

Technical manual

Status 01.08.2022

Industrial sectional doors

**Series 60
Depth 42 mm**

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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 constructions 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 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 installed in the centre fields of the door. Cannot be fitted in the outer fields – note the arrangement! Only opening outwards, LH or RH hinged. 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 of anodised aluminium extrusion profiles in the standard version or with thermal breaks or alternatively 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 glazing 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 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 installed in the centre fields of the door. Cannot be fitted in the outer fields – note the arrangement! Only opening outwards, LH or RH hinged. 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 of anodised aluminium extrusion profiles in the standard version or with thermal breaks or alternatively 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 glazing 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. Other door sections with glazing made of standard anodised aluminium extrusion 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 section possible.
Wicket door	Depending on the door type, made of anodised aluminium extrusion profiles in the standard version or with thermal breaks, installed into the centre 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 with glazing made of standard anodised aluminium extrusion 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), other door sections with 26 mm clear synthetic double panes (S2). Ventilation grilles in the bottom section possible.
Wicket door	Depending on the door type, made of anodised aluminium extrusion profiles in the standard version or with thermal breaks, installed into the centre 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 of standard anodised aluminium extrusion 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 polyester primer-coated standard anodised aluminium extrusion 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, in grey. Ventilation grilles are not possible in the bottom 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.

Note 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, $LZ \leq 4000$, class Door without wicket door, $LZ > 4000$, class Door with wicket door, $LZ \leq 4000$, 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 $R_w =$ dB Door with wicket door $R_w =$ dB
Thermal resistance EN 13241-1, appendix B EN 12428	Door without wicket door, $U = W/m^2 \cdot K^{2)}$ – Optional triple glazing, $U = W/m^2 \cdot K^{2)}$ – Optional climatic double panes (single-pane safety glass) $U = W/m^2 \cdot K^{2)}$ – Optional double panes (single-pane safety glass) $U = W/m^2 \cdot K^{2)}$ Door with wicket door, $U = W/m^2 \cdot K^{2)}$ – Optional triple glazing, $U = W/m^2 \cdot K^{2)}$ – Section, $U = W/m^2 \cdot K$
Construction	Self-supporting Depth, mm
Door sizes	Max. width mm, LZ Max. height mm, RM ³⁾
Space requirements	From page 52
Material, door leaf	Steel, double-skinned, 42 mm Aluminium, standard profile Aluminium, profile with thermal break
Surface finish, door leaf	Galvanized steel, coated RAL 9002 Galvanized steel, coated RAL 9006 Galvanized steel, coated RAL to choose Anodised aluminium E6/C0 (previously E6/EV1) 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 windows Type D section windows Type E section windows Glazing frame
Seals	All-round on 4 sides Intermediate seal between the door sections
ThermoFrame	PVC hard and soft seal
Locking systems	Inside locking Outside and inside locking
Anti-lift kit	For doors of up to 5 m height with shaft operator
Security equipment	Finger trap protection Side trap guards Spring safety device for manual operation Safety catch for doors with shaft operator
Fastening options	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

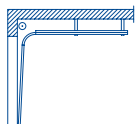
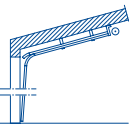
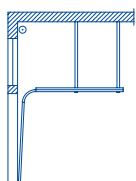
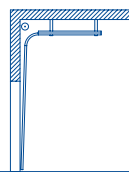
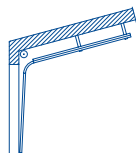
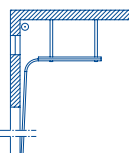
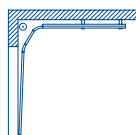
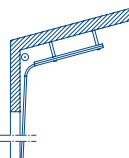
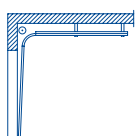
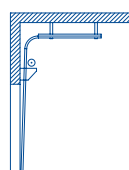
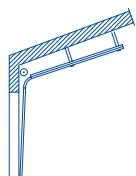
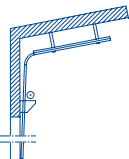
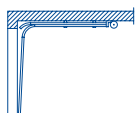
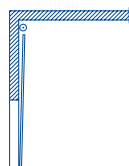
- 5) Door width up to 5500 mm
- 6) Class 4 = 1.0 kN/m² or 144 km/h
- 7) Class 3 = 0.7 kN/m² or 120 km/h
- 8) Class 2 = 0.45 kN/m² or 96 km/h
- 9) Class 2 = 12 m³/m²h

- 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

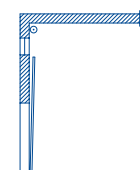
SPU F42	APU F42	APU F42 Thermo	ALR F42	ALR F42 Thermo	ALR F42 Vitraplan	ALR F42 Glazing
4 ⁶⁾ 11)	4 ⁶⁾	4 ⁶⁾	4 ⁶⁾	4 ⁶⁾	4 ⁶⁾	4 ⁶⁾
3 ⁷⁾ 11)	3 ⁷⁾	3 ⁷⁾	3 ⁷⁾	3 ⁷⁾	3 ⁷⁾	3 ⁷⁾
3 ⁷⁾ 11)	3 ⁷⁾	3 ⁷⁾	3 ⁷⁾	3 ⁷⁾	–	–
2 ⁸⁾ 11)	2 ⁸⁾	2 ⁸⁾	2 ⁸⁾	2 ⁸⁾	–	–
3 (70 Pa)	3 (70 Pa)	3 (70 Pa)	3 (70 Pa)	3 (70 Pa)	3 (70 Pa)	3 (70 Pa)
2 ⁹⁾	2 ⁹⁾	2 ⁹⁾	2 ⁹⁾	2 ⁹⁾	2 ⁹⁾	2 ⁹⁾
1 ¹⁰⁾	1 ¹⁰⁾	1 ¹⁰⁾	1 ¹⁰⁾	1 ¹⁰⁾	–	–
25 ¹²⁾	23	23	23 (30 ¹⁾)	23 (30 ¹⁾)	23	30 ¹⁾
24 ¹²⁾	22	22	22 (29 ¹⁾)	22 (29 ¹⁾)	–	–
1.0 (0.94 ⁴⁾)	3.4 (3.3 ⁴⁾)	2.9 (2.8 ⁴⁾)	3.6 (3.6 ⁴⁾)	3.0 (3.0 ⁴⁾)	3.2 (3.2 ⁴⁾)	6.1 (6.1 ⁴⁾)
–	3.0 (2.9 ⁴⁾)	2.5 (2.4 ⁴⁾)	3.2 (3.1 ⁴⁾)	2.6 (2.5 ⁴⁾)	3.0 (2.9 ⁴⁾)	–
–	2.5 (2.4 ⁴⁾)	2.0 (1.9 ⁴⁾)	2.7 (2.6 ⁴⁾)	2.1 (2.0 ⁴⁾)	–	2.7 (2.6 ⁴⁾)
–	3.4 (3.3 ⁴⁾)	2.9 (2.8 ⁴⁾)	3.6 (3.6 ⁴⁾)	3.0 (3.0 ⁴⁾)	–	3.8 (3.8 ⁴⁾)
1.2 (1.2 ⁴⁾)	3.6 (3.6 ⁴⁾)	3.1 (3.1 ⁴⁾)	3.8 (3.8 ⁴⁾)	3.2 (3.2 ⁴⁾)	–	–
–	3.2 (3.1 ⁴⁾)	2.7 (2.6 ⁴⁾)	3.4 (3.4 ⁴⁾)	2.8 (2.8 ⁴⁾)	–	–
0,5	–	–	–	–	–	–
●	●	●	●	●	●	●
42	42	42	42	42	42	42
8000	8000	7000	8000	7000	6000	5500
7500	7500	7500	7500	7500	7500	4000
●	●	●	–	–	–	–
–	●	–	●	–	●	●
–	–	●	–	●	–	–
●	○	○	–	–	–	–
○	●	●	–	–	–	–
○	○	○	–	–	–	–
○	●	●	●	●	●	●
○	○	○	○	○	○	○
4010*/5010	4010**/5010	4010**/5010	4010**/5010	4010**/5010	●	3340
4510	–	4510	–	4510	●	3340
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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>RC 2 version 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

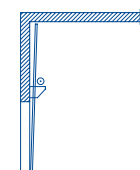
VA



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

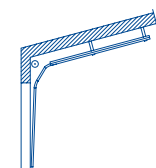


As with track application V, with low-mounted torsion spring shaft
(Additional hand pulley required for manually operated doors!)

Notice:

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

NK

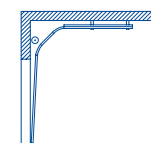


As with track application NS, but the degree values of both radii are adapted to the situation on-site

Door height RM \leq 5000 mm

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

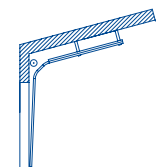
GS



As with track application NH with double radius

Door height RM \leq 5000 mm

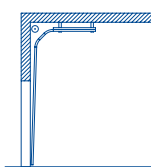
GK



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

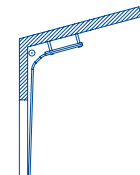
Door height RM \leq 5000 mm

HS



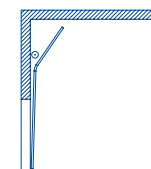
As with track application H with double radius

HK



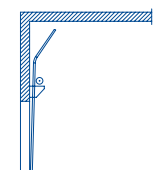
As with track application H, with double radius and inclination

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!)

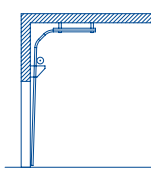
WS



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

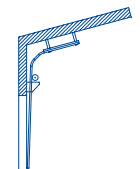
RS



As with track application HU with double radius

Door height RM \leq 5000 mm

RK



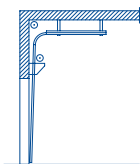
As with track application HU, with double radius and inclination

Door height RM \leq 5000 mm

Notice:

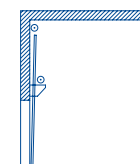
The sectional door Parcel is only available with these track applications. Technical factory inspection required!

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

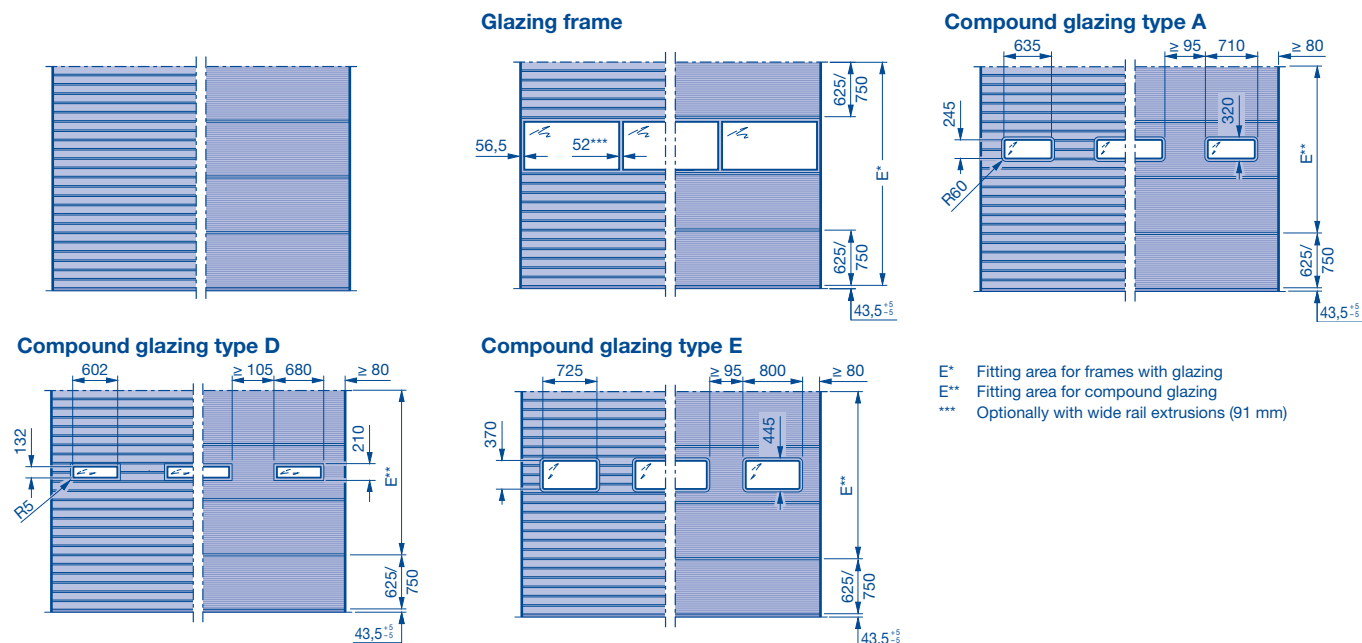
Sectional door SPU F42

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 glazing frames or shortened top door section are possible!

RM	SPB 52	LZ	TH 625	n ₁	TH 750
7500			—	10	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	+	—
Number of infills/fields per glazing 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 cm² 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 (installation example 5), the door locking is always opposite the operator side.
- For a view of the matching appearance with doors with wicket doors see page 36–38.
- Number of glazings, matching view to 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 Number of door sections

RM Grid height

LZ Clear frame dimensions (from 1200)

SPB Rail width

TH Door section height

**** Top door section 500 mm

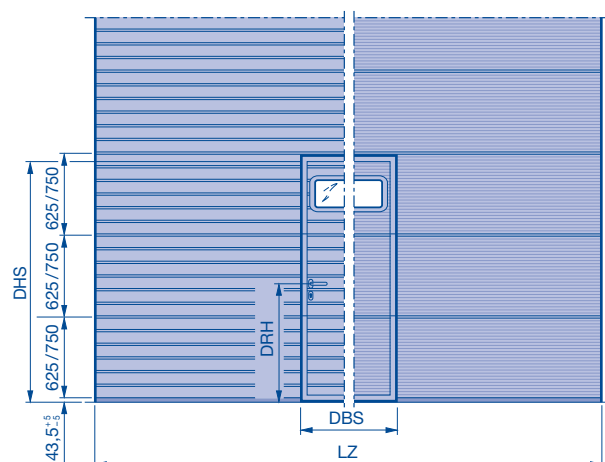
Sectional door SPU F42

with wicket door and trip-free threshold

Double-skinned steel sectional door

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

External views



** Note on fitting compound glazings:

For door widths from 1750–3000 mm, a compound glazing can **only** be fitted in the wicket door. No compound glazing can be fitted to the left or right of the wicket door. Compound glazing type E must 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 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						
Range 3	RM	7500											7500	–	10	2205				
		7375											7375	1	+	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	RM	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	RM	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				
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						
2500										2500	4	–	–	1830						
2375										2375	3	+	1***	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 glazing 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	6000	
		SPB 52																		
		LZ																		

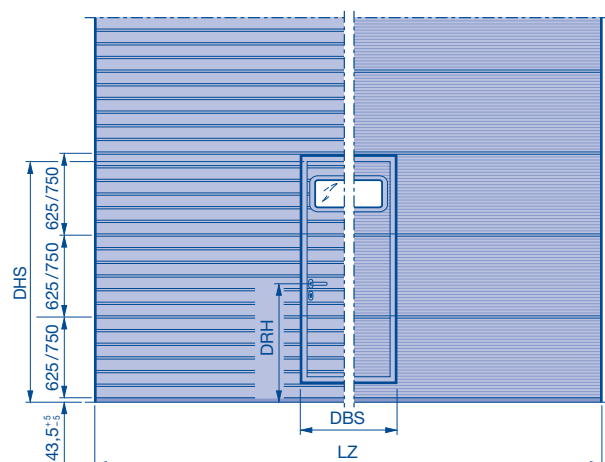
Sectional door SPU F42

with wicket door and threshold rail

Double-skinned steel sectional door

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

External views



** Note on fitting compound glazings:

For door widths from 1750–3000 mm, a compound glazing can **only** be fitted in the wicket door.
No compound glazing can be fitted to the left or right of the wicket door. Compound glazing type E must 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 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	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	3	+	1***	1830											
	2250					2250	–	3	2205												
	2125					2125	1	+	2	2080											
	2000					2000	2	+	1	1955											
	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 cm² per grille														
			1750	2000	2000	2250	2500	2750	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500	5750	6000
		SPB 52																			
		LZ																			

Notices:

- When using a shaft operator (installation example 5), the door locking is always opposite the operator side.
- For a view of the matching appearance with doors without wicket doors see page 36–38.
- Number of glazings, matching view to series 40, see page 39.
- For versions with real glass infill in the wicket door, the threshold height **SH₂** begins at LZ 4510 mm.

	On request
	Versions with glazing frame A3, B3, M3, S3, U3, LB, P on request!
	Glazings on request
n ₁	Number of door sections
DHS	Clear passage heights of wicket door to grid height
SH ₁	Threshold height (207)
SH ₂	Threshold height (330), bottom door section with 250 mm aluminium bottom section
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

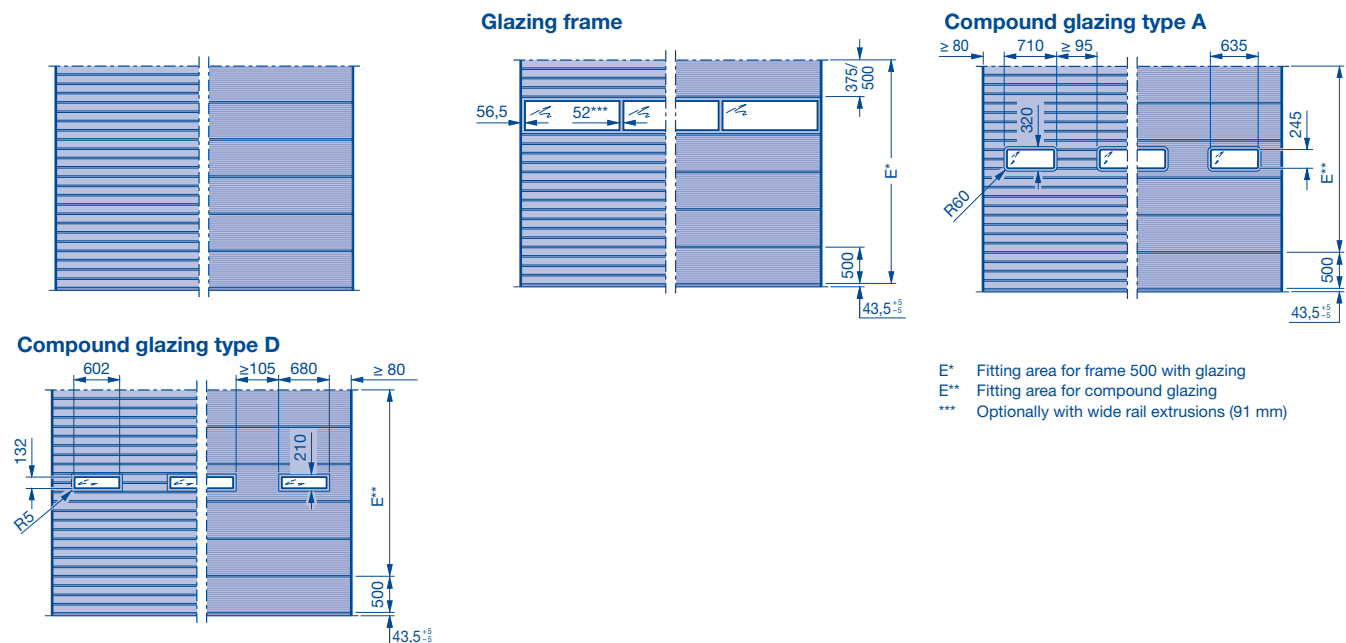
Sectional door SPU F42

Double-skinned steel sectional door

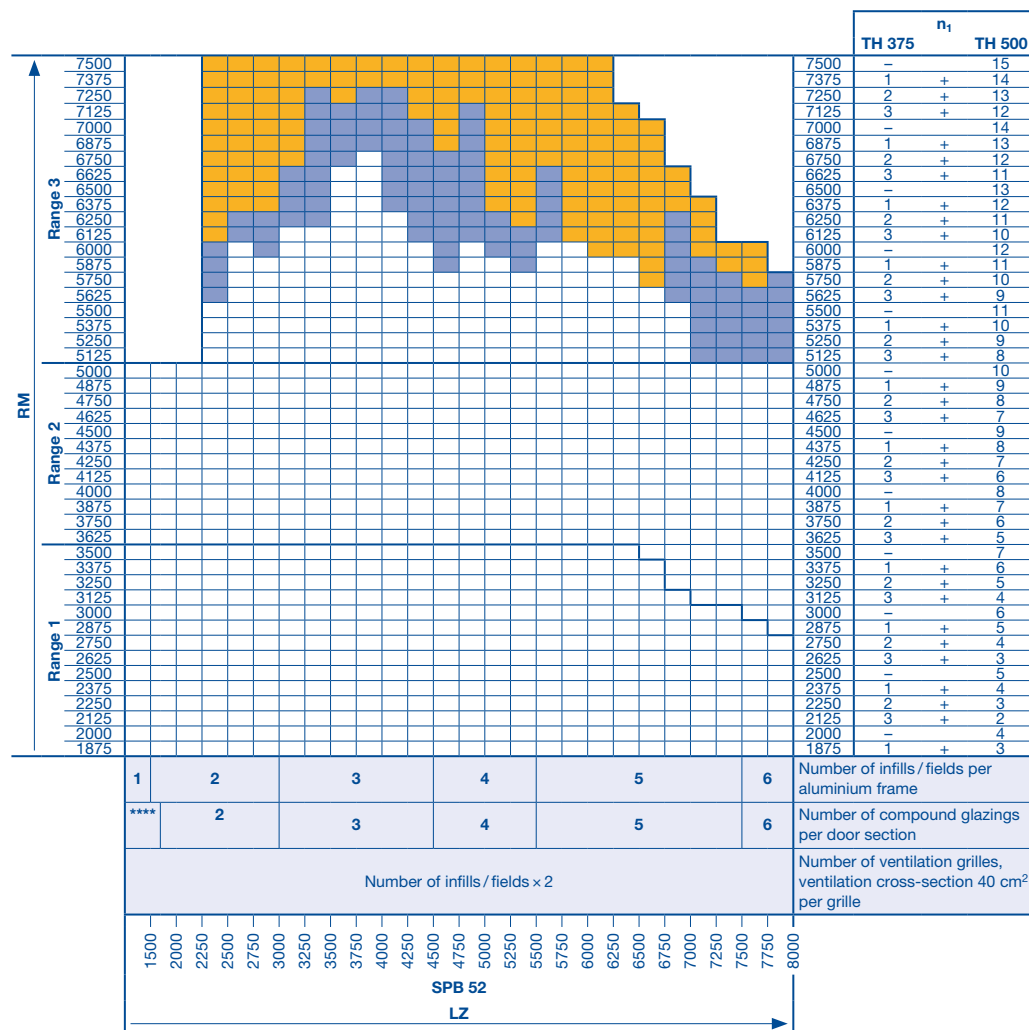
Stucco-textured / Micrograin

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 glazing frames or shortened top door section are possible!

Notices:

- Glazing frame as thermo version only up to 7000 mm wide.
- For a view of the matching appearance with doors with wicket doors see page 36 – 38.
- Number of glazings, matching view to series 40, see page 39.

On request

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

Range change

n₁ Number 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

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

Technical drawing of a double door (DHS) with dimensions and labels:

- DHS**: Double Door Set.
- DRH**: Door Height.
- DBS**: Door Width.
- LZ**: Total width of the door set.
- Dimensions**:
 - Vertical dimensions (from top to bottom): 500, 500, 500, 625, 625, 500/625, 43,5 ± 5.
 - Horizontal dimensions: 500/625, 625, 500.

Bottom door section 625 = 960.5

		SH ₁										SH ₂										n ₁		DHS		
																						TH 375	TH 500			
Range 3	7500																					7500	-	15	1955	
	7375																					7375	1	+	14	1955
	7250																					7250	2	+	13	1955
	7125																					7125	3	+	12	1955
	7000																					7000	-	14	1955	
	6875																					6875	1	+	13	1955
	6750																					6750	2	+	12	1955
	6625																					6625	3	+	11	1955
	6500																					6500	-	13	1955	
	6375																					6375	1	+	12	1955
	6250																					6250	2	+	11	1955
	6125																					6125	3	+	10	1955
	6000																					6000	-	12	1955	
	5875																					5875	1	+	11	1955
	5750																					5750	2	+	10	1955
	Range 2	5625																					5625	3	+	9
5500																						5500	-	11	1955	
5375																						5375	1	+	10	1955
5250																						5250	2	+	9	1955
5125																						5125	3	+	8	1955
5000																						5000	-	10	1955	
4875																						4875	1	+	9	1955
4750																						4750	2	+	8	1955
4625																						4625	3	+	7	1955
4500																						4500	-	9	1955	
4375																						4375	1	+	8	1955
4250																						4250	2	+	7	1955
4125																						4125	3	+	6	1955
4000																						4000	-	8	1955	
3875																						3875	1	+	7	1955
Range 1		3750																					3750	2	+	6
	3625																					3625	3	+	5	1955
	3500																					3500	-	7	1955	
	3375																					3375	1	+	6	1955
	3250																					3250	2	+	5	1955
	3125																					3125	3	+	4	1955
	3000																					3000	-	6	1955	
	2875																					2875	1	+	5	1955
	2750																					2750	2	+	4	1955
	2625																					2625	1***	+	4	2080
	2500																					2500	-	5	1955	
	2375																					2375	1	+	4	1955
	2250																					2250	2***	+	2	2125
	2125																					2125	1***	+	3	2000
	2000																					2000	-	4	1875	
			3					4					5					Number of infills / fields per glazing 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	6000	6250	6500	6750	7000			
		SPB 52																								
		LZ																								

*** TH = 625 mm

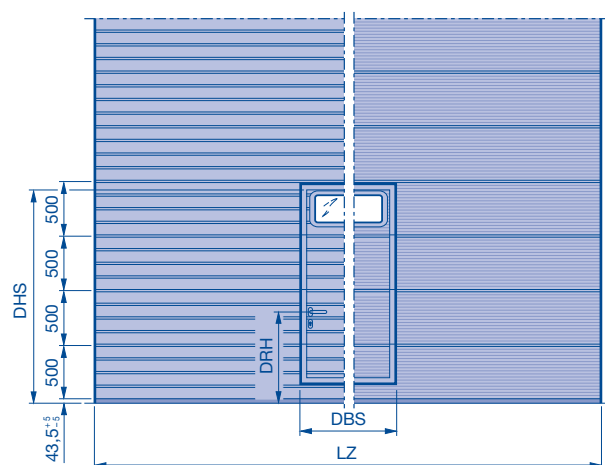
Sectional door SPU F42

with wicket door and threshold rail

Double-skinned steel sectional door

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

Viewed from outside



** Note on fitting compound glazings:

For door widths from 1750–3000 mm, a compound glazing can **only** be fitted in the wicket door.

No compound glazing can be fitted to the left or right of the wicket door.

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 500 = 835.5

Bottom door section 625 = 960.5 (only for SH₂)

Size range

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

		SH ₁										SH ₂										n ₁		DHS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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Notices:

- From LZ > 5500 mm bottom door section with deviating heights TH = 625 / 750 mm (made of 375 / 500 mm section and 2 × 125 mm aluminium bottom profile).
- For a view of the matching appearance with doors without wicket doors see page 36–38.
- Number of glazings, matching view to series 40, see page 39.
- For versions with real glass infill in the wicket door, the threshold height SH₂ begins at LZ 4510 mm.

On request

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

Range change

Glazings on request

n₁ Number of door sections

DHS Clear passage heights of wicket door to grid height

RM Grid height

LZ Clear frame dimensions (from 1500)

SH₁ Threshold height (207)

SH₂ Threshold height (330), bottom door section with 250 mm aluminium bottom section, glazing from 625 mm

SPB Rail width

TH Door section height

DRH Lever height

DBS Wicket door clear passage width

*** TH = 625 mm

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 glazing 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

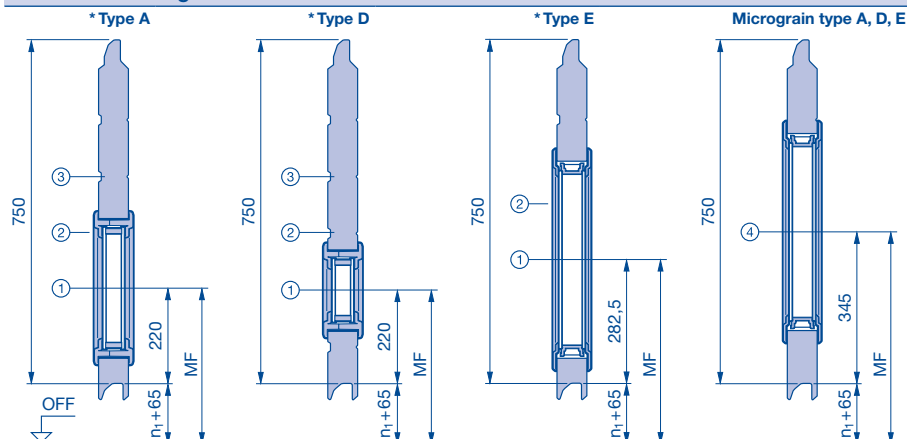
(Centre of window from FFL)

Door section heights 500, 625 and 750 mm

Calculating the glazing heights for compound glazing 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



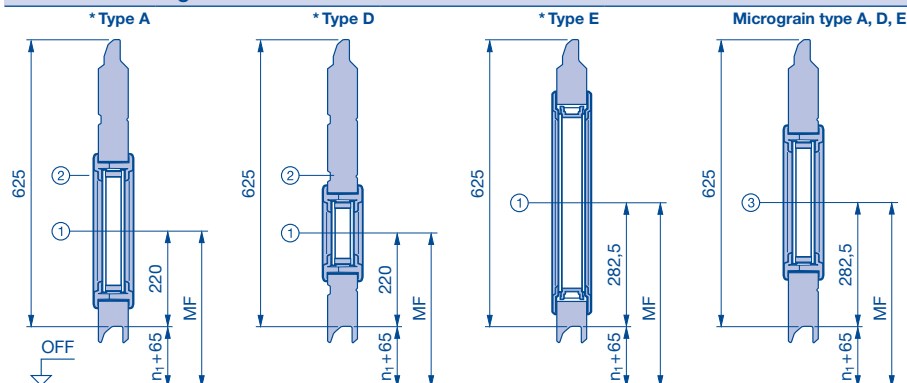
Glazing height type A and D

- 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

- ② = $n_1 + 65 + 282.5$
- ③ = $n_1 + 65 + 282.5 + 125$
- ④ = $n_1 + 65 + 345$

Door section height 625 mm



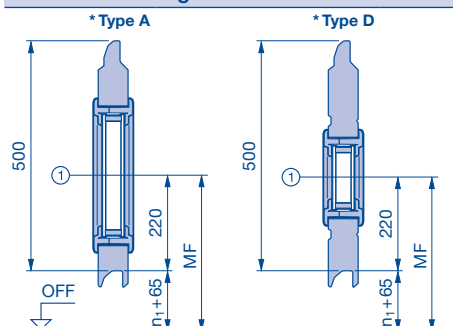
Glazing height type A and D

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

Glazing height type E

- ② = $n_1 + 65 + 282.5$
- ③ = $n_1 + 65 + 282.5$

Door section height 500 mm



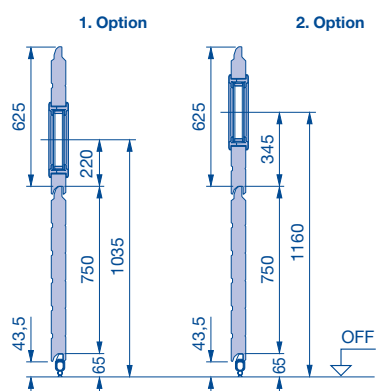
Glazing height type A and D

- 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 ×

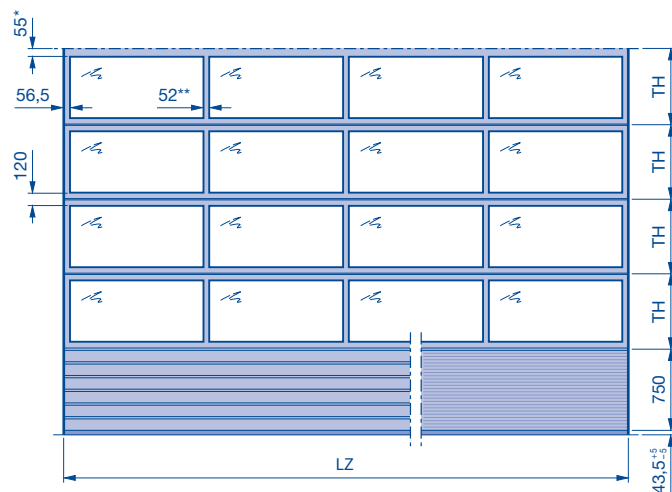
Option	Door section / position	Glazing height
1	in 2nd door section 625 mm at position 1	$750 + 65 + 220 = 1035$ mm from FFL
2	in 2nd door section 625 mm at position 2	$750 + 65 + 220 + 125 = 1160$ mm from FFL
3	in 3rd door section 625 mm at position 1	$750 + 625 + 65 + 220 = 1660$ mm from FFL
4	in 3rd 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
- n₁ Number of door sections
- OFF Finished floor level (FFL)

Sectional door APU F42

Glazed aluminium sectional door with steel bottom section

Viewed from outside



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

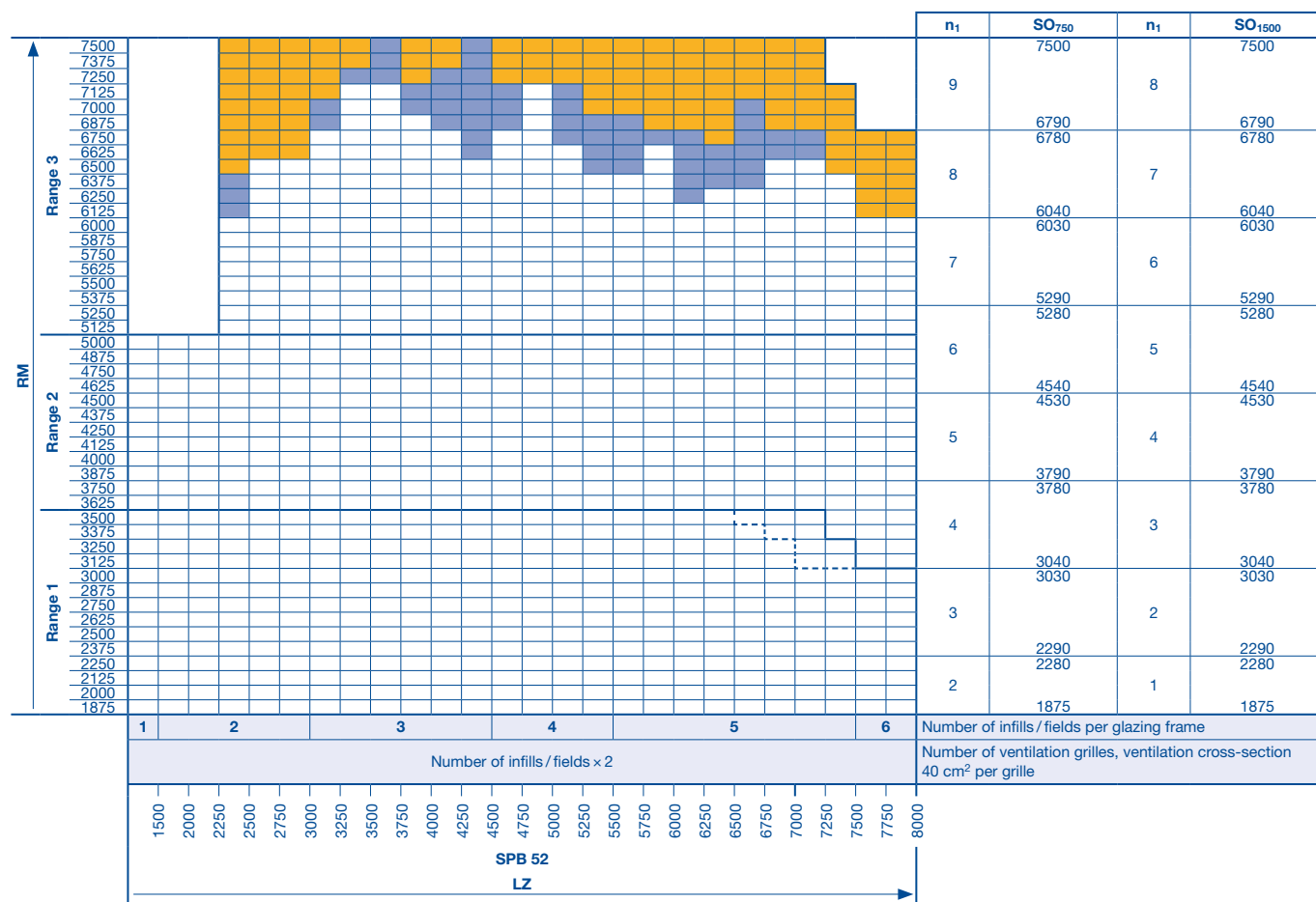
- * On request 115 mm in order to match the appearance of a sectional door with wicket door with trip-free threshold with the same door height.
- ** Optionally with wide rail extrusions (91 mm)

Notice:

- When using a shaft operator (installation example 5), the door locking is always opposite the operator side.
- For a view of the matching appearance with doors with wicket doors see page 36 – 38.
- Number of glazings, matching view to 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

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

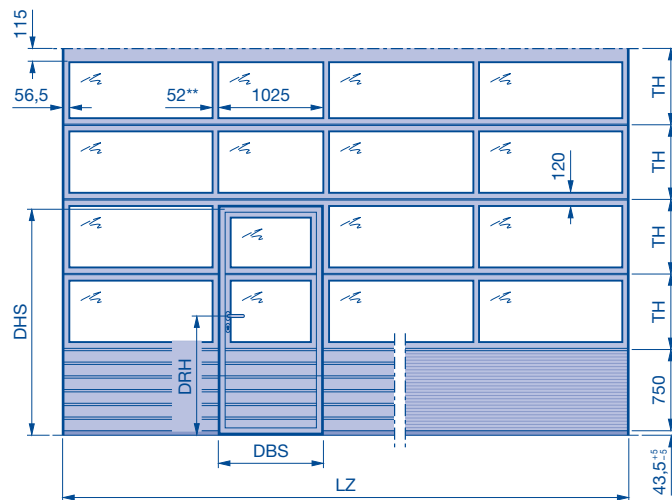
Sectional door APU F42

with wicket door and trip-free threshold

Glazed aluminium sectional door with steel bottom section

Bottom section height 750

Viewed from outside



Lever height on request

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

Clear passage height of wicket door (DHS) =
 $Sn_1 \times TH + (\text{bottom section height} - 45^*)$

Sn_1 Number of frames in the wicket door
Attention: If there is no frame above the wicket door, then - 90 instead of - 45.
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 (installation example 5), the door locking is always opposite the operator side.
- For a view of the matching appearance with doors without wicket doors see page 36 – 38.
- Number of glazings, matching view to 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																				9	7500	7500	2197	2	
																								7375	2169		
																								7250	2142		
																								7125	2114		
																								7000	2086		
																								6875	2058		
																								6750	2030		
																								6625	2002		
																								6500	1974		
																								6375	1946		
																								6250	1918		
																								6125	1890		
																								6000	1862		
																								5875	1834		
																								5750	1806		
																								5625	1778		
																								5500	1750		
																								5375	1722		
																								5250	1694		
																								5125	1666		
																								5000	1638		
																								4875	1610		
																								4750	1582		
																								4625	1554		
																								4500	1526		
																								4375	1498		
																								4250	1470		
																								4125	1442		
																								4000	1414		
																								3875	1386		
																				3750	1358						
																				3625	1330						
																				3500	1302						
																				3375	1274						
																				3250	1246						
																				3125	1218						
																				3000	1190						
																				2875	1162						
																				2750	1134						
																				2625	1106						
																				2500	1078						
																				2375	1050						
																				2250	1022						
																				2125	994						
																				2000	966						
																				2000	2000	1875					
																				Number of infills / fields per glazing frame							
																				Number of ventilation grilles, ventilation cross-section 40 cm ² per grille							

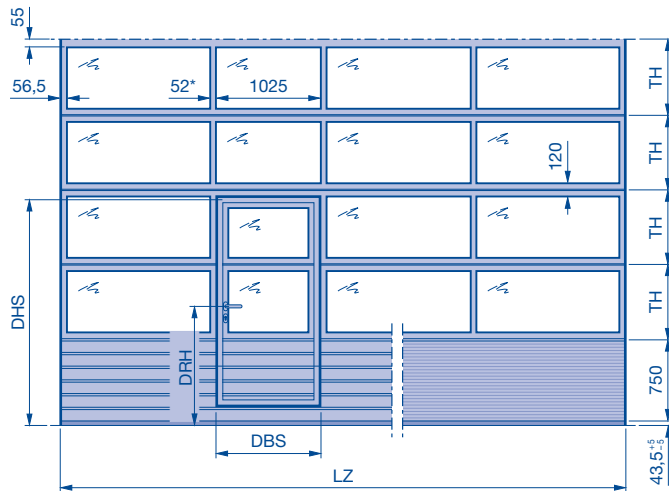
Sectional door APU F42

with wicket door and threshold rail

Glazed aluminium sectional door with steel bottom section

Bottom section height 750

Viewed from outside



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 (installation example 5), the door locking is always opposite the operator side.
- For a view of the matching appearance with doors without wicket doors see page 36–38.
- Number of glazings, matching view to 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
Range 3	7500					9	7500	7500	2197	2	
	7375						7375	7375	2169		
	7250					8	7250	7250	2142	2	
Range 2	7125						7125	7125	2114		
	7000					7	7000	7000	2086	2	
	6875						6875	6875	2058		
Range 1	6750					6	6750	6750	2196	2	
	6625						6625	6625	2165		
	6500					5	6500	6500	2134	2	
Range 0	6375						6375	6375	2103		
	6250					4	6250	6250	2071	2	
	6125						6125	6125	2040		
Range 0	6000					3	6000	6000	2195	2	
	5875						5875	5875	2159		
	5750					2	5750	5750	2124	2	
Range 0	5625						5625	5625	2088		
	5500					1	5500	5500	2052	2	
	5375						5375	5375	2016		
Range 0	5250					0	5250	5250	2193	2	
	5125						5125	5125	2152		
	5000					0	5000	5000	2110	2	
Range 0	4875						4875	4875	2068		
	4750					0	4750	4750	2027	2	
	4625						4625	4625	1985		
Range 0	4500					0	4500	4500	2191	2	
	4375						4375	4375	2141		
	4250					0	4250	4250	2091	2	
Range 0	4125						4125	4125	2041		
	4000					0	4000	4000	1991	2	
	3875						3875	3875	1941		
Range 0	3750					0	3750	3750	2188	2	
	3625						3625	3625	2125		
	3500					0	3500	3500	2063	2	
Range 0	3375						3375	3375	2000		
	3250					0	3250	3250	1938	2	
	3125						3125	3125	1875		
Range 0	3000					0	3000	3000	2182	2	
	2875						2875	2875	2096		
	2750					0	2750	2750	2015	2	
Range 0	2625						2625	2625	1932		
	2500					0	2500	2500	1848	3	2430
	2375						2375	2375	2295		
Range 0	2250					0	2250	2250	2170	2	2420
	2125						2125	2125	2045		
	2000					0	2000	2000	1920		
Range 0	1875						1875	1875	1795		
	1750					0	1750	1750	1670	2	
	1625						1625	1625	1545		
Range 0	1500					0	1500	1500	1420	2	
	1375						1375	1375	1295		
	1250					0	1250	1250	1170	2	
	1125						1125	1125	1045		
	1000					0	1000	1000	920	2	
	875						875	875	795		
Range 0	750					0	750	750	670	2	
	625						625	625	545		
	500					0	500	500	420	2	
	375						375	375	295		
	250					0	250	250	170	2	
	125						125	125	45		
	0					0	0	0	0	2	

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	SH ₁	Threshold height (207)
Versions with glazing A3, B3, M3, S3, U3, LB, P, XU on request	DBS	Wicket door clear passage width	SH ₂	Threshold height (330)
Range change	DRH	Lever height	n ₁	Number of glazing frames
Range change with glazing A3, B3, M3, S3, U3, LB, P, XU	LZ	Clear frame dimensions (from 1500)	Sn ₁	Number of glazing frames in the wicket door
	RM	Grid height	TH	Door section height
	SPB	Rail width		

Bottom section height 1500

- When using a shaft operator (installation example 5), the door locking is always opposite the operator side.
- For a view of the matching appearance with doors without wicket doors see page 36–38.
- Number of glazings, matching view to 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.

Bottom section height 1500

Technical drawing of a rectangular building layout. The drawing shows a floor plan with various rooms and corridors. Key dimensions and labels include:

- Overall Dimensions:**
 - Top: 59
 - Left: 56,5
 - Right: 1500
 - Bottom: 43,5
 - Bottom Right: 43,5
- Room Dimensions and Labels:**
 - Top Left Room: 120 (width), h_2 (height)
 - Top Middle Room: 52* (width), h_2 (height)
 - Top Right Room: 1025 (width), h_2 (height)
 - Middle Left Room: h_2 (width), TH (height)
 - Middle Right Room: h_2 (width), TH (height)
 - Bottom Left Room: h_2 (width), TH (height)
 - Bottom Middle Room: h_2 (width), TH (height)
 - Bottom Right Room: h_2 (width), TH (height)
- Corridor and Staircase Dimensions:**
 - Corridor (Left): DRH (width)
 - Corridor (Bottom): DBS (width)
 - Staircase (Bottom): LZ (width)

- When using a shaft operator (installation 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 doors see page 36–38.
- Number of glazings, matching view to 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.

SH₁	Threshold height (207)
SH₂	Threshold height (330)
n₁	Number of glazing frames
Sn₁	Number of glazing frames in the wicket door
TH	Door section height

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

The technical drawing illustrates a window frame assembly with the following specifications:

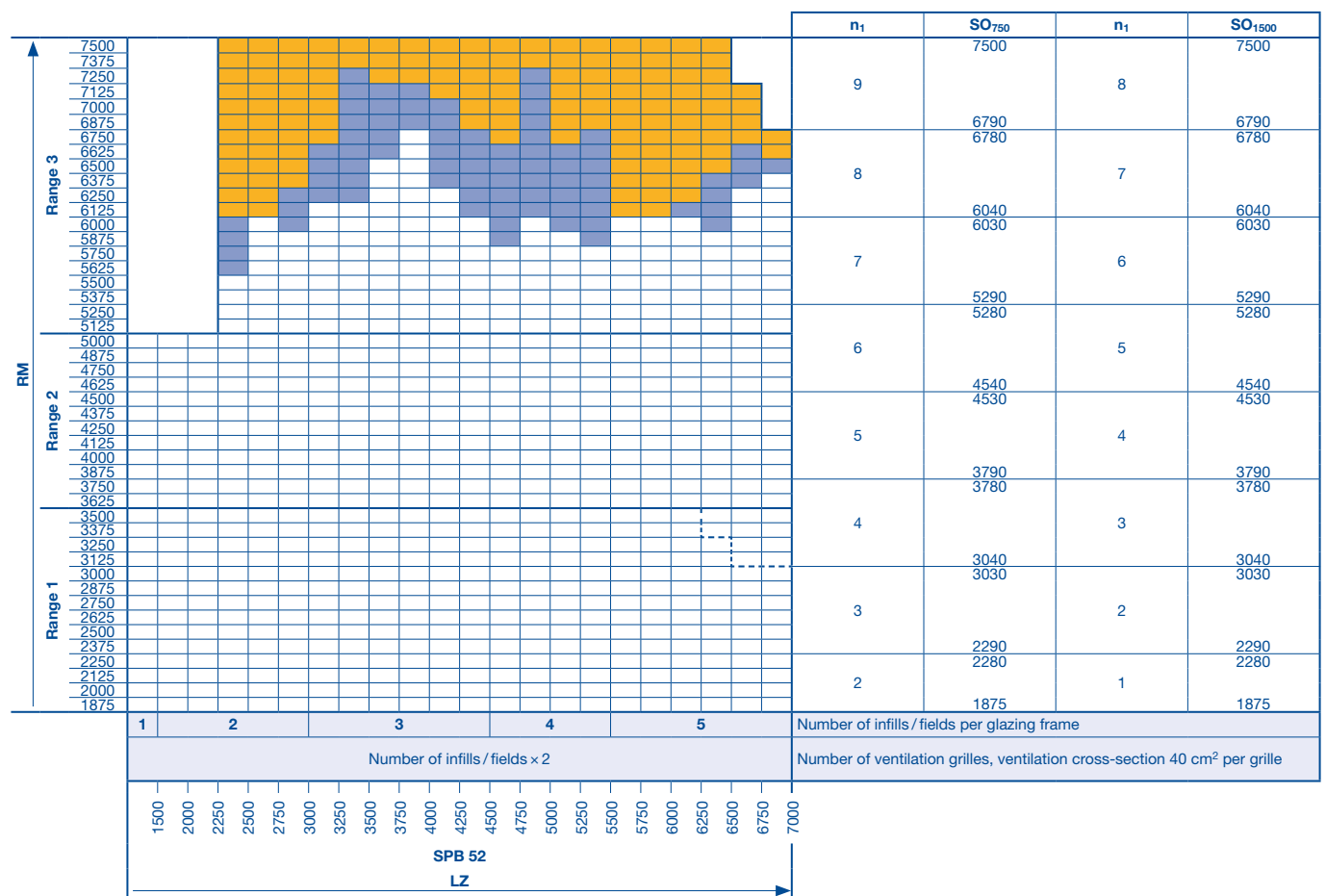
- Overall Dimensions:**
 - Height: 760
 - Width: LZ
- Frame Components:**
 - TH (Top Horizontal):** Indicated by arrows pointing to the top horizontal sections.
 - TH (Bottom Horizontal):** Indicated by arrows pointing to the bottom horizontal sections.
 - LZ (Left Vertical):** Indicated by an arrow pointing to the left vertical section.
 - RZ (Right Vertical):** Indicated by an arrow pointing to the right vertical section.
- Internal Structure:**
 - A grid of four rectangular panes is shown, each containing a stylized logo.
 - The panes are separated by thin lines, likely representing muntins or spacers.
- Dimensions and Spacing:**
 - Vertical spacing between the top and second row of panes is 56,5.
 - Horizontal spacing between the first and second column of panes is 52**.
 - Vertical spacing between the third and fourth row of panes is 120.
 - Vertical spacing between the fourth row of panes and the bottom horizontal section is 55.
 - Horizontal spacing between the second and third column of panes is 52**.
 - Horizontal spacing between the third and fourth column of panes is 52**.
 - Horizontal spacing between the fourth column of panes and the right vertical section is 52**.
 - Horizontal spacing between the first and second column of panes is 52**.
 - Horizontal spacing between the second and third column of panes is 52**.
 - Horizontal spacing between the third and fourth column of panes is 52**.
 - Horizontal spacing between the fourth column of panes and the right vertical section is 52**.



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

- Notice:**

- When using a shaft operator (installation example 5), the door locking is always opposite the operator side.
- For a view of the matching appearance with doors with wicket doors see page 36–38.
- Number of glazings, matching view to series 40, see page 39.

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

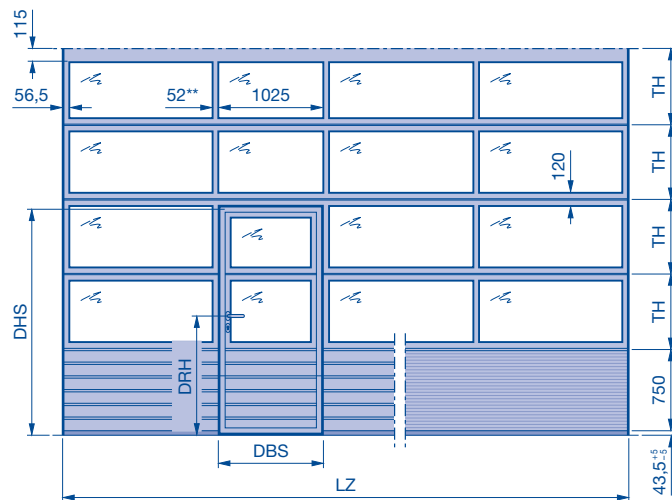
- | | |
|--------------------|---|
| SO ₇₅₀ | Bottom section height 750 mm (standard) |
| SO ₁₅₀₀ | Bottom section height 1500 mm |
| RM | Grid height |
| LZ | Clear frame dimensions (from 1200) |
| SPB | Rail width |
| n ₁ | Number of glazing frames |
| TH | Door section height |

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

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

Bottom section height 750

Viewed from outside



Lever height on request

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

Clear passage height of wicket door (DHS) =
 $Sn_1 \times TH + (\text{bottom section height} - 45^*)$

Sn₁ Number of frames in the wicket door
 Attention: If there is no frame above the wicket door, then - 90 instead of - 45.
 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 (installation example 5), the door locking is always opposite the operator side.
- For a view of the matching appearance with doors without wicket doors see page 36 – 38.
- Number of glazings, matching view to 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.

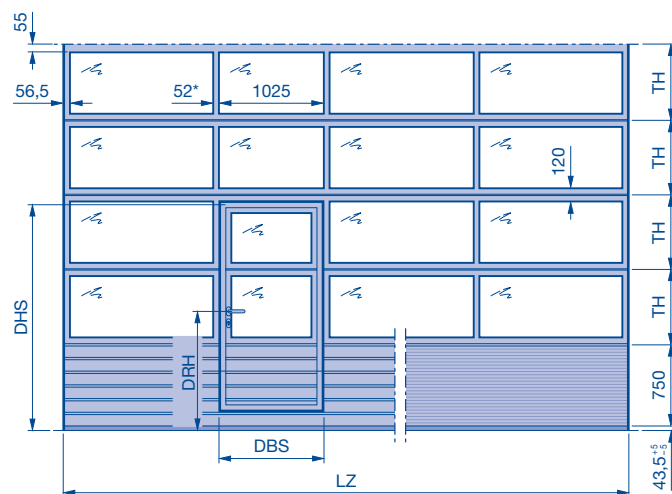
		SH ₁										SH ₂										n ₁	Height	RM	DHS	Sn ₁	Height			
RM	↑																					9	7500	7500	2197	2				
Range 3	7500																					8	6790 6780	7500	2196	2				
	7375																							7375	2169					
	7250																							7250	2142					
	7125																							7125	2114					
	7000																							7000	2086					
	6875																							6875	2058					
	6750																							6750	2196					
	6625																							6625	2165					
	6500																							6500	2134					
	6375																							6375	2103					
Range 2	6250																					7	6040 6030	6250	2071	2				
	6125																							6125	2040					
	6000																							6000	2195					
	5875																							5875	2159					
	5750																							5750	2124					
	5625																							5625	2088					
	5500																							5500	2052					
	5375																							5375	2016					
	5250																							5250	1980					
	5125																							5125	1944					
Range 1	5000																					6	4540 4530	5000	1908	2				
	4875																							4875	1872					
	4750																							4750	1836					
	4625																							4625	1800					
	4500																							4500	1764					
	4375																							4375	1728					
	4250																							4250	1692					
	4125																							4125	1656					
	4000																							4000	1620					
	3875																							3875	1584					
3750	3750	1548																												
3625	3625	1512																												
3500	3500	1476																												
3375	3375	1440																												
3250	3250	1404																												
3125	3125	1368																												
3000	3000	1332																												
2875	2875	1296																												
2750	2750	1260																												
2625	2625	1224																												
2500	2500	1188																												
2375	2375	1152																												
2250	2250	1116																												
2125	2125	1080																												
2000	2000	1044																												
															3											Number of infills / fields per glazing frame				
															4											Number of ventilation grilles, ventilation cross-section 40 cm ² per grille				
															5															
																				Notice:										
																				For versions with real glass infill in the wicket door, the threshold height SH₂ begins at LZ 4510 mm.										

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

Viewed from outside



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 (installation example 5), the door locking is always opposite the operator side.
- For a view of the matching appearance with doors without wicket doors see page 36–38.
- Number of glazings, matching view to 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		9	7500	7500	2197	2							
		7375			7375	7375	2169								
		7250			7250	7250	2142								
		7125			7125	7125	2114								
		7000			7000	7000	2086								
		6875		8	6790	6875	2058	2							
		6750			6780	6750	2196								
		6625				6625	2165								
		6500				6500	2134								
		6375				6375	2103								
	6250		7	6040	6250	2071	2								
	6125			6030	6125	2040									
	6000				6000	2195									
	5875				5875	2159									
	5750				5750	2124									
	5625		6		5625	2088	2								
	5500				5500	2052									
	5375			5290	5375	2016									
	5250			5280	5250	2193									
	5125				5125	2152									
	5000		5		5000	2110	2								
	4875				4875	2068									
	4750			4540	4750	2027									
	4625			4530	4625	1985									
	4500				4500	2191									
	4375		4		4375	2141	2								
	4250				4250	2091									
	4125				4125	2041									
	4000			3790	4000	1991									
	3875			3780	3875	1941									
	3750		3		3750	2188	2								
	3625				3625	2125									
	3500				3500	2063									
	3375				3375	2000									
	3250				3250	1938									
	3125		2	3040	3125	1875	3	2430							
	3000			3030	3000	2182		2420							
	2875				2875	2096									
	2750				2750	2015									
	2625				2625	1932									
	2500		1		2500	1848	2								
	2375			2290	2375	2295									
	2250			2280	2250	2170									
	2125				2125	2045									
	2000			2000	2000	1920									
3				4				5				Number of infills / fields per glazing frame			
(Number of infills / fields - 1) × 2												Number of ventilation grilles, ventilation cross-section 40 cm ² per grille			
SPB 52															
LZ															

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

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

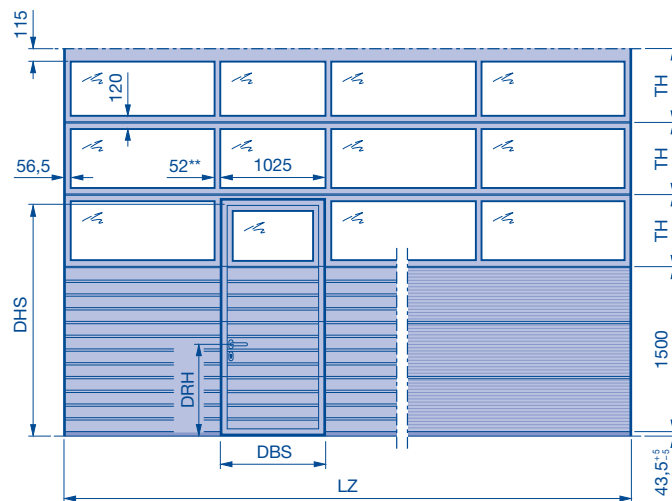
SH ₁	Threshold height (207)
SH ₂	Threshold height (330)
n ₁	Number of glazing frames
Sn ₁	Number of glazing frames in the wicket door
TH	Door section height

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

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

Bottom section height 1500

Viewed from outside



Lever height (DRH):

$LZ \leq 6000 = 1085,5$

$LZ > 6000 = 835,5$

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

Clear passage height of wicket door (DHS) =

$Sn_1 \times TH + (\text{bottom section height} - 45^*)$

Sn_1 Number of frames in the wicket door

* Attention: If there is no frame above the wicket door, then - 90 instead of - 45.

** 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 (installation example 5), the door locking is always opposite the operator side.
- For a view of the matching appearance with doors without wicket doors see page 36-38.
- Number of glazings, matching view to 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.

RM	Range 3	SH ₁										SH ₂										n ₁	Height	RM	DHS	Sn ₁																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
		7500	7375	7250	7125	7000	6875	6750	6625	6500	6375	6250	6125	6000	5875	5750	5625	5500	5375	5250	5125																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
Range 2	5000																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							

Bottom section height 1500

Technical drawing of a rectangular building layout. The drawing shows a grid of rooms and corridors. The overall dimensions are 43,5 m by 15,0 m. The layout includes a central corridor (DBS) and a staircase (LZ). The rooms are labeled with dimensions: 120, 52*, 1025, and 56,5. The drawing also shows a section of the building with a staircase (LZ) and a section of the building with a staircase (LZ). The drawing is a technical drawing of a building layout.

- When using a shaft operator (installation 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 doors see page 36–38.
- Number of glazings, matching view to series 40, see page 39.

[illegible]

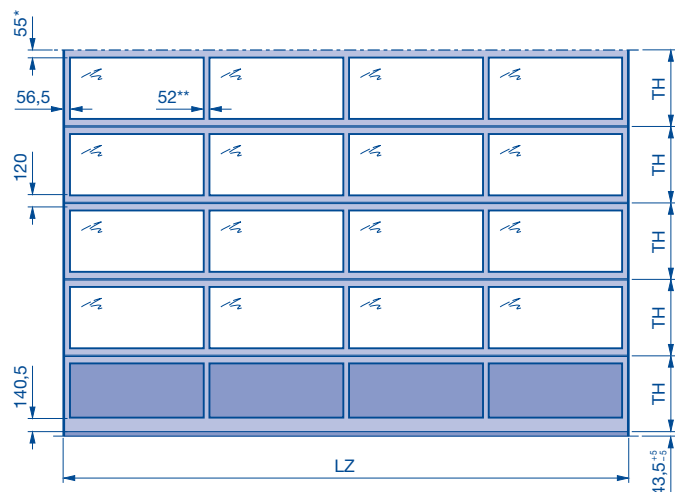
For versions with real glass infill in the wicket door, the threshold height **SH₂** begins at LZ 4510 mm.

SH₁	Threshold height (207)
SH₂	Threshold height (330)
n₁	Number of glazing frames
Sn₁	Number of glazing frames in the wicket door
TH	Door section height

Sectional door ALR F42

Glazed aluminium sectional door

Viewed from outside



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

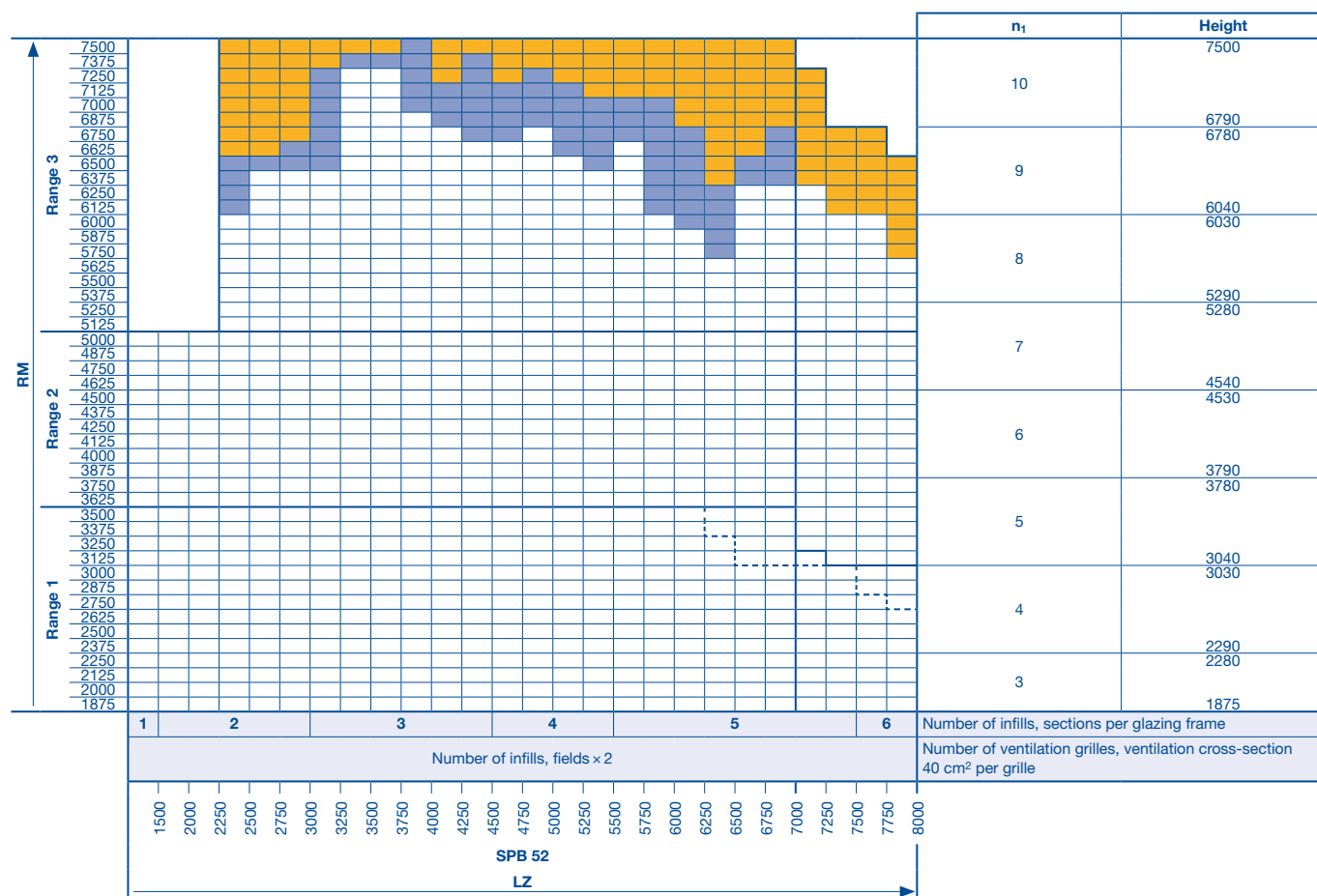
- * On request 115 mm in order to match the appearance of a sectional door with wicket door with trip-free threshold with the same door height.
- ** Optionally with wide rail extrusions (91 mm)

Notice:

- When using a shaft operator (installation 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 doors see page 36–38.
- Number of glazings, matching view to 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.

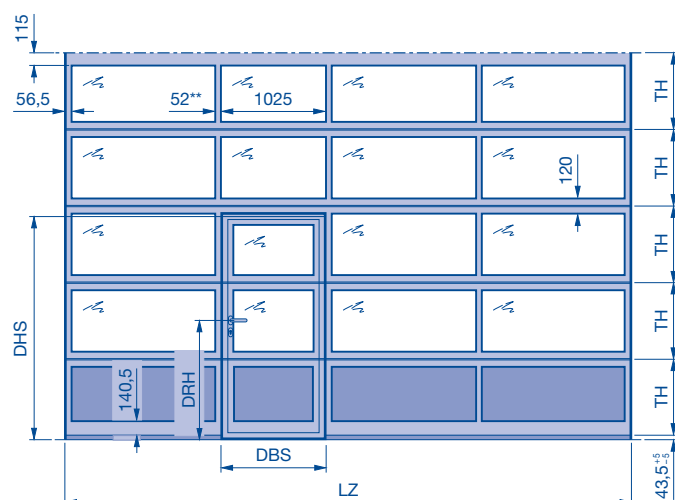


- On request
- Versions with glazing A3, B3, M3, S3, U3, LB, P, XU on request
- Range change
- Range change with glazing A3, B3, M3, S3, U3, LB, P, XU

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

Glazed aluminium sectional door

Viewed from outside



Clear passage height of wicket door (DHS) = $S_{n1} \times TH - 45^*$

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

- When using a shaft operator (installation 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 doors see page 36–38.
- Number of glazings, matching view to 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.

		RM															n ₁		Height	RM	DHS	S _{n1}	Height			
RM	Range 3	7500	<div style="display: flex; justify-content: space-around;"><div>SH₁</div><div>SH₂</div></div>															10	7500	7500	2195	3				
		7375																	7375	2157						
		7250																	7250	2120						
		7125																	7125	2082						
		7000																	7000	2045						
		6875																	6875	2007						
		6750																	6750	1970						
		6625																	6625	1933						
		6500																	6500	1895						
		6375																	6375	1858						
		6250																	6250	1820						
		6125																	6125	1783						
		6000																	6000	1745						
		5875																	5875	1708						
		5750																	5750	1670						
	Range 2	5625	5625	1633	3																					
		5500	5500	1595																						
		5375	5375	1558																						
		5250	5250	1520																						
		5125	5125	1483																						
		5000	5000	1445																						
		4875	4875	1408																						
		4750	4750	1370																						
		4625	4625	1333																						
		4500	4500	1295																						
		4375	4375	1258																						
		4250	4250	1220																						
		4125	4125	1183																						
		4000	4000	1145																						
		Range 1	3875	3875			1108	3																		
3750	3750		1070																							
3625	3625		1033																							
3500	3500		995																							
3375	3375		958																							
3250	3250		920																							
3125	3125		883																							
3000	3000		845																							
2875	2875		808																							
2750	2750		770																							
2625	2625		733																							
2500	2500		695																							
2375	2375		658																							
2250	2250		620																							
2125	2125		583																							
2000	2000	545																								
		3	4	5	Number of infills, sections per glazing frame																					
		(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	6000	6250	6500	6750	7000			
		SPB 52																								
		LZ																								

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

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

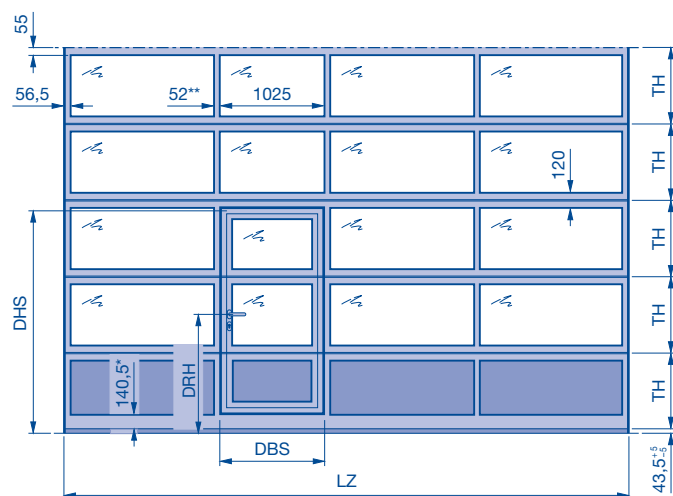
- On request
- Versions with glazing A3, B3, M3, S3, U3, LB, P, XU on request
- Range change
- Range change with glazing A3, B3, M3, S3, U3, LB, P, XU

DHS	Wicket door clear passage height
DBS	Wicket door clear passage width
DRH	Lever height
LZ	Clear frame dimensions (from 1500)
RM	Grid height
SPB	Rail width

SH ₁	Threshold height (rising from 5 to 10)
SH ₂	Threshold height (approx. 13)
n ₁	Number of glazing frames
Sn ₁	Number of glazing frames in the wicket door
TH	Door section height

Glazed aluminium sectional door

Viewed from outside

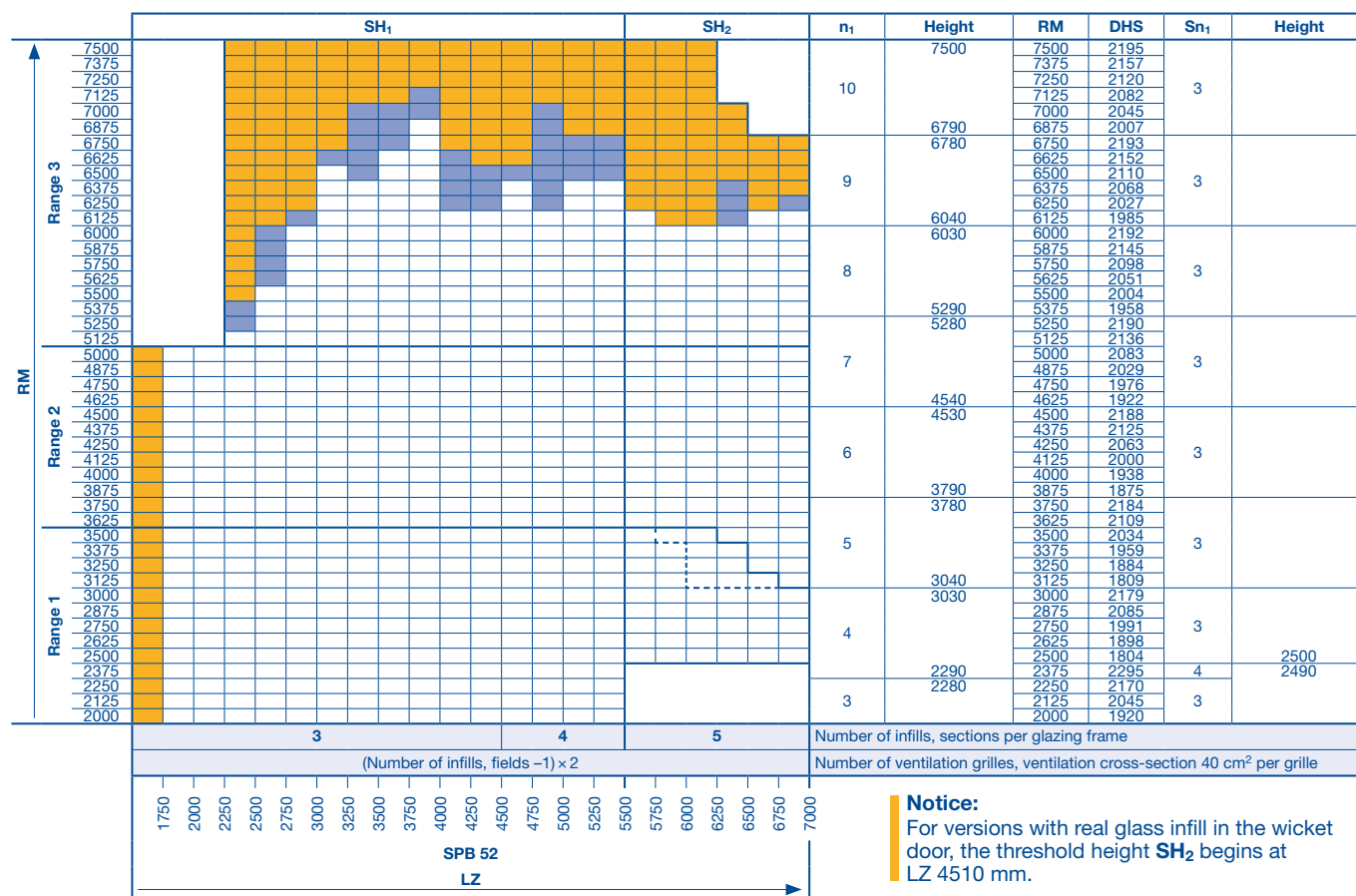


For door widths below 1750 mm, the clear passage width (DBS) depends on the door width and is much smaller than standard dimensions.

- When using a shaft operator (installation example 5), the door locking is always opposite the operator side.
- For a view of the matching appearance with doors without wicket doors see page 36–38.
- Number of glazings, matching view to 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.



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

- 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

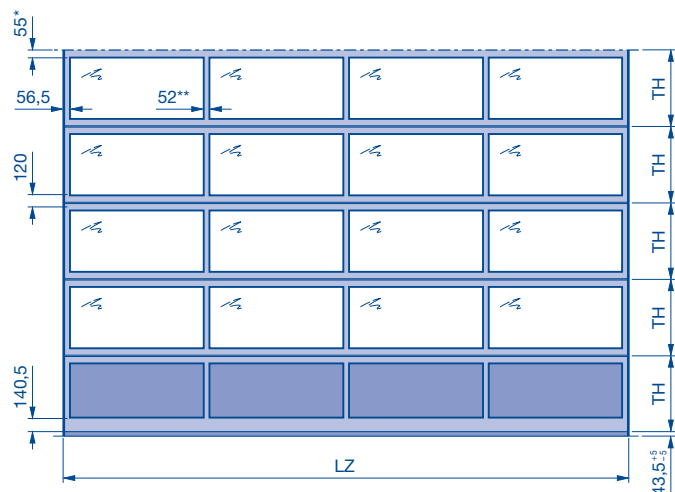
DHS	Wicket door clear passage height
DBS	Wicket door clear passage width
DRH	Lever height
LZ	Clear frame dimensions (from 1500)
RM	Grid height
SPB	Rail width

SH ₁	Threshold height (186)
SH ₂	Threshold height (311)
n ₁	Number of glazing frames
Sn ₁	Number of glazing frames in the wicket door
TH	Door section height

Sectional door ALR F42 Thermo

Glazed aluminium sectional door with thermal break

Viewed from outside



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

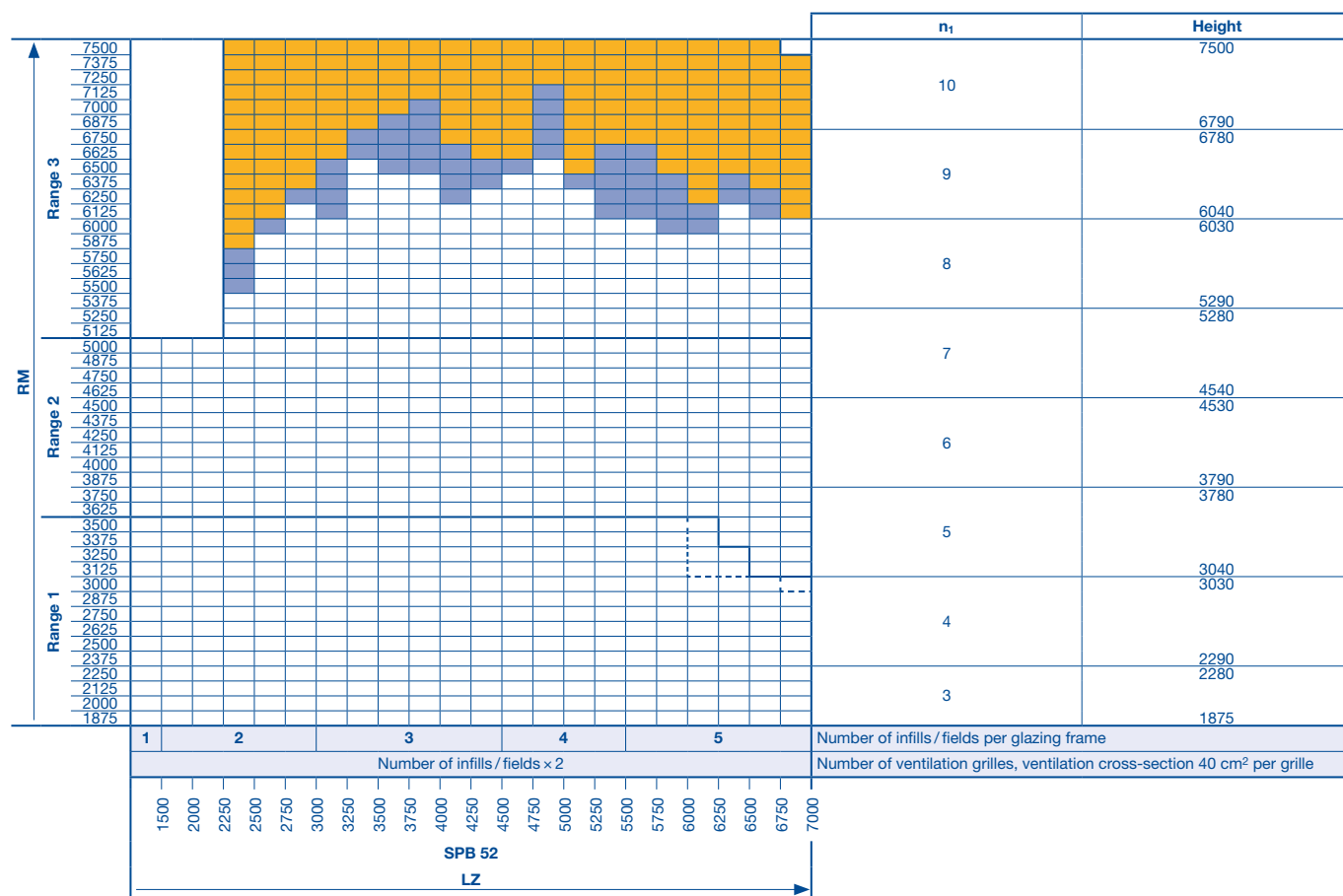
- * On request 115 mm in order to match the appearance of a sectional door with wicket door with trip-free threshold with the same door height.
- ** Optionally with wide rail extrusions (91 mm)

Notice:

- When using a shaft operator (installation 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 doors see page 36–38.
- Number of glazings, matching view to 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 glazing frames
- TH Door section height

Glazed aluminium sectional door with thermal break

The schematic diagram illustrates the layout of the test section, showing a grid of channels. Key dimensions and labels include:

- Total Height:** 115
- Top Channel Height:** 56.5
- Bottom Channel Height:** 120
- Channel Width:** 52** (indicated by a double asterisk)
- Channel Length:** 1025
- Labels:** ρ_2 , TH, DHS, DBS, LZ.

- When using a shaft operator (installation 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 doors see page 36–38.
- Number of glazings, matching view to 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 glazing frames
Sn ₁	Number of glazing frames in the wicket door
TH	Door section height

Glazed aluminium sectional door with thermal break

[illegible]

- When using a shaft operator (installation example 5), the door locking is always opposite the operator side.
- For a view of the matching appearance with doors without wicket doors see page 36–38.
- Number of glazings, matching view to series 40, see page 39.

RM		SH ₁		SH ₂		n ₁	Height	RM	DHS	Sn ₁	Height											
<div> <div>Range 3</div> <div>Range 2</div> <div>Range 1</div> </div>	7500						10	7500	7500	2195	3											
	7375							7375	2157													
	7250							7250	2120													
	7125							7125	2082	3												
	7000							7000	2045													
	6875							6875	2007													
	6750							6750	2193	3												
	6625							6625	2152													
	6500							6500	2110													
	6375							6375	2068	3												
	6250							6250	2027													
	6125							6125	1985													
	6000							6000	2192	3												
	5875							5875	2145													
	5750							5750	2098													
	5625							5625	2051	3												
	5500							5500	2004													
	5375							5375	1958													
	5250							5250	2190	3												
	5125							5125	2136													
	5000							5000	2083													
	4875							4875	2029	3												
	4750							4750	1976													
	4625							4625	1922													
	4500							4500	2188	3												
	4375							4375	2125													
	4250							4250	2063													
	4125							4125	2000	3												
4000							4000	1938														
3875							3875	1875														
3750							3750	2184	3													
3625							3625	2109														
3500							3500	2034														
3375							3375	1959	3													
3250							3250	1884														
3125							3125	1809														
3000							3000	2179	3													
2875							2875	2085														
2750							2750	1991														
2625							2625	1898	3													
2500							2500	1804														
2375							2375	2295														
2250							2250	2170	4	2500												
2125							2125	2045														
2000							2000	1920														
		3	4	5	Number of infills / fields per glazing frame																	
		(Number of infills / fields - 1) × 2			Number of ventilation grilles, ventilation cross-section 40 cm² per grille																	
	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500	5750	6000	6250	6500	6750	7000
	SPB 52																					
	LZ																					

Notice:

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

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

SH₁	Threshold height (186)
SH₂	Threshold height (311)
n₁	Number of glazing frames
Sn₁	Number of glazing frames in the wicket door
TH	Door section height

Aluminium sectional door with extensive glazing, real glass

Technical drawing of a 5x120mm profile. The drawing shows a cross-section of the profile with dimensions and labels. The overall height is 120mm, and the overall width is 55mm. The profile is divided into five horizontal sections, each 24mm high. The sections are labeled from top to bottom: OTH, TH, TH, TH, and UTH. The top section (OTH) has a height of 56.5mm. The bottom section (UTH) has a height of 13.5mm. The middle three sections (TH) have a height of 24mm each. The width of the profile is 55mm. The length of the profile is labeled as LZ. The drawing includes a scale bar at the bottom right indicating 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400, 410, 420, 430, 440, 450, 460, 470, 480, 490, 500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810, 820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970, 980, 990, 1000.

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

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

* 76 with optional wide rail extrusions (91 mm)

Notice:

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

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.

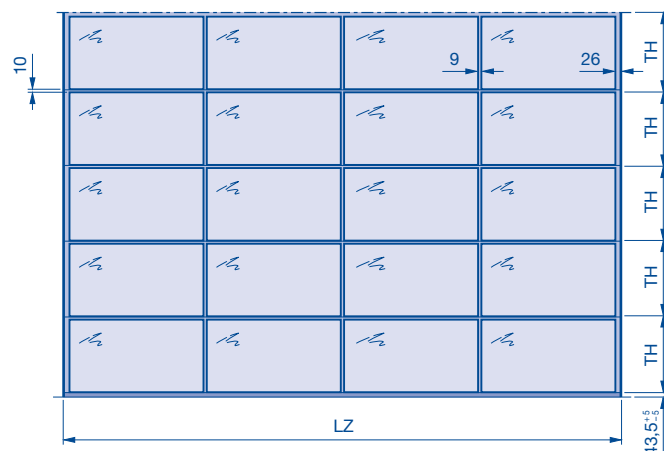
		n ₁	Height													
<div>RM</div> <div>↑</div> <div>Range 2</div>	5000	6	4000													
	4875															
	4750															
	4625															
	4500															
	4375															
	4250															
	4125															
	4000	5	3625 3620													
	3875															
	3750	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

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

Sectional door ALR F42 Vitraplan

Aluminium sectional door with exclusive glazing

Viewed from outside



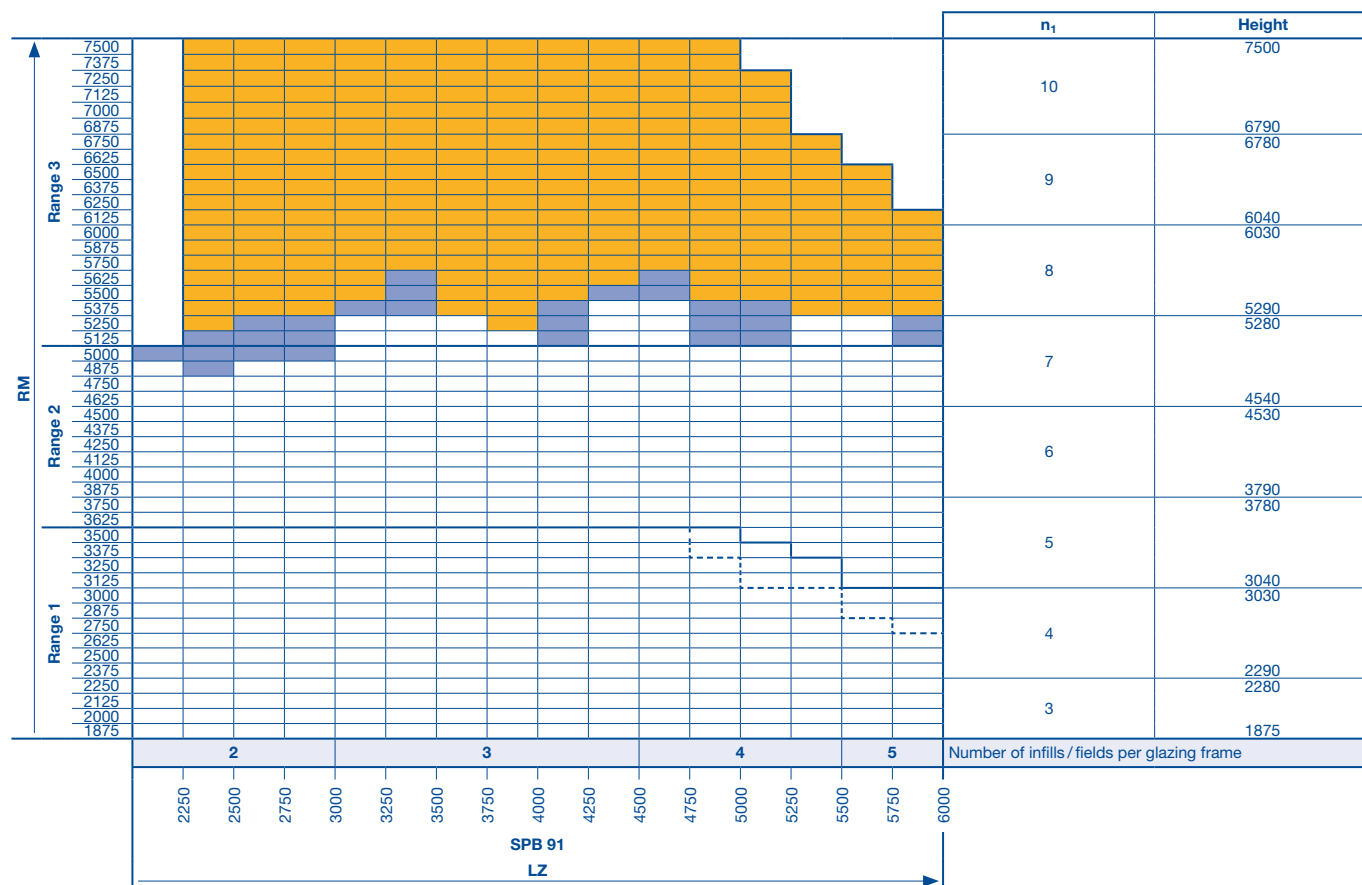
$$TH = \frac{\text{Door height} - 35}{\text{Number of glazing frames}}$$

Notice:

- When using a shaft operator (installation 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

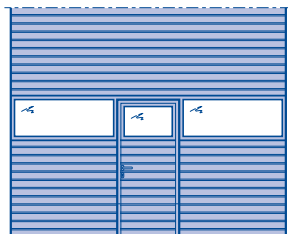
- RM Grid height
- LZ Clear frame dimensions (from 2000)
- SPB Rail width
- n₁ Number of glazing frames
- TH Door section height

Glazing and wicket door arrangements

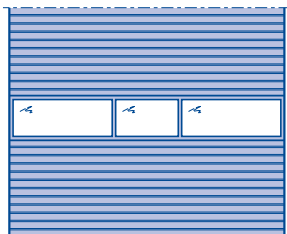
Sectional doors with 3 infills / fields

Glazing arrangements – external view

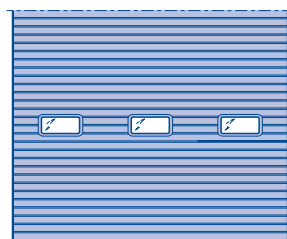
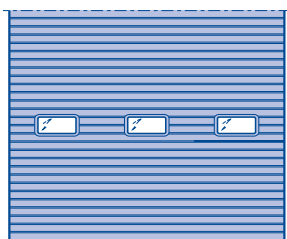
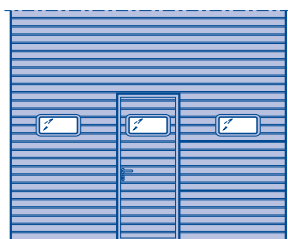
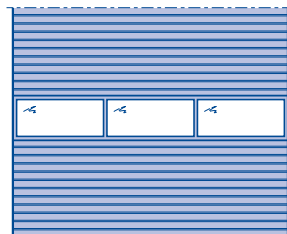
Sectional door SPU F42 with wicket door with trip-free threshold



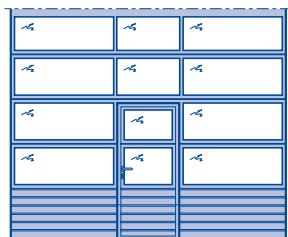
Sectional door SPU F42, matching the wicket door versions



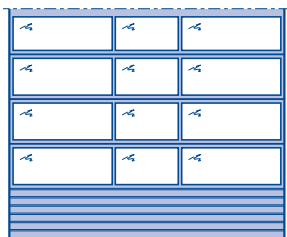
Sectional door SPU F42 with standard window division



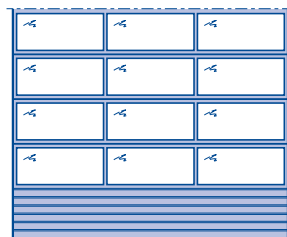
Sectional door APU F42 with wicket door with trip-free threshold



Sectional door APU F42, matching the wicket door versions



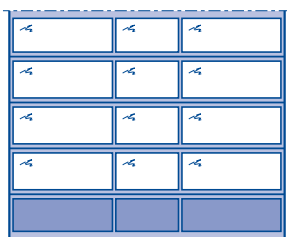
Sectional door APU F42 with standard window division



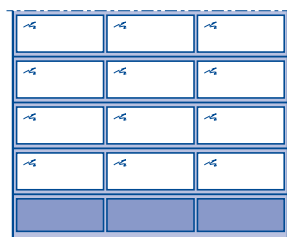
Sectional door ALR F42 with wicket door with trip-free threshold



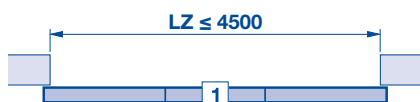
Sectional door ALR F42, matching the wicket door versions



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 and wicket door arrangements

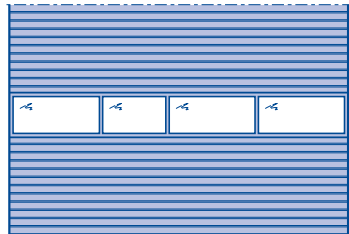
Sectional doors with 4 infills / fields

Glazing arrangements – external view

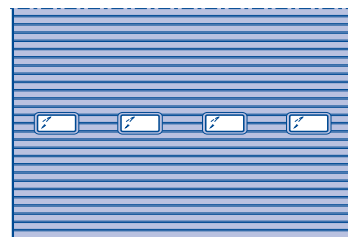
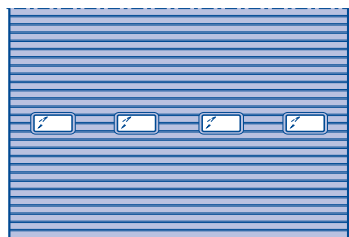
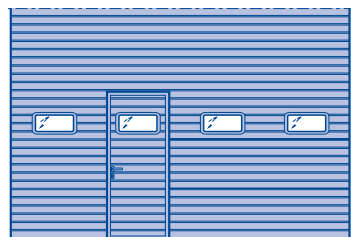
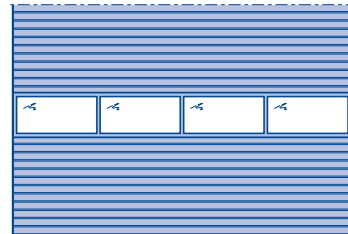
Sectional door SPU F42 with wicket door with trip-free threshold



Sectional door SPU F42, matching the wicket door versions



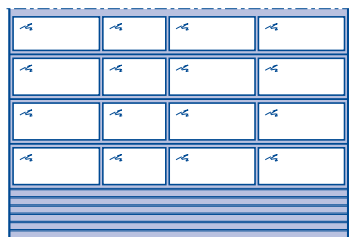
Sectional door SPU F42 with standard window division



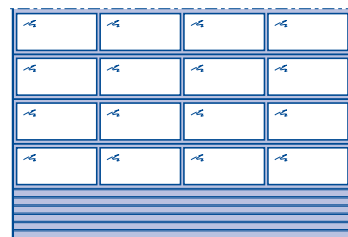
Sectional door APU F42 with wicket door with trip-free threshold



Sectional door APU F42, matching the wicket door versions



Sectional door APU F42 with standard window division



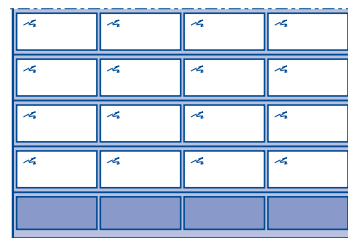
Sectional door ALR F42 with wicket door with trip-free threshold



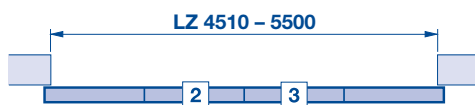
Sectional door ALR F42, matching the wicket door versions



Sectional door ALR F42 with standard window division



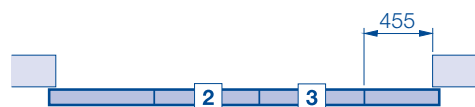
Arrangement of the wicket door



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:

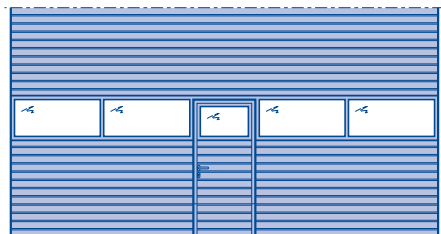
- Not possible for doors with real glass.

Glazing and wicket door arrangements

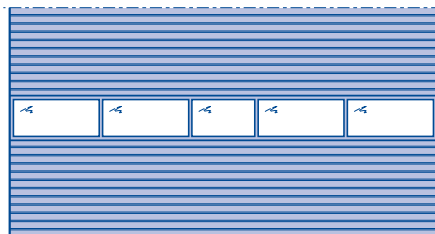
Sectional doors with 5 infills / fields

Glazing arrangements – external view

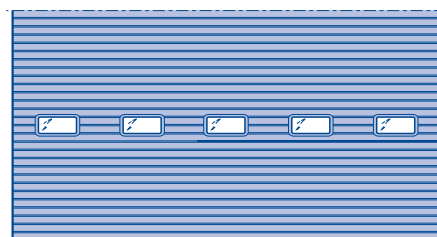
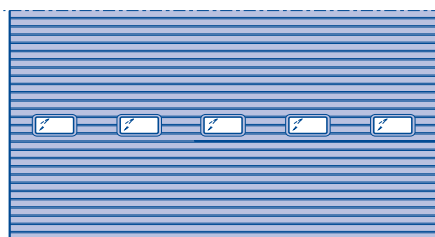
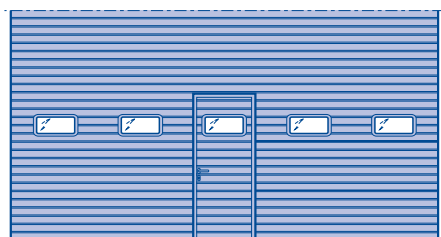
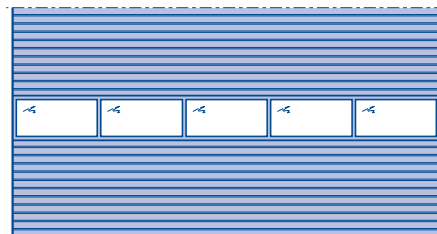
Sectional door SPU F42 with wicket door with trip-free threshold



Sectional door SPU F42, matching the wicket door versions



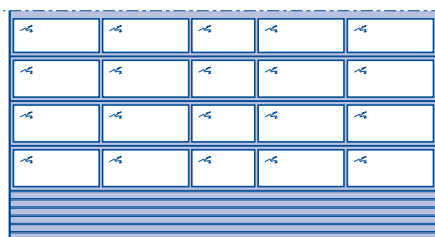
Sectional door SPU F42 with standard window division



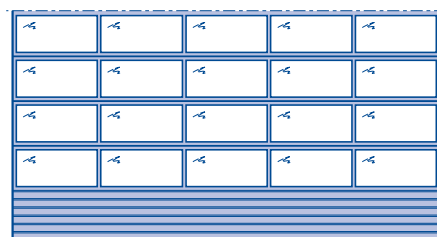
Sectional door APU F42 with wicket door with trip-free threshold



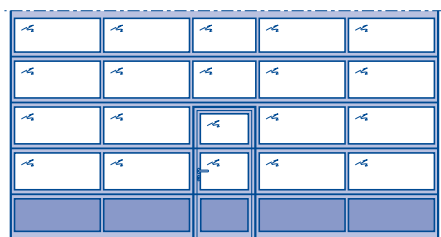
Sectional door APU F42, matching the wicket door versions



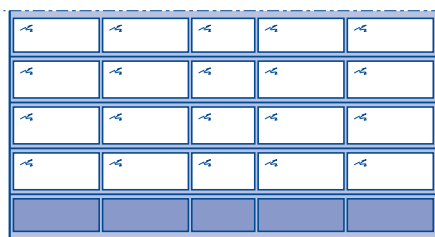
Sectional door APU F42 with standard window division



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



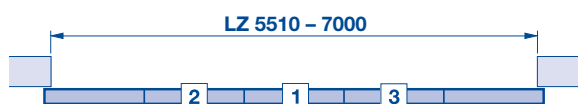
Sectional door ALR F42, matching the wicket door versions



Sectional door ALR F42 with standard window division



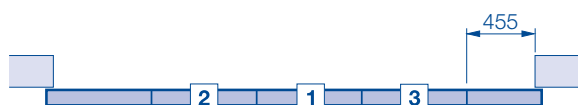
Arrangement of the wicket door



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 / sections per glazing frame

	Sectional door without wicket door																										
Glazing frame type N	1	2	3			4		5		6		7		8													
Glazing frame type B	1	2 → 3330					3				4 → 6670				5												
	Sectional door with wicket door																										
Glazing 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 and NT 80 Thermo

Possible handing options

Fitting in the opening

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

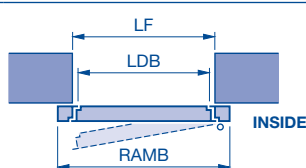


Fitting in the opening, opening inwards or outwards, RH or LH hinged



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 profile 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 with RC2 version not possible.

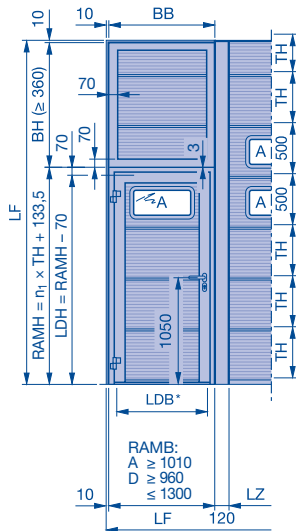
* See page 40
LF Structural opening
RAMB Overall frame width
RAMH Overall frame height

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

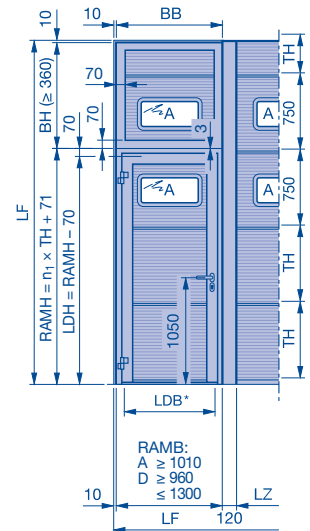
TH Door section height
SO Bottom section height
LZ Clear frame dimension
n₁ Number of door sections / glazing frames

with L-ribbed Micrograin infills

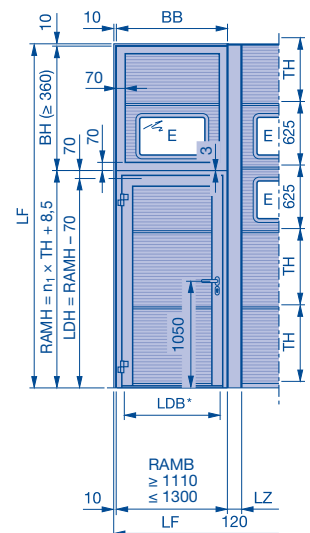
Compound glazing type A TH = 500



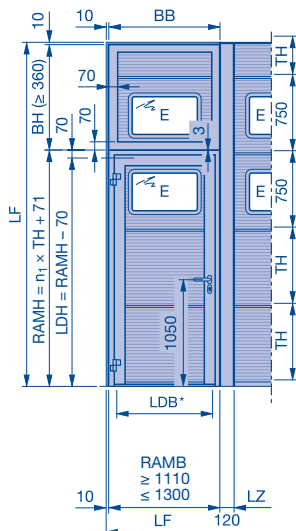
Compound glazing type A TH = 625 and 750



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



Compound glazing type E TH = 750



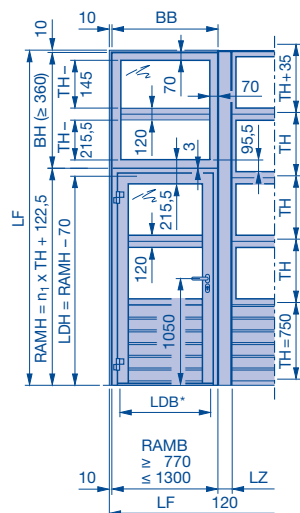
Notice:
Compound glazing with RC2 version not possible.

(Legend see page 41)

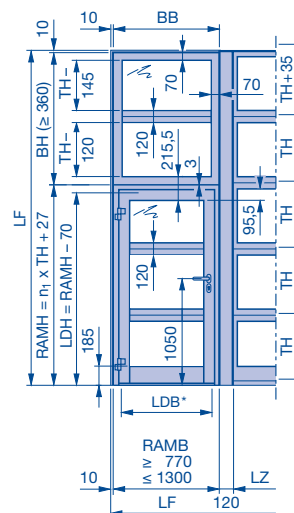
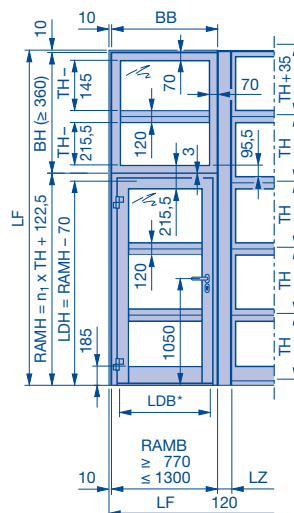
Side door NT 60

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

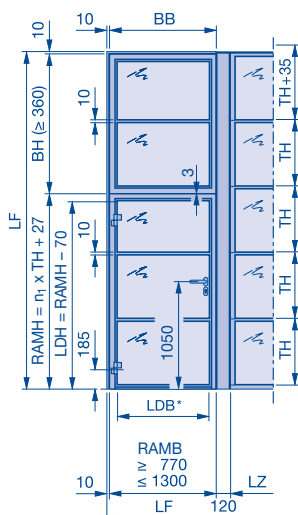
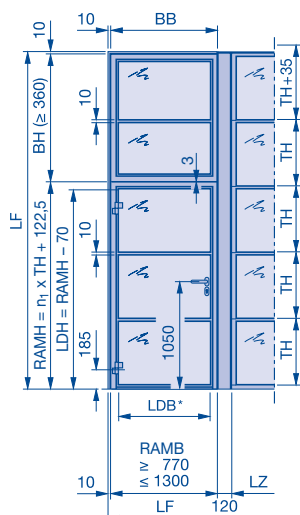
Side door NT 60 matching door type APU F42



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
PR Panel width
LDB Clear passage width
LDH Clear passage height

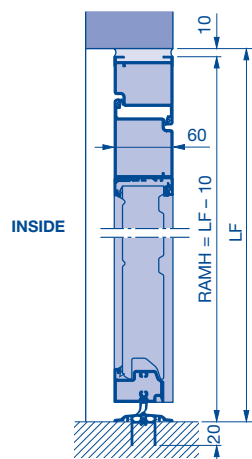
TH Door section height
SO Bottom section height
LZ Clear frame dimension
n1 Number of door sections / glazing frames

Side door NT 60

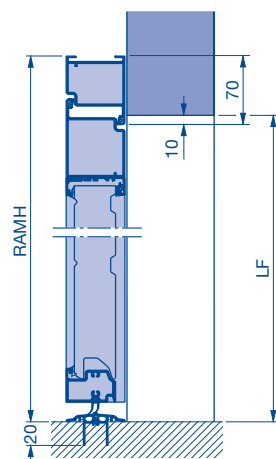
Possible fitting options

Possible fitting options

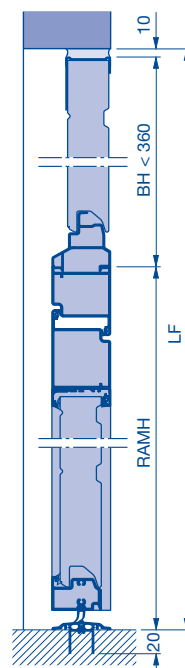
SPU in the opening
No window section,
no compound glazing



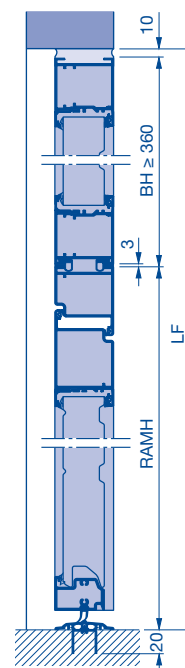
SPU behind the opening
No window section,
no compound glazing



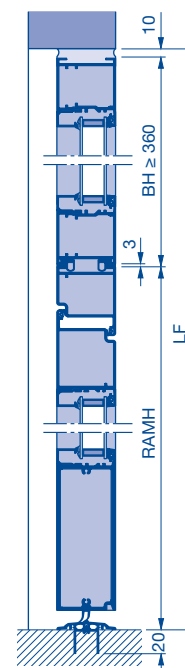
SPU with fascia panel in the opening



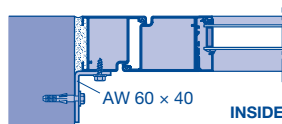
SPU, APU with fascia panel in the opening



ALR with fascia panel in the opening



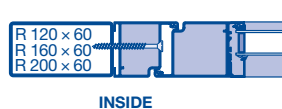
In the opening



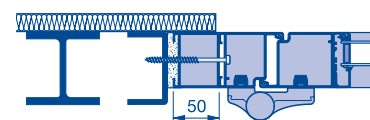
Plugs for metal frame



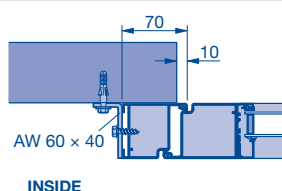
Tapping screw with countersunk head
B 6.3 x 80



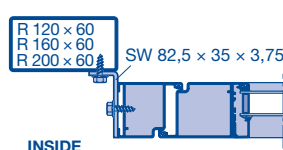
(Bottom illustration with 50 mm* extension profile for all-over insulation)
* Optionally with 25 mm



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

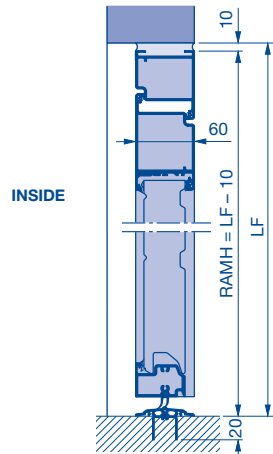
Possible fitting options

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.

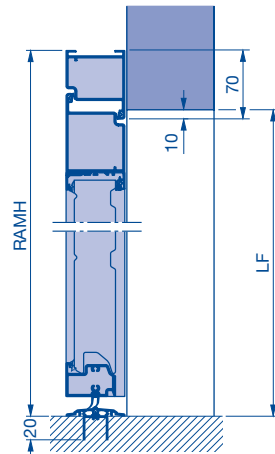
SPU in the opening

No window section,
no compound glazing

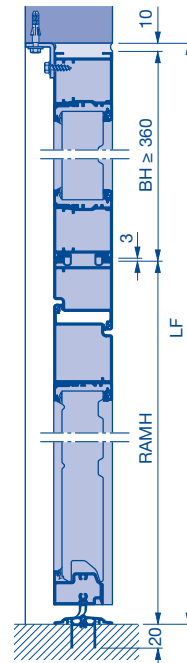


SPU behind the opening

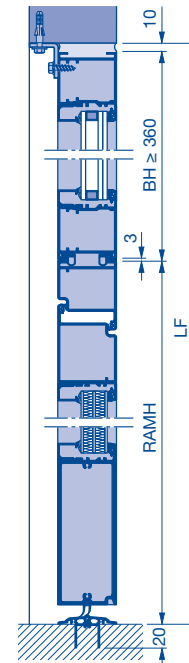
No window section,
no compound glazing



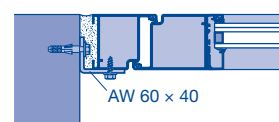
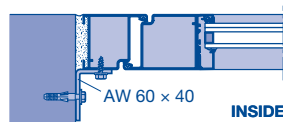
SPU, APU with fascia panel in the opening



ALR with fascia panel in the opening



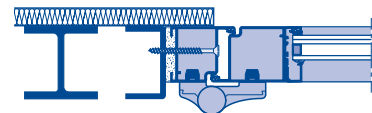
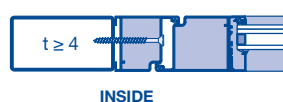
In the opening



Plugs for metal frame



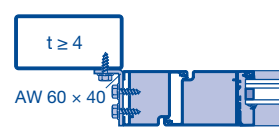
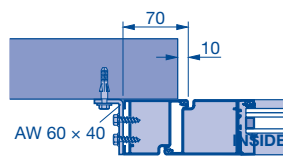
Tapping screw with countersunk head
B 6.3 × 80



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 with RC2 version not possible.

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

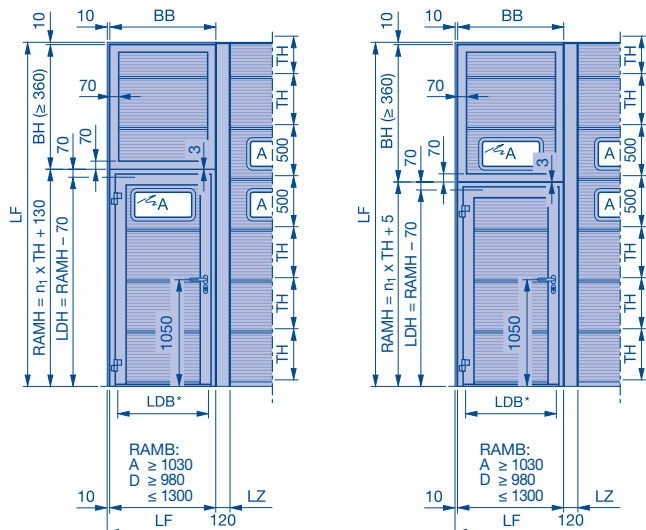
BH Panel height
PR Panel width
LDB Clear passage width
LDH Clear passage height

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

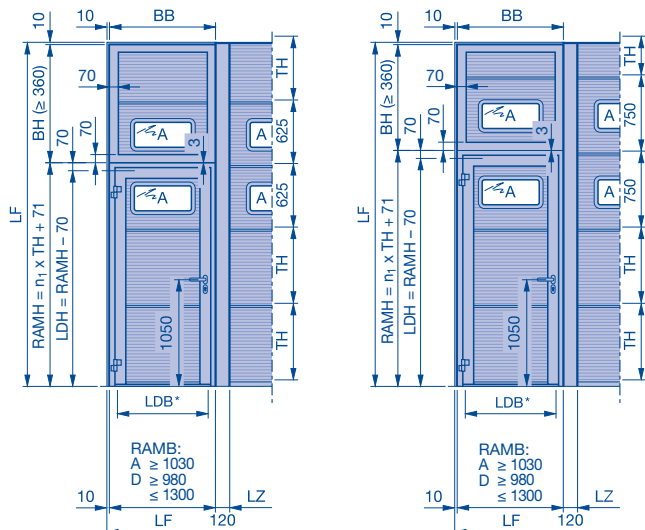
Side door NT 80 Thermo

with L-ribbed Micrograin infills

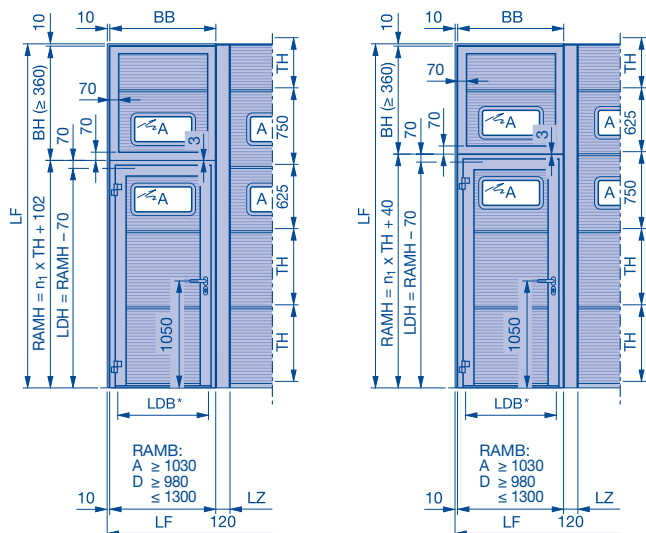
Compound glazing type A TH = 500



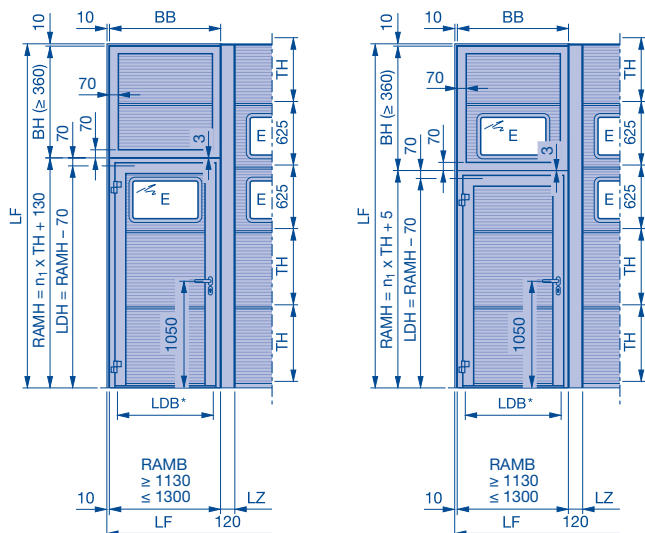
Compound glazing type A TH = 625 and 750



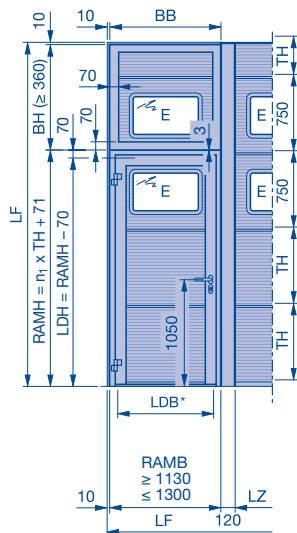
Compound glazing type A TH = 625 / 750 and 750 / 625



Compound glazing type E TH = 625



Compound glazing type E TH = 750



Notice:

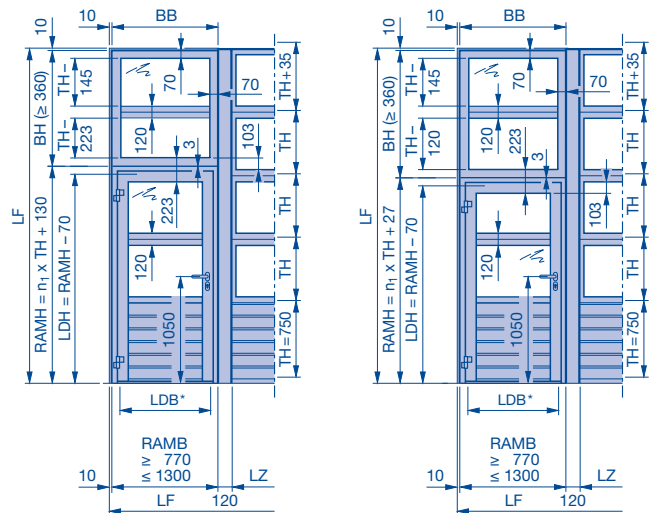
Compound glazing with RC2 version not possible.

(Legend see page 46)

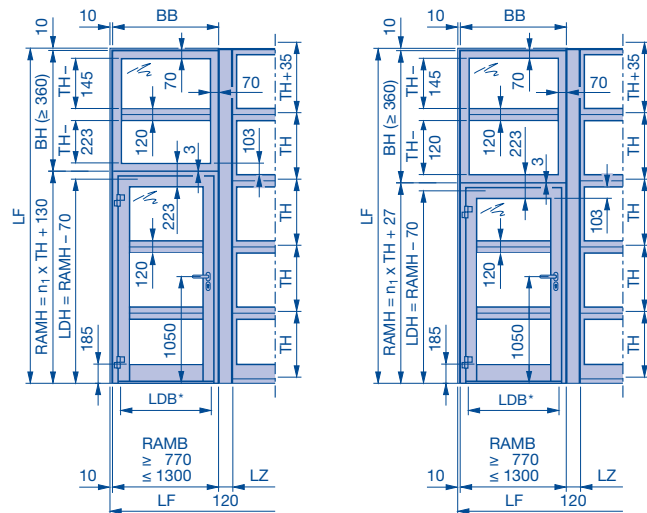
Side door NT 80 Thermo

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
PR 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 / glazing frames

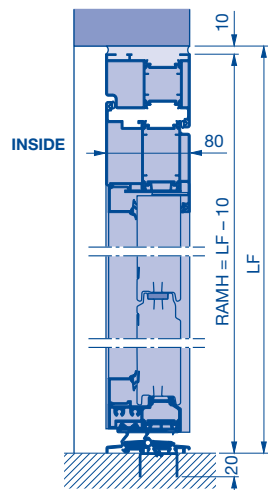
Side door NT 80 Thermo

Possible fitting options

Possible fitting options

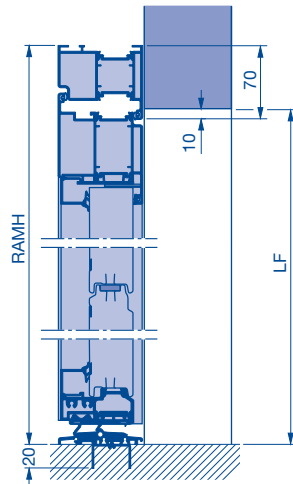
SPU in the opening

No window section,
no compound glazing

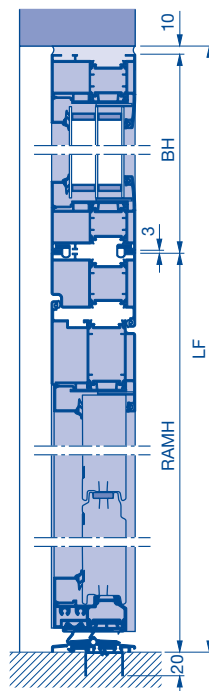


SPU behind the opening

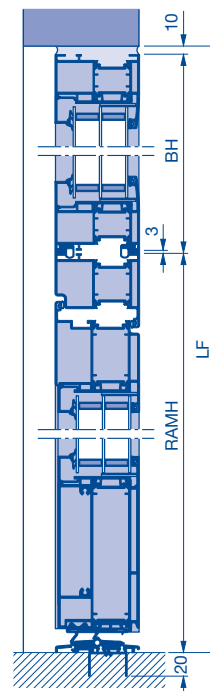
No window section,
no compound glazing



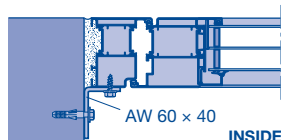
SPU, APU with fascia panel



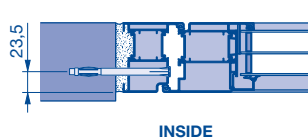
ALR with fascia panel



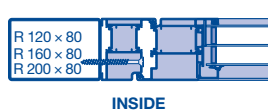
In the opening



Plugs for metal frame

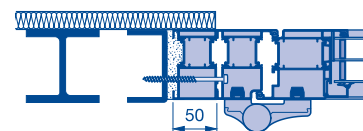


Tapping screw with countersunk head
B 6.3 x 80

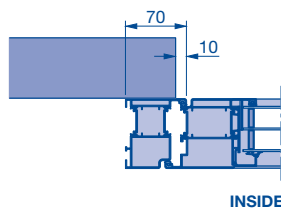


(Bottom illustration with 50 mm* extension profile for all-over insulation)

* 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

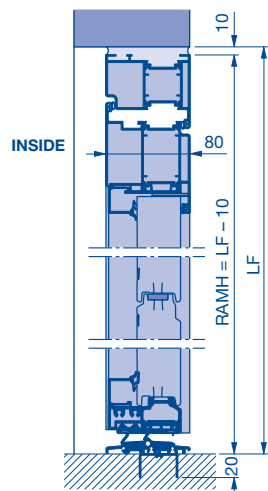
Possible fitting options

Notice:

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

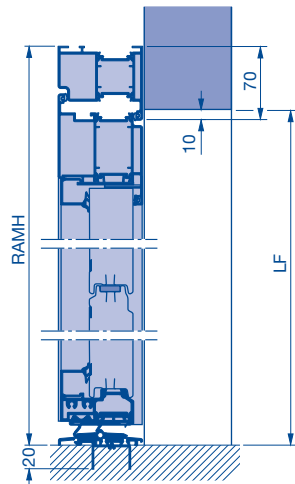
SPU in the opening

No window section,
no compound glazing

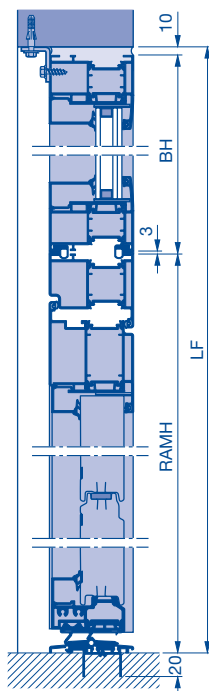


SPU behind the opening

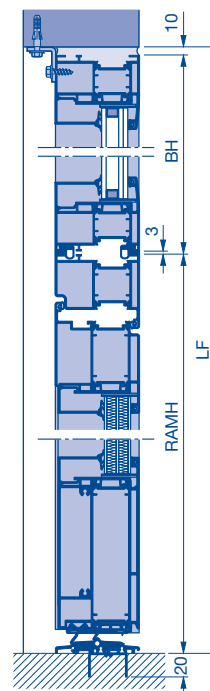
No window section,
no compound glazing



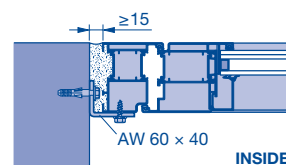
SPU, APU with fascia panel



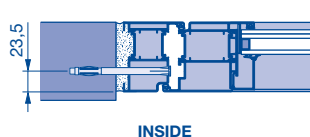
ALR with fascia panel



In the opening



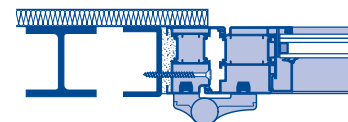
Plugs for metal frame



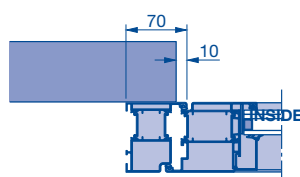
Tapping screw with countersunk head
B 6.3 x 80

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

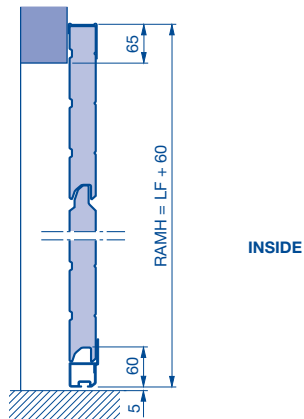
Fixed elements

Possible fitting options and fitting examples

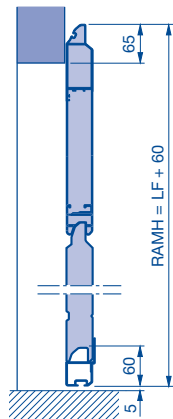
Possible fitting options

SPU F42 behind the opening

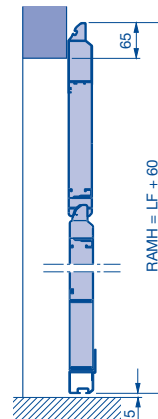
No window section, no compound glazing



APU F42 behind the opening

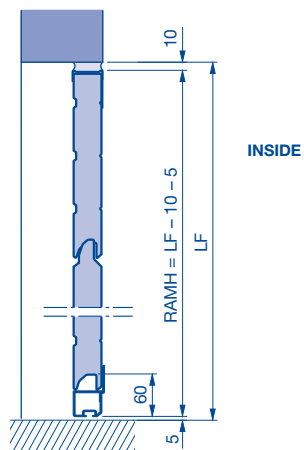


ALR F42, ALR F42 Thermo behind the opening

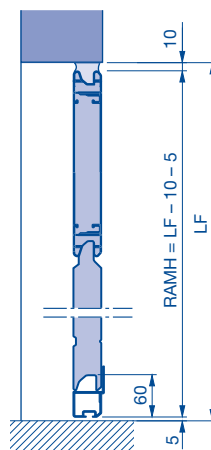


SPU F42 in the opening

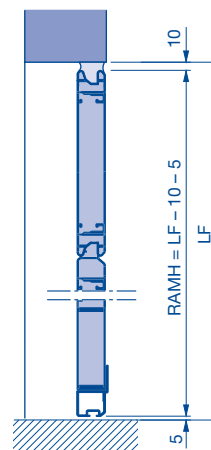
No window section, no compound glazing



APU F42 in the opening

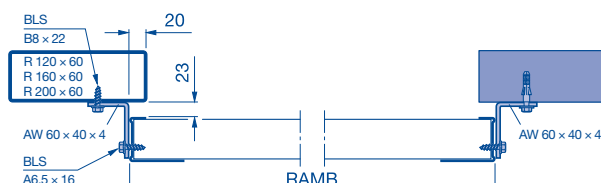
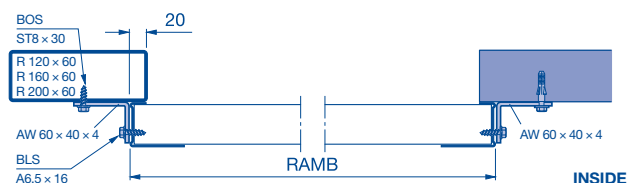


ALR F42, ALR F42 Thermo in the opening

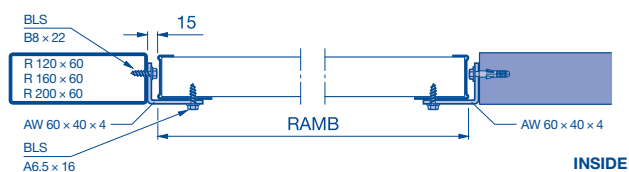


Fitting examples

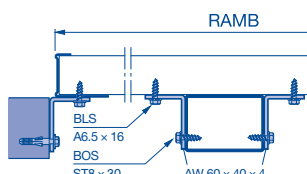
Behind the opening



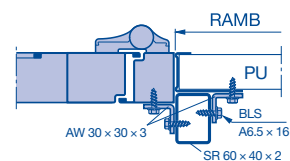
In the opening



In front of the opening



Side door



AW Aluminium angle
SR Support tube
AR Glazing frame

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 - 65	RM - 95	–
LZ > 5500				
Without wicket door	–	RM - 50	RM - 80	–
Wicket door with threshold rail	–	RM - 100	RM - 130	–
Wicket door without threshold rail	–	RM - 135	RM - 165	–

* 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 - 150	RM - 50	RM - 80	RM - 50
Wicket door with threshold rail	RM - 170	RM - 70	RM - 100	RM - 70
Wicket door without threshold rail ***	RM - 185	RM - 135	RM - 165	RM - 135

** Track applications NS and NK not possible.

*** For versions with real glass infill LZ > 4500

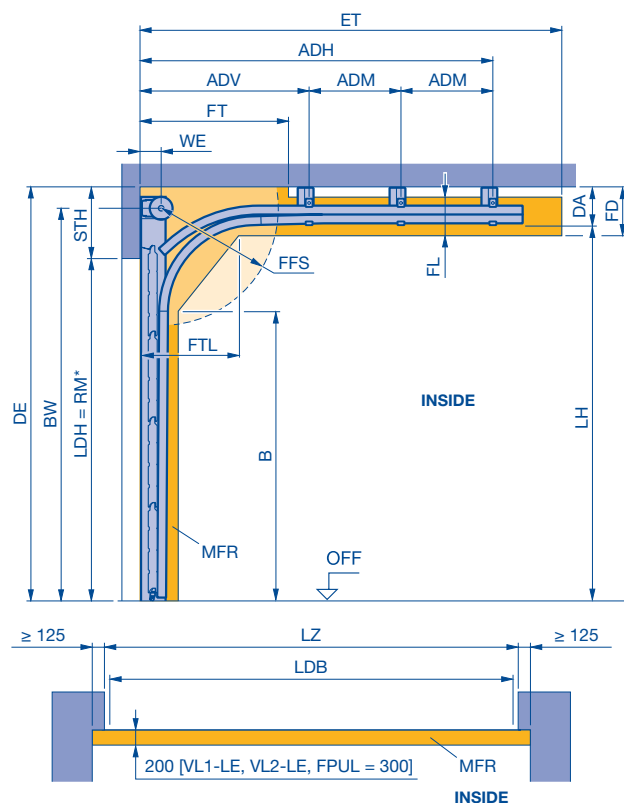
– Not possible
a° Inclination

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 door section in the double radius
ADM	Distance to central 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	OFF	Finished floor level (FFL)
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 compression 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 the 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:

- Observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 35 under all circumstances!
- 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	Headroom	Track size	Headroom	Track size	Headroom
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

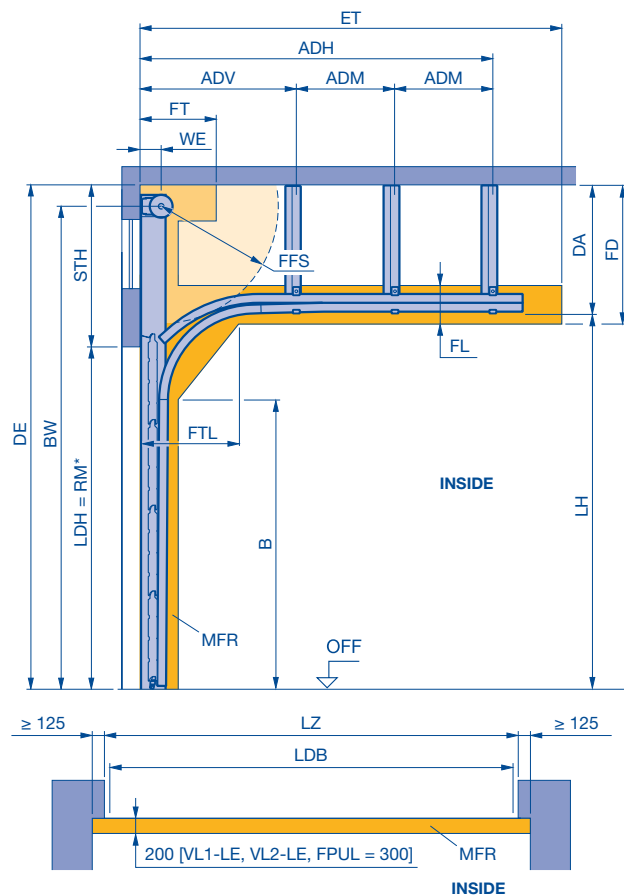
** Dimensions can be found in the product configurator.

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 door section in the double radius
ADM	Distance to central 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)	OFF	Finished floor level (FFL)
ET	Min. distance back	RM	Grid height
FD	Ceiling clearance	STH	Max. headroom (depends on order)
FFS	Spring compression 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 the 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:

- Observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 35 under all circumstances!
- 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:

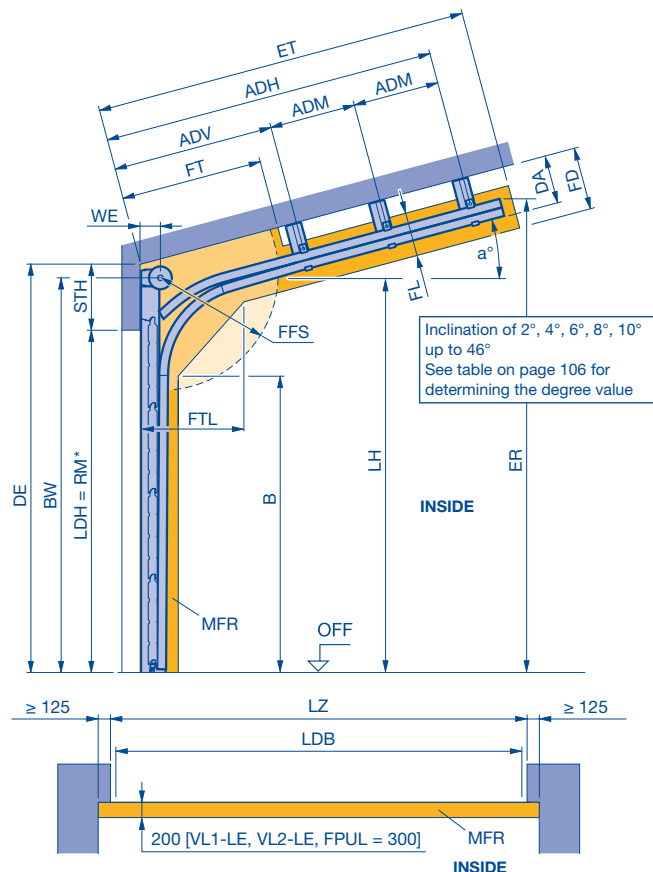
Observe clear passage height LDH, see page 52.

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 door section in the double radius
ADH	Distance to rear ceiling anchor	LDB	Clear passage width with ThermoFrame (see page 78)
ADM	Distance to central 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	OFF	Finished floor level (FFL)
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 compression 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 the min. sideroom, see page 78.

	STH	WE	BW	FT	FTL
ND 1, ≤ 30°	410	140	RM + 330	1250, < 16°	670, < 16°
ND 2, ≤ 30°	440	160	RM + 335	1000, ≥ 16°	500, ≥ 16°
ND 6, > 30°	490		RM + 385	885	500
ND 7, > 30°	510	160	RM + 405		
ND 3, ≤ 30°	550		RM + 415	1250, < 16°	670, < 16°
With double spring shaft	760	180	RM + 415	1000, ≥ 16°	500, ≥ 16°

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:

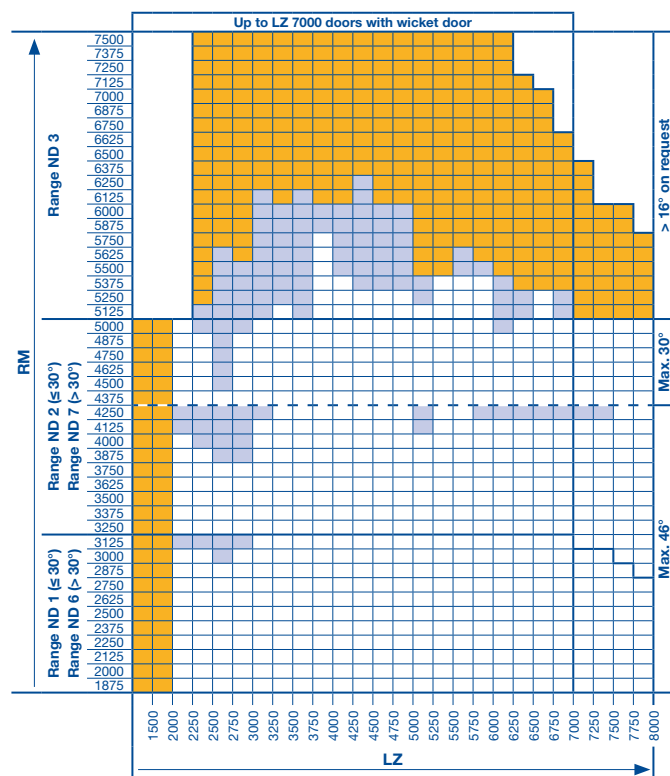
- Observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 35 under all circumstances!
- ALR F42 Vitraplan and ALR F42 Glazing on request.
- To determine the roof slope see page 106.
- Door types APU F42, ALR F42, APU F42 Thermo and ALR F42 Thermo with glazing A3, B3, M3, S3, U3, LB, P, XU and wicket door on request.
- Inclination on request for $RM \leq 4250$ and $> 30^\circ$ or $RM > 4250$ and $> 16^\circ$.

□ 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

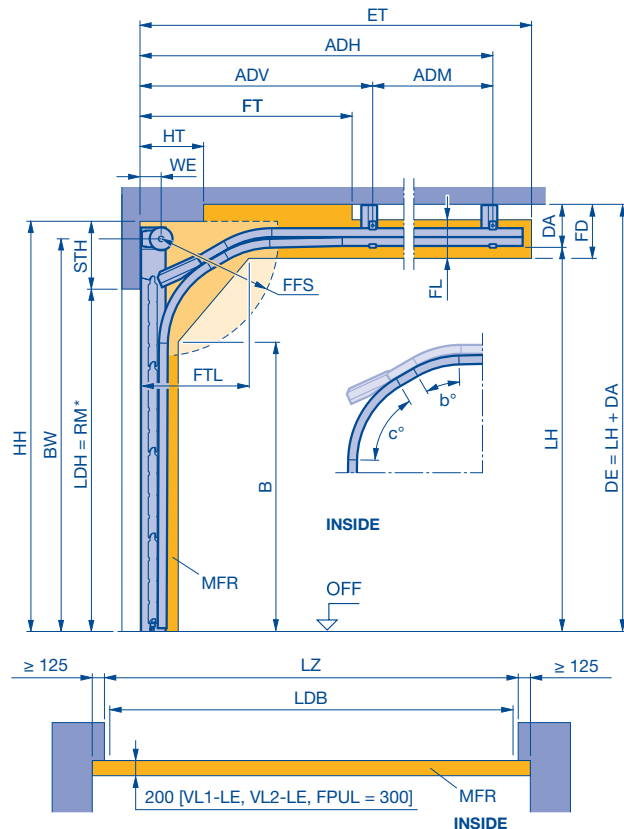


Track application: NS

Normal track application

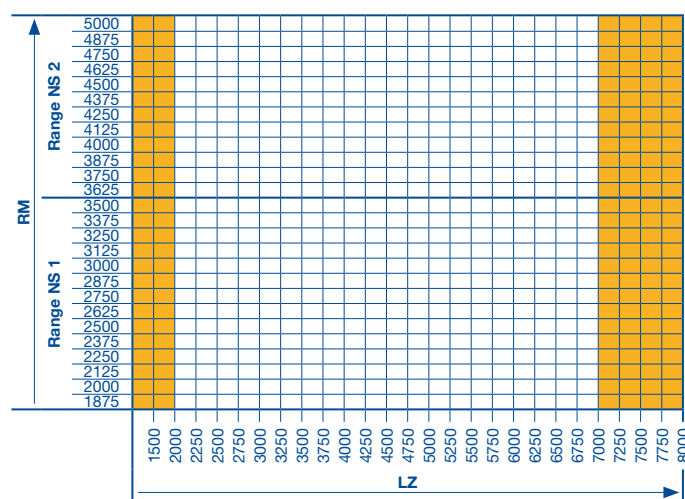
with double radius

Detailed technical data can be found in the product configurator.



Notice:

- Observe the permissible size ranges of the door types on pages 10–15 and 18–35 under all circumstances!
- ALR F42 Vitraplan and ALR F42 Glazing on request



b°/c°	Contour angle	HH	Obstruction height
ADH	Distance to rear ceiling anchor	HT	Obstruction depth
ADM	Distance to central 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
BW	Position of shaft support	LZ	Clear frame dimensions (from 1200)
DA	Min. distance to ceiling	MFR	Space for fitting the door
DE	Ceiling height	OFF	Finished floor level (FFL)
ET	Min. distance back on request	RM	Grid height
FD	Ceiling clearance	STH	Min. headroom (see page 53)
FFS	Spring compression clearance	WE	Shaft centre from lintel
FPUL	Spring buffers below the track		
FT	Clearance for door operation		
FTL	Clearance 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 the 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	185	RM + 310
NS 2	440	160		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.

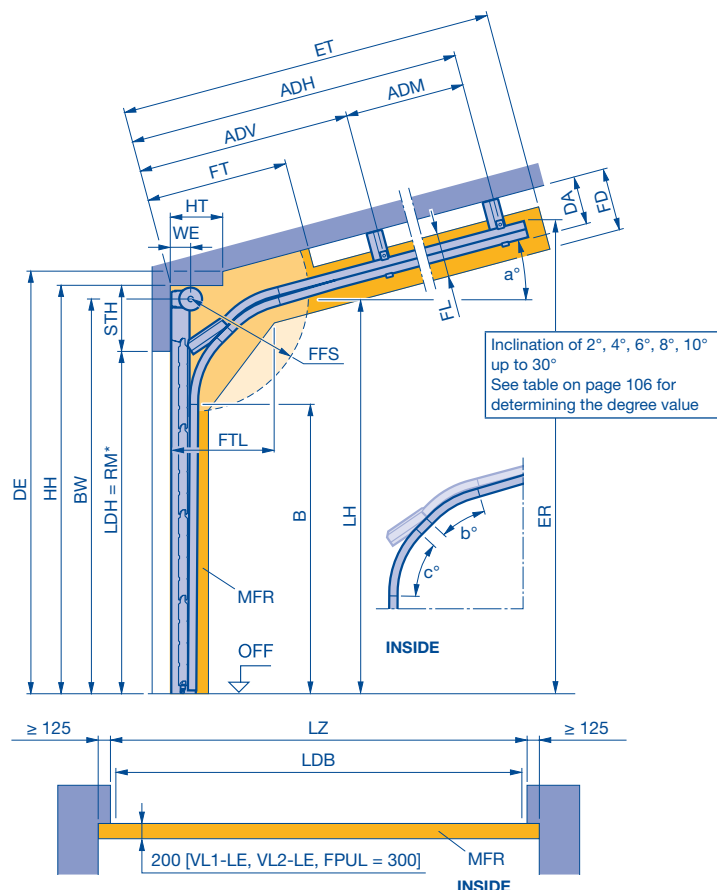
Dimensions in mm

Track application: NK

Normal track application

with double radius and inclination up to max. 30°

Detailed technical data can be found in the product configurator.



a°	Inclination	FT	Clearance for door operation
b°/c°	Contour angle	FTL	Clearance door section in the double radius
ADH	Distance to rear ceiling anchor	HH	Obstruction height
ADM	Distance to central 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	OFF	Finished floor level (FFL)
ET	Min. distance back	RM	Grid height
FD	Ceiling clearance	STH	Min. headroom
FFS	Spring compression clearance	WE	Shaft centre from lintel
FL	Track clearance		
FPUL	Spring buffers below the track		

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 the 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.
- Observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 35 under all circumstances!
- ALR F42 Vitraplan and ALR F42 Glazing on request.
- To determine the roof slope see page 106.

* Notice:

Observe clear passage height LDH, see page 52.

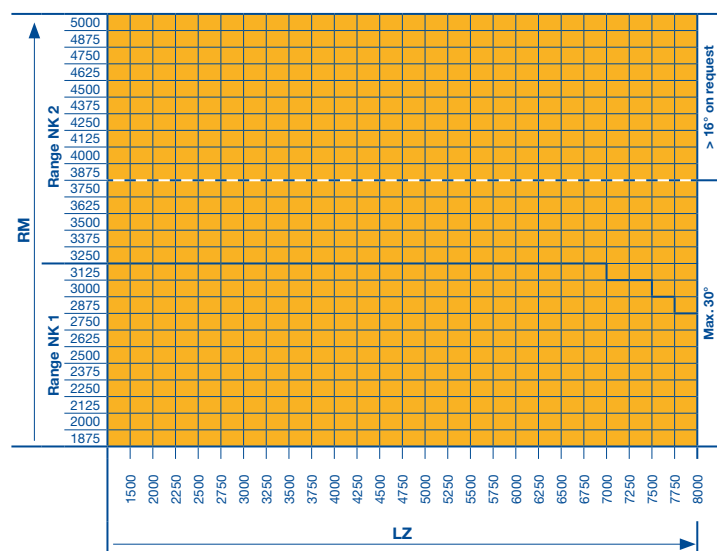
	STH	WE	DA	BW
NK 1	390	140	185	RM + 310
NK 2	440	160		RM + 335

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.

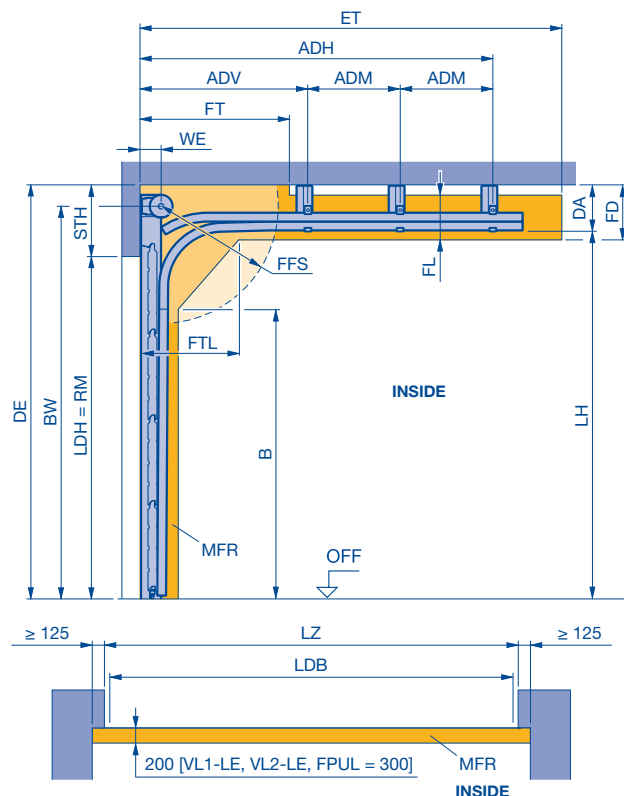
Dimensions in mm



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	L	Anchor length
ADM	Distance to central 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	Ceiling height	OFF	Finished floor level (FFL)
ET	Min. distance back	RM	Grid height
FD	Ceiling clearance	STH	Min. headroom
FFS	Spring compression clearance	WE	Shaft centre from lintel
FL	Track clearance	RM	Grid height
FPUL	Spring buffers below the track	STH	Min. headroom
FT	Clearance for door operation	WE	Shaft centre from lintel
FTL	Clearance 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 the 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.
- Observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 35 under all circumstances!
- ALR F42 Vitraplan and ALR F42 Glazing on request

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

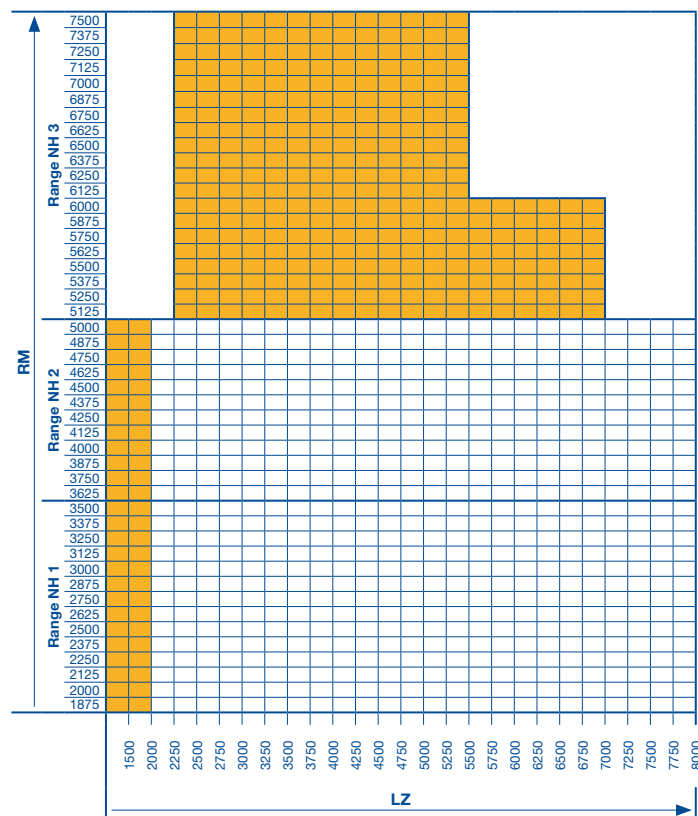
FT	DE	B	FFS	FD	FL	FTL	LH	ET
1150	STH + RM	LH - 366	Min. 90° (745)	DA + 65	250	645	Min. RM + 344 Max. RM + 490	**

** 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



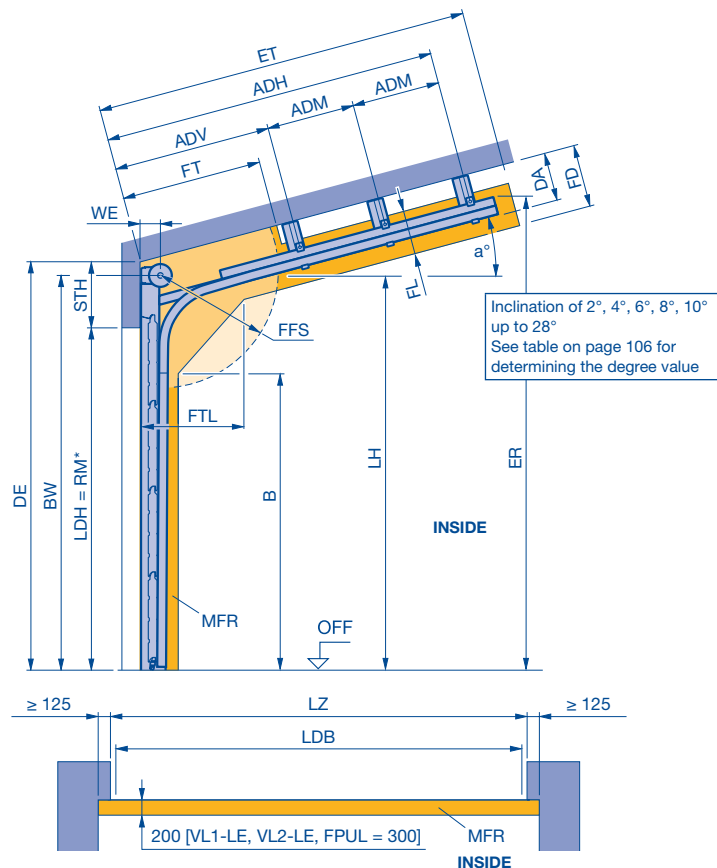
Track application: GD

Normal track application

With inclination up to max. 28

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 central ceiling anchor	FTL	Clearance 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	OFF	Finished floor level (FFL)
FD	Ceiling clearance	RM	Grid height
FFS	Spring compression clearance	STH	Min. headroom
FL	Track clearance	WE	Shaft centre from lintel

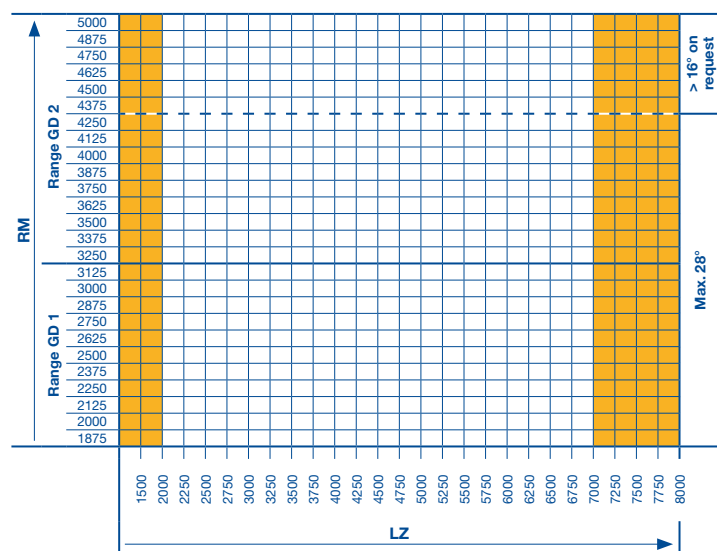
Door weights for roof loads:

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 the 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.
- Observe the permissible size ranges of the door types on pages 10–15 and 18–35 under all circumstances!
- ALR F42 Vitraplan and ALR F42 Glazing on request.
- To determine the roof slope see page 106.



	STH	WE	DA	BW	FT	DE
GD 1	569	140	**	LH + 140	2 × 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.

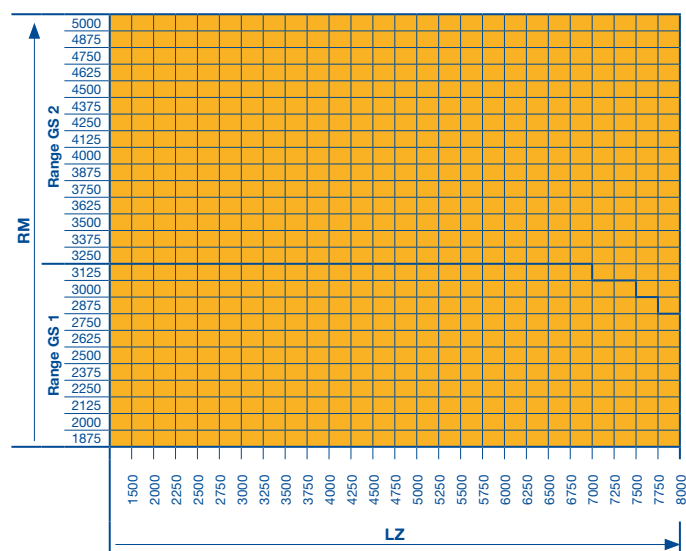
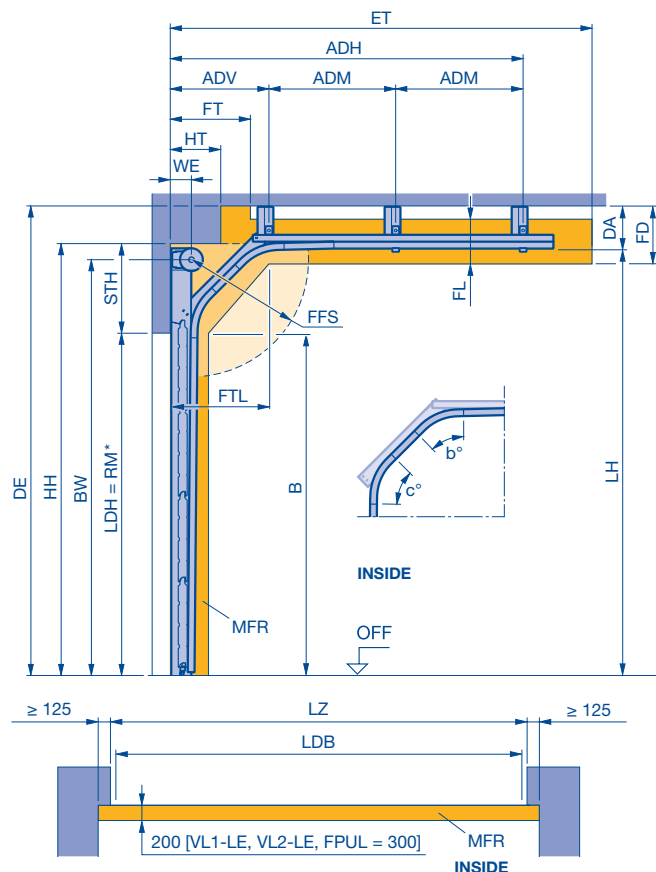
Dimensions in mm

Track application: GS

Normal track application

with double radius and minimum high-lift

Detailed technical data can be found in the product configurator.



b°/c°	Contour angle	FTL	Clearance door section in the double radius
ADH	Distance to rear ceiling anchor	HH	Obstruction height
ADM	Distance to central 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	OFF	Finished floor level (FFL)
FD	Ceiling clearance	RM	Grid height
FFS	Spring compression 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 the 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.
- Observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 35 under all circumstances!
- ALR F42 Vitraplan and ALR F42 Glazing on request.
- To determine the roof slope see page 106.

	STH	WE	DA	BW	FT	DE
GS 1	567	140	185	B + 510	2 × WE	LH + +183
GS 2	617	160		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

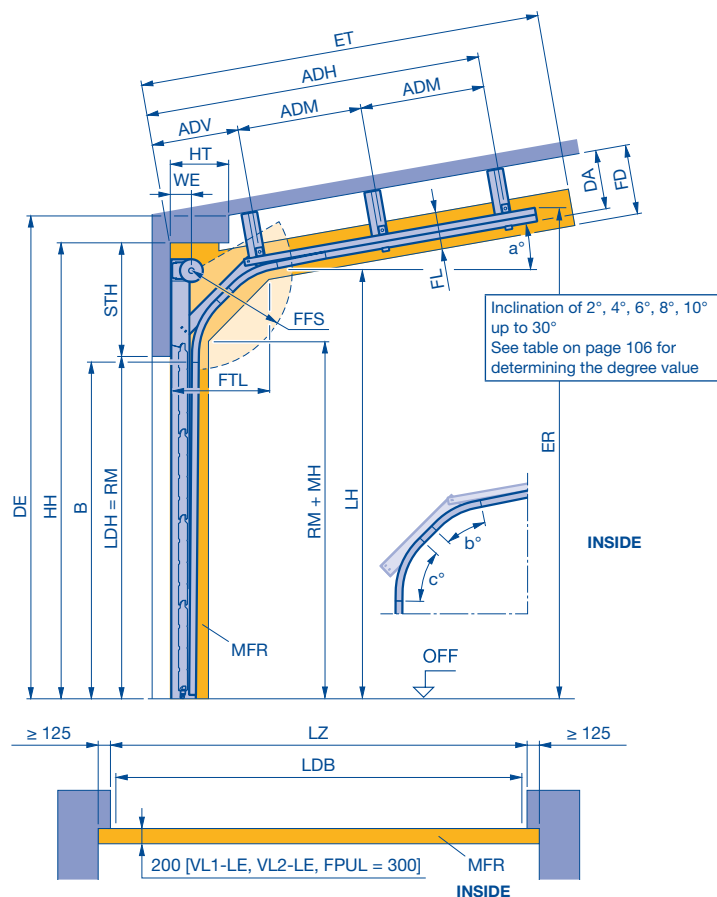
Track application: GK

Normal track application

with double radius and inclination up to max. 30°

Minimum high-lift

Detailed technical data can be found in the product configurator.



a°	Inclination	FPUL	Spring buffers below the track
b°/c°	Contour angle	FT	Clearance for door operation
ADH	Distance to rear ceiling anchor	FTL	Clearance door section in the double radius
ADM	Distance to central 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)
BW	Position of shaft support	LDH	Clear passage height
DA	Distance to ceiling on request	LH	Track height
DE	Ceiling height	LZ	Clear frame dimensions (from 1200)
ER	Top edge corner point	MFR	Space for fitting the door
ET	Min. distance back	OFF	Finished floor level (FFL)
FD	Ceiling clearance	RM	Grid height
FFS	Spring compression clearance	STH	Min. headroom
FL	Track clearance	WE	Shaft centre from lintel

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 the 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.
- Observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 35 under all circumstances!
- ALR F42 Vitraplan and ALR F42 Glazing on request.
- To determine the roof slope see page 106.

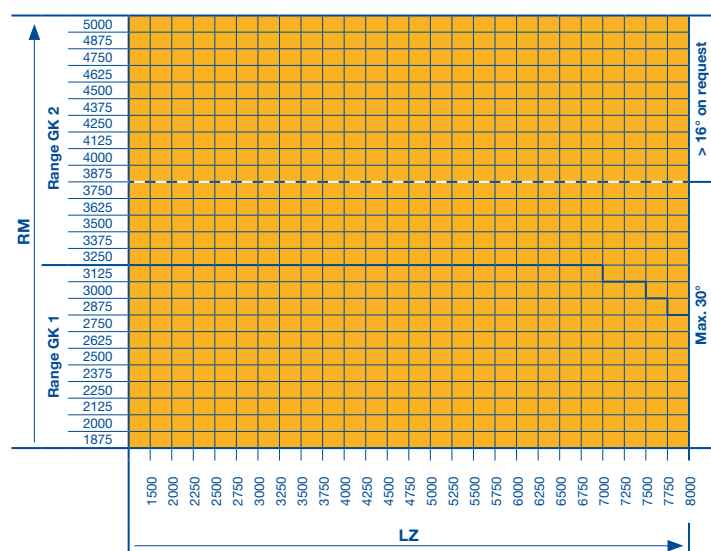
	STH	WE	DA	BW	FT	DE
GK 1	567	140	185	B + 510	2 × WE	LH ++ 183
GK 2	617	160		B + 535		

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.

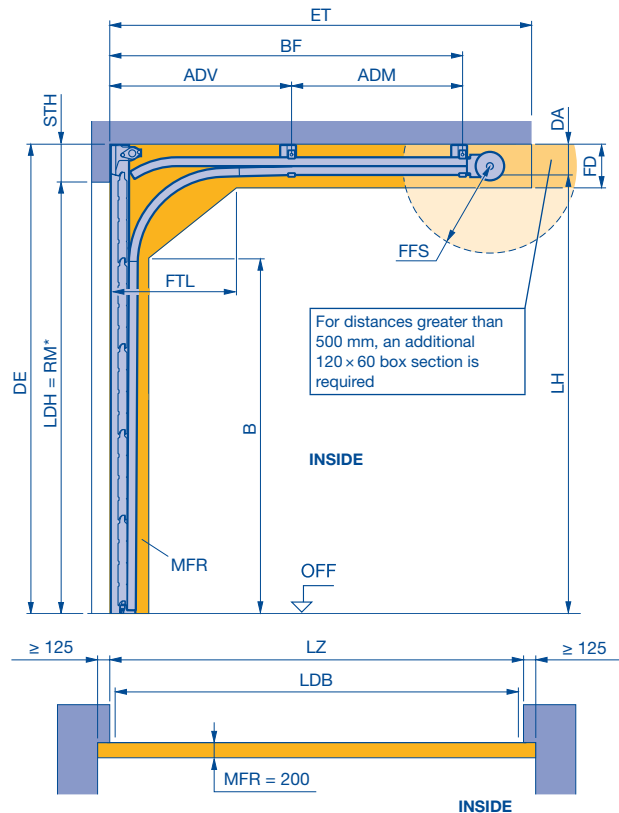
Dimensions in mm



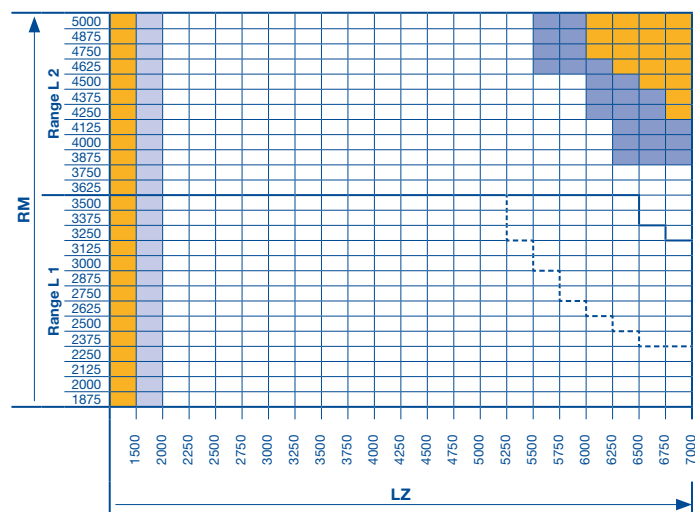
Track application: L

Low headroom track application

Detailed technical data can be found in the product configurator.



MFR = 260	Trap protection for swivel mechanism RM < 2800
MFR = 300	Leading photocell VL1/VL2



ADM	Distance to central 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	OFF	Finished floor level (FFL)
DE	Min. ceiling height	RM	Grid height
FD	Min. ceiling clearance	STH	Min. headroom
FFS	Spring compression clearance		
FTL	Clearance 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 the 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.
- Observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 35 under all circumstances!
- ALR F42 Vitraplan and ALR F42 Glazing on request

* Notice:

Observe clear passage height LDH, see page 52.

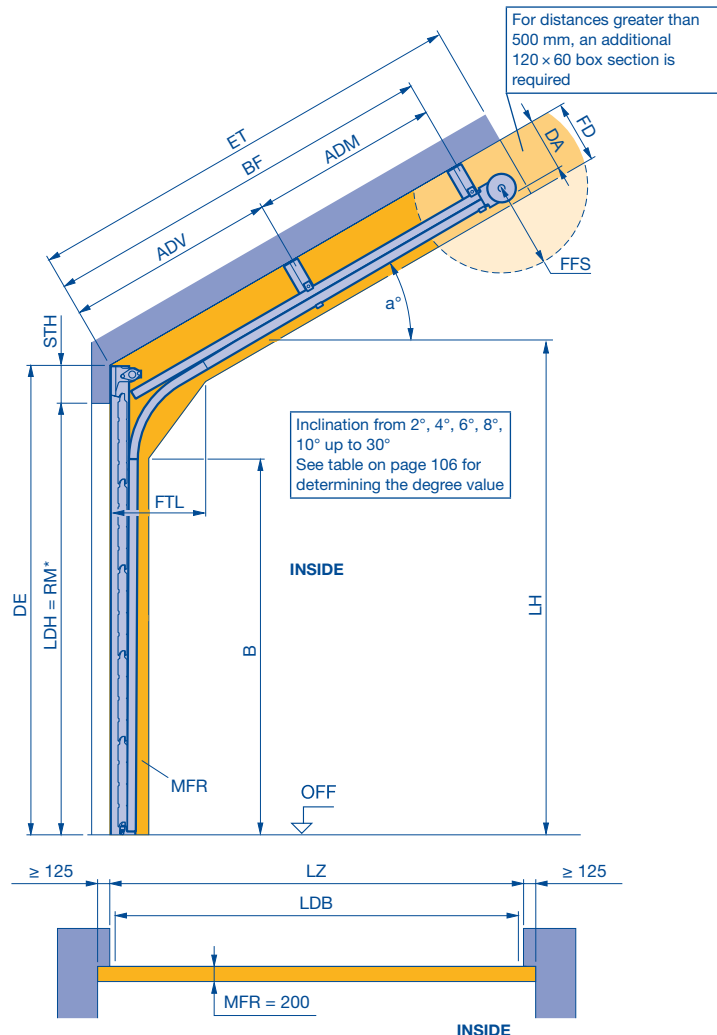
	All door types available in any version.
	All door types and versions on request.
	Door types APU F42, ALR F42, APU F42 Thermo, ALR F42 Thermo as well as versions with glazing A3, B3, M3, S3, U3, LB, P, XU and wicket door on request.
	Versions with glazing A3, B3, M3, S3, U3, LB, P, XU and/or wicket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

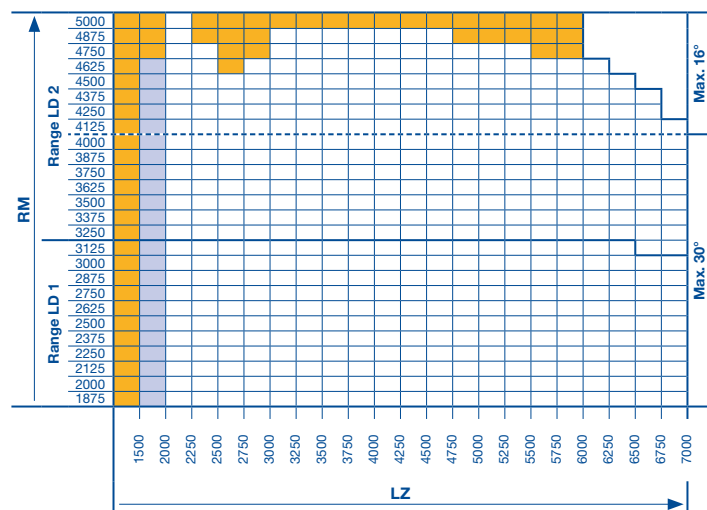
Track application: LD

Low headroom track application
with inclination up to max. 30

Detailed technical data can be found in the product configurator.



MFR = 260	Trap protection for swivel mechanism RM < 2800
MFR = 300	Leading photocell VL1/VL2



a°	Inclination	FTL	Clearance door section in the double radius
ADM	Distance to central 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	OFF	Finished floor level (FFL)
DE	Min. ceiling height	RM	Grid height
ET	Min. distance back	STH	Min. headroom
FD	Min. ceiling clearance		
FFS	Spring compression 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 the 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.
- Observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 35 under all circumstances!
- ALR F42 Vitraplan and ALR F42 Glazing on request.
- To determine the roof slope see page 106.
- 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.

* Notes:

- 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 × 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.

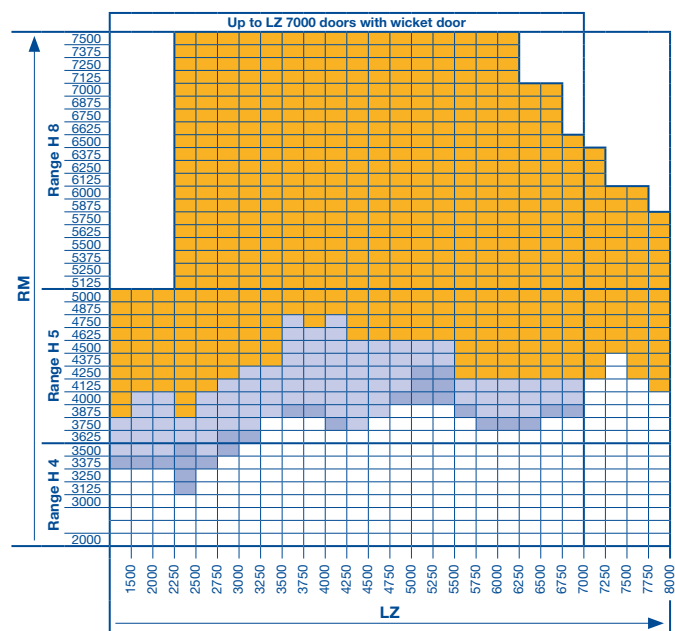
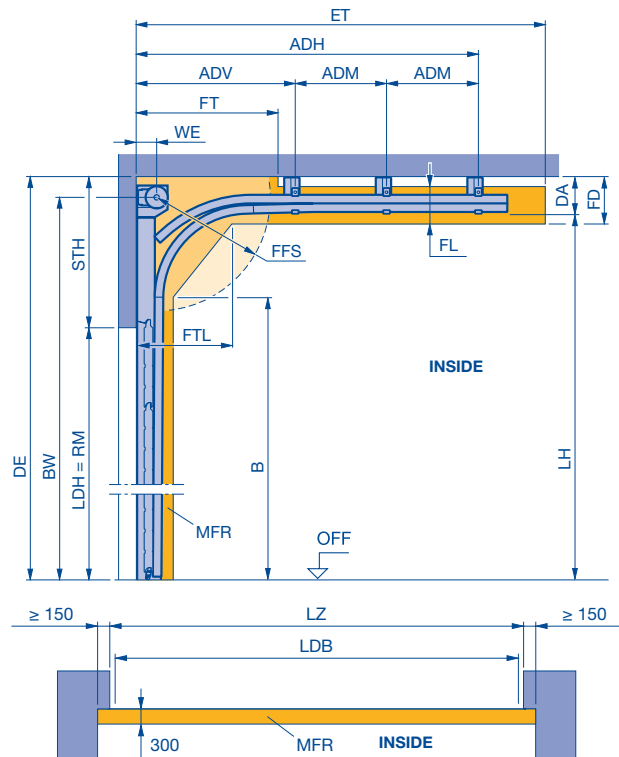
☐ Track limit

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 door section in the double radius
ADM	Distance to central 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	OFF	Finished floor level (FFL)
ET	Min. distance back	RM	Grid height
FD	Min. ceiling clearance	STH	Min. headroom
FFS	Spring compression 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:

- Observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 35 under all circumstances!
- ALR F42 Vitraplan and ALR F42 Glazing on request

Observe the 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

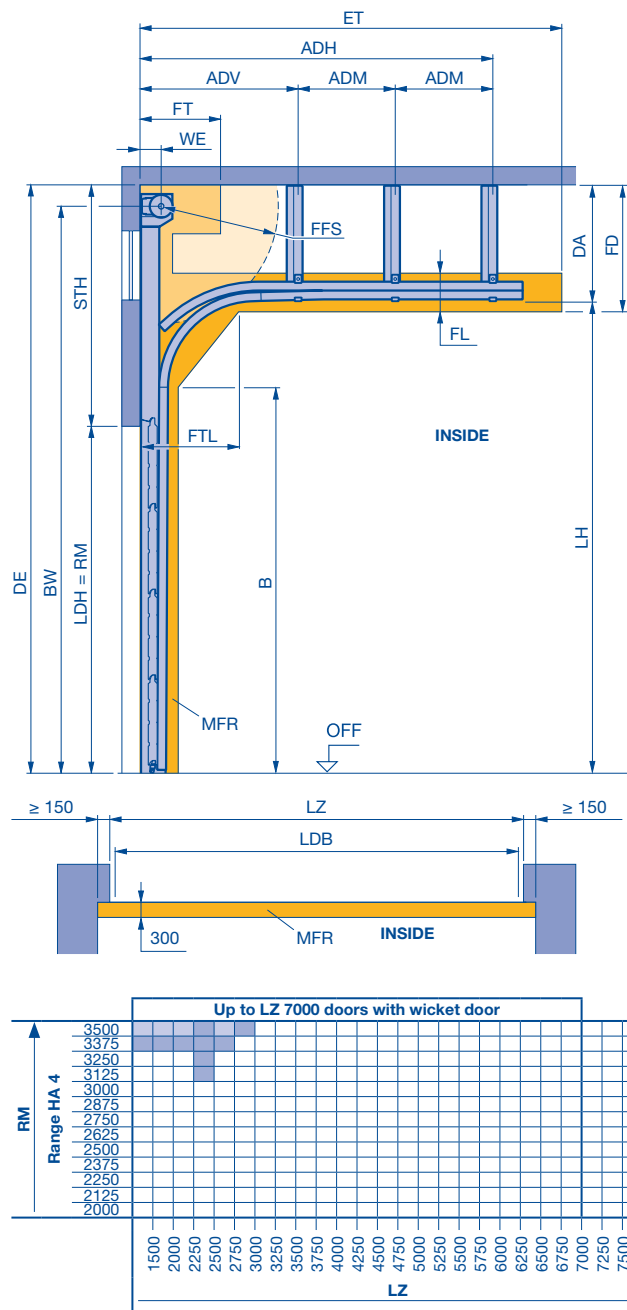
Table: track heights (LH)

Door height RM	Min. LH	Max. LH	H 5	Door height RM	Min. LH	Max. LH	H 8
5000	5490	8350		7500	8595	10250	
4875	5365	8225	H 4	7375	8470	10250	All door types and versions available on request
4750	5240	8100		7250	8345	10250	
4625	5115	7975		7125	8220	10250	
4500	4990	7850		7000	8095	10250	
4375	4865	7725		6875	7970	10250	
4250	4740	7600		6750	7845	10200	
4125	4615	7475		6625	7720	10075	
4000	4490	7235		6500	7595	9950	
3875	4365	6985		6375	7470	9825	
3750	4240	6735		6250	7345	9700	
3625	4115	6485		6125	7220	9575	
3500	3990	6235		6000	7095	9450	
3375	3865	5985		5875	6970	9325	
3250	3740	5735		5750	6845	9200	
3125	3615	5485		5625	6720	9075	
3000	3490	5235		5500	6595	8950	
2875	3365	4985		5375	6470	8825	
2750	3240	4735		5250	6345	8700	
2625	3115	4485		5125	6220	8575	
2500	2990	4235					
2375	2865	3985					
2250	2740	3735					
2125	2615	3485					
2000	2490	3235					

Track application: HA

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

Detailed technical data can be found in the product configurator.



ADH	Distance to rear ceiling anchor	FTL	Clearance door section in the double radius
ADM	Distance to central 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	OFF	Finished floor level (FFL)
ET	Min. distance back	RM	Grid height
FD	Ceiling clearance	STH	Min. headroom
FFS	Spring compression 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 the 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:

- Observe the permissible size ranges of the door types on pages 10 - 15 and 18 - 35 under all circumstances!
- 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

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

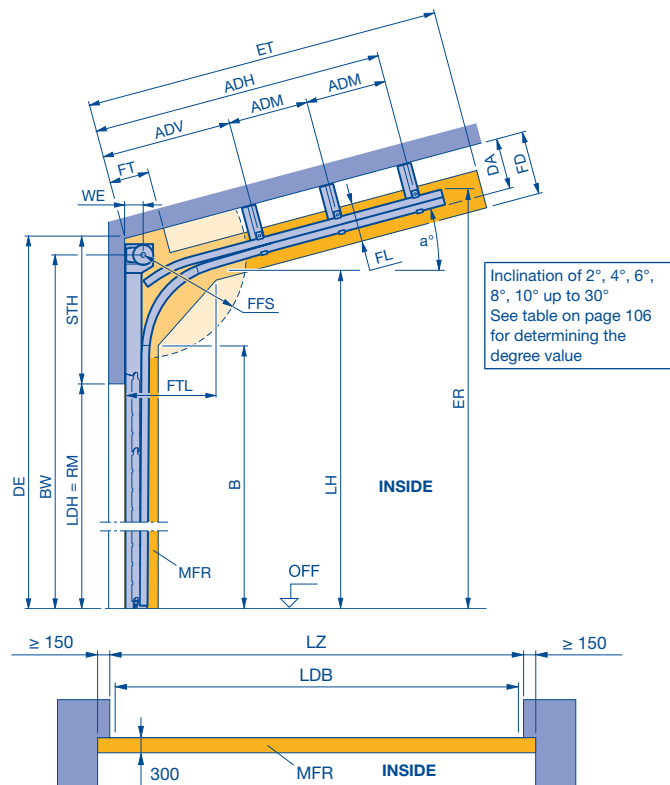
* Simplified calculation

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 door section in the double radius
ADM	Distance to central 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
ET	Track height (depth and height)	OFF	Finished floor level (FFL)
FD	Min. distance back	RM	Grid height
FFS	Ceiling clearance	STH	Min. headroom
FL	Spring compression 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:

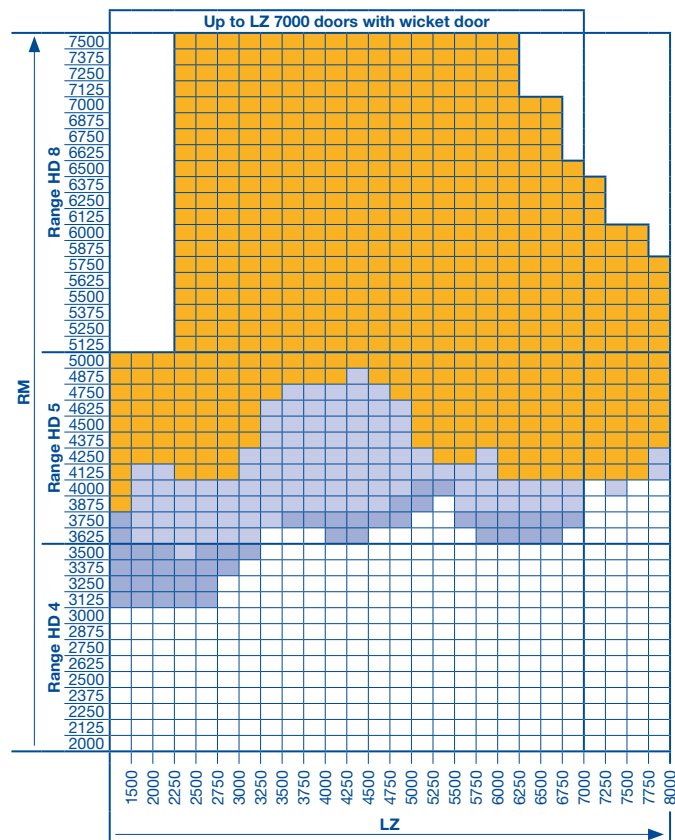
- The validity tables with the size range shown are based on the standard door type version (see product description). In case of deviations, the valid size ranges in the product configurator must be taken into account.
- The clearance required for fitting the door must be free of supply lines, heater 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.
- Observe the permissible size ranges of the door types on pages 10–15 and 18–35 under all circumstances!
- ALR F42 Vitraplan and ALR F42 Glazing on request.
- To determine the roof slope see page 106.
- Inclination > 10° to 30° on request.

Observe the 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 × WE	250	650, < 16° 550, ≥ 16°	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.

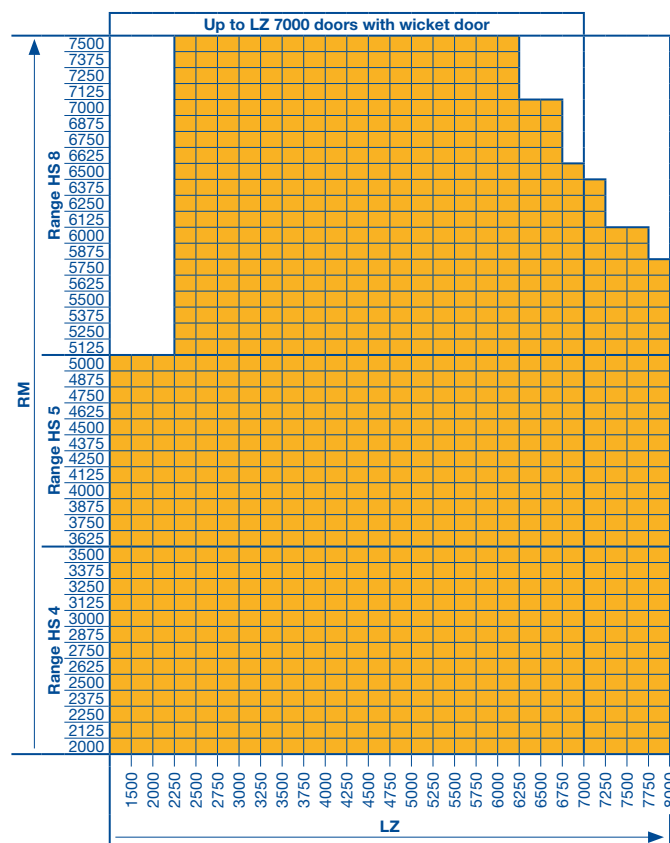
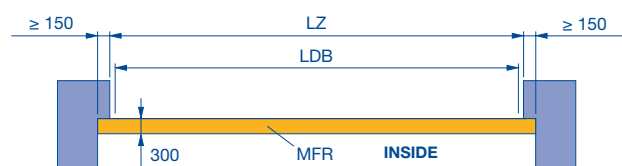
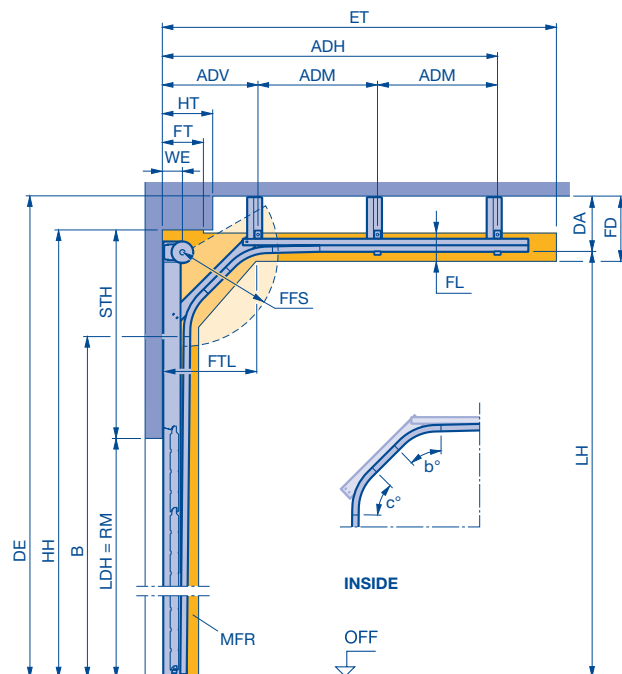
Dimensions in mm

Track application: HS

High-lift track application

with double radius

Detailed technical data can be found in the product configurator.



b°/c°	Contour angle	FTL	Clearance door section in the double radius
ADH	Distance to rear ceiling anchor	FFW	Spring shaft clearance
ADM	Distance to central 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
ET	Distance back	LZ	Clear frame dimensions (from 1200)
FD	Ceiling clearance	MFR	Space for fitting the door
FFS	Spring compression clearance	OFF	Finished floor level (FFL)
FL	Track clearance	RM	Grid height
FT	Clearance for door operation, on request	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 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:

- Observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 35 under all circumstances!
- ALR F42 Vitraplan and ALR F42 Glazing on request

Observe the min. sideroom, see page 78.

	STH	WE	DA	DE	B
HS 4	785	160	**	LH + 183	**
HS 5	812	180			
HS 8	852	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.

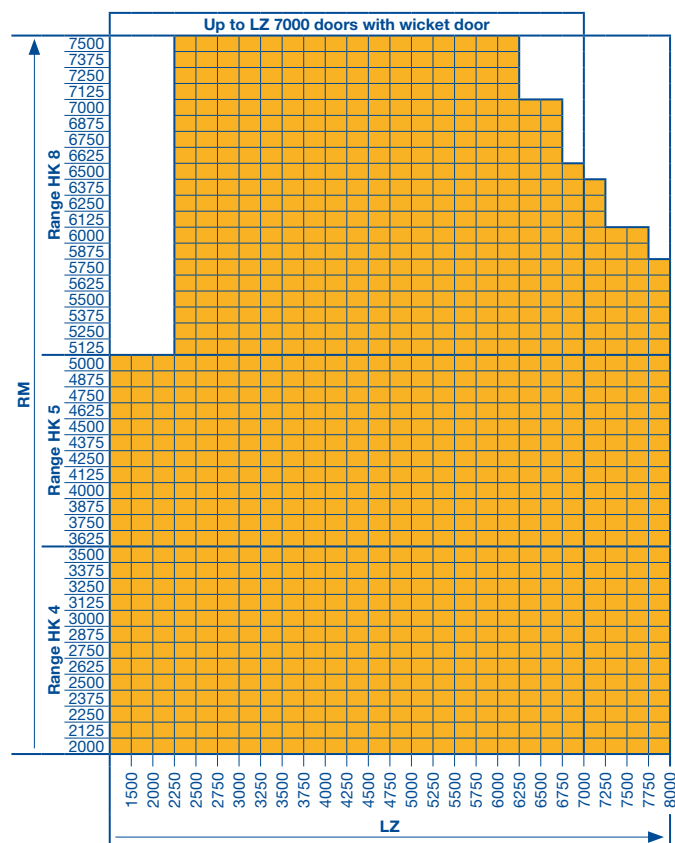
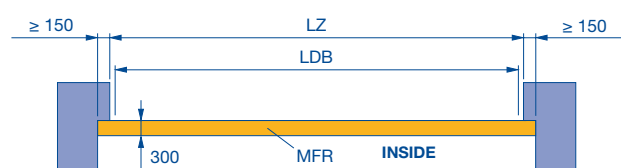
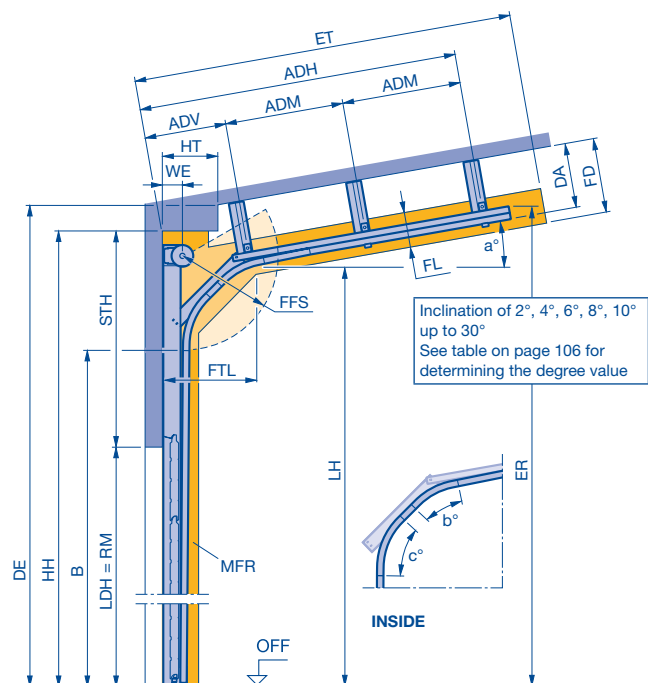
Dimensions in mm

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 door section in the double radius
b°/c°	Contour angle	FFW	Spring shaft clearance
ADH	Distance to rear ceiling anchor	HH	Obstruction height
ADM	Distance to central 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	Track height (depth and height)	OFF	Finished floor level (FFL)
FFS	Spring compression clearance	RM	Grid height
FL	Track clearance	STH	Min. headroom
FT	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:

- Observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 35 under all circumstances!
- ALR F42 Vitraplan and ALR F42 Glazing on request.
- To determine the roof slope see page 106.
- Roof slope > 10° to 30° on request.

Observe the min. sideroom, see page 78.

	STH	WE	DA	DE	B
HK 4	785	160	**	LH + 183	**
HK 5	812	180			
HK 8	852	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.

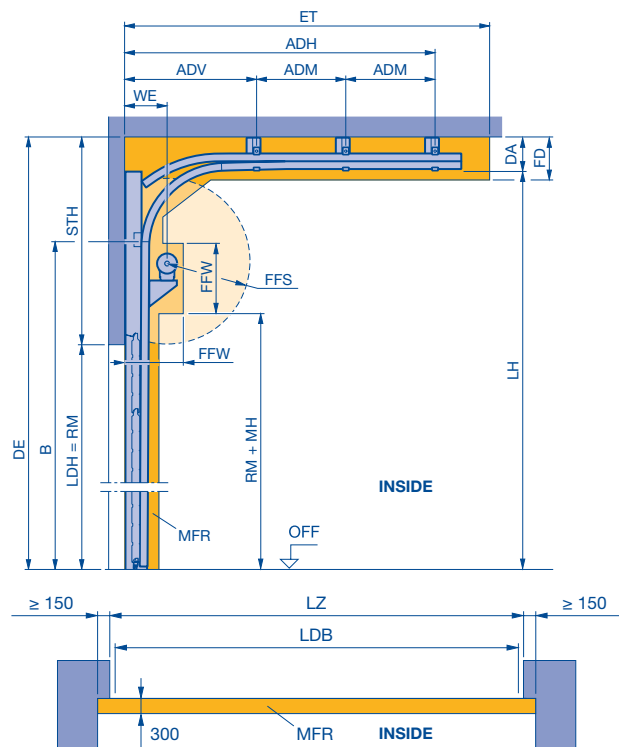
All door types and versions on request.

Dimensions in mm

Track application: HU

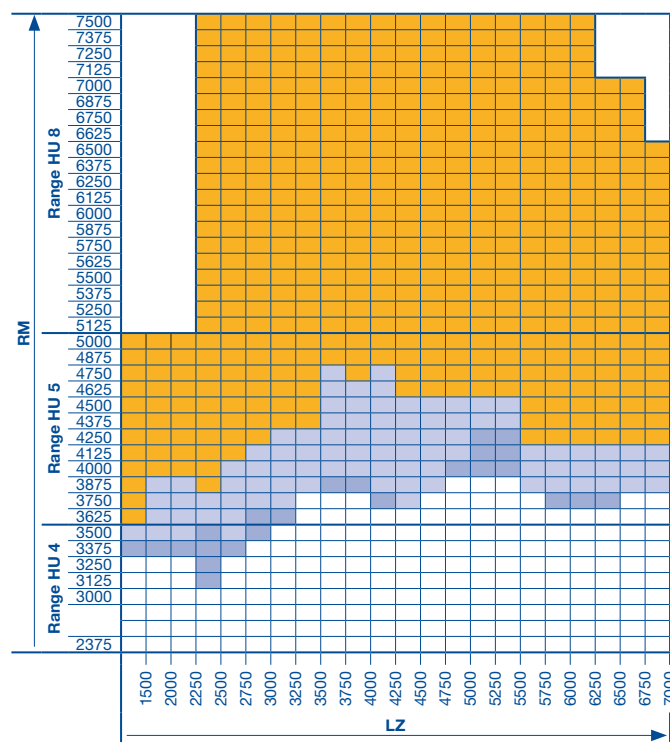
High-lift track application with low-mounted torsion spring shaft

Detailed technical data can be found in the product configurator.



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

* Simplified calculation.



ADH	Distance to rear ceiling anchor	LDB	Clear passage width with ThermoFrame (see page 78)
ADM	Distance to central 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	OFF	Finished floor level (FFL)
FD	Min. ceiling clearance	RM	Grid height
FFS	Spring compression 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 the min. sideroom, see page 78.

	STH	WE	DA	FFW
HU 4	LH - RM + 190	315	190	460 x 850
HU 5		335		500 x 850
HU 8		375		580 x 850

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

Table: track heights (LH)

Door height RM	Min. LH	Max. LH	Door height RM	Min. LH	Max. LH
5000	6560	8350	7500	9060	10040
4875	6435	8225	7375	8935	10040
4750	6310	8100	7250	8810	10040
4625	6185	7975	7125	8685	10040
4500	6060	7850	7000	8560	10040
4375	5935	7725	6875	8435	10040
4250	5810	7600	6750	8310	10040
4125	5685	7475	6625	8185	10040
4000	5560	7235	6500	8060	9950
3875	5435	6985	6375	7935	9825
3750	5310	6735	6250	7810	9700
3625	5185	6485	6125	7685	9575
3500	5060	6235	6000	7560	9450
3375	4935	5985	5875	7435	9325
3250	4810	5735	5750	7310	9200
3125	4685	5485	5625	7185	9075
3000	4560	5235	5500	7060	8950
2875	4435	4985	5375	6935	8825
2750	4310	4735	5250	6810	8700
2625	4185	4485	5125	6685	8575
2500	4060	4235			
2375	3935	3985			

Notices:

- Observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 35 under all circumstances!
- 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.

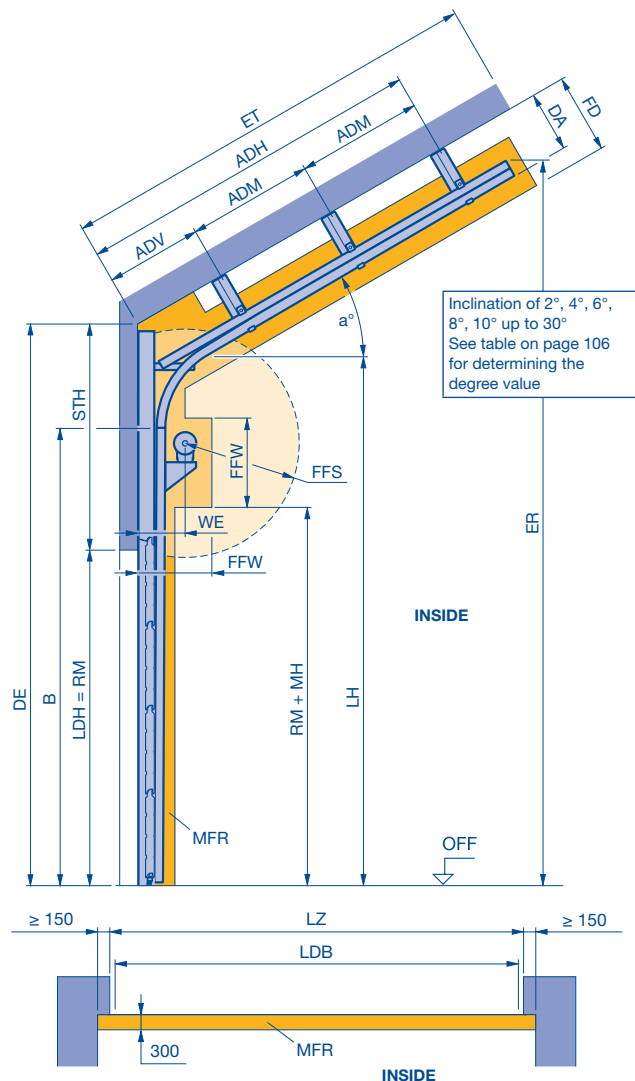
Dimensions in mm

Track application: 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	LDB	Clear passage width with ThermoFrame (see page 78)
ADH	Distance to rear ceiling anchor	LDH	Clear passage height
ADM	Distance to central ceiling anchor	LH	Track height
ADV	Distance to front ceiling anchor	LZ	Clear frame dimensions (from 1200)
B	Start of double radius	MFR	Space for fitting the door
DA	Distance to ceiling on request	MH	Fitting height
DE	Min. ceiling height	OFF	Finished floor level (FFL)
ER	Top edge corner point	RM	Grid height
	Track height (depth and height)	STH	Min. headroom
ET	Min. distance back	WE	Shaft centre from lintel
FD	Ceiling clearance		
FFS	Spring compression clearance		
FFW	Spring shaft clearance		

Please note:

Select required track height according to the door height in the table on page 69.

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:

- Observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 35 under all circumstances!
- ALR F42 Vitraplan and ALR F42 Glazing on request.
- To determine the roof slope see page 106.
- Inclination > 10° to 30° on request.

Observe the min. sideroom, see page 78.

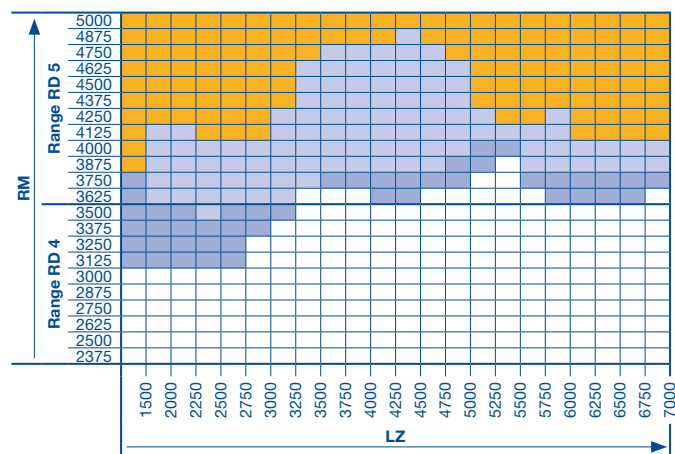
	WE	FFW	STH	DA	DE
RD 4	315	460 × 850	1750	**	STH + RM
RD 5	335	500 × 850			

B	FFS	FD	ET	ER	MH
LH-513	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

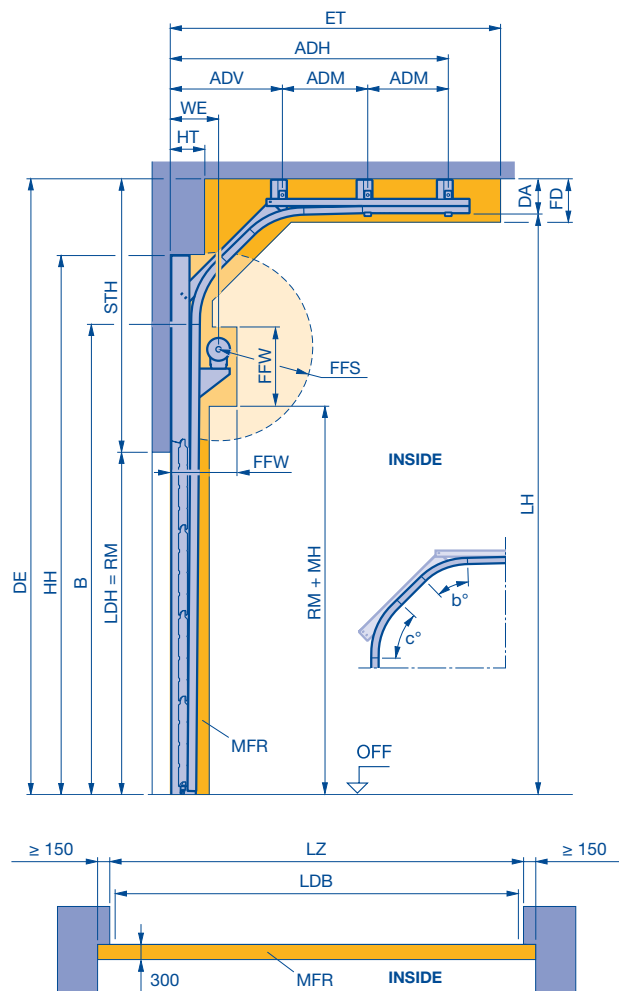


Track application: RS

High-lift track application

with double radius and low-mounted torsion spring shaft

Detailed technical data can be found in the product configurator.



b°/c°	Contour angle	HT	Obstruction depth
ADH	Distance to rear ceiling anchor	LDB	Clear passage width with ThermoFrame (see page 78)
ADM	Distance to central ceiling anchor	LDH	Clear passage height
ADV	Distance to front ceiling anchor	LH	Track height
B	Start of double radius, factory specification	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
ET	Distance back	OFF	Finished floor level (FFL)
FD	Ceiling clearance	RM	Grid height
FFS	Spring compression clearance	STH	Min. headroom (see page 53)
FFW	Spring shaft clearance	WE	Shaft centre from lintel
HH	Obstruction height		

Please note:

Select required track height according to the door height in the table on page 69.

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:

- Observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 35 under all circumstances!
- ALR F42 Vitraplan and ALR F42 Glazing on request

Observe the min. sideroom, see page 78.

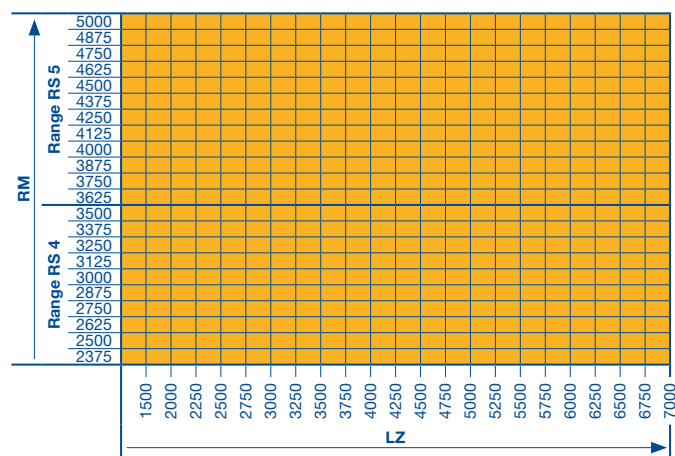
	WE	FFW	STH	DA	DE
RS 4	315	460 × 850	1477	183	LH + 183
RS 5	335	500 × 850			

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

** Dimensions can be found in the product configurator.

All door types and versions on request.

Dimensions in mm

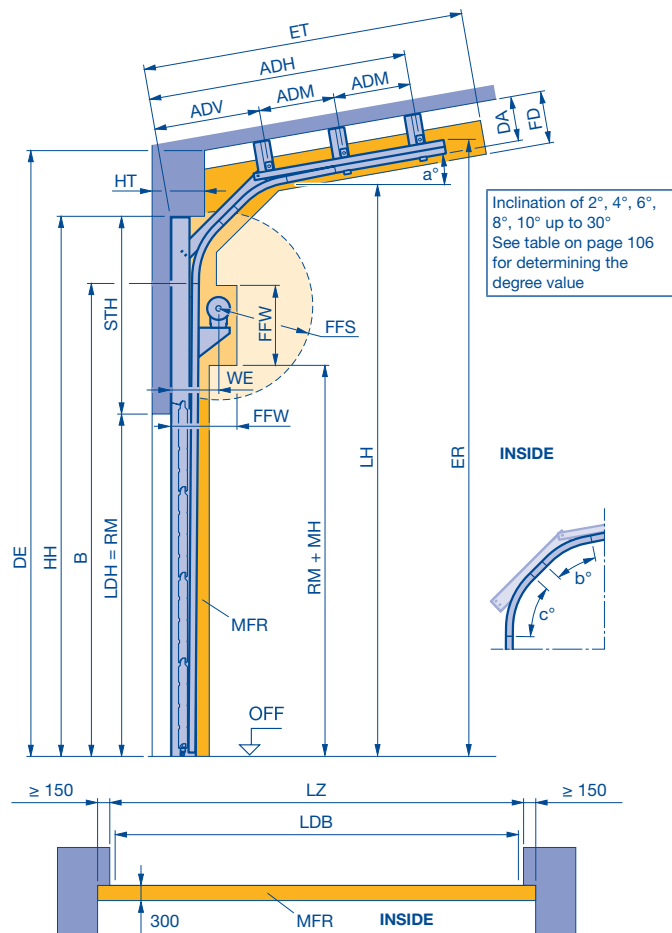


Track application: RK

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	HH	Obstruction height
b°/c°	Contour angle	HT	Obstruction depth
ADH	Distance to rear ceiling anchor	LDB	Clear passage width with ThermoFrame (see page 78)
ADM	Distance to central ceiling anchor	LDH	Clear passage height
ADV	Distance to front ceiling anchor	LH	Track height
B	Start of double radius, factory specification	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	OFF	Finished floor level (FFL)
	Track height (depth and height)	RM	Grid height
FD	Ceiling clearance	STH	Min. headroom
FFS	Spring compression clearance	WE	Shaft centre from lintel
FFW	Spring shaft clearance		

Please note:

Select required track height according to the door height in Table 4 on page 69.

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:

- Observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 35 under all circumstances!
- ALR F42 Vitraplan and ALR F42 Glazing on request.
- To determine the roof slope see page 106.
- Inclination > 10° to 30° on request.

Observe the min. sideroom, see page 78.

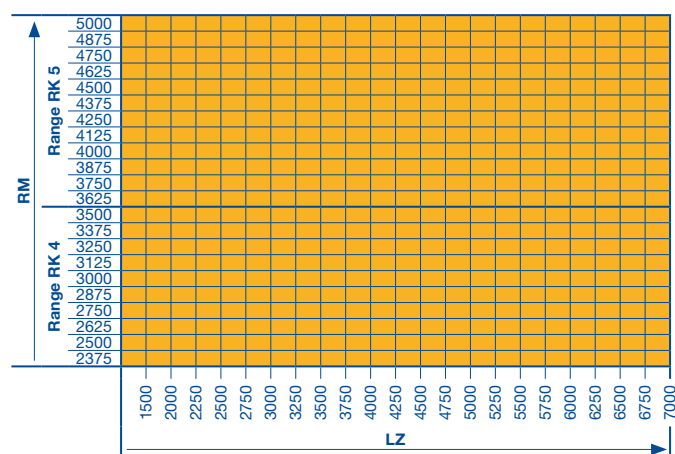
	WE	FFW	STH	DA	DE
RK 4	315	460 × 850	1477	183	LH + 183
RK 5	335	500 × 850			

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

** Dimensions can be found in the product configurator.

All door types and versions on request.

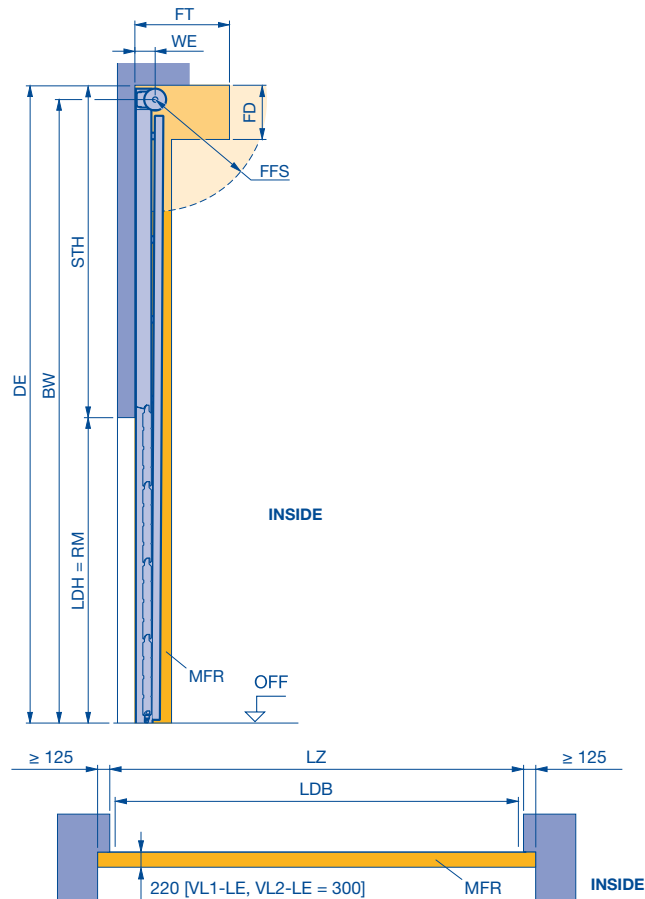
Dimensions in mm



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 compression clearance	OFF	Finished floor level (FFL)
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.
- Observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 35 under all circumstances!
- ALR F42 Vitraplan and ALR F42 Glazing on request

Observe the 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

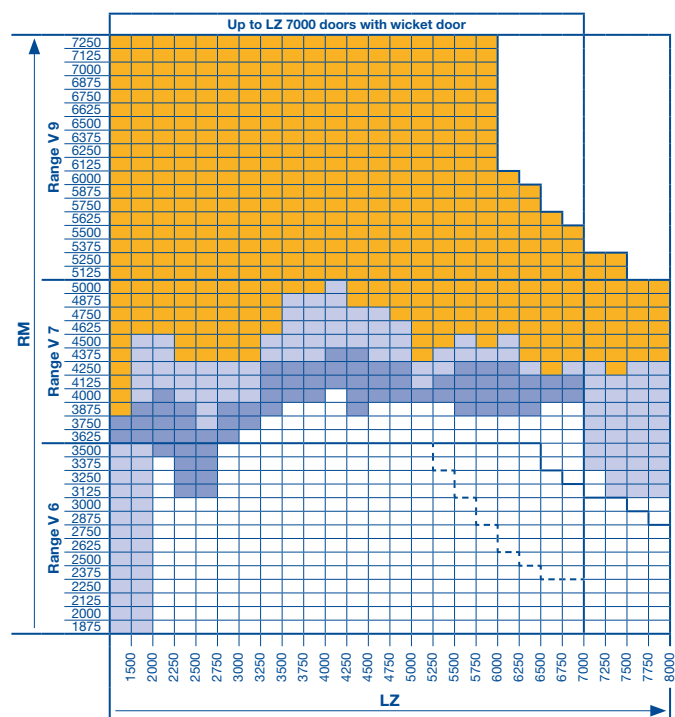
* with double spring shaft

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

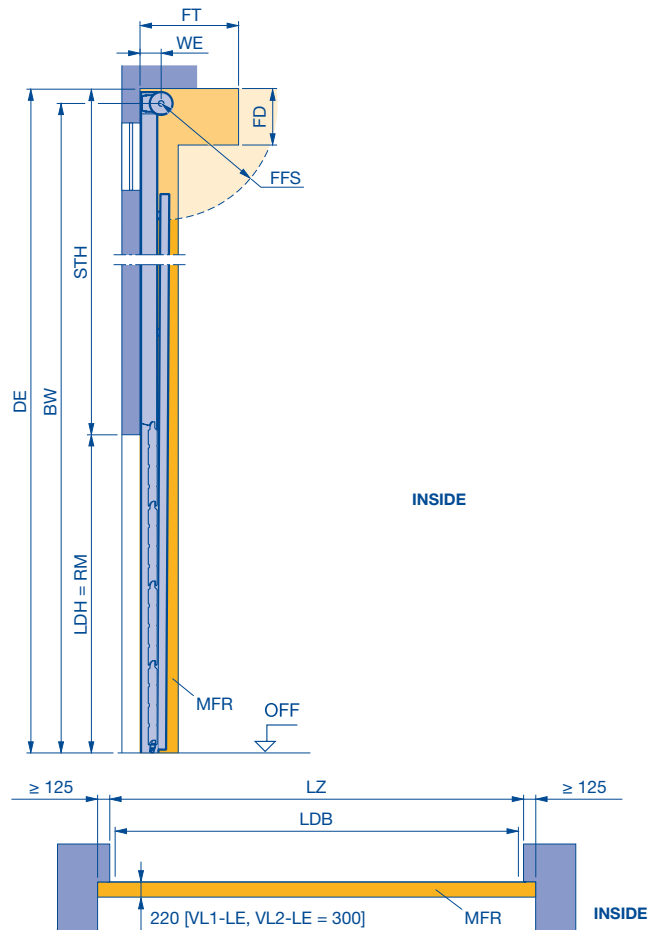


Track application: VA

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 compression clearance	OFF	Finished floor level (FFL)
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.
- Observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 35 under all circumstances!

Observe the min. sideroom, see page 78.

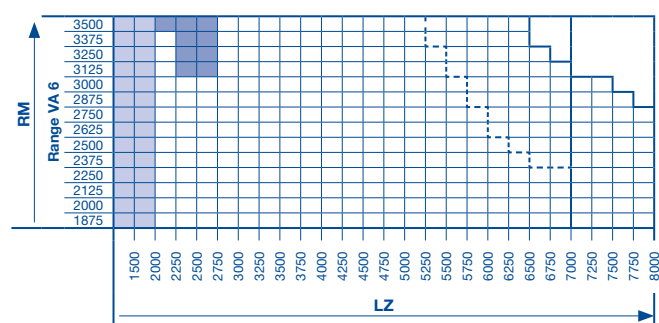
	STH	DE	BW	WE	FD	FFS	FT
VA 6	RM + 550	BW + 140	Min. 2 × RM + 410 Max. DE – 140 (7895)	160	500	min. 90° (745)	2 × WE

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

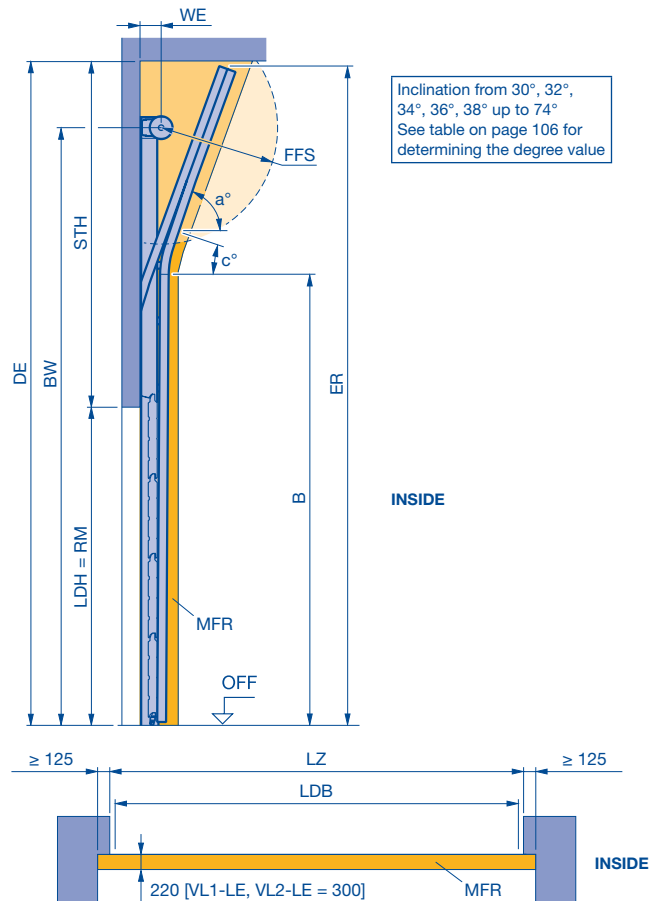


Track application: VS

Vertical track application

With inclination

Detailed technical data can be found in the product configurator.



a°	Inclination	LDH	Clear passage height
c°	Contour angle	LZ	Clear frame dimensions (from 1200)
B	Start of double radius	MFR	Space for fitting the door
BW	Position of shaft support	OFF	Finished floor level (FFL)
DE	Min. ceiling height	RM	Grid height
ER	Top edge corner point	STH	Min. headroom
FFS	Spring compression clearance	WE	Shaft centre from lintel
LDB	Clear passage width with ThermoFrame (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.
- Observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 35 under all circumstances!

Observe the 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 x RM – 1075		180	(745)	
VS 9					205		

** Dimensions can be found in the product configurator.

Notice:

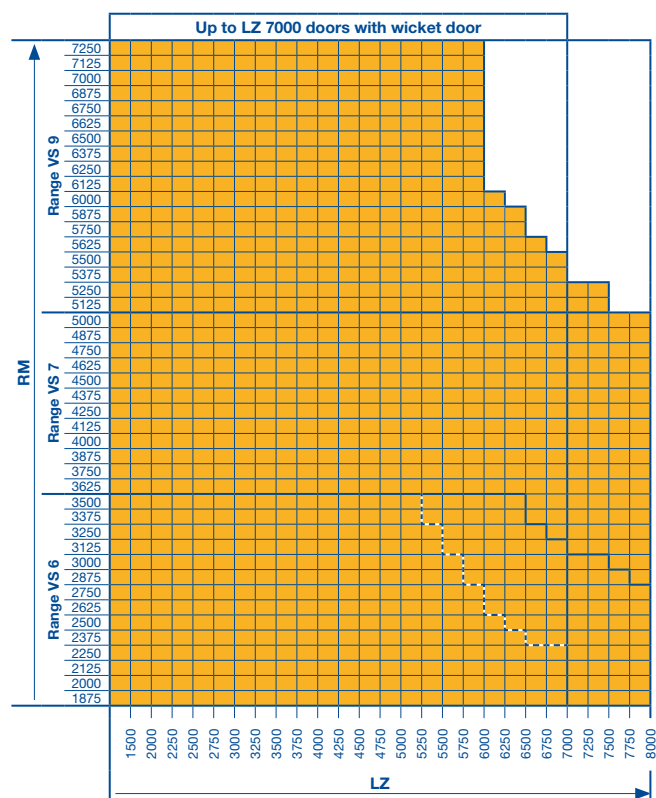
ALR F42 Vitraplan and ALR F42 Glazing on request

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

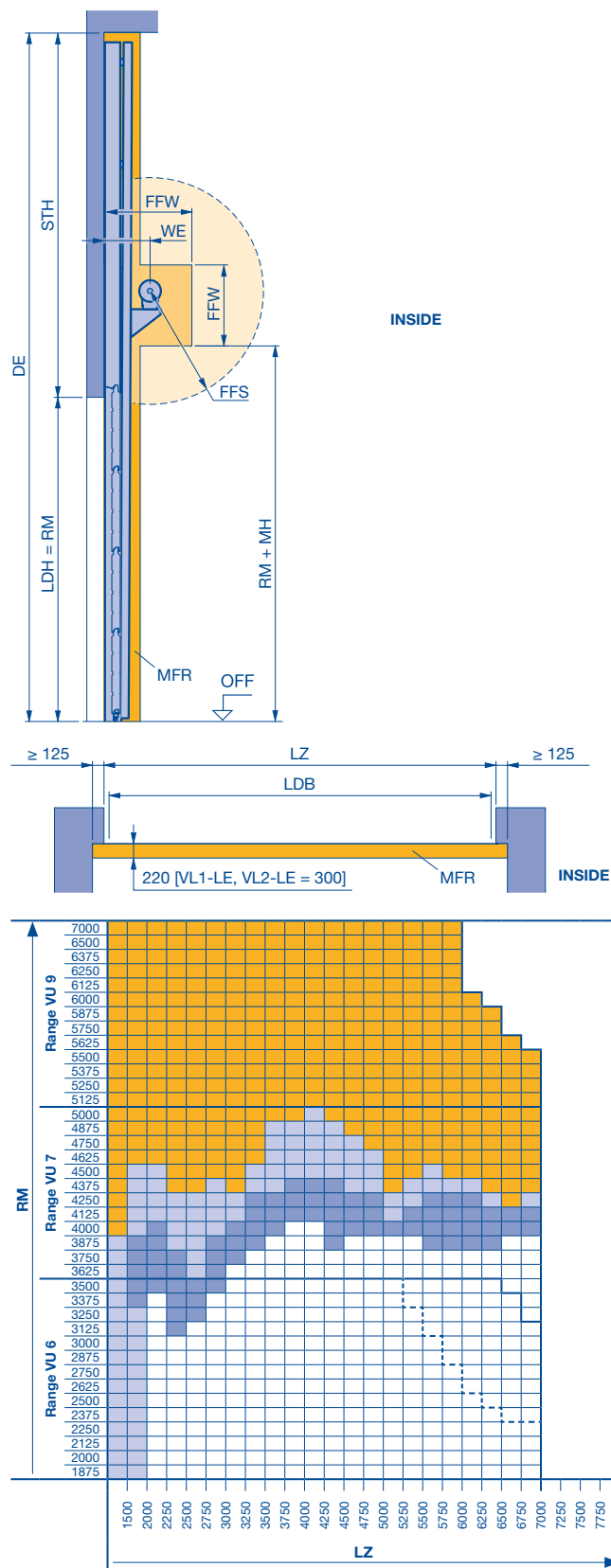


Track application: VU

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 compression clearance	OFF	Finished floor level (FFL)
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.
- Observe the permissible size ranges of the door types on pages 10–15 and 18–35 under all circumstances!

Observe the 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

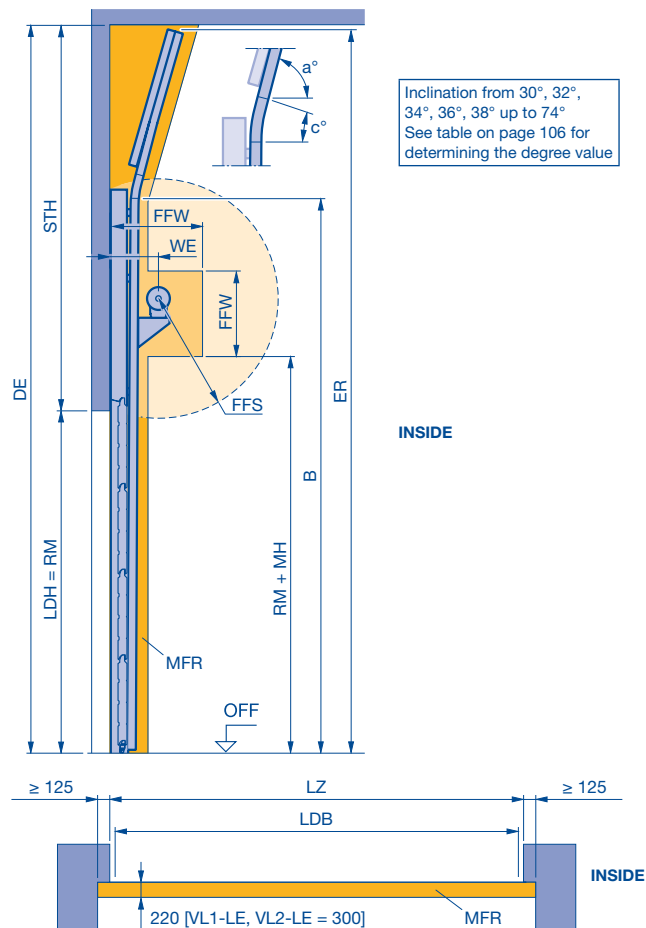
Dimensions in mm

Track application: WS

Vertical track application

with inclination and low-mounted torsion spring shaft

Detailed technical data can be found in the product configurator.



a°	Inclination	LDH	Clear passage height
c°	Contour angle	LZ	Clear frame dimensions (from 1200)
B	Start of double radius	MFR	Space for fitting the door
DE	Min. ceiling height	MH	Fitting height 400
ER	Top edge corner point	OFF	Finished floor level (FFL)
FD	Track height (depth and height)	RM	Grid height
FFW	Ceiling clearance	STH	Min. headroom
FFS	Spring shaft clearance	WE	Shaft centre from lintel
LDB	Spring compression clearance		
	Clear passage width with ThermoFrame (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.
- Observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 35 under all circumstances!

Observe the 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:

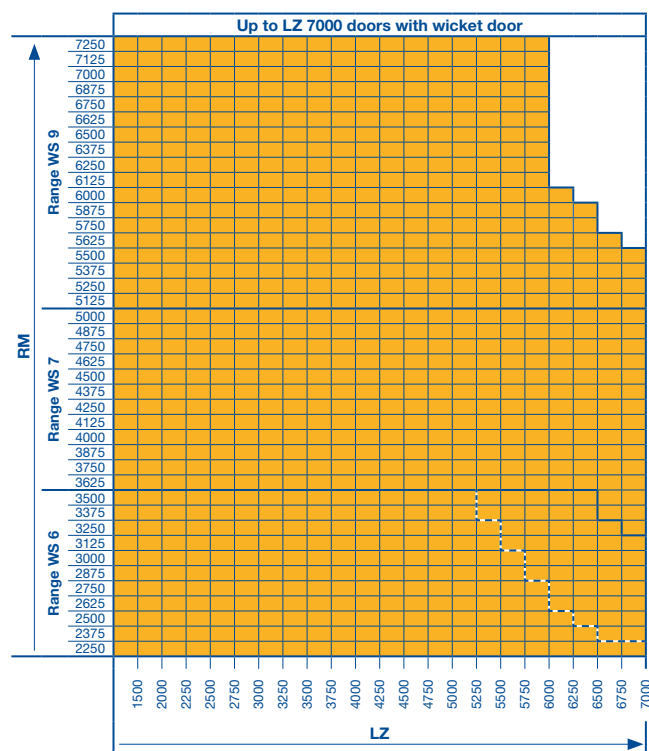
ALR F42 Vitraplan and ALR F42 Glazing on request

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



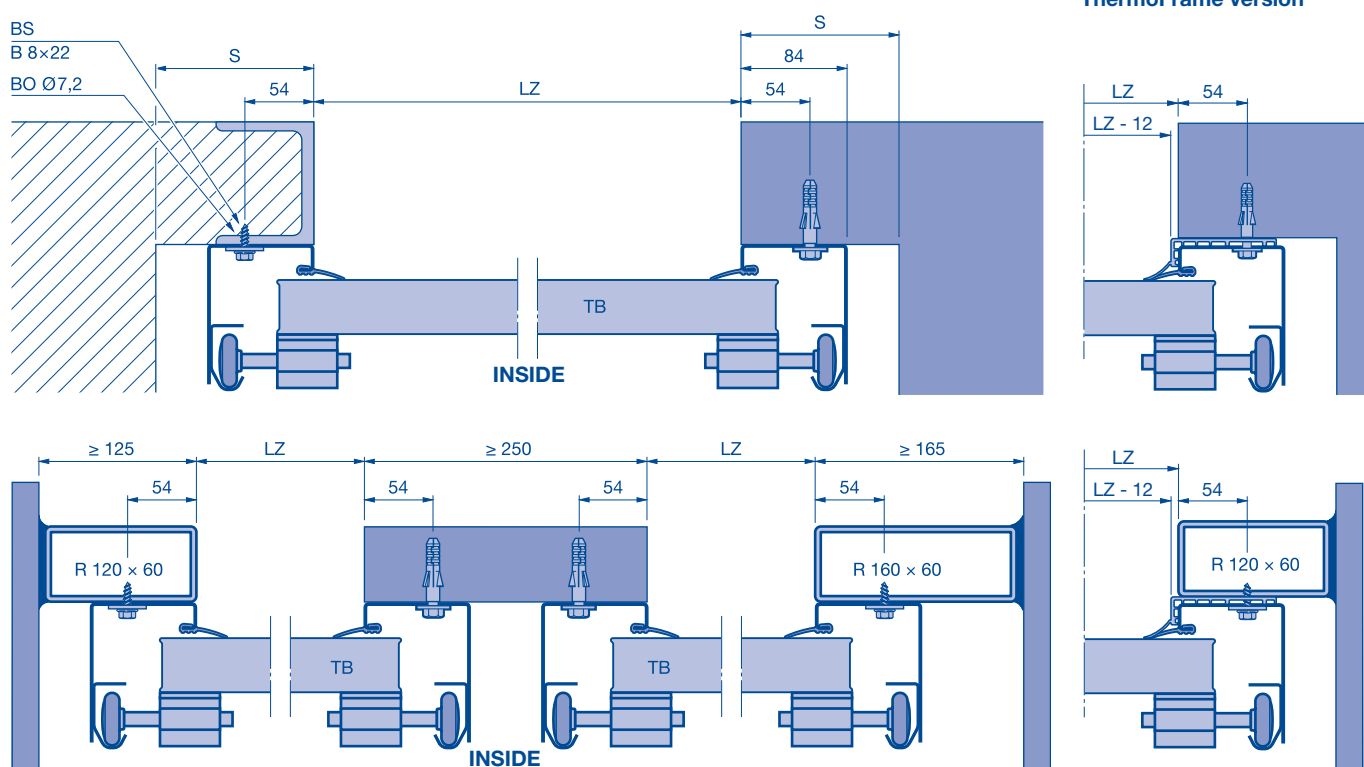
Sideroom

Required sideroom

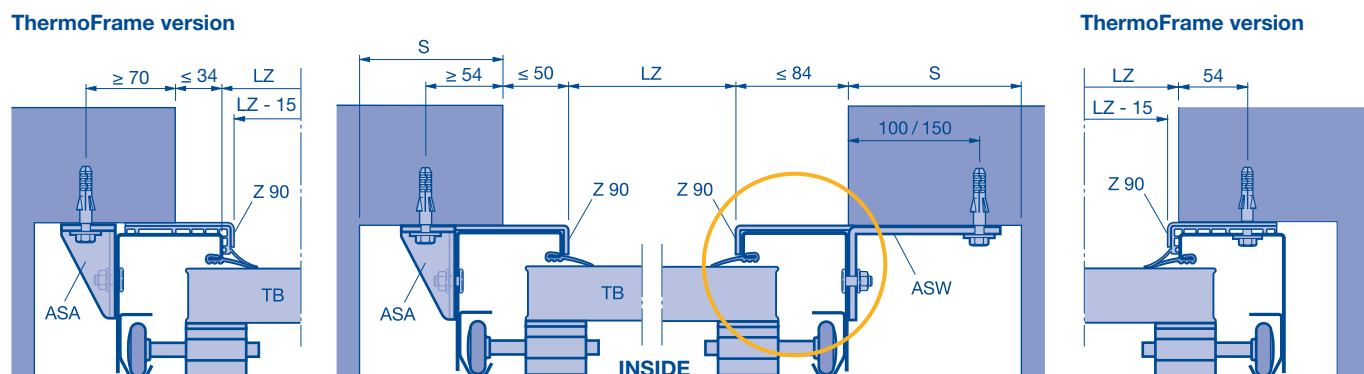
Track application / designation	SA	Track application / designation		SA
N*, NA, ND*, NH*, NS, NK, GD, V, VA, VU, GK, GS, VS, WS	125	Hand pulley	N, NA, ND, NH, NS, GD, NK, GS, GK	140
H, HA, HD, HU, RD, HK, HS, RS, RK	150		H, HA, HD, HU, RD, HK, HS, RS, RK	150
L, LD	125		V, VA, VU, VS,WS	125
With use of the C-rail (page 84 – 85)	170	Chain hoist		Page 82
		Shaft operators		Pages 87 – 96

* 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 × 40
ASW Screw-on bracket 70 × 120/170
BO Hole
BOS drilling screw

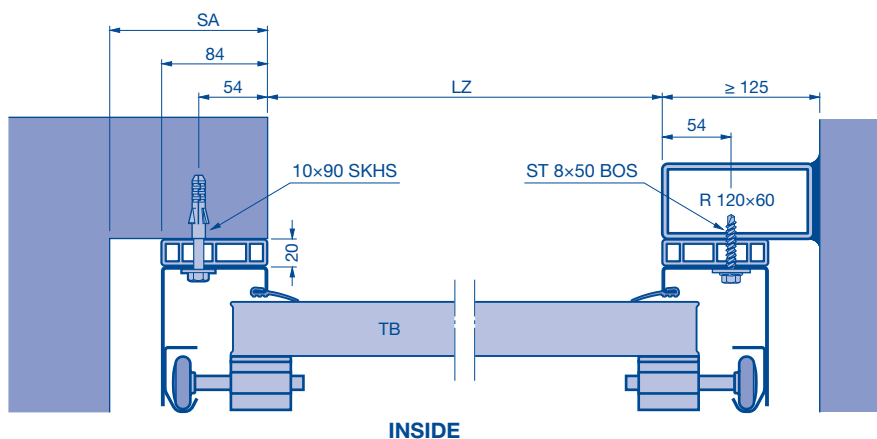
BLS self-tapping screw
LZ Clear frame dimension
R Box section
SA Sideroom

TB Door leaf
Z Frame covering

Spacer profile

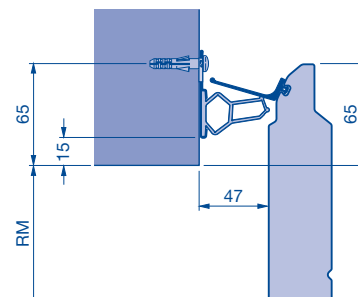
Clearance to the lintel

Sideroom

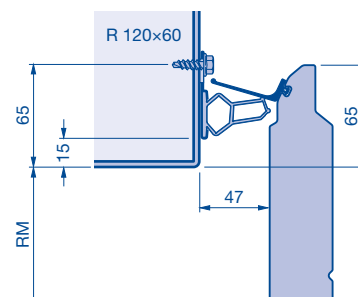


Lintel counter seal

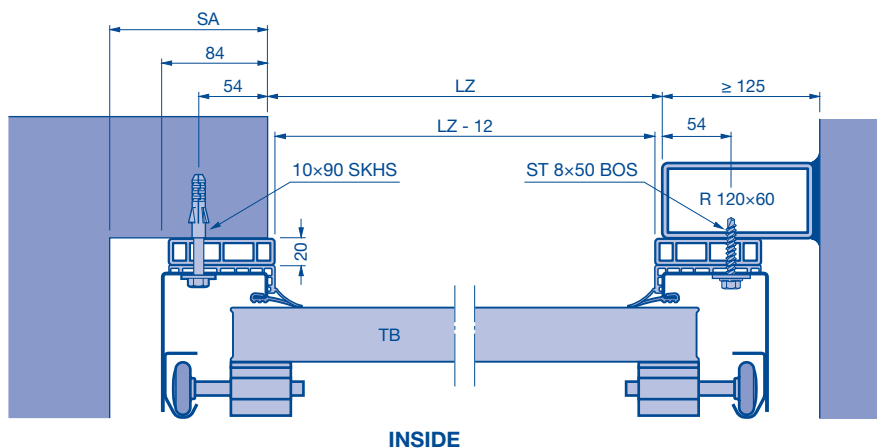
Fitting to brickwork



Box section fitting (120, 160, 200)

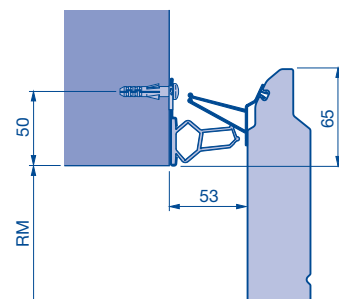


ThermoFrame sideroom

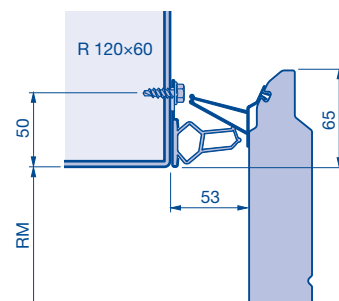


Thermoframe lintel counter seal

Fitting to brickwork



Box section fitting (120, 160, 200)



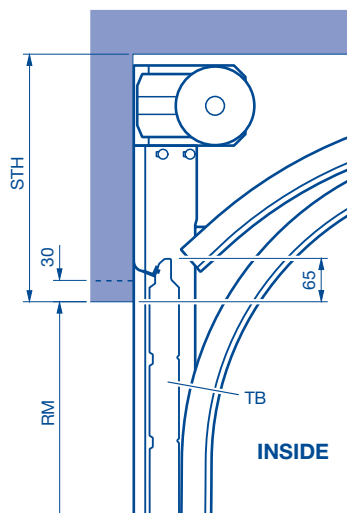
Notice:

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

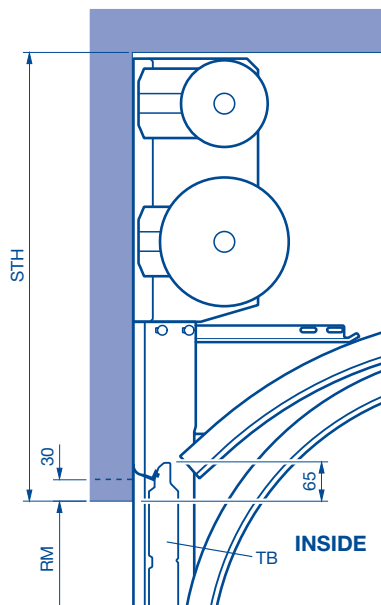
BOS	drilling screw	SA	Sideroom
LZ	Clear frame dimension	SKHS	Hexagon wood screw
R	Box section	TB	Door leaf
RM	Grid		

Lintel fittings

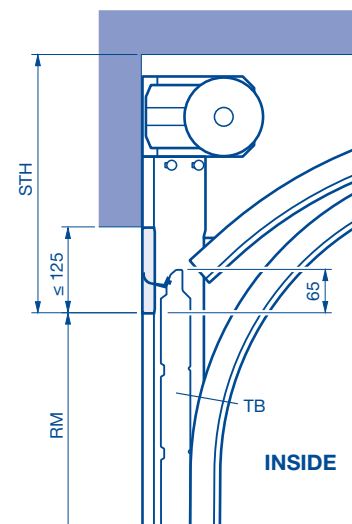
Normal lintel fitting
Insufficient headroom up to 30 mm high



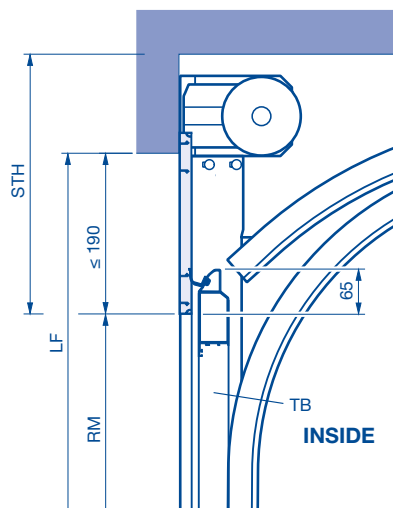
Normal lintel fitting
Double spring shaft



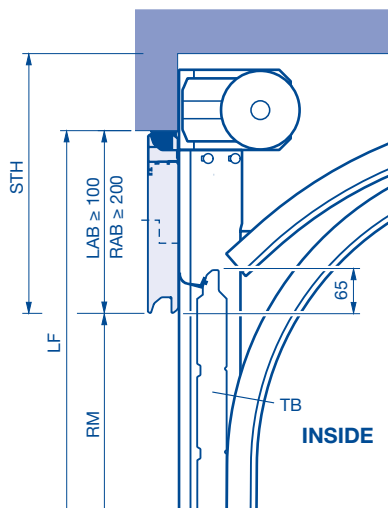
Single-skinned steel fascia for SPU F42
to make up for insufficient headroom up to
125 mm
(only for track applications N and L)



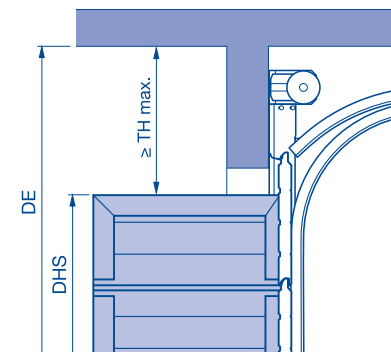
**Smooth panel, anodised, for APU F42,
ALR F42, ALR F42 Glazing,
ALR F42 Vitraplan** to make up for
insufficient headroom from 31 to 190 mm
height and $LZ \leq 7000$ mm
(only for track application N and L)



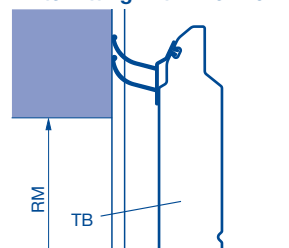
PU fascia panel
to make up for insufficient headroom from
100 mm
Aluminium fascia profile
to make up for insufficient headroom
(see table)



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, M2, M3

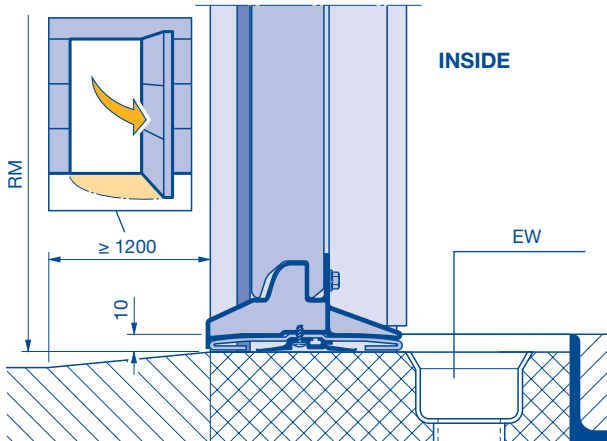
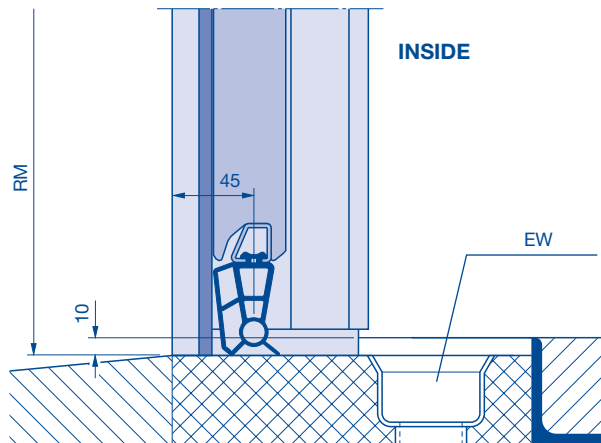
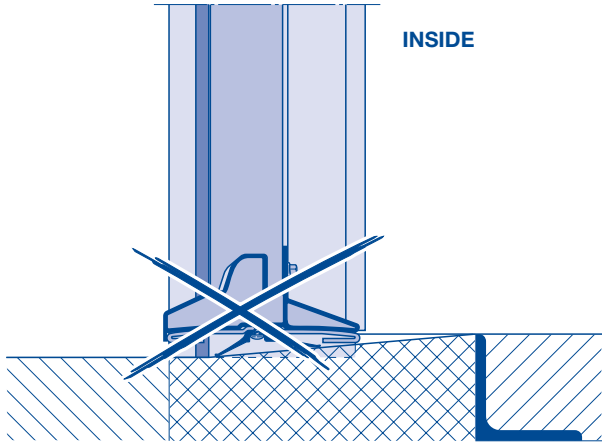
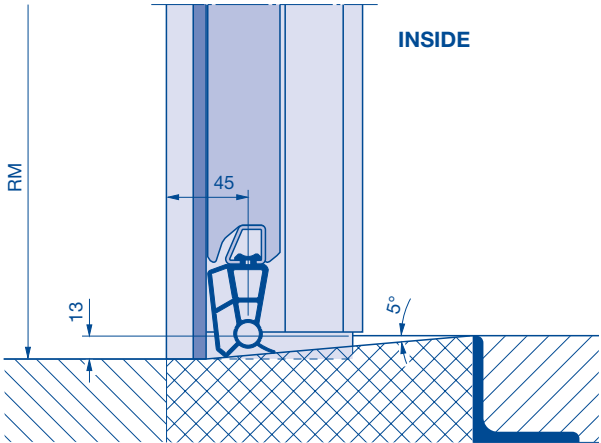
- Aluminium frame fascia panels with real glass infill VG, E2 and G2 on request.

DE	Ceiling height
DHS	Wicket door clear passage height
RAB	Fascia panel
LF	Structural opening
LAB	Fascia panel
RM	Grid
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

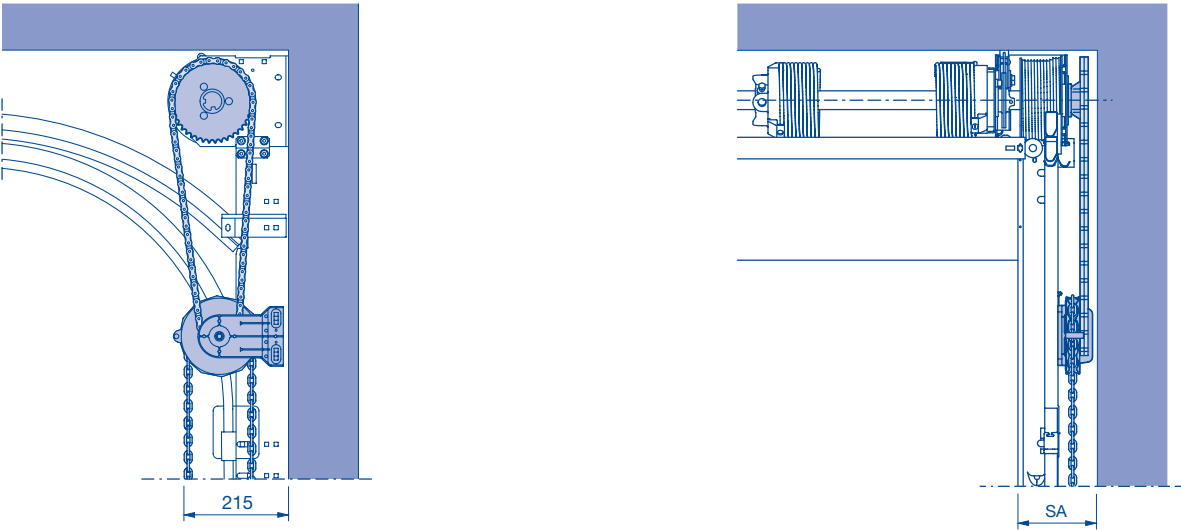
RM

Drainage

Grid

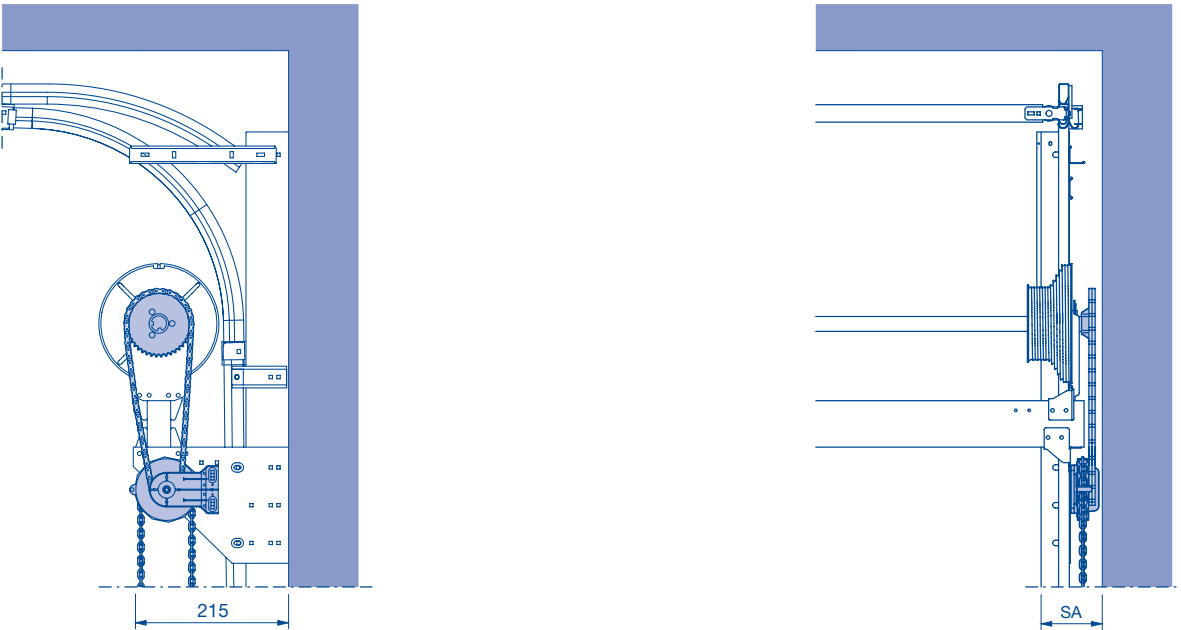
Chain hoist

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

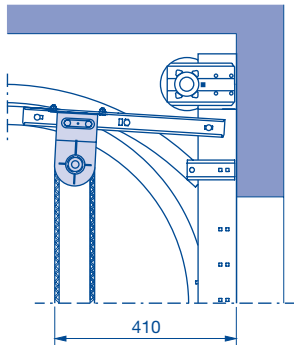
SA Sideroom

Hand pulley

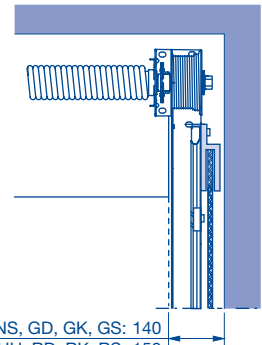
With rope or link steel chain

Track applications up to 20 m² door surface

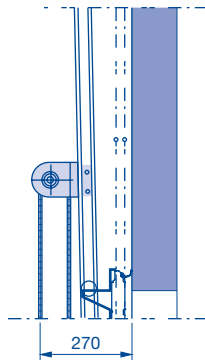
With rope or link steel chain



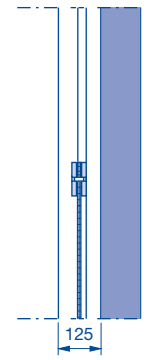
N, NA, ND, NH, NS, GD, H, HA, HD, HU, RD



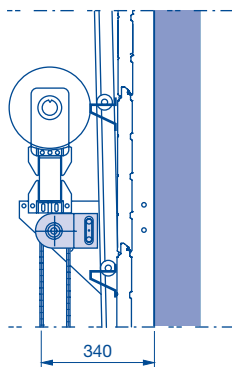
With rope or link steel chain



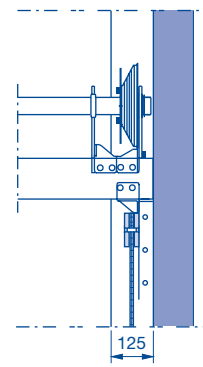
V, VA, VS



With rope or link steel chain



VU, WS



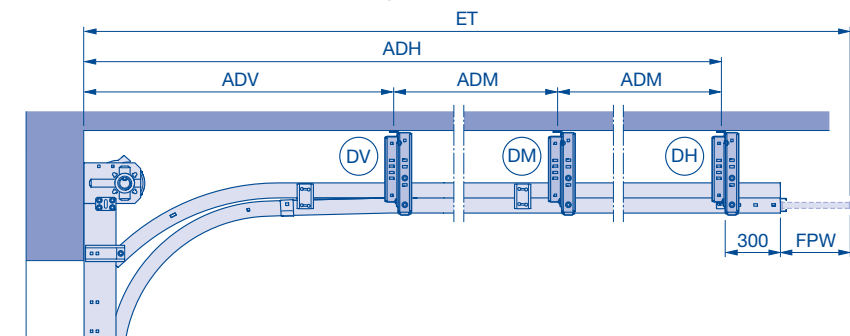
Ceiling anchors

Double track

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

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

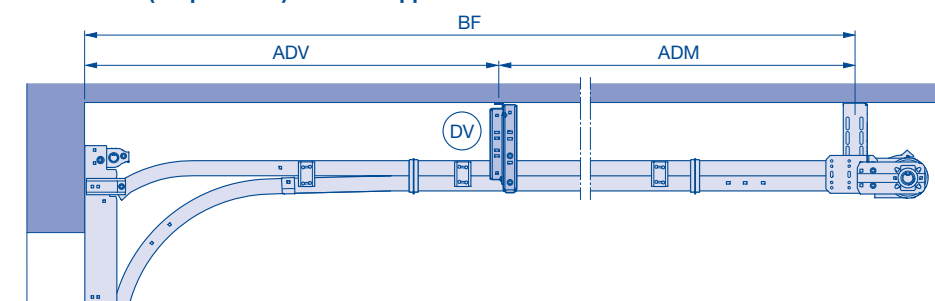
Double track (suspensions), door heights RM ≤ 5000



Notices:

- Detailed technical data can be found in the product configurator.
- On-site fastening elements must be able to withstand forces of 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.
- Deviations may occur due to the simplified calculation of the distance back. Detailed technical data can be found in the product configurator.

Double track (suspensions) for track application L



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
	> 7000	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
		4036–5660	4	1	2	1	1400	$(ET - ADV - 597) / 3$ $(ET - ADV - 327) / 3$	ET – 597 ET – 327	Long Short
L	≤ 7000	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	$(BF - ADV) / 3$		
H, HA, HU	≤ 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
	> 7000	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	Dimensions can be found in the product configurator									

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

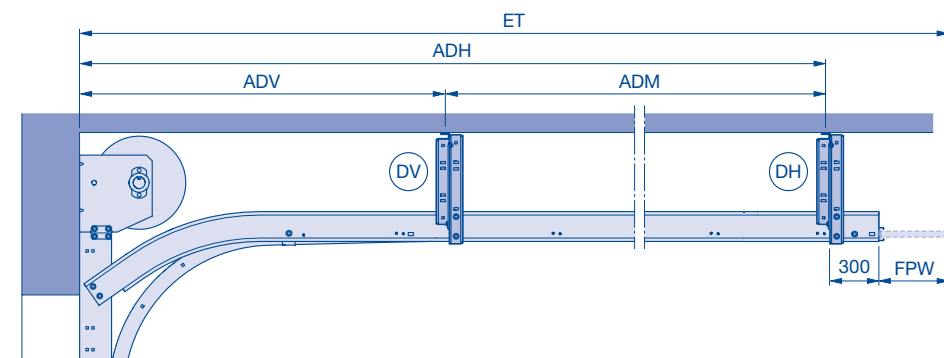
DA Distance to ceiling
DAL Ceiling anchor length
DH Rear ceiling anchor
DM Centre ceiling anchor

DV Ceiling anchor front
ET Min. distance back
FPW Spring buffer travel
LZ Clear frame dimension

Ceiling anchors

C track

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



Notice:

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

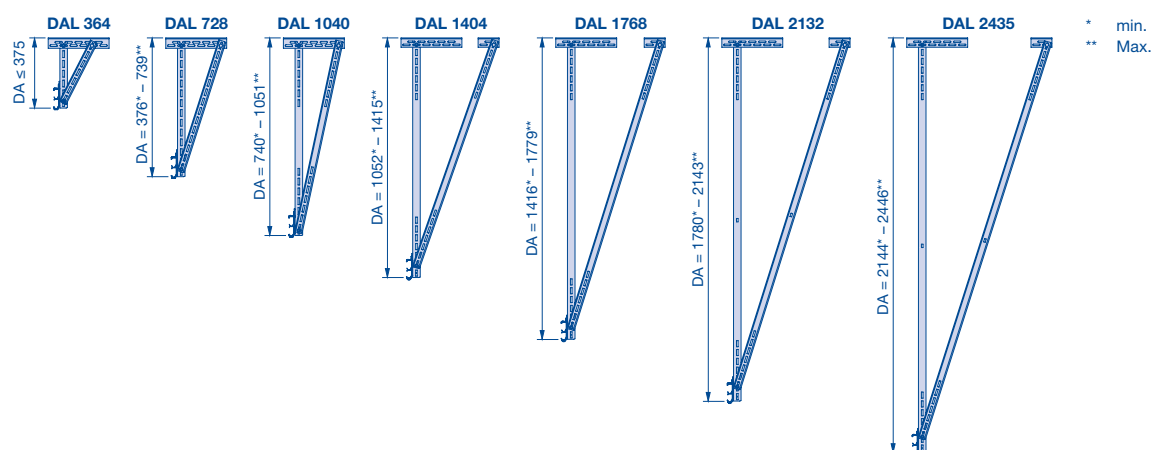
All door types RM > 4500 and LZ > 6250, all door types RM > 5000 except for track application L / LD doors with real glass RM > 3500 and LZ > 5000

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	Long
		> 6660	3	1	1	1	ADH / 3	(ET – ADV – 597) / 2	ET – 597	Long
								(ET – ADV – 327) / 2	ET – 327	Short
L	≤ 7000	≤ 5982	2	1	0	1	BF / 2	–	RM + 670	–
H, HA, HU	≤ 8000	≤ 6714	2	1	0	1	ADH / 2	–	ET – 597	Long
		> 6714	3	1	1	1	ADH / 3	(ET – ADV – 597) / 2	ET – 597	Long
								(ET – ADV – 327) / 2	ET – 327	Short
NH, ND, GD, LD, HD, RD	Dimensions can be found in the product configurator									

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	Long
		> 3785	2	1	0	1	ADH / 2	–	ET – 327	Short
L		≤ 3516	1	0	0	1	–	–	–	–
		3517–5891	2	1	0	1	BF/2	–	RM + 670	
		> 5891	3	1	1	1	BF/3	(BF – ADV) / 2	RM + 670	
H, HA, HU		≤ 3715	1	0	0	1	–	–	ET – 597	Long
		> 3715	2	1	0	1	ADH / 2	–	ET – 327	Short
									ET – 597	Long
NH, ND, GD, LD, HD, RD		Dimensions can be found in the product configurator								

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



ADH Distance to rear ceiling anchor
ADM Distance to central 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 Ceiling anchor front
ET Min. distance back
FPW Spring buffer travel
LZ Clear frame dimension

Diagonal strut

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

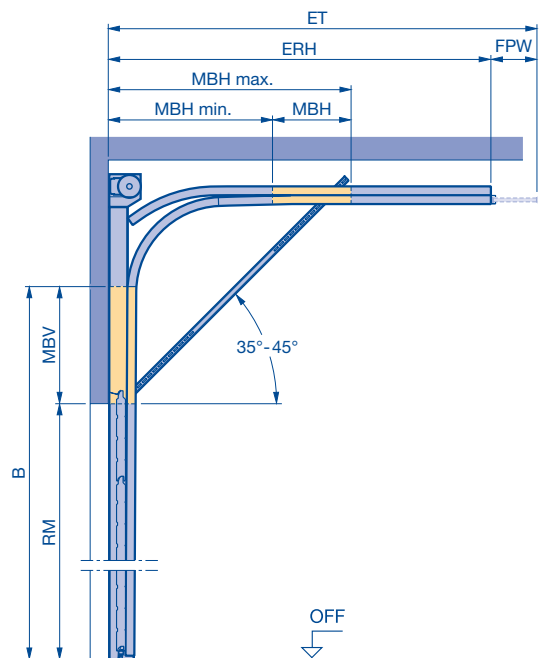
Please note:

A technical inspection is required!

Notices:

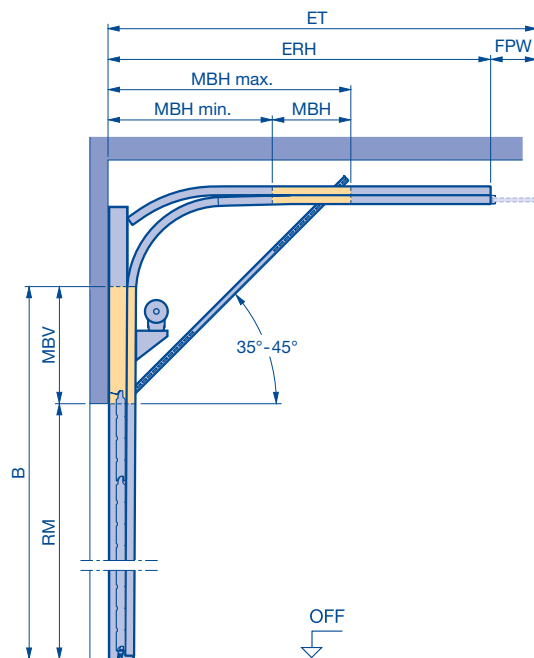
- Application range of LZ ≤ 3000 and RM ≤ 3250
- Max. distance back 2297
- Not for door type ALR F42 Glazing.

Track application H



Other required technical data for track application H must be observed (see page 64).

Track application HU

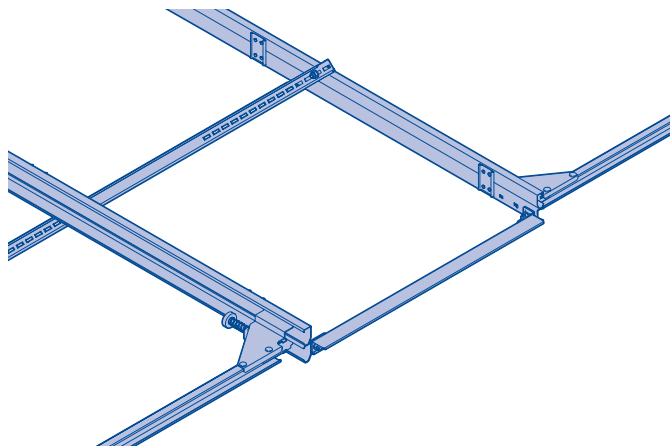


Further required technical data for track application HU must be observed (see page 69).

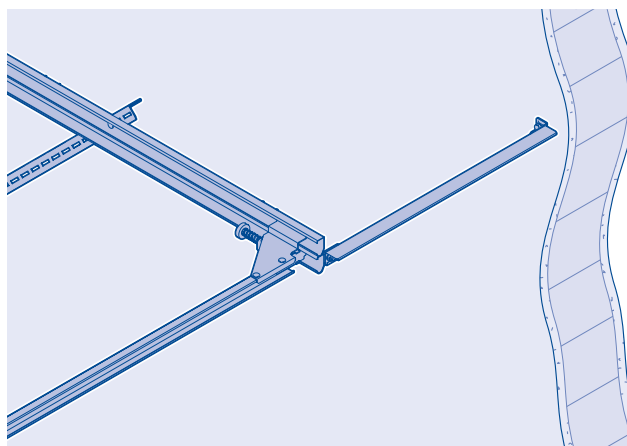
ET	ERH	MBH min.	Max. MBH	FPW*		MBH	MBV		
				min.	Max.		Track application H		Track application HU
Max. 2297	ET - FPW (max. 2000)	ERH / 2	3 × ERH / 4	27	297	Max. MBH - min. MBH	RM	B	On request
							MBH min.	Max. MBH	

* Dimensions can be found in the product configurator.

Connection door - door



Connection door - wall



B Start of double radius
ET Min. distance back
ERH Corner point track horizontal

FPW Spring buffer travel
MBH Fitting area horizontal
MBV Fitting area vertical

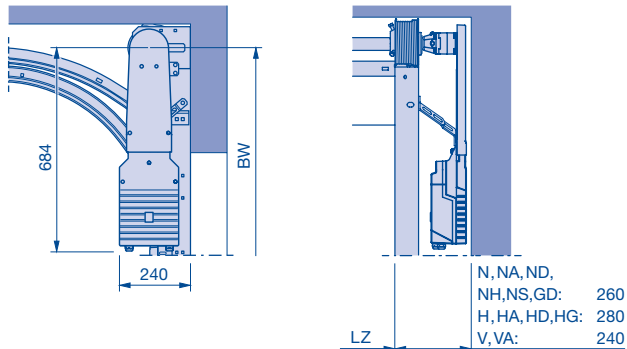
OFF Finished floor level (FFL)
RM Grid height

Shaft operator WA 300

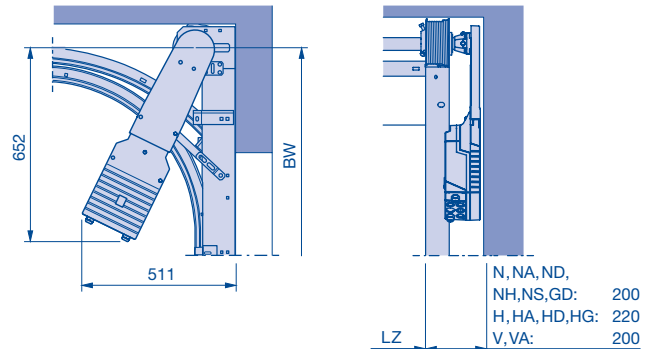
Shaft operator WA 300 for track applications N, NA, ND, NS, NH, NK, GD, GS, GK, H, HA, HD, HS, HK, V, VA and VS

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

Fitting example ⑧ right



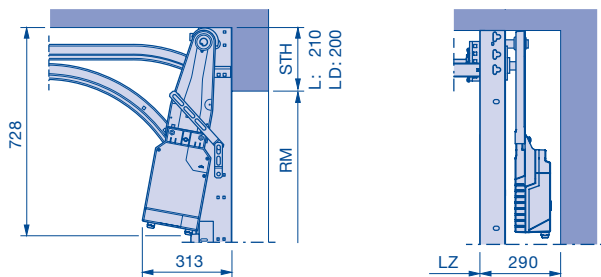
Fitting example ⑨ right



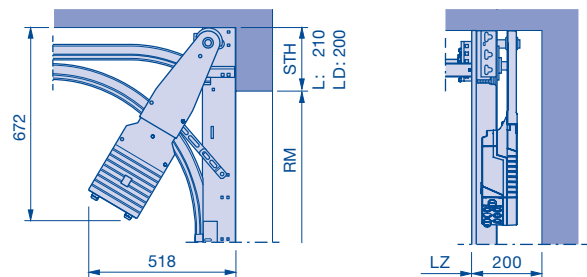
Shaft operator WA 300 for track applications L and LD

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



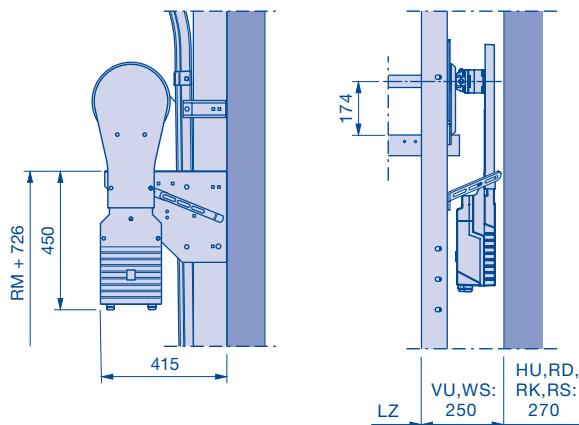
Fitting example ⑨ right



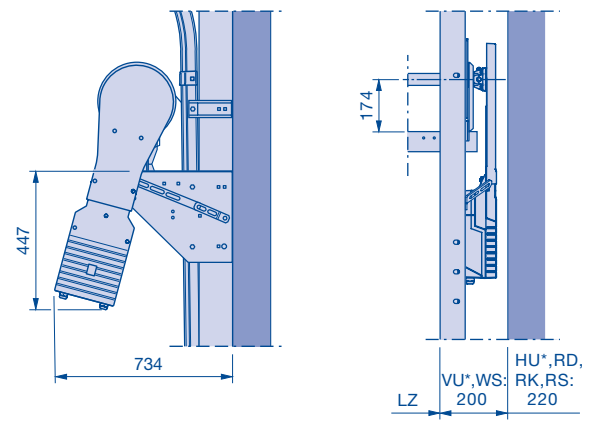
Shaft operator WA 300 for track applications HU, RD, RS, RK, VU and WS

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 $RM \leq 3500$ the track applications VU and HU are not possible

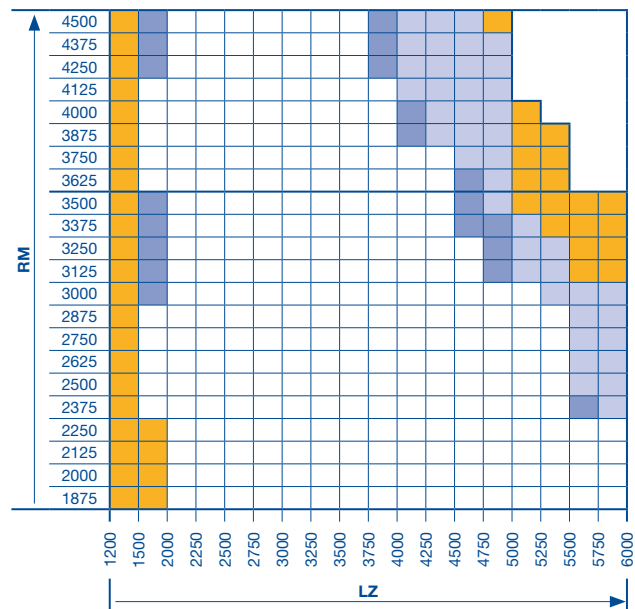
BW Position of shaft support
LZ Clear frame dimension

STH Min. headroom
RM Grid height

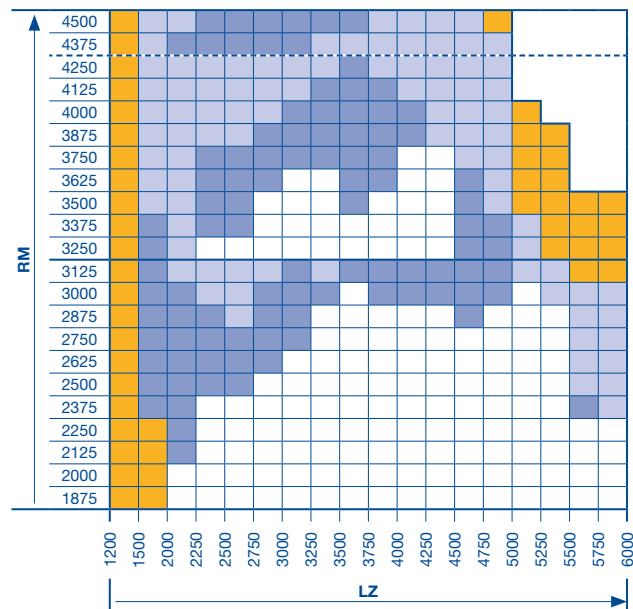
Shaft operator WA 300

Size range WA 300 (ALR F42 Vitraplan on request)

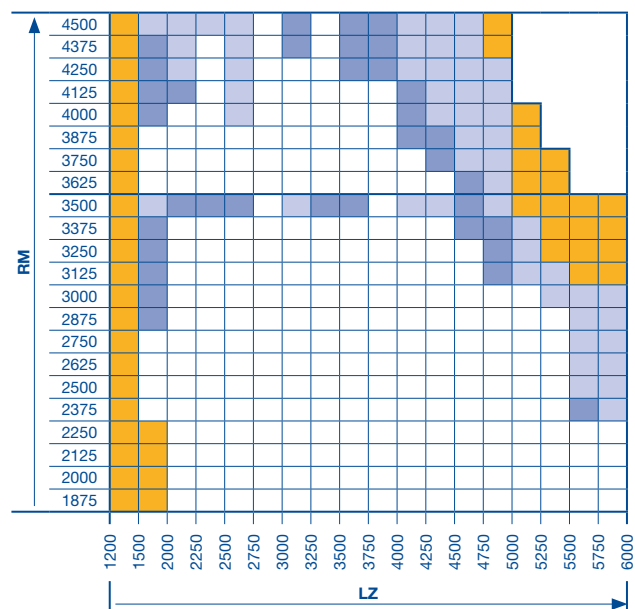
Track applications: N, NA and NH



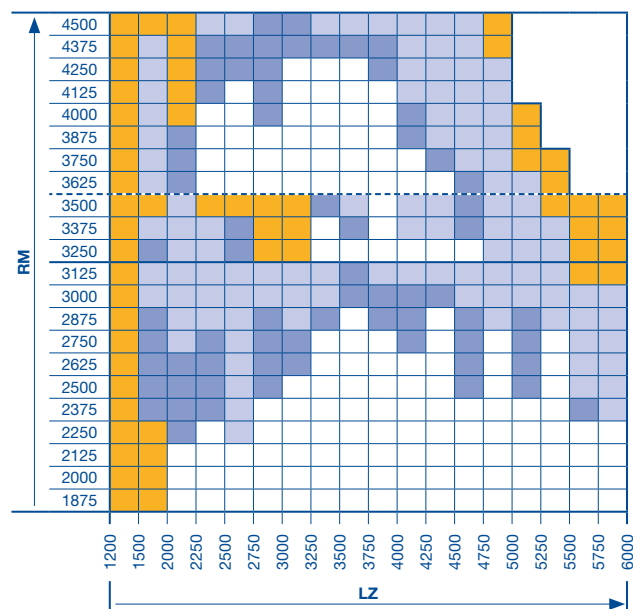
Track applications: ND and GD



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!

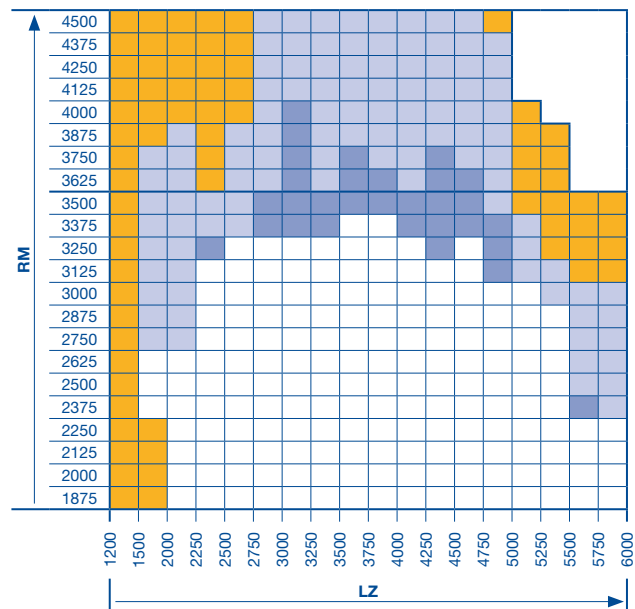
LZ Clear frame dimension
RM Grid height

Dimensions in mm

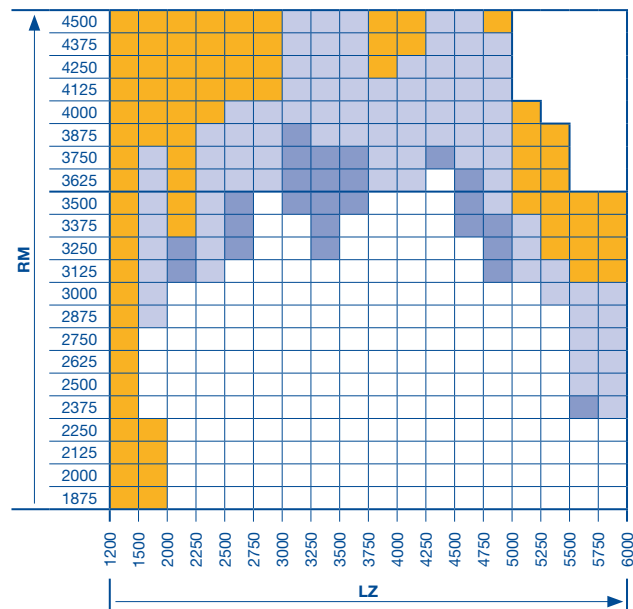
Shaft operator WA 300

Size range WA 300 (ALR F42 Vitraplan on request)

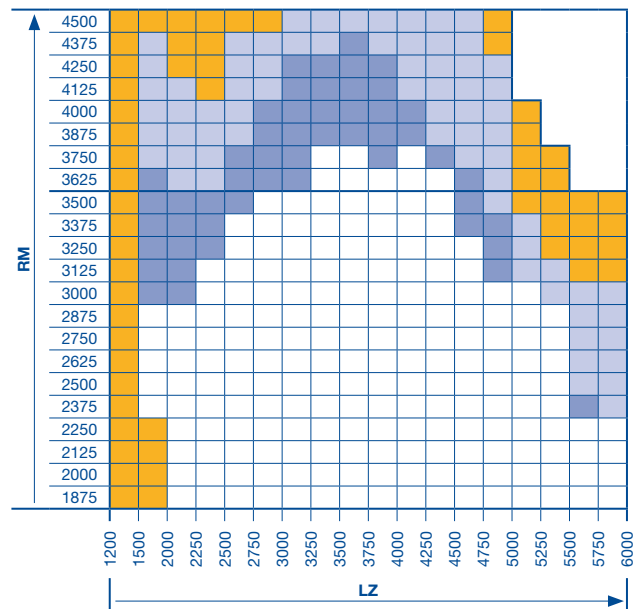
Track application: H, HA and HU



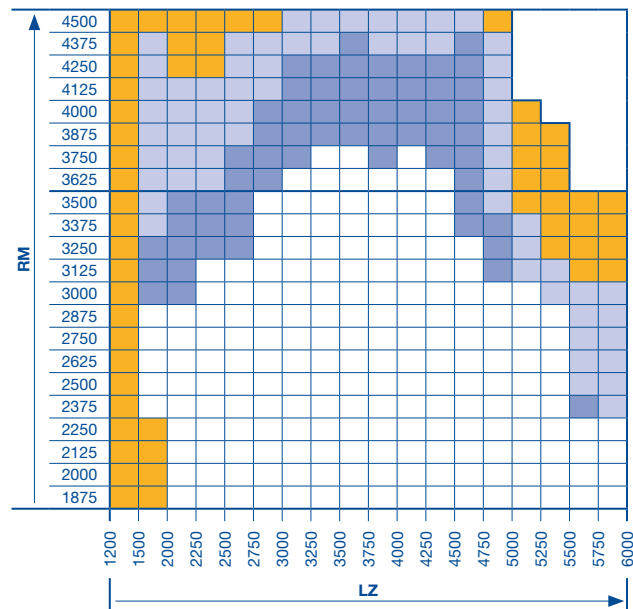
Track application: HD and RD



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

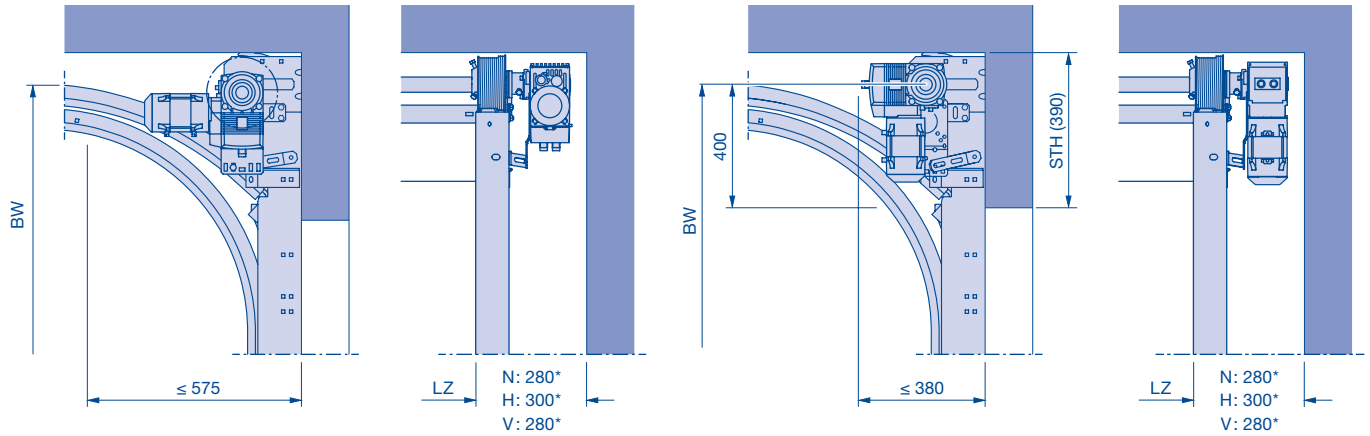
Dimensions in mm

Shaft operator WA 400

As a frame-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.

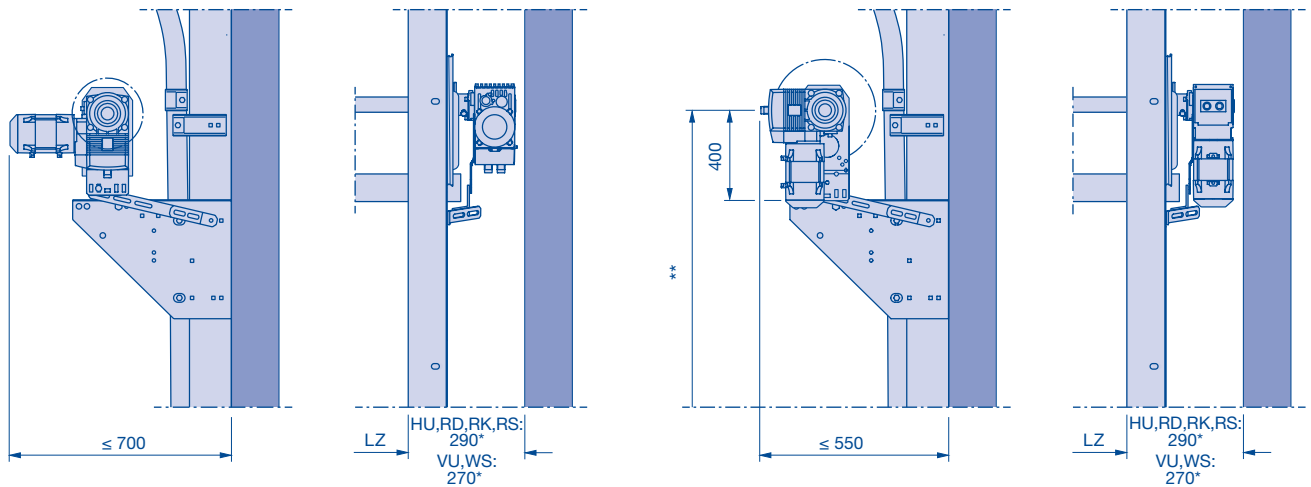


* Notice:

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

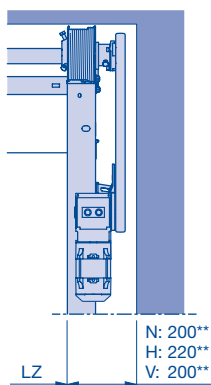
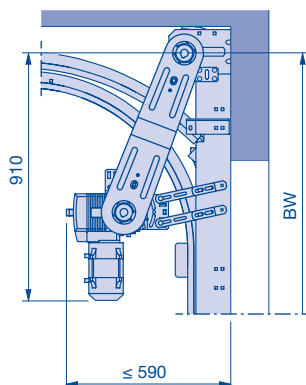
Shaft operator WA 400

with chain box

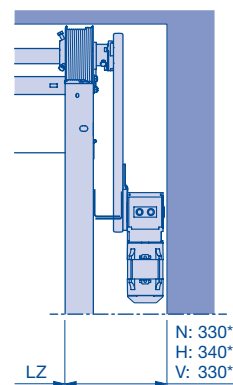
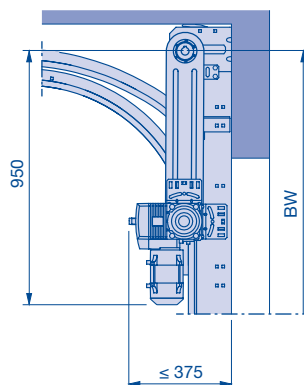
Shaft operator WA 400 for all track applications, except L, LD, HU, RD, RS, RK, VU and WS

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



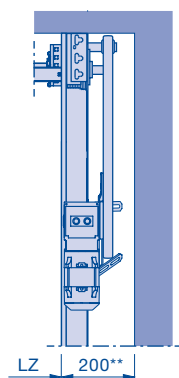
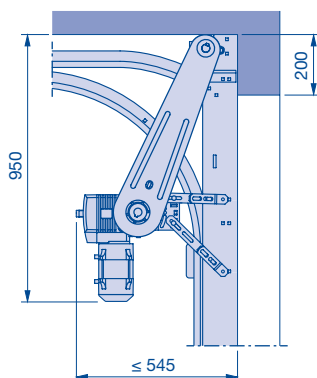
Fitting example ⑥ right



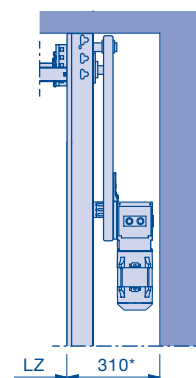
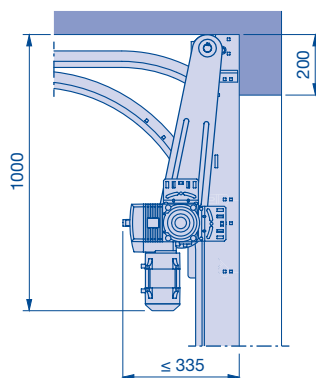
Shaft operator WA 400 for track applications L and LD

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



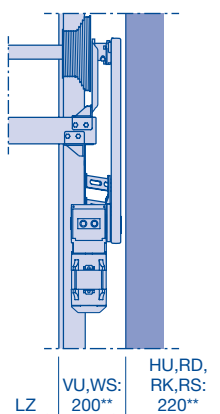
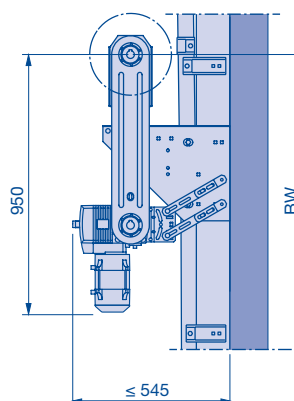
Fitting example ⑥ right



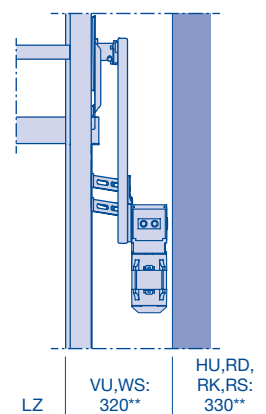
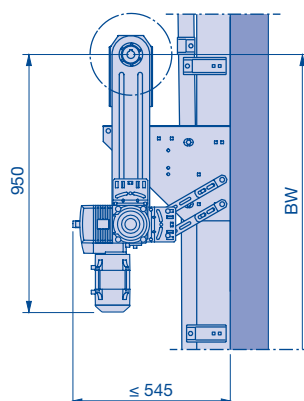
Shaft operator WA 400 for track applications HU, RD, RS, RK, VU and WS

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

** Note:

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

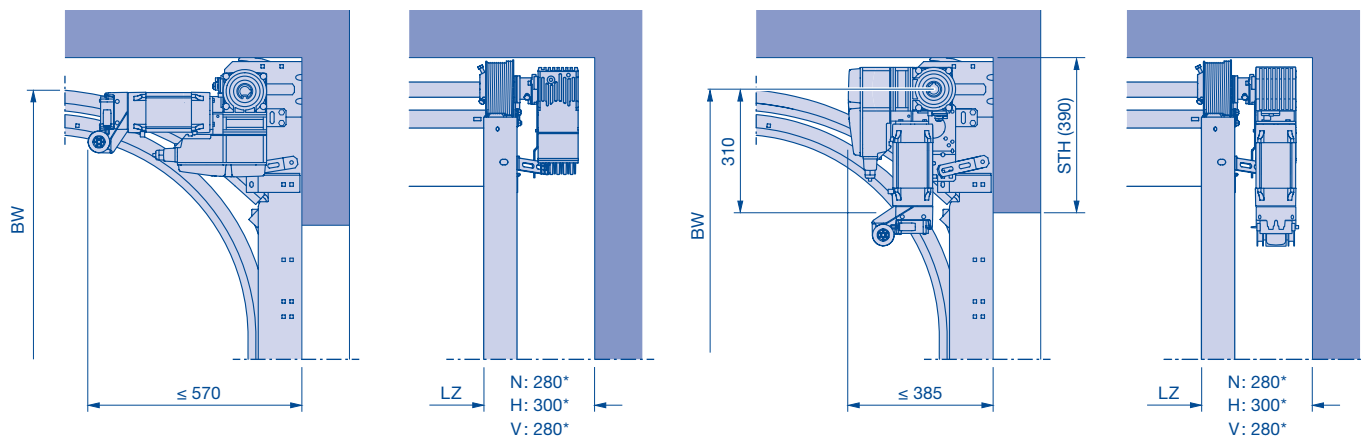
BW Position of shaft support
LZ Clear frame dimension

Shaft operator WA 500 FU

As a frame-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.

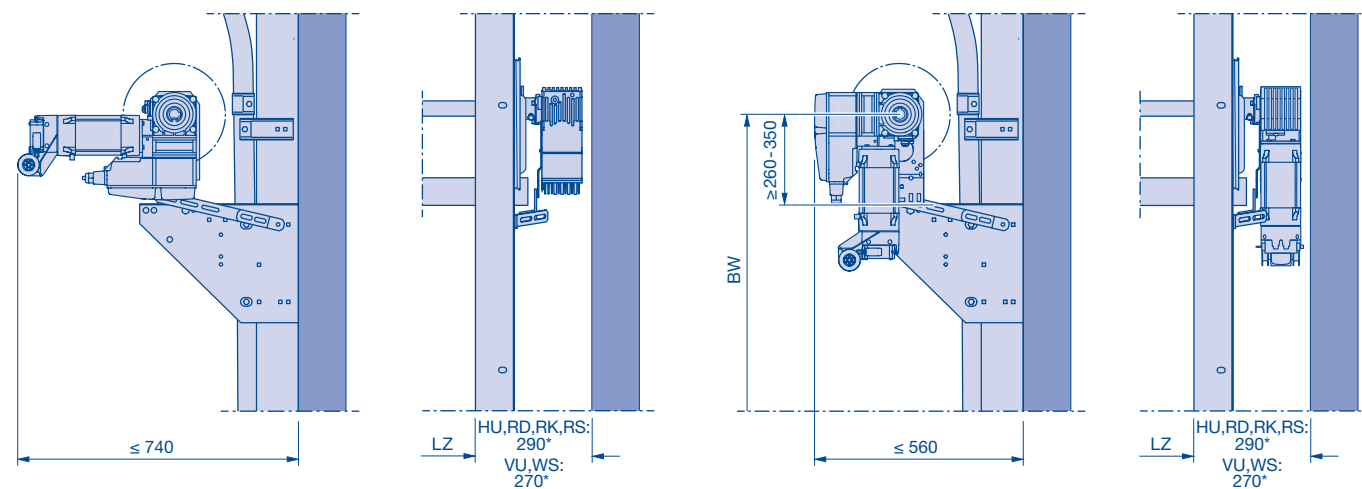


* Notice:

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

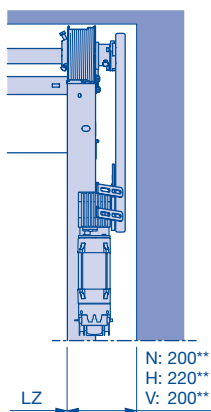
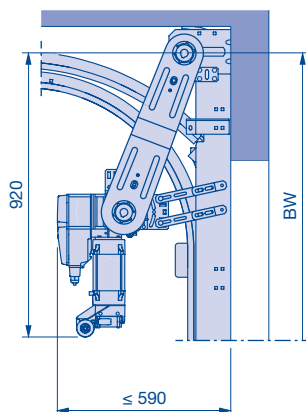
Shaft operator WA 500 FU

with chain box

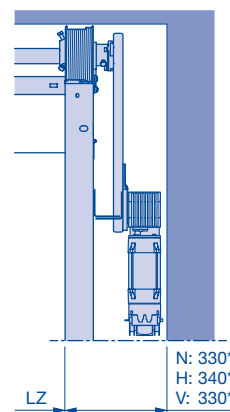
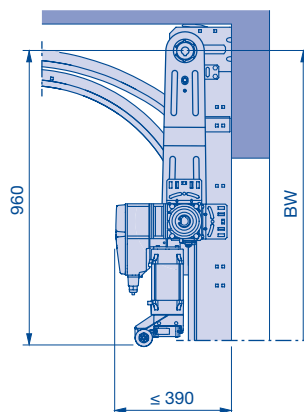
Shaft operator WA 500 FU for all track applications, except L, LD, HU, RD, RS, RK, VU and WS

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



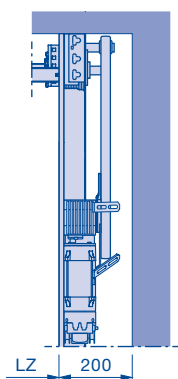
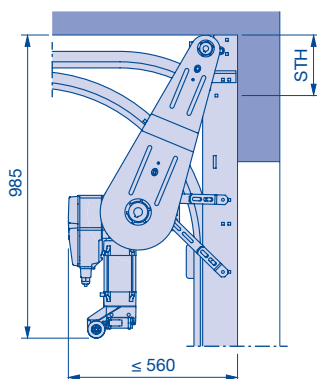
Fitting example ⑥ right



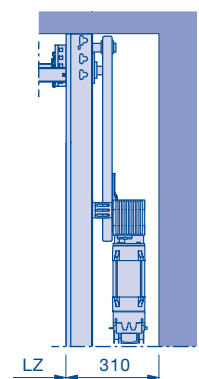
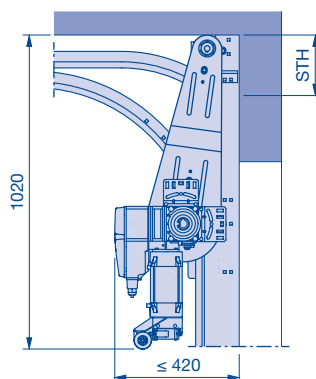
Shaft operator WA 500 FU for the track applications L and LD

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



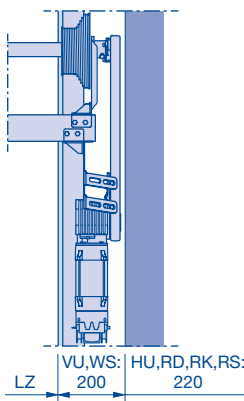
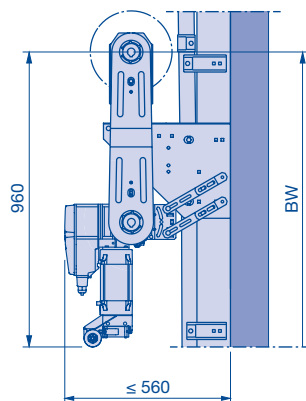
Fitting example ⑥ right



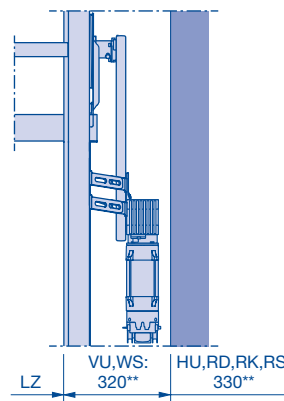
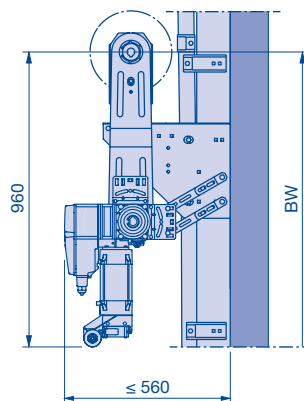
Shaft operator WA 500 FU for track applications HU, RD, RS, RK, VU and WS

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

** Note:

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

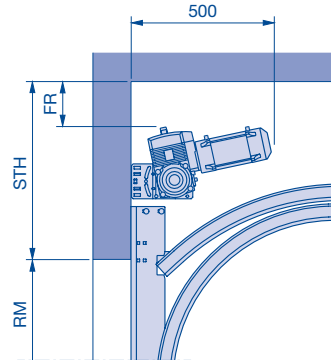
BW Position of shaft support
LZ Clear frame dimension

Shaft operator WA 400 / 500 FU

for central mounting

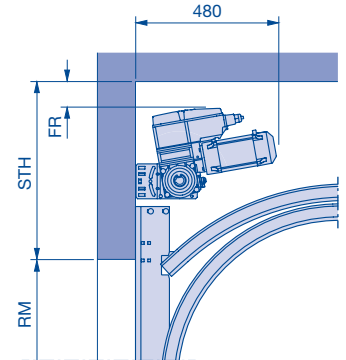
Shaft operator WA 400 / 500 FU for track applications: N and ND

WA 400



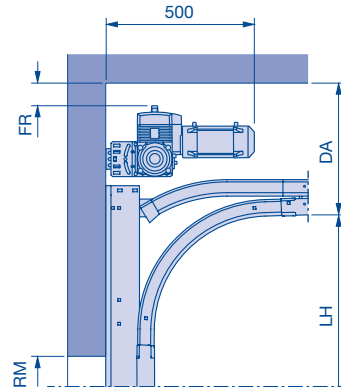
Track application	WA 400		WA 500 FU	
	STH min.	FR min.	STH min.	FR min.
N 1	520	45	590	45
N 2	550	50	615	45
N 3	–	–	675	45
ND 1	520	65	550	48
ND 2	550	75	570	48
ND 3	–	–	675	48
ND 6	560	65	560	48
ND 7	640	75	640	48

WA 500 FU



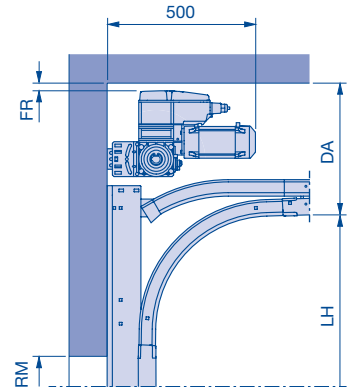
Shaft operator WA 400 / 500 FU for track application: NH and GD

WA 400



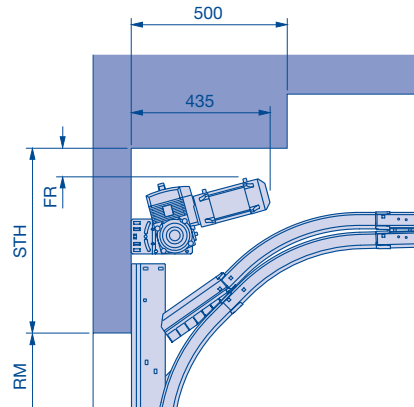
Track application	WA 400		WA 500 FU	
	DA min.	FR min.	DA min.	FR min.
NH 1 / GD 1	415	50	480	45
NH 2 / GD 2	440	50	485	45
NH 3	–	–	565	45

WA 500 FU



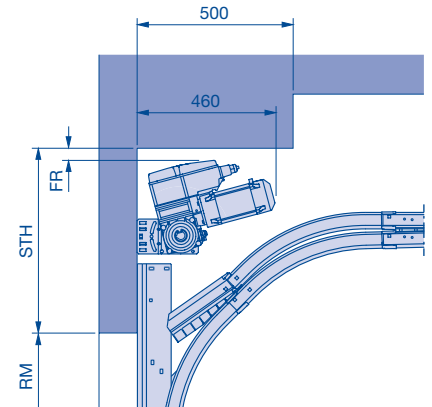
Shaft operator WA 400 / 500 FU for track applications: NS, NK, GS and GK

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

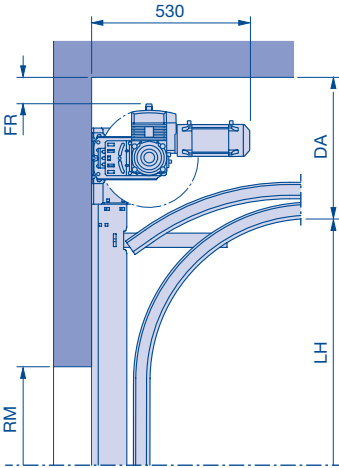
STH Headroom

Shaft operator WA 400 / 500 FU

for central mounting

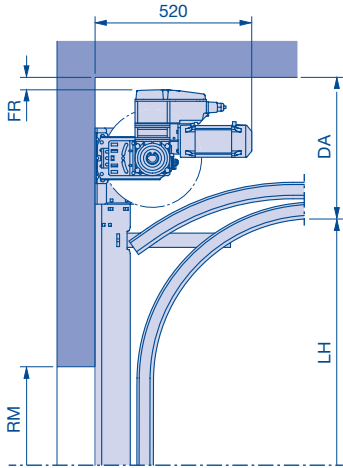
Shaft operator WA 400 / 500 FU for track applications: H, HD, HS and HK

WA 400



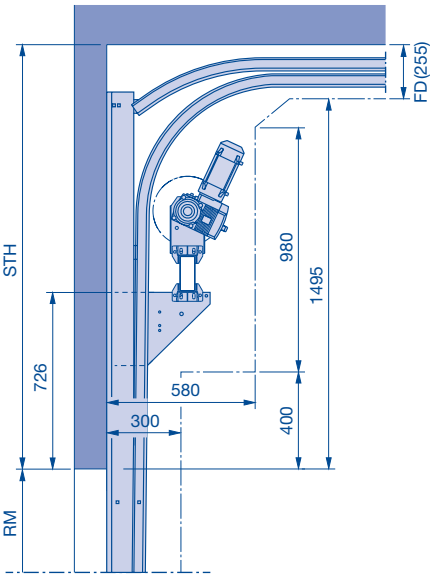
Track application	WA 400		WA 500 FU	
	DA min.	FR min.	DA min.	FR min.
H 4	415	50	480	45
H 5	440	50	485	45
H 8	–	–	565	45
HD / HS / HK	On request			

WA 500 FU



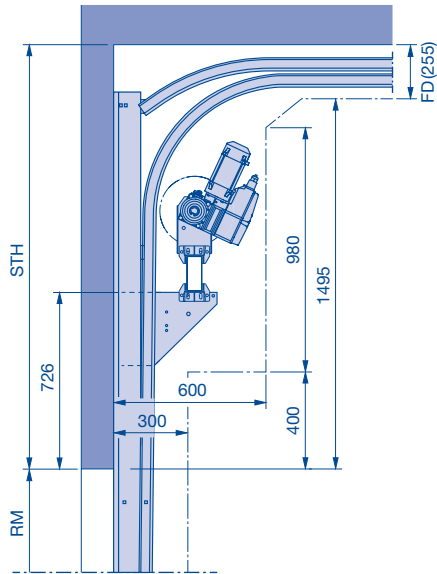
Shaft operator WA 400 / 500 FU for track applications: HU, RD, RS and RK

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!

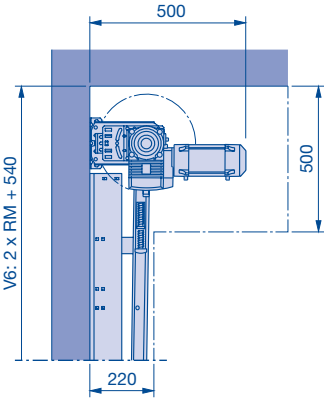
DA	Distance to ceiling	LH	Track height
FR	Clearance ceiling / shaft operator	RM	Grid height

Shaft operator WA 400 / 500 FU

for central mounting

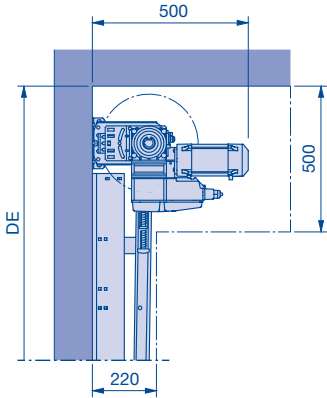
Shaft operator WA 400 / 500 FU for track applications: V and VS

WA 400



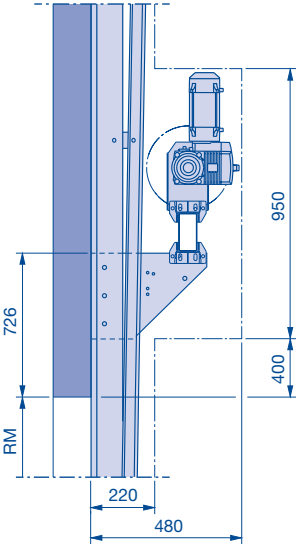
Track application	WA 400	WA 500 FU
VS	On request	

WA 500 FU

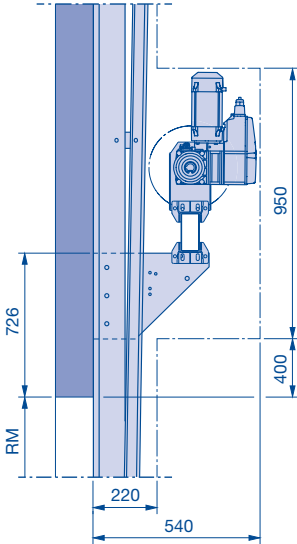


Shaft operator WA 400 / 500 FU for track applications: VU and WS

WA 400



WA 500 FU

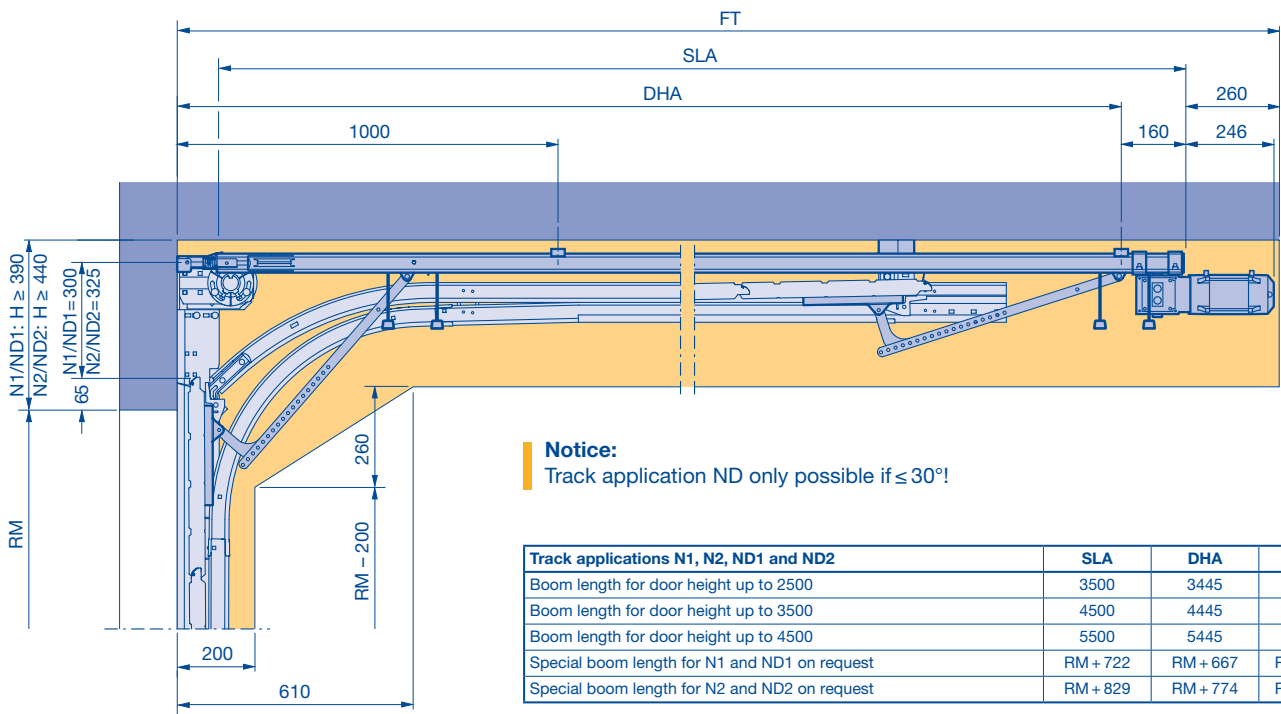


Notice:
Centre motor in conjunction with double spring shaft on request!

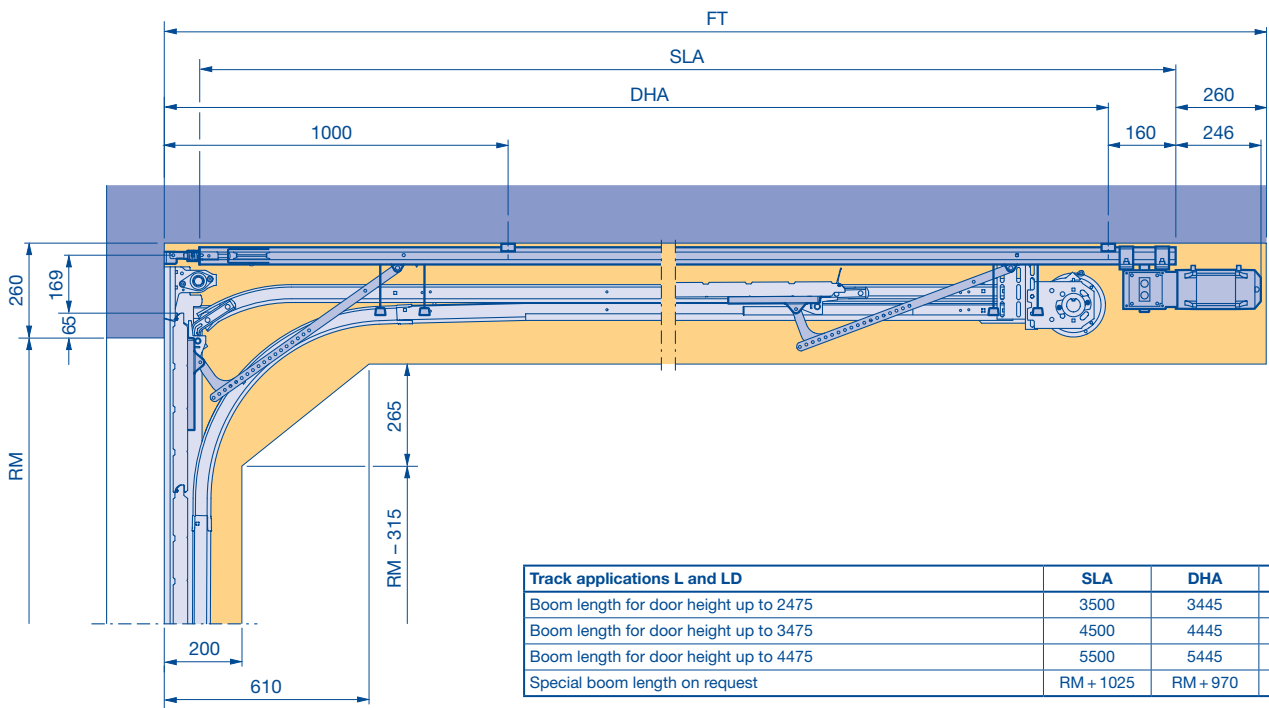
DA Distance to ceiling
LH Track height
RM Grid height

Chain drive operator ITO 400 / 500 FU

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



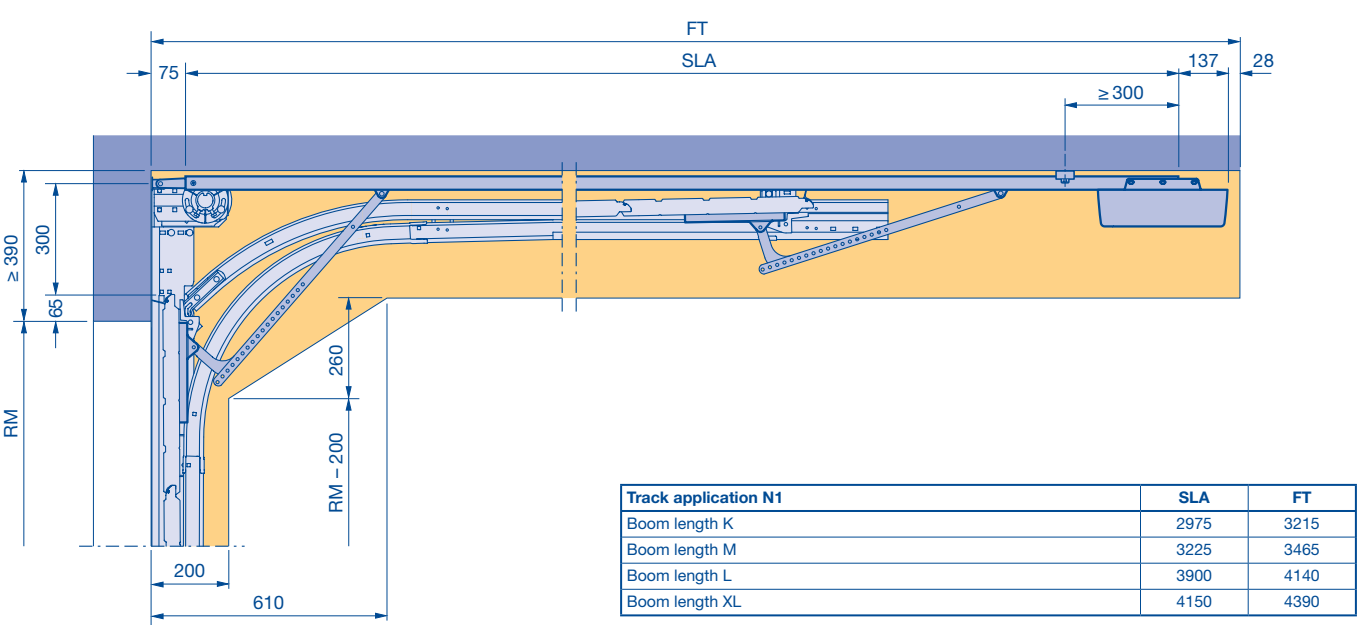
ITO 400 / 500 FU track applications L and LD (doors with wicket door on request)



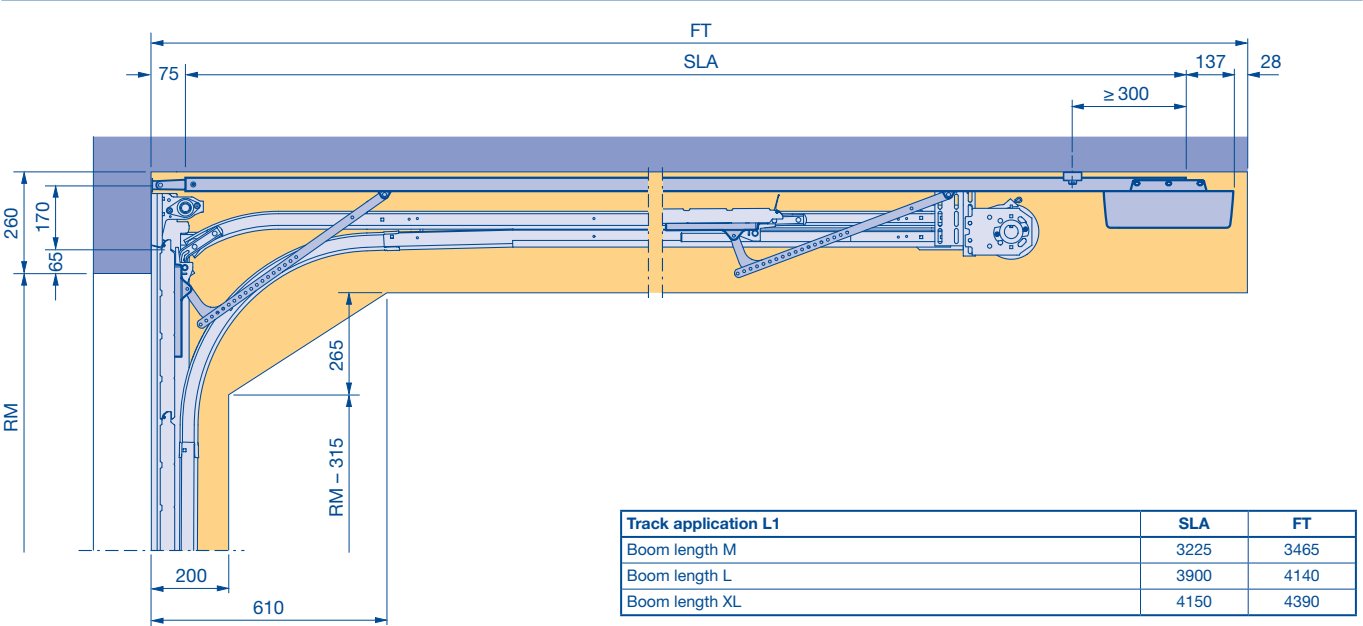
DHA Operator rear ceiling anchor
FT Clearance for door operator
RM Grid height
SLA Operator boom length

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)

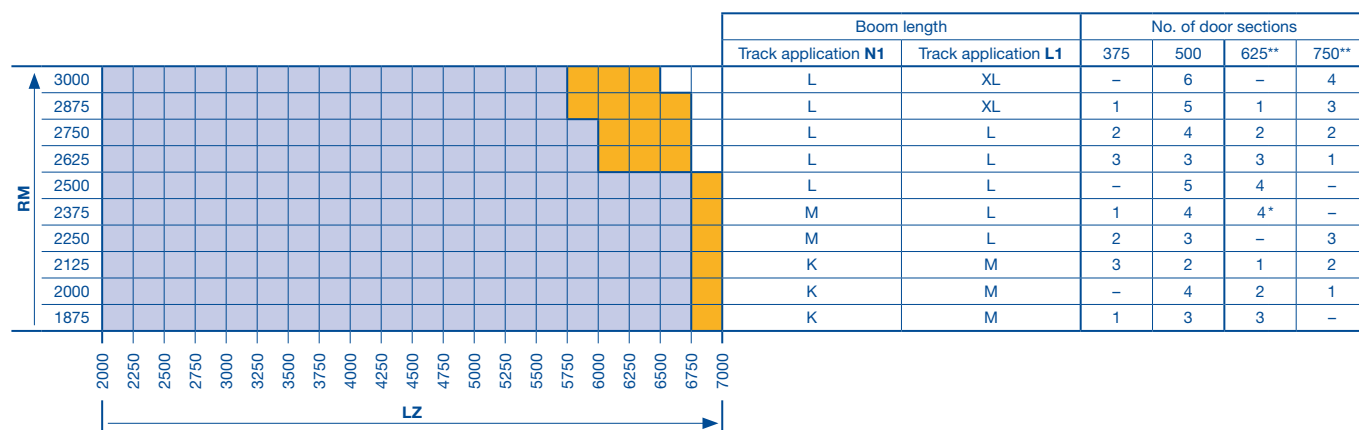
*** Notice:**
Operator not possible for doors with a depth of 67 mm!

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 [1]	24	300 [1]	16	170 [1]	24	300 [1]
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 [2]	275 [1, 2]	19	275 [1]	13	180 [1]	19	275 [1]
N3, NH3, ND3 < 6°	-		-				-			
ND3 ≥ 6°							13	160	19	190
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 [1]	30 / 24	290 [1]	19 / 16	170 [1]	30 / 24	290 [1]
H5, HA5, HU5, HD5, RD5	210 [1]	105 [1]	24 / 19 [2]	290 [1, 2]	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 [1]	24	300 [1]	16	170 [1]	24	300 [1]
V7, VU7, VS7, WG7, WS7	190 [1]	95 [1]	19 [2]	275 [1, 2]	19	275 [1]	13		19	275 [1]
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 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 "Open" direction	In "Close" direction	In "Close" direction	In "Close" direction			In "Open" direction TopSpeed: 0 TopSpeed: 1	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				200	300	500	Yes	Yes	500			200	300
ND7 > 30°				500			Yes	Yes	500 825 [5]	500	500	500	
							-	Yes [4]	1000 [5]			1000	
							Yes	Yes	1000 [5]			1000	
NH3	200	300		500	Yes	Yes	500	200	300	500			
L1, LD1	-	Yes		500	200	250		-	Yes	575 [5]	200	300	375
Yes [4]								1000 [5]	500	500	1000		
L2, LD2			500			-	Yes	575 [5]	200	300	375		
						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	
							Yes	Yes	500 1000 [5]			500	
H8, HD8, HK8, HS8, HU8	Yes	Yes					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	
							Yes	Yes	500 1000 [5]			500	
V9, VU9, VS9, WS9	Yes	Yes					1000 [5]	1000					

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

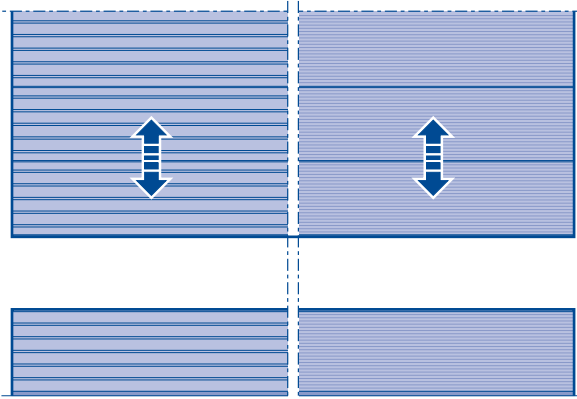
Max. door leaf speed from the open end-of-travel position in the close direction up to approx. 3200 mm above FFL
 Max. door leaf speed from the open end-of-travel position in the close direction up to approx. 500 mm above FFL

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

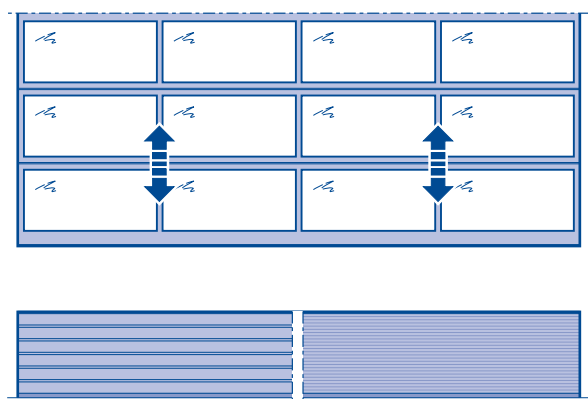
Sectional door

Parcel

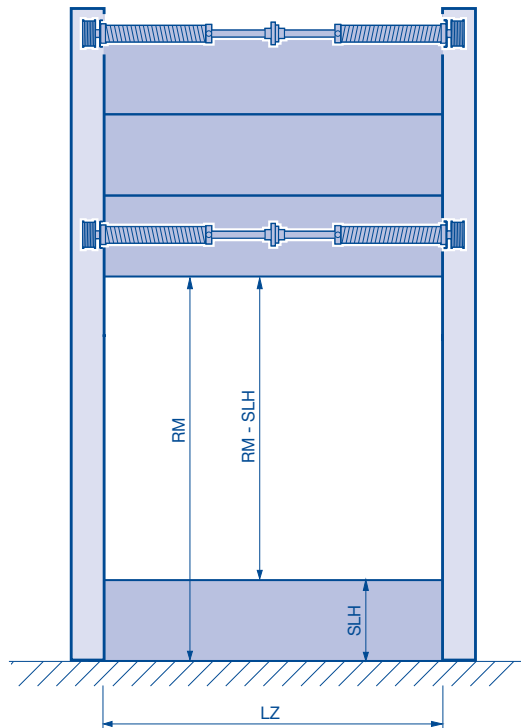
SPU F42



APU F42

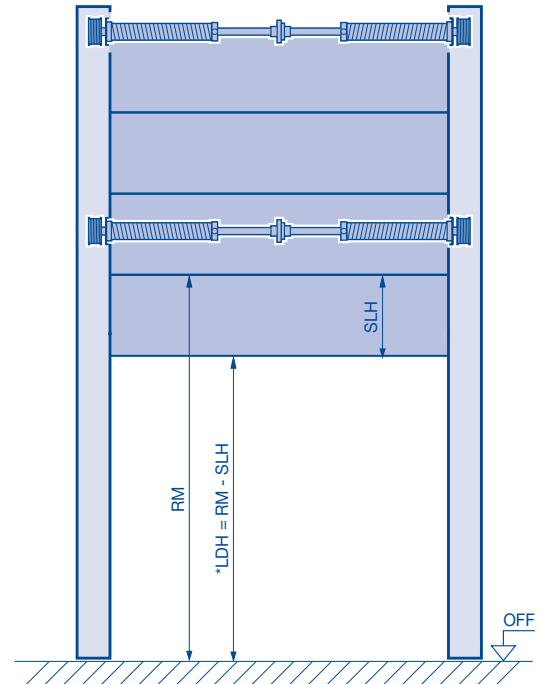


Functional principle



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

*LDH = RM possible on request for Parcel



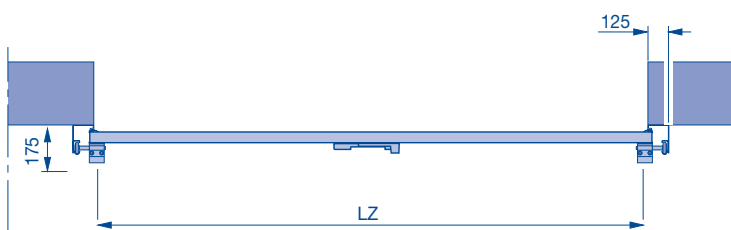
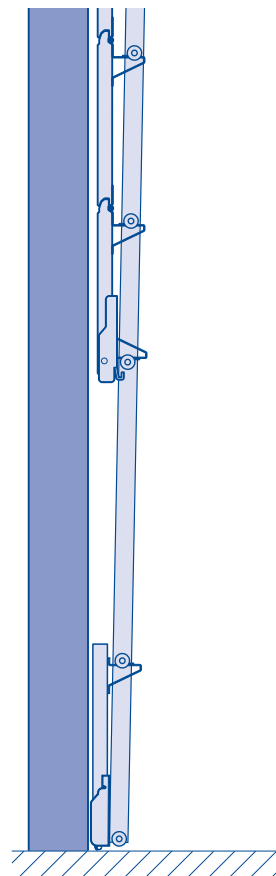
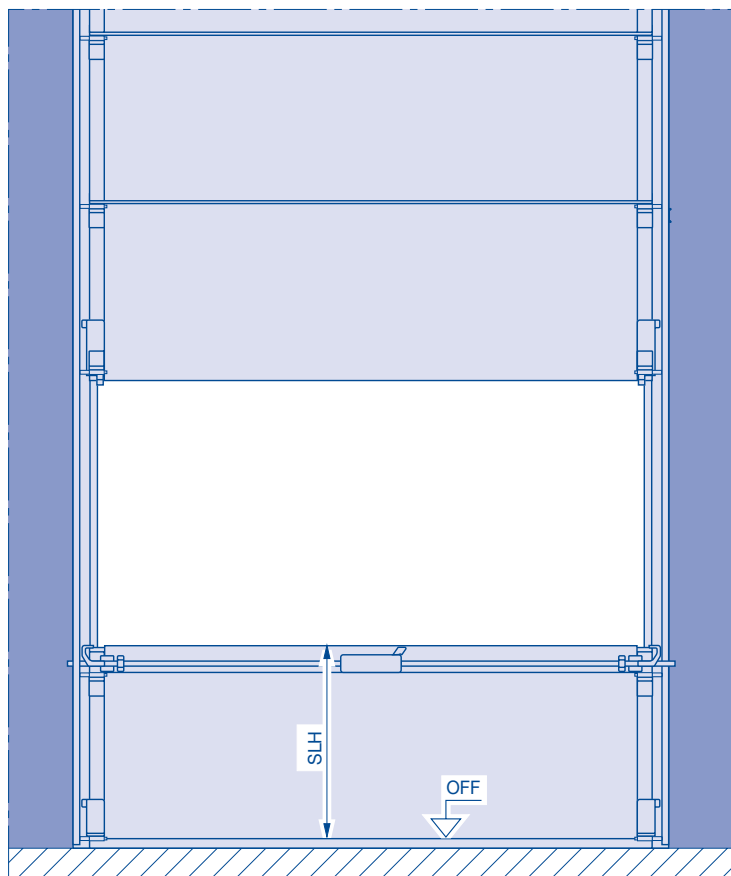
Vans are loaded at floor level. For this purpose, the door is opened completely including the bottom section. When the coupled door is open, the bottom section with the catwalk remains in the top part of the door opening.

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

Dimensions in mm

Sectional door

Parcel

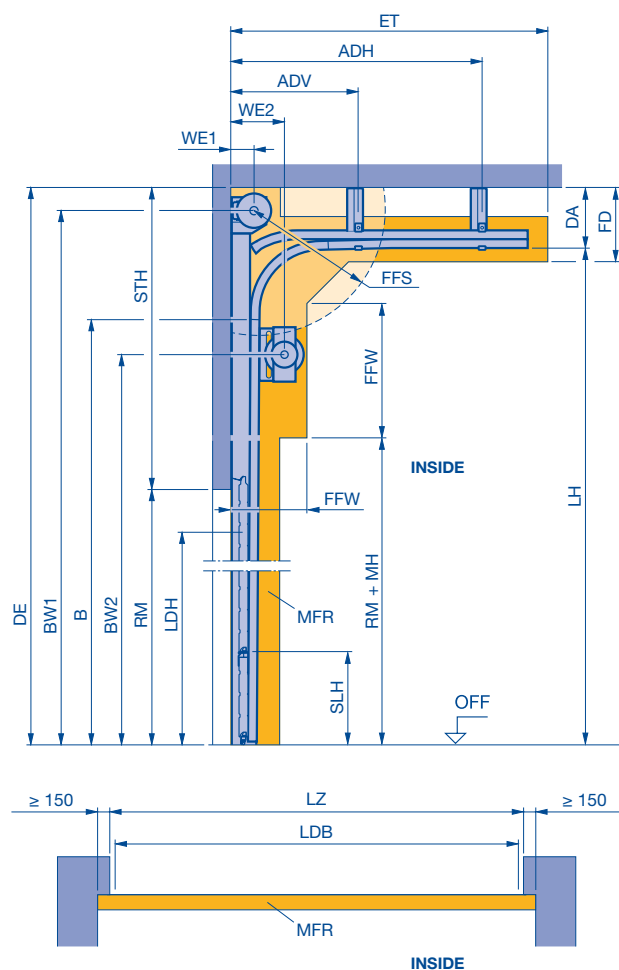


LZ Clear frame dimension
SLH Bottom section height
Dimensions in mm

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	LDH	Clear passage height For Parcel, LDH = RM is available on request
ADV	Distance to front ceiling anchor	LH	Track height (see table)
B	Start of double radius	LZ	Clear frame dimensions (from 1500)
BW	Position of shaft support	MFR	Space for fitting the door on request
DA	Distance to ceiling	MH	Fitting height
DE	Ceiling height	OFF	Finished floor level (FFL)
ET	Distance back on request	RM	Grid height
FD	Min. ceiling clearance	SLH	Bottom section height
FFS	Spring compression clearance	STH	Min. headroom (see page 53)
FFW	Spring shaft clearance	WE	Shaft centre from lintel (see table)
LDB	Clear passage width with ThermoFrame (see page 78)		

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	On request
3500	5060	
3375	4935	
3250	4810	
3125	4685	

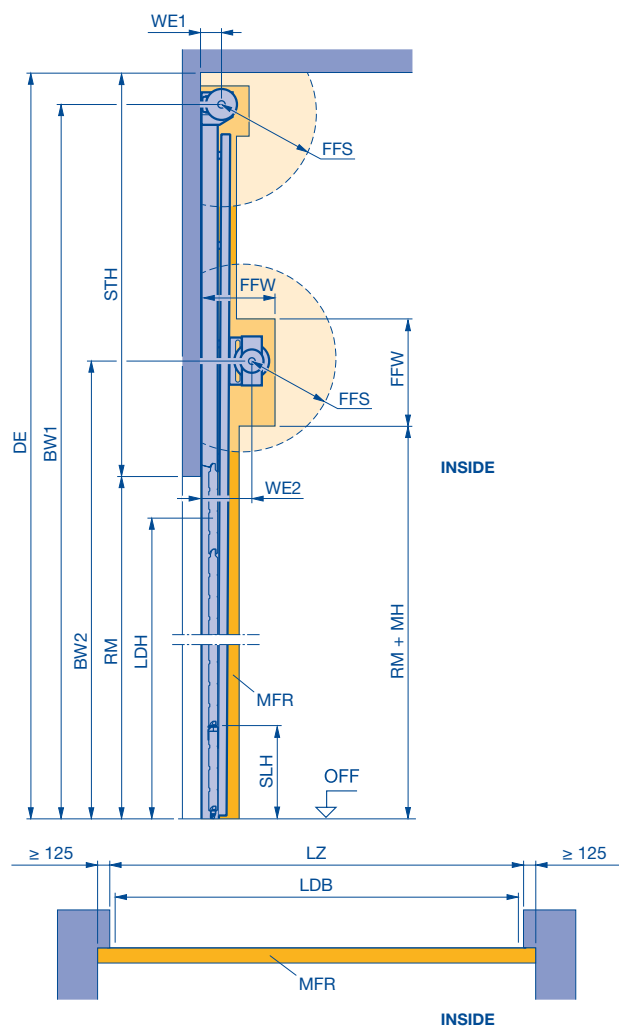
	B	BW1	BW2	DA	WE1	WE2
HP 4	LH - 366	LH + 231	RM + 940	Min. 370	160	315
HP 5				Min. 400	180	

DAL	FD	FFS	FFW	LDH	MH	SLH
DE - LH - 15	DA + 65	Min. 90° (745)	460 × 850	RM - SLH	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 compression clearance	MH	Fitting height
FFW	Spring shaft clearance	OFF	Finished floor level (FFL)
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 the 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	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 smooth, anodised 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 smooth, anodised aluminium sheet cover on both sides $U_g = 1.2 \text{ W/m}^2\cdot\text{K}$ [6]	TU	TU	TU	TU	TU	–	–
Clear synthetic double pane, 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, white tinted (opal), 26 mm, $U_g = 2.6 \text{ W/m}^2\cdot\text{K}$	M2	M2	M2	M2	M2	–	–
Clear synthetic triple pane, 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, white tinted (opal), 26 mm, $U_g = 1.9 \text{ W/m}^2\cdot\text{K}$	M3	M3	M3	M3	M3	–	–
Clear polycarbonate double pane, 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]	HS	HS	HS	HS	HS	–	–

[1] **Note:** 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

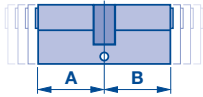
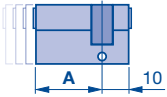
[5] On request; infill weight and thickness must be specified (anodised glazing beads required)

[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
						46	103,55	1035,5

Overview

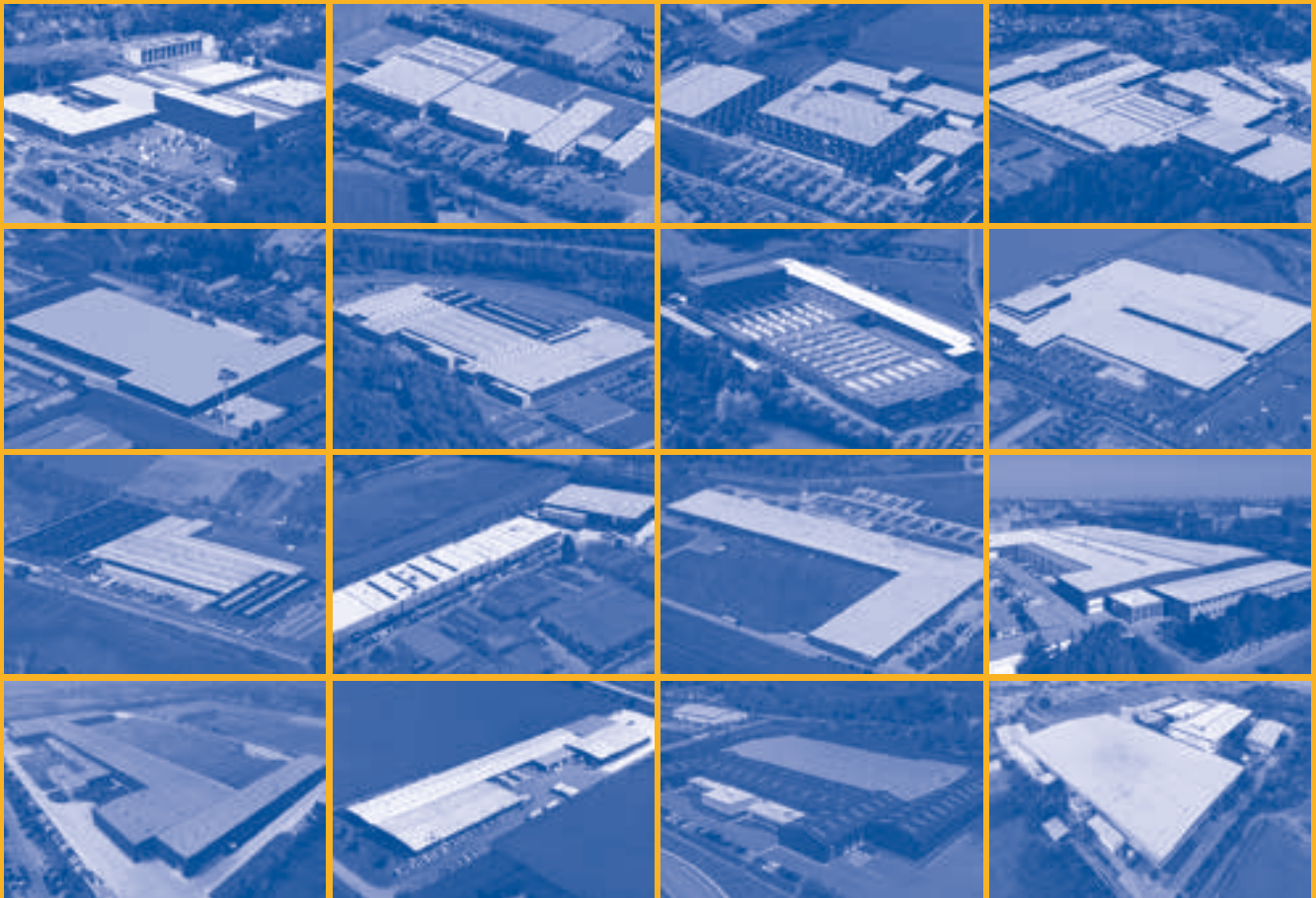
Profile cylinder

Product type			Glazing frame	Door lock		Wicket door	Optional extras	Operator accessories
	Double cylinder PC length (L): Interior (A) + exterior (B)	Half cylinder PC length (L): Closing side (A) + blind side		Standard	Recessed			
SPU 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 in acc. with DIN 1303
(digit 7 = grade 5, digit 8 = grade 1)

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The family-owned company Hörmann offers all important construction components for building and renovating projects from a single source. We manufacture in highly-specialised factories using the latest production technologies. Furthermore, our employees work intensively on new products, continual further developments and improvements to details. The results are patents and one-of-a-kind products you can depend on.



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