



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.
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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.
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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 and 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/(m ² ·K) ²⁾	1.0 (0.94 ⁴⁾)
	- Optional triple glazing, U = W/(m ² ·K) ²⁾	-
	- Optional climatic double panes (single-pane safety glass) U = W/(m ² ·K) ²⁾	-
	- Optional double panes (single-pane safety glass) U = W/(m ² ·K) ²⁾	-
	Door with wicket door, U = W/(m ² ·K) ²⁾	1.2 (1.2 ⁴⁾)
	- Section, U = W/(m ² ·K)	0.5
Fire protection	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

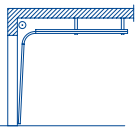
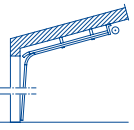
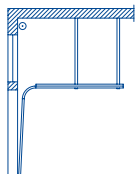
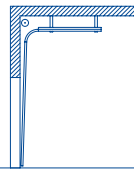
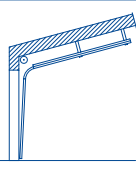
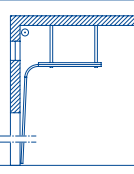
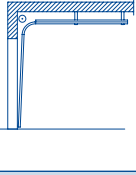
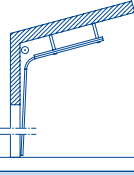
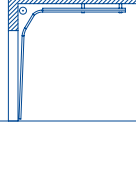
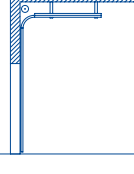
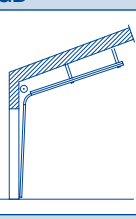
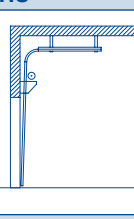
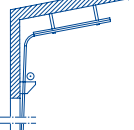
8) Class 2 = 12 m³/m²h

9) Class 1 = 24 m³/m²h

Technical Data Overview

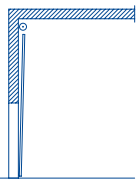
APU F42 S-Line	APU F42	APU F42 Thermo	ALR F42 S-Line	ALR F42	ALR F42 Thermo	ALR F42 Vitraplan	ALR F42 Glazing
3 ⁶⁾	3 ⁶⁾	3 ⁶⁾	3 ⁶⁾	3 ⁶⁾	3 ⁶⁾	3 ⁶⁾	3 ⁶⁾
-	3 ⁶⁾	3 ⁶⁾	-	3 ⁶⁾	3 ⁶⁾	-	-
-	2 ⁷⁾	2 ⁷⁾	-	2 ⁷⁾	2 ⁷⁾	-	-
3 (70 Pa)	3 (70 Pa)	3 (70 Pa)	3 (70 Pa)	3 (70 Pa)	3 (70 Pa)	3 (70 Pa)	3 (70 Pa)
2 ⁸⁾	2 ⁸⁾	2 ⁸⁾	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
●	●	●	-	-	-	-	-
●	●	-	●	●	-	●	●
-	-	●	-	-	●	-	-
○	○	○	-	-	-	-	-
●	●	●	-	-	-	-	-
○	○	○	-	-	-	-	-
●	●	●	●	●	●	●	●
○	○	○	○	○	○	○	○
-	○	○	-	○	○	-	-
○	○	○	○	○	○	○	-
-	-	-	-	-	-	-	-
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-	-	-	-	-	-	-	-
●	●	●	●	●	●	●	●
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●	●	●	●	●	●	●	●
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●	●	●	●	●	●	●	●
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●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●

Overview of Track Applications

<p>N</p>  <p>Normal track application</p>	<p>LD</p>  <p>Like track application L, with inclination</p> <p>Door height RM ≤ 5000 mm</p>
<p>NA</p>  <p>Like track application N, with high-mounted torsion spring shaft</p> <p>Door height RM ≤ 5000 mm</p>	<p>H</p>  <p>High-lift track</p>
<p>ND</p>  <p>Like track application N, with inclination</p>	<p>HA</p>  <p>Like track application H, with high-mounted torsion spring shaft</p> <p>Door height RM ≤ 3500 mm</p>
<p>NH</p>  <p>Like track application N, with minimum high-lift</p>	<p>HD</p>  <p>Like track application H, with inclination</p>
<p>NS</p>  <p>Like track application N, with double radius 2 × 45°</p> <p>Door height RM ≤ 5000 mm</p>	<p>HG</p>  <p>Like track application H, with steep track and minimum slot width of 120 mm (for loading ramp doors)</p> <p>Door width LZ ≤ 3500 mm</p> <p>Door height RM ≤ 5000 mm</p> <p>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!</p>
<p>GD</p>  <p>Like track application NH, with inclination (maximum 27°)</p> <p>Door height RM ≤ 5000 mm</p>	<p>HU</p>  <p>Like track application H, with low-mounted torsion spring shaft</p> <p>Door height RM ≤ 5000 mm</p>
<p>L</p>  <p>Low headroom track application</p> <p>Door height RM ≤ 5000 mm</p>	<p>RD</p>  <p>Like track application HU, with inclination</p> <p>Door height RM ≤ 5000 mm</p>
	<p>RG</p>  <p>Like track application HU, with steep track and minimum slot width of 120 mm (for loading ramp doors)</p> <p>Door width LZ ≤ 3500 mm</p> <p>Door height RM ≤ 5000 mm</p> <p>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!</p>

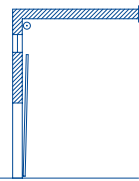
Overview of Track Applications

V



Vertical track application
(additional hand pulley required for manually operated doors!)

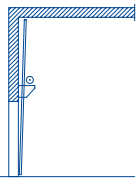
VA



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

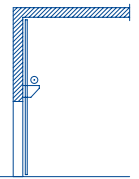
Door height RM ≤ 3500 mm

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

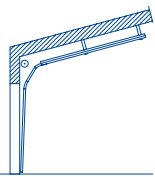
Door height RM ≤ 5000 mm

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.

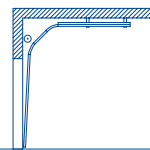
NK



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

Door height RM ≤ 5000 mm

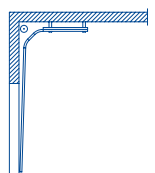
GS



Like track application NH with 2 × 45° – double radius

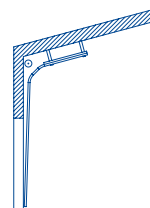
Door height RM ≤ 5000 mm

HS



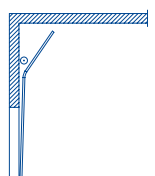
Like track application H, with double radius 2 × 45°

HK



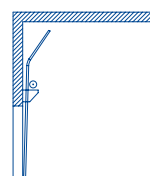
Like track application HS, but the degree values of both radii are adapted to the situation on site

VS



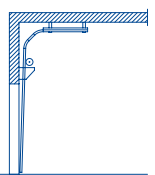
Like track application V, but in the top sections the tracks are diverted using radii where the ceiling is too low
(additional hand pulley required for manually operated doors!)

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!)

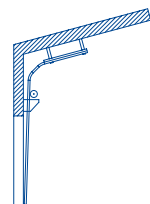
RS



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

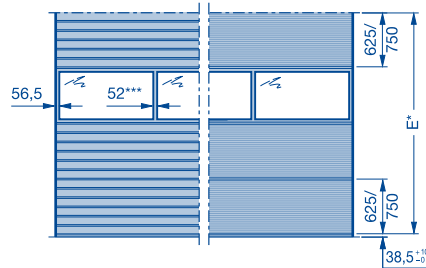
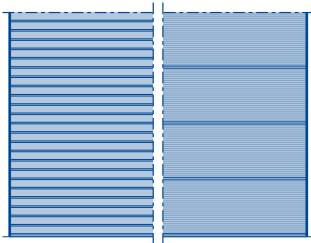
Double-skinned steel sections

625 and 750 mm high

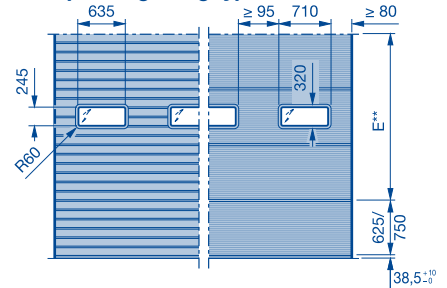
Stucco-textured / Micrograin

External views

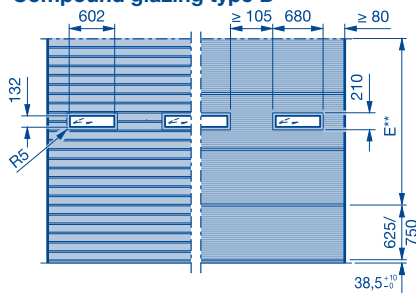
Glazing frames



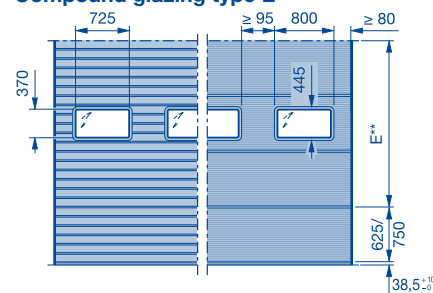
Compound glazing type A



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

		TH 625	[A]	TH 750															
Range 3	7500	-		10															
	7375	1	+	9															
	7250	2	+	8															
	7125	3	+	7															
	7000	4	+	6															
	6875	5	+	5															
	6750	-		9															
	6625	1	+	8															
	6500	2	+	7															
	6375	3	+	6															
	6250	4	+	5															
	6125	5	+	4															
	6000	-		8															
	5875	1	+	7															
	5750	2	+	6															
	5625	3	+	5															
	5500	4	+	4															
	Range 2	5375	5	+	3														
5250		-		7															
5125		1	+	6															
5000		2	+	5															
4875		3	+	4															
4750		4	+	3															
4625		5	+	2															
4500		-		6															
4375		1	+	5															
4250		2	+	4															
4125		3	+	3															
4000		4	+	2															
3875		5	+	1															
3750		-		5															
3625		1	+	4															
3500		2	+	3															
3375		3	+	2															
3250		4	+	1															
Range 1	3125	5	+	0															
	3000	-		4															
	2875	1	+	3															
	2750	2	+	2															
	2625	3	+	1															
	2500	4	+	-															
	2375	3	+	1****															
	2250	-		3															
	2125	1	+	2															
	2000	2	+	1															
	1875	3	+	-															
		1	2	3	4	5	Number of infills/fields per aluminium frame												
		(see table 1)					Number of compound glazings per door section												
		Number of infills / fields x 2					Number of ventilation grilles, ventilation area												
							40 cm ² per grille												
		1500	2000	2250	2500	2750	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500	5750	6000
		SPB 52																	
		LZ																	

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
		3010 – 4500 mm
E	3	1200 – 1850 mm
	4	1860 – 3000 mm
	5	3010 – 4500 mm
	4	4510 – 5500 mm
	5	5510 – 6000 mm

On request

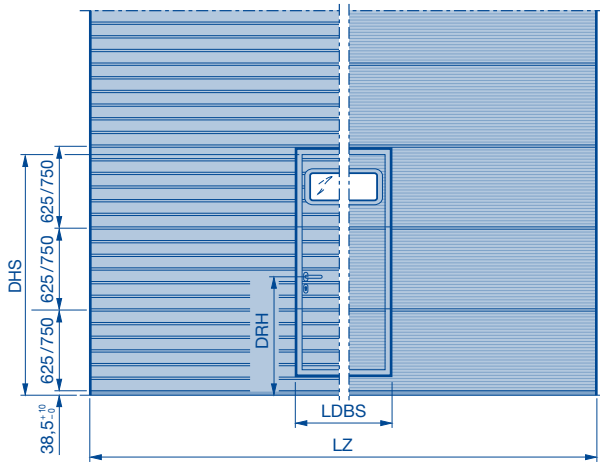
- [A] No. of door sections
- RM Grid height
- LZ Clear frame dimensions (from 1200)
- up to LZ
- SPB Rail width
- TH Door section height
- **** Top door section 500 mm

Sectional Door SPU F42 With Wicket Door and Threshold Rail

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.

RM	SH	[A]		[D]											
		TH 625	TH 750												
7500		-	10	2205											
7375		1	9	2205											
7250		2	8	2205											
7125		3	7	2205											
7000		4	6	2205											
6875		5	5	2205											
6750		6	4	2205											
6625		7	3	2205											
6500		8	2	2205											
6375		9	1	2205											
6250		10	0	2205											
6125		11	-	2205											
6000		12	-	2205											
5875		13	-	2205											
5750		14	-	2205											
5625		15	-	2205											
5500		16	-	2205											
5375		17	-	2205											
5250		18	-	2205											
5125		19	-	2205											
5000		20	-	2205											
4875		21	-	2205											
4750		22	-	2205											
4625		23	-	2080											
4500		24	-	2205											
4375		25	-	2205											
4250		26	-	2205											
4125		27	-	2205											
4000		28	-	2080											
3875		29	-	1955											
3750		30	-	2205											
3625		31	-	2205											
3500		32	-	2205											
3375		33	-	2080											
3250		34	-	1955											
3125		35	-	1830											
3000		36	-	2205											
2875		37	-	2205											
2750		38	-	2080											
2625		39	-	1955											
2500		40	-	1830											
2375		41	-	1830											
2250		42	-	2205											
2125		43	-	2080											
2000		44	-	1955											
	2	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 cm ² 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)

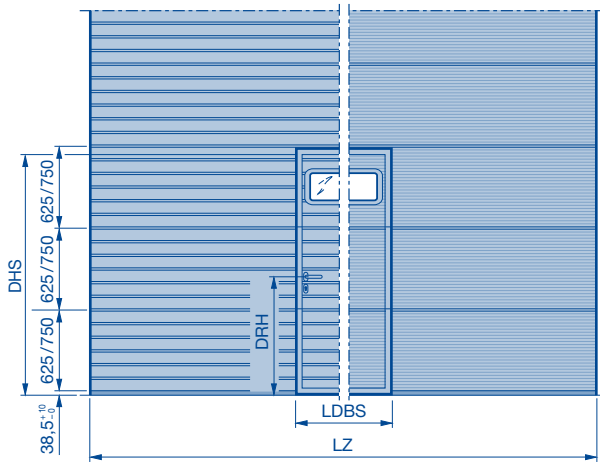
*** Top door section 500 mm

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.

RM	SH	[A]		[D]
		TH 625	TH 750	[D]
7500		-	10	2205
7375		1	9	2205
7250		2	8	2205
7125		3	7	2205
7000		4	6	2205
6875		5	5	2205
6750		6	4	2205
6625		7	3	2205
6500		8	2	2205
6375		9	1	2205
6250		10	-	2205
6125		-	-	2205
6000		-	-	2205
5875		1	7	2205
5750		2	6	2205
5625		3	5	2205
5500		4	4	2205
5375		5	3	2205
5250		6	2	2205
5125		7	1	2205
5000		8	-	2205
4875		9	-	2205
4750		10	-	2205
4625		-	-	2080
4500		1	6	2205
4375		2	5	2205
4250		3	4	2205
4125		4	3	2205
4000		5	2	2205
3875		6	1	1955
3750		7	-	2205
3625		8	-	2205
3500		9	-	2205
3375		10	-	2080
3250		-	-	1955
3125		1	5	1830
3000		2	4	2205
2875		3	3	2205
2750		4	2	2080
2625		5	1	1955
2500		6	-	1830
2375		7	-	1830
2250		8	-	2125
2125		9	-	2000
2000		10	-	1875

2	3	4	5
Number of infills / fields per aluminium frame			
Number of compound glazings per door section**			
(Number of infills / fields - 1) × 2			
Number of ventilation grilles, ventilation area 40 cm² per grille			

2000	2250	2500	2750	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500	5750	6000
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 (rising from 5 to 10)

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

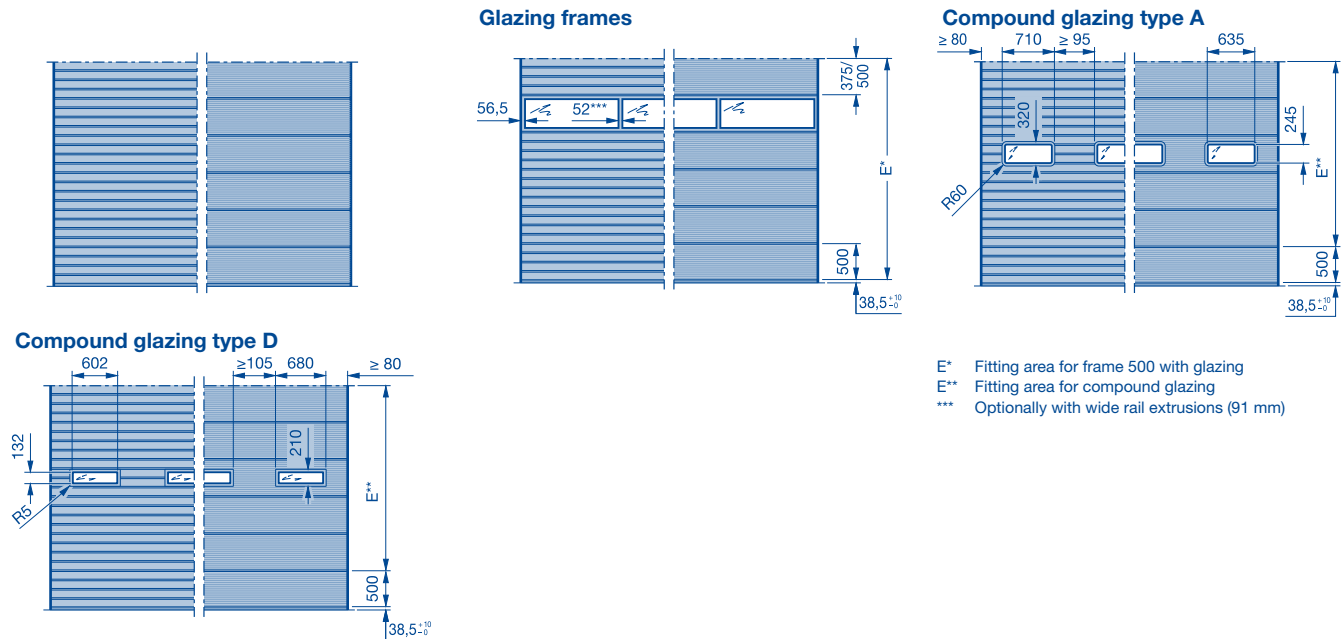
Sectional Door SPU F42

Double-Skinned Steel Sections

375 and 500 mm high

Stucco-textured / Micrograin

External views



Size range

RM	[A]																									
	TH 375	TH 500																								
7500	-	15																								
7375	1	+	14																							
7250	2	+	13																							
7125	3	+	12																							
7000	-		14																							
6875	1	+	13																							
6750	2	+	12																							
6625	3	+	11																							
6500	-		13																							
6375	1	+	12																							
6250	2	+	11																							
6125	3	+	10																							
6000	-		12																							
5875	1	+	11																							
5750	2	+	10																							
5625	3	+	9																							
5500	-		11																							
5375	1	+	10																							
5250	2	+	9																							
5125	3	+	8																							
5000	-		10																							
4875	1	+	9																							
4750	2	+	8																							
4625	3	+	7																							
4500	-		9																							
4375	1	+	8																							
4250	2	+	7																							
4125	3	+	6																							
4000	-		8																							
3875	1	+	7																							
3750	2	+	6																							
3625	3	+	5																							
3500	-		7																							
3375	1	+	6																							
3250	2	+	5																							
3125	3	+	4																							
3000	-		6																							
2875	1	+	5																							
2750	2	+	4																							
2625	3	+	3																							
2500	-		5																							
2375	1	+	4																							
2250	2	+	3																							
2125	3	+	2																							
2000	-		4																							
1875	1	+	3																							
	1	2	3	4	5	6	Number of infills / fields per aluminium frame																			
	****	2	3	4	5	6	Number of compound glazings per door section																			
	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	5250	5500	5750	6000	6250	6500	6750	7000	7250	7500	7750	8000
	SPB 52																									
	LZ																									

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:

- Thermo glazing frames only up to a width of 7000 mm.
- 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.

On request

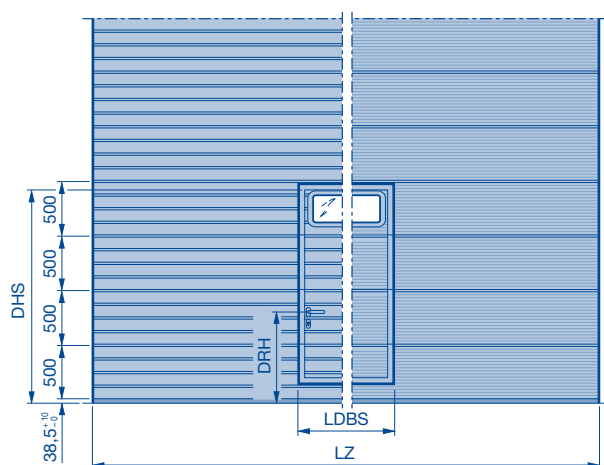
- [A] No. of door sections
- RM Grid height
- LZ Clear frame dimensions (from 1200) up to LZ
- up to LZ
- SPB Rail width
- TH Door section height
- **** See table 1 on page 10

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.

RM	SH ₁				SH ₂		[A]		[D]																
					TH 375	TH 500																			
7500					7500	-	15	1955																	
7375					7375	-	14	1955																	
7250					7250	1 +	13	1955																	
7125					7125	2 +	12	1955																	
7000					7000	-	14	1955																	
6875					6875	1 +	13	1955																	
6750					6750	2 +	12	1955																	
6625					6625	3 +	11	1955																	
6500					6500	-	13	1955																	
6375					6375	1 +	12	1955																	
6250					6250	2 +	11	1955																	
6125					6125	3 +	10	1955																	
6000					6000	-	12	1955																	
5875					5875	1 +	11	1955																	
5750					5750	2 +	10	1955																	
5625					5625	3 +	9	1955																	
5500					5500	-	11	1955																	
5375					5375	1 +	10	1955																	
5250					5250	2 +	9	1955																	
5125					5125	3 +	8	1955																	
5000					5000	-	10	1955																	
4875					4875	1 +	9	1955																	
4750					4750	2 +	8	1955																	
4625					4625	3 +	7	1955																	
4500					4500	-	9	1955																	
4375					4375	1 +	8	1955																	
4250					4250	2 +	7	1955																	
4125					4125	3 +	6	1955																	
4000					4000	-	8	1955																	
3875					3875	1 +	7	1955																	
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																	
2500					2500	-	5	1955																	
2375					2375	1 +	4	1955																	
2250					2250	2 +	3	1830																	
2125					2125	1***	3	2080																	
2000					2000	-	4	1955																	
					Number of infills / fields per aluminium frame																				
		3	4	5																					
					Number of compound glazings per door section**																				
		2	3	4	5																				
					(Number of infills / fields - 1) × 2																				
					Number of ventilation grilles, ventilation area 40 cm ² per grille																				
					2000	2250	2500	2750	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500	5750	6000	6250	6500	6750	7000

Notes:

- Micrograin version only up to LZ ≤ 5500 mm.
- From LZ > 5500 mm bottom door section with deviating heights TH = 625 / 750 mm (made of 375 / 500 mm sections and 2 × 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.

On request

Glazings on request

[A] No. of door sections

[D] Clear passage heights (DHS)

of wicket door to grid height

RM Grid height

LZ Clear frame dimensions (from 1750)

SH₁ Threshold height (200)

SH₂ Threshold height (325), bottom door section with 250 mm aluminium

bottom section, glazing from 625 mm

SPB Rail width

TH Door section height

DHS Clear passage height of wicket door

DRH Lever height

LDBS Clear passage width

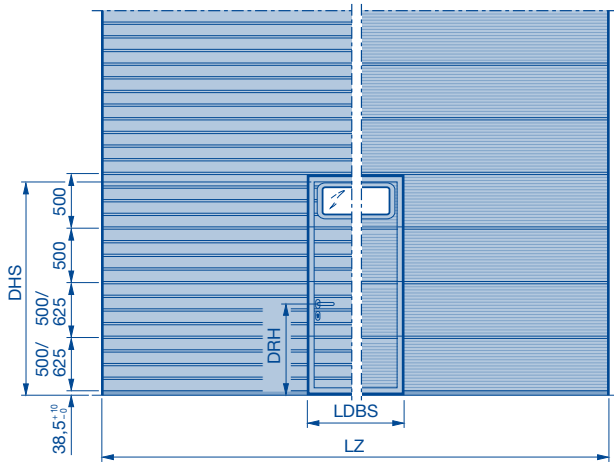
*** TH=625 mm

Sectional Door SPU F42 With Wicket Door with Trip-Free Threshold

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

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.

RM	SH ₁		SH ₂		[A]		[D]															
	TH 375	TH 500																				
7500	-	15	15	1955																		
7375	1	14	14	1955																		
7250	2	13	13	1955																		
7125	3	12	12	1955																		
7000	-	14	14	1955																		
6875	1	13	13	1955																		
6750	2	12	12	1955																		
6625	3	11	11	1955																		
6500	-	13	13	1955																		
6375	1	12	12	1955																		
6250	2	11	11	1955																		
6125	3	10	10	1955																		
6000	-	12	12	1955																		
5875	1	11	11	1955																		
5750	2	10	10	1955																		
5625	3	9	9	1955																		
5500	-	11	11	1955																		
5375	1	10	10	1955																		
5250	2	9	9	1955																		
5125	3	8	8	1955																		
5000	-	10	10	1955																		
4875	1	9	9	1955																		
4750	2	8	8	1955																		
4625	3	7	7	1955																		
4500	-	9	9	1955																		
4375	1	8	8	1955																		
4250	2	7	7	1955																		
4125	3	6	6	1955																		
4000	-	8	8	1955																		
3875	1	7	7	1955																		
3750	2	6	6	1955																		
3625	3	5	5	1955																		
3500	-	7	7	1955																		
3375	1	6	6	1955																		
3250	2	5	5	1955																		
3125	3	4	4	1955																		
3000	-	6	6	1955																		
2875	1	5	5	1955																		
2750	2	4	4	1955																		
2625	1***	4	2080																			
2500	-	5	1955																			
2375	1	4	1955																			
2250	2***	2	2125																			
2125	1***	3	2000																			
2000	-	4	1875																			
	3	4	5	Number of infills / fields per aluminium frame																		
	2	3	4	5	Number of compound glazings per door section**																	
	(Number of infills / fields - 1) × 2			Number of ventilation grilles, ventilation 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																					

Note:

- 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

RM Grid height

LZ Clear frame dimensions (from 1750)

SH₁ Threshold height (rising from 5 to 10)

SH₂ Threshold height (approx. 13)

SPB Rail width

TH Door section height

DHS Clear passage height of wicket door

DRH Lever height

LDBS Clear passage width

*** TH=625 mm

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

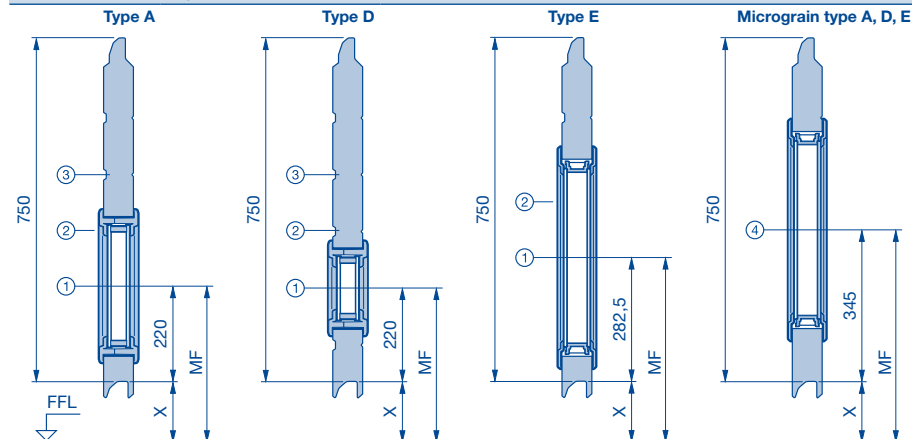
(Centre of window from FFL)

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

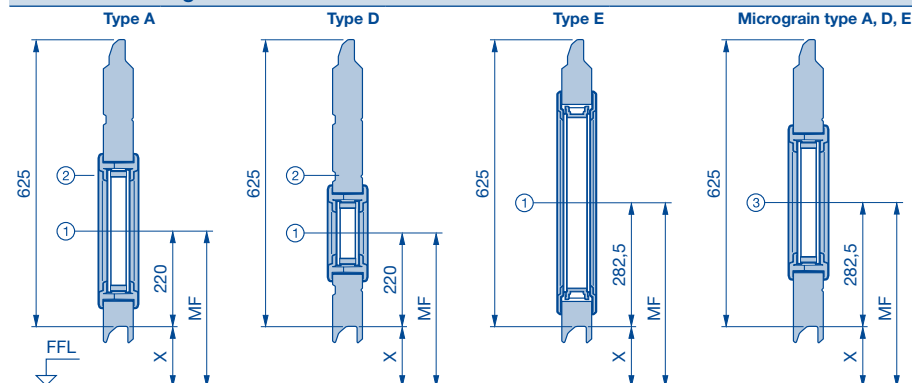
- ① = $x + 220$
- ② = $x + 220 + 125$
- ③ = $x + 220 + 250$
- ④ = $x + 345$

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

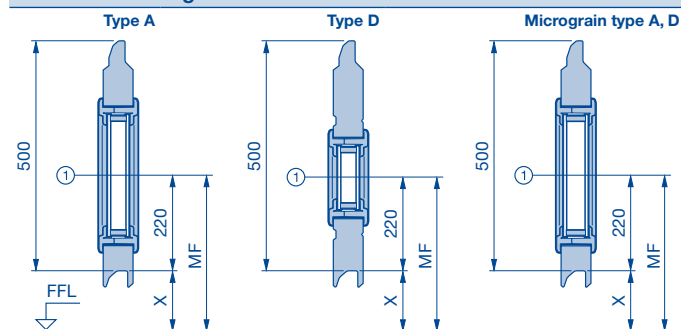
- ① = $x + 220$
- ② = $x + 220 + 125$
- ③ = $x + 282.5$

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

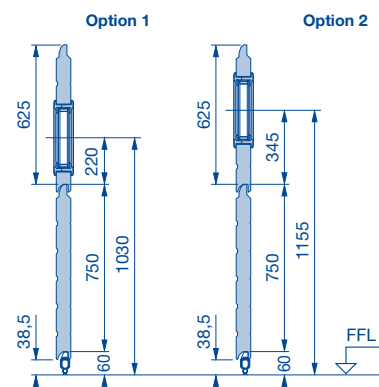
- ① = $x + 220$

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.		

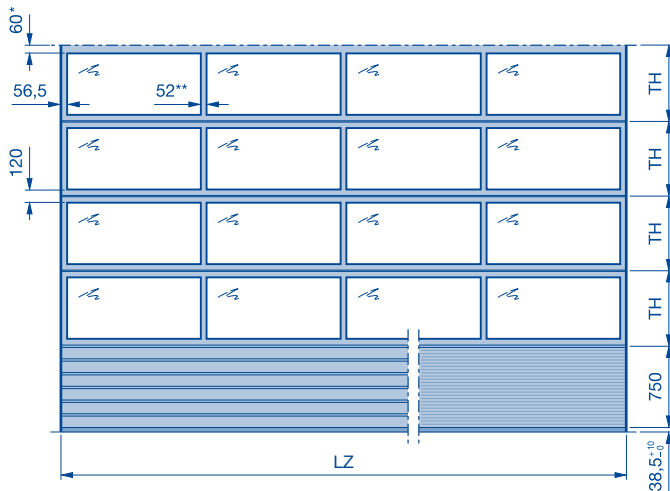
MF Centre of window from FFL

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.

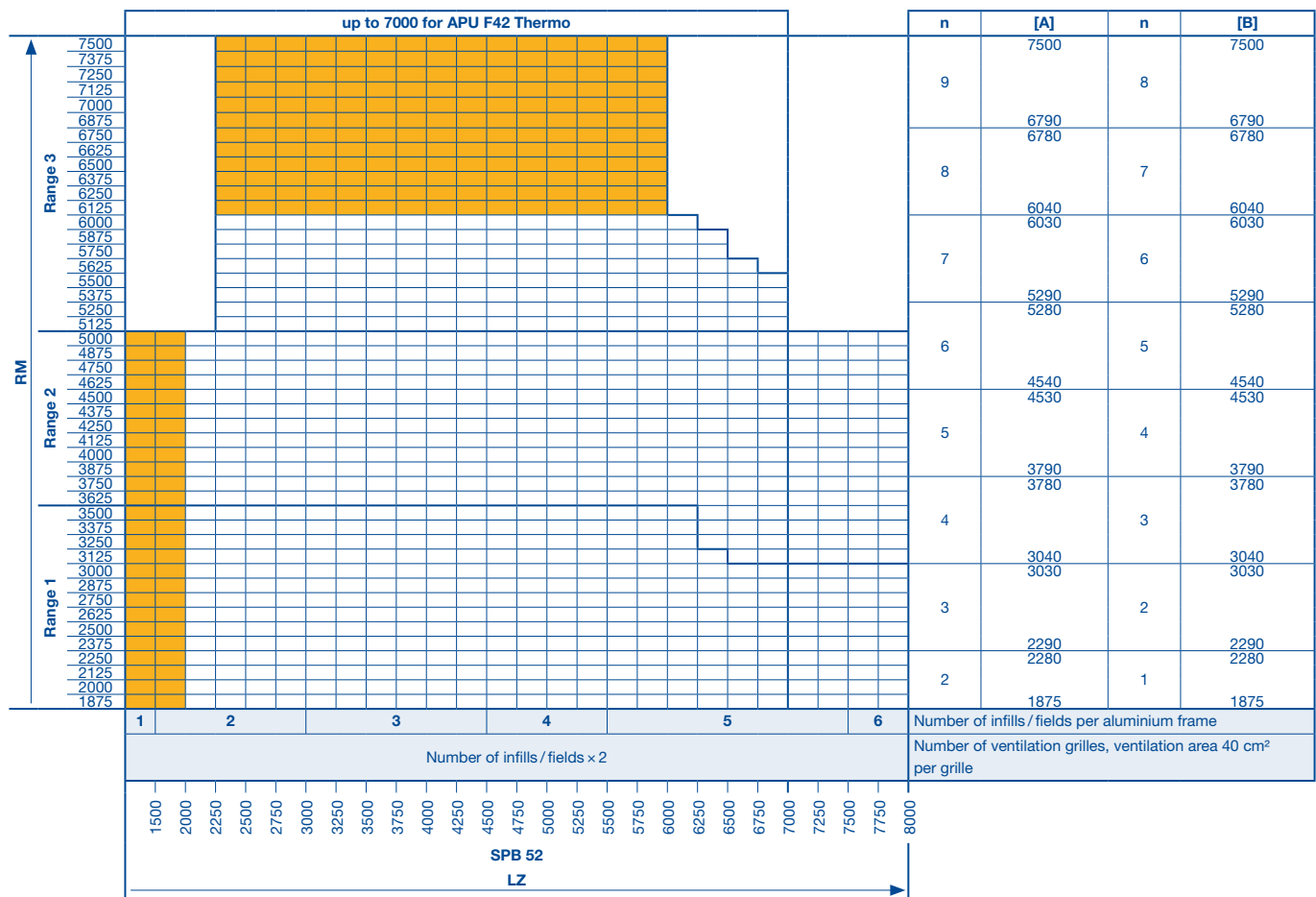
** Optionally with wide rail extrusions (91 mm)

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

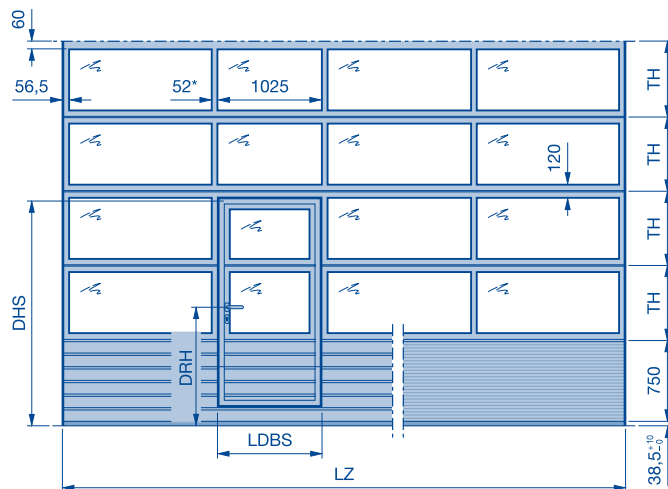
TH Door section height

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.

RM	Range 3	Range 2	Range 1	SH ₁				SH ₂				n	Height	RM	DHS	n ₁	Height		
				3	4	5	6	7	8	9	10								
7500																			
7375																			
7250																			
7125																			
7000																			
6875																			
6750																			
6625																			
6500																			
6375																			
6250																			
6125																			
6000																			
5875																			
5750																			
5625																			
5500																			
5375																			
5250																			
5125																			
5000																			
4875																			
4750																			
4625																			
4500																			
4375																			
4250																			
4125																			
4000																			
3875																			
3750																			
3625																			
3500																			
3375																			
3250																			
3125																			
3000																			
2875																			
2750																			
2625																			
2500																			
2375																			
2250																			
2125																			
2000																			
				3				4				5				Number of infills / fields per aluminium frame			
				(Number of infills / fields - 1) × 2								Number of ventilation grilles, ventilation area 40 cm ² per grille							
				2000				2250				2500				2750			
				3000				3250				3500				3750			
				4000				4250				4500				4750			
				5000				5250				5500				5750			
				6000				6250				6500				6750			
				7000															

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

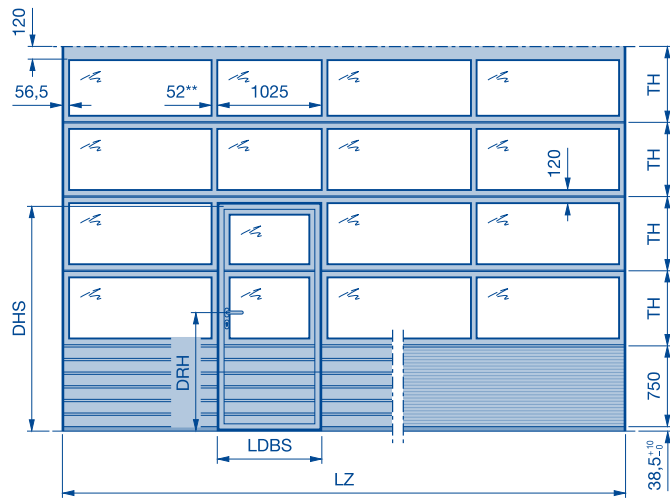
TH Door section height

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 (Ø1 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.

RM	Range 3	Range 2	Range 1	SH ₁			SH ₂			n	Height	RM	DHS	n ₁	Height									
				3	4	5	3	4	5															
7500										9	7500	7500	2197	2										
7375											7375	2169												
7250										8	7250	2142	2											
7125											7125	2114												
7000										7	7000	2086	2											
6875											6875	2058												
6750										6	6750	2196	2											
6625											6625	2165												
6500										5	6500	2134	2											
6375											6375	2103												
6250										4	6250	2071	2											
6125											6125	2040												
6000										3	6000	2195	2											
5875											5875	2159												
5750										2	5750	2124	2											
5625											5625	2088												
5500										1	5500	2052	2											
5375											5375	2016												
5250										9	5250	2193	2											
5125											5125	2152												
5000										8	5000	2110	2											
4875											4875	2068												
4750										7	4750	2027	2											
4625											4625	1985												
4500										6	4500	2191	2											
4375											4375	2141												
4250										5	4250	2091	2											
4125											4125	2041												
4000										4	4000	1991	2											
3875											3875	1941												
3750										3	3750	2188	2											
3625											3625	2125												
3500										2	3500	2063	2											
3375											3375	2000												
3250										9	3250	1938	2											
3125											3125	1875												
3000										8	3000	2182	2											
2875											2875	2096												
2750										7	2750	2015	2											
2625											2625	1932												
2500										6	2500	1848	2											
2375											2375	2250												
2250										5	2250	2125	3	2430										
2125											2125	2000												
2000										4	2000	1875	2	2420										
				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

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

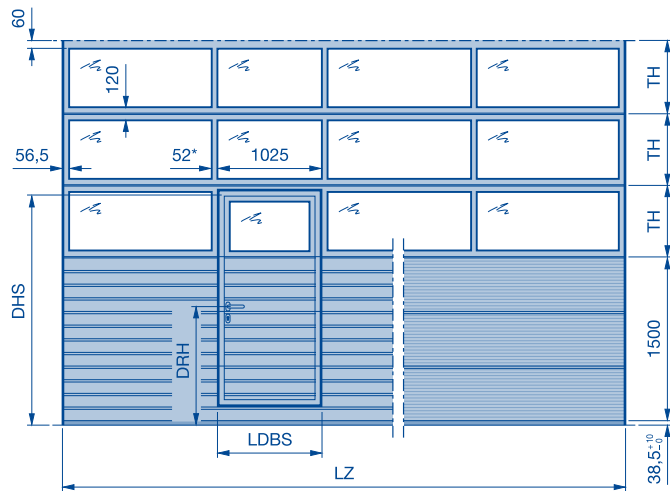
TH Door section height

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.

RM	Range 3	Range 2	Range 1	SH ₁			SH ₂			n	Height	RM	DHS	n ₁	
				3	4	5	3	4	5						
7500									8	7500	7500	2201	1		
7375									7	6790	7375	2185	1		
7250								7250			2169				
7125									6	6780	7125	2154	1		
7000								7000			2138				
6875									5	6040	6875	2123	1		
6750								6750			2200				
6625									4	6030	6625	2182	1		
6500								6500			2164				
6375									3	5290	6375	2146	1		
6250								6250			2129				
6125									2	5280	6125	2111	1		
6000								6000			2199				
5875									1	4540	5875	2178	1		
5750								5750			2158				
5625									4	4530	5625	2137	1		
5500								5500			2116				
5375									3	3790	5375	2095	1		
5250								5250			2198				
5125									2	3780	5125	2173	1		
5000								5000			2148				
4875									1	4540	4875	2123	1		
4750								4750			2098				
4625									4	4530	4625	2073	1		
4500								4500			2196				
4375									3	3790	4375	2165	1		
4250								4250			2134				
4125									2	3780	4125	2103	1		
4000								4000			2071				
3875									1	3040	3875	2040	1		
3750								3750			2193				
3625									4	3030	3625	2152	1		
3500								3500			2110				
3375									3	2290	3375	2068	1		
3250								3250			2027				
3125									2	2280	3125	1985	1		
3000								3000			2188				
2875									1	2000	2875	2125	1		
2750								2750			2063				
2625									4	2000	2625	2000	1		
2500								2500			1938				
2375									3	2290	2375	1875	1		
2250								2250			2170				
2125									2	2000	2125	2045	1		
2000								2000			1920				
				3			4			5			Number of infills / fields per aluminium frame		
				(Number of infills / fields - 1) x 2									Number of ventilation grilles, ventilation area 40 cm ² 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

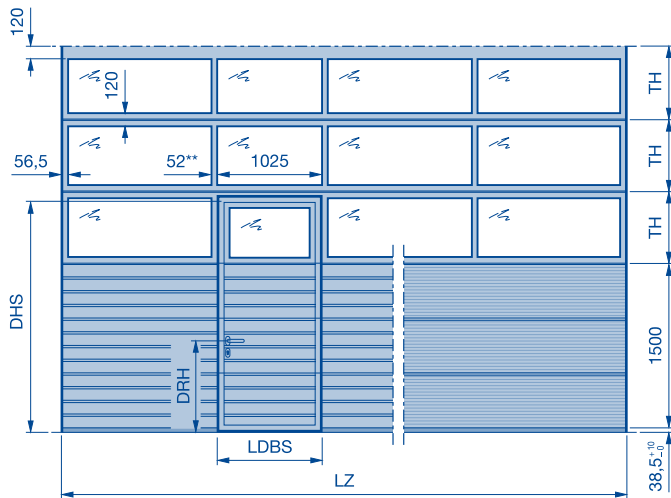
TH Door section height

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)

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

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 (Ø1 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.

RM	Range 3	Range 2	Range 1	SH ₁			SH ₂			n	Height	RM	DHS	n ₁																
				3	4	5	3	4	5																					
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																		
5000											5000	2148																		
4875											4875	2123																		
4750											4750	2098																		
4625											4625	2073																		
4500											4500	2196																		
4375											4375	2185																		
4250											4250	2164																		
4125											4125	2143																		
4000											4000	2103																		
3875											3875	2071																		
3750											3750	2040																		
3625											3625	2193																		
3500											3500	2152																		
3375											3375	2110																		
3250											3250	2068																		
3125											3125	2027																		
3000											3000	1985																		
2875											2875	2188																		
2750											2750	2125																		
2625											2625	2063																		
2500											2500	2000																		
2375											2375	1938																		
2250											2250	1875																		
2125											2125	1815																		
2000											2000	1755																		
										3	4	5	Number of infills / fields per aluminium frame																	
										$(\text{Number of infills / fields} - 1) \times 2$		Number of ventilation grilles, ventilation area 40 cm ² per grille																		
										SPB 52		LZ																		
										2000	2250	2500	2750	3000	3250	3500	3750	4000	4250	4500	4750	5000	5250	5500	5750	6000	6250	6500	6750	7000

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

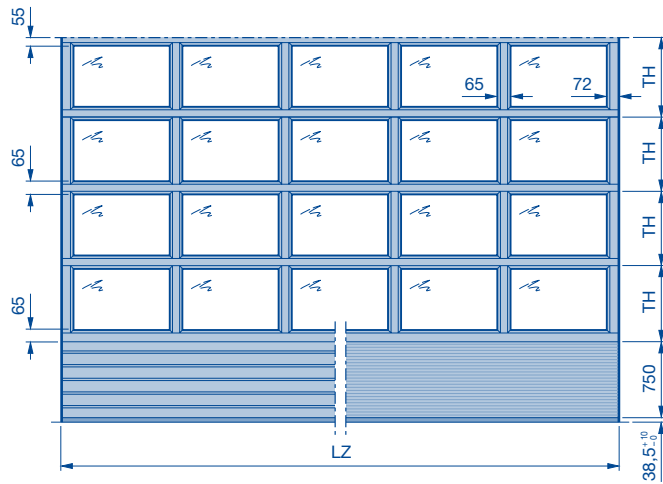
TH Door section height

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.

RM	Range 3	Range 2	Range 1	[1]	2	3	4	5	n	[A]	n	[B]
									11	7450 7440	9	
10	6790 6780	8	6875 6870									
9	6125 6120	7	6220 6210									
8	5470 5400	6	5550 5540									
7	4800 4790	5	4890 4880									
6	4140 4130	4	4230 4220									
5	3480 3470	3	3570 3560									
4	2820 2810	2	2910 2900									
3	2160 2150	1	2240 2230									
									Number of infills / fields per aluminium frame			
									Number of ventilation grilles, ventilation area 40 cm ² per grille.			
									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

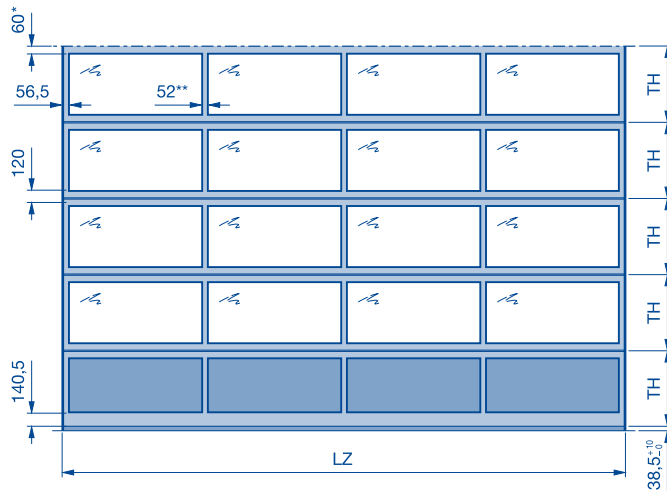
n Number of aluminium frames

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



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

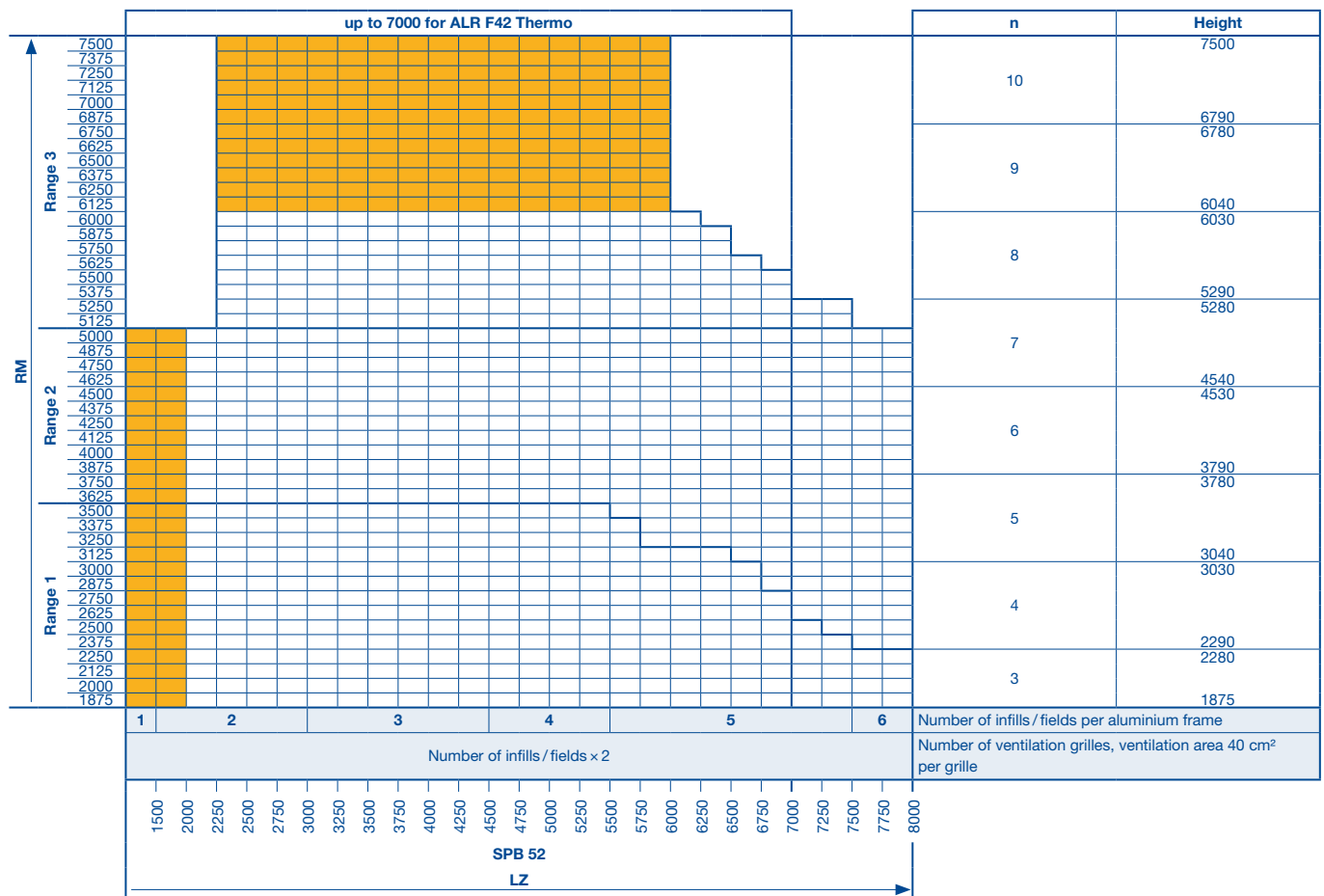
- * On request 120 mm, so as to match the appearance of a sectional door with wicket door with trip-free threshold with the same door height.
- ** Optionally with wide rail extrusions (91 mm)

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.

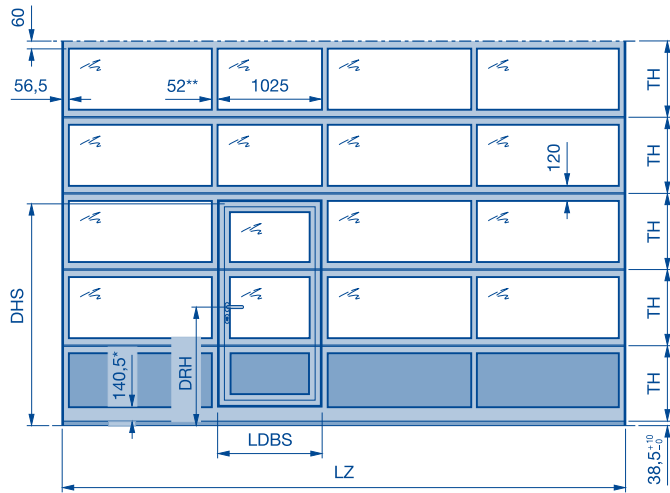


On request

- 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.

RM	Range 3	Range 2	Range 1	SH ₁		SH ₂		n	Height	RM	DHS	n ₁	Height
				3	4	5	3						
7500								10	7500	7500	2195	3	
7375									7375	7375	2157		
7250									7250	7250	2120		
7125									7125	7125	2082		
7000									7000	7000	2045		
6875									6875	6875	2007		
6750									6750	6750	2193	3	
6625									6625	6625	2152		
6500									6500	6500	2110		
6375									6375	6375	2068	3	
6250									6250	6250	2027		
6125									6125	6125	1985		
6000									6000	6000	2192		
5875									5875	5875	2145		
5750									5750	5750	2098	3	
5625									5625	5625	2051		
5500									5500	5500	2004		
5375									5375	5375	1958		
5250									5290	5290	1958		
5125									5280	5280	2190	3	
5000									5125	5125	2136		
4875									5000	5000	2083		
4750									4875	4875	2029	3	
4625									4750	4750	1976		
4500									4540	4625	1922		
4375									4530	4530	2125		
4250										4250	2063	3	
4125										4125	2000		
4000										4000	1938		
3875									3790	3875	1875		
3750									3780	3750	2184	3	
3625										3625	2109		
3500										3500	2034		
3375										3375	1959	3	
3250										3250	1884		
3125										3125	1809		
3000										3000	2179	3	
2875										2875	2085		
2750										2750	1991	3	
2625										2625	1893		
2500										2500	1804		
2375										2375	2295	4	2500
2250										2280	2170	3	2490
2125										2125	2045		
2000										2000	1920		
				3		4		5		Number of infills / fields per aluminium frame			
				(Number of infills / fields - 1) × 2						Number of ventilation grilles, ventilation area 40 cm ² 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 (181)

SH₂ Threshold height (306)

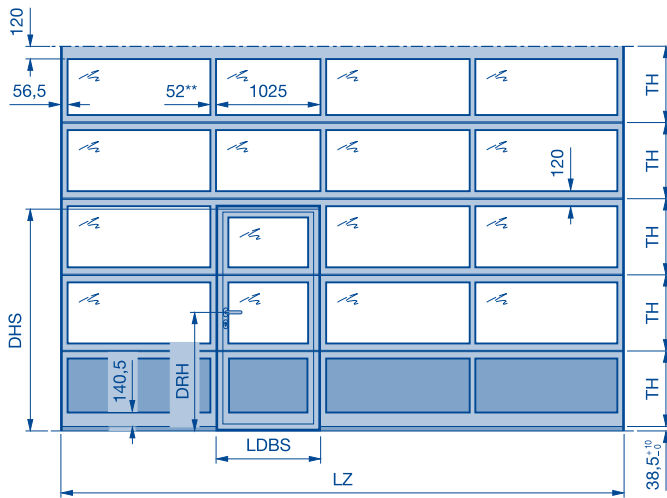
n Number of aluminium frames

n₁ 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.

RM	Range 3	Range 2	Range 1	SH ₁			SH ₂			n	Height	RM	DHS	n ₁	Height										
				3	4	5	3	4	5																
7500										10	7500	7500	2195	3											
7375												7375	2157												
7250												7250	2120												
7125												7125	2082												
7000												7000	2045												
6875												6875	2007												
6750												6750	2193												
6625												6625	2152												
6500												6500	2110	3											
6375												6375	2069												
6250												6250	2027												
6125												6125	1985												
6000												6000	2192												
5875												5875	2145												
5750												5750	2098	3											
5625												5625	2051												
5500												5500	2004												
5375												5375	1958												
5250												5290	1958												
5125												5280	2190												
5000												5125	2136												
4875												5000	2083	3											
4750												4875	2029												
4625												4750	1976												
4500												4625	1922												
4375												4540	1922												
4250												4530	2188												
4125												4375	2125												
4000												4250	2063	3											
3875												4125	2000												
3750												4000	1938												
3625												3790	1875												
3500												3780	2184												
3375												3625	2109												
3250												3500	2034	3											
3125												3375	1959												
3000												3250	1884												
2875												3040	1809												
2750												3030	2179												
2625												2875	2085	3											
2500												2750	1991												
2375												2625	1898												
2250												2500	1804		2500										
2125												2290	2375	4	2490										
2000												2280	2250	3											
												2125	2000												
												2000	1875												
					3	4	5																		
					(Number of infills / fields - 1) × 2																				
					Number of ventilation grilles, ventilation area 40 cm ² 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 (rising from 5 to 10)

SH₂ Threshold height (approx. 13)

n Number of aluminium frames

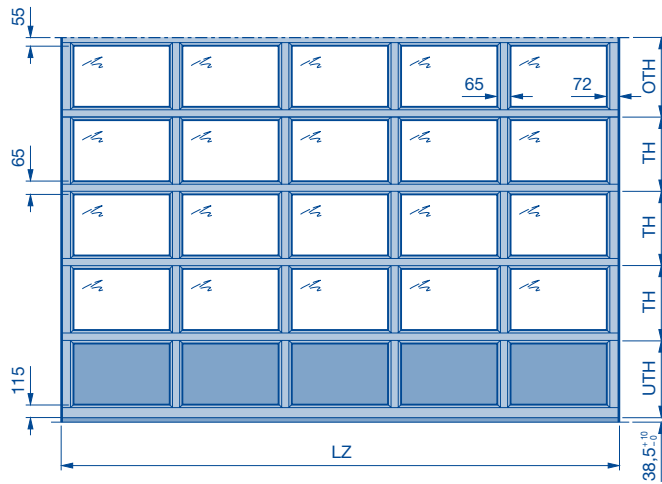
n₁ Number of aluminium frames in the wicket door

TH Door section height

Sectional Door 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						7420								
		7250														
		7125					11									
		7000														
		6875														
		6750														
		6625														
		6500														
		6375					10	6770								
	6250						6760									
	6125															
	6000															
	5875															
	5750					9										
	5625															
	5500															
	5375															
	5250															
	5125															
	5000					8	6110									
	4875						6100									
	4750															
	4625															
	4500															
	4375					7										
	4250															
	4125															
	4000															
	3875															
3750					6	5440										
3625						5430										
3500																
3375																
3250																
3125					5	4780										
3000						4770										
2875																
2750																
2625																
2500					4	4120										
2375						4110										
2250																
2125																
2000					3	3460										
1875						3450										
	[1]	2	3	4	5	Number of infills / fields per aluminium frame										
	Number of infills / fields × 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



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

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

$$OTH = TH \cdot 35$$

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

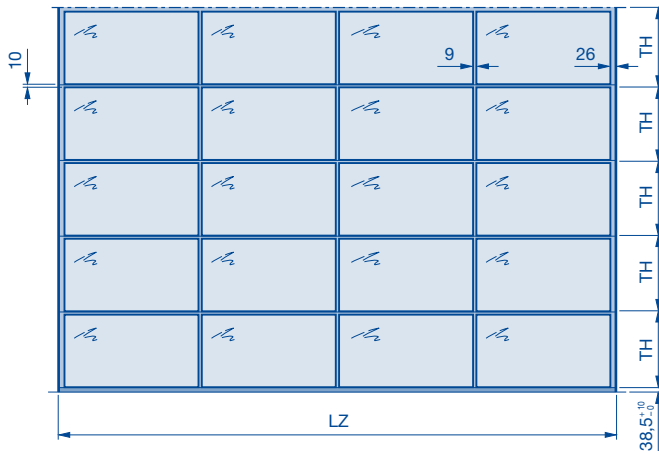
RM Grid height
LZ Clear frame dimensions (from 2000)
 → up to LZ
SPB Rail width
n Number of aluminium frames
UTH Bottom door section height

TH Door section height
OTH Upper door section height

Sectional Door ALR F42 Vitraplan

Door leaf made of standard aluminium extrusions

External view



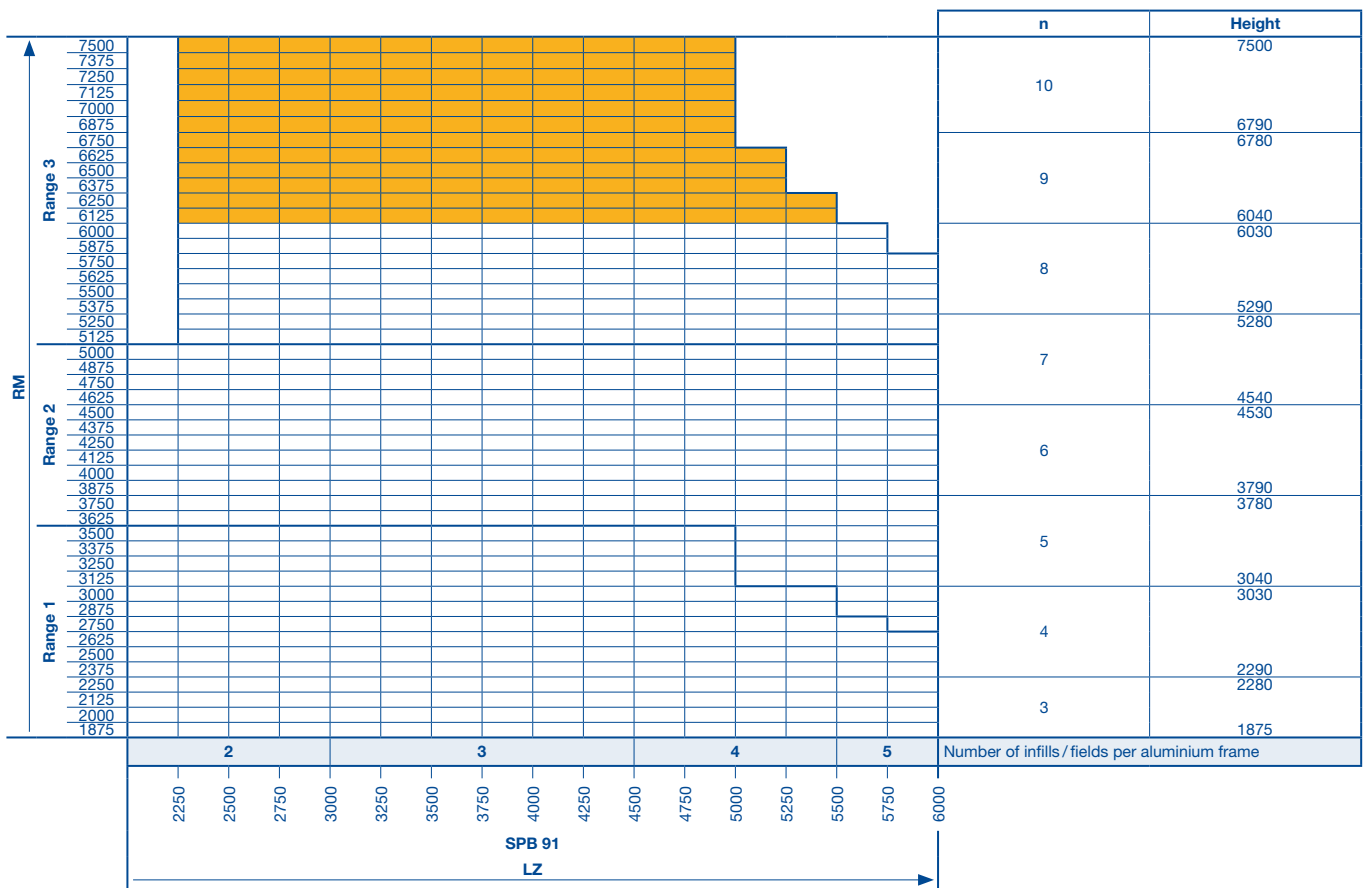
$$TH = \frac{\text{Door height} - 35}{\text{Number of door section frames}}$$

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

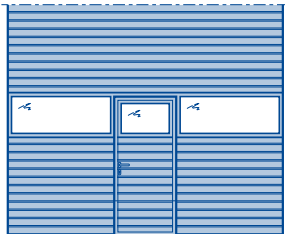
RM Grid height
LZ Clear frame dimensions (from 2000)
SPB Rail width
n Number of aluminium frames
TH Door section height

Glazing / Wicket Door Arrangements

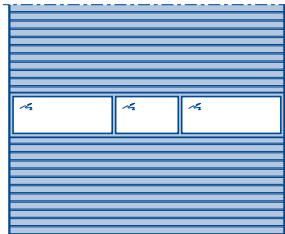
Sectional doors with 3 infills / fields

Glazing arrangements – external view

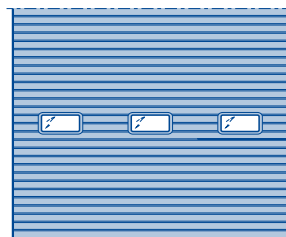
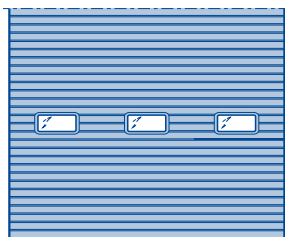
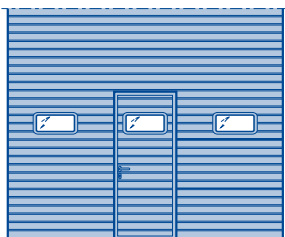
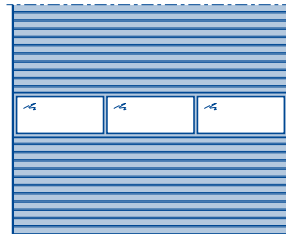
Sectional door SPU F42
with wicket door with trip-free threshold



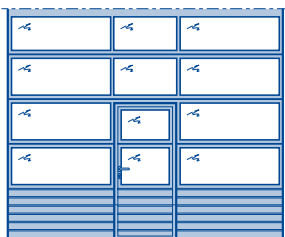
Sectional door SPU 42,
matching doors with wicket door



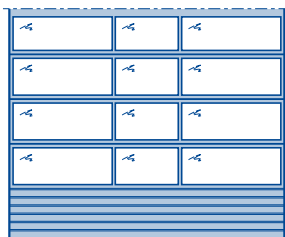
Sectional door SPU F42
with standard window division



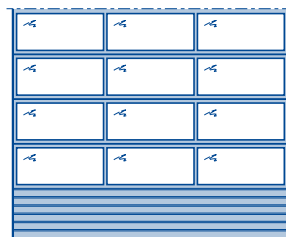
Sectional door APU F42
with wicket door with trip-free threshold



Sectional door APU F42,
matching doors with wicket door



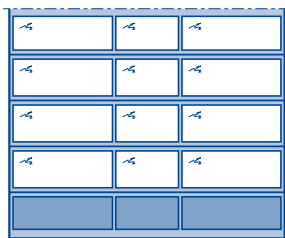
Sectional door APU F42
with standard window division



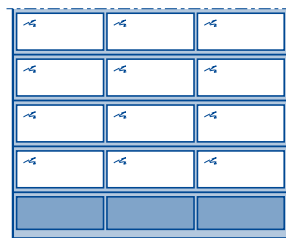
Sectional door ALR F42
with wicket door with trip-free threshold



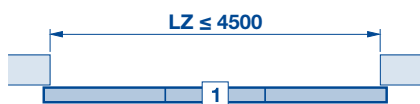
Sectional door ALR F42,
matching doors with wicket door



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

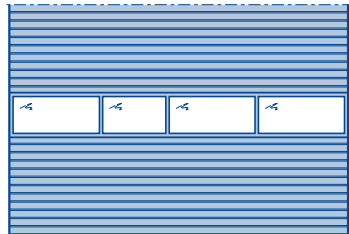
Sectional doors with 4 infills / fields

Glazing arrangements – external view

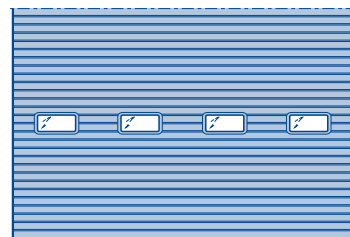
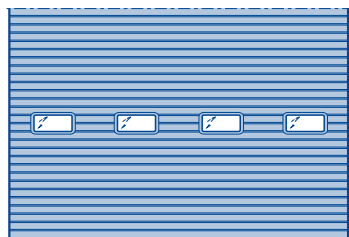
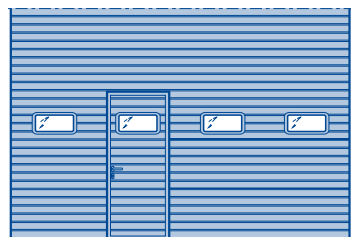
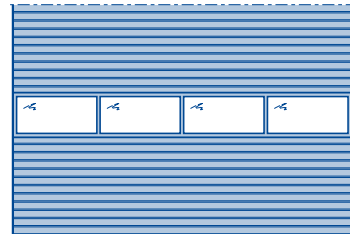
Sectional door SPU F42
with wicket door with trip-free threshold



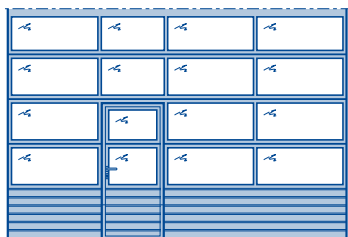
Sectional door SPU 42,
matching doors with wicket door



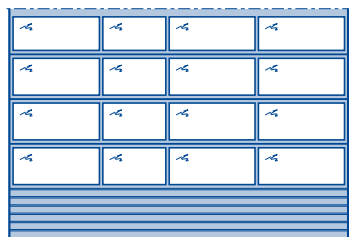
Sectional door SPU F42
with standard window division



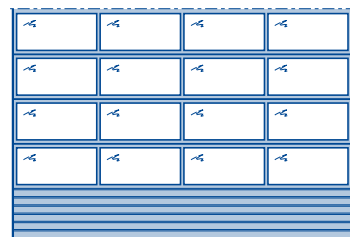
Sectional door APU F42
with wicket door with trip-free threshold



Sectional door APU F42,
matching doors with wicket door



Sectional door APU F42
with standard window division



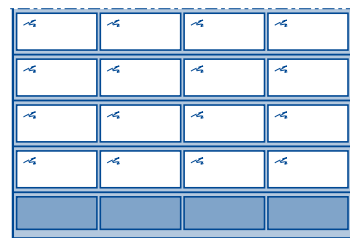
Sectional door ALR F42
with wicket door with trip-free threshold



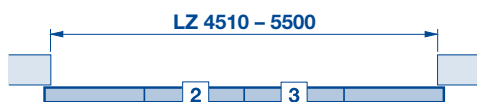
Sectional door ALR F42,
matching doors with wicket door



Sectional door ALR F42
with standard window division



Arrangement of the wicket door



Notes:

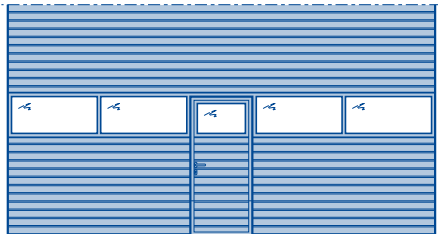
- Clear passage width (LDBS) = 940 mm.
- Wicket door only opening outwards.

Glazing / Wicket Door Arrangements

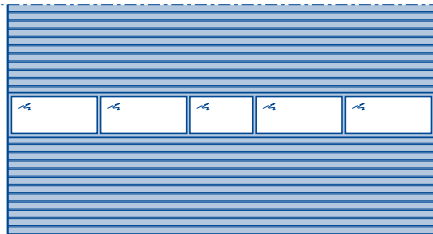
Sectional doors with 5 infills / fields

Glazing arrangements – external view

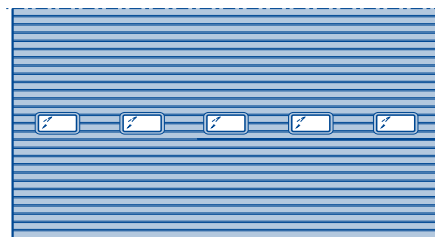
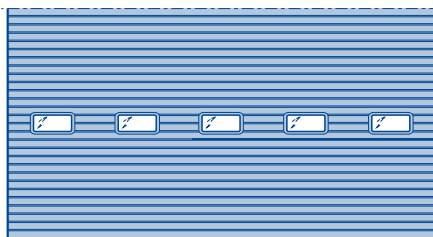
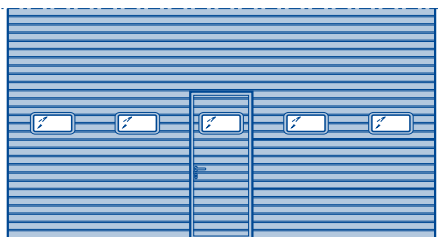
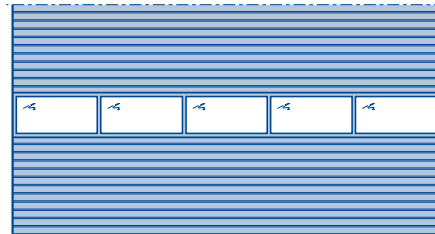
Sectional door SPU F42
with wicket door with trip-free threshold



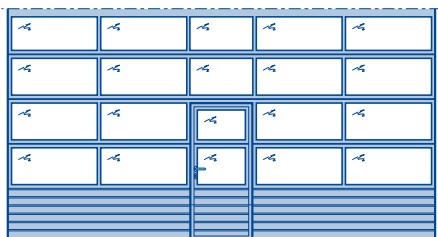
Sectional door SPU 42,
matching doors with wicket door



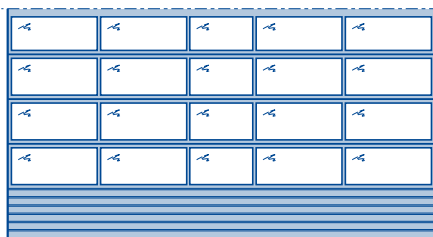
Sectional door SPU F42
with standard window division



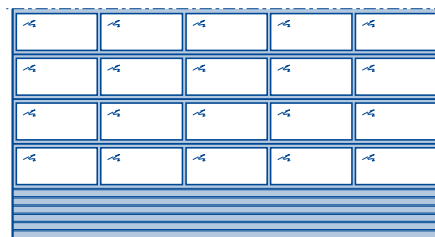
Sectional door APU F42
with wicket door with trip-free threshold



Sectional door APU F42,
matching doors with wicket door



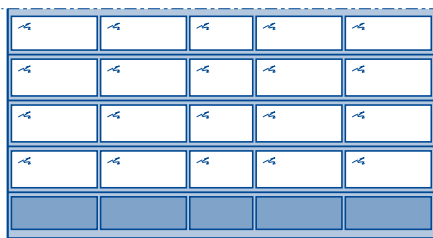
Sectional door APU F42
with standard window division



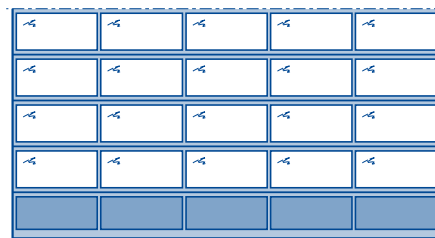
Sectional door ALR F42
with wicket door with trip-free threshold



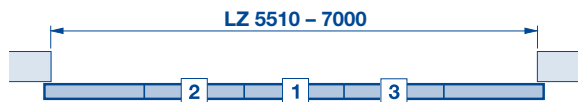
Sectional door ALR F42,
matching doors with wicket door



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	X 3 → 1750-3500 4 5 6 7 X

LZ

Number of compound glazings per door section

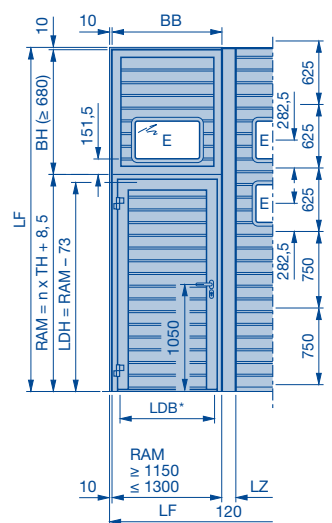
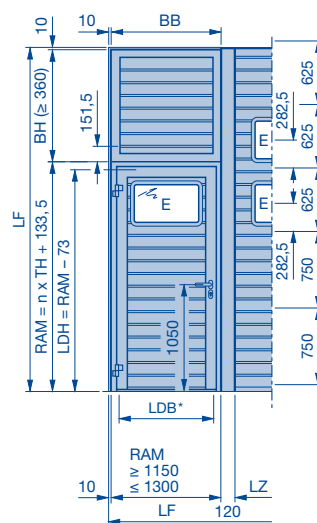
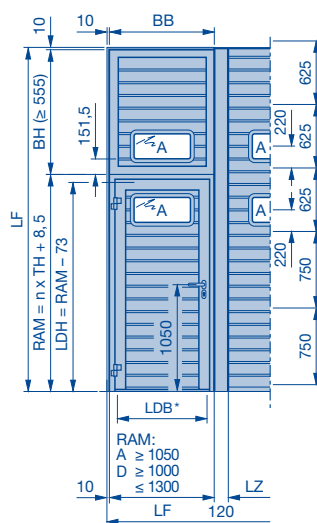
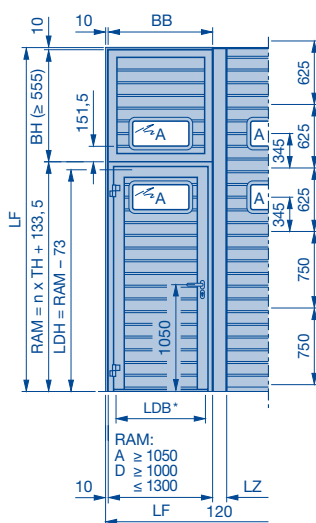
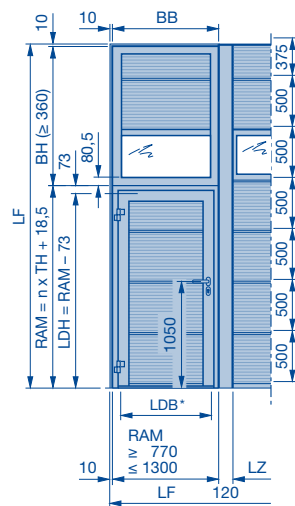
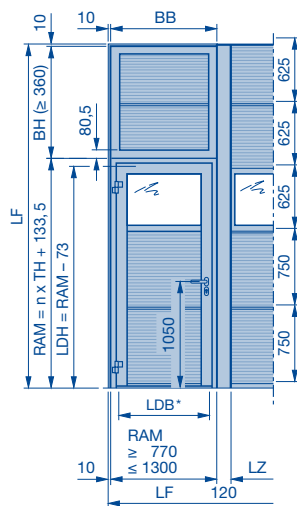
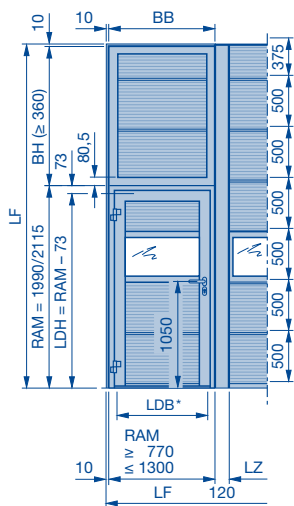
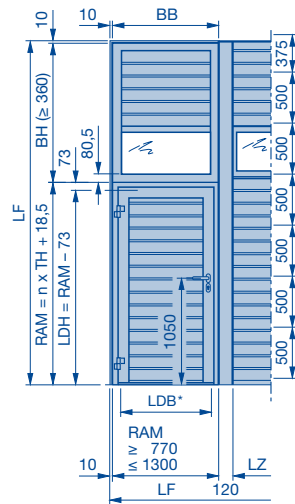
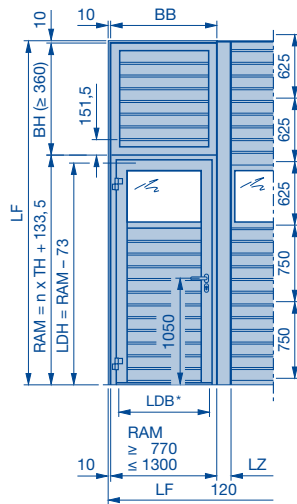
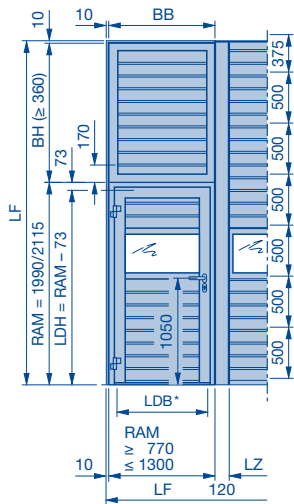
Sectional door without wicket door	
Standard type A	1 → 1680 2 3 4 5 6 7 8
Standard type D	1 → 1640 2 3 4 5 6 7 8
Standard type E	1 → 1860 2 → 2750 3 → 3650 4 → 4540 5 → 5510 6 X
Sectional door with wicket door	
Type A or type D	X 1 → 1750-2650 3 4 5 6 7 X
Type E	X 1 → 1840-2920 3 → 3880 4 → 4830 5 → 5780 6 X

LZ

LZ Clear frame dimensions
→ up to LZ

Side Door NT 60

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



* See page 37
LF Structural opening
RAM Overall frame dimension
BH Panel height

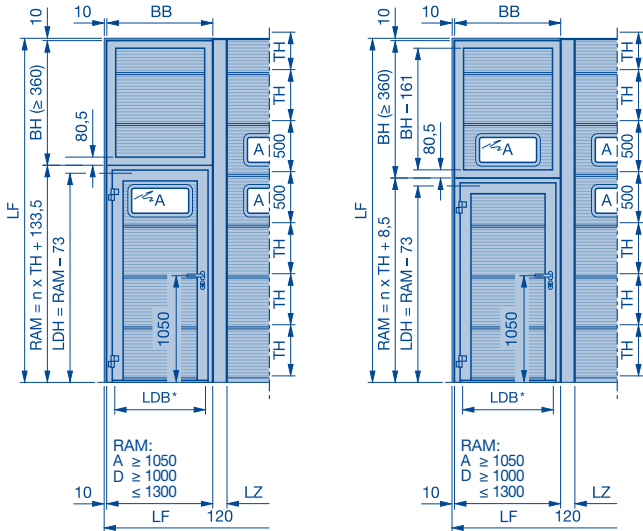
BB Panel width
LDB Clear passage width
LDH Clear passage height
TH Door section height

SO Bottom section height
LZ Clear frame dimensions
n Number of door sections / aluminium frames

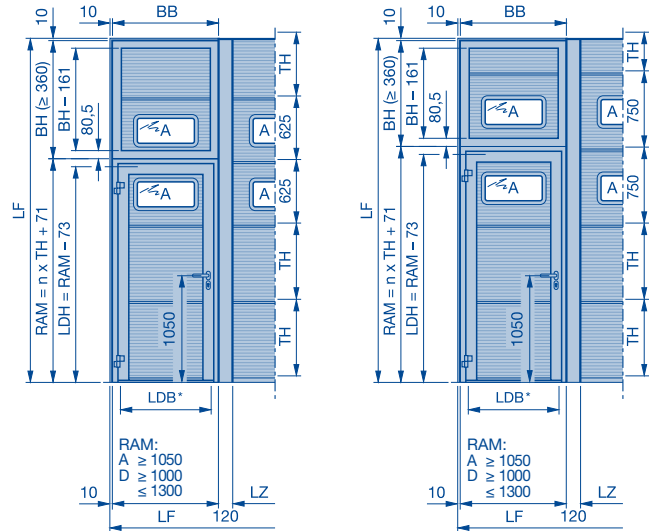
Side Door NT 60

With L-ribbed, Micrograin infills

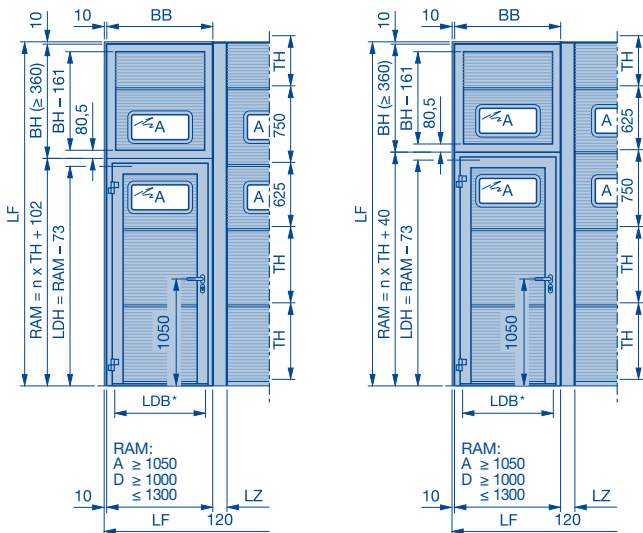
Compound glazing type A TH = 500



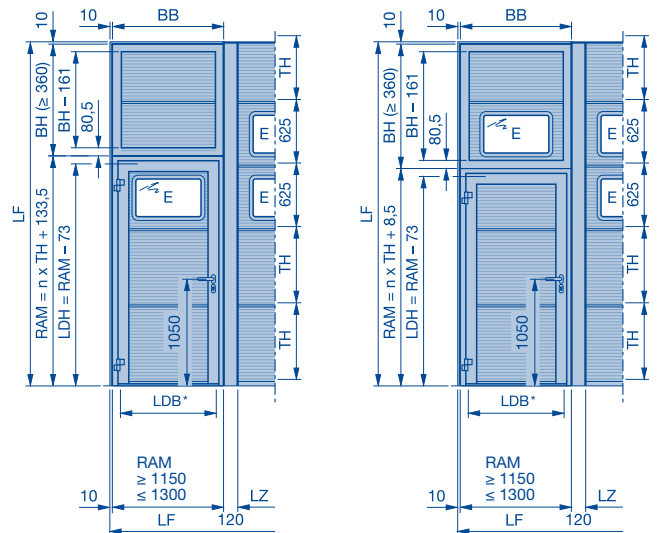
Compound glazing type A TH = 625 and 750



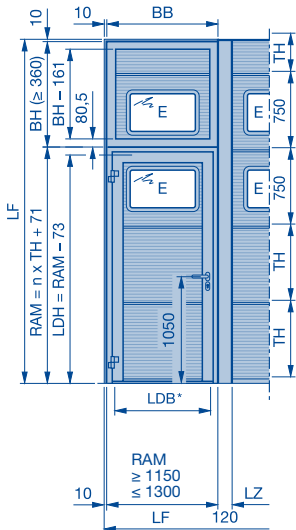
Compound glazing type A TH = 625 / 750 and 750 / 625



Compound glazing type E TH = 625



Compound glazing type E TH = 750

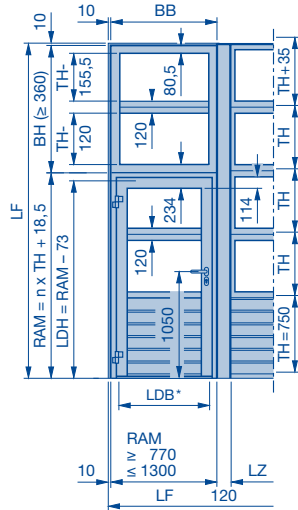
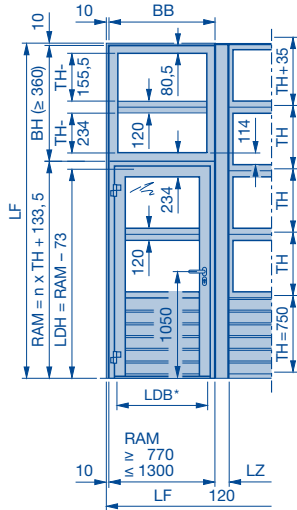


(Legend see page 34)

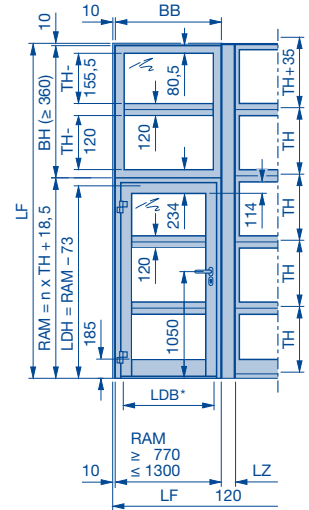
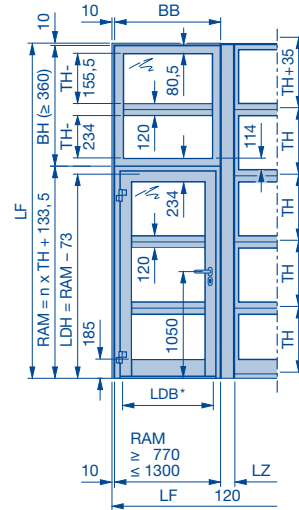
Side Door NT 60

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

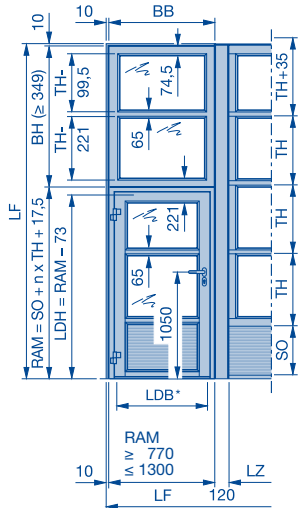
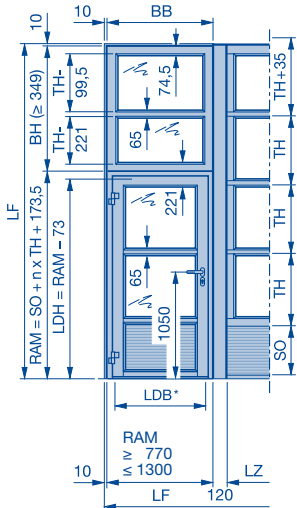
Side door NT 60 matching door type APU F42



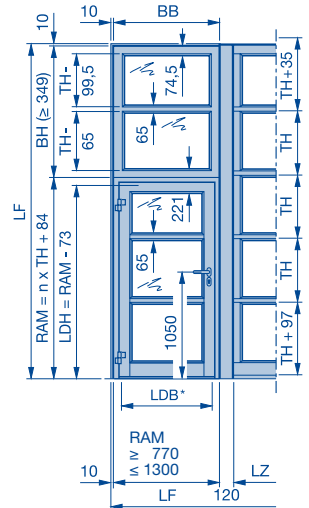
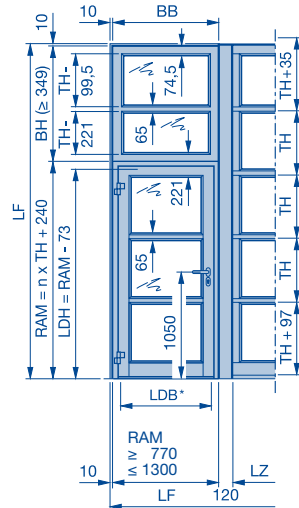
Side door NT 60 matching door type ALR F42 Thermo



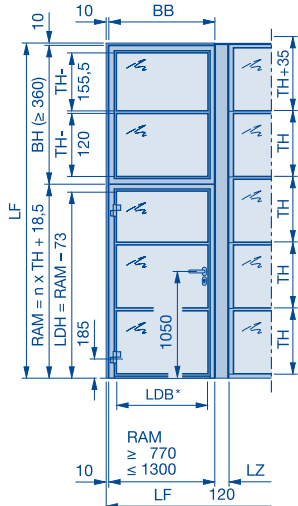
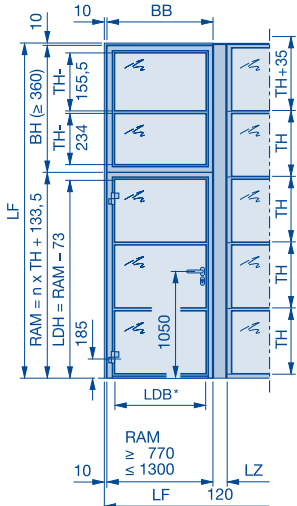
Side door NT 60 matching door type APU F42 S-Line



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

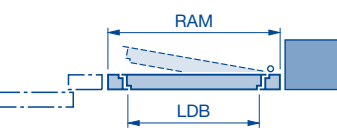
Arrangement 1

Fitting next to the door, opening outwards, RH hinged



Arrangement 2

Fitting next to the door, opening outwards, LH hinged



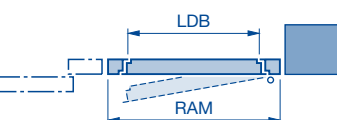
Arrangement 3

Fitting next to the door, opening inwards, LH hinged



Arrangement 4

Fitting next to the door, opening inwards, RH hinged



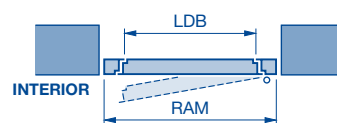
Arrangement 5

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



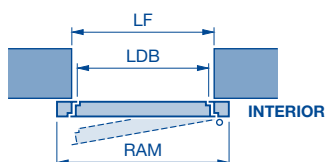
Arrangement 6

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

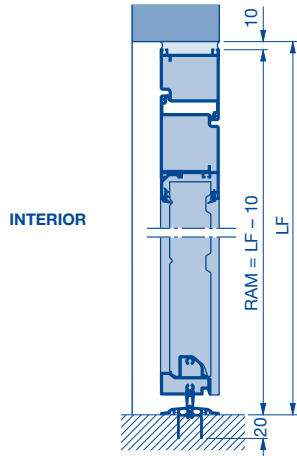
Arrangements

Possible handing options

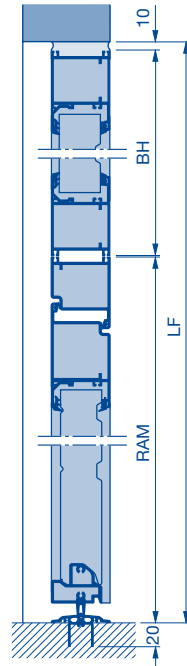
Possible handing options

SPU F42

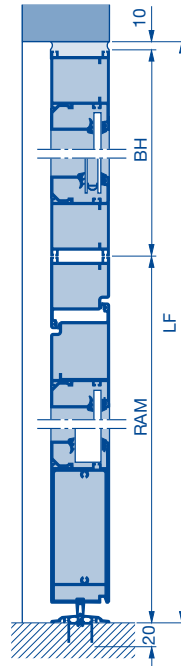
No window section,
no compound glazing



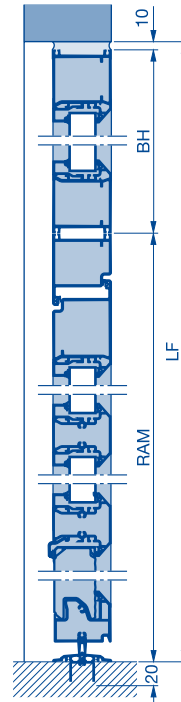
SPU F42, APU F42 with fascia panel



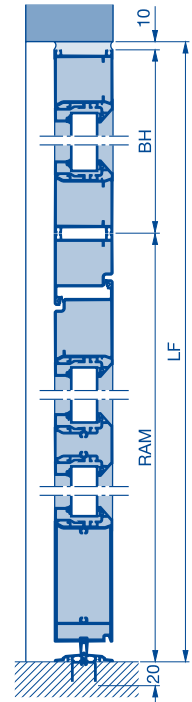
ALR F42, ALR F42 Thermo with fascia panel



APU F42 S-Line

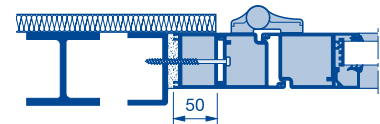
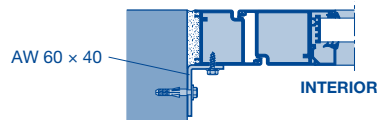


ALR F42 S-Line

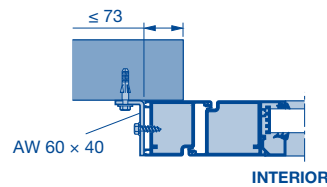


In the opening

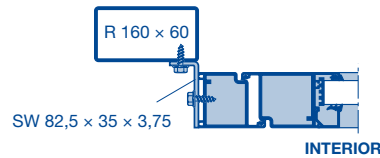
(right illustration with 50 mm extension
profile for all-over insulation)



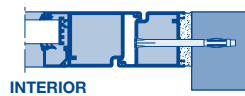
Behind the opening



Side door NT 60 flush with sectional door

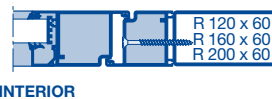


Plugs for metal frame



Tapping screw

with countersunk head B 6.3 x 80



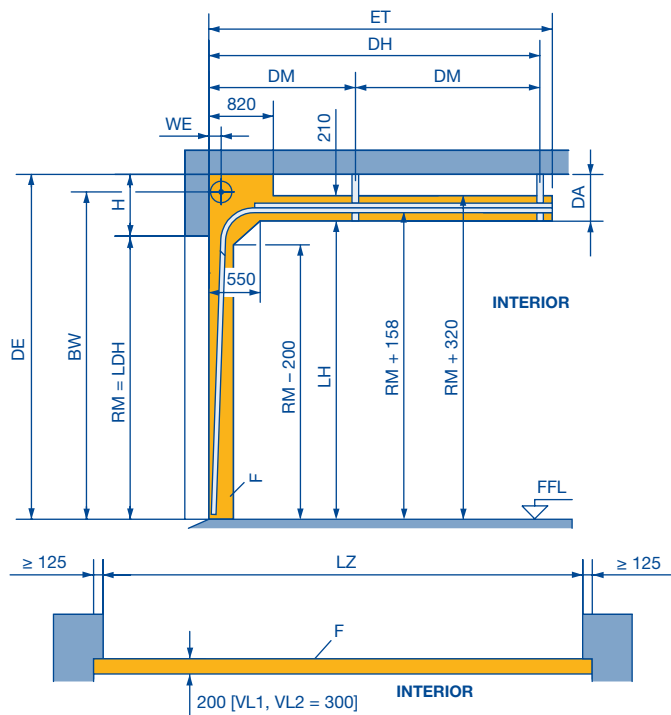
R Box section
AW Aluminium angle
SW Steel angle

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	
N 3	RM + 220	For manual operation and shaft operator with spring buffer below the track	
	RM + 700	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
- ** Track application with inclination not possible!
- LDH** Clear passage height
- RM** Grid height
- BW** Position of shaft support
N 1 = RM + 310
N 2 = RM + 335
N 3 = RM + 415
- 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
- DH** Rear ceiling anchor
N 1 + N 2 = RM + 195
N 3 = RM + 295
- DM** Central ceiling anchor (see page 63)
- WE** Shaft centre from lintel
- H** Min. headroom (see table)
- DA** Distance to ceiling
- 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

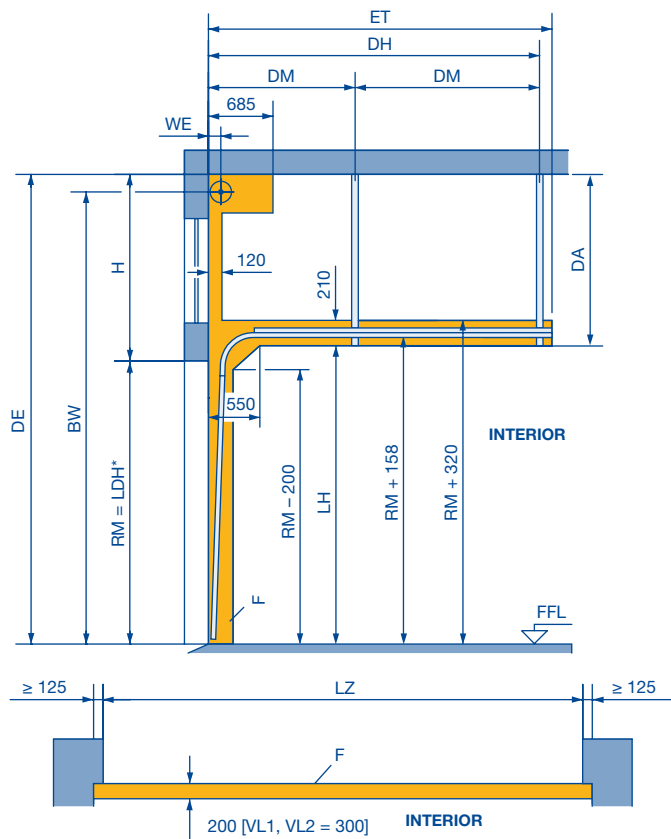
Track size	Headroom	Track size	Headroom	Track size	Headroom
N 1	390	GD 2	660–790	RD 4	1760
N 2	440	L 1	200	RD 5	1760
N 3	550	L 2	200	RG 4	1760
NA 1	400	LD 1	200	RG 5	1760
NA 2	450	LD 2	200	V 6	RM + 500
ND 1	390	H 4	880	V 7	RM + 540
ND 2	440	H 5	910	V 9	RM + 635
ND 3	550	H 8	950	VA 6	RM + 510
NH 1	610–740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

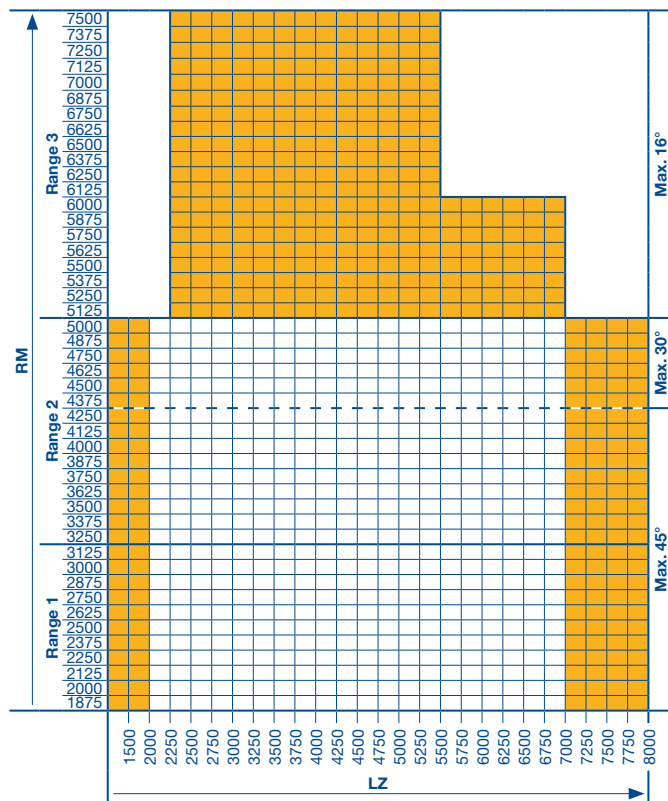
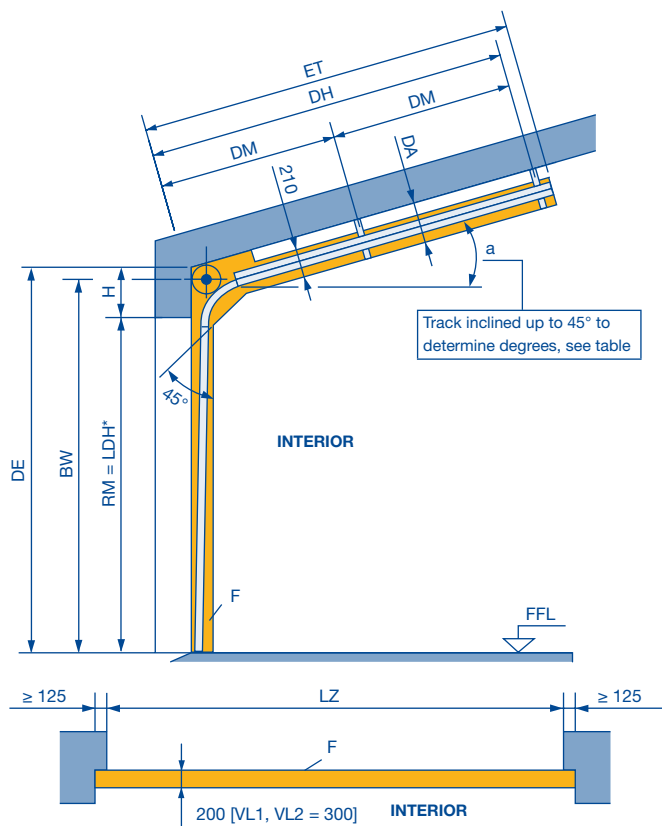
Notes:

- 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		
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

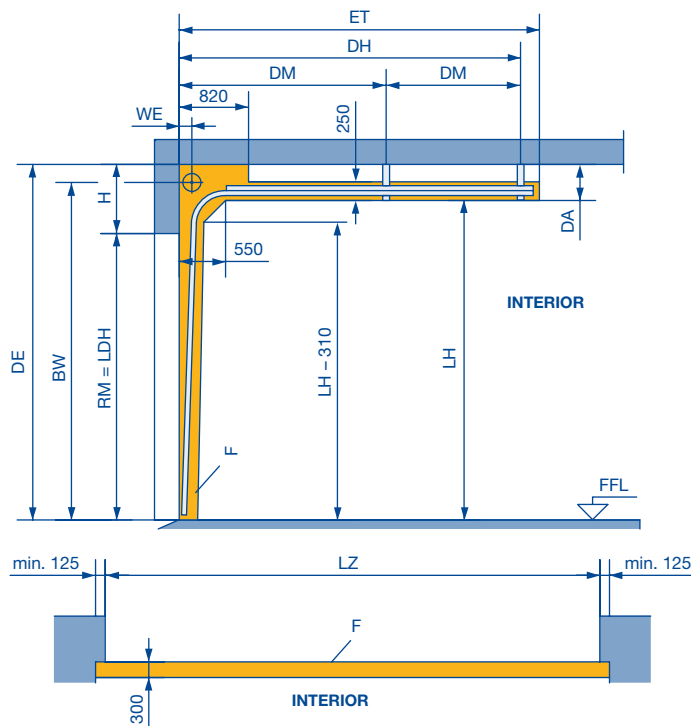
On request

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/m²

APU F42 / ALR F42 = 280 N/m²

ALR F42 Glazing = 560 N/m²

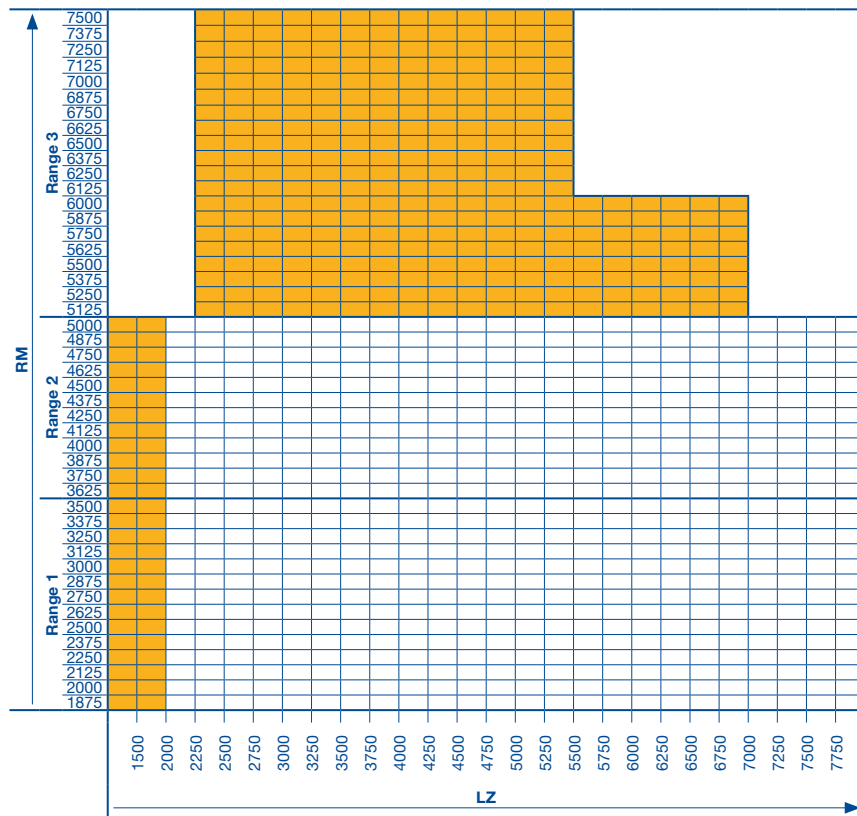
Observe min. sideroom, see page 58.

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

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

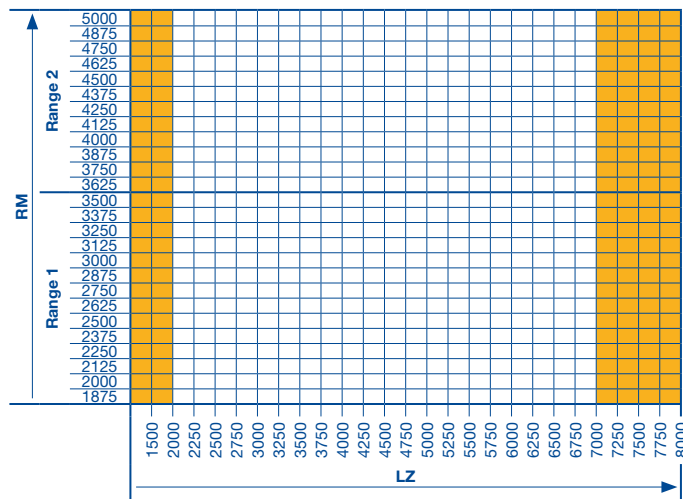
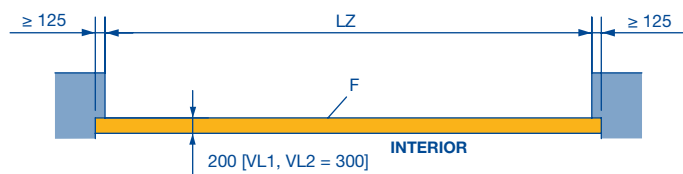
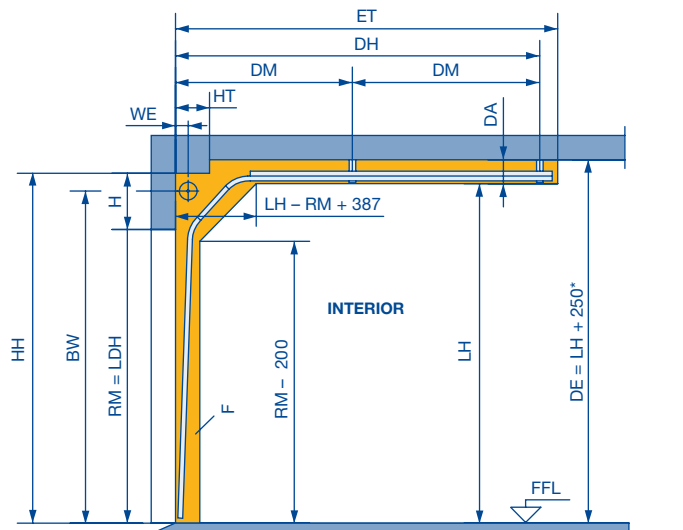


LDH	Clear passage height
RM	Grid height
BW	Position of shaft support NH 1 = LH + 200 NH 2 = LH + 225 NH 3 = LH + 305
LH	Track height Min. = RM + 330 max. = RM + 460
DH	Rear ceiling anchor NH 1 + NH 2 = 2 × RM - LH + 645 (long spring buffer) NH 1 + NH 2 = 2 × RM - LH + 405 (short spring buffer) NH 1 + NH 2 = 2 × RM - LH + 405 (long spring buffer + operator) NH 3 = 2 × 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 × 45°



	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	

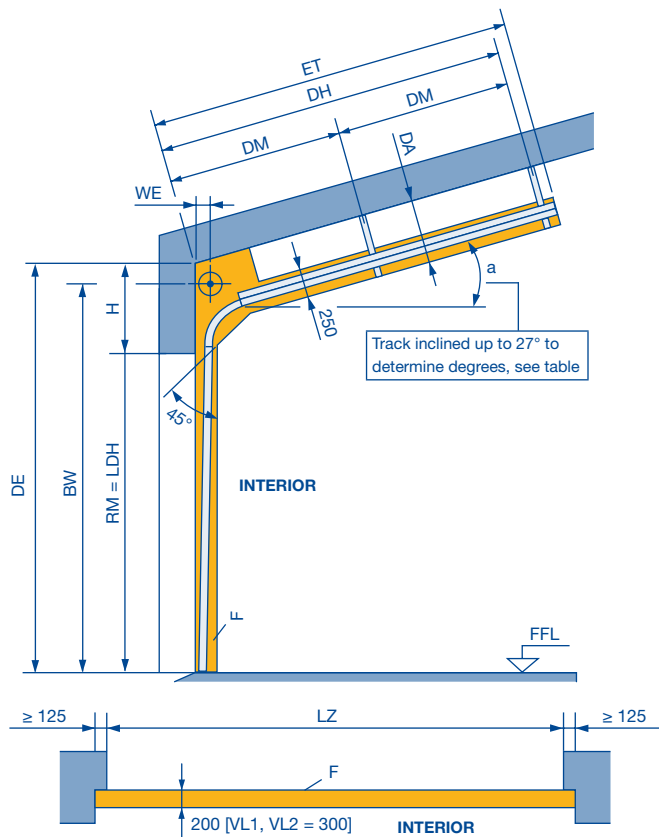
- Note:**
- Observe the permissible size ranges of the door types on pages 10 – 15 and 18 – 29!
 - ALR F42 Vitraplan and ALR F42 Glazing on request

*	Min.	HH	Obstruction height
H	Or with chain hoist / pull rope	DE	Ceiling height
HT	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	RM	Grid height
DA	Min. distance to ceiling 250	F	Space for fitting the door
HT	Obstruction depth		On request
L	Anchor length = DE - LH - 15 (see page 63)		
BW	Position of shaft support		Dimensions in mm
WE	Shaft centre from lintel		

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.

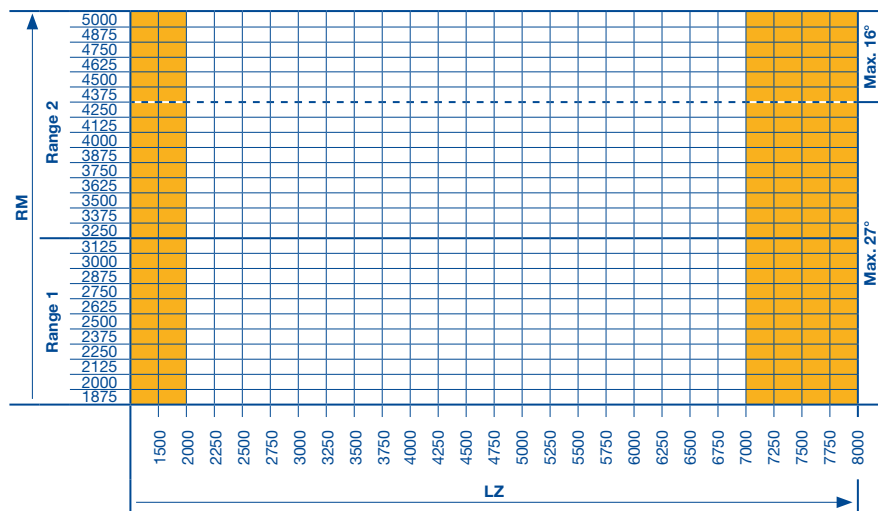
	WE
GD 1	140
GD 2	160

ET = min. distance back		
GD 1 + 2	2 × RM - LH + 1120 - a° × 6.5	For manual operation with long spring buffer
	2 × RM - LH + 650 - a° × 6.5	a° > 5° and with operator, with short spring buffer
	2 × RM - LH + 880 - a° × 6.5	a° ≤ 5° and with operator, with long spring buffer
	2 × RM - LH + 270 - a° × 6.5	For manual operation and shaft operator with spring buffer below the track

Only to determine the roof slope in degrees (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



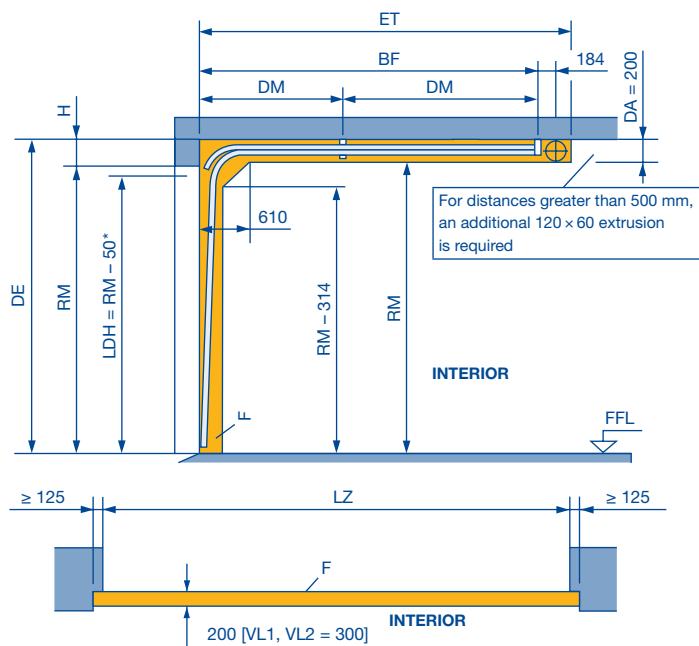
- DH** Rear ceiling anchor
GD 1 + GD 2 = 2 × RM - LH + 645 - a° × 6.5 (long spring buffer)
GD 1 + GD 2 = 2 × RM - LH + 405 - a° × 6.5 (short spring buffer)
GD 1 + GD 2 = 2 × RM - LH + 405 - a° × 6.5 (long spring buffer + operator)
- DM** Central ceiling anchor = see page 63
- H** Min. headroom (see page 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

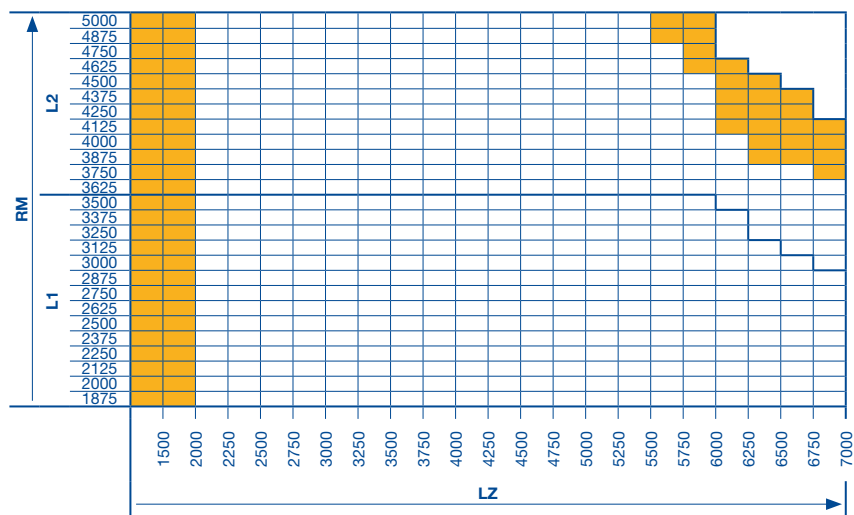
	* Clear passage height LDH		
	Without operator	Operator	
		WA 400 **	WA 300 ***
LZ ≤ 5500			
Without wicket door	RM - 50	RM - 50	RM - 80
Wicket door with threshold	RM - 100	RM - 100	RM - 130
Wicket door without threshold rail	RM - 165	RM - 135	RM - 165
LZ > 5500			
Without wicket door	RM - 100	RM - 100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

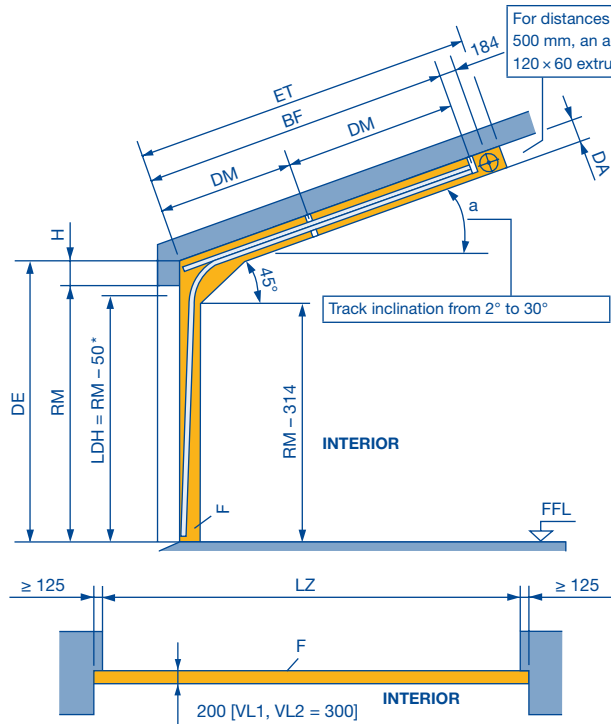
■ All door types in any version on request.

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/m²

APU F42 / ALR F42 = 280 N/m²

ALR F42 Glazing = 560 N/m²

Observe min. sideroom, see page 58.

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



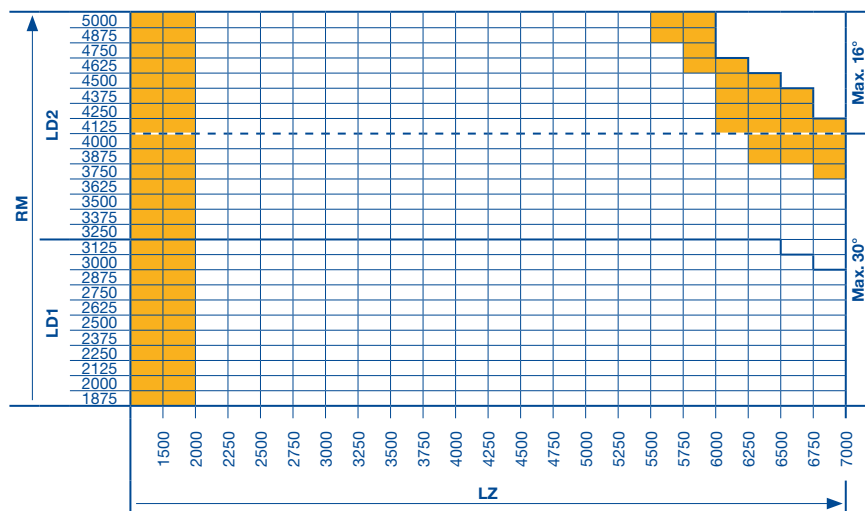
a°	%	X (mm)
2	3.49	34.9
4	6.99	69.9
6	10.51	105.1
8	14.05	140.5
10	17.63	176.3
12	21.26	212.6
14	24.93	249.3
16	28.67	286.7
18	32.49	324.9
20	36.40	364.0
22	40.40	404.0
24	44.52	445.2
26	48.77	487.7
28	53.17	531.7
30	57.74	577.4

* 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

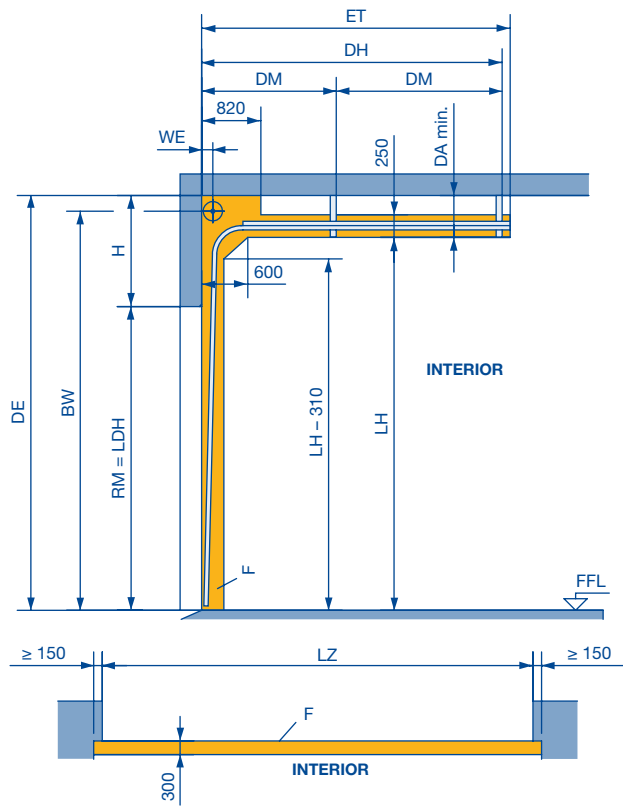
□ All door types available in any version.

■ All door types in any version on request.

Dimensions in mm

Track Application: H

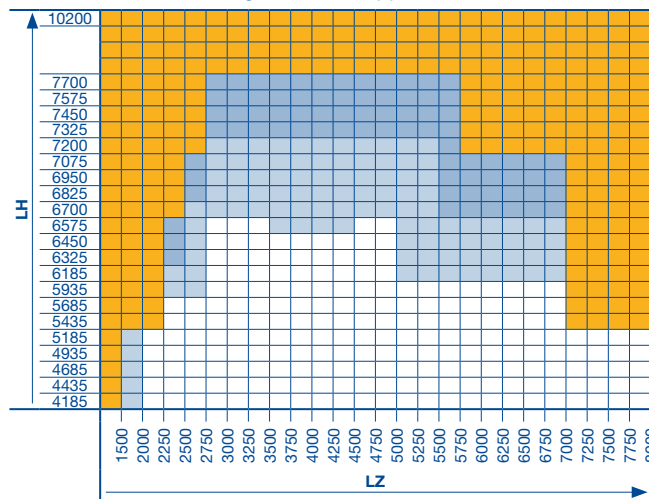
High-lift track application



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
5000	5460	8300		H 5, WE = 180	7500	7960
4875	5335	8175	7375		7835	10200
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	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				

H 8, WE = 205
All door types and versions available on request.

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

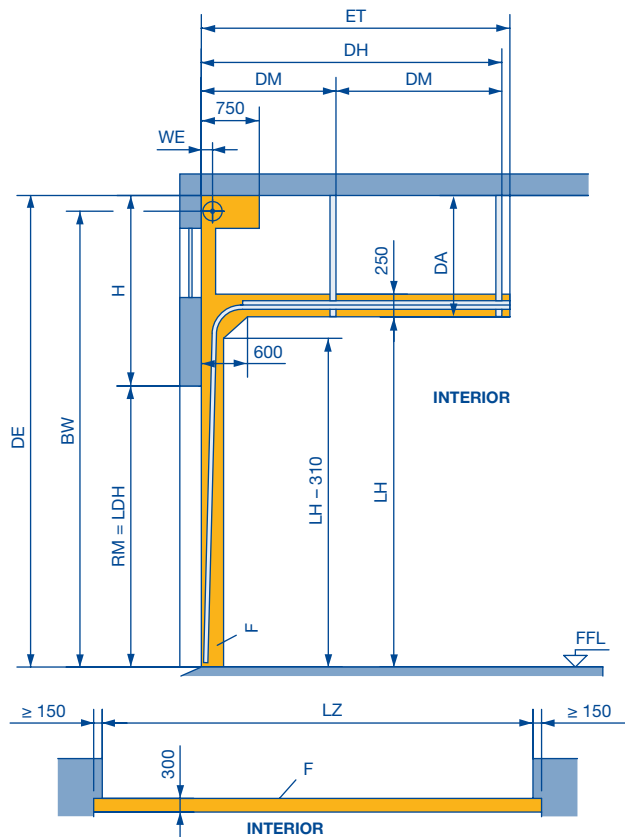
- LDH** Clear passage height
- RM** Grid height
- LH** Track height (see Table 1 + 2)
- BW** Position of shaft support
H 4 + 5 = LH + 280, H 8 = LH + 305
- DH** Rear ceiling anchor
H 4 + H 5 = 2 x RM - LH + 645 (long spring buffer)
H 4 + H 5 = 2 x RM - LH + 405 (long spring buffer + operator)
H 8 = 2 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

Dimensions in mm

Track Application: HA

High-lift track application

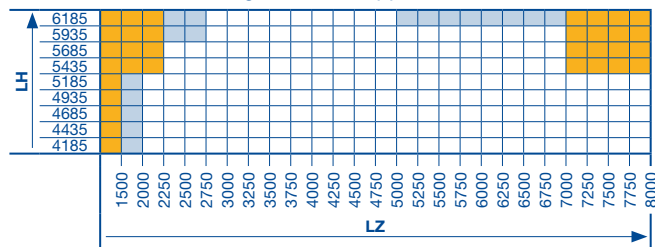
With high-mounted torsion spring shaft



ET = min. distance back	
HA 4	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

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	RM	Min. LH	Max. LH
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

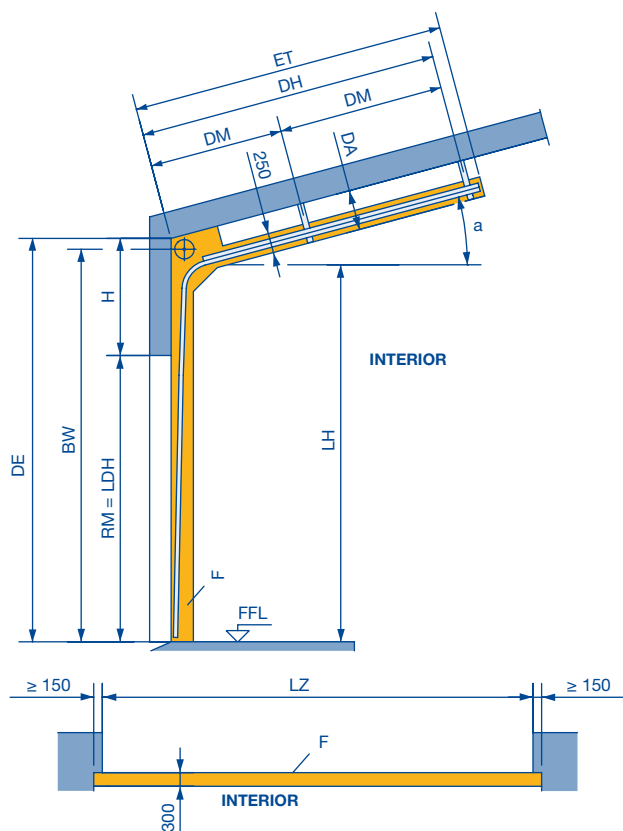
- LDH** Clear passage height
RM Grid height
LH Track height (see Table 3 + 4)
BW Position of shaft support
 Min. = HA 4 = LH + 280
 Max. (Ø120) = HA 4 = DE - 140
DH Rear ceiling anchor
 HA 4 = 2 x RM - LH + 645 (long spring buffer)
 HA 4 = 2 x RM - LH + 405 (short spring buffer)
 HA 4 = 2 x RM - LH + 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

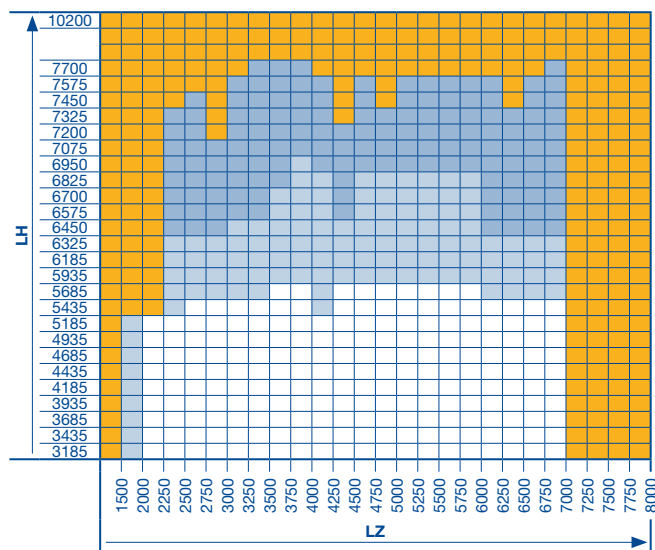


Notes:

- 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:

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

ET = min. distance back	
HD 4 + 5	2 × RM – LH + 1120 – 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 + 880 – a° × 6.5 For shaft operator with long spring buffer (LH – RM) ≤ 1000 and a° ≤ 5°
	2 × RM – LH + 650 – a° × 6.5 For shaft operator with short spring buffer (LH – RM) > 1000 or a° > 5°
	2 × RM – LH + 430 – a° × 6.5 For shaft operator with spring buffer below the track
HD 8	2 × RM – LH + 950 – a° × 6.5 All versions
	2 × RM – LH + 430 – a° × 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 × RM – LH + 645 – a° × 6.5 (long spring buffer)
HD 4 + HD 5 = 2 × RM – LH + 405 – a° × 6.5 (short spring buffer)
HD 4 + HD 5 = 2 × RM – LH + 405 – a° × 6.5 (long spring buffer + operator)
HD 8 = 2 × 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.

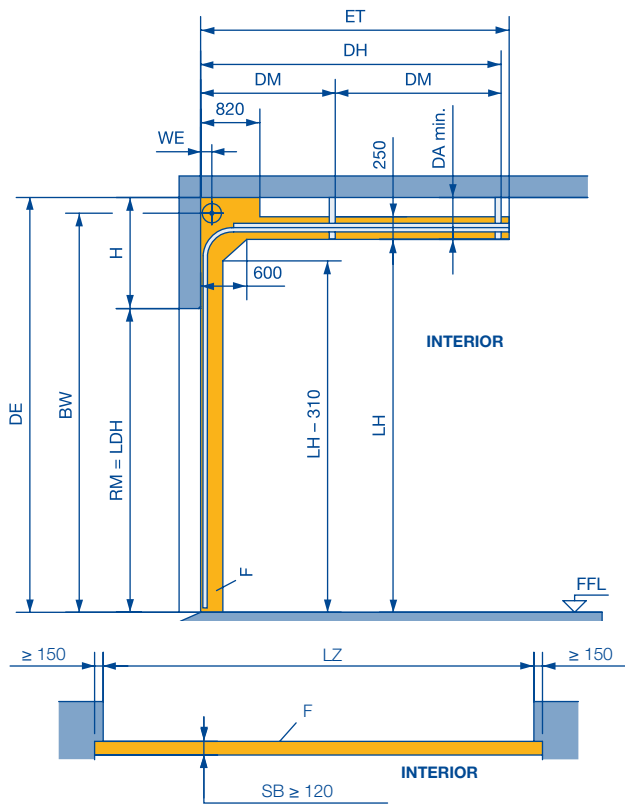
Dimensions in mm

Track Application: HG

High-lift track application

With steep track

(Application for loading ramp doors)



ET = min. distance back	
HG 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
	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	RM	Min. LH	Max. LH		
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		
3625		4085	6435		
3500		3960	6185		HG 4, WE = 160
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

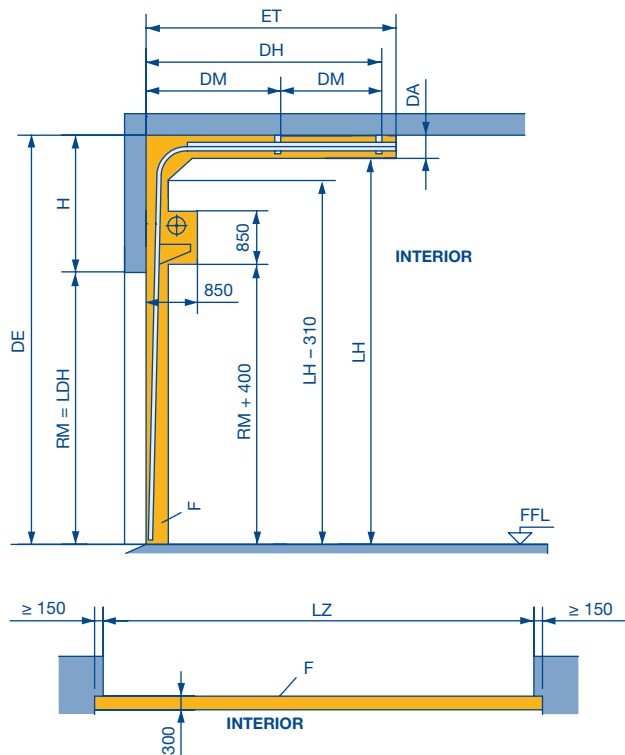
- All door types available in any version.
- All door types available, versions with glazing A3, B3, M3, S3, R3, LB, P on request.
- Door types APU F42 S-Line, ALR F42 S-Line, APU F42 and ALR F42 are possible; APU F42 Thermo, ALR F42 Thermo and SPU F42 with thermo frames as well as versions with glazing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

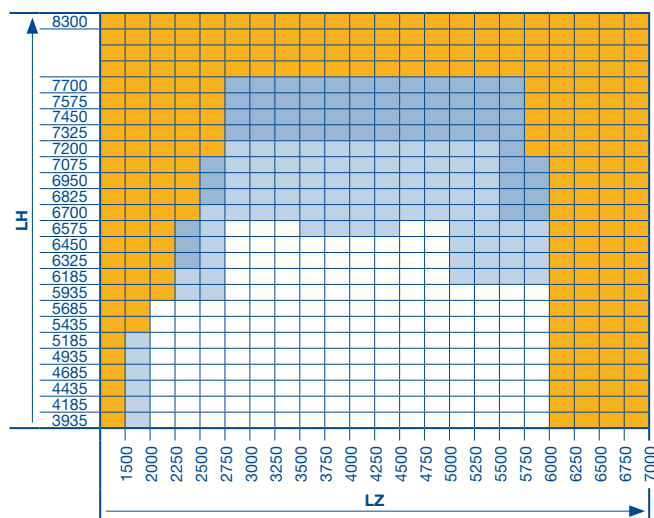
With low-mounted torsion spring shaft



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	RM	Min. LH	Max. LH	
5000		6510	8300	HU 5, WE = 335
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 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

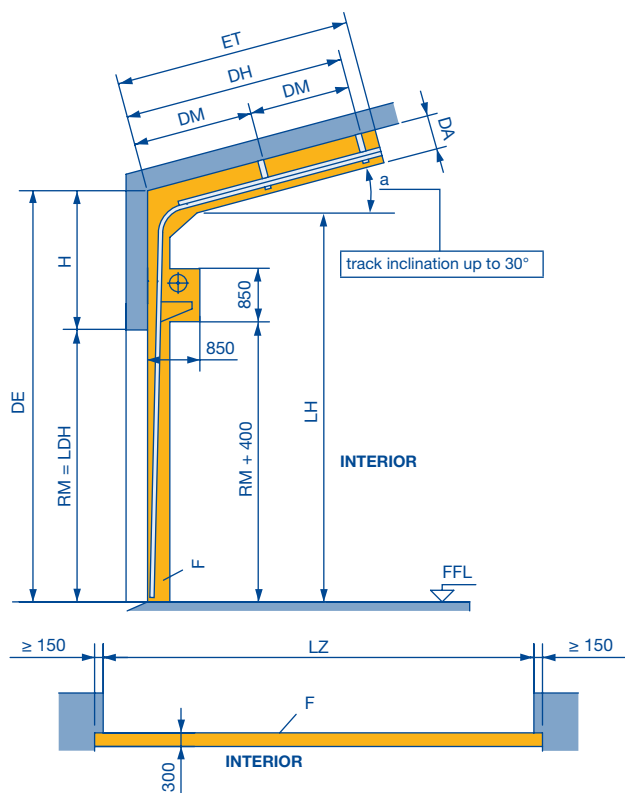
- All door types available in any version.
- All door types available, versions with glazing A3, B3, M3, S3, R3, LB, P and/or wicket door on request.
- Door types APU F42 S-Line, ALR F42 S-Line, APU F42 and ALR F42 are possible; APU F42 Thermo, ALR F42 Thermo and SPU F42 with thermo frames as well as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

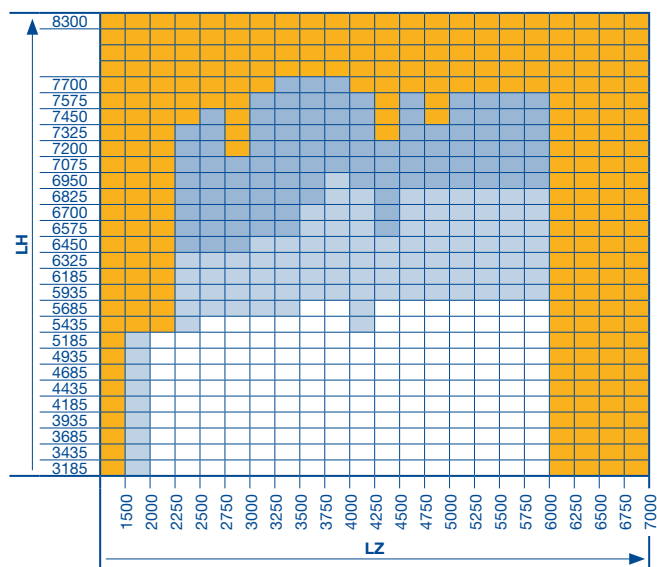


Notes:

- 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:

1. Select required track height according to the door height in table 6 on page 51.
2. Determine the intersection of the door width and track height using table 8.
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.

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°		
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.

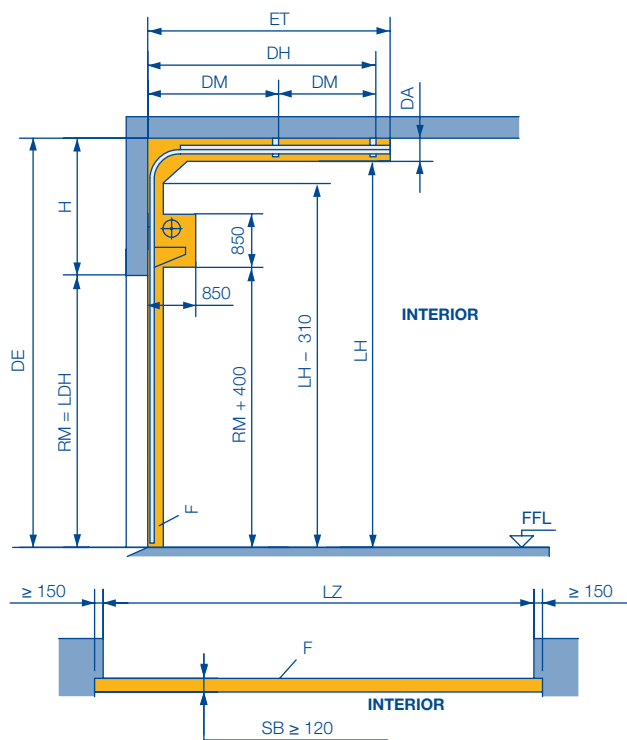
Dimensions in mm

Track Application: RG

High-lift track application

With low-mounted torsion spring shaft and steep track

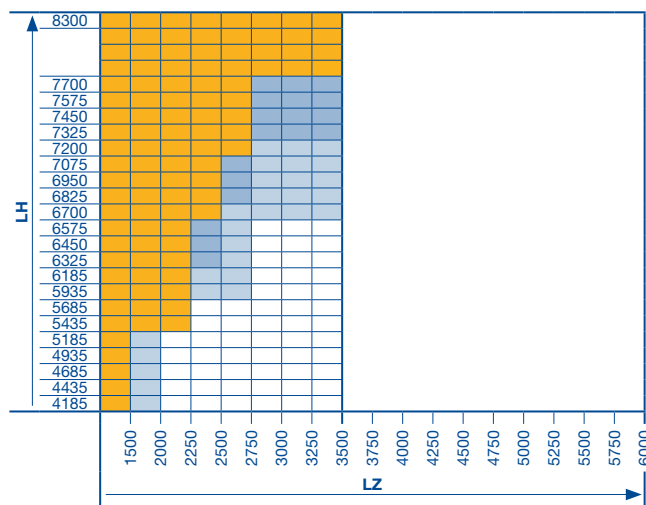
(Application for loading ramp doors)



ET = min. distance back	
RG 4+5	2 × RM – LH + 1120 For manual operation with long spring buffer (standard)
	2 × RM – LH + 670 For manual operation with spring buffer below the track
	2 × RM – LH + 650 For shaft operator with short spring buffer = (LH – RM ≥ 1510)
	2 × 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	RM	Min. LH	Max. LH	
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	RG 4, WE = 246
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	

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

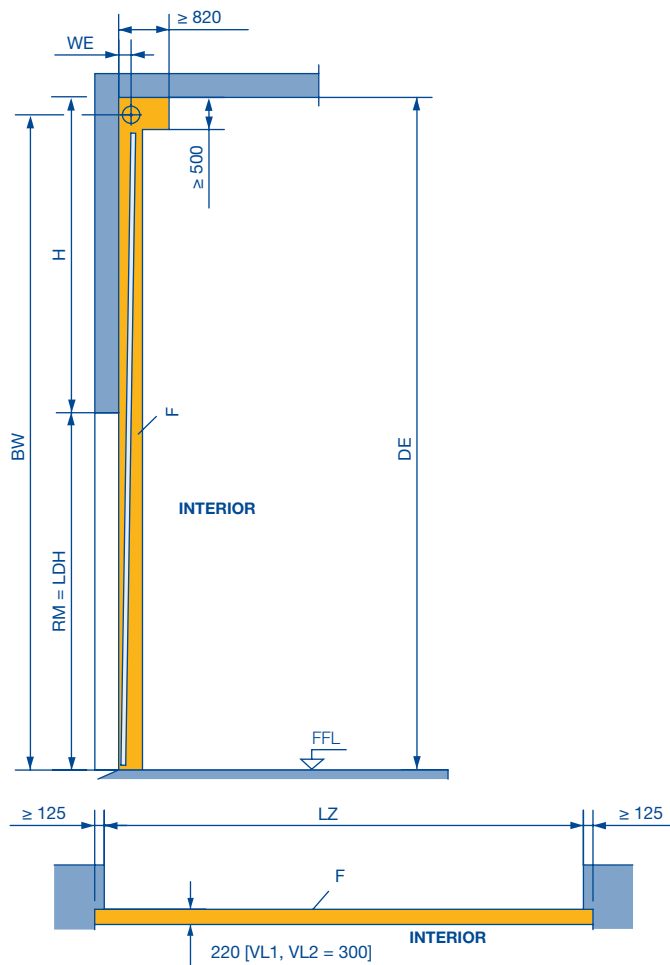
- LDH** Clear passage height
RM Grid height
LH Track height (see Table 9)
DH Rear ceiling anchor =
 RG 4 + RG 5 = 2 × RM – LH + 580 (long spring buffer)
 RG 4 + RG 5 = 2 × RM – LH + 340 (short spring buffer)
 RG 4 + RG 5 = 2 × RM – LH + 340 (long spring buffer + WA 400)
DM Central ceiling anchor (see 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

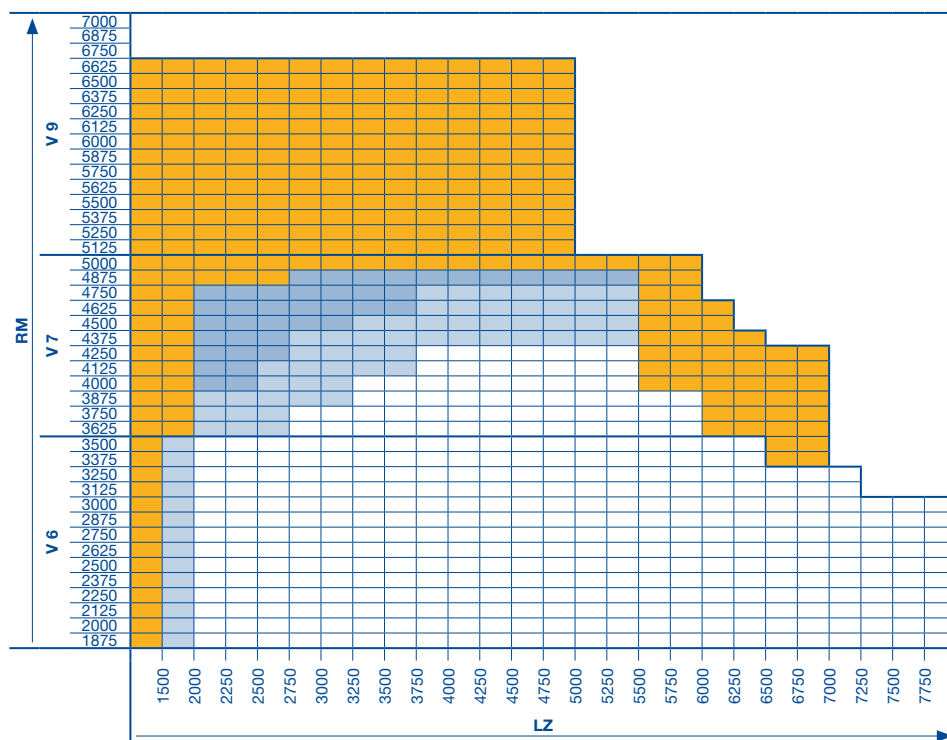


Notes:

- 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

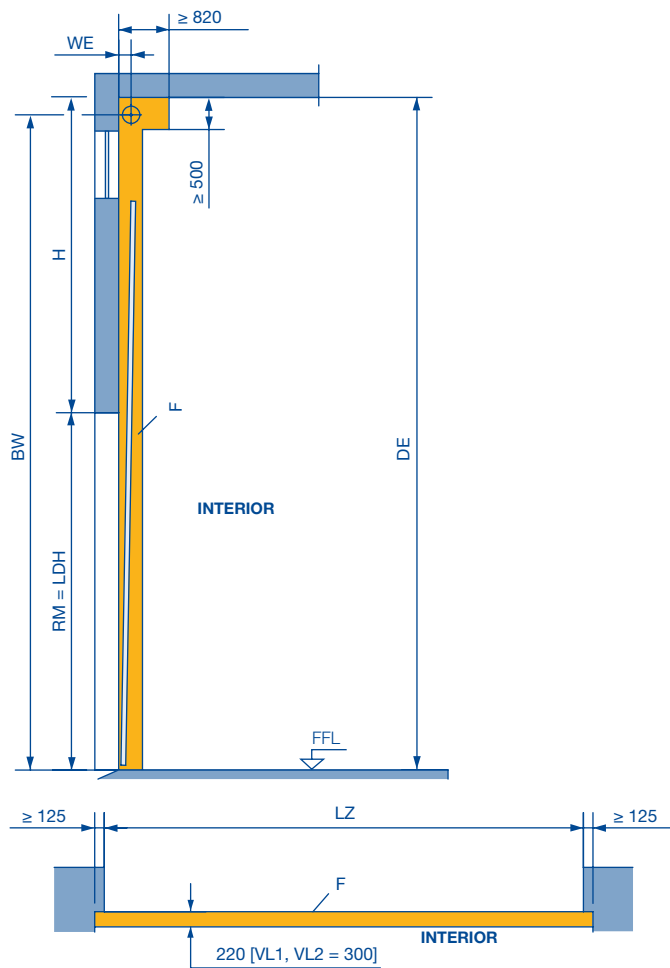
- All door types available in any version.
- All door types available, versions with glazing A3, B3, M3, S3, R3, LB, P and/or wicket door on request.
- Door types APU F42 S-Line, ALR F42 S-Line, APU F42 and ALR F42 are possible; APU F42 Thermo, ALR F42 Thermo and SPU F42 with thermo frames as well as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

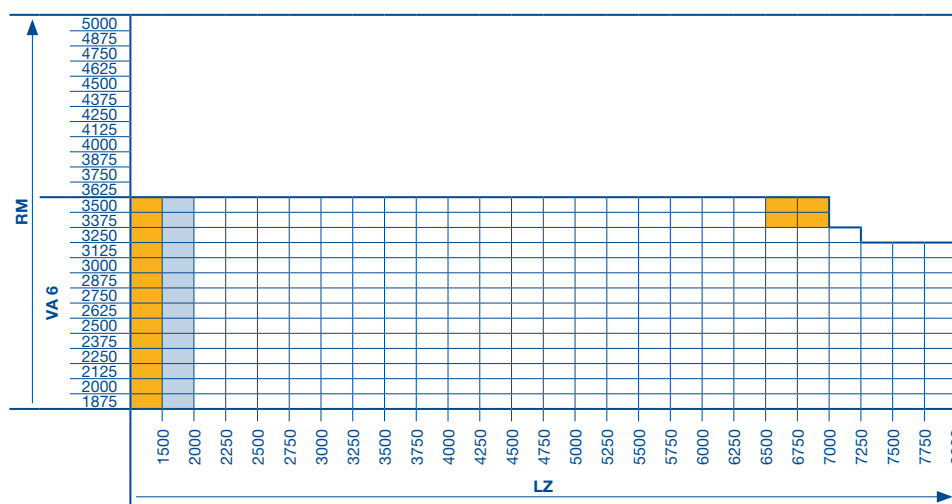


Notes:

- 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

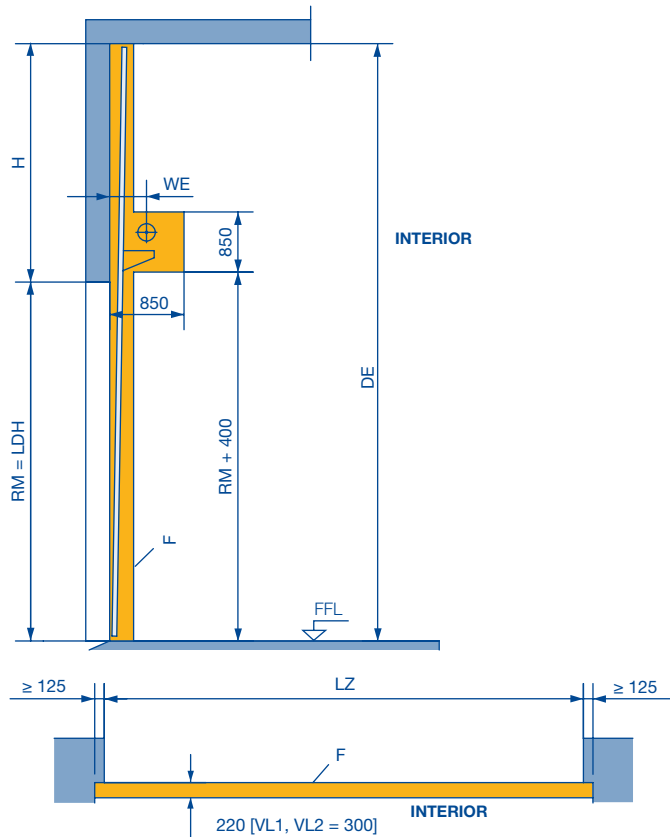
- All door types available in any version.
- All door types available, versions with glazing A3, B3, M3, S3, R3, LB, P and/or wicket door on request.
- All door types in any version on request.

Dimensions in mm

Track Application: VU

Vertical track application

With low-mounted torsion spring shaft

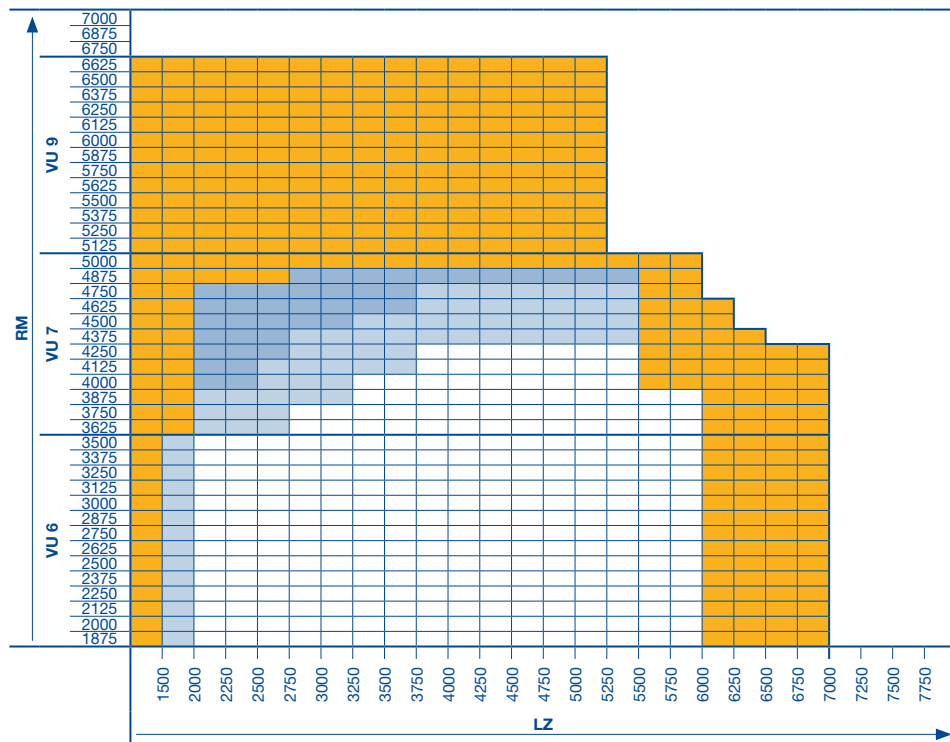


Notes:

- 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.

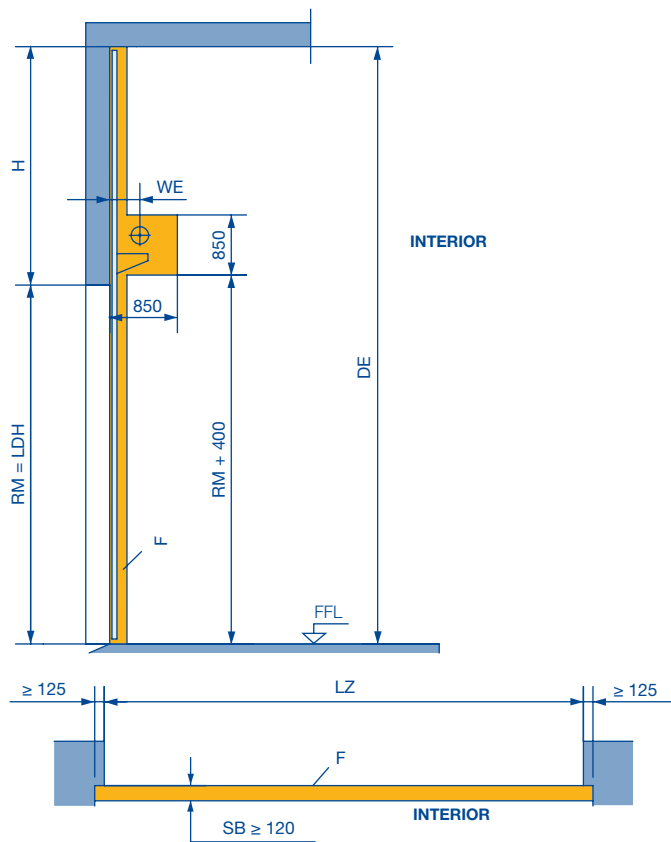
Dimensions in mm

Track Application: WG

Vertical track application

With low-mounted torsion spring shaft and steep track

(Application for loading ramp doors)

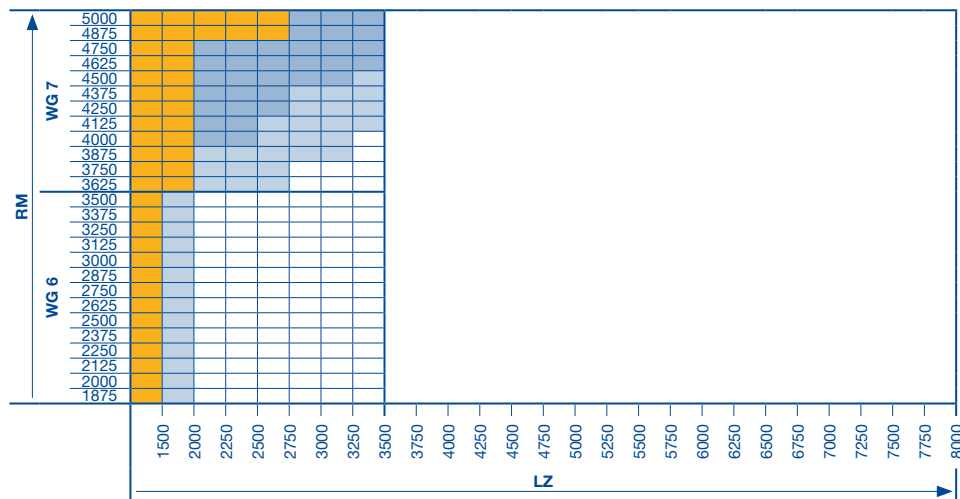


Notes:

- 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.

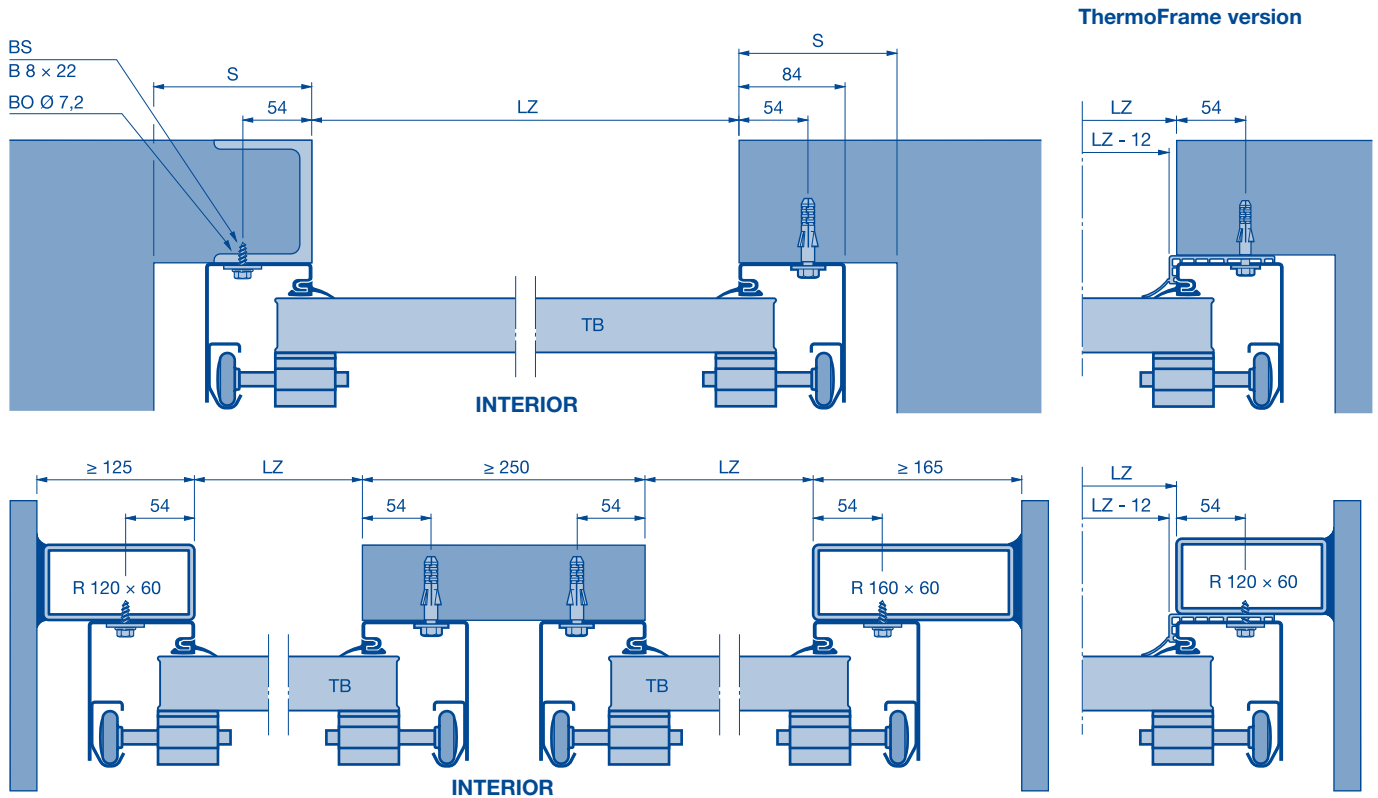
Dimensions in mm

Sideroom

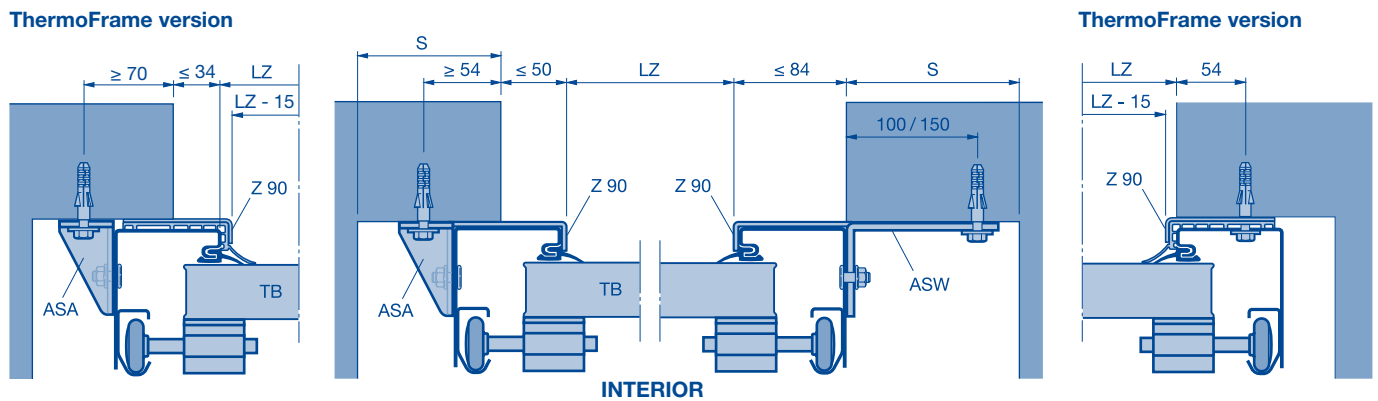
Required sideroom

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

Sideroom



Sideroom with frame covering



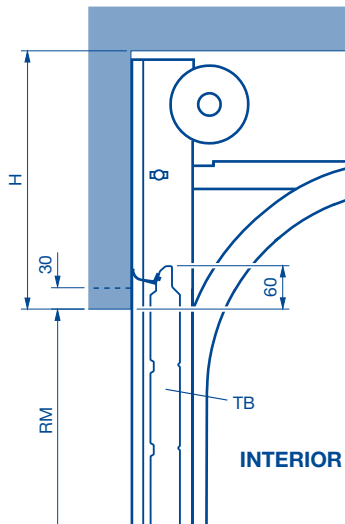
ASA Screw-on anchor 70 × 40
ASW Screw-on bracket 70 × 120 / 170
BO Hole

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

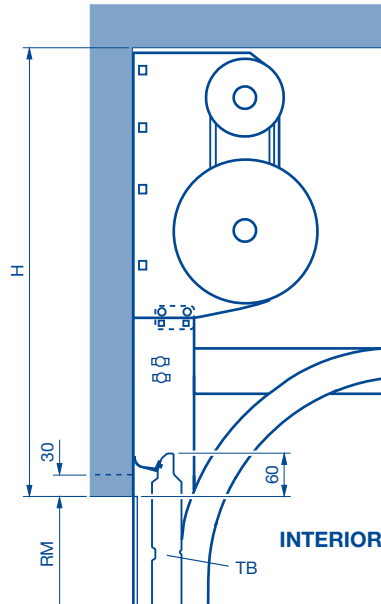
S Sideroom
TB Door leaf

Lintel Fitting

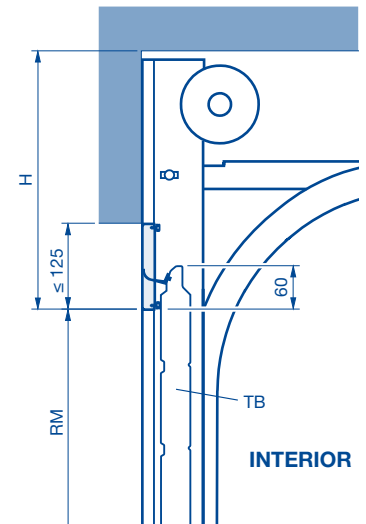
Normal lintel fitting
Lintel variation up to 30 mm high



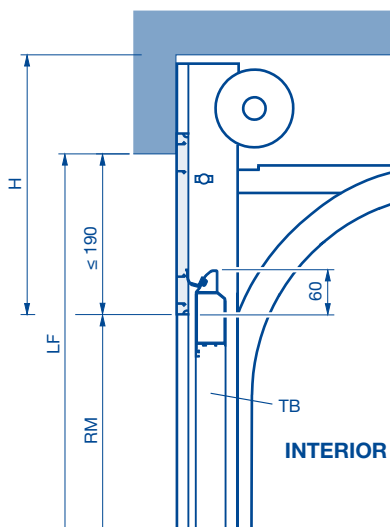
Normal lintel fitting
Double spring shaft



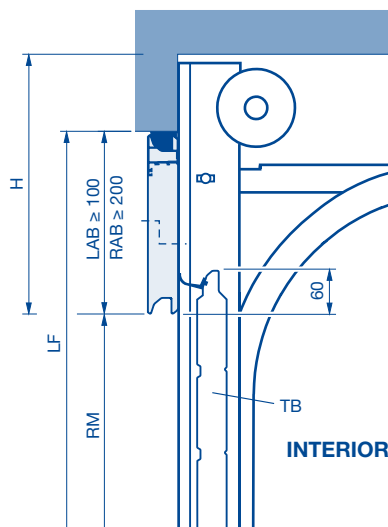
Single-skinned steel fascia for SPU F42
to make up for insufficient headroom up to 125 mm (only for track applications N and L)



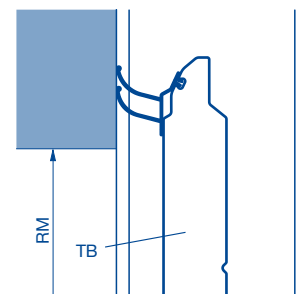
Smooth panel, anodised, for APU F42, ALR F42, ALR F42 Glazing, ALR F42 Vitraplan
to make up for insufficient headroom from 31 to 190 mm (only for track applications N and L)



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

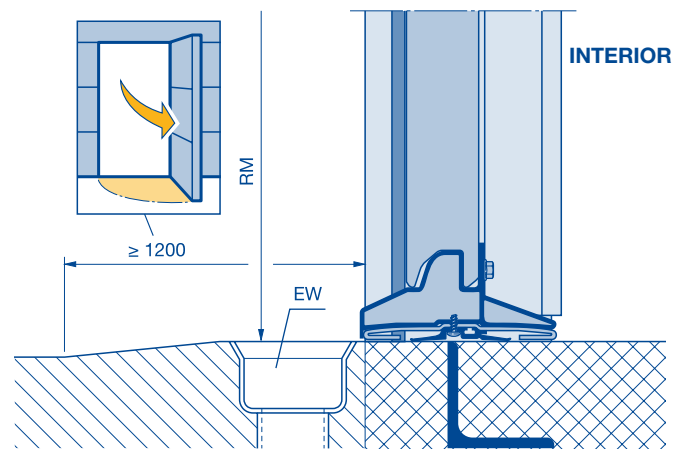
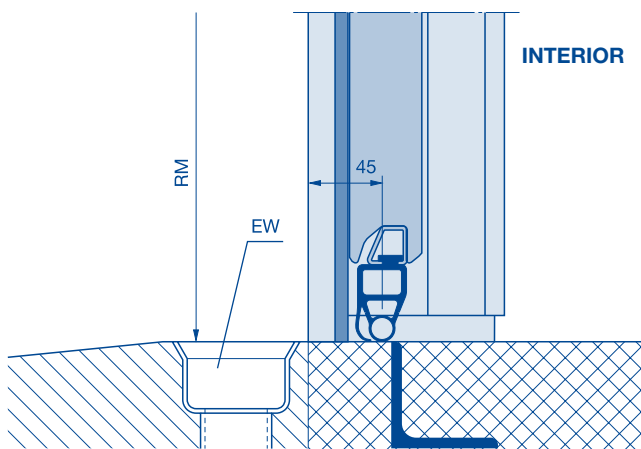
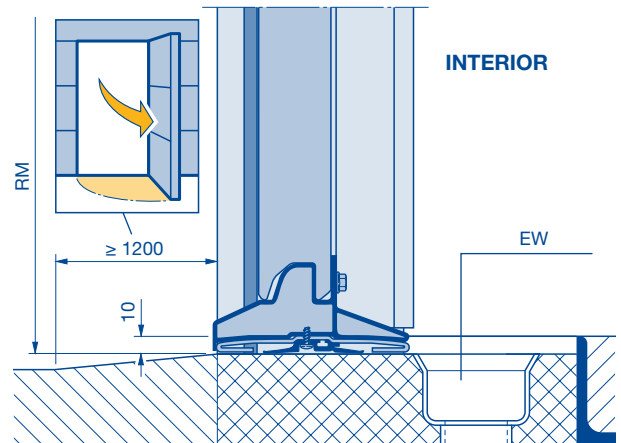
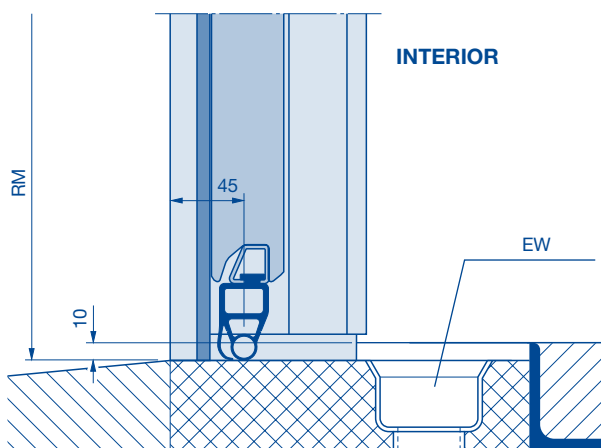
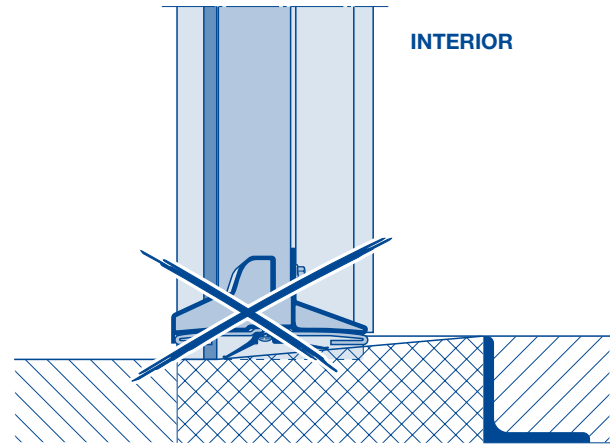
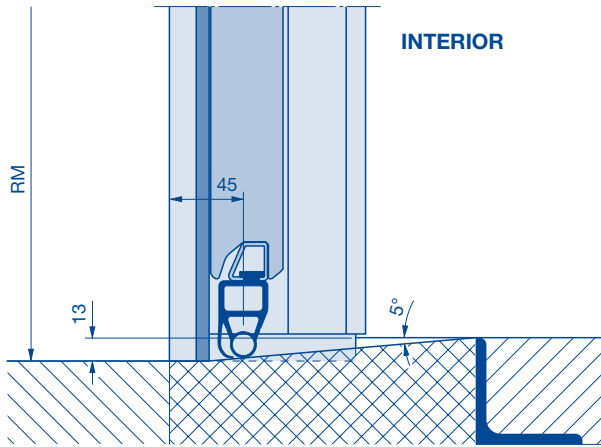
- H** Min. headroom (see page 39)
- RM** Grid
- TB** Door leaf
- LF** Structural opening
- LAB** Fascia panel
- RAB** Frame fascia panel

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

Bottom Edge

Without wicket door / with wicket door and threshold rail

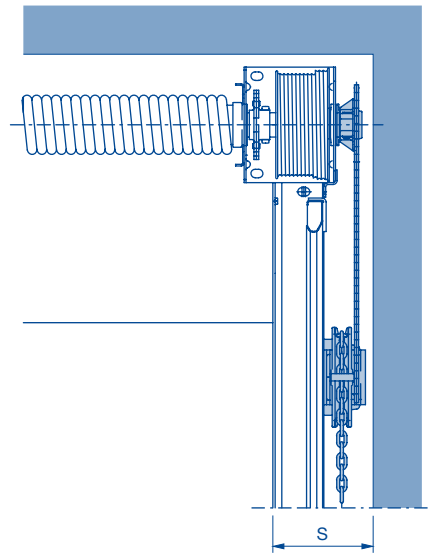
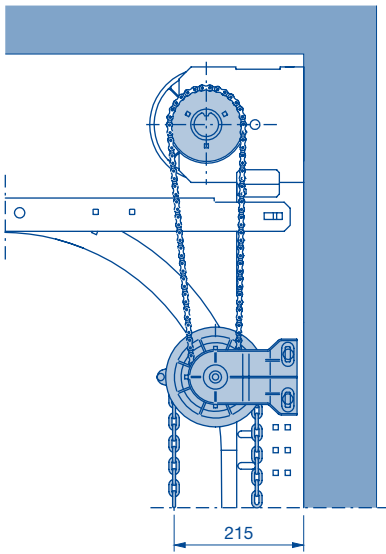
With wicket door with trip-free threshold



EW Drainage
RM Grid

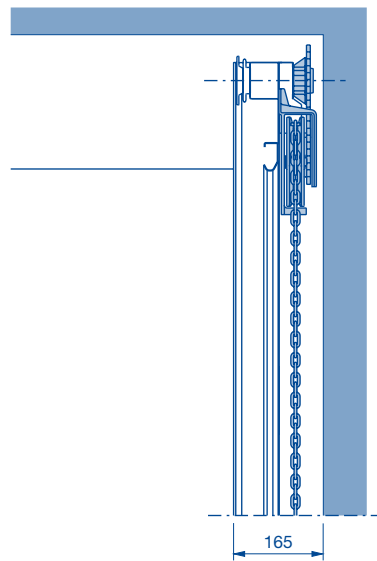
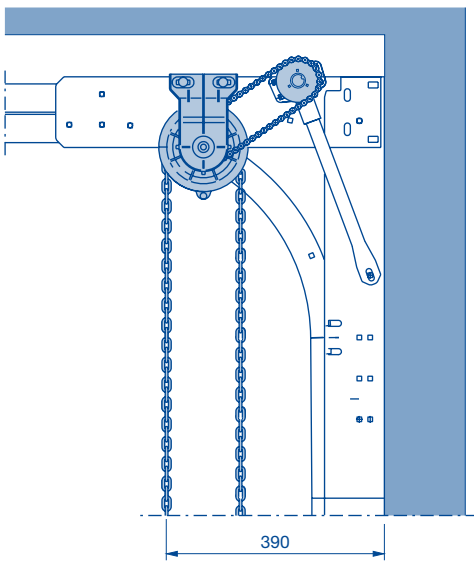
Chain Hoist

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

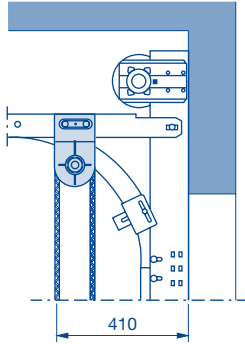


Hand Pulley

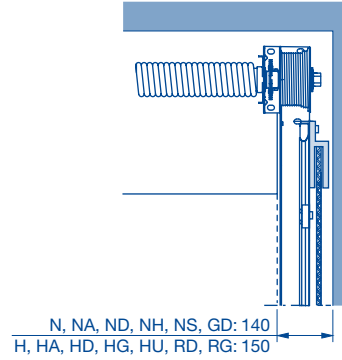
With rope or link steel chain

Track applications up to 20 m² door surface

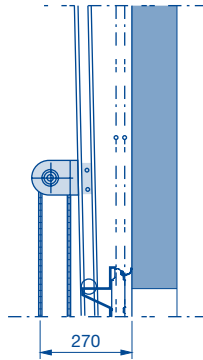
With rope or link steel chain



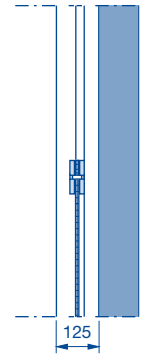
N, NA, ND, NH, NS, GD, H, HA, HD, HG, HU, RD, RG



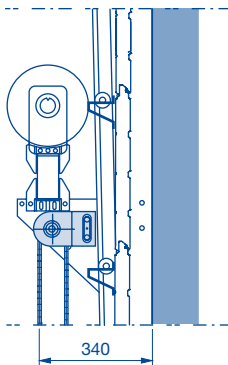
With rope or link steel chain



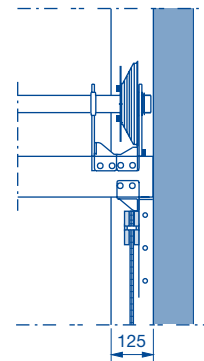
V, VA



With rope or link steel chain



VU, WG

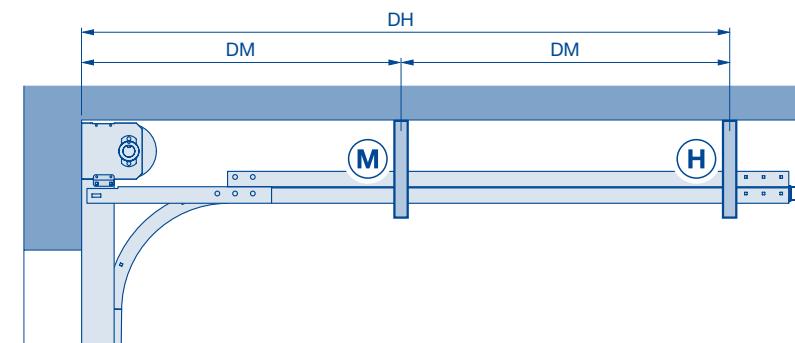


Ceiling Anchors

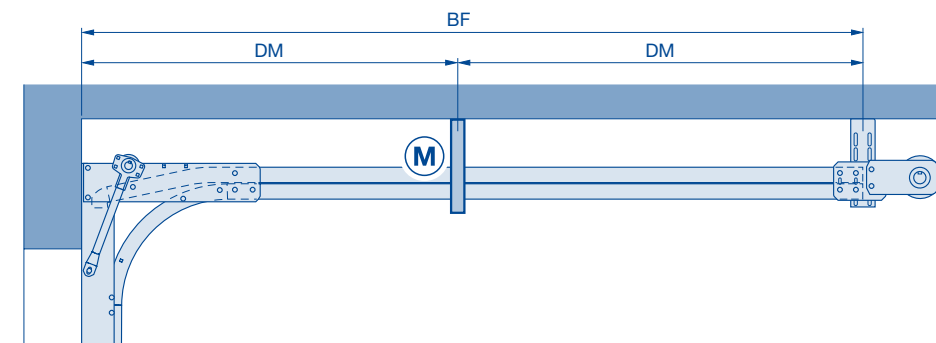
Track suspensions for all track applications except V, VA, VU and WG

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

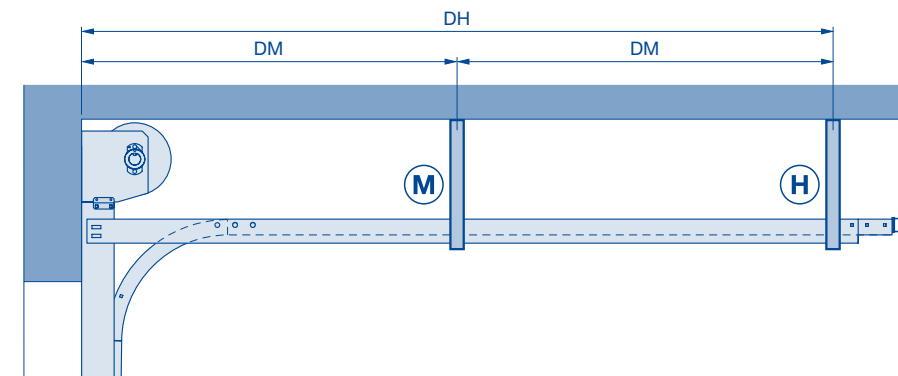
DH = Rear ceiling anchor (see pages 39 – 53), door weights for roof loads (see pages 39 – 46).



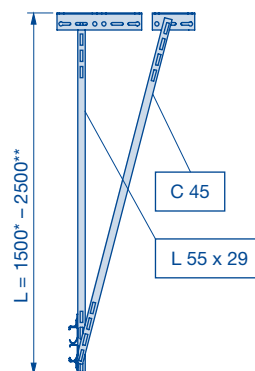
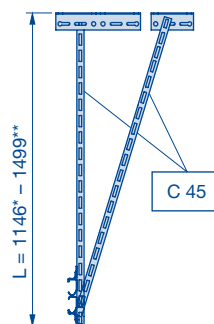
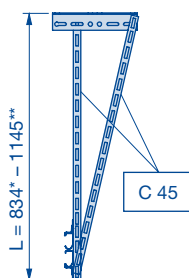
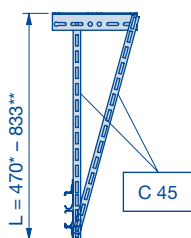
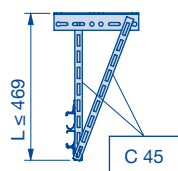
Double track (suspensions), Door heights $RM \leq 5000$			
DH	M	H	DM
- 1555	-	1	-
1560 – 3720	1	1	DH/2
3730 – 5195	2	1	DH/3



Double track (suspensions), L			
BF	M	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.

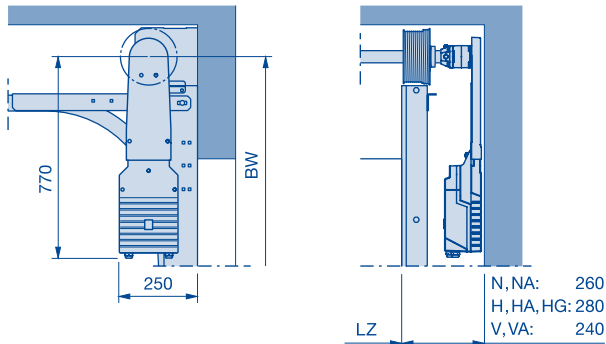
BF Position of spring shaft
DH Rear ceiling anchor
DM Centre ceiling anchor
L Anchor length = DE – RM – 125 (see page 39)

Shaft Operator WA 300

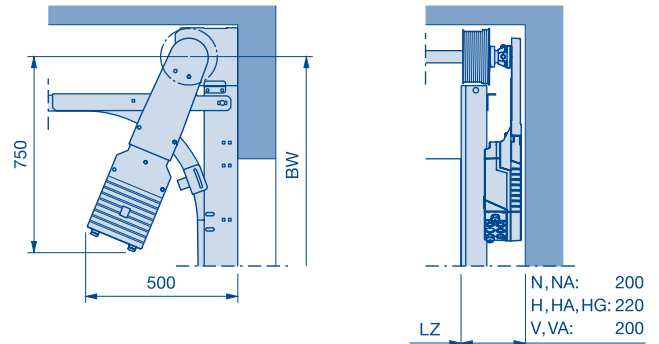
Shaft operator WA 300 for track applications N, NA, H, HA, HG, V and VA

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

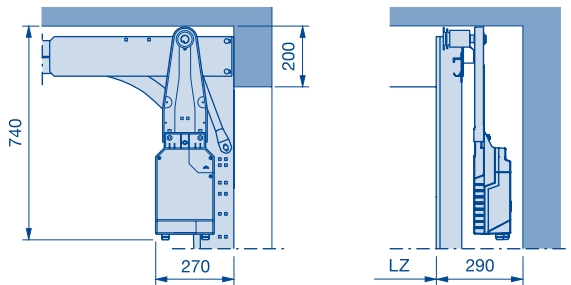


Shaft operator WA 300 for track application L

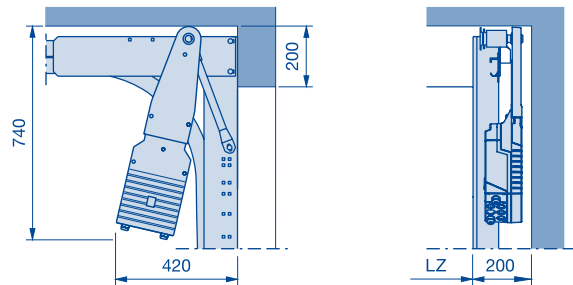
As shown in the figure, the operator can be fitted either left or right, viewed from the inside.

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

Fitting example ⑧ right



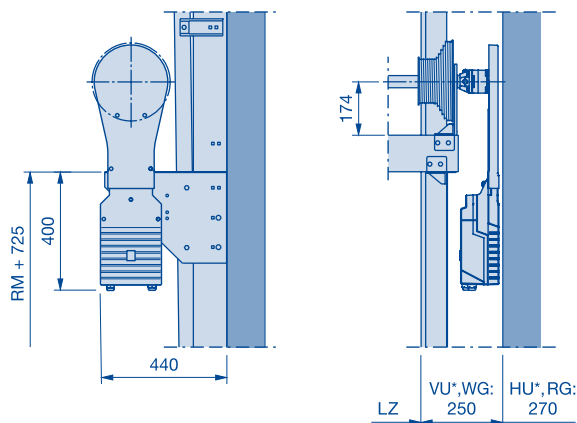
Fitting example ⑨ right



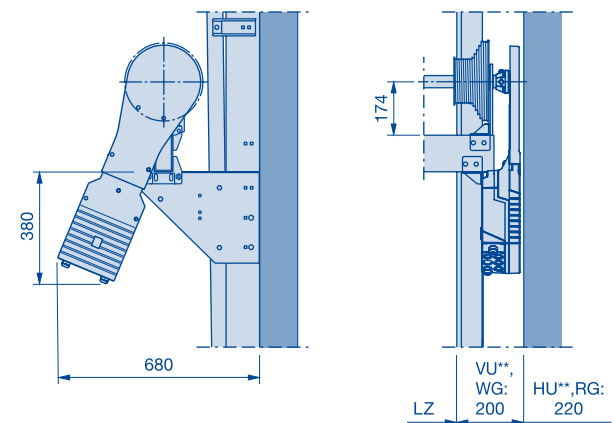
Shaft operator WA 300 for track applications HU, RG, VU and WG

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

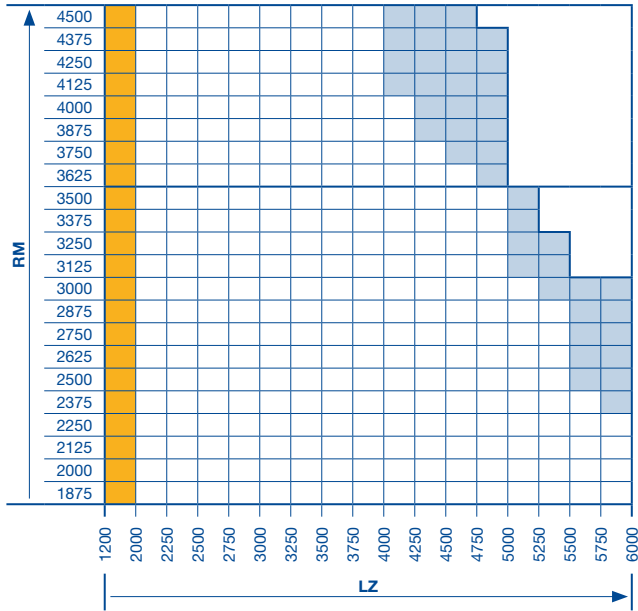
** In the door range LZ ≤ 3000 and RM ≤ 3500 the track applications VU and HU are not possible

LZ Clear frame dimensions
BW Position of shaft support

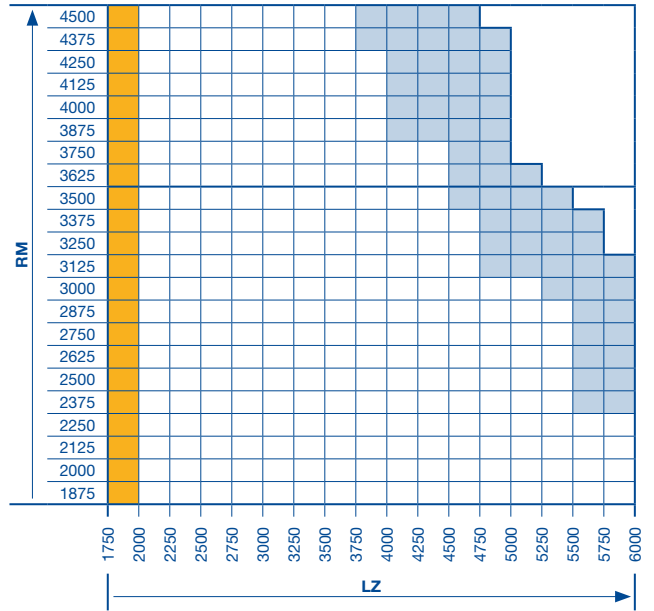
Shaft Operator WA 300

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

Without wicket door

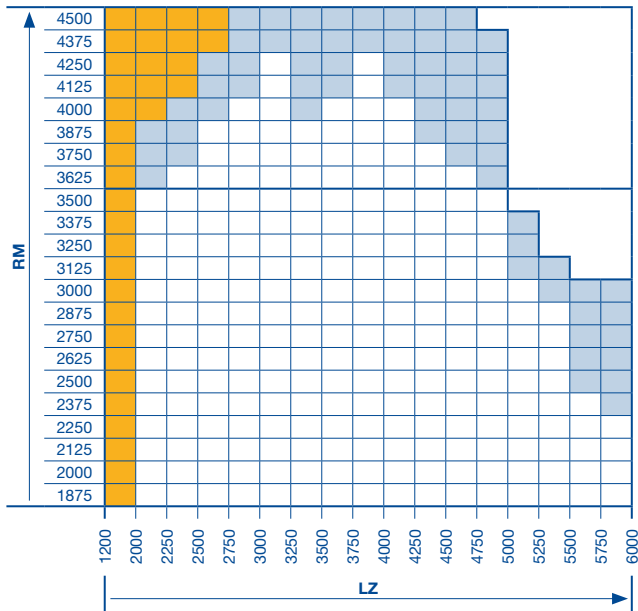


With wicket door

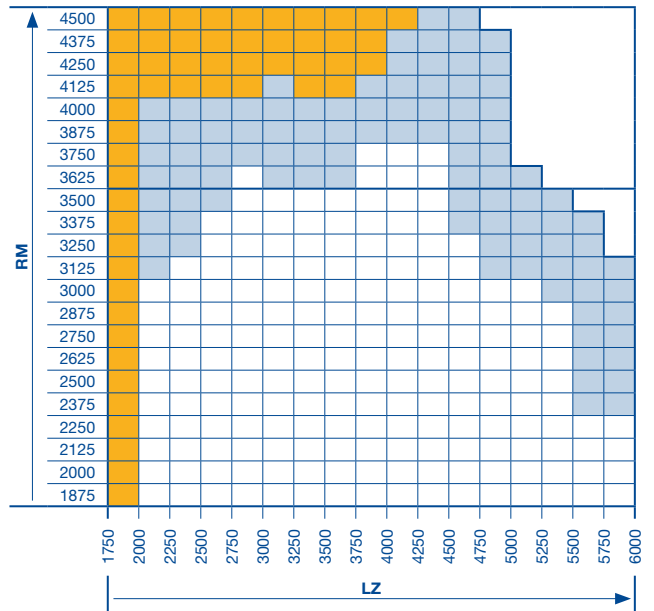


Shaft operator WA 300 for track applications H, HA, HG, HU, RG, V, VA, VU and WG

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

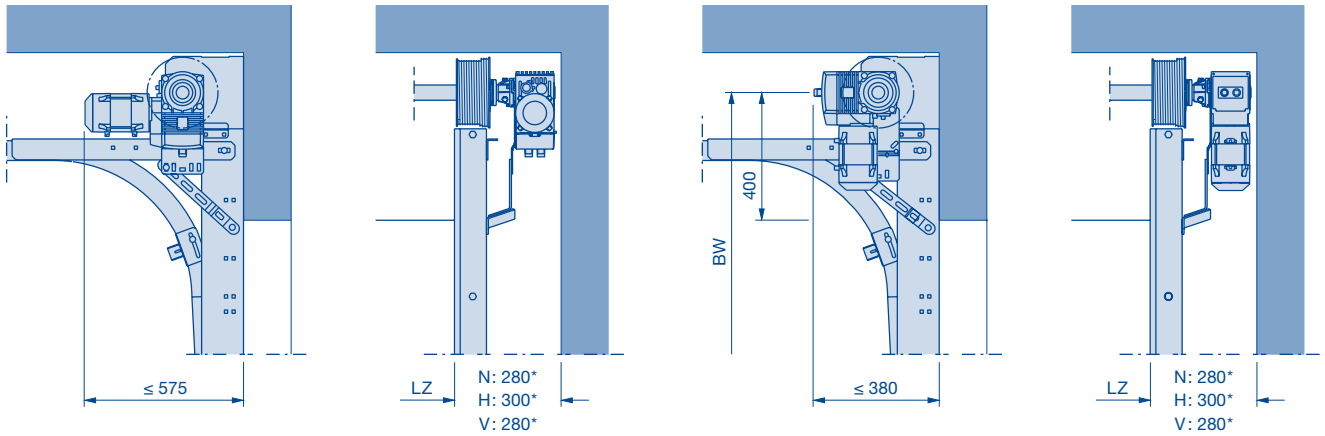
Dimensions in mm

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.

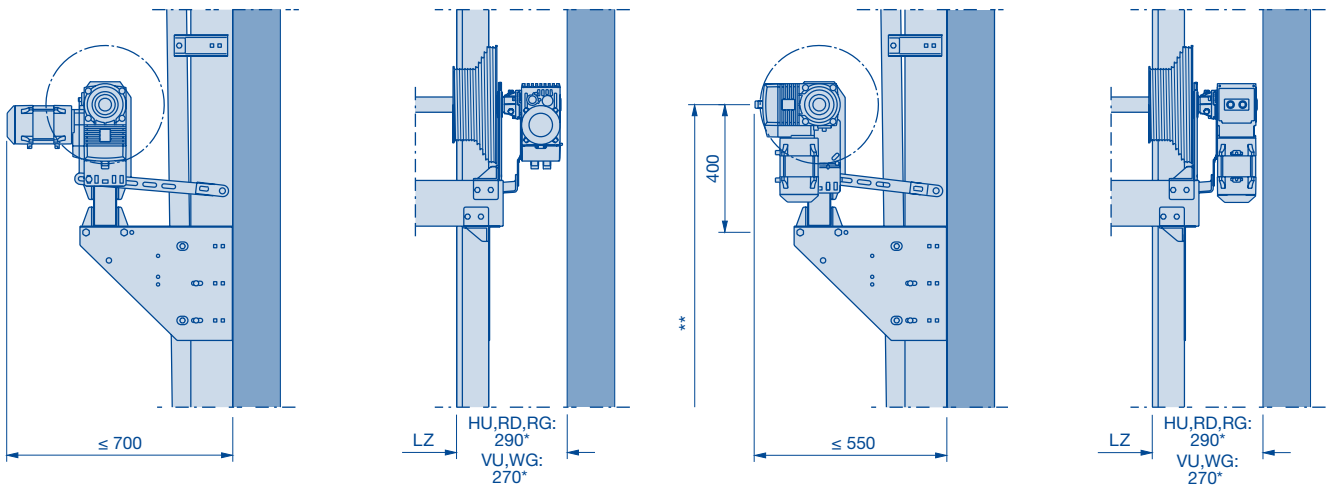


*** Note:**

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

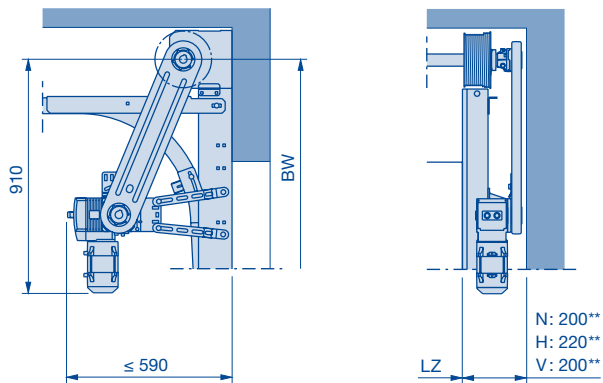
With chain box

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

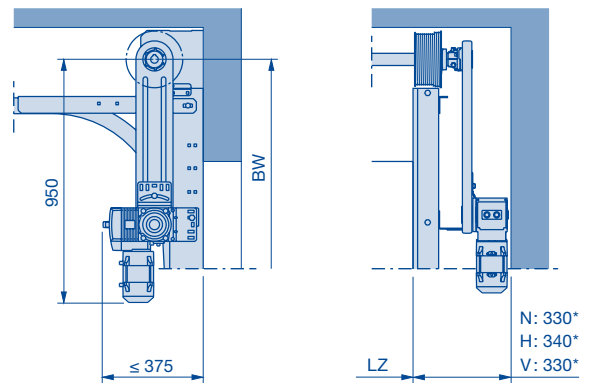
As shown in the figure, the operator can be fitted either left or right, viewed from the inside.

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

Fitting example ⑤ right



Fitting example ⑥ right

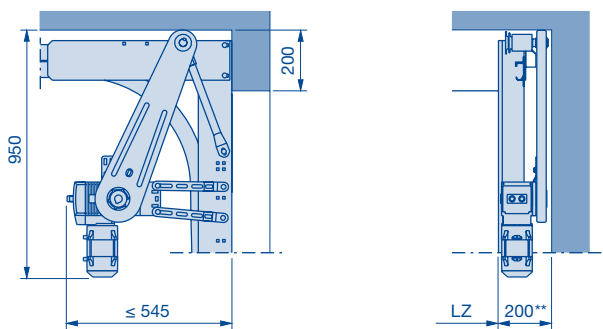


Shaft operator WA 400 for the track applications L and LD

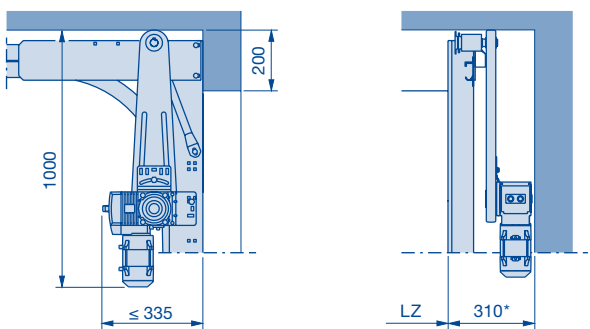
As shown in the figure, the operator can be fitted either left or right, viewed from the inside.

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

Fitting example ⑤ right



Fitting example ⑥ right

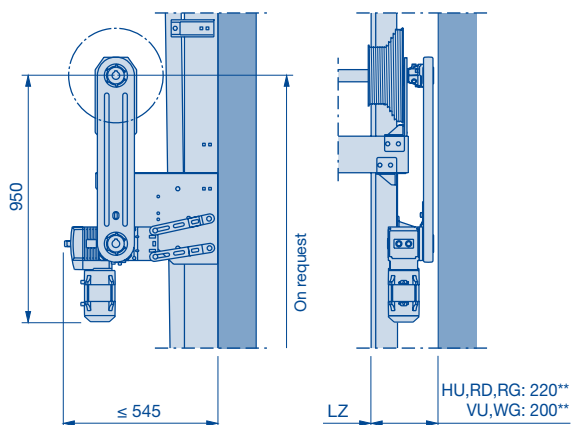


Shaft operator WA 400 for track applications HU, RD, RG, VU and WG

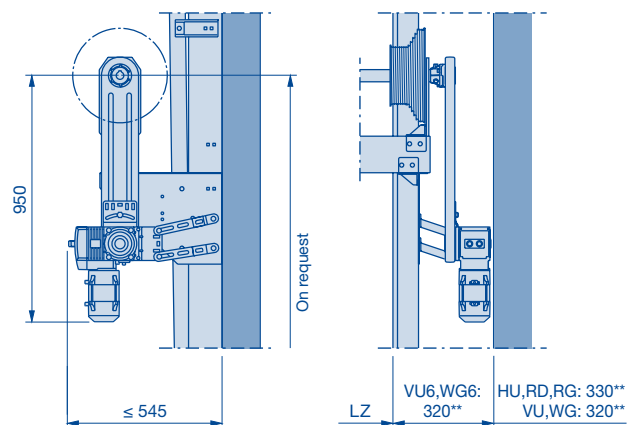
As shown in the figure, the operator can be fitted either left or right, viewed from the inside.

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

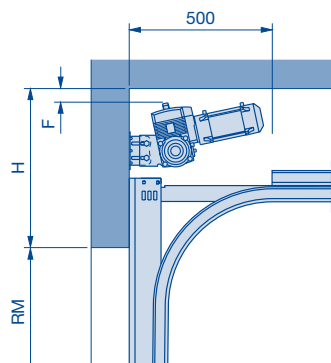
BW Position of shaft support

Shaft Operator WA 400

For central mounting

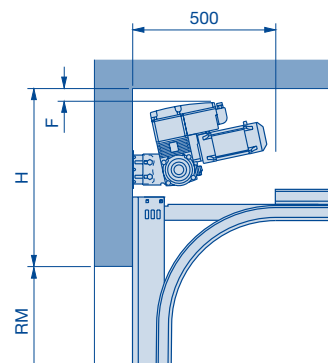
Shaft operator WA 400 for track applications N and ND

Control A/B 445, 460



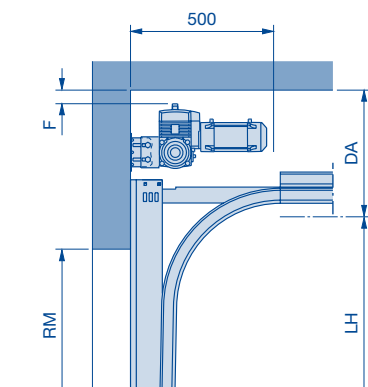
Track application	A/B 445, 460		B 460 FU	
	H min.	F min.	H min.	F min.
N 1	520	45	590	45
N 2	550	50	615	45
N 3 (RM > 7000)	-	-	675 (810)	45
ND 1	520	65	550	48
ND 2	550	75	570	48
ND 3 (RM > 7000)	-	-	650 (810)	48

Control B 460 FU



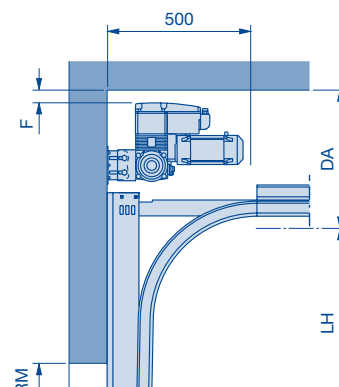
Shaft operator WA 400 for the track applications NH and GD

Control A/B 445, 460



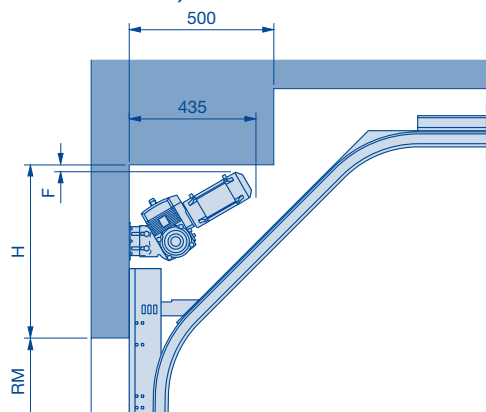
Track application	A/B 445, 460		B 460 FU	
	DA min.	F min.	DA min.	F min.
NH 1/GD 1	415	50	480	45
NH 2/GD 2	440	50	485	45
NH 3	-	-	565	45

Control B 460 FU

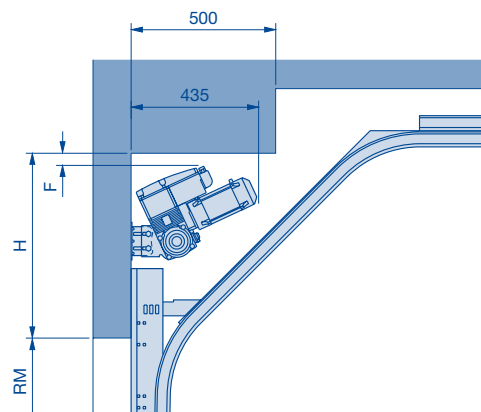


Shaft operator WA 400 for track application NS

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

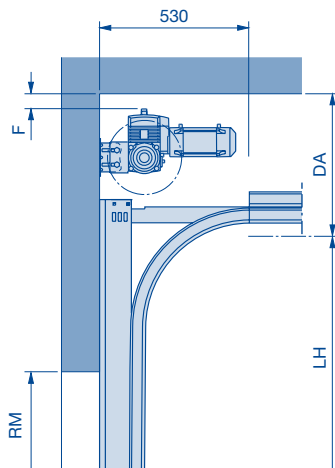
F Clearance ceiling / shaft operator

Shaft Operator WA 400

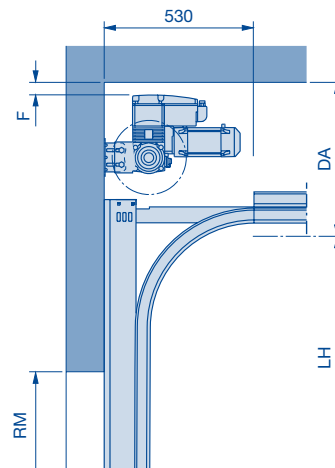
For central mounting

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

Control A / B 445, 460



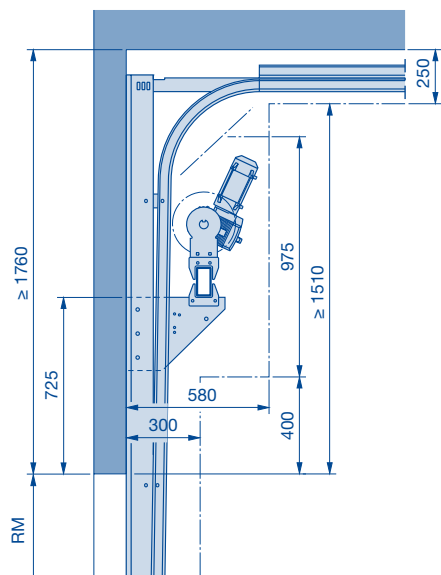
Control B 460 FU



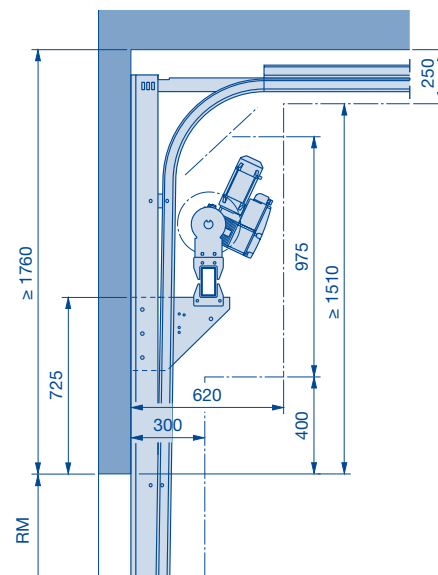
Track application	A / B 445, 460		B 460 FU	
	DA min.	F min.	DA min.	F min.
H 4, HG 4	500	55	540	45
H 5, HG 5	500	55	540	45
H 8	-	-	565	45
HD	On request			

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

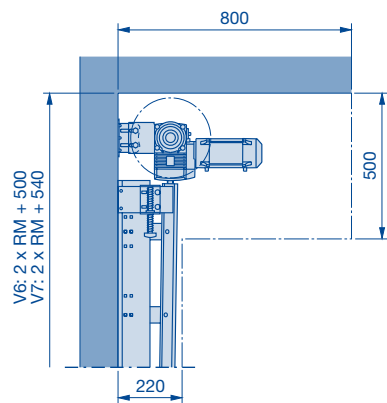
LH Track height
F Clearance ceiling / shaft operator

Shaft Operator WA 400

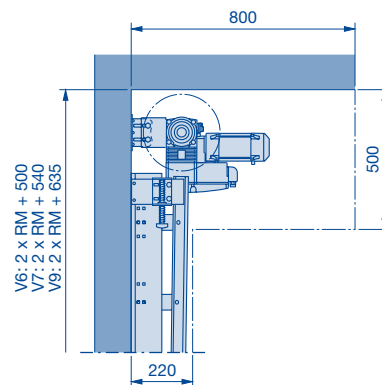
For central mounting

Shaft operator WA 400 for track application V

Control A / B 445, 460

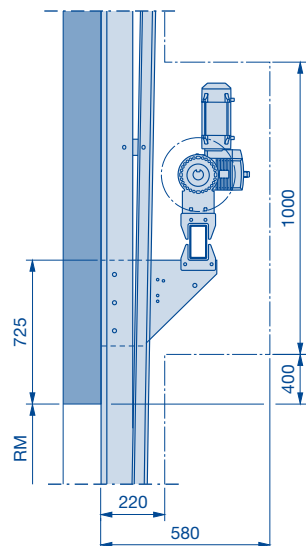


Control B 460 FU

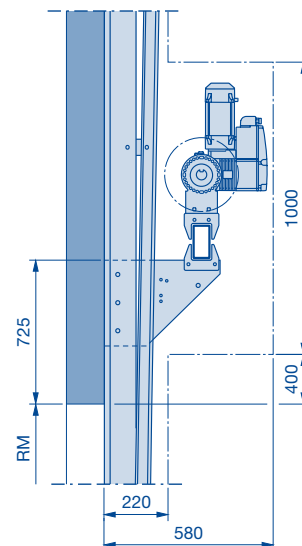


Shaft operator WA 400 for track applications VU and WG

Control A / B 445, 460



Control B 460 FU



Note:

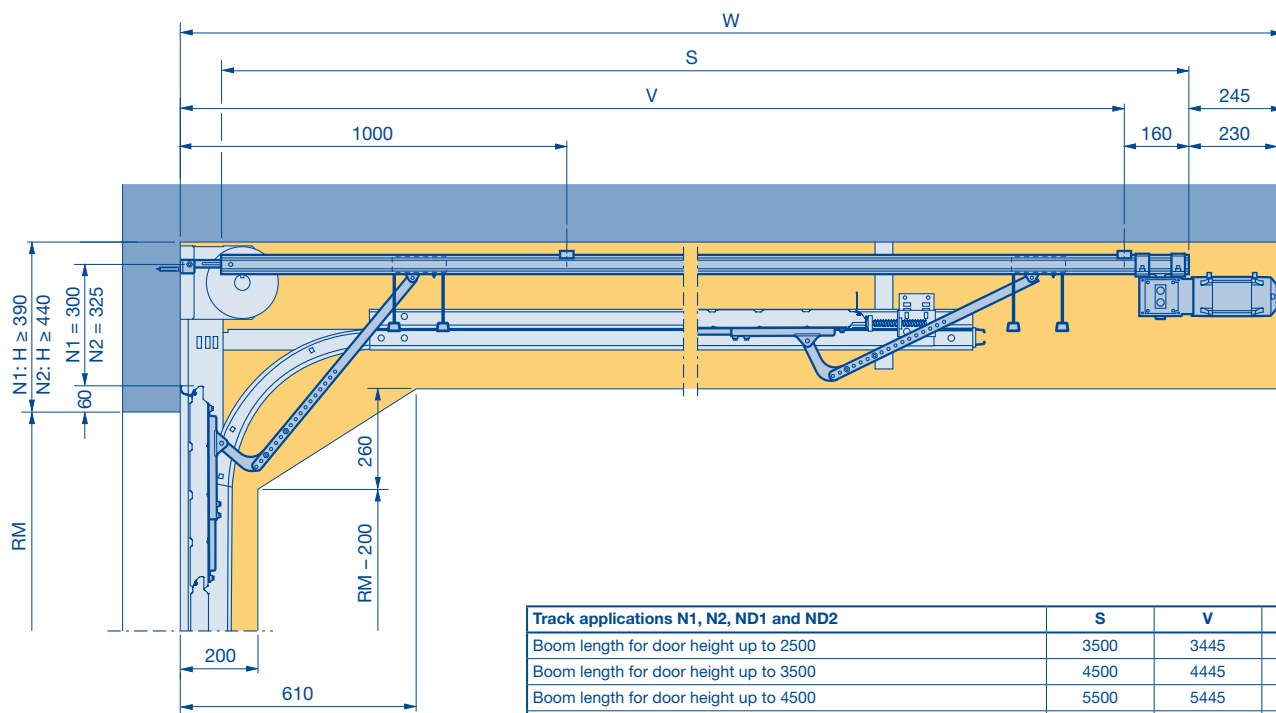
WA 400 as a centre motor in conjunction with double spring shaft on request!

RM Grid height
DA Distance to ceiling

LH Track height

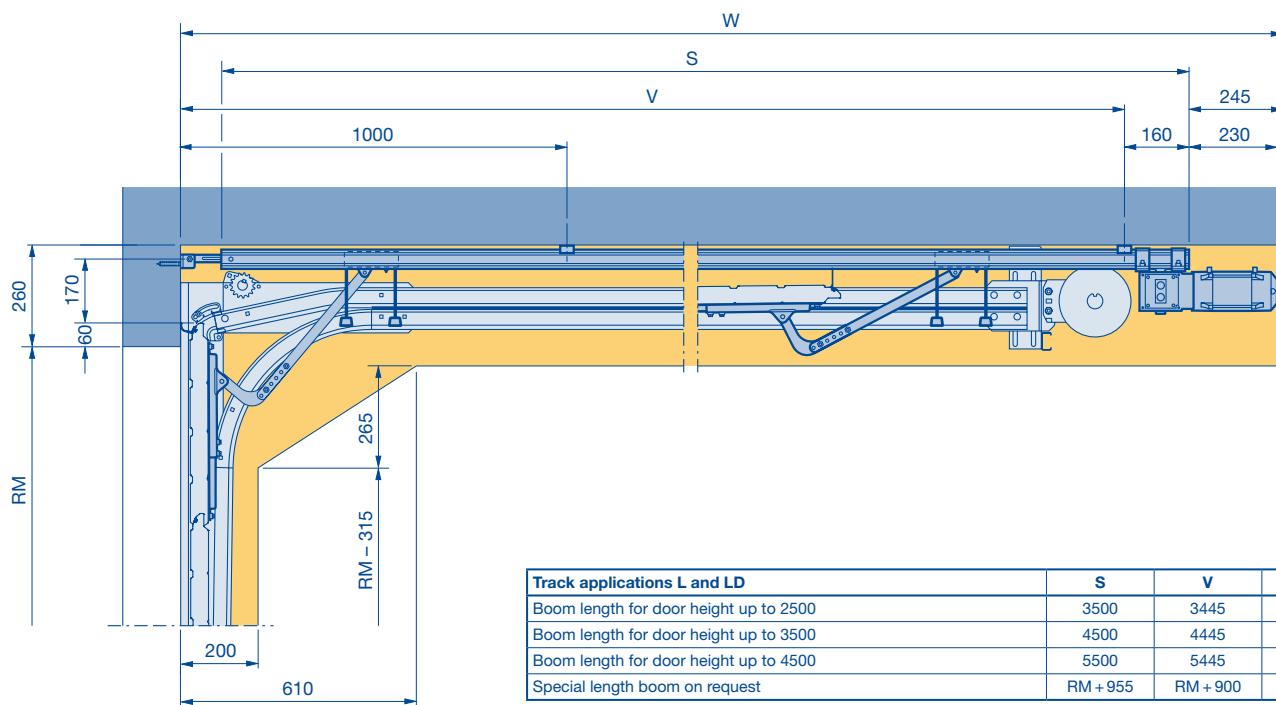
Chain Drive Operator ITO 400

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

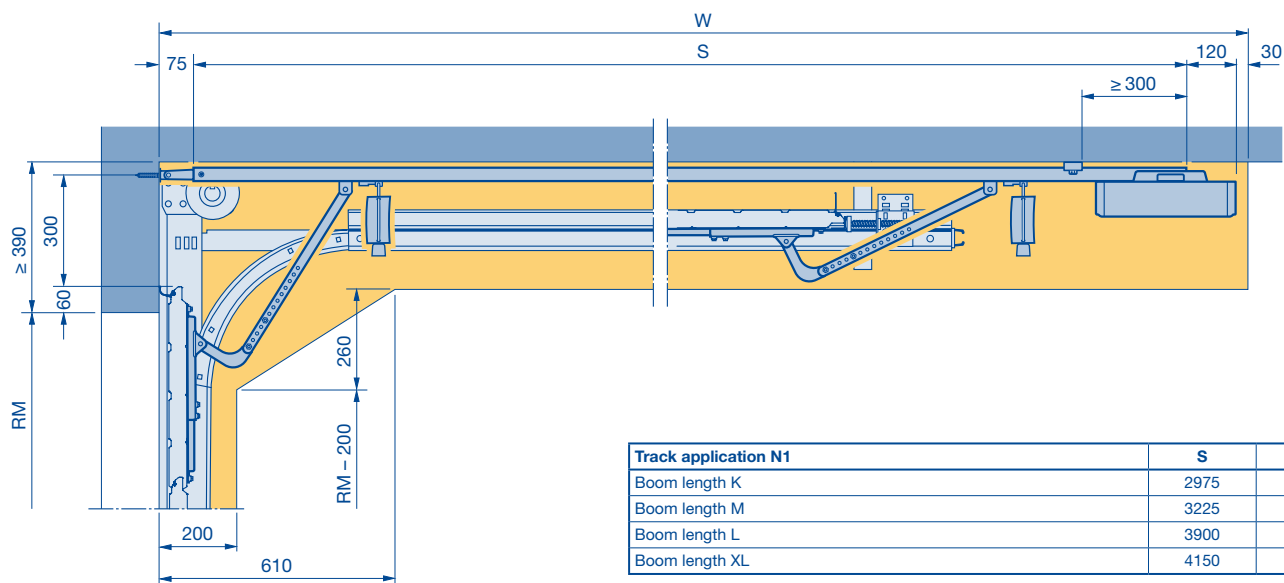
ITO 400 track applications L and LD (doors with wicket doors on request)



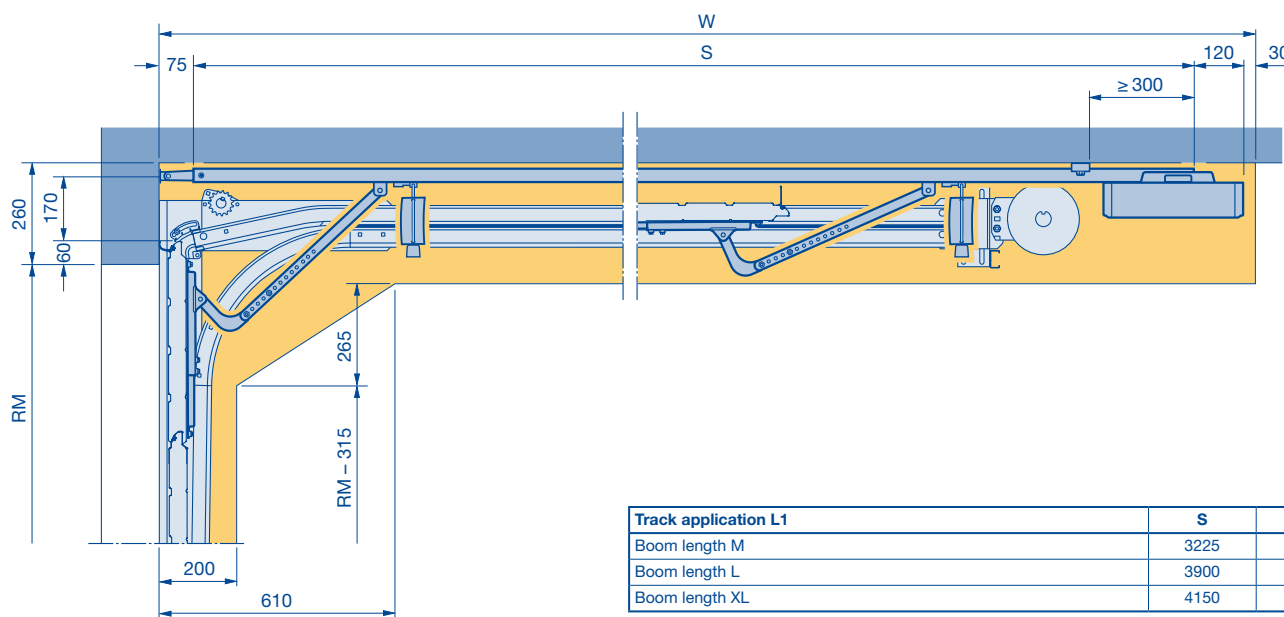
Track applications L and LD	S	V	W
Boom length for door height up to 2500	3500	3445	3850
Boom length for door height up to 3500	4500	4445	4850
Boom length for door height up to 4500	5500	5445	5850
Special length boom on request	RM + 955	RM + 900	RM + 1305

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)

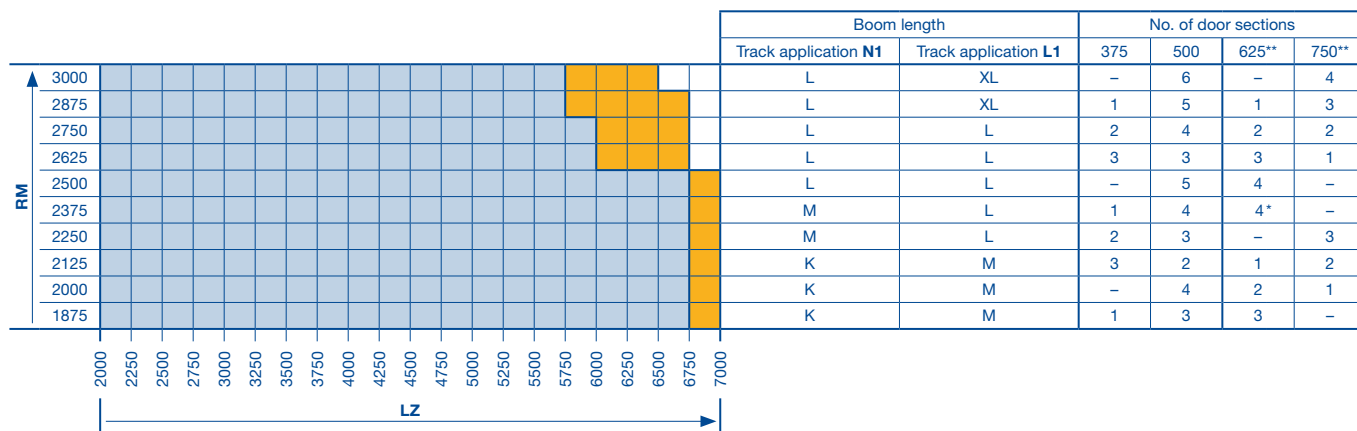
*** Note:**

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						
			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	
	Max. speed in mm/s, open / close [5]	Max. speed in mm/s, open / close [6]	Optosensors		VL 1, VL 2; HLG		Optosensors		VL 1, VL 2; HLG		Optosensors		VL 1, VL 2 (HLG)		Max. speed in mm/s, open / close	Max. speed in mm/s, open / close	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	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	rpm [1]	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

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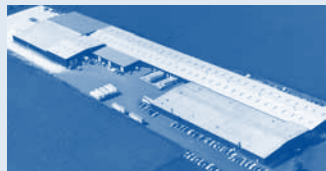
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GARAGE DOORS
OPERATORS
INDUSTRIAL DOORS
LOADING EQUIPMENT
HINGED DOORS
DOOR FRAMES

