



Industrial Sectional Doors Depth 42 mm

Technical Manual: Issue 01.04.2014



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

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Subject to design changes.

Product Descriptions

Door type	Door leaf / wicket door
Sectional door SPU F42, double-skinned steel sections, 625 and 750 mm high, Stucco-textured / Micrograin	
Door leaf	Door sections made of polyurethane-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	Installed in the centre fields of the sectional door. Cannot be installed in the outer fields – note the arrangement! Only opening outwards, LH or RH hinged. Ventilation grilles are not possible in wicket doors. 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 extrusions in the standard version or with thermal breaks or alternatively sections with compound glazing are possible within the size range 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 sections, 375 and 500 mm high, Stucco-textured / Micrograin	
Door leaf	Door sections made of polyurethane-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	Installed in the centre fields of the sectional door. Cannot be installed in the outer fields – note the arrangement! Only opening outwards, LH or RH hinged. Ventilation grilles are not possible in wicket doors. 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 extrusions in the standard version or with thermal breaks or alternatively sections with compound glazing are possible within the size range 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, aluminium extrusions, double-skinned bottom section	
Door leaf	Bottom section of hot-galvanized sections, infilled with polyurethane foam, 750 (standard version), or 1500 mm high, Stucco-textured inside and outside with uniform horizontal ribbing, or Micrograin with fine horizontal embossing outside and Stucco-textured inside. Surface protection with polyester-primer coating. Other door sections with glazing of anodised aluminium extrusions in the standard version (APU F42) or with thermal breaks (APU F42 Thermo). Depth 42 mm. All door sections with finger trap protection. Infill: clear synthetic double panes, 26 mm. Ventilation grilles in the bottom section optional.
Wicket door	Depending on the door type, made of anodised aluminium extrusions in the standard version or with thermal breaks, installed in the centre fields of the door. Cannot be installed in the outer fields – note the arrangement! Only opening outwards, LH or RH hinged. Ventilation grilles are not possible in wicket doors. Attention (for threshold rail): If the wicket door has the same number of sections as the sectional door, the clear opening height must not be lower than the door height (RM).
Sectional door APU F42 S-Line, aluminium extrusions, double-skinned bottom section	
Door leaf	Bottom section of hot-galvanized sections, infilled with polyurethane foam, 750 (standard version), or 1500 mm high, Stucco-textured inside and outside with uniform horizontal ribbing, or Micrograin with fine horizontal embossing outside and Stucco-textured inside. Surface protection with polyester-primer coating. Other door sections with glazing of anodised aluminium extrusions in the standard version. Depth 48.5 mm. All door sections with finger trap protection. Infill: clear synthetic double panes, 26 mm. Ventilation grilles in the bottom section optional.
Sectional door ALR F42 / ALR F42 Thermo, aluminium extrusions	
Door leaf	Door sections made of anodised aluminium extrusions in the standard version (ALR F42) or with thermal breaks (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, other door sections with 26 mm clear synthetic double panes. Ventilation grilles in the bottom section optional.
Wicket door	Depending on the door type, made of anodised aluminium extrusions in the standard version or with thermal breaks, installed in the centre fields of the door. Cannot be installed in the outer fields – note the arrangement! Only opening outwards, LH or RH hinged. Ventilation grilles are not possible in wicket doors. Attention (for threshold rail): If the wicket door has the same number of sections as the sectional door, the clear opening height must not be lower than the door height (RM).
Sectional door ALR F42 S-Line, aluminium extrusions	
Door leaf	Door sections made of anodised aluminium extrusions in the standard version, depth 48.5 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, other door sections with 26 mm clear synthetic double panes. Ventilation grilles in the bottom section optional.

Product Descriptions

Door type	Door leaf / wicket door
Sectional door ALR F42 Glazing, aluminium extrusions	
Door leaf	Door sections made of anodised aluminium extrusions in the standard version. Depth 42 mm. All door sections with finger trap protection. All door section infills in 6-mm laminated safety glass. Uniform infill heights.
Sectional door ALR F42 Vitraplan, aluminium extrusions	
Door leaf	Door sections of standard polyester primer-coated aluminium extrusions. Depth 42 mm. All door sections with finger trap protection and synthetic double panes, 26 mm, clear, and 4 mm transparent synthetic glazings fitted in front, in a choice of brown or grey. Ventilation grilles are not possible in the bottom section.
Frame / track application	
Enclosed, moulded angle frame with pressed-fitted external seal, made of hot-galvanized steel with screwed safety tracks.	
Door lock	
Manually operated	Inside locking using a shootbolt, self-locking rotary latch (with track applications that have a low-mounted torsion spring shaft on request) 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, NB, ND, NS, NK, NA, NH, GD, GS, L and LD for at least 25000 closing cycles und for all other track applications for at least 50000 closing cycles.	
Safety-related equipment according to DIN EN 12604	
- Manually operated doors using a torsion spring with approved catch safety device *) - Manually operated doors that have more than one torsion spring with approved spring safety device *) over a door height of 5000 mm, additional approved catch safety devices *) - Power-driven doors with break-in-resistant anti-lift kit - Inner and outer finger trap protection * European patent	
Seals	
Floor seal made of 3-chamber EPDM profile with flexible adjustment lip, side seal, lintel seal and intermediate seal between the sections.	

Technical Data Overview

Construction and quality features

SPU F42

Resistance to wind load EN 12424	Door without wicket door, class	3 ⁶⁾
	Door with wicket door, LZ ≤ 4000, class	3 ⁶⁾
	Door with wicket door, LZ > 4000, class	2 ⁷⁾
Water tightness EN 12425	Door without wicket door, class	3 (70 Pa)
Air permeability EN 12426	Door without wicket door, class	2 ⁸⁾
	Door with wicket door, class	1 ⁹⁾
Acoustic insulation EN 717-1	Door without wicket door R = . . . dB	25
	Door with wicket door R = . . . dB	24
Thermal insulation EN 13241-1, appendix B EN 12428	Door without wicket door, U = W/(m²·K) ²⁾	1.0 (0.94 ⁴⁾)
	- Optional triple glazing, U = W/(m²·K) ²⁾	–
	- Optional climatic double panes (single-pane safety glass) U = W/(m²·K) ²⁾	–
	- Optional double panes (single-pane safety glass) U = W/(m²·K) ²⁾	–
	Door with wicket door, U = W/(m²·K) ²⁾	1.2 (1.2 ⁴⁾)
	- Optional triple glazing, U = W/(m²·K) ²⁾	–
Fire protection	- Section, U = W/(m²·K)	0.5
	Class	B2
Design	Self-supporting	●
	Depth, mm	42
Door sizes	Max. width mm, LZ	8000
	Max. height mm, RM ³⁾	7500
Space requirements	From page 39	
Material, door leaf	Steel, double-skinned, 42 mm	●
	Aluminium, standard profile	–
	Aluminium, profile with thermal break	–
Surface, door leaf	Galvanized steel, coated RAL 9002	●
	Galvanized steel, coated RAL 9006	○
	Galvanized steel, coated RAL to choose	○
	Anodised aluminium E6 / C0 (previously E6 / EV 1)	○
	Aluminium coated in RAL to choose	○
Wicket door	With trip-free threshold	○
Side door	Matching the door	○
Glazings	Type A section window	○
	Type D section windows	○
	Type E section windows	○
	Aluminium glazing frames	○
Seals	All-round on 4 sides	●
	Intermediate seal between the door sections	●
ThermoFrame	PVC hard / soft seal	○
Locking systems	Internal latches	●
	Outside / inside locking	○
Anti-lift kit	For doors of up to 5 m with shaft operator	●
Safety equipment	Finger trap protection	●
	Side trap guard	●
	Spring break safeguard for manual operation	●
	Safety catch for doors with shaft operator	●
Fastening options	Concrete	●
	Steel	●
	Brickwork	●
	Others on request	

● = Standard

○ = Optional

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

2) For a door surface of 5000 × 5000 mm

3) 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 3 = 0.7 kN/m² or 120 km/h

7) Class 2 = 0.45 kN/m² or 96 km/h

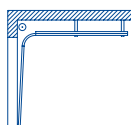
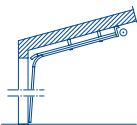
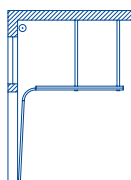
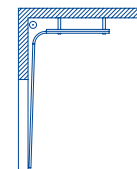
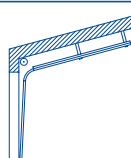
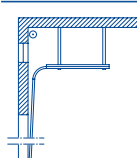
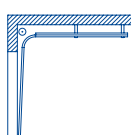
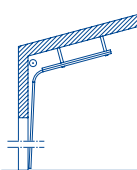
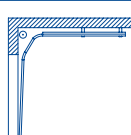
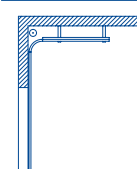
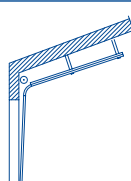
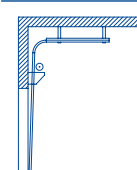
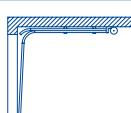
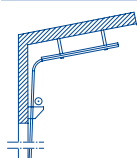
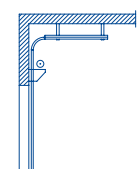
8) Class 2 = 12 m³/m²h

9) Class 1 = 24 m³/m²h

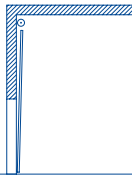
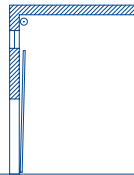
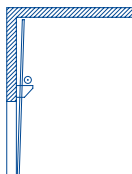
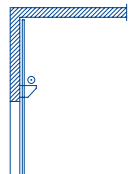
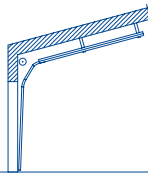
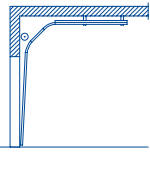
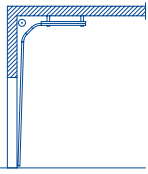
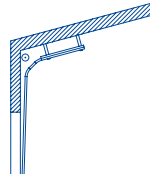
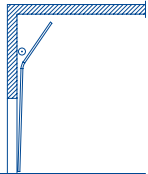
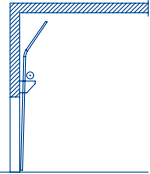
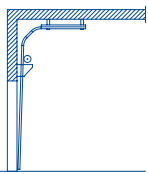
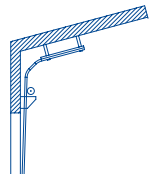
Technical Data Overview

ALR F42							
APU F42 S-Line	APU F42	APU F42 Thermo	ALR F42 S-Line	ALR F42	ALR F42 Thermo	ALR F42 Vitraplan	ALR F42 Glazing
3 ⁶⁾	3 ⁶⁾	3 ⁶⁾	3 ⁶⁾	3 ⁶⁾	3 ⁶⁾	3 ⁶⁾	3 ⁶⁾
–	3 ⁶⁾	3 ⁶⁾	–	3 ⁶⁾	3 ⁶⁾	–	–
–	2 ⁷⁾	2 ⁷⁾	–	2 ⁷⁾	2 ⁷⁾	–	–
3 (70 Pa)	3 (70 Pa)	3 (70 Pa)	3 (70 Pa)	3 (70 Pa)	3 (70 Pa)	3 (70 Pa)	3 (70 Pa)
2 ⁸⁾	2 ⁸⁾	2 ⁸⁾	2 ⁸⁾	2 ⁸⁾	2 ⁸⁾	2 ⁸⁾	2 ⁸⁾
–	1 ⁹⁾	1 ⁹⁾	–	1 ⁹⁾	1 ⁹⁾	–	–
23	23	23	22	23 (30 ¹⁾)	23 (30 ¹⁾)	23	30 ¹⁾
–	22	22	–	22	22	–	–
3.3 (3.2 ⁴⁾)	3.4 (3.3 ⁴⁾)	2.9 (2.8 ⁴⁾)	3.5 (3.4 ⁴⁾)	3.6 (3.6 ⁴⁾)	3.0 (3.0 ⁴⁾)	3.2 (3.4 ⁴⁾)	6.1 (6.1 ⁴⁾)
2.8 (2.7 ⁴⁾)	3.0 (2.9 ⁴⁾)	2.5 (2.4 ⁴⁾)	3.0 (2.9 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⁾)
–	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⁾)	–	–
–	–	–	–	–	–	–	–
B2	B2	B2	B2	B2	B2	B2	B2
●	●	●	●	●	●	●	●
42 / 48.5	42	42	48.5	42	42	42	42
5000	8000	7000	5000	8000	7000	6000	5500
7500	7500	7500	7500	7500	7500	7500	4000
●	●	●	–	–	–	–	–
●	●	–	●	●	–	●	●
–	–	●	–	–	●	–	–
○	○	○	–	–	–	–	–
●	●	●	–	–	–	–	–
○	○	○	–	–	–	–	–
●	●	●	●	●	●	●	●
○	○	○	○	○	○	○	○
–	○	○	–	○	○	–	–
○	○	○	○	○	○	○	–
–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
○	○	○	○	○	○	○	○
●	●	●	●	●	●	●	●
○	○	○	○	○	○	–	–
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●

Overview of Track Applications

N  Normal track application	LD  Like track application L, with inclination Door height RM ≤ 5000 mm
NA  Like track application N, with high-mounted torsion spring shaft Door height RM ≤ 5000 mm	H  High-lift track
ND  Like track application N, with inclination	HA  Like track application H, with high-mounted torsion spring shaft Door height RM ≤ 3500 mm
NH  Like track application N, with minimum high-lift	HD  Like track application H, with inclination
NS  Like track application N, with double radius 2 × 45° Door height RM ≤ 5000 mm	HG  Like track application H, with steep track and minimum slot width of 120 mm (for loading ramp doors) Door width LZ ≤ 3500 mm Door height RM ≤ 5000 mm Not possible for door types APU F42 S-Line / ALR F42 S-Line / ALR F42 Glazing and doors with wicket door and with real glass infill!
GD  Like track application NH, with inclination (maximum 27°) Door height RM ≤ 5000 mm	HU  Like track application H, with low-mounted torsion spring shaft Door height RM ≤ 5000 mm
L  Low headroom track application Door height RM ≤ 5000 mm	RD  Like track application HU, with inclination Door height RM ≤ 5000 mm
	RG  Like track application HU, with steep track and minimum slot width of 120 mm (for loading ramp doors) Door width LZ ≤ 3500 mm Door height RM ≤ 5000 mm Not possible for door types APU F42 S-Line / ALR F42 S-Line / ALR F42 Glazing and doors with wicket door and with real glass infill!

Overview of Track Applications

V  Vertical track application (additional hand pulley required for manually operated doors!)	VA  Like track application V, with high-mounted torsion spring shaft (additional hand pulley required for manually operated doors!) Door height RM ≤ 3500 mm
VU  Like track application V, with low-mounted torsion spring shaft (additional hand pulley required for manually operated doors!)	WG  Like track application VU, with steep track and minimum slot width of 120 mm (for loading ramp doors) (additional chain hoist required for manually operated doors!) Door width LZ ≤ 3500 mm Door height RM ≤ 5000 mm Not possible for door types APU F42 S-Line / ALR F42 S-Line / ALR F42 Glazing and doors with wicket door and with real glass infill!
Note: An in-factory technical inspection is required for the following track applications.	
NK  Like track application NS, but the degree values of both radii are adapted to the situation on site Door height RM ≤ 5000 mm	GS  Like track application NH with 2 × 45° – double radius Door height RM ≤ 5000 mm
HS  Like track application H, with double radius 2 × 45°	HK  Like track application HS, but the degree values of both radii are adapted to the situation on site
VS  Like 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  Like 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!)
RS  Like track application HU, with 2 × 45° – double radius Door height RM ≤ 5000 mm	RK  Like track application RS, but the degree values of both radii are adapted to the situation on site Door height RM ≤ 5000 mm

Sectional Door SPU F42

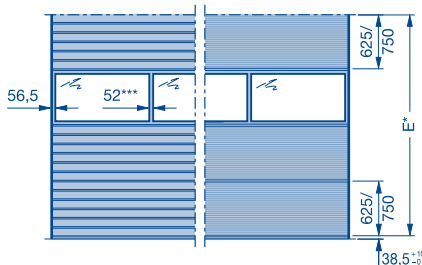
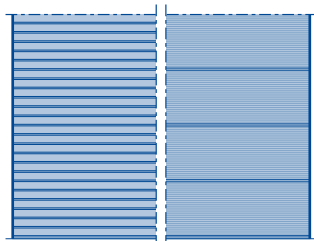
Double-skinned steel sections

625 and 750 mm high

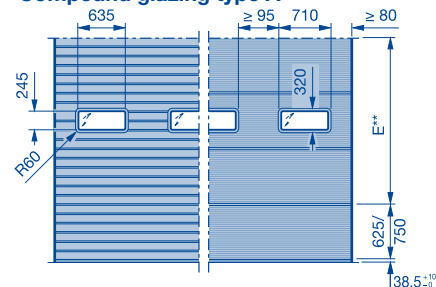
Stucco-textured / Micrograin

External views

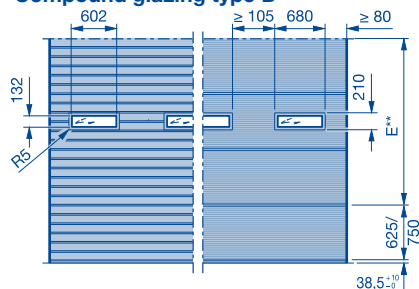
Glazing frames



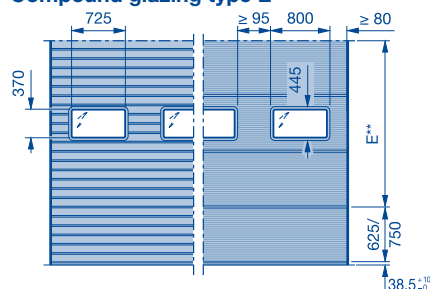
Compound glazing type A



Compound glazing type D



Compound glazing type E



- E* Fitting area for frames with glazing
- E** Fitting area for compound glazing
- *** Optionally with wide rail extrusions (91 mm)

Size range

		[A]	
		TH 625	TH 750
Range 3	7500	-	10
	7375	1	9
	7250	2	8
Range 2	7125	3	7
	7000	4	6
	6875	5	5
Range 1	6750	-	9
	6625	1	8
	6500	2	7
Range 0	6375	3	6
	6250	4	5
	6125	5	4
Range -1	6000	-	8
	5875	1	7
	5750	2	6
Range -2	5625	3	5
	5500	4	4
	5375	5	3
Range -3	5250	-	7
	5125	1	6
	5000	2	5
Range -4	4875	3	4
	4750	4	3
	4625	5	2
Range -5	4500	-	6
	4375	1	5
	4250	2	4
Range -6	4125	3	3
	4000	4	2
	3875	5	1
Range -7	3750	-	5
	3625	1	4
	3500	2	3
Range -8	3375	3	2
	3250	4	1
	3125	5	-
Range -9	3000	-	4
	2875	1	3
	2750	2	2
Range -10	2625	3	1
	2500	4	-
	2375	5	1****
Range -11	2250	-	3
	2125	1	2
	2000	2	1
Range -12	1875	3	-
	1750	4	-
	1625	5	-

In the size range shown, any door width can be manufactured in 10-mm increments and any door height in the 125-mm grid, taking the min. ceiling height into account. Intermediate heights using aluminium glazing frames or shortened top door section are possible.

Notes:

- When using a shaft operator (installation example 5), the door lock is always on the side opposite the operator
- For a view of the matching appearance with doors with wicket doors see page 30 – 32.
- Number of glazings, matching view to series 40, see page 33.

Table 1:

Number of compound glazings per door section

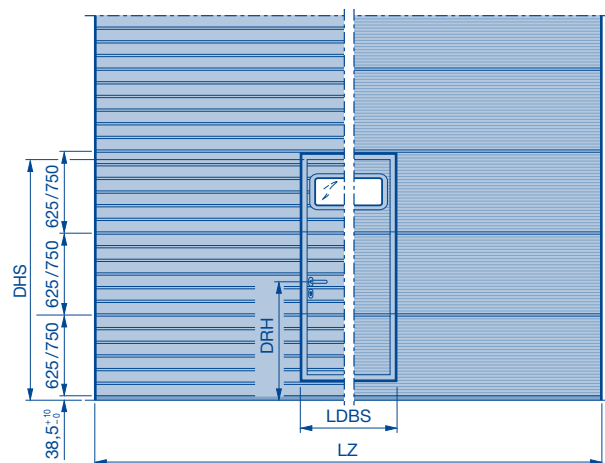
Type	Quantity	Door width
A, D	1	A: 1200 – 1670 mm D: 1200 – 1630 mm
	2	A: 1680 – 3000 mm D: 1640 – 3000 mm
	3	3010 – 4500 mm
	4	4510 – 5500 mm
	5	5510 – 6000 mm
E	1	1200 – 1850 mm
	2	1860 – 3000 mm
	3	3010 – 4500 mm
	4	4510 – 5500 mm
	5	5510 – 6000 mm

On request

- [A] No. of door sections
- RM Grid height
- LZ Clear frame dimensions (from 1200)
- up to LZ
- SPB Rail width
- TH Door section height
- **** Top door section 500 mm

625 and 750 mm high, Stucco-textured / Micrograin

External views



**** Note on fitting compound glazings:**

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

Clear passage width (LDBS) = 940 mm*

* For a door width of 1750–1840 mm, the clear passage width is 833 mm.

Lever heights (DRH)

Bottom door section 625 = 955.5

Bottom door section 750 = 1080.5

Size range

In the size range shown, any door width can be manufactured in 10-mm increments and any door height in the 125-mm grid, taking the min. ceiling height into account. Intermediate heights using aluminium glazing frames or shortened door section above wicket door are possible.

		SH										TH 625		[A]	TH 750		[D]
Range 3	RM	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	+		2205
		6750											6750	-		9	2205
		6625											6625	1	+	8	2205
		6500											6500	2	+	7	2205
		6375											6375	3	+	6	2205
		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 2	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	
Range 1	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	2205	
	2125											2125	1	+	2	2080	
2000											2000	2	+	1	1955		
		3					4					Number of infills / fields per aluminium frame					
		2			3			4			Number of compound glazings per door section**						
		(Number of infills / fields - 1) × 2										Number of ventilation grilles, ventilation area					
												40 cm² per grille					
		2000	2250	2500	2750	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500	
		SPB 52															
		LZ															

Notes:

- When using a shaft operator (installation example 5), the door lock is always on the side opposite the operator
- For a view of the matching appearance with doors without wicket doors see page 30 – 32.
- Number of glazings, matching view to series 40, see page 33.



On request



Glazings on request

[A] No. of door sections

[D] Clear passage heights (DHS) of wicket door to grid height

SH Threshold height (200)

SPB Rail width

TH Door section height

DHS Clear passage height of wicket door

RM Grid height

LDBS Clear passage width

DRH Lever height

LZ Clear frame dimensions (from 1750)

*** Top door section 500 mm

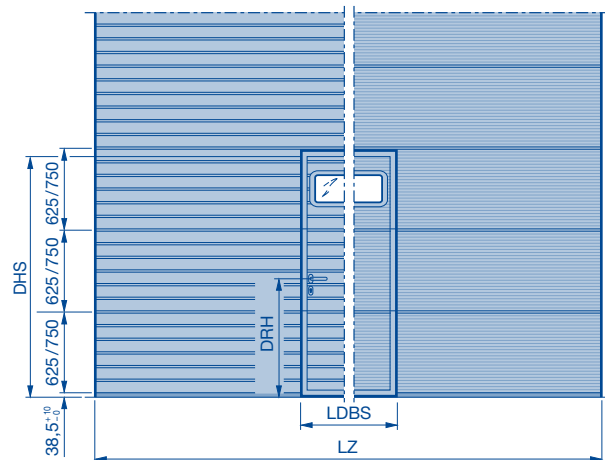
Sectional Door SPU F42

With Wicket Door with Trip-Free Threshold

Double-skinned steel sections

625 and 750 mm high, Stucco-textured / Micrograin

External views



** Note on fitting compound glazings:

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

Clear passage width (LDBS) = 940 mm*

* For a door width of 1750–1840 mm, the clear passage width is 833 mm.

Lever heights (DRH)

Bottom door section 625 = 955.5

Bottom door section 750 = 1080.5

Size range

In the size range shown, any door width can be manufactured in 10-mm increments and any door height in the 125-mm grid, taking the min. ceiling height into account. Intermediate heights using aluminium glazing frames or shortened door section above wicket door are possible.

		SH										TH 625		[A]		TH 750		[D]	
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	-			4		2205	
	6625											6625	1	+		3		2205	
	6500											6500	2	+		2		2205	
	6375											6375	3	+		1		2205	
Range 2	6250											6250	4	+		0		2205	
	6125											6125	5	+		-		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	-			2		2205	
	5125											5125	1	+		1		2205	
Range 1	5000											5000	2	+		0		2205	
	4875											4875	3	+		-		2205	
	4750											4750	4	+		-		2205	
	4625											4625	5	+		-		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	-			0		2205		
3625											3625	1	+		-		2205		
3500											3500	2	+		-		2205		
3375											3375	3	+		-		2080		
3250											3250	4	+		-		1955		
3125											3125	5	+		-		1830		
3000											3000	-			-		2205		
2875											2875	1	+		-		2205		
2750											2750	2	+		-		2080		
2625											2625	3	+		-		1955		
2500											2500	4	+		-		1830		
2375											2375	5	+		-		1830		
2250											2250	-			-		2125		
2125											2125	1	+		-		2000		
2000											2000	2	+		-		1875		

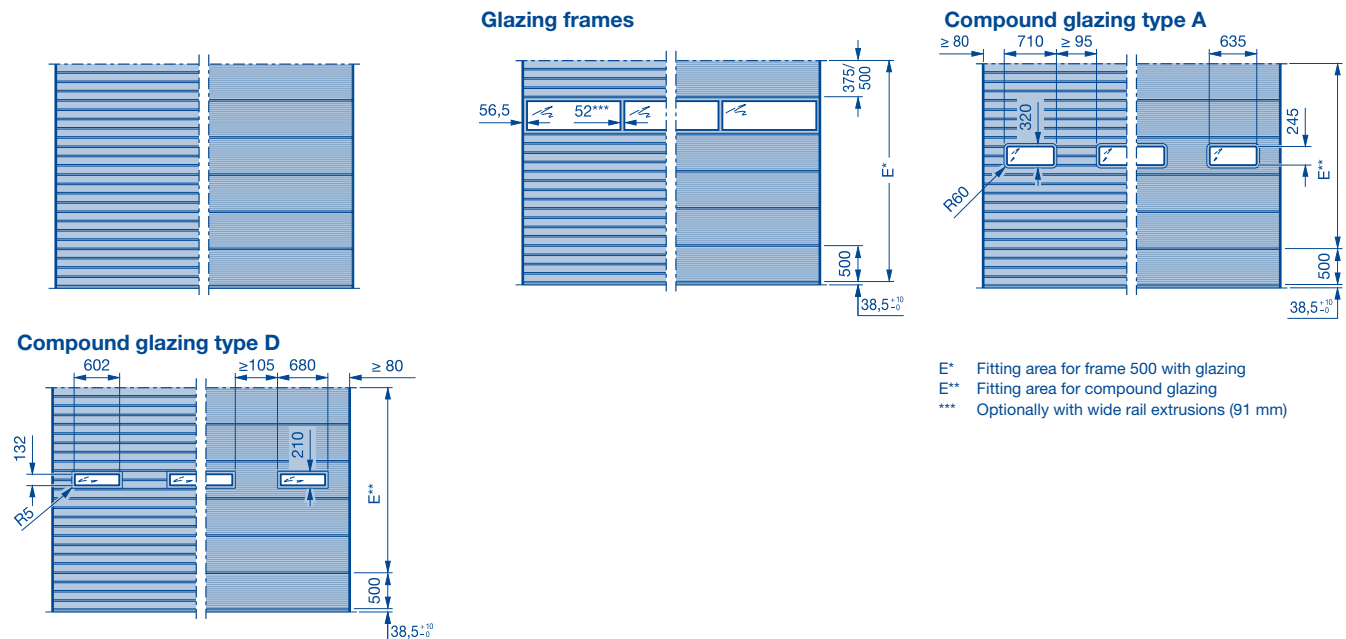
Sectional Door SPU F42

Double-Skinned Steel Sections

375 and 500 mm high

Stucco-textured / Micrograin

External views



Size range

										[A]		
										TH 375	TH 500	
Range 3	7500									7500	-	15
	7375									7375	1	+ 14
	7250									7250	2	+ 13
	7125									7125	3	+ 12
	7000									7000	-	14
	6875									6875	1	+ 13
	6750									6750	2	+ 12
	6625									6625	3	+ 11
	6500									6500	-	13
	6375									6375	1	+ 12
Range 2	6250									6250	2	+ 11
	6125									6125	3	+ 10
	6000									6000	-	12
	5875									5875	1	+ 11
	5750									5750	2	+ 10
	5625									5625	3	+ 9
	5500									5500	-	11
	5375									5375	1	+ 10
	5250									5250	2	+ 9
	5125									5125	3	+ 8
Range 1	5000									5000	-	10
	4875									4875	1	+ 9
	4750									4750	2	+ 8
	4625									4625	3	+ 7
	4500									4500	-	9
	4375									4375	1	+ 8
	4250									4250	2	+ 7
	4125									4125	3	+ 6
	4000									4000	-	8
	3875									3875	1	+ 7
Range 0	3750									3750	2	+ 6
	3625									3625	3	+ 5
	3500									3500	-	7
	3375									3375	1	+ 6
	3250									3250	2	+ 5
	3125									3125	3	+ 4
	3000									3000	-	6
	2875									2875	1	+ 5
	2750									2750	2	+ 4
	2625									2625	3	+ 3
Range -1	2500									2500	-	5
	2375									2375	1	+ 4
	2250									2250	2	+ 3
	2125									2125	3	+ 2
	2000									2000	-	4
	1875									1875	1	+ 3
</												

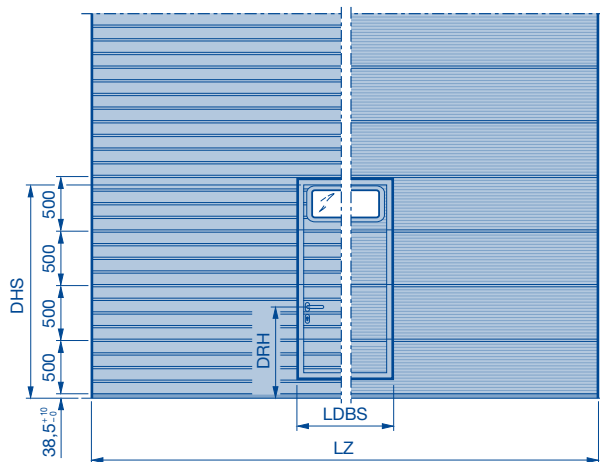
Sectional Door SPU F42

With Wicket Door and Threshold Rail

Double-skinned steel sections

375 and 500 mm high, Stucco-textured / Micrograin

External view



*** Note on fitting compound glazings:

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

Clear passage width (LDBS) = 940 mm*

* For a door width of 1750–1840 mm, the clear passage width is 833 mm.

Lever heights (DRH)

Bottom door section 500 = 830.5

Bottom door section 625 = 955.5 (only for SH₂)

Size range

In the size range shown, any door width can be manufactured in 10-mm increments and any door height in the 125-mm grid, taking the min. ceiling height into account. Intermediate heights using aluminium glazing frames or shortened door section above wicket door are possible.

		SH ₁										SH ₂					TH 375		TH 500		[D]		
																	[A]						
RM	↑																						
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			
Range 2	6250															6250	2	+	11	1955			
	6125															6125	3	+	10	1955			
	6000															6000	—		12	1955			
	5875															5875	1	+	11	1955			
	5750															5750	2	+	10	1955			
	5625															5625	3	+	9	1955			
	5500															5500	—		11	1955			
	5375															5375	1	+	10	1955			
	5250															5250	2	+	9	1955			
	5125															5125	3	+	8	1955			
Range 1	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 0	3750															3750	2	+	6	1955			
	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			
Range -1	2500															2500	—		5	1955			
	2375															2375	1	+	4	1955			
	2250															2250	2	+	3	1830			
	2125															2125	1***		3	2080			
	2000															2000	—		4	1955			
		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 area 40 cm² per grille						
		2000 2250 2500 2750 3000 3250 3500 3750 4000 4250 4500 4750 5000 5250 5500 5750 6000 6250 6500 6750 7000																					
		SPB 52																					
		LZ																					

Glazing Heights for Matching External Appearance

SPU F42 Stucco-Textured

(Centre of window from FFL)

Door section heights 500, 625 and 750 mm

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

RM	Glazing heights (centre of window from FFL)											
	1155	1280	1530	1655	1780	1905	2030	2155	2280	2405	2530	2655
7500		X			X							
7375	X	X		X	X							X
7250	X	X	X	X	X		X		X		X	X
7125	X	X	X	X	X	X	X	X	X	X	X	X
7000		X			X				X			
6875	X	X		X	X			X	X			X
6750	X	X			X		X				X	X
6625	X	X		X	X	X	X			X	X	X
6500		X			X				X			
6375	X	X		X	X			X	X			X
6250	X	X	X	X	X		X	X	X		X	X
6125	X	X	X	X	X	X	X	X	X	X	X	X
6000		X			X							
5875	X	X		X	X							X
5750	X	X	X	X	X		X		X		X	X
5625	X	X	X	X	X	X	X	X	X	X	X	X
5500		X			X				X			
5375	X	X		X	X			X	X			X
5250	X	X			X		X				X	X
5125	X	X		X	X	X	X			X	X	X
5000		X			X				X			
4875	X	X		X	X			X	X			X
4750	X	X	X	X	X		X	X	X		X	X
4625	X	X	X	X	X	X		X	X	X	X	
4500		X			X							
4375	X	X		X	X							X
4250	X	X	X	X	X	X	X		X	X	X	X
4125	X	X	X	X	X	X	X	X	X	X	X	X
4000		X			X				X			
3875	X			X	X			X	X			
3750	X	X			X		X				X	X
3625	X	X		X	X	X	X			X	X	X
3500		X			X				X			
3375	X	X		X	X				X			
3250	X		X	X	X			X	X			
3125			X	X				X				
3000		X			X							
2875	X	X		X	X							X
2750	X	X	X	X	X						X	
2625	X		X	X						X		
2500									X			
2375				X				X				
2250	X	X					X					
2125	X					X						
2000					X							
1875				X								

RM Grid height

Calculating the Glazing Heights

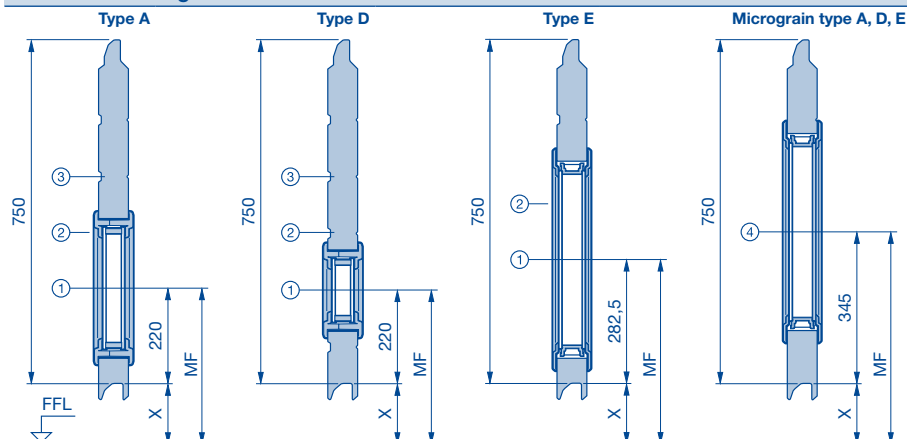
(Centre of window from FFL)

Door section heights 500, 625 and 750 mm

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

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

Door section height 750 mm



Glazing height type A and D

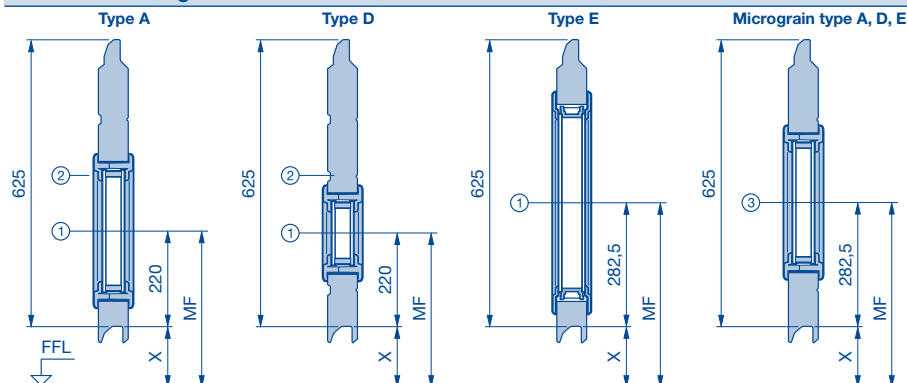
- ① = $x + 220$
- ② = $x + 220 + 125$
- ③ = $x + 220 + 250$
- ④ = $x + 345$

Glazing height type E

- ① = $x + 282.5$
- ② = $x + 282.5 + 125$
- ④ = $x + 345$

x = Sum of door section heights + 60 mm from FFL

Door section height 625 mm



Glazing height type A and D

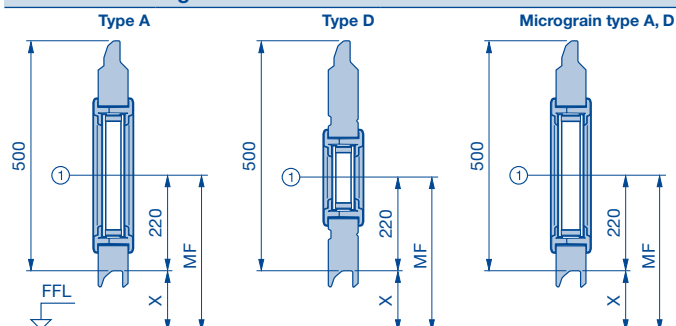
- ① = $x + 220$
- ② = $x + 220 + 125$
- ③ = $x + 282.5$

Glazing height type E

- ① = $x + 282.5$
- ③ = $x + 282.5$

x = Sum of door section heights + 60 mm from FFL

Door section height 500 mm



Glazing height type A and D

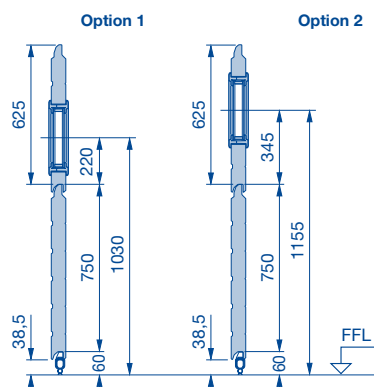
- ① = $x + 220$

Glazing height type E

Not possible!

x = Sum of door section heights + 60 mm from FFL

Calculation example



Given:

- Door type SPU F42; grid height (RM) = 3250 mm; glazing type A; position see below number of door sections (see table of door types)
- Door section 625 mm = 4 units
- Door section 750 mm = 1 unit

Option	Door section / position	Glazing height
1	in 2nd door section 625 mm at position 1	$750 + 60 + 220 = 1030$ mm from FFL
2	in 2nd door section 625 mm at position 2	$750 + 60 + 220 + 125 = 1155$ mm from FFL
3	in 3rd door section 625 mm at position 1	$750 + 625 + 60 + 220 = 1655$ mm from FFL
4	in 3rd door section 625 mm at position 2	$750 + 625 + 60 + 220 + 125 = 1780$ mm from FFL
etc.		

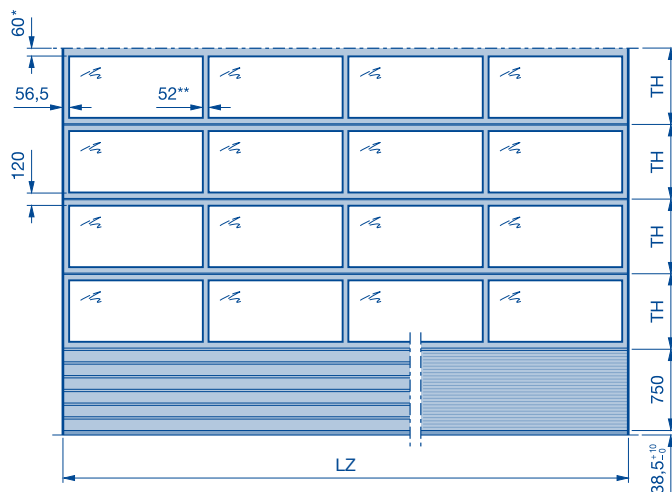
MF Centre of window from FFL

Sectional Door APU F42 / APU F42 Thermo

Aluminium extrusions

Double-skinned bottom section

External view



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

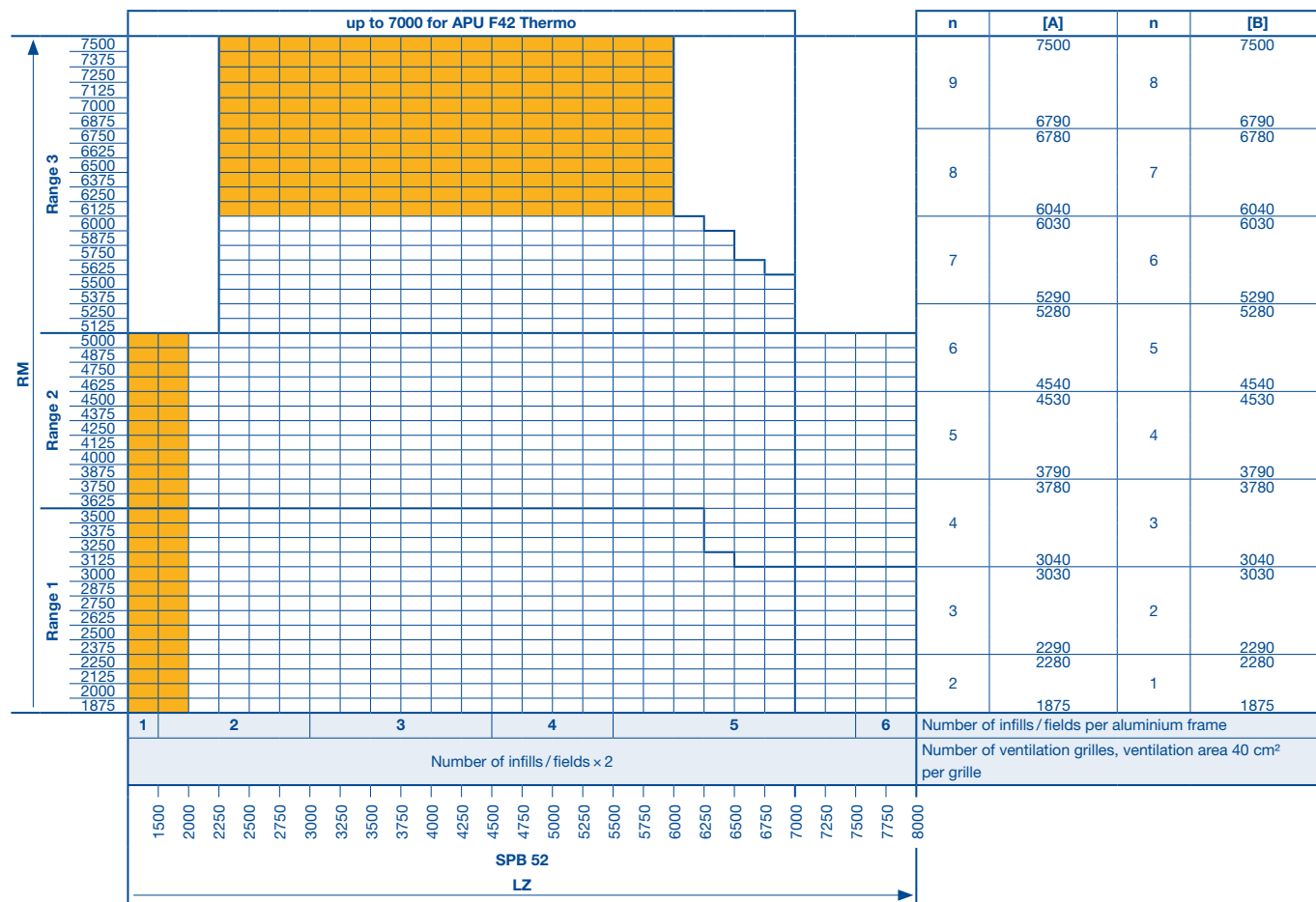
- * On request 120 mm, so as to match the appearance of a sectional door with wicket door with trip-free threshold with the same door height.
- ** Optionally with wide rail extrusions (91 mm)

Note:

- When using a shaft operator (installation example 5), the door lock is always on the side opposite the operator.
- For a view of the matching appearance with doors with wicket doors see page 30–32.
- Number of glazings, matching view to series 40, see page 33.

Size range

In the size range shown, any door width can be produced in 10-mm increments. Observe min. ceiling height.



On request

Number of door section frames:

[A] Bottom section height 750 mm (standard)

[B] Bottom section height 1500 mm

RM Grid height

LZ Clear frame dimensions (from 1200)

SPB Rail width

n Number of aluminium frames

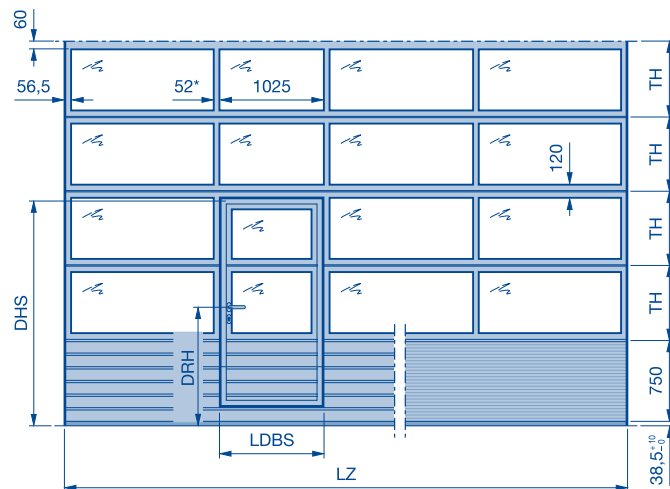
TH Door section height

Sectional Door APU F42 / APU F42 Thermo With Wicket Door and Threshold Rail

Aluminium extrusions

Bottom section height 750

External view



Lever height on request

Clear passage width (LDBS) = 940 mm**

Clear passage height of wicket door (DHS)
= $n_1 \times TH + (\text{bottom section height} - 45)$

n_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.

Note:

- When using a shaft operator (installation example 5), the door lock is always on the side opposite the operator.
- Micrograin version only up to door width ≤ 5500 mm.
- For a view of the matching appearance with doors without wicket doors see page 30–32.
- Number of glazings, matching view to series 40, see page 33.

Size range

In the size range shown, any door width can be produced in 10-mm increments. Observe min. ceiling height.

		SH ₁										SH ₂					n	Height	RM	DHS	n ₁	Height																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
RM	↑	Range 3										Range 2					Range 1					9	7500	7500	2197	2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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On request

DHS Clear passage height of wicket door

DRH Lever height

LZ Clear frame dimensions (from 1750)

RM Grid height

SPB Rail width

SH₁ Threshold height (200)

SH₂ Threshold height (325)

n Number of aluminium frames

n₁ Number of aluminium frames in the wicket door

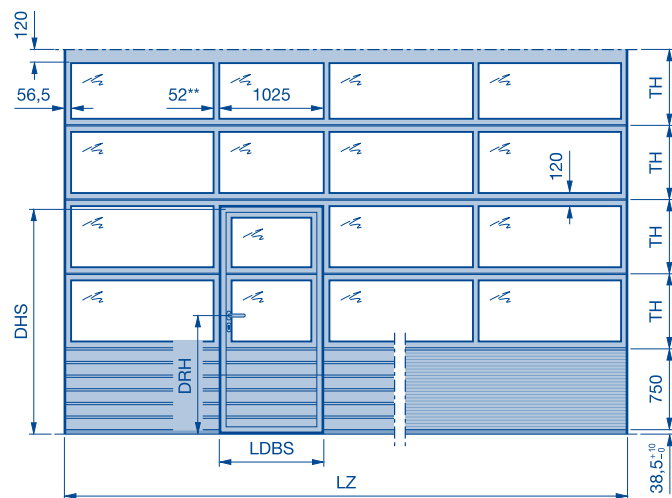
TH Door section height

Sectional Door APU F42 / APU F42 Thermo With Wicket Door with Trip-Free Threshold

Aluminium extrusions

Bottom section height 750

External view



Lever height on request

Clear passage width (LDBS) = 940 mm***

Clear passage height of wicket door (DHS)
= $n_1 \times TH + (\text{bottom section height} - 45^*)$

n_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.

Note:

- When using a shaft operator (installation example 5), the door lock is always on the side opposite the operator.
- For a view of the matching appearance with doors without wicket doors see page 30 – 32.
- Number of glazings, matching view to series 40, see page 33.

Size range

In the size range shown, any door width can be produced in 10-mm increments. Observe min. ceiling height.

		SH ₁										SH ₂										n	Height	RM	DHS	n ₁	Height																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
RM	Range 3	7500																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			

On request

DHS Clear passage height of wicket door

LZ Clear frame dimensions (from 1750)

DRH Lever height

RM Grid height

SPB Rail width

SH₁ Threshold height (rising from 5 to 10)

SH₂ Threshold height (approx. 13)

n Number of aluminium frames

n₁ Number of aluminium frames in the wicket door

TH Door section height

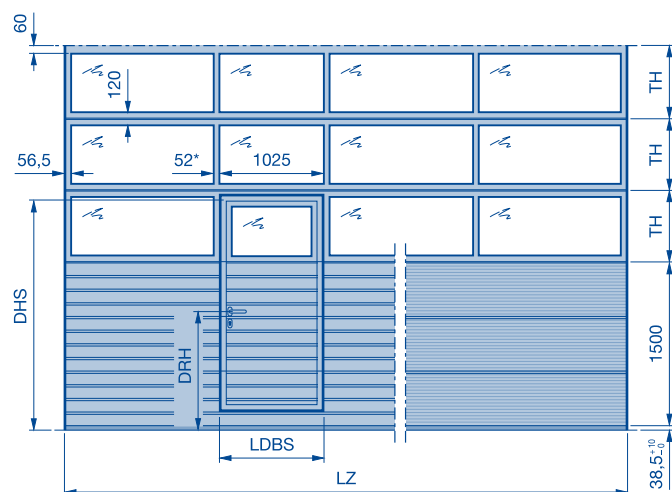
Sectional Door APU F42 / APU F42 Thermo

With Wicket Door and Threshold Rail

Aluminium extrusions

Bottom section height 1500

External view



Lever height on request

Clear passage width (LDBS) = 940 mm**

Clear passage height of wicket door (DHS)

= $n_1 \times TH + (\text{bottom section height} - 45)$

n_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.

Note:

- When using a shaft operator (installation example 5), the door lock is always on the side opposite the operator.
- Micrograin version only up to door width ≤ 5500 mm.
- 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 30 – 32.
- Number of glazings, matching view to series 40, see page 33.

Size range

In the size range shown, any door width can be produced in 10-mm increments. Observe min. ceiling height.

		SH ₁										SH ₂										n	Height	RM	DHS	n ₁										
RM	↑	Range 3																				8	7500	7500	2201	1										
		7375																7375	2185																	
		7250																7250	2169																	
		7125																7125	2154																	
		7000																7000	2138	7	6790		6875	2123	1											
		6875																6750	2200																	
		6750																6625	2182																	
		6625																6500	2164																	
		6500																	6375	2146	6		6040	6250	2129	1										
		6375																	6125	2111																
		6250																	6000	2199																
		6125																	5875	2178																
		6000																		5750	2158		5	6030	5625	2137	1									
		5875																		5500	2116															
		5750																		5375	2095															
		5625																		5250	2198															
		5500																			5125		2173	4	5290	5000	2148	1								
		5375																			4875		2123													
		5250																			4750		2098													
		5125																			4625		2073													
		5000																					4500	2196	3	4540	4375	2165	1							
		4875																					4250	2134												
		4750																					4125	2103												
		4625																					4000	2071												
4500																					3875	2040	2	4530	3750	2193	1									
4375																				3625	2152															
4250																				3500	2110															
4125																				3375	2068															
4000																					3250	2027	1	3790	3125	1985	1									
3875																					3000	2188														
3750																					2875	2125														
3625																					2750	2063														
3500																					2625	2000	3	3780	2500	1938	1									
3375																					2375	1875														
3250																					2250	2170														
3125																					2125	2045														
3000																						2000	1920	2	3040			1								
2875																																				
2750																																				
2625																																				
2500																										1	3030			1						
2375																																				
2250																																				
2125																																				
2000																																				
		3										4										5										Number of infills / fields per aluminium frame				
												(Number of infills / fields -1) × 2															Number of ventilation grilles, ventilation area 40 cm² per grille									
		2000	2250	2500	2750	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500	5750	6000	6250	6500	6750	7000														
		SPB 52																																		
		LZ																																		

On request

DHS Clear passage height of wicket door

DRH Lever height

LZ Clear frame dimensions (from 1750)

RM Grid height

SPB Rail width

SH₁ Threshold height (200)

SH₂ Threshold height (325)

n Number of aluminium frames

n₁ Number of aluminium frames in the wicket door

TH Door section height

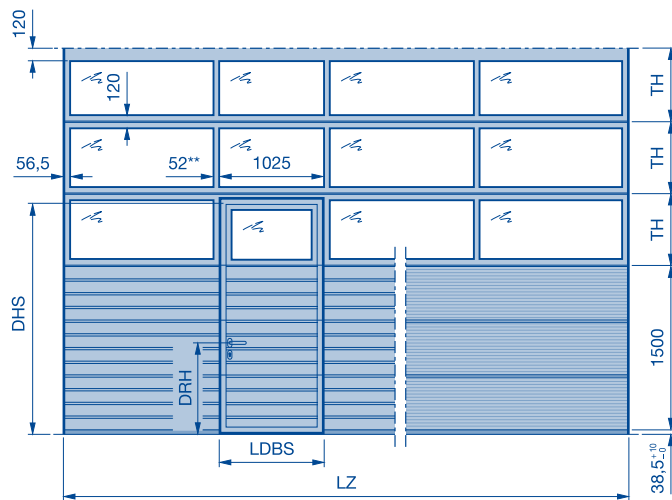
Sectional Door APU F42 / APU F42 Thermo

With Wicket Door with Trip-Free Threshold

Aluminium extrusions

Bottom section height 1500

External view



Lever height (DRH):

$LZ \leq 6000 = 1080.5$

$LZ > 6000 = 830.5$

Clear passage width (LDBS) = 940 mm***

Clear passage height of wicket door (DHS)

$= n_1 \times TH + (\text{bottom section height} - 45^\circ)$

n_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.

Note:

- When using a shaft operator (installation example 5), the door lock is always on the side opposite the operator.
- For a view of the matching appearance with doors without wicket doors see page 30–32.
- Number of glazings, matching view to series 40, see page 33.

Size range

In the size range shown, any door width can be produced in 10-mm increments. Observe min. ceiling height.

		SH ₁										SH ₂					n	Height	RM	DHS	n ₁								
RM	Range 3	7500																		8	7500	7500	2201	1					
		7375																	7375			2185							
		7250																	7250			2169							
		7125																	7125			2154							
		7000																	7000			2138							
		6875																		6875	2123								
		6750																		6750	2200								
		6625																		6625	2182								
		6500																		6500	2164								
		6375																		6375	2146								
	6250																		6250	2129									
	6125																		6125	2111									
	6000																		6000	2199									
	5875																		5875	2178									
	5750																		5750	2158									
	5625																		5625	2137									
	5500																		5500	2116									
	5375																		5375	2095									
	5250																		5250	2198									
	5125																		5125	2173									
Range 2	5000																		5000	2148	5	5290	5000	2148	1				
	4875																		4875	2123									
	4750																		4750	2098									
	4625																		4625	2073									
	4500																		4500	2196									
	4375																		4375	2165	4	4530	4375	2165	1				
	4250																		4250	2134									
	4125																		4125	2103									
	4000																		4000	2071									
	3875																		3875	2040									
Range 1	3750																		3750	2193	3	3780	3750	2193	1				
	3625																		3625	2152									
	3500																	3500	2110										
	3375																	3375	2068										
	3250																	3250	2027										
	3125																		3125	1985	2	3040	3125	1985	1				
	3000																		3000	2188									
	2875																		2875	2125									
	2750																		2750	2063									
	2625																		2625	2000									
2500																		2500	1938	1	2290	2500	1938						
2375																		2375	1875										
2250																		2250	2125										
2125																		2125	2000										
2000																		2000	1875										
		3										4					5					Number of infills / fields per aluminium frame							
																						Number of ventilation grilles, ventilation area 40 cm² per grille							
		2000	2250	2500	2750	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500	5750	6000	6250	6500	6750	7000							
		SPB 52																											
		LZ																											

On request

DHS Clear passage height of wicket door

LZ Clear frame dimensions (from 1750)

RM Grid height

SPB Rail width

SH₁ Threshold height (rising from 5 to 10)

SH₂ Threshold height (approx. 13)

n Number of aluminium frames

n₁ Number of aluminium frames in the wicket door

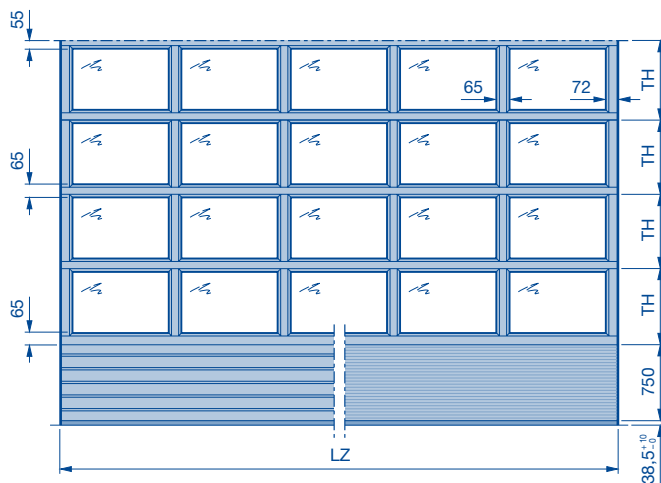
TH Door section height

Sectional Door APU F42 S-Line

Aluminium extrusions

Double-skinned bottom section

External view



$$TH = \frac{\text{Door height} - \text{bottom section height} - 77}{\text{Number of door section frames}}$$

Note:

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

Size range

In the size range shown, any door width can be produced in 10-mm increments. Observe min. ceiling height.

		n	[A]	n	[B]	
RM	Range 3	11	7450 7440	9	6875 6870	
		10	6790 6780			
		9	6125 6120	8	6220 6210	
		8	5470 5400	7	5550 5540	
		7	4800 4790	6	4890 4880	
		6	4140 4130	5	4230 4220	
		5	3480 3470	4	3570 3560	
		4	2820 2810	3	2910 2900	
		3	2160 2150	2	2240 2230	
		2		1		
	Range 2					
		Range 1				
		[1]	2	3	4	5
		Number of infills / fields per aluminium frame				
		Number of ventilation grilles, ventilation area 40 cm² per grille.				
		1500	2000	2250	2500	2750
		3000	3250	3500	3750	4000
		4250	4500	4750	5000	
		SPB 65				
		LZ				

On request

[1] 1 → 1300

Number of door section frames:

[A] Bottom section height 750 mm (standard)

[B] Bottom section height 1500 mm

RM Grid height

LZ Clear frame dimensions (from 1200)

→ up to LZ

SPB Rail width

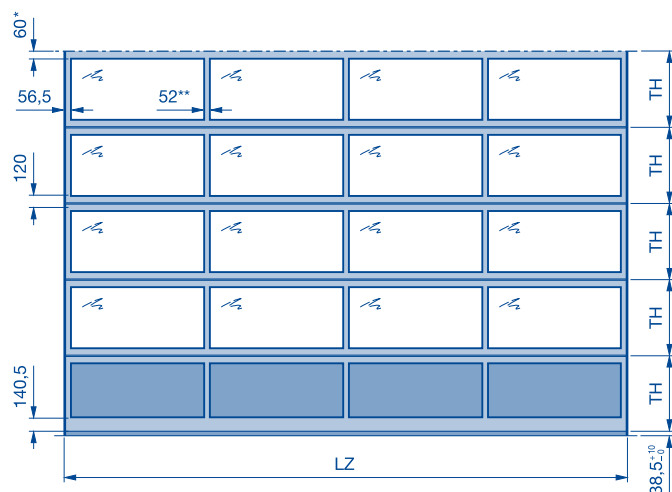
n Number of aluminium frames

TH Door section height

Sectional Door ALR F42 / ALR F42 Thermo

Door leaf made of standard aluminium extrusions or aluminium extrusions with thermal break

External view



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

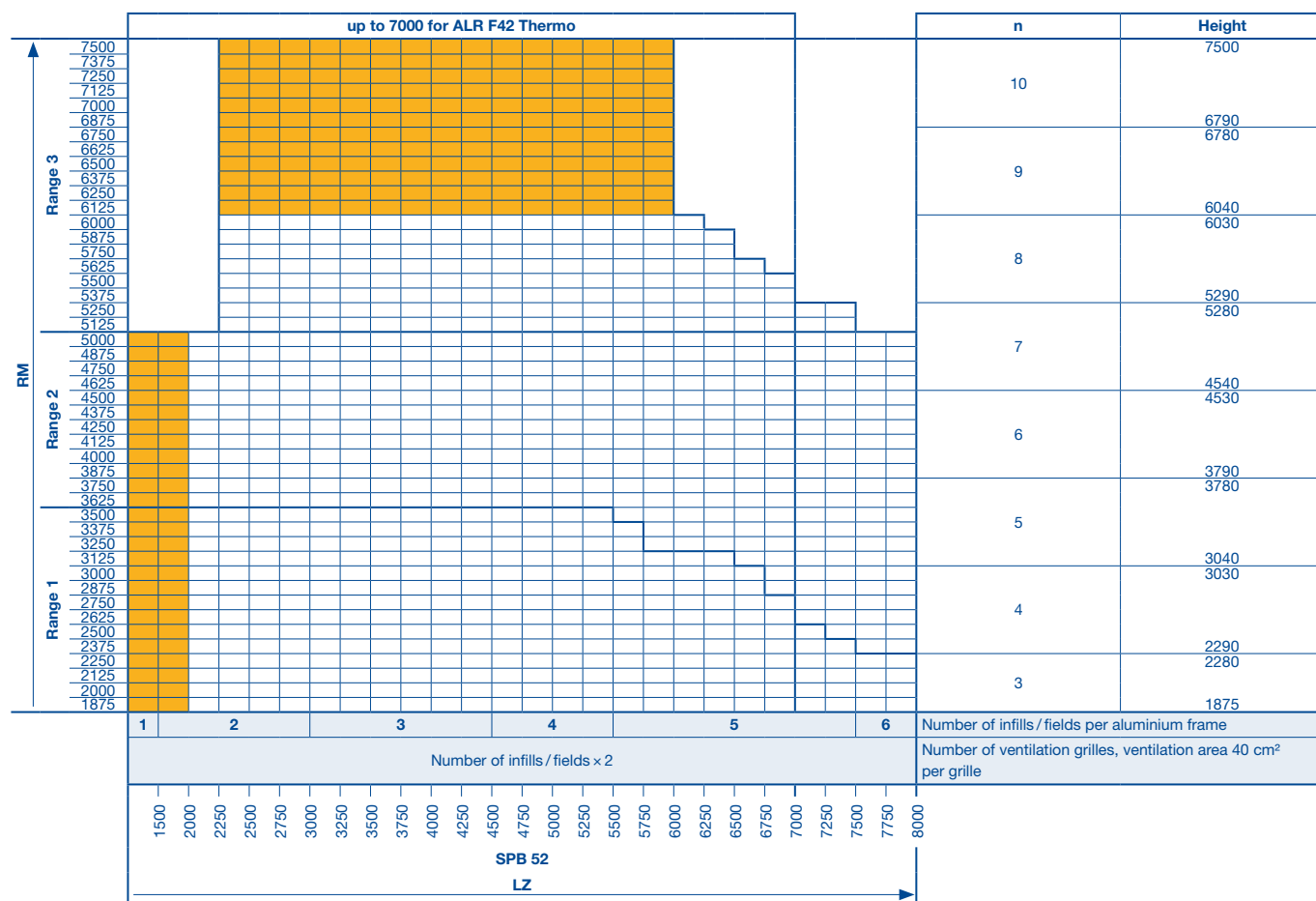
- * On request 120 mm, so as to match the appearance of a sectional door with wicket door with trip-free threshold with the same door height.
- ** Optionally with wide rail extrusions (91 mm)

Note:

- When using a shaft operator (installation example 5), the door lock is always on the side opposite the operator.
- For door widths from 5500 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 30–32.
- Number of glazings, matching view to series 40, see page 33.

Size range

In the size range shown, any door width can be produced in 10-mm increments. Observe min. ceiling height.

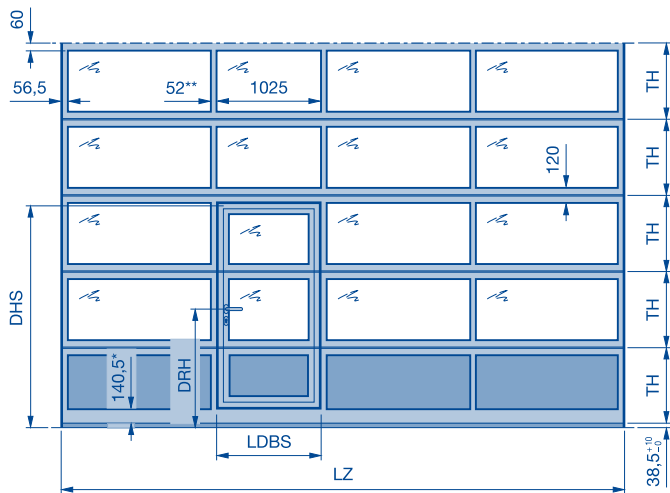


On request

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

Sectional Door ALR F42 / ALR F42 Thermo With Wicket Door and Threshold Rail

External view



Lever height on request

Clear passage width (LDBS) = 940 mm***

Clear passage height of wicket door (DHS) = $n_1 \times TH - 45$

n_1 Number of frames in the wicket door

- * 265.5 with SH₂

** Optionally with wide rail extrusions (91 mm)

*** For a door width of 1750–1840 mm, the clear passage width is 833 mm.

Note:

- When using a shaft operator (installation example 5), the door lock is always on the side opposite the operator.
- For door widths from 5500 mm, 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 30 – 32.
- Number of glazings, matching view to series 40, see page 33.

Size range

In the size range shown, any door width can be produced in 10-mm increments. Observe min. ceiling height.

[illegible]

On request

DHS Clear passage height of wicket door

DRS	Clear passage
DRH	Lever height

LZ Clear frame dimensions (from 1750)

L2	Clear frame
RM	Grid height

RM	Grid height
SPB	Rail width

SH₁ Threshold height (181)

SH₂ Threshold height (306)

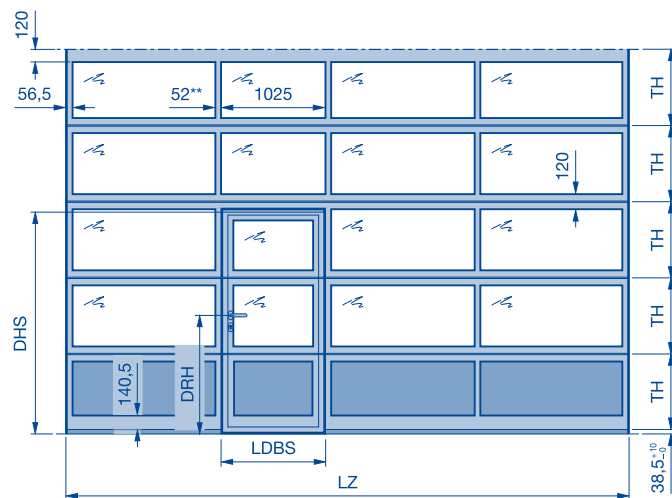
n Number of aluminium frames

n_1 Number of aluminium frames in the wicket door

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

Sectional Door ALR F42 / ALR F42 Thermo With Wicket Door with Trip-Free Threshold

External view



Lever height on request

Clear passage width (LDBS) = 940 mm***

Clear passage height of wicket door (DHS) = $n_1 \times TH - 45^*$

n_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.

Note:

- When using a shaft operator (installation example 5), the door lock is always on the side opposite the operator.
- For door widths from 5500 mm, 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 30 – 32.
- Number of glazings, matching view to series 40, see page 33.

Size range

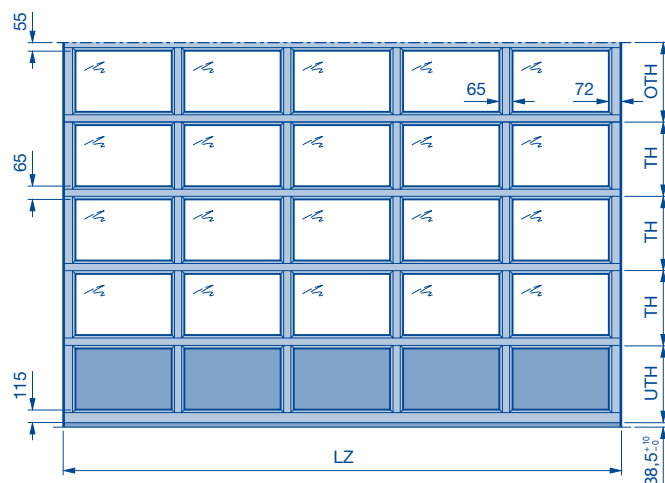
In the size range shown, any door width can be produced in 10-mm increments. Observe min. ceiling height.

		SH ₁										SH ₂										n	Height	RM	DHS	n ₁	Height																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
RM	↑	Range 3										Range 2										Range 1										10	7500	7500	2195	3																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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Sectional Door ALR F42 S-Line

Door leaf made of aluminium extrusions

External view



$$TH = \frac{\text{Door height} - 143.5}{\text{Number of door section frames}}$$

$$OTH = TH + 68$$

$$UTH = TH + 97$$

Note:

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

Size range

In the size range shown, any door width can be produced in 10-mm increments. Observe min. ceiling height.

												n	Height		
RM	Range 3	7500											12	7430	
		7375											11	7420	
		7250													
		7125													
		7000													
		6875													
		6750													
		6625												6770	
		6500												6760	
		6375													
	6250														
	6125														
	6000												6110		
	5875												6100		
	5750														
	5625														
	5500														
	5375														
	5250														
	5125														
	5000														
	4875														
	4750														
	4625														
	4500														
	4375														
	4250														
	4125														
	4000												4120		
	3875												4110		
3750															
3625															
3500															
3375															
3250															
3125															
3000															
2875															
2750															
2625															
2500															
2375															
2250															
2125															
2000															
1875															
		[1]	2	3			4			5		Number of infills / fields per aluminium frame			
		Number of infills / fields x 2										Number of ventilation grilles, ventilation area 40 cm² per grille			
		1500	2000	2250	2500	2750	3000	3250	3500	3750	4000	4250	4500	4750	5000
		SPB 65													
		LZ													

On request

[1] 1 → 1300

RM Grid height

LZ Clear frame dimensions (from 1200)

→ up to LZ

SPB Rail width

n Number of aluminium frames

UTH Bottom door section height

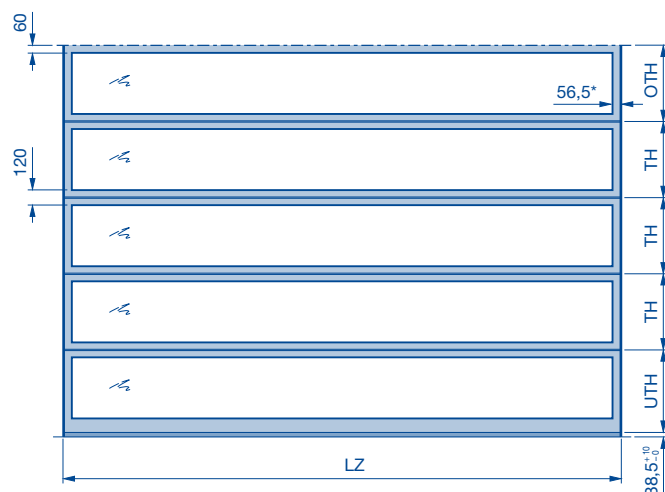
TH Door section height

OTH Upper door section height

Sectional Door ALR F42 Glazing

Door leaf made of standard aluminium extrusions

External view



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

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

$$OTH = TH - 35$$

* 76 with optional wide rail extrusions (91 mm)

Note:

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

Size range

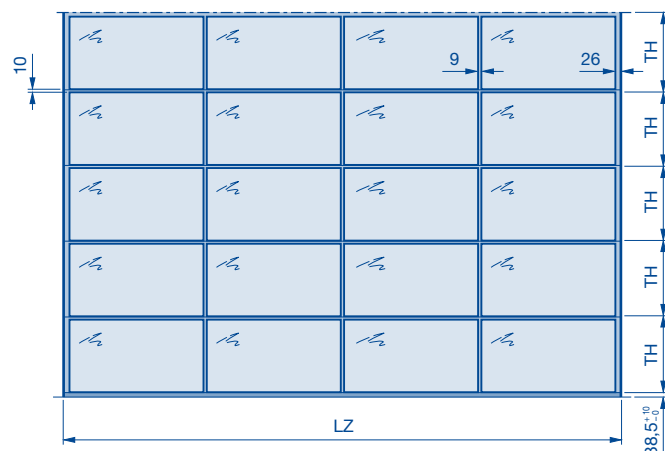
In the size range shown, any door width can be produced in 10-mm increments. Observe min. ceiling height.

										n	Height
RM	5000										
	4875										
	4750										
	4625										
	4500										
	4375										
	4250										
	4125										
	4000									6	4000
	3875										
	3750										
	3625										3625
	3500									5	3620
	3375										
	3250										
	3125										
	3000										2930
	2875									4	2920
	2750										
	2625										
	2500										
	2375									3	
2250											
2125											
2000										2230	
1875										2220	
											1875
1 → 3330					2					Number of infills/ fields per aluminium frame	

Sectional Door ALR F42 Vitraplan

Door leaf made of standard aluminium extrusions

External view



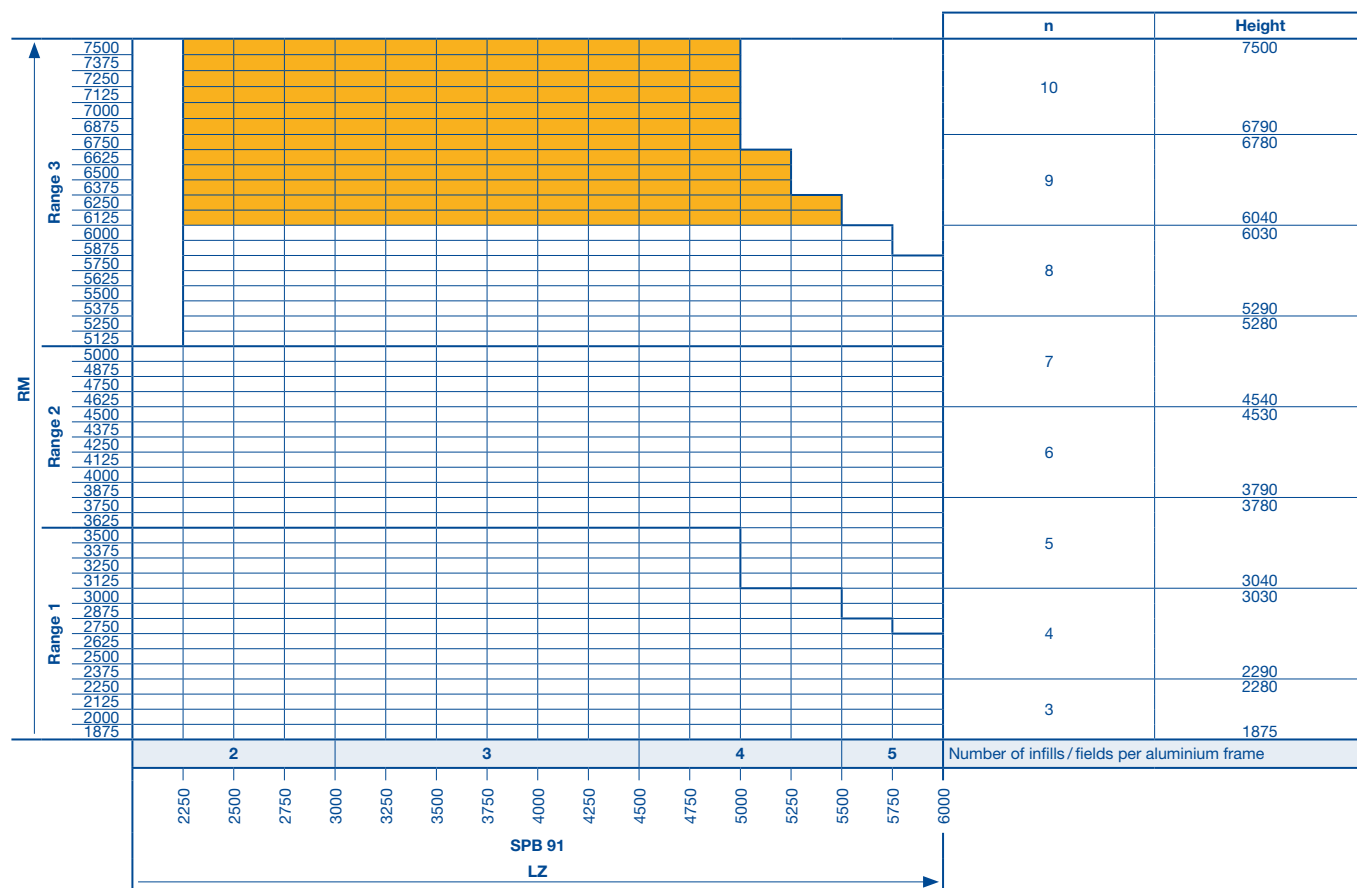
$$TH = \frac{\text{Door height} - 35}{\text{Number of door section frames}}$$

Note:

- When using a shaft operator (installation example 5), the door lock is always on the side opposite the operator.
- For door widths from 5500 mm, diagonal struts are fitted into the bottom door section.

Size range

In the size range shown, any door width can be produced in 10-mm increments. Observe min. ceiling height.



On request

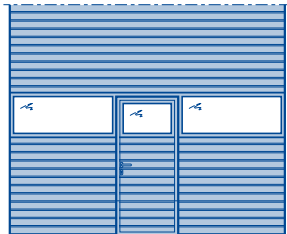
RM Grid height
LZ Clear frame dimensions (from 2000)
SPB Rail width
n Number of aluminium frames
TH Door section height

Glazing / Wicket Door Arrangements

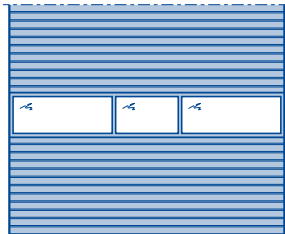
Sectional doors with 3 infills / fields

Glazing arrangements – external view

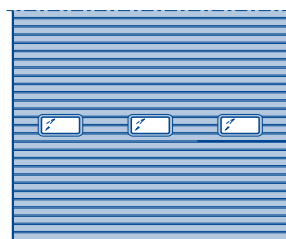
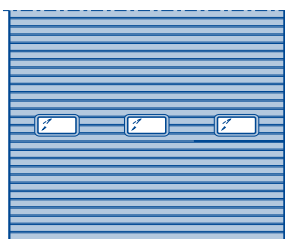
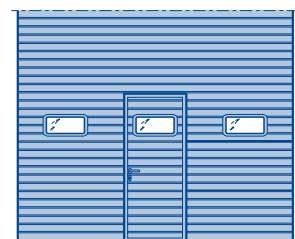
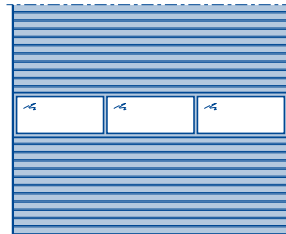
Sectional door SPU F42
with wicket door with trip-free threshold



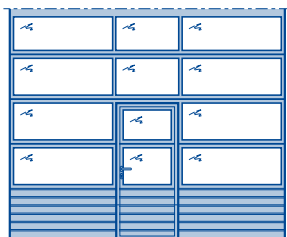
Sectional door SPU 42,
matching doors with wicket door



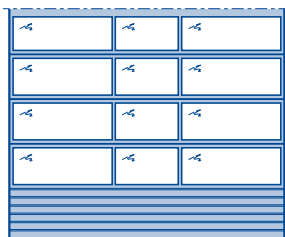
Sectional door SPU F42
with standard window division



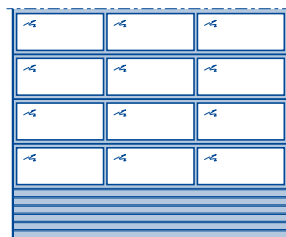
Sectional door APU F42
with wicket door with trip-free threshold



Sectional door APU F42,
matching doors with wicket door



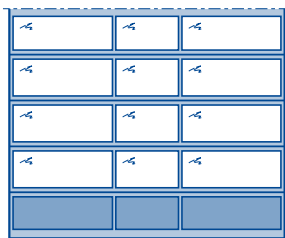
Sectional door APU F42
with standard window division



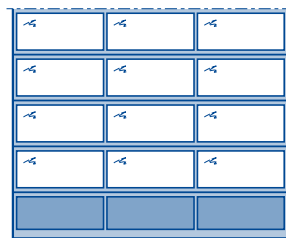
Sectional door ALR F42
with wicket door with trip-free threshold



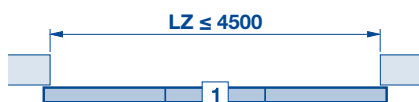
Sectional door ALR F42,
matching doors with wicket door



Sectional door ALR F42
with standard window division



Arrangement of the wicket door



Notes:

- Clear passage width (LDBS) = 940 mm.
- Wicket door only opening outwards.

Glazing / Wicket Door Arrangements

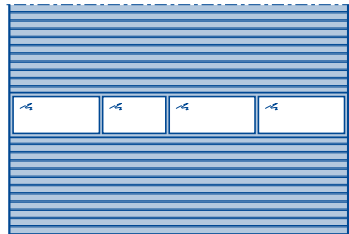
Sectional doors with 4 infills / fields

Glazing arrangements – external view

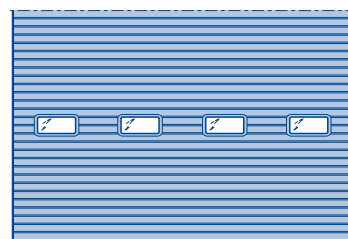
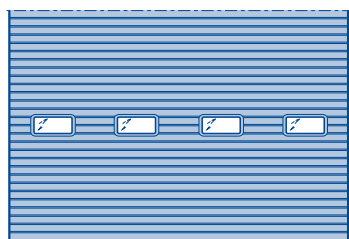
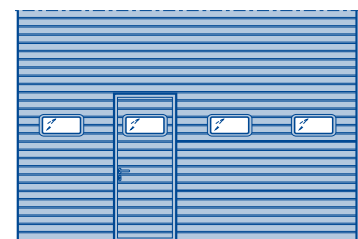
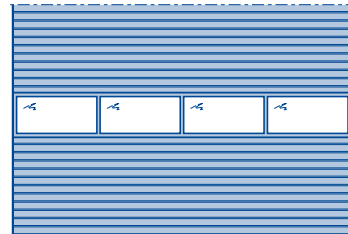
Sectional door SPU F42
with wicket door with trip-free threshold



Sectional door SPU 42,
matching doors with wicket door



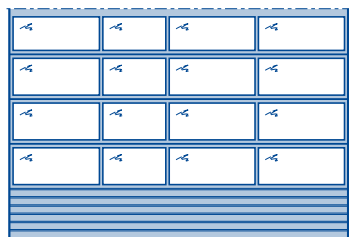
Sectional door SPU F42
with standard window division



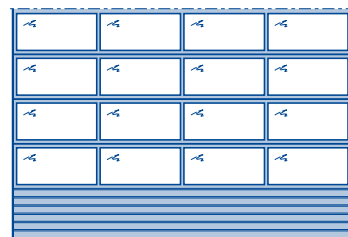
Sectional door APU F42
with wicket door with trip-free threshold



Sectional door APU F42,
matching doors with wicket door



Sectional door APU F42
with standard window division



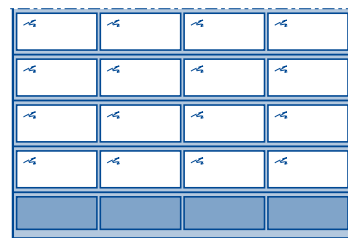
Sectional door ALR F42
with wicket door with trip-free threshold



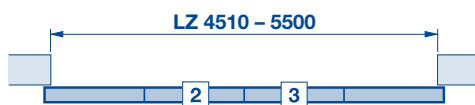
Sectional door ALR F42,
matching doors with wicket door



Sectional door ALR F42
with standard window division



Arrangement of the wicket door



Notes:

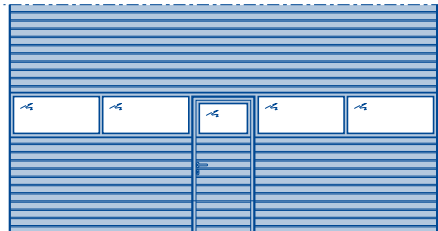
- Clear passage width (LDBS) = 940 mm.
- Wicket door only opening outwards.

Glazing / Wicket Door Arrangements

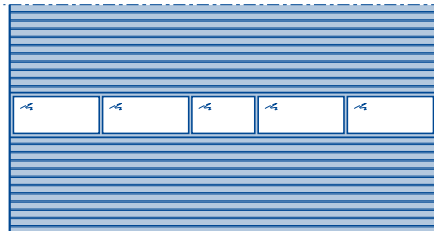
Sectional doors with 5 infills / fields

Glazing arrangements – external view

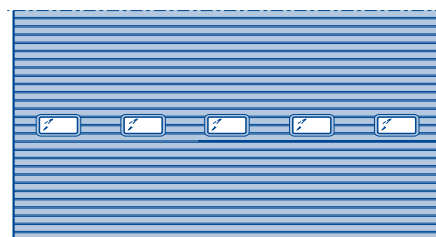
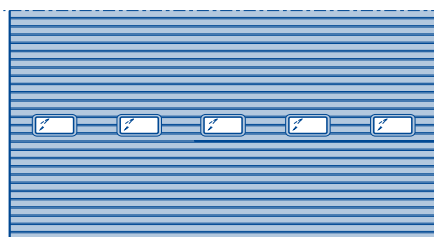
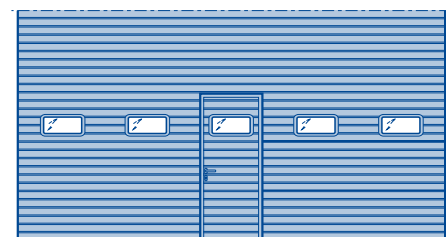
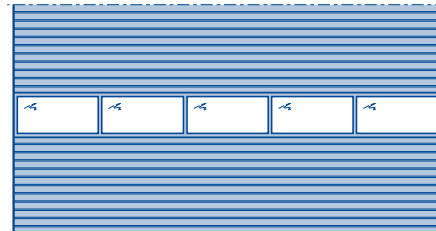
Sectional door SPU F42
with wicket door with trip-free threshold



Sectional door SPU 42,
matching doors with wicket door



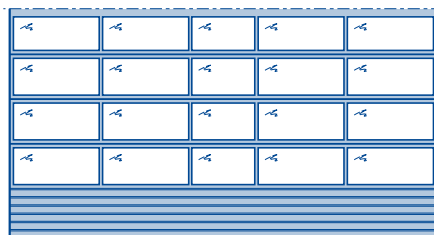
Sectional door SPU F42
with standard window division



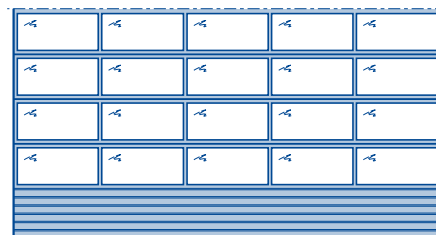
Sectional door APU F42
with wicket door with trip-free threshold



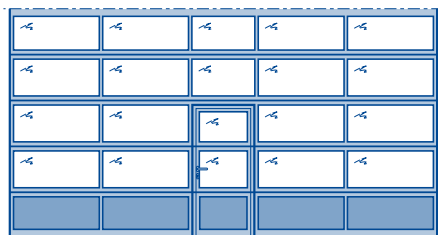
Sectional door APU F42,
matching doors with wicket door



Sectional door APU F42
with standard window division



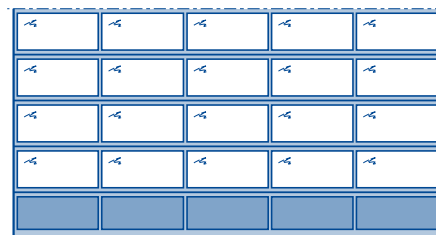
Sectional door ALR F42
with wicket door with trip-free threshold



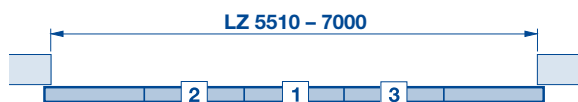
Sectional door ALR F42,
matching doors with wicket door



Sectional door ALR F42
with standard window division



Arrangement of the wicket door



Notes:

- Clear passage width (LDBS) = 940 mm.
- Wicket door only opening outwards.

Infills / Fields and Glazing Series 40

Number of infills / fields per aluminium frame

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

Number of compound glazings per door section

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

LZ Clear frame dimensions
→ up to LZ

With S-ribbed, Stucco-textured / L-ribbed, Micrograin infills



★ See page 37

LF [Structural opening](#)

RAM Overall frame dimension

BH Panel height

BB Panel width

LDB Clear passage width

LDH Clear passage height

TH Door section height

SO Bottom section height

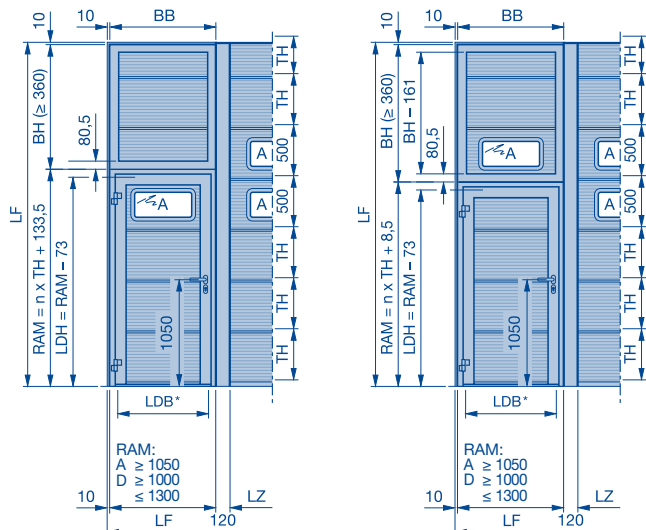
LZ Clear frame dimensions

n Number of door sections / aluminium frames

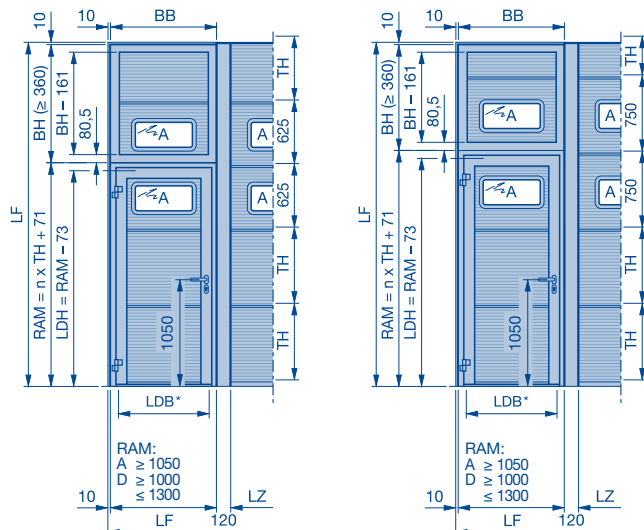
Side Door NT 60

With L-ribbed, Micrograin infills

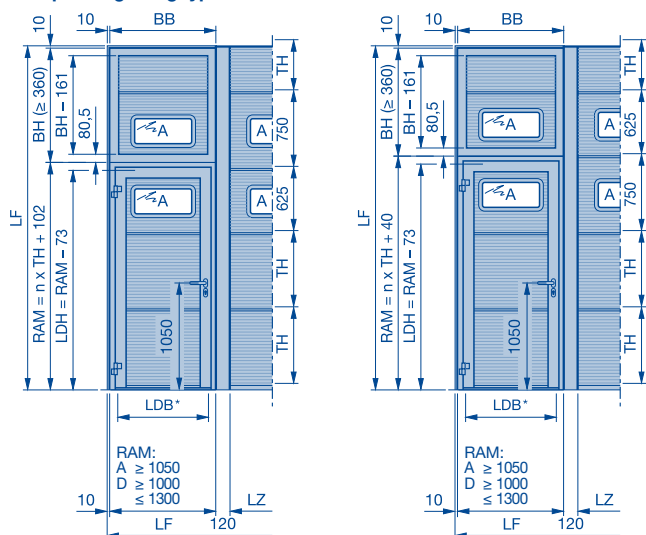
Compound glazing type A TH = 500



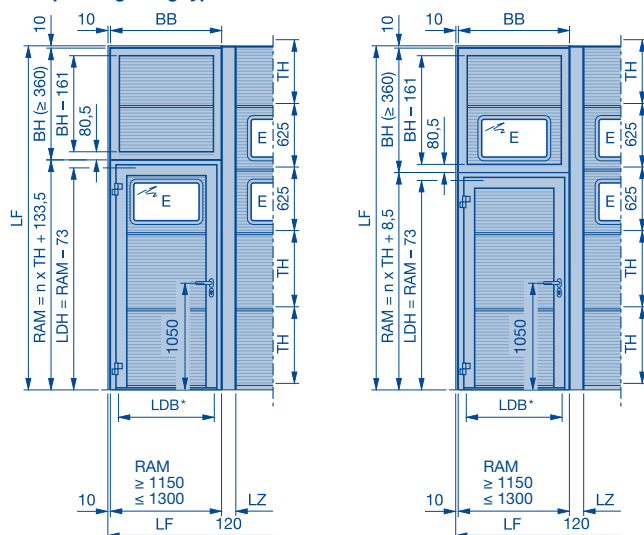
Compound glazing type A TH = 625 and 750



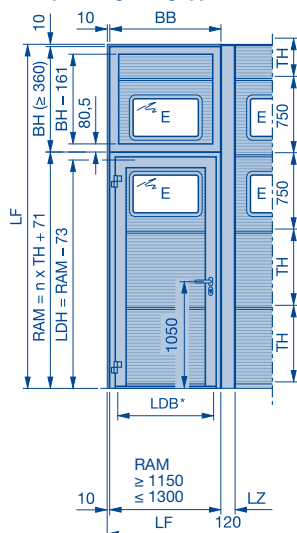
Compound glazing type A TH = 625 / 750 and 750 / 625



Compound glazing type E TH = 625



Compound glazing type E TH = 750

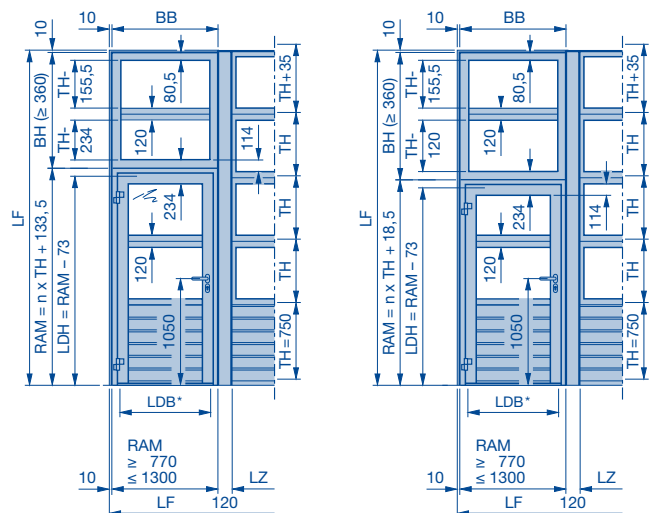


(Legend see page 34)

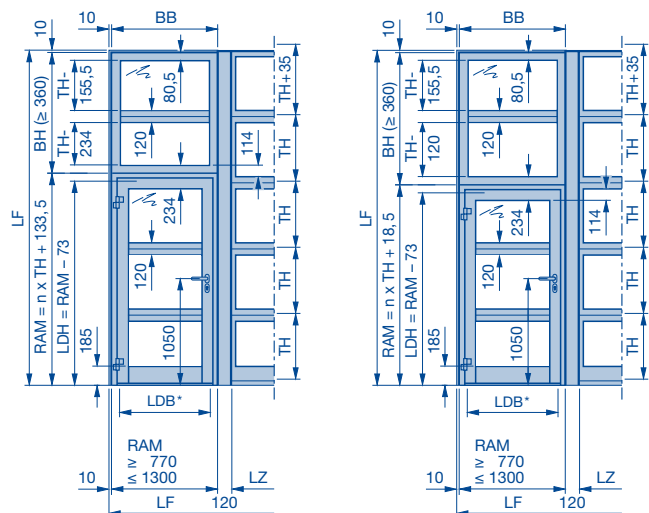
Side Door NT 60

With S-ribbed, Stucco-textured / L-ribbed, Micrograin infills

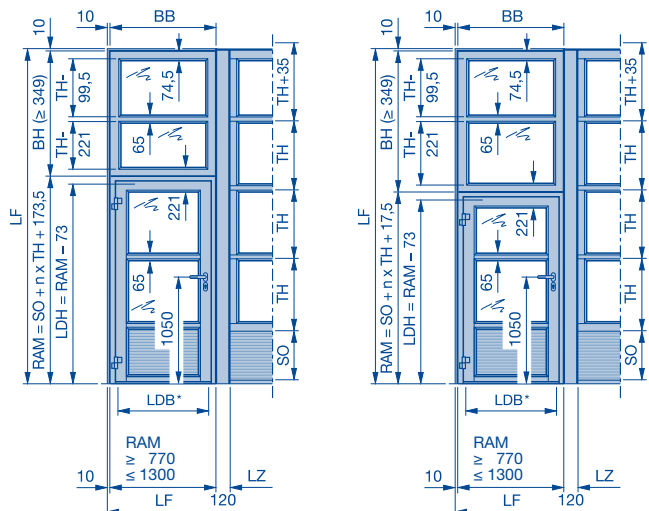
Side door NT 60 matching door type APU F42



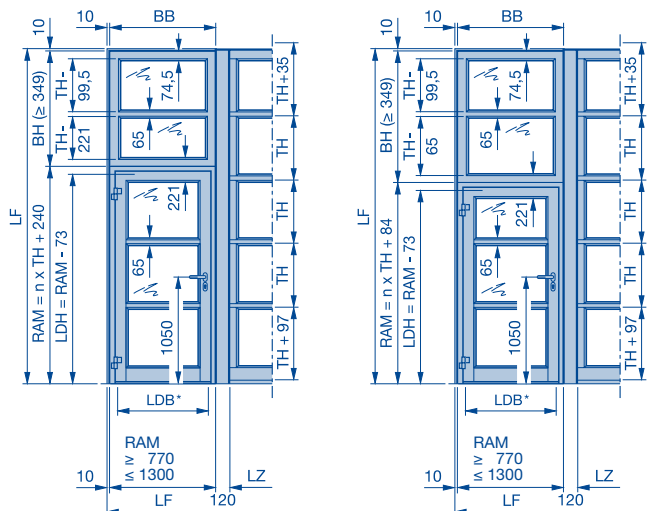
Side door NT 60 matching door type ALR F42 Thermo



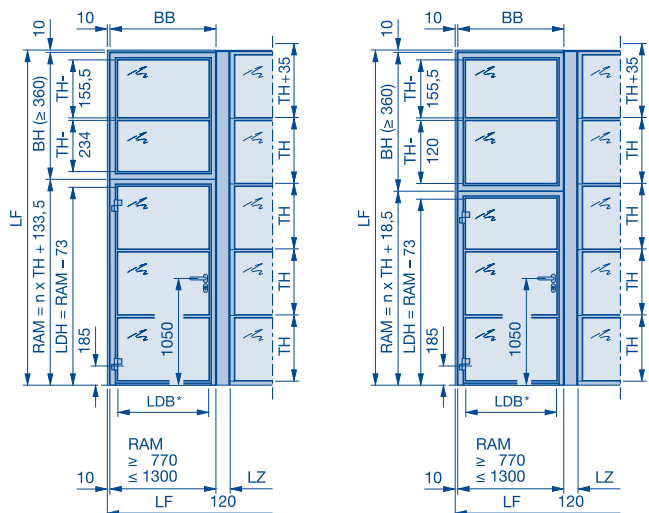
Side door NT 60 matching door type APU F42 S-Line



Side door NT 60 matching door type ALR F42 S-Line



Side door NT Vitraplan



(Legend see page 34)

Side Door NT 60

Arrangements

Possible handing options

Arrangements

Arrangement 1

Fitting next to the door,
opening outwards,
RH hinged



Arrangement 2

Fitting next to the door,
opening outwards,
LH hinged



Arrangement 3

Fitting next to the door,
opening inwards,
LH hinged



Arrangement 4

Fitting next to the door,
opening inwards,
RH hinged



Arrangement 5

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



Arrangement 6

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



Arrangement 7

Fitting behind the opening,
only opening inwards,
RH or LH hinged



Structural opening	Ordering size Overall frame dimensions RAM
875 × 2000	855 × 1990
875 × 2125	855 × 2115
1000 × 2000	980 × 1990
1000 × 2125	980 × 2115
Special sizes: width: RAM 770 to 1300, height: RAM 1865 to 2525 (state overall frame dimension)	
Doors with 3-point locking: RAM = min. 2025 mm	

Clear passage dimensions:

Opening angle	Width	Height
136°	RAM – 146	RAM – 73
90°	RAM – 200	

(Legend see page 34)

Side Door NT 60

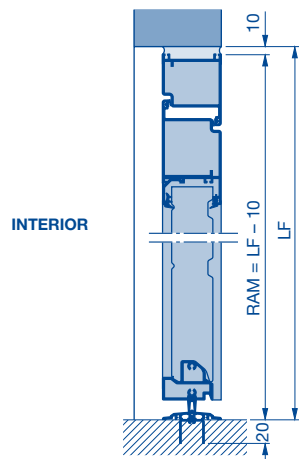
Arrangements

Possible handing options

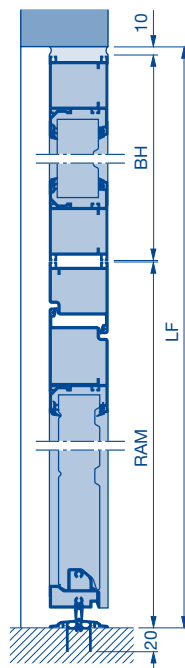
Possible handing options

SPU F42

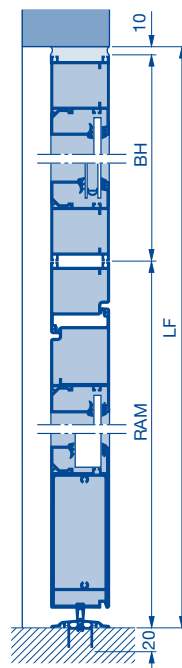
No window section,
no compound glazing



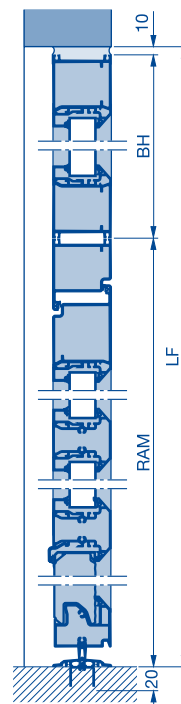
SPU F42, APU F42 with fascia panel



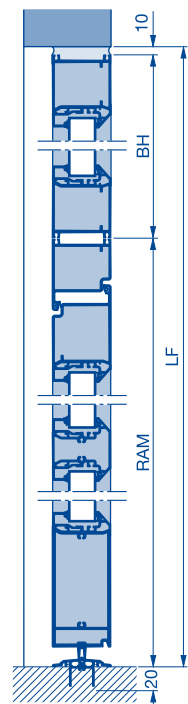
ALR F42, ALR F42 Thermo with fascia panel



APU F42 S-Line

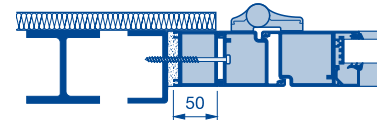
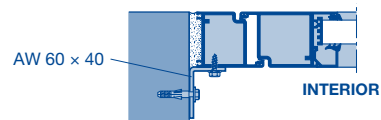


ALR F42 S-Line

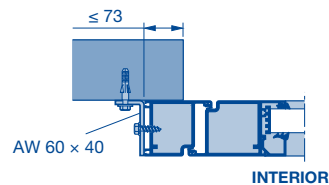


In the opening

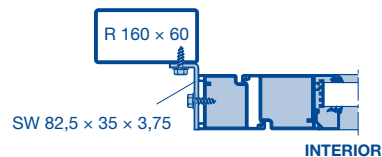
(right illustration with 50 mm extension
profile for all-over insulation)



Behind the opening



Side door NT 60 flush with sectional door

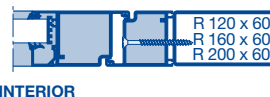


Plugs for metal frame



Tapping screw

with countersunk head B 6.3 x 80



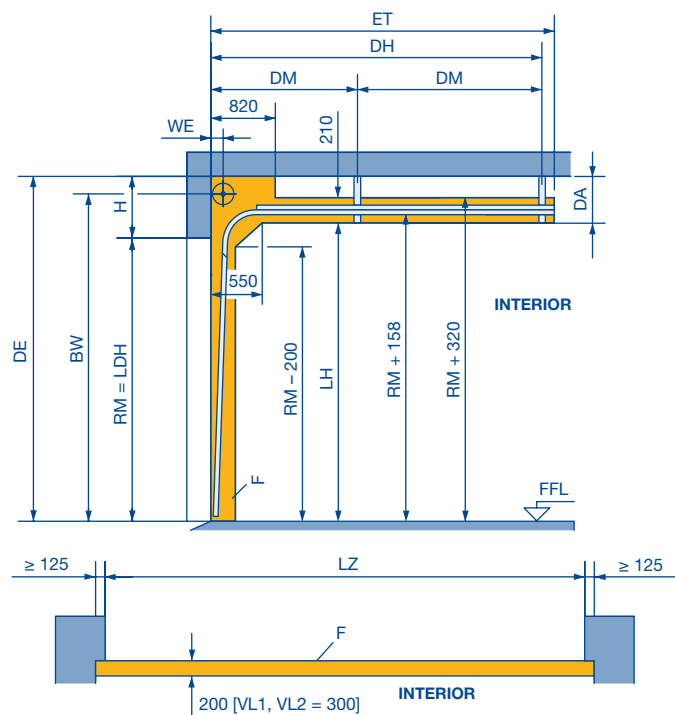
R Box section
AW Aluminium angle
SW Steel angle

BH Panel height
RAM Overall frame dimension
LDB Clear passage width

LF Structural opening

Track Application: N

Normal track application



ET = min. distance back		
N 1 + 2	RM + 440	For manual operation
	RM + 650	With shaft operator
	RM + 220	For manual operation and shaft operator with spring buffer below the track
N 3	RM + 700	For manual operation and shaft operator
	RM + 220	For manual operation and shaft operator with spring buffer below the track

Notes:

- Observe the permissible size ranges of the door types on pages 10–15 and 18–29!
- 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 near the spring buffer is reduced by 70 mm.
- For version with wicket door, manually operated: chain hoist recommended!
- ALR F42 Vitraplan and ALR F42 Glazing on request

Door weights for roof loads:

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

Observe min. sideroom, see page 58.

	H	WE	DA
N 1	390	140	280
N 2	440	160	330
N 3	550	180	440
With double spring shaft	760	180	650
RM > 7000	810	180	700

	Clear passage height LDH		
	Without operator	Operator	
		WA 400 *	WA 300 **
LZ ≤ 5500			
Without wicket door	RM	RM	RM
Wicket door with threshold	RM – 100	RM – 50	RM – 50
Wicket door without threshold rail	RM – 150	RM – 85	RM – 85
LZ > 5500			
Without wicket door	RM – 50	RM – 50	RM – 50
Wicket door with threshold	RM – 100	RM – 100	RM – 100
Wicket door without threshold rail	RM – 175	RM – 110	RM – 110

*	Or with chain hoist / pull rope	DH	Rear ceiling anchor N 1 + N 2 = RM + 195 N 3 = RM + 295
**	Track application with inclination not possible!	DM	Central ceiling anchor (see page 63)
LDH	Clear passage height	WE	Shaft centre from lintel
RM	Grid height	H	Min. headroom (see table)
BW	Position of shaft support N 1 = RM + 310 N 2 = RM + 335 N 3 = RM + 415	DA	Distance to ceiling
ET	Min. distance back N 1 + N 2 = RM + 440 N 3 = RM + 700 With shaft operator N 1 + N 2 = RM + 650 With shaft operator N 3 = RM + 700	L	Anchor length = DE – RM – 125 (see page 63)
		LH	Track height = RM + 110
		LZ	Clear frame dimensions
		DE	Ceiling height
		F	Space for fitting the door

Min. headroom

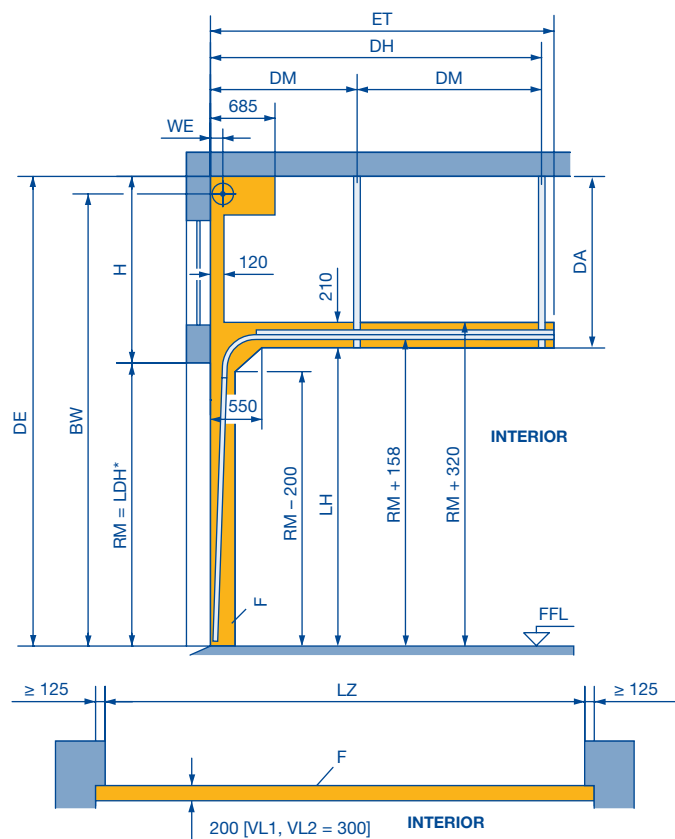
Track size	Headroom	Track size	Headroom	Track size	Headroom
N 1	390	GD 2	660–790	RD 4	1760
N 2	440	L 1	200	RD 5	1760
N 3	550	L 2	200	RG 4	1760
NA 1	400	LD 1	200	RG 5	1760
NA 2	450	LD 2	200	V 6	RM + 500
ND 1	390	H 4	880	V 7	RM + 540
ND 2	440	H 5	910	V 9	RM + 635
ND 3	550	H 8	950	VA 6	RM + 510
NH 1	610–740	HA 4	890	VU 6	RM + 350
NH 2	660–790	HD 4	880	VU 7	RM + 350
NH 3	770–900	HD 5	910	VU 9	RM + 350
NS 1	390	HD 8	950	WG 6	RM + 350
NS 2	440	HU 4	1760	WG 7	RM + 350
GD 1	610–740	HU 5	1760		

Dimensions in mm

Track Application: NA

Normal track application

With high-mounted torsion spring shaft



Door weights for roof loads:

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

Observe min. sideroom, see page 58.

	H min.	WE	DA min.
NA 1	400	140	290
NA 2	450	160	340

ET = min. distance back		
NA 1 + 2	RM + 440	For manual operation
	RM + 650	With shaft operator
	RM + 220	For manual operation and shaft operator with spring buffer below the track

LDH	Clear passage height
H	Max. headroom (depends on order)
DA	Max. distance to ceiling (depends on order)
RM	Grid height
DE	Ceiling height (depends on order)
BW	Position of shaft support
	NA 1: BW _{min.} = RM + 320
	NA 2: BW _{min.} = RM + 345
	NA 1: BW _{max.} (7820) = DE - 80
	NA 2: BW _{max.} (7995) = DE - 105
ET	Min. distance back
	NA 1 + NA 2 = RM + 440
	With shaft operator
	NA 1 + NA 2 = RM + 650
DH	Rear ceiling anchor
	NA 1 + NA 2 = RM + 195
DM	Central ceiling anchor (see 63)
WE	Shaft centre from lintel
L	Anchor length = DE - RM - 125 (see page 63)
LZ	Clear frame dimensions
F	Space for fitting the door

* Note:

Clear passage height LDH, see track application N

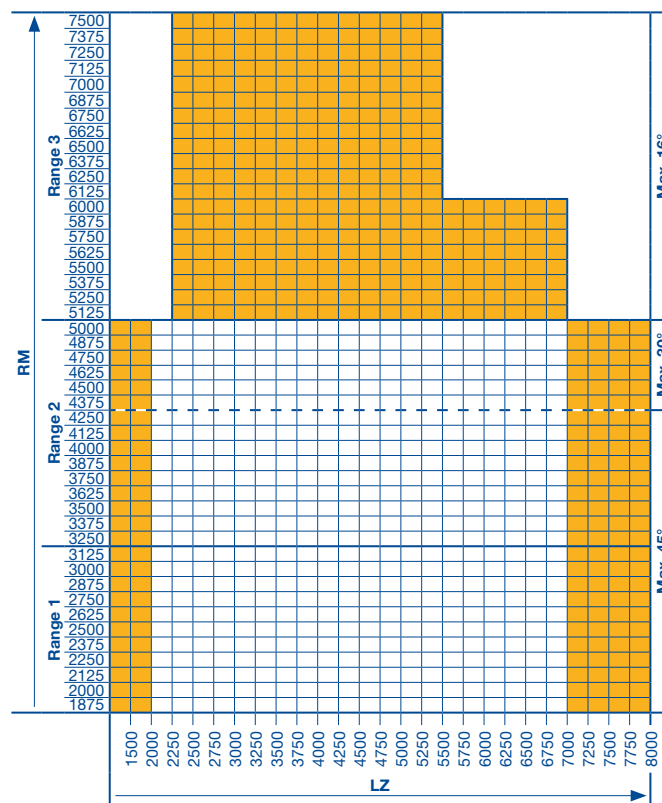
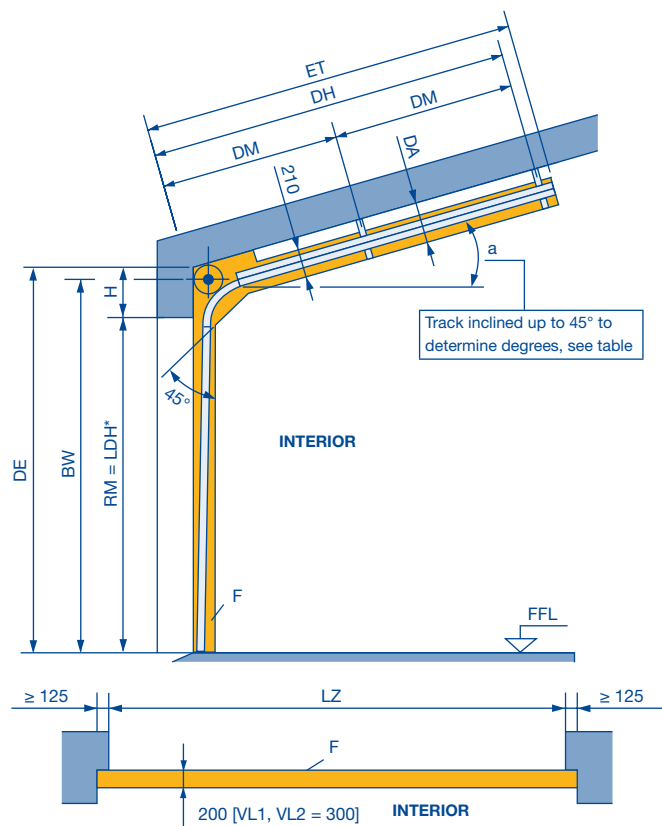
Notes:

- Observe the permissible size ranges of the door types on pages 10–15 and 18–29!
- 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 near the spring buffer is reduced by 70 mm.
- ALR F42 Vitraplan and ALR F42 Glazing on request

Track Application: ND

Normal track application

With inclination up to max. 45°



* Note:

Clear passage height LDH, see track application N

Note:

- 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 near the spring buffer is reduced by 70 mm.

Door weights for roof loads:

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

Observe min. sideroom, see page 58.

	H ≤ 30°	H > 30°
ND 1	390	490
ND 2	440	490
ND 3	550	–
With double spring shaft	760	–

ET = min. distance back		
ND 1 + 2 + 3	RM + 450 – a° × 6.5	a° > 5° and with / without operator, with short spring buffer
	RM + 700 – a° × 6.5	a° ≤ 5° and with operator, with long spring buffer
	RM + 450 – a° × 6.5	a° ≤ 5° and manual operation with short spring buffer
	RM + 270 – a° × 6.5	For manual operation and shaft operator with spring buffer below the track

See the normal track application for all other fitting dimensions.

Only to determine the roof slope in degrees (a°)								
a°	%	X (mm)	a°	%	X (mm)	a°	%	X (mm)
1	1.75	17.5	16	28.67	286.7	31	60.09	600.9
2	3.49	34.9	17	30.57	305.7	32	62.49	624.9
3	5.24	52.4	18	32.49	324.9	33	64.95	649.5
4	6.99	69.9	19	34.43	344.3	34	67.46	674.6
5	8.75	87.5	20	36.40	364.0	35	70.03	700.3
6	10.51	105.1	21	38.39	383.9	36	72.66	726.6
7	12.28	122.8	22	40.40	404.0	37	75.36	753.6
8	14.05	140.5	23	42.45	424.5	38	78.13	781.3
9	15.84	158.4	24	44.52	445.2	39	80.98	809.8
10	17.63	176.3	25	46.63	466.3	40	83.91	839.1
11	19.44	194.4	26	48.77	487.7	41	86.93	869.3
12	21.26	212.6	27	50.95	509.5	42	90.05	900.5
13	23.09	230.9	28	53.17	531.7	43	93.26	932.6
14	24.93	249.3	29	55.43	554.3	44	96.57	965.7
15	26.79	267.9	30	57.74	577.4	45	100	1000

Note:

- Observe the permissible size ranges of the door types on pages 10–15 and 18–29!
- ALR F42 Vitraplan and ALR F42 Glazing on request

LDH	Clear passage height
BW	Position of shaft support
	ND 1, ≤ 30° = RM + 310
	ND 2, ≤ 30° = RM + 335
	ND 1 + ND 2, > 30° = RM + 385
	ND 3, ≤ 16° = RM + 415
DH	Rear ceiling anchor
	ND 1 + ND 2 = RM + 195 – a° × 6.5
	ND 3 = RM + 295 – a° × 6.5
DM	Central ceiling anchor (see page 63)
H	Min. headroom (see page 39)
DA	Distance to ceiling on request
L	Anchor length = DE – RM + 25 (see page 63)
LZ	Clear frame dimensions (from 1200)
DE	Ceiling height
ET	Min. distance back
RM	Grid height
F	Space for fitting the door

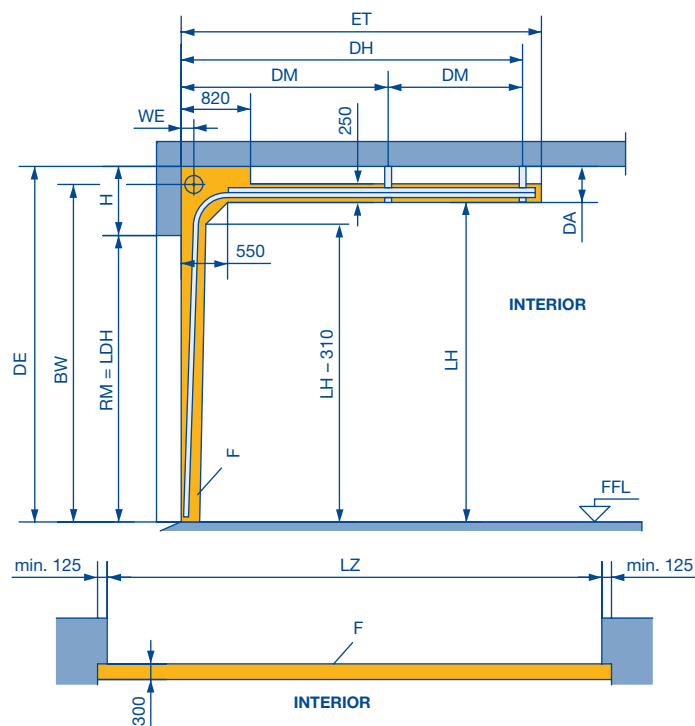
On request

Dimensions in mm

Track Application: NH

Normal track application

With minimum high-lift



Door weights for roof loads:

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

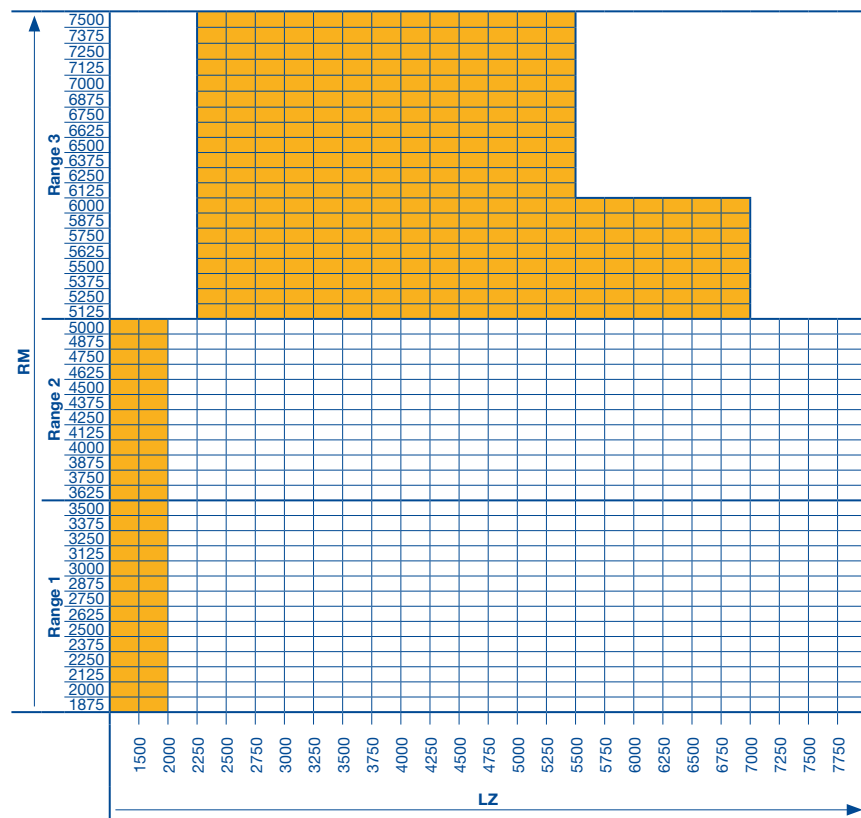
Observe min. sideroom, see page 58.

	WE	DA
NH 1	140	280
NH 2	160	330
NH 3	180	440

ET = min. distance back		
NH 1 + 2	2 x RM - LH + 1120	For manual operation with long spring buffer (standard)
	2 x RM - LH + 670	For manual operation with spring buffer below the track
	2 x RM - LH + 880	For shaft operator with long spring buffer = (LH - RM) ≤ 1000
	2 x RM - LH + 650	For shaft operator with short spring buffer = (LH - RM) > 1000
	2 x RM - LH + 430	For shaft operator with spring buffer below the track
NH 3	2 x RM - LH + 950	All versions
	2 x RM - LH + 430	For manual operation and shaft operator with spring buffer below the track

Notes:

- 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 near the spring buffer is reduced by 70 mm.
- Observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 29!
- ALR F42 Vitraplan and ALR F42 Glazing on request



LDH	Clear passage height
RM	Grid height
BW	Position of shaft support NH 1 = LH + 200 NH 2 = LH + 225 NH 3 = LH + 305
LH	Track height Min. = RM + 330 max. = RM + 460
DH	Rear ceiling anchor NH 1 + NH 2 = 2 x RM - LH + 645 (long spring buffer) NH 1 + NH 2 = 2 x RM - LH + 405 (short spring buffer) NH 1 + NH 2 = 2 x RM - LH + 405 (long spring buffer + operator) NH 3 = 2 x RM - LH + 485
DM	Deckenanker, Mitte (see page 63)
WE	Shaft centre from lintel
H	Min. headroom (see page 39)
DA	Distance to ceiling
DE	Ceiling height
L	Anchor length = DE - LH + 15 (see page 63)
LZ	Clear frame dimensions (from 1200)
ET	Min. distance back
F	Space for fitting the door

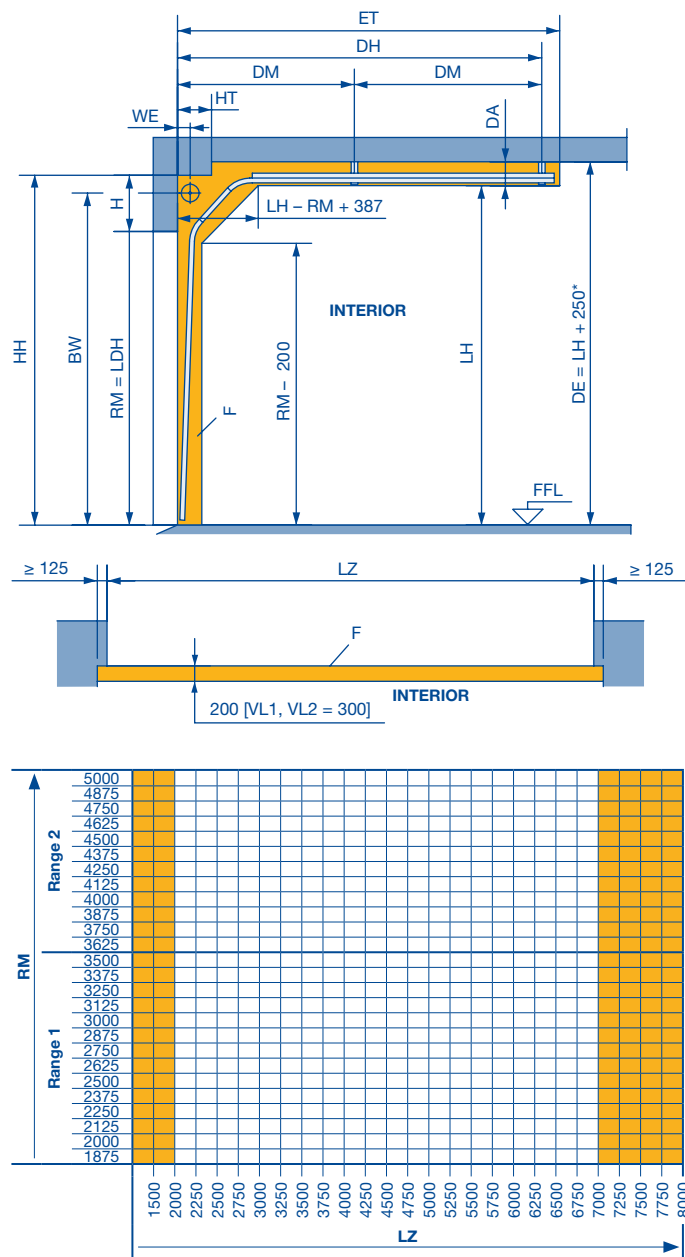
On request

Dimensions in mm

Track Application: NS

Normal track application

With double radius $2 \times 45^\circ$



	Clear passage height LDH	
	Without operator	Operator WA 400 **
LZ ≤ 5500		
Without wicket door	RM	RM
Wicket door with threshold	RM - 100	RM - 50
Wicket door without threshold rail	RM - 150	RM - 85
LZ > 5500		
Without wicket door	RM - 50	RM - 50
Wicket door with threshold	RM - 100	RM - 100
Wicket door without threshold rail	RM - 175	RM - 110

Note:

- 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 near the spring buffer is reduced by 70 mm.

Door weights for roof loads:

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

Observe min. sideroom, see page 58.

	H	HT	WE	BW
NS 1	≥ 390	330	140	RM + 310
NS 2	≥ 440	380	160	RM + 335

Door height RM	Track height		
	Min. LH	Max. LH	
5000	5190	5810	NS 2
4875	5065	5685	
4750	4940	5560	
4625	4815	5435	
4500	4690	5310	
4375	4565	5175	
4250	4440	5030	
4125	4315	4885	
4000	4190	4730	
3875	4065	4585	
3750	3940	4440	NS 1
3625	3815	4295	
3500	3690	4150	
3375	3565	4005	
3250	3440	3860	
3125	3315	3715	
3000	3190	3570	
2875	3065	3425	
2750	2940	3280	
2625	2815	3135	
2500	2690	2990	
2375	2565	2845	
2250	2440	2700	
2125	2315	2555	
2000	2190	2410	
1875	2065	2265	

Note:

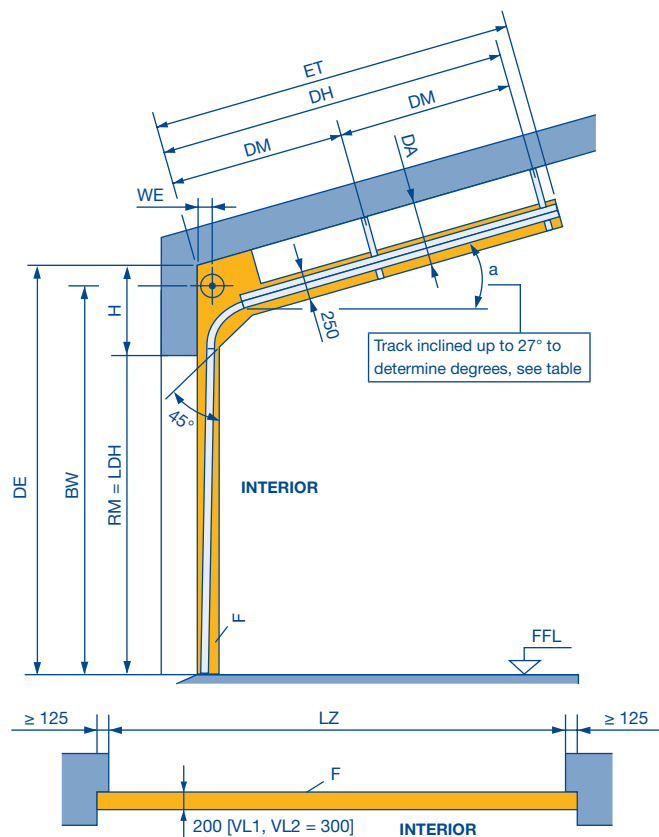
- Observe the permissible size ranges of the door types on pages 10–15 and 18–29!
- ALR F42 Vitraplan and ALR F42 Glazing on request

*	Min.	HH	Obstruction height
**	Or with chain hoist / pull rope	DE	Ceiling height
H	Min. headroom (see page 39)	LH	Track height
ET	Min. distance back on request	LDH	Clear passage height
DH	Rear ceiling anchor on request	LZ	Clear frame dimensions
DM	Central ceiling anchor on request		(from 1200)
DA	Min. distance to ceiling 250	RM	Grid height
HT	Obstruction depth	F	Space for fitting the door
L	Anchor length = DE - LH - 15 (see page 63)		On request
BW	Position of shaft support		
WE	Shaft centre from lintel		Dimensions in mm

Track Application: GD

Normal track application

With inclination up to max. 27°
and minimum high lift



Door weights for roof loads:

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

Observe min. sideroom, see page 58.

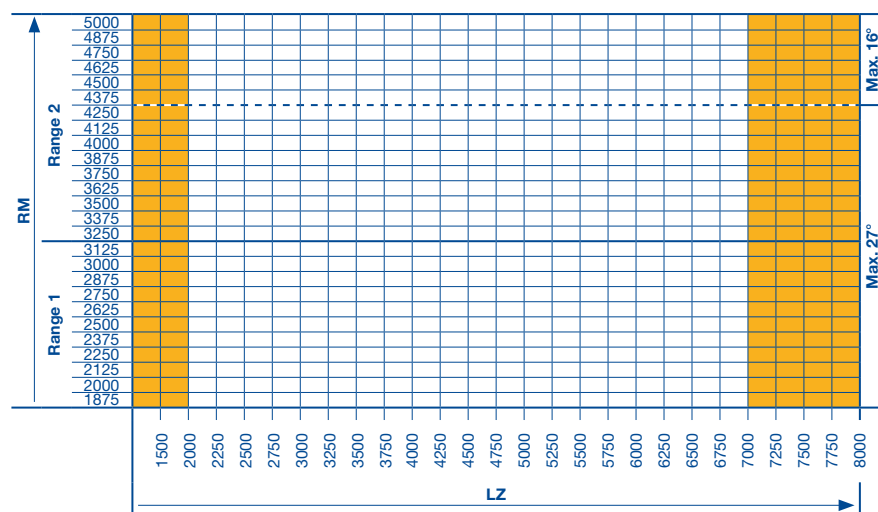
	WE
GD 1	140
GD 2	160

ET = min. distance back	
GD 1 + 2	2 x RM - LH + 1120 - a° x 6.5
	2 x RM - LH + 650 - a° x 6.5
	2 x RM - LH + 880 - a° x 6.5
	2 x RM - LH + 270 - a° x 6.5

Only to determine the roof slope in degrees (a°)			a°		
a°	%	X (mm)	a°	%	X (mm)
1	1.75	17.5	15	26.79	267.9
2	3.49	34.9	16	28.67	286.7
3	5.24	52.4	17	30.57	305.7
4	6.99	69.9	18	32.49	324.9
5	8.75	87.5	19	34.43	344.3
6	10.51	105.1	20	36.40	364.0
7	12.28	122.8	21	38.39	383.9
8	14.05	140.5	22	40.40	404.0
9	15.84	158.4	23	42.45	424.5
10	17.63	176.3	24	44.52	445.2
11	19.44	194.4	25	46.63	466.3
12	21.26	212.6	26	48.77	487.7
13	23.09	230.9	27	50.95	509.5
14	24.93	249.3			

Notes:

- 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 near the spring buffer is reduced by 70 mm.
- Observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 29!
- ALR F42 Vitraplan and ALR F42 Glazing on request



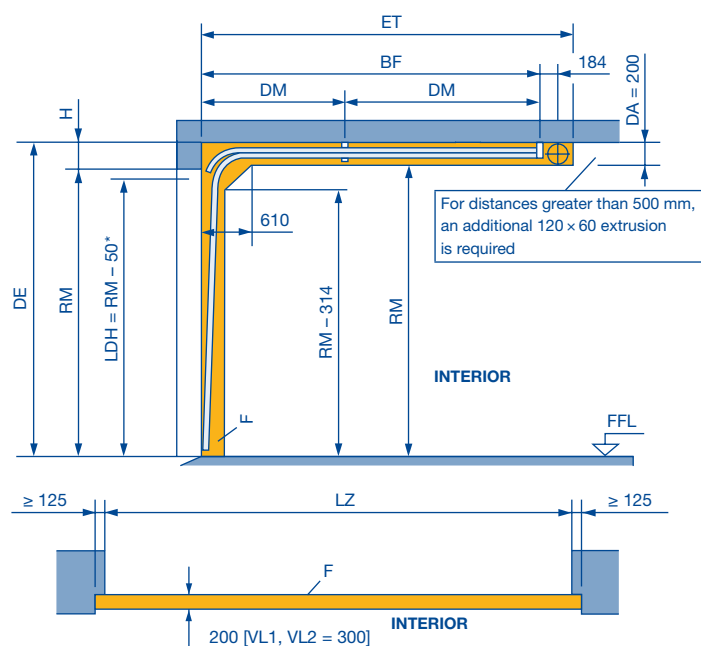
- DH** Rear ceiling anchor
GD 1 + GD 2 = 2 x RM - LH + 645 - a° x 6.5
(long spring buffer)
GD 1 + GD 2 = 2 x RM - LH + 405 - a° x 6.5
(short spring buffer)
GD 1 + GD 2 = 2 x RM - LH + 405 - a° x 6.5
(long spring buffer + operator)
- DM** Central ceiling anchor = see page 63
- H** Min. headroom (see page 39)
- DA** Distance to ceiling on request
- DE** Ceiling height
- L** Anchor length on request (see page 63)
- LDH** Clear passage height
- LZ** Clear frame dimensions (from 1200)
- ET** Min. distance back
- RM** Grid height
- F** Space for fitting the door

On request

Dimensions in mm

Track Application: L

Low headroom track application



Door weights for roof loads:

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

Observe min. sideroom, see page 58.

Door operation:

- Manually operated: with rope or chain hoist (recommended for manual operation!)
- Power-driven: WA 400 with chain box, ITO 400 or SupraMatic H

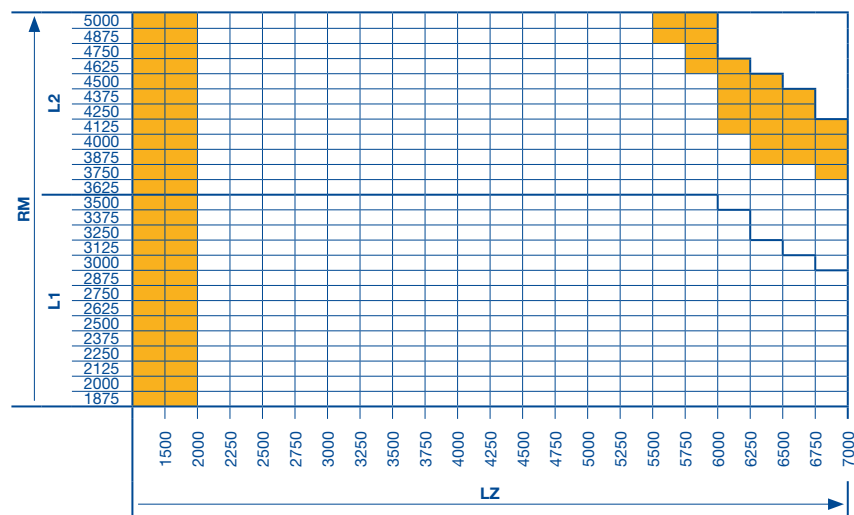
	* Clear passage height LDH		
	Without operator	Operator	
		WA 400 **	WA 300 ***
LZ ≤ 5500			
Without wicket door	RM - 50	RM - 50	RM - 80
Wicket door with threshold	RM - 100	RM - 100	RM - 130
Wicket door without threshold rail	RM - 165	RM - 135	RM - 165
LZ > 5500			
Without wicket door	RM - 100	RM - 100	RM - 130
Wicket door with threshold	RM - 100	RM - 100	RM - 130
Wicket door without threshold rail	RM - 195	RM - 165	RM - 195

** Or with chain hoist / pull rope

*** Track application with inclination not possible!

Notes:

- 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 - 29!
- ALR F42 Vitraplan and ALR F42 Glazing on request



LDH	Clear passage height
RM	Grid height
BF	Position of spring shaft = $RM + 682$
DM	Central ceiling anchor
	Up to $RM 3500 = BF / 2$
	From $RM 3510 = BF / 3$
ET	Min. distance back = $RM + 990$
H	Min. headroom 200 (see page 39)
DA	Distance to ceiling
DE	Ceiling height
L	Anchor length = $DE - RM - 15$ (see page 63)
LZ	Clear frame dimensions (from 1200)
F	Space for fitting the door

□ All door types available in any version.

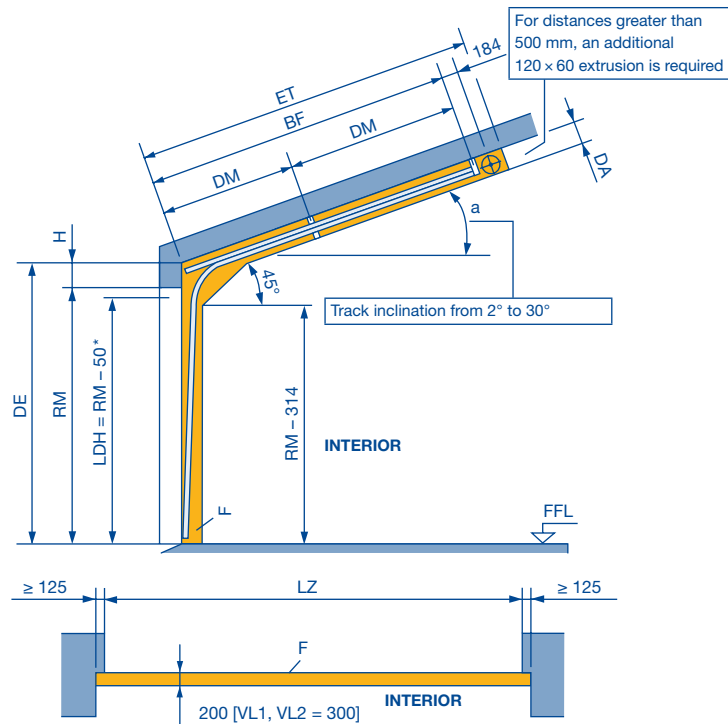
■ All door types in any version on request.

Dimensions in mm

Track Application: LD

Low headroom track application

With inclination



Door weights for roof loads:

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

Observe min. sideroom, see page 58.

Only to determine the roof slope in degrees (a°)



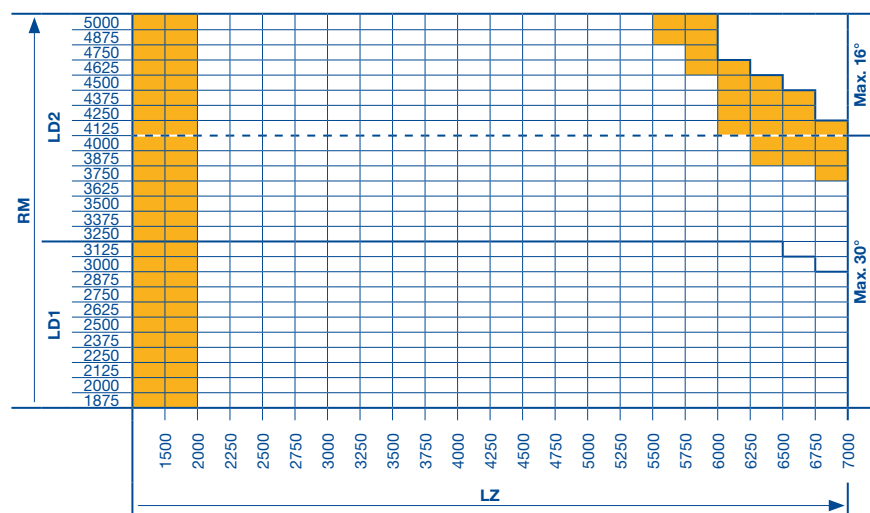
a°	%	X (mm)
2	3.49	34.9
4	6.99	69.9
6	10.51	105.1
8	14.05	140.5
10	17.63	176.3
12	21.26	212.6
14	24.93	249.3
16	28.67	286.7
18	32.49	324.9
20	36.40	364.0
22	40.40	404.0
24	44.52	445.2
26	48.77	487.7
28	53.17	531.7
30	57.74	577.4

* Notes:

- Clear passage height LDH, see track application L
- For door operation, see track application L

Notes:

- 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 – 29!
- ALR F42 Vitraplan and ALR F42 Glazing on request



LDH	Clear passage height
RM	Grid height
ET	Min. distance back
	2° – 4° = RM + 990
	6° – 16° = RM + 800
	18° – 30° = RM + 740
H	Min. headroom 200 (see page 39)
BF	Position of spring shaft on request
DM	Central ceiling anchor on request
DA	Distance to ceiling on request
DE	Ceiling height
L	Anchor length on request (see page 63)
LZ	Clear frame dimensions (from 1200)
F	Space for fitting the door

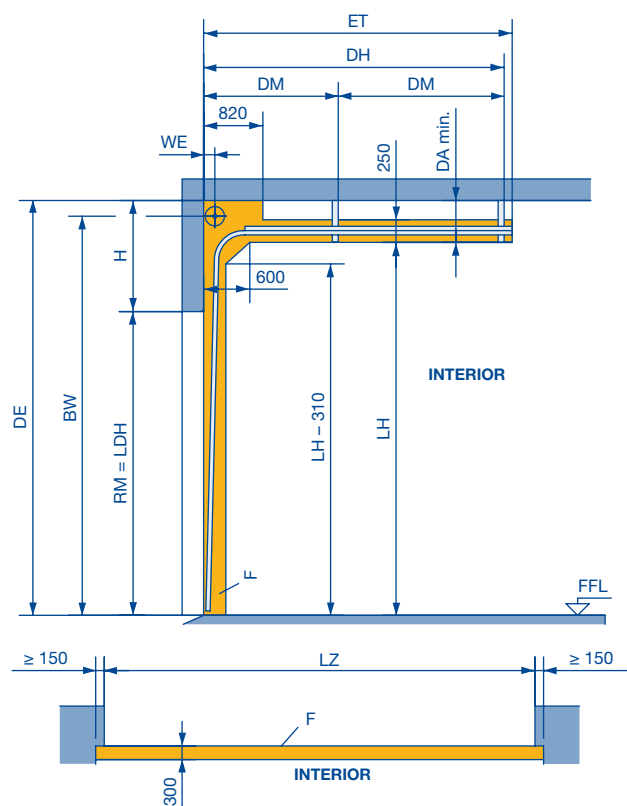
□ All door types available in any version.

■ All door types in any version on request.

Dimensions in mm

Track Application: H

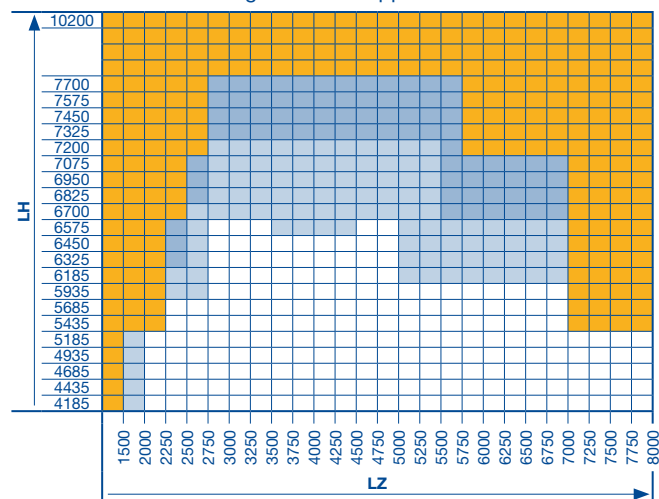
High-lift track application



ET = min. distance back		
H 4 + 5	2 x RM - LH + 1120	For manual operation with long spring buffer (standard)
	2 x RM - LH + 670	For manual operation with spring buffer below the track
	2 x RM - LH + 880	For shaft operator with long spring buffer (LH - RM) ≤ 1000
	2 x RM - LH + 650	For shaft operator with short spring buffer (LH - RM) > 1000
H 8	2 x RM - LH + 430	For shaft operator with spring buffer below the track
	2 x RM - LH + 950	All versions
	2 x RM - LH + 430	For manual operation and shaft operator with spring buffer below the track

Observe min. sideroom, see page 58.

Table 2
Demarcation of track height for track application H



Please note:

1. Select required track height according to the door height in table 1.
2. Determine the intersection of the door width and track height using table 2.
3. Please check if, acc. to the explanations, a request is necessary.

Note:

- 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 near the spring buffer is reduced by 70 mm.

Table 1: Track heights (LH)

Door height RM	Min. LH	Max. LH	H 5, WE = 180	Door height RM	Min. LH	Max. LH	H 8, WE = 205
5000	5460	8300		7500	7960	10200	
4875	5335	8175	H 5, WE = 180	7375	7835	10200	All door types and versions available on request.
4750	5210	8050		7250	7710	10200	
4625	5085	7925		7125	7585	10200	
4500	4960	7800		7000	7460	10200	
4375	4835	7675		6875	7335	10200	
4250	4710	7550		6750	7210	10150	
4125	4585	7425		6625	7085	10025	
4000	4460	7185		6500	6960	9900	
3875	4335	6935		6375	6835	9775	
3750	4210	6685		6250	6710	9650	
3625	4085	6435		6125	6585	9525	
3500	3960	6185		6000	6460	9400	
3375	3835	5935		5875	6335	9275	
3250	3710	5685		5750	6210	9150	
3125	3585	5435		5625	6085	9025	
3000	3460	5185	H 4, WE = 160	5500	5960	8900	
2875	3335	4935		5375	5835	8775	
2750	3210	4685		5250	5710	8650	
2625	3085	4435		5125	5585	8525	
2500	2960	4185					
2375	2835	3935					
2250	2710	3685					
2125	2585	3435					
2000	2460	3185					

Notes:

- Observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 29!
- ALR F42 Vitraplan and ALR F42 Glazing on request

LDH	Clear passage height
RM	Grid height
LH	Track height (see Table 1 + 2)
BW	Position of shaft support H 4 + 5 = LH + 280, H 8 = LH + 305
DH	Rear ceiling anchor H 4 + H 5 = 2 x RM - LH + 645 (long spring buffer) H 4 + H 5 = 2 x RM - LH + 405 (long spring buffer + operator) H 8 = 2 x RM - LH + 485
DM	Central ceiling anchor (see page 63)
WE	Shaft centre from lintel (see table 1)
H	Min. headroom (see page 39)
Min. DA	H 4 = 420 H 5 = 450, 625 with double spring shaft H 8 = 490, 650 with double spring shaft
L	Anchor length DE - LH - 15 (see page 63)
DE	Ceiling height
LZ	Clear frame dimensions (from 1200)
ET	Distance back
F	Space for fitting the door

□ All door types available in any version.

□ All door types available, versions with glazing A3, B3, M3, S3, R3, LB, P and / or wicket door on request.

□ Door types APU F42 S-Line, ALR F42 S-Line, APU F42 and ALR F42 are possible; APU F42 Thermo, ALR F42 Thermo and SPU F42 with thermo frames as well as versions with glazing A3, B3, M3, S3, R3, LB, P and / or wicket door on request.

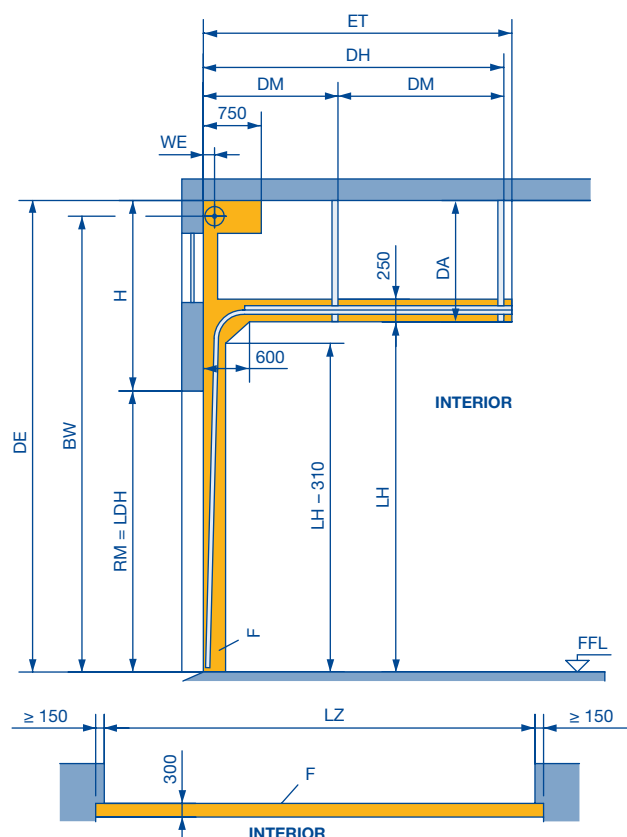
□ All door types in any version on request.

Dimensions in mm

Track Application: HA

High-lift track application

With high-mounted torsion spring shaft

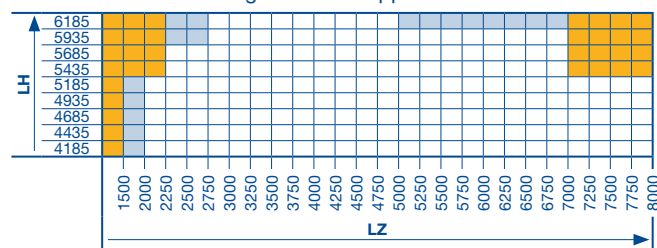


ET = min. distance back		
HA 4	$2 \times RM - LH + 1120$	For manual operation with long spring buffer (standard)
	$2 \times RM - LH + 670$	For manual operation with spring buffer below the track
	$2 \times RM - LH + 880$	For shaft operator with long spring buffer ($LH - RM \leq 1000$)
	$2 \times RM - LH + 650$	For shaft operator with short spring buffer ($LH - RM > 1000$)
	$2 \times RM - LH + 430$	For shaft operator with spring buffer below the track

Observe the min. sideroom see page 58.

Table 4

Demarcation of track height for track application HA



Please note:

1. Select required track height according to the door height in table 3.
2. Determine the intersection of the door width and track height using table 4.
3. Please check if, acc. to the explanations, a request is necessary.

Note:

- 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 near the spring buffer is reduced by 70 mm.

Table 3: Track heights (LH)

Door height	Min. LH	Max. LH
RM		
3500	3960	6185
3375	3835	5935
3250	3710	5685
3125	3585	5435
3000	3460	5185
2875	3335	4935
2750	3210	4685
2625	3085	4435
2500	2960	4185
2375	2835	3935
2250	2710	3685
2125	2585	3435
2000	2460	3185

HA 4, WE = 160

Notes:

- Observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 29!
- ALR F42 Vitraplan and ALR F42 Glazing on request

LDH	Clear passage height
RM	Grid height
LH	Track height (see Table 3 + 4)
BW	Position of shaft support Min. = HA 4 = LH + 280 Max. (8120) = HA 4 = DE - 140
DH	Rear ceiling anchor HA 4 = $2 \times RM - LH + 645$ (long spring buffer) HA 4 = $2 \times RM - LH + 405$ (short spring buffer) HA 4 = $2 \times RM - LH + 405$ (long spring buffer + operator)
DM	Central ceiling anchor (see page 63)
WE	Shaft centre from lintel (see table 3)
H	Min. headroom (see page 39)
DA	Distance to ceiling = HA 4 = min. 420
L	Anchor length DE - LH - 15 (see page 63)
DE	Ceiling height
LZ	Clear frame dimensions (from 1200)
ET	Distance back
F	Space for fitting the door

□ All door types available in any version.

□ All door types available, versions with glazing A3, B3, M3, S3, R3, LB, P and/or wicket door on request.

□ Door types APU F42 S-Line, ALR F42 S-Line, APU F42 und ALR F42 are possible; APU F42 Thermo, ALR F42 Thermo und SPU F42 with thermo frames as well as versions with glazing A3, B3, M3, S3, R3, LB, P and/or wicket door on request.

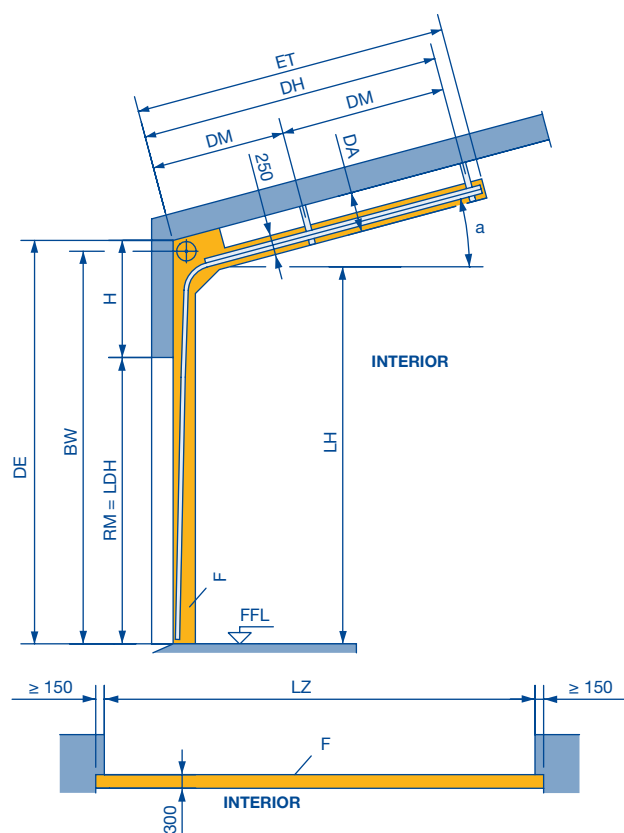
□ All door types in any version on request.

Dimensions in mm

Track Application: HD

High-lift track application

With inclination

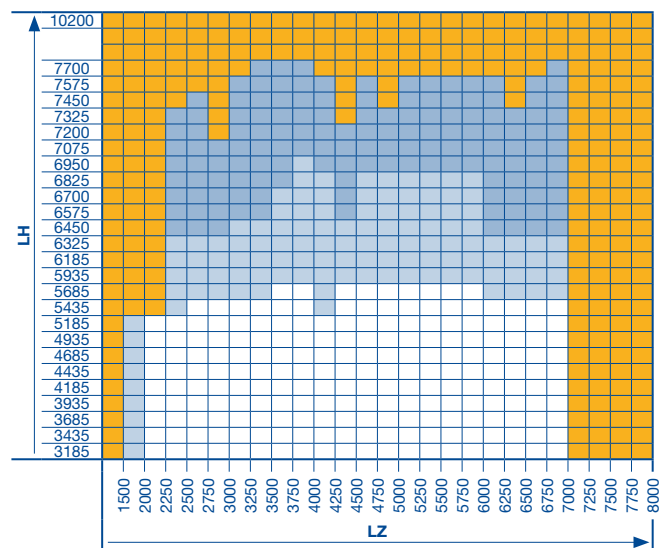


Notes:

- 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 near the spring buffer is reduced by 70 mm.
- Observe the permissible size ranges of the door types on pages 10–15 and 18–29!
- ALR F42 Vitraplan and ALR F42 Glazing on request

Table 5

Demarcation of track height for track application HD to 10°,
Track application HD 11° to 30° on request!



Please note:

- Select required track height according to the door height in table 1 on page 47.
- Determine the intersection of the door width and track height using table 5.
- Please check if, acc. to the explanations, a request is necessary.

ET = min. distance back	
2 x RM – LH + 1120 – a° x 6.5	For manual operation with long spring buffer (standard)
2 x RM – LH + 670 – a° x 6.5	For manual operation with spring buffer below the track
2 x RM – LH + 880 – a° x 6.5	For shaft operator with long spring buffer (LH – RM) ≤ 1000 and a° ≤ 5°
2 x RM – LH + 650 – a° x 6.5	For shaft operator with short spring buffer (LH – RM) > 1000 or a° > 5°
2 x RM – LH + 430 – a° x 6.5	For shaft operator with spring buffer below the track
2 x RM – LH + 950 – a° x 6.5	All versions
2 x RM – LH + 430 – a° x 6.5	For manual operation and shaft operator with spring buffer below the track

See the high-lift track application with inclination for all other fitting dimensions.
Observe the min. sideroom, see page 58.

Only to determine the roof slope in degrees (a°)					
a°	%	X (mm)	a°	%	X (mm)
1	1.75	17.5	16	28.67	286.7
2	3.49	34.9	17	30.57	305.7
3	5.24	52.4	18	32.49	324.9
4	6.99	69.9	19	34.43	344.3
5	8.75	87.5	20	36.40	364.0
6	10.51	105.1	21	38.39	383.9
7	12.28	122.8	22	40.40	404.0
8	14.05	140.5	23	42.45	424.5
9	15.84	158.4	24	44.52	445.2
10	17.63	176.3	25	46.63	466.3
11	19.44	194.4	26	48.77	487.7
12	21.26	212.6	27	50.95	509.5
13	23.09	230.9	28	53.17	531.7
14	24.93	249.3	29	55.43	554.3
15	26.79	267.9	30	57.74	577.4

- DA** Distance to ceiling on request
L Anchor length DE – L + 140 (see page 63)
LH Track height (see Table 1 on page 47 and Table 5)
H Min. headroom (see page 39)
BW Position of shaft support
 HD 4 + 5 = LH + 280, HD 8 = LH + 305
DH Rear ceiling anchor
 HD 4 + HD 5 = 2 x RM – LH + 645 – a° x 6.5 (long spring buffer)
 HD 4 + HD 5 = 2 x RM – LH + 405 – a° x 6.5 (short spring buffer)
 HD 4 + HD 5 = 2 x RM – LH + 405 – a° x 6.5 (long spring buffer + operator)
 HD 8 = 2 x RM – LH + 485
DM Central ceiling anchor on request
WE Shaft centre from lintel (see Table 1 on page 47)
DE Ceiling height
LDH Clear passage height
LZ Clear frame dimensions (from 1200)
ET Distance back
RM Grid height
F Space for fitting the door

□ All door types available in any version.

□ All door types available, versions with glazing A3, B3, M3, S3, R3, LB, P and/or wicket door on request.

□ Door types APU F42 S-Line, ALR F42 S-Line, APU F42 und ALR F42 are possible; APU F42 Thermo, ALR F42 Thermo und SPU F42 with thermo frames as well as versions with glazing A3, B3, M3, S3, R3, LB, P and/or wicket door on request.

□ All door types in any version on request.

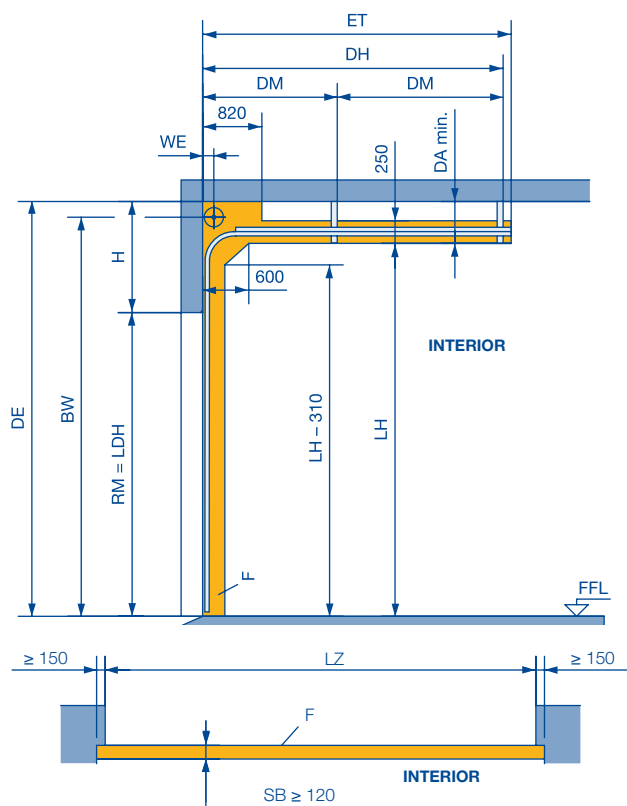
Dimensions in mm

Track Application: HG

High-lift track application

With steep track

(Application for loading ramp doors)



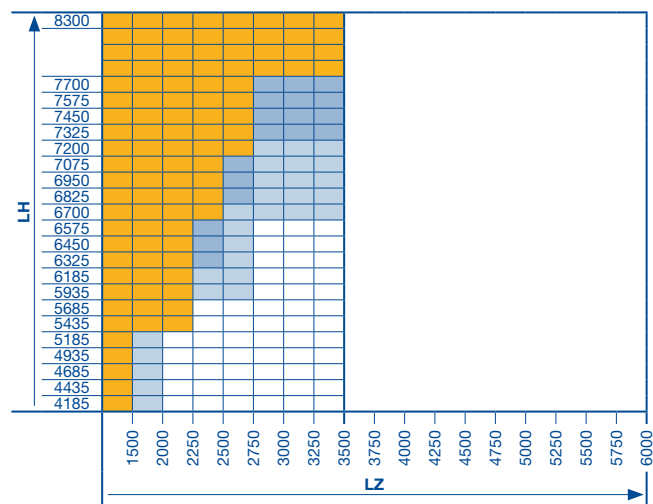
ET = min. distance back	
2 x RM - LH + 1120	For manual operation with long spring buffer (standard)
2 x RM - LH + 670	For manual operation with spring buffer below the track
2 x RM - LH + 880	For shaft operator with long spring buffer (LH - RM) ≤ 1000
2 x RM - LH + 650	For shaft operator with short spring buffer (LH - RM) > 1000
2 x RM - LH + 430	For shaft operator with spring buffer below the track

Other versions on request.

Observe min. sideroom, see page 58.

Table 7

Demarcation of track height for track application HG



Please note:

1. Select required track height according to the door height in table 6.
2. Determine the intersection of the door width and track height using table 7.
3. Please check if, acc. to the explanations, a request is necessary.

Notes:

- Door types APU F42 S-Line / ALR F42 S-Line / ALR F42 Glazing, doors with real glass infill and wicket doors are not possible!
- 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 near the spring buffer is reduced by 70 mm.

Table 6: Track heights (LH)

Door height	Min. LH	Max. LH	
RM			
5000	5460	8300	HG 5, WE = 180
4875	5335	8175	
4750	5210	8050	
4625	5085	7925	
4500	4960	7800	
4375	4835	7675	
4250	4710	7550	
4125	4585	7425	
4000	4460	7185	
3875	4335	6935	
3750	4210	6685	HG 4, WE = 160
3625	4085	6435	
3500	3960	6185	
3375	3835	5935	
3250	3710	5685	
3125	3585	5435	
3000	3460	5185	
2875	3335	4935	
2750	3210	4685	
2625	3085	4435	
2500	2960	4185	
2375	2835	3935	

Notes:

- Observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 29!
- ALR F42 Vitraplan on request

LDH	Clear passage height
RM	Grid height
LH	Track height (see Table 6)
DH	Rear ceiling anchor = HG 4 + HG 5 = 2 x RM - LH + 645 (long spring buffer) HG 4 + HG 5 = 2 x RM - LH + 405 (short spring buffer) HG 4 + HG 5 = 2 x RM - LH + 405 (long spring buffer + operator)
DM	Central ceiling anchor (see page 63)
WE	Shaft centre from lintel (see table 6)
H	Min. headroom (see page 39)
Min. DA	HG 4 = 420 HG 5 = 450, 625 with double spring shaft
SB	Slot width
L	Anchor length DE - LH - 15 (see page 63)
ET	Distance back
DE	Ceiling height
LZ	Clear frame dimensions (from 1200)
F	Space for fitting the door

□ All door types available in any version.

□ All door types available, versions with glazing A3, B3, M3, S3, R3, LB, P on request.

□ Door types APU F42 S-Line, ALR F42 S-Line, APU F42 and ALR F42 are possible; APU F42 Thermo, ALR F42 Thermo and SPU F42 with thermo frames as well as versions with glazing A3, B3, M3, S3, R3, LB, P must be requested.

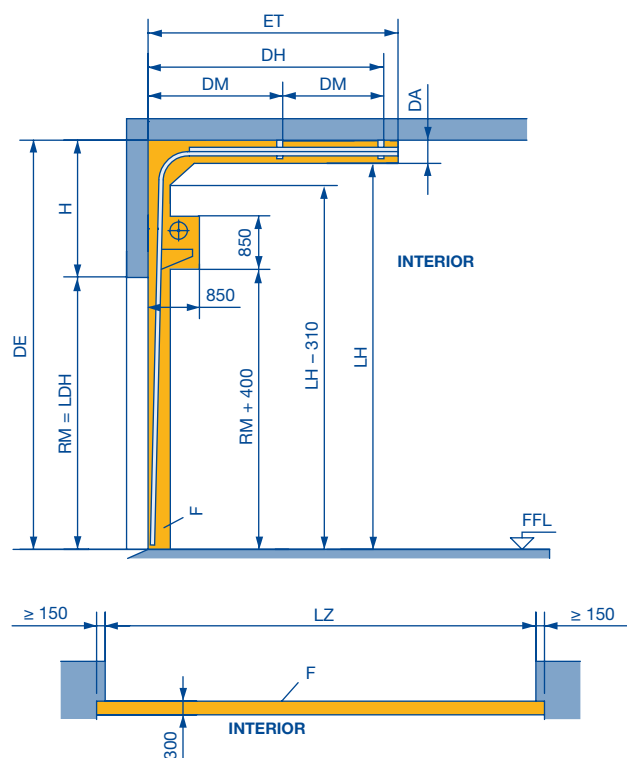
□ All door types in any version on request.

Dimensions in mm

Track Application: HU

High-lift track application

With low-mounted torsion spring shaft



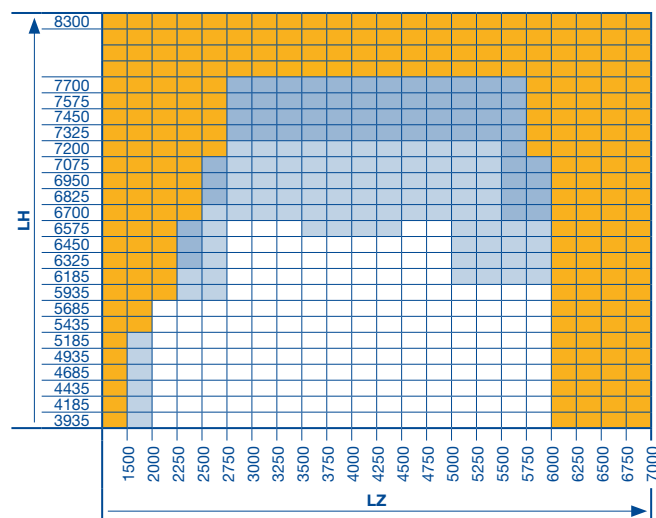
ET = min. distance back	
HU 4 + 5	2 x RM - LH + 1120 For manual operation with long spring buffer (standard)
	2 x RM - LH + 670 For manual operation with spring buffer below the track
	2 x RM - LH + 650 For shaft operator with short spring buffer = (LH - RM ≥ 1510)
	2 x RM - LH + 430 For shaft operator with spring buffer below the track

Other versions on request.

Observe min. sideroom, see page 58.

Table 7

Demarcation of track height for track application HU



Please note:

1. Select required track height according to the door height in table 6.
2. Determine the intersection of the door width and track height using table 7.
3. Please check if, acc. to the explanations, a request is necessary.

Note:

- 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 near the spring buffer is reduced by 70 mm.

Table 6: Track heights (LH)

Door height	Min. LH	Max. LH
RM		
5000	6510	8300
4875	6385	8175
4750	6260	8050
4625	6135	7925
4500	6010	7800
4375	5885	7675
4250	5760	7550
4125	5635	7425
4000	5510	7185
3875	5385	6935
3750	5260	6685
3625	5135	6435
3500	5010	6185
3375	4885	5935
3250	4760	5685
3125	4635	5435
3000	4510	5185
2875	4385	4935
2750	4260	4685
2625	4135	4435
2500	4010	4185
2375	3885	3935

HU 5, WE = 335

HU 4, WE = 315

Notes:

- Observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 29!
- ALR F42 Vitraplan and ALR F42 Glazing on request

DE	Ceiling height
LDH	Clear passage height
RM	Grid height
LH	Track height (see Table 6)
DH	Rear ceiling anchor
	HU 4 + HU 5 = 2 x RM - LH + 645 (long spring buffer)
	HU 4 + HU 5 = 2 x RM - LH + 405 (short spring buffer)
	HU 4 + HU 5 = 2 x RM - LH + 405 (long spring buffer + operator)
DM	Central ceiling anchor (see page 63)
WE	Shaft centre from lintel (see table 6)
H	Min. headroom (see page 39)
DA	Min. distance to ceiling 250
L	Anchor length DE - LH - 15 (see page 63)
LZ	Clear frame dimensions (from 1200)
ET	Distance back
F	Space for fitting the door

□ All door types available in any version.

□ All door types available, versions with glazing A3, B3, M3, S3, R3, LB, P and/or wicket door on request.

□ Door types APU F42 S-Line, ALR F42 S-Line, APU F42 and ALR F42 are possible; APU F42 Thermo, ALR F42 Thermo and SPU F42 with thermo frames as well as versions with glazing A3, B3, M3, S3, R3, LB, P and/or wicket door on request.

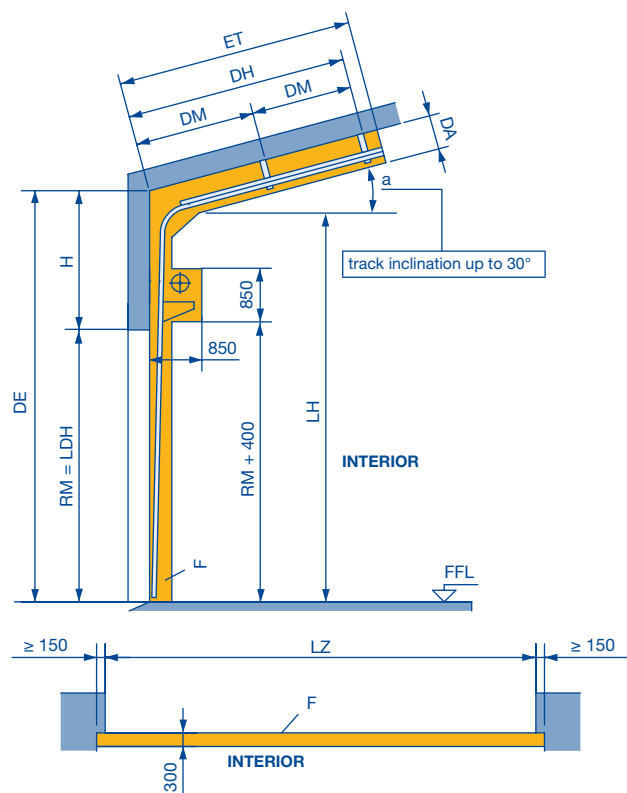
□ All door types in any version on request.

Dimensions in mm

Track Application: RD

High-lift track application

With low-mounted torsion spring shaft and inclination

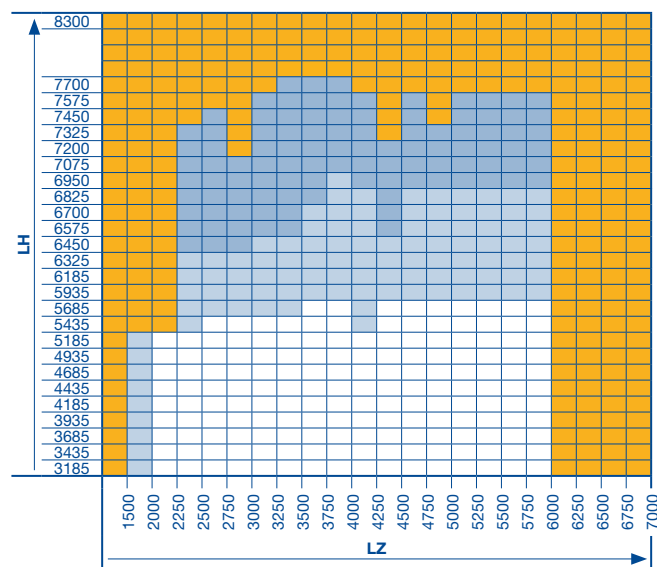


Notes:

- Observe the permissible size ranges of the door types on pages 10–15 and 18–29!
- ALR F42 Vitraplan and ALR F42 Glazing on request

Table 8

Demarcation of track height for track application RD to 10°,
Track application RD 11° to 30° on request!



Please note:

- Select required track height according to the door height in table 6 on page 51.
- Determine the intersection of the door width and track height using table 8.
- Please check if, acc. to the explanations, a request is necessary.

Note:

- 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 near the spring buffer is reduced by 70 mm.

ET = min. distance back		
RD 4+5	2 × RM – LH + 1160 – a° × 6.5	For manual operation with long spring buffer (standard)
	2 × RM – LH + 670 – a° × 6.5	For manual operation with spring buffer below the track
	2 × RM – LH + 920 – a° × 6.5	For shaft operator with long spring buffer = a° ≤ 5°
	2 × RM – LH + 690 – a° × 6.5	For shaft operator with long spring buffer = (LH – RM) ≥ 1510 or a° > 5°
	2 × RM – LH + 430 – a° × 6.5	For shaft operator with spring buffer below the track

See the high-lift track application with inclination for all other fitting dimensions.
Observe min. sideroom, see page 58.

Only to determine the roof slope in degrees (a°)					
a°	%	X (mm)	a°	%	X (mm)
1	1.75	17.5	16	28.67	286.7
2	3.49	34.9	17	30.57	305.7
3	5.24	52.4	18	32.49	324.9
4	6.99	69.9	19	34.43	344.3
5	8.75	87.5	20	36.40	364.0
6	10.51	105.1	21	38.39	383.9
7	12.28	122.8	22	40.40	404.0
8	14.05	140.5	23	42.45	424.5
9	15.84	158.4	24	44.52	445.2
10	17.63	176.3	25	46.63	466.3
11	19.44	194.4	26	48.77	487.7
12	21.26	212.6	27	50.95	509.5
13	23.09	230.9	28	53.17	531.7
14	24.93	249.3	29	55.43	554.3
15	26.79	267.9	30	57.74	577.4

- DE** Ceiling height
L Anchor length DE – L – 15 (see page 63)
LH Track height (see Table 6 on page 51)
H Min. headroom (see page 39)
DH Rear ceiling anchor =
 RD 4 + RD 5 = 2 × RM – LH + 645 – a° × 6.5 (long spring buffer)
 RD 4 + RD 5 = 2 × RM – LH + 405 – a° × 6.5 (short spring buffer)
 RD 4 + RD 5 = 2 × RM – LH + 405 – a° × 6.5 (long spring buffer + operator)

- DM** Central ceiling anchor (see page 63)
WE Shaft centre from lintel (see Table 6 on page 51)
DA Distance to ceiling on request
LDH Clear passage height
LZ Clear frame dimensions (from 1200)
RM Grid height
F Space for fitting the door

□ All door types available in any version.

□ All door types available, versions with glazing A3, B3, M3, S3, R3, LB, P and/or wicket door on request.

□ Door types APU F42 S-Line, ALR F42 S-Line, APU F42 and ALR F42 are possible; APU F42 Thermo, ALR F42 Thermo and SPU F42 with thermo frames as well as versions with glazing A3, B3, M3, S3, R3, LB, P and/or wicket door on request.

□ All door types in any version on request.

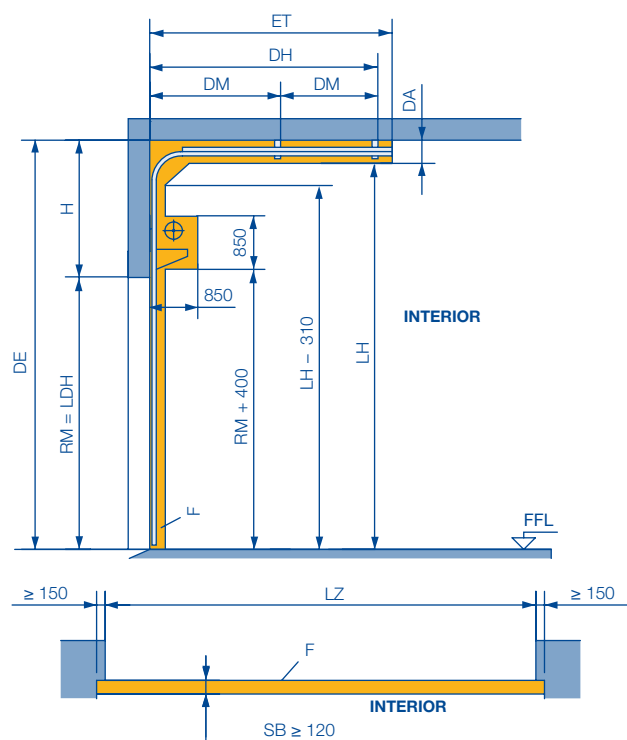
Dimensions in mm

Track Application: RG

High-lift track application

With low-mounted torsion spring shaft and steep track

(Application for loading ramp doors)



ET = min. distance back	
RG 4 + 5	2 x RM - LH + 1120 For manual operation with long spring buffer (standard)
	2 x RM - LH + 670 For manual operation with spring buffer below the track
	2 x RM - LH + 650 For shaft operator with short spring buffer = (LH - RM ≥ 1510)
	2 x RM - LH + 430 For shaft operator with spring buffer below the track

Other versions on request.

Observe min. sideroom, see page 58.

Table 10

Demarcation of track height for track application RG



Please note:

1. Select required track height according to the door height in table 9.
2. Determine the intersection of the door width and track height using table 10.
3. Please check if, acc. to the explanations, a request is necessary.

Notes:

- Door types APU F42 S-Line / ALR F42 S-Line and wicket doors are not possible!
- 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 near the spring buffer is reduced by 70 mm.

Table 9: Track heights (LH)

Door height	Min. LH	Max. LH	
RM			
5000	6510	8300	RG 5, WE = 276
4875	6385	8175	
4750	6260	8050	
4625	6135	7925	
4500	6010	7800	
4375	5885	7675	
4250	5760	7550	
4125	5635	7425	
4000	5510	7185	
3875	5385	6935	
3750	5260	6685	
3625	5135	6435	
3500	5010	6185	
3375	4885	5935	RG 4, WE = 246
3250	4760	5685	
3125	4635	5435	
3000	4510	5185	
2875	4385	4935	
2750	4260	4685	
2625	4135	4435	
2500	4010	4185	
2375	3885	3935	

Notes:

- Observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 29!
- ALR F42 Vitraplan and ALR F42 Glazing on request

LDH	Clear passage height
RM	Grid height
LH	Track height (see Table 9)
DH	Rear ceiling anchor = RG 4 + RG 5 = 2 x RM - LH + 580 (long spring buffer) RG 4 + RG 5 = 2 x RM - LH + 340 (short spring buffer) RG 4 + RG 5 = 2 x RM - LH + 340 (long spring buffer + WA 400)
DM	Central ceiling anchor (see page 63)
WE	Shaft centre from lintel (see table 9)
H	Min. headroom (see page 39)
DA	Min. distance to ceiling 250
SB	Slot width
L	Anchor length DE - LH - 15 (see page 63)
ET	Distance back
DE	Ceiling height
LZ	Clear frame dimensions (from 1200)
F	Space for fitting the door

□ All door types available in any version.

□ All door types available, versions with glazing A3, B3, M3, S3, R3, LB, P on request.

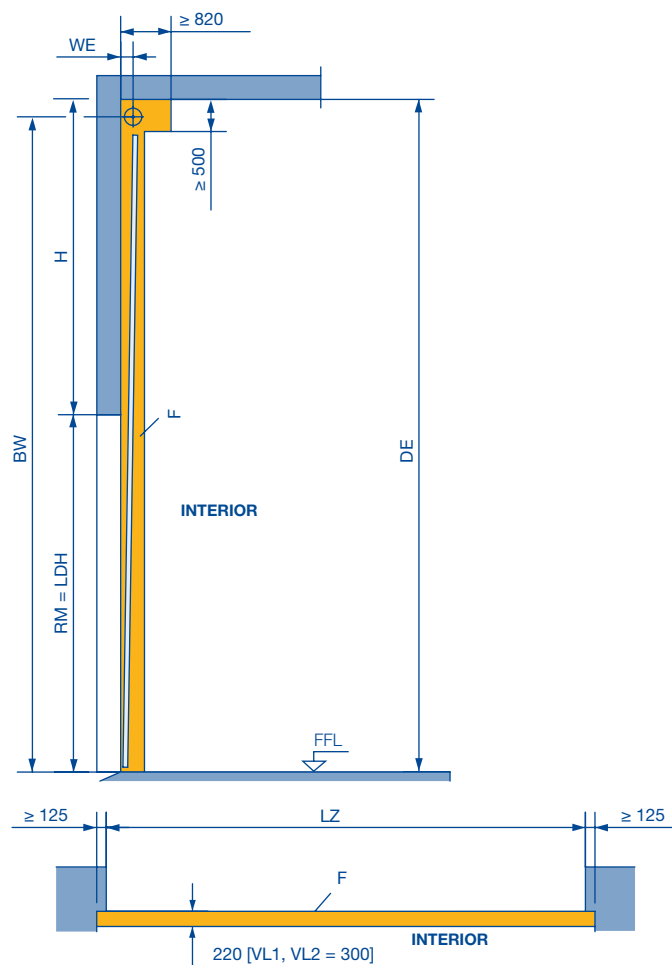
□ Door types APU F42 S-Line, ALR F42 S-Line, APU F42 and ALR F42 are possible; APU F42 Thermo, ALR F42 Thermo and SPU F42 with thermo frames as well as versions with glazing A3, B3, M3, S3, R3, LB, P must be requested.

□ All door types in any version on request.

Dimensions in mm

Track Application: V

Vertical track application

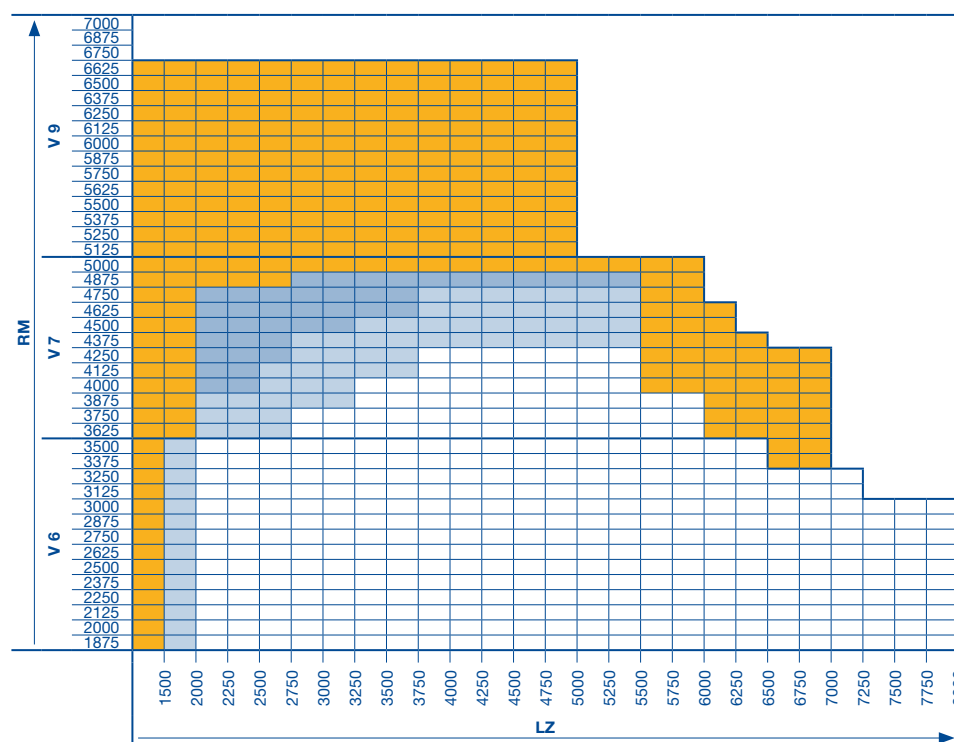


Notes:

- 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 18–29!

Observe min. sideroom, see page 58.

LDH	Clear passage height
RM	Grid height
WE	Shaft centre from lintel V 6 = 160, V 7 = 180
H	Min. headroom (see page 39)
DE	Ceiling height 2 × RM + 500 (V 6) 2 × RM + 540 (V 7) 2 × RM + 730 (V 7 with double spring shaft) 2 × RM + 635 (V 9) 2 × RM + 780 (V 9 with double spring shaft)
BW	Position of shaft support 2 × RM + 360 (V 6) 2 × RM + 385 (V 7) 2 × RM + 435 (V 9)
LZ	Clear frame dimensions (from 1200)
F	Space for fitting the door



Note:

ALR F42 Vitraplan and ALR F42 Glazing on request

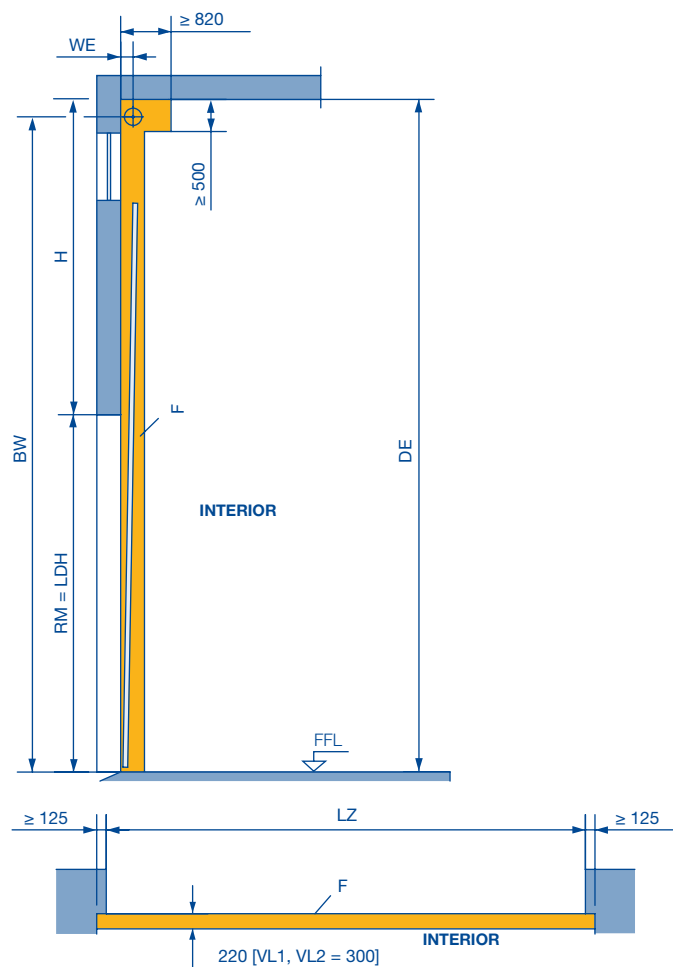
- All door types available in any version.
- All door types available, versions with glazing A3, B3, M3, S3, R3, LB, P and/or wicket door on request.
- Door types APU F42 S-Line, ALR F42 S-Line, APU F42 and ALR F42 are possible; APU F42 Thermo, ALR F42 Thermo and SPU F42 with thermo frames as well as versions with glazing A3, B3, M3, S3, R3, LB, P and/or wicket door on request.
- All door types in any version on request.

Dimensions in mm

Track Application: VA

Vertical track application

With high-mounted torsion spring shaft

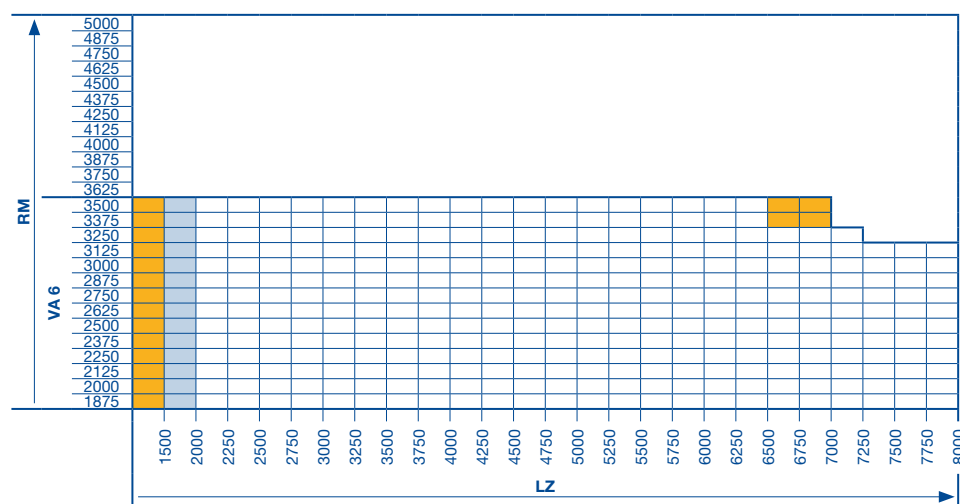


Notes:

- 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 18–29!

Observe min. sideroom, see page 58.

LDH	Clear passage height
RM	Grid height
WE	Shaft centre from lintel VA 6=160
H	Min. headroom (see page 39)
DE	Ceiling height Min.: $2 \times RM + 510$ (VA 6) Max.: depends on order
BW	Position of shaft support = Min.: $2 \times RM + 370$ (VA 6) Max.: $7895 = DE - 140$
LZ	Clear frame dimensions (from 1200)
F	Space for fitting the door



Note:

ALR F42 Vitraplan and ALR F42
Glazing on request

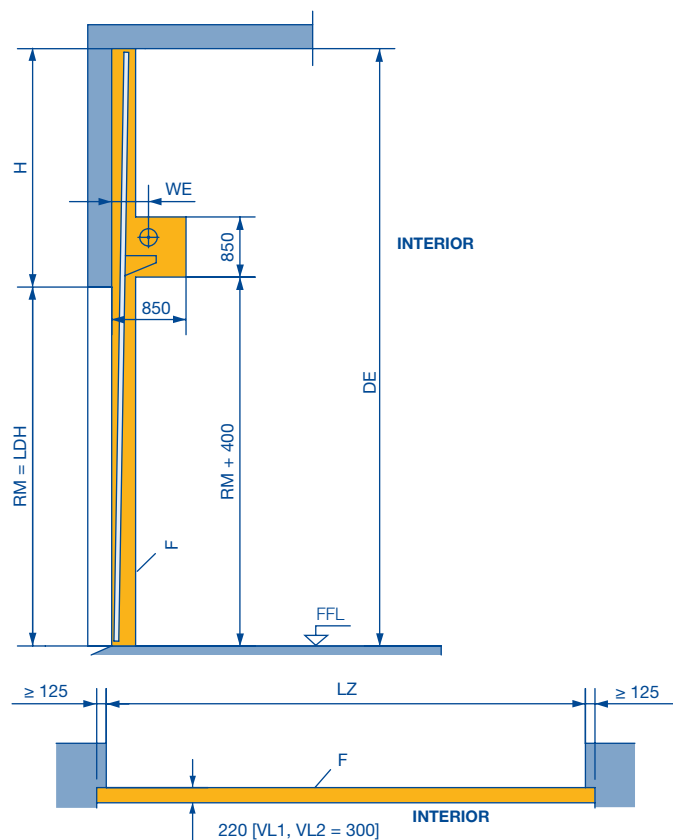
- All door types available in any version.
- All door types available, versions with glazing A3, B3, M3, S3, R3, LB, P and/or wicket door on request.
- All door types in any version on request.

Dimensions in mm

Track Application: VU

Vertical track application

With low-mounted torsion spring shaft

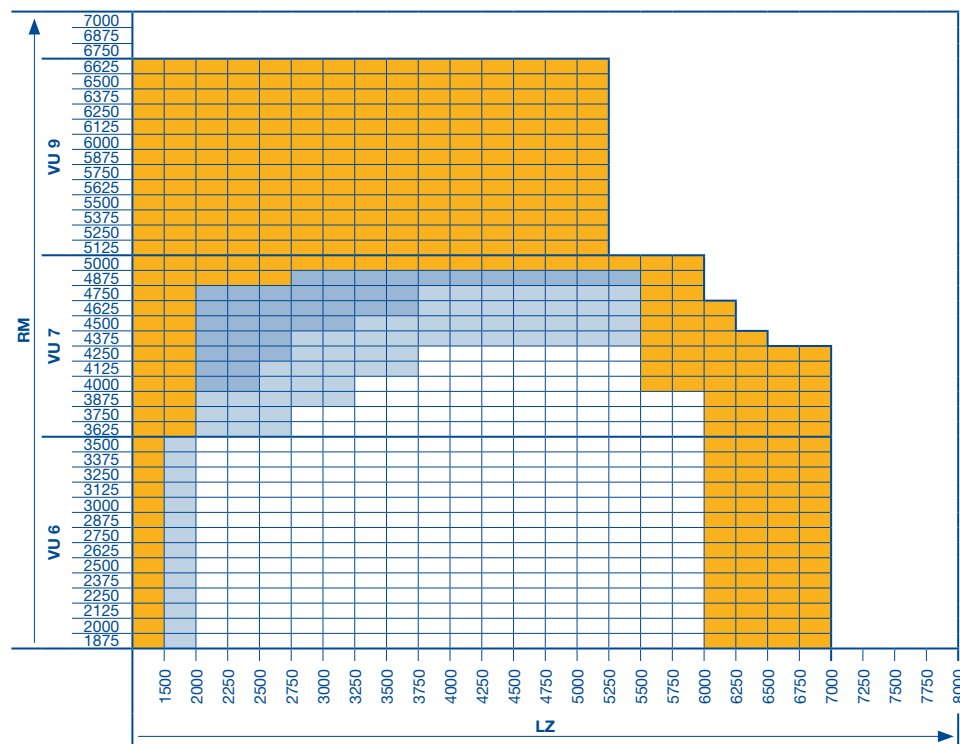


Notes:

- 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 18–29!

Observe min. sideroom, see page 58.

DE	Ceiling height = $2 \times RM + 350$
WE	Shaft centre from lintel
	VU 6 = 315
	VU 7 = 335
	VU 9 = 375
H	Min. headroom (see page 39)
LDH	Clear passage height
RM	Grid height
LZ	Clear frame dimensions (from 1200)
F	Space for fitting the door



Note:

ALR F42 Vitraplan and ALR F42 Glazing on request

- All door types available in any version.
- All door types available, versions with glazing A3, B3, M3, S3, R3, LB, P and/or wicket door on request.
- Door types APU F42 S-Line, ALR F42 S-Line, APU F42 and ALR F42 are possible; APU F42 Thermo, ALR F42 Thermo and SPU F42 with thermo frames as well as versions with glazing A3, B3, M3, S3, R3, LB, P and/or wicket door on request.
- All door types in any version on request.

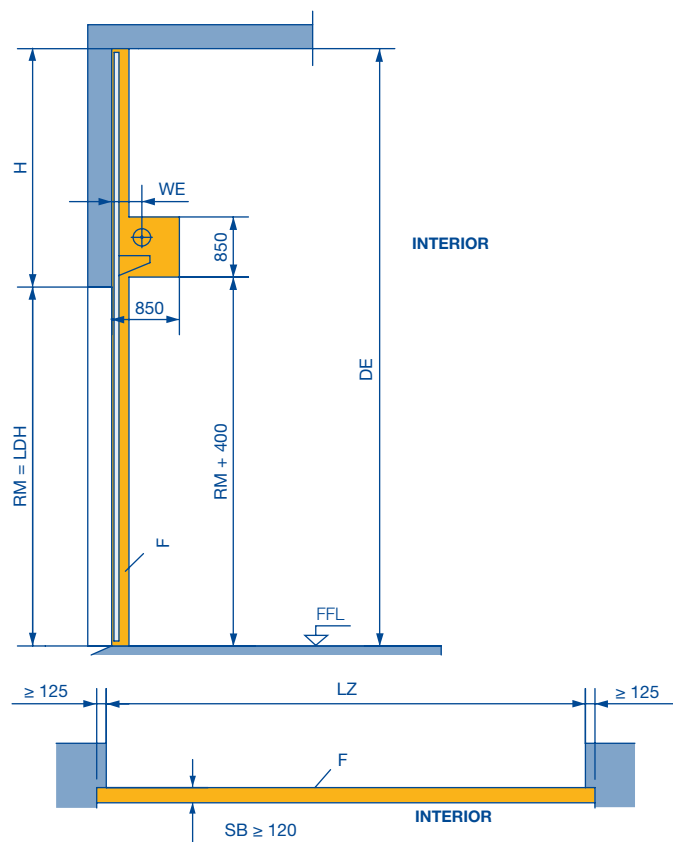
Dimensions in mm

Track Application: WG

Vertical track application

With low-mounted torsion spring shaft and steep track

(Application for loading ramp doors)

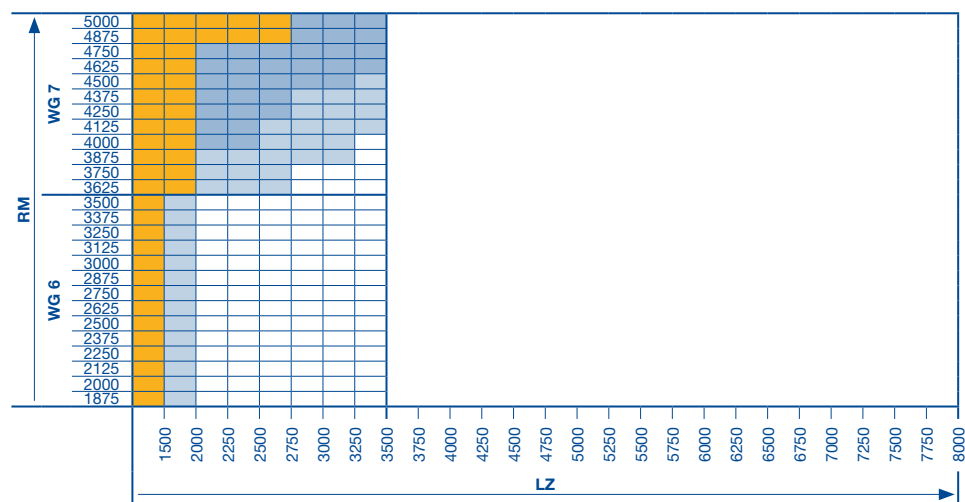


Notes:

- Door types APU F42 S-Line / ALR F42 S-Line and wicket doors are not possible!
- 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 18–29!

Observe min. sideroom, see page 58.

DE	Ceiling height = $2 \times RM + 350$
WE	Shaft centre from lintel WG 6 = 246 WG 7 = 276
H	Min. headroom (see page 39)
SB	Slot width
LDH	Clear passage height
RM	Grid height
LZ	Clear frame dimensions (from 1200)
F	Space for fitting the door



Note:

ALR F42 Vitraplan and ALR F42 Glazing on request

- All door types available in any version.
- All door types available, versions with glazing A3, B3, M3, S3, R3, LB, P on request.
- Door types APU F42 S-Line, ALR F42 S-Line, APU F42 and ALR F42 are possible; APU F42 Thermo, ALR F42 Thermo and SPU F42 with thermo frames as well as versions with glazing A3, B3, M3, S3, R3, LB, P must be requested.
- All door types in any version on request.

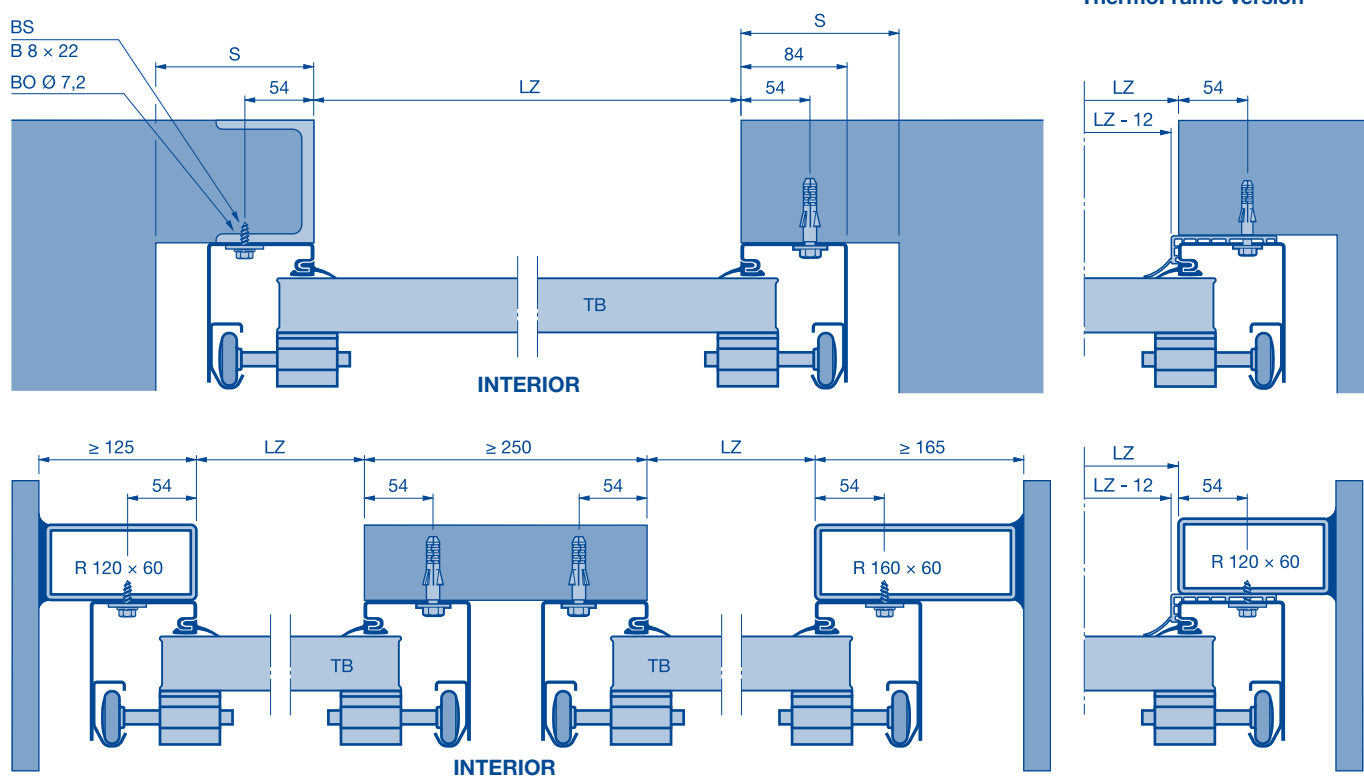
Dimensions in mm

Sideroom

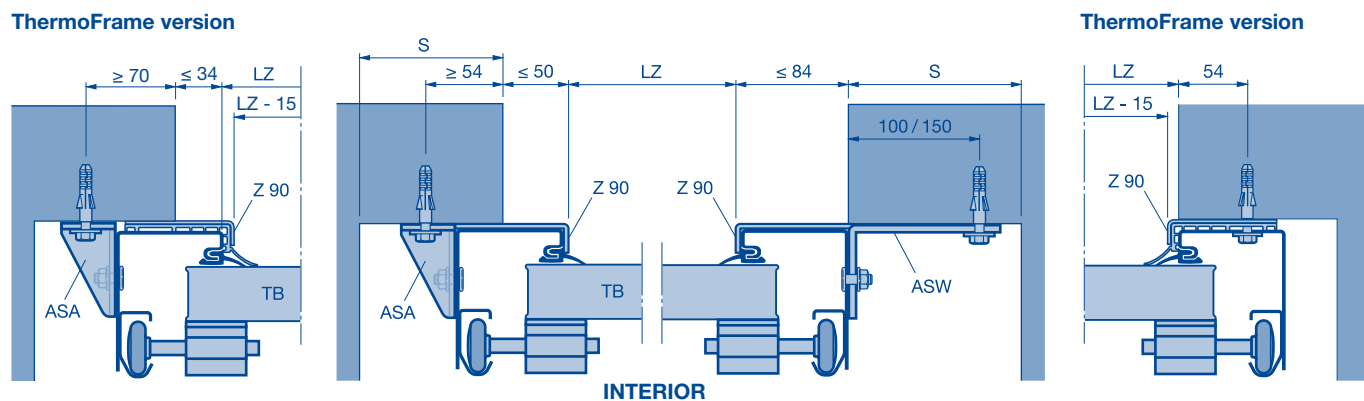
Required sideroom

Track application / designation	S	Track application / designation	S
N, NA, ND, NH, NS, GD, V, VA, VU, WG	125	N, NA, ND, NH, NS, GD	140
H, HA, HD, HG, HU, RD, RG	150	Hand pulley	150
L, LD	125	V, VA, VU, WG	125
		Chain hoist	Page 61
		Shaft operators	Page 64 – 70

Sideroom



Sideroom with frame covering



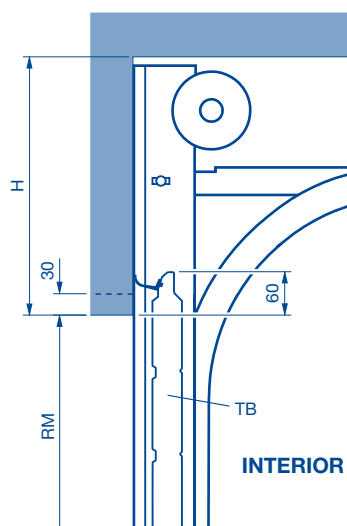
ASA Screw-on anchor 70 x 40
ASW Screw-on bracket 70 x 120 / 170
BO Hole

BS Self-tapping screw
LZ Clear frame dimensions
R Box section

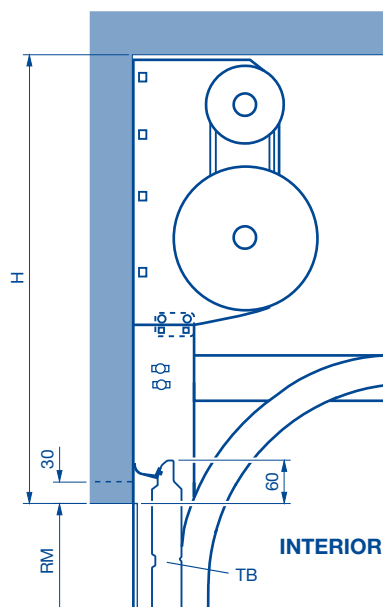
S Sideroom
TB Door leaf

Lintel Fitting

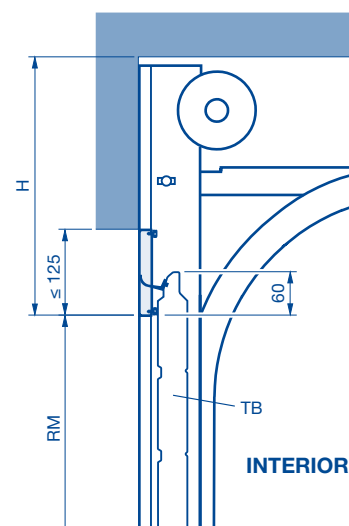
Normal lintel fitting
Lintel variation up to 30 mm high



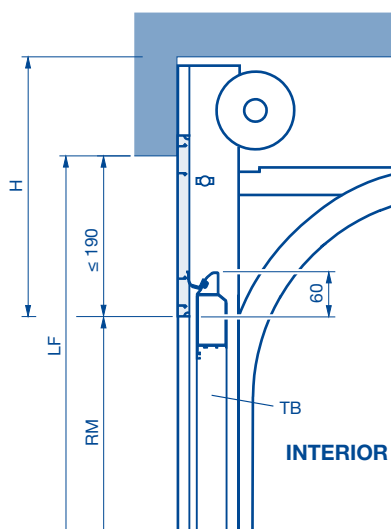
Normal lintel fitting
Double spring shaft



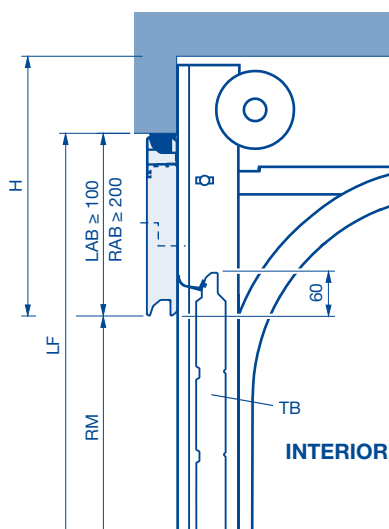
Single-skinned steel fascia for SPU F42
to make up for insufficient headroom up to 125 mm (only for track applications N and L)



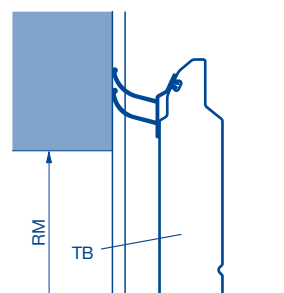
Smooth panel, anodised, for APU F42, ALR F42, ALR F42 Glazing, ALR F42 Vitraplan
to make up for insufficient headroom from 31 to 190 mm
(only for track applications N and L)



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



Lintel fitting with ThermoFrame



Aluminium frame fascia panel	
Height	Infill type
≥ 200	FU, LB, S, SE, XU, FK, KR
≥ 245	S2, S3, R2, R3, C2, A2, A3, B2, B3, M2, M3
≥ 230 – 692	S2, S3, R2, R3, C2, A2, A3, B2, B3, M2, M3 for APU F42 S-Line / ALR F42 S-Line

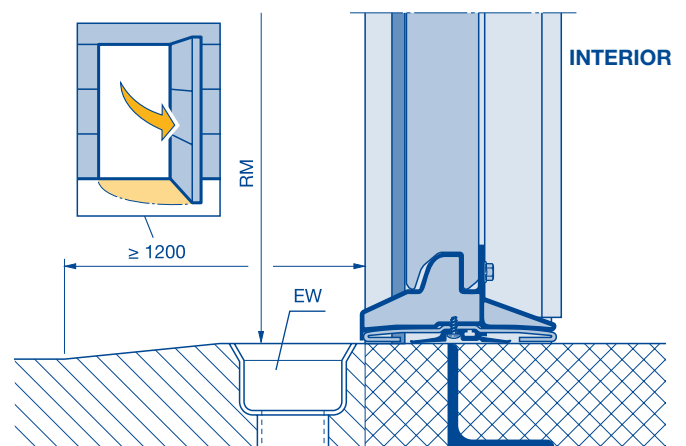
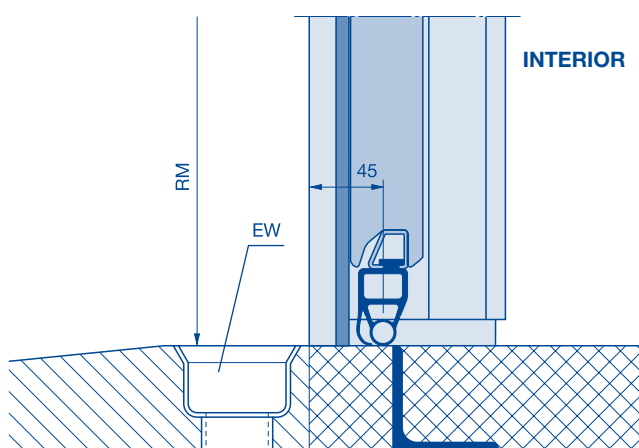
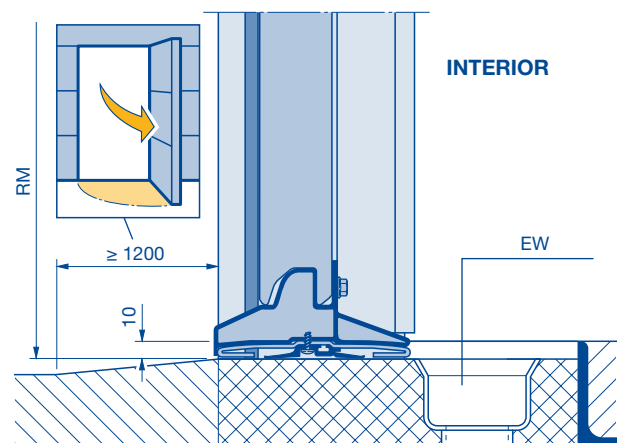
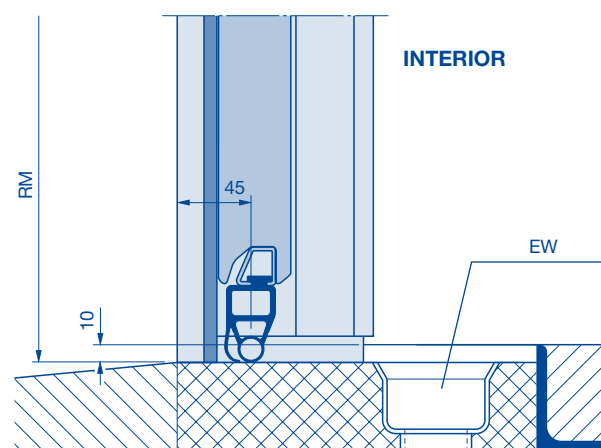
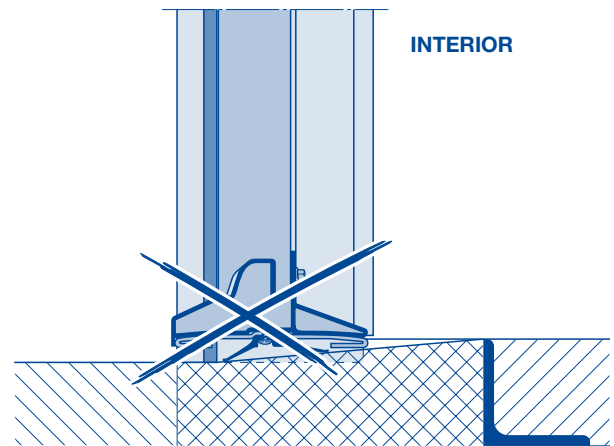
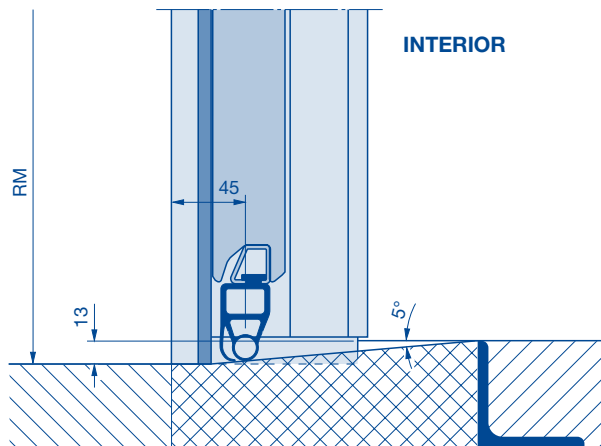
- Aluminium frame fascia panel with real glass infill VG, E2 and G2 on request.

H	Min. headroom (see page 39)
RM	Grid
TB	Door leaf
LF	Structural opening
LAB	Fascia panel
RAB	Frame fascia panel

Bottom Edge

Without wicket door / with wicket door and threshold rail

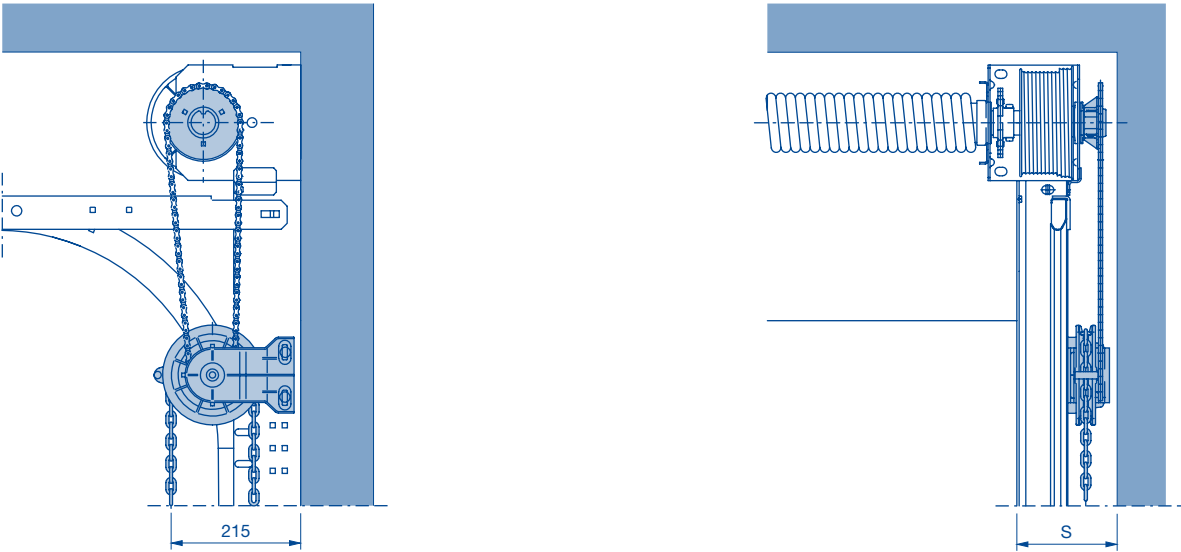
With wicket door with trip-free threshold



EW Drainage
RM Grid

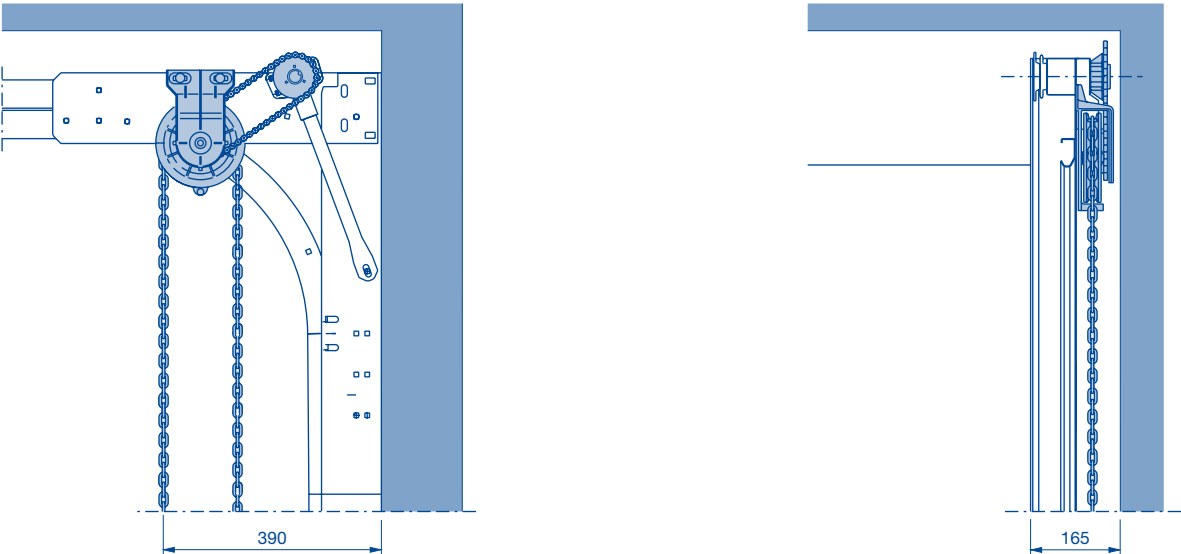
Chain Hoist

Track applications N, NA, ND, NH, NS, GD, H, HA, HD, HG, HU, RD, RG, VU, WG



Track application	N	NA	ND	NH	NS	GD	H	HA	HD	HG	HU	RD	RG	VU	WG
S	165	165	165	165	165	165	185	185	185	185	185	185	185	165	165

Track applications L and LD

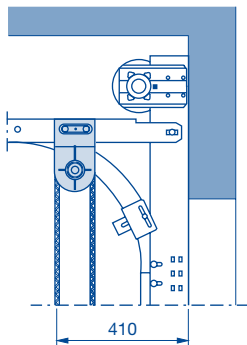


Hand Pulley

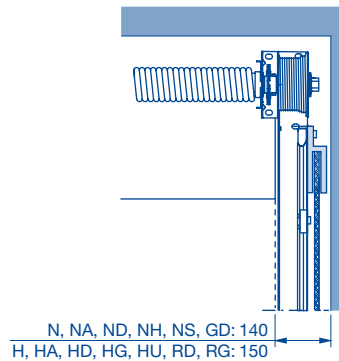
With rope or link steel chain

Track applications up to 20 m² door surface

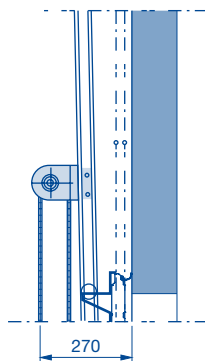
With rope or link steel chain



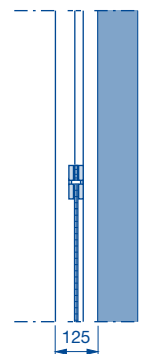
N, NA, ND, NH, NS, GD, H, HA, HD, HG, HU, RD, RG



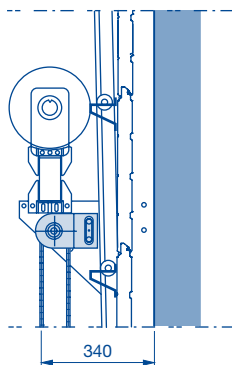
With rope or link steel chain



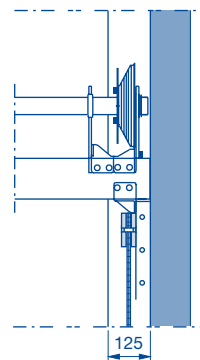
V, VA



With rope or link steel chain



VU, WG

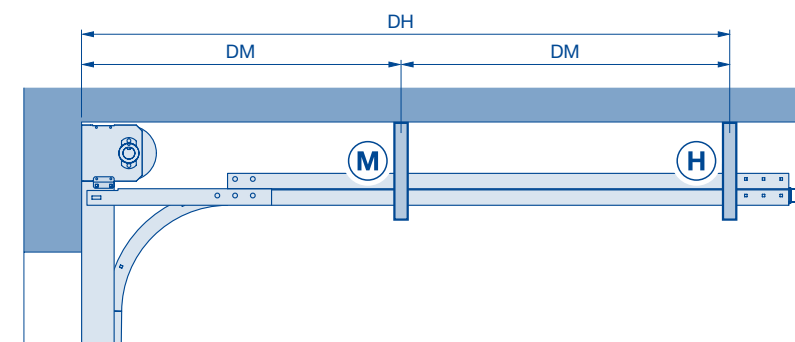


Ceiling Anchors

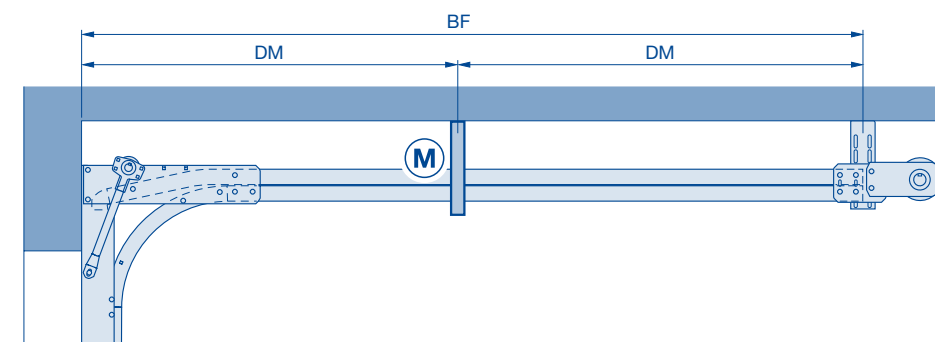
Track suspensions for all track applications except V, VA, VU and WG

Track suspensions as ceiling anchors in five lengths, standard length 469 mm.

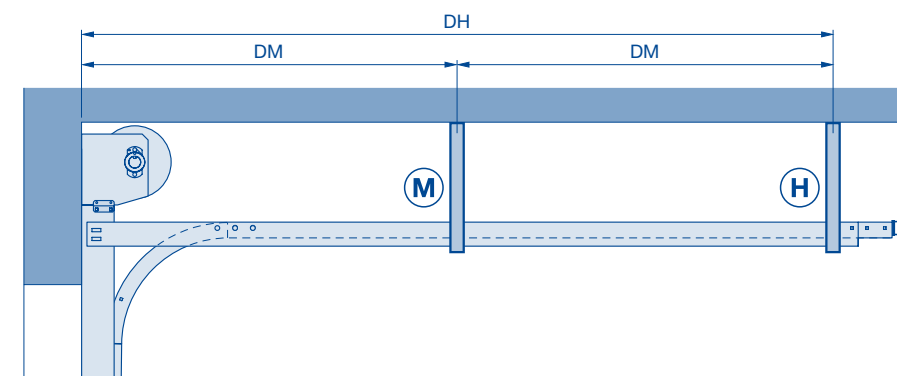
DH = Rear ceiling anchor (see pages 39–53), door weights for roof loads (see pages 39–46).



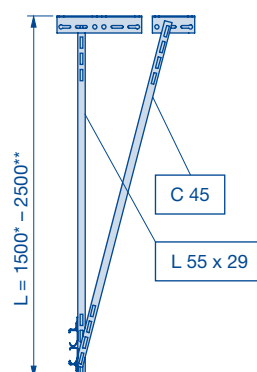
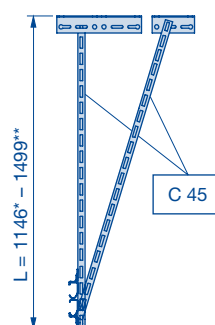
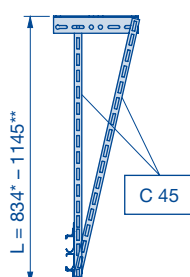
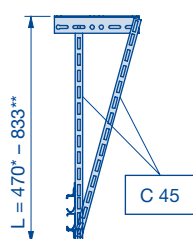
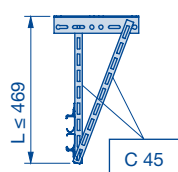
Double track (suspensions), Door heights RM ≤ 5000			
DH	M	H	DM
– 1555	–	1	–
1560 – 3720	1	1	DH / 2
3730 – 5195	2	1	DH / 3



Double track (suspensions), L			
BF	M	H	DM
≤ 4182	1	BF / 2	–
> 4182	2	BF / 3	–



C-rail (suspensions) all track sizes, Door heights RM > 5000			
DH	M	H	DM
–	1	1	DH / 2



* Min.

** Max.

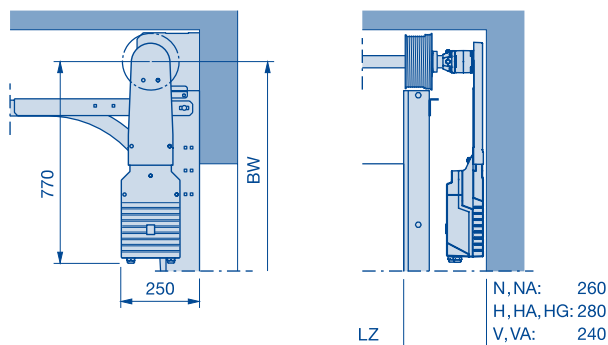
BF	Position of spring shaft
DH	Rear ceiling anchor
DM	Centre ceiling anchor
L	Anchor length = DE – RM – 125 (see page 39)

Shaft Operator WA 300

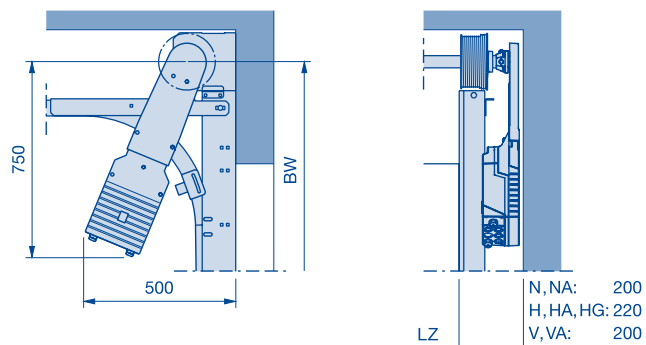
Shaft operator WA 300 for track applications N, NA, H, HA, HG, V and VA

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

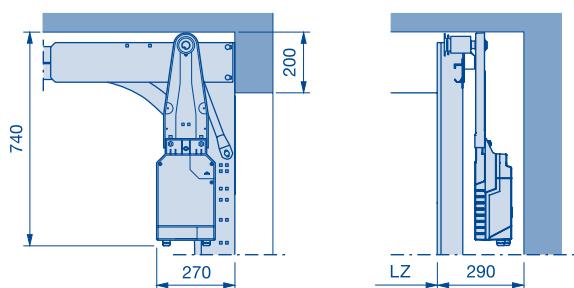


Shaft operator WA 300 for track application L

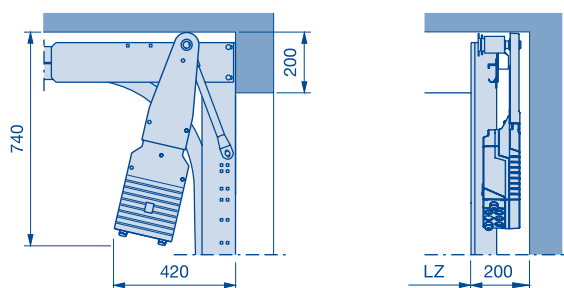
As shown in the figure, the operator can be fitted either left or right, viewed from the inside.

In fitting example 9: on the side opposite the door lock.

Fitting example ⑧ right



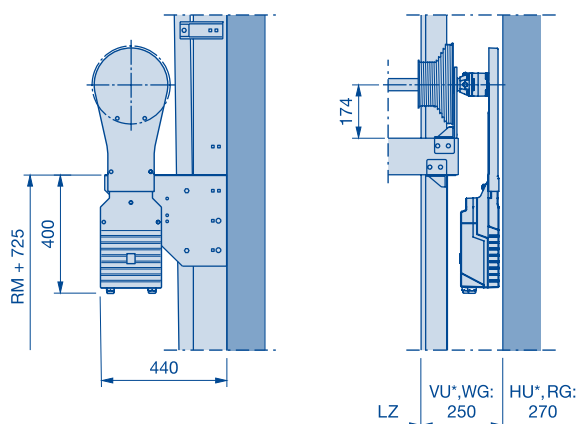
Fitting example ⑨ right



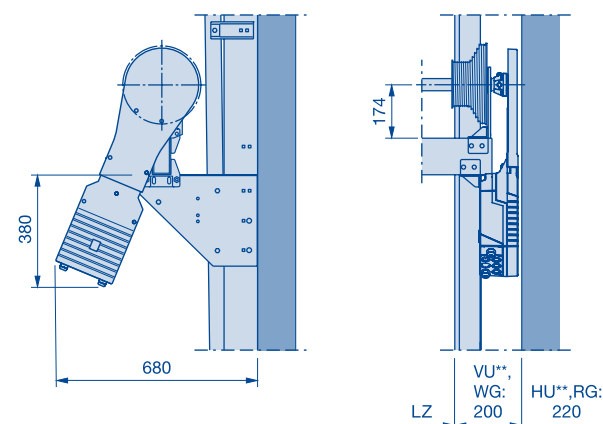
Shaft operator WA 300 for track applications HU, RG, VU and WG

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



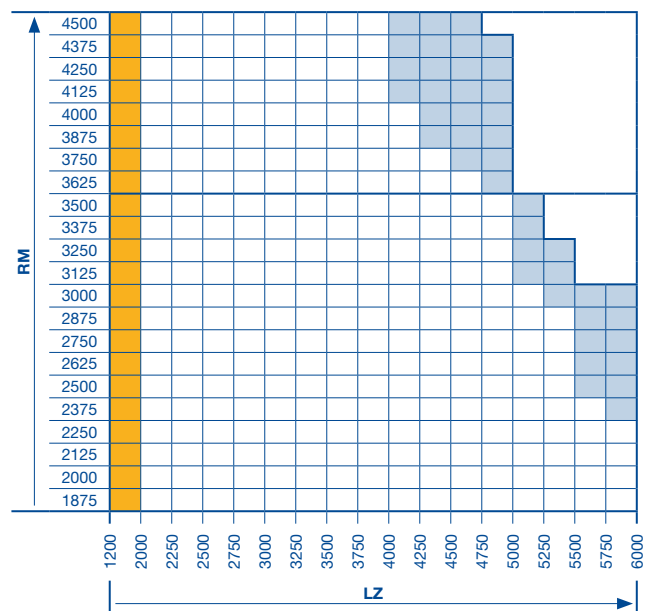
* In the door range LZ ≤ 3000 and RM ≤ 3500 a sideroom from 200 is possible

** In the door range LZ ≤ 3000 and RM ≤ 3500 the track applications VU and WG: HU are not possible
LZ Clear frame dimensions
BW Position of shaft support

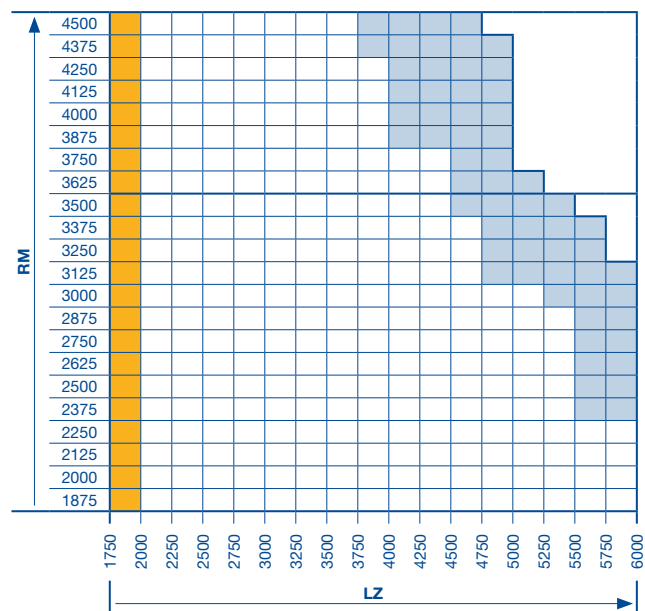
Shaft Operator WA 300

Shaft operator WA 300 for track applications N, NA and L

Without wicket door

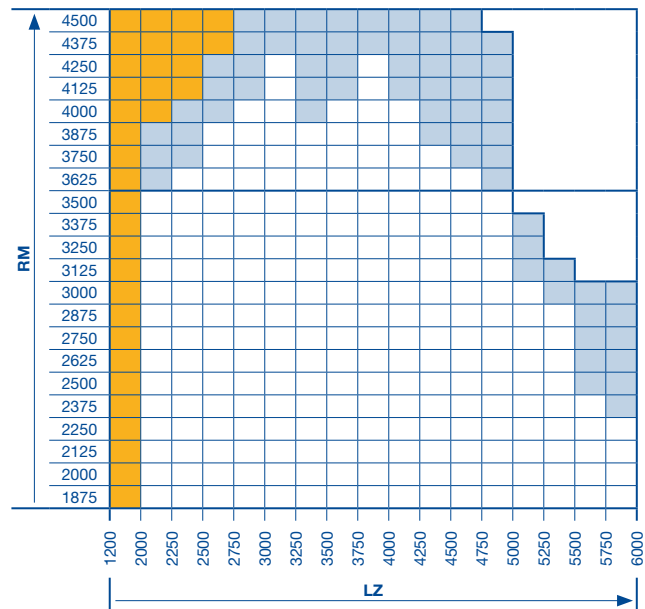


With wicket door

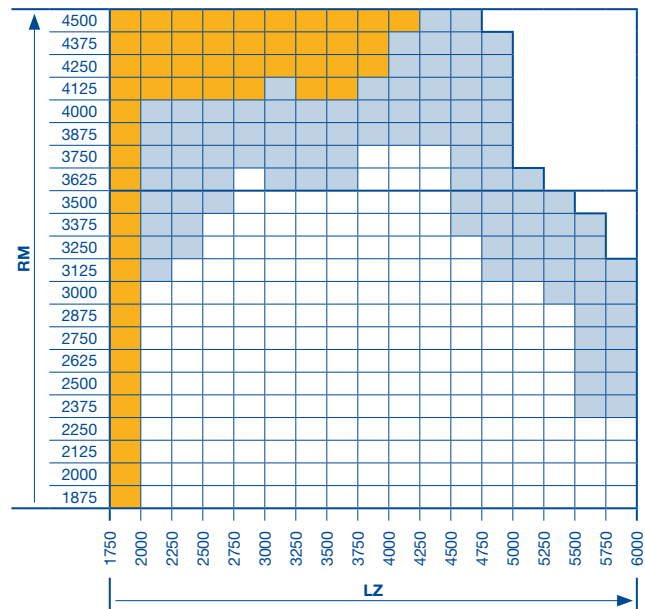


Shaft operator WA 300 for track applications H, HA, HG, HU, RG, V, VA, VU and WG

Without wicket door



With wicket door



□ WA 300 possible.

■ WA 300 possible, versions with glazing A3, B3, M3, S3, R3, LB and P on request.

■ WA 300 on request.

LZ Clear frame dimensions
RM Grid height

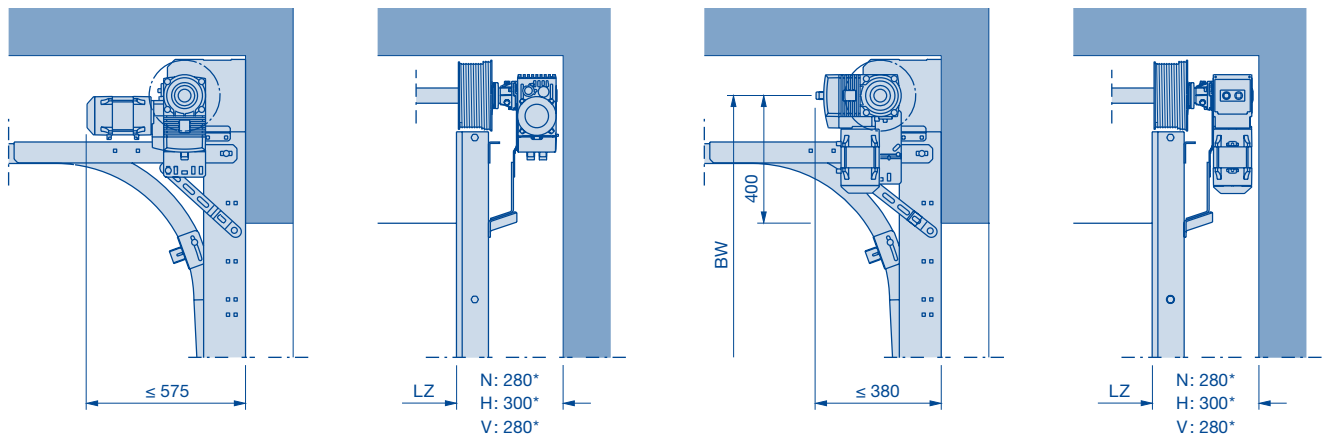
Dimensions in mm

Shaft Operator WA 400

As a frame-mounted operator

Shaft operator WA 400 for all track applications, except for L, LD, HU, RD, RG, VU and WG

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

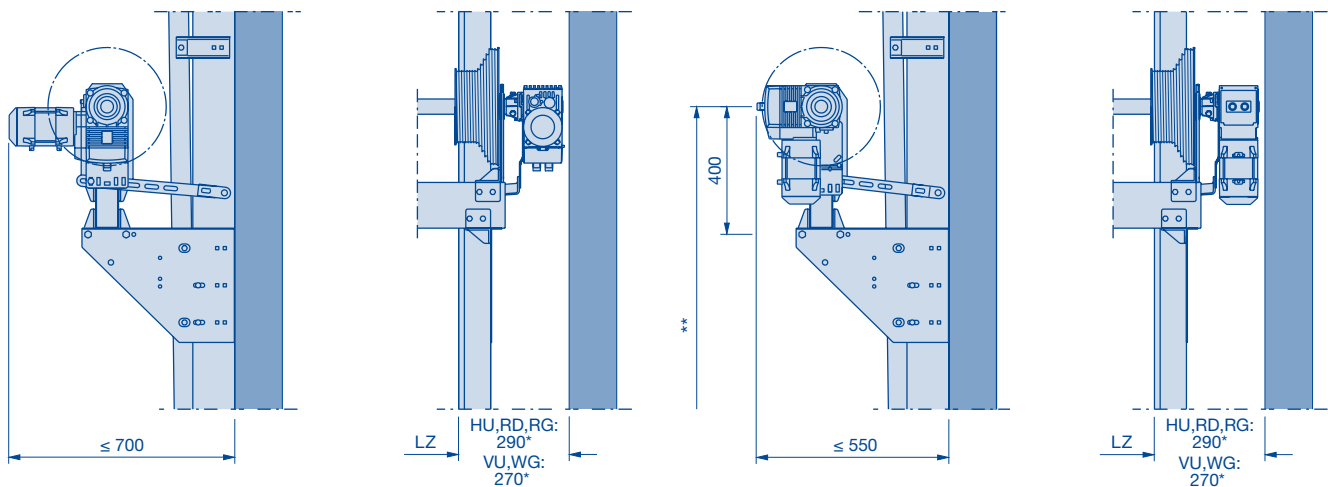


* Note:

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

Shaft operator WA 400 for track applications HU, RD, RG, VU and WG

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



* Note:

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

** On request

LZ Clear frame dimensions
BW Position of shaft support

Shaft Operator WA 400

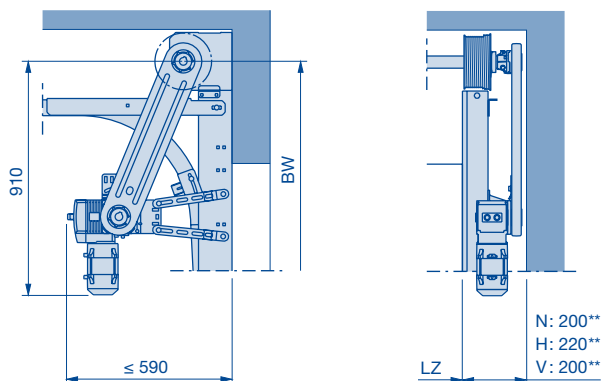
With chain box

Shaft operator WA 400 for all track applications, except for L, LD, HU, RD, RG, VU and WG

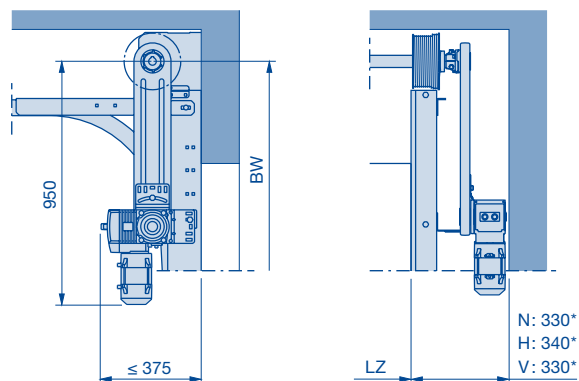
As shown in the figure, the operator can be fitted either left or right, viewed from the inside.

In fitting example 5: on the side opposite the door lock.

Fitting example ⑤ right



Fitting example ⑥ right

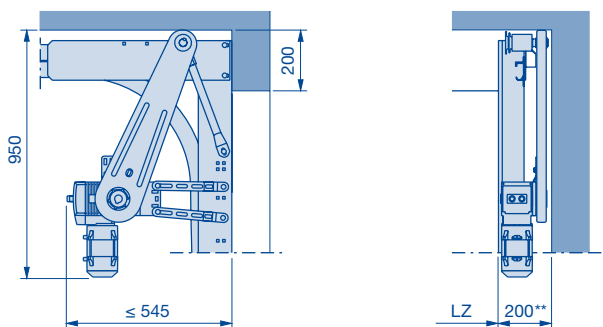


Shaft operator WA 400 for the track applications L and LD

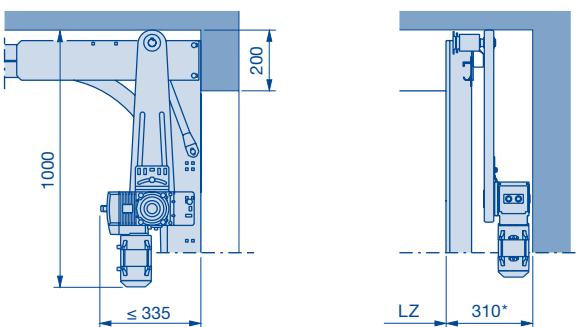
As shown in the figure, the operator can be fitted either left or right, viewed from the inside.

In fitting example 5: on the side opposite the door lock.

Fitting example ⑤ right



Fitting example ⑥ right

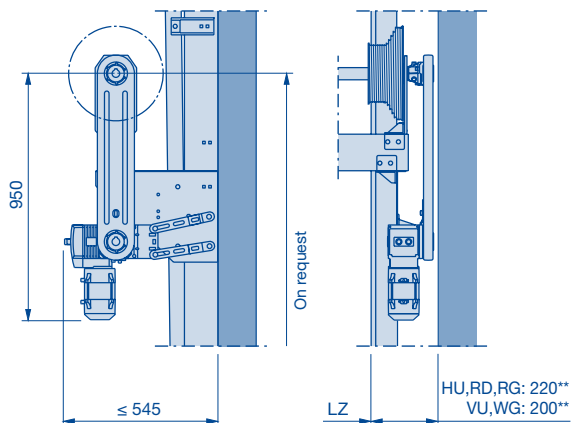


Shaft operator WA 400 for track applications HU, RD, RG, VU and WG

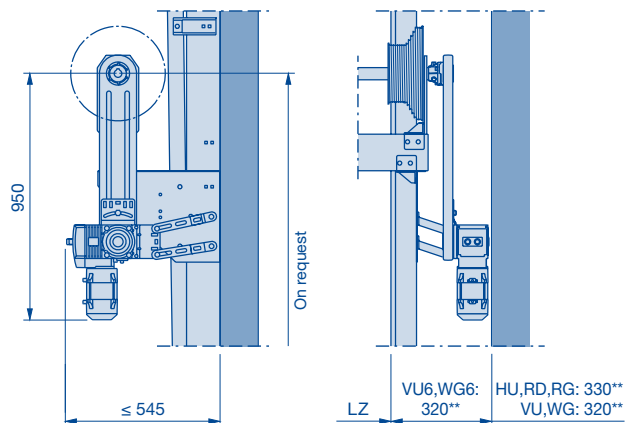
As shown in the figure, the operator can be fitted either left or right, viewed from the inside.

In fitting example 5: on the side opposite the door lock.

Fitting example ⑤ right



Fitting example ⑥ right



* Note:

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

LZ Clear frame dimensions

** Note:

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

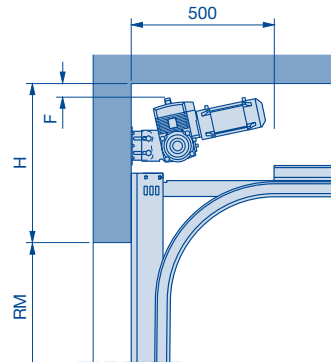
BW Position of shaft support

Shaft Operator WA 400

For central mounting

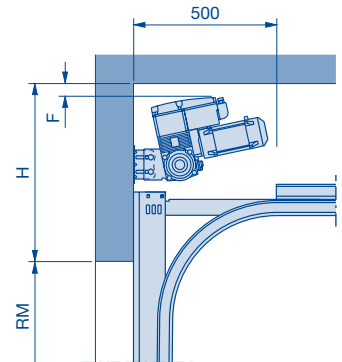
Shaft operator WA 400 for track applications N and ND

Control A / B 445, 460



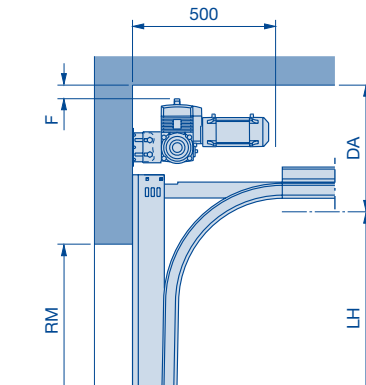
Track application	A / B 445, 460		B 460 FU	
	H min.	F min.	H min.	F min.
N 1	520	45	590	45
N 2	550	50	615	45
N 3 (RM > 7000)	–	–	675 (810)	45
ND 1	520	65	550	48
ND 2	550	75	570	48
ND 3 (RM > 7000)	–	–	650 (810)	48

Control B 460 FU



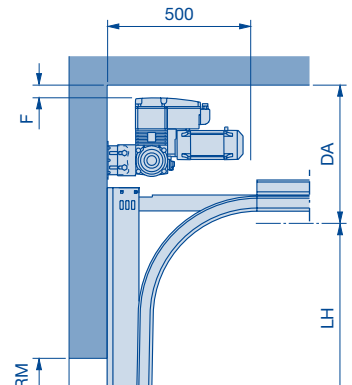
Shaft operator WA 400 for the track applications NH and GD

Control A / B 445, 460



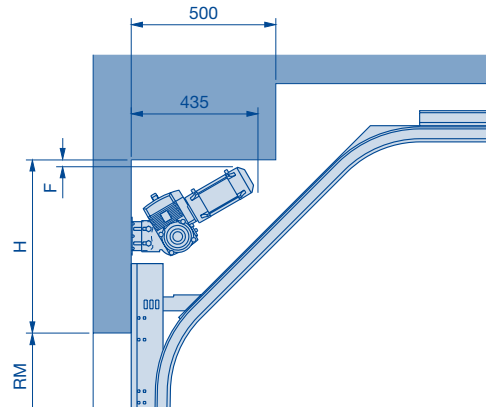
Track application	A / B 445, 460		B 460 FU	
	DA min.	F min.	DA min.	F min.
NH 1 / GD 1	415	50	480	45
NH 2 / GD 2	440	50	485	45
NH 3	–	–	565	45

Control B 460 FU

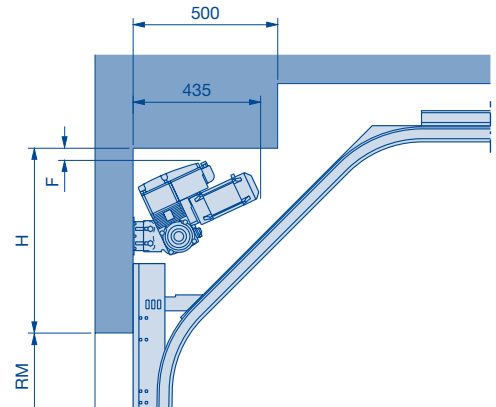


Shaft operator WA 400 for track application NS

Control A / B 445, 460



Control B 460 FU



Track application	A / B 445, 460		B 460 FU	
	H min.	F min.	H min.	F min.
NS 1	570	20	615	45
NS 2	600	25	640	45

Note:

WA 400 as a centre motor in conjunction with double spring shaft on request!

H Headroom
RM Grid height

DA Distance to ceiling
LH Track height

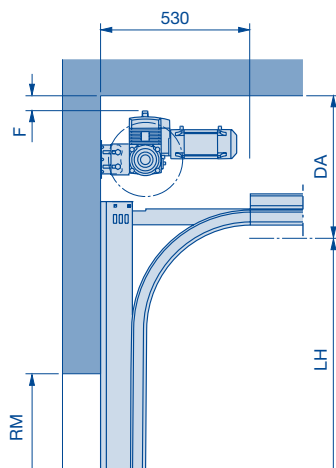
F Clearance ceiling / shaft operator

Shaft Operator WA 400

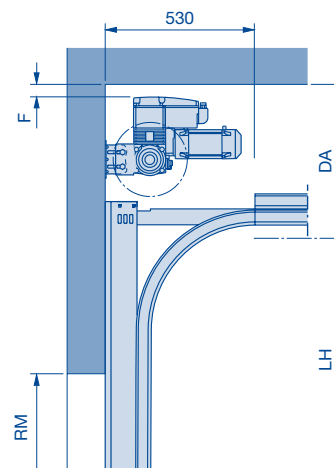
For central mounting

Shaft operator WA 400 for track applications H, HG and HD

Control A / B 445, 460



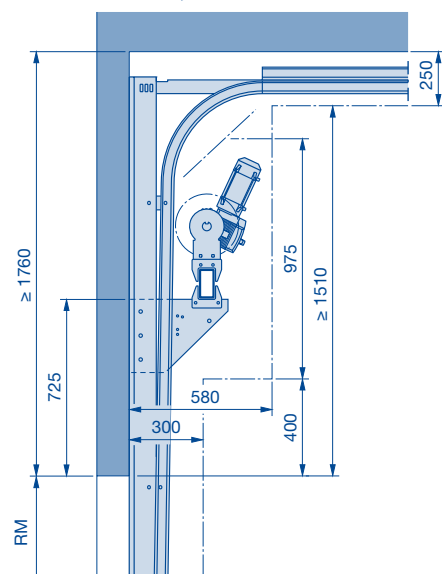
Control B 460 FU



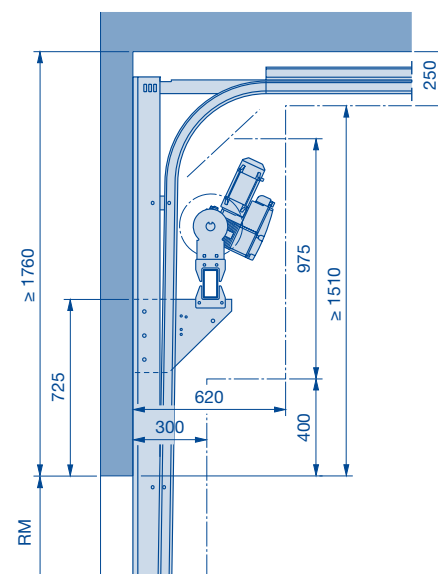
Track application	A / B 445, 460		B 460 FU	
	DA min.	F min.	DA min.	F min.
H 4, HG 4	500	55	540	45
H 5, HG 5	500	55	540	45
H 8	-	-	565	45
HD	On request			

Shaft operator WA 400 for the track applications HU, RD and RG

Control A / B 445, 460



Control B 460 FU



Note:

WA 400 as a centre motor in conjunction with double spring shaft on request!

RM Grid height
DA Distance to ceiling

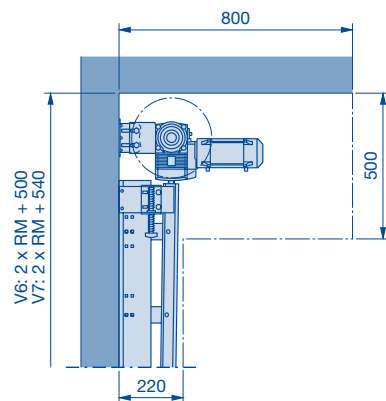
LH Track height
F Clearance ceiling / shaft operator

Shaft Operator WA 400

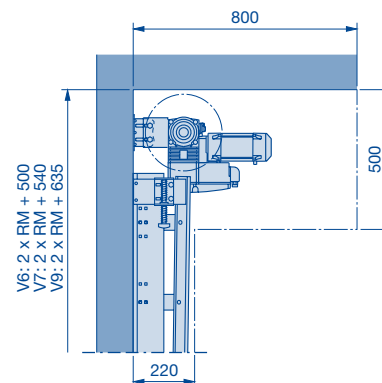
For central mounting

Shaft operator WA 400 for track application V

Control A / B 445, 460

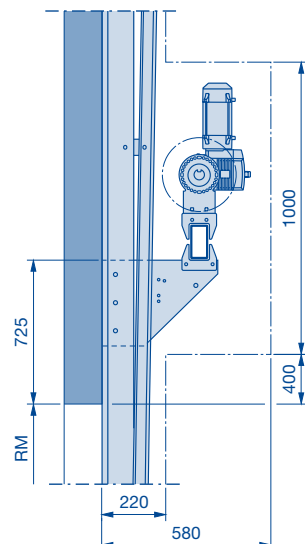


Control B 460 FU

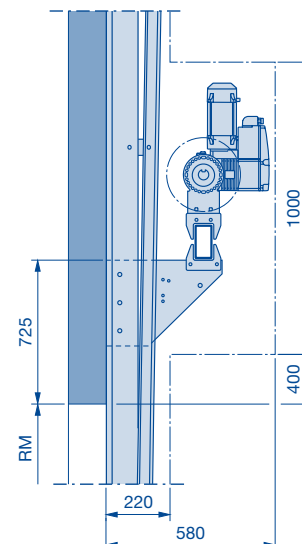


Shaft operator WA 400 for track applications VU and WG

Control A / B 445, 460



Control B 460 FU



Note:

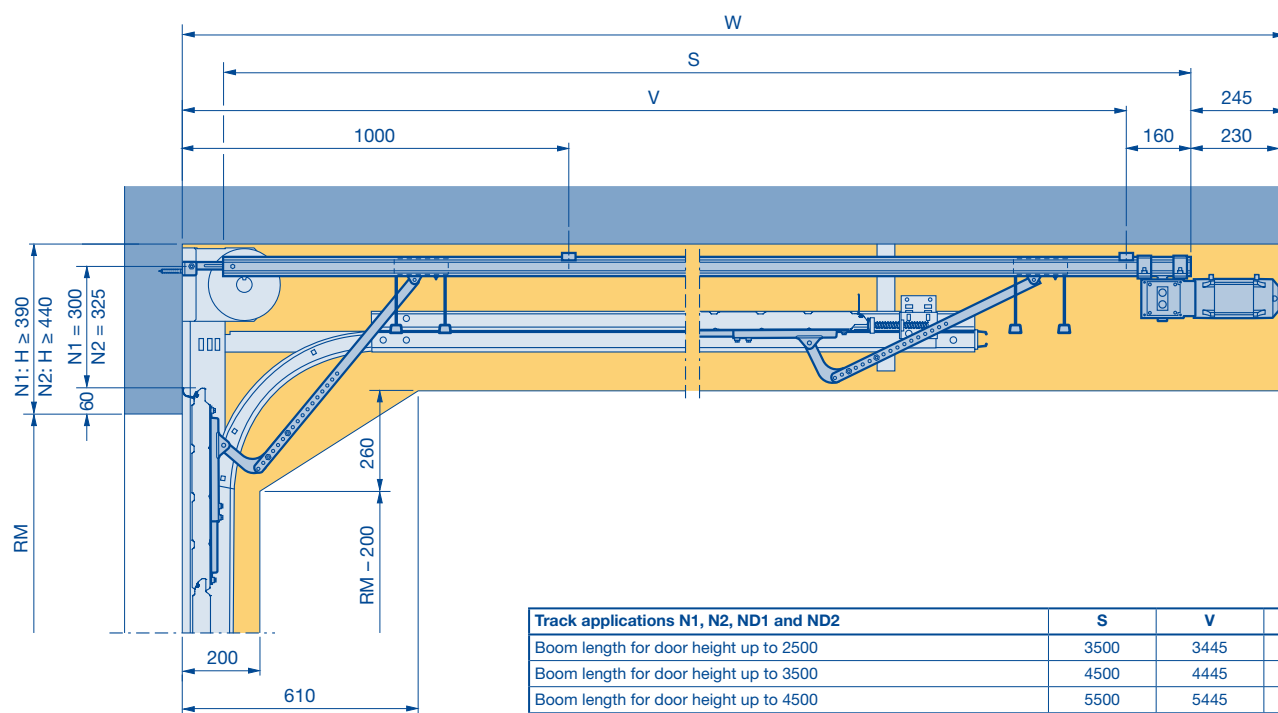
WA 400 as a centre motor in conjunction with double spring shaft on request!

RM Grid height
DA Distance to ceiling

LH Track height

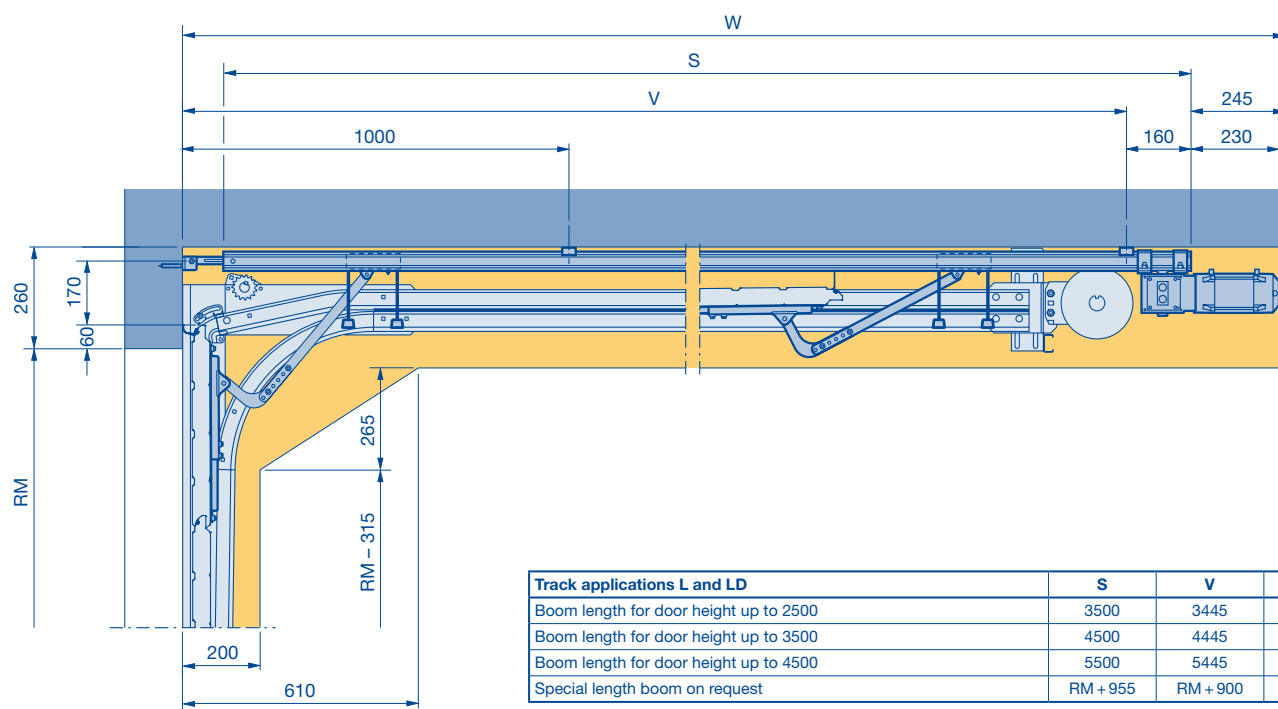
Chain Drive Operator ITO 400

ITO 400 track applications N and ND (doors with wicket doors on request)



Track applications N1, N2, ND1 and ND2	S	V	W
Boom length for door height up to 2500	3500	3445	3850
Boom length for door height up to 3500	4500	4445	4850
Boom length for door height up to 4500	5500	5445	5850
Special length boom for N1 and ND1 on request	RM + 722	RM + 667	RM + 1072
Special length boom for N2 and ND2 on request	RM + 829	RM + 774	RM + 1179

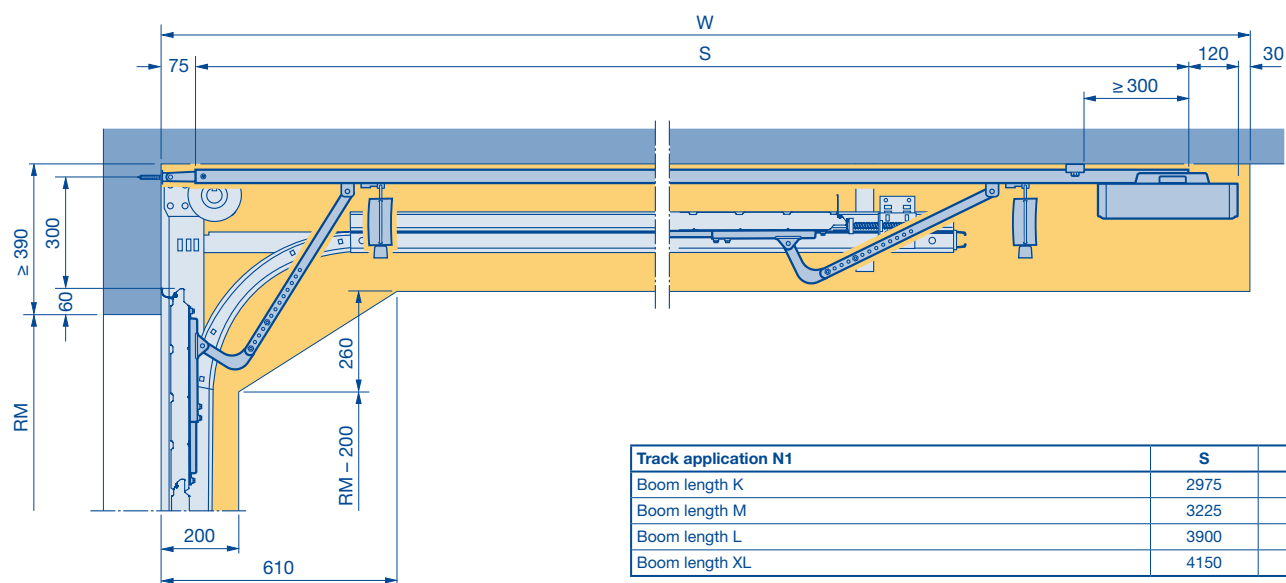
ITO 400 track applications L and LD (doors with wicket doors on request)



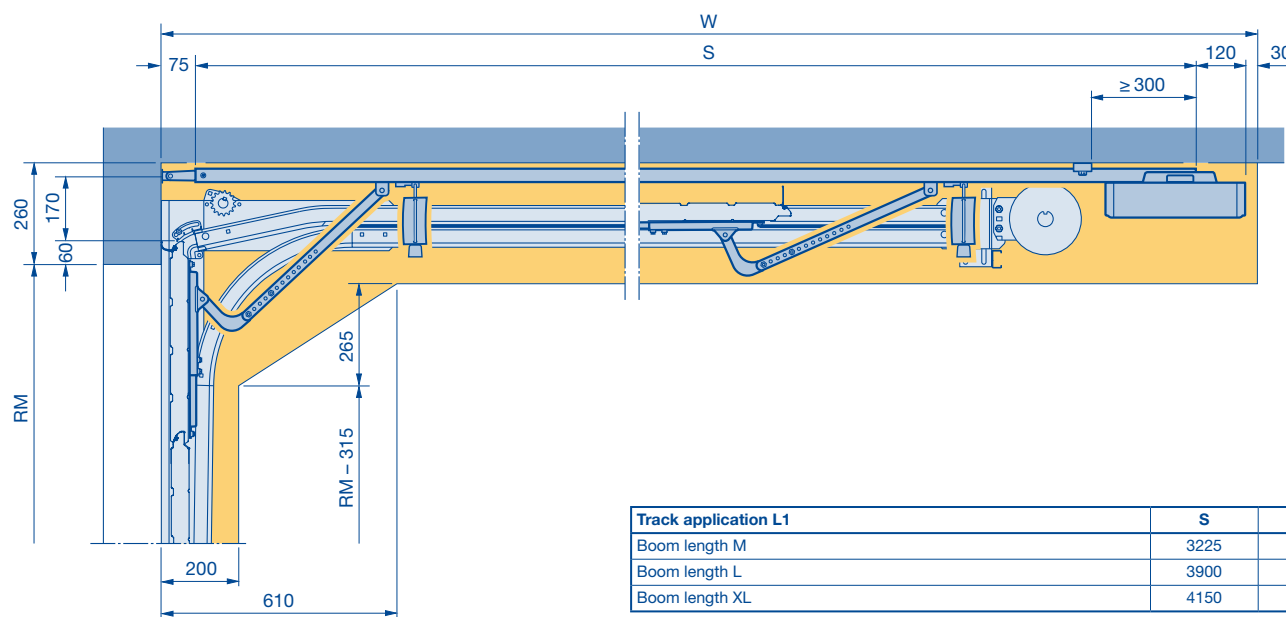
Track applications L and LD	S	V	W
Boom length for door height up to 2500	3500	3445	3850
Boom length for door height up to 3500	4500	4445	4850
Boom length for door height up to 4500	5500	5445	5850
Special length boom on request	RM + 955	RM + 900	RM + 1305

Operator SupraMatic HT

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



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



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

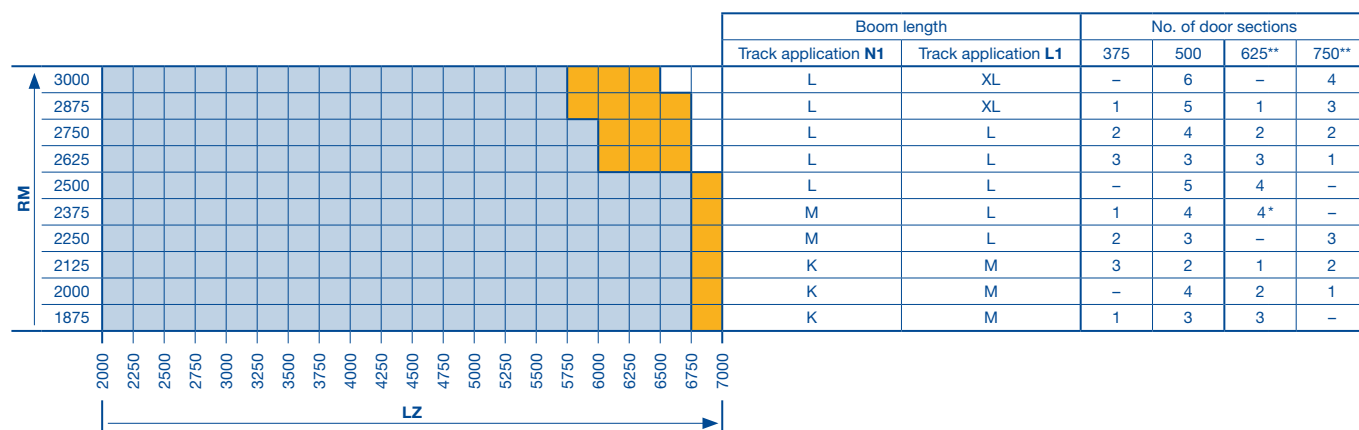
*** Note:**

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

RM Grid height

Operator SupraMatic HT

SupraMatic HT size range



SupraMatic HT not possible.

SupraMatic HT possible.

SupraMatic HT on request.

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

Dimensions in mm

Door Leaf Speeds

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 door heights and track heights.)

Fitting	WA 300 S4		WA 400													
	Integrated / external control 360		Control A/B 445 and 460								Control B 460 FU					
	Max. speed in mm/s, open / close [5] Max. speed in mm/s, open / close [6]		Frame-mounted operator				Chain box operator				Frame-mounted operator [1]	Chain box operator [1]	Without twin roller	With twin roller	Without twin roller	With twin roller
			Optosensors		VL 1, VL 2; HLG		Optosensors		VL 1, VL 2; HLG				Optosensors		VL 1, VL 2 (HLG)	
			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			Max. speed in mm/s, open / close	Max. speed in mm/s, open / close	Max. speed in mm/s, open / close	Max. speed in mm/s, open / close
N1	190	95	30	190	30	190	30	190	30	190	Yes	Yes	300 / 200	375 / 200	300 / 300	375 / 300 (375)
N2	210	105	24	210	30	265	24	210	30	265	Yes	Yes	300 / 200	450 / 200	300 / 300	450 / 300 (450)
N3	-	-	-	-	-	-	16	190	24	290	Yes	Yes	300 / 200	450 / 200	300 / 300	450 / 300 (450)
NA1	190	95	30	190	30	190	30	190	30	190	Yes	Yes	300 / 200	375 / 200	300 / 300	375 / 300 (375)
NA2	210	105	24	210	30	265	24	210	30	265	Yes	Yes	300 / 200	450 / 200	300 / 300	450 / 300 (450)
ND1	-	-	30	190	30	190	30	190	30	190	Yes	Yes	300 / 200	375 / 200	300 / 300	375 / 300 (375)
ND2	-	-	24	210	30	265	24	210	30	265	Yes	Yes	300 / 200	450 / 200	300 / 300	450 / 300 (450)
ND3	-	-	-	-	-	-	16	190	24	290	Yes	Yes	300 / 200	450 / 200	300 / 300	450 / 300 (450)
NH1	-	-	30	190	30	190	30	190	30	190	Yes	Yes	300 / 200	375 / 200	300 / 300	375 / 300 (375)
NH2	-	-	24	210	30	265	24	210	30	265	Yes	Yes	300 / 200	450 / 200	300 / 300	450 / 300 (450)
NH3	-	-	-	-	-	-	16	190	24	290	Yes	Yes	300 / 200	450 / 200	300 / 300	450 / 300 (450)
NS1	-	-	30	190	30	190	30	190	30	190	Yes	Yes	300 / 200	375 / 200	300 / 300	375 / 300 (375)
NS2	-	-	24	210	30	265	24	210	30	265	Yes	Yes	300 / 200	450 / 200	300 / 300	450 / 300 (450)
GD1	-	-	30	190	30	190	30	190	30	190	Yes	Yes	300 / 200	375 / 200	300 / 300	375 / 300 (375)
GD2	-	-	24	210	30	265	24	210	30	265	Yes	Yes	300 / 200	450 / 200	300 / 300	450 / 300 (450)
L1	210	105	-	-	-	-	24	150	24	150	-	Yes	300 / 200	380 / 200	300 / 300	380 / 300 (380)
L2	210	105	-	-	-	-	24	150	24	150	-	Yes	300 / 200	380 / 200	300 / 300	380 / 300 (380)
LD1	-	-	-	-	-	-	24	150	24	150	-	Yes	300 / 200	380 / 200	300 / 300	380 / 300 (380)
LD2	-	-	-	-	-	-	24	150	24	150	-	Yes	300 / 200	380 / 200	300 / 300	380 / 300 (380)
H4	160 / 190 [1;4]	80 / 95 [1;4]	24 / 19	190	30 / 24	290	24 / 19	190	30 / 24	290	Yes	Yes	300 / 200	450 / 200	300 / 300	450 / 300 (450)
H5	210	105	19 / 16	210	24 / 19	290	19 / 16	210	24 / 19	290	Yes	Yes	300 / 200	440 / 200	300 / 300	440 / 300 (440)
H8	-	-	-	-	-	-	16 [2]	250 [2]	16	250	Yes	Yes	300 / 200	450 / 200	300 / 300	450 / 300 (450)
HA4	160 / 190 [1;4]	80 / 95 [1;4]	24 / 19	190	30 / 24	290	24 / 19	190	30 / 24	290	Yes	Yes	300 / 200	450 / 200	300 / 300	450 / 300 (450)
HA5	210	105	19 / 16	210	24 / 19	290	19 / 16	210	24 / 19	290	Yes	Yes	300 / 200	440 / 200	300 / 300	440 / 300 (440)
HD4	-	-	24 / 19	190	30 / 24	290	24 / 19	190	30 / 24	290	Yes	Yes	300 / 200	450 / 200	300 / 300	450 / 300 (450)
HD5	-	-	19 / 16	210	24 / 19	290	19 / 16	210	24 / 19	290	Yes	Yes	300 / 200	440 / 200	300 / 300	440 / 300 (440)
HD8	-	-	-	-	-	-	16 [2]	250 [2]	16	250	Yes	Yes	300 / 200	450 / 200	300 / 300	450 / 300 (450)
HG4	160 / 190 [1;4]	80 / 95 [1;4]	24 / 19	190	30 / 24	290	24 / 19	190	30 / 24	290	Yes	Yes	300 / 200	450 / 200	300 / 300	450 / 300 (450)
HG5	210	105	19 / 16	210	24 / 19	290	19 / 16	210	24 / 19	290	Yes	Yes	300 / 200	440 / 200	300 / 300	440 / 300 (440)
HU4	160 / 190 [1;4]	80 / 95 [1;4]	24 / 19	190	30 / 24	290	24 / 19	190	30 / 24	290	Yes	Yes	300 / 200	450 / 200	300 / 300	450 / 300 (450)
HU5	210	105	19 / 16	210	24 / 19	290	19 / 16	210	24 / 19	290	Yes	Yes	300 / 200	440 / 200	300 / 300	440 / 300 (440)
RD4	-	-	24 / 19	190	30 / 24	290	24 / 19	190	30 / 24	290	Yes	Yes	300 / 200	450 / 200	300 / 300	450 / 300 (450)
RD5	-	-	19 / 16	210	24 / 19	290	19 / 16	210	24 / 19	290	Yes	Yes	300 / 200	440 / 200	300 / 300	440 / 300 (440)
RG4	160 / 190 [1;4]	80 / 95 [1;4]	24 / 19	190	30 / 24	290	24 / 19	190	30 / 24	290	Yes	Yes	300 / 200	450 / 200	300 / 300	450 / 300 (450)
RG5	210	105	19 / 16	210	24 / 19	290	19 / 16	210	24 / 19	290	Yes	Yes	300 / 200	440 / 200	300 / 300	440 / 300 (440)
V6	160 / 190 [1;4]	80 / 95 [1;4]	19	190	24	300	19	190	24	300	Yes	Yes	450 / 200 [3]		450 / 300 (450) [3]	
V7	190	95	16	190	19	275	16	190	19	275	Yes	Yes	440 / 200 [3]		440 / 300 (440) [3]	
V9	-	-	-	-	-	-	16 [2]	250 [2]	16	250	Yes	Yes	440 / 200 [3]		440 / 300 (440) [3]	
VA6	160 / 190 [1;4]	80 / 95 [1;4]	19	190	24	300	19	190	24	300	Yes	Yes	450 / 200 [3]		450 / 300 (450) [3]	
VU6	160 / 190 [1;4]	80 / 95 [1;4]	19	190	24	300	19	190	24	300	Yes	Yes	450 / 200 [3]		450 / 300 (450) [3]	
VU7	190	95	16	190	19	275	16	190	19	275	Yes	Yes	440 / 200 [3]		440 / 300 (440) [3]	
VU9	-	-	-	-	-	-	16 [2]	250 [2]	16	250	Yes	Yes	440 / 200 [3]		440 / 300 (440) [3]	
WG6	160 / 190 [1;4]	80 / 95 [1;4]	19	190	24	300	19	190	24	300	Yes	Yes	450 / 200 [3]		450 / 300 (450) [3]	
WG7	190	95	16	190	19	275	16	190	19	275	Yes	Yes	440 / 200 [3]		440 / 300 (440) [3]	

[1] Speed corresponding to high-lift / door height (RM)

[2] Only possible with press-and-hold control

[3] Twin rollers not necessary with track applications V and VU!

[4] Max. speed depending on the clear frame dimensions

[5] With closing edge safety device (optosensors, VL 1 or VL 2)

[6] From 2500 mm above FFL to FFL without closing edge safety device to comply with EN 13241-1

Note

Double spring shaft only possible in conjunction with control B 460 FU!

Infill Overview

Infill overview	SPU F42	APU F42 S-Line	APU F42	APU F42 Thermo	ALR F42 S-Line	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 (7-fold), 16 mm, $U_g = 1.9 \text{ W/(m}^2\text{K)}$ [3]	S	–	S	S	–	S	S	–	–
PU infill, 26 mm with Stucco-textured aluminium sheet cover on both sides	–	FU	FU	FU	FU	FU	FU	–	–
PU infill, 26 mm with smooth, anodised aluminium sheet cover on both sides	–	XU	XU	XU	XU	XU	XU	–	–
Synthetic double pane, clear, 26 mm, $U_g = 2.6 \text{ W/(m}^2\text{K)}$	S2	S2	S2	S2	S2	S2	S2	S2	–
Synthetic double pane, crystal structure, 26 mm, $U_g = 2.6 \text{ W/(m}^2\text{K)}$	R2	R2	R2	R2	R2	R2	R2	R2	–
Synthetic double pane, grey tinted, 26 mm, $U_g = 2.6 \text{ W/(m}^2\text{K)}$	A2	A2	A2	A2	A2	A2	A2	–	–
Synthetic double pane, brown tinted, 26 mm, $U_g = 2.6 \text{ W/(m}^2\text{K)}$	B2	B2	B2	B2	B2	B2	B2	–	–
Synthetic double pane, white tinted (opal), 26 mm, $U_g = 2.6 \text{ W/(m}^2\text{K)}$	M2	M2	M2	M2	M2	M2	M2	–	–
Synthetic triple pane, clear, 26 mm, $U_g = 1.9 \text{ W/(m}^2\text{K)}$	S3	S3	S3	S3	S3	S3	S3	S3	–
Synthetic triple pane, crystal structure, 26 mm, $U_g = 1.9 \text{ W/(m}^2\text{K)}$	R3	R3	R3	R3	R3	R3	R3	R3	–
Synthetic triple pane, grey tinted, 26 mm, $U_g = 1.9 \text{ W/(m}^2\text{K)}$	A3	A3	A3	A3	A3	A3	A3	–	–
Synthetic triple pane, brown tinted, 26 mm, $U_g = 1.9 \text{ W/(m}^2\text{K)}$	B3	B3	B3	B3	B3	B3	B3	–	–
Synthetic triple pane, white tinted (opal), 26 mm, $U_g = 1.9 \text{ W/(m}^2\text{K)}$	M3	M3	M3	M3	M3	M3	M3	–	–
Polycarbonate double pane, clear, 26 mm, $U_g = 2.6 \text{ W/(m}^2\text{K)}$	C2	C2	C2	C2	C2	C2	C2	C2	–
Single pane of laminated safety glass, 6 mm [2] [3]	VG	–	VG	–	–	VG	–	–	VG
Double pane made of single-pane safety glass, 26 mm, $U_g = 2.6 \text{ W/(m}^2\text{K)}$ [2]	E2	–	E2	E2	–	E2	E2	–	E2
Climatic double pane made of single-pane safety glass, 26 mm, $U_g = 1.1 \text{ W/(m}^2\text{K)}$ [2]	G2	–	G2	G2	–	G2	G2	–	G2
Stainless steel expanded mesh [1] [3] [4]	SE	–	SE	–	–	SE	–	–	–
Perforated stainless steel sheet, perforation 8 mm [1] [3] [4]	LB	–	LB	–	–	LB	–	–	–
Prepared for on-site infill [5]	BS	BS	BS	BS	BS	BS	BS	–	–

- [1] **Note:** max. field width 1230 mm, if required add an additional field
- [2] Only for door width up to 6000 mm; on request, and not in conjunction with wicket door

- [3] Not possible for aluminium frames in Thermo version
- [4] No colour coating possible
- [5] On request; infill weight and thickness must be specified

Hörmann: Quality without Compromise



Hörmann KG Amshausen, Germany



Hörmann KG Antriebstechnik, Germany



Hörmann KG Brandis, Germany



Hörmann KG Brockhagen, Germany



Hörmann KG Dissen, Germany



Hörmann KG Eckelhausen, Germany



Hörmann KG Freisen, Germany



Hörmann KG Ichtershausen, Germany



Hörmann KG Werne, Germany



Hörmann Genk NV, Belgium



Hörmann Alkmaar B.V., Netherlands



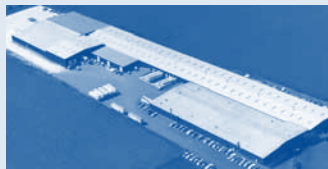
Hörmann Legnica Sp. z o.o., Poland



Hörmann Beijing, China



Hörmann Tianjin, China



Hörmann LLC, Montgomery IL, USA



Hörmann Flexon, Leetsdale PA, USA

Hörmann is the only manufacturer worldwide that offers you a complete range of all major building products from one source. We manufacture in highly-specialised factories using the latest production technologies. The close-meshed network of sales and service companies throughout Europe, and activities in the USA and China, make Hörmann your strong partner for first-class building products, offering “Quality without Compromise”.

GARAGE DOORS

OPERATORS

INDUSTRIAL DOORS

LOADING EQUIPMENT

HINGED DOORS

DOOR FRAMES

