 Thermo Glazing and doors with wicket door on request.
- To determine the roof slope see page 86.

* Notice:

Observe clear passage height LDH, see page 36.

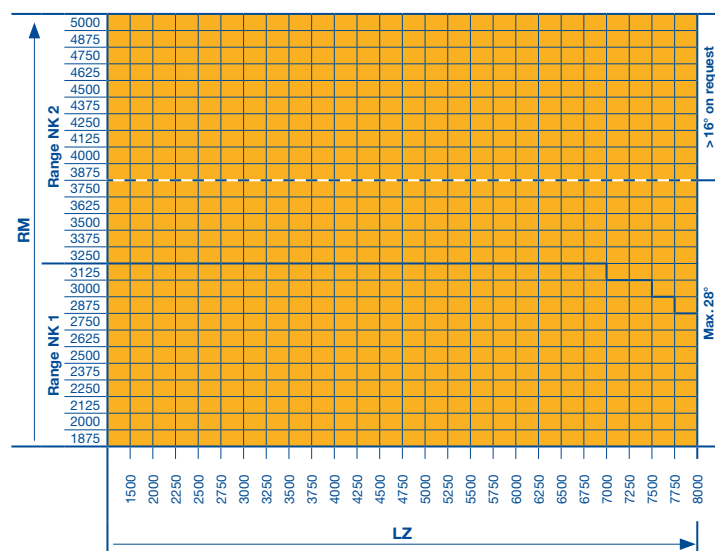
	STH	WE	DA	BW
NK 1	425	140	203	RM + 345
NK 2	475	160		RM + 370

FT	DE	B	ET	FFS	FD	FL	FTL	LH
2 × WE	LH + 203	**	**	min. 90° (745)	DA + 65	250	**	**

** Dimensions can be found in the product configurator.

All door types and versions on request.

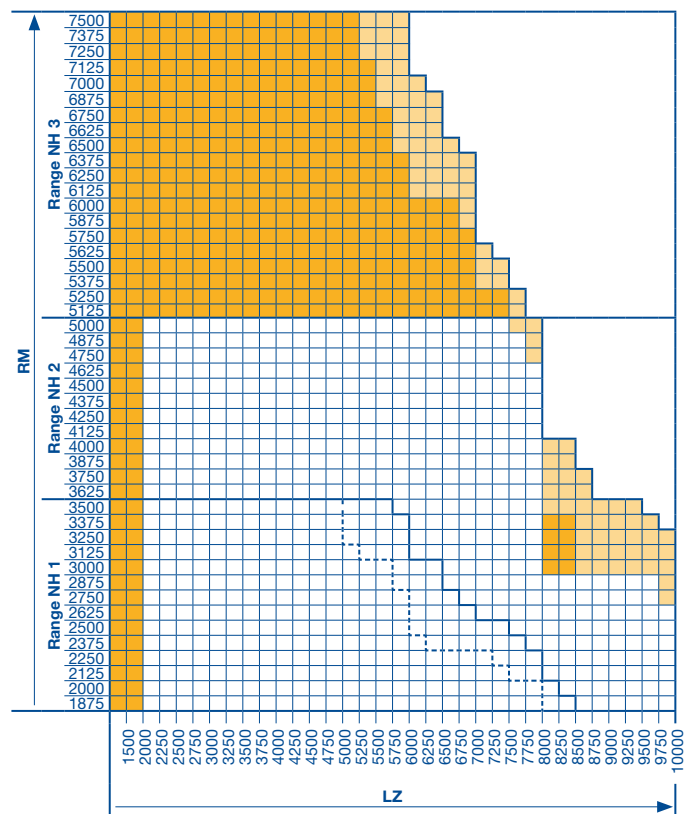
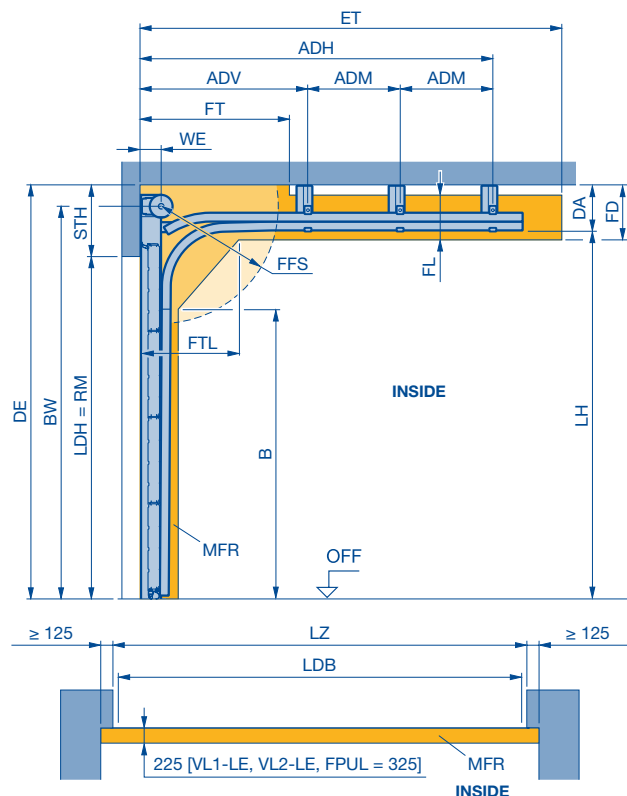
Dimensions in mm



Track application: NH

Normal track application with minimum high-lift

Detailed technical data can be found in the product configurator.



ADH	Distance to rear ceiling anchor	LDB	Clear passage width with ThermoFrame (see page 62)
ADM	Distance to centre ceiling anchor	LDH	Clear passage height
ADV	Distance to front ceiling anchor	LH	Track height
B	Start of double radius	LZ	Clear frame dimensions (from 1200)
BW	Position of shaft support	MFR	Space for fitting the door
DA	Min. distance to ceiling	FFL	Finished floor level
DE	Ceiling height	RM	Grid height
ET	Min. distance back	STH	Min. headroom
FD	Ceiling clearance	WE	Shaft centre from lintel
FFS	Spring tensioning clearance	RM	Grid height
FL	Track clearance	STH	Min. headroom
FPUL	Spring buffers below the track	WE	Shaft centre from lintel
FT	Clearance for door operation		
FTL	Clearance of door section in the double radius		
S	Anchor length		

Door weights for roof loads:

SPU 67 Thermo	= 450 N/m ²
APU 67 Thermo / ALR 67 Thermo	= 500 N/m ²
ALR 67 Thermo Glazing	= 600 N/m ²

Observe min. sideroom, see page 62.

Notices:

- The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account.
- The clearance required for fitting the door must be free of supply lines, heater fans, etc.
- If using the spring buffer below the track, the clear height under the track in the area of the spring buffer is reduced by 70 mm.
- Be sure to observe the permissible size ranges of the door types on pages 9 – 14 and 17 – 25!
- ALR 67 Thermo Glazing and doors with wicket door on request.

	STH	WE	DA	BW
NH 1	579	140	225	LH + 140
NH 2	644	160	290	LH + 180
NH 3	719		365	
with double spring shaft	760	180	565	LH + 225

FT	DE	B	FFS	FD	FL	FTL	LH	ET
2 x WE	STH + RM	LH - 366	min. 90° (745)	DA + 65	275	670	min. RM + 354 max. RM + 500	**

** Dimensions can be found in the product configurator.

All door types available in any version.

Door type SPU 67 Thermo on request (APU 67 Thermo and ALR 67 Thermo not possible).

On request

Track limit for SPU 67 Thermo

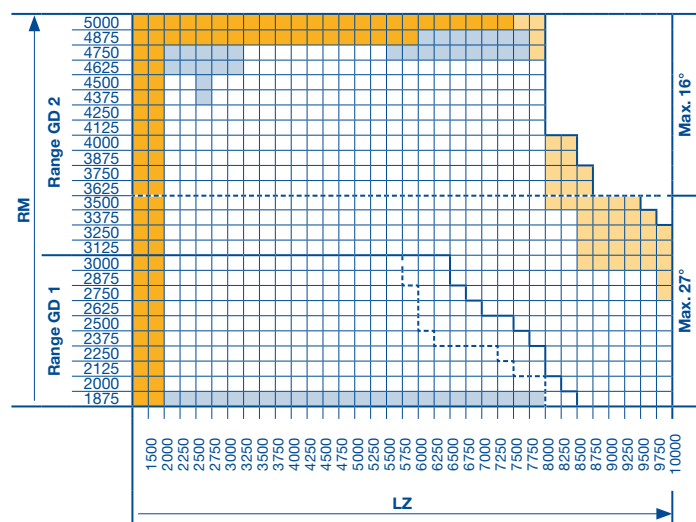
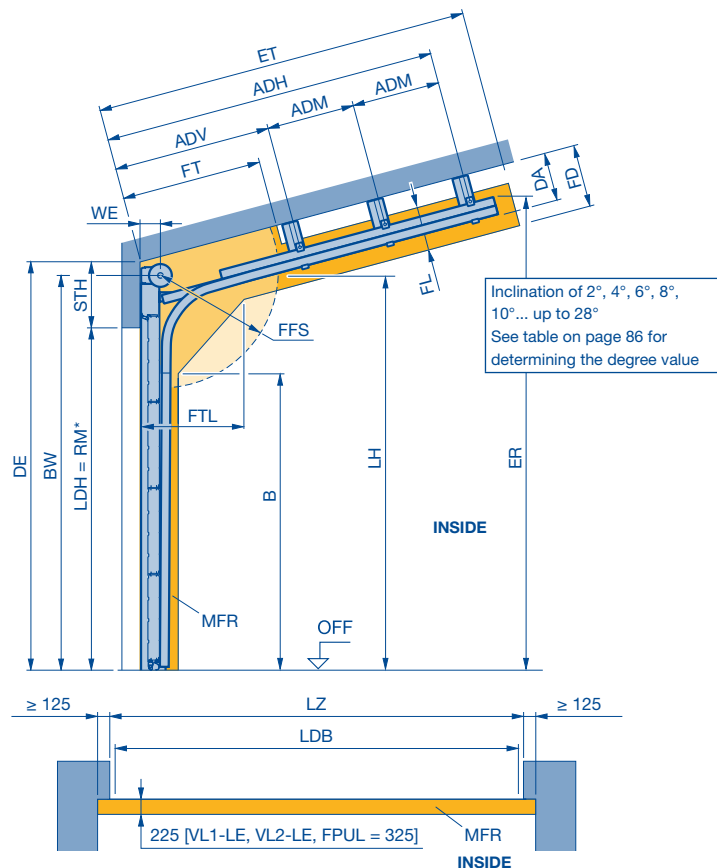
Track limit for APU 67 Thermo and ALR 67 Thermo

Dimensions in mm

Track application: GD

Normal track application with inclination up to max. 28° and minimum high-lift

Detailed technical data can be found in the product configurator.



a°	Inclination	FPUL	Spring buffers below the track
ADH	Distance to rear ceiling anchor	FT	Clearance for door operation
ADM	Distance to centre ceiling anchor	FTL	Clearance of door section in the double radius
ADV	Distance to front ceiling anchor	LDB	Clear passage width with ThermoFrame (see page 62)
B	Start of double radius, factory specification	LDH	Clear passage height
BW	Position of shaft support	LH	Track height
DA	Distance to ceiling on request	LZ	Clear frame dimensions (from 1200)
DE	Ceiling height	MFR	Space for fitting the door
ER	Top edge corner point	FFL	Finished floor level
	Track height (depth and height)	RM	Grid height
ET	Min. distance back	STH	Min. headroom
FD	Ceiling clearance	WE	Shaft centre from lintel
FFS	Spring tensioning clearance		
FL	Track clearance		

Door weights for roof loads:

SPU 67 Thermo	= 450 N/m ²
APU 67 Thermo / ALR 67 Thermo	= 500 N/m ²
ALR 67 Thermo Glazing	= 600 N/m ²

Observe min. sideroom, see page 62.

Notices:

- The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account.
- The clearance required for fitting the door must be free of supply lines, heater fans, etc.
- If using the spring buffer below the track, the clear height under the track in the area of the spring buffer is reduced by 70 mm.
- Be sure to observe the permissible size ranges of the door types on pages 9–14 and 17–25!
- ALR 67 Thermo Glazing and doors with wicket door on request.
- To determine the roof slope see page 86.

	STH	WE	DA	BW	FT	DE
GD 1	579	140	**	LH + 140	2 × WE	STH + RM
GD 2	644	160		LH + 180		

ET	B	FFS	FD	FL	FTL	LH	ER
**	LH – 366	min. 90° (745)	DA + 65	275	670	min. RM + 354 max. RM + 500	**

** Dimensions can be found in the product configurator.

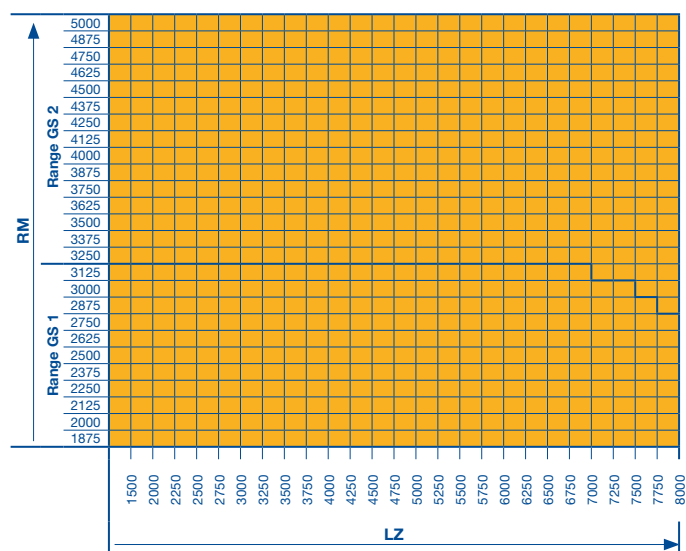
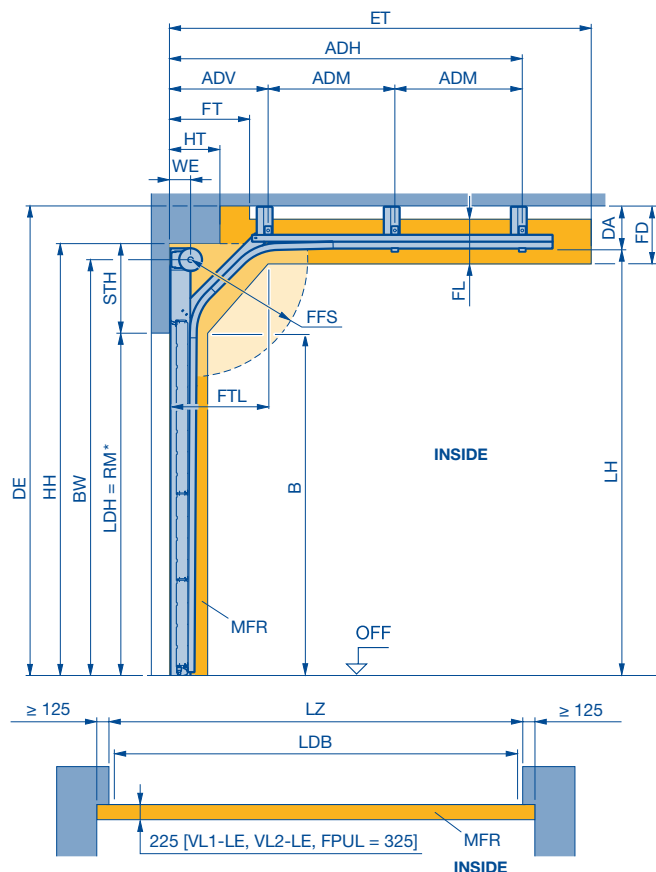
- All door types available in any version.
- Door types APU 67 Thermo and ALR 67 Thermo on request.
- Door type SPU 67 Thermo on request (APU 67 Thermo and ALR 67 Thermo not possible).
- On request
- Track limit for SPU 67 Thermo
- Track limit for APU 67 Thermo and ALR 67 Thermo

Dimensions in mm

Track application: GS

Normal track application with double radius and minimum high-lift

Detailed technical data can be found in the product configurator.



a°	Inclination	FTL	Clearance of door section in the double radius
ADH	Distance to rear ceiling anchor	HH	Obstruction height
ADM	Distance to centre ceiling anchor	HT	Obstruction depth
ADV	Distance to front ceiling anchor	LDB	Clear passage width with ThermoFrame (see page 62)
B	Start of double radius, factory specification	LDH	Clear passage height
BW	Position of shaft support	LH	Track height
DA	Distance to ceiling on request	LZ	Clear frame dimensions (from 1200)
DE	Ceiling height	MFR	Space for fitting the door
ET	Min. distance back	FFL	Finished floor level
FD	Ceiling clearance	RM	Grid height
FFS	Spring tensioning clearance	STH	Min. headroom
FL	Track clearance	WE	Shaft centre from lintel
FPUL	Spring buffers below the track		
FT	Clearance for door operation		

Door weights for roof loads:

SPU 67 Thermo	= 450 N/m ²
APU 67 Thermo / ALR 67 Thermo	= 500 N/m ²
ALR 67 Thermo Glazing	= 600 N/m ²

Observe min. sideroom, see page 62.

Notices:

- A technical inspection is required!
- The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account.
- The clearance required for fitting the door must be free of supply lines, heater fans, etc.
- If using the spring buffer below the track, the clear height under the track in the area of the spring buffer is reduced by 70 mm.
- Be sure to observe the permissible size ranges of the door types on pages 9 – 14 and 17 – 25!
- ALR 67 Thermo Glazing and doors with wicket door on request.
- To determine the roof slope see page 86.

	STH	WE	DA	BW	FT	DE
GS 1	567	140	203	B + 510	2 × WE	LH + +183
GS 2	617	160	203	B + 535		

FFS	FD	FL	FTL	LH	ET
min. 90° (745)	DA + 65	275	**	**	**

** Dimensions can be found in the product configurator.

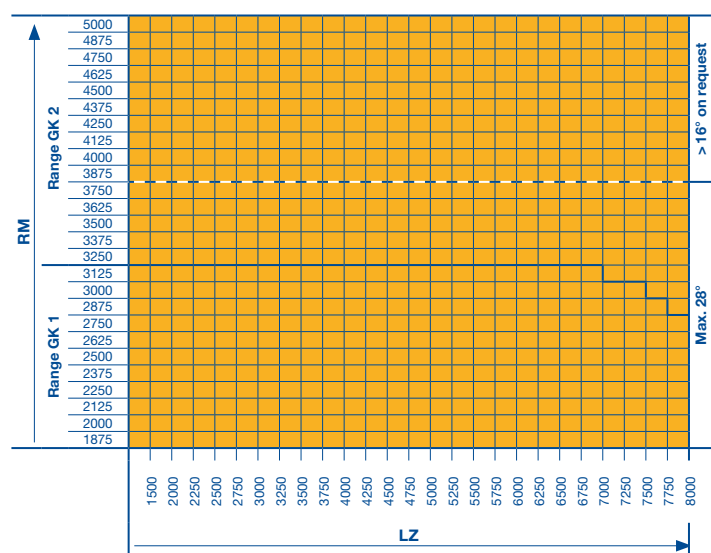
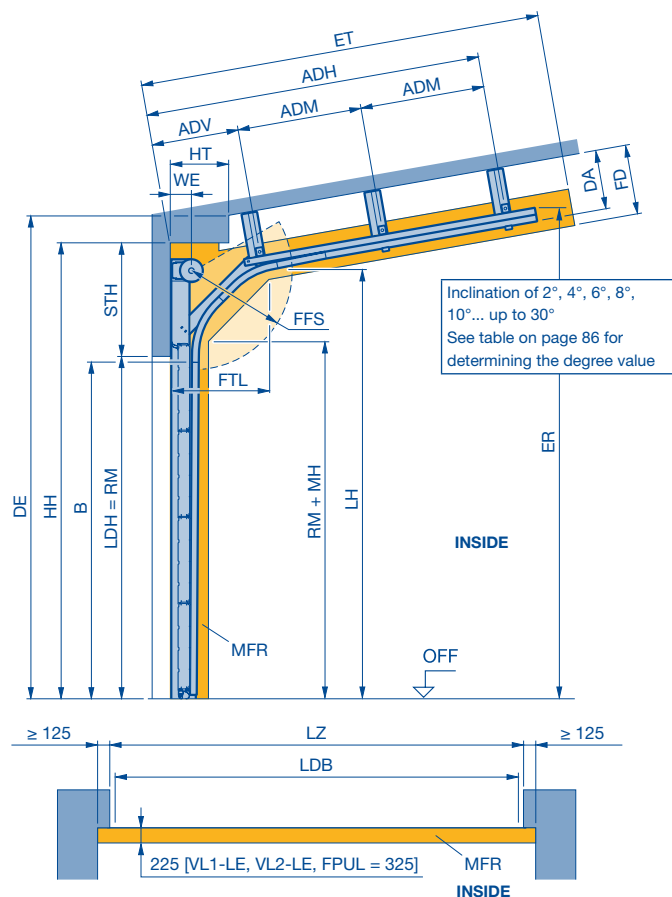
All door types and versions on request.

Dimensions in mm

Track application: GK

Normal track application with double radius and inclination up to max. 30° and minimum high-lift

Detailed technical data can be found in the product configurator.



a°	Inclination	FTL	Clearance of door section in the double radius
ADH	Distance to rear ceiling anchor	HH	Obstruction height
ADM	Distance to centre ceiling anchor	HT	Obstruction depth
ADV	Distance to front ceiling anchor	LDB	Clear passage width with ThermoFrame (see page 62)
B	Start of double radius, factory specification	LDH	Clear passage height
BW	Position of shaft support	LH	Track height
DA	Distance to ceiling on request	LZ	Clear frame dimensions (from 1200)
DE	Ceiling height	MFR	Space for fitting the door
ER	Top edge corner point	FFL	Finished floor level
ET	Track height (depth and height)	RM	Grid height
FD	Min. distance back	STH	Min. headroom
FFS	Spring tensioning clearance	WE	Shaft centre from lintel
FL	Track clearance		
FPUL	Spring buffers below the track		
FT	Clearance for door operation		

Door weights for roof loads:

SPU 67 Thermo	= 450 N/m ²
APU 67 Thermo / ALR 67 Thermo	= 500 N/m ²
ALR 67 Thermo Glazing	= 600 N/m ²

Observe min. sideroom, see page 62.

Notices:

- A technical inspection is required!
- The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account.
- The clearance required for fitting the door must be free of supply lines, heater fans, etc.
- If using the spring buffer below the track, the clear height under the track in the area of the spring buffer is reduced by 70 mm.
- Be sure to observe the permissible size ranges of the door types on pages 9 – 14 and 17 – 25!
- ALR 67 Thermo Glazing and doors with wicket door on request.
- To determine the roof slope see page 86.

	STH	WE	DA	BW	FT	DE
GK 1	567	140	203	B + 510	2 × WE	LH + 183
GK 2	617	160	203	B + 535		

FFS	FD	FL	FTL	LH	ET
min. 90° (745)	DA + 65	275	**	**	**

** Dimensions can be found in the product configurator.

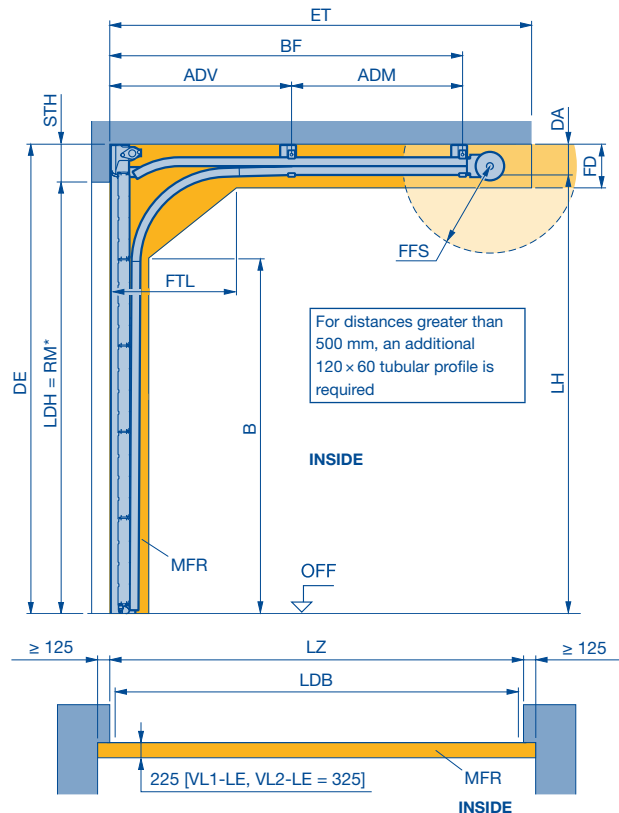
All door types and versions on request.

Dimensions in mm

Track application: L

Low headroom track application

Detailed technical data can be found in the product configurator.



ADM	Distance to centre ceiling anchor	LH	Track height
ADV	Distance to front ceiling anchor	LDB	Clear passage width with ThermoFrame (see page 62)
B	Start of double radius	LDH	Clear passage height
BF	Position of spring shaft	LZ	Clear frame dimensions (from 1200)
ET	Min. distance back	MFR	Space for fitting the door
DA	Min. distance to ceiling	FFL	Finished floor level
DE	Min. ceiling height	RM	Grid height
FD	Min. ceiling clearance	STH	Min. headroom
FFS	Spring tensioning clearance		
FTL	Clearance of door section in the double radius		

Door weights for roof loads:

SPU 67 Thermo	= 450 N/m ²
APU 67 Thermo / ALR 67 Thermo	= 500 N/m ²
ALR 67 Thermo Glazing	= 600 N/m ²

Observe min. sideroom, see page 62.

Door operation:

- Manually operated: rope or chain hoist (recommended for manual operation!)
- Power-driven: WA 400/500 FU only with chain box! ITO only possible without swivel mechanism!
- WA 300 on request!

Notices:

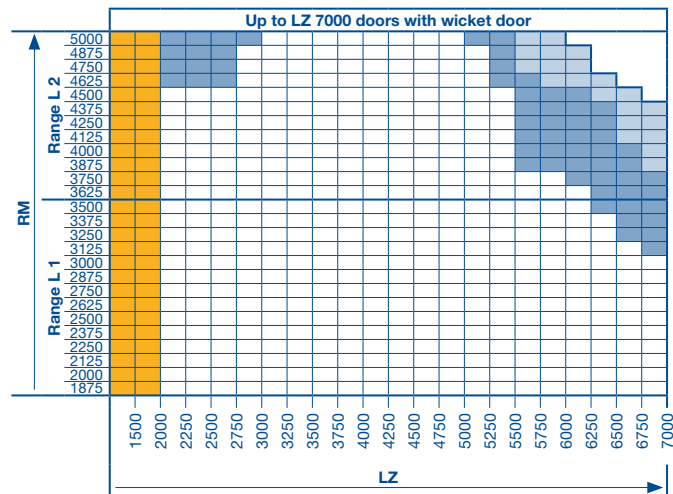
- The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account.
- The clearance required for fitting the door must be free of supply lines, heater fans, etc.
- Be sure to observe the permissible size ranges of the door types on pages 9 – 14 and 17 – 25!
- ALR 67 Thermo Glazing on request.

* Notice:

Observe clear passage height LDH, see page 36.

B	BF *	DA	DE	ET *
LH - 517	RM + 695	191	STH + RM	RM + 1007
FD	FFS	FTL	LH	STH
DA + 65	min. 90° (745)	675	RM + 59	250

* with swing mechanism, ET = RM + 916 and BF = RM + 604



All door types available in any version.

All door types on request.

Door type APU 67 Thermo and ALR 67 Thermo on request.

All doors with wicket doors on request.

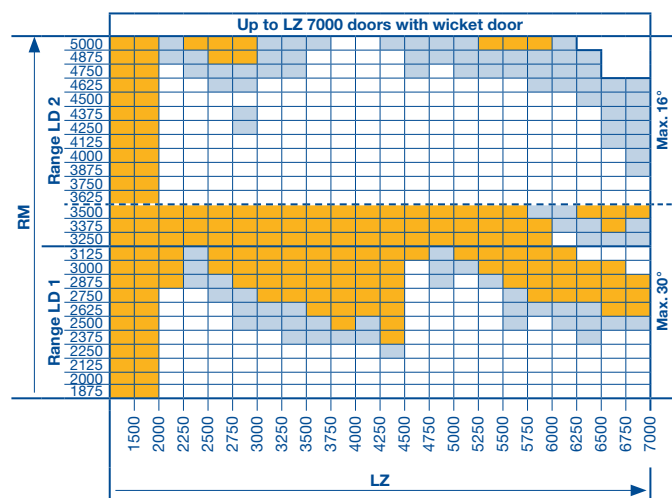
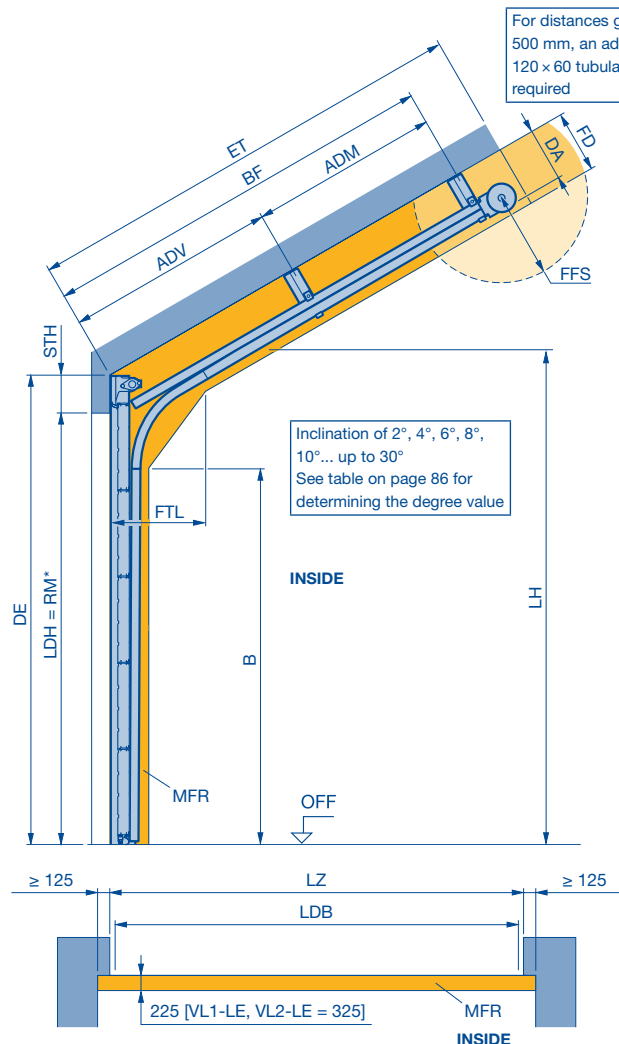
Track limit

Dimensions in mm

Track application: LD

Low headroom track application with inclination up to max. 30°

Detailed technical data can be found in the product configurator.



a°	Inclination	FTL	Clearance of door section in the double radius
ADM	Distance to centre ceiling anchor on request	LDB	Clear passage width with ThermoFrame (see page 62)
ADV	Distance to front ceiling anchor	LDH	Clear passage height
B	Start of double radius on request	LZ	Clear frame dimensions (from 1200)
BF	Position of spring shaft on request	MFR	Space for fitting the door
DA	Distance to ceiling on request	FFL	Finished floor level
DE	Min. ceiling height	RM	Grid height
ET	Min. distance back	STH	Min. headroom
FD	Min. ceiling clearance		
FFS	Spring tensioning clearance		

Door weights for roof loads:

SPU 67 Thermo	= 450 N/m ²
APU 67 Thermo / ALR 67 Thermo	= 500 N/m ²
ALR 67 Thermo Glazing	= 600 N/m ²

Observe min. sideroom, see page 62.

Door operation:

- Manually operated: rope or chain hoist (recommended for manual operation!)
- Power-driven: WA 400 / 500 FU only with chain box! ITO or SupraMatic HT only possible without swivel mechanism!

Notices:

- The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account.
- The clearance required for fitting the door must be free of supply lines, heater fans, etc.
- Be sure to observe the permissible size ranges of the door types on pages 9 – 14 and 17 – 25!
- ALR 67 Thermo Glazing and doors with wicket door as well as glazings with S4, U4, A4, B4, M4, E2, G2 must be requested.
- Doors with WA 300 on request!
- To determine the roof slope see page 86.

* Notices:

- Observe clear passage height LDH, see page 36.
- The swivel mechanism is only possible up to 10°.

	DE	LH	STH	FD
LD 1 / LD 2	STH + RM	**	250	DA + 65

B	DA	FFS	FTL
**	**	min. 90° (745)	675

** Dimensions can be found in the product configurator.

ET***		
LD 1 / LD 2	(RM + 990) – (8 × a°)	All versions

*** Simplified calculation

□ All door types available in any version.

■ All door types on request.

■ Door types APU 67 Thermo and ALR 67 Thermo on request.

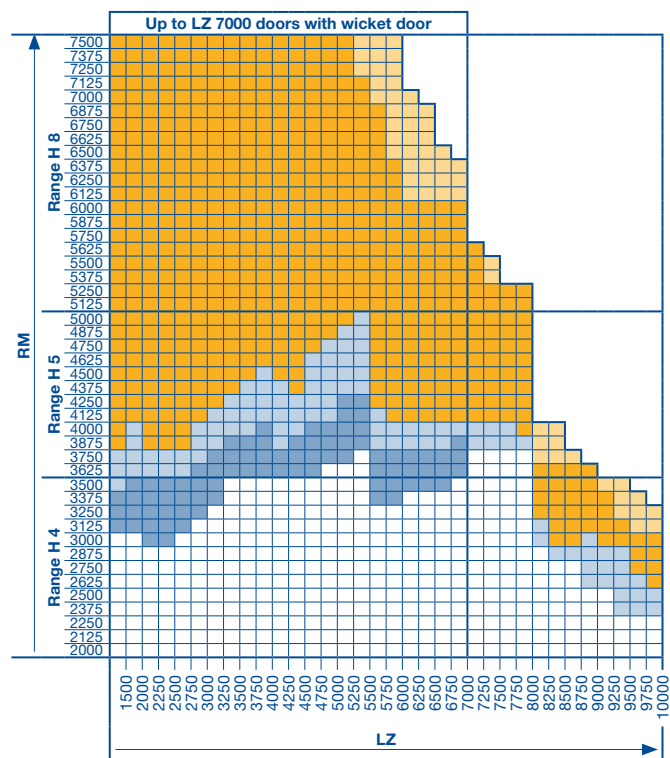
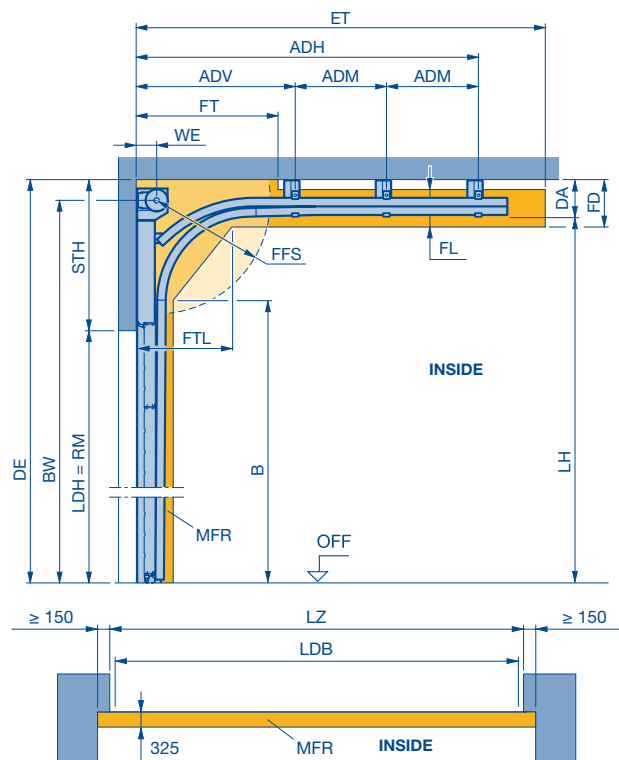
— Track limit

Dimensions in mm

Track application: H

High-lift track application

Detailed technical data can be found in the product configurator.



- All door types available in any version.
- Door types APU 67 Thermo and ALR 67 Thermo on request.
- All door types with wicket door on request.
- Door type SPU 67 Thermo on request (APU 67 Thermo and ALR 67 Thermo not possible).
- All door types on request.

ADH	Distance to rear ceiling anchor	FTL	Clearance of door section in the double radius
ADM	Distance to centre ceiling anchor	LDB	Clear passage width with ThermoFrame (see page 62)
ADV	Distance to front ceiling anchor	LDH	Clear passage height
B	Start of double radius	LH	Track height
BW	Position of shaft support	LZ	Clear frame dimensions (from 1200)
DA	Min. distance to ceiling	MFR	Space for fitting the door
DE	Min. ceiling height	FFL	Finished floor level
ET	Min. distance back	RM	Grid height
FD	Min. ceiling clearance	STH	Min. headroom
FFS	Spring tensioning clearance	WE	Shaft centre from lintel
FL	Track clearance		
FT	Clearance for door operation		

Please note:
Select required track height according to the door height in table.

- Notice:**
- The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account.
 - The clearance required for fitting the door must be free of supply lines, heater fans, etc.
 - If using the spring buffer below the track, the clear height under the track in the area of the spring buffer is reduced by 70 mm.

- Notices:**
- Be sure to observe the permissible size ranges of the door types on pages 9 – 14 and 17 – 25!
 - ALR 67 Thermo Glazing on request.

Observe min. sideroom, see page 62.

	STH	WE	DA	BW
H 4	LH – RM + 280	160	280	LH + 140
H 5	LH – RM + 340 (515*)	180	340 (515*)	LH + 170
H 8	LH – RM + 380 (540*)	205	380 (540*)	LH + 195

* with double spring shaft

B	DE	FD	FFS	FL	FT	FTL
LH – 513	STH + RM	DA + 65	min. 90° (745)	275	2 × WE	675

ET*	
H 4/H 5	2 × RM – LH + 982 + 297 For manual operation with long spring buffer (standard)
	2 × RM – LH + 712 + 297 For shaft operator with long spring buffer LH – RM ≤ 1000
	2 × RM – LH + 712 + 297 For shaft operator WA 300 with long spring buffer LH – RM > 1000
	2 × RM – LH + 712 + 27 For shaft operator WA 400 / WA 500 FU with spring buffer, short LH – RM > 1000
H 8	2 × RM – LH + 712 + 297 All versions

* Simplified calculation

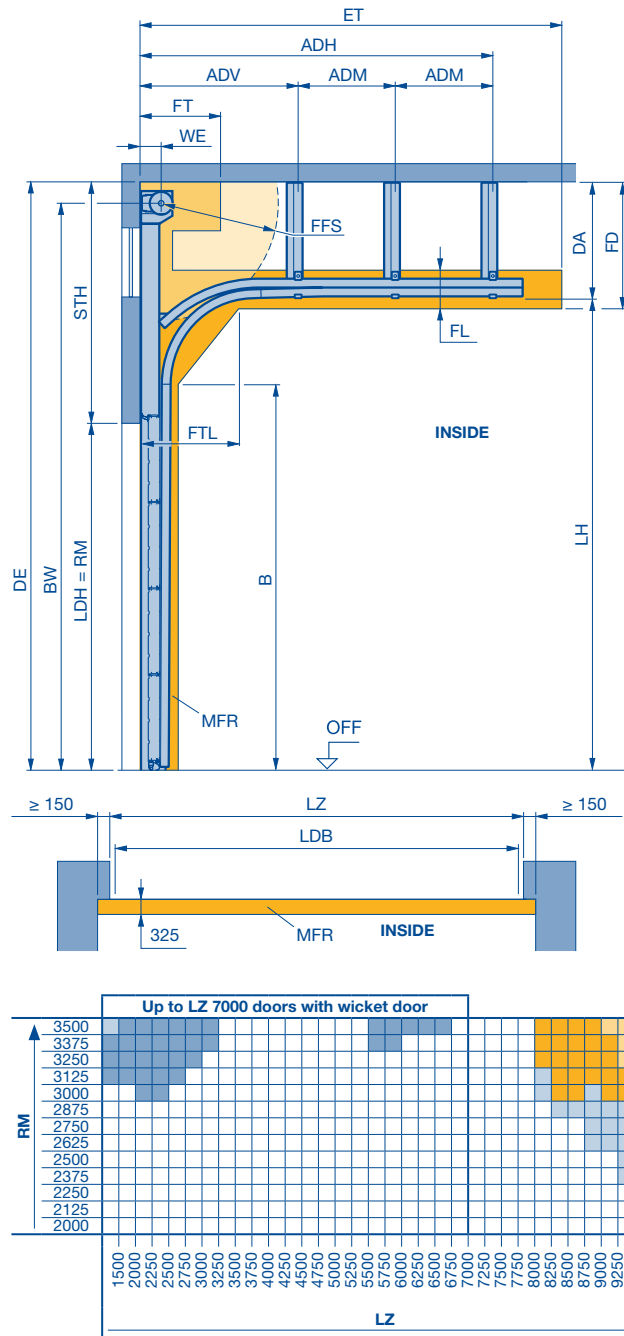
Table: track heights (LH)

Door height RM	Min. LH	Max. LH	Door height RM	Min. LH	Max. LH
5000	5500	8350	7500	8605	10250
4875	5375	8225	7375	8480	10250
4750	5250	8100	7250	8355	10250
4625	5125	7975	7125	8230	10250
4500	5000	7850	7000	8105	10250
4375	4875	7725	6875	7980	10250
4250	4750	7600	6750	7855	10200
4125	4625	7475	6625	7730	10075
4000	4500	7235	6500	7605	9950
3875	4375	6985	6375	7480	9825
3750	4250	6735	6250	7355	9700
3625	4125	6485	6125	7230	9575
3500	4000	6235	6000	7105	9450
3375	3875	5985	5875	6980	9325
3250	3750	5735	5750	6855	9200
3125	3625	5485	5625	6730	9075
3000	3500	5235	5500	6605	8950
2875	3375	4985	5375	6480	8825
2750	3250	4735	5250	6355	8700
2625	3125	4485	5125	6230	8575
2500	3000	4235			
2375	2875	3985			
2250	2750	3735			
2125	2625	3485			
2000	2500	3235			

Track application: HA

High-lift track application with high-mounted torsion spring shaft

Detailed technical data can be found in the product configurator.



ADH	Distance to rear ceiling anchor	FTL	Clearance of door section in the double radius
ADM	Distance to centre ceiling anchor (see page 68)	LDB	Clear passage width with ThermoFrame (see page 62)
ADV	Distance to front ceiling anchor	LDH	Clear passage height
B	Start of double radius	LH	Track height
BW	Position of shaft support	LZ	Clear frame dimensions (from 1200)
DA	Min. distance to ceiling	MFR	Space for fitting the door
DE	Min. ceiling height	FFL	Finished floor level
ET	Min. distance back	RM	Grid height
FD	Ceiling clearance	STH	Min. headroom
FFS	Spring tensioning clearance	WE	Shaft centre from lintel
FL	Track clearance		
FT	Clearance for door operation		

Please note:

Select required track height according to the door height in table.

Notice:

- The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account.
- The clearance required for fitting the door must be free of supply lines, heater fans, etc.
- If using the spring buffer below the track, the clear height under the track in the area of the spring buffer is reduced by 70 mm.

Observe min. sideroom, see page 62.

	STH	DA	DE	B	min. BW
HA 4	(BW + 140) – RM	(BW + 140) – LH	STH + RM	LH – 513	LH + 150

Max. BW	FD	FFS	FL	FT	FTL	WE
8120, DE – 140	DA + 65	min. 90° (745)	275	2 × WE	675	160

Table: track heights (LH)

Door height RM	Min. LH	Max. LH	HA 4
3500	4000	6215	
3375	3875	5965	
3250	3750	5715	
3125	3625	5465	
3000	3500	5215	
2875	3375	4965	
2750	3250	4715	
2625	3125	4465	
2500	3000	4215	
2375	2875	3965	
2250	2750	3715	
2125	2625	3465	
2000	2500	3215	

Notices:

- Be sure to observe the permissible size ranges of the door types on pages 9 – 14 and 17 – 25!
- ALR 67 Thermo Glazing on request.

	All door types available in any version.
	Door types APU 67 Thermo and ALR 67 Thermo on request.
	All door types with wicket door on request.
	Door type SPU 67 Thermo on request (APU 67 Thermo and ALR 67 Thermo not possible).
	All door types on request.

Dimensions in mm

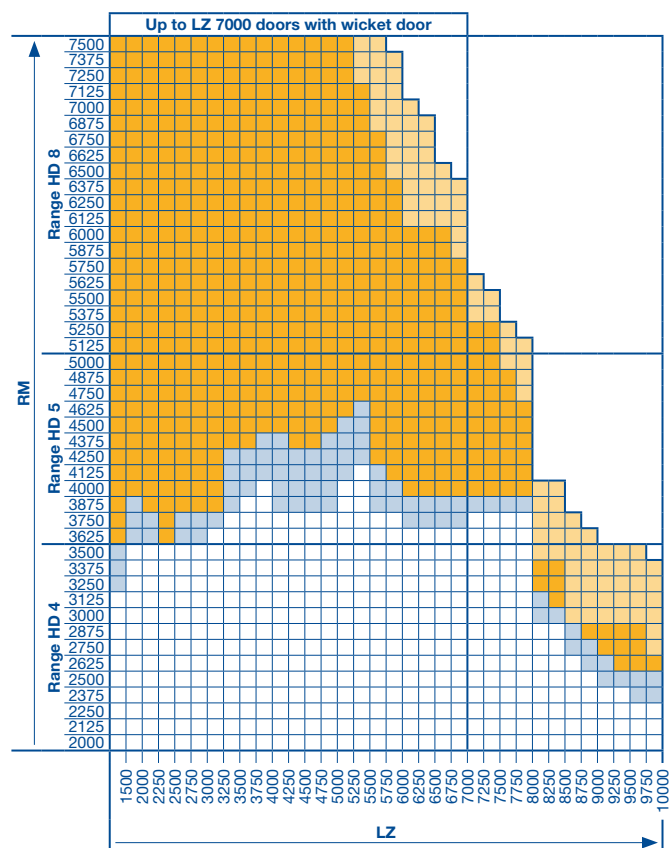
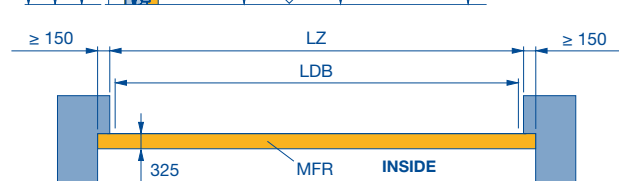
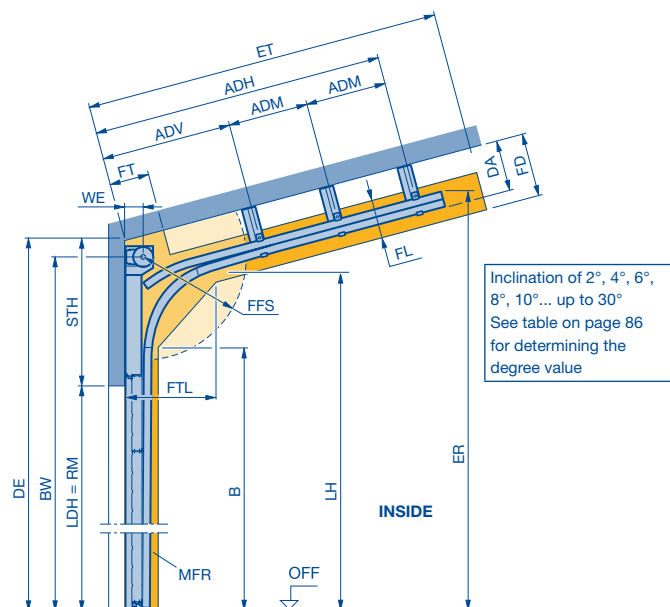
ET*		
HA 4	2 × RM – LH + 982 + 297	For manual operation with long spring buffer (standard)
	2 × RM – LH + 712 + 297	For shaft operator with long spring buffer LH – RM ≤ 1000
	2 × RM – LH + 712 + 297	For shaft operator WA 300 with long spring buffer LH – RM > 1000
	2 × RM – LH + 712 + 27	For shaft operator WA 400 / WA 500 FU with spring buffer, short LH – RM > 1000

* Simplified calculation

Track application: HD

High-lift track application with inclination up to max. 30°

Detailed technical data can be found in the product configurator.



a°	Inclination	FT	Clearance for door operation
ADH	Distance to rear ceiling anchor	FTL	Clearance of door section in the double radius
ADM	Distance to centre ceiling anchor on request	LDB	Clear passage width with ThermoFrame (see page 62)
ADV	Distance to front ceiling anchor	LDH	Clear passage height
B	Start of double radius	LH	Track height (see table on page 48)
BW	Position of shaft support	LZ	Clear frame dimensions (from 1200)
DA	Distance to ceiling on request	MFR	Space for fitting the door
DE	Min. ceiling height	FFL	Finished floor level
ER	Top edge corner point	RM	Grid height
ET	Track height (depth and height)	STH	Min. headroom
FD	Min. distance back	WE	Shaft centre from lintel
FFS	Ceiling clearance		
FL	Spring tensioning clearance		
	Track clearance		

Please note:

Select required track height according to the door height in the table on page 48.

Notices:

- The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account.
- The clearance required for fitting the door must be free of supply lines, heater fans, etc.
- If using the spring buffer below the track, the clear height under the track in the area of the spring buffer is reduced by 70 mm.
- Be sure to observe the permissible size ranges of the door types on pages 9 – 14 and 17 – 25!
- ALR 67 Thermo Glazing on request.
- To determine the roof slope see page 86.
- Inclination > 10° to 30° on request.

Observe min. sideroom, see page 62.

	STH	BW	WE	DA	B
HD 4	780	LH + 140	160	**	LH – 513
HD 5	840	LH + 170	180		
HD 8	880	LH + 195	205		

FT	FL	FTL	FFS	FD	ET	ER
2 x WE	275	675	min. 90° (745)	DA + 65	**	**

** Dimensions can be found in the product configurator.

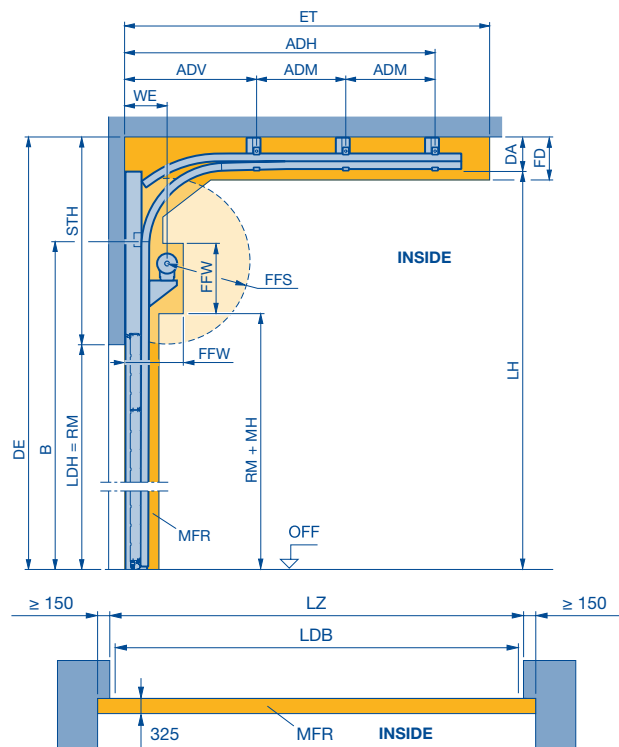
- All door types available in any version.
- Door types APU 67 Thermo and ALR 67 Thermo on request.
- Door type SPU 67 Thermo on request (APU 67 Thermo and ALR 67 Thermo not possible).
- All door types on request.

Dimensions in mm

Track application: HU

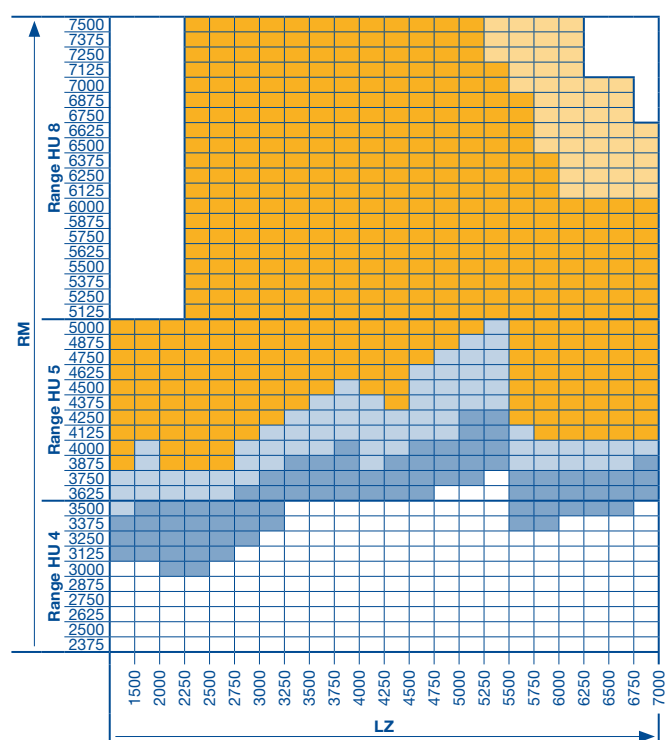
High-lift track application with low-mounted torsion spring shaft

Detailed technical data can be found in the product configurator.



ET*		
HU 4 / HU 5	$2 \times RM - LH + 982 + 297$	For manual operation with long spring buffer (standard)
	$2 \times RM - LH + 712 + 297$	For shaft operator WA 300 with long spring buffer
	$2 \times RM - LH + 712 + 27$	For shaft operator WA 400 / WA 500 FU with short spring buffer
HU 8	$2 \times RM - LH + 712 + 297$	All versions

* Simplified calculation.



ADH	Distance to rear ceiling anchor	LDH	Clear passage height
ADM	Distance to centre ceiling anchor	LH	Track height
ADV	Distance to front ceiling anchor	LZ	Clear frame dimensions (from 1200)
B	Start of double radius	MFR	Space for fitting the door
DA	Min. distance to ceiling	MH	Fitting height
DE	Min. ceiling height	FFL	Finished floor level
ET	Min. distance back	RM	Grid height
FD	Min. ceiling clearance	STH	Min. headroom
FFS	Spring tensioning clearance	WE	Shaft centre from lintel
FFW	Spring shaft clearance		
LDB	Clear passage width with ThermoFrame (see page 62)		

Please note:
Select required track height according to the door height in table.

Notice:

- The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account.
- The clearance required for fitting the door must be free of supply lines, heater fans, etc.

Observe min. sideroom, see page 62.

	STH	WE	DA	FFW
HU 4	LH - RM + 215	335	215	500 x 850
HU 5		355		540 x 850
HU 8		395		620 x 850

B	DE	FD	FFS	MH
LH - 513	STH + RM	DA + 65	min. 90° (745)	400

Table: track heights (LH)

Door height RM	Min. LH	Max. LH	Door height RM	Min. LH	Max. LH
5000	6560	8350	HU 5	7500	9060
4875	6435	8225			
4750	6310	8100			
4625	6185	7975			
4500	6060	7850			
4375	5935	7725			
4250	5810	7600			
4125	5685	7475			
4000	5560	7350			
3875	5435	7225			
3750	5310	7100	HU 4	7500	9060
3625	5185	6975			
3500	5060	6850			
3375	4935	6725			
3250	4810	6600			
3125	4685	6475			
3000	4560	6350			
2875	4435	6225			
2750	4310	6100			
2625	4185	5975			
2500	4060	5850	HU 8	7500	9060
2375	3935	5725			

Notices:

- Be sure to observe the permissible size ranges of the door types on pages 9 – 14 and 17 – 25!
- ALR 67 Thermo Glazing on request.

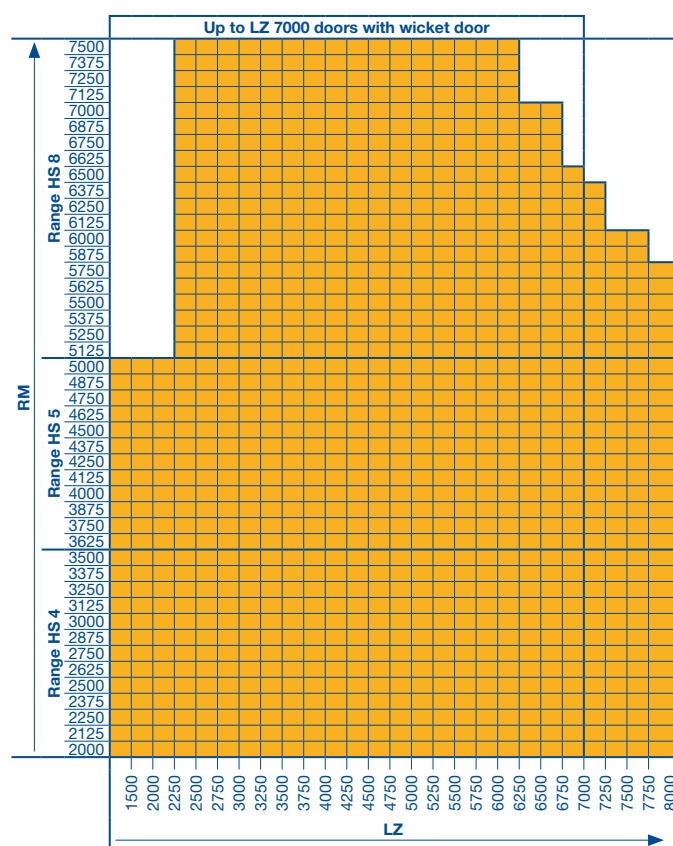
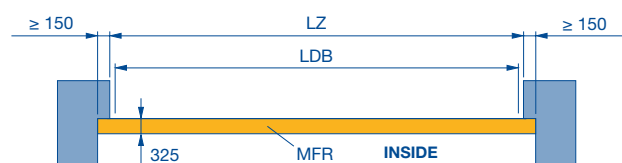
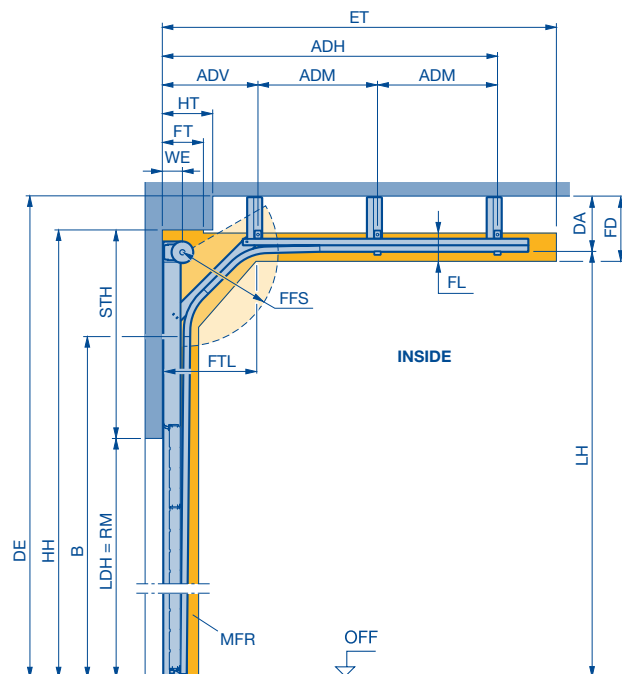
	All door types available in any version.
	Door types APU 67 Thermo and ALR 67 Thermo on request.
	All door types with wicket door on request.
	Door type SPU 67 Thermo on request (APU 67 Thermo and ALR 67 Thermo not possible).
	All door types on request.

Dimensions in mm

Track application: HS

High-lift track application with double radius

Detailed technical data can be found in the product configurator.



ADH	Distance to rear ceiling anchor	FFW	Spring shaft clearance
ADM	Distance to centre ceiling anchor	HH	Obstruction height
ADV	Distance to front ceiling anchor	HT	Obstruction depth
B	Start of double radius, factory specification	LDB	Clear passage width with ThermoFrame (see page 62)
DA	Distance to ceiling on request	LDH	Clear passage height
DE	Min. ceiling height	LH	Track height
ET	Distance back	LZ	Clear frame dimensions (from 1200)
FD	Ceiling clearance	MFR	Space for fitting the door
FFS	Spring tensioning clearance	FFL	Finished floor level
FL	Track clearance	RM	Grid height
FT	Clearance for door operation, on request	STH	Min. headroom
FTL	Clearance of door section in the double radius	WE	Shaft centre from lintel

Please note:

Select required track height according to the door height in the table on page 48.

Notice:

- A technical inspection is required!
- The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account.
- The clearance required for fitting the door must be free of supply lines, heater fans, etc.

Notices:

- Be sure to observe the permissible size ranges of the door types on pages 9–14 and 17–25!
- ALR 67 Thermo Glazing on request.

Observe min. sideroom, see page 62.

	STH	WE	DA	DE	B
HS 4	808	160	**	LH + 203	**
HS 5	835	180			
HS 8	875	205			

BW	FT	FL	FTL	FFS	FD	ET	ER
**	2 × WE	275	**	min. 90° (745)	DA + 65	**	**

** Dimensions can be found in the product configurator.

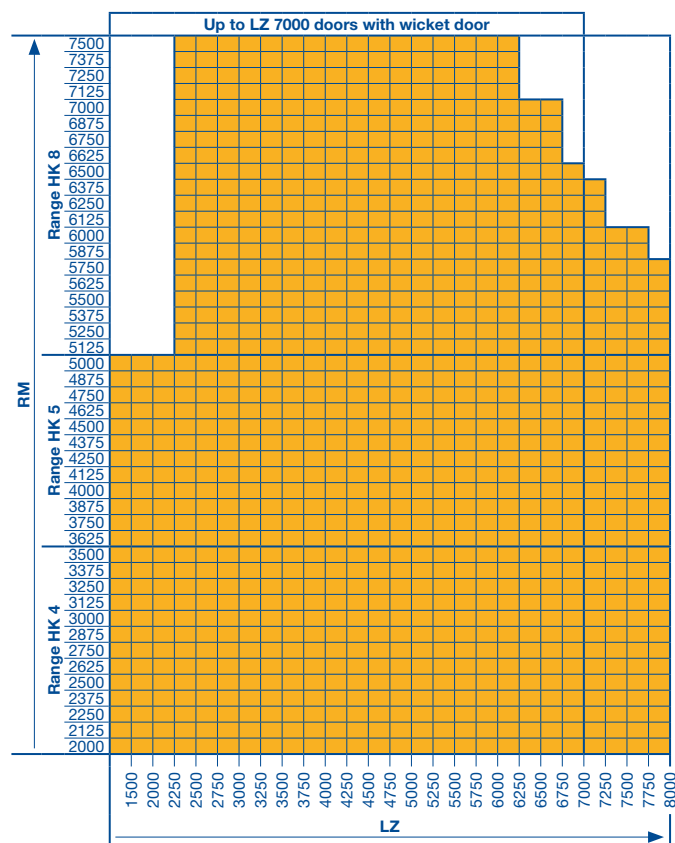
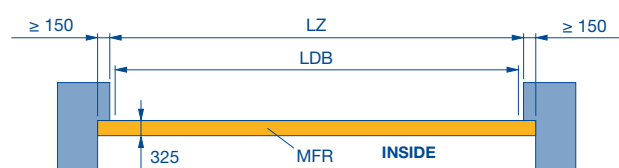
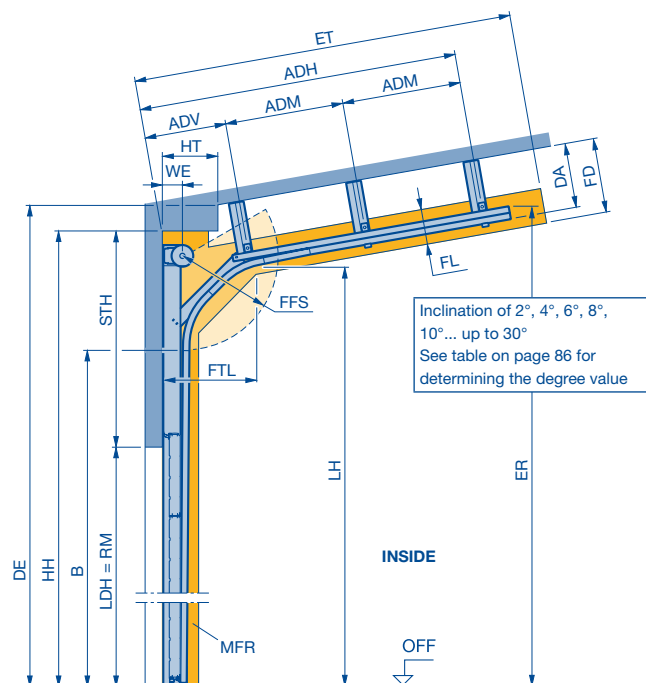
All door types and versions on request.

Dimensions in mm

Track application: HK

High-lift track application with double radius and inclination up to max. 30°

Detailed technical data can be found in the product configurator.



a°	Inclination	FTL	Clearance of door section in the double radius
ADH	Distance to rear ceiling anchor	FFW	Spring shaft clearance
ADM	Distance to centre ceiling anchor	HH	Obstruction height
ADV	Distance to front ceiling anchor	HT	Obstruction depth
B	Start of double radius, factory specification	LDB	Clear passage width with ThermoFrame (see page 62)
DA	Distance to ceiling on request	LDH	Clear passage height
DE	Min. ceiling height	LH	Track height
ER	Top edge corner point	LZ	Clear frame dimensions (from 1200)
FD	Track height (depth and height)	MFR	Space for fitting the door
FFS	Ceiling clearance	FFL	Finished floor level
FL	Spring tensioning clearance	RM	Grid height
FT	Track clearance	STH	Min. headroom
	Clearance for door operation, on request	WE	Shaft centre from lintel

Please note:

Select required track height according to the door height in the table on page 48.

Notice:

- A technical inspection is required!
- The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account.
- The clearance required for fitting the door must be free of supply lines, heater fans, etc.

Notices:

- Be sure to observe the permissible size ranges of the door types on pages 9 – 14 and 17 – 25!
- ALR 67 Thermo Glazing on request.
- To determine the roof slope see page 86.
- Roof slope > 10° to 30° on request.

Observe min. sideroom, see page 62.

	STH	WE	DA	DE	B
HK 4	808	160	**	LH + 203	**
HK 5	835	180			
HK 8	875	205			

BW	FT	FL	FTL	FFS	FD	ET	ER
**	2 × WE	275	**	min. 90° (745)	DA + 65	**	**

** Dimensions can be found in the product configurator.

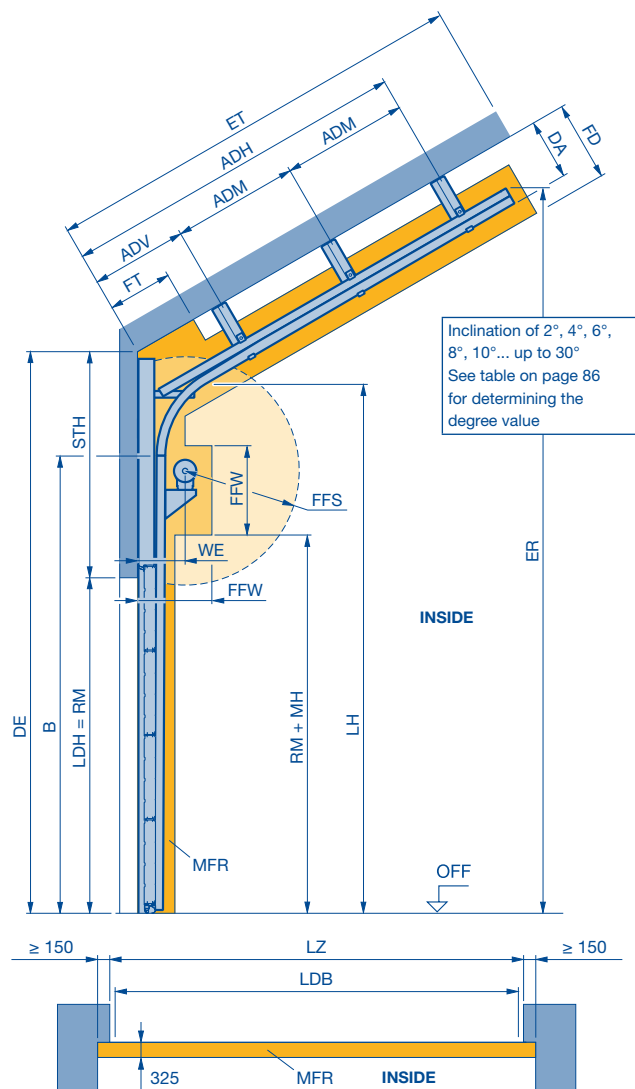
All door types and versions on request.

Dimensions in mm

Track application: RD

High-lift track application with low-mounted torsion spring shaft and inclination up to max. 30°

Detailed technical data can be found in the product configurator.



a°	Inclination	FFW	Spring shaft clearance
ADH	Distance to rear ceiling anchor	LDB	Clear passage width with ThermoFrame (see page 62)
ADM	Distance to centre ceiling anchor	LDH	Clear passage height
ADV	Distance to front ceiling anchor	LH	Track height
B	Start of double radius	LZ	Clear frame dimensions (from 1200)
DA	Distance to ceiling on request	MFR	Space for fitting the door
DE	Min. ceiling height	MH	Fitting height
ER	Top edge corner point	FFL	Finished floor level
	Track height (depth and height)	RM	Grid height
ET	Min. distance back	STH	Min. headroom
FD	Ceiling clearance	WE	Shaft centre from lintel
FFS	Spring tensioning clearance		
FT	Clearance for door operation, on request		

Please note:

Select required track height according to the door height in the table on page 51.

Notice:

- The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account.
- The clearance required for fitting the door must be free of supply lines, heater fans, etc.

Notices:

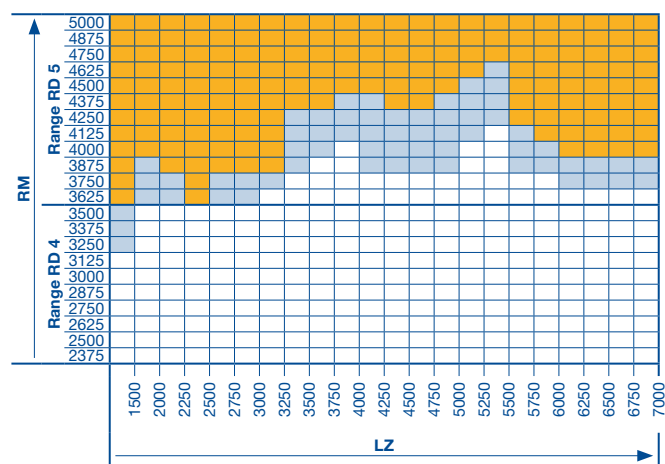
- Be sure to observe the permissible size ranges of the door types on pages 9–14 and 17–25!
- ALR 67 Thermo Glazing and doors with wicket door on request.
- To determine the roof slope see page 86.
- Inclination > 10° to 30° on request.

Observe min. sideroom, see page 62.

	WE	FFW	STH	DA	DE
RD 4	335	500 x 850	1775	**	STH + RM
RD 5	355	540 x 850			

B	FT	FFS	FD	ET	ER	MH
LH - 513	2 x WE	min. 90° (745)	DA + 65	**	**	400

** Dimensions can be found in the product configurator.



All door types available in any version.

Door types APU 67 Thermo and ALR 67 Thermo on request.

All door types on request.

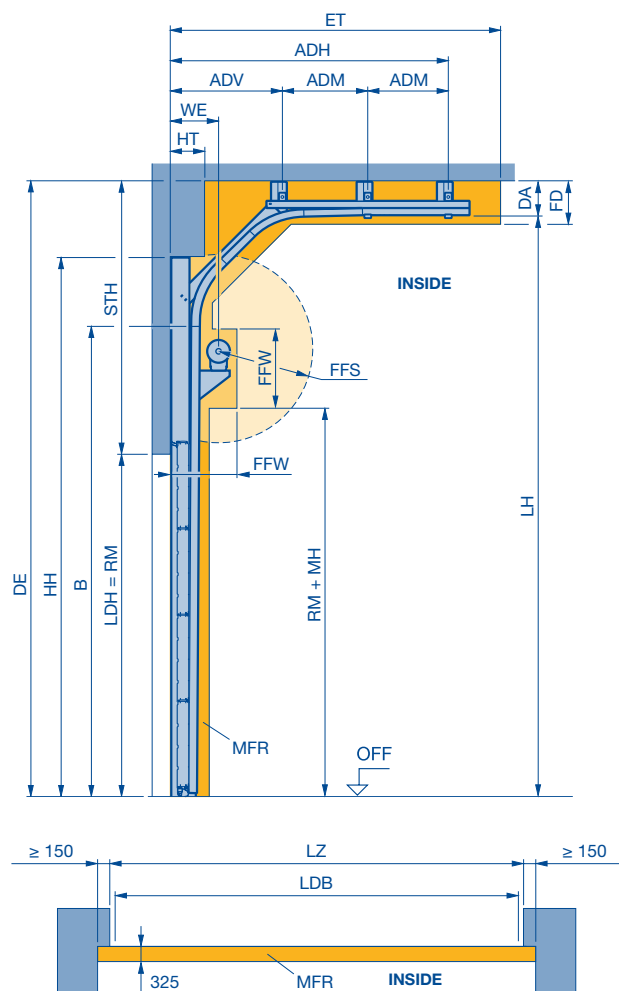
All door types and versions on request.

Dimensions in mm

Track application: RS

High-lift track application with double radius and low-mounted torsion spring shaft

Detailed technical data can be found in the product configurator.



ADH	Distance to rear ceiling anchor	HT	Obstruction depth
ADM	Distance to centre ceiling anchor	LDB	Clear passage width with ThermoFrame (see page 62)
ADV	Distance to front ceiling anchor	LDH	Clear passage height
B	Start of double radius, factory specification	LH	Track height
DA	Distance to ceiling on request	LZ	Clear frame dimensions (from 1200)
DE	Min. ceiling height	MFR	Space for fitting the door
ET	Distance back	MH	Fitting height
FD	Ceiling clearance	FFL	Finished floor level
FFS	Spring tensioning clearance	RM	Grid height
FFW	Spring shaft clearance	STH	Min. headroom
HH	Obstruction height	WE	Shaft centre from lintel

Please note:

Select required track height according to the door height in the table on page 51.

Notice:

- A technical inspection is required!
- The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account.
- The clearance required for fitting the door must be free of supply lines, heater fans, etc.

Notices:

- Be sure to observe the permissible size ranges of the door types on pages 9 – 14 and 17 – 25!
- ALR 67 Thermo Glazing on request.

Observe min. sideroom, see page 62.

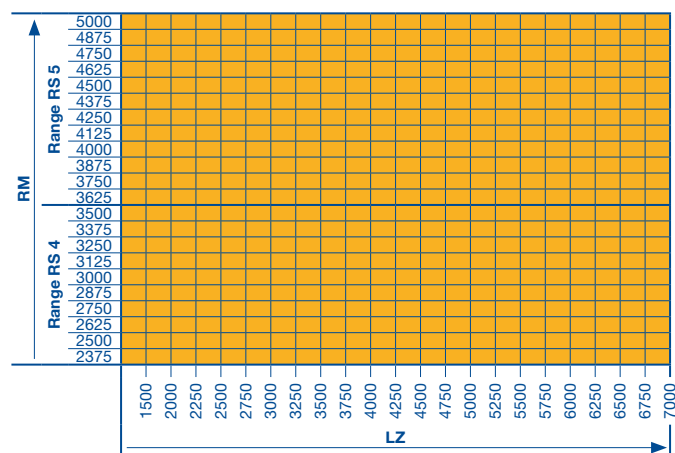
	WE	FFW	STH	DA	DE
RS 4	335	500 x 850	1477	203	LH + 183
RS 5	355	540 x 850			

B	FT	FFS	FD	ET	ER	MH
**	2 x WE	min. 90° (745)	DA + 65	**	**	400

** Dimensions can be found in the product configurator.

All door types and versions on request.

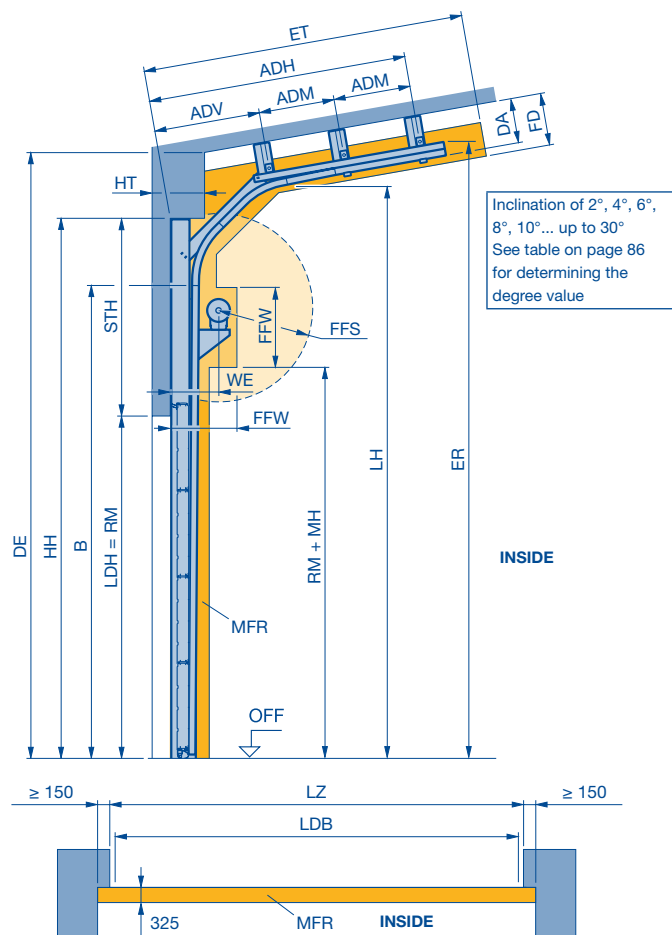
Dimensions in mm



Track application: RK

High-lift track application with double radius and inclination up to max. 30°

Detailed technical data can be found in the product configurator.



Inclination of 2°, 4°, 6°, 8°, 10°... up to 30°
See table on page 86 for determining the degree value

a°	Inclination	FFW	Spring shaft clearance
ADH	Distance to rear ceiling anchor	HH	Obstruction height
ADM	Distance to centre ceiling anchor	HT	Obstruction depth
ADV	Distance to front ceiling anchor	LDB	Clear passage width with ThermoFrame (see page 62)
B	Start of double radius, factory specification	LDH	Clear passage height
DA	Distance to ceiling on request	LH	Track height
DE	Min. ceiling height	LZ	Clear frame dimensions (from 1200)
ER	Top edge corner point	MFR	Space for fitting the door
FD	Track height (depth and height)	MH	Fitting height
FFS	Ceiling clearance	FFL	Finished floor level
FFW	Spring tensioning clearance	RM	Grid height
FT	Clearance for door operation, on request	STH	Min. headroom
		WE	Shaft centre from lintel

Please note:

Select required track height according to the door height in the table on page 51.

Notice:

- A technical inspection is required!
- The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account.
- The clearance required for fitting the door must be free of supply lines, heater fans, etc.

Notices:

- Be sure to observe the permissible size ranges of the door types on pages 9 – 14 and 17 – 25!
- ALR 67 Thermo Glazing on request.
- To determine the roof slope see page 86.
- Inclination > 10° to 30° on request.

Observe min. sideroom, see page 62.

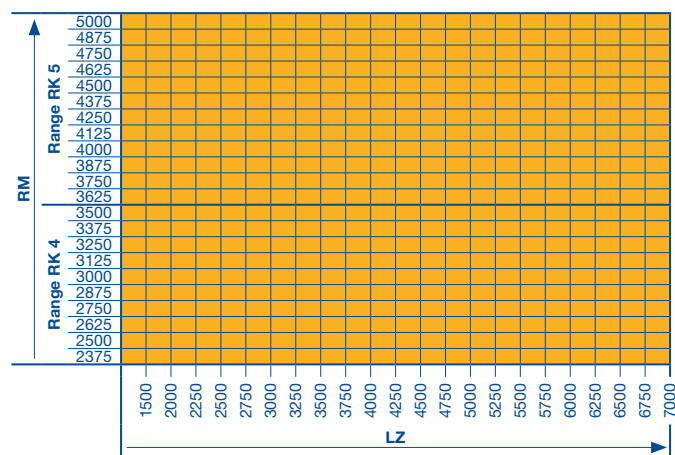
	WE	FFW	STH	DA	DE
RK 4	335	500 x 850	1477	203	LH + 183
RK 5	355	540 x 850			

B	FT	FFS	FD	ET	ER	MH
**	2 x WE	min. 90° (745)	DA + 65	**	**	400

** Dimensions can be found in the product configurator.

All door types and versions on request.

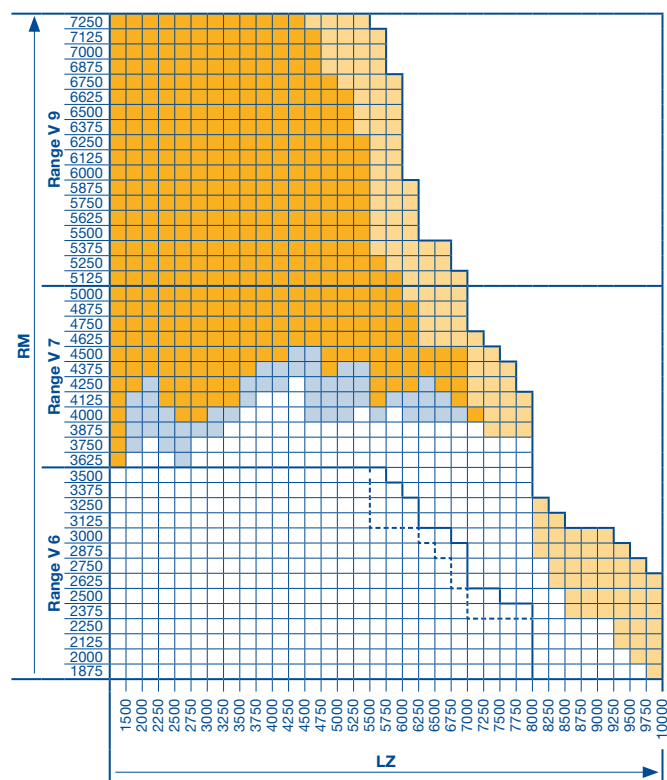
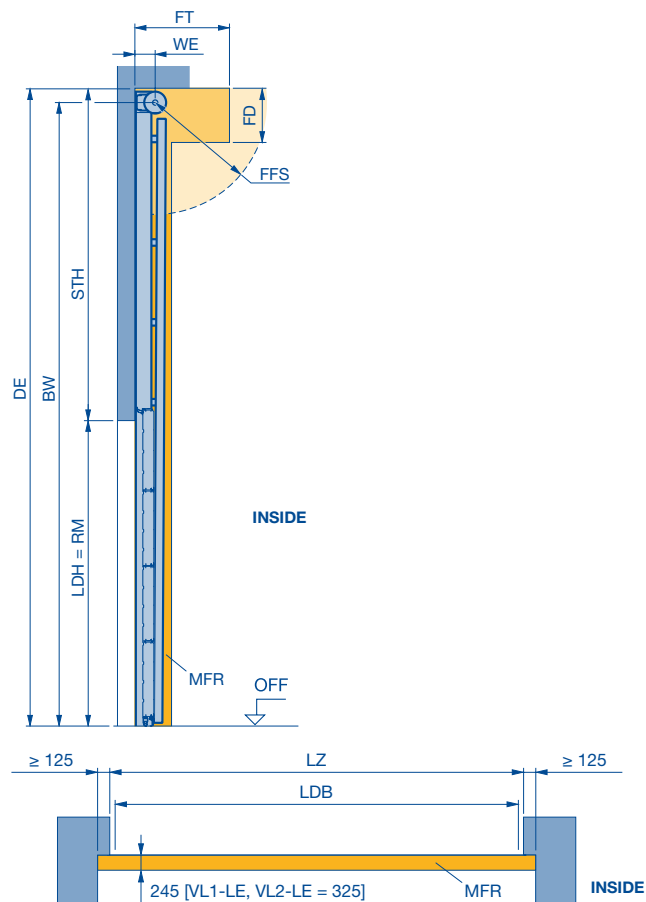
Dimensions in mm



Track application: V

Vertical track application

Detailed technical data can be found in the product configurator.



BW	Position of shaft support	LDH	Clear passage height
DE	Min. ceiling height	LZ	Clear frame dimensions (from 1200)
FD	Min. ceiling clearance	MFR	Space for fitting the door
FFS	Spring tensioning clearance	FFL	Finished floor level
FT	Clearance for door operation	RM	Grid height
LDB	Clear passage width with ThermoFrame (see page 62)	WE	Shaft centre from lintel
		STH	Min. headroom

Notices:

- The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account.
- The clearance required for fitting the door must be free of supply lines, heater fans, etc.
- Be sure to observe the permissible size ranges of the door types on pages 9 – 14 and 17 – 25!
- ALR 67 Thermo Glazing and doors with wicket door on request.

Observe min. sideroom, see page 62.

	STH	WE	DE	BW
V 6	RM + 560	160	2 × RM + 560	2 × RM + 420
V 7	RM + 600 (790*)	180	2 × RM + 600 (790*)	2 × RM + 445
V 9	RM + 695 (840*)	205	2 × RM + 695 (840*)	2 × RM + 495

* with double spring shaft

FD	FFS	FT
500	min. 90° (745)	2 × WE

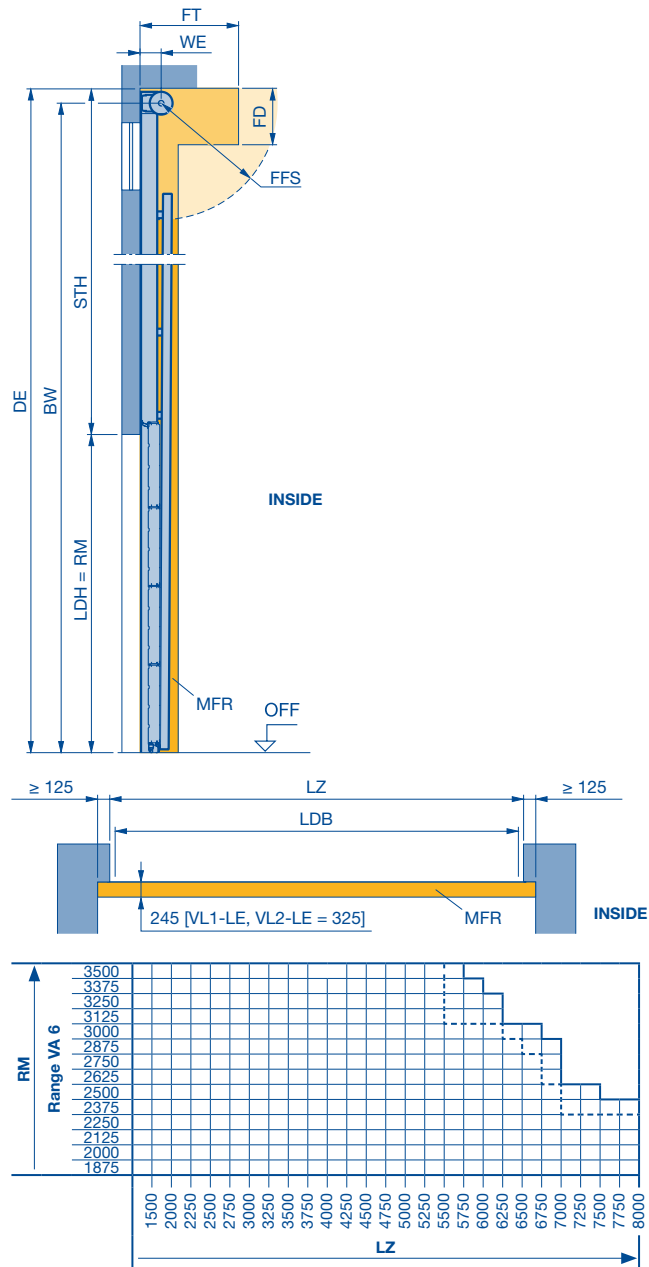
- Track limit
- Track limit for APU 67 Thermo and ALR 67 Thermo.
- All door types available in any version.
- Door types APU 67 Thermo and ALR 67 Thermo on request.
- Door type SPU 67 Thermo on request (APU 67 Thermo and ALR 67 Thermo not possible).
- All door types on request.

Dimensions in mm

Track application: VA

Vertical track application with high-mounted torsion spring shaft

Detailed technical data can be found in the product configurator.



BW	Position of shaft support	LDH	Clear passage height
DE	Min. ceiling height	LZ	Clear frame dimensions (from 1200)
FD	Ceiling clearance	MFR	Space for fitting the door
FFS	Spring tensioning clearance	FFL	Finished floor level
FT	Clearance for door operation	RM	Grid height
LDB	Clear passage width with ThermoFrame (see page 62)	STH	Min. headroom
		WE	Shaft centre from lintel

Notices:

- The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account.
- The clearance required for fitting the door must be free of supply lines, heater fans, etc.
- Be sure to observe the permissible size ranges of the door types on pages 9 – 14 and 17 – 25!

Observe min. sideroom, see page 62.

	STH	DE	BW	WE	FD	FFS	FT
VA 6	RM + 570	BW + 140	min. $2 \times RM + 430$ max. DE - 140 (7895)	160	500	min. 90° (745)	$2 \times WE$

Notice:

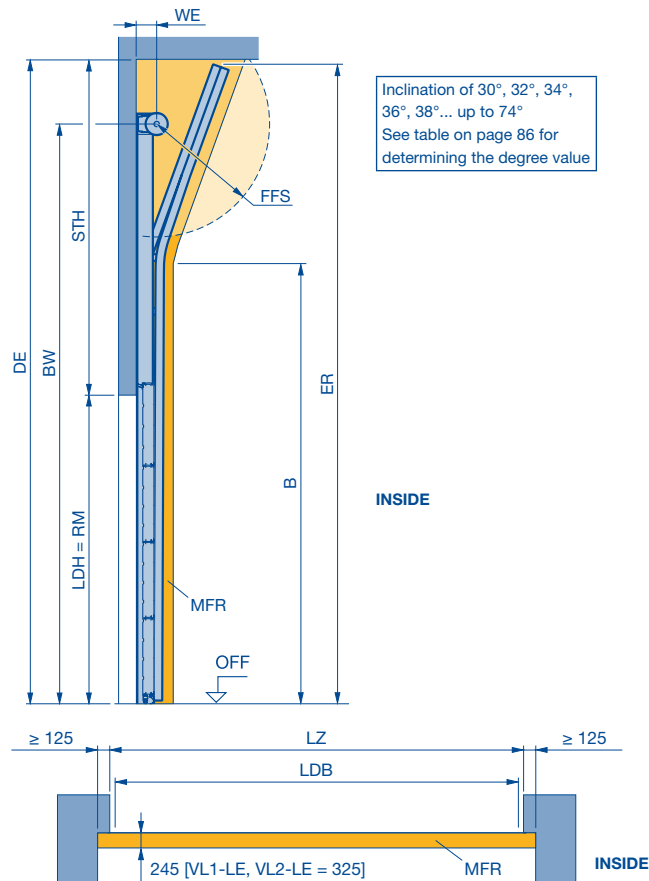
ALR 67 Thermo Glazing and doors with wicket door on request.

- Track limit
 - Track limit for APU 67 Thermo and ALR 67 Thermo.
 - All door types available in any version.
- Dimensions in mm

Track application: VS

Vertical track application with inclination

Detailed technical data can be found in the product configurator.



B	Start of double radius	LDH	Clear passage height
BW	Position of shaft support	LZ	Clear frame dimensions (from 1200)
DE	Min. ceiling height	MFR	Space for fitting the door
ER	Top edge corner point	FFL	Finished floor level
	Track height (depth and height)	RM	Grid height
FFS	Spring tensioning clearance	STH	Min. headroom
LDB	Clear passage width with ThermoFrame (see page 62)	WE	Shaft centre from lintel

Notices:

- The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account.
- A technical inspection is required!
- The clearance required for fitting the door must be free of supply lines, heater fans, etc.
- Be sure to observe the permissible size ranges of the door types on pages 9 – 14 and 17 – 25!

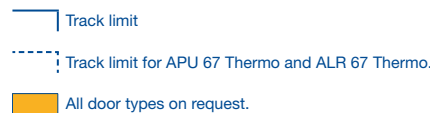
Observe min. sideroom, see page 62.

	STH	DE	B	BW	WE	FFS	ER
VS 6	on request	on request	min. RM + 20	**	160	min. 90°	on request
VS 7			max. 2 × RM – 1075		180	(745)	
VS 9					205		

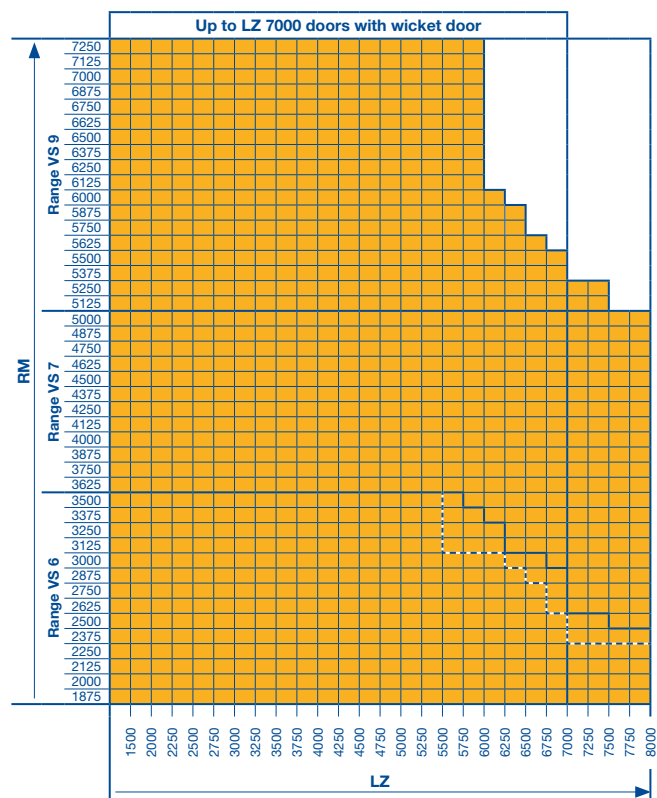
** Dimensions can be found in the product configurator.

Notice:

ALR 67 Thermo Glazing and doors with wicket door on request.



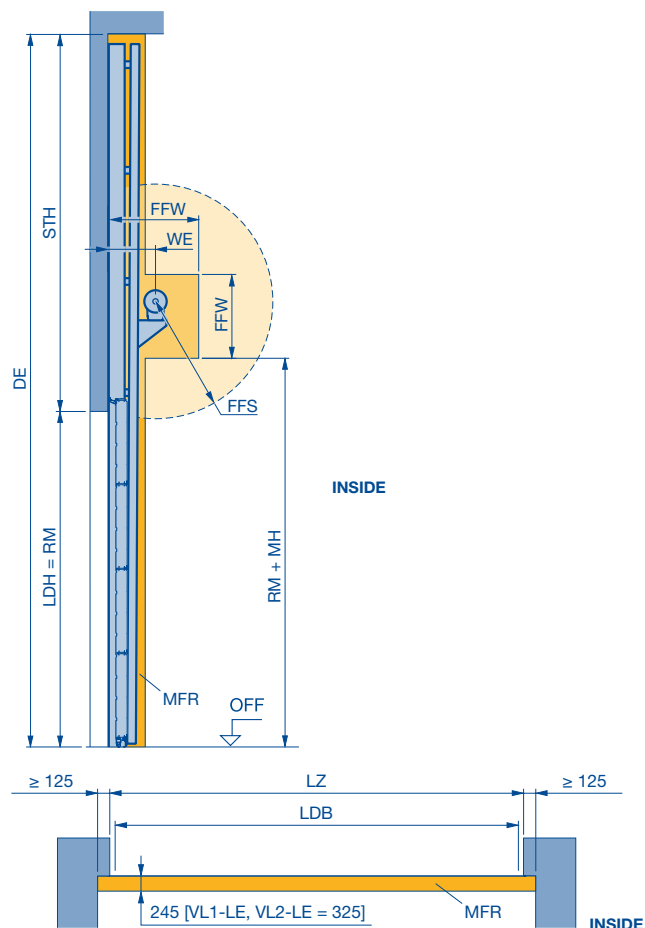
Dimensions in mm



Track application: VU

Vertical track application with low-mounted torsion spring shaft

Detailed technical data can be found in the product configurator.



DE	Min. ceiling height	MFR	Space for fitting the door
FFW	Spring shaft clearance	MH	Fitting height
FFS	Spring tensioning clearance	FFL	Finished floor level
LDB	Clear passage width with ThermoFrame (see page 62)	RM	Grid height
LDH	Clear passage height	STH	Min. headroom
LZ	Clear frame dimensions (from 1200)	WE	Shaft centre from lintel

Notices:

- The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account.
- The clearance required for fitting the door must be free of supply lines, heater fans, etc.
- Be sure to observe the permissible size ranges of the door types on pages 9 – 14 and 17 – 25!

Observe min. sideroom, see page 62.

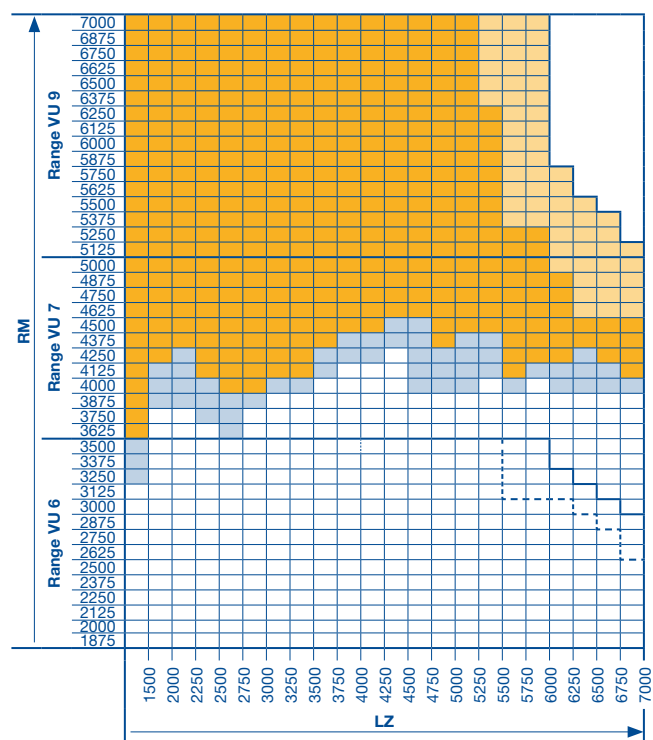
	STH	DE	WE	FFS	MH	FFW
VU 6			335	min. 90° (745)	400	500 x 850
VU 7	RM + 330	STH + RM	355			540 x 850
VU 9			395			620 x 850

Notice:

ALR 67 Thermo Glazing and doors with wicket door on request.

- Track limit
- Track limit for APU 67 Thermo and ALR 67 Thermo.
- All door types available in any version.
- Door types APU 67 Thermo and ALR 67 Thermo on request.
- Door type SPU 67 Thermo on request (APU 67 Thermo and ALR 67 Thermo not possible).
- All door types on request.

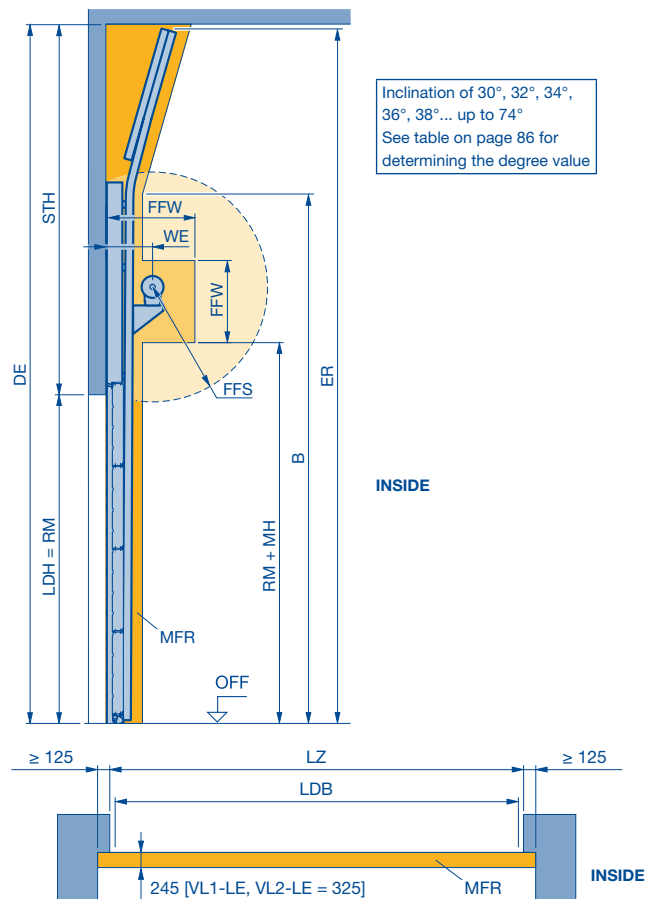
Dimensions in mm



Track application: WS

Vertical track application with inclination and low-mounted torsion spring shaft

Detailed technical data can be found in the product configurator.



B	Start of double radius	LDH	Clear passage height
DE	Min. ceiling height	LZ	Clear frame dimensions (from 1200)
ER	Top edge corner point	MFR	Space for fitting the door
	Track height (depth and height)	MH	Fitting height
FD	Ceiling clearance	FFL	Finished floor level
FFW	Spring shaft clearance	RM	Grid height
FFS	Spring tensioning clearance	STH	Min. headroom
LDB	Clear passage width with ThermoFrame (see page 62)	WE	Shaft centre from lintel

Notices:

- The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account.
- A technical inspection is required!
- The clearance required for fitting the door must be free of supply lines, heater fans, etc.
- Be sure to observe the permissible size ranges of the door types on pages 9 – 14 and 17 – 25!

Observe min. sideroom, see page 62.

	WE	FFW	STH	B	DE	FFS	MH	ER
WS 6	335	500 × 850	on request	min. RM + 1200 max. 2 × RM – 1000	on request	min. 90° (745)	400	on request
WS 7	355	540 × 850						
WS 9	395	620 × 850						

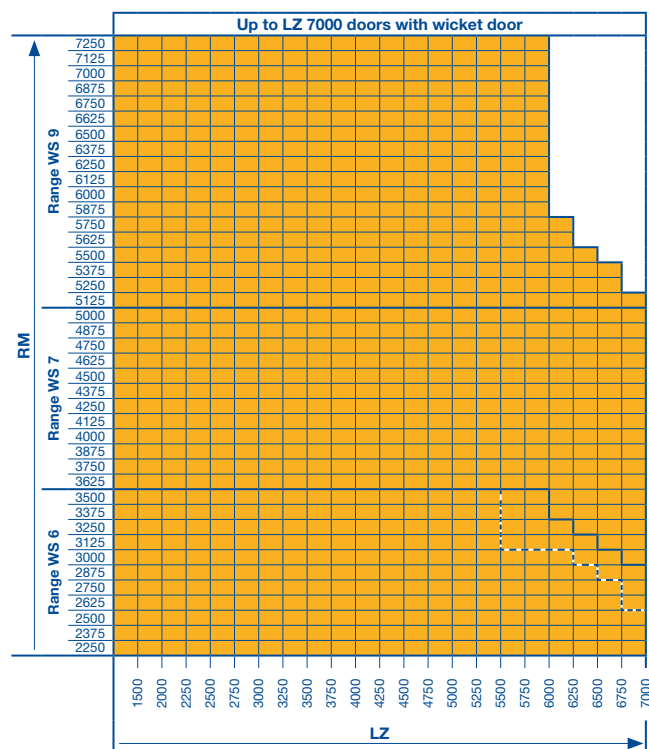
** Dimensions can be found in the product configurator.

All door types and versions on request.

Track limit

Track limit for APU 67 Thermo and ALR 67 Thermo.

Dimensions in mm



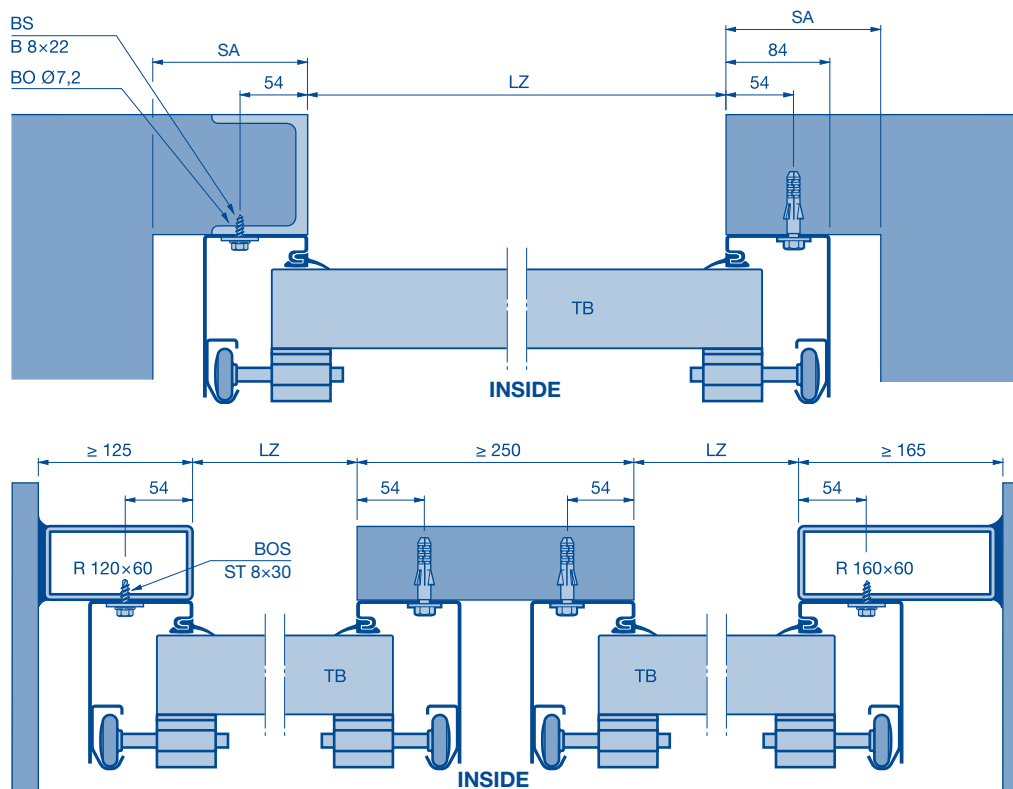
Sideroom

Required sideroom

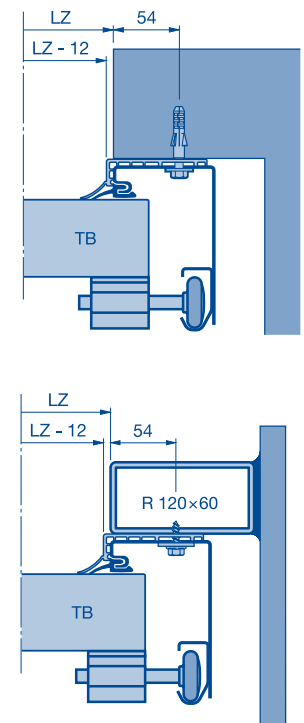
Track application / designation	SA	Track application / designation		SA
N*, NA, ND*, NH*, NS, NK, GD, V, VA, VU, GK, GS, VS, WS	125	Hand pulley	N, NA, ND, NH, NS, GD, NK, GS, GK	140
H, HA, HD, HU, RD, HK, HS, RS, RK	150		H, HA, HD, HU, RD, HK, HS, RS, RK	150
L, LD	125		V, VA, VU, VS,WS	125
With use of the C-rail (page 68 – 69)	170	Chain hoist		Page 66
		Shaft operators		Page 70 – 79

* The sideroom changes due to the fitting area (see pages 52 – 60).

Sideroom

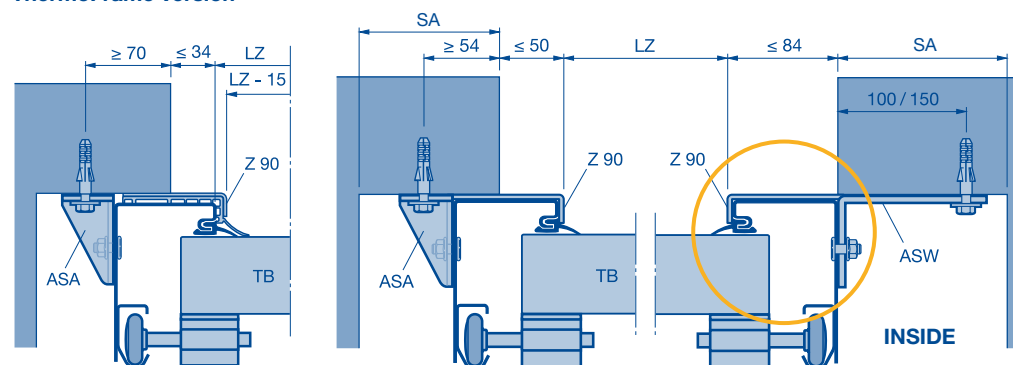


ThermoFrame version

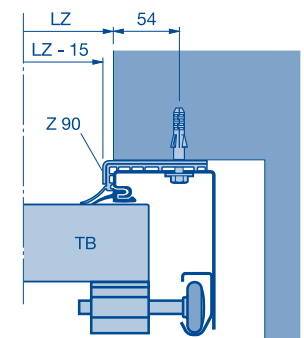


Sideroom with frame covering

ThermoFrame version



ThermoFrame version



Notice:

Clear frame in the opening is not possible with RC 2.

LZ Clear frame dimension
BO Hole
BOS Drilling screw

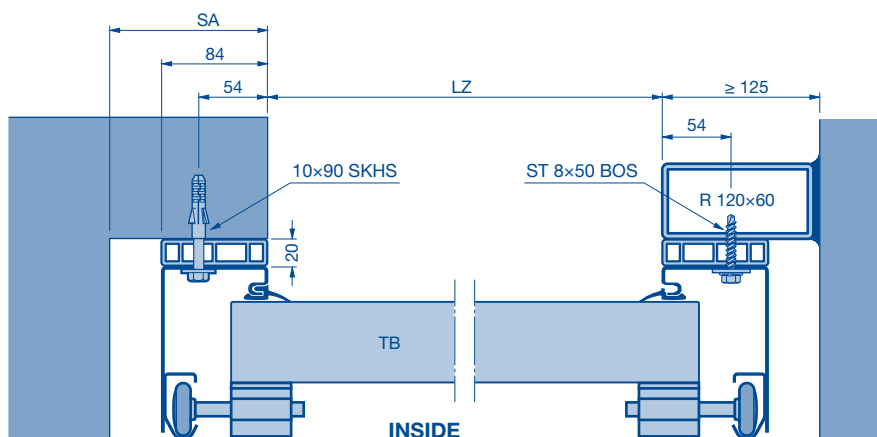
BS Self-tapping screw
TB Door leaf
R Box section

SA Sideroom
ASA Screw-on anchor 70 x 40
ASW Screw-on bracket 70 x 120/170

Spacer profile

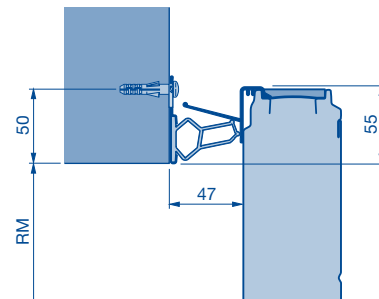
Clearance to the lintel

Sideroom

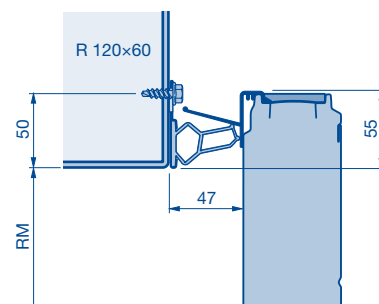


Lintel counter seal

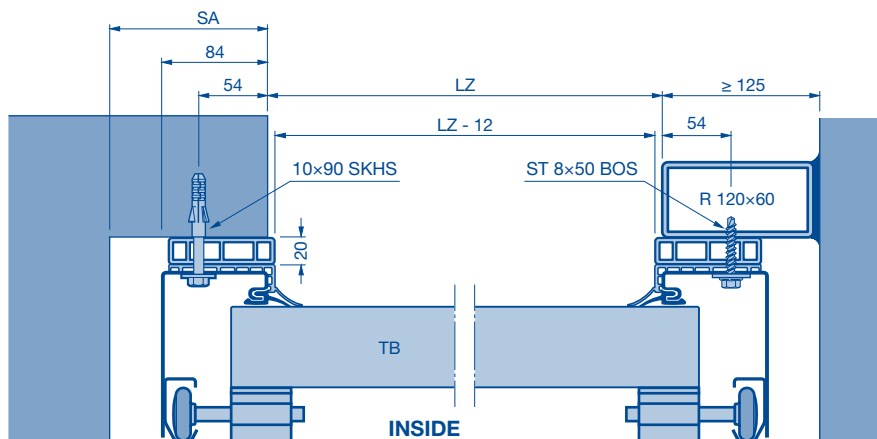
Fitting to brickwork



Box section fitting (120, 160, 200)

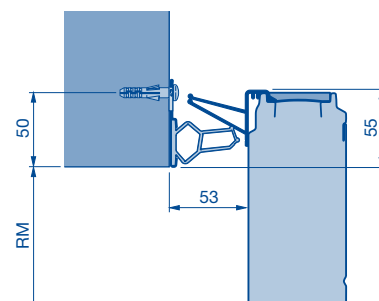


Thermoframe sideroom

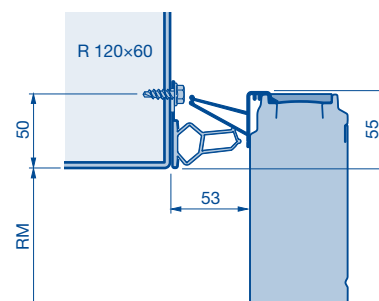


Thermoframe lintel counter seal

Fitting to brickwork



Box section fitting (120, 160, 200)



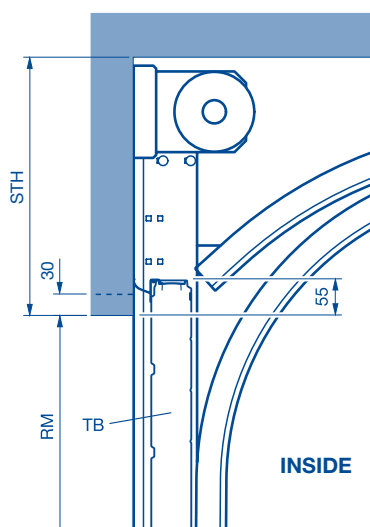
Notice:

Door versions with facade door, panels or frame covering as well as frame fitting with screw-on bracket are not possible.

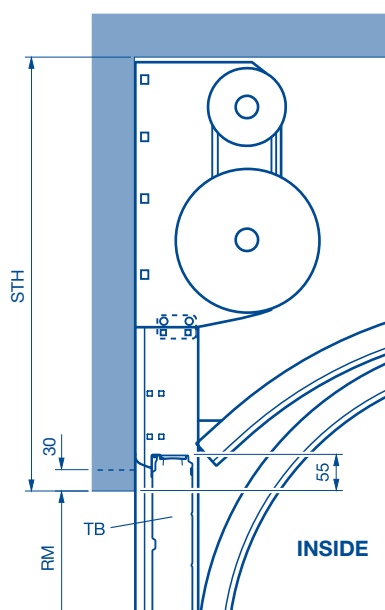
BOS	Drilling screw	SA	Sideroom
LZ	Clear frame dimension	SKHS	Hexagon wood screw
R	Box section	TB	Door leaf
RM	Standard size		

Lintel fittings

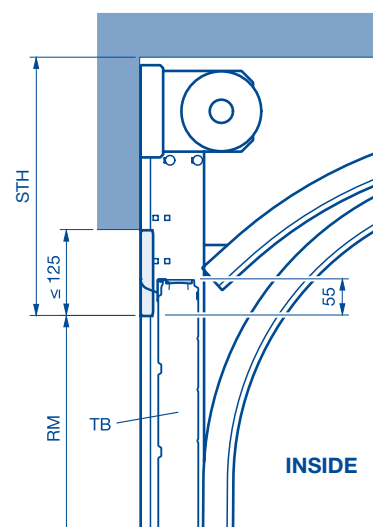
Normal lintel fitting
Insufficient headroom up to 30 mm high



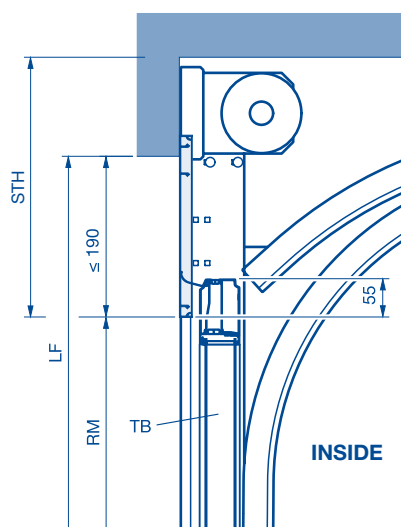
Normal lintel fitting
Double spring shaft



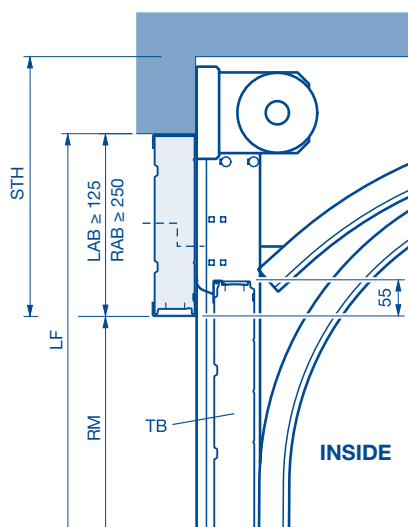
Single-skinned steel fascia for SPU 67 Thermo to make up for insufficient headroom up to 125 mm height and LZ ≤ 8000 mm
(only for track application N)



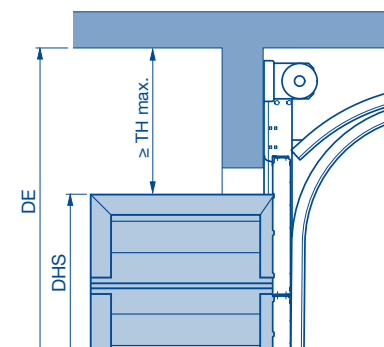
Smooth panel, anodised, for APU 67 Thermo, ALR 67 Thermo and ALR 67 Thermo Glazing to make up for insufficient headroom from 31 to 190 mm and LZ ≤ 7000 mm
(only for track application N)



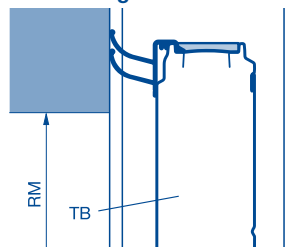
PU fascia panel to make up for insufficient headroom from 125 mm
Aluminium fascia panel to make up for insufficient headroom (see table)



Fitting clearance for multiple-point locking



Lintel fitting with ThermoFrame



Aluminium fascia panels	
Height	Infill type
≥ 250	FU, XU, S3, S4, U3, U4, A3, A4, B3, B4, M3, M4

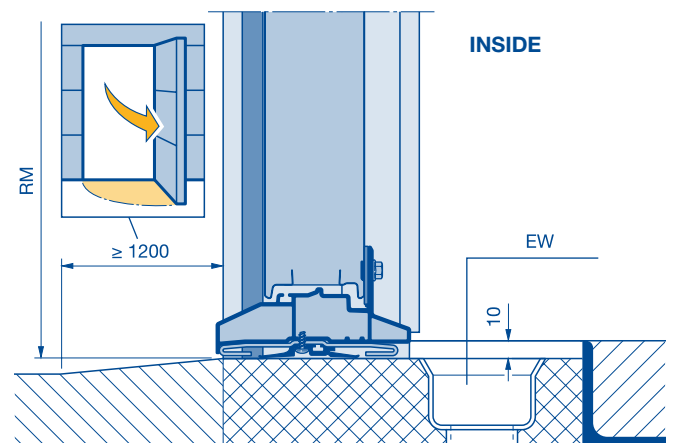
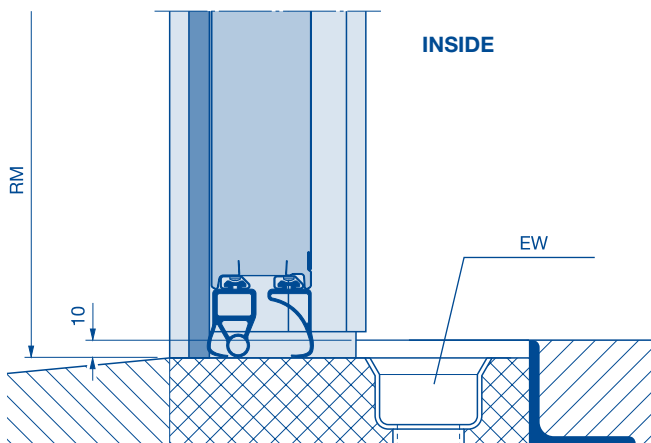
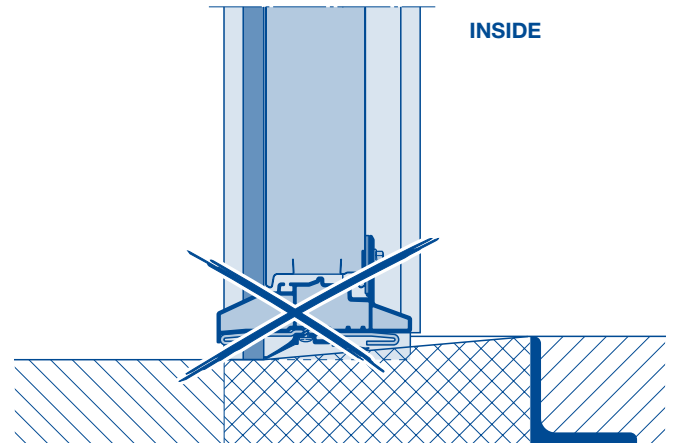
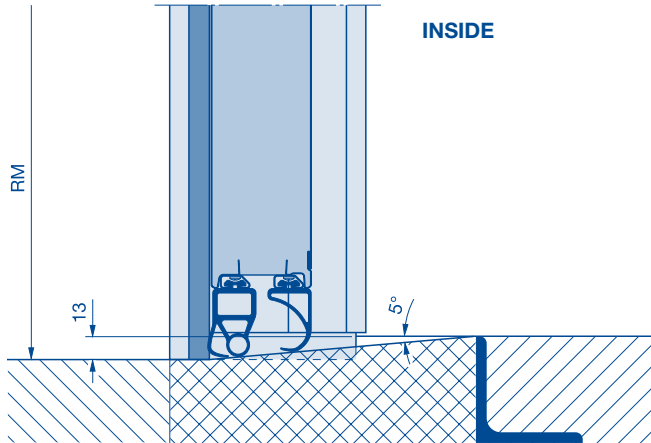
- Aluminium fascia panel with real glass infill E2 and G2 on request.

STH	Min. headroom (see page 37)
DHS	Wicket door clear passage height
RM	Grid height
TB	Door leaf
TH	Door section height
LAB	Fascia panel
RAB	Frame panel
LF	Structural opening
LZ	Clear frame dimension

Bottom edge

without wicket door / with wicket door and threshold rail

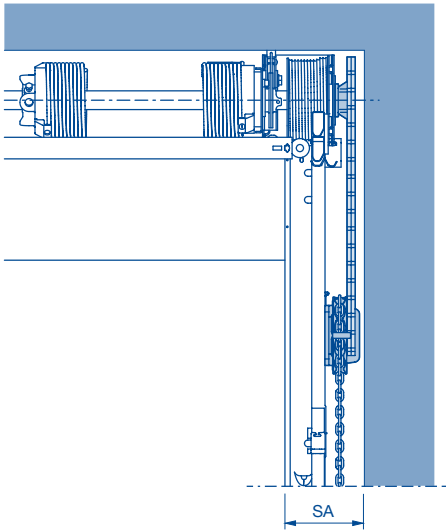
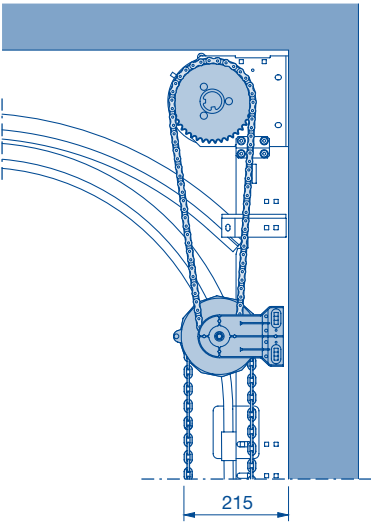
with wicket door and trip-free threshold



EW Drainage
RM Grid height

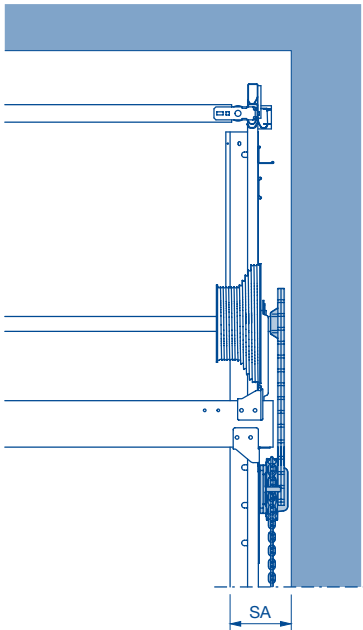
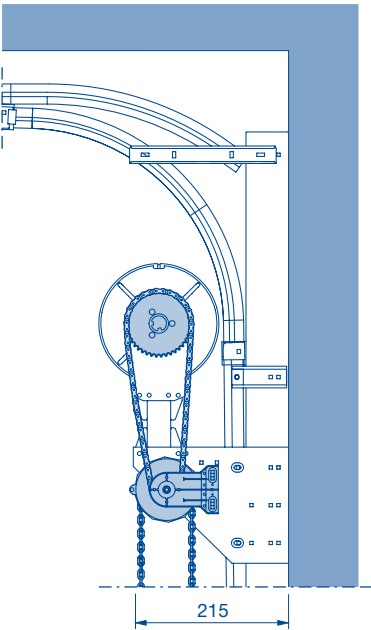
Chain hoist

Chain hoist for all track applications except HU, RD, RS, RK, VU, WS



Track application	N, NA, ND, NS, NK	NH, GD, GS, GK	L, LD	H, HA, HD, HS, HK	V, VA, VS
SA	165	165	165	185	165

Chain hoist for track applications HU, RD, RS, RK, VU, WS



Track application	HU, RD, RS, RK	VU, WS
SA	185	185

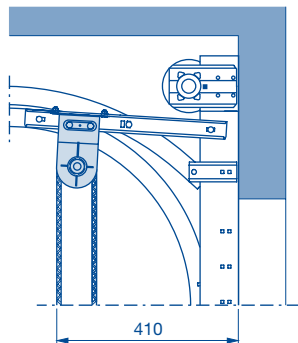
SA Sideroom

Hand pulley

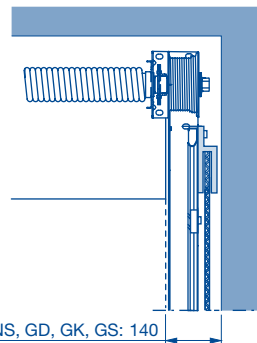
with rope or link steel chain

Track applications up to 20 m² door surface

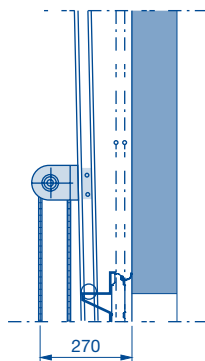
with rope or link steel chain



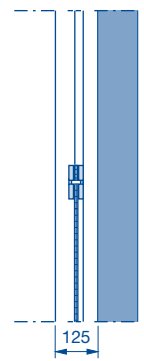
N, NA, ND, NH, NS, GD, H, HA, HD, HU, RD



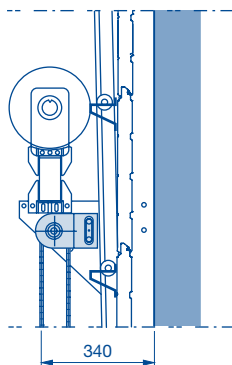
with rope or link steel chain



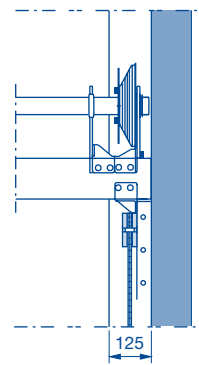
V, VA, VS



with rope or link steel chain



VU, WS

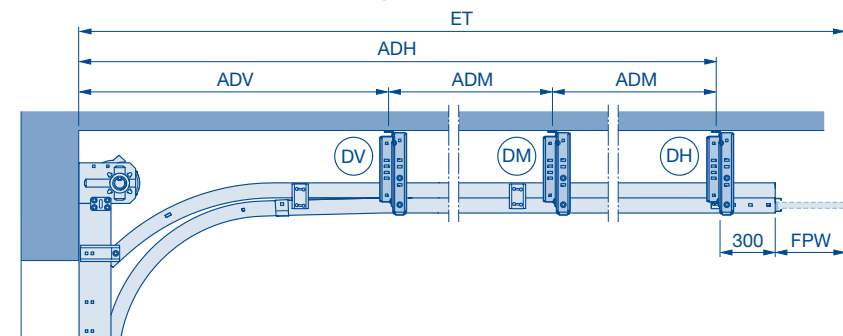


Ceiling anchors

Track suspensions for all track applications except V, VA, VS, VU and WS

Door weights for roof loads (see pages 37 – 47).

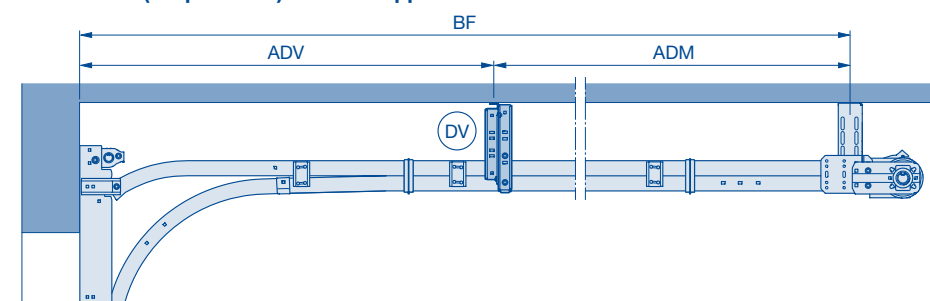
Double track (suspensions), door heights $RM \leq 5000$



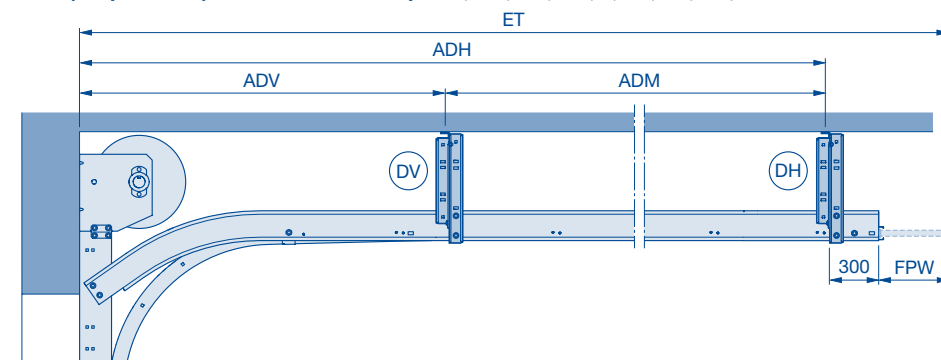
Notices:

- Detailed technical data can be found in the product configurator.
- On-site fastening elements must be able to absorb forces up to 1.5 kN per fixing point!
- Always obtain the permission of the structural engineer before fastening the door system to supporting structural elements.

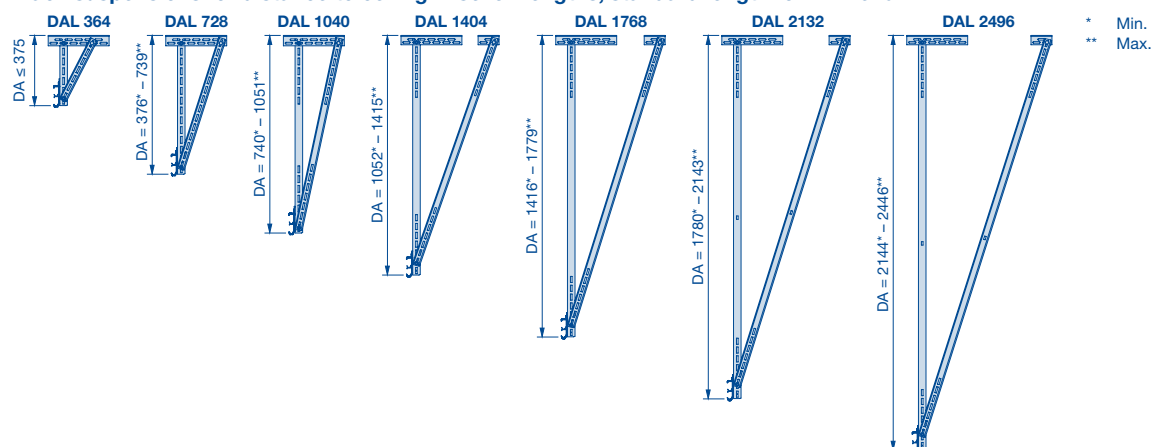
Double track (suspensions) for track application L



C-rail (suspensions) all track sizes except NS, NK, GS, GK, V, VA, VS, VU, WS



Track suspensions for distance to ceiling in seven lengths, standard length for $DA = 375$ mm



ADH	Distance to rear ceiling anchor
ADM	Distance to centre ceiling anchor
ADV	Distance to front ceiling anchor
BF	Position of spring shaft

DA	Distance to ceiling
DAL	Ceiling anchor length
DH	Rear ceiling anchor
DM	Centre ceiling anchor

DV	Front ceiling anchor
FPW	Spring buffer travel
LZ	Clear frame dimension

Ceiling anchors

Track suspensions with double track

Track application	LZ	ET	Number of suspensions per side	DV	DM	DH / BF	ADV	ADM	ADH / BF	FPW	
N, NA	≤ 7000	2289–3934	2	1	0	1	1400	–	ET–597	Long	
									ET–327	Short	
		3935–5685	3	1	1	1	1400	(ET–ADV–597)/2	ET–597	Long	
								(ET–ADV–327)/2	ET–327	Short	
	> 7000	2289–2934	2	1	0	1	1400	–	ET–597	Long	
									ET–327	Short	
		2935–4060	3	1	1	1	1400	(ET–ADV–597)/2	ET–597	Long	
								(ET–ADV–327)/2	ET–327	Short	
S	≤ 7000	4061–5685	4	1	2	1	1400	(ET–ADV–597)/3	ET–597	Long	
								(ET–ADV–327)/3	ET–327	Short	
		2882–3540	2	1	0	1	1400	–	RM + 695	–	
	3541–5666	3	1	1	1	1400	(BF–ADV)/2				
	5667–6007	4	1	2	1	1400	(BF–ADV)/3				
	H, HA, HU	≤ 7000	1915–2201	1	0	0	1	–	–	ET–597	Long
										ET–327	Short
			2202–3982	2	1	0	1	1400	–	ET–597	Long
									ET–327	Short	
> 7000		3983–5488	3	1	1	1	1400	(ET–ADV–597)/2	ET–597	Long	
								(ET–ADV–327)/2	ET–327	Short	
		5489–5719	4	1	2	1	1400	(ET–ADV–327)/3	ET–327	Short	
		1915–2201	1	0	0	1	1400	–	ET–597	Long	
									ET–327	Short	
		2202–2991	2	1	0	1	1400	–	ET–597	Long	
									ET–327	Short	
		2991–3864	3	1	1	1	1400	(ET–ADV–597)/2	ET–597	Long	
								(ET–ADV–327)/2	ET–327	Short	
3865–5219	4	1	2	1	1400	(ET–ADV–597)/3	ET–597	Long			
						(ET–ADV–327)/3	ET–327	Short			
NH, ND, GD, LD, HD, RD	***										

Suspension with use of the C-rail

All door types RM > 4500 and LZ > 6250, all door types RM > 5000 except for track application L / LD doors with real glass RM > 3500 and LZ > 5000

Track application	LZ	ET	Number of suspensions per side	DV	DM	DH / BF	ADV (max. 3000)	ADM	ADH / BF	FPW
N, NA	≤ 8000	≤ 6685	2	1	0	1	ADH / 2	–	ET – 597	Long
								ET – 327	Short	
		> 6685	3	1	1	1	ADH / 3	(ET – ADV – 597) / 2	ET – 597	Long
								(ET – ADV – 327) / 2	ET – 327	Short
S	≤ 7000	≤ 6007	2	1	0	1	BF/2	–	RM + 695	–
H, HA, HU	≤ 8000	≤ 6739	2	1	0	1	ADH / 2	–	ET – 597	Long
								ET – 327	Short	
		> 6739	3	1	1	1	ADH / 3	(ET – ADV – 597) / 2	ET – 597	Long
								(ET – ADV – 327) / 2	ET – 327	Short
NH, ND, GD, LD, HD, RD	***									

Use of C-rail to reduce suspensions

Track application	LZ	ET	Number of suspensions per side	DV	DM	DH / BF	ADV (max. 3000)	ADM	ADH / BF	FPW
N, NA	≤ 5500	≤ 3810	1	0	0	1	–	–	ET – 597	Long
									ET – 327	Short
		> 3810	2	1	0	1	ADH / 2	–	ET – 597	Long
									ET – 327	Short
S		≤ 3541	1	0	0	1	–	–	–	–
		3542 – 5916	2	1	0	1	BF / 2	–	RM + 695	
		> 5916	3	1	1	1	BF / 3	(BF – ADV) / 2	RM + 695	
H, HA, HU		≤ 3740	1	0	0	1	–	–	ET – 597	Long
									ET – 327	Short
		> 3740	2	1	0	1	ADH / 2	–	ET – 597	Long
									ET – 327	Short
NH, ND, GD, LD, HD, RD	***									

*** Dimensions can be found in the product configurator.

Notice:

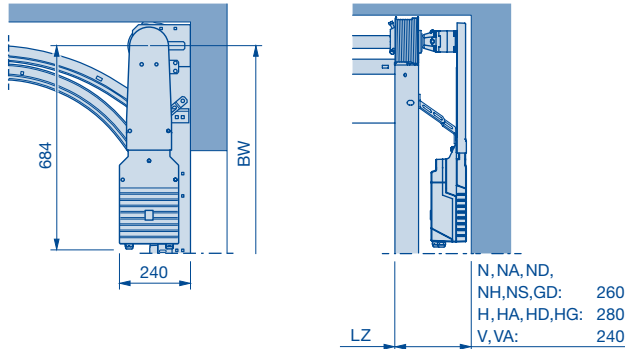
Deviations may occur due to the simplified calculation of the distance back. Detailed technical data can be found in the product configurator.

Shaft operator WA 300

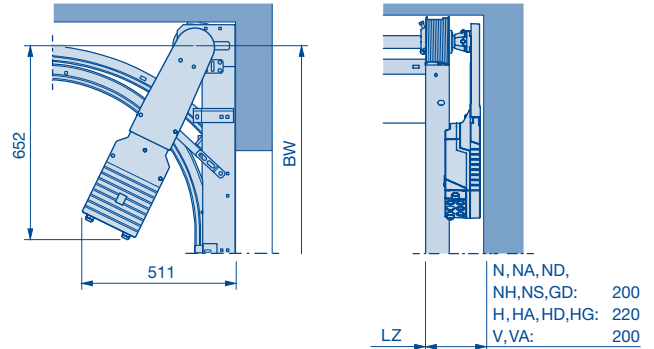
Shaft operator WA 300 for track applications N, NA, ND, NS, NH, NK, GD, GS, GK, H, HA, HD, HS, HK, V, VA and VS

As shown in the figure, the operator can be fitted either left or right, viewed from the inside.

Fitting example ⑧ right



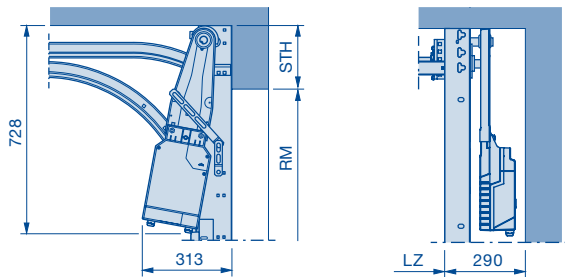
Fitting example ⑨ right



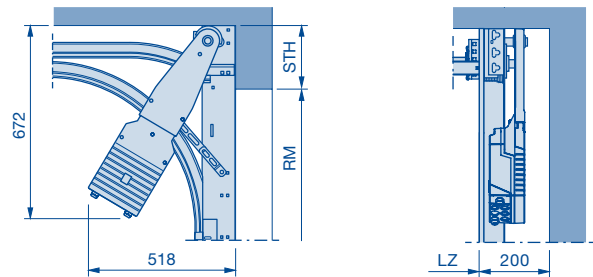
Shaft operator WA 300 for track applications L and LD

As shown in the figure, the operator can be fitted either left or right, viewed from the inside. In fitting example 9: on the side opposite the door lock.

Fitting example ⑧ right



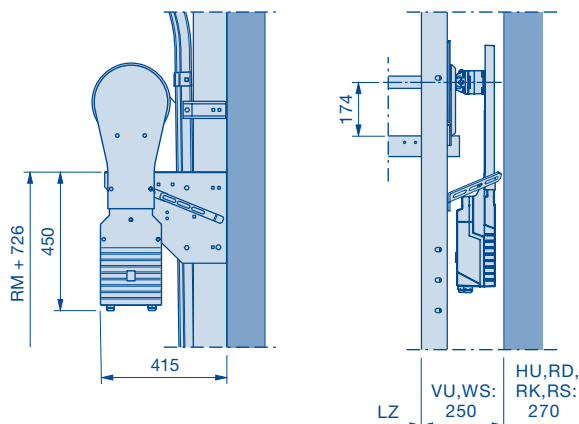
Fitting example ⑨ right



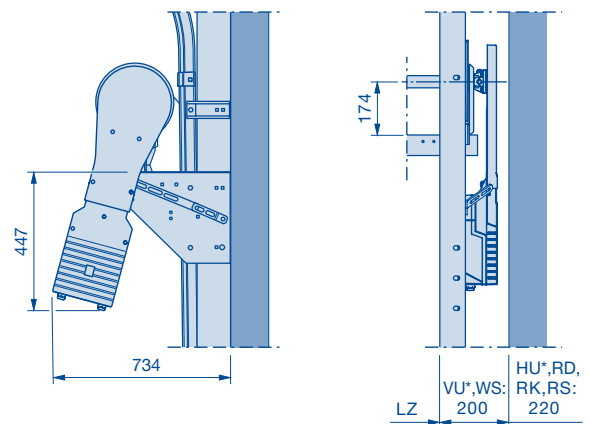
Shaft operator WA 300 for track applications HU, RD, RS, RK, VU and WS

As shown in the figure, the operator can be fitted either left or right, viewed from the inside.

Fitting example ⑧ right



Fitting example ⑨ right



* Notice:

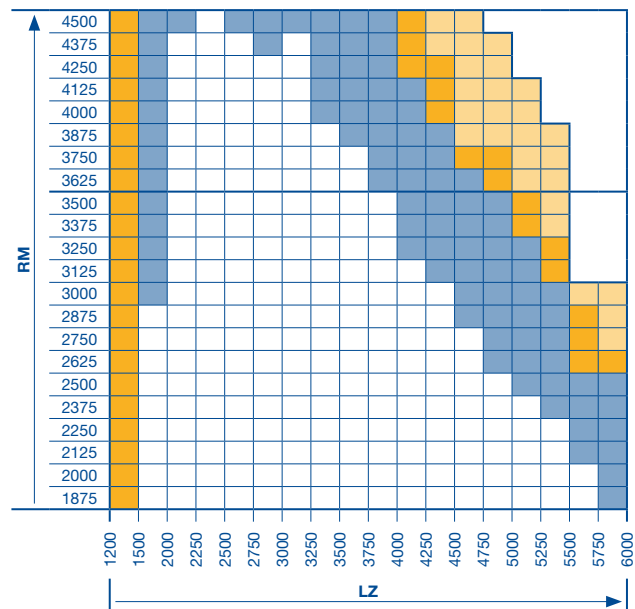
In the door range $LZ \leq 3000$ and $RM \leq 3500$, track applications VU and HU are not possible

BW Position of shaft support
LZ Clear frame dimension

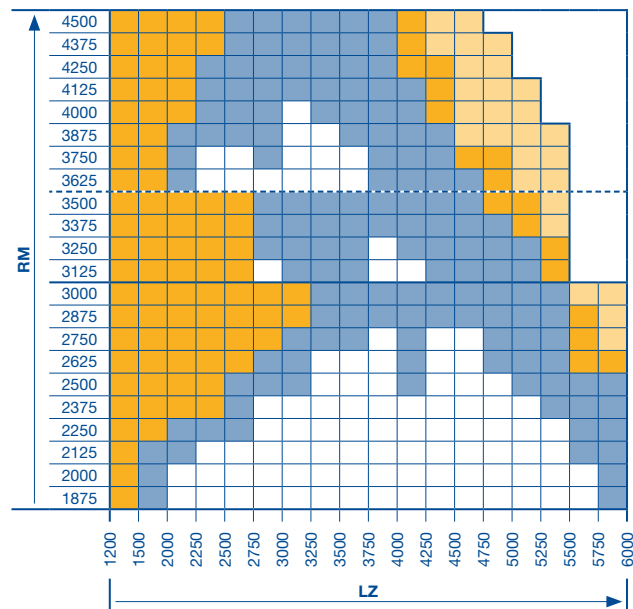
Shaft operator WA 300

Size range WA 300

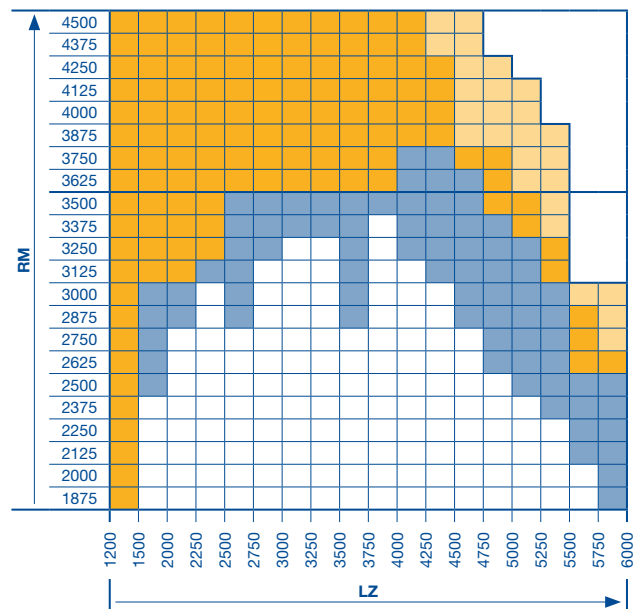
Track applications: N, NA and NH



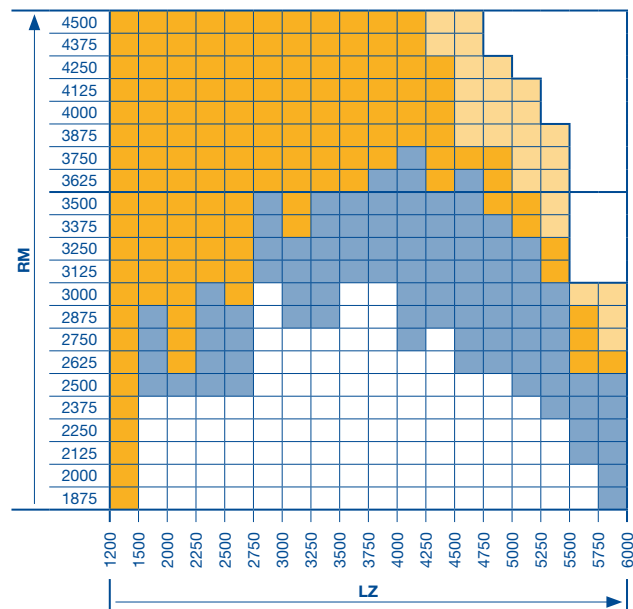
Track applications: ND and GD



Track application: H, HA, HG, HU and RG



Track application: HD and RD



- All door types available in any version.
- Door types APU 67 Thermo and ALR 67 Thermo on request.
- Only door type SPU 67 Thermo on request. Door type APU 67 Thermo and ALR 67 Thermo not possible.
- All door types and versions on request.

Notice:
Track application NS on request!

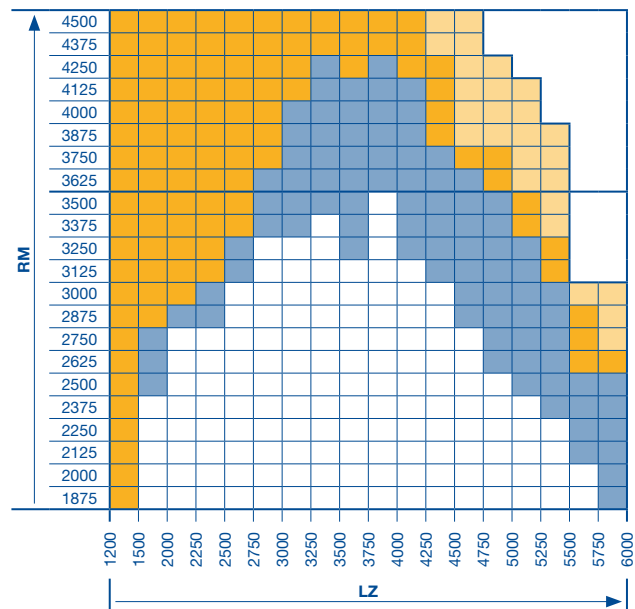
LZ Clear frame dimension
RM Grid height

Dimensions in mm

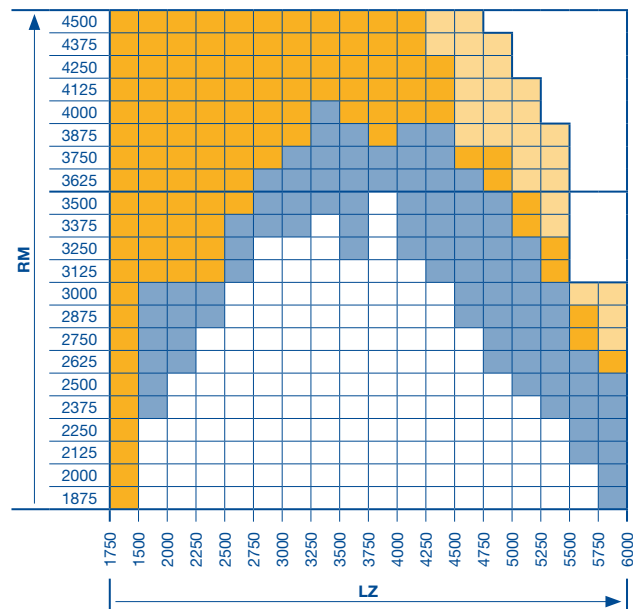
Shaft operator WA 300

Size range WA 300

Track application: V and VA



Track application: VU and WG



- All door types available in any version.
- Door types APU 67 Thermo and ALR 67 Thermo on request.
- Only door type SPU 67 Thermo on request. Door type APU 67 Thermo and ALR 67 Thermo not possible.
- All door types and versions on request.

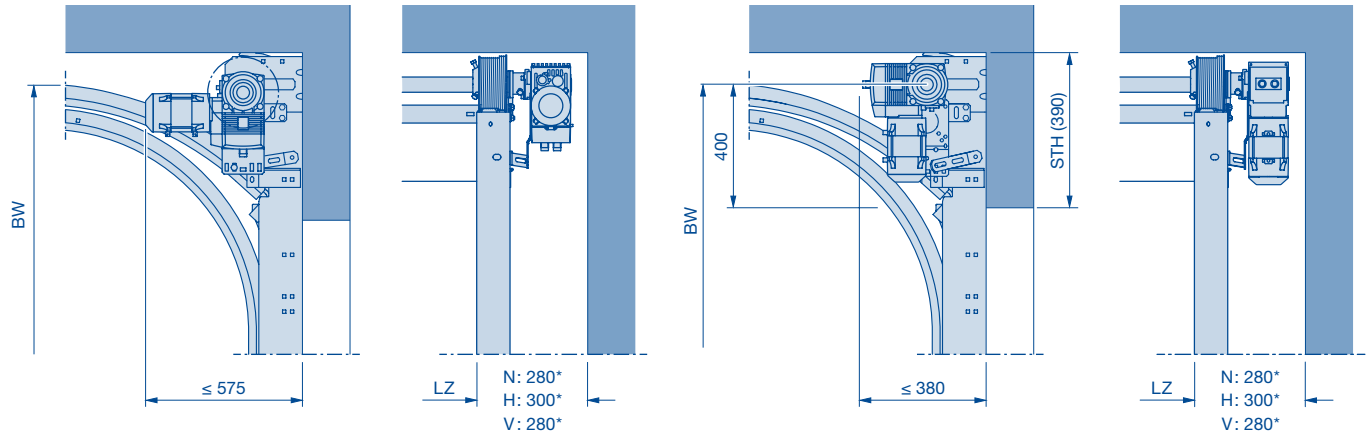
LZ Clear frame dimension
RM Grid height

Dimensions in mm

As a flange-mounted operator

Shaft operator WA 400 for all track applications except L, LD, HU, RD, RS, RK, VU and WS

As shown in the figure, the operator can be fitted either left or right, viewed from the inside.

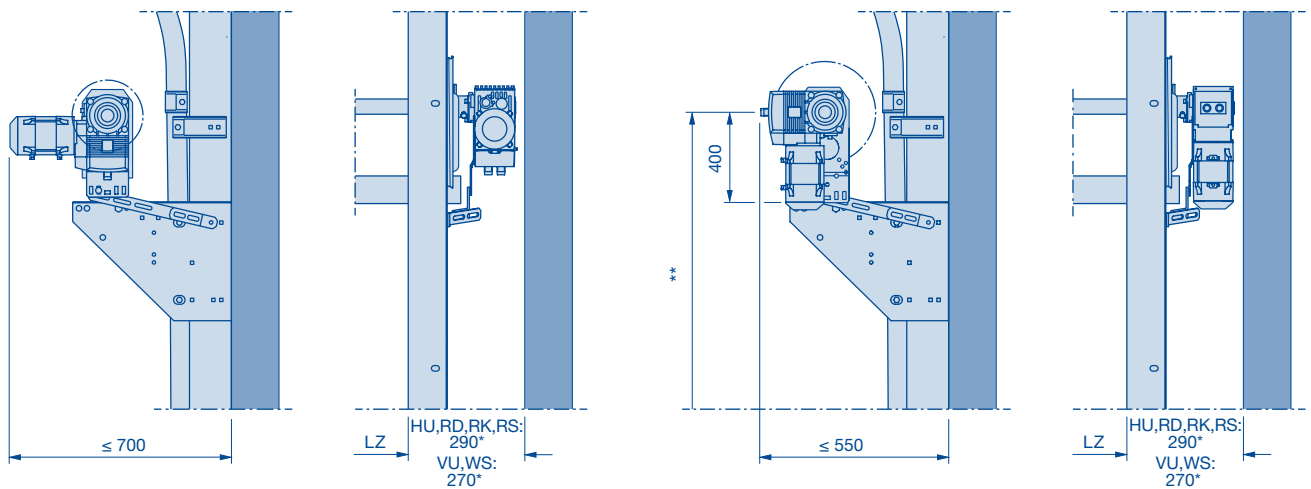


*** Notice:**

Dimension +75 mm if using a non-jointed emergency crank handle

Shaft operator WA 400 for track applications HU, RD, RS, RK, VU and WS

As shown in the figure, the operator can be fitted either left or right, viewed from the inside.



*** Notice:**

Dimension +75 mm if using a non-jointed emergency crank handle

** On request

BW	Position of shaft support
LZ	Clear frame dimension

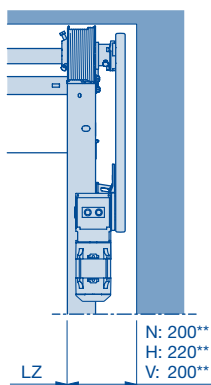
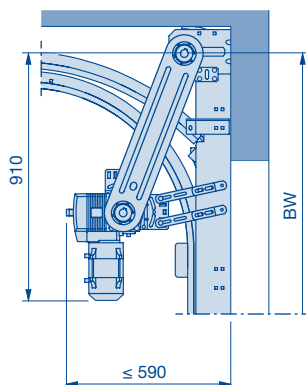
Shaft operator WA 400

with chain box

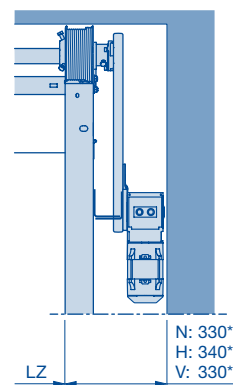
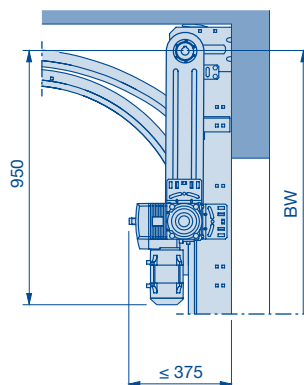
Shaft operator WA 400 for all track applications except L, LD, HU, RD, RS, RK, VU and WS

As shown in the figure, the operator can be fitted either left or right, viewed from the inside. **In fitting example 5: on the side opposite the door lock.**

Fitting example ⑤ right



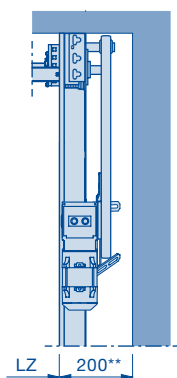
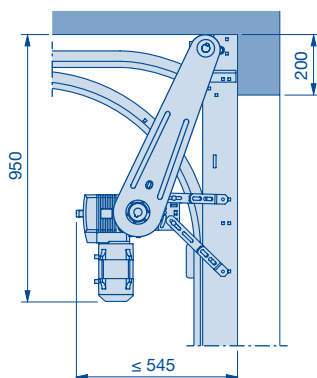
Fitting example ⑥ right



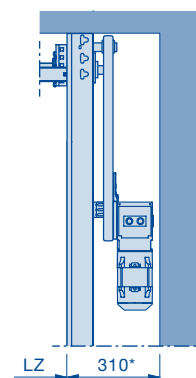
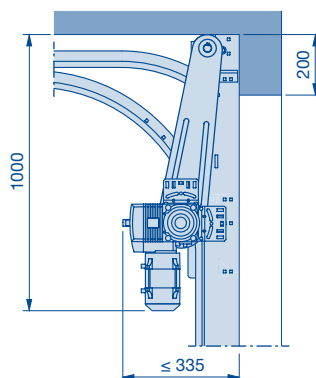
Shaft operator WA 400 for the track applications L and LD

As shown in the figure, the operator can be fitted either left or right, viewed from the inside. **In fitting example 5: on the side opposite the door lock.**

Fitting example ⑤ right



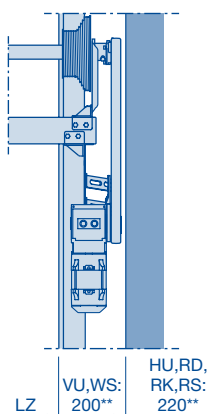
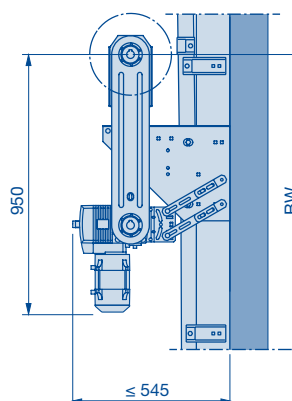
Fitting example ⑥ right



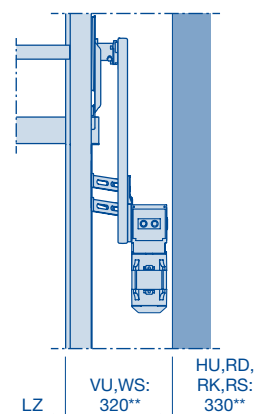
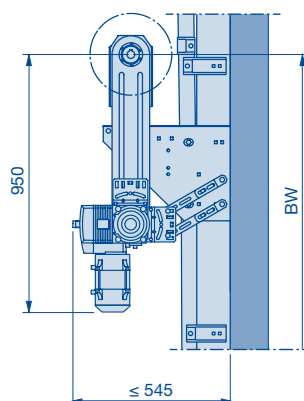
Shaft operator WA 400 for track applications HU, RD, RS, RK, VU and WS

As shown in the figure, the operator can be fitted either left or right, viewed from the inside. **In fitting example 5: on the side opposite the door lock.**

Fitting example ⑤ right



Fitting example ⑥ right



* Notice:

Dimension +75 mm if using a non-jointed emergency crank handle

** Notice:

Dimension +40 mm if using a non-jointed emergency crank handle

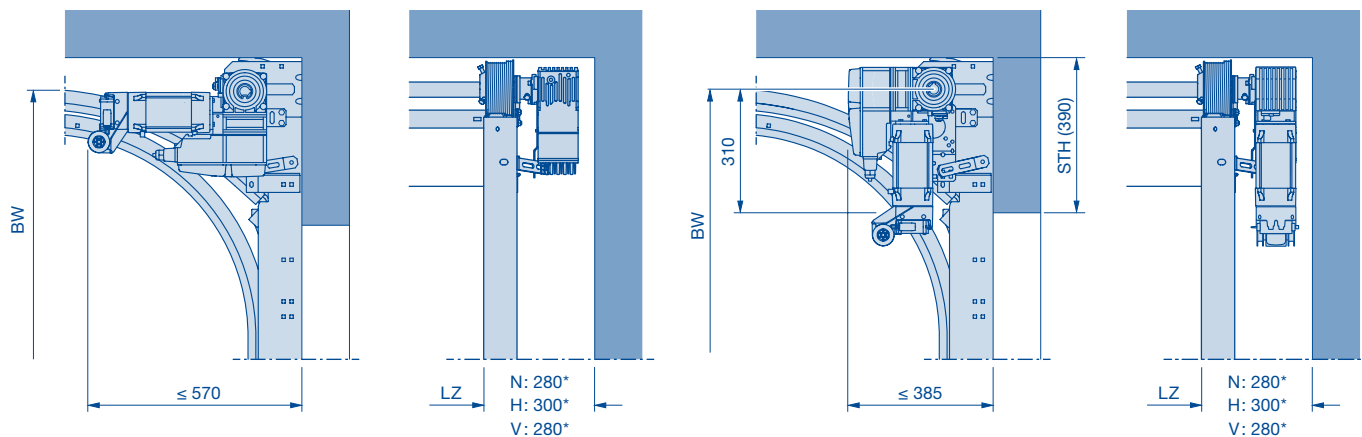
BW Position of shaft support
LZ Clear frame dimension

Shaft operator WA 500 FU

As a flange-mounted operator

Shaft operator WA 500 FU for all track applications except L, LD, HU, RD, RS, RK, VU and WS

As shown in the figure, the operator can be fitted either left or right, viewed from the inside.

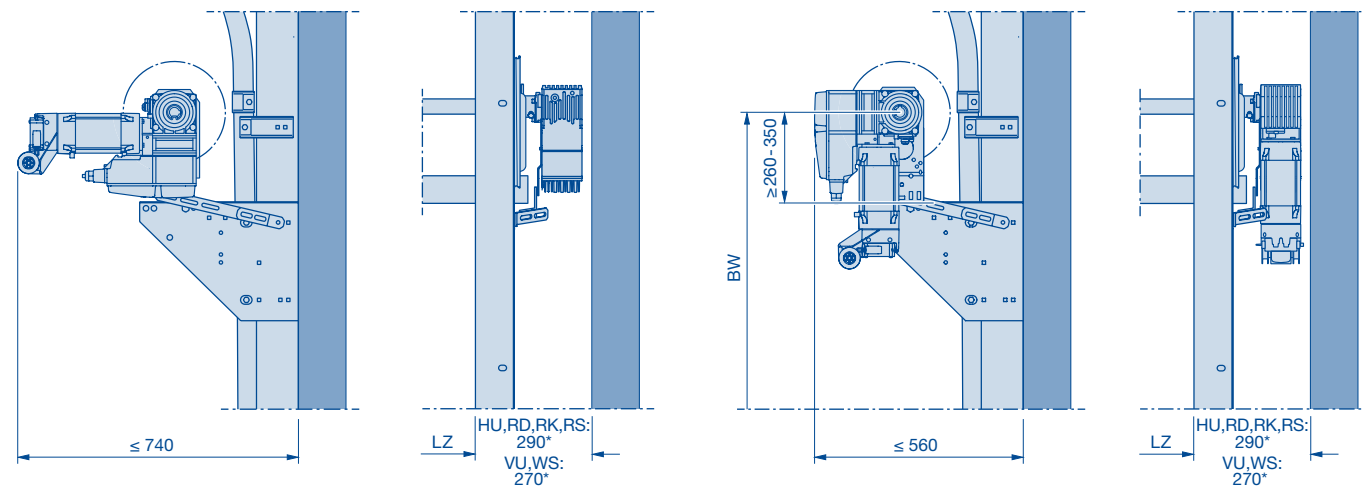


* Notice:

Dimension +75 mm if using a non-jointed emergency crank handle

Shaft operator WA 500 FU for track applications HU, RD, RS, RK, VU and WS

As shown in the figure, the operator can be fitted either left or right, viewed from the inside.



* Notice:

Dimension +75 mm if using a non-jointed emergency crank handle

** On request

BW Position of shaft support
LZ Clear frame dimension

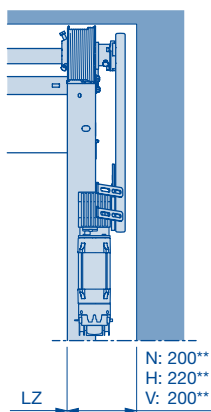
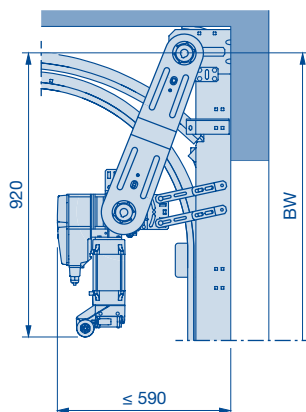
Shaft operator WA 500 FU

with chain box

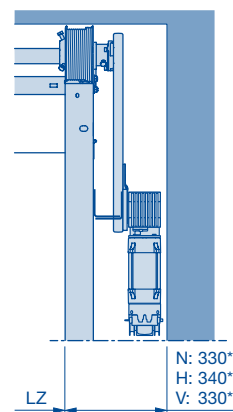
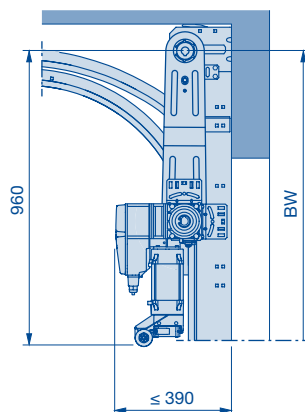
Shaft operator WA 500 FU for all track applications except L, LD, HU, RD, RS, RK, VU and WS

As shown in the figure, the operator can be fitted either left or right, viewed from the inside. **In fitting example 5: on the side opposite the door lock.**

Fitting example ⑤ right



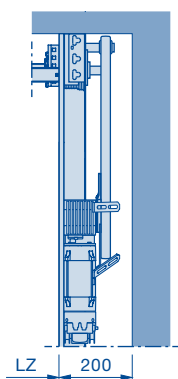
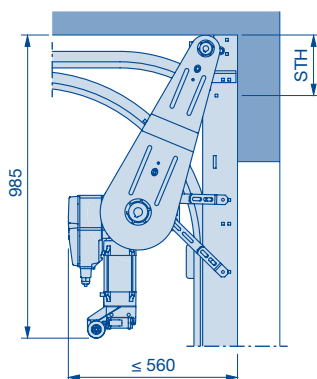
Fitting example ⑥ right



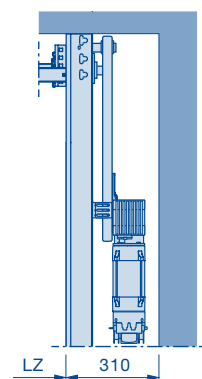
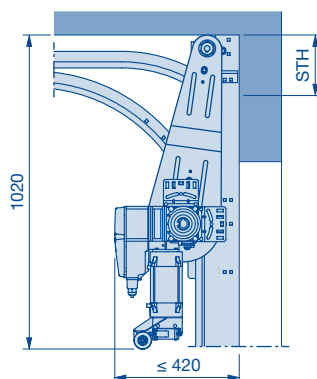
Shaft operator WA 500 FU for the track applications L and LD

As shown in the figure, the operator can be fitted either left or right, viewed from the inside. **In fitting example 5: on the side opposite the door lock.**

Fitting example ⑤ right



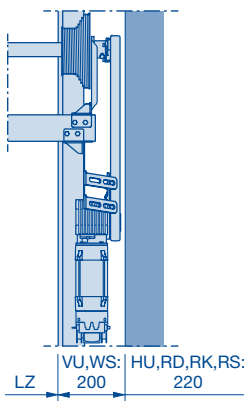
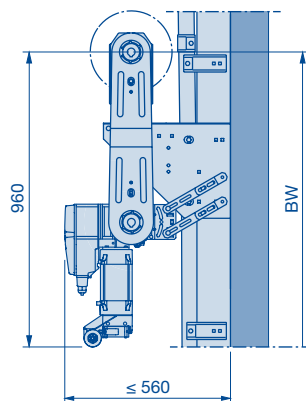
Fitting example ⑥ right



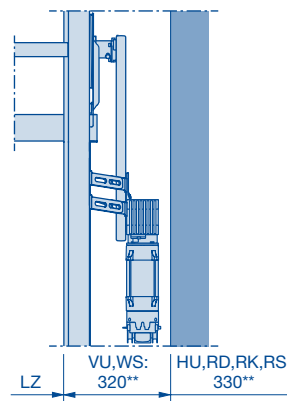
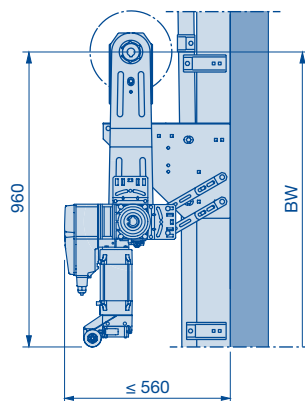
Shaft operator WA 500 FU for track applications HU, RD, RS, RK, VU and WS

As shown in the figure, the operator can be fitted either left or right, viewed from the inside. **In fitting example 5: on the side opposite the door lock.**

Fitting example ⑤ right



Fitting example ⑥ right



* Notice:

Dimension +75 mm if using a non-jointed emergency crank handle

** Notice:

Dimension +40 mm if using a non-jointed emergency crank handle

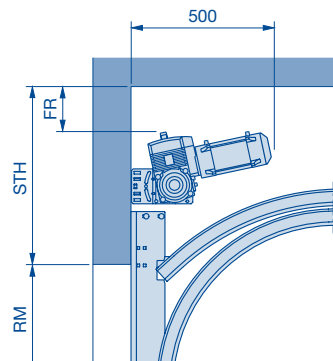
BW Position of shaft support
LZ Clear frame dimension

Shaft operator WA 400 / 500 FU

for central mounting

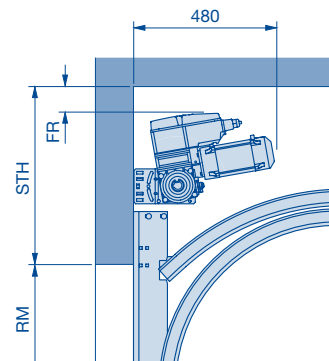
Shaft operator WA 400 / 500 FU for track applications: N and ND

WA 400



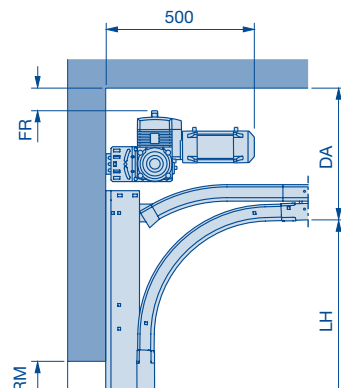
Track application	WA 400		WA 500 FU	
	STH min.	FR min.	STH min.	FR min.
N 1	590	45	625	45
N 2	620	50	650	45
N 3	–	–	710	45
ND 1	590	65	585	48
ND 2	620	75	605	48
ND 3	–	–	710	48
ND 6	630	65	595	48
ND 7	710	75	675	48

WA 500 FU



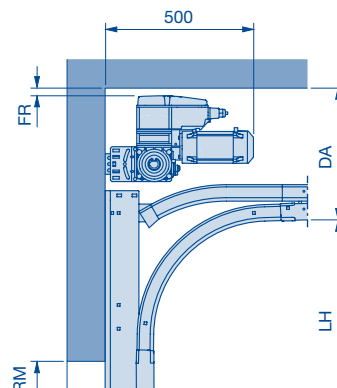
Shaft operator WA 400 / 500 FU for track application: NH and GD

WA 400



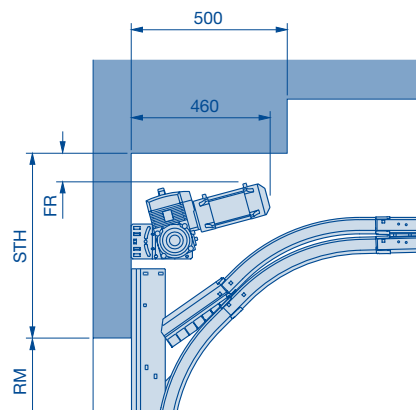
Track application	WA 400		WA 500 FU	
	DA min.	FR min.	DA min.	FR min.
NH 1 / GD 1	415	50	480	45
NH 2 / GD 2	440	50	485	45
NH 3	–	–	565	45

WA 500 FU



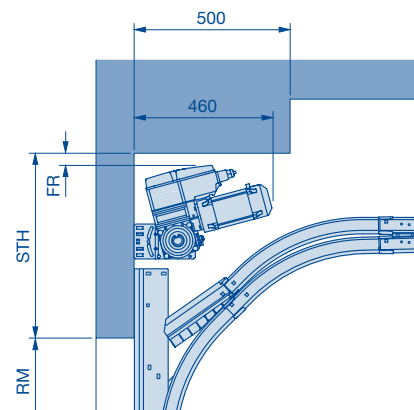
Shaft operator WA 400 / 500 FU for track applications: NS, NK, GS and GK

WA 400



Track application	WA 400		WA 500 FU	
	STH min.	FR min.	STH min.	FR min.
NS 1 / NK 1	640	20	650	45
NS 2 / NK 2	670	25	675	45
GS / GK	on request			

WA 500 FU



Notice:

Centre motor in conjunction with double spring shaft on request!

DA Distance to ceiling
FR Clearance ceiling / shaft operator

LH Track height
RM Grid height

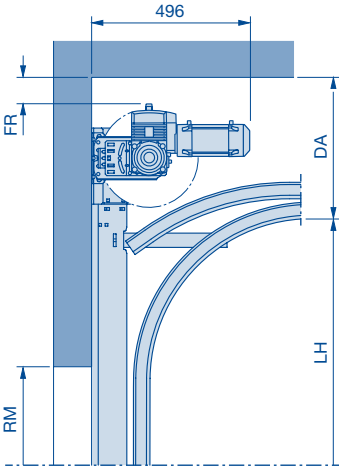
STH Lintel height

Shaft operator WA 400 / 500 FU

for central mounting

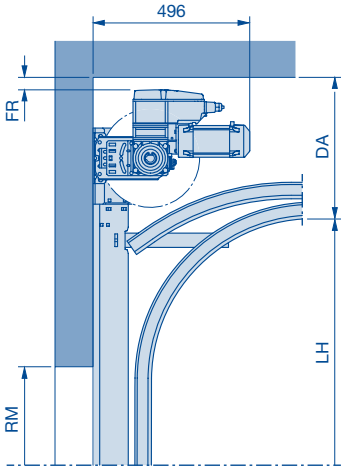
Shaft operator WA 400 / 500 FU for track applications: H, HD, HS and HK

WA 400



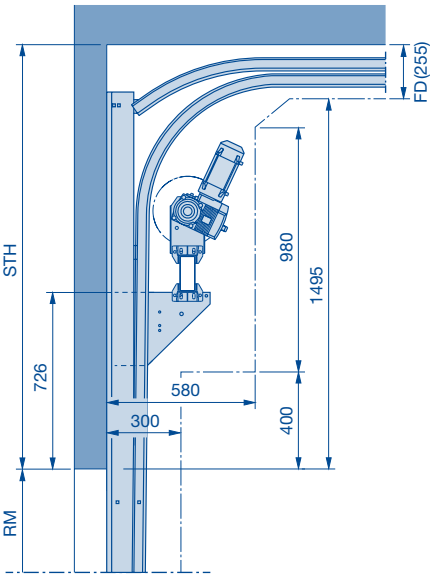
Track application	WA 400		WA 500 FU	
	DA min.	FR min.	DA min.	FR min.
H 4	500	55	540	45
H 5	500	55	540	45
H 8	—	—	565	45
HD / HS / HK	on request			

WA 500 FU



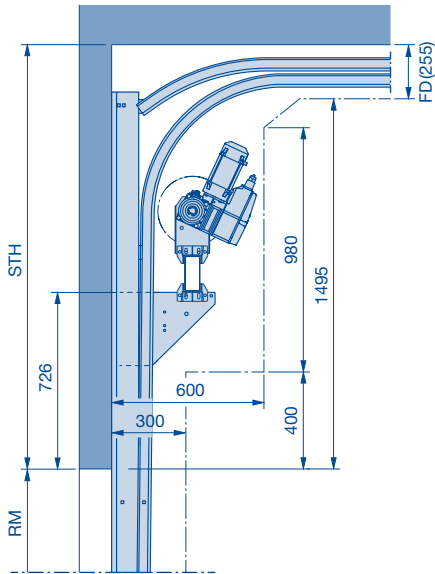
Shaft operator WA 400 / 500 FU for track applications: HU, RD, RS and RK

WA 400



Track application	WA 400	WA 500 FU
	on request	
RS / RK		

WA 500 FU



Notice:
Centre motor in conjunction with double spring shaft on request!

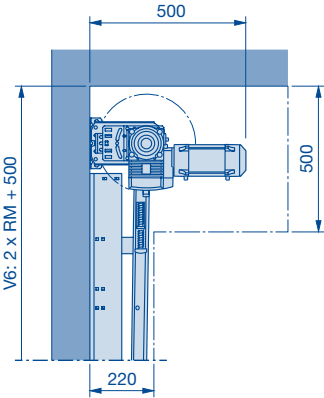
DA	Distance to ceiling	LH	Track height
FR	Clearance ceiling / shaft operator	RM	Grid height

Shaft operator WA 400 / 500 FU

for central mounting

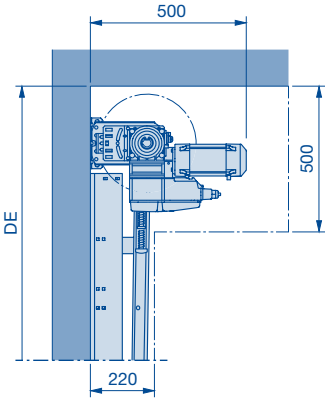
Shaft operator WA 400 / 500 FU for track applications: V and VS

WA 400



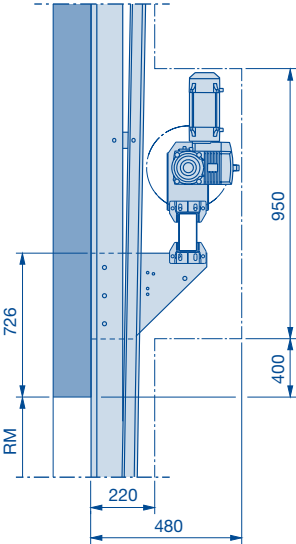
Track application	WA 400	WA 500 FU
VS	on request	

WA 500 FU

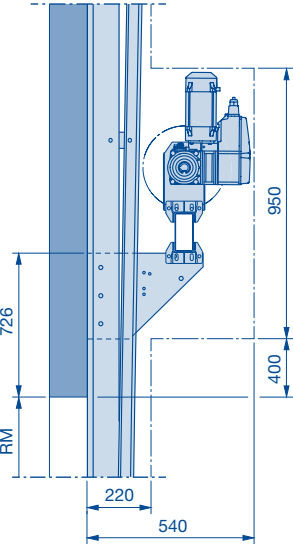


Shaft operator WA 400 / 500 FU for track applications: VU and WS

WA 400



WA 500 FU

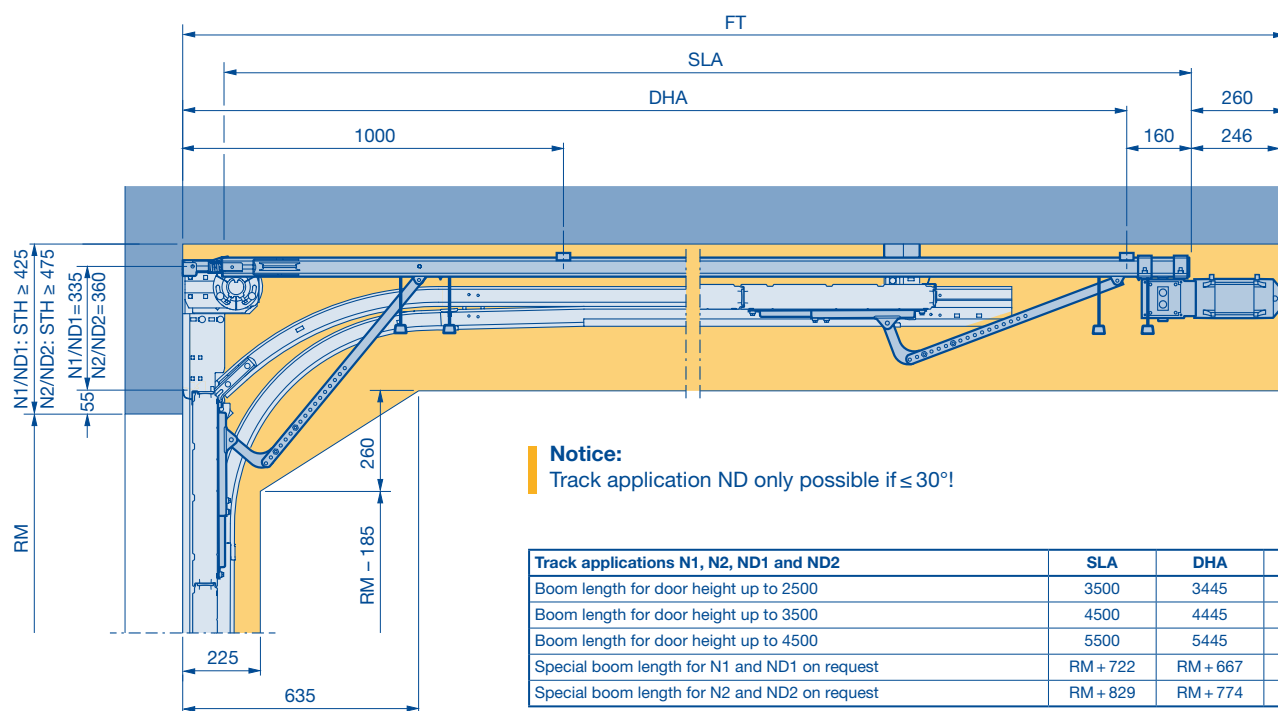


Notice:
Centre motor in conjunction with double spring shaft on request!

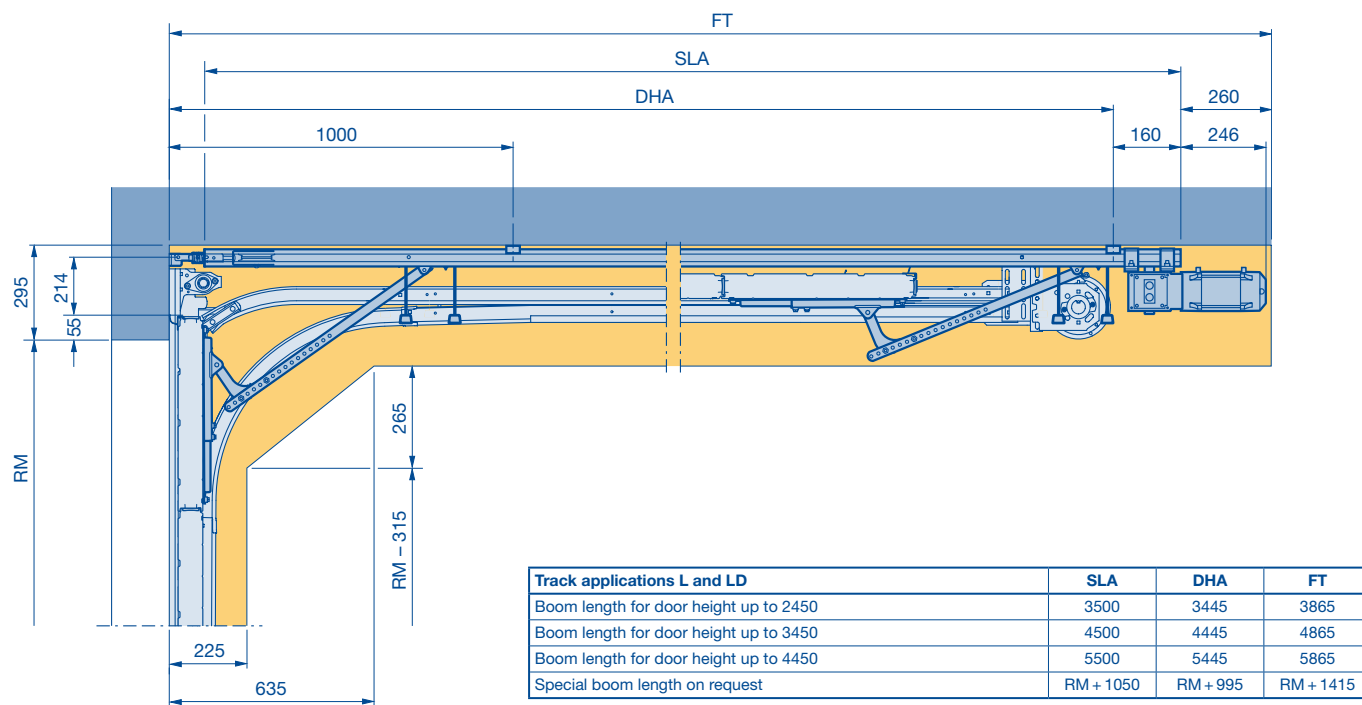
DA Distance to ceiling
LH Track height
RM Grid height

Chain drive operator ITO 400 / 500 FU

ITO 400 / 500 FU track applications N and ND (doors with wicket door on request)



ITO 400 / 500 FU track applications L and LD (doors with wicket door on request)



DHA Operator rear ceiling anchor
FT Clearance for door operator
RM Grid height
SLA Operator boom length

STH Lintel height

Door leaf speeds

WA 300 / WA 400

(ATTENTION! The stated speeds can **only be achieved under optimum conditions** regarding door size and track size. More detailed information on request, as it is dependent on fitting, door and track heights.)

Fitting area	WA 300 S4		WA 400							
	Integrated / external control 360		Control 445 and 460							
	Optosensors-LE, 8k2 resistor strip VL 1-LE, VL 2-LE, HLG	Power limit	Flange operator / centre motor				Chain box operator			
			A/B control with optosensors and 8k2 resistor strip		A/B control VL 1-LE, VL 2-LE, HLG		A/B control with optosensors and 8k2 resistor strip		A/B control VL 1-LE, VL 2-LE, HLG	
	Max. speed in mm/s, Open / Close	Max. speed in mm/s, Close [3]	rpm [1]	Max. speed in mm/s, Open / Close	rpm [1]	Max. speed in mm/s, Open / Close	rpm [1]	Max. speed in mm/s, Open / Close	rpm [1]	Max. speed in mm/s, Open / Close
N1, NA1, NS1, ND1 ≤ 30°, NK1	190	95	30	190	30	190	30	190	30	190
GD1, GK1, GS1, NH1	190	95								
ND6 > 30°	160 / 190 [1]	80 / 95 [1]	16	170	24	300	16	170	24	300
N2, NA2, NS2, ND2 ≤ 30°, NK2	210	105	24	210	30	265	24	210	30	265
GD2, GK2, GS2, NH2	210	105								
ND7 > 30°	190 [1]	95 [1]	–		19	275 [1]	13	180 [1]	19	275 [1]
ND3	–		–				13	160	13	160
N3, NH3							–			
L1, LD1	210	105	–				24	150	24	150
L2, LD2										
H4, HA4, HK4, HS 4, HU4, HD4, RD4, RK4, RS4	160 / 190 [1]	80 / 95 [1]	19 / 16	170	30 / 24	290	19 / 16	170	30 / 24	290
H5, HA5, HU5, HD5, RD5	210 [1]	105 [1]	–		24 / 19		16 / 13		24 / 19	
H8, HD8, HK8, HS8, HU8	–		–				16 [2]	250 [2]	16	250
V6, VA6, VU6, VS6, WG6, WS6	160 / 190 [1]	80 / 95 [1]	16	170	24	300	16	170	24	300
V7, VU7, VS7, WG7, WS7	190 [1]	95 [1]	–		19	275	13		19	275
V9, VU9, VS9, WS9	–		–				16 [2]	250 [2]	16	250

- [1] Max. door leaf speed depending on the high-lift / door height (RM) / door width (LZ)
- [2] Only possible with press-and-hold operation
- [3] From 2500 mm above FFL to FFL without closing edge safety device to comply with EN 13241

Notice
Double spring shaft only possible in conjunction with control WA 500 FU!

Door leaf speeds

WA 500 FU

(ATTENTION! The stated speeds can **only be achieved under optimum conditions** regarding door size and track size. More detailed information on request, as it is dependent on fitting, door and track heights.)

Fitting area	WA 500 FU											
	Control 545						Control 560					
	Flange operator / centre motor	Chain box operator	Max. speed in mm/s				Flange operator / centre motor	Chain box operator	Max. speed in mm/s			
			In "Open" direction	Optosensors-LE, 8k2 resistor strip	VL 1-LE, VL 2-LE	HLG			In "Open" direction TopSpeed: 0 TopSpeed: 1	Optosensors-LE, 8k2 resistor strip	VL 1-LE, VL 2-LE	HLG
In "Close" direction	In "Close" direction	In "Close" direction		In "Close" direction	In "Close" direction	In "Close" direction	In "Close" direction	In "Close" direction				
N1, NA1, NS1, ND1 ≤ 30°, NK1	Yes	Yes	350	200	250		Yes	Yes	500 575 [5]	200	300	500
GD1, GK1, GS1, NH1							-	Yes [4]	700 [5]			
ND6 > 30°							Yes	Yes	500			
							-	Yes [4]	700 [5]			
N2, NA2, NS2, ND2 ≤ 30°, NK2			500	500			Yes	Yes	500 825 [5]	500	500	500
GD2, GK2, GS2, NH2				-	Yes [4]	1000 [5]	825					
				200	300	500	Yes	Yes	500	200	300	500
ND7 > 30°				500			Yes	Yes	500 825 [5]	500	500	500
							-	Yes [4]	1000 [5]			825
							Yes	Yes	1000 [5]			500
N3, ND3	500	200		300	500	Yes	Yes	500	200	300	500	
NH3						Yes	Yes	500	200	300	500	
L1, LD1	-	Yes	500	200	250		-	Yes	575 [5]	200	300	375
L2, LD2							Yes [4]	1000 [5]	200	300	500	
	H4, HA4, HK4, HS 4, HU4, HD4, RD4, RK4, RS4	Yes	Yes	350	200	250		Yes	Yes	500 700 [5]	200	300
Yes								Yes	500 825 [5]	500	500	500
H5, HA5, HU5, HD5, RD5	500	500			-	Yes [4]	1000 [5]	500	500			1000
H8, HD8, HK8, HS8, HU8					Yes	Yes	500 1000 [5]	500	500	1000		
V6, VA6, VU6, VS6, WS6	Yes	Yes	350	200	250		Yes	Yes	500 700 [5]	200	300	500
V7, VU7, VS7, WS7			500	500			Yes	Yes	500 825 [5]	500	500	500
							-	Yes [4]	1000 [5]			825
V9, VU9, VS9, WS9			Yes	Yes	500 1000 [5]	500	500	1000				

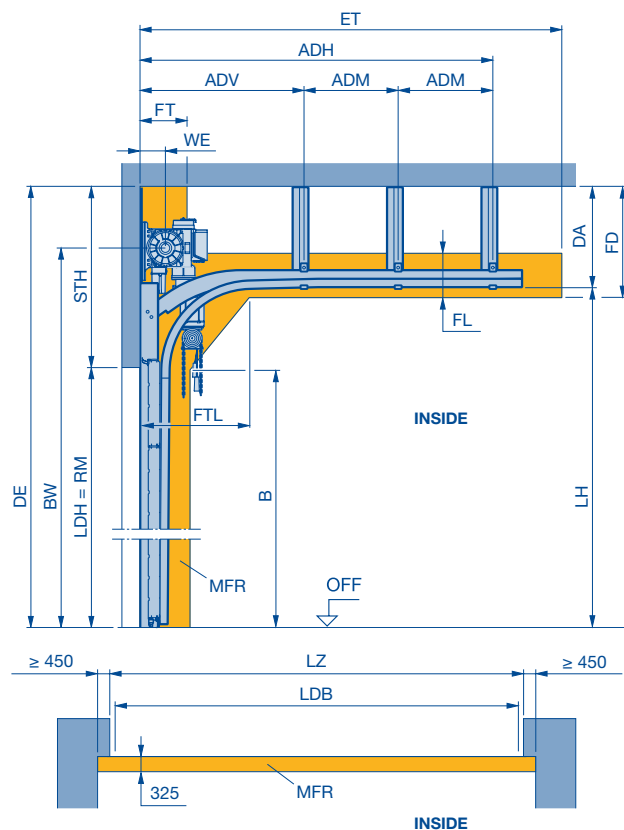
[4] Increased door travel speed up to 1 m/s required
 [5] Max. door leaf speed at door width (LZ) ≤ 6000 mm;
 For door width (LZ) > 6000 mm only after technical inspection; not possible with roller holder type S

Max. door leaf speed from the Open end-of-travel position in the Close direction up to approx. 3200 mm above FFL
 Max. door leaf speed from the Open end-of-travel position in the Close direction up to approx. 500 mm above FFL

Notice
 Double spring shaft only possible in conjunction with control WA 500 FU!

Track application: H with direct drive operator S75 / S140

High-lift track application



ADH	Distance to rear ceiling anchor	LDB	Clear passage width with ThermoFrame (see page 62)
ADM	Distance to centre ceiling anchor	LDH	Clear passage height
ADV	Distance to front ceiling anchor	LH	Track height
B	Start of double radius	LZ	Clear frame dimension
BW	Position of shaft support	MFR	Space for fitting the door
DA	Min. distance to ceiling	FFL	Finished floor level
DE	Min. ceiling height	RM	Grid height
ET	Min. distance back	STH	Min. headroom
FD	Min. ceiling clearance	WE	Shaft centre from lintel
FL	Track clearance		
FT	Clearance for door operation		
FTL	Clearance of door section in the double radius		

Notices:

- The clearance required for fitting the door must be free of supply lines, heater fans, etc.
- The direct drive operator is generally available on request.

Door weights for roof loads:

SPU 67 Thermo	= 450 N/m ²
APU 67 Thermo / ALR 67 Thermo	= 500 N/m ²
ALR 67 Thermo Glazing	= 600 N/m ²

- Other versions on request
- Observe min. sideroom, see page 62

	STH	WE	DA	B	BW
H 10, RM ≤ 6000	1125	145	625	LH - 513	LH + 240
H 11, RM > 6000		205			

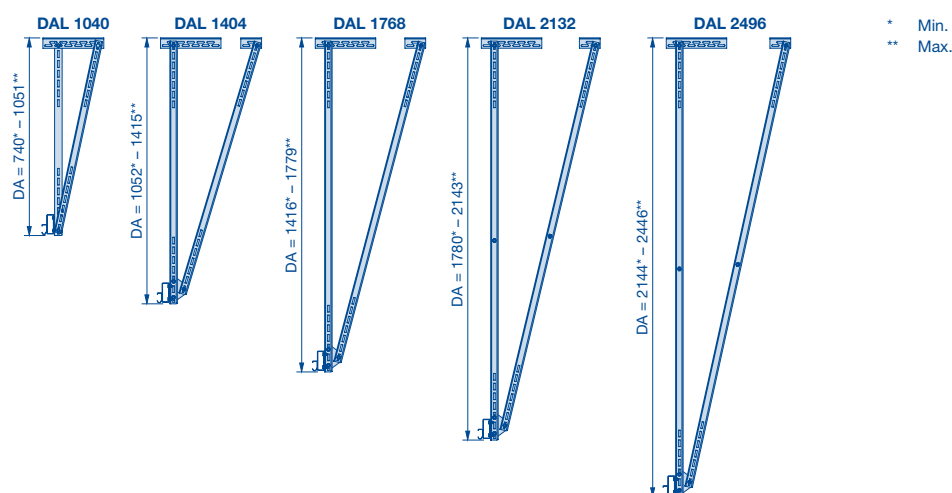
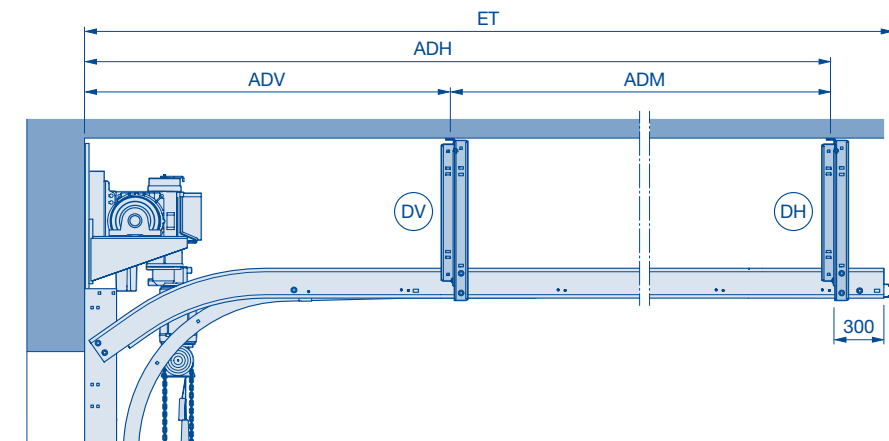
DE	ET*	FD	FL	FT	FTL	LH
STH + RM	2 × RM - LH + 962	DA + 65	275	2 × WE	675	min. RM + 500 max. 10250

* Simplified calculation

Ceiling anchors

Track suspensions for track application H with direct drive operator

Track suspensions as ceiling anchors in five lengths, standard length 1040 mm.
DH = rear ceiling anchor (see page 83), door weights for roof loads (see page 83).



Suspension with C-rail for track application H with direct drive operator

Track application	LZ	ET	Number of suspensions per side	DV	DM	DH	ADV (max. 3000)	ADM	ADH
H10, H11	≤ 6000	≤ 2142	1	0	0	1	–	–	ET – 300
		2143 – 5732	2	1	0	1	ADH / 2	–	
		> 5733	3	1	1	1	ADH / 3	(ET – ADV – 300) / 2	
	> 6000	≤ 1907	1	0	0	1	–	–	
		1908 – 3492	2	1	0	1	ADH / 2	–	
		3493 – 5492	3	1	1	1	ADH / 3	(ET – ADV – 300) / 2	
		> 5493	4	1	2	1	ADH / 4	(ET – ADV – 300) / 3	

*** Dimensions can be found in the product configurator.

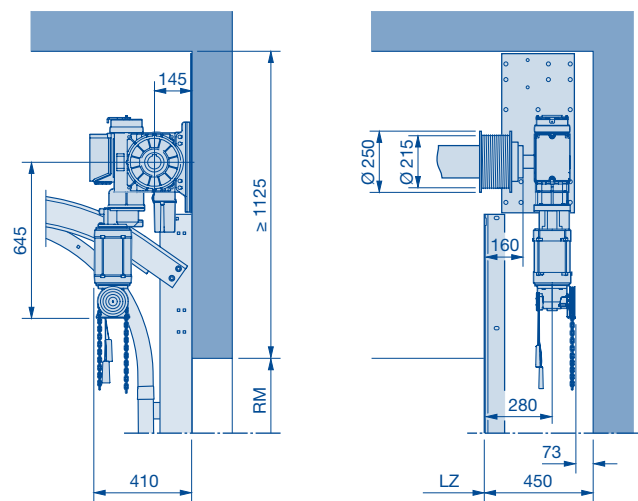
DH Rear ceiling anchor
DM Centre ceiling anchor
DV Front ceiling anchor
LZ Clear frame dimension

DAL Ceiling anchor length
ADH Distance to rear ceiling anchor
ADM Distance to centre ceiling anchor
ADV Distance to front ceiling anchor

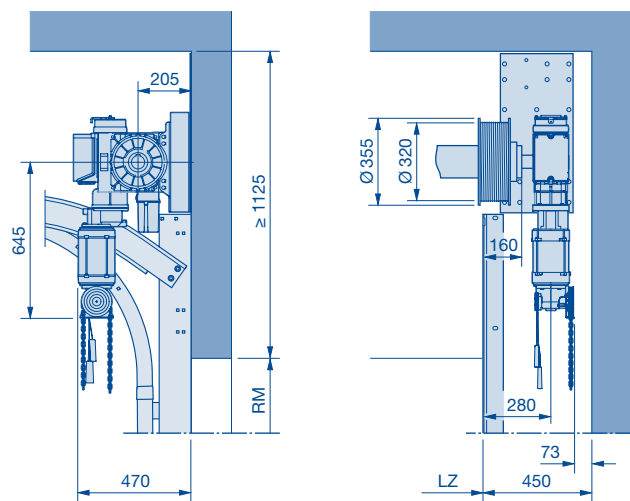
Direct drive operators S75 and S140

Direct drive operators S75 and S140 for track application H

RM ≤ 6000



RM > 6000



Door leaf speeds – control 445 R and 460 R

Direct drive operator	Cable drum diameter in mm	Max. speed in mm/s – Open / Close
S75	215	110
S75	320	170
S140	215	80
S140	320	120

LZ Clear frame dimension
RM Grid height

Infill overview


Determination of the roof slope

Infill overview	SPU 67 Thermo	APU 67 Thermo	ALR 67 Thermo	ALR 67 Thermo Glazing
Infill type	Abbreviation			
PU infill, 51 mm with Stucco-textured aluminium sheet cover on both sides, $U_g = 0.54 \text{ W/(m}^2\text{K)}$	–	FU	FU	–
PU infill, 51 mm with anodised smooth aluminium sheet cover on both sides, $U_g = 0.54 \text{ W/(m}^2\text{K)}$	–	XU	XU	–
PU infill, 26 mm with anodised smooth aluminium sheet cover on both sides, $U_g = 1.2 \text{ W/(m}^2\text{K)}$ [3]	TU	TU	TU	–
Synthetic triple pane, clear, 51 mm, $U_g = 1.8 \text{ W/(m}^2\text{K)}$	S3	S3	S3	–
Synthetic triple pane, crystal structure, 51 mm, $U_g = 1.6 \text{ W/(m}^2\text{K)}$	U3	U3	U3	–
Synthetic triple pane, grey tinted, 51 mm, $U_g = 1.6 \text{ W/(m}^2\text{K)}$	A3	A3	A3	–
Synthetic triple pane, brown tinted, 51 mm, $U_g = 1.6 \text{ W/(m}^2\text{K)}$	B3	B3	B3	–
Synthetic triple pane, white tinted (opal), 51 mm, $U_g = 1.6 \text{ W/(m}^2\text{K)}$	M3	M3	M3	–
Synthetic quadruple pane, clear, 51 mm, $U_g = 1.3 \text{ W/(m}^2\text{K)}$	S4	S4	S4	–
Synthetic quadruple pane, crystal structure, 51 mm, $U_g = 1.3 \text{ W/(m}^2\text{K)}$	U4	U4	U4	–
Synthetic quadruple pane, grey tinted, 51 mm, $U_g = 1.3 \text{ W/(m}^2\text{K)}$	A4	A4	A4	–
Synthetic quadruple pane, brown tinted, 51 mm, $U_g = 1.3 \text{ W/(m}^2\text{K)}$	B4	B4	B4	–
Synthetic quadruple pane, white tinted (opal), 51 mm, $U_g = 1.3 \text{ W/(m}^2\text{K)}$	M4	M4	M4	–
Double pane made of single-pane safety glass, 26 mm, $U_g = 2.6 \text{ W/(m}^2\text{K)}$ [1]	E2	E2	E2	E2
Double pane made of laminated safety glass P4A, 26 mm, $U_g = 1.3 \text{ W/(m}^2\text{K)}$ [3]	W2	W2	W2	–
Climatic double pane made of single-pane safety glass, 26 mm, $U_g = 1.1 \text{ W/(m}^2\text{K)}$ [1]	G2	G2	G2	G2
Prepared for on-site infill [2]	BS	BS	BS	–

[1] Only for door width up to 6000 mm on request

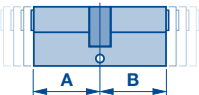
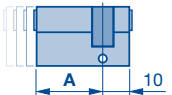
[2] On request; infill weight and thickness must be specified (anodised glazing beads required)

[3] Only NT 80 Thermo with RC 2 version

Determining the roof slope in increments of two degrees (a°)								
a°	%	X (mm)	a°	%	X (mm)	a°	%	X (mm)
2	3,49	34,9	16	28,67	286,7	30	57,74	577,4
4	6,99	69,9	18	32,49	324,9	32	62,49	624,9
6	10,51	105,1	20	36,40	364,0	34	67,46	674,6
8	14,05	140,5	22	40,40	404,0	36	72,66	726,6
10	17,63	176,3	24	44,52	445,2	38	78,13	781,3
12	21,26	212,6	26	48,77	487,7	40	83,91	839,1
14	24,93	249,3	28	53,17	531,7	42	90,05	900,5
						44	96,57	965,7

Overview

Profile cylinder

Product type			Aluminium frames	Door lock		Wicket door	Optional extras	Operator accessories
	Double cylinder PC length (L): Interior (A) + exterior (B)	Half cylinder PC length (L): Closing side (A) + blind side		Standard	Recessed			
SPU 67 Thermo APU 67 Thermo	L = 35 + 55	—	—	—	—	●	●	—
	—	L = 55 + 10	—	—	●	●	●	—
	—	L = 95 + 10	—	●	—	—	—	—
	—	L = 30 + 10	—	—	—	—	—	●
ALR 67 Thermo	L = 35 + 55	—	—	—	—	●	●	—
	—	L = 55 + 10	—	—	—	●	—	—
	—	L = 80 + 10	FU and XU	●	—	—	—	—
	—	L = 30 + 10	—	—	—	—	—	●
NT 80	L = 35 + 70	L = 35 + 10	—	—	—	—	—	—
NT 80 RC 2	L = 35 + 60*	—	—	—	—	—	—	—

* Profile cylinder acc. to DIN 1303
(point 7 = class 5, point 8 = class 1)

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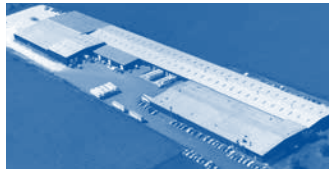
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