



Industrial sectional doors Depth 42 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 F42, double-skinned steel sectional door, Stucco-textured / Micrograin, door sections 625 and 750 mm high	
Door leaf	Door sections made of PU-foamed, hot-galvanized sections. 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 42 mm. All door sections with finger trap protection. Surface protection with polyester primer coating. Ventilation grilles optional.
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. Ventilation grilles are not possible in wicket doors. 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 standard anodised aluminium tubular profiles or with thermal break, or optionally 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 F42, double-skinned steel sectional door, Stucco-textured / Micrograin, door sections 375 and 500 mm high	
Door leaf	Door sections made of PU-foamed, hot-galvanized sections. 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 42 mm. All door sections with finger trap protection. Surface protection with polyester primer coating. Ventilation grilles optional.
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. Ventilation grilles are not possible in wicket doors. 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 standard anodised aluminium tubular profiles or with thermal break, or optionally 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 F42 / APU F42 Thermo, glazed aluminium sectional door with steel bottom section / glazed aluminium sectional door with thermal break, with steel bottom section	
Door leaf	Bottom section made of hot-galvanized, PU-foamed sections, 750 (standard version), or 1500 mm high, Stucco-textured 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. Additional door sections with glazing made of standard anodised aluminium tubular profiles (APU F42) or with thermal break (APU F42 Thermo). Depth 42 mm. All door sections with finger trap protection. Infill: clear synthetic double panes, 26 mm (S2). Ventilation grilles in the bottom door section possible.
Wicket door	Depending on the door type, made of standard extruded anodised aluminium tubular profiles or with thermal break, fitted in the central fields of the door. Cannot be fitted in the outer fields – note the arrangement! Only opening outwards, LH or RH hinged. Ventilation grilles are not possible in wicket doors. 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 F42 / ALR F42 Thermo, glazed aluminium sectional door / glazed aluminium sectional door with thermal break	
Door leaf	Door sections made of standard anodised aluminium tubular profiles (ALR F42) or with thermal break (ALR F42 Thermo). Depth 42 mm. All door sections with finger trap protection. Bottom door section made of PU infill with 26 mm Stucco-textured aluminium sheet cover on both sides (FU), additional door sections with 26 mm clear synthetic double panes (S2). Ventilation grilles in the bottom door section possible.
Wicket door	Depending on the door type, made of standard anodised aluminium tubular profiles or with thermal break, fitted in the central fields of the door. Cannot be fitted in the outer fields – note the arrangement! Only opening outwards, LH or RH hinged. Ventilation grilles are not possible in wicket doors. 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 F42 Glazing, aluminium sectional door with extensive glazing, real glass	
Door leaf	Door sections made of standard anodised aluminium tubular profiles. Depth 42 mm. All door sections with finger trap protection. All door section infills in 6 mm laminated safety glass (VG). Uniform infill heights.
Sectional door ALR F42 Vitraplan, aluminium sectional door with exclusive glazing	
Door leaf	Door sections made of standard polyester primer-coated aluminium tubular profiles. Depth 42 mm. All door sections with finger trap protection and synthetic double panes, 26 mm (S2), clear, and 4 mm transparent synthetic glazings fitted in front, optionally in brown or grey. Ventilation grilles are not possible in the bottom door section.

Product descriptions

Door type	Door leaf / wicket door
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Sectional door Parcel

Door leaf	The divisible industrial door for special package loading requirements. The optimal solution for the joint use of the same loading bay by both lorries and vans.
Door versions	SPU F42 Parcel, APU F42 Parcel Releasing an espagnolette lock can decouple one or more door sections.

Frame / track application

Enclosed, moulded angle frame with press-fitted external seal, made of hot-galvanized steel with screwed track and double radius 510 mm.

Door lock

Manually operated	Inside locking using a shootbolt, self-locking rotary latch (on request for track applications that have a low-mounted torsion spring shaft) or self-locking 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 are designed for track applications N, ND, NS, NK, NA, NH, GD, GK, GS, L and LD 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, tubular 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 ^{*)}
 - Power-driven doors with break-in-resistant anti-lift kit
 - Inner and outer finger trap protection
- * European patent

Seals

Bottom seal made of 5-chamber EPDM profile with flexible adjustment lip, side seal, lintel seal and intermediate seal between the door sections.

Notice regarding surface coating

For the listed colours, the sectional doors SPU F42, APU F42 Thermo and ALR F42 Thermo with door width from 4510 to 5000 mm in combination with the track applications NH, GD, GK, GS, H, HD, HS, HK, HA, HU, RD, RS, RK, V, VA, VS, VU and WS are fitted with door leaf reinforcement to reduce any possible 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	
Resistance to wind load EN 12424	Door without wicket door, LZ ≤ 4000, class Door without wicket door, LZ > 4000, class Door with wicket door, LZ ≤ 4000, class Door with wicket door, LZ > 4000, class
Water tightness EN 12425	Door without wicket door, class
Air permeability EN 12426	Door without wicket door, class Door with wicket door, class
Acoustic value EN 717-1	Door without wicket door $R_w = . . . \text{ dB}$ Door with wicket door $R_w = . . . \text{ dB}$
Thermal resistance EN 13241-1, appendix B EN 12428	Door without wicket door, $U = \text{W/m}^2\cdot\text{K}^{2)}$ – Optional triple glazing, $U = \text{W/m}^2\cdot\text{K}^{2)}$ – Optional climatic double panes (single-pane safety glass) $U = \text{W/m}^2\cdot\text{K}^{2)}$ – Optional double panes (single-pane safety glass) $U = \text{W/m}^2\cdot\text{K}^{2)}$ Door with wicket door, $U = \text{W/m}^2\cdot\text{K}^{2)}$ – Optional triple glazing, $U = \text{W/m}^2\cdot\text{K}^{2)}$ – Section, $U = \text{W/m}^2\cdot\text{K}$
Construction	Self-supporting Depth, mm
Door sizes	Max. width mm, LZ Max. height mm, RM ³⁾
Space requirement	From page 52
Material, door leaf	Steel, double-skinned, 42 mm Aluminium, standard profile Aluminium, profile with thermal break
Surface, door leaf	Galvanized steel, coated in RAL 9002 Galvanized steel, coated in RAL 9006 Galvanized steel, coated in RAL to choose Anodised aluminium E6 / C0 (previously E6 / EV 1) Aluminium coated in RAL to choose
Door leaf reinforcement	From LZ, mm Notice regarding surface coating, see page 5, from LZ, mm
Wicket door	
Side door	Matching the door
Glazings	Type A section window Type D section window Type E section windows 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	Finger trap protection 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

* With glazing VG, E2 and G2
** Top door section

- 1) With optional double pane (single-pane safety glass)
- 2) For a door surface of 5000 x 5000 mm
- 3) Door height above 7000 mm on request (not with door type ALR F42 Glazing)
- 4) Optionally with ThermoFrame

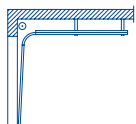
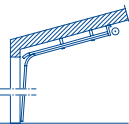
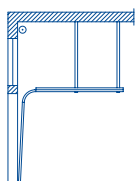
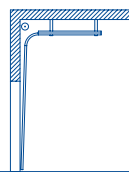
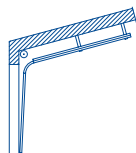
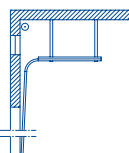
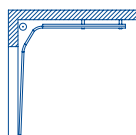
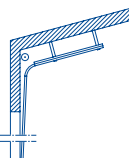
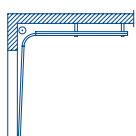
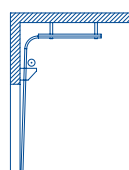
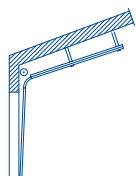
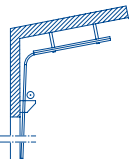
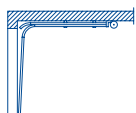
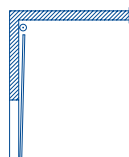
- 5) Door width up to 5500 mm
- 6) Class 4 = 1.0 kN/m² or 144 km/h
- 7) Class 3 = 0.7 kN/m² or 120 km/h
- 8) Class 2 = 0.45 kN/m² or 96 km/h
- 9) Class 2 = 12 m³/m²h

- 10) Class 1 = 24 m³/m²h
- 11) Lower class rating may apply for doors with compound glazing
- 12) For doors without glazing frame

Technical data overview

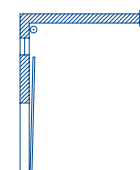
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Overview of track applications

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

Overview of track applications

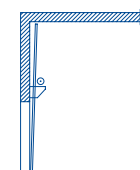
VA



As with track application V, with high-mounted torsion spring shaft
(Additional hand pulley required for manually operated doors!)

Door height RM \leq 3500 mm

VU

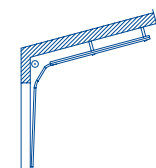


As with track application V, with low-mounted torsion spring shaft
(Additional hand pulley required for manually operated doors!)

Notice:

An in-factory technical inspection is required for the following track applications!

NK

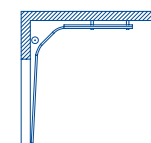


As with track application NS, but the degree values of both radii are adapted to the situation on-site

Door height RM \leq 5000 mm

Version RC 2 only possible with angle C = 40° and 45°.

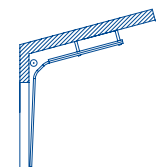
GS



As with track application NH with double radius

Door height RM \leq 5000 mm

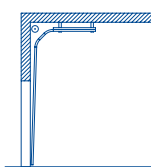
GK



As with track application NH with double radius and inclination
Double radius 361 mm

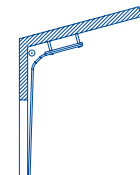
Door height RM \leq 5000 mm

HS



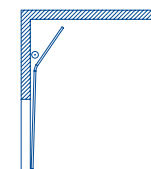
As with track application H with double radius

HK



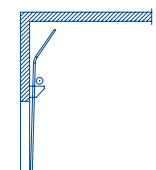
As with track application H, with double radius and inclination

VS



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!)

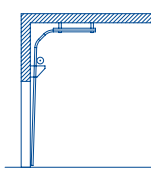
WS



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!)

Door height RM \geq 2250 mm

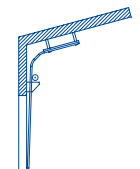
RS



As with track application HU with double radius

Door height RM \leq 5000 mm

RK



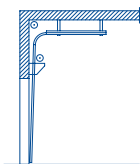
As with track application HU, with double radius and inclination

Door height RM \leq 5000 mm

Notice:

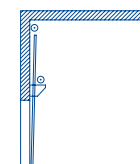
The sectional door Parcel is only available with these track applications. Technical inspection at the factory required!

HP



High-lift track application
With high- and low-mounted torsion spring shaft
Double radius 361 mm
Door width LZ \leq 3000 mm
Door height RM \leq 4250 mm
Only for sectional door Parcel

VP



Vertical track application
With high- and low-mounted torsion spring shaft
Door width LZ \leq 3000 mm
Door height RM \leq 4250 mm
Only for sectional door Parcel

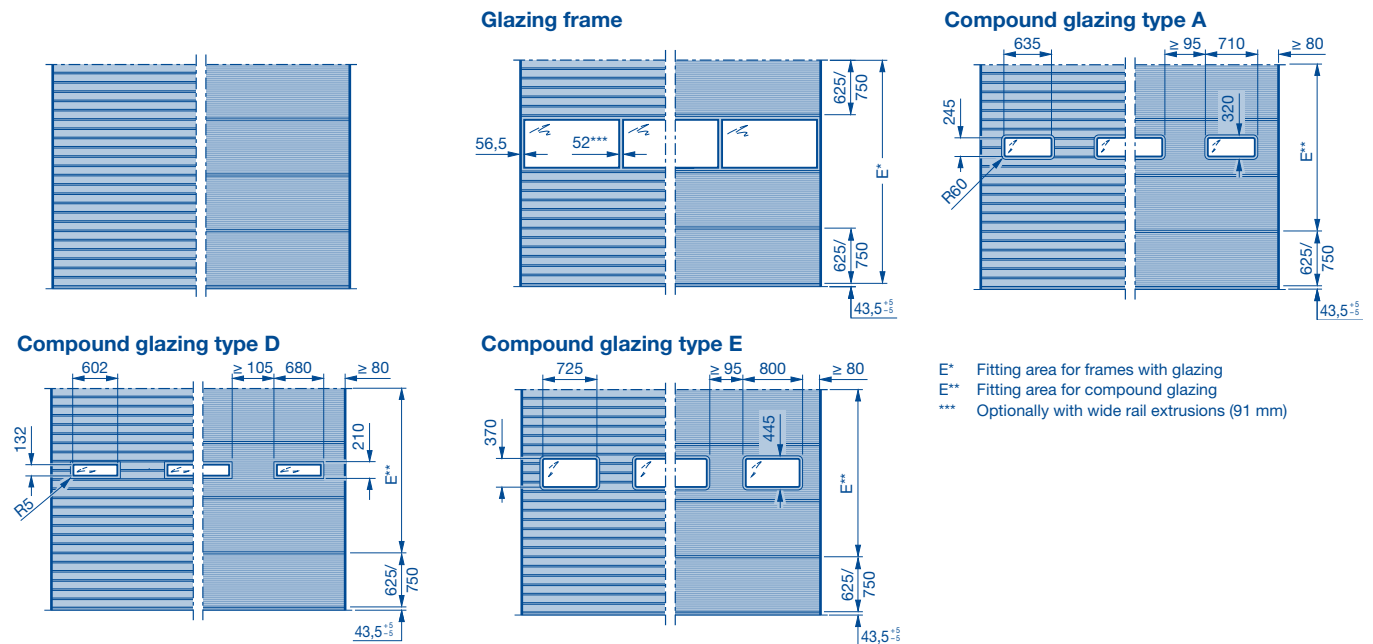
Sectional door SPU F42

Double-skinned steel sectional door

Stucco-textured / Micrograin

Door sections 625 and 750 mm high

External views



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!

RM	SPB 52	LZ	n ₁	
			TH 625	TH 750
7500			—	10
7375			1	9
7250			2	8
7125			3	7
7000			4	6
6875			5	5
6750			—	9
6625			1	8
6500			2	7
6375			3	6
6250			4	5
6125			5	4
6000			—	8
5875			1	7
5750			2	6
5625			3	5
5500			4	4
5375			5	3
5250			—	7
5125			1	6
5000			2	5
4875			3	4
4750			4	3
4625			5	2
4500			—	6
4375			1	5
4250			2	4
4125			3	3
4000			4	2
3875			5	1
3750			—	5
3625			1	4
3500			2	3
3375			3	2
3250			4	1
3125			5	—
3000			—	4
2875			1	3
2750			2	2
2625			3	1
2500			4	—
2375			5	1****
2250			—	3
2125			1	2
2000			2	1
1875			3	—
1			Number of infills / fields per aluminium frame	
(see Table 1)			Number of compound glazings per door section	
Number of infills / fields x 2			Number of ventilation grilles, ventilation cross-section 40 cm ² per grille	
1500				
2000				
2250				
2500				
2750				
3000				
3250				
3500				
3750				
4000				
4250				
4500				
4750				
5000				
5250				
5500				
5750				
6000				

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 36–38.
- Number of glazings, matching series 40, see page 39.

Table 1:

Number of compound glazings per door section

Type	Unit(s)	Door width
A, D	1	A: 1200–1670 mm D: 1200–1630 mm
	2	A: 1680–3000 mm D: 1640–3000 mm
	3	3010–4500 mm
	4	4510–5500 mm
	5	5510–6000 mm
E	1	1200–1850 mm
	2	1860–3000 mm
	3	3010–4500 mm
	4	4510–5500 mm
	5	5510–6000 mm

On request

Versions with glazing frame A3, B3, M3, S3, U3, LB, P on request

n₁ No. of door sections

RM Grid height

LZ Clear frame dimensions (from 1200)

SPB Rail width

TH Door section height

**** Top door section 500 mm

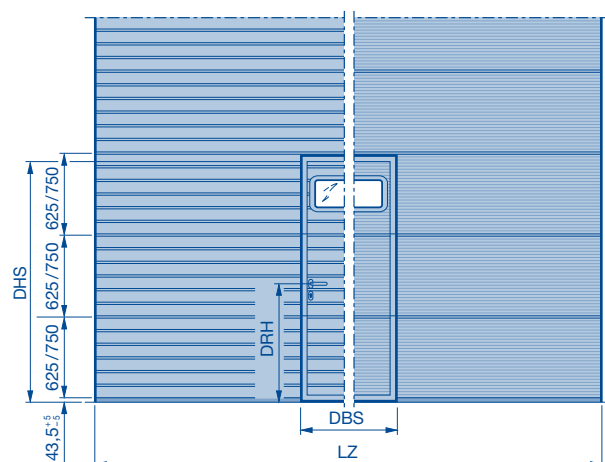
Sectional door SPU F42

With wicket door and trip-free threshold

Double-skinned steel sectional door

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. Compound glazing type E may not be used in the wicket door area.

Wicket door clear passage width (DBS) = 940 mm*

* For a door width of 1750–1840 mm, the clear passage width is 833 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. 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	TH 625	n ₁	TH 750	DHS			
RM	↑																		
Range 3	7500											7500	–		10	2205			
	7375											7375	1	+	9	2205			
	7250											7250	2	+	8	2205			
	7125											7125	3	+	7	2205			
	7000											7000	4	+	6	2205			
	6875											6875	5	+	5	2205			
	6750											6750	–		9	2205			
	6625											6625	1	+	8	2205			
	6500											6500	2	+	7	2205			
	6375											6375	3	+	6	2205			
Range 2	6250											6250	4	+	5	2205			
	6125											6125	5	+	4	2205			
	6000											6000	–		8	2205			
	5875											5875	1	+	7	2205			
	5750											5750	2	+	6	2205			
	5625											5625	3	+	5	2205			
	5500											5500	4	+	4	2205			
	5375											5375	5	+	3	2205			
	5250											5250	–		7	2205			
	5125											5125	1	+	6	2205			
Range 1	5000											5000	2	+	5	2205			
	4875											4875	3	+	4	2205			
	4750											4750	4	+	3	2205			
	4625											4625	5	+	2	2080			
	4500											4500	–		6	2205			
	4375											4375	1	+	5	2205			
	4250											4250	2	+	4	2205			
	4125											4125	3	+	3	2205			
	4000											4000	4	+	2	2080			
	3875											3875	5	+	1	1955			
Range 0	3750											3750	–		5	2205			
	3625											3625	1	+	4	2205			
	3500											3500	2	+	3	2205			
	3375											3375	3	+	2	2080			
	3250											3250	4	+	1	1955			
	3125											3125	5	–	–	1830			
	3000											3000	–		4	2205			
	2875											2875	1	+	3	2205			
	2750											2750	2	+	2	2080			
	2625											2625	3	+	1	1955			
Range -1	2500											2500	4	–	–	1830			
	2375											2375	5	–	–	1830			
	2250											2250	–	+	3	2125			
	2125											2125	1	+	2	2000			
	2000											2000	2	+	1	1875			
	1875											1875	–		–	–			
	3											4	5	Number of infills / fields per aluminium frame					
	2		3			4			5	Number of compound glazings per door section**									
	(Number of infills / fields – 1) × 2											Number of ventilation grilles, ventilation cross-section 40 cm ² per grille							
			1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500	5750
		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 36–38.
- Number of glazings, matching series 40, see page 39.

	On request
	Versions with glazing frame A3, B3, M3, S3, U3, LB, P on request
n ₁	No. of door sections
DHS	Clear passage heights of wicket door to grid height
SH ₁	Threshold height (rising from 5 to 10)
SH ₂	Threshold height (approx. 13)
SPB	Rail width
TH	Door section height
RM	Grid height
DBS	Wicket door clear passage width
DRH	Lever height
LZ	Clear frame dimensions (from 1500)
***	Top door section 500 mm

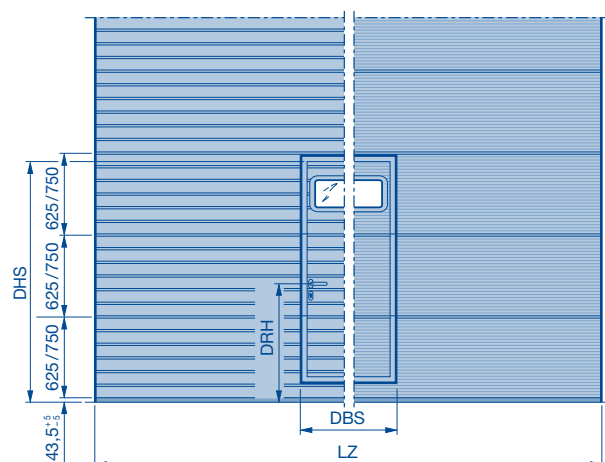
Sectional door SPU F42

With wicket door and threshold rail

Double-skinned steel sectional door

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. Compound glazing type E may not be used in the wicket door area.

Wicket door clear passage width (DBS) = 940 mm*

* For a door width of 1750–1840 mm, the clear passage width is 833 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. 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 625	TH 750								
RM	↑											7500	–	10	2205	
												7375	1	+	9	2205
Range 3												7250	2	+	8	2205
												7125	3	+	7	2205
												7000	4	+	6	2205
												6875	5	+	5	2205
												6750	–	–	9	2205
												6625	1	+	8	2205
												6500	2	+	7	2205
												6375	3	+	6	2205
												6250	4	+	5	2205
												6125	5	+	4	2205
Range 2												6000	–	–	8	2205
												5875	1	+	7	2205
												5750	2	+	6	2205
												5625	3	+	5	2205
												5500	4	+	4	2205
												5375	5	+	3	2205
												5250	–	–	7	2205
												5125	1	+	6	2205
												5000	2	+	5	2205
												4875	3	+	4	2205
Range 1												4750	4	+	3	2205
												4625	5	+	2	2080
												4500	–	–	6	2205
												4375	1	+	5	2205
												4250	2	+	4	2205
												4125	3	+	3	2205
												4000	4	+	2	2080
												3875	5	+	1	1955
												3750	–	–	5	2205
												3625	1	+	4	2205
Range 0												3500	2	+	3	2205
												3375	3	+	2	2080
												3250	4	+	1	1955
												3125	5	–	–	1830
												3000	–	–	4	2205
												2875	1	+	3	2205
												2750	2	+	2	2080
												2625	3	+	1	1955
												2500	4	–	–	1830
												2375	5	+	1***	1830
Range -1												2250	–	–	3	2205
												2125	1	+	2	2080
												2000	2	+	1	1955
												1875	–	–	–	–
												Number of infills/fields per aluminium frame				
												Number of compound glazings per door section**				
(Number of infills/fields – 1) × 2											Number of ventilation grilles, ventilation cross-section 40 cm ² per grille					
1750 2000 2000 2250 2500 2500 2750 3000 3250 3500 3750 4000 4250 4500 4750 5000 5250 5500 5750 6000																
SPB 52																
LZ																

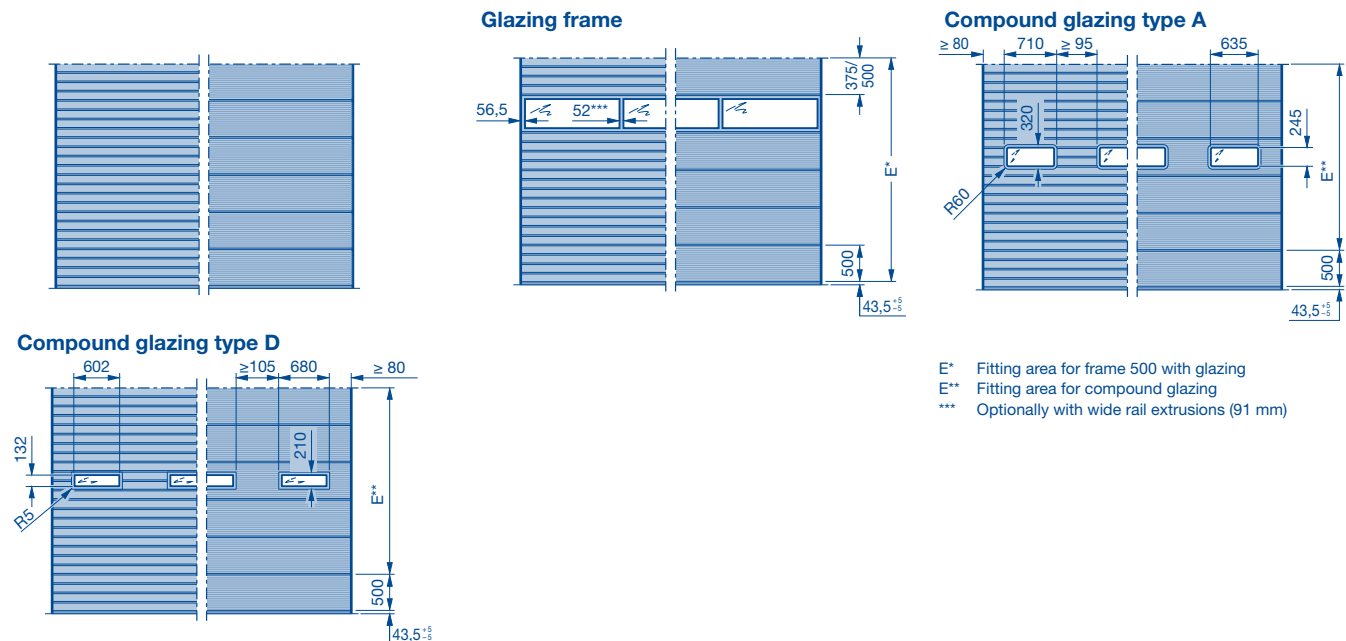
Sectional door SPU F42

Double-skinned steel sectional door

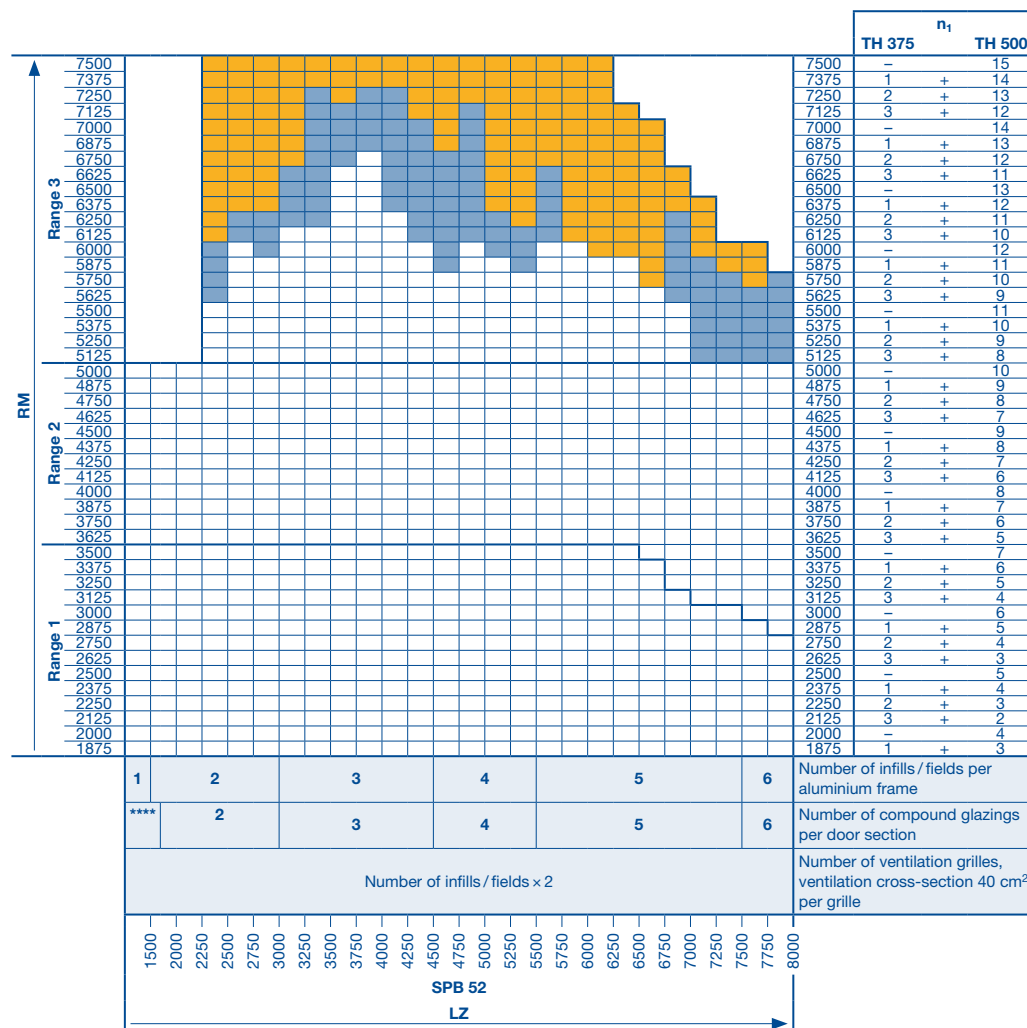
Stucco-textured / Micrograin

Door sections 375 and 500 mm high

External views



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:

- Thermo glazing frames only up to a width of 7000 mm.
- For a view of the matching appearance with doors with wicket door see pages 36–38.
- Number of glazings, matching series 40, see page 39.

- On request
- Versions with glazing frame A3, B3, M3, S3, U3, LB, P on request
- Range change

- n₁ No. of door sections
- RM Grid height
- LZ Clear frame dimensions (from 1200)
- SPB Rail width
- TH Door section height
- **** See Table 1 on page 10

Glazing heights for matching external appearance

SPU F42 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

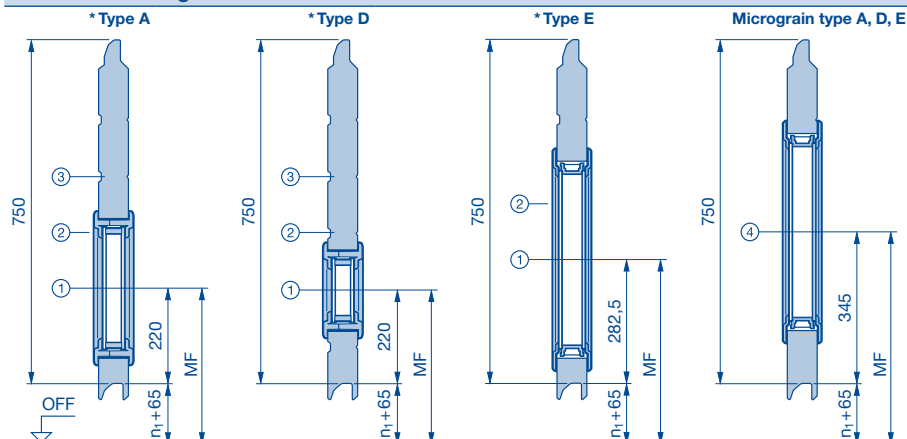
(Centre of window from FFL)

Door section heights 500, 625 and 750 mm

Calculating the glazing heights for compound windows type A, type D and type E.

See door type for number of door sections and glazing areas! The illustrations correspond to a section depth of 42 mm.

Door section height 750 mm



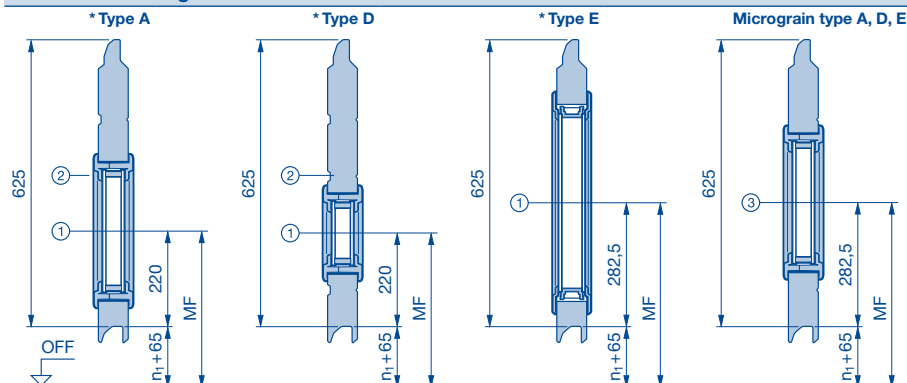
Glazing height type A and D

- ① = $n_1 + 65 + 220$
- ② = $n_1 + 65 + 220 + 125$
- ③ = $n_1 + 65 + 220 + 250$
- ④ = $n_1 + 65 + 345$

Glazing height type E

- ① = $n_1 + 65 + 282.5$
- ② = $n_1 + 65 + 282.5 + 125$
- ④ = $n_1 + 65 + 345$

Door section height 625 mm



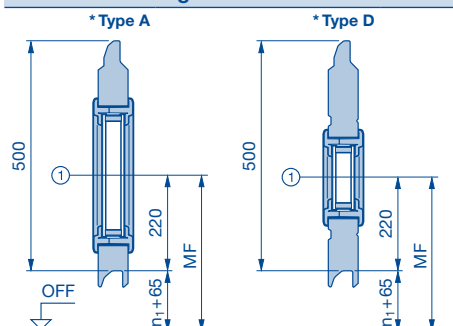
Glazing height type A and D

- ① = $n_1 + 65 + 220$
- ② = $n_1 + 65 + 220 + 125$
- ③ = $n_1 + 65 + 282.5$

Glazing height type E

- ① = $n_1 + 65 + 282.5$
- ③ = $n_1 + 65 + 282.5$

Door section height 500 mm



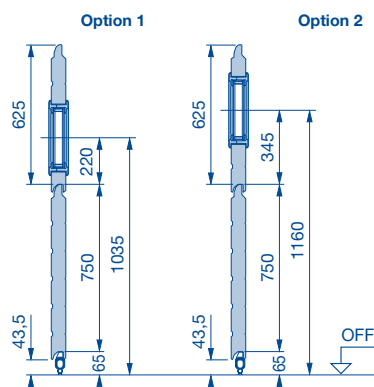
Glazing height type A and D

- ① = $n_1 + 65 + 220$

Glazing height type E

Not possible!

Calculation example



Given:

- Door type SPU F42; grid height (RM) = 3250 mm; glazing type A; position see below
- 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	$750 + 65 + 220 = 1035$ mm from FFL
2	in 2nd door section 625 mm at position 2	$750 + 65 + 220 + 125 = 1160$ mm from FFL
3	in 3rd door section 625 mm at position 1	$750 + 625 + 65 + 220 = 1660$ mm from FFL
4	in 3rd door section 625 mm at position 2	$750 + 625 + 65 + 220 + 125 = 1785$ mm from FFL
etc.		

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

Glazed aluminium sectional door with steel bottom section

Technical drawing of a window frame assembly. The drawing shows a cross-section of the frame with dimensions and labels.

Dimensions:

- Top vertical dimension: 55
- Left vertical dimension: 56,5
- Left vertical dimension: 120
- Right vertical dimension: 750
- Bottom horizontal dimension: 1950
- Bottom horizontal dimension: LZ

Labels and components:

- TH: Threshold
- 52**: Glass unit width
- 120: Glass unit height
- 55: Frame height
- 56,5: Frame width
- 1950: Total width
- LZ: Glass unit length

- * On request 115 mm for a matching appearance to a door with wicket door and trip-free threshold with the same door height.
- ** Optionally with wide rail extrusions (91 mm)

- 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 36–38.
- Number of glazings, matching series 40, see page 39.

RM		Range 3		Range 2		Range 1		LZ																	
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																									
1875																									
1	2	3	4	5	6	Number of infills / fields per aluminium frame																			
Number of infills / fields x 2						Number of ventilation grilles, ventilation cross-section 40 cm² per grille																			
1500	2000	2250	2500	2750	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500	5750	6000	6250	6500	6750	7000	7250	7500	7750	8000
SPB 52																									
LZ																									

TH	Door section height
----	---------------------

Bottom section height 1500

- Number of glazings, matching series 40, see page 39.

[illegible]

For versions with real glass infill in the wicket door, the threshold height **SH**₂ begins at LZ 4510 mm.

n_1	Number of aluminium frames
Sn_1	Number of aluminium frames in the wicket door
TH	Door section height

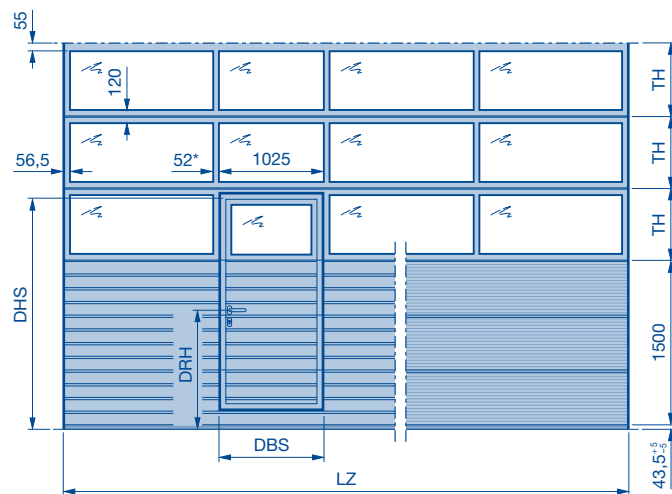
Sectional door APU F42

With wicket door and threshold rail

Glazed aluminium sectional door with steel bottom section

Bottom section height 1500

Exterior view



Lever height on request

Wicket door clear passage width (DBS) = 940 mm*

Wicket door passage height (DHS) =
 $Sn_1 \times TH + (\text{bottom section height} - 45)$

Sn_1 Number of frames in the wicket door
· Optionally with wide rail extrusions (91 mm)
· For a door width of 1750 – 1840 mm, the clear passage width is 833 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.
- From LZ > 5500 mm, the bottom door section consists of a 375 / 500 mm section and 2 × 125 mm aluminium bottom profile.
- For a view of the matching appearance with doors without wicket door see pages 36 – 38.
- Number of glazings, matching series 40, see page 39.

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																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
RM	Range 3	7500																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		

Glazed aluminium sectional door with thermal break, with steel bottom section

[illegible]

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

** Optionally with wide rail extrusions (91 mm)

- 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 36–38.
- Number of glazings, matching series 40, see page 39.

RM		SPB 52					LZ								
		Number of infills / fields × 2					Number of ventilation grilles, ventilation cross-section 40 cm ² per grille								
<div> <div>Range 3</div> <div>Range 2</div> <div>Range 1</div> </div>	7500						n ₁	SO ₇₅₀	n ₁	SO ₁₅₀₀					
	7375						9	7500	8	7500					
	7250						8	6790	7	6790					
	7125							6780		6780					
	7000						7	6040	6	6040					
	6875							6030		6030					
	6750						6	5290	5	5290					
	6625							5280		5280					
	6500						5	4540	4	4540					
	6375							4530		4530					
	6250						4	3790	3	3790					
	6125							3780		3780					
	6000						3	3040	2	3040					
	5875							3030		3030					
	5750						2	2290	1	2290					
	5625							2280		2280					
	5500						1	1875	1	1875					
	5375							1875		1875					
	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															
1875															

TH	Door section height
----	---------------------

Glazed aluminium sectional door with thermal break, with steel bottom section
Bottom section height 750

Technical drawing of a rectangular layout, likely a floor plan or a technical drawing of a component. The drawing shows a grid of rectangular sections, some of which are labeled with μ_2 . Dimensions are indicated by arrows and text:

- Overall width: 43,5 ± 0,5
- Overall height: 115
- Top-left section width: 56,5
- Top-left section height: 52**
- Top-middle section width: 1025
- Top-right section height: 120
- Left side height: DHS
- Bottom-left section height: DRH
- Bottom-middle section width: DBS
- Bottom-right section height: 750
- Bottom-right section width: LZ
- Right side labels: TH (repeated four times)

- 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 36–38.
- Number of glazings, matching series 40, see page 39.

[illegible]

For versions with real glass infill in the wicket door, the threshold height **SH₂** begins at LZ 4510 mm.

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

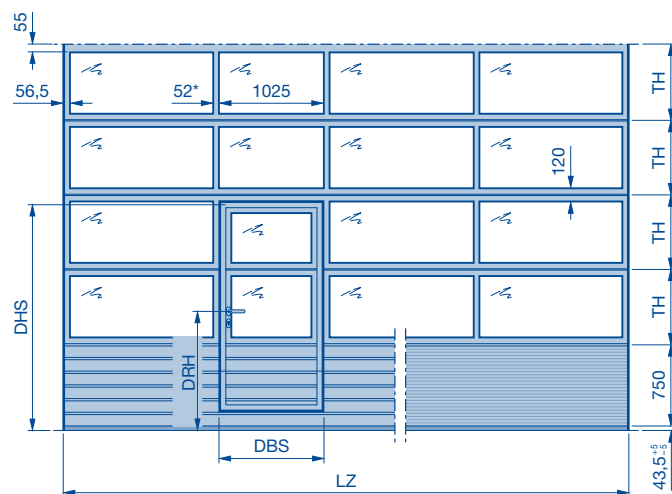
Sectional door APU F42 Thermo

With wicket door and threshold rail

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) = 940 mm*

Wicket door clear passage height (DHS) =
 $Sn_1 \times TH + (\text{bottom section height} - 45)$

Sn_1 Number of frames in the wicket door

* Optionally with wide rail extrusions (91 mm)

** For a door width of 1750–1840 mm, the clear passage width is 833 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 36–38.
- Number of glazings, matching series 40, see page 39.

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																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												</

Notice:

For versions with real glass infill in the wicket door, the threshold height **SH₂** begins at LZ 4510 mm.

On request	DHS	Wicket door clear passage height
Versions with glazing A3, B3, M3, S3, U3, LB, P, XU on request	DBS	Wicket door clear passage width
Range change	DRH	Lever height
Range change with glazing A3, B3, M3, S3, U3, LB, P, XU	LZ	Clear frame dimensions (from 1500)
	RM	Grid height
	SPB	Rail width

SH ₁	Threshold height (200)
SH ₂	Threshold height (325)
n ₁	Number of aluminium frames
Sn ₁	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

Technical drawing of a window unit showing dimensions and components. The drawing includes a top view and a side view. The top view shows a rectangular unit with a width of 115 and a height of 120. The unit is divided into a grid of 12 panes (3 rows by 4 columns). The panes are labeled with h_2 . The dimensions of the panes are 56,5 (width) and 52** (height). The total width of the unit is 1025. The side view shows the unit with a height of 1500 and a width of 43,5. The unit is divided into a grid of 12 panes (3 rows by 4 columns). The panes are labeled with h_2 . The dimensions of the panes are 56,5 (width) and 52** (height). The total width of the unit is 1025. The side view also shows the unit with a height of 1500 and a width of 43,5. The unit is divided into a grid of 12 panes (3 rows by 4 columns). The panes are labeled with h_2 . The dimensions of the panes are 56,5 (width) and 52** (height). The total width of the unit is 1025.

- 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 36–38.
- Number of glazings, matching series 40, see page 39.

For versions with real glass infill in the wicket door, the threshold height **SH₂** begins at LZ 4510 mm.

n_1	Number of aluminium frames
Sn_1	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

- When using a shaft operator (fitting example 5), the door locking is always opposite the operator side.
- From LZ > 5500 mm, the bottom door section consists of a 375/500 mm section and 2 x 125 mm aluminium bottom profile.
- For a view of the matching appearance with doors without wicket door see pages 36–38.
- Number of glazings, matching series 40, see page 39.

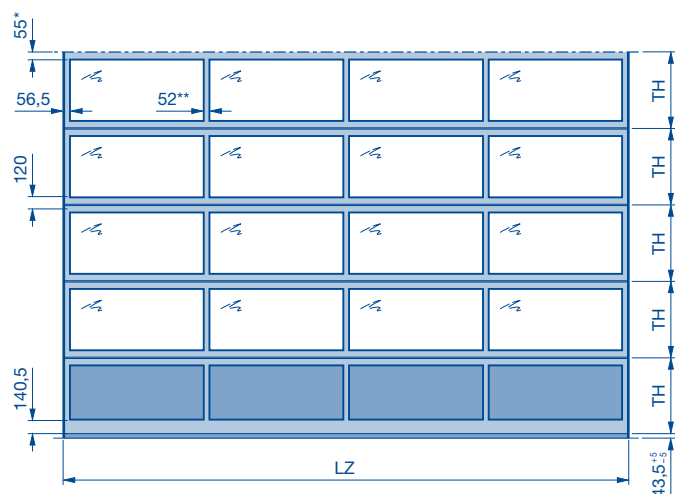
For versions with real glass infill in the wicket door, the threshold height **SH₂** begins at LZ 4510 mm.

SH_1	Threshold height (200)
SH_2	Threshold height (325)
n_1	Number of aluminium frames
Sn_1	Number of aluminium frames in the wicket door
TH	Door section height

Sectional door ALR F42

Glazed aluminium sectional door

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.

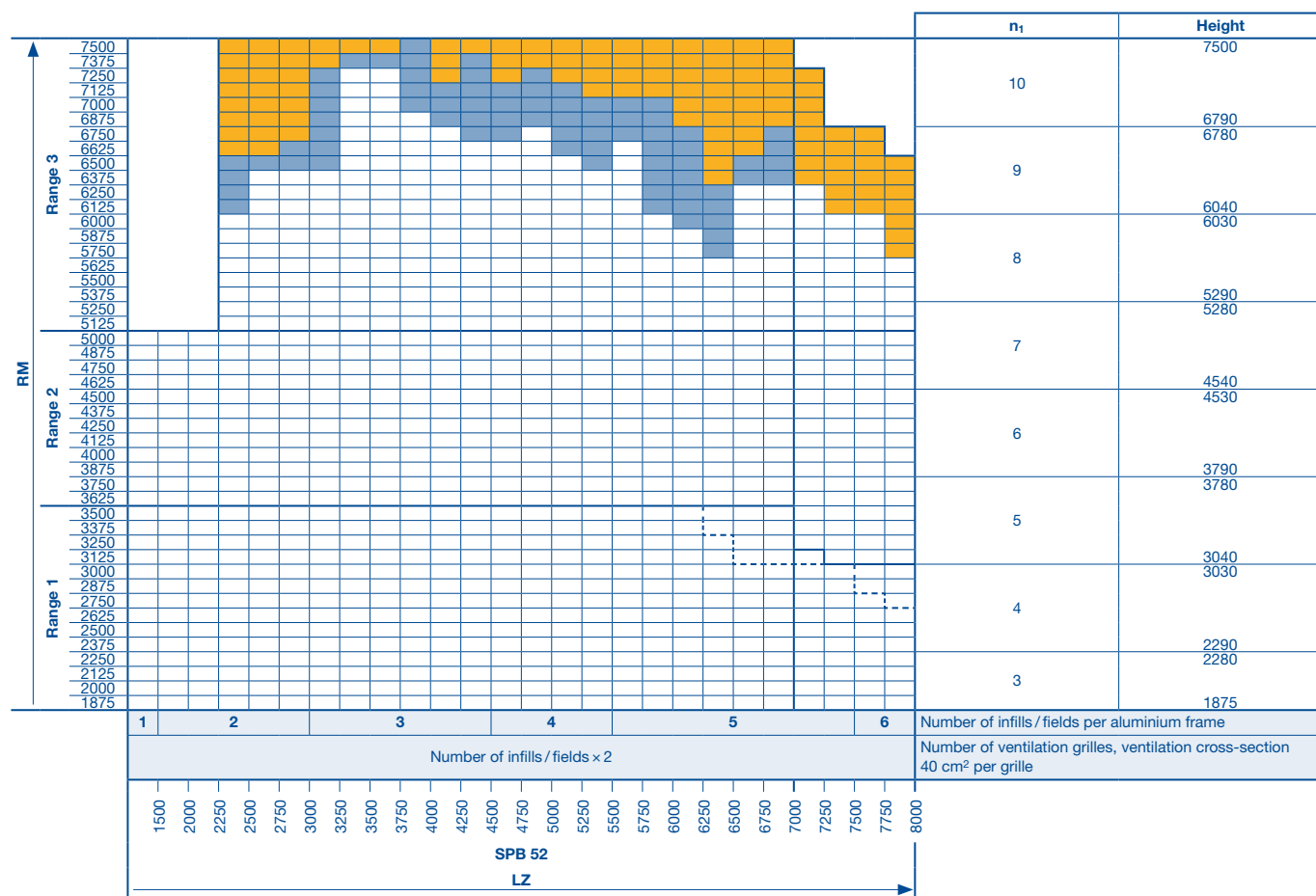
** Optionally with wide rail extrusions (91 mm)

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 36–38.
- Number of glazings, matching series 40, see page 39.

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
- Versions with glazing A3, B3, M3, S3, U3, LB, P, XU on request
- Range change
- Range change with glazing A3, B3, M3, S3, U3, LB, P, XU

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

Glazed aluminium sectional door

[illegible]

- 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 36–38.
- Number of glazings, matching series 40, see page 39.

RM	SH ₁										SH ₂										n ₁	Height	RM	DHS	Sn ₁	Height
Range 3	7500																		7500	7500	2195	3				
	7375																	7375	6875	2007						
	7250																	7250	6750	2193						
	7125																	7125	6625	2152						
	7000																	7000	6500	2110						
	6875																	6875	6375	2068						
	6750																	6750	6250	2027						
	6625																	6625	6125	1985						
	6500																	6500	6000	1942						
	6375																	6375	5875	1900						
Range 2	6250																		6250	5750	2098	3				
	6125																		6125	5625	2051					
	6000																	6000	5500	2004						
	5875																	5875	5375	1958						
	5750																	5750	5250	1910						
	5625																	5625	5125	1866						
	5500																	5500	5000	1822						
	5375																	5375	4875	1779						
	5250																	5250	4750	1736						
	5125																	5125	4625	1692						
Range 1	5000																		5000	4500	2188	3				
	4875																		4875	4375	2125					
	4750																		4750	4250	2063					
	4625																		4625	4125	2000					
	4500																		4500	4000	1938					
	4375																		4375	3750	1875					
	4250																		4250	3625	1822					
	4125																		4125	3500	1779					
	4000																		4000	3375	1736					
	3875																		3875	3250	1692					
Range 1	3750																		3750	3000	2179	3				
	3625																		3625	2875	2085					
	3500																		3500	2750	1991					
	3375																		3375	2625	1898					
	3250																		3250	2500	1804					
	3125																									

For versions with real glass infill in the wicket door, the threshold height **SH₂** begins at LZ 4510 mm.

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

Glazed aluminium sectional door

Technical drawing of a rectangular panel layout. The drawing shows a grid of panels with various dimensions and labels. The overall width is labeled LZ and the overall height is labeled $43,5^{+5}_{-5}$. The top edge has a dimension of $56,5$ and a small vertical dimension of $5,5$. The right edge has a vertical dimension of 120 . The bottom edge has a dimension of $140,5^{+5}_{-5}$ and a label DBS . The left edge has a label DHS . The panels are labeled with h_2 and 1025 . A central panel is labeled DBH . The panels are arranged in a grid with a central panel labeled DBH and a panel labeled DBS at the bottom. The panels are labeled with h_2 and 1025 . The panels are arranged in a grid with a central panel labeled DBH and a panel labeled DBS at the bottom. The panels are labeled with h_2 and 1025 .

- 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 36–38.
- Number of glazings, matching series 40, see page 39.

[illegible]

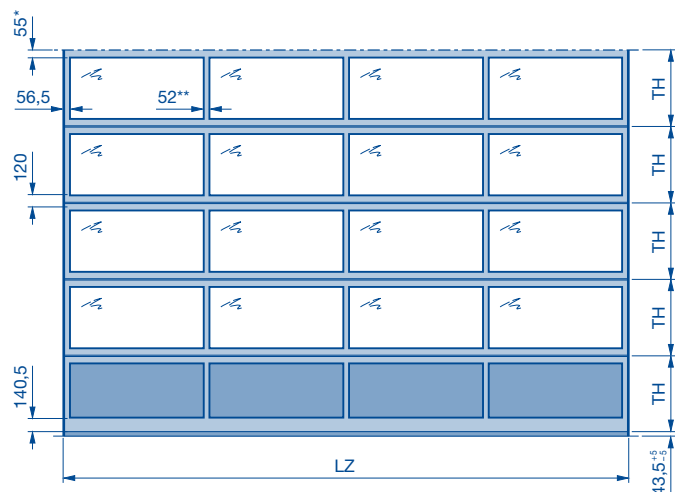
For versions with real glass infill in the wicket door, the threshold height **SH₂** begins at LZ 4510 mm.

SH_1	Threshold height (181)
SH_2	Threshold height (306)
n_1	Number of aluminium frames
Sn_1	Number of aluminium frames in the wicket door
TH	Door section height

Sectional door ALR F42 Thermo

Glazed aluminium sectional door with thermal break

Exterior view



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

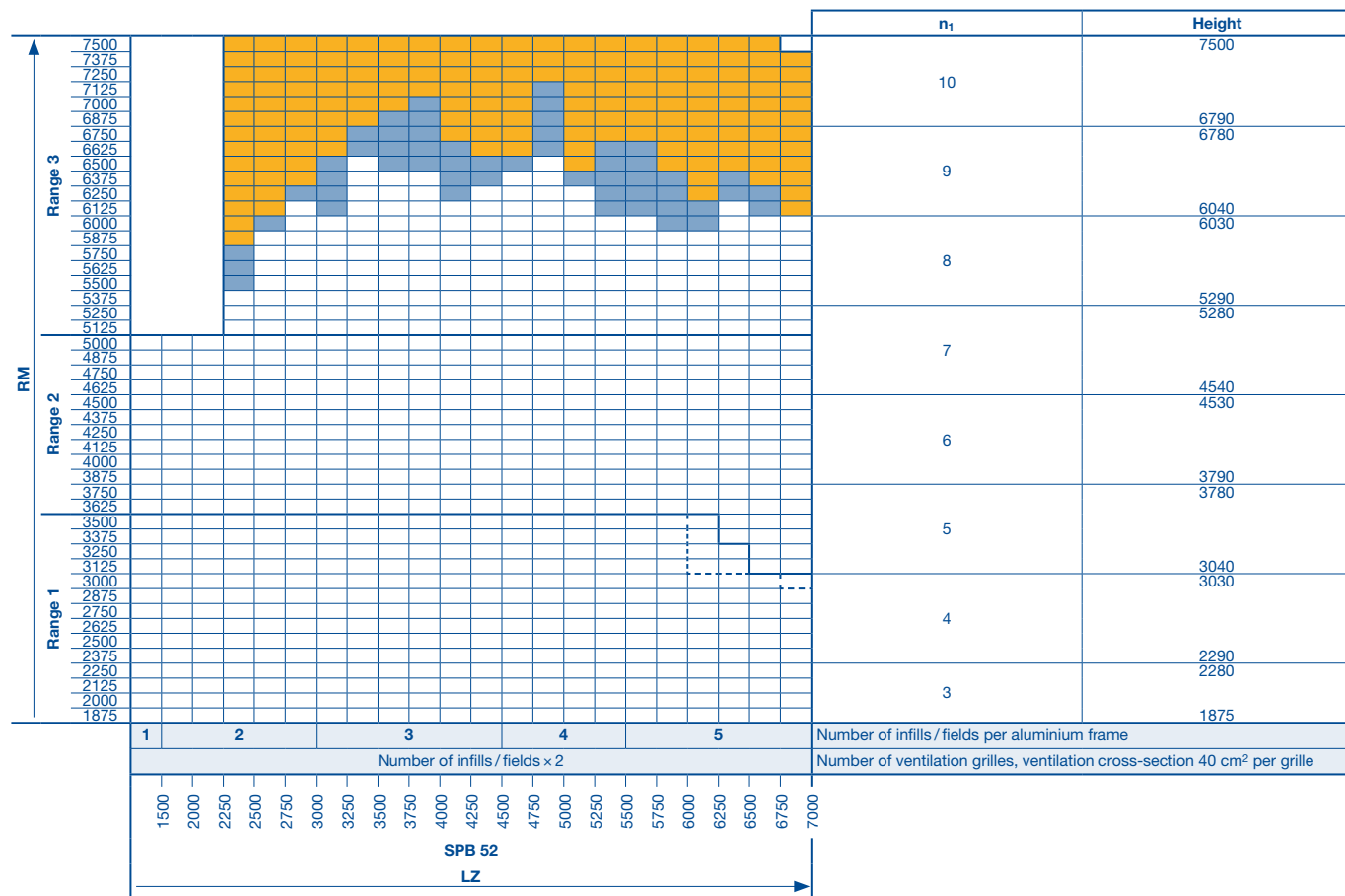
- * On request 115 mm for a matching appearance to a door with wicket door and trip-free threshold with the same door height.
- ** Optionally with wide rail extrusions (91 mm)

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 36–38.
- Number of glazings, matching series 40, see page 39.

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
- Versions with glazing A3, B3, M3, S3, U3, LB, P, XU on request
- Range change
- Range change with glazing A3, B3, M3, S3, U3, LB, P, XU

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

Glazed aluminium sectional door with thermal break

[illegible]

- 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 36–38.
- Number of glazings, matching series 40, see page 39.

[illegible]

For versions with real glass infill in the wicket door, the threshold height **SH₂** begins at LZ 4510 mm.

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

Glazed aluminium sectional door with thermal break

Technical drawing of a rectangular panel layout. The drawing shows a grid of panels with various dimensions and labels. The overall width is 56.5, and the overall height is 55. The layout includes a central section with a width of 52** and a height of 1025. A vertical dimension of 120 is indicated on the right side. The layout is divided into sections labeled TH, DRH, DBS, and LZ. The overall width is also labeled as 43.5 ± 0.5. The drawing includes a scale bar and a north arrow.

- 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 36–38.
- Number of glazings, matching series 40, see page 39.

RM		SPB 52										LZ		n ₁		Height	RM	DHS	S _{n1}	Height								
Range 3	7500	SH ₁										SH ₂										10	7500	7500	2195	3		
	7375																							7375	2157			
	7250																							7250	2120			
Range 2	7125																					9	6790	7125	2082	3		
	7000																							7000	2045			
	6875																							6875	2007			
	6750																							6750	1993			
	6625																							6625	1952			
	6500																							6500	2110			
	6375																							6375	2068			
	6250																							6250	2027			
	6125																							6125	1985			
	6000																							6000	2192			
Range 1	5875																					8	6030	5875	2145	3		
	5750																							5750	2098			
	5625																							5625	2051			
	5500																							5500	2004			
	5375																							5375	1958			
	5250																							5250	2190			
	5125																							5125	2136			
	5000																							5000	2083			
	4875																							4875	2029			
	4750																							4750	1976			
Range 1	4625																					7	4540	4625	1922	3		
	4500																							4500	2188			
	4375																							4375	2125			
	4250																							4250	2063			
	4125																							4125	2000			
	4000																							4000	1938			
	3875																							3875	1875			
	3750																							3750	2184			
	3625																							3625	2109			
	3500																							3500	2034			
Range 1	3375																					6	3780	3375	1959	3		
	3250																							3250	1884			
	3125																							3125	1809			
	3000																							3000	2179			
	2875																							2875	2085			
	2750																							2750	1991			
	2625																							2625	1898			
	2500																							2500	1804			
	2375																							2375	2295			
	2250																							2250	2170			
Range 1	2125																					5	3040	2125	2045	3		
	2000																							2000	1920			
	3000																							3000	2179			
	2875																							2875	2085			
	2750																							2750	1991			
	2625																							2625	1898			
	2500																							2500	1804			
	2375																							2375	2295			
	2250																							2250	2170			
	2125																							2125	2045			
Range 1	2000																					4	3030	2000	1920	3		
	3000																							3000	2179			
	2875																							2875	2085			
	2750																							2750	1991			
	2625																							2625	1898			
	2500																							2500	1804			
	2375																							2375	2295			
	2250																							2250	2170			
	2125																							2125	2045			
	2000																							2000	1920			
Range 1	3																					3	2290	2290	2170	4	2500	
	4																							2280	2170			
	5																							2125	2045			
	6																							2000	1920			
	7																							3790	3875			1875
	8																							4530	4625			1922
	9																							6030	6125			1985
	10																							6780	6875			2007
	11																							7500	7500			2195
	12																							8225	8225			2245

For versions with real glass infill in the wicket door, the threshold height **SH₂** begins at LZ 4510 mm.

SH_1	Threshold height (181)
SH_2	Threshold height (306)
n_1	Number of aluminium frames
Sn_1	Number of aluminium frames in the wicket door
TH	Door section height

Aluminium sectional door with extensive glazing, real glass

Technical drawing of a rectangular plate. The overall width is labeled LZ . The overall height is labeled $135,5$. The plate is divided into five horizontal sections. The top section has a height of 55 and contains the label $56,5^*$. The four sections below it each have a height of 120 . The sections are labeled on the right as UTH, TH, TH, TH, and UTH. The plate is shown with a blue border and a dashed line indicating the top edge.

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

$$\begin{aligned} \text{UTH} &= \text{TH} + 84 \leq 785 \\ \text{OTH} &= \text{TH} - 35 \end{aligned}$$

* 76 with optional wide rail extrusions (91 mm)

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

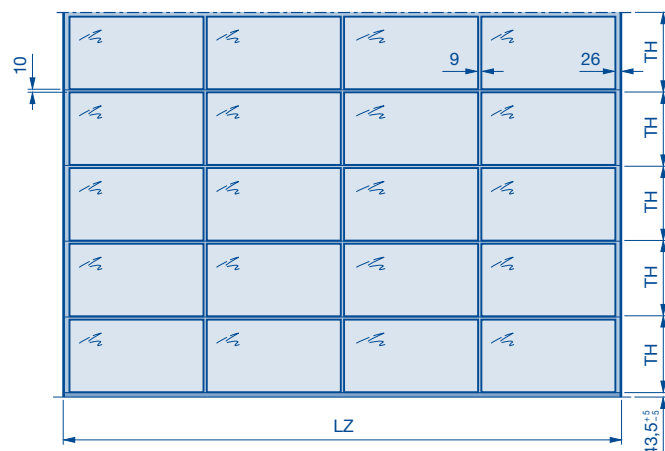
		n ₁	Height												
RM ↑	5000	6	4000												
	4875														
	4750														
	4625														
	4500														
	4375														
	4250	5	3625 3620												
	4125														
	4000														
	3875														
	3750														
	3625														
	3500	4	2930 2920												
	3375														
	3250														
	3125														
	3000														
	2875														
2750	3	2230 2220													
2625															
2500															
2375															
2250															
2125															
2000															
1875															
	1 → 3330	2	Number of infills / fields per aluminium frame												
	2250	2500	2750	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500	** Optionally with wide rail extrusions (91 mm)
	SPB 52**														
	LZ														

→	up to LZ
SPB	Rail width
n ₁	Number of aluminium frames
UTH	Bottom door section height
TH	Door section height
OTH	Top door section height

Sectional door ALR F42 Vitraplan

Aluminium sectional door with exclusive glazing

Exterior view



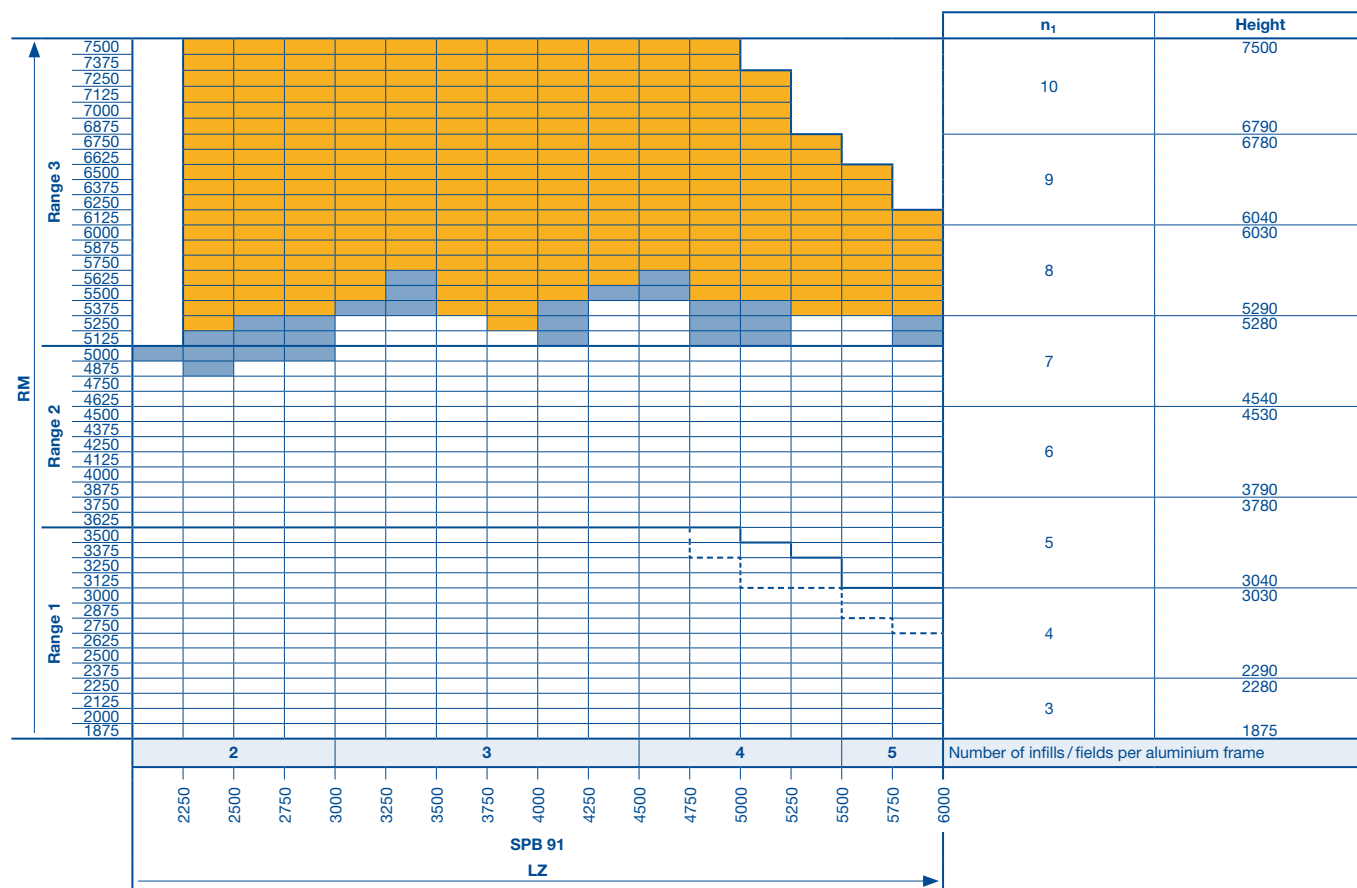
$$TH = \frac{\text{Door height} - 35}{\text{Number of door section frames}}$$

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.

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
- Versions with glazing S3, U3 on request
- Range change
- Range change with glazing S3, U3

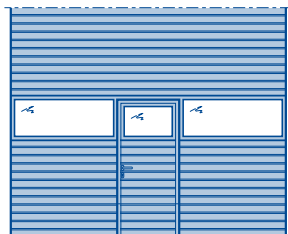
- RM Grid height
- LZ Clear frame dimensions (from 2000)
- SPB Rail width
- n₁ Number of aluminium frames
- TH Door section height

Glazing / wicket door arrangements

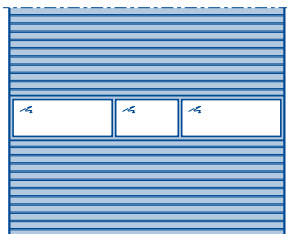
Sectional doors with 3 infills / fields

Glazing arrangements – external view

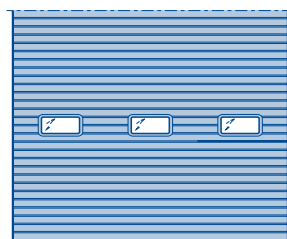
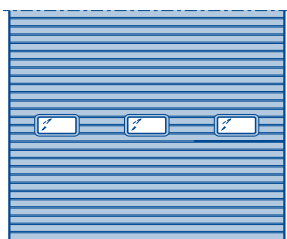
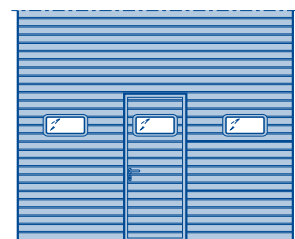
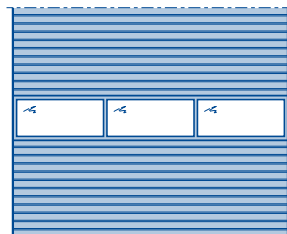
Sectional door SPU F42 with wicket door with trip-free threshold



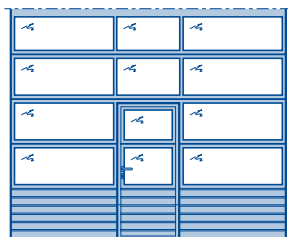
Sectional door SPU F42, matching doors with wicket door



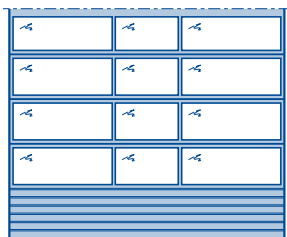
Sectional door SPU F42 with standard window division



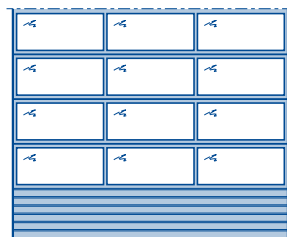
Sectional door APU F42 with wicket door with trip-free threshold



Sectional door APU F42, matching doors with wicket door



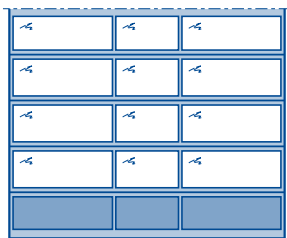
Sectional door APU F42 with standard window division



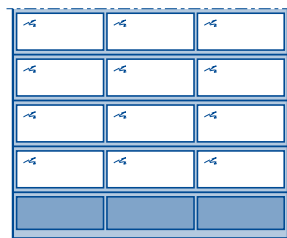
Sectional door ALR F42 with wicket door with trip-free threshold



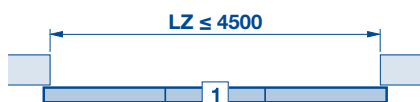
Sectional door ALR F42, matching doors with wicket door



Sectional door ALR F42 with standard window division



Arrangement of the wicket door



Notices:

- Wicket door clear passage width (DBS) = 940 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

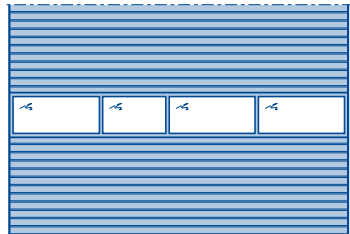
Sectional doors with 4 infills / fields

Glazing arrangements – external view

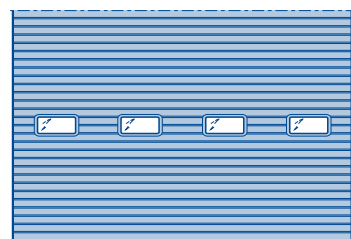
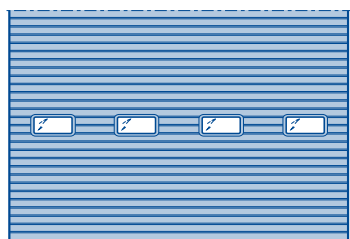
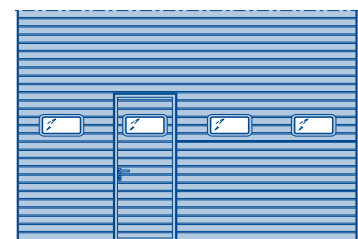
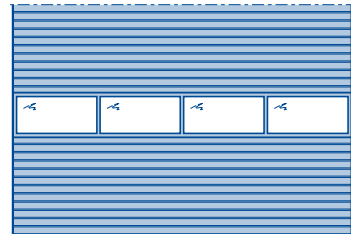
Sectional door SPU F42 with wicket door with trip-free threshold



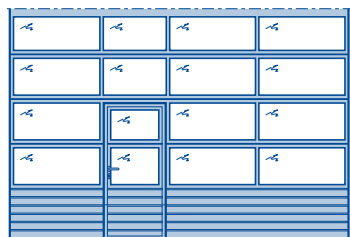
Sectional door SPU F42, matching doors with wicket door



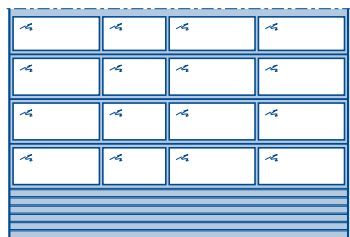
Sectional door SPU F42 with standard window division



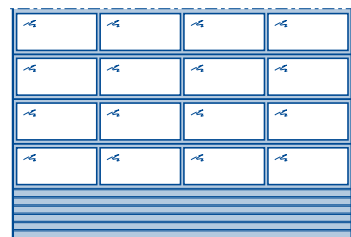
Sectional door APU F42 with wicket door with trip-free threshold



Sectional door APU F42, matching doors with wicket door



Sectional door APU F42 with standard window division



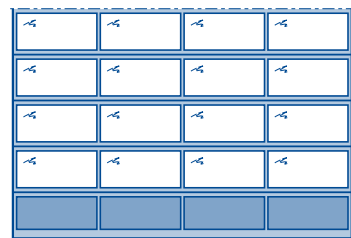
Sectional door ALR F42 with wicket door with trip-free threshold



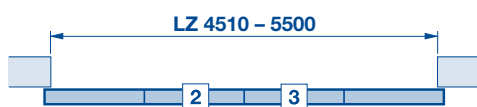
Sectional door ALR F42, matching doors with wicket door



Sectional door ALR F42 with standard window division



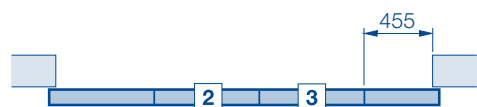
Arrangement of the wicket door



Notices:

- Wicket door clear passage width (DBS) = 940 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:

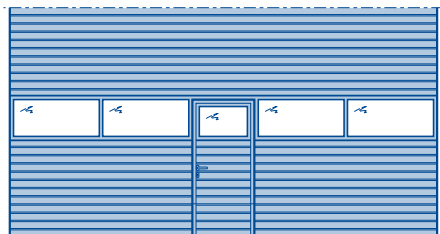
- Not possible for doors with real glass.

Glazing / wicket door arrangements

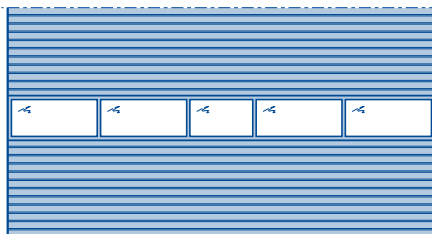
Sectional doors with 5 infills / fields

Glazing arrangements – external view

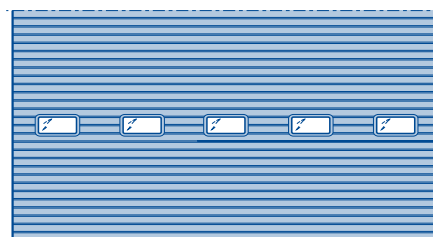
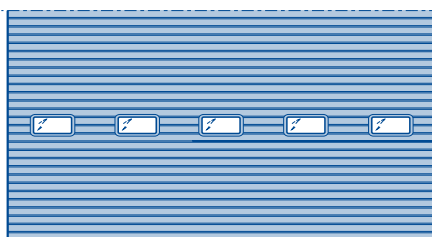
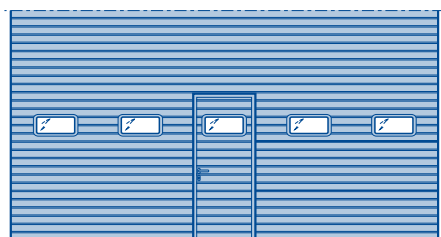
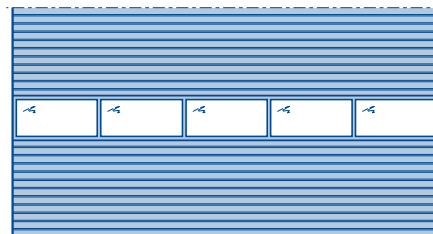
Sectional door SPU F42 with wicket door with trip-free threshold



Sectional door SPU F42, matching doors with wicket door



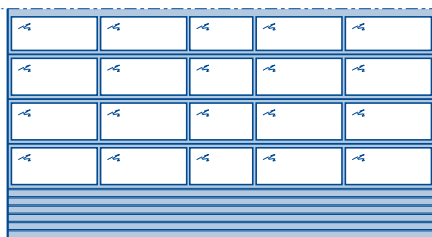
Sectional door SPU F42 with standard window division



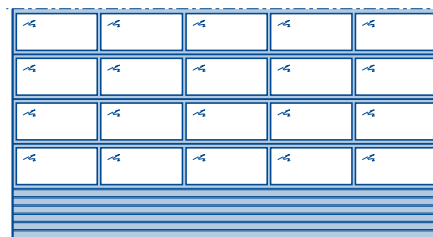
Sectional door APU F42 with wicket door with trip-free threshold



Sectional door APU F42, matching doors with wicket door



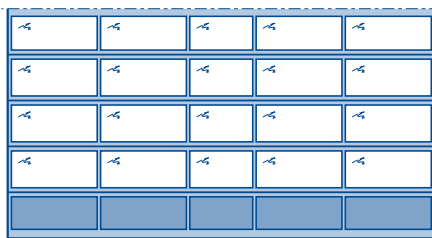
Sectional door APU F42 with standard window division



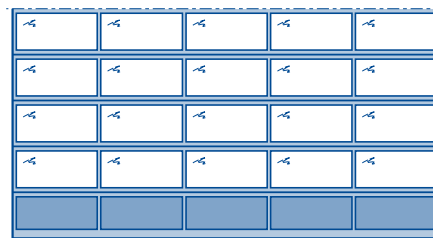
Sectional door ALR F42 with wicket door with trip-free threshold



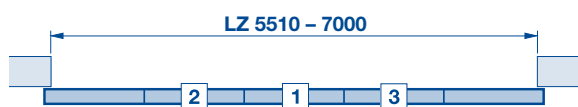
Sectional door ALR F42, matching doors with wicket door



Sectional door ALR F42 with standard window division



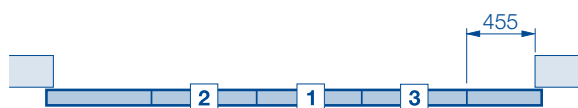
Arrangement of the wicket door



Notices:

- Wicket door clear passage width (DBS) = 940 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.






Infills / fields and glazing

Series 40

Number of infills / fields per aluminium frame

	Sectional door without wicket door																										
Aluminium frame type N	1	2	3		4		5		6		7		8														
Aluminium frame type B	1	2 → 3330				3				4 → 6670				5													
	Sectional door with wicket door																										
Aluminium frame type N		3 → 1750–3500						4		5		6		7													
	1200	1500	2000	2250	2500	2750	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500	5750	6000	6250	6500	6750	7000	7250	7500	7750	8000
	LZ																										

Number of compound glazings per door section

	Sectional door without wicket door																										
Standard type A	1 → 1680	2	3	4	5	6	7	8																			
Standard type D	1 → 1640	2	3	4	5	6	7	8																			
Standard type E	1 → 1860	2 → 2750	3 → 3650	4 → 4540	5 → 5510	6																					
	Sectional door with wicket door																										
Type A or type D		1 → 1750–2650	3	4	5	6	7																				
Type E		1 → 1840–2920	3 → 3880	4 → 4830	5 → 5780	6																					
	1200	1500	2000	2250	2500	2750	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500	5750	6000	6250	6500	6750	7000	7250	7500	7750	8000
	LZ																										

LZ Clear frame dimension
→ up to LZ

Side door NT 60 / NT 80 Thermo

Possible handing options

Fitting in the opening

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

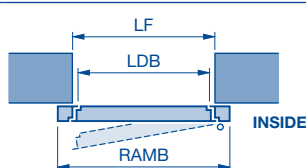


Fitting in the opening, opening inwards or outwards, RH or LH hinged



Fitting behind the opening

Only opening inwards, RH or LH hinged



Structural opening	Ordering size Overall frame dimensions RAMB x RAMH
875 x 2000	855 x 1990
875 x 2125	855 x 2115
1000 x 2000	980 x 1990
1000 x 2125	980 x 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
NT 60	136°	RAMB - 149	RAMH - 70
	90°	RAMB - 194	
NT 80 Thermo	136°	RAMB - 164	RAMH - 70
	90°	RAMB - 215	

Notice:

Side door version in ALR F42 Vitraplan with aluminium fascia panel opening inwards on request!

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

LDH Clear passage height
LZ Clear frame dimension

Side door NT 60

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



Notice:
Compound glazing not possible with RC 2 version.

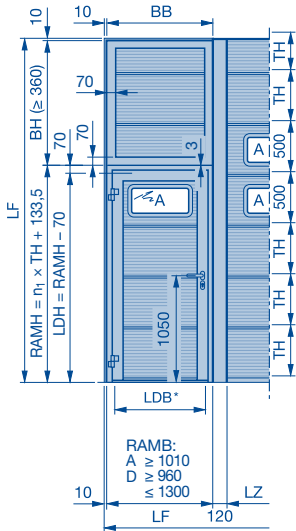
* See page 40
LF Structural opening
RAMB Overall frame width
RAMH Overall frame height

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

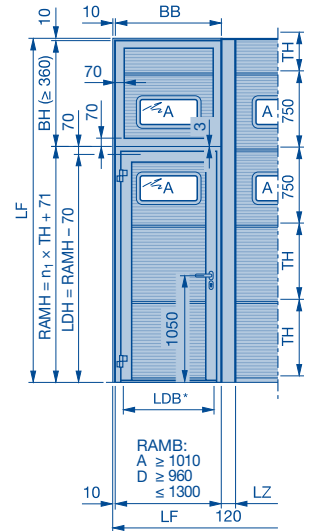
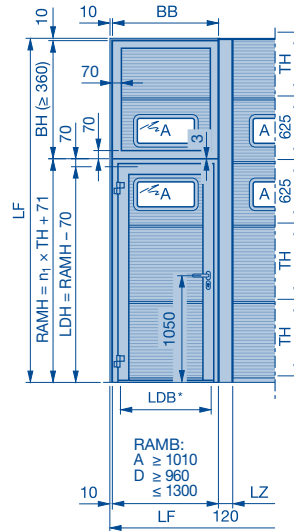
TH Door section height
SO Bottom section height
LZ Clear frame dimension
n₁ Number of door sections / aluminium frames

with L-ribbed Micrograin infills

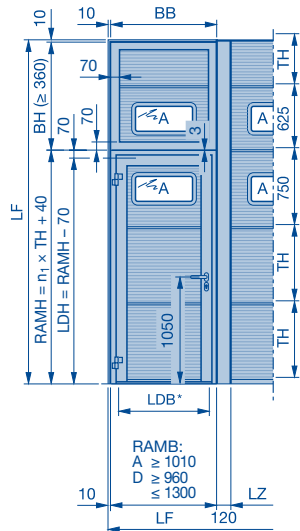
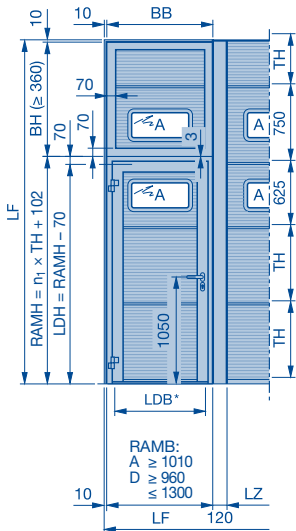
Compound glazing type A TH = 500

[illegible]

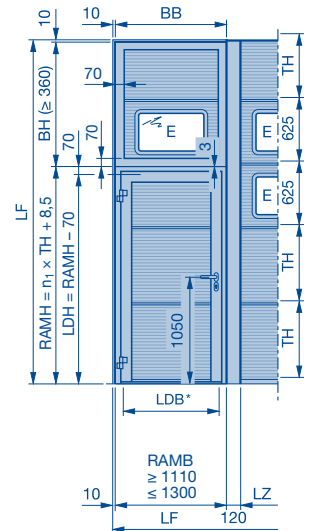
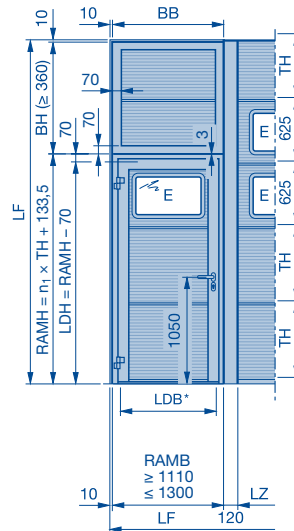
Compound glazing type A TH = 625 and 750



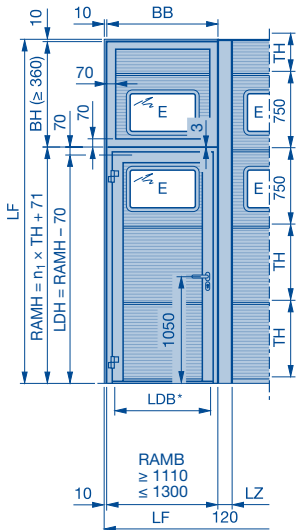
Compound glazing type A TH = 625 / 750 and 750 / 625



Compound glazing type E TH = 625



Compound glazing type E TH = 750



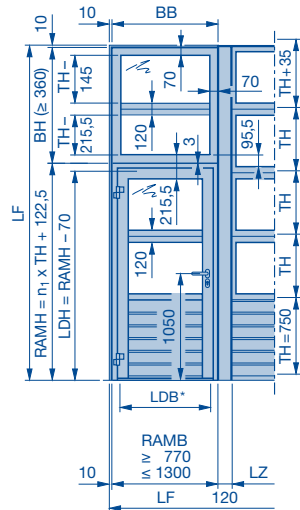
Notice:
Compound glazing not possible with RC 2 version.

(Legend see page 41)

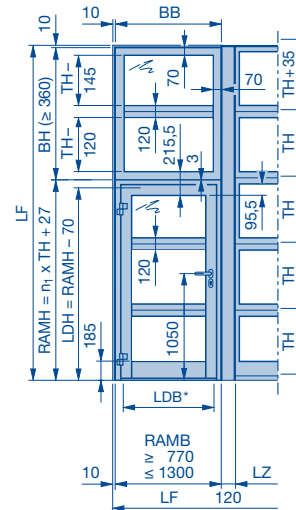
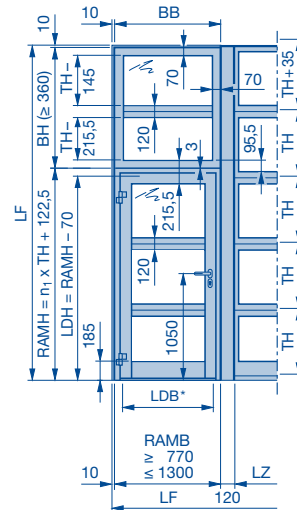
Side door NT 60

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

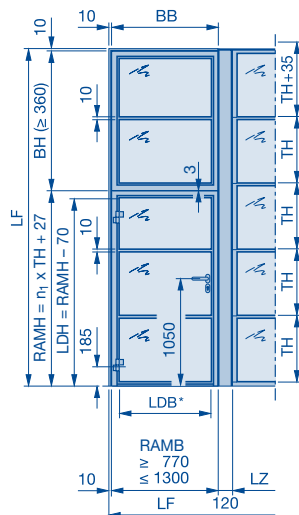
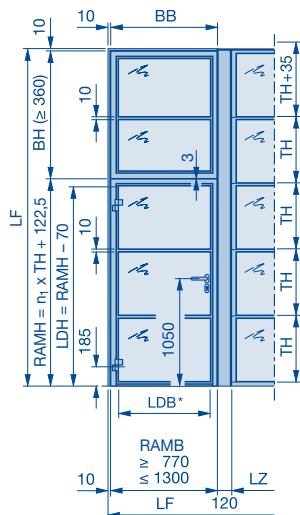
Side door NT 60 matching door type APU F42



Side door NT 60 matching door type ALR F42



Side door NT Vitraplan



Notice:

Side door NT Vitraplan not possible in RC 2 version.

* See page 40
LF Structural opening
RAMB Overall frame width
RAMH Overall frame height

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

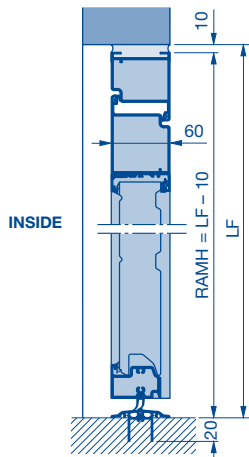
TH Door section height
SO Bottom section height
LZ Clear frame dimension
n₁ Number of door sections / aluminium frames

Side door NT 60

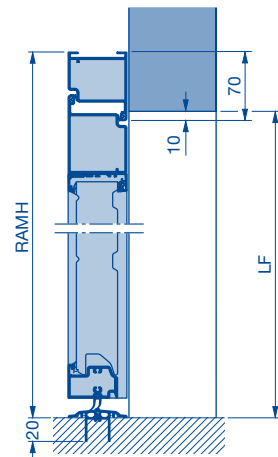
Possible fitting options

Possible fitting options

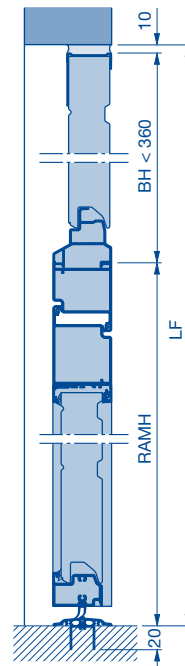
SPU in the opening
Without window section,
without compound glazing



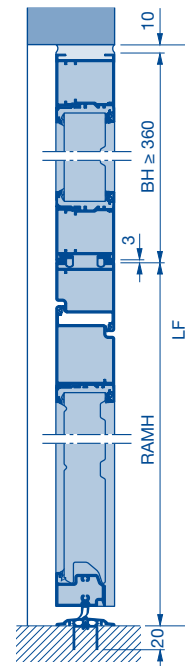
SPU behind the opening
Without window section,
without compound glazing



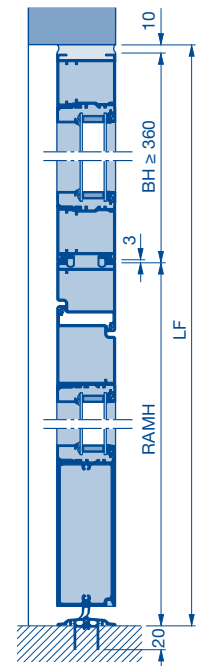
SPU with fascia panel in the opening



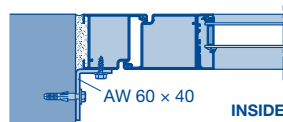
SPU, APU with fascia panel in the opening



ALR with fascia panel in the opening



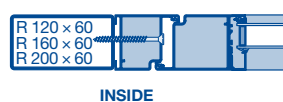
In the opening



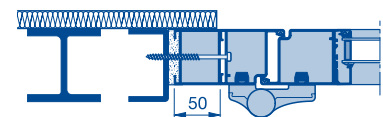
Plugs for metal frame



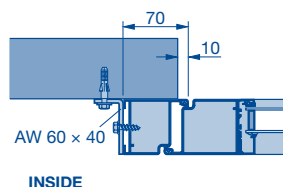
Tapping screw with countersunk head
B 6.3 x 80



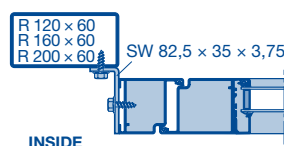
(Bottom illustration with 50 mm* extension profile for all-over insulation)
* Optionally with 25 mm



Behind the opening



Side door NT 60 flush with sectional door



R Box section
AW Aluminium angle
SW Steel angle

BH Panel height
RAMH Overall frame height
LDB Clear passage width

LF Structural opening

Side door NT 60 RC2

Possible fitting options

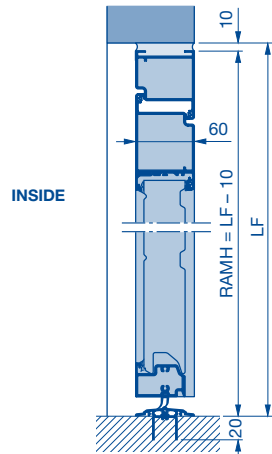
Possible fitting options

Notice:

The side door and panel must be fitted in accordance with DIN EN 1627. Side door NT Vitraplan not possible in RC 2 version.

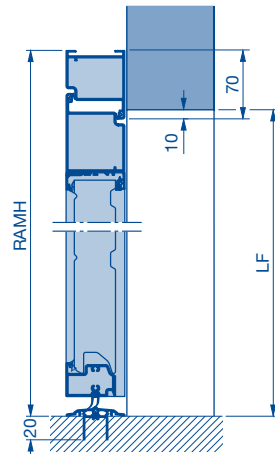
SPU in the opening

Without window section,
without compound glazing

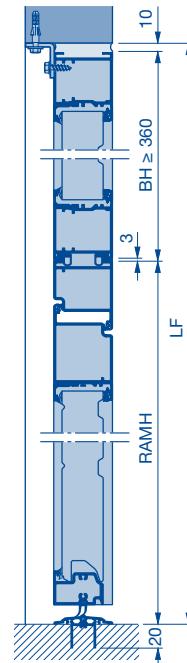


SPU behind the opening

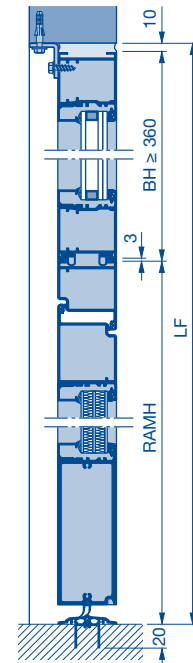
Without window section,
without compound glazing



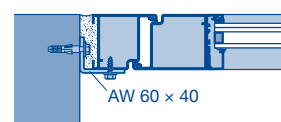
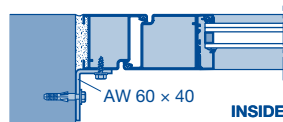
SPU, APU with fascia panel in the opening



ALR with fascia panel in the opening



In the opening



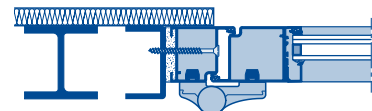
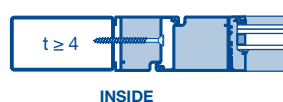
Plugs for metal frame



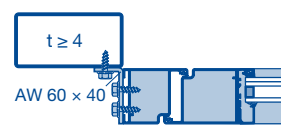
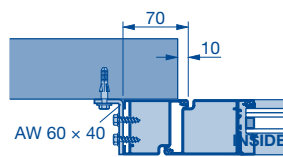
Tapping screw with countersunk head
B 6.3 × 80

Notice:

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



Behind the opening



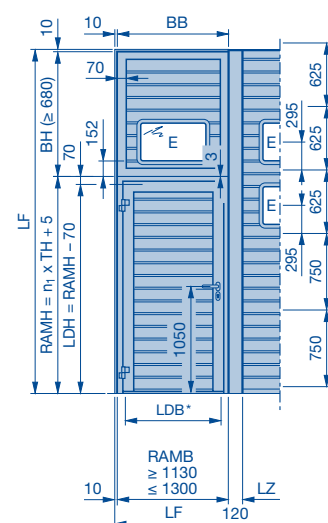
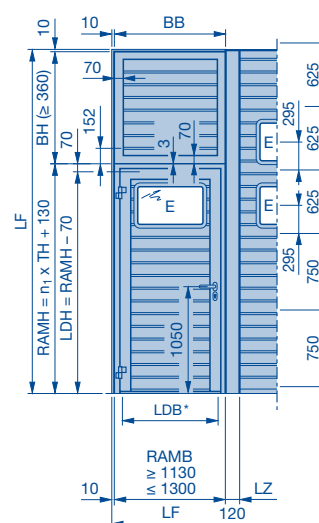
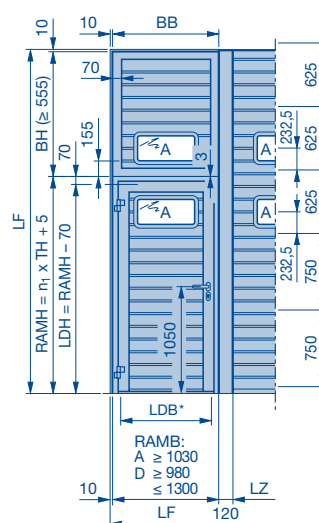
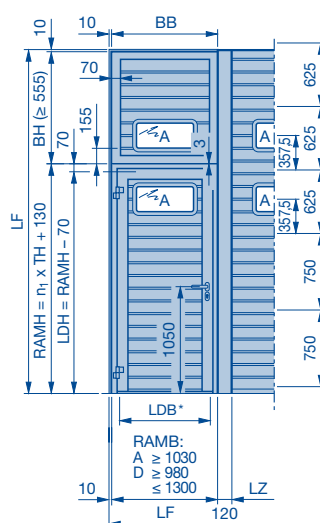
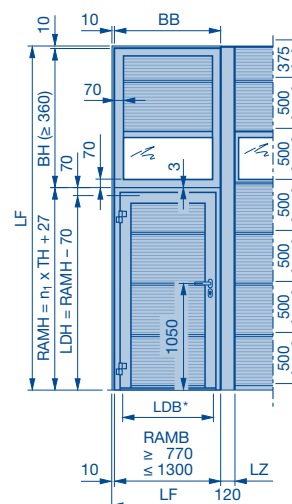
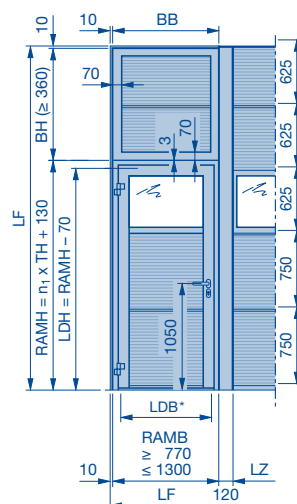
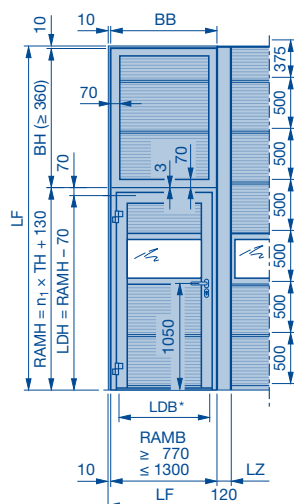
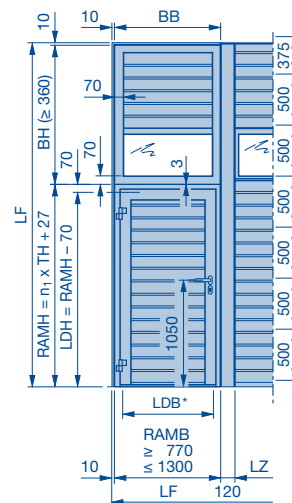
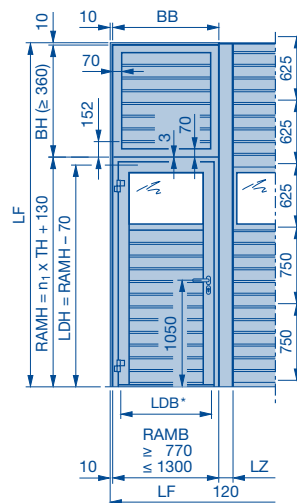
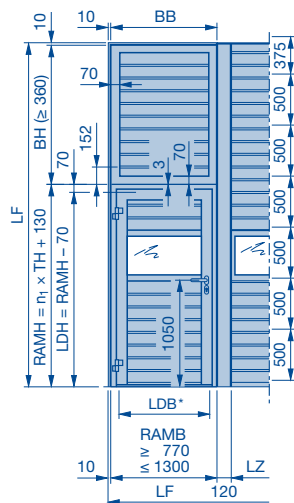
Side door NT 60 flush with sectional door

AW Aluminium angle
t Fastening thickness
BH Panel height

RAMH Overall frame height
LDB Clear passage width
LF Structural opening

Side door NT 80 Thermo

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



Notice:
Compound glazing not possible with RC 2 version.

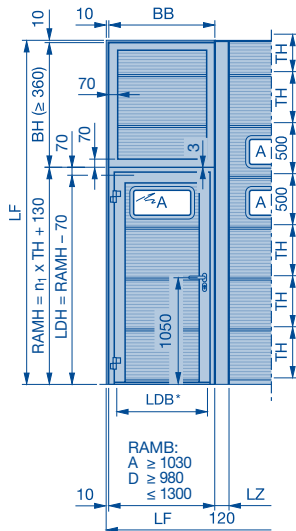
* See page 40
LF Structural opening
RAMB Overall frame width
RAMH Overall frame height

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

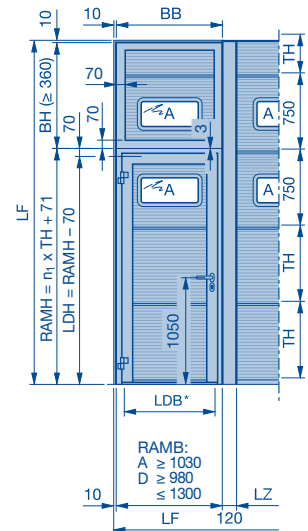
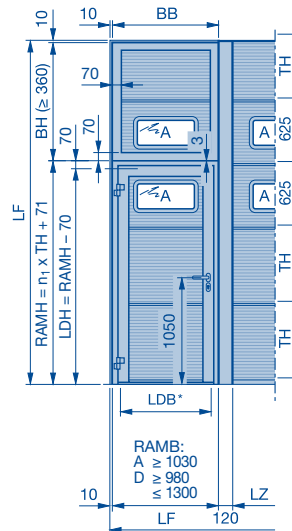
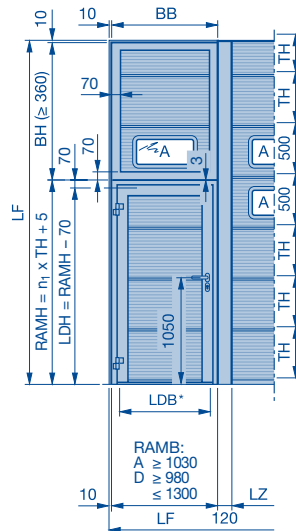
TH Door section height
SO Bottom section height
LZ Clear frame dimension
n1 Number of door sections / aluminium frames

with L-ribbed Micrograin infills

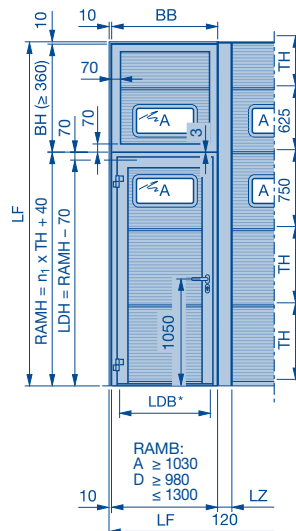
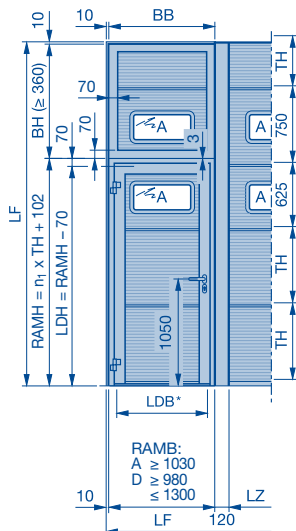
Compound glazing type A TH = 500



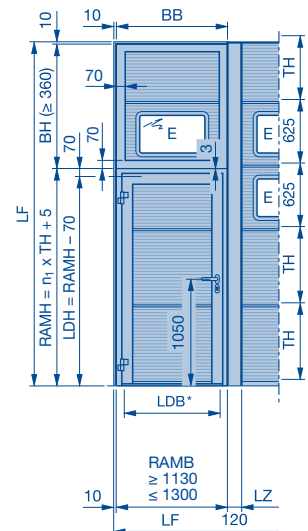
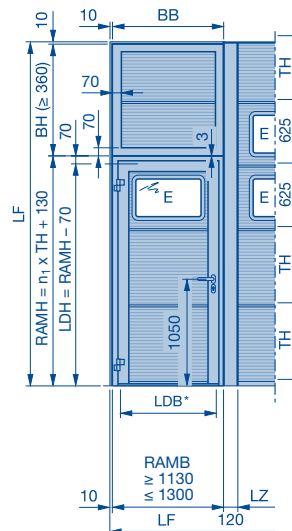
Compound glazing type A TH = 625 and 750



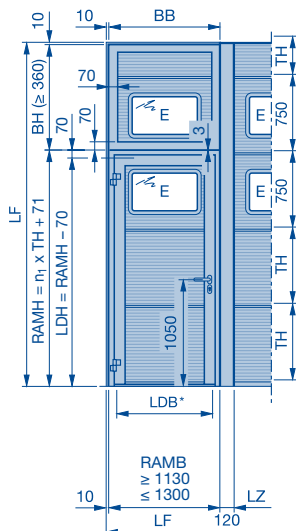
Compound glazing type A TH = 625 / 750 and 750 / 625



Compound glazing type E TH = 625



Compound glazing type E TH = 750



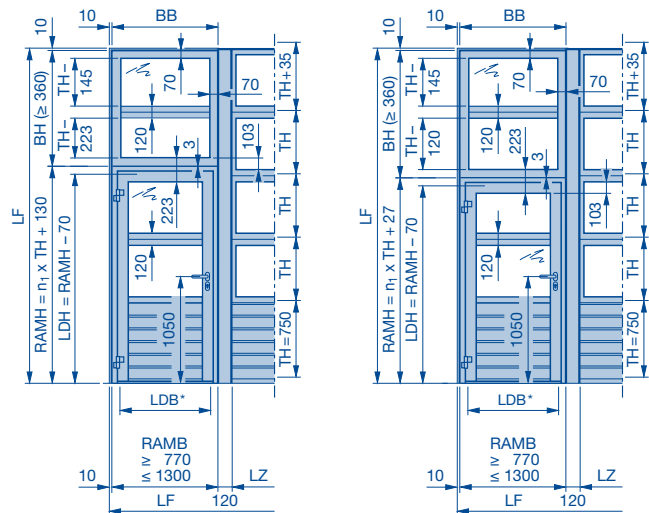
Notice:

Compound glazing not possible with RC 2 version.

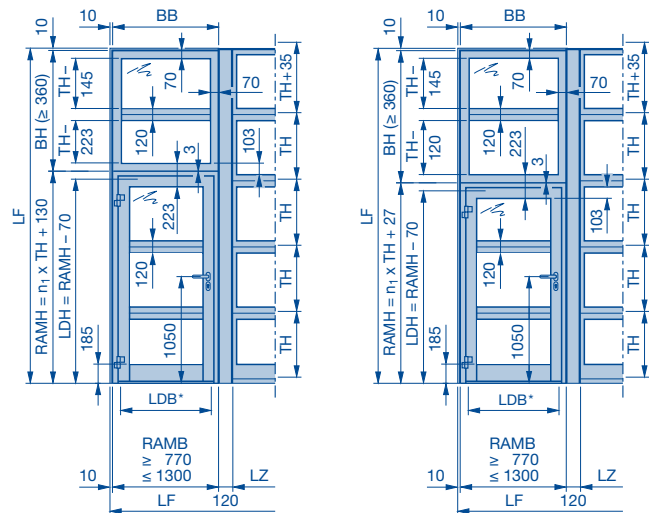
Side door NT 80 Thermo

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

Side door NT 80 Thermo matching door type APU F42 Thermo



Side door NT 80 Thermo matching door type ALR F42 Thermo



* See page 40
LF Structural opening
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

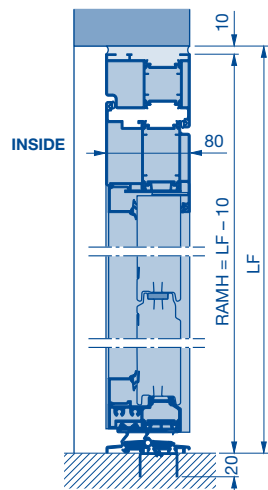
Side door NT 80 Thermo

Possible fitting options

Possible fitting options

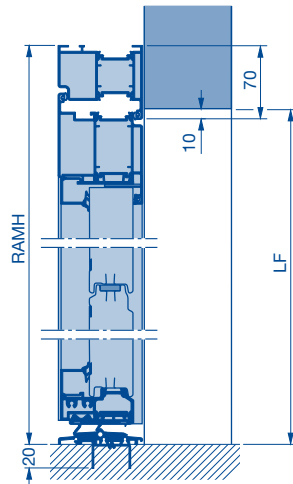
SPU in the opening

Without window section,
without compound glazing

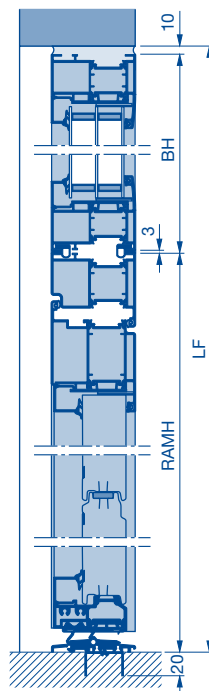


SPU behind the opening

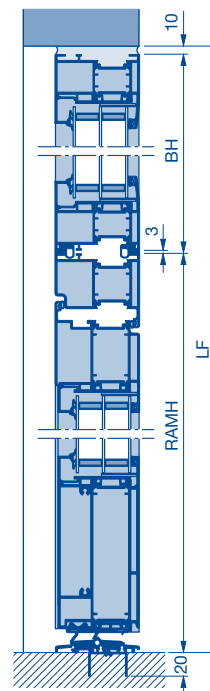
Without window section,
without compound glazing



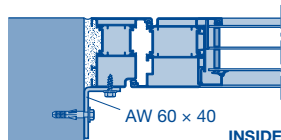
SPU, APU with fascia panel



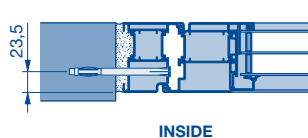
ALR with fascia panel



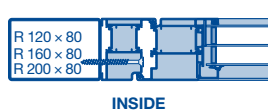
In the opening



Plugs for metal frame

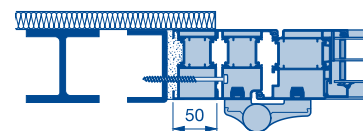


Tapping screw with countersunk head
B 6.3 x 80

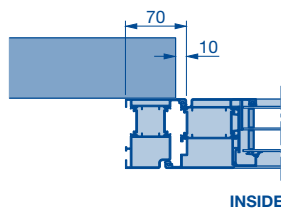


(Bottom illustration with 50 mm* extension profile for all-over insulation)

* 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
LDB Clear passage width

LF Structural opening

Side door NT 80 Thermo RC2

Possible fitting options

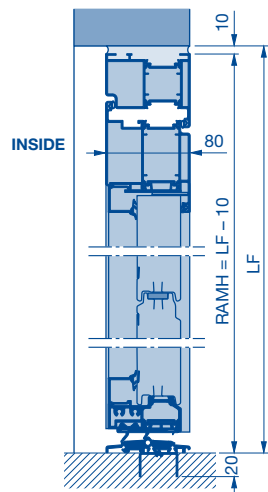
Possible fitting options

Notice:

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

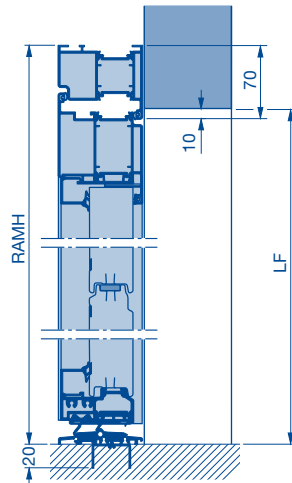
SPU in the opening

Without window section,
without compound glazing

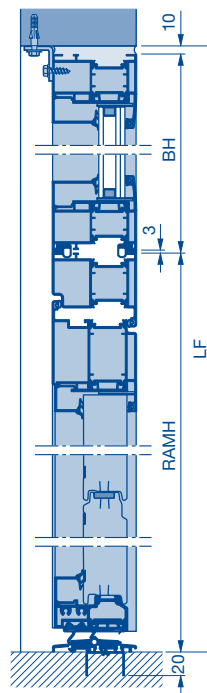


SPU behind the opening

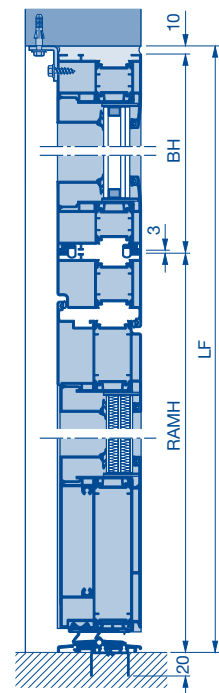
Without window section,
without compound glazing



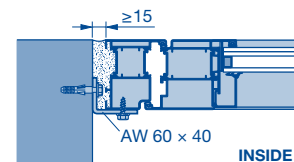
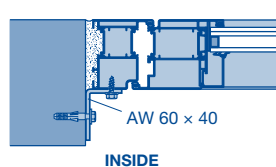
SPU, APU with fascia panel



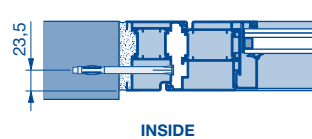
ALR with fascia panel



In the opening



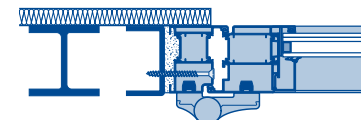
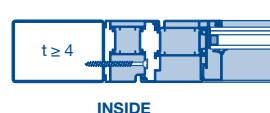
Plugs for metal frame



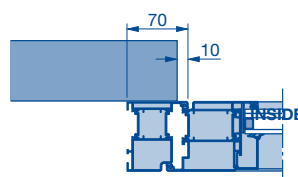
Tapping screw with countersunk head
B 6.3 x 80

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

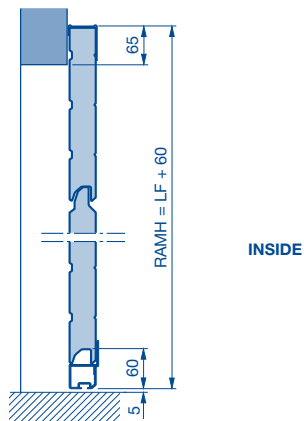
Fixed elements

Possible fitting options and fitting examples

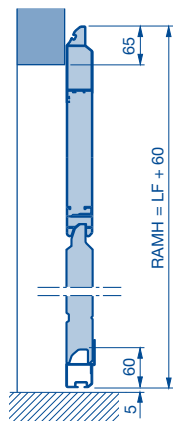
Possible fitting options

SPU F42 behind the opening

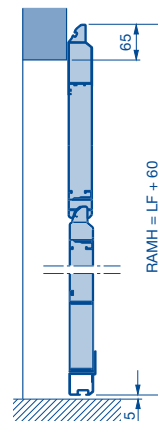
Without window section,
without compound glazing



APU F42 behind the opening

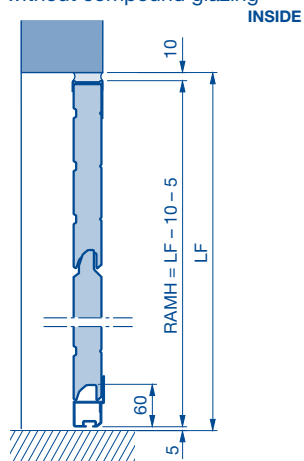


ALR F42, ALR F42 Thermo behind the opening

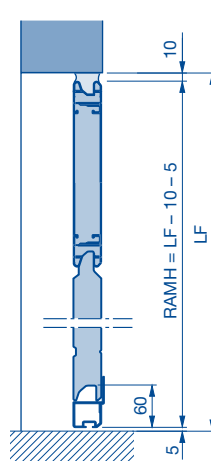


SPU F42 in the opening

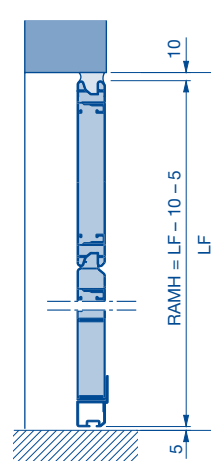
Without window section,
without compound glazing



APU F42 in the opening

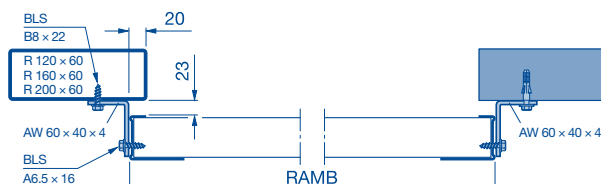
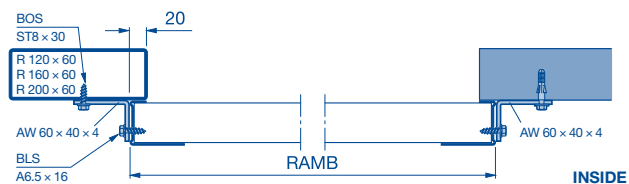


ALR F42, ALR F42 Thermo in the opening

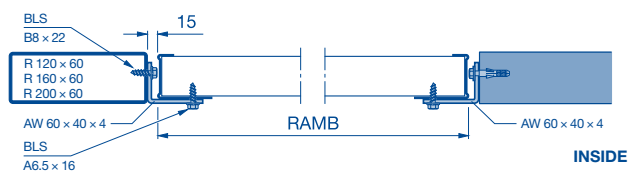


Fitting examples

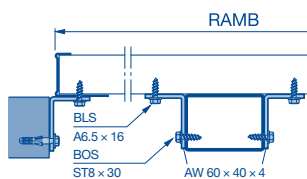
Behind the opening



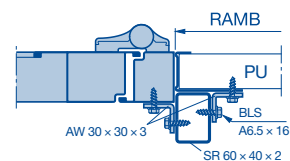
In the opening



In front of the opening



Side door



AW Aluminium angle
SR Support tube
AR Aluminium frames

PU PU section
LF Structural opening
RAMB Overall frame width

RAMH Overall frame height
BOS Drilling screw
BLS Self-tapping screw

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 – 190	RM – 220	RM – 50
Wicket door with threshold rail	RM – 375	RM – 210	RM – 240	RM – 100
Wicket door without threshold rail	RM – 440	RM – 255	RM – 305	RM – 135
LZ > 5500				
Without wicket door	RM – 375	RM – 240	RM – 270	RM – 50
Wicket door with threshold rail	RM – 375	RM – 260	RM – 290	RM – 100
Wicket door without threshold rail	RM – 475	RM – 325	RM – 355	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 – 190 + (a° × 5.3)	RM – 155 + (a° × 3.2)	RM – 220 + (a° × 5.3)	RM – 185 + (a° × 3.2)	RM – 50
Wicket door with threshold rail	RM – 375	RM – 210 + (a° × 5.3)	RM – 175 + (a° × 3.2)	RM – 240 + (a° × 5.3)	RM – 205 + (a° × 3.2)	RM – 100
Wicket door without threshold rail	RM – 440	RM – 255 + (a° × 5.3)	RM – 220 + (a° × 3.2)	RM – 305 + (a° × 5.3)	RM – 270 + (a° × 3.2)	RM – 135
LZ > 5500						
Without wicket door	RM – 375	RM – 240 + (a° × 5.3)	RM – 205 + (a° × 3.2)	RM – 270 + (a° × 5.3)	RM – 235 + (a° × 3.2)	RM – 50
Wicket door with threshold rail	RM – 375	RM – 260 + (a° × 5.3)	RM – 225 + (a° × 3.2)	RM – 290 + (a° × 5.3)	RM – 255 + (a° × 3.2)	RM – 100
Wicket door without threshold rail	RM – 475	RM – 325 + (a° × 5.3)	RM – 295 + (a° × 3.2)	RM – 355 + (a° × 5.3)	RM – 320 + (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 – 50	RM – 50	RM – 80	RM – 50
Wicket door with threshold rail	RM – 80	RM – 70	RM – 100	RM – 70
Wicket door without threshold rail	RM – 155	RM – 135	RM – 165	RM – 135

** Track applications NS and NK not possible.

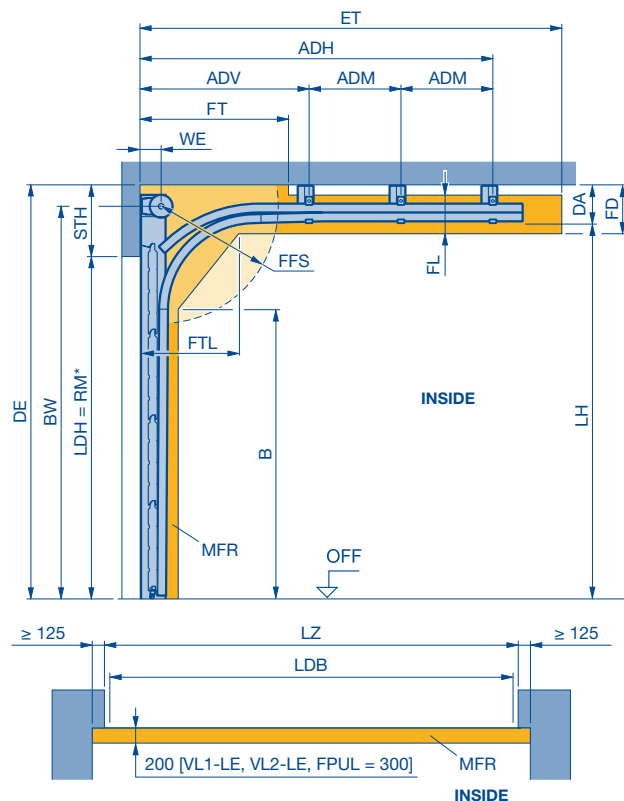
– Not possible
a° Inclination

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	FTL	Clearance of door section in the double radius
ADM	Distance to centre ceiling anchor	LDB	Clear passage width with ThermoFrame (see page 78)
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	MFR	Space for fitting the door
DAL	Anchor length	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
FFS	Spring tensioning clearance		
FL	Track clearance		
FPUL	Spring buffers below the track		
FT	Clearance for door operation		

Door weights for roof loads:

SPU F42 / APU F42 Thermo / ALR F42 Thermo	= 320 N/m ²
APU F42 / ALR F42	= 280 N/m ²
ALR F42 Glazing	= 560 N/m ²

Observe min. sideroom, see page 78.

	STH	WE	DA	BW	FT
N 1	390	140	183	RM + 310	1250
N 2	440	160	233	RM + 335	
N 3	550	180	343	RM + 415	
with double spring shaft	760		543	RM + 415	

B	DE	FFS	FD	FL	FTL	LH
RM - 310	STH + RM	Min. 90° (745)	DA + 65	230	670	RM + 207

ET***		
N 1 / N 2	RM + 395	Manual operation with short spring buffer
	RM + 665	Shaft operator with long spring buffer
N 3	RM + 665	For manual operation and shaft operator with long spring buffer

*** Simplified calculation

Notices:

- Be sure to observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 35!
- 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 52.

Min. headroom

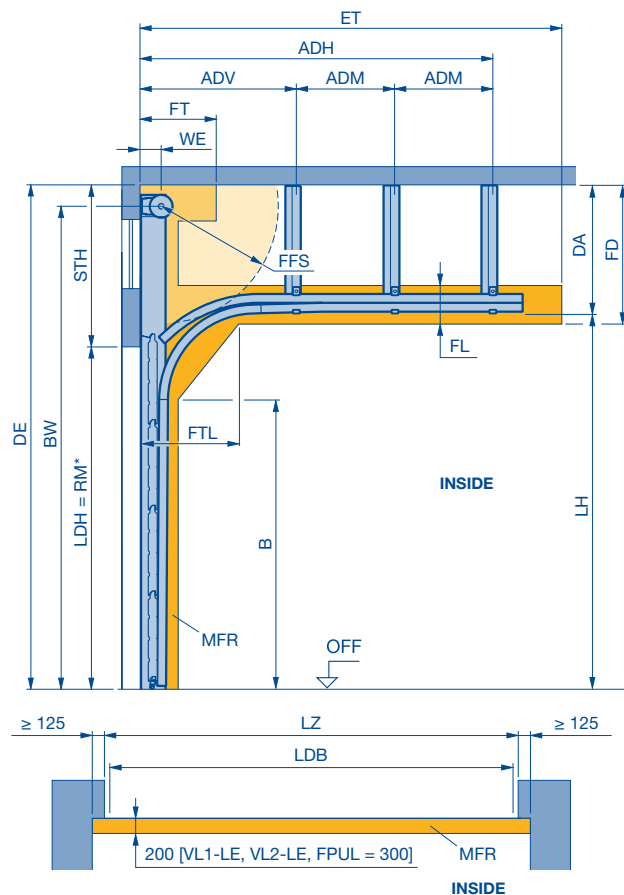
Track size	Lintel height	Track size	Lintel height	Track size	Lintel height
N 1, NS 1, NK 1	390	GS 1, GK 1	567	V 6	RM + 540
N 2, NS 2, NK 2	440	GS 1, GK 2	617	V 7	RM + 580
N 3	550	L 1, LD 1, L 2, LD 2	200	V 9	RM + 675
NA 1	400	H 4, HD 4	780	VA 6	RM + 550
NA 2	450	H 5, HD 5	840	VS 6, VS 7	**
ND 1	410	H 8, HD 8	880	VS 9	**
ND 2	440	HA 4	790	VU 6	RM + 310
ND 3	550	HU 4, HU 5, HU 8, RD 4, RD 5, RD 8	1750	VU 7	RM + 310
ND 6	490	HS 4, HK 4	808	VU 9	RM + 310
ND 7	510	HS 5, HK 5	835	WS 6, WS 7, WS 9	**
NH 1, GD 1	569	HS 8, HK 8	875	HP 4	1930
NH 2, GD 2	634	RS 4, RK 4, RS 5, RK 5	1477	HP 5	1960
NH 3	709				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 78)
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 F42 / APU F42 Thermo / ALR F42 Thermo	= 320 N/m ²
APU F42 / ALR F42	= 280 N/m ²
ALR F42 Glazing	= 560 N/m ²

Observe min. sideroom, see page 78.

	STH	WE	DA	Min. BW	Max. BW
NA 1	400	140	(BW + 80) – (RM + 207)	RM + 320	7820, DE – 80
NA 2	450	160	(BW + 105) – (RM + 207)	RM + 345	7995, DE – 105

FT	DE	B	FFS
885	STH + RM	RM – 310	Min. 90° (745)

FD	FL	FTL	LH
DA + 65	230	670	RM + 207

ET**		
NA 1 / NA 2	RM + 395	Manual operation with short spring buffer
	RM + 665	Shaft operator with long spring buffer

** Simplified calculation

Notices:

- Be sure to observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 35!
- 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.

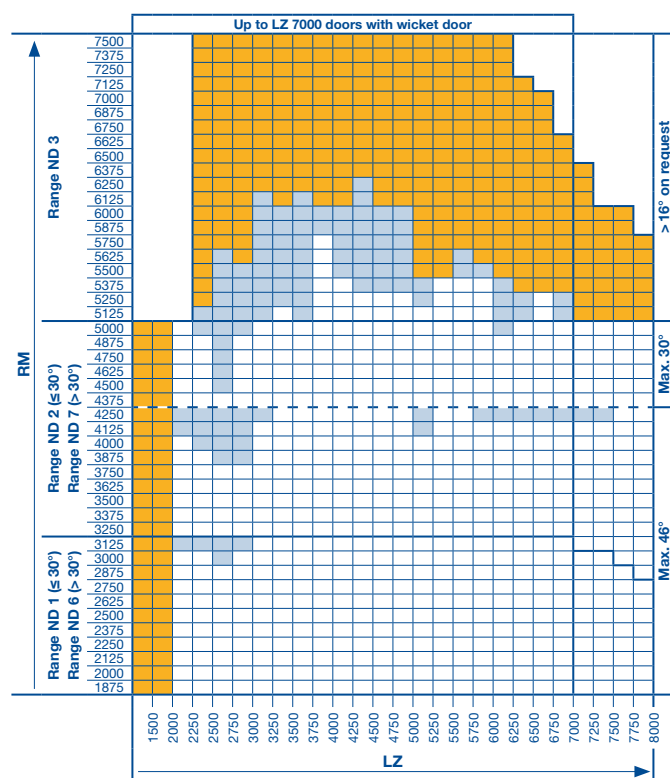
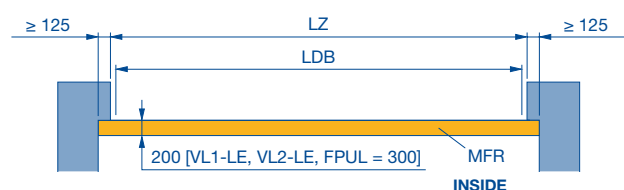
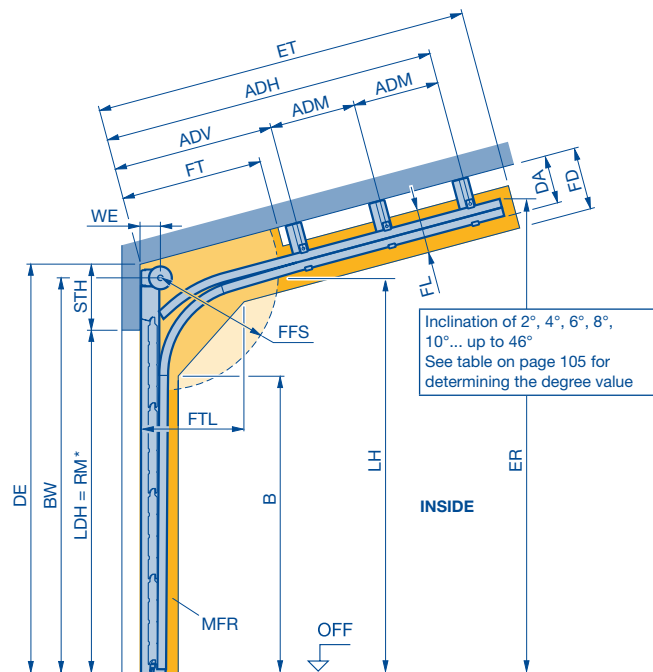
* Notice:

Observe clear passage height LDH, see page 52.

Track application: ND

Normal track application
with inclination up to max. 46°

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	LDB	Clear passage width with ThermoFrame (see page 78)
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	Distance to ceiling on request	FFL	Finished floor level
DE	Ceiling height	RM	Grid height
ER	Corner point, top edge of track (depth and height)	STH	Min. headroom
ET	Min. distance back	WE	Shaft centre from lintel
FD	Ceiling clearance		
FFS	Spring tensioning clearance		
FL	Track clearance		
FPUL	Spring buffers below the track		
FT	Clearance for door operation		

Door weights for roof loads:

SPU F42 / APU F42 Thermo / ALR F42 Thermo	= 320 N/m ²
APU F42 / ALR F42	= 280 N/m ²
ALR F42 Glazing	= 560 N/m ²

Observe min. sideroom, see page 78.

	STH	WE	BW	FT	FTL
ND 1, ≤ 30°	410	140	RM + 330	1250, ≤ 15°	670, ≤ 15°
ND 2, ≤ 30°	440	160	RM + 335	1000, > 15°	500, > 15°
ND 6, > 30°	490		RM + 385	885	500
ND 7, > 30°	510		RM + 405		
ND 3, ≤ 30°	550	180	RM + 415	1250, ≤ 15°	670, ≤ 15°
with double spring shaft	760		RM + 415	1000, > 15°	500, > 15°

ET	DA	DE	FFS	FD	FL	LH	ER	B
**	**	STH + RM	Min. 90° (745)	DA + 65	230	**	**	**

** Dimensions can be found in the product configurator.

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 52.

Notice:

- Be sure to observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 35!
- ALR F42 Vitraplan and ALR F42 Glazing on request.
- To determine the roof slope see page 105.
- Door types APU F42, ALR F42, APU F42 Thermo and ALR F42 Thermo with glazing A3, B3, M3, S3, U3, LB, P, XU and wicket door on request.
- Inclination on request for RM ≤ 4250 and > 30° or RM > 4250 and > 16°.

□ All door types available in any version.

▒ Versions with glazing A3, B3, M3, S3, U3, LB, P, XU and/or wicket door.

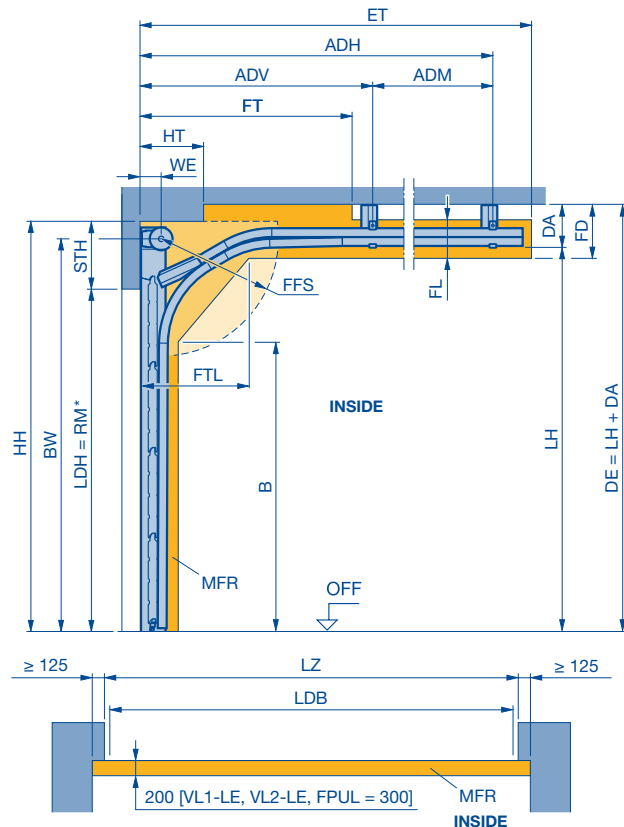
■ All door types and versions on request.

Dimensions in mm

Track application: NS

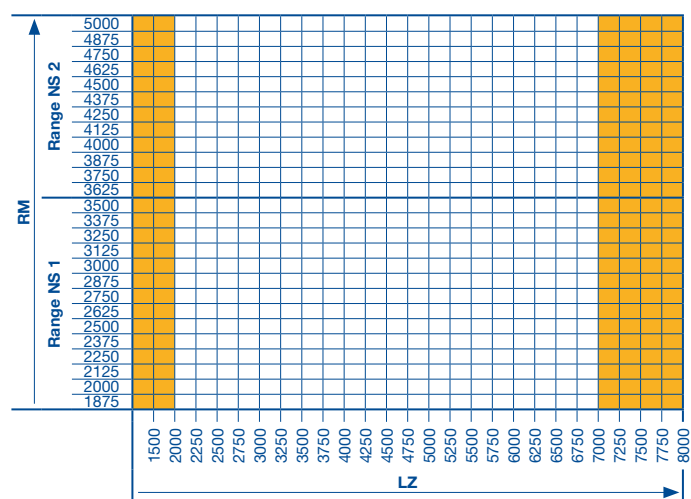
Normal track application with double radius

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 10–15 and 18–35!
- ALR F42 Vitraplan and ALR F42 Glazing 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 78)
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 (see page 53)
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 F42 / APU F42 Thermo / ALR F42 Thermo	= 320 N/m ²
APU F42 / ALR F42	= 280 N/m ²
ALR F42 Glazing	= 560 N/m ²

Observe min. sideroom, see page 78.

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 52.

	STH	WE	DA	BW
NS 1	390	140	183	RM + 310
NS 2	440	160	183	RM + 335

FT	DE	B	ET	FFS	FD	FL	FTL	LH
885	LH + 183	**	**	Min. 90° (745)	DA + 65	230	**	**

** Dimensions can be found in the product configurator.

All door types available in any version.

All door types and versions on request.

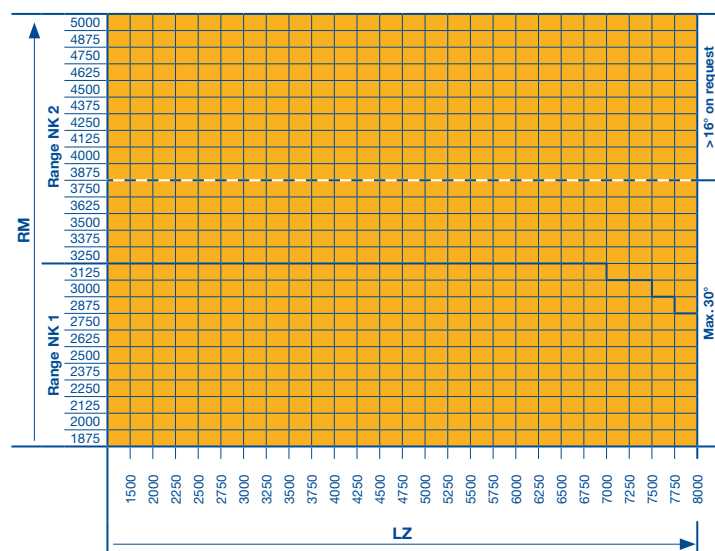
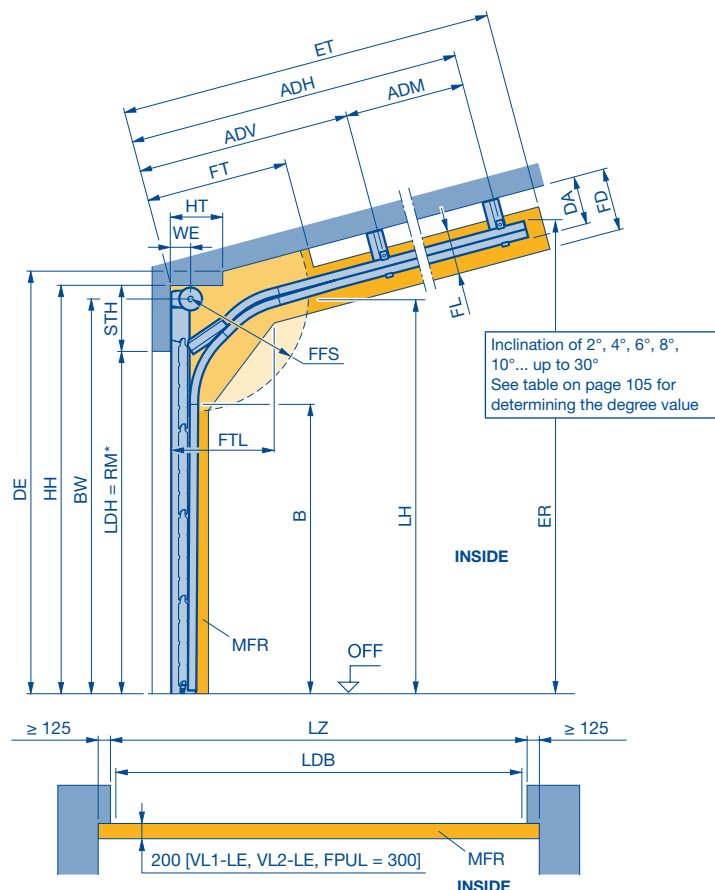
Dimensions in mm

Track application: NK

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 78)
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		
FPUL	Track clearance		
FT	Spring buffers below the track		
	Clearance for door operation		

Door weights for roof loads:

SPU F42 / APU F42 Thermo / ALR F42 Thermo	= 320 N/m ²
APU F42 / ALR F42	= 280 N/m ²
ALR F42 Glazing	= 560 N/m ²

Observe min. sideroom, see page 78.

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 10–15 and 18–35!
- ALR F42 Vitraplan and ALR F42 Glazing on request.
- To determine the roof slope see page 105.

* Notice:

Observe clear passage height LDH, see page 52.

	STH	WE	DA	BW
NK 1	390	140	183	RM + 310
NK 2	440	160	183	RM + 335

FT	DE	B	ET	FFS	FD	FL	FTL	LH
885	LH + 183	**	**	Min. 90° (745)	DA + 65	230	**	**

** Dimensions can be found in the product configurator.

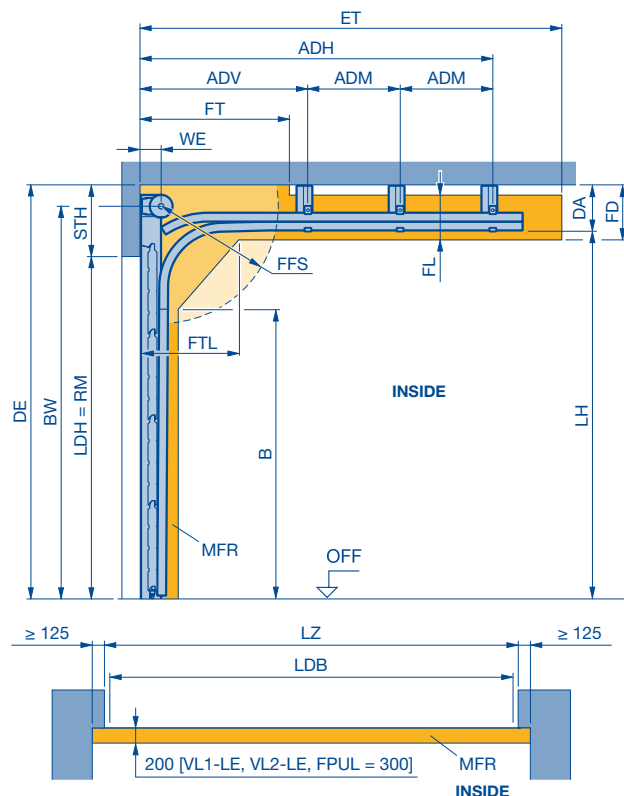
All door types and versions on request.

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 78)
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		
L	Anchor length		

Door weights for roof loads:

SPU F42 / APU F42 Thermo / ALR F42 Thermo	= 320 N/m ²
APU F42 / ALR F42	= 280 N/m ²
ALR F42 Glazing	= 560 N/m ²

Observe min. sideroom, see page 78.

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 10–15 and 18–35!
- ALR F42 Vitraplan and ALR F42 Glazing on request

	STH	WE	DA	BW
NH 1	569	140	255	LH + 140
NH 2	634	160	290	LH + 180
NH 3	709		365	
with double spring shaft	760	180	565	LH + 225

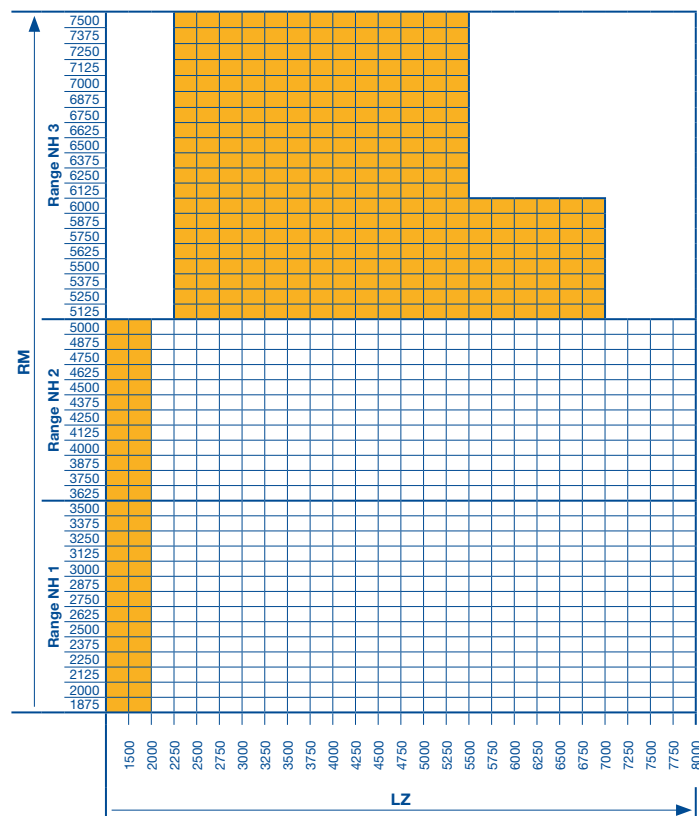
FT	DE	B	FFS	FD	FL	FTL	LH	ET
1150	STH + RM	LH - 366	Min. 90° (745)	DA + 65	250	645	Min. RM + 344 Max. RM + 490	**

** Dimensions can be found in the product configurator.

□ All door types available in any version.

■ All door types and versions on request.

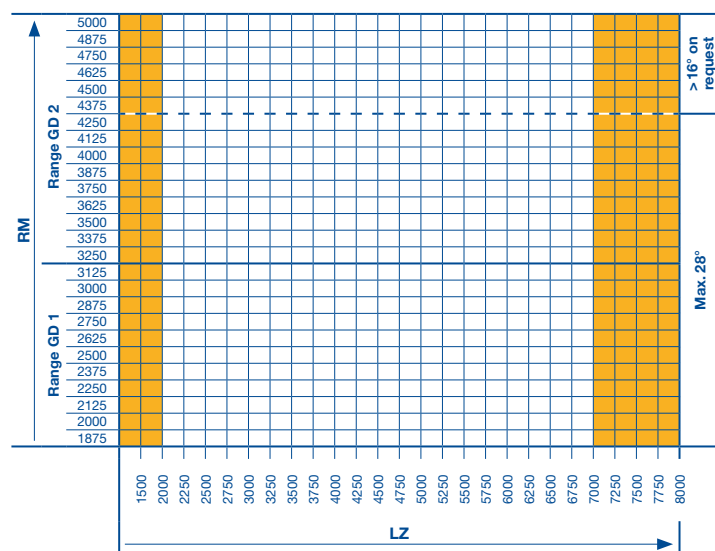
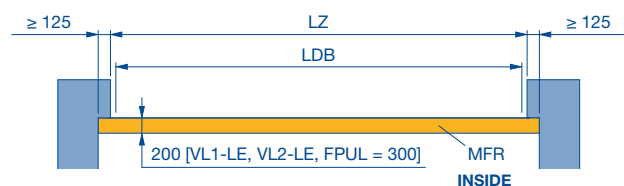
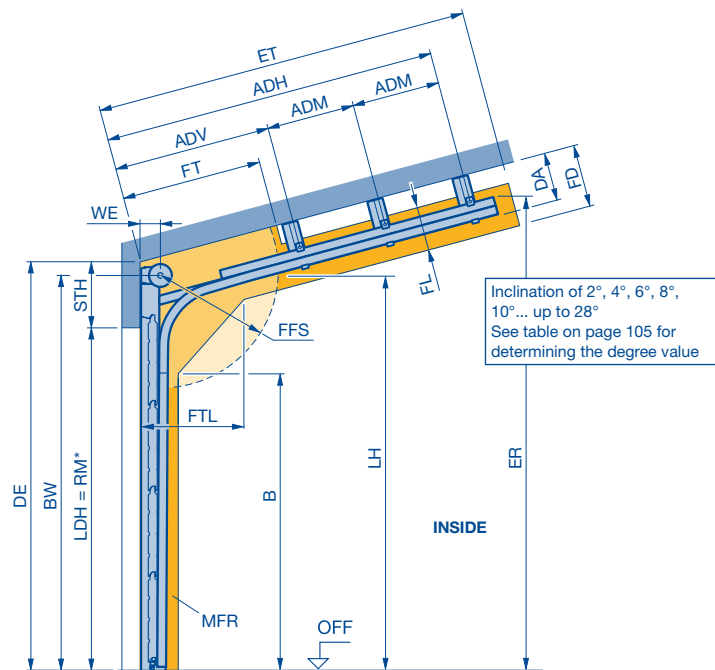
Dimensions in mm



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 78)
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	Ceiling clearance	WE	Shaft centre from lintel
FL	Spring tensioning clearance		
	Track clearance		

Door weights for roof loads:

SPU F42 / APU F42 Thermo / ALR F42 Thermo	= 320 N/m ²
APU F42 / ALR F42	= 280 N/m ²
ALR F42 Glazing	= 560 N/m ²

Observe min. sideroom, see page 78.

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 10–15 and 18–35!
- ALR F42 Vitraplan and ALR F42 Glazing on request.
- To determine the roof slope see page 105.

	STH	WE	DA	BW	FT	DE
GD 1	569	140	**	LH + 140	2 x WE	STH + RM
GD 2	634	160		LH + 180		

ET	B	FFS	FD	FL	FTL	LH	ER
**	LH - 366	Min. 90° (745)	DA + 65	250	645	Min. RM + 344 Max. RM + 490	**

** Dimensions can be found in the product configurator.

All door types available in any version.

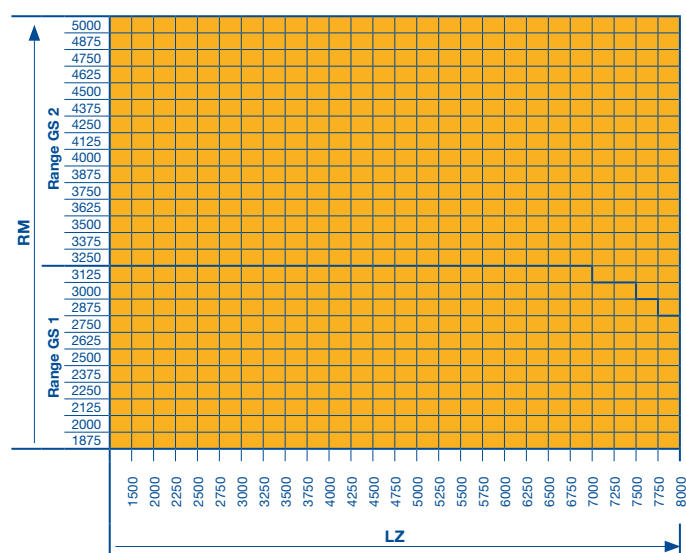
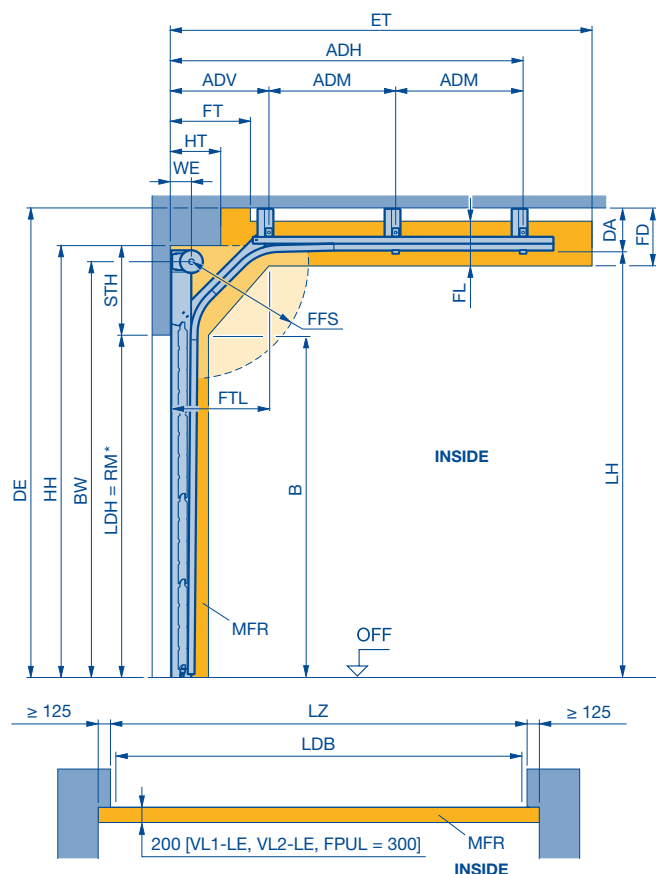
All door types and versions on request.

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 78)
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 F42 / APU F42 Thermo / ALR F42 Thermo	= 320 N/m ²
APU F42 / ALR F42	= 280 N/m ²
ALR F42 Glazing	= 560 N/m ²

Observe min. sideroom, see page 78.

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 10 – 15 and 18 – 35!
- ALR F42 Vitraplan and ALR F42 Glazing on request.
- To determine the roof slope see page 105.

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

FFS	FD	FL	FTL	LH	ET
Min. 90° (745)	DA + 65	250	**	**	**

** Dimensions can be found in the product configurator.

 All door types and versions on request.

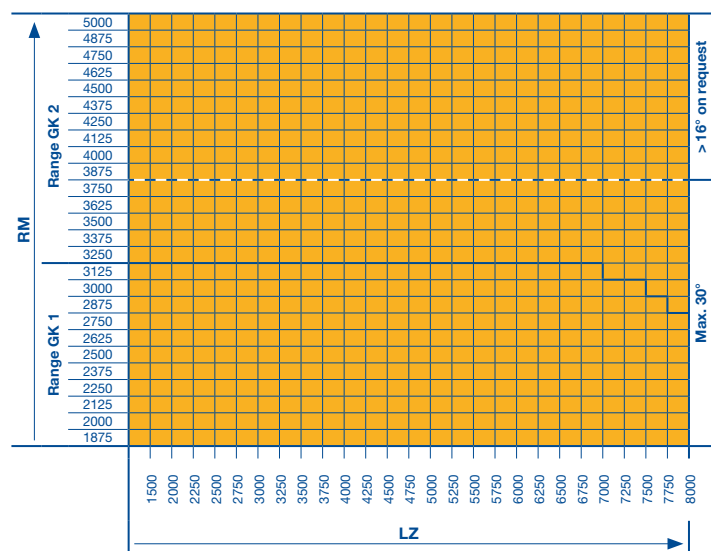
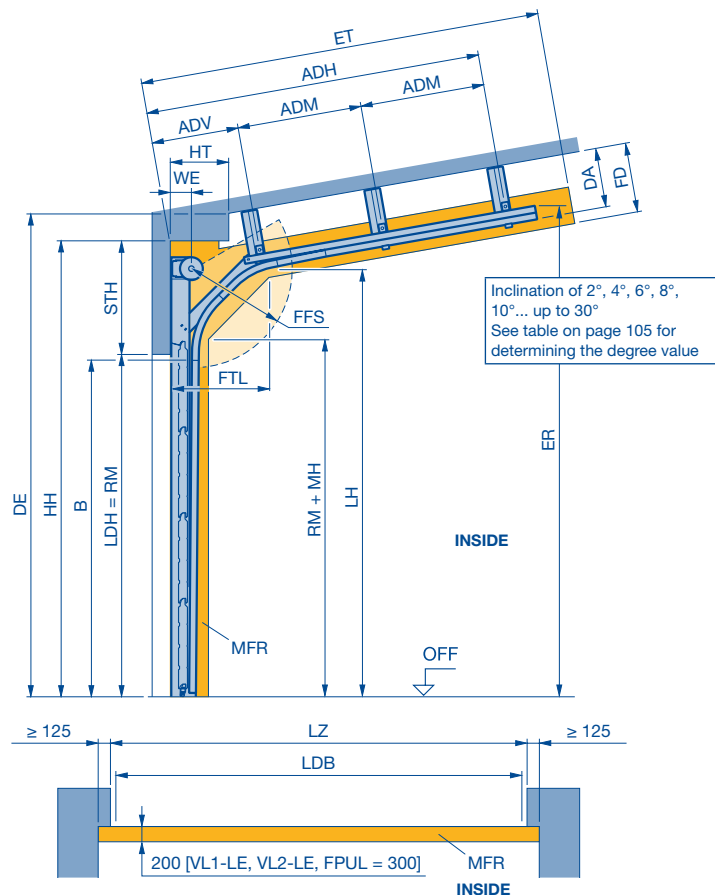
Dimensions in mm

Track application: 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 78)
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 F42 / APU F42 Thermo / ALR F42 Thermo	= 320 N/m ²
APU F42 / ALR F42	= 280 N/m ²
ALR F42 Glazing	= 560 N/m ²

Observe min. sideroom, see page 78.

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 10–15 and 18–35!
- ALR F42 Vitraplan and ALR F42 Glazing on request.
- To determine the roof slope see page 105.

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

FFS	FD	FL	FTL	LH	ET
Min. 90° (745)	DA + 65	250	**	**	**

** Dimensions can be found in the product configurator.

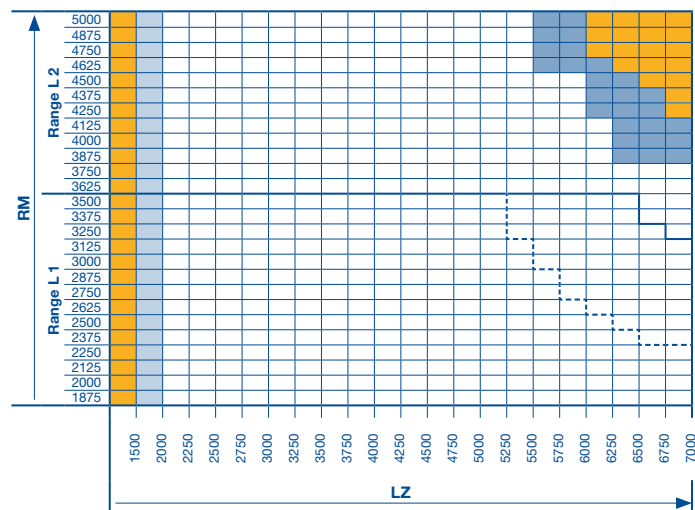
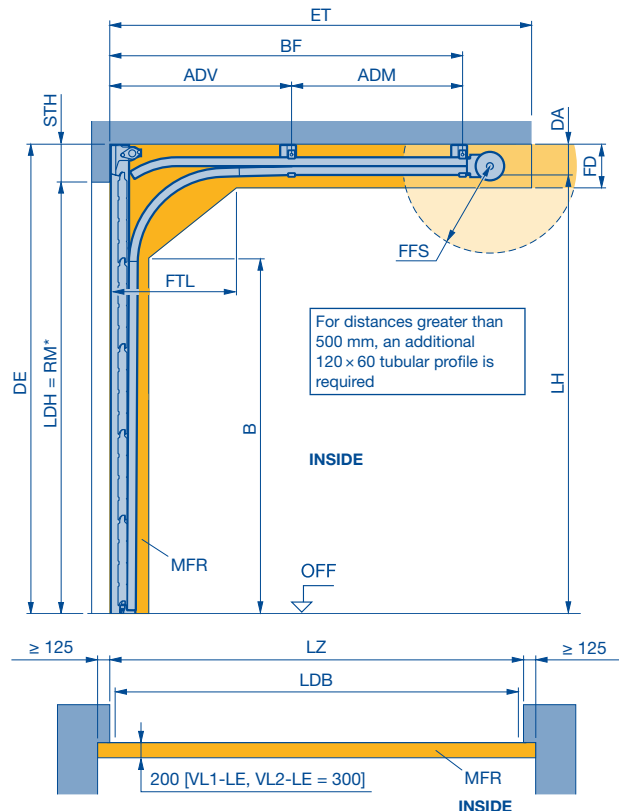
All door types and versions on request.

Dimensions in mm

Track application: 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 78)
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 F42 / APU F42 Thermo / ALR F42 Thermo	= 320 N/m ²
APU F42 / ALR F42	= 280 N/m ²
ALR F42 Glazing	= 560 N/m ²

Observe min. sideroom, see page 78.

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!

B	BF	DA	DE	ET
LH - 517	RM + 670	156	STH + RM	RM + 982
FD	FFS	FTL	LH	STH
DA + 65	Min. 90° (745)	650	RM + 45	200 210 (WA 300)

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 10 – 15 and 18 – 35!
- ALR F42 Vitraplan and ALR F42 Glazing on request

* Notice:

Observe clear passage height LDH, see page 52.

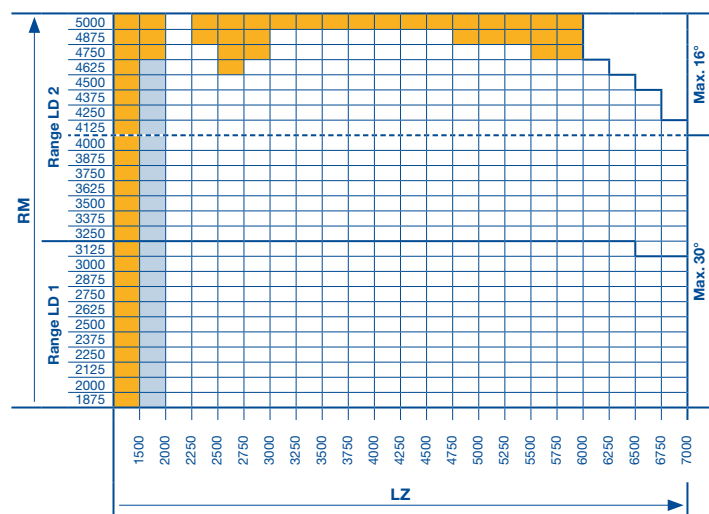
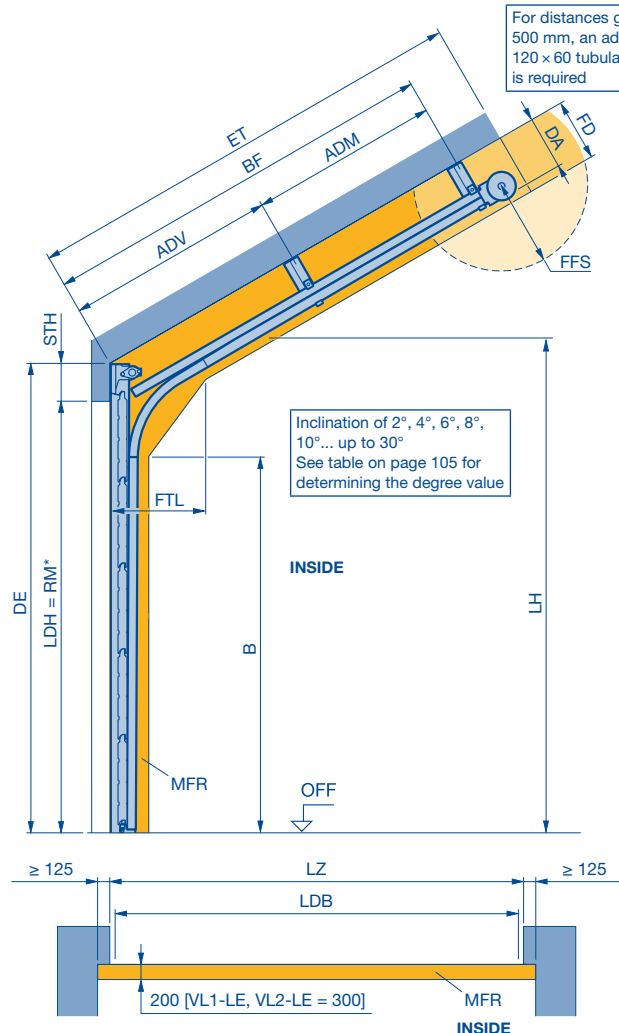
- All door types available in any version.
- All door types and versions on request.
- Door types APU F42, ALR F42, APU F42 Thermo, ALR F42 Thermo as well as versions with glazing A3, B3, M3, S3, U3, LB, P, XU and wicket door on request.
- Versions with glazing A3, B3, M3, S3, U3, LB, P, XU and/or wicket door.
- Track limit
- Track limit for door types APU F42 Thermo, ALR F42 Thermo as well as versions with glazing A3, B3, M3, S3, U3, LB, P, XU and wicket door

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 78)
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 F42 / APU F42 Thermo / ALR F42 Thermo	= 320 N/m ²
APU F42 / ALR F42	= 280 N/m ²
ALR F42 Glazing	= 560 N/m ²

Observe min. sideroom, see page 78.

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 10 – 15 and 18 – 35!
- ALR F42 Vitraplan and ALR F42 Glazing on request.
- To determine the roof slope see page 105.
- Door types APU F42, ALR F42, APU F42 Thermo, ALR F42 Thermo with glazing A3, B3, M3, S3, U3, LB, P, XU and wicket door on request.

* Notices:

- Observe clear passage height LDH, see page 52.
- The swivel mechanism is only possible up to 10°.

	DE	LH	STH	FD
LD 1 / LD 2	STH + RM	**	200	DA + 65

B	DA	FFS	FTL
**	**	Min. 90° (745)	650

** Dimensions can be found in the product configurator.

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

*** Simplified calculation

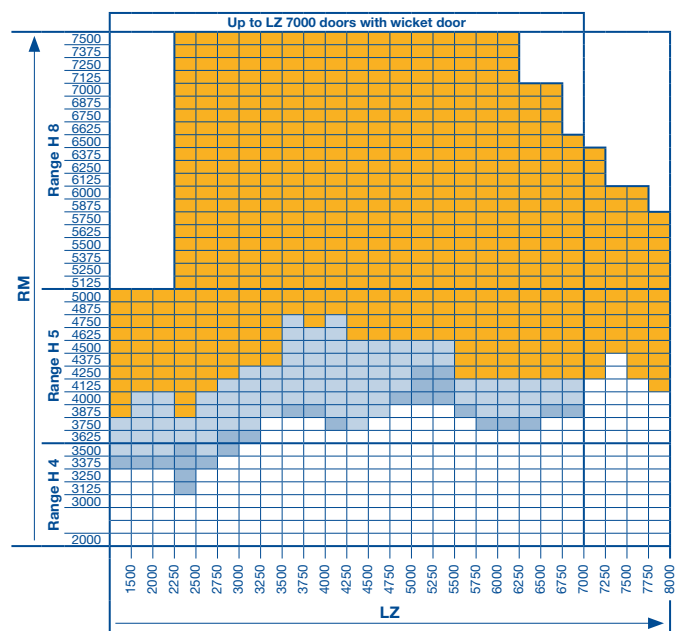
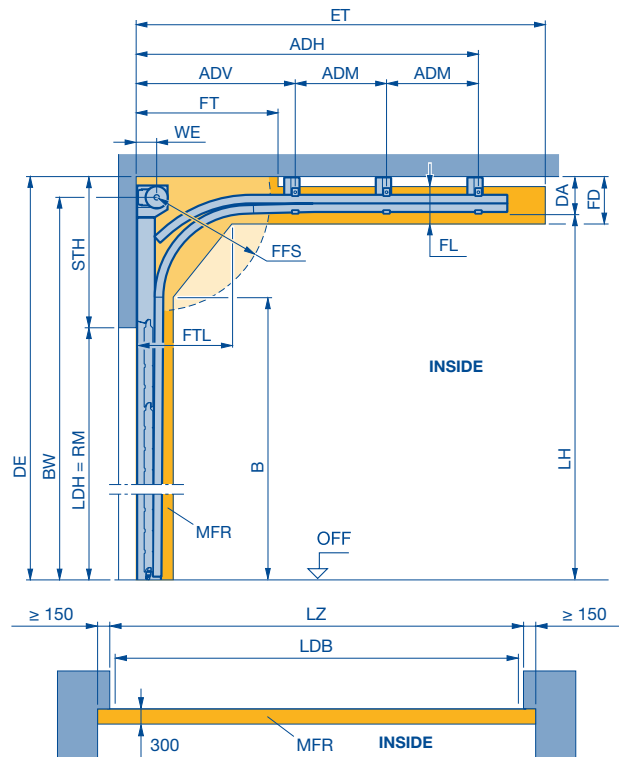
- All door types available in any version.
- All door types and versions on request.
- Versions with glazing A3, B3, M3, S3, U3, LB, P, XU and / or wicket door.
- Track limit

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.
- All door types are available, versions with glazing A3, B3, M3, S3, U3, LB, P, XU and/or wicket door on request.
- Door types APU F42 and ALR F42 are available; APU F42 Thermo, ALR F42 Thermo and SPU F42 with thermo frames as well as versions with glazing A3, B3, M3, S3, U3, LB, P, XU and/or wicket door on request.
- All door types and versions on request.

Dimensions in mm

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 78)
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 10 – 15 and 18 – 35!
- ALR F42 Vitraplan and ALR F42 Glazing on request

Observe min. sideroom, see page 78.

	STH	WE	DA	BW
H 4	LH – RM + 290	160	290	LH + 150
H 5	LH – RM + 350 (525*)	180	350 (525*)	LH + 180
H 8	LH – RM + 390 (550*)	205	390 (550*)	LH + 205

* with double spring shaft

B	DE	FD	FFS	FL	FT	FTL
LH – 513	STH + RM	DA + 65	Min. 90° (745)	250	2 × WE	650

ET*	
H 4 / H 5	2 × RM – LH + 962 + 297 For manual operation with long spring buffer (standard) 2 × RM – LH + 692 + 297 For shaft operator with long spring buffer LH – RM ≤ 1000 2 × RM – LH + 692 + 297 For shaft operator WA 300 with long spring buffer LH – RM > 1000 2 × RM – LH + 692 + 27 For shaft operator WA 400 / WA 500 FU with spring buffer, short LH – RM > 1000
H 8	2 × RM – LH + 692 + 297 All versions

* Simplified calculation

Table: track heights (LH)

Door height RM	Min. LH	Max. LH	H 5	Door height RM	Min. LH	Max. LH	
5000	5490	8350					
4875	5365	8225					
4750	5240	8100					
4625	5115	7975					
4500	4990	7850					
4375	4865	7725					
4250	4740	7600			7500	8595	10250
4125	4615	7475			7375	8470	10250
4000	4490	7235			7250	8345	10250
3875	4365	6985	H 4	7125	8220	10250	
3750	4240	6735		7000	8095	10250	
3625	4115	6485		6875	7970	10250	
3500	3990	6235		6750	7845	10200	
3375	3865	5985		6625	7720	10075	
3250	3740	5735		6500	7595	9950	
3125	3615	5485		6375	6865	9825	
3000	3490	5235		6250	6740	9700	
2875	3365	4985		6125	6615	9575	
2750	3240	4735		6000	6490	9450	
2625	3115	4485		5875	6365	9325	
2500	2990	4235		5750	6240	9200	
2375	2865	3985		5625	6115	9075	
2250	2740	3735		5500	5990	8950	
2125	2615	3485		5375	5865	8825	
2000	2490	3235	5250	5740	8700		
			5125	5615	8575		

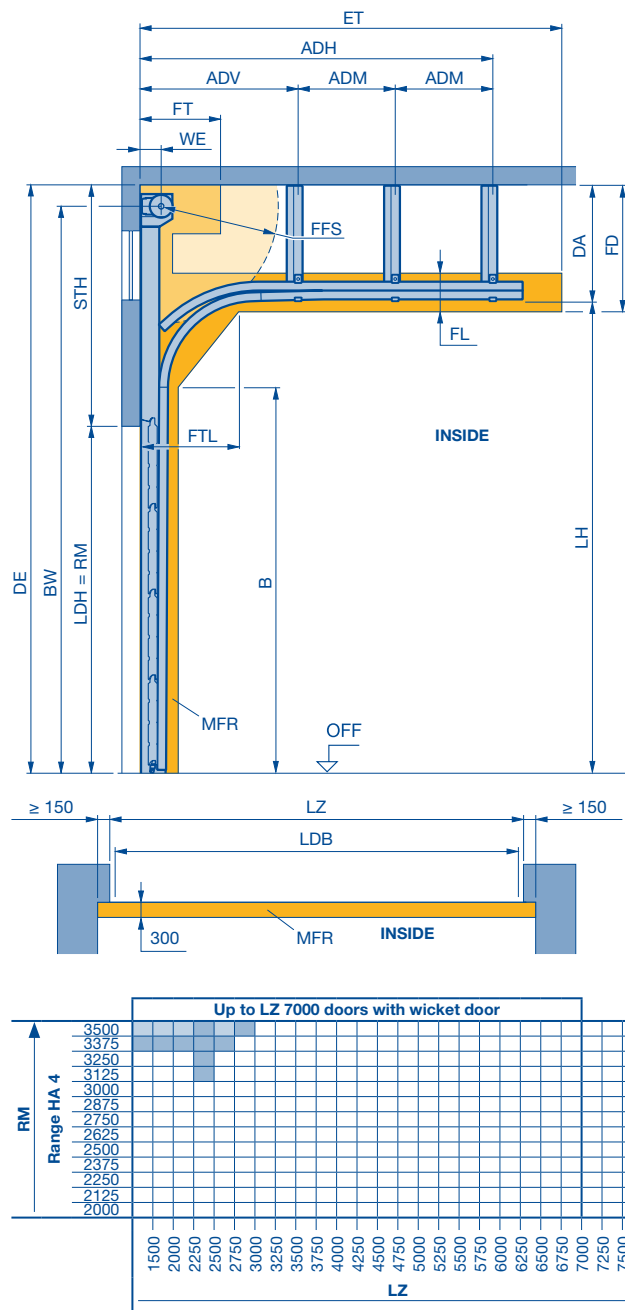
H 8

All door types and versions available on request

Track application: HA

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

Detailed technical data can be found in the product configurator.



ET*		
HA 4	2 x RM - LH + 962 + 297	For manual operation with long spring buffer (standard)
	2 x RM - LH + 692 + 297	For shaft operator with long spring buffer LH - RM ≤ 1000
	2 x RM - LH + 692 + 297	For shaft operator WA 300 with long spring buffer LH - RM > 1000
	2 x RM - LH + 692 + 27	For shaft operator WA 400/WA 500 FU with spring buffer, short LH - RM > 1000

* Simplified calculation

ADH	Distance to rear ceiling anchor	FTL	Clearance of door section in the double radius
ADM	Distance to centre ceiling anchor (see page 84)	LDB	Clear passage width with ThermoFrame (see page 78)
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 78.

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

Max. BW	WE	FT	FTL	FL	FFS	FD
8120, DE - 140	160	2 x WE	650	250	Min. 90° (745)	DA + 65

Table: track heights (LH)

Door height RM	Min. LH	Max. LH	HA 4
3500	3990	6215	
3375	3865	5965	
3250	3740	5715	
3125	3615	5465	
3000	3490	5215	
2875	3365	4965	
2750	3240	4715	
2625	3115	4465	
2500	2990	4215	
2375	2865	3965	
2250	2740	3715	
2125	2615	3465	
2000	2490	3215	

Notices:

- Be sure to observe the permissible size ranges of the door types on pages 10 - 15 and 18 - 35!
- ALR F42 Vitraplan and ALR F42 Glazing on request

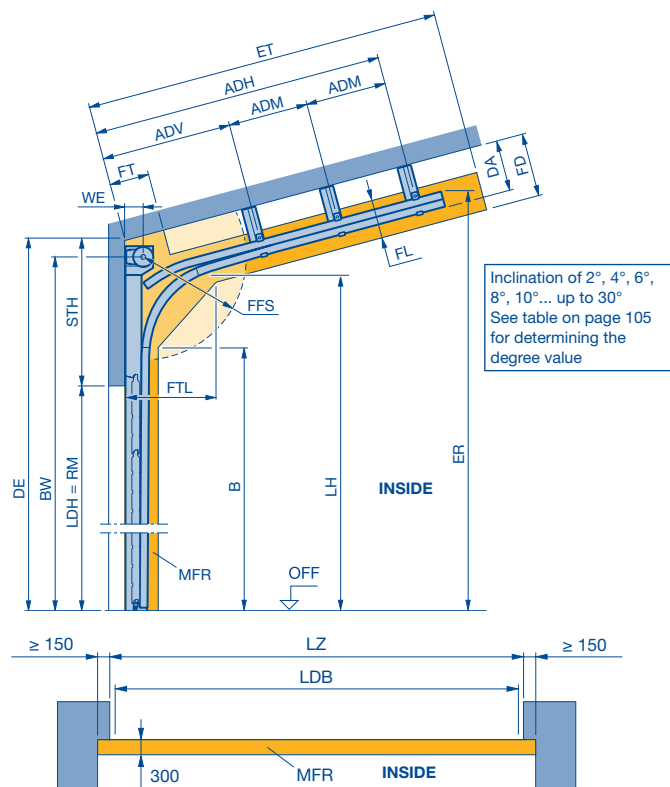
- All door types available in any version.
- All door types are available, versions with glazing A3, B3, M3, S3, U3, LB, P, XU and / or wicket door on request.
- Door types APU F42 and ALR F42 are available; APU F42 Thermo, ALR F42 Thermo and SPU F42 with thermo frames as well as versions with glazing A3, B3, M3, S3, U3, LB, P, XU and / or wicket door on request.

Dimensions in mm

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	HH	Obstruction height
ADV	Distance to front ceiling anchor	HT	Obstruction depth
B	Start of double radius	LDB	Clear passage width with ThermoFrame (see page 78)
BW	Position of shaft support	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
	Track height (depth and 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		

Please note:

Select required track height according to the door height in the table on page 64.

Notices:

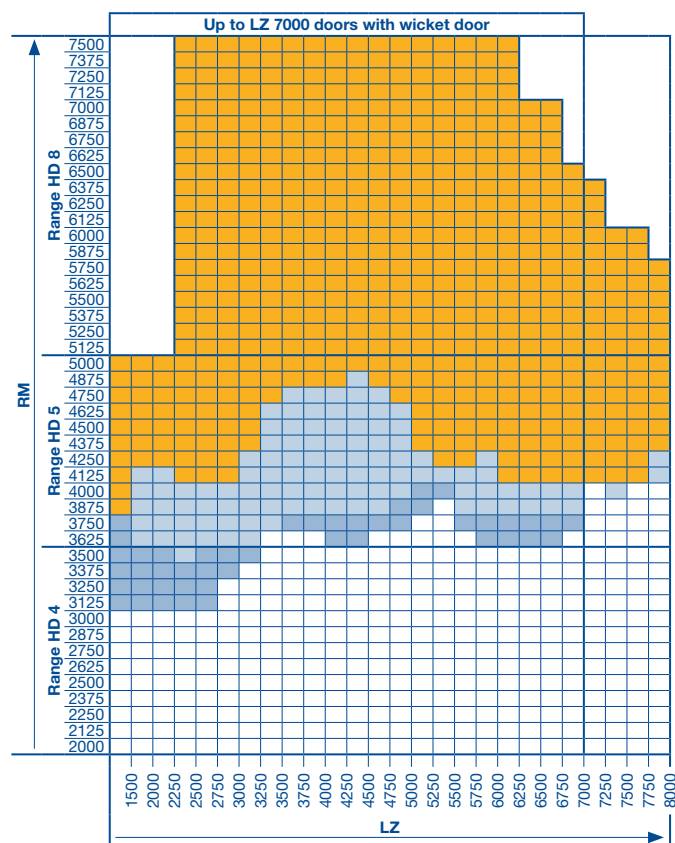
- The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account.
- The clearance required for fitting the door must be free of supply lines, heater 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 10 – 15 and 18 – 35!
- ALR F42 Vitraplan and ALR F42 Glazing on request.
- To determine the roof slope see page 105.
- Inclination > 10° to 30° on request.

Observe min. sideroom, see page 78.

	STH	BW	WE	DA	B
HD 4	780	LH + 150	160	**	LH – 513
HD 5	840	LH + 180	180		
HD 8	880	LH + 205	205		

FT	FL	FTL	FFS	FD	ET	ER
2 x WE	250	650, ≤ 15° 550, > 15°	Min. 90° (745)	DA + 65	**	**

** Dimensions can be found in the product configurator.



All door types available in any version.

All door types are available, versions with glazing A3, B3, M3, S3, U3, LB, P, XU and/or wicket door on request.

Door types APU F42 and ALR F42 are available; APU F42 Thermo, ALR F42 Thermo and SPU F42 with thermo frames as well as versions with glazing A3, B3, M3, S3, U3, LB, P, XU and/or wicket door on request.

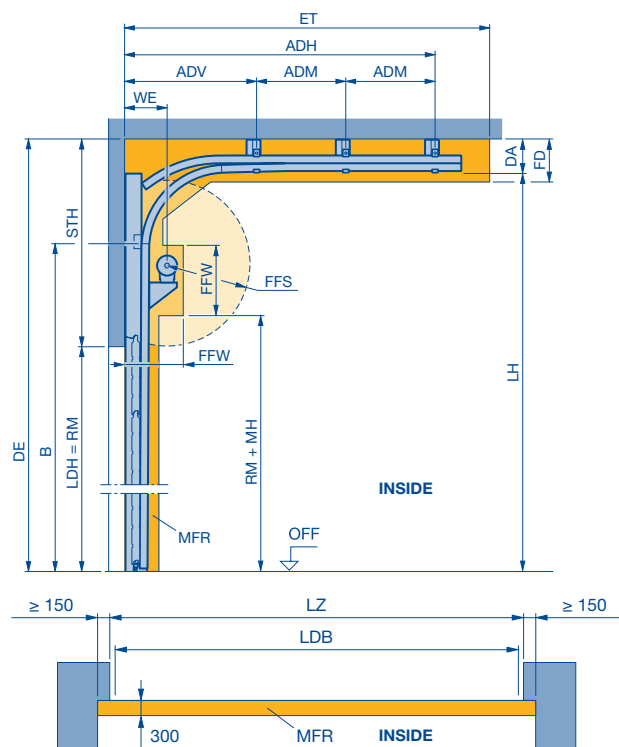
All door types and versions on request.

Dimensions in mm

Track application: HU

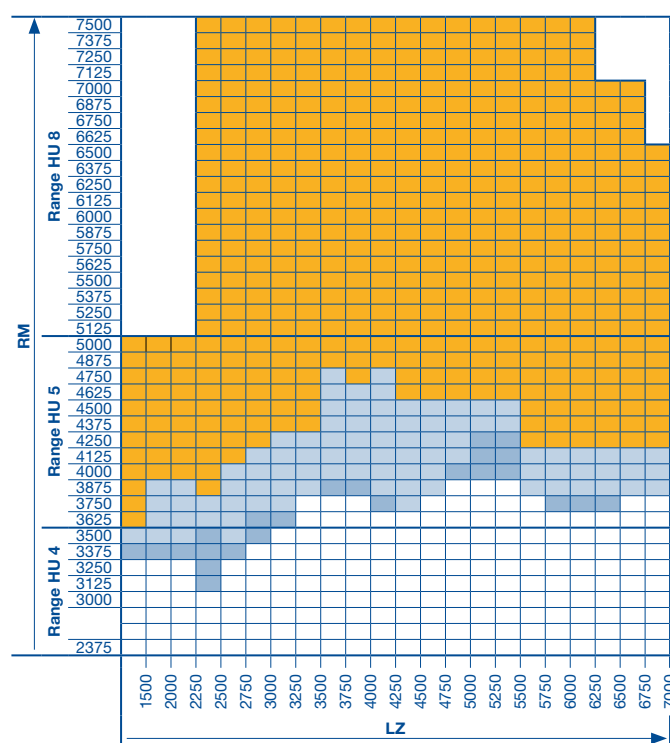
High-lift track application with low-mounted torsion spring shaft

Detailed technical data can be found in the product configurator.



ET*		
HU 4 / HU 5	2 × RM - LH + 962 + 297	For manual operation with long spring buffer (standard)
HU 4 / HU 5	2 × RM - LH + 692 + 297	For shaft operator WA 300 with long spring buffer
HU 4 / HU 5	2 × RM - LH + 692 + 27	For shaft operator WA 400 / WA 500 FU with short spring buffer
HU 8	2 × RM - LH + 692 + 297	All versions

* Simplified calculation.



ADH	Distance to rear ceiling anchor	LDB	Clear passage width with ThermoFrame (see page 78)
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	Min. distance to ceiling	MFR	Space for fitting the door
DE	Min. ceiling height	MH	Fitting height
ET	Min. distance back	FFL	Finished floor level
FD	Min. ceiling clearance	RM	Grid height
FFS	Spring tensioning clearance	STH	Min. headroom (see page 53)
FFW	Spring shaft clearance	WE	Shaft centre from lintel

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 78.

	STH	WE	DA	FFW
HU 4	LH - RM + 190	315	190	460 × 850
HU 5		335		500 × 850
HU 8		375		580 × 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	6125	7685
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			
2375	3935	5725			

Notices:

- Be sure to observe the permissible size ranges of the door types on pages 10–15 and 18–35!
- ALR F42 Vitraplan and ALR F42 Glazing on request

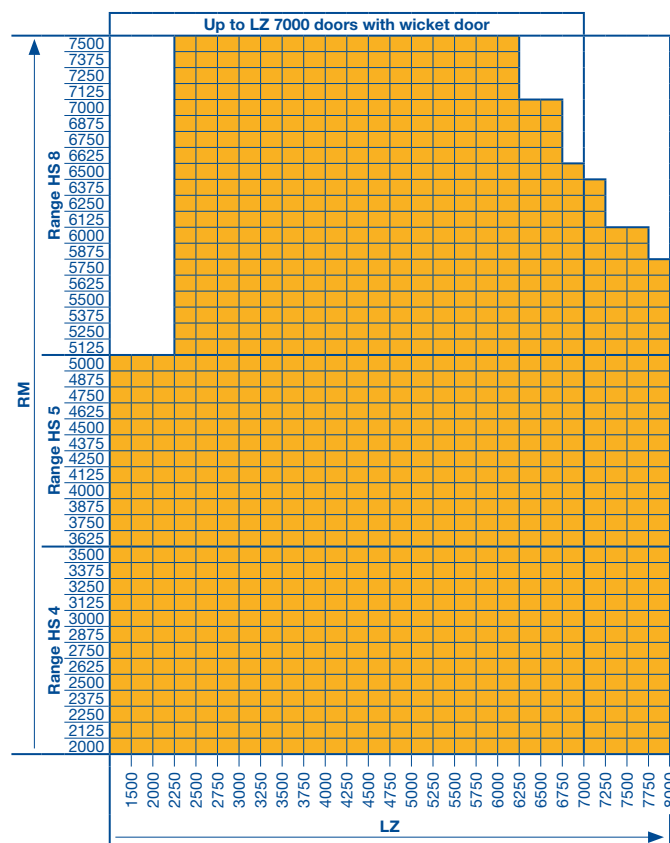
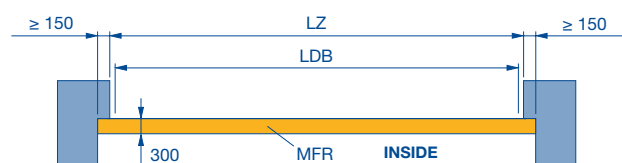
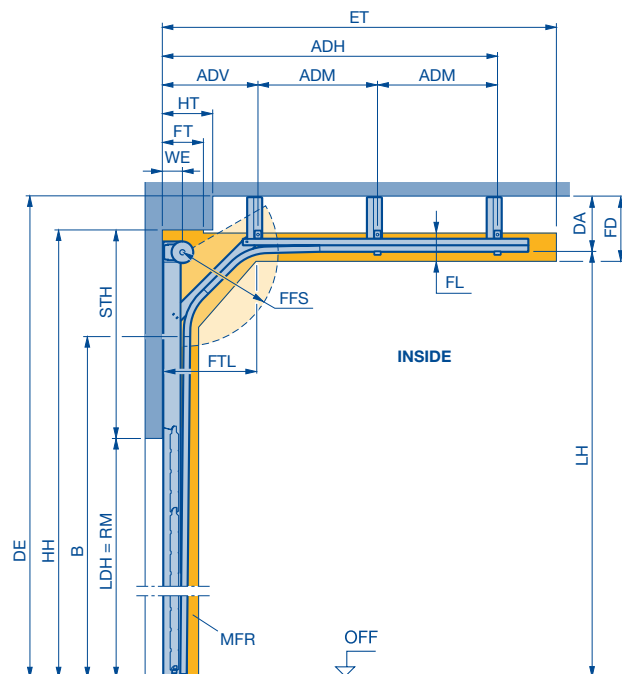
	All door types available in any version.
	All door types are available, versions with glazing A3, B3, M3, S3, U3, LB, P, XU and/or wicket door on request.
	Door types APU F42 and ALR F42 are available; APU F42 Thermo, ALR F42 Thermo and SPU F42 with thermo frames as well as versions with glazing A3, B3, M3, S3, U3, LB, P, XU and/or wicket door on request.
	All door types and versions 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	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 78)
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)
ET	Distance back	MFR	Space for fitting the door
FD	Ceiling clearance	FFL	Finished floor level
FFS	Spring tensioning clearance	RM	Grid height
FL	Track clearance	STH	Min. headroom (see page 53)
FT	Clearance for door operation, on request	WE	Shaft centre from lintel
FTL	Clearance of door section in the double radius		
FFW	Spring shaft clearance		

Please note:

Select required track height according to the door height in the table on page 64.

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 10 – 15 and 18 – 35!
- ALR F42 Vitraplan and ALR F42 Glazing on request

Observe min. sideroom, see page 78.

	STH	WE	DA	DE	B
HS 4	808	160	**	LH + 183	**
HS 5	835	180			
HS 8	875	205			

BW	FT	FL	FTL	FFS	FD	ET	ER
**	2 x WE	250	**	Min. 90° (745)	DA + 65	**	**

** Dimensions can be found in the product configurator.

All door types and versions on request.

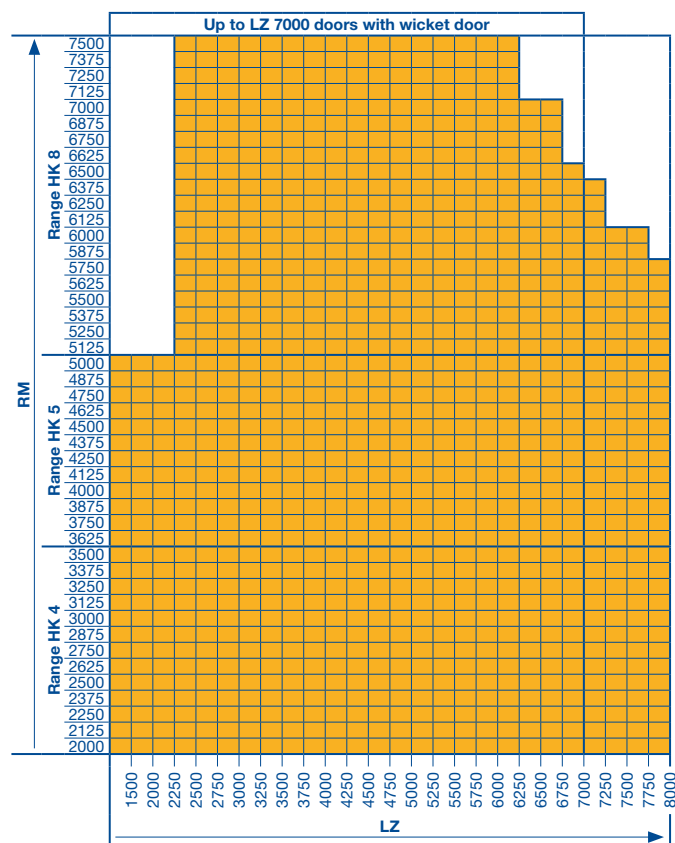
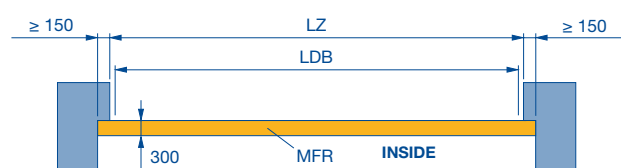
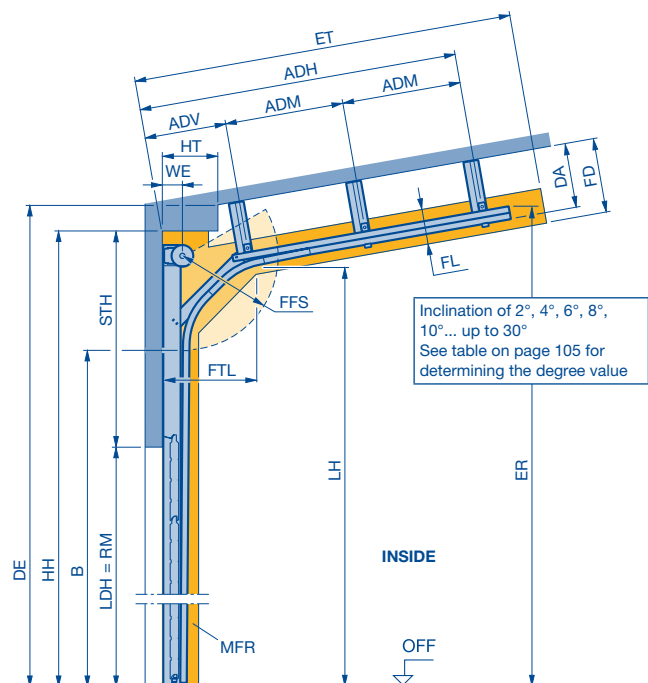
Dimensions in mm

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 78)
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 64.

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 10 – 15 and 18 – 35!
- ALR F42 Vitraplan and ALR F42 Glazing on request.
- To determine the roof slope see page 105.
- Roof slope > 10° to 30° on request.

Observe min. sideroom, see page 78.

	STH	WE	DA	DE	B
HK 4	808	160	**	LH + 183	**
HK 5	835	180			
HK 8	875	205			

BW	FT	FL	FTL	FFS	FD	ET	ER
**	2 x WE	250	**	Min. 90° (745)	DA + 65	**	**

** Dimensions can be found in the product configurator.

All door types and versions on request.

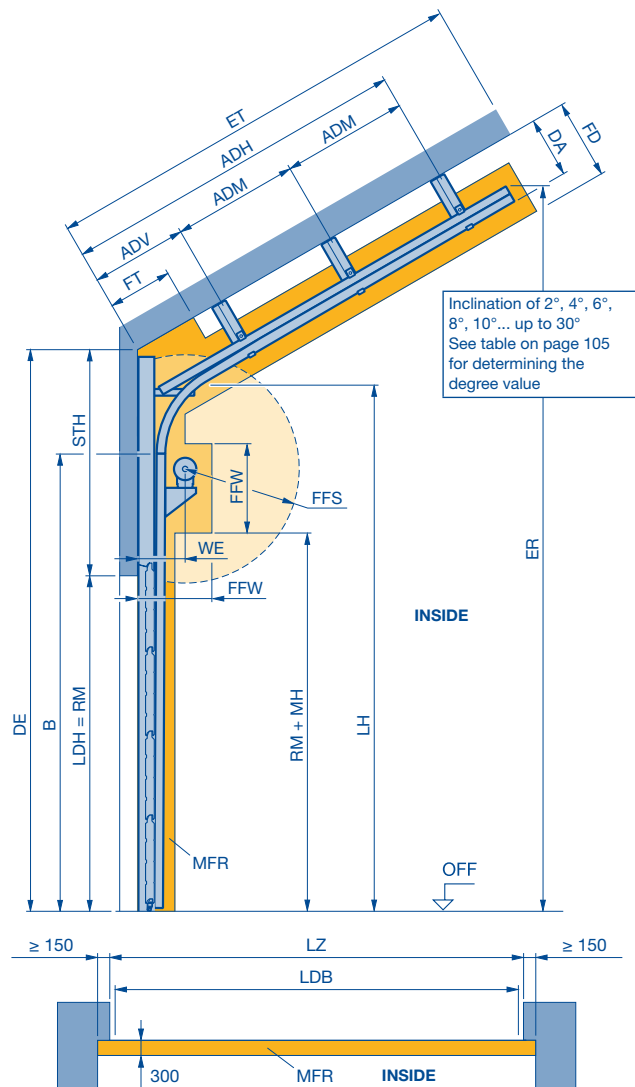
Dimensions in mm

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 78)
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	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 67.

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 10–15 and 18–35!
- ALR F42 Vitraplan and ALR F42 Glazing on request.
- To determine the roof slope see page 105.
- Inclination > 10° to 30° on request.

Observe min. sideroom, see page 78.

	WE	FFW	STH	DA	DE
RD 4	315	460 x 850	1750	**	STH + RM
RD 5	335	500 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.

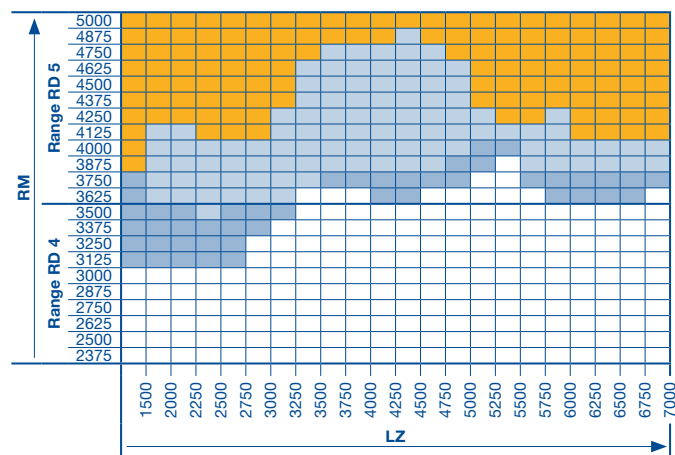
All door types available in any version.

All door types are available, versions with glazing A3, B3, M3, S3, U3, LB, P, XU and / or wicket door on request.

Door types APU F42 and ALR F42 are available; APU F42 Thermo, ALR F42 Thermo and SPU F42 with thermo frames as well as versions with glazing A3, B3, M3, S3, U3, LB, P, XU and / or wicket door on request.

All door types and versions on request.

Dimensions in mm

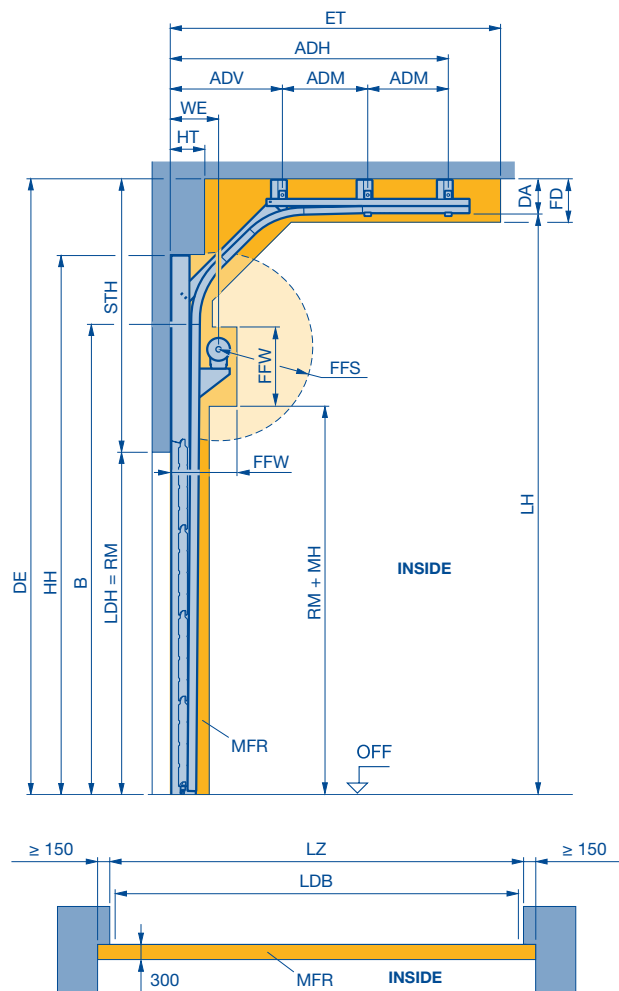


Track application: RS

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
ADM Distance to centre ceiling anchor
ADV Distance to front ceiling anchor
B Start of double radius, factory specification
DA Distance to ceiling on request
DE Min. ceiling height
ET Distance back
FD Ceiling clearance
FFS Spring tensioning clearance
FFW Spring shaft clearance
HH Obstruction height

HT Obstruction depth
LDB Clear passage width with ThermoFrame (see page 78)
LDH Clear passage height
LH Track height
LZ Clear frame dimensions (from 1200)
MFR Space for fitting the door
MH Fitting height
FFL Finished floor level
RM Grid height
STH Min. headroom (see page 53)
WE Shaft centre from lintel

Please note:

Select required track height according to the door height in the table on page 67.

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 10 – 15 and 18 – 35!
- ALR F42 Vitraplan and ALR F42 Glazing on request

Observe min. sideroom, see page 78.

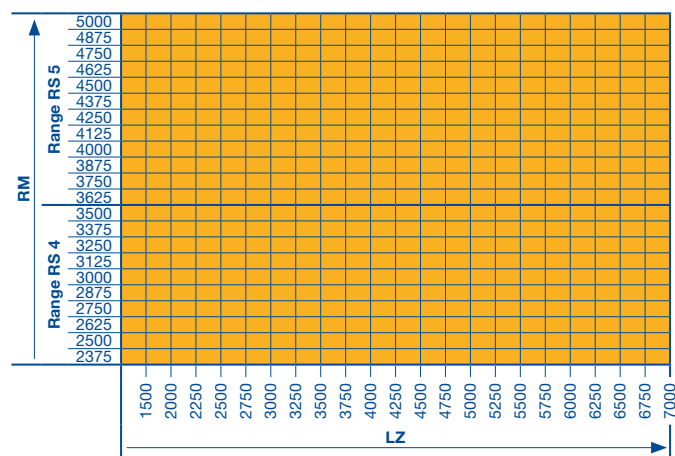
	WE	FFW	STH	DA	DE
RS 4	315	460 × 850	1477	183	LH + 183
RS 5	335	500 × 850			

B	FT	FFS	FD	ET	ER	MH
**	2 × 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

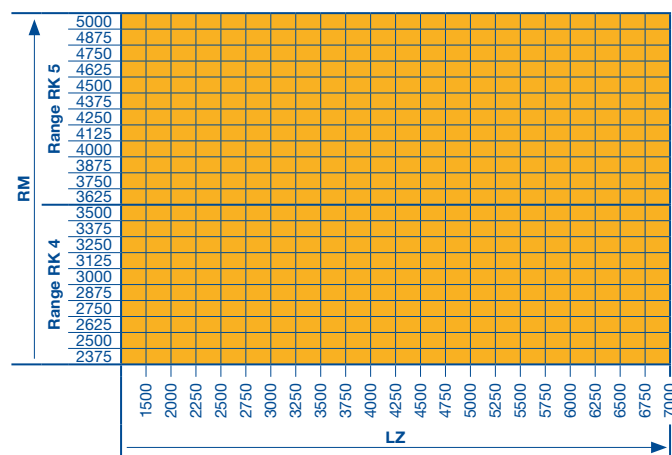
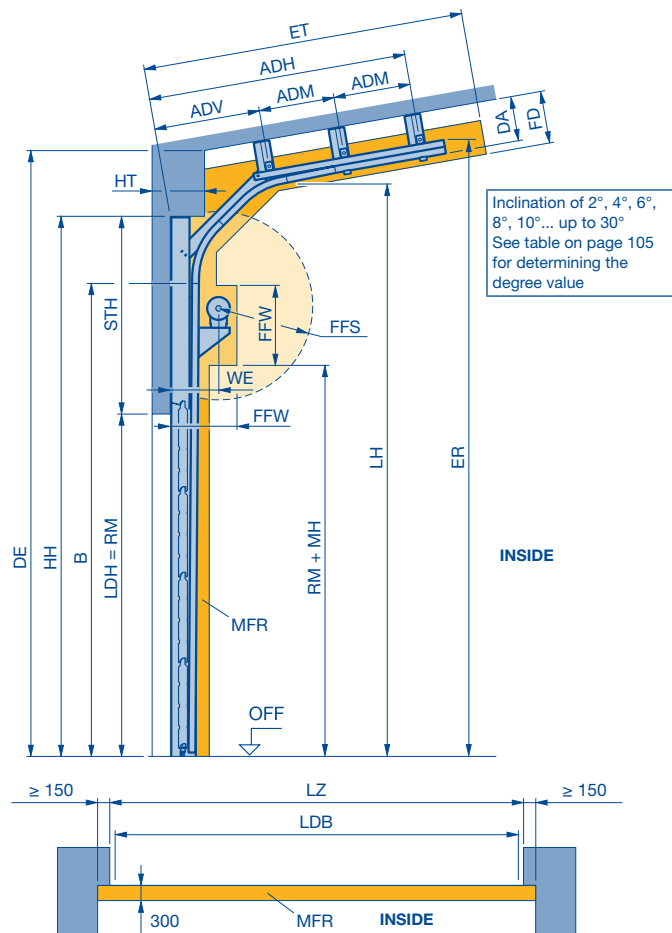


Track application: RK

High-lift track application

with double radius and inclination up to max. 30°

Detailed technical data can be found in the product configurator.



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 78)
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	Distance to ceiling on request	MH	Fitting height
FFS	Spring tensioning clearance	FFL	Finished floor level
FT	Clearance for door operation, on request	RM	Grid height
		STH	Min. headroom
		WE	Shaft centre from lintel

Please note:

Select required track height according to the door height in Table 4 on page 67.

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 10 – 15 and 18 – 35!
- ALR F42 Vitraplan and ALR F42 Glazing on request.
- To determine the roof slope see page 105.
- Inclination > 10° to 30° on request.

Observe min. sideroom, see page 78.

	WE	FFW	STH	DA	DE
RK 4	315	460 × 850	1477	183	LH + 183
RK 5	335	500 × 850			

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

** Dimensions can be found in the product configurator.

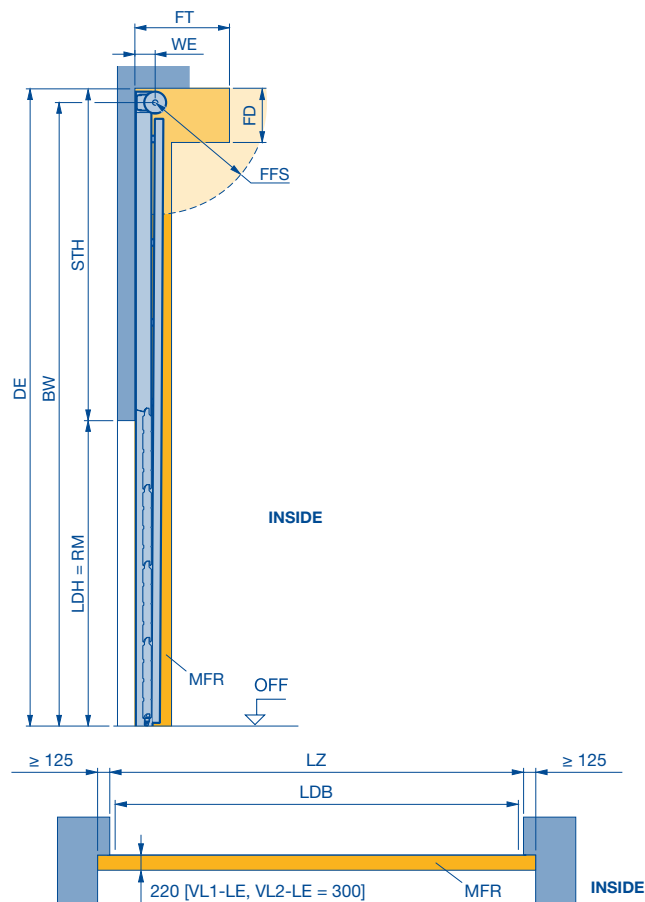
All door types and versions on request.

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 78)	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 10–15 and 18–35!
- ALR F42 Vitraplan and ALR F42 Glazing on request

Observe min. sideroom, see page 78.

	STH	WE	DE	BW
V 6	RM + 540	160	2 × RM + 540	2 × RM + 400
V 7	RM + 580 (770*)	180	2 × RM + 580 (770*)	2 × RM + 425
V 9	RM + 675 (820*)	205	2 × RM + 675 (820*)	2 × RM + 475

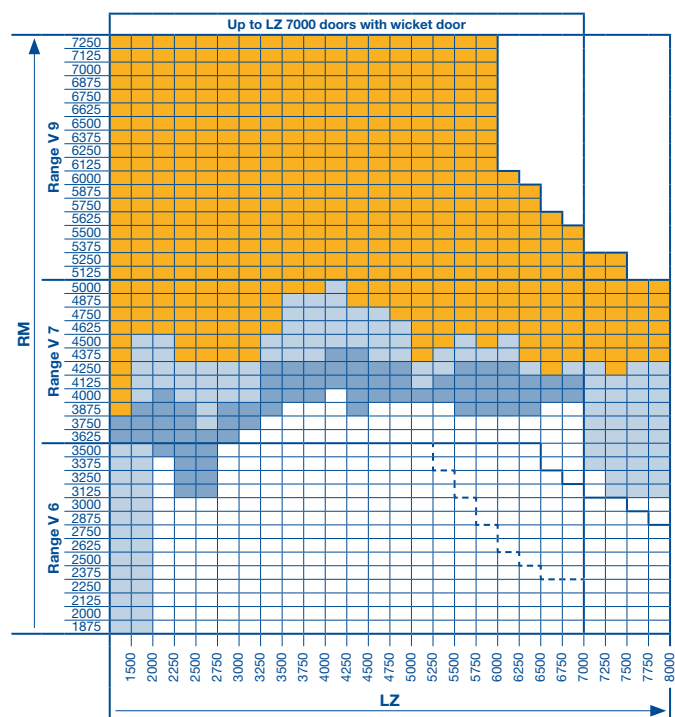
* with double spring shaft

FD	FFS	FT
500	Min. 90° (745)	2 × WE

- All door types available in any version.
- Versions with glazing A3, B3, M3, S3, U3, LB, P, XU and / or wicket door as well as versions LZ > 7000 with glazing A3, B3, M3, S3, U3, LB, P on request.
- Doors with wicket door as well as versions with thermo frames and glazing A3, B3, M3, S3, U3, LB, P and XU.
- All door types and versions on request.

- Track limit
- Track limit with thermo frames and glazing A3, B3, M3, S3, U3, LB, P, XU and / or wicket door.

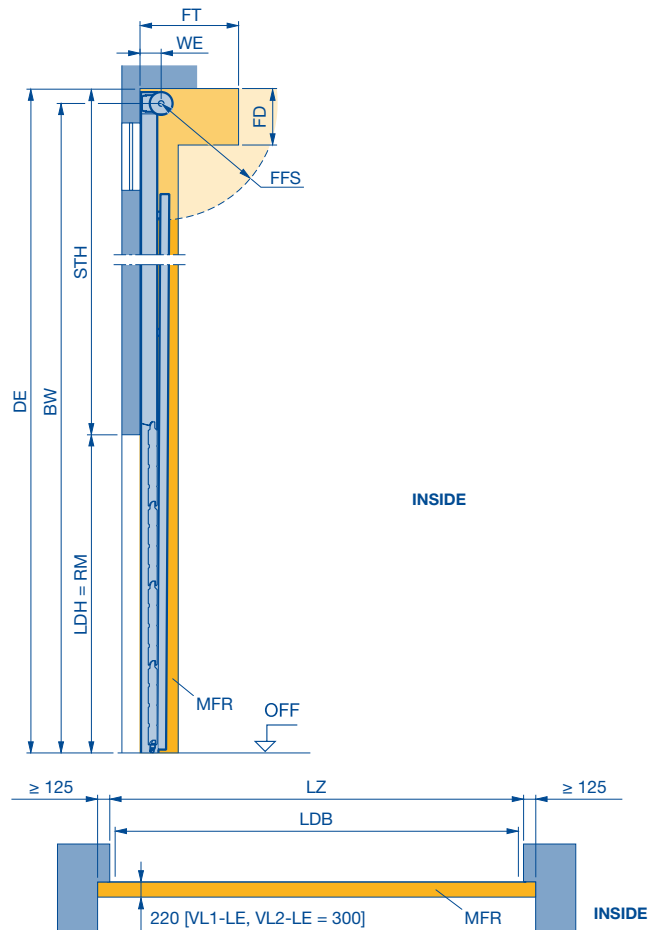
Dimensions in mm



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 78)	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 10 – 15 and 18 – 35!

Observe min. sideroom, see page 78.

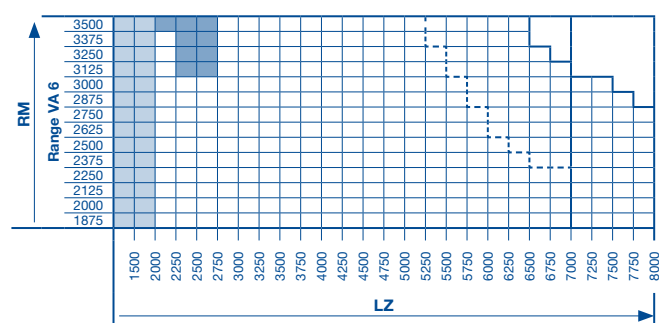
	STH	DE	BW	WE	FD	FFS	FT
VA 6	RM + 550	BW + 140	Min. 2 × RM + 410 Max. DE – 140 (7895)	160	500	Min. 90° (745)	2 × WE

Notice:

ALR F42 Vitraplan and ALR F42 Glazing on request

- All door types available in any version.
- Versions with glazing A3, B3, M3, S3, U3, LB, P, XU and/or wicket door on request.
- Versions with thermo frames and glazing A3, B3, M3, S3, U3, LB, P, XU and wicket door.
- Track limit
- Track limit with thermo frames and glazing A3, B3, M3, S3, U3, LB, P, XU and/or wicket door

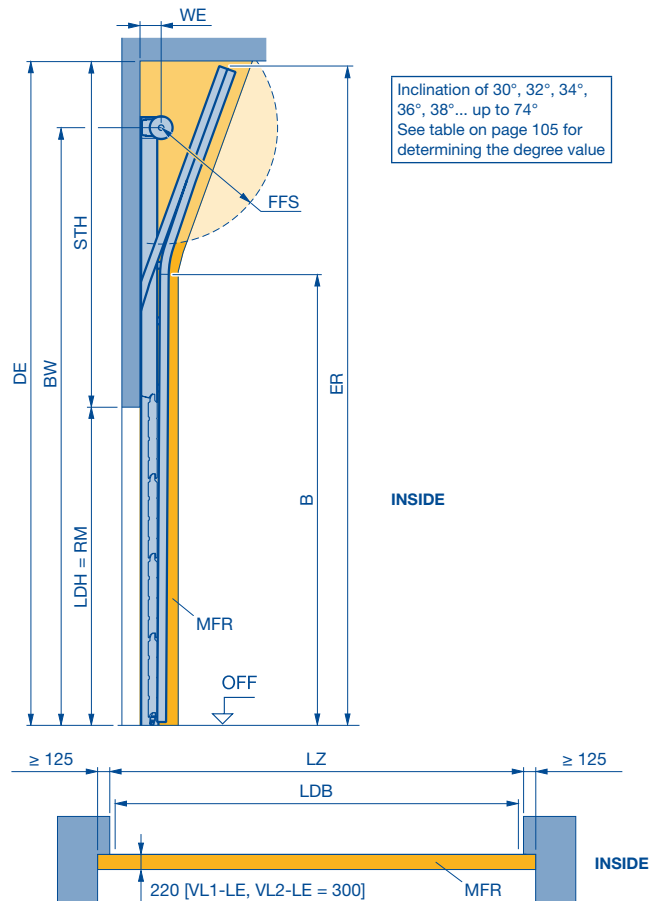
Dimensions in mm



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 78)	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 10 – 15 and 18 – 35!

Observe min. sideroom, see page 78.

	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:

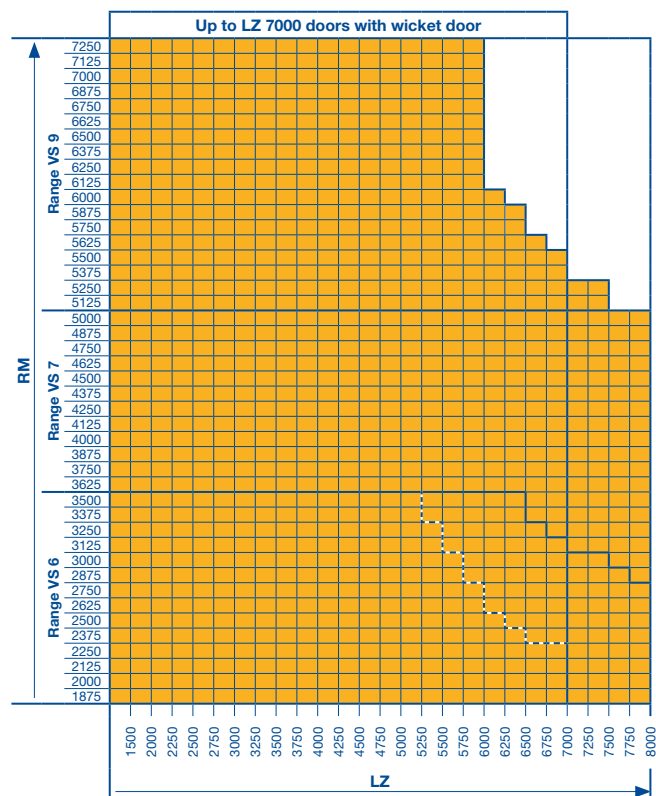
ALR F42 Vitraplan and ALR F42 Glazing on request

All door types and versions on request.

Track limit

Track limit with thermo frames and glazing A3, B3, M3, S3, U3, LB, P, XU and / or wicket door.

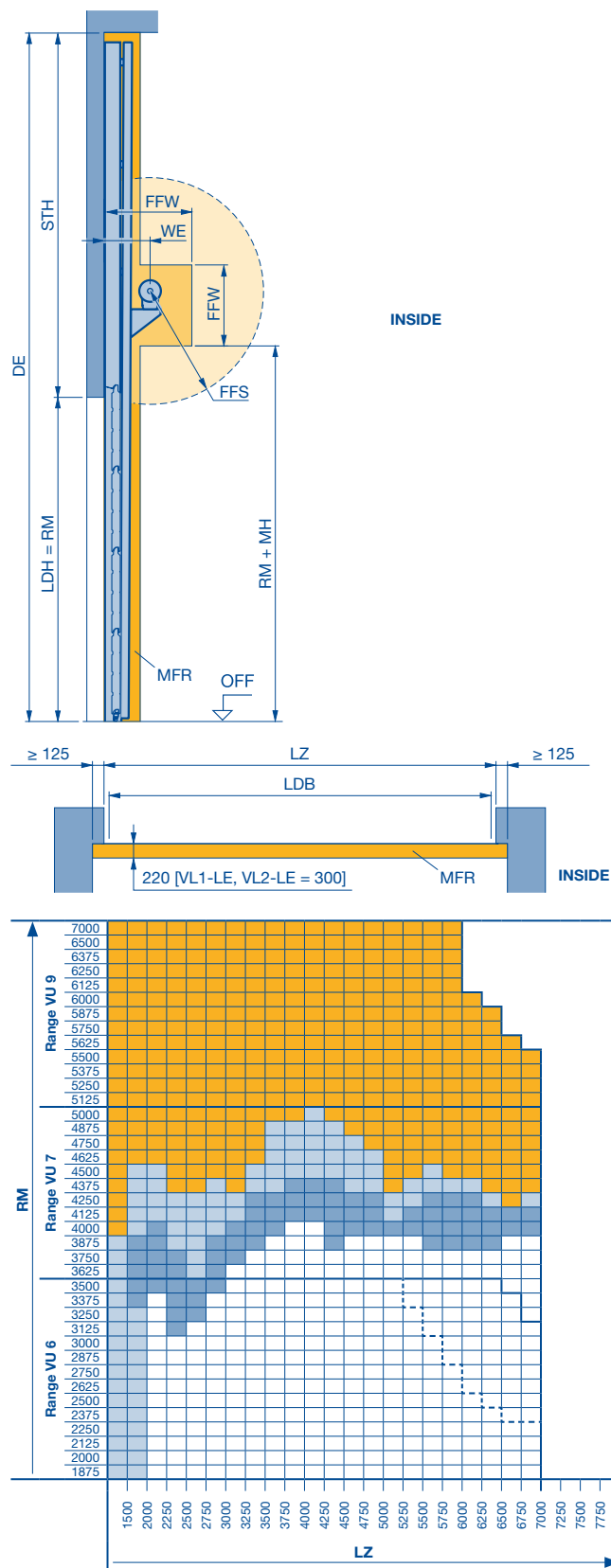
Dimensions in mm



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 78)	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 10–15 and 18–35!

Observe min. sideroom, see page 78.

	STH	DE	WE	FFS	MH	FFW
VU 6			315			460 x 850
VU 7	RM + 310	STH + RM	335	Min. 90° (745)	400	500 x 850
VU 9			375			580 x 850

Notice:

ALR F42 Vitraplan and ALR F42 Glazing on request

- All door types available in any version.
- All door types are available, versions with glazing A3, B3, M3, S3, U3, LB, P, XU and /or wicket door on request.
- Door types APU F42 and ALR F42 are available; APU F42 Thermo, ALR F42 Thermo and SPU F42 with thermo frames as well as versions with glazing A3, B3, M3, S3, U3, LB, P, XU and /or wicket door on request.
- All door types and versions on request.
- Track limit
- Track limit with thermo frames and glazing A3, B3, M3, S3, U3, LB, P, XU and /or wicket door

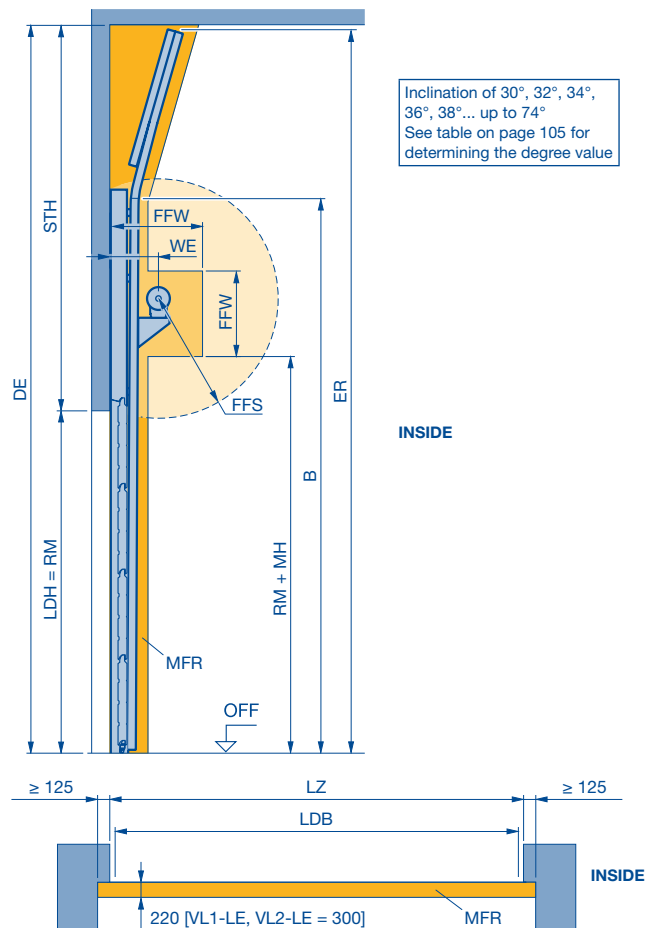
Dimensions in mm

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 400
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 78)	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 10–15 and 18–35!

Observe min. sideroom, see page 78.

	WE	FFW	FFS	MH
WS 6	315	460 × 850	Min. 90° (745)	400
WS 7	335	500 × 850		
WS 9	375	580 × 850		

B	DE	ER	STH
Min. RM + 1200 Max. 2 × RM – 1000	on request	on request	on request

Notice:

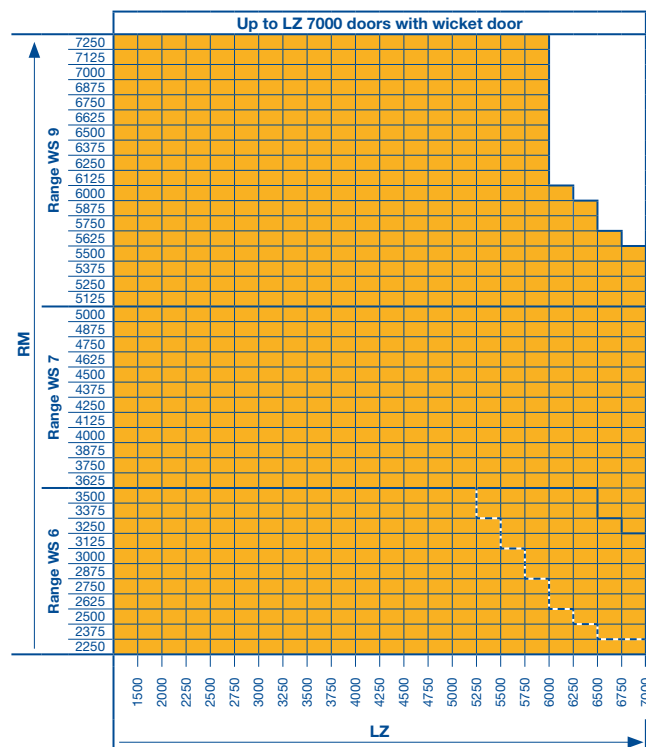
ALR F42 Vitraplan and ALR F42 Glazing on request

All door types and versions on request.

Track limit

Track limit with thermo frames and glazing A3, B3, M3, S3, U3, LB, P, XU and / or wicket door

Dimensions in mm



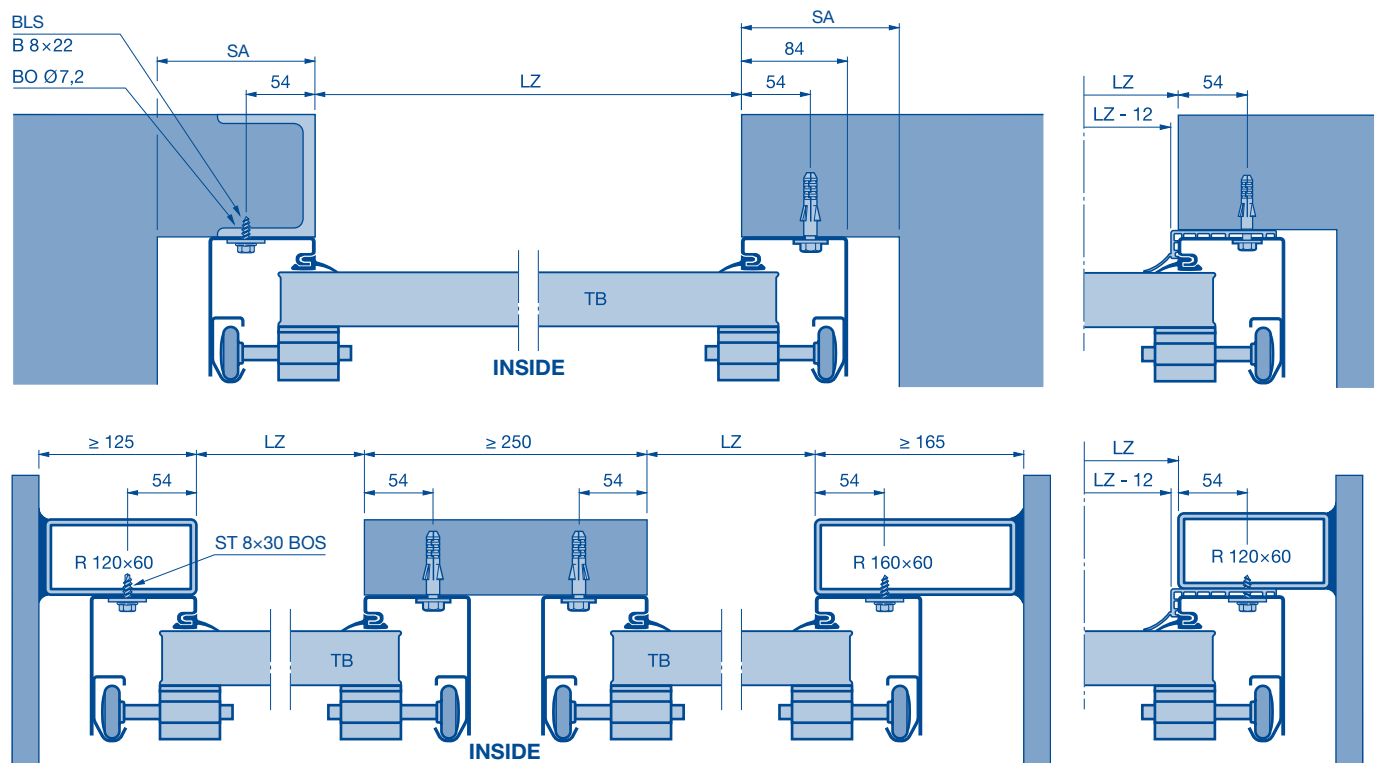
Sideroom

Required sideroom

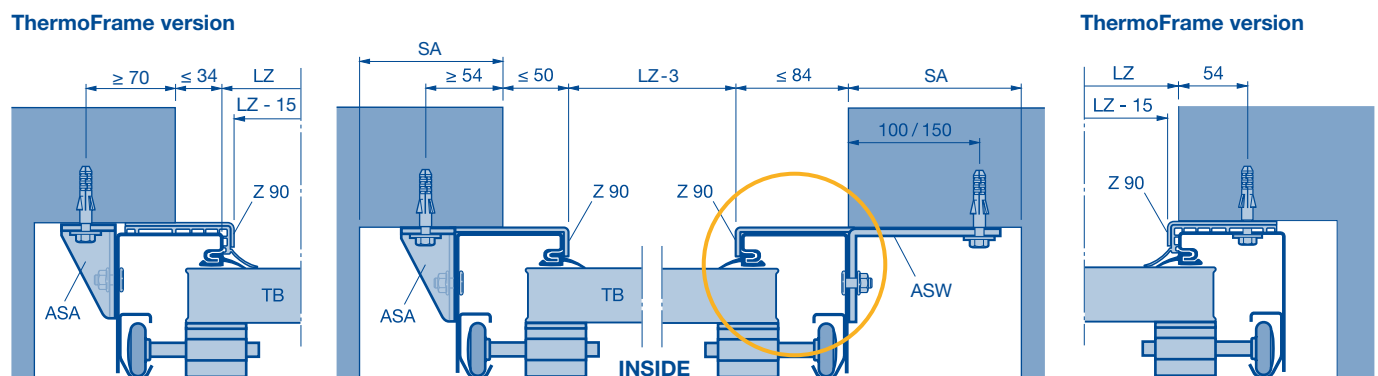
Track application / designation	SA	Track application / designation		SA
N*, NA, ND*, NH*, NS, NK, GD, V, VA, VU, GK, GS, VS, WS	125	Hand pulley	N, NA, ND, NH, NS, GD, NK, GS, GK	140
H, HA, HD, HU, RD, HK, HS, RS, RK	150		H, HA, HD, HU, RD, HK, HS, RS, RK	150
L, LD	125		V, VA, VU, VS,WS	125
With use of the C-rail (page 84 – 85)	170	Chain hoist		Page 82
		Shaft operators		Page 86 – 95

* The sideroom changes due to the track application range.

Sideroom



Sideroom with frame covering



Notice:

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

ASA	Screw-on anchor 70 x 40
ASW	Screw-on bracket 70 x 120/170
BO	Hole
BOS	Drilling screw

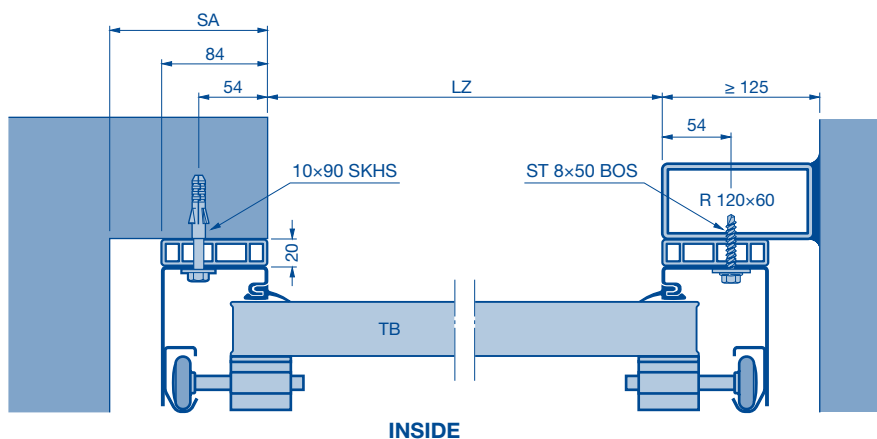
BLS	Self-tapping screw
LZ	Clear frame dimension
R	Box section
SA	Sideroom

TB	Door leaf
Z	Frame covering

Spacer profile

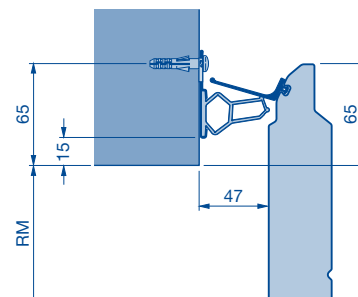
Clearance to the lintel

Sideroom

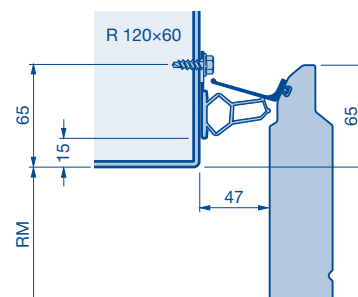


Lintel counter seal

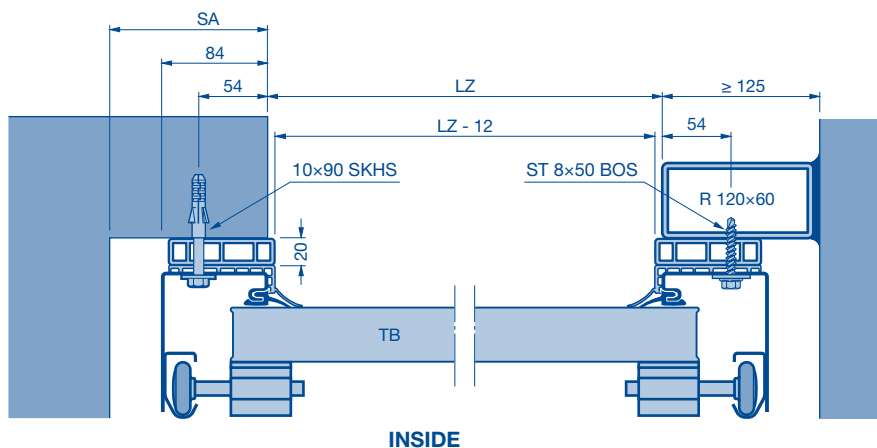
Fitting to brickwork



Box section fitting (120, 160, 200)

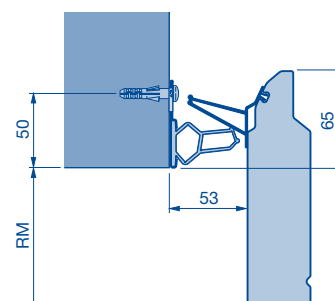


Thermoframe sideroom

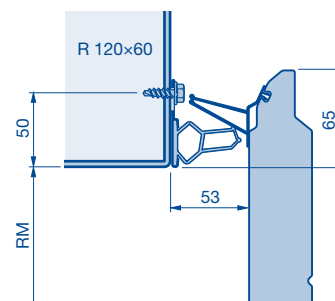


Thermoframe lintel counter seal

Fitting to brickwork



Box section fitting (120, 160, 200)



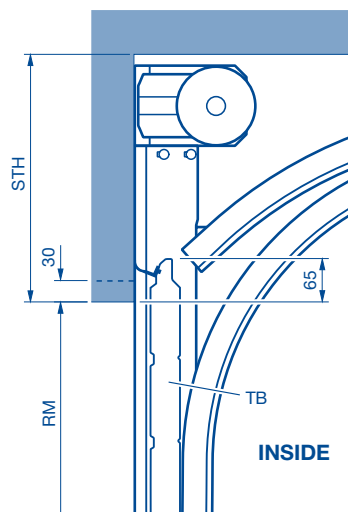
Notice:

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

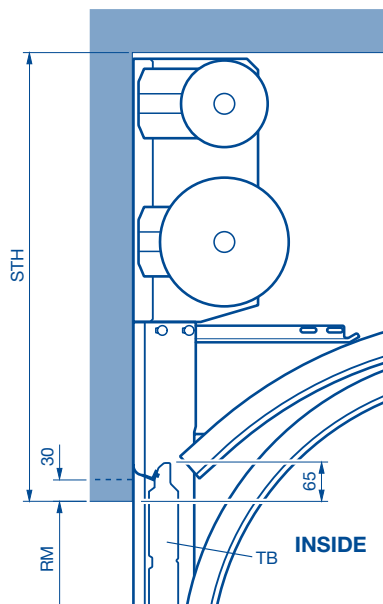
BOS	Drilling screw	SA	Sideroom
LZ	Clear frame dimension	SKHS	Hexagon woodscrew
R	Box section	TB	Door leaf
RM	Standard size		

Lintel fittings

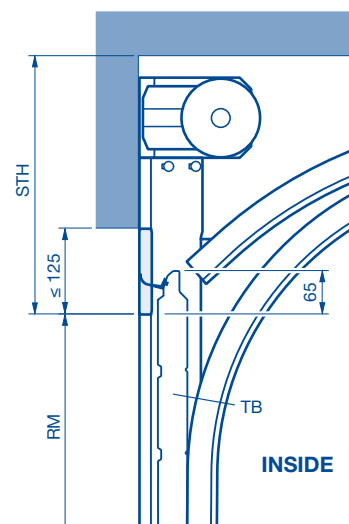
Normal lintel fitting
Insufficient headroom up to 30 mm high



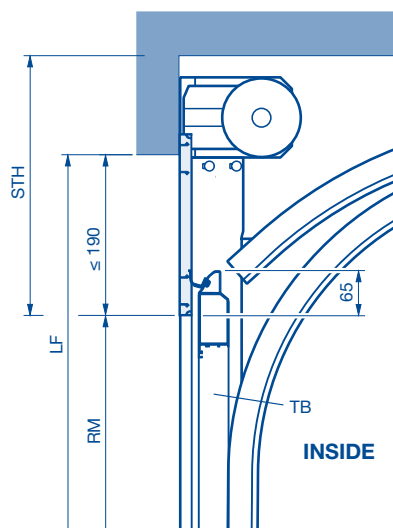
Normal lintel fitting
Double spring shaft



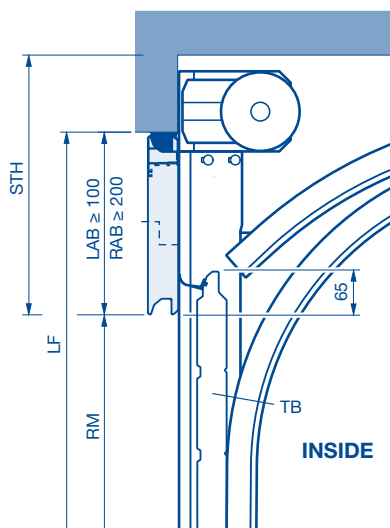
Single-skinned steel fascia for SPU F42
to make up for insufficient headroom
up to 125 mm
(only for track applications N and L)



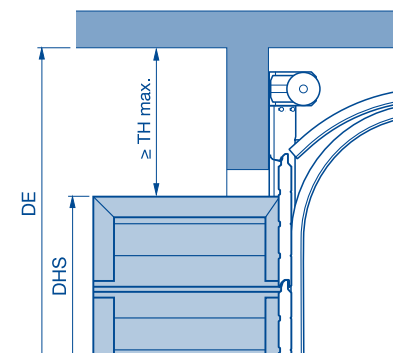
Smooth panel, anodised, for APU F42, ALR F42, ALR F42 Glazing, ALR F42 Vitraplan
to make up for insufficient headroom from 31 to 190 mm height and $LZ \leq 7000$ mm (only for track application N and L)



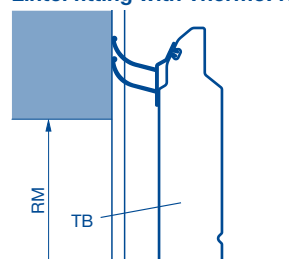
PU fascia panel to make up for insufficient headroom from 100 mm
Aluminium fascia panel to make up for insufficient headroom (see table)



Fitting clearance for multiple-point locking



Lintel fitting with ThermoFrame



Aluminium fascia panels	
Height	Infill type
≥ 200	FU, LB, S, SE, XU, FK, KR
≥ 245	S2, S3, U2, U3, C2, A2, A3, B2, B3, M2, M3

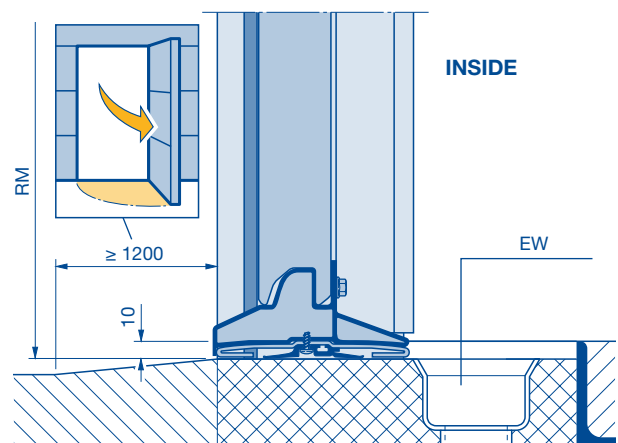
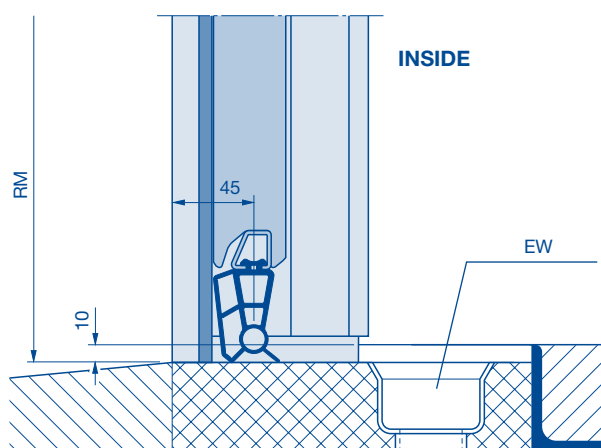
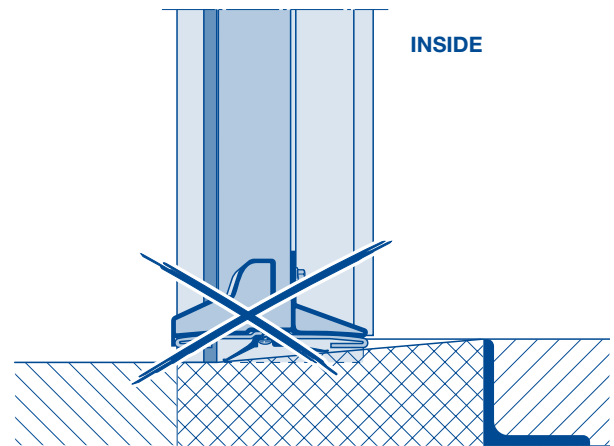
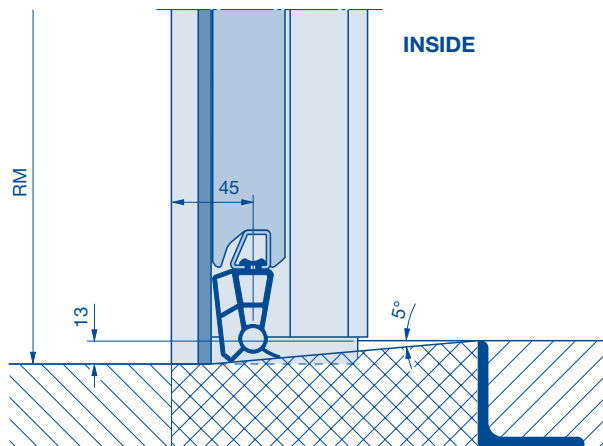
- Aluminium fascia panel with real glass infill VG, E2 and G2 on request.

DE	Ceiling height
DHS	Wicket door clear passage height
RAB	Frame panel
LF	Structural opening
LAB	Fascia panel
RM	Standard size
STH	Min. headroom (see page 53)
TB	Door leaf

Bottom edge

Without wicket door / with wicket door and threshold rail

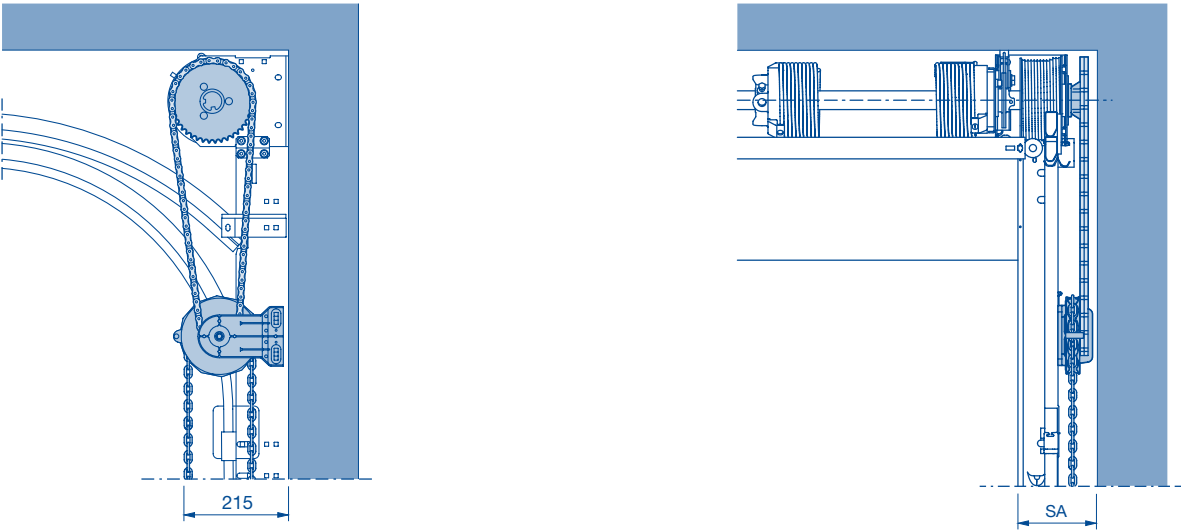
With wicket door and trip-free threshold



EW Drainage
RM Standard size

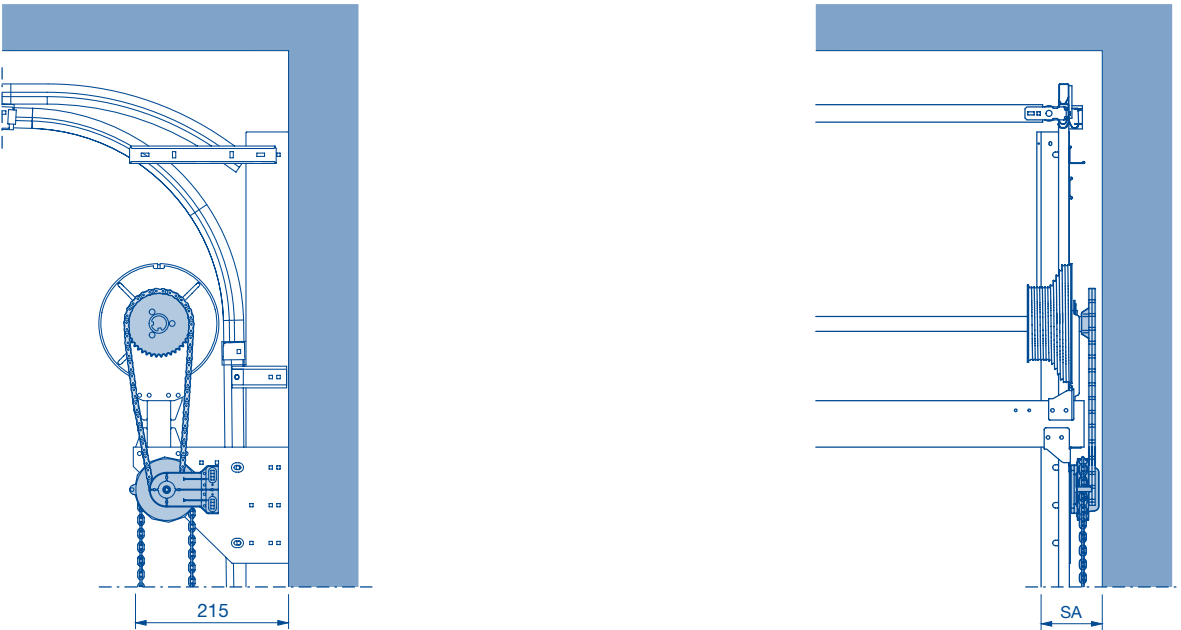
Chain hoist

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

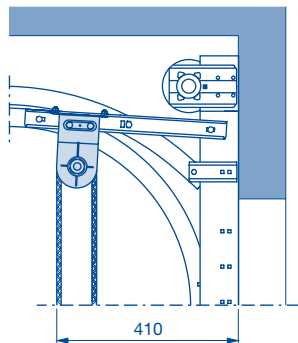
SA Sideroom

Hand pulley

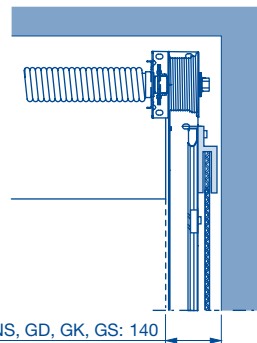
with rope or link steel chain

Track applications up to 20 m² door surface

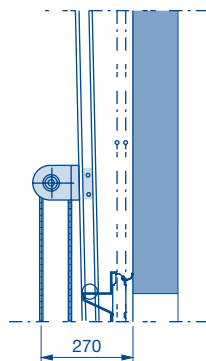
with rope or link steel chain



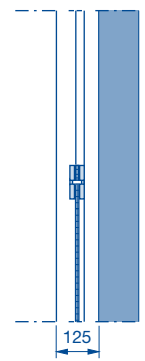
N, NA, ND, NH, NS, GD, H, HA, HD, HU, RD



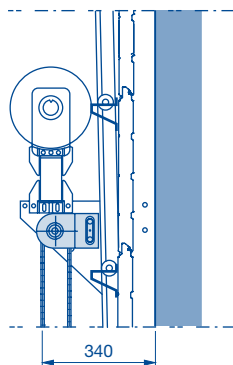
with rope or link steel chain



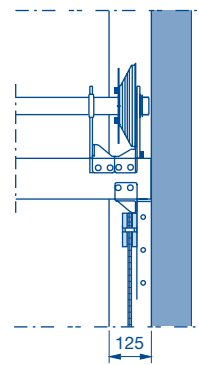
V, VA, VS



with rope or link steel chain



VU, WS

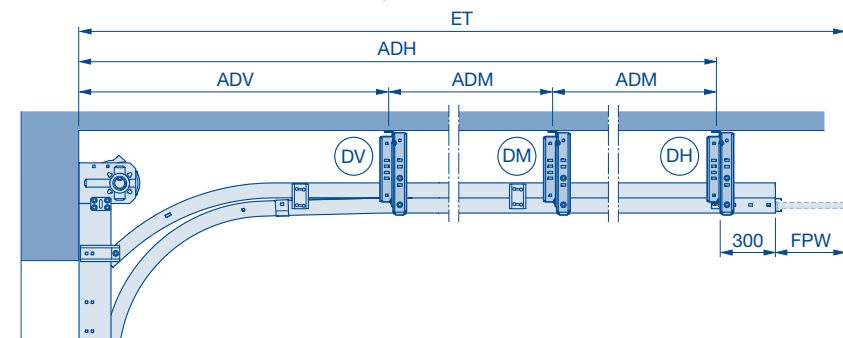


Ceiling anchors

Track suspensions for all track applications except V, VA, VU

Door weights for roof loads (see pages 53 – 63).

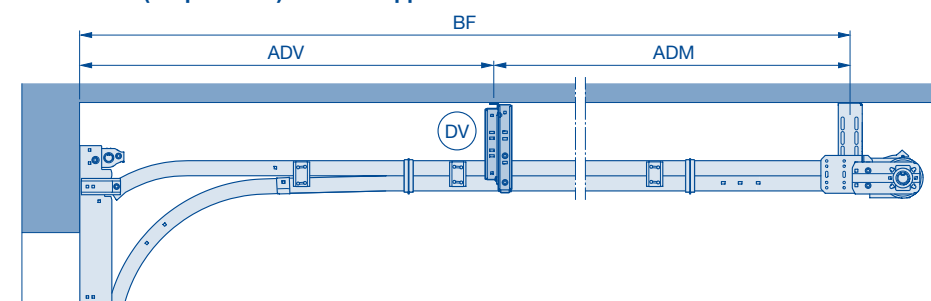
Double track (suspensions), door heights $RM \leq 5000$



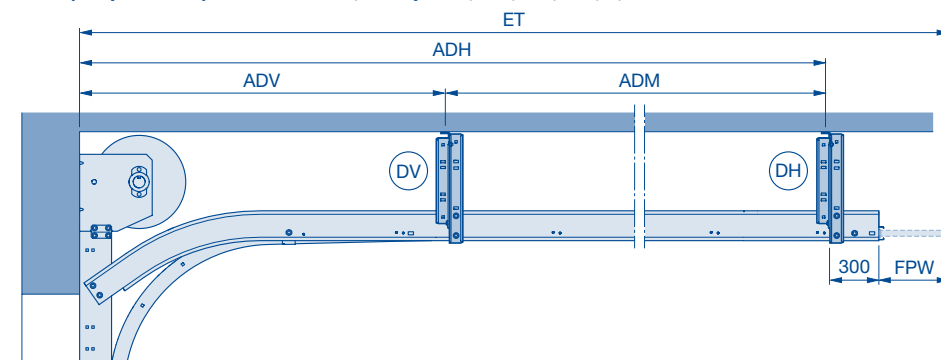
Notices:

- 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.

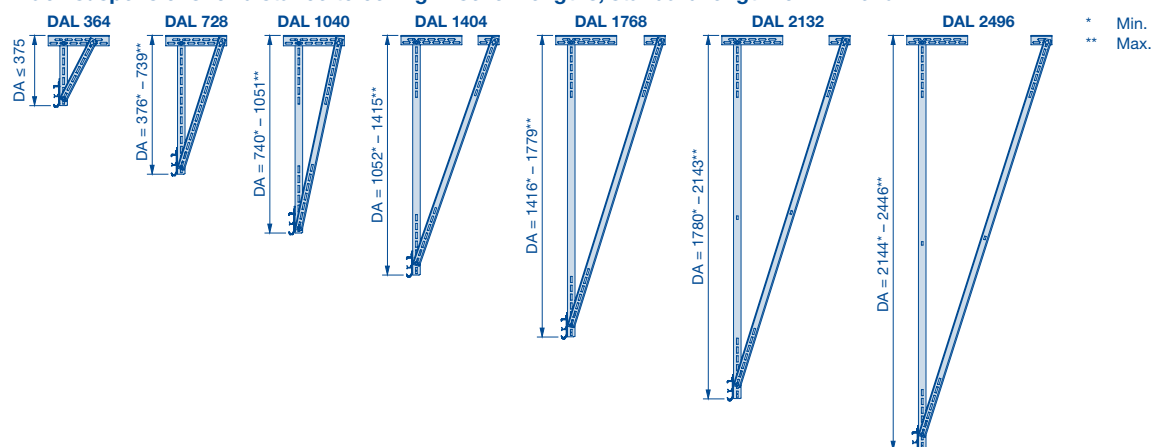
Double track (suspensions) for track application L



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



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



* Min.
** Max.

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	2264–3910	2	1	0	1	1400	–	ET – 597 ET – 327	Long Short
		3911–5660	3	1	1	1	1400	(ET – ADV – 597) / 2 (ET – ADV – 327) / 2	ET – 597 ET – 327	Long Short
		2264–2910	2	1	0	1	1400	–	ET – 597 ET – 327	Long Short
		2911–4035	3	1	1	1	1400	(ET – ADV – 597) / 2 (ET – ADV – 327) / 2	ET – 597 ET – 327	Long Short
	> 7000	4036–5660	4	1	2	1	1400	(ET – ADV – 597) / 3 (ET – ADV – 327) / 3	ET – 597 ET – 327	Long Short
		1890–2177	1	0	0	1	–	–	ET – 597 ET – 327	Long Short
		2178–3957	2	1	0	1	1400	–	ET – 597 ET – 327	Long Short
		3958–5464	3	1	1	1	1400	(ET – ADV – 597) / 2 (ET – ADV – 327) / 2	ET – 597 ET – 327	Long Short
L	≤ 7000	5465–5694	4	1	2	1	1400	(ET – ADV – 327) / 3	ET – 327	Short
		2857–3516	2	1	0	1	1400	–	RM + 670	–
		3517–5641	3	1	1	1	1400	(BF – ADV) / 2		
		5642–5982	4	1	2	1	1400	(BF – ADV) / 3		
	> 7000	1890–2177	1	0	0	1	–	–	ET – 597 ET – 327	Long Short
		2178–3957	2	1	0	1	1400	–	ET – 597 ET – 327	Long Short
		3958–5464	3	1	1	1	1400	(ET – ADV – 597) / 2 (ET – ADV – 327) / 2	ET – 597 ET – 327	Long Short
		5465–5694	4	1	2	1	1400	(ET – ADV – 327) / 3	ET – 327	Short
		1890–2177	1	0	0	1	1400	–	ET – 597 ET – 327	Long Short
		2178–2967	2	1	0	1	1400	–	ET – 597 ET – 327	Long Short
		2968–3839	3	1	1	1	1400	(ET – ADV – 597) / 2 (ET – ADV – 327) / 2	ET – 597 ET – 327	Long Short
		3840–5194	4	1	2	1	1400	(ET – ADV – 597) / 3 (ET – ADV – 327) / 3	ET – 597 ET – 327	Long 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	≤ 6660	2	1	0	1	ADH / 2	–	ET – 597 ET – 327	Long Short
		> 6660	3	1	1	1	ADH / 3	(ET – ADV – 597) / 2 (ET – ADV – 327) / 2	ET – 597 ET – 327	Long Short
		≤ 5982	2	1	0	1	BF / 2	–	RM + 670	–
		≤ 6714	2	1	0	1	ADH / 2	–	ET – 597 ET – 327	Long Short
H, HA, HU	≤ 8000	> 6714	3	1	1	1	ADH / 3	(ET – ADV – 597) / 2 (ET – ADV – 327) / 2	ET – 597 ET – 327	Long Short
		≤ 5982	2	1	0	1	BF / 2	–	RM + 670	–
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	≤ 3785	1	0	0	1	–	–	ET – 597 ET – 327	Long Short
		> 3785	2	1	0	1	ADH / 2	–	ET – 597 ET – 327	Long Short
		≤ 3516	1	0	0	1	–	–	–	–
		3517–5891	2	1	0	1	BF / 2	–	RM + 670	
L	≤ 5500	> 5891	3	1	1	1	BF / 3	(BF – ADV) / 2	RM + 670	–
		≤ 3715	1	0	0	1	–	–	ET – 597 ET – 327	Long Short
		> 3715	2	1	0	1	ADH / 2	–	ET – 597 ET – 327	Long Short
		≤ 3715	1	0	0	1	–	–	ET – 597 ET – 327	Long Short
NH, ND, GD, LD, HD, RD	***									

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

Notice:

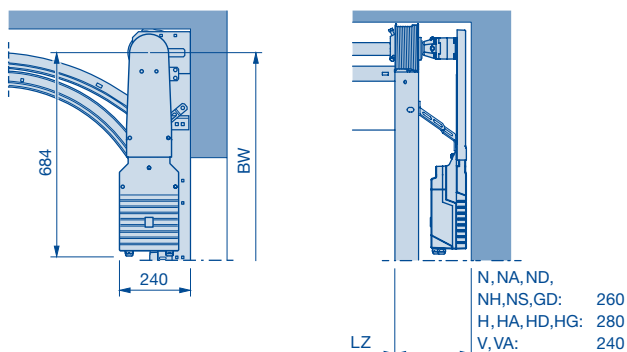
Deviations may occur due to the simplified calculation of the distance back. Detailed technical data can be found in the product configurator.

Shaft operator WA 300

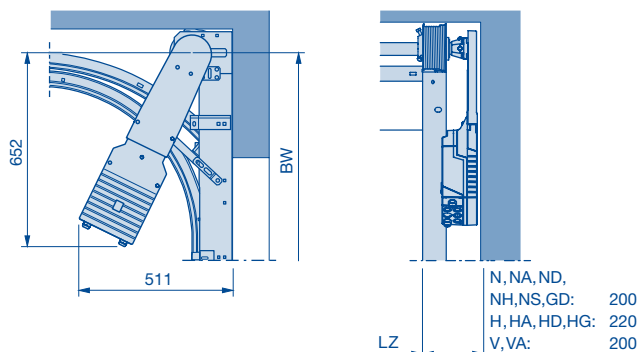
Shaft operator WA 300 for track applications N, NA, ND, NS, NH, NK, GD, GS, GK, H, HA, HD, HS, HK, V, VA and VS

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

Fitting example ⑧ right



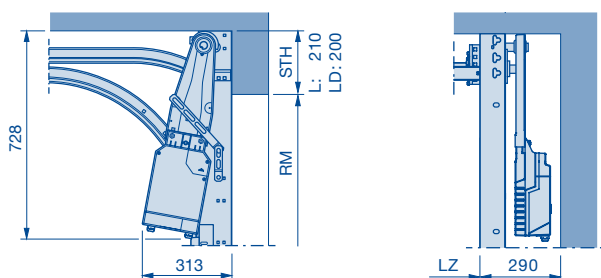
Fitting example ⑨ right



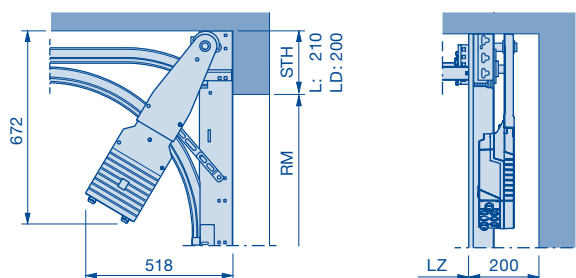
Shaft operator WA 300 for track applications L and LD

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



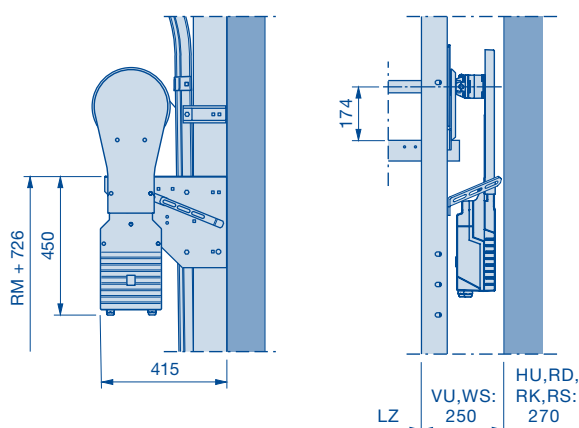
Fitting example ⑨ right



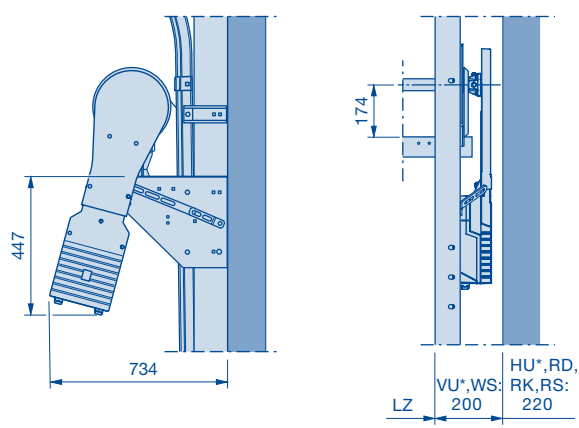
Shaft operator WA 300 for track applications HU, RD, RS, RK, VU and WS

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

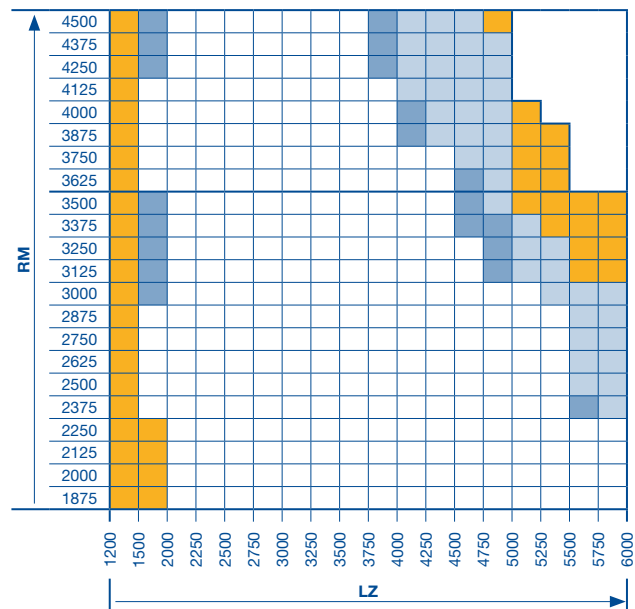
BW Position of shaft support
LZ Clear frame dimension

STH Min. headroom
RM Grid height

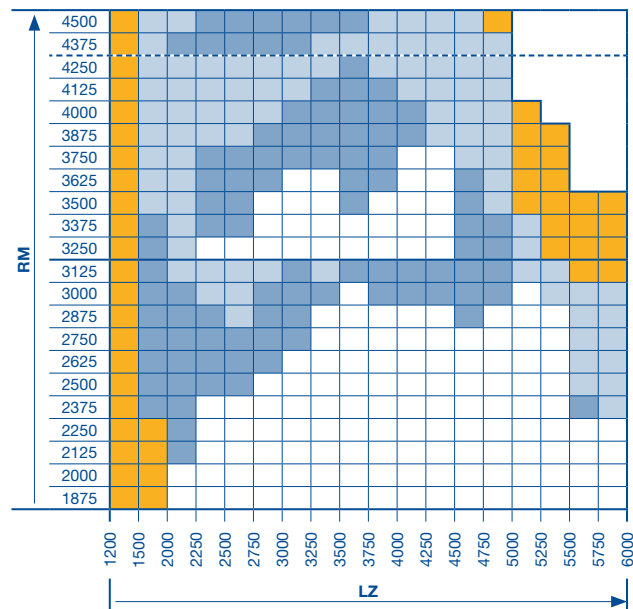
Shaft operator WA 300

Size range WA 300 (ALR F42 Vitraplan on request)

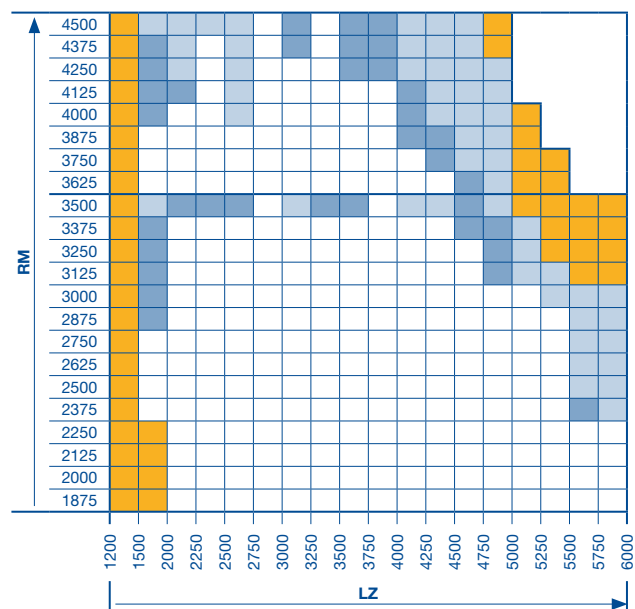
Track applications: N, NA and NH



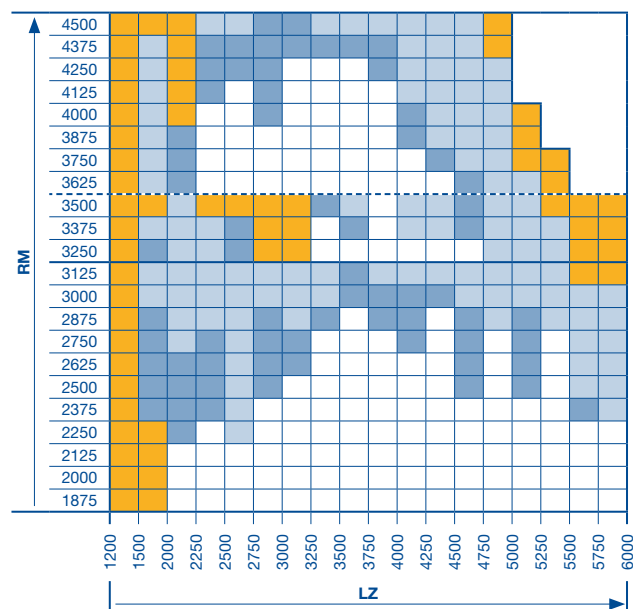
Track applications: ND and GD



Track application: L



Track application: LD



- All door types available in any version.
- All door types with thermo frames, glazing A3, B3, M3, S3, U3, LB, P, XU or wicket door on request.
- All door types with thermo frames with glazing A3, B3, M3, S3, U3, LB, P, XU and/or wicket door on request.
- All door types and versions on request.

Notice:
Track application NS on request!

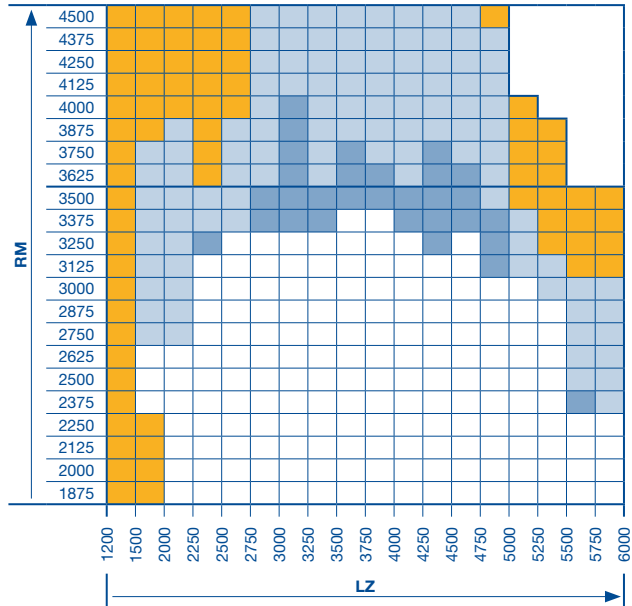
LZ Clear frame dimension
RM Grid height

Dimensions in mm

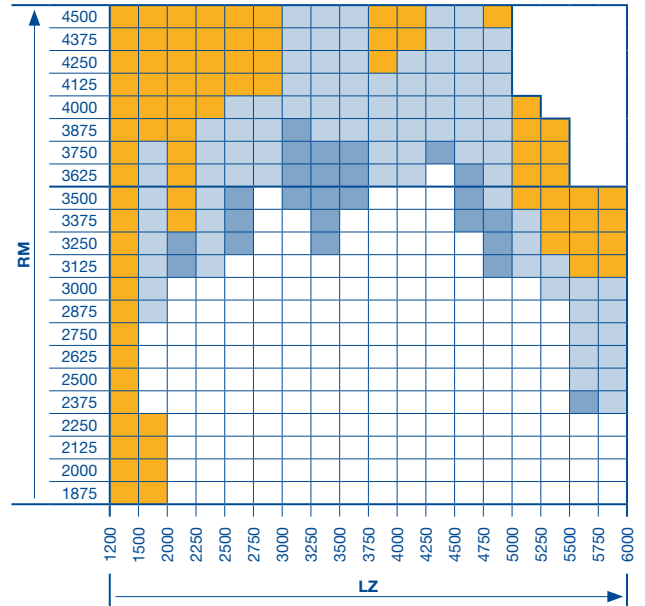
Shaft operator WA 300

Size range WA 300 (ALR F42 Vitraplan on request)

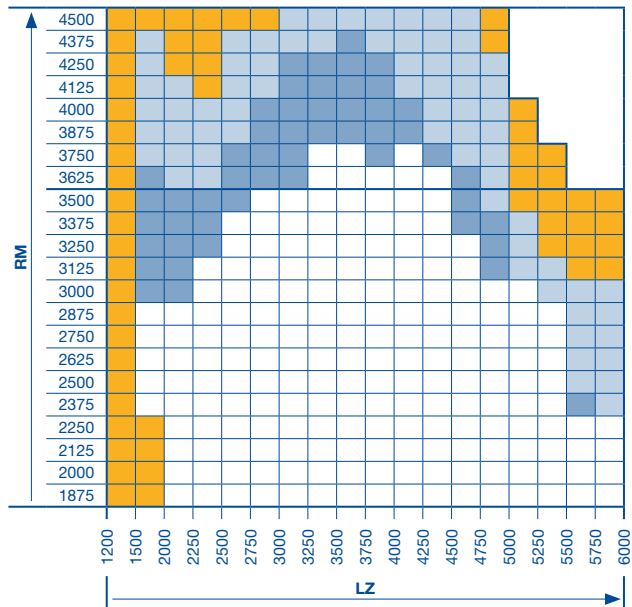
Track application: H, HA and HU



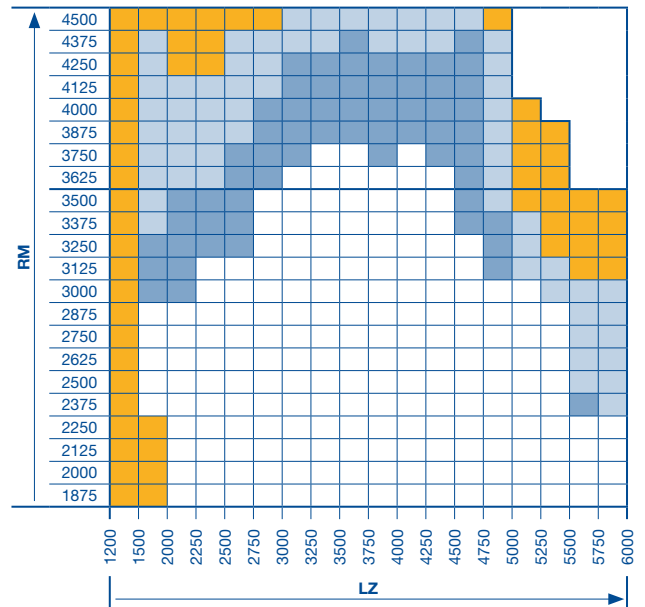
Track application: HD and RD



Track application: V and VA



Track application: VU



- All door types available in any version.
- All door types with thermo frames, glazing A3, B3, M3, S3, U3, LB, P, XU or wicket door on request.
- All door types with thermo frames with glazing A3, B3, M3, S3, U3, LB, P, XU and/or wicket door on request.
- All door types and versions on request.

LZ Clear frame dimension
RM Grid height

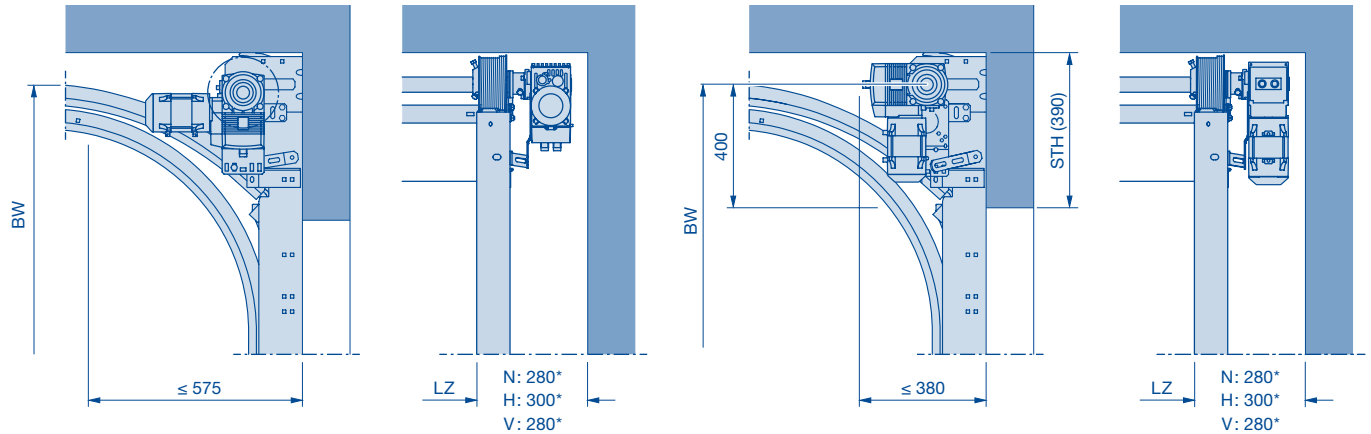
Dimensions in mm

Shaft operator WA 400

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.

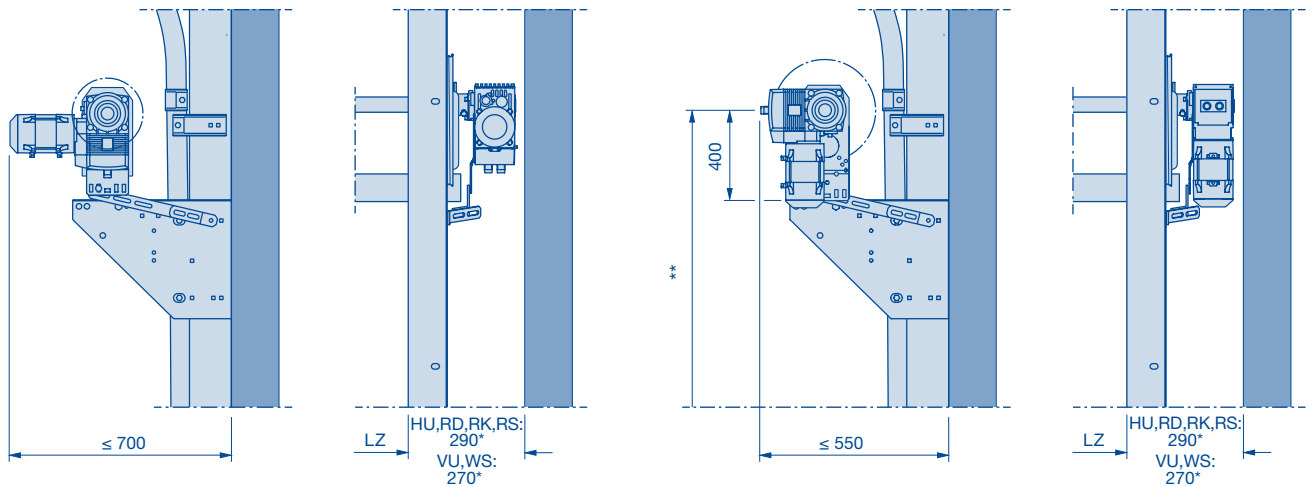


* Notice:

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

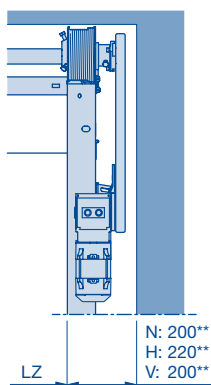
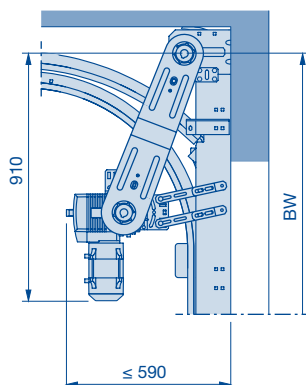
Shaft operator WA 400

With chain box

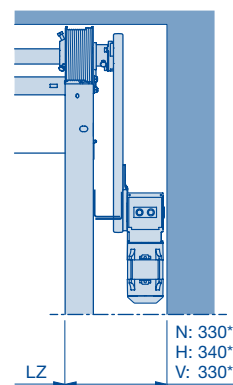
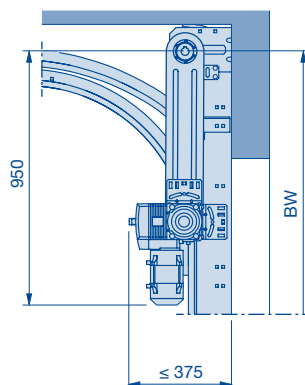
Shaft operator WA 400 for all track applications, except L, LD, HU, RD, RS, RK, VU and WS

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



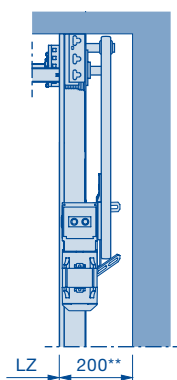
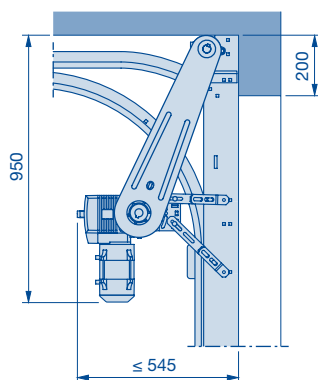
Fitting example ⑥ right



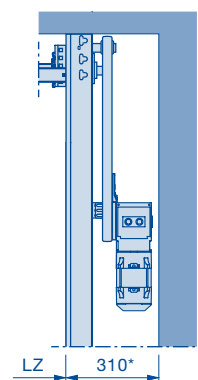
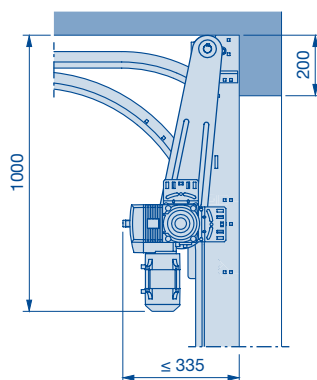
Shaft operator WA 400 for track applications L and LD

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



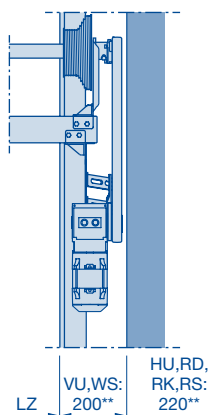
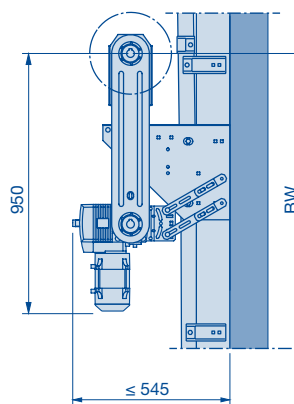
Fitting example ⑥ right



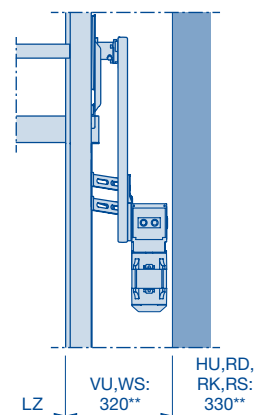
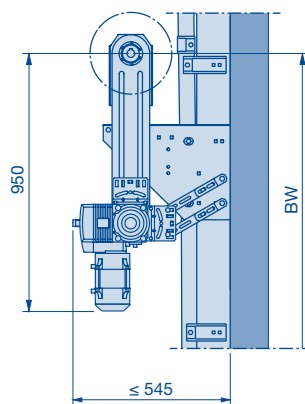
Shaft operator WA 400 for track applications HU, RD, RS, RK, VU and WS

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

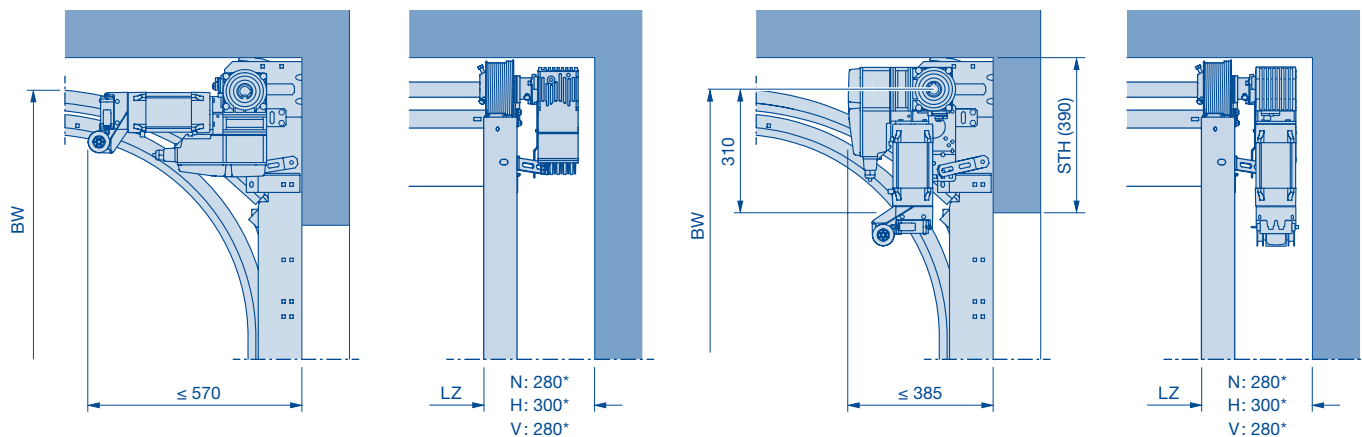
BW Position of shaft support
LZ Clear frame dimension

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.

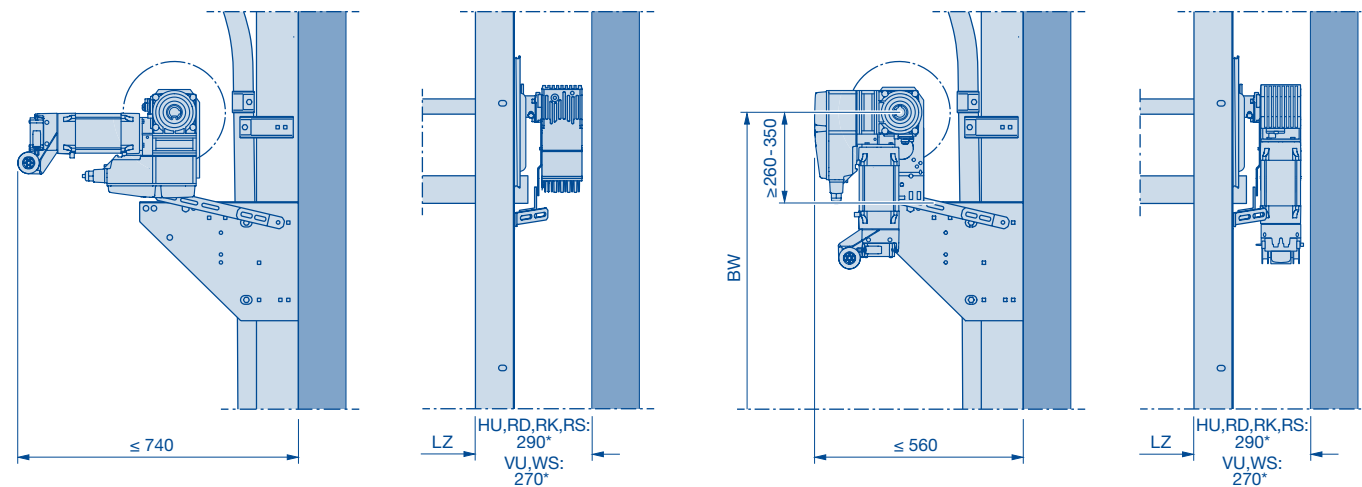


* Notice:

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

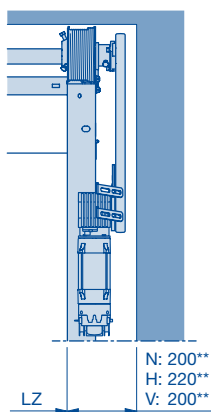
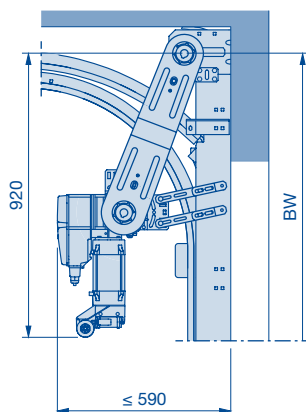
Shaft operator WA 500 FU

With chain box

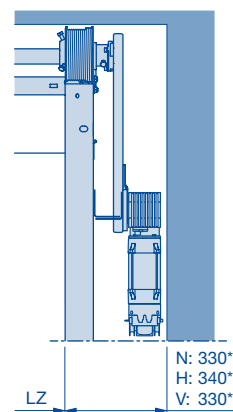
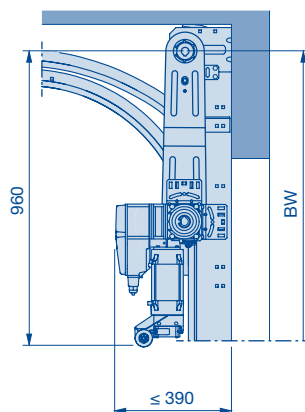
Shaft operator WA 500 FU for all track applications, except L, LD, HU, RD, RS, RK, VU and WS

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



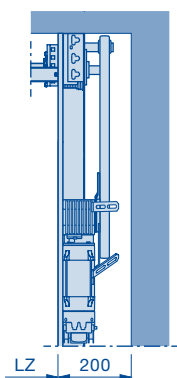
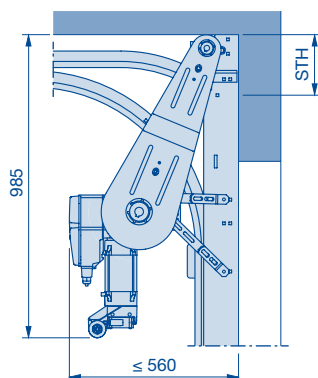
Fitting example ⑥ right



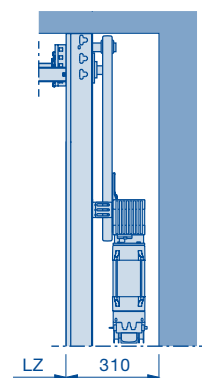
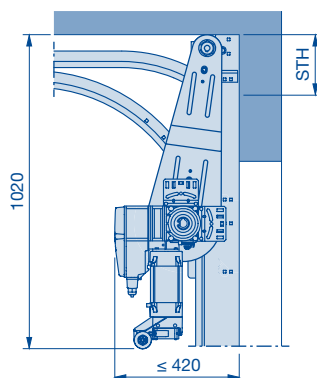
Shaft operator WA 500 FU for the track applications L and LD

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



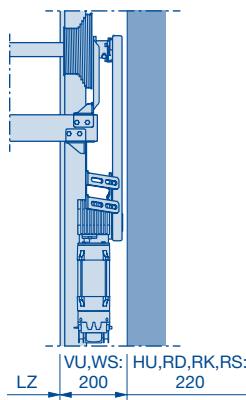
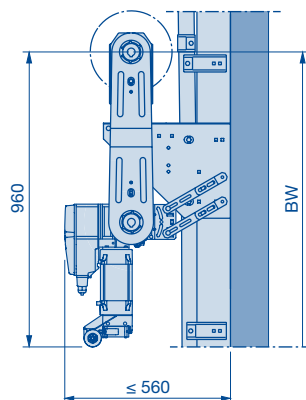
Fitting example ⑥ right



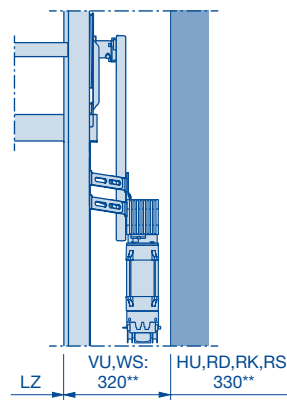
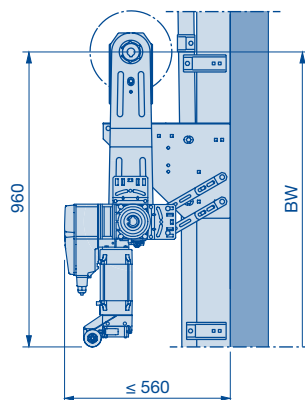
Shaft operator WA 500 FU for track applications HU, RD, RS, RK, VU and WS

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

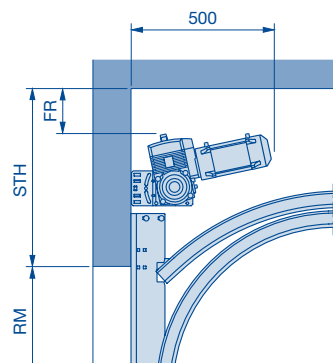
BW Position of shaft support
LZ Clear frame dimension

Shaft operator WA 400 / 500 FU

For central mounting

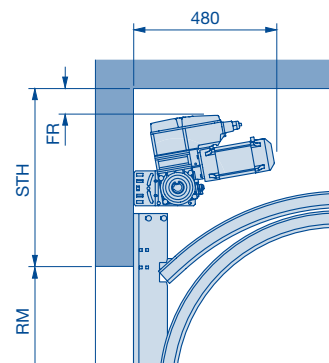
Shaft operator WA 400 / 500 FU for track applications: N and ND

WA 400



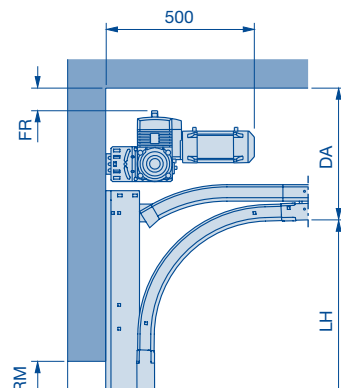
Track application	WA 400		WA 500 FU	
	STH min.	FR min.	STH min.	FR min.
N 1	520	45	590	45
N 2	550	50	615	45
N 3	–	–	675	45
ND 1	520	65	550	48
ND 2	550	75	570	48
ND 3	–	–	675	48
ND 6	560	65	560	48
ND 7	640	75	640	48

WA 500 FU



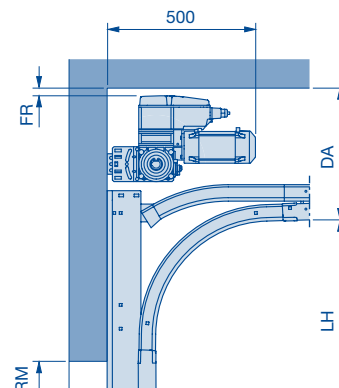
Shaft operator WA 400 / 500 FU for track application: NH and GD

WA 400



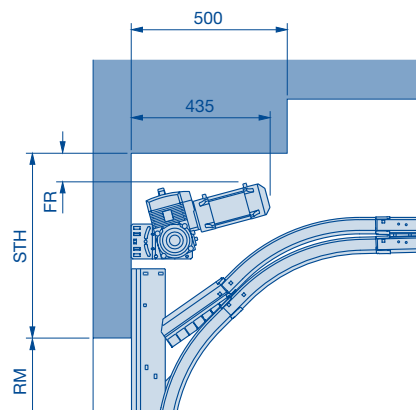
Track application	WA 400		WA 500 FU	
	DA min.	FR min.	DA min.	FR min.
NH 1 / GD 1	415	50	480	45
NH 2 / GD 2	440	50	485	45
NH 3	–	–	565	45

WA 500 FU



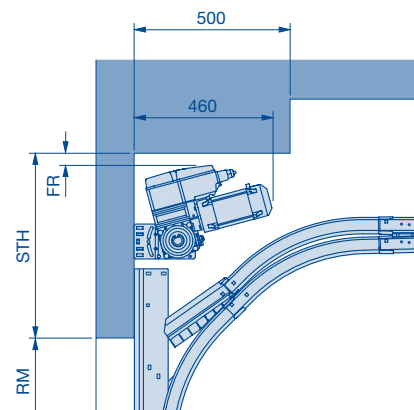
Shaft operator WA 400 / 500 FU for track applications: NS, NK, GS and GK

WA 400



Track application	WA 400		WA 500 FU	
	STH min.	FR min.	STH min.	FR min.
NS 1 / NK 1	570	20	615	45
NS 2 / NK 2	600	25	640	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

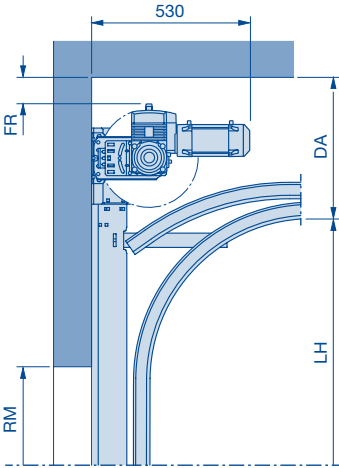
STH Lintel height

Shaft operator WA 400 / 500 FU

For central mounting

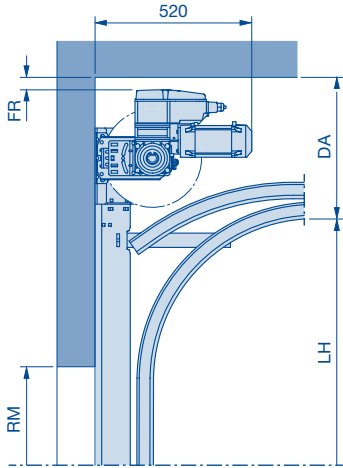
Shaft operator WA 400 / 500 FU for track applications: H, HD, HS and HK

WA 400



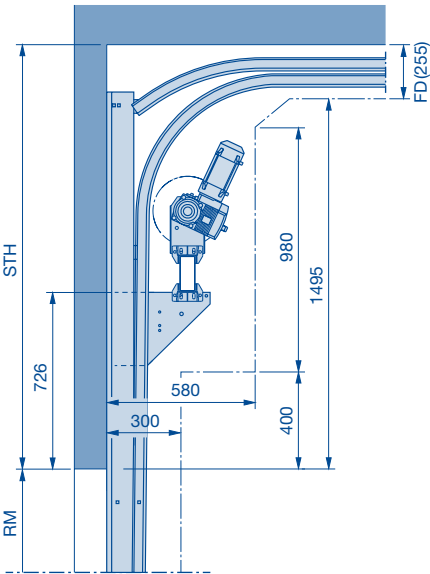
Track application	WA 400		WA 500 FU	
	DA min.	FR min.	DA min.	FR min.
H 4	415	50	480	45
H 5	440	50	485	45
H 8	—	—	565	45
HD / HS / HK	on request			

WA 500 FU



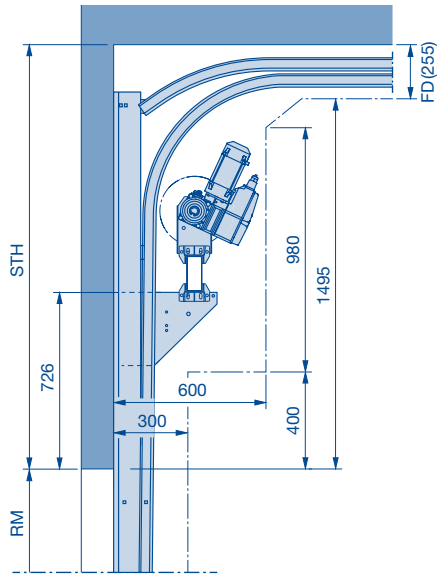
Shaft operator WA 400 / 500 FU for track applications: HU, RD, RS and RK

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!

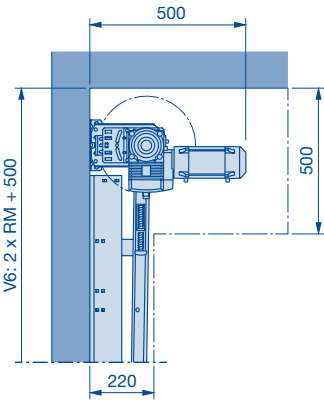
DA Distance to ceiling
FR Clearance ceiling / shaft operator
LH Track height
RM Grid height

Shaft operator WA 400 / 500 FU

For central mounting

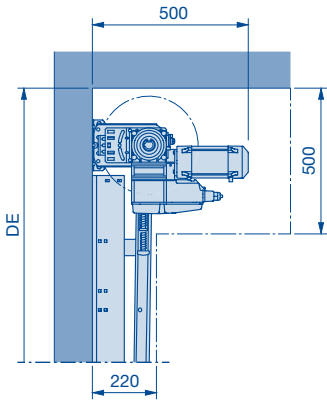
Shaft operator WA 400 / 500 FU for track applications: V and VS

WA 400



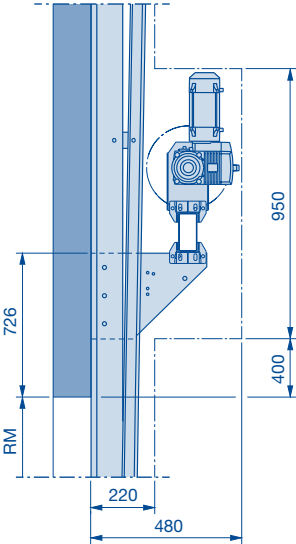
Track application	WA 400	WA 500 FU
VS	on request	

WA 500 FU

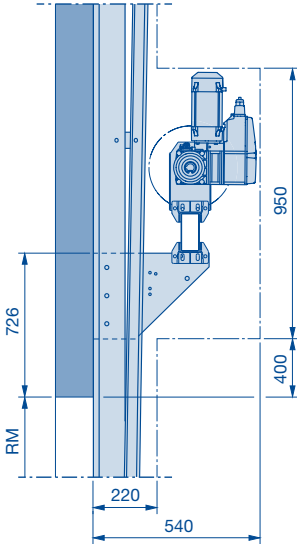


Shaft operator WA 400 / 500 FU for track applications: VU and WS

WA 400



WA 500 FU

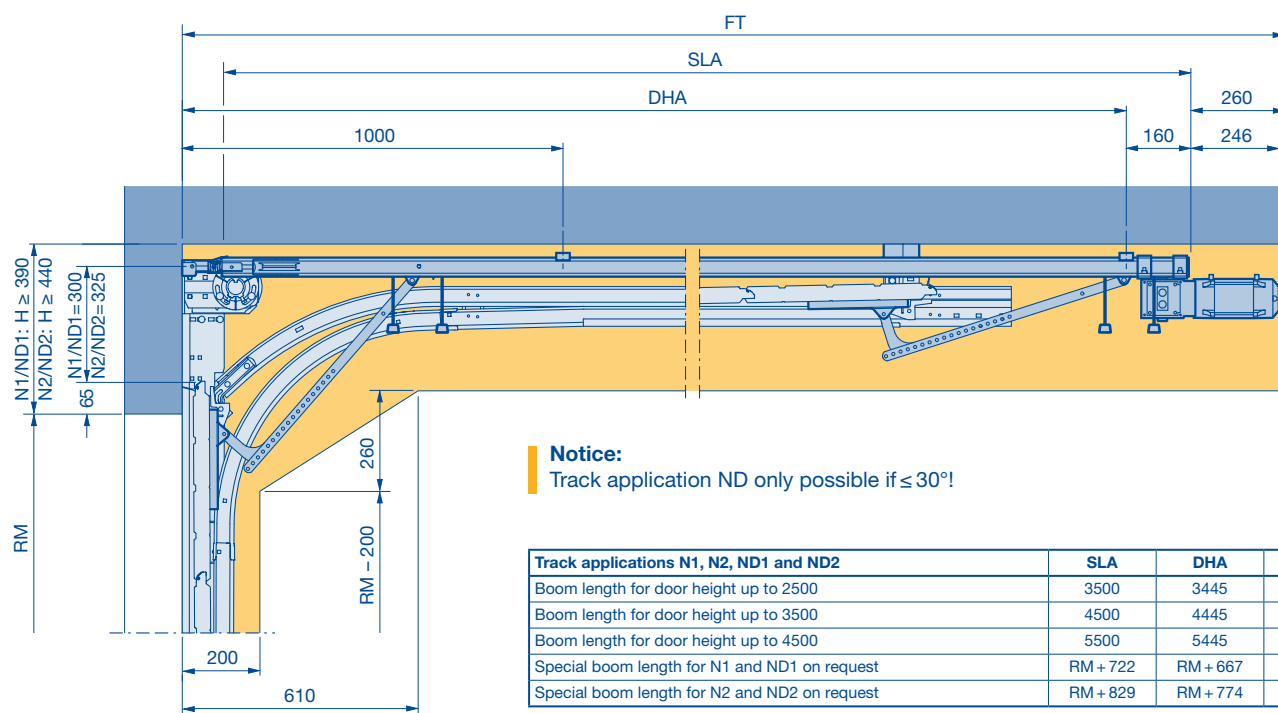


Notice:
Centre motor in conjunction with double spring shaft on request!

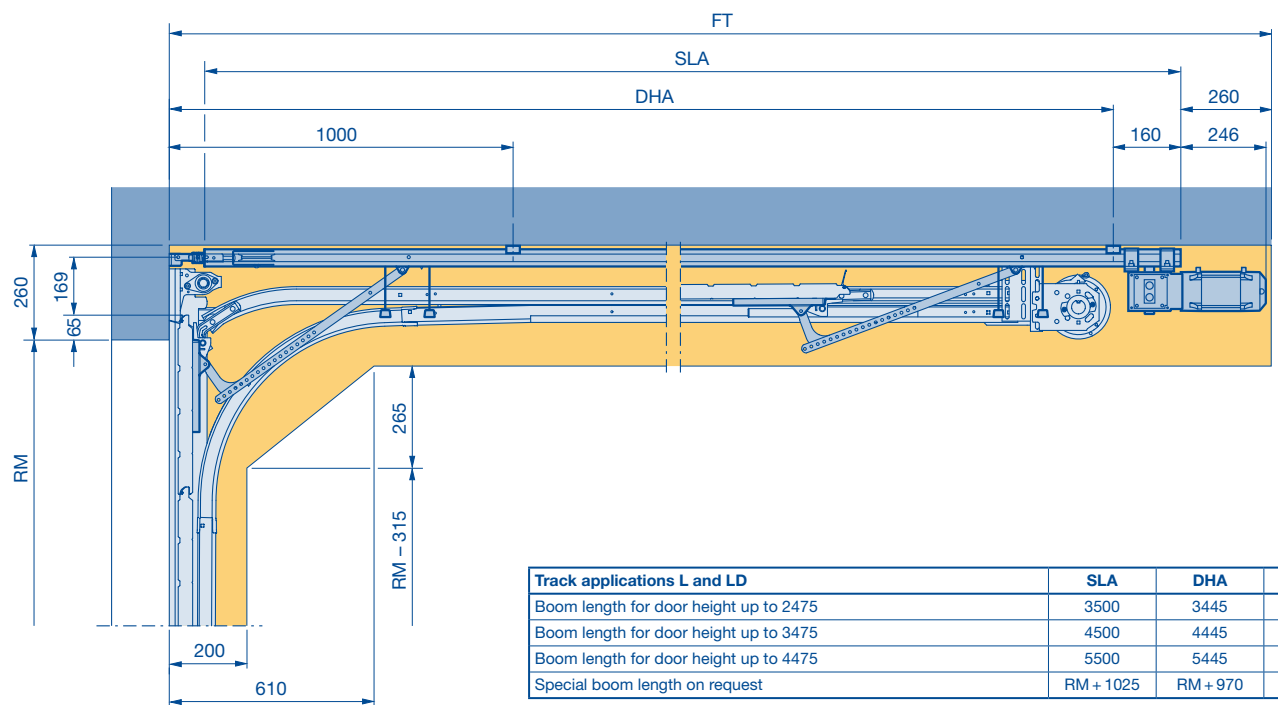
DA Distance to ceiling
LH Track height
RM Grid height

Chain drive operator ITO 400 / 500 FU

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



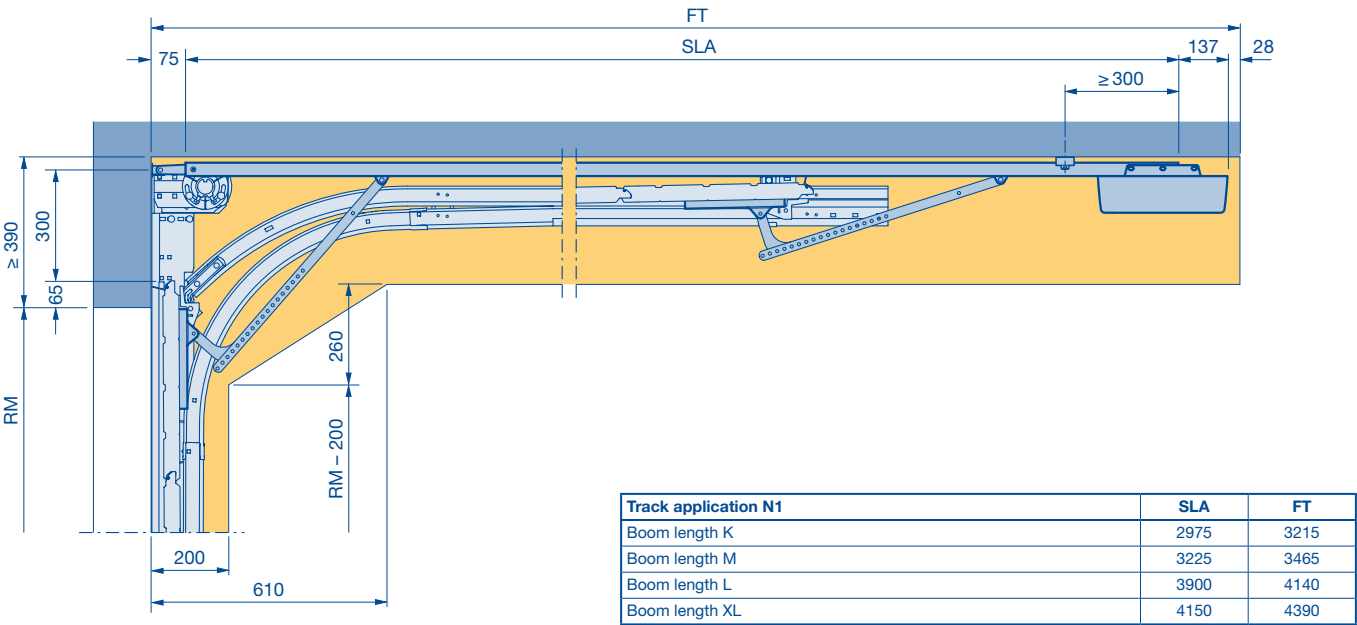
ITO 400 / 500 FU track applications L and LD (doors with wicket door on request)



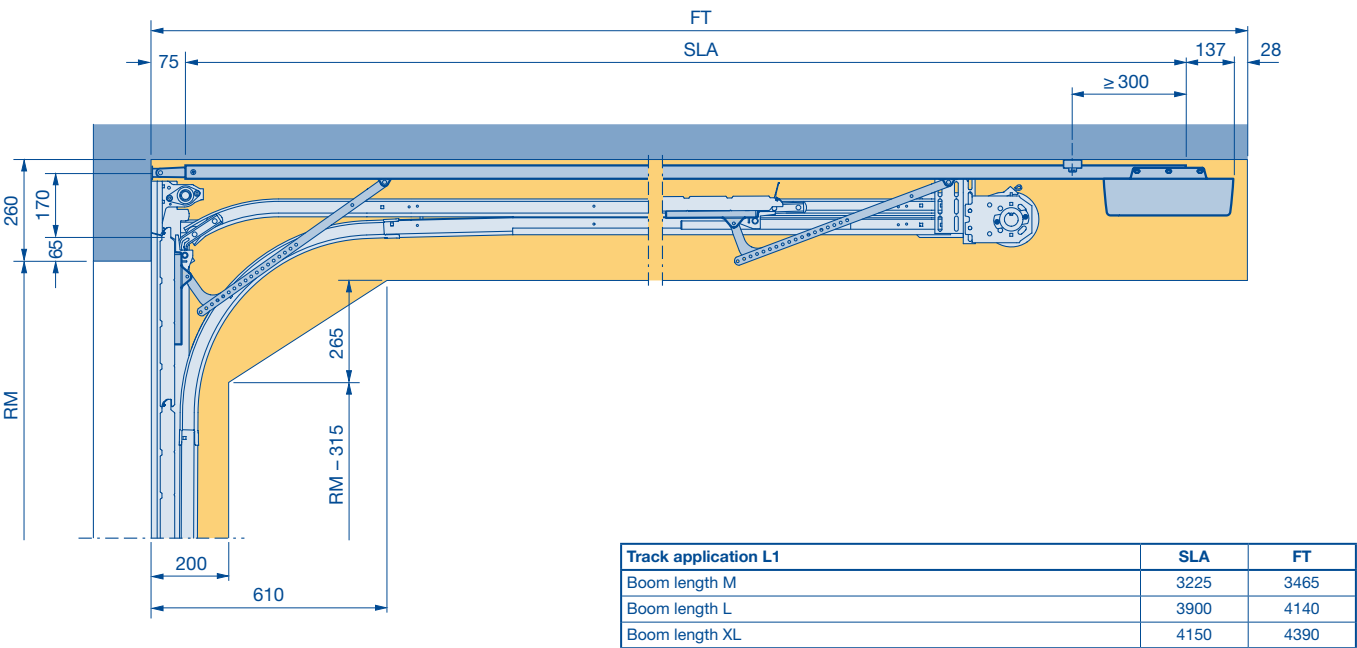
DHA	Operator rear ceiling anchor
FT	Clearance for door operator
RM	Grid height
SLA	Operator boom length

Operator SupraMatic HT

SupraMatic HT track application N (doors with wicket door, ALR F42 Glazing, ALR F42 Vitraplan and doors with real glass infill on request)*



SupraMatic HT track application L (doors with wicket door, ALR F42 Glazing, ALR F42 Vitraplan and doors with real glass infill on request)*



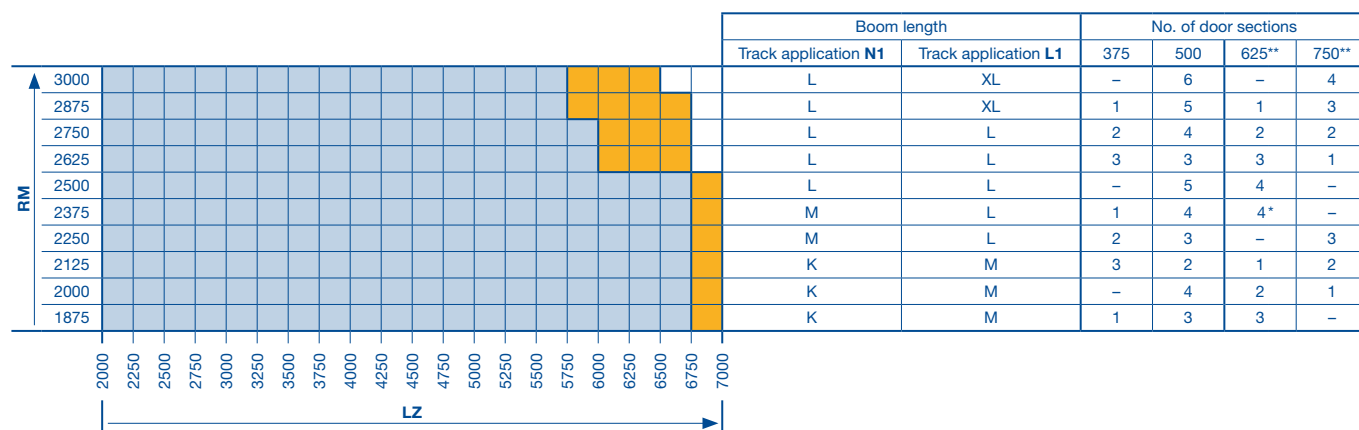
(See the next page for the size range for SupraMatic HT)

*** Notice:**
Operator not possible for doors with a depth of 67 mm!

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

Operator SupraMatic HT

SupraMatic HT size range



SupraMatic HT not possible.

SupraMatic HT possible.

SupraMatic HT on request.

LZ Clear frame dimension
RM Grid height
 * Top door section 500 mm
 ** Only without wicket door

Dimensions in mm

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 VL1-LE, VL2-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, HS4, 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, 8k2 resistor strip	VL1-LE, VL2-LE	HLG			In "Open" direction TopSpeed: 0 TopSpeed: 1	Optosensors, 8k2 resistor strip	VL1-LE, VL2-LE	HLG
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								500	Yes [4]	1000 [5]	500	500
				500	500				-	Yes	575 [5]	200
Yes [4]								1000 [5]		500	500	1000
H4, HA4, HK4, HS4, HU4, HD4, RD4, RK4, RS4	Yes	Yes	350	200	250		Yes	Yes	500 700 [5]	200	300	500
H5, HA5, HU5, HD5, RD5			500	500			Yes	Yes	500 825 [5]	500	500	500
							-	Yes [4]	1000 [5]			1000
H8, HD8, HK8, HS8, HU8							Yes	Yes	500			500
	1000 [5]	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]			1000
V9, VU9, VS9, WS9							Yes	Yes	500 1000 [5]			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

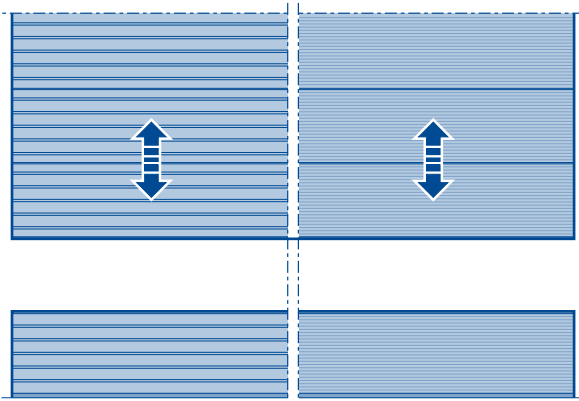
Max. door leaf speed from the Open end-of-travel
 position in the Close direction up to approx.
 3200 mm above FFL
 Max. door leaf speed from the Open end-of-travel
 position in the Close direction up to approx. 500 mm
 above FFL

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

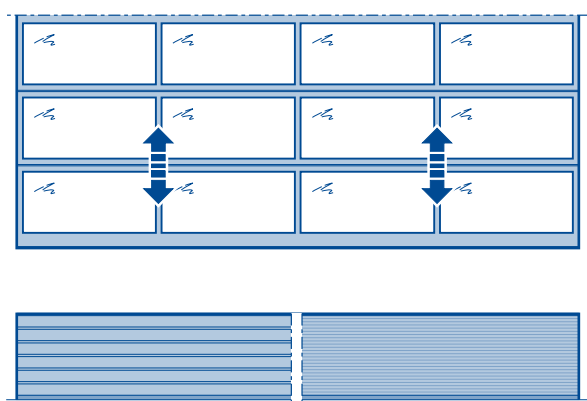
Sectional door

Parcel

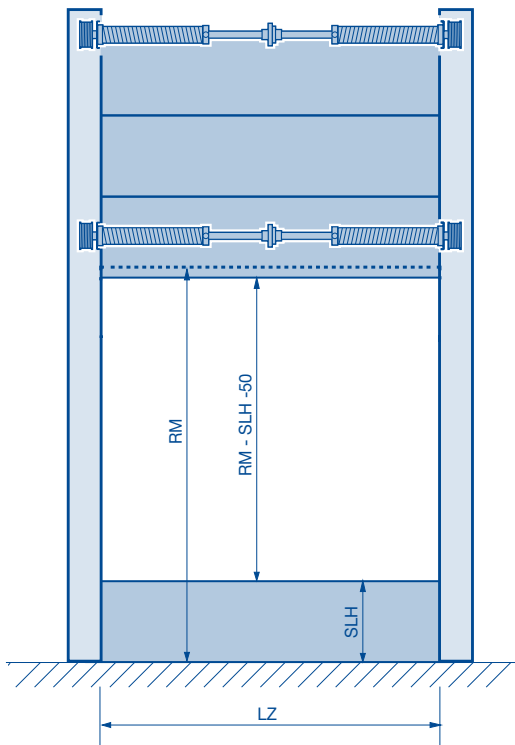
SPU F42



APU F42

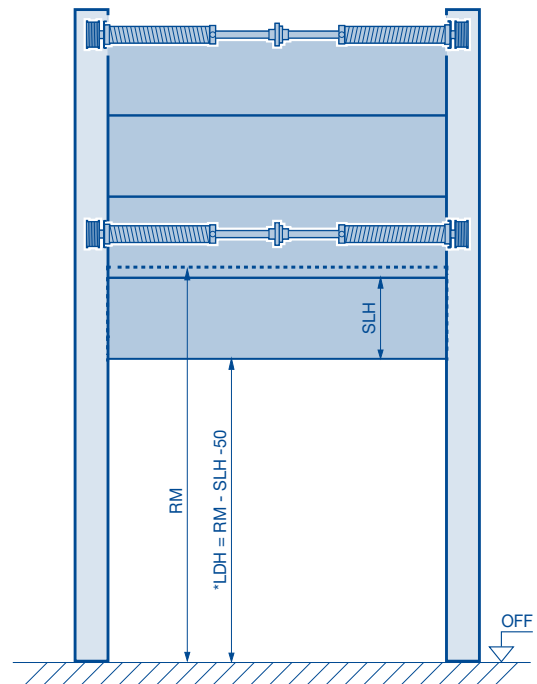


Functional principle



For loading lorries and swap containers, the bottom section with the catwalk remains on the ground when the door is open.

*LDH = RM possible on request for Parcel



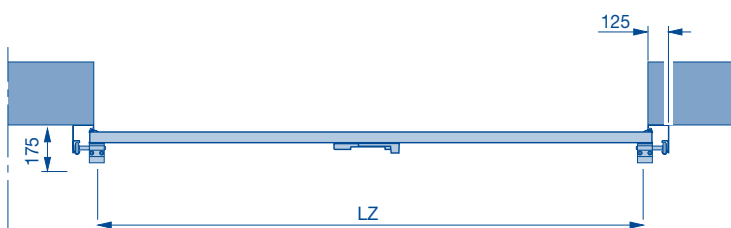
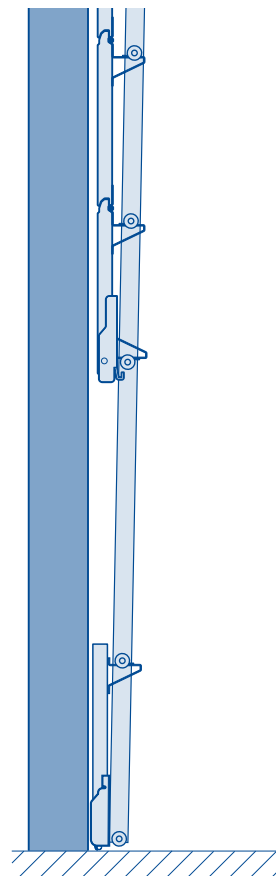
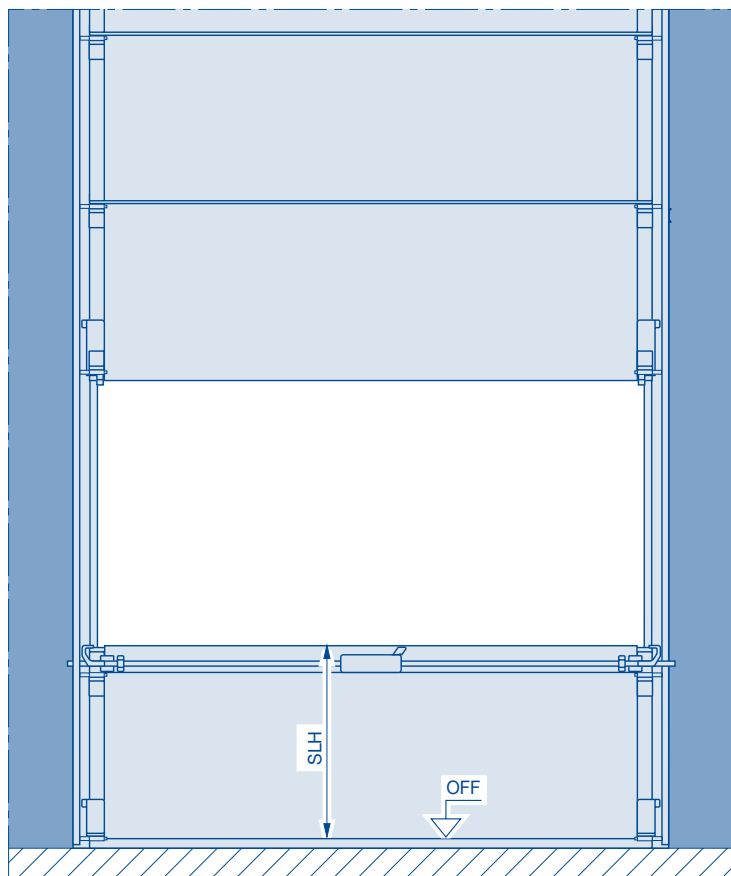
Vans are loaded at floor level. For this purpose, the door is opened completely including the bottom section. When the coupled door is open, the bottom section with the catwalk remains in the top part of the door opening.

LDH Clear passage height
LZ Clear frame dimension
RM Grid height
SLH Bottom section height

Dimensions in mm

Sectional door

Parcel

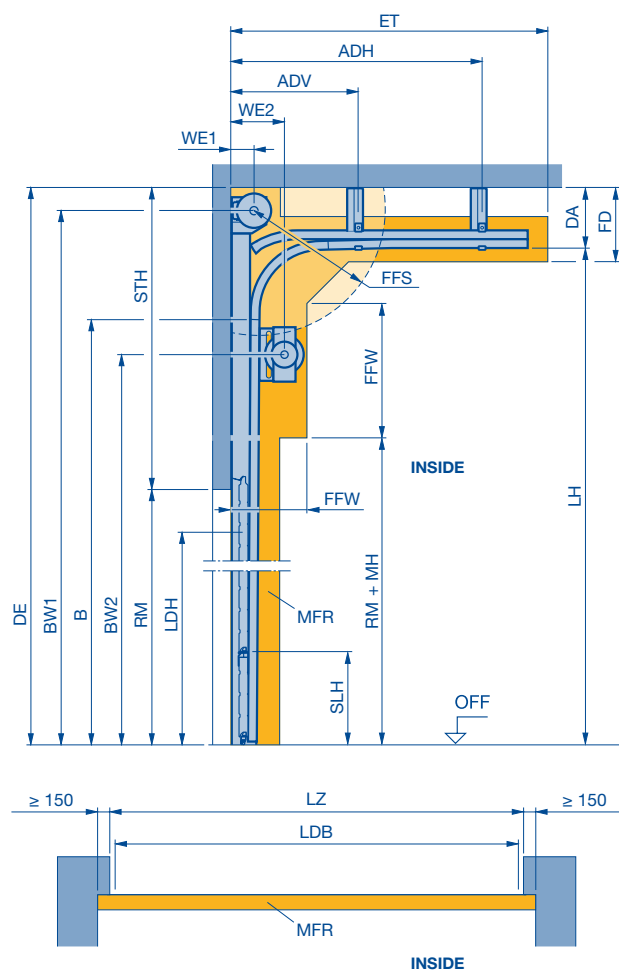


LZ Clear frame dimension
SLH Bottom section height
 Dimensions in mm

Track application: HP

High-lift track application

for sectional door Parcel with high- and low-mounted torsion spring shaft



ADH Distance to rear ceiling anchor on request
ADV Distance to front ceiling anchor
B Start of double radius
BW Position of shaft support
DA Distance to ceiling
DE Ceiling height
ET Distance back on request
FD Min. ceiling clearance
FFS Spring tensioning clearance
FFW Spring shaft clearance
LDB Clear passage width with ThermoFrame (see page 78)

LDH Clear passage height
 For Parcel, LDH = RM is available on request
LH Track height (see table)
LZ Clear frame dimensions (from 1500)
MFR Space for fitting the door on request
MH Fitting height
FFL Finished floor level
RM Grid height
SLH Bottom section height
STH Min. headroom (see page 53)
WE Shaft centre from lintel (see table)

Please note:

1. Select required track height according to the door height in table.
2. A technical inspection is required!

Notices:

- Only for door types SPU F42 and APU F42
- Operators WA 300 and WA 400 are only possible in press-and-hold operation.
- A frame below the door division is not possible
- Application range from LZ 1500–3000 mm and RM from 3125–4250 mm.
- Doors with wicket door are not possible.
- The clearance required for fitting the door must be free of supply lines, heater fans, etc.

Notices:

- Follow the instructions for the approved size ranges for door types SPU F42 and APU F42 from the table!

Table: track heights (LH)

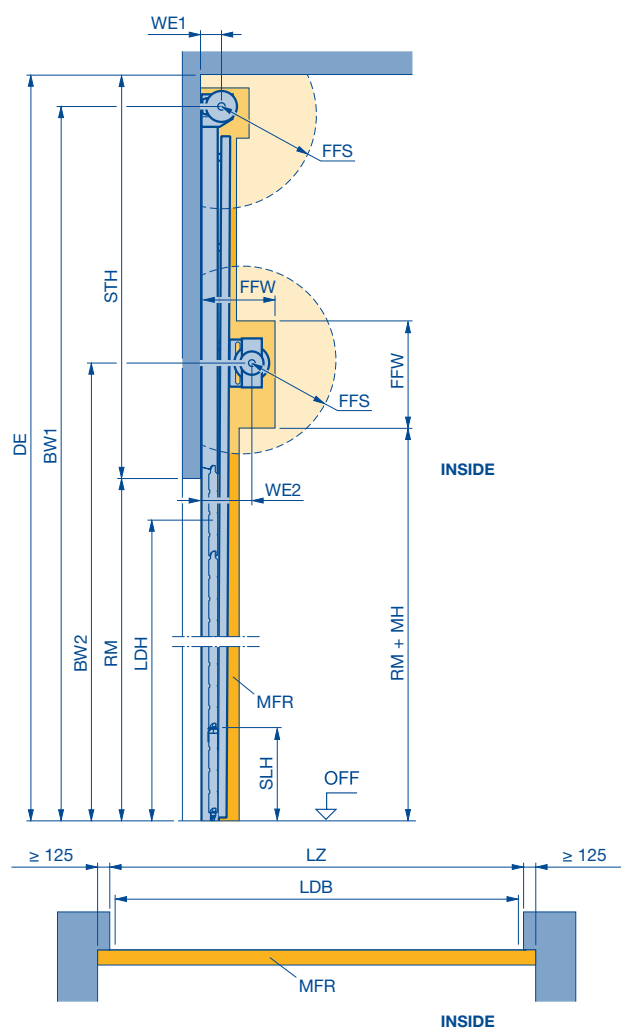
Door height	Min. LH	Max. LH
RM		
4250	5810	on request
4125	5685	
4000	5560	
3875	5435	
3750	5310	
3625	5185	
3500	5060	on request
3375	4935	
3250	4810	
3125	4685	

	B	BW1	BW2	DA	WE1	WE2
HP 4	LH – 366	LH + 231	RM + 940	Min. 370	160	315
HP 5				Min. 400	180	

DAL	FD	FFS	FFW	LDH	MH	SLH
DE – LH – 15	DA + 65	Min. 90° (745)	460 × 850	RM – SLH – 50	400	500 – 1450

Track application: VP

Vertical track application for sectional door Parcel with high- and low-mounted torsion spring shaft



BW	Position of shaft support, BW1 on request	LZ	Clear frame dimensions (from 1500)
DE	Ceiling height, on request	MFR	Space for fitting the door on request
FFS	Spring tensioning clearance	MH	Fitting height
FFW	Spring shaft clearance	FFL	Finished floor level
LDB	Clear passage width with ThermoFrame (see page 78)	RM	Grid height
LDH	Clear passage height	SLH	Bottom section height
	For Parcel, LDH = RM is possible	STH	Headroom on request
		WE	Shaft centre from lintel

Please note:

A technical inspection is required!

Notices:

- Only for door types SPU F42 and APU F42
- Operators WA 300 and WA 400 are only possible in press-and-hold operation.
- A frame below the door division is not possible
- Application range from LZ 1500–3000 mm and RM from 3125–4250 mm.
- Doors with wicket door are not possible.
- The clearance required for fitting the door must be free of supply lines, heater fans, etc.

Observe min. sideroom, see page 78.

	BW2	FFS	FFW	LDH	MH	SLH	WE1	WE2
VP 6							160	
VP 7	RM + 940	Min. 90° (745)	460 x 850	RM – SLH – 50	400	500 – 1450	180	315


Infill overview

Determination of the roof slope

Infill overview	SPU F42	APU F42	APU F42 Thermo	ALR F42	ALR F42 Thermo	ALR F42 Vitraplan	ALR F42 Glazing
Infill type	Abbreviation						
Clear synthetic pane, 3 mm [1] [3]	FK	FK	–	FK	–	–	–
Crystal structure synthetic pane, 3 mm [1] [3]	KR	KR	–	KR	–	–	–
Clear polycarbonate pane, 6 mm [3]	P	P	–	P	–	–	–
Multiple moulded pane, 16 mm, $U_g = 1.9 \text{ W/m}^2\cdot\text{K}$ [3]	S	S	S	S	S	–	–
PU infill, 26 mm with Stucco-textured aluminium sheet cover on both sides, $U_g = 1.0 \text{ W/m}^2\cdot\text{K}$	–	FU	FU	FU	FU	–	–
PU infill, 26 mm with anodised smooth aluminium sheet cover on both sides, $U_g = 1.0 \text{ W/m}^2\cdot\text{K}$	–	XU	XU	XU	XU	–	–
PU infill, 26 mm with anodised smooth aluminium sheet cover on both sides, $U_g = 1.2 \text{ W/m}^2\cdot\text{K}$ [6]	TU	TU	TU	TU	TU	–	–
Synthetic double pane, clear, 26 mm, $U_g = 2.6 \text{ W/m}^2\cdot\text{K}$	S2	S2	S2	S2	S2	S2	–
Synthetic double pane, crystal structure, 26 mm, $U_g = 2.6 \text{ W/m}^2\cdot\text{K}$	U2	U2	U2	U2	U2	U2	–
Synthetic double pane, grey tinted, 26 mm, $U_g = 2.6 \text{ W/m}^2\cdot\text{K}$	A2	A2	A2	A2	A2	–	–
Synthetic double pane, brown tinted, 26 mm, $U_g = 2.6 \text{ W/m}^2\cdot\text{K}$	B2	B2	B2	B2	B2	–	–
Synthetic double pane, white tinted (opal), 26 mm, $U_g = 2.6 \text{ W/m}^2\cdot\text{K}$	M2	M2	M2	M2	M2	–	–
Synthetic triple pane, clear, 26 mm, $U_g = 1.9 \text{ W/m}^2\cdot\text{K}$	S3	S3	S3	S3	S3	S3	–
Synthetic triple pane, crystal structure, 26 mm, $U_g = 1.9 \text{ W/m}^2\cdot\text{K}$	U3	U3	U3	U3	U3	U3	–
Synthetic triple pane, grey tinted, 26 mm, $U_g = 1.9 \text{ W/m}^2\cdot\text{K}$	A3	A3	A3	A3	A3	–	–
Synthetic triple pane, brown tinted, 26 mm, $U_g = 1.9 \text{ W/m}^2\cdot\text{K}$	B3	B3	B3	B3	B3	–	–
Synthetic triple pane, white tinted (opal), 26 mm, $U_g = 1.9 \text{ W/m}^2\cdot\text{K}$	M3	M3	M3	M3	M3	–	–
Polycarbonate double pane, clear, 26 mm, $U_g = 2.7 \text{ W/m}^2\cdot\text{K}$	C2	C2	C2	C2	C2	C2	–
Single pane made of laminated safety glass, 6 mm [2] [3]	VG	VG	–	VG	–	–	VG
Double pane made of single-pane safety glass, 26 mm, $U_g = 2.6 \text{ W/m}^2\cdot\text{K}$ [2]	E2	E2	E2	E2	E2	–	E2
Double pane made of laminated safety glass P4A, 26 mm, $U_g = 1.3 \text{ W/m}^2\cdot\text{K}$ [6]	W2	W2	W2	W2	W2	–	–
Climatic double pane made of single-pane safety glass, 26 mm, $U_g = 1.1 \text{ W/m}^2\cdot\text{K}$ [2]	G2	G2	G2	G2	G2	–	G2
Stainless steel expanded mesh, 5 mm [1] [3] [4]	SE	SE	–	SE	–	–	–
Perforated stainless steel sheet, 1.5 mm, perforation 8 mm [1] [3] [4]	LB	LB	–	LB	–	–	–
Prepared for on-site infill [5]	BS	BS	BS	BS	BS	–	–

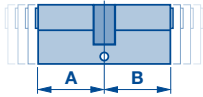
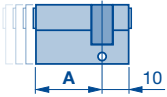
- [1] **Notice:** max. field width 1230 mm; if required, add an additional field
- [2] Only for door width up to 6000 mm; on request
- [3] Not possible for aluminium frames in Thermo version
- [4] No colour coating possible

- [5] On request; infill weight and thickness must be specified (anodised glazing beads required)
- [6] Only for NT 60 and N T80 Thermo with RC 2 version and door version with glazing type A

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		Bolt lock	Key switches
SPU F42 APU F42 APU F42 Thermo	L = 35 + 30	—	—	—	—	●	●	—
	—	L = 30 + 10	—	—	●	●	—	●
	—	L = 35 + 10	—	—	—	—	●	—
	—	L = 70 + 10	—	●	—	—	—	—
ALR F42 ALR F42 Thermo	L = 35 + 30	—	—	—	—	●	●	—
	—	L = 30 + 10	—	—	—	●	—	●
	—	L = 35 + 10	—	—	—	—	●	—
	—	L = 55 + 10	FU and XU	●	—	—	—	—
NT 60	L = 40 + 40	L = 40 + 10	—	—	—	—	—	—
NT 80	L = 35 + 70	L = 35 + 10	—	—	—	—	—	—
NT 60 RC2	L = 35 + 40*	—	—	—	—	—	—	—
NT 80 RC2	L = 35 + 60*	—	—	—	—	—	—	—

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

Notes

A large rectangular area filled with a fine grid of blue lines, typical of graph paper, intended for taking notes or technical drawings.

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Hörmann KG Freisen, Germany



Hörmann KG Ichtershausen, Germany



Hörmann KG Werne, Germany



Hörmann Alkmaar B.V., Netherlands



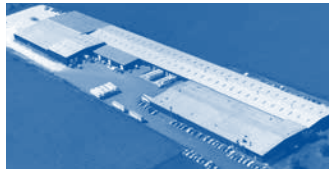
Hörmann Legnica Sp. z o.o., Poland



Hörmann Beijing, China



Hörmann Tianjin, China



Hörmann LLC, Montgomery IL, USA



Hörmann Flexon LLC, Burgettstown PA, USA



Shakti Hörmann Pvt. Ltd., India

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GARAGE DOORS
OPERATORS
INDUSTRIAL DOORS
LOADING EQUIPMENT
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DOOR FRAMES

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