Industrial Sectional Doors Depth 67 mm

Technical Manual: Issue 01.04.2015

HÖRMANN

Contents

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

All dimensions in mm.
Subject to design changes.

Product Descriptions

Door type	Door leaf / wicket door
Sectional door SPU 67 Thermo, double-skinned steel sections, 625 and 750 mm high, Stucco-textured / Micrograin	
Door leaf	Door sections made of double-skinned, PU-foamed steel sections with thermal break (made of hot-galvanized steel). Door sections Stucco-textured on inside and outside with uniform horizontal ribbing, or Micrograin with fine horizontal embossing outside and Stucco-textured inside, 625 and 750 mm high, depth 67 mm. All door sections without finger trap protection. Surface protection with polyester-primer coating.
Wicket door	Only to be installed in the central fields of the sectional door. **Cannot be installed in the outer fields – note the arrangement!** Only opening outwards, LH or RH hinged. **Attention (for threshold rail): For grid heights 2000, 2125 and 2250, the clear opening height must not be lower than the door height.**
Glazing	Glazing frames made of anodised aluminium extrusions with thermal break or 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 67 Thermo, double-skinned steel sections, 375 and 500 mm high, Stucco-textured / Micrograin	
Door leaf	Door sections made of double-skinned, PU-foamed steel sections with thermal break (made of hot-galvanized steel). Door sections Stucco-textured on inside and outside with uniform horizontal ribbing, or Micrograin with fine horizontal embossing outside and Stucco-textured inside, 375 and 500 mm high, depth 67 mm. All door sections without finger trap protection. Surface protection with polyester-primer coating.
Wicket door	Only to be installed in the central fields of the sectional door. **Cannot be installed in the outer fields – note the arrangement!** Only opening outwards, LH or RH hinged. **Attention (for threshold rail): For grid heights 2000 and 2125, the clear opening height must not be lower than the door height.**
Glazing	Glazing frames made of anodised aluminium extrusions with thermal break or 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 67 Thermo, aluminium extrusions, double-skinned bottom section	
Door leaf	Bottom section made of double-skinned, PU-foamed steel section with thermal break (made of hot-galvanized steel), 750 mm (standard) or 1500 mm high, Stucco-textured on inside and outside with uniform horizontal ribbing, or Micrograin with fine horizontal embossing outside and Stucco-textured inside. Surface protection with polyester-primer coating. Other door sections with glazing made of anodised aluminium extrusions with thermal break. Depth 67 mm. All door sections without finger trap protection. Infill: Clear synthetic triple pane, 51 mm (S 3).
Wicket door	Depending on the door type, made of anodised aluminium extrusions with thermal break, installed in the central fields of the door. **Cannot be installed in the outer fields – note the arrangement!** Only opening outwards, LH or RH hinged. **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 67 Thermo, aluminium extrusions	
Door leaf	Door sections made of anodised aluminium extrusions with thermal break. Depth 67 mm. All door sections without finger trap protection. Bottom door section consisting of PU-foamed infill with 51 mm Stucco-textured aluminium sheet cover on both sides (FU), other door sections with 51 mm clear synthetic triple panes (S3).
Wicket door	Depending on the door type, made of anodised aluminium extrusions with thermal break, installed in the central fields of the door. **Cannot be installed in the outer fields – note the arrangement!** Only opening outwards, LH or RH hinged. **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 67 Glazing, aluminium extrusions	
Door leaf	Door sections made of anodised aluminium extrusions with thermal break. Depth 67 mm. All door sections without finger trap protection. All door section infills in 26 mm double pane safety glass. Uniform infill heights.
Frame / track application	
Enclosed, moulded angle frame, made of hot-galvanized steel with screwed safety tracks.	

Product Descriptions
Aluminium Frame Infill

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

Counterbalance

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

Safety-related equipment according to DIN EN 12604

- Manually operated doors using 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 *) on both sides

* European patent

Seals

Floor seal made of 1-chamber profile internally and 3-chamber EPDM profile externally with flexible adjustment lip, side seal, lintel seal, intermediate seal between the sections.

Aluminium frame infill

Infill overview	SPU 67 Thermo	APU 67 Thermo	ALR 67 Thermo	ALR 67 Thermo Glazing
Infill type	**Abbreviation**			
PU infill, 51 mm, with Stucco-textured aluminium sheet cover on both sides	–	FU	FU	–
PU infill, 51 mm with smooth, anodised aluminium sheet cover on both sides	–	XU	XU	–
Synthetic triple pane, clear, 51 mm, $U_g = 1.8\ W/(m^2 \cdot K)$	S3	S3	S3	–
Synthetic triple pane, crystal structure, 51 mm, $U_g = 1.6\ W/(m^2 \cdot K)$	R3	R3	R3	–
Synthetic triple pane, grey tinted, 51 mm, $U_g = 1.6\ W/(m^2 \cdot K)$	A3	A3	A3	–
Synthetic triple pane, brown tinted, 51 mm, $U_g = 1.6\ W/(m^2 \cdot K)$	B3	B3	B3	–
Synthetic triple pane, white tinted (opal), 51 mm, $U_g = 1.6\ W/(m^2 \cdot K)$	M3	M3	M3	–
Synthetic quadruple pane, clear, 51 mm, $U_g = 1.3\ W/(m^2 \cdot K)$	S4	S4	S4	–
Synthetic quadruple pane, crystal structure, 51 mm, $U_g = 1.3\ W/(m^2 \cdot K)$	R4	R4	R4	–
Synthetic quadruple pane, grey tinted, 51 mm, $U_g = 1.3\ W/(m^2 \cdot K)$	A4	A4	A4	–
Synthetic quadruple pane, brown tinted, 51 mm, $U_g = 1.3\ W/(m^2 \cdot K)$	B4	B4	B4	–
Synthetic quadruple pane, white tinted (opal), 51 mm, $U_g = 1.3\ W/(m^2 \cdot K)$	M4	M4	M4	–
Double pane made of single-pane safety glass, 26 mm, $U_g = 2.6\ W/(m^2 \cdot K)$ [1]	E2	E2	E2	E2
Climatic double pane made of single-pane safety glass, 26 mm, $U_g = 1.1\ W/(m^2 \cdot K)$ [1]	G2	G2	G2	G2
Prepared for on-site infill [2]	BS	BS	BS	–

[1] Only for door width up to 6000 mm, on request, and not in conjunction with wicket door
[2] On request; infill weight and thickness must be specified

Technical Data Overview

Construction and quality features

		SPU 67 Thermo	APU 67 Thermo	ALR 67 Thermo	ALR 67 Thermo Glazing
Resistance to wind load EN 12424	Door without wicket door, LZ ≤ 8000, class	3 [6]	3 [6]	3 [6]	3 [5.6]
	Door without wicket door, LZ > 8000, class	2 [7]	2 [7]	2 [7]	–
	Door with wicket door, LZ ≤ 4000, class	3 [6]	3 [6]	3 [6]	–
	Door with wicket door, LZ > 4000, class	2 [7]	2 [7]	2 [7]	–
Water tightness EN 12425	Door without wicket door, class	3 (70 Pa)	3 (70 Pa)	3 (70 Pa)	3 (70 Pa)
Air permeability EN 12426	Door without wicket door, class	2 [8]	2 [8]	2 [8]	2 [8]
	Door with wicket door, class	1 [9]	1 [9]	1 [9]	1 [9]
Acoustic insulation EN 717-1	Door without wicket door R = . . . dB	25	23	23 (30 [1])	30 [1]
	Door with wicket door R = . . . dB	24	22	22	–
Thermal insulation EN 13241-1, appendix B EN 12428	Door without wicket door, U = W/(m²·K) [2]	0.62 (0.51 [4])	–	–	–
	– Optional triple glazing, U = W/(m²·K) [2]	–	2.1 (2.0 [4])	2.2 (2.1 [4])	–
	– Optional quadruple glazing, U = W/(m²·K) [2]	–	1.8 (1.7 [4])	1.9 (1.8 [4])	–
	– Optional climatic double panes made of single-pane safety glass, U = W/(m²·K) [2]	–	1.6 (1.5 [4])	1.7 (1.6 [4])	1.8 (1.7 [4])
	– Optional double glazing made of single-pane safety glass, U = W/(m²·K) [2]	–	2.6 (2.5 [4])	2.7 (2.6 [4])	3.0 (2.9 [4])
	Door with wicket door, U = W/(m²·K) [2]	0.82 (0.75 [4])	–	–	–
	– Optional triple glazing, U = W/(m²·K) [2]	–	2.3 (2.2 [4])	2.4 (2.3 [4])	–
	– Optional quadruple glazing, U = W/(m²·K) [2]	–	2.0 (1.9 [4])	2.1 (2.1 [4])	–
	– Section, U = W/(m²·K)	0.33	–	–	–
Fire protection	Class	B2	B2	B2	B2
Design	Self-supporting	●	●	●	●
	Depth, mm	67	67	67	67
Door sizes	Max. width mm, LZ	10000	10000	10000	5500
	Max. height mm, RM [3]	7500	7500	7500	4000
Space requirements	From page 33				
Material, door leaf	Steel, double-skinned, 67 mm	●	●	–	–
	Aluminium, profile with thermal break	–	●	●	●
Surface, door leaf	Galvanized steel, coated RAL 9002	●	○	–	–
	Galvanized steel, coated RAL 9006	○	●	–	–
	Galvanized steel, coated RAL to choose	○	○	–	–
	Anodised aluminium E6 / C0 (previously E6 / EV 1)	○	●	●	●
	Aluminium coated in RAL to choose	○	○	○	○
Wicket door	With trip-free threshold	○	○	○	–
Glazings	Type A section window	○	–	–	–
	Type D section window	○	–	–	–
	Aluminium glazing frame	○	●	●	●
Seals	All-round on 4 sides	●	●	●	●
	Intermediate seal between the door sections	●	●	●	●
ThermoFrame	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	Side trap guards	●	●	●	●
	Spring break safeguard for manual operation	●	●	●	●
	Safety catch for doors with shaft operator	●	●	●	●
Fitting types	Concrete	●	●	●	●
	Steel	●	●	●	●
	Brickwork	●	●	●	●
	Others on request	○	○	○	○

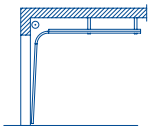
● = Standard
○ = Optional

1) With optional double pane (single-pane safety glass)
2) For a door surface of 5000 × 5000 mm
3) 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

Overview of Track Applications

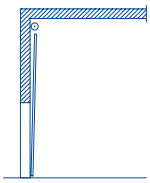
SPU 67 Thermo / APU 67 Thermo / ALR 67 Thermo with torsion spring shaft

N



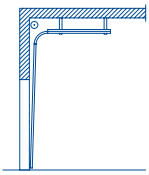
Normal track application
(An operator with light grille HLG 550 is generally required for a door height RM ≤ 3000 mm)

V



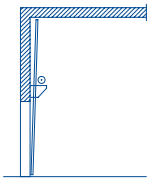
Vertical track application
(Additional hand pulley required for manually operated doors!)

H



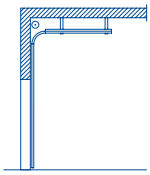
High-lift track application
(For a door height RM ≤ 3000 mm an operator and a light grille HLG 550 may be required after a technical inspection)

VU



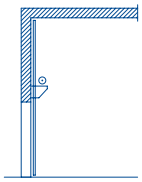
Like track application V, with low-mounted torsion spring shaft
(Additional hand pulley required for manually operated doors!)

HG



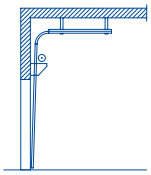
Like track application H, with steep track and minimum slot width of 150 mm
(for loading ramp doors)
(For a door height RM ≤ 3000 mm an operator and a light grille HLG 550 may be required after a technical inspection)
Not possible for door type ALR 67 Thermo Glazing and doors with wicket door or real glass infill!
Door width LZ ≤ 3500 mm
Door height RM ≤ 5000 mm

WG



Like track application VU, with steep track and minimum slot width of 150 mm
(for loading ramp doors)
(additional chain hoist required for manually operated doors!)
Not possible for door type ALR 67 Thermo Glazing and doors with wicket door or real glass infill!
Door width LZ ≤ 3500 mm
Door height RM ≤ 5000 mm

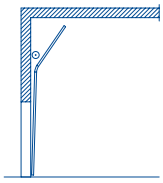
HU



Like track application H, with low-mounted torsion spring shaft

Door height RM ≤ 5000 mm

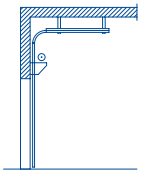
VS



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!)

Note:
An in-factory technical inspection is required for this track application!

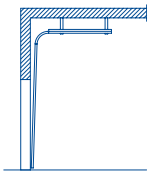
RG



Like track application HU, with steep track and minimum slot width of 150 mm
(for loading ramp doors)
Not possible for door type ALR 67 Thermo Glazing and doors with wicket door or real glass infill!
Door width LZ ≤ 3500 mm
Door height RM ≤ 5000 mm

SPU 67 Thermo / APU 67 Thermo / ALR 67 Thermo with direct drive operator

H

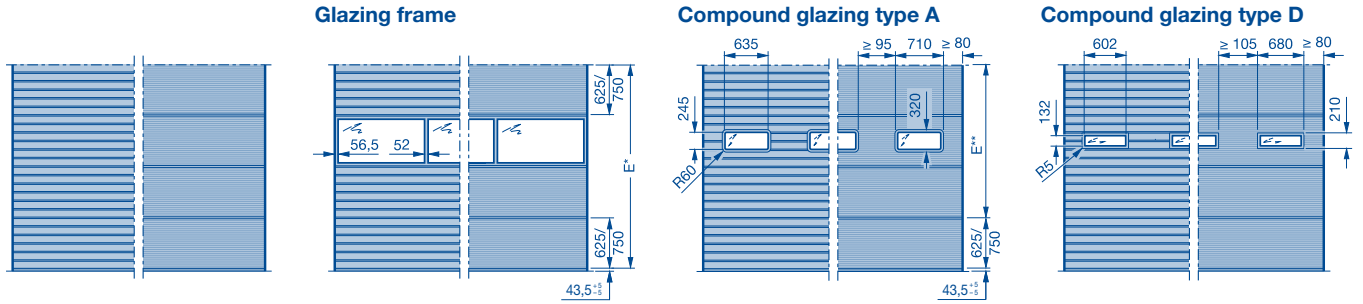


High-lift track application without torsion spring
(For a door height RM ≤ 3000 mm a light grille HLG 550 may be required after a technical inspection)
Door width LZ ≤ 10000 mm
Door height RM ≤ 7500 mm

Sectional Door SPU 67 Thermo

Double-skinned steel sections
625 and 750 mm high
Stucco-textured / Micrograin

External views



E* Fitting area for frames with glazing
E** Fitting area for compound glazing

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 top door section are possible.

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

1	2	3	4	5	Number of infills / fields per aluminium frame
[1]	2	3	4	5	Number of compound glazings per door section

1500 2000 2250 2500 2750 3000 3250 3500 3750 4000 4250 4500 4750 5000 5250 5500 5750 6000

SPB 52

LZ

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 pages 24 – 26.
- Doors with more than 2 glazing frames on request.

On request: torsion spring shaft or direct drive operator
Direct drive operator S75 with high-lift track application
Track applications N, H and HG on request; torsion spring shaft

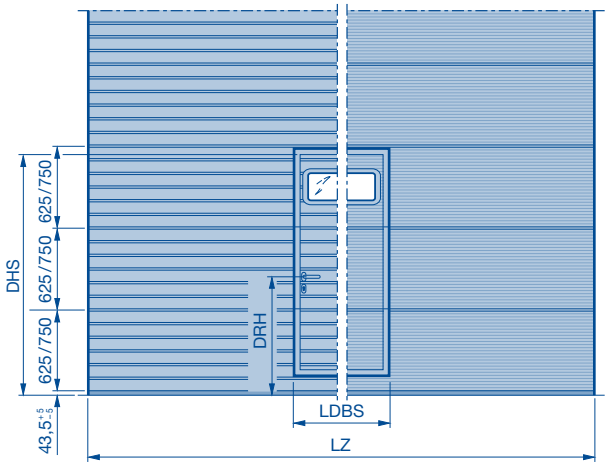
[1] **Type A** → 1670, **Type D** → 1630
[A] No. of door sections
RM Grid height
LZ Clear frame dimensions **(from 1200)**
→ up to LZ
SPB Rail width
TH Door section height
******** Top door section 500 mm

Sectional Door SPU 67 Thermo 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) = 905 mm*
* For a door width of 1750 – 1840 mm, the clear passage width is 798 mm.

Lever heights (DRH)
Bottom door section 625 = 960.5
Bottom door section 750 = 1085.5

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] TH 625		[A] TH 750	[D]
Range 3	7500	–		10	2195
	7375	1	+	9	2195
	7250	2	+	8	2195
	7125	3	+	7	2195
	7000	4	+	6	2195
	6875	5	+	5	2195
	6750	–		9	2195
	6625	1	+	8	2195
	6500	2	+	7	2195
	6375	3	+	6	2195
	6250	4	+	5	2195
	6125	5	+	4	2195
	6000	–		8	2195
	5875	1	+	7	2195
	5750	2	+	6	2195
	5625	3	+	5	2195
	5500	4	+	4	2195
	5375	5	+	3	2195
	5250	–		7	2195
	5125	1	+	6	2195
Range 2	5000	2	+	5	2195
	4875	3	+	4	2195
	4750	4	+	3	2195
	4625	5	+	2	2070
	4500	–		6	2195
	4375	1	+	5	2195
	4250	2	+	4	2195
	4125	3	+	3	2195
	4000	4	+	2	2070
	3875	5	+	1	1945
	3750	–		5	2195
	3625	1	+	4	2195
Range 1	3500	2	+	3	2195
	3375	3	+	2	2070
	3250	4	+	1	1945
	3125	5		–	1820
	3000	–		4	2195
	2875	1	+	3	2195
	2750	2	+	2	2070
	2625	3	+	1	1945
	2500	4		–	1820
	2375	4***		–	1820
	2250	–		3	2195
	2125	1	+	2	2070
	2000	2	+	1	1945

3	4	Number of infills / fields per aluminium frame
2	3 4	Number of compound glazings per door section**

2000 2250 2500 2750 3000 3250 3500 3750 4000 4250 4500 4750 5000 5250 5500

SPB 52
LZ

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 pages 24 – 26.
- Doors with more than 2 glazing frames on request.

On request: torsion spring shaft or direct drive operator
Direct drive operator S75 with high-lift track application
Track applications N, H and HG on request; torsion spring shaft
Glazings on request

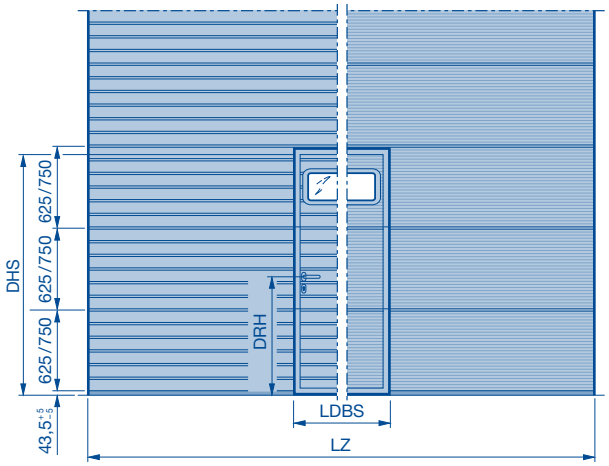
[A]	No. of door sections
[D]	Clear passage heights (DHS) of wicket door to grid height
SH	Threshold height **(215)**
SPB	Rail width
TH	Door section height
DHS	Clear passage height of wicket door
RM	Grid height
LDBS	Clear passage width
DRH	Lever height
LZ	Clear frame dimensions **(from 1750)**
***	Top door section 500 mm

Sectional Door SPU 67 Thermo 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) = 905 mm*
* For a door width of 1750 – 1840 mm, the clear passage width is 798 mm.

Lever heights (DRH)
Bottom door section 625 = 960.5
Bottom door section 750 = 1085.5

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

2000 2250 2500 2750 3000 3250 3500 3750 4000 4250 4500 4750 5000 5250 5500 5750 6000

SPB 52

LZ

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 pages 24 – 26.
- Doors with more than 2 glazing frames on request.

On request: torsion spring shaft or direct drive operator
Direct drive operator S75 with high-lift track application
Track application **N not possible**, H and HG on request; torsion spring shaft
Glazings on request

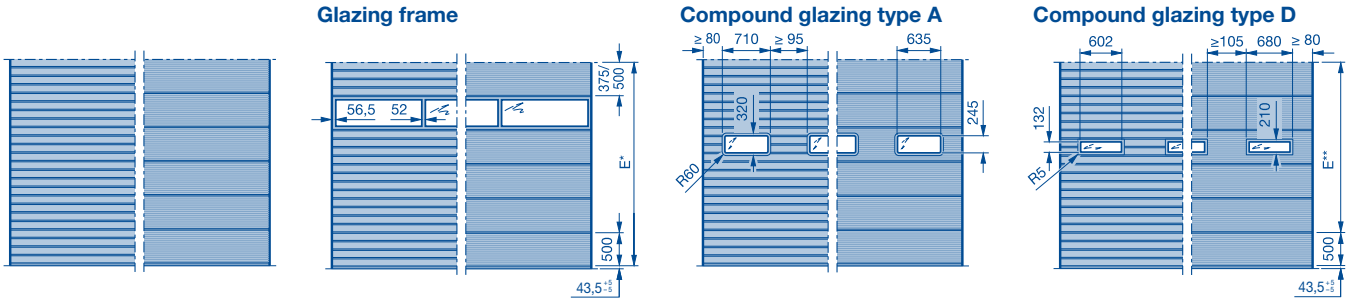
[A] No. of door sections
[D] Clear passage heights (DHS) of wicket door to grid height
SH Threshold height **(rising from 5 to 10)**
SPB Rail width
TH Door section height
DHS Clear passage height of wicket door
RM Grid height
LDBS Clear passage width
DRH Lever height
LZ Clear frame dimensions **(from 1750)**
*** Top door section 500 mm

Sectional Door SPU 67 Thermo
Double-Skinned Steel Sections

375 and 500 mm high

Stucco-textured / Micrograin

External views



E* Fitting area for frame 500 with glazing
E** Fitting area for compound glazing

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 top door section are possible.

Note:

- For a view of the matching appearance with doors with wicket doors see pages 24 – 26.
- Doors with more than 2 glazing frames on request.

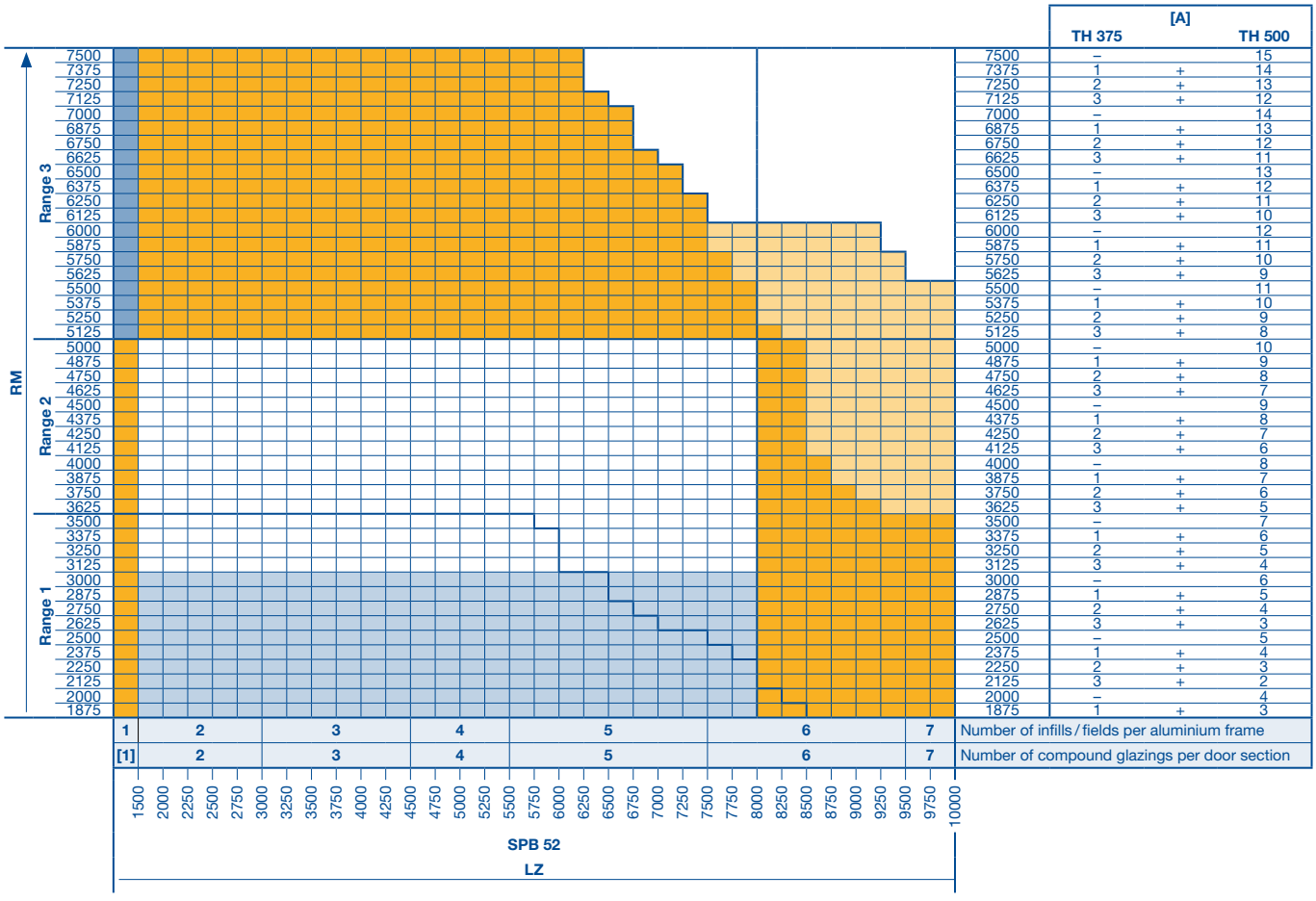
On request: torsion spring shaft or direct drive operator

On request and only direct drive operator S140 with high-lift track application

Direct drive operator S75 with high-lift track application

Track applications N, H and HG on request; torsion spring shaft

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

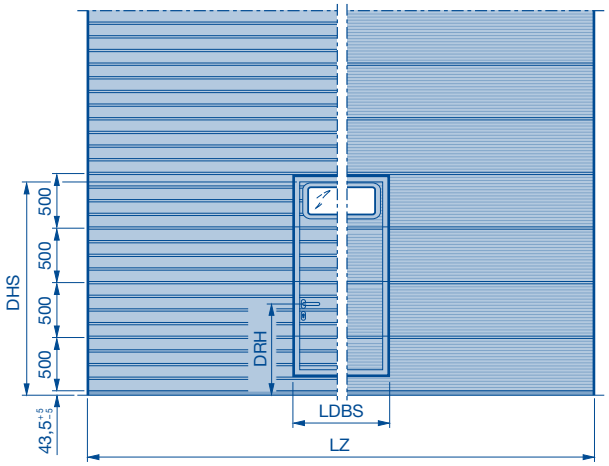


Sectional Door SPU 67 Thermo with Wicket Door and Threshold Rail

Double-skinned steel sections

375 and 500 mm high, Stucco-textured / Micrograin

External view



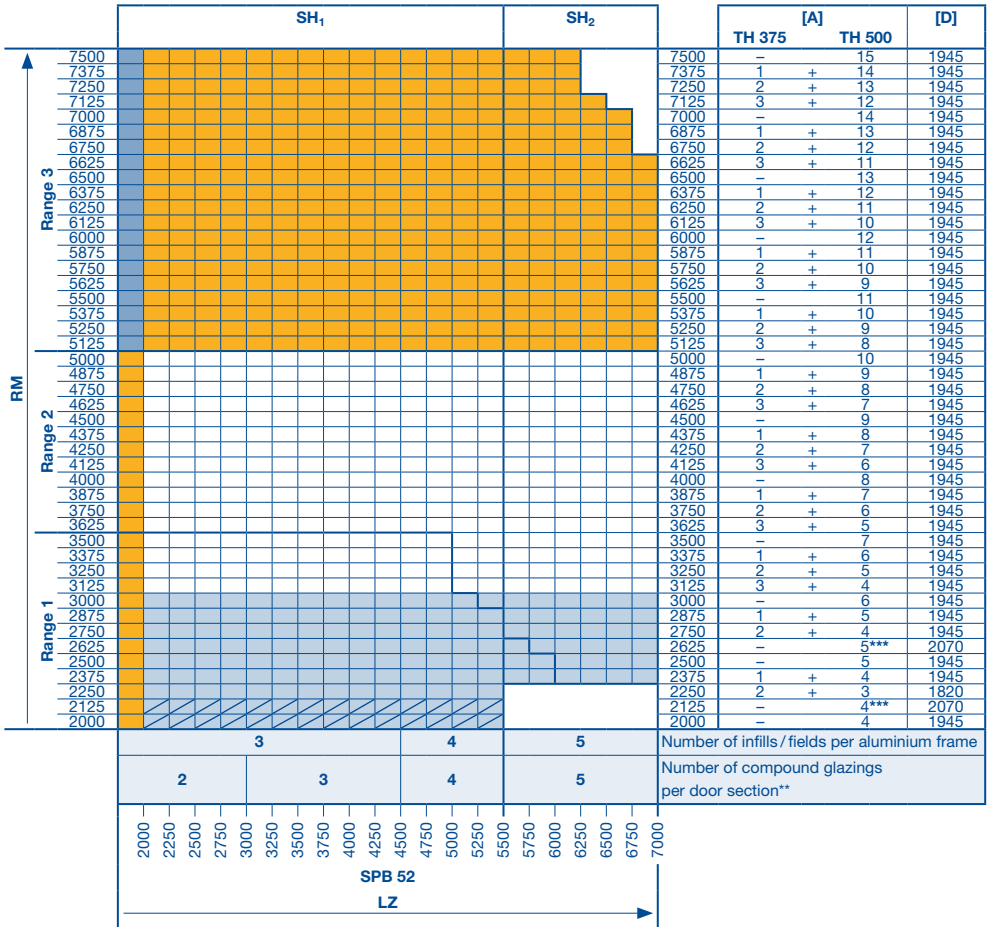
**** Note on fitting compound glazings:**
For door widths from 1750 – 3000 mm, a compound glazing can **only** be fitted into the wicket door. No compound glazing can be fitted to the left or right of the wicket door.

Clear passage width (LDBS) = 905 mm*
* For a door width of 1750 – 1840 mm, the clear passage width is 798 mm.

Lever heights (DRH)
Bottom door section 500 = 835.5
Bottom door section 625 = 960.5 (only for SH_2)

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	[A] TH 375	[A] TH 500	[D]
7500	–	15	1945
7375	1 +	14	1945
7250	2 +	13	1945
7125	3 +	12	1945
7000	–	14	1945
6875	1 +	13	1945
6750	2 +	12	1945
6625	3 +	11	1945
6500	–	13	1945
6375	1 +	12	1945
6250	2 +	11	1945
6125	3 +	10	1945
6000	–	12	1945
5875	1 +	11	1945
5750	2 +	10	1945
5625	3 +	9	1945
5500	–	11	1945
5375	1 +	10	1945
5250	2 +	9	1945
5125	3 +	8	1945
5000	–	10	1945
4875	1 +	9	1945
4750	2 +	8	1945
4625	3 +	7	1945
4500	–	9	1945
4375	1 +	8	1945
4250	2 +	7	1945
4125	3 +	6	1945
4000	–	8	1945
3875	1 +	7	1945
3750	2 +	6	1945
3625	3 +	5	1945
3500	–	7	1945
3375	1 +	6	1945
3250	2 +	5	1945
3125	3 +	4	1945
3000	–	6	1945
2875	1 +	5	1945
2750	2 +	4	1945
2625	–	5***	2070
2500	–	5	1945
2375	1 +	4	1945
2250	2 +	3	1820
2125	–	4***	2070
2000	–	4	1945

Number of infills / fields per aluminium frame

Number of compound glazings per door section**

Note:
- 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 pages 24 – 26.
- Doors with more than 2 glazing frames on request.

On request: torsion spring shaft or direct drive operator
Direct drive operator S75 with high-lift track application
Track applications N, H and HG on request; torsion spring shaft
Glazings on request

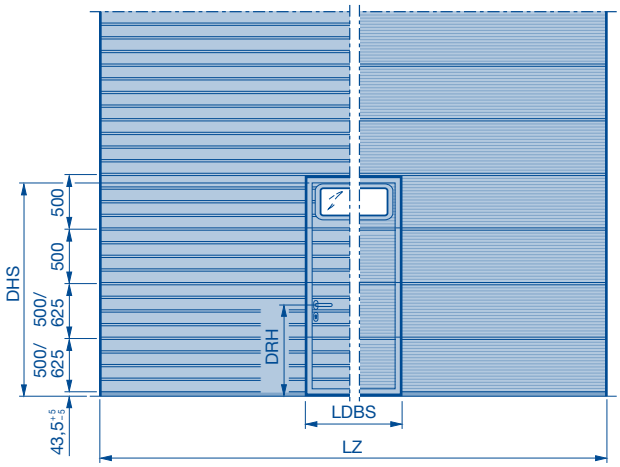
[A] No. of door sections
[D] Clear passage heights (DHS) of wicket door to grid height
RM Grid height
LZ Clear frame dimensions **(from 1750)**
SH_1 Threshold height **(215)**
SH_2 Threshold height **(312)**, bottom door section with 250 mm aluminium bottom section, **glazing from 625 mm**
SPB Rail width
TH Door section height
DHS Clear passage height of wicket door
LDBS Clear passage width
*** Bottom door section TH = 625

Sectional Door SPU 67 Thermo with Wicket Door with Trip-Free Threshold

Double-skinned steel sections

375 and 500 mm high, Stucco-textured / Micrograin

External view



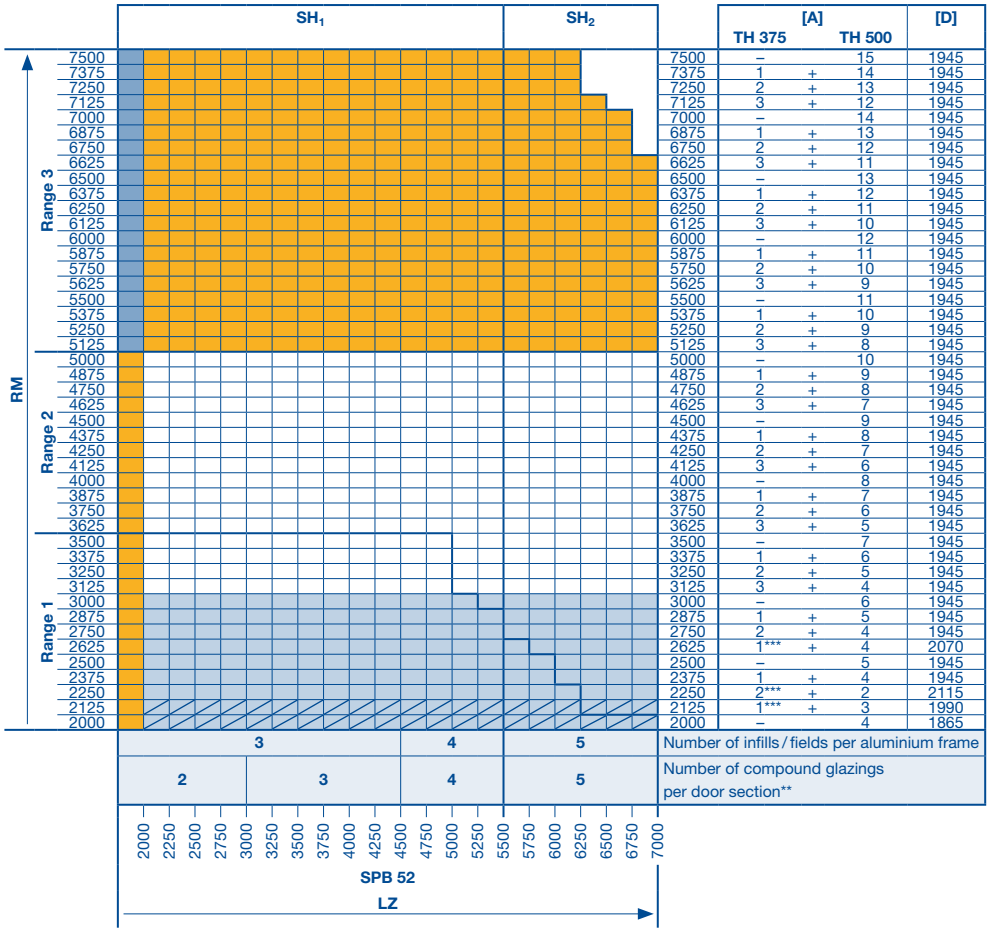
**** Note on fitting compound glazings:**
For door widths from 1750 – 3000 mm, a compound glazing can **only** be fitted into the wicket door. No compound glazing can be fitted to the left or right of the wicket door.

Clear passage width (LDBS) = 905 mm*
* For a door width of 1750 – 1840 mm, the clear passage width is 798 mm.

Lever heights (DRH)
Bottom door section 500 = 835.5
Bottom door section 625 = 960.5

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.



	[A] TH 375		[A] TH 500	[D]
7500	–		15	1945
7375	1	+	14	1945
7250	2	+	13	1945
7125	3	+	12	1945
7000	–		14	1945
6875	1	+	13	1945
6750	2	+	12	1945
6625	3	+	11	1945
6500	–		13	1945
6375	1	+	12	1945
6250	2	+	11	1945
6125	3	+	10	1945
6000	–		12	1945
5875	1	+	11	1945
5750	2	+	10	1945
5625	3	+	9	1945
5500	–		11	1945
5375	1	+	10	1945
5250	2	+	9	1945
5125	3	+	8	1945
5000	–		10	1945
4875	1	+	9	1945
4750	2	+	8	1945
4625	3	+	7	1945
4500	–		9	1945
4375	1	+	8	1945
4250	2	+	7	1945
4125	3	+	6	1945
4000	–		8	1945
3875	1	+	7	1945
3750	2	+	6	1945
3625	3	+	5	1945
3500	–		7	1945
3375	1	+	6	1945
3250	2	+	5	1945
3125	3	+	4	1945
3000	–		6	1945
2875	1	+	5	1945
2750	2	+	4	1945
2625	1***	+	4	2070
2500	–		5	1945
2375	1	+	4	1945
2250	2***	+	2	2115
2125	1***	+	3	1990
2000	–		4	1865

Number of infills / fields per aluminium frame

Number of compound glazings per door section**

2000 2250 2500 2750 3000 3250 3500 3750 4000 4250 4500 4750 5000 5250 5500 5750 6000 6250 6500 6750 7000

Note:
- For a view of the matching appearance with doors without wicket doors see pages 24 – 26.
- Doors with more than 2 glazing frames on request.

On request: torsion spring shaft or direct drive operator
Direct drive operator S75 with high-lift track application
Track application **N not possible**, H and HG on request; torsion spring shaft
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)**
SH_1 Threshold height **(rising from 5 to 10)**
SH_2 Threshold height **(approx. 13)**
SPB Rail width
TH Door section height
DHS Clear passage height of wicket door
LDBS Clear passage width
DRH Lever height
*** Bottom door section TH = 625

Glazing Heights for Matching External Appearance SPU 67 Thermo 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)											
	1160	1285	1535	1660	1785	1910	2035	2160	2285	2410	2535	2660
7500		X			X							
7375	X	X		X	X							X
7250	X	X	X	X	X		X		X		X	X
7125	X	X	X	X	X	X	X	X	X	X	X	X
7000		X			X				X			
6875	X	X		X	X			X	X			X
6750	X	X			X		X				X	X
6625	X	X		X	X	X	X			X	X	X
6500		X			X				X			
6375	X	X		X	X			X	X			X
6250	X	X	X	X	X		X	X	X		X	X
6125	X	X	X	X	X	X	X	X	X	X	X	X
6000		X			X							
5875	X	X		X	X							X
5750	X	X	X	X	X		X		X		X	X
5625	X	X	X	X	X	X	X	X	X	X	X	X
5500		X			X				X			
5375	X	X		X	X			X	X			X
5250	X	X			X		X				X	X
5125	X	X		X	X	X	X			X	X	X
5000		X			X				X			
4875	X	X		X	X			X	X			X
4750	X	X	X	X	X		X	X	X		X	X
4625	X	X	X	X	X	X		X	X	X	X	
4500		X			X							
4375	X	X		X	X							X
4250	X	X	X	X	X	X	X		X	X	X	X
4125	X	X	X	X	X	X	X	X	X	X	X	X
4000		X			X				X			
3875	X			X	X			X	X			
3750	X	X			X		X				X	X
3625	X	X		X	X	X	X			X	X	X
3500		X			X				X			
3375	X	X		X	X				X			
3250	X		X	X	X			X	X			
3125			X	X				X				
3000		X			X							
2875	X	X		X	X							X
2750	X	X	X	X	X						X	
2625	X		X	X						X		
2500									X			
2375				X				X				
2250	X	X					X					
2125	X					X						
2000					X							
1875				X								

RM Grid height

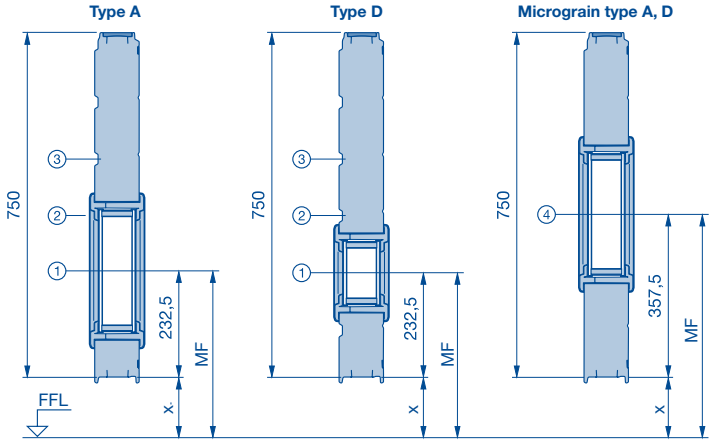
Calculating the Glazing Heights for SPU 67 Thermo

(Centre of window from FFL)

Door section heights 500, 625 and 750 mm

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

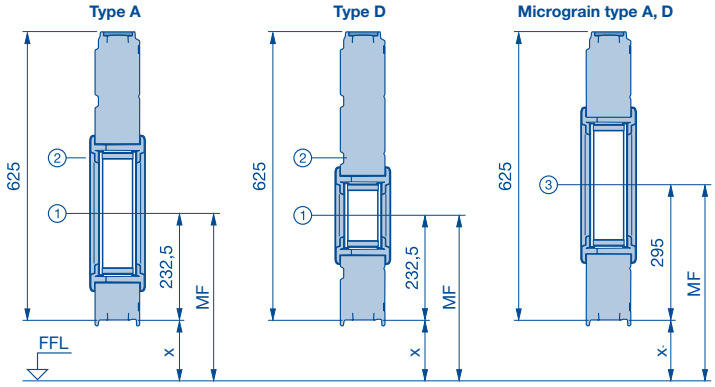
Door section height 750 mm



Glazing height type A and D
① = x + 232.5
② = x + 232.5 + 125
③ = x + 232.5 + 250
④ = x + 357.5

x = Sum of door section heights + 52.5 mm from FFL

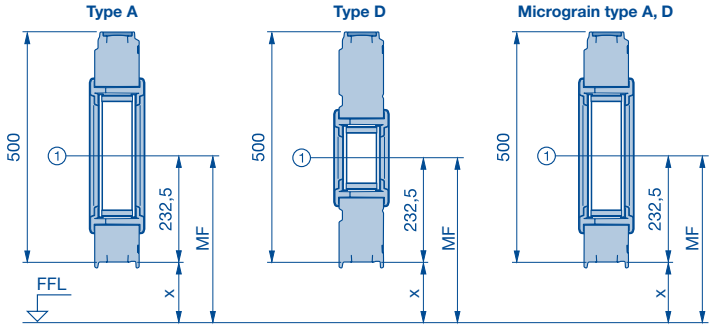
Door section height 625 mm



Glazing height type A and D
① = x + 232.5
② = x + 232.5 + 125
③ = x + 295

x = Sum of door section heights + 52.5 mm from FFL

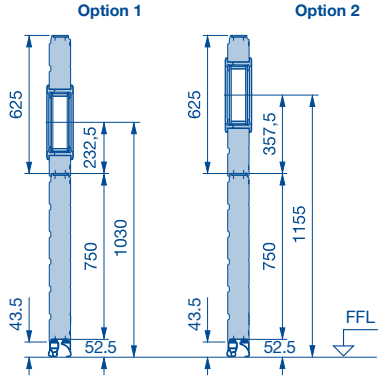
Door section height 500 mm



Glazing height type A and D
① = x + 232.5

x = Sum of door section heights + 52.5 mm from FFL

Calculation example



Given:

- Door type SPU 67 Thermo; 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 + 52.5 + 232.5 = 1035 mm from FFL
2	In 2nd door section 625 mm at position 2	750 + 52.5 + 232.5 + 125 = 1160 mm from FFL
3	In 3rd door section 625 mm at position 1	750 + 625 + 52.5 + 232.5 = 1660 mm from FFL
4	In 3rd door section 625 mm at position 2	750 + 625 + 52.5 + 232.5 + 125 = 1785 mm from FFL
etc.		

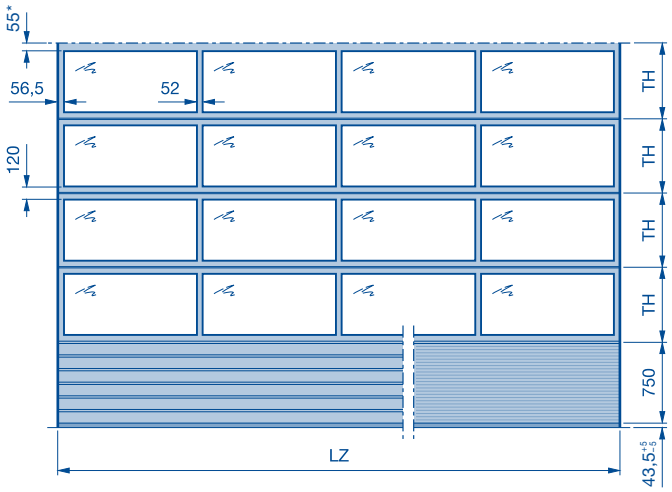
MF Centre of window from FFL

Sectional Door APU 67 Thermo

Aluminium extrusions with thermal break

Double-skinned bottom section

External view



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

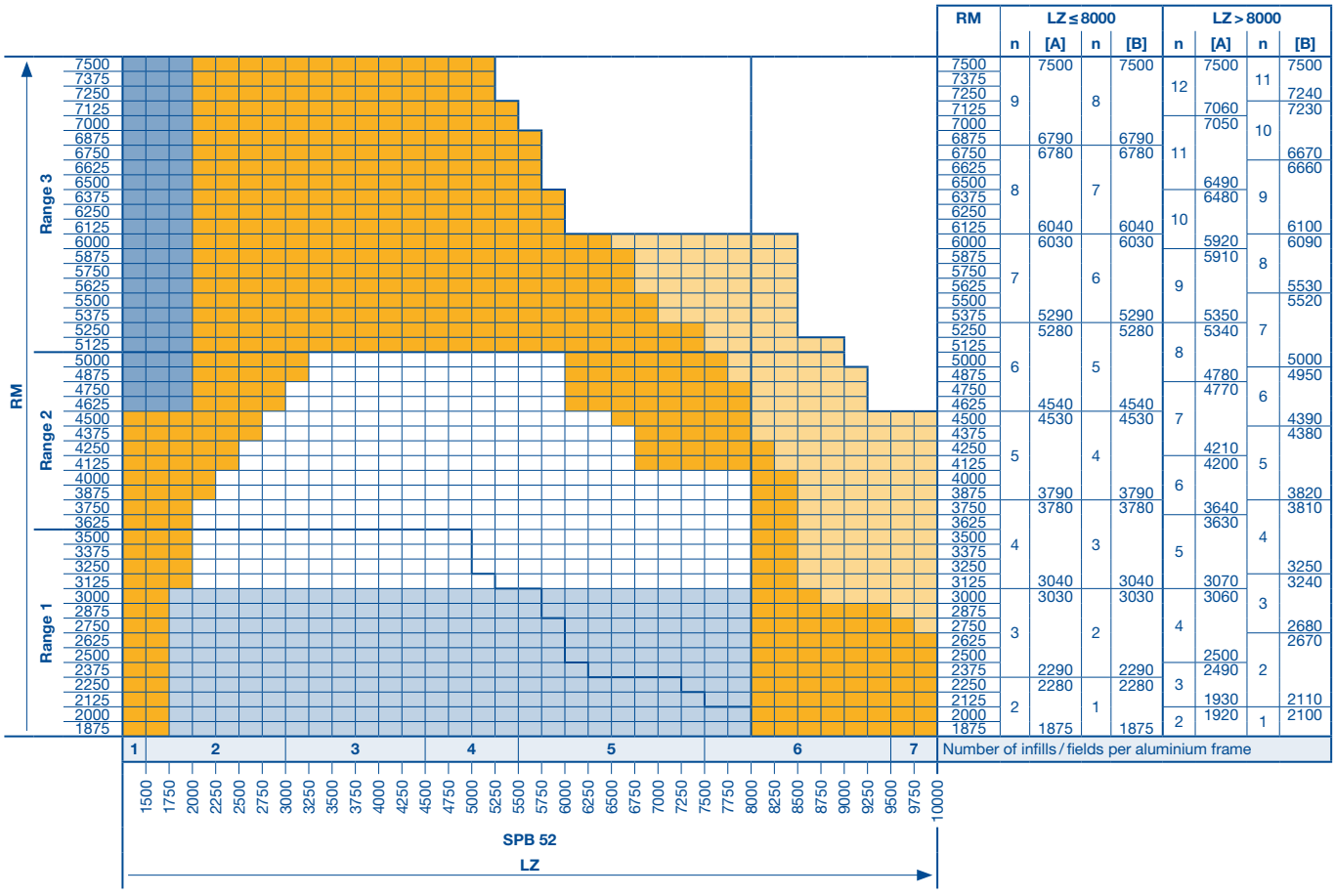
* On request 115 mm, so as to match the appearance of a sectional door with wicket door with trip-free threshold with the same door height.

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 pages 24 – 26.

Size range

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



RM	LZ ≤ 8000				LZ > 8000			
	n	[A]	n	[B]	n	[A]	n	[B]
7500		7500		7500		7500		7500
7375								
7250	9		8		12		11	7240
7125						7060		
7000						7050	10	7230
6875		6790		6790				
6750		6780		6780	11			6670
6625								
6500	8		7			6490		6660
6375						6480	9	
6250					10			
6125		6040		6040				6100
6000		6030		6030		5920		6090
5875						5910	8	
5750	7		6					
5625					9			5530
5500								5520
5375		5290		5290		5350	7	
5250		5280		5280		5340		
5125					8			
5000	6		5					5000
4875						4780		4950
4750						4770	6	
4625		4540		4540				
4500		4530		4530	7			4390
4375						4210		4380
4250	5		4				5	
4125					6	4200		
4000								
3875		3790		3790				3820
3750		3780		3780		3640		3810
3625						3630		
3500	4		3		5		4	
3375								3250
3250						3070		
3125		3040		3040				3240
3000		3030		3030		3060	3	
2875					4			
2750	3		2					2680
2625								2670
2500						2500		
2375		2290		2290		2490	2	
2250		2280		2280	3			
2125	2		1			1930		2110
2000					2	1920	1	2100
1875		1875		1875				

On request: torsion spring shaft or direct drive operator

On request and only direct drive operator S140 with high-lift track application

Direct drive operator S75 with high-lift track application

Track applications N, H and HG on request; torsion spring shaft

Number of door section frames:

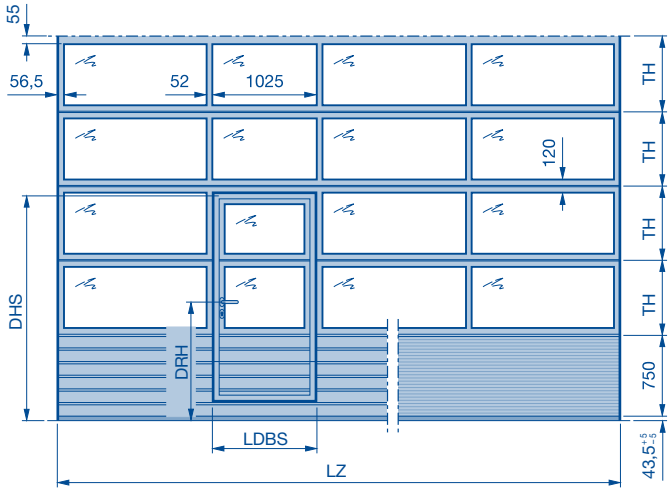
[A]	Bottom section height 750 mm (standard)
[B]	Bottom section height 1500 mm
n	Number of aluminium frames
RM	Grid height
LZ	Clear frame dimensions **(from 1200)**
SPB	Rail width
TH	Door section height

Sectional Door APU 67 Thermo with Wicket Door and Threshold Rail

Aluminium extrusions with thermal break

Bottom section height 750

External view



Lever height on request

Clear passage width (LDBS) = 905 mm*

Clear passage height of wicket door (DHS)
= n_1 × TH + (bottom section height – 55)

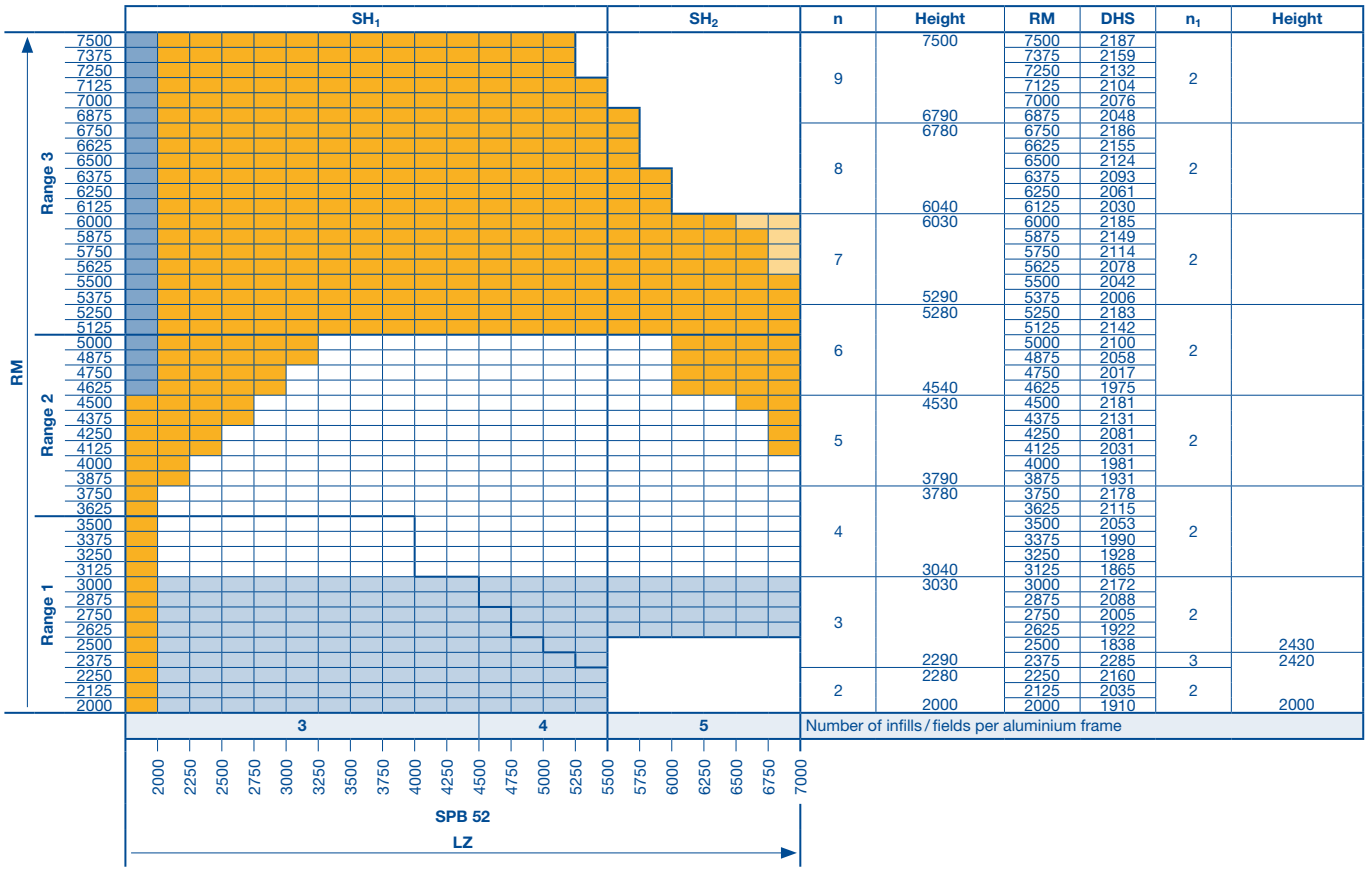
n_1 Number of frames in the wicket door
* For a door width of 1750 – 1840 mm, the clear passage width is 798 mm.

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.
- Bottom door section made of 375 / 500 mm section and 2 × 125 mm aluminium bottom profile for door widths > 5500 mm.
- For a view of the matching appearance with doors without wicket doors see pages 24 – 26.

Size range

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



n	Height	RM	DHS	n_1	Height
9	7500	7500	2187	2	
		7375	2159		
		7250	2132		
		7125	2104		
		7000	2076		
	6790	6875	2048		
8	6780	6750	2186	2	
		6625	2155		
		6500	2124		
		6375	2093		
		6250	2061		
	6040	6125	2030		
7	6030	6000	2185	2	
		5875	2149		
		5750	2114		
		5625	2078		
		5500	2042		
	5290	5375	2006		
6	5280	5250	2183	2	
		5125	2142		
		5000	2100		
		4875	2058		
		4750	2017		
	4540	4625	1975		
5	4530	4500	2181	2	
		4375	2131		
		4250	2081		
		4125	2031		
		4000	1981		
	3790	3875	1931		
4	3780	3750	2178	2	
		3625	2115		
		3500	2053		
		3375	1990		
		3250	1928		
	3040	3125	1865		
3	3030	3000	2172	2	
		2875	2088		
		2750	2005		
		2625	1922		
		2500	1838		2430
	2290	2375	2285	3	2420
2	2280	2250	2160	2	
		2125	2035		
	2000	2000	1910		2000

Number of infills / fields per aluminium frame

On request: torsion spring shaft or direct drive operator

On request and only direct drive operator S140 with high-lift track application

Direct drive operator S75 with high-lift track application

Track applications N, H and HG on request; torsion spring shaft

DHS Clear passage height of wicket door
DRH Lever height

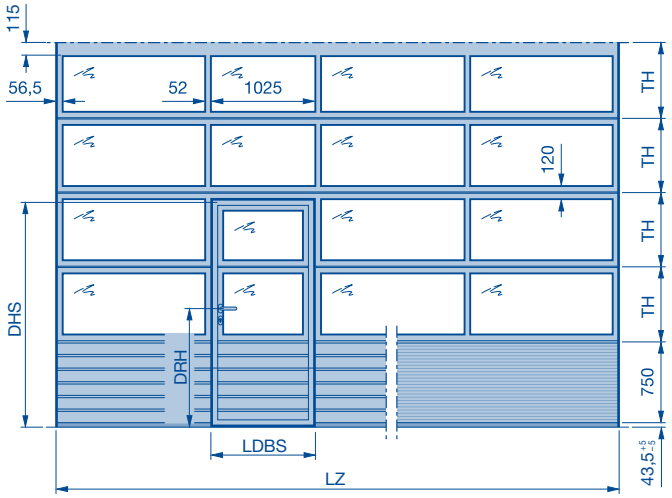
LZ Clear frame dimensions **(from 1750)**
RM Grid height
SPB Rail width
SH_1 Threshold height **(215)**
SH_2 Threshold height **(312)**
n Number of aluminium frames
n_1 Number of aluminium frames in the wicket door
TH Door section height

Sectional Door APU 67 Thermo with Wicket Door with Trip-Free Threshold

Aluminium extrusions with thermal break

Bottom section height 750

External view



Lever height on request

Clear passage width (LDBS) = 905 mm**

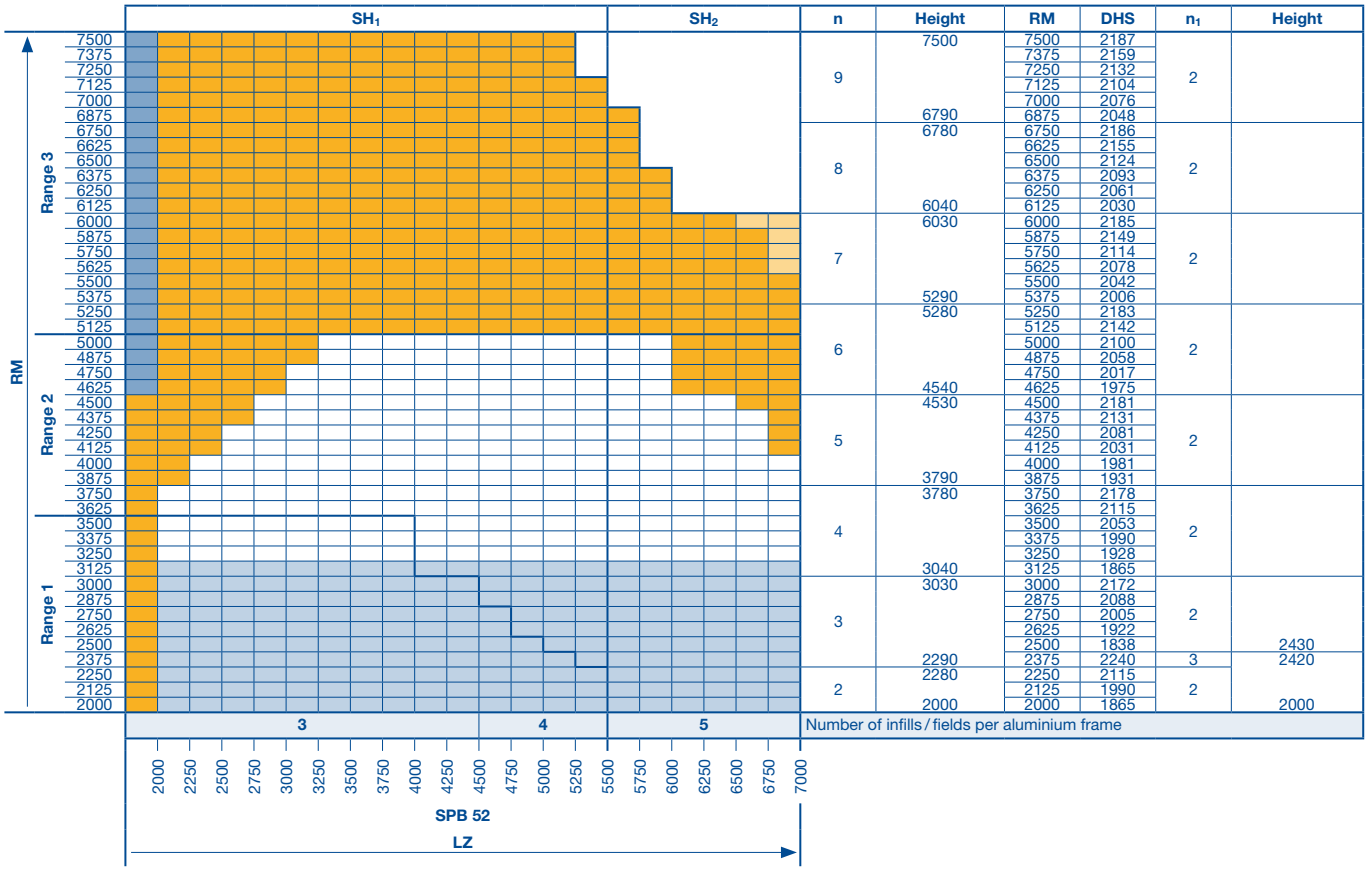
Clear passage height of wicket door (DHS)
= n_1 × TH + (bottom section height – 55*)

n_1 Number of frames in the wicket door
* Attention: If there is no frame above the wicket door, then – 100 instead of – 55.
** For a door width of 1750 – 1840 mm, the clear passage width is 798 mm.

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 pages 24 – 26.

Size range

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



RM	n	Height	RM	DHS	n_1	Height
7500	9	7500	7500	2187	2	
7375			7375	2159		
7250			7250	2132		
7125			7125	2104		
7000			7000	2076		
6875		6790	6875	2048		
6750	8	6780	6750	2186	2	
6625			6625	2155		
6500			6500	2124		
6375			6375	2093		
6250			6250	2061		
6125		6040	6125	2030		
6000	7	6030	6000	2185	2	
5875			5875	2149		
5750			5750	2114		
5625			5625	2078		
5500			5500	2042		
5375		5290	5375	2006		
5250	6	5280	5250	2183	2	
5125			5125	2142		
5000			5000	2100		
4875			4875	2058		
4750			4750	2017		
4625		4540	4625	1975		
4500	5	4530	4500	2181	2	
4375			4375	2131		
4250			4250	2081		
4125			4125	2031		
4000			4000	1981		
3875		3790	3875	1931		
3750	4	3780	3750	2178	2	
3625			3625	2115		
3500			3500	2053		
3375			3375	1990		
3250			3250	1928		
3125		3040	3125	1865		
3000	3	3030	3000	2172	2	
2875			2875	2088		
2750			2750	2005		
2625			2625	1922		
2500			2500	1838		2430
2375		2290	2375	2240	3	2420
2250	2	2280	2250	2115	2	
2125			2125	1990		
2000		2000	2000	1865		2000

Number of infills / fields per aluminium frame

On request: torsion spring shaft or direct drive operator

On request and only direct drive operator S140 with high-lift track application

Direct drive operator S75 with high-lift track application

Track application **N not possible** for a door height RM ≤ 3000 mm; H and HG on request; torsion spring shaft

DHS Clear passage height of wicket door

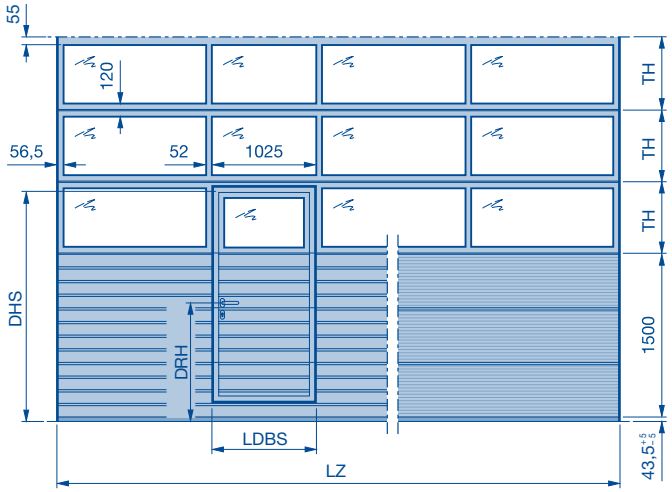
DRH Lever height
LZ Clear frame dimensions **(from 1750)**
RM Grid height
SPB Rail width
SH_1 Threshold height **(rising from 5 to 10)**
SH_2 Threshold height **(approx. 13)**
n Number of aluminium frames
n_1 Number of aluminium frames in the wicket door
TH Door section height

Sectional Door APU 67 Thermo with Wicket Door and Threshold Rail

Aluminium extrusions with thermal break

Bottom section height 1500

External view



Lever height on request

Clear passage width (LDBS) = 905 mm*

Clear passage height of wicket door (DHS)
= n_1 × TH + (bottom section height – 55)

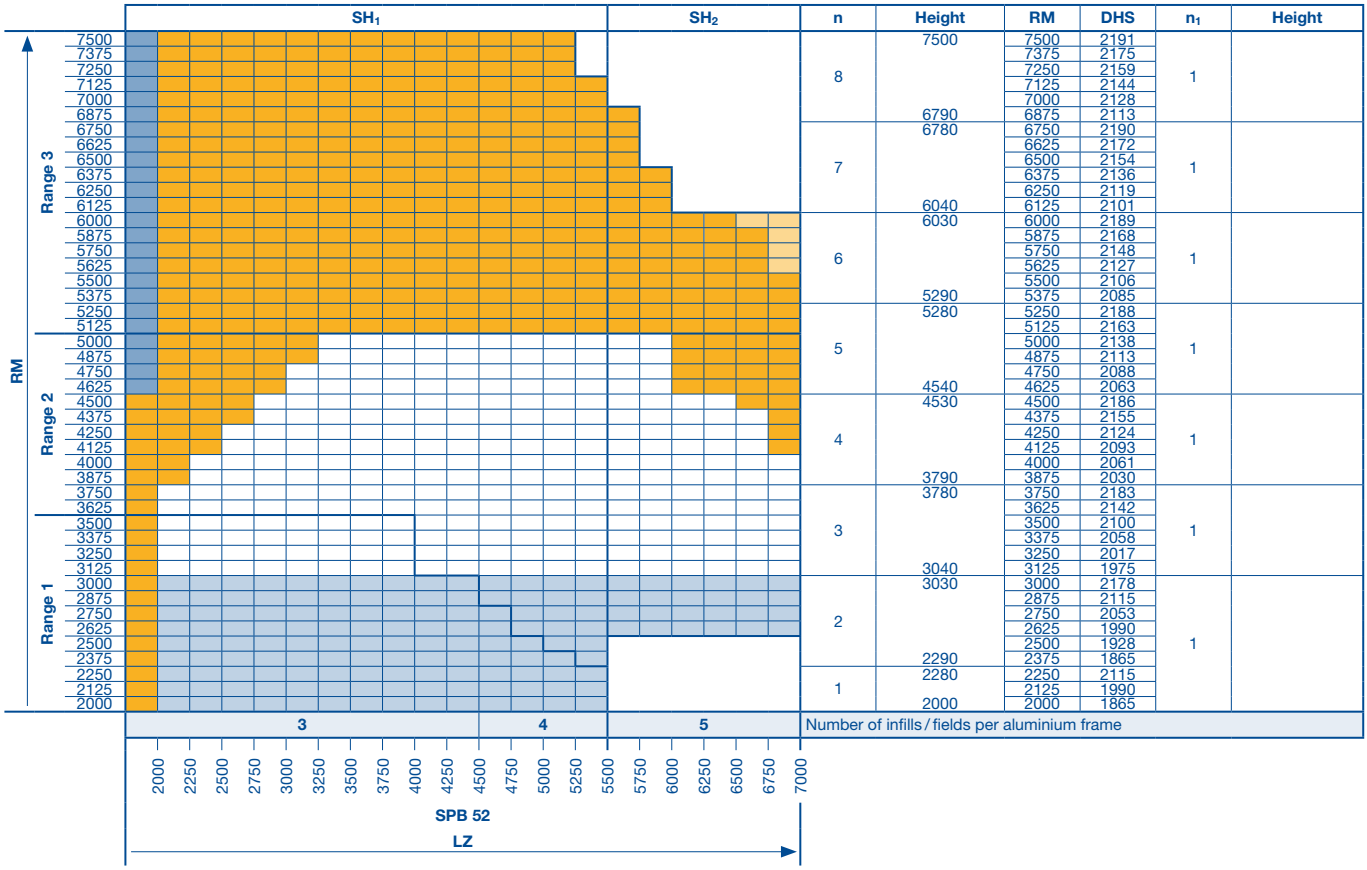
n_1 Number of frames in the wicket door
* For a door width of 1750 – 1840 mm, the clear passage width is 798 mm.

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.
- Bottom door section made of 375 / 500 mm section and 2 × 125 mm aluminium bottom profile for door widths > 5500 mm.
- For a view of the matching appearance with doors without wicket doors see pages 24 – 26.

Size range

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



n	Height	RM	DHS	n_1	Height
8	7500 – 6790	7500	2191	1	
		7375	2175		
		7250	2159		
		7125	2144		
		7000	2128		
		6875	2113		
7	6780 – 6040	6750	2190	1	
		6625	2172		
		6500	2154		
		6375	2136		
		6250	2119		
		6125	2101		
6	6030 – 5290	6000	2189	1	
		5875	2168		
		5750	2148		
		5625	2127		
		5500	2106		
		5375	2085		
5	5280 – 4540	5250	2188	1	
		5125	2163		
		5000	2138		
		4875	2113		
		4750	2088		
		4625	2063		
4	4530 – 3790	4500	2186	1	
		4375	2155		
		4250	2124		
		4125	2093		
		4000	2061		
		3875	2030		
3	3780 – 3040	3750	2183	1	
		3625	2142		
		3500	2100		
		3375	2058		
		3250	2017		
		3125	1975		
2	3030 – 2290	3000	2178	1	
		2875	2115		
		2750	2053		
		2625	1990		
		2500	1928		
		2375	1865		
1	2280 – 2000	2250	2115		
		2125	1990		
		2000	1865		

Number of infills / fields per aluminium frame

On request: torsion spring shaft or direct drive operator

On request and only direct drive operator S140 with high-lift track application

Direct drive operator S75 with high-lift track application

Track applications N, H and HG on request; torsion spring shaft

DHS Clear passage height of wicket door
DRH Lever height

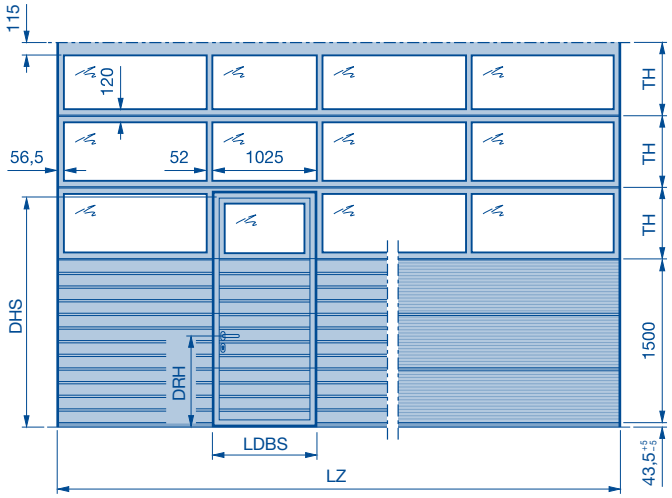
LZ Clear frame dimensions **(from 1750)**
RM Grid height
SPB Rail width
SH_1 Threshold height **(215)**
SH_2 Threshold height **(312)**
n Number of aluminium frames
n_1 Number of aluminium frames in the wicket door
TH Door section height

Sectional Door APU 67 Thermo with Wicket Door with Trip-Free Threshold

Aluminium extrusions with thermal break

Bottom section height 1500

External view



Lever height (DRH):

LZ ≤ 6000 = 1080.5

LZ > 6000 = 830.5

Clear passage width (LDBS) = 905 mm**

Clear passage height of wicket door (DHS)
= n_1 × TH + (bottom section height – 55*)

n_1 Number of frames in the wicket door

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

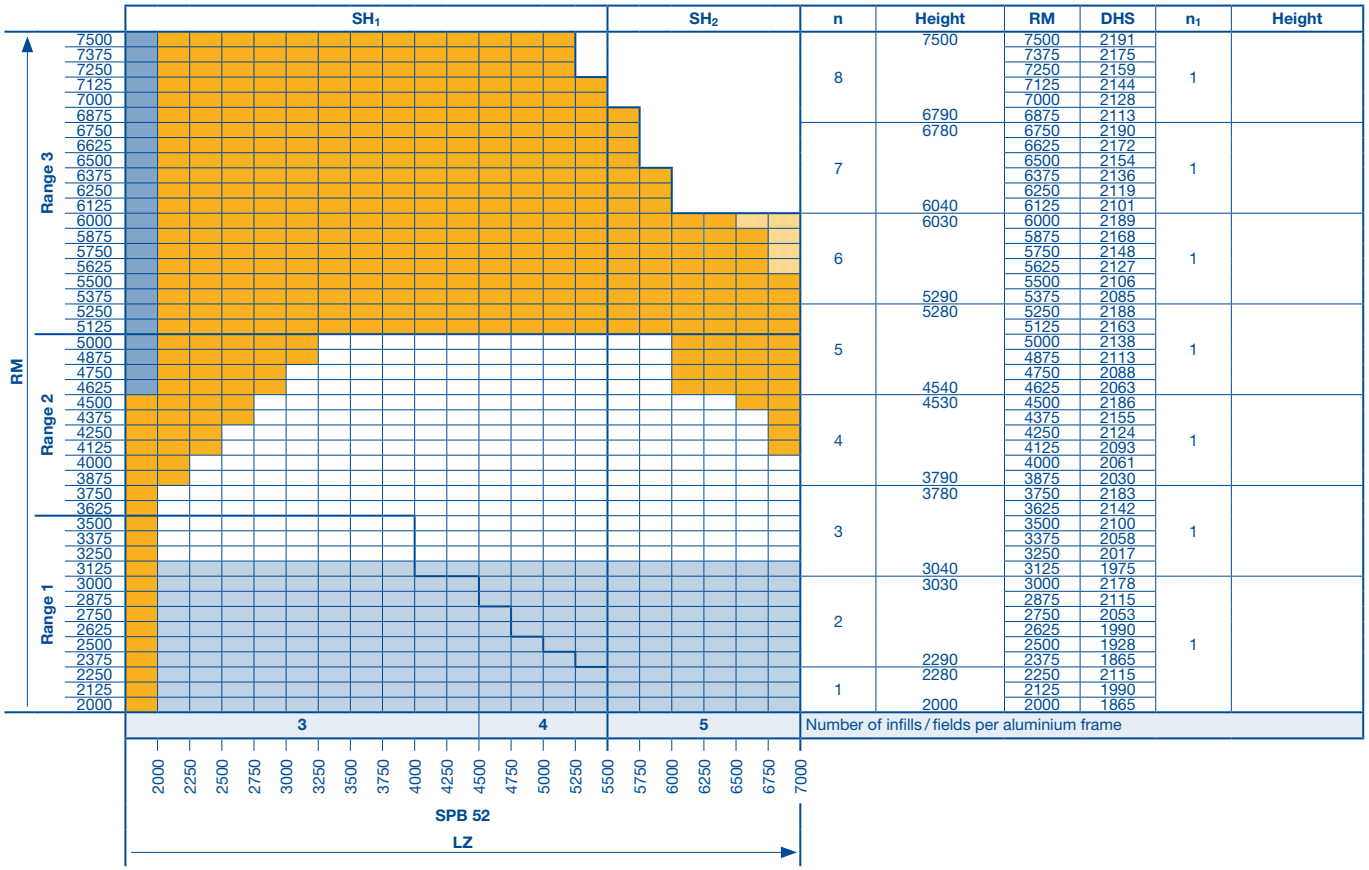
** For a door width of 1750 – 1840 mm, the clear passage width is 798 mm.

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 pages 24 – 26.

Size range

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



n	Height	RM	DHS	n_1	Height
8	7500	7500	2191	1	
		7375	2175		
		7250	2159		
		7125	2144		
		7000	2128		
	6790	6875	2113		
7	6780	6750	2190	1	
		6625	2172		
		6500	2154		
		6375	2136		
		6250	2119		
	6040	6125	2101		
6	6030	6000	2189	1	
		5875	2168		
		5750	2148		
		5625	2127		
		5500	2106		
	5290	5375	2085		
5	5280	5250	2188	1	
		5125	2163		
		5000	2138		
		4875	2113		
		4750	2088		
	4540	4625	2063		
4	4530	4500	2186	1	
		4375	2155		
		4250	2124		
		4125	2093		
		4000	2061		
	3790	3875	2030		
3	3780	3750	2183	1	
		3625	2142		
		3500	2100		
		3375	2058		
		3250	2017		
	3040	3125	1975		
2	3030	3000	2178	1	
		2875	2115		
		2750	2053		
		2625	1990		
		2500	1928		
	2290	2375	1865		
1	2280	2250	2115		
		2125	1990		
	2000	2000	1865		

Number of infills / fields per aluminium frame

On request: torsion spring shaft or direct drive operator

On request and only direct drive operator S140 with high-lift track application

Direct drive operator S75 with high-lift track application

Track application **N not possible** for a door height RM ≤ 3000 mm; H and HG on request; torsion spring shaft

DHS Clear passage height of wicket door

DRH Lever height

LZ Clear frame dimensions **(from 1750)**

RM Grid height

SPB Rail width

SH_1 Threshold height **(rising from 5 to 10)**

SH_2 Threshold height **(approx. 13)**

n Number of aluminium frames

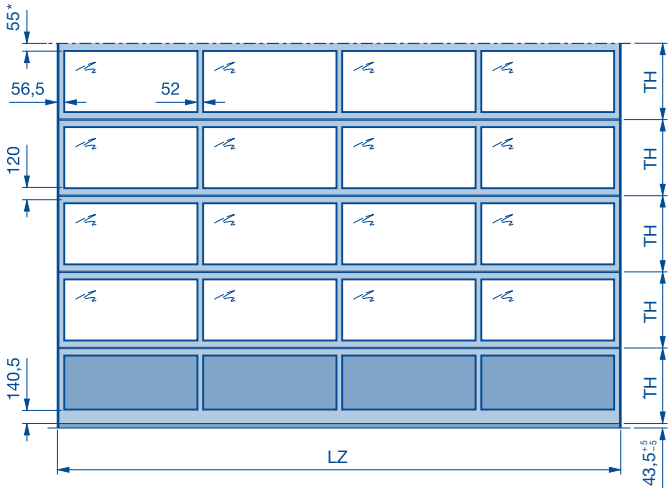
n_1 Number of aluminium frames in the wicket door

TH Door section height

Sectional Door ALR 67 Thermo

Door leaf made of aluminium extrusions with thermal break

External view



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

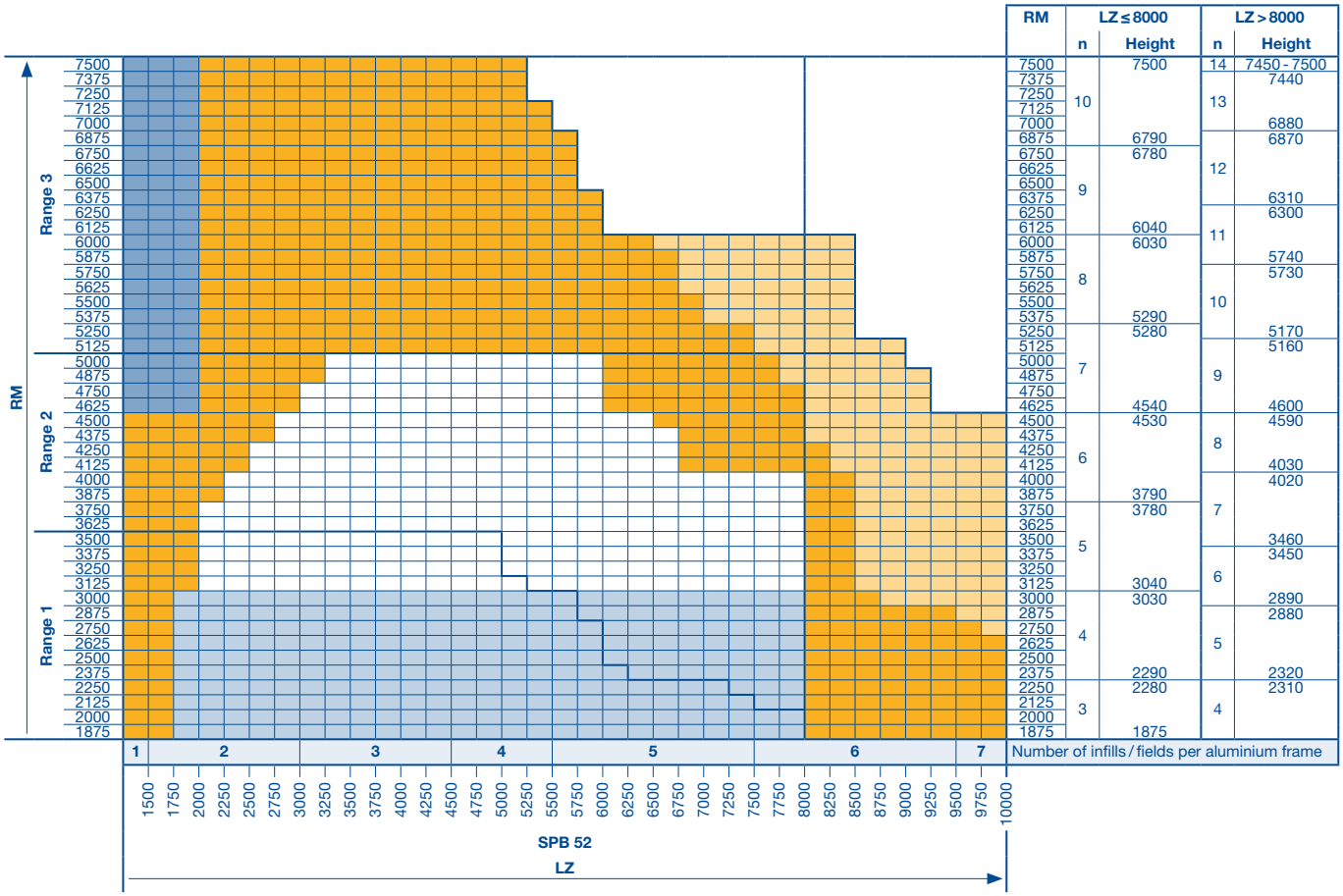
* On request 115 mm, so as to match the appearance of a sectional door with wicket door with trip-free threshold with the same door height.

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 pages 24 – 26.

Size range

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



RM	LZ ≤ 8000		LZ > 8000	
	n	Height	n	Height
7500	10	7500	14	7450 - 7500
7375			13	7440
7250				
7125				
7000				6880
6875		6790	12	6870
6750	9	6780		
6625				
6500				
6375				6310
6250			11	6300
6125		6040		
6000	8	6030		
5875				5740
5750			10	5730
5625				
5500				
5375		5290		
5250	7	5280		5170
5125			9	5160
5000				
4875				
4750				
4625		4540		4600
4500	6	4530	8	4590
4375				
4250				
4125				4030
4000			7	4020
3875		3790		
3750	5	3780		
3625				
3500				3460
3375			6	3450
3250				
3125		3040		
3000	4	3030		2890
2875			5	2880
2750				
2625				
2500				
2375		2290		2320
2250	3	2280	4	2310
2125				
2000				
1875		1875		

On request: torsion spring shaft or direct drive operator

On request and only direct drive operator S140 with high-lift track application

Direct drive operator S75 with high-lift track application

Track applications N, H and HG on request; torsion spring shaft

n Number of aluminium frames

RM Grid height

LZ Clear frame dimensions **(from 1200)**

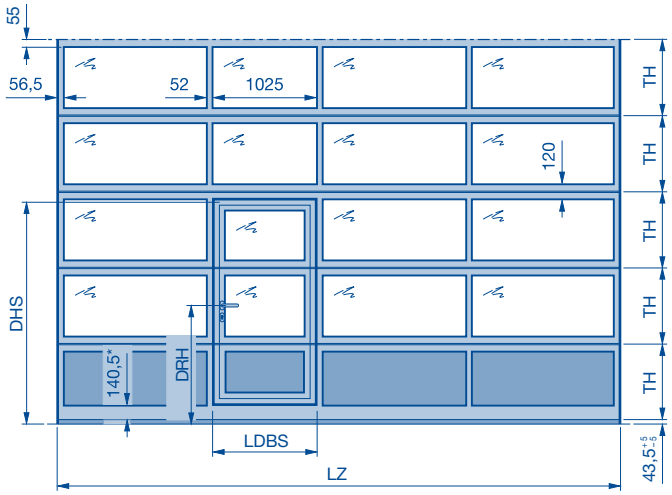
SPB Rail width

TH Door section height

Sectional Door ALR 67 Thermo with Wicket Door and Threshold Rail

Door leaf made of aluminium extrusions with thermal break

External view



Lever height on request

Clear passage width (LDBS) = 905 mm**

Clear passage height of wicket door (DHS) = $n_1 \times TH - 55$

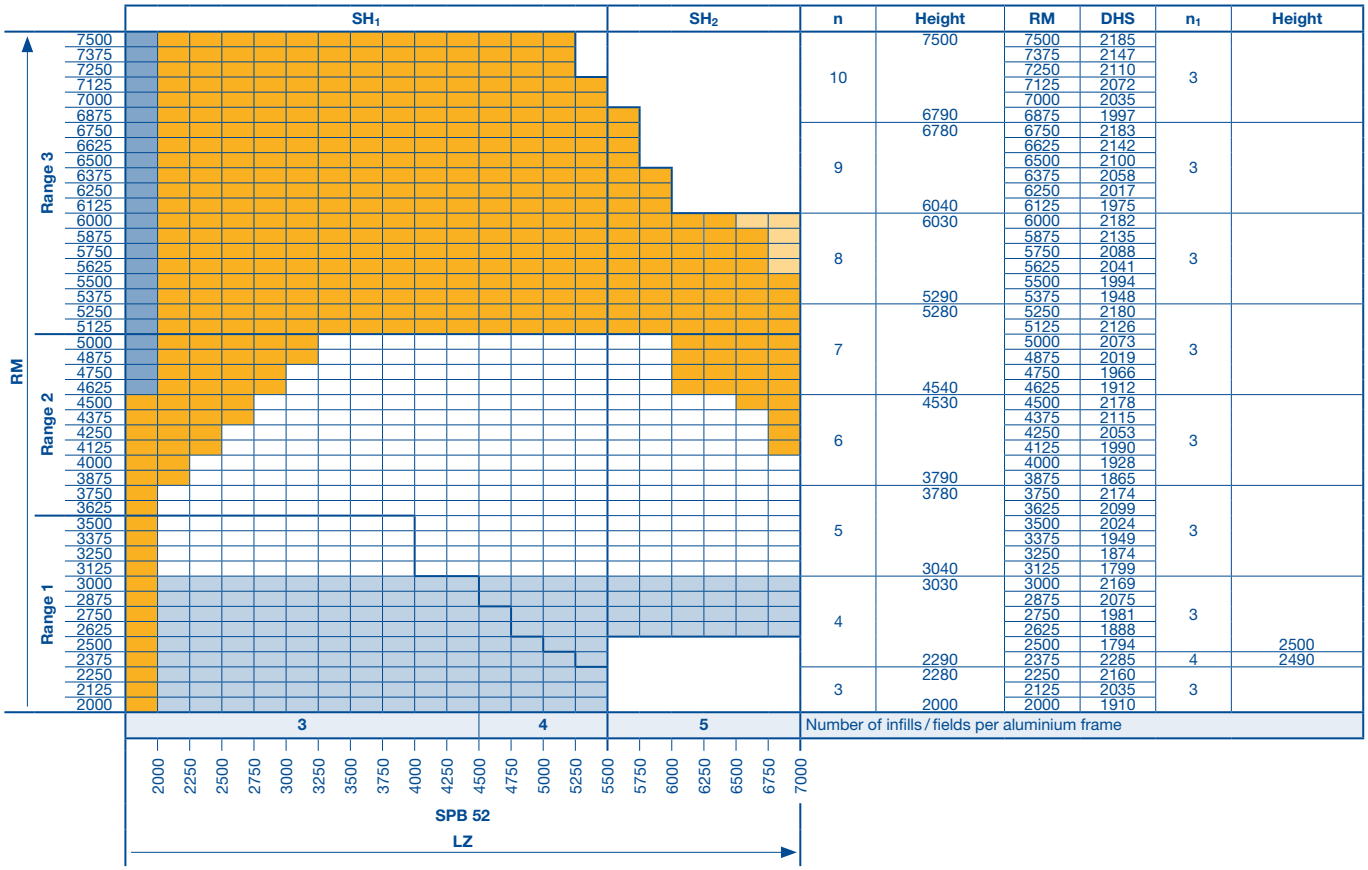
n_1 Number of frames in the wicket door
* 265.5 with SH_2
** For a door width of 1750 – 1840 mm, the clear passage width is 798 mm.

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 pages 24 – 26.

Size range

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



n	Height	RM	DHS	n_1	Height
10	7500	7500	2185	3	
		7375	2147		
		7250	2110		
		7125	2072		
		7000	2035		
	6790	6875	1997		
9	6780	6750	2183	3	
		6625	2142		
		6500	2100		
		6375	2058		
		6250	2017		
	6040	6125	1975		
8	6030	6000	2182	3	
		5875	2135		
		5750	2088		
		5625	2041		
		5500	1994		
	5290	5375	1948		
7	5280	5250	2180	3	
		5125	2126		
		5000	2073		
		4875	2019		
		4750	1966		
	4540	4625	1912		
6	4530	4500	2178	3	
		4375	2115		
		4250	2053		
		4125	1990		
		4000	1928		
	3790	3875	1865		
5	3780	3750	2174	3	
		3625	2099		
		3500	2024		
		3375	1949		
		3250	1874		
	3040	3125	1799		
4	3030	3000	2169	3	
		2875	2075		
		2750	1981		
		2625	1888		
		2500	1794		2500
	2290	2375	2285	4	2490
3	2280	2250	2160	3	
		2125	2035		
	2000	2000	1910		

Number of infills / fields per aluminium frame

On request: torsion spring shaft or direct drive operator

On request and only direct drive operator S140 with high-lift track application

Direct drive operator S75 with high-lift track application

Track applications N, H and HG on request; torsion spring shaft

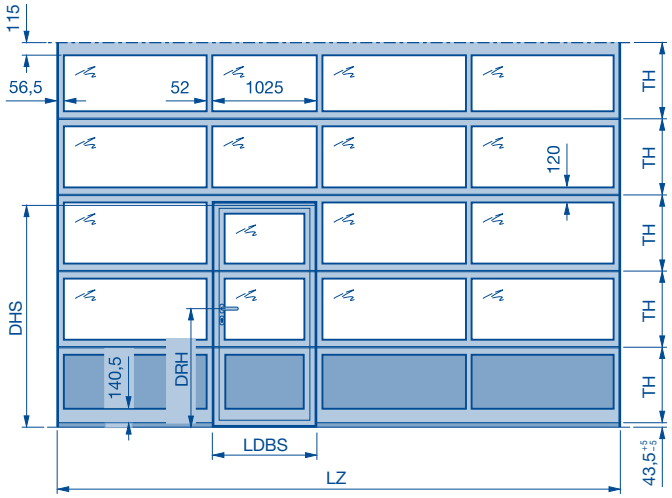
DHS Clear passage height of wicket door
DRH Lever height

LZ Clear frame dimensions **(from 1750)**
RM Grid height
SPB Rail width
SH_1 Threshold height **(187)**
SH_2 Threshold height **(312)**
n Number of aluminium frames
n_1 Number of aluminium frames in the wicket door
TH Door section height

Sectional Door ALR 67 Thermo with Wicket Door with Trip-Free Threshold

Door leaf made of aluminium extrusions with thermal break

External view



Lever height on request

Clear passage width (LDBS) = 905 mm**

Clear passage height of wicket door (DHS) = $n_1 \times TH - 55$*

n_1 Number of frames in the wicket door

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

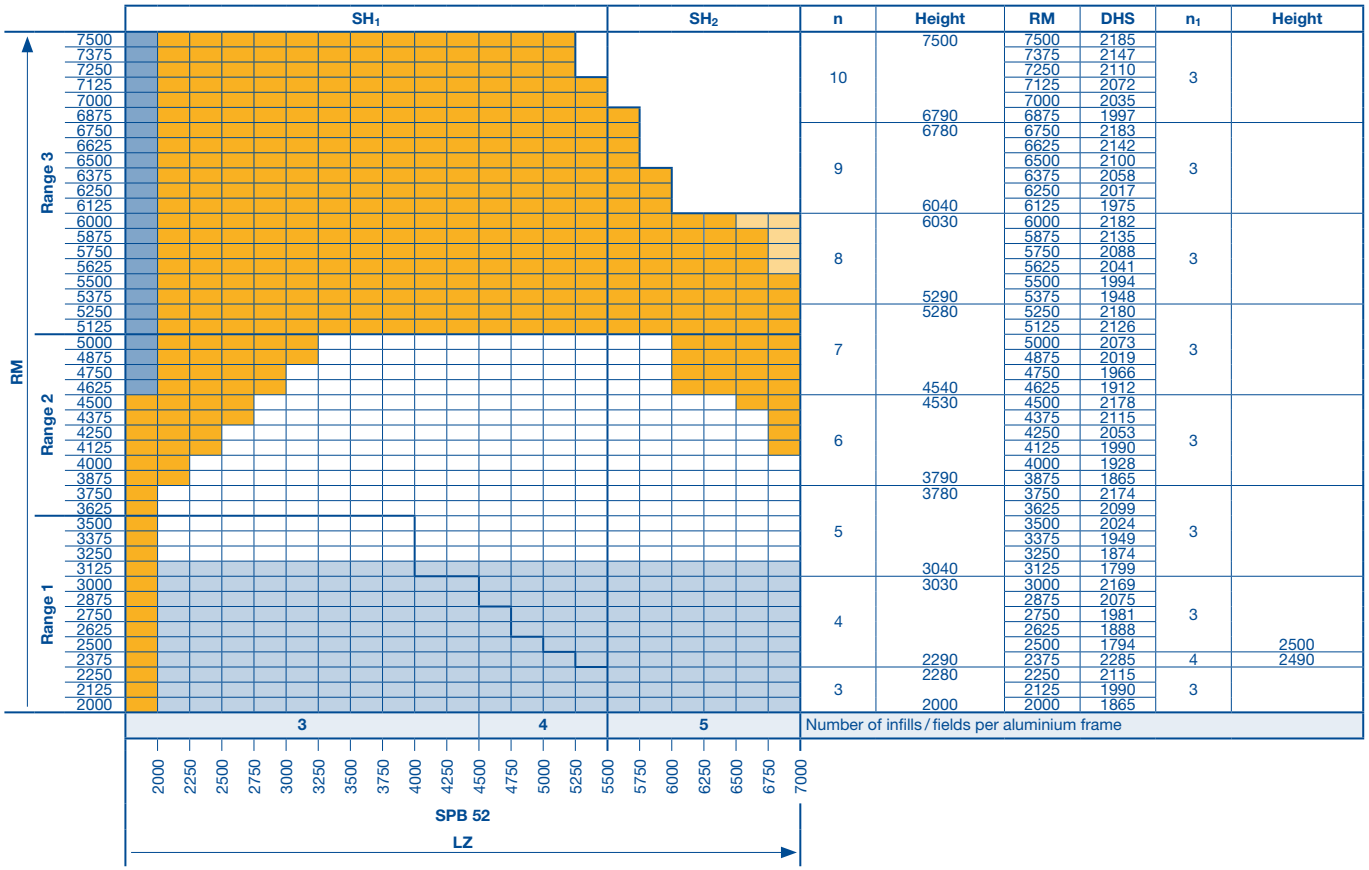
** For a door width of 1750 – 1840 mm, the clear passage width is 833 mm.

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 pages 24 – 26.

Size range

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



RM	n	Height	DHS	n_1	Height
7500	10	7500	2185	3	
7375			2147		
7250			2110		
7125			2072		
7000			2035		
6875		6790	1997		
6750	9	6780	2183	3	
6625			2142		
6500			2100		
6375			2058		
6250			2017		
6125		6040	1975		
6000	8	6030	2182	3	
5875			2135		
5750			2088		
5625			2041		
5500			1994		
5375		5290	1948		
5250	7	5280	2180	3	
5125			2126		
5000			2073		
4875			2019		
4750			1966		
4625		4540	1912		
4500	6	4530	2178	3	
4375			2115		
4250			2053		
4125			1990		
4000			1928		
3875		3790	1865		
3750	5	3780	2174	3	
3625			2099		
3500			2024		
3375			1949		
3250			1874		
3125		3040	1799		
3000	4	3030	2169	3	
2875			2075		
2750			1981		
2625			1888		
2500			1794		2500
2375		2290	2285	4	2490
2250	3	2280	2115	3	
2125			1990		
2000		2000	1865		

Number of infills / fields per aluminium frame

On request: torsion spring shaft or direct drive operator

On request and only direct drive operator S140 with high-lift track application

Direct drive operator S75 with high-lift track application

Track application **N not possible** for a door height RM ≤ 3000 mm; H and HG on request; torsion spring shaft

DHS Clear passage height of wicket door

DRH Lever height

LZ Clear frame dimensions **(from 1750)**

RM Grid height

SPB Rail width

SH_1 Threshold height **(rising from 5 to 10)**

SH_2 Threshold height **(approx. 13)**

n Number of aluminium frames

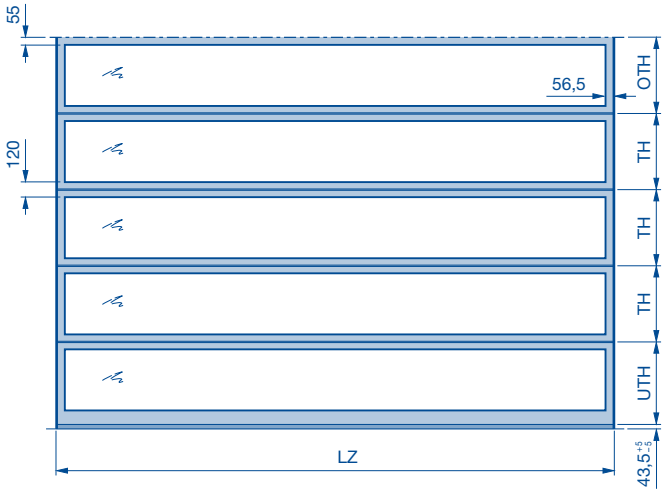
n_1 Number of aluminium frames in the wicket door

TH Door section height

Sectional Door ALR 67 Thermo Glazing

Door leaf made of aluminium extrusions with thermal break

External view



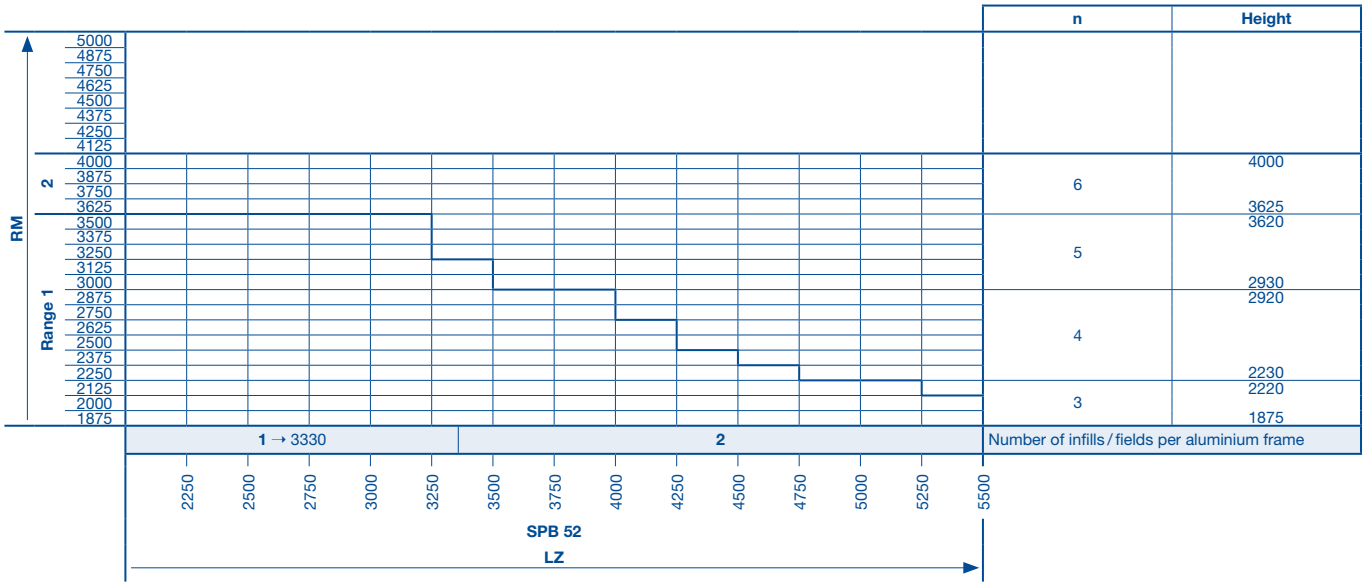
$$TH = \frac{\text{Door height} - 119}{\text{Number of door section frames}}$$

UTH = TH + 84 ≤ 785
OTH = TH 35

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.



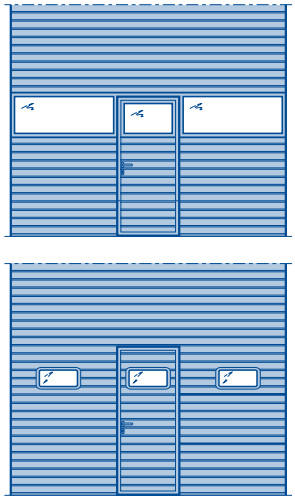
RM	Grid height	**TH**	Door section height
LZ	Clear frame dimensions **(from 2000)**	**OTH**	Upper door section height
→	up to LZ		
SPB	Rail width		
n	Number of aluminium frames		
UTH	Bottom door section height		

Glazing / Wicket Door Arrangements

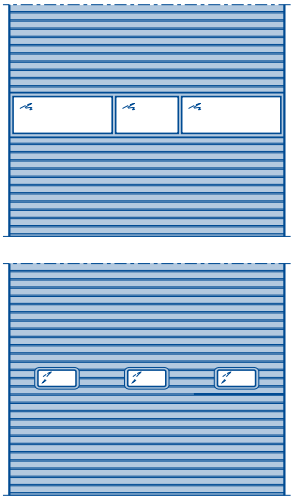
Sectional doors with 3 infills / fields

Glazing arrangements – external view

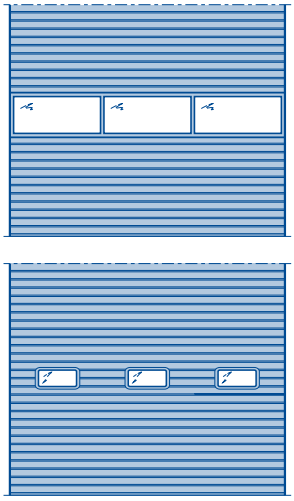
Sectional door SPU 67 Thermo
with wicket door with trip-free threshold



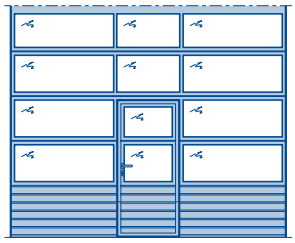
Sectional door SPU 67 Thermo,
matching doors with wicket door



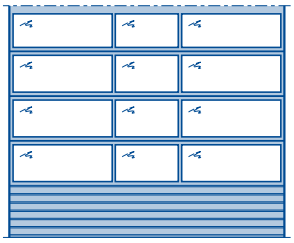
Sectional door SPU 67 Thermo
with standard window division



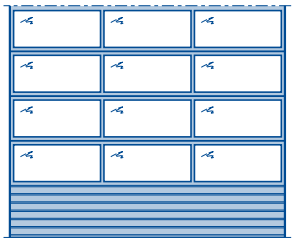
Sectional door APU 67 Thermo
with wicket door with trip-free threshold



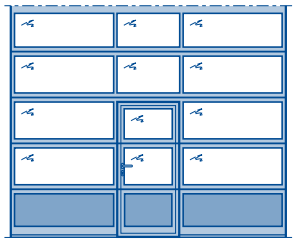
Sectional door APU 67 Thermo,
matching doors with wicket door



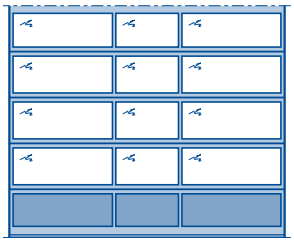
Sectional door APU 67 Thermo
with standard window division



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

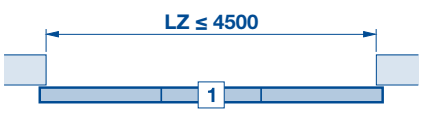


Sectional door ALR 67 Thermo,
matching doors with wicket door



Sectional door ALR 67 Thermo
with standard window division

Arrangement of the wicket door



Note:

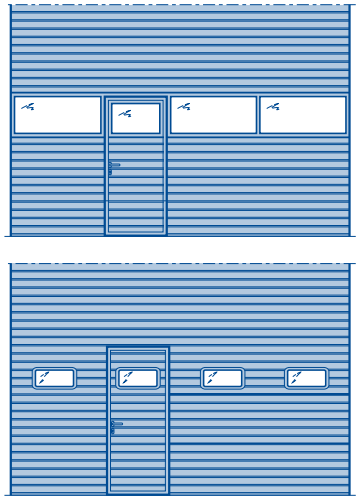
- Clear passage width (LDBS) = 905 mm.
- Wicket door only opening outwards.

Glazing / Wicket Door Arrangements

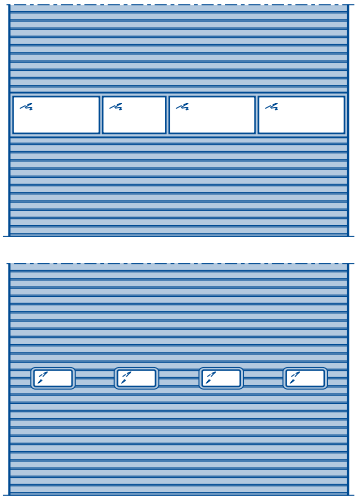
Sectional doors with 4 infills / fields

Glazing arrangements – external view

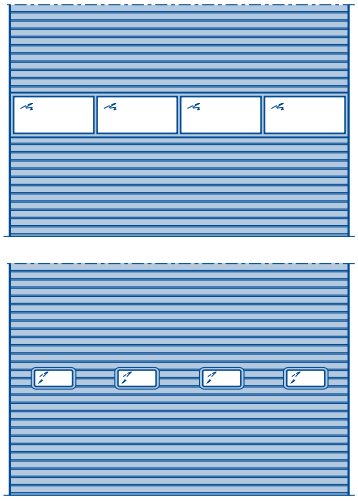
Sectional door SPU 67 Thermo
with wicket door with trip-free threshold



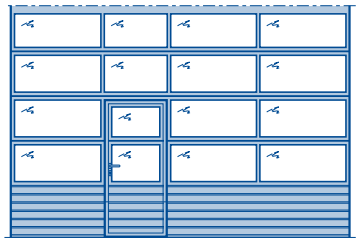
Sectional door SPU 67 Thermo,
matching doors with wicket door



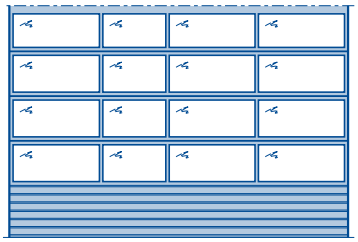
Sectional door SPU 67 Thermo
with standard window division



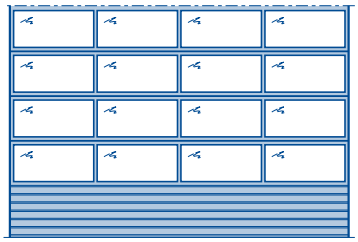
Sectional door APU 67 Thermo
with wicket door with trip-free threshold



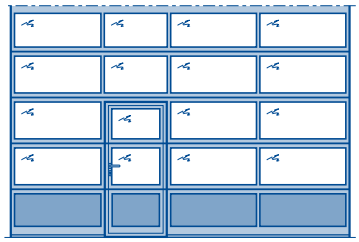
Sectional door APU 67 Thermo,
matching doors with wicket door



Sectional door APU 67 Thermo
with standard window division

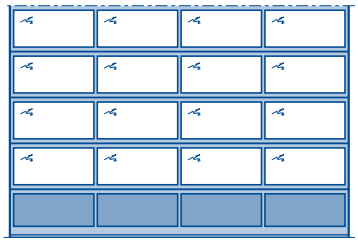


Sectional door ALR 67 Thermo
with wicket door with trip-free threshold

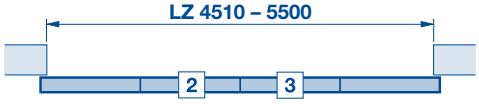


Sectional door ALR 67 Thermo,
matching doors with wicket door

Sectional door ALR 67 Thermo
with standard window division



Arrangement of the wicket door



Note:

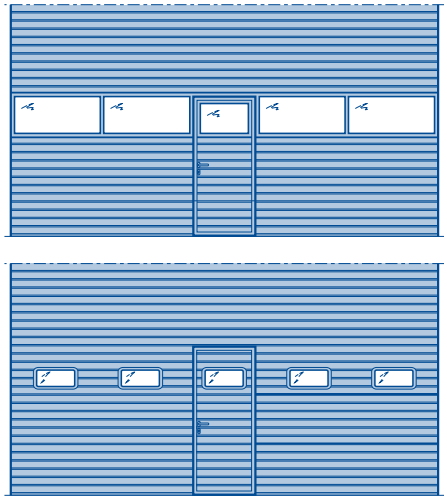
- Clear passage width (LDBS) = 905 mm.
- Wicket door only opening outwards.

Glazing / Wicket Door Arrangements

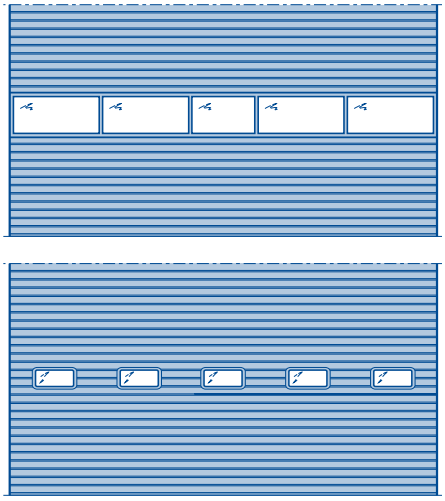
Sectional doors with 5 infills / fields

Glazing arrangements – external view

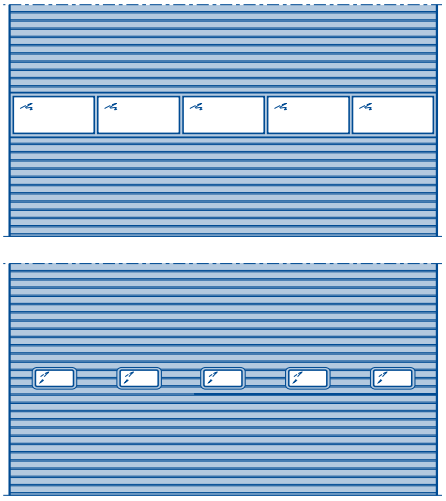
Sectional door SPU 67 Thermo
with wicket door with trip-free threshold



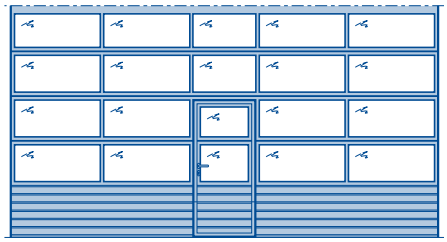
Sectional door SPU 67 Thermo,
matching doors with wicket door



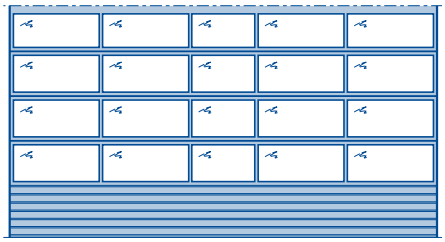
Sectional door SPU 67 Thermo
with standard window division



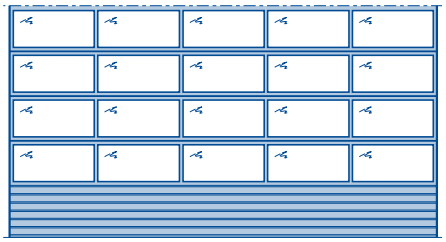
Sectional door APU 67 Thermo
with wicket door with trip-free threshold



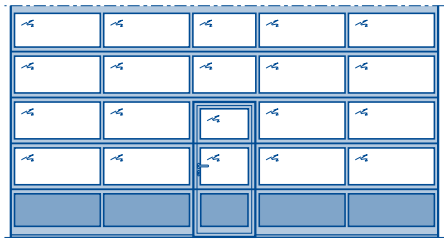
Sectional door APU 67 Thermo,
matching doors with wicket door



Sectional door APU 67 Thermo
with standard window division

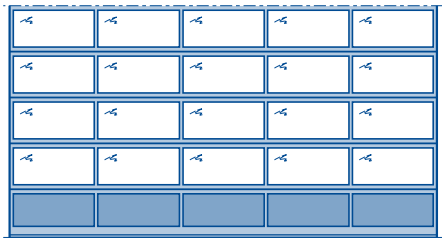


Sectional door ALR 67 Thermo
with wicket door with trip-free threshold

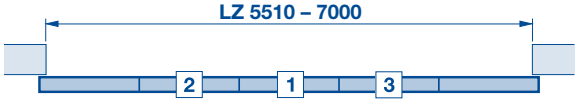


Sectional door ALR 67 Thermo,
matching doors with wicket door

Sectional door ALR 67 Thermo
with standard window division



Arrangement of the wicket door



Note:

- Clear passage width (LDBS) = 905 mm.
- Wicket door only opening outwards.

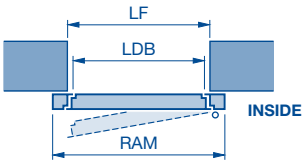
Side Door NT 80 Thermo

Possible handing options

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

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

Fitting behind the opening
Only opening inwards, LH or RH 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
Size range: width: RAM 770 to 1300, height: RAM 1865 to 2525 **(state overall frame dimension)** **Doors with 3-point locking:** RAM = ≥ 1940 mm	

Clear passage dimensions:

Opening angle	Width	Height
136°	RAM – 164	RAM – 70
90°	RAM – 215	

LF Structural opening
RAM Overall frame dimension
LDB Clear passage width
LDH Clear passage height
LZ Clear frame dimensions

Side Door NT 80 Thermo

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

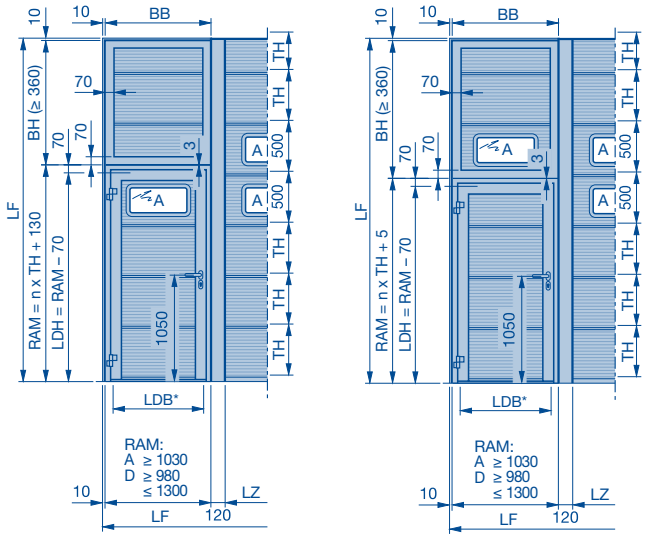
* See page 27

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

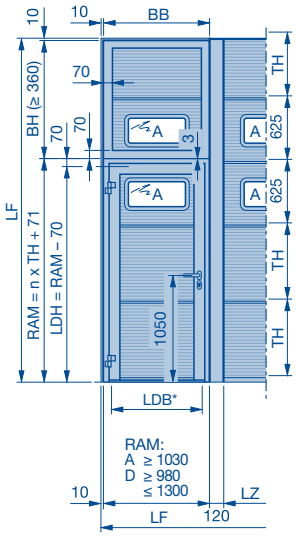
Side Door NT 80 Thermo

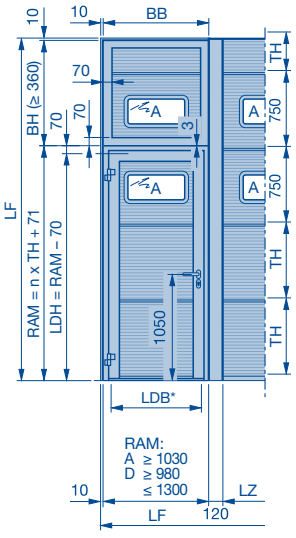
With L-ribbed Micrograin infills

Compound glazing type A TH = 500

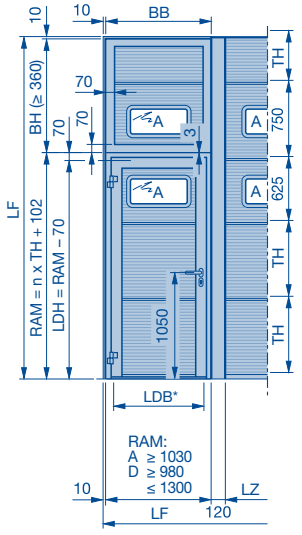


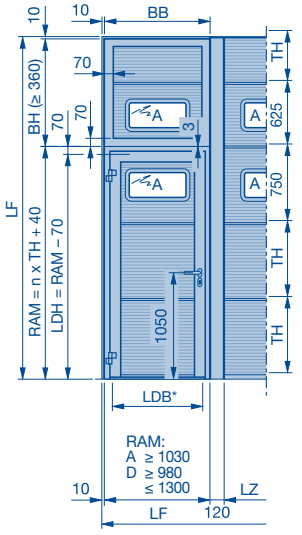
Compound glazing type A TH = 625 and 750



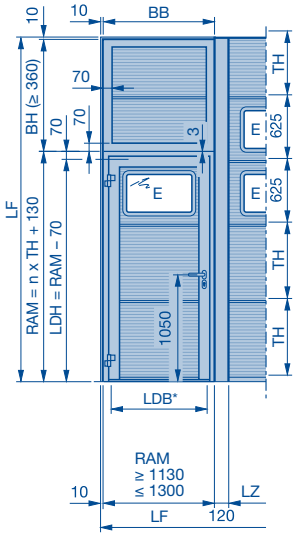


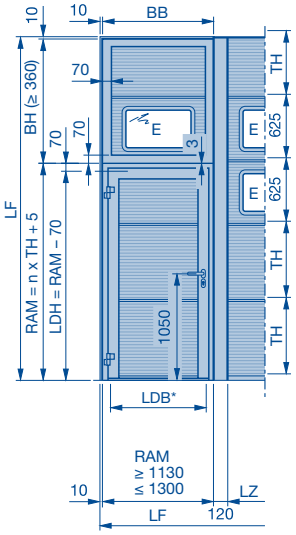
Compound glazing type A TH = 625 / 750 and 750 / 625



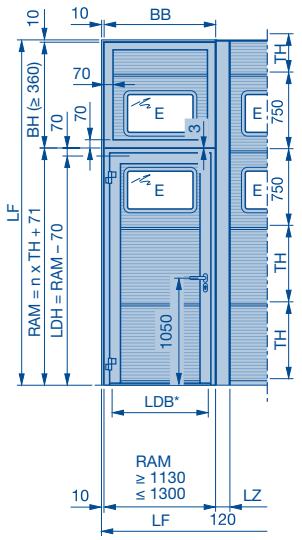


Compound glazing type E TH = 625





Compound glazing type E TH = 750

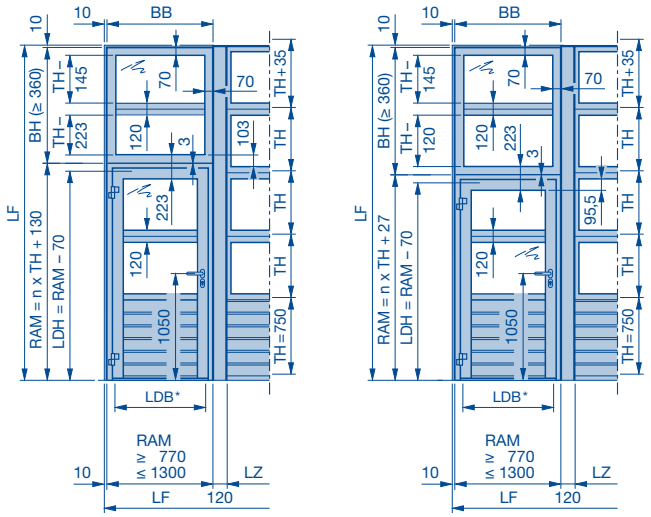


(Legend see page 28)

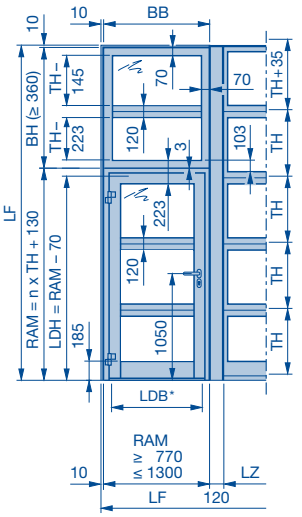
Side Door NT 80 Thermo

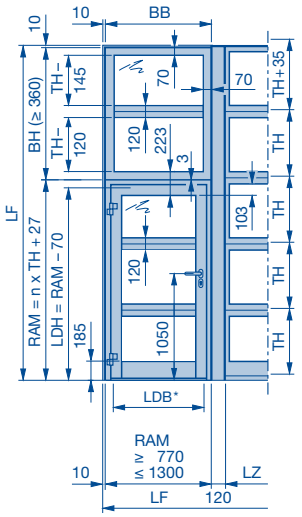
With S-ribbed Stucco-textured / L-ribbed Micrograin infills

Side door NT 80 Thermo matching door type APU 67 Thermo



Side door NT 80 Thermo matching door type ALR 67 Thermo





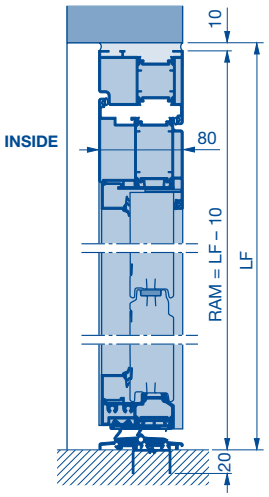
*	See page 27	**BB**	Panel width	**SO**	Bottom section height
LF	Structural opening	**LDB**	Clear passage width	**LZ**	Clear frame dimensions
RAM	Overall frame dimension	**LDH**	Clear passage height	**n**	Number of door sections / aluminium frames
BH	Panel height	**TH**	Door section height		

Side Door NT 80 Thermo

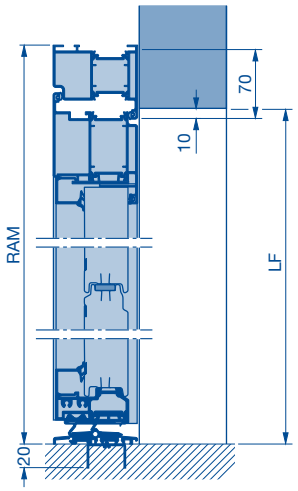
Possible fitting options

Possible fitting options

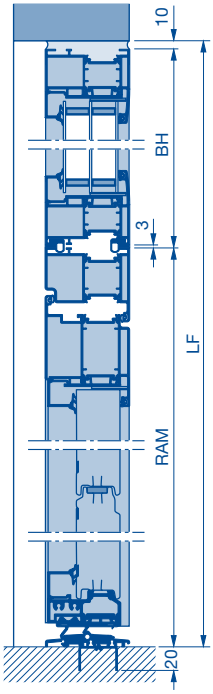
SPU 67 Thermo in the opening
without window section,
without compound glazing



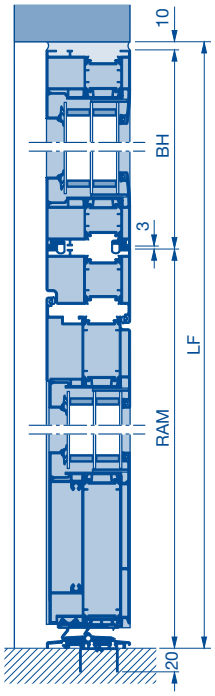
SPU 67 Thermo behind the opening
without window section,
without compound glazing



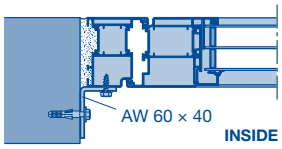
SPU 67 Thermo, APU 67 Thermo with fascia panel

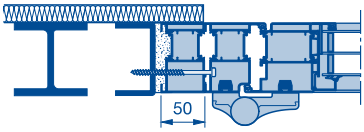


ALR 67 Thermo with fascia panel

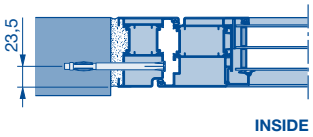


In the opening
(right illustration with 50 mm extension profile for all-over insulation)

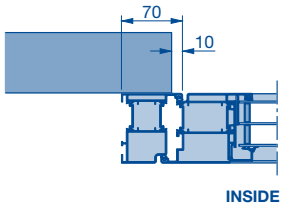




Plugs for metal frame



Behind the opening



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

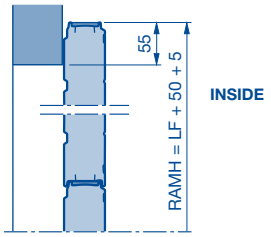
R	Box section	**BH**	Panel height	**LF**	Structural opening
AW	Aluminium angle	**RAM**	Overall frame dimension		
SW	Steel angle	**LDB**	Clear passage width		

Fixed Elements

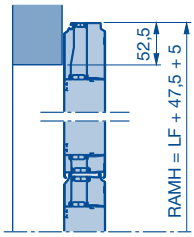
Possible fitting options and fitting examples

Possible fitting options

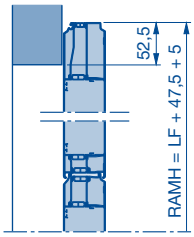
SPU 67 Thermo behind the opening
without window section,
without compound glazing



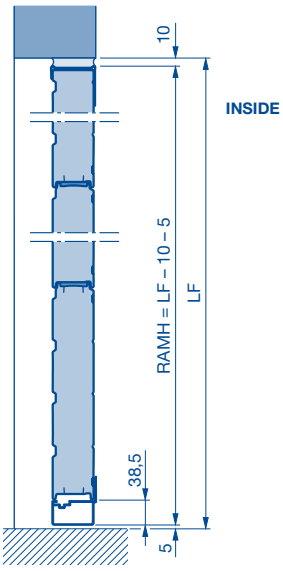
APU 67 Thermo behind the opening



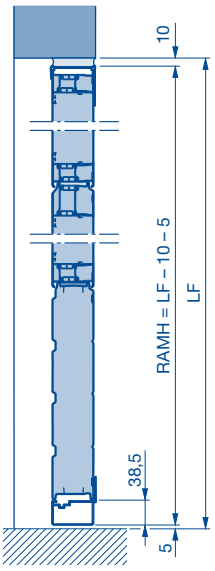
ALR 67 Thermo behind the opening



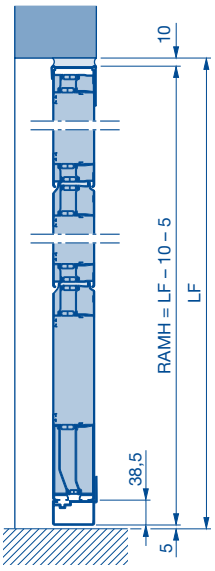
SPU 67 Thermo in the opening
without window section,
without compound glazing



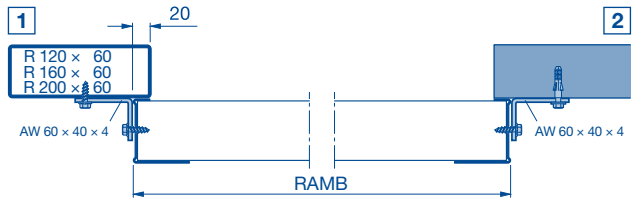
APU 67 Thermo in the opening

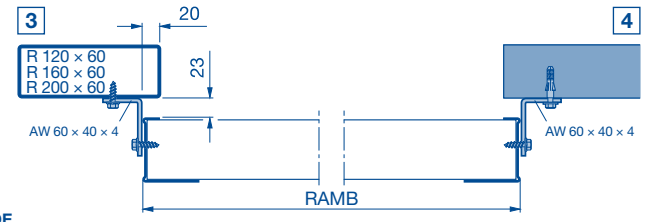


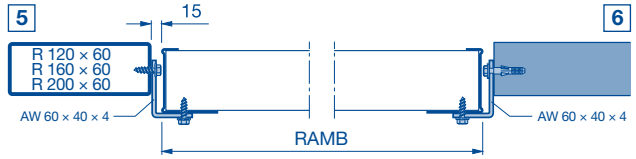
ALR 67 Thermo in the opening



Fitting examples with fitting numbers





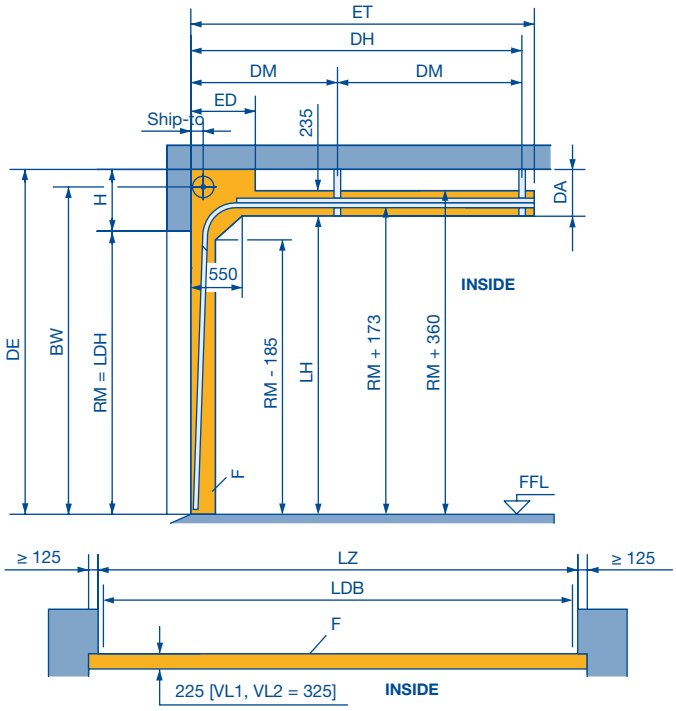


Note:
Fitting with thermal break requires on-site preparations.

AW Aluminium angle
LF Structural opening
RAMB Overall frame width
RAMH Overall frame height

Track Application: N

Normal track application



	ET = min. distance back	
N 1 + 2	RM + 435	For manual operation
	RM + 670	With shaft operator
	RM + 245	For manual operation and shaft operator with spring buffers below the track
N 3	RM + 725	For manual operation and shaft operator
	RM + 245	For manual operation and shaft operator with spring buffers below the track

Min. headroom

Track size	Headroom (H)
N 1	425
N 2	475
N 3	585 / 795*
N 3 > RM 7000	845
H / HG 4	880
H / HG 5	910 / 1085*
H 8	950 / 1085*
HU / RG 4 / 5	1760
V 6	RM + 500
V 7	RM + 540
V 9	RM + 635
VU / WG 6 / 7	RM + 350
VU 9	RM + 350

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.
- Observe the permissible size ranges of the door types on pages 7 – 12 and 15 – 23 under all circumstances!
- ALR 67 Thermo Glazing on request

Door weights for roof loads:

SPU 67 Thermo = 450 N/m²
APU 67 Thermo / ALR 67 Thermo = 500 N/m²
ALR 67 Thermo Glazing = 600 N/m²

Observe the min. sideroom, see page 41

	H	WE	DA	FT
N 1	425	140	300	820
N 2	475	160	350	820
N 3	585	180	460	1750
With double spring shaft	795	180	650	1750
RM > 7000	845	180	700	1750

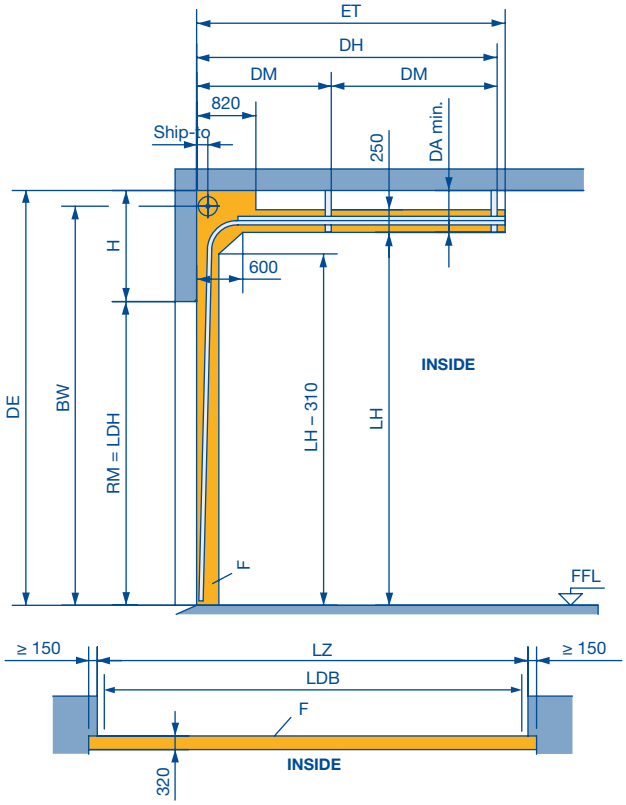
	Clear passage height LDH		
	Without operator	Operator	
		WA 400 **	WA 300
LZ ≤ 5500			
Without wicket door	RM	RM	RM
Wicket door with threshold	RM – 100	RM – 50	RM – 50
Wicket door without threshold rail	RM – 150	RM – 85	RM – 85
LZ > 5500			
Without wicket door	RM – 50	RM – 50	RM – 50
Wicket door with threshold	RM – 100	RM – 100	RM – 100
Wicket door without threshold rail	RM – 175	RM – 110	RM – 110
LZ ≥ 8000			
Without wicket door	RM – 100	RM – 100	–

* For version with double spring shaft
** Or with chain hoist / pull rope
LDB Clear passage width with ThermoFrame (see page 41)
LDH Clear passage height
RM Grid height
LH Track height = RM + 125
BW Position of shaft support
N 1 = RM + 345
N 2 = RM + 370
N 3 = RM + 460
DH Rear ceiling anchor
N 1 / N 2 = RM + 220
N 3 = RM + 320
DM Central ceiling anchor (see page 45)
WE Shaft centre from lintel (see table)
H Min. headroom (see table)
DA Distance to ceiling (see table)
DE Ceiling height
LZ Clear frame dimensions
F Space for fitting the door
FT Clearance for door operation

Dimensions in mm

Track Application: H

High-lift track application

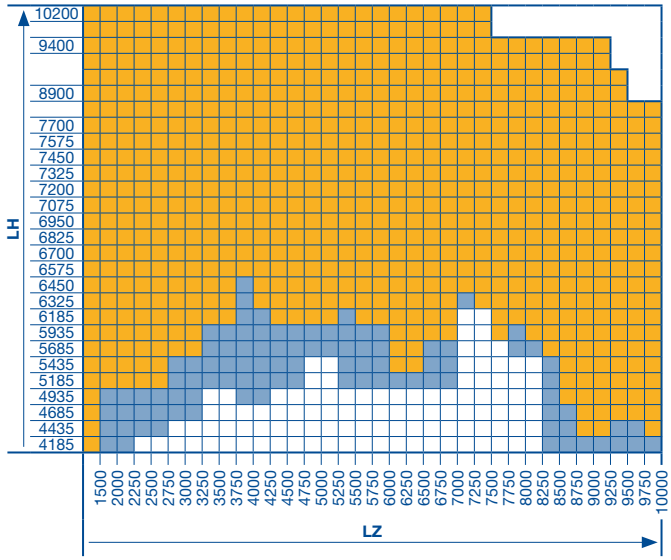


	ET = min. distance back	
H 4+5	2 × RM – LH + 1145	For manual operation with long spring buffer
	2 × RM – LH + 695	For manual operation with spring buffers below the track
	2 × RM – LH + 905	For shaft operator with long spring buffer (LH – RM) ≤ 1000
	2 × RM – LH + 675	For shaft operator with short spring buffer (LH – RM) > 1000
	2 × RM – LH + 455	For shaft operator with spring buffers below the track
H 8	2 × RM – LH + 975	All versions
	2 × RM – LH + 455	For manual operation and shaft operator with spring buffers below the track

Observe min. sideroom, see page 41.

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

Note:

- Observe the permissible size ranges of the door types on pages 7 – 12 and 15 – 23 under all circumstances!
- ALR 67 Thermo Glazing on request

LDB Clear passage width with ThermoFrame (see page 41)
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 × RM – LH + 645 (long spring buffer)
H 4 + H 5 = 2 × RM – LH + 405 (long and short spring buffer + operator)
H 8 = 2 × RM – LH + 485
DM Central ceiling anchor (see page 45)
WE Shaft centre from lintel (see table 1)
H Min. headroom (see page 33)
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 45)
DE Ceiling height
LZ Clear frame dimensions **(from 1200)**
ET Distance back
F Space for fitting the door

Torsion spring shaft is possible.

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

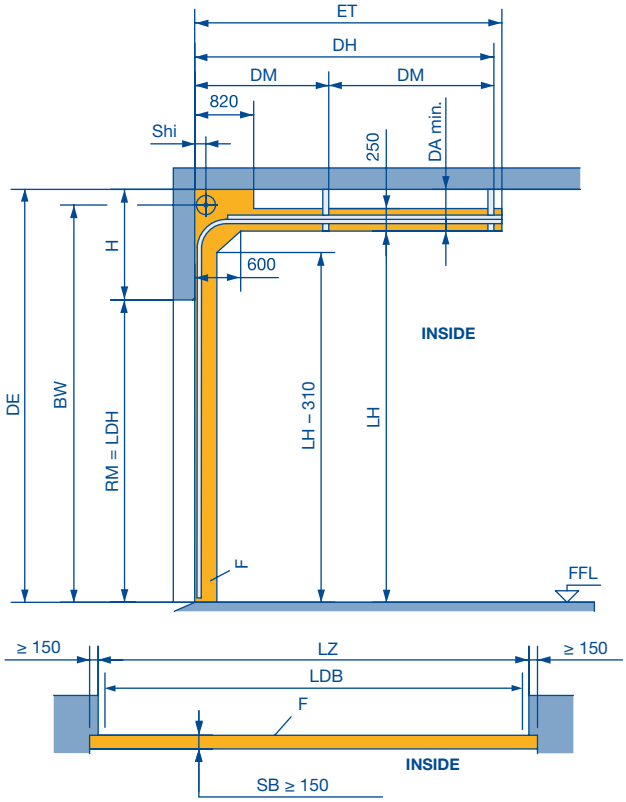
All door types must be requested.

Dimensions in mm

Track Application: HG

High-lift track application with steep track

(Application for loading ramp doors)



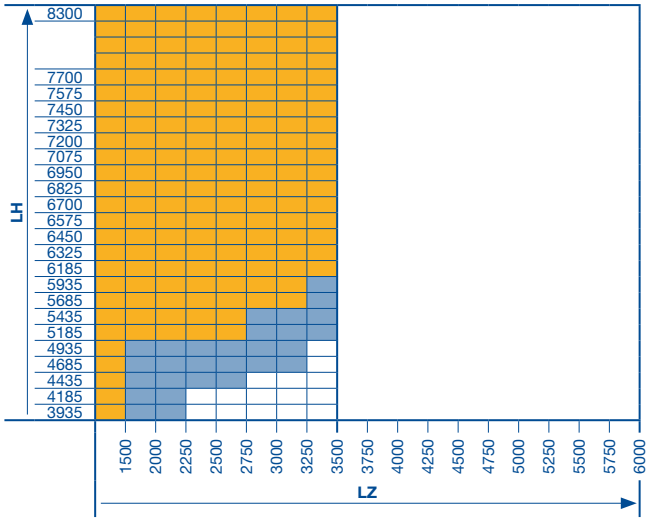
	ET = min. distance back	
HG 4+5	2 × RM – LH + 1145	For manual operation with long spring buffer
	2 × RM – LH + 695	For manual operation with spring buffers below the track
	2 × RM – LH + 905	For shaft operator with long spring buffer (LH – RM) ≤ 1000
	2 × RM – LH + 675	For shaft operator with short spring buffer (LH – RM) > 1000
	2 × RM – LH + 455	For shaft operator with spring buffers below the track

Other versions on request.

Observe min. sideroom, see page 41.

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.

Note:

- **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	

Note:

- Observe the permissible size ranges of the door types on pages 7 – 12 and 15 – 23 under all circumstances!
- ALR 67 Thermo Glazing on request

LDB Clear passage width with ThermoFrame (see page 41)
LDH Clear passage height
RM Grid height
LH Track height (see Table 6)
BW Position of shaft support
HG 4 + HG 5 = LH + 280
DH Rear ceiling anchor =
HG 4 + HG 5 = 2 × RM – LH + 645 (long spring buffer)
HG 4 + HG 5 = 2 × RM – LH + 405 (long and short spring buffer + operator)
DM Central ceiling anchor (see page 45)
WE Shaft centre from lintel (see table 6)
H Min. headroom (see page 33)
Min. DA HG 4 = 420
HG 5 = 450, 625 with double spring shaft
SB Slot width
L Anchor length DE – LH – 15 (see page 45)
ET Distance back
DE Ceiling height
LZ Clear frame dimensions **(from 1200)**
F Space for fitting the door

Torsion spring shaft is possible.

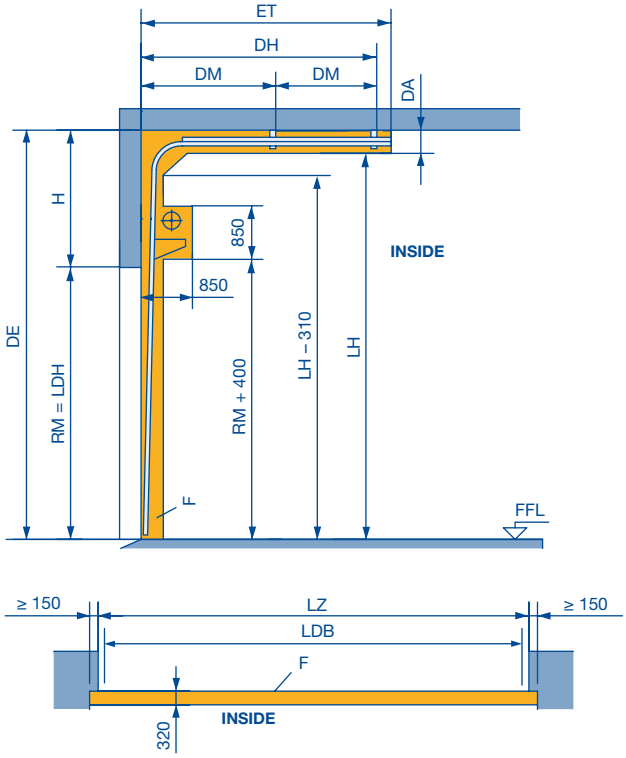
Door types APU 67 Thermo and ALR 67 Thermo on request.

All door types must be requested.

Dimensions in mm

Track Application: HU

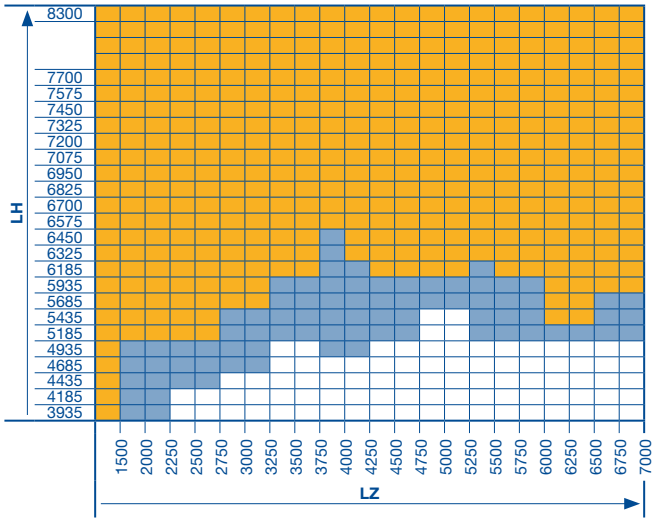
High-lift track application with low-mounted torsion spring shaft



ET = min. distance back		
HU 4+5	2 × RM – LH + 1145	For manual operation with long spring buffer
	2 × RM – LH + 695	For manual operation with spring buffers below the track
	2 × RM – LH + 675	For shaft operator with short spring buffer (LH – RM > 1510)
	2 × RM – LH + 455	For shaft operator with spring buffers below the track

Other versions on request.
Observe min. sideroom, see page 41.

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 = 355
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	HU 4, WE = 335
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	

Note:
- Observe the permissible size ranges of the door types on pages 7 – 12 and 15 – 23 under all circumstances!
- ALR 67 Thermo Glazing on request

LDB Clear passage width with ThermoFrame (see page 41)
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 × RM – LH + 645 (long spring buffer)
HU 4 + HUG 5 = 2 × RM – LH + 405 (long and short spring buffer + operator)
DM Central ceiling anchor (see page 45)
WE Shaft centre from lintel (see table 6)
H Min. headroom (see page 33)
DA Min. distance to ceiling 275
L Anchor length DE – LH – 15 (see page 45)
LZ Clear frame dimensions **(from 1200)**
ET Distance back
F Space for fitting the door

Torsion spring shaft is possible.

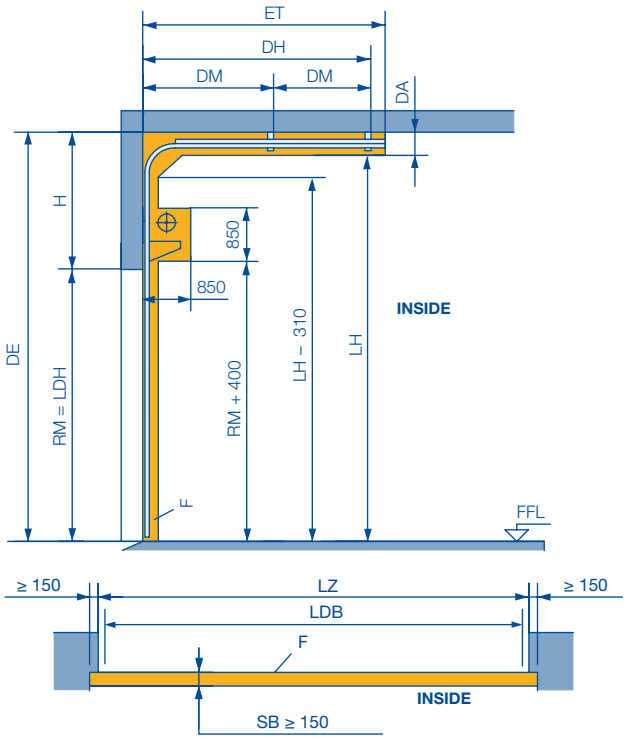
Door types APU 67 Thermo and ALR 67 Thermo on request.

All door types must be requested.

Dimensions in mm

Track Application: RG

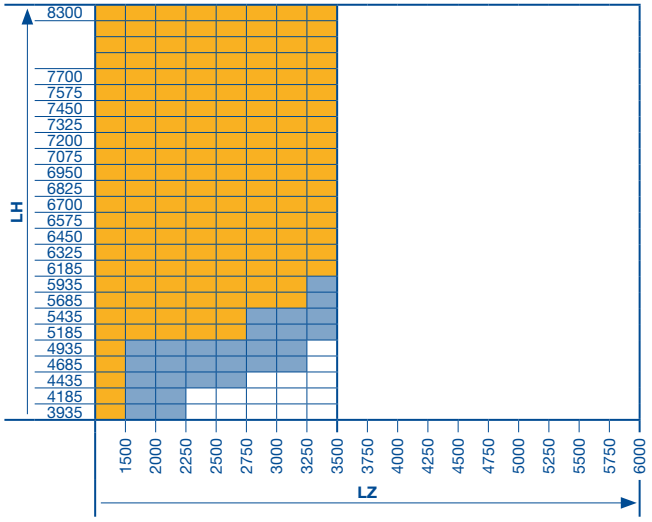
High-lift track application with low-mounted torsion spring shaft and steep track (Application for loading ramp doors)



	ET = min. distance back	
RG 4 + 5	2 × RM – LH + 1145	For manual operation with long spring buffer
	2 × RM – LH + 695	For manual operation with spring buffers below the track
	2 × RM – LH + 675	For shaft operator with short spring buffer (LH – RM > 1510)
	2 × RM – LH + 455	For shaft operator with spring buffers below the track

Other versions on request.
Observe min. sideroom, see page 41.

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.

Note:
- **Doors with 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 = 315
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 = 295
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	

Note:
- Observe the permissible size ranges of the door types on pages 7 – 12 and 15 – 23 under all circumstances!
- ALR 67 Thermo Glazing on request

LDB Clear passage width with ThermoFrame (see page 41)
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 (long and short spring buffer + WA 400)
DM Central ceiling anchor (see page 45)
WE Shaft centre from lintel (see table 9)
H Min. headroom (see page 33)
DA Min. distance to ceiling 275
SB Slot width
L Anchor length DE – LH – 15 (see page 45)
ET Distance back
DE Ceiling height
LZ Clear frame dimensions **(from 1200)**
F Space for fitting the door

Torsion spring shaft is possible.

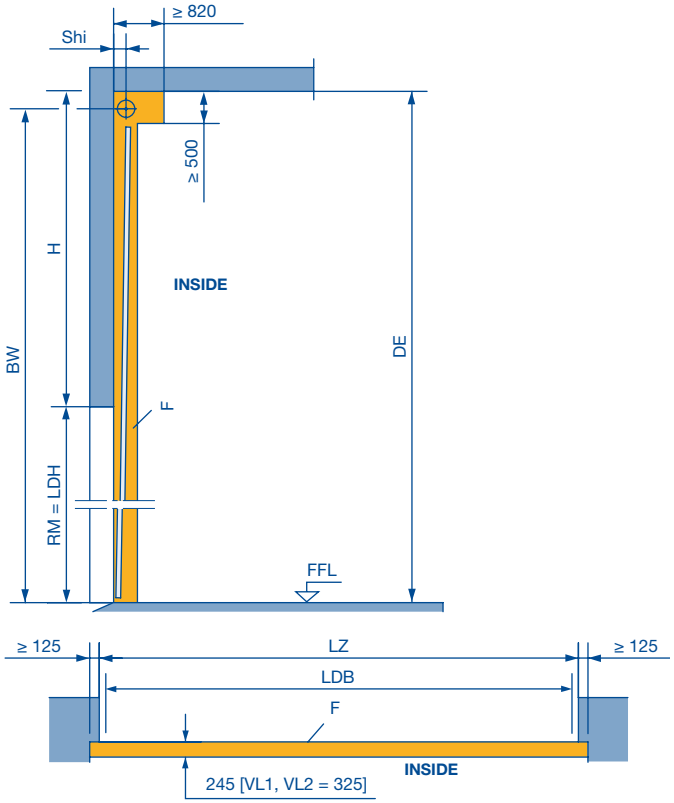
Door types APU 67 Thermo and ALR 67 Thermo on request.

All door types must be requested.

Dimensions in mm

Track Application: V

Vertical track application

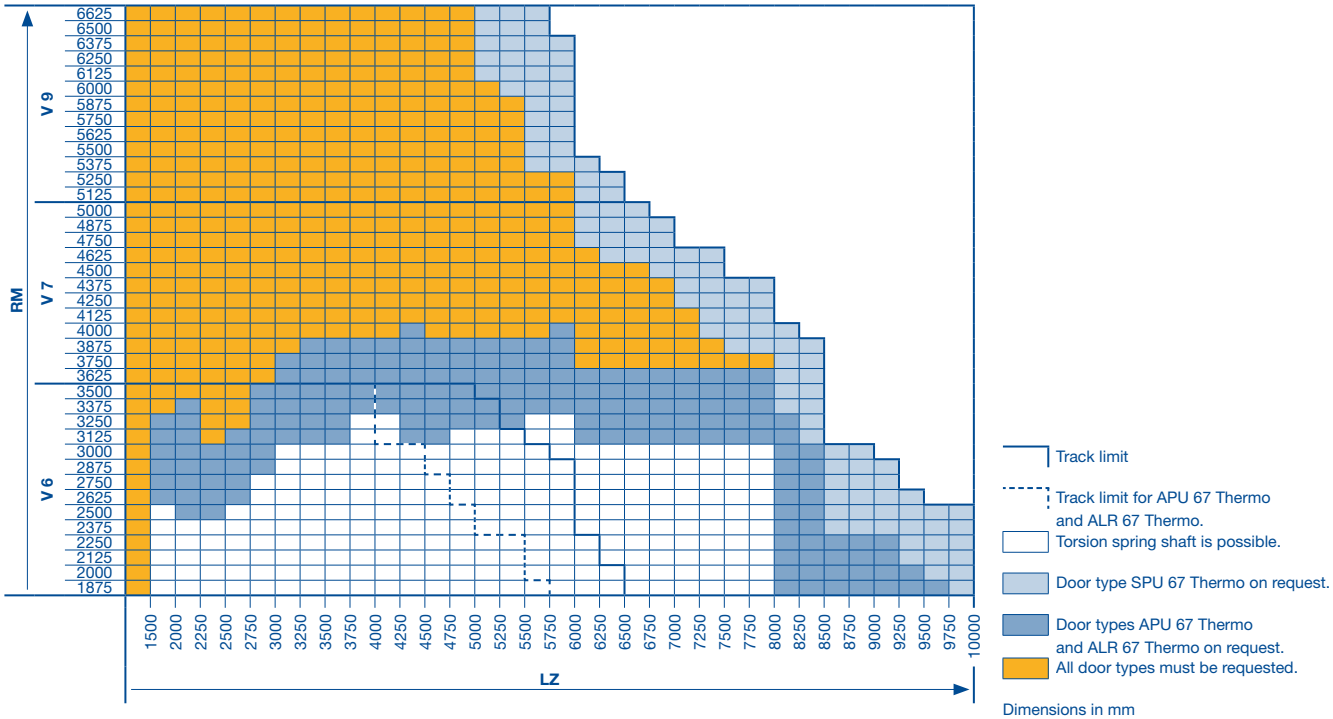


Note:

- 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 7 – 12 and 15 – 23 under all circumstances!
- ALR 67 Thermo Glazing on request

Observe min. sideroom, see page 41.

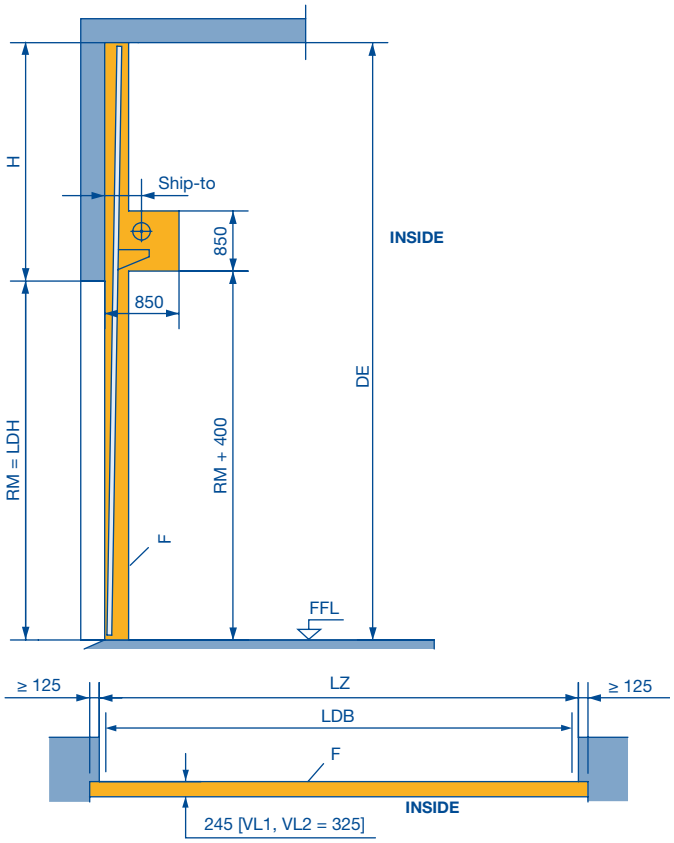
LDB Clear passage width with ThermoFrame (see page 41)
LDH Clear passage height
RM Grid height
WE Shaft centre from lintel
V 6 = 160, V 7 = 180, V 9 = 205
H Min. headroom (see page 33)
DE Ceiling height
2 × RM + 500 (V 6)
2 × RM + 540 (V 7)
2 × RM + 730 (V 7 with double spring shaft)
2 × RM + 635 (V 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



Dimensions in mm

Track Application: VU

Vertical track application with low-mounted torsion spring shaft

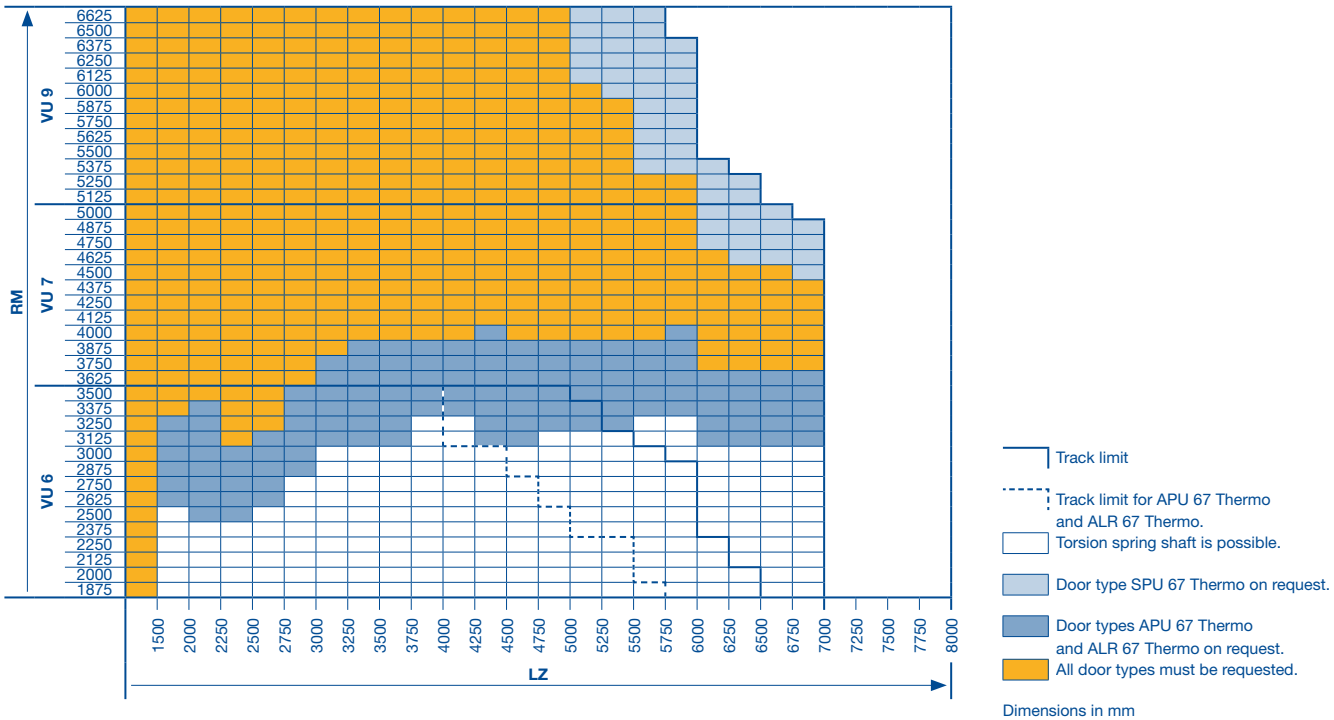


Note:

- 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 7 – 12 and 15 – 23 under all circumstances!
- ALR 67 Thermo Glazing on request

Observe min. sideroom, see page 41.

DE	Ceiling height = 2 × RM + 350
WE	Shaft centre from lintel VU 6 = 335 VU 7 = 355 VU 9 = 395
H	Min. headroom (see page 33)
LDB	Clear passage width with ThermoFrame (see page 41)
LDH	Clear passage height
RM	Grid height
LZ	Clear frame dimensions **(from 1200)**
F	Space for fitting the door

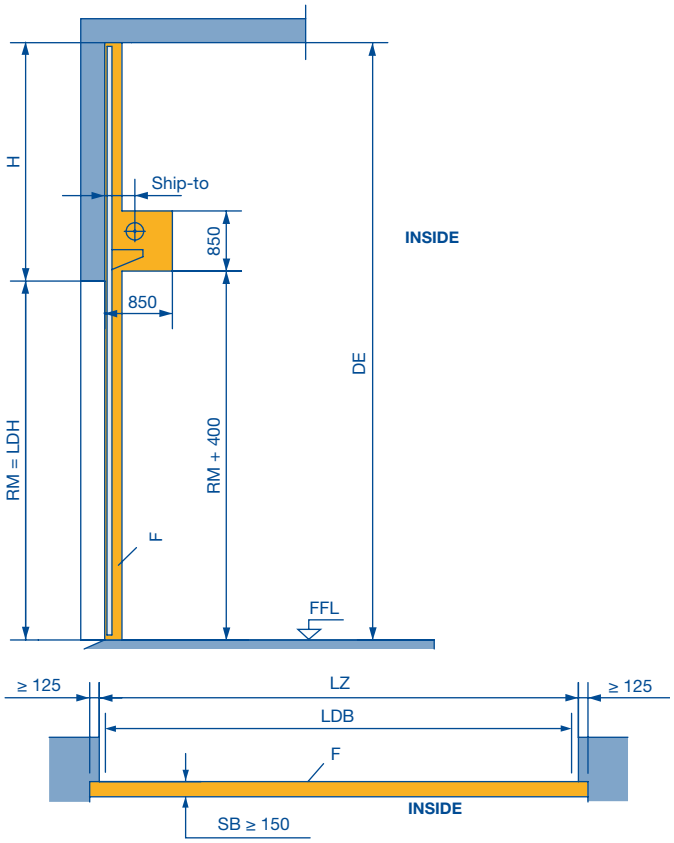


Dimensions in mm

Track Application: WG

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

(Application for loading ramp doors)

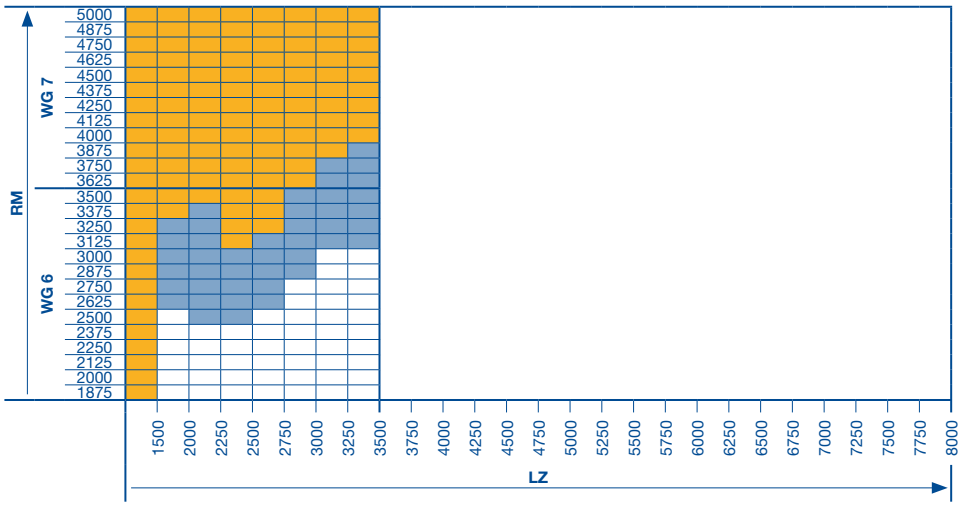


Note:

- **Doors with 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 7 – 12 and 15 – 23 under all circumstances!
- ALR 67 Thermo Glazing on request

Observe min. sideroom, see page 41.

DE	Ceiling height = 2 × RM + 350
WE	Shaft centre from lintel WG 6 = 295 WG 7 = 315
H	Min. headroom (see page 33)
SB	Slot width
LDB	Clear passage width with ThermoFrame (see page 41)
LDH	Clear passage height
RM	Grid height
LZ	Clear frame dimensions **(from 1200)**
F	Space for fitting the door



Torsion spring shaft is possible.

Door types APU 67 Thermo and ALR 67 Thermo on request. All door types must be requested.

Dimensions in mm

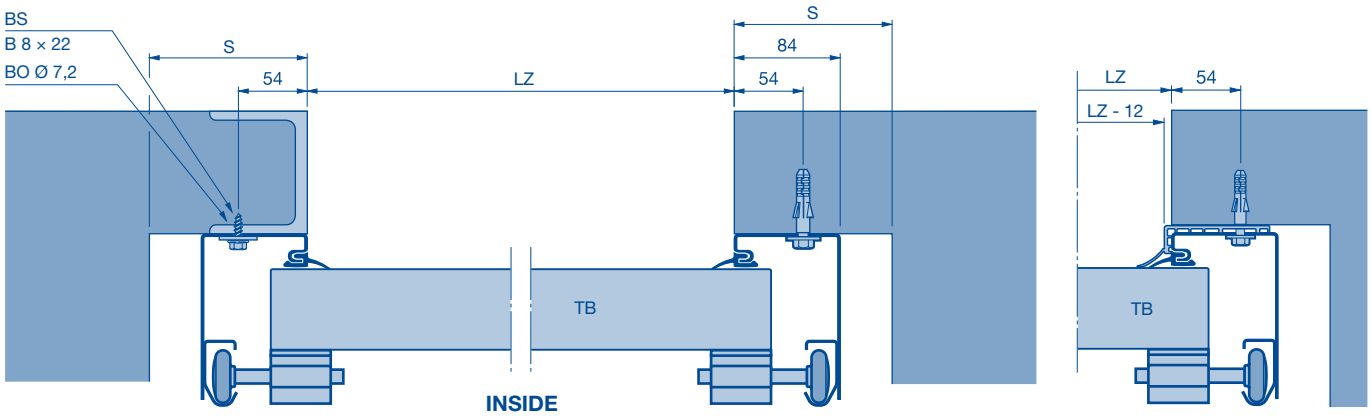
Sideroom

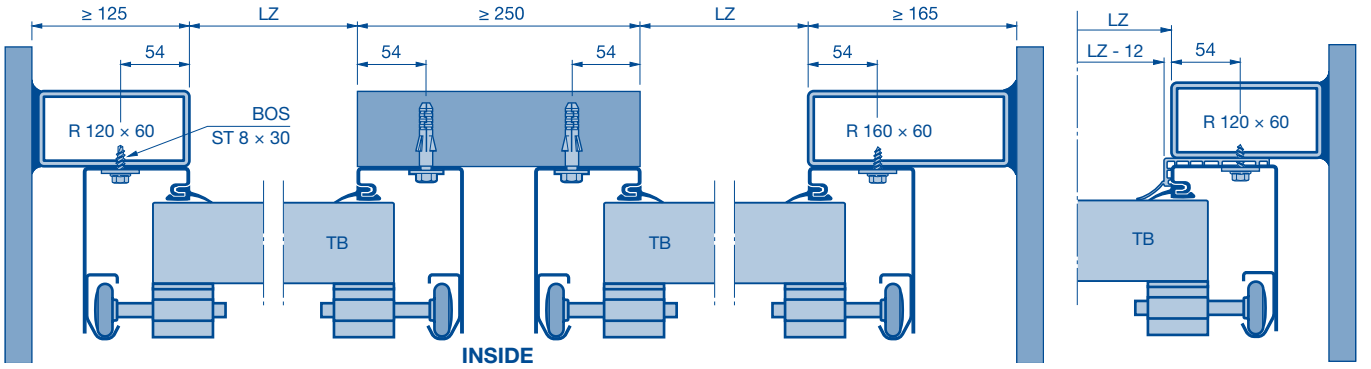
Required sideroom

Track application / designation		S	Track application / designation	S
N, VU, WG		125	Chain hoist	Page 44
H, HG, HU, RG, V		150	Shaft operators	Pages 46–52
Hand pulley	N, WG	140	Direct drive operators	Page 56
	H, HG, HU, RG	150		
	V, VU	125		

Sideroom

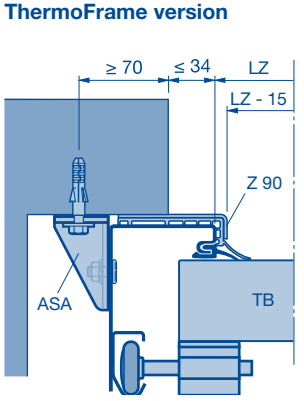
ThermoFrame version

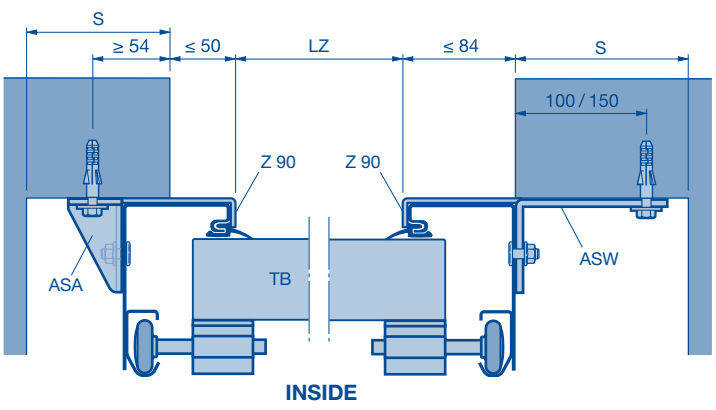




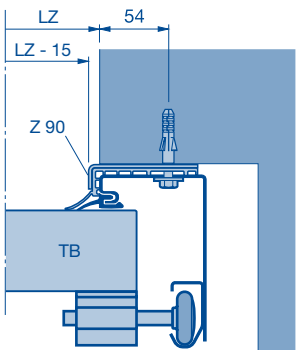
Sideroom with frame covering

ThermoFrame version





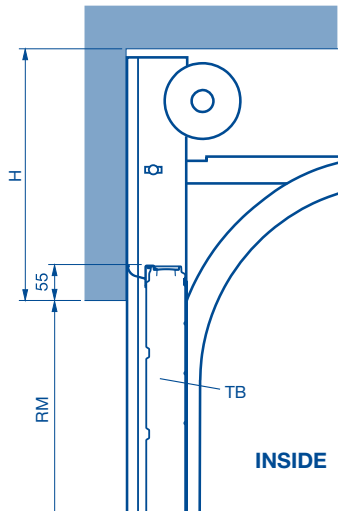
ThermoFrame version



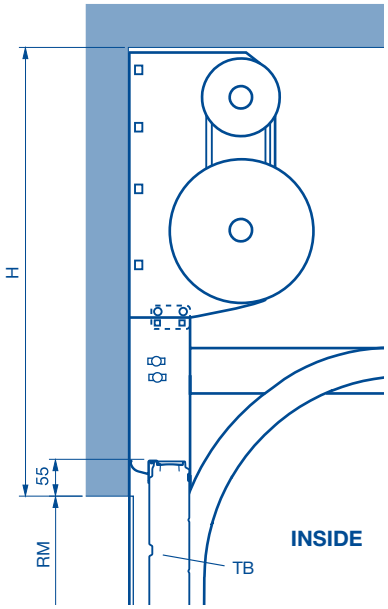
LZ	Clear frame dimensions	**BS**	Self-tapping screw	**S**	Sideroom
BO	Hole	**TB**	Door leaf	**ASA**	Screw-on anchor 70 × 40
BOS	Drilling screw	**R**	Box section	**ASW**	Screw-on bracket 70 × 120 / 170

Lintel Fitting

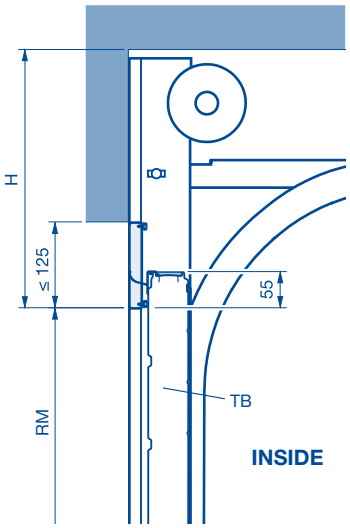
Normal lintel fitting
Lintel variation up to 30 mm high



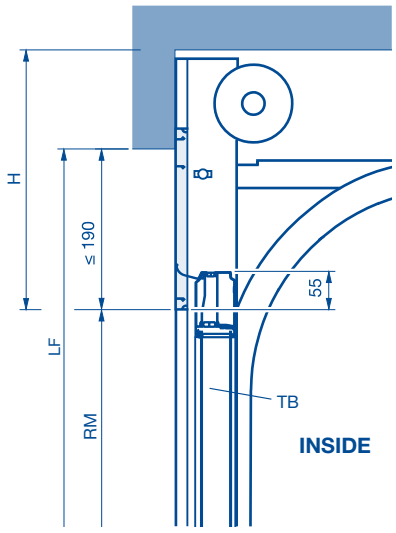
Normal lintel fitting
Double spring shaft



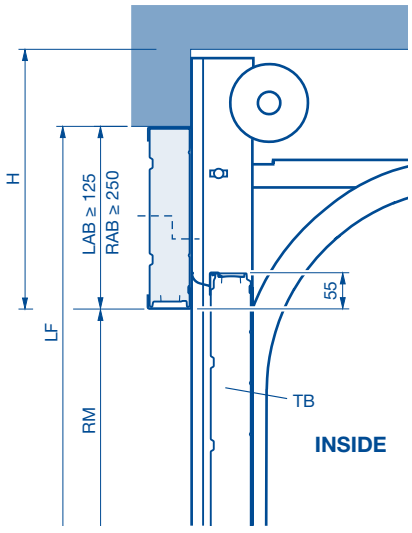
Single-skinned steel fascia for SPU 67 Thermo to make up for insufficient headroom up to 125 mm and LZ ≤ 8000 mm (only for track application N)



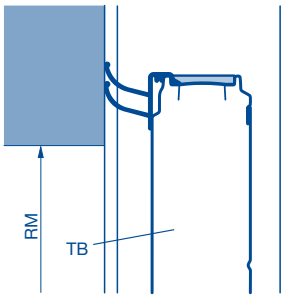
Smooth panel, anodised, for APU 67 Thermo, ALR 67 Thermo and ALR 67 Thermo Glazing to make up for insufficient headroom from 31 to 190 mm and LZ ≤ 8000 mm (only for track application N)



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



Lintel fitting with ThermoFrame



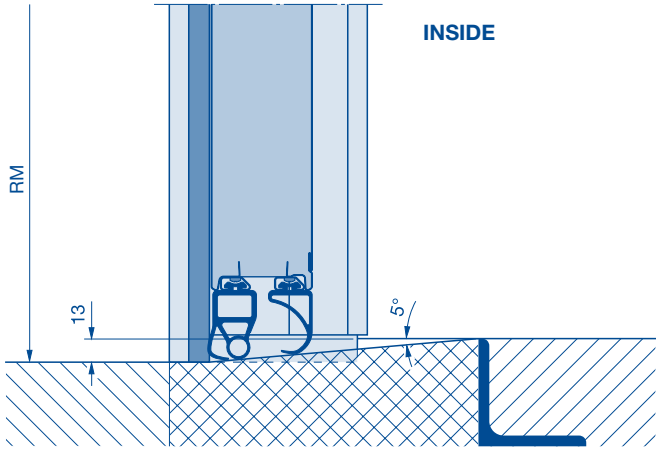
Aluminium frame fascia panel	
Height	**Infill type**
≥ 250	FU, XU, S3, S4, R3, R4, A3, A4, B3, B4, M3, M4

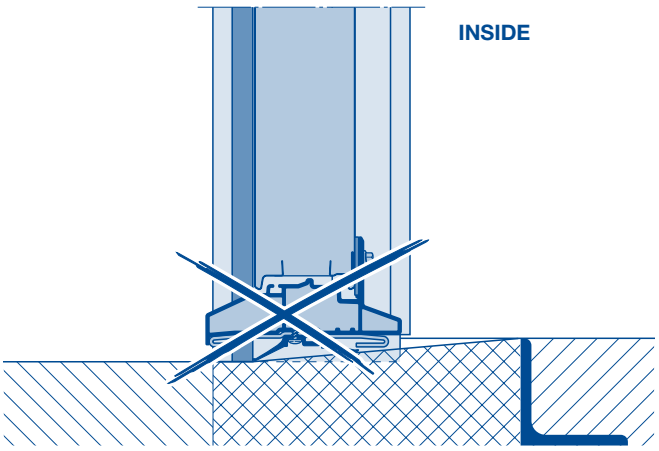
- Aluminium frame fascia panel with real glass infill E2 and G2 on request.

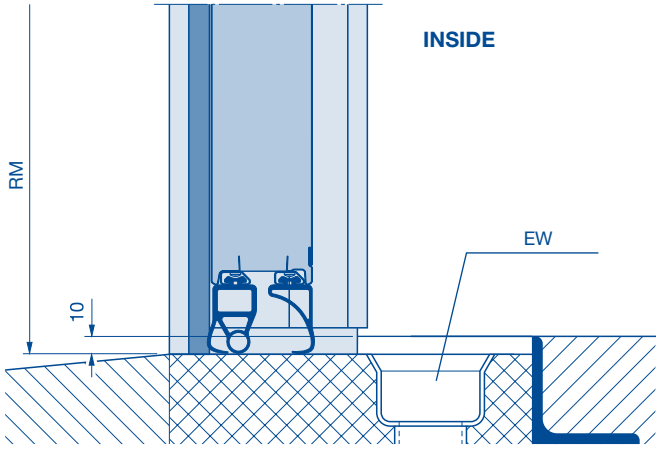
H	Min. headroom (see page 33)
DHS	Clear passage height of wicket door
RM	Grid height
TB	Door leaf
TH	Door section height
LAB	Fascia panel
RAB	Frame fascia panel
LF	Structural opening
LZ	Clear frame dimensions

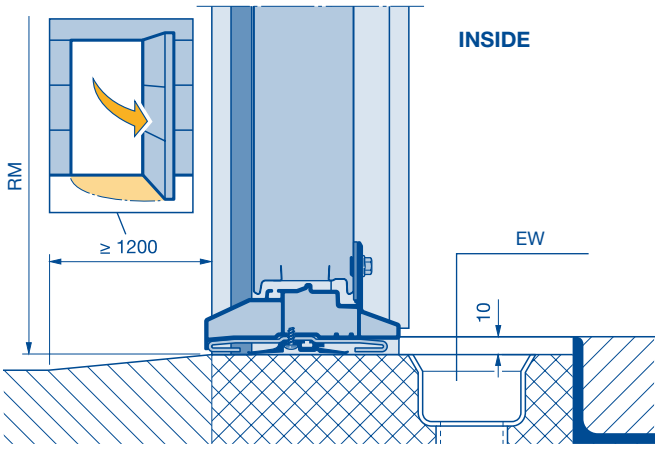
Bottom Edge

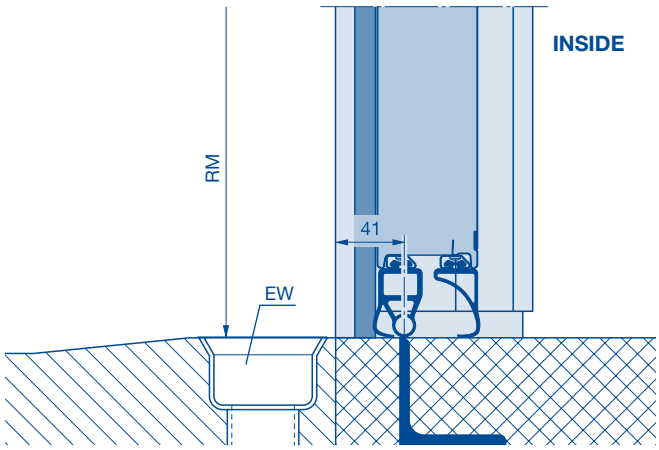
Without wicket door / with wicket door and threshold rail	With wicket door with trip-free threshold

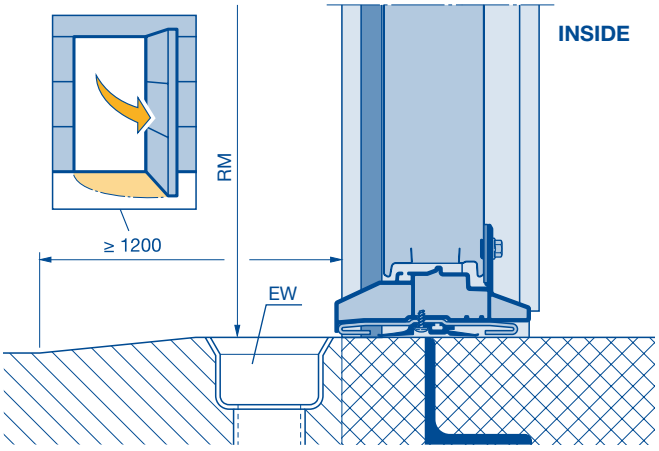










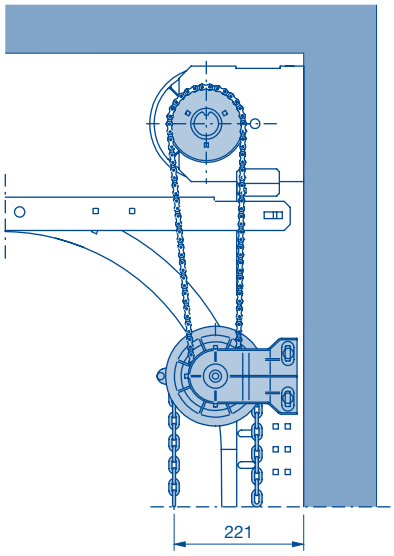


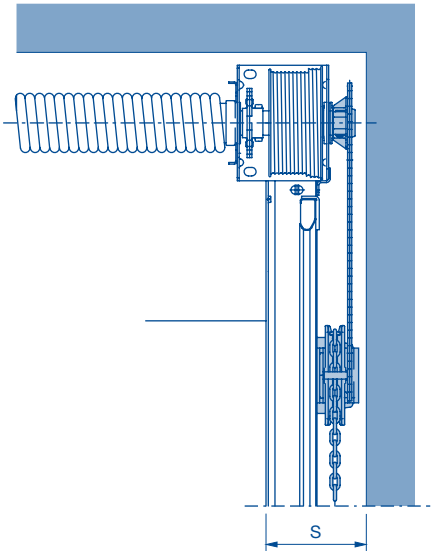
EW Drainage
RM Grid height

Chain Hoist
Hand Pulley
With rope or link steel chain

Chain hoist

Track applications N*, H, HG, HU, RG, VU, WG



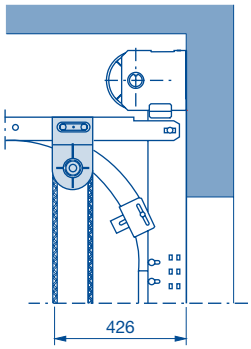


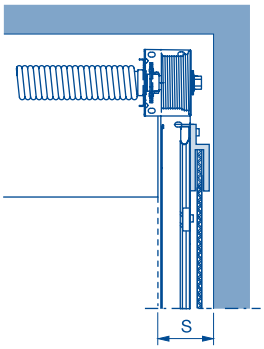
Track application	S
N, VU, WG	165
H, HG, HU, RG	185

Hand pulley with rope or link steel chain

Track applications up to 20 m² door surface

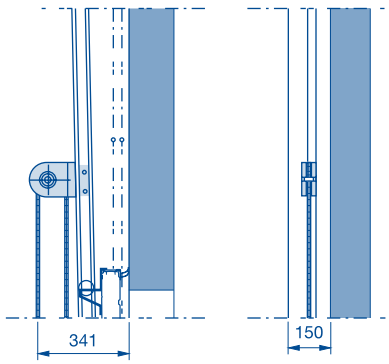
N*, H, HG
With rope or link steel chain



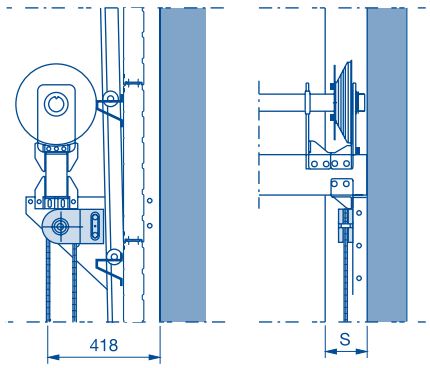


Track application	S
N	140
H, HG	150

V
With rope or link steel chain



HU, RG, VU, WG
With rope or link steel chain



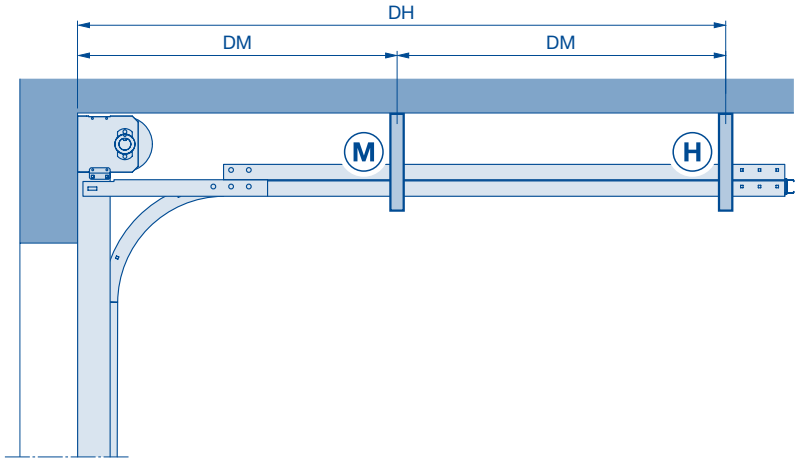
Track application	S
V, VU, WG	125
HU, RG	150

* Cannot be used with RM ≤ 3000
S Sideroom

Ceiling Anchors

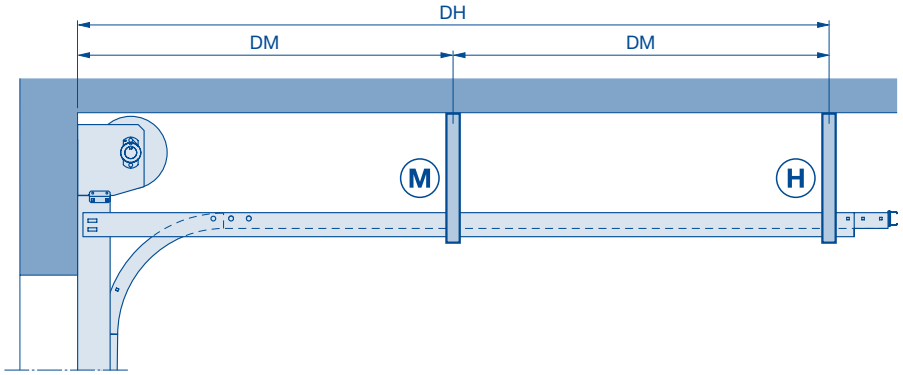
Track suspensions for all track applications except V, VU and WG

Track suspensions as ceiling anchors in five lengths, standard length 469 mm.
DH = rear ceiling anchor (see pages 33 – 40), door weights for roof loads (see page 33).



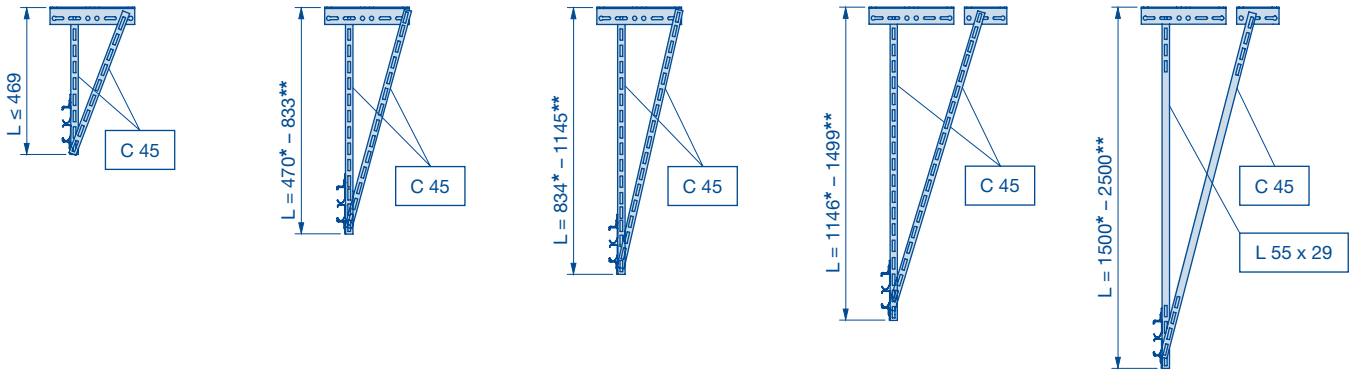
Double track (suspensions), door heights RM ≤ 5000

DH	M	H	DM
– 1555	–	1	–
1560 – 3720	1	1	DH / 2
3730 – 5195	2	1	DH / 3



C-rail (suspensions) all track sizes, door heights RM > 5000

DH	M	H	DM
	1	1	DH / 2



* Min.
** Max.

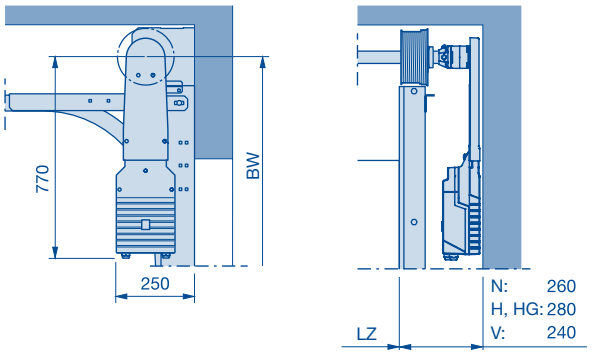
DH Rear ceiling anchor
DM Central ceiling anchor

Shaft Operator WA 300

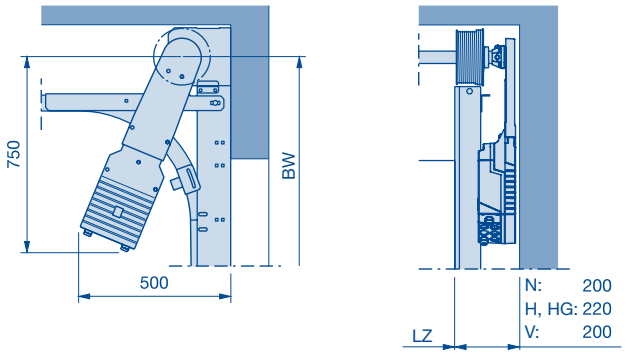
Shaft operator WA 300 for track applications N, H, HG and V

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

Fitting example ⑧ right



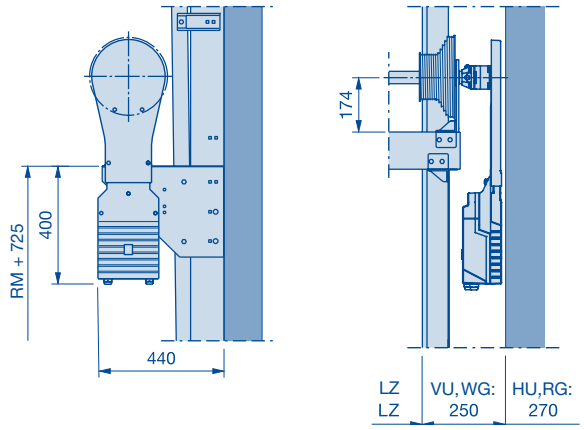
Fitting example ⑨ right



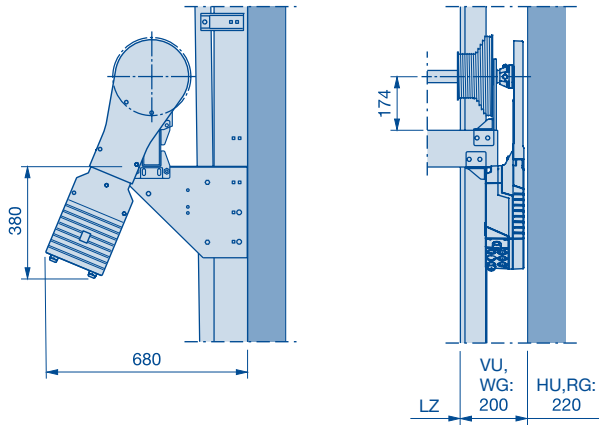
Shaft operator WA 300 for track applications HU, RG, VU and WG

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

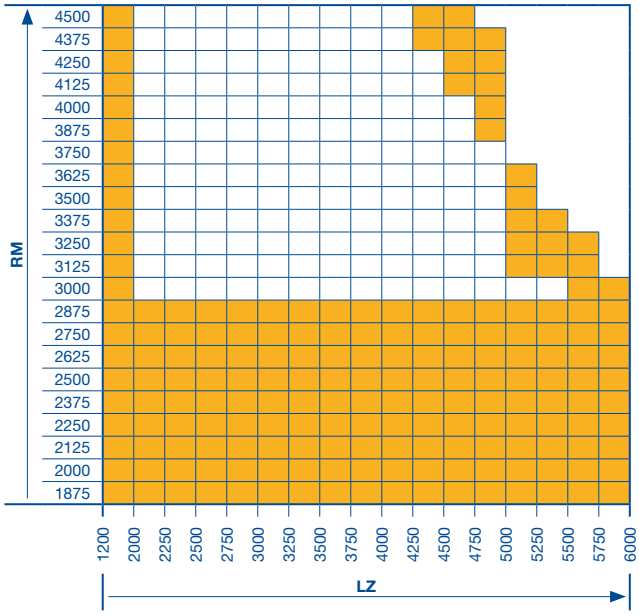


LZ Clear frame dimensions
BW Position of shaft support

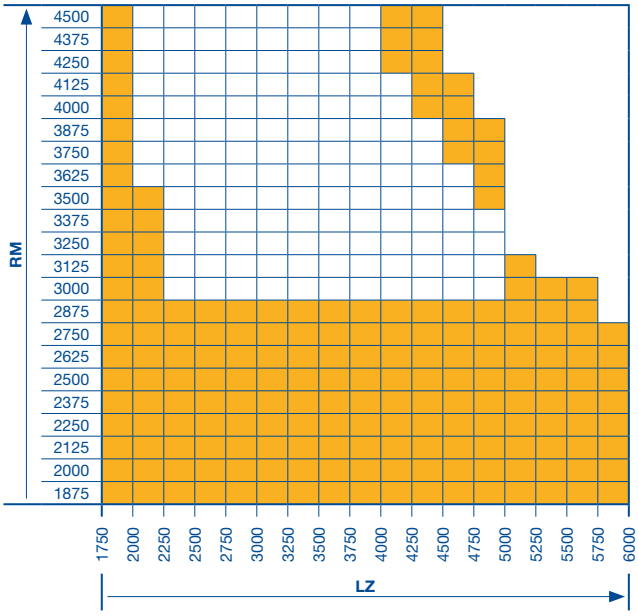
Shaft Operator WA 300

WA 300 size range for the track application N

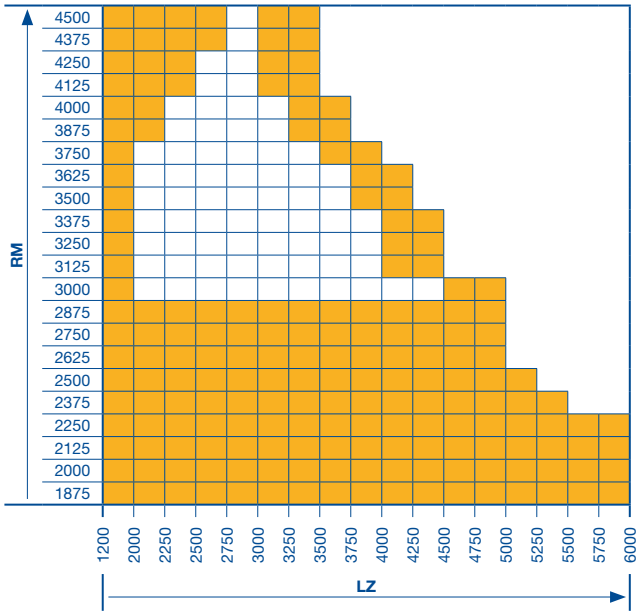
SPU 67 Thermo without wicket door



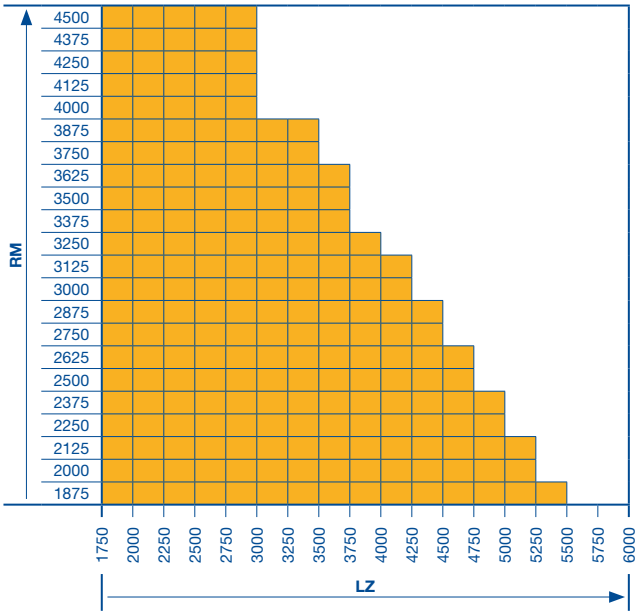
SPU 67 Thermo with wicket door



APU / ALR 67 Thermo without wicket door



APU / ALR 67 Thermo with wicket door



WA 300 possible.

WA 300 on request.

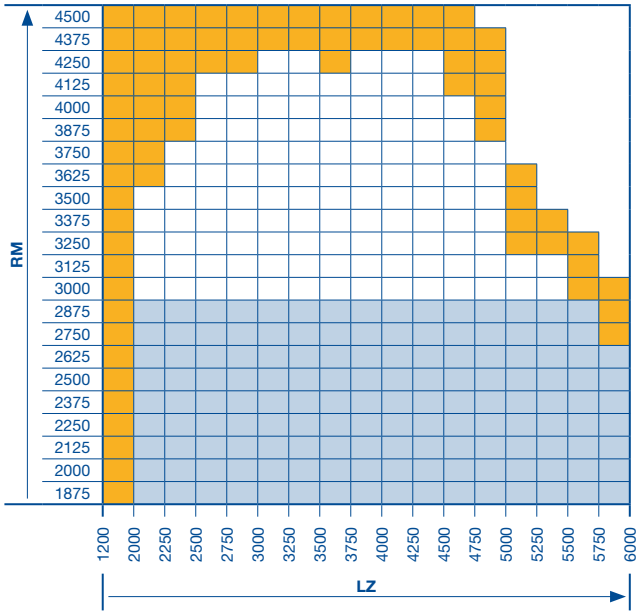
LZ Clear frame dimensions
RM Grid height

Dimensions in mm

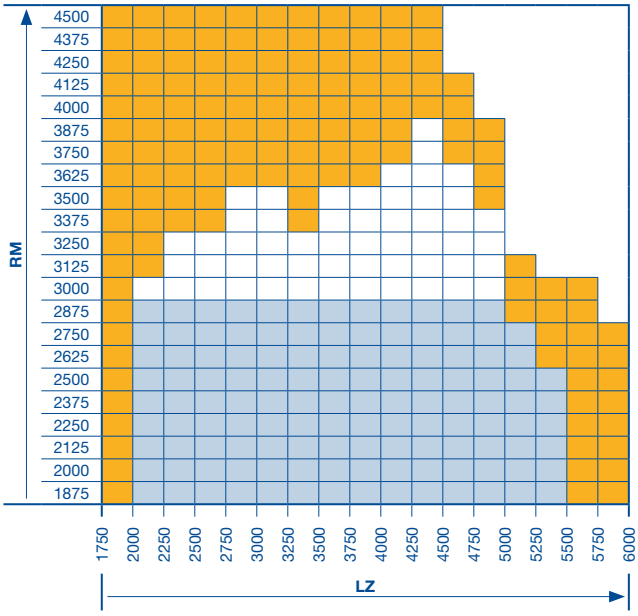
Shaft Operator WA 300

WA 300 size range for the track applications H and V

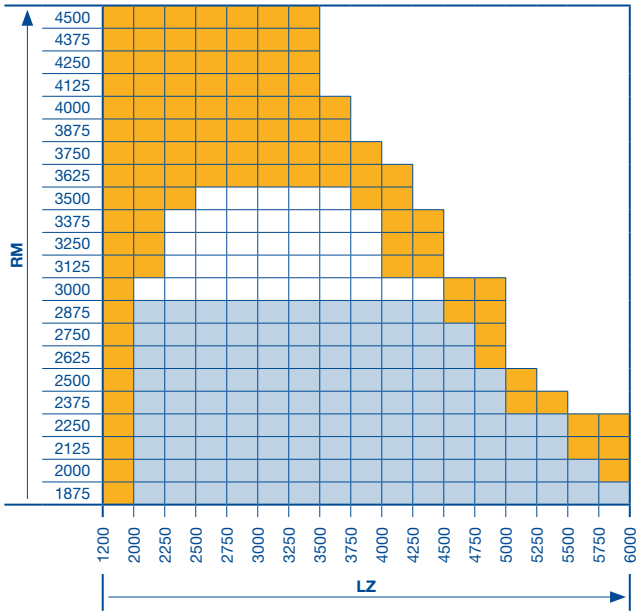
SPU 67 Thermo without wicket door



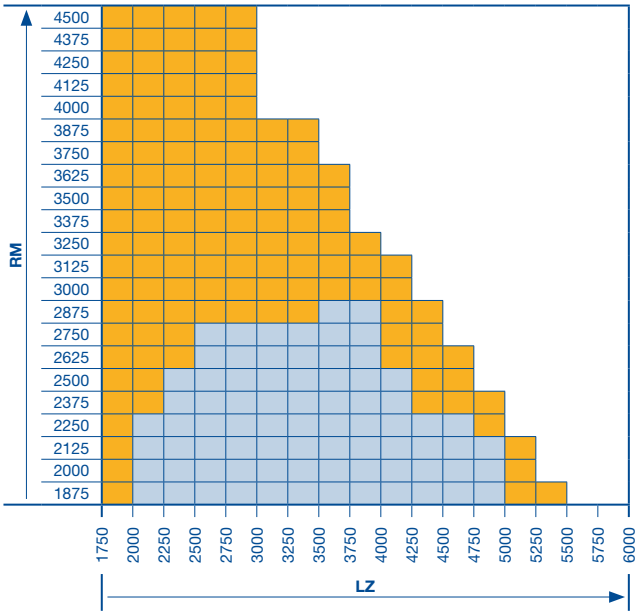
SPU 67 Thermo with wicket door



APU / ALR 67 Thermo without wicket door



APU / ALR 67 Thermo with wicket door



WA 300 possible.

Track application H on request.

WA 300 on request.

LZ Clear frame dimensions
RM Grid height

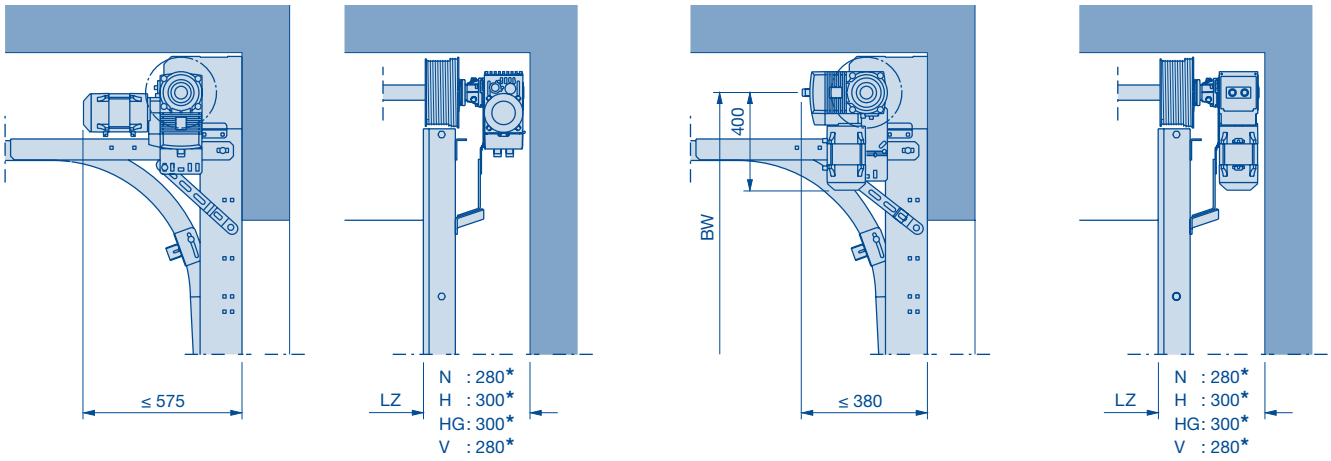
Dimensions in mm

Shaft Operator WA 400

As a frame-mounted operator

Shaft operator WA 400 for track applications N, H, HG and V

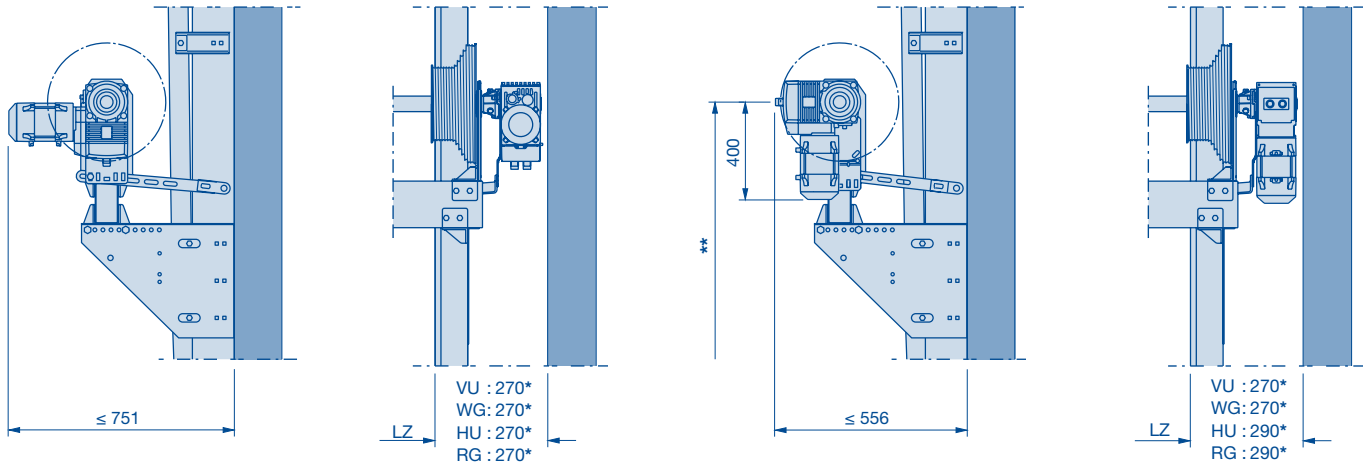
As shown in the figure, the operator can be fitted either left or right, viewed from the inside.



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

Shaft operator WA 400 for track applications HU, 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

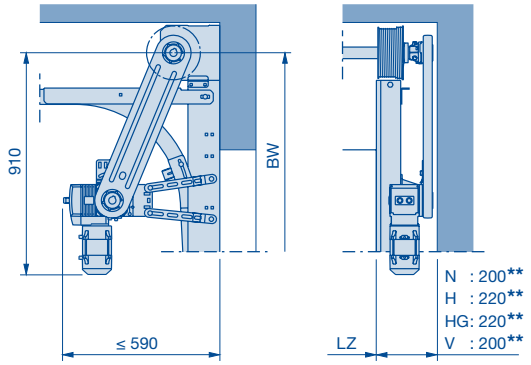
Shaft Operator WA 400

With chain box

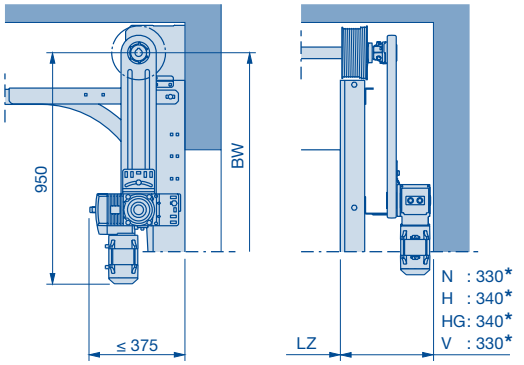
Shaft operator WA 400 for track applications N, H, HG and V

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

Fitting example ⑤ right



Fitting example ⑥ right

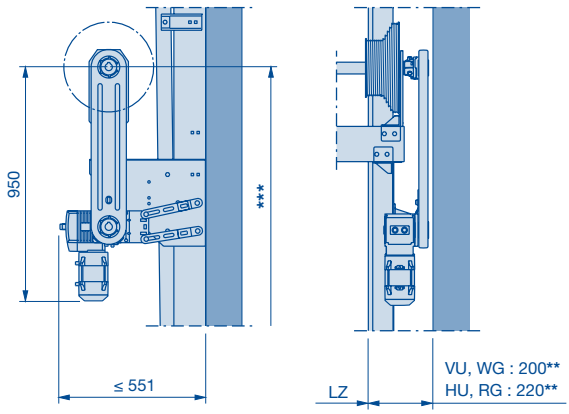


Note:
* Dimension + 75 mm if using a non-jointed emergency crank handle
** Dimension + 40 mm if using a non-jointed emergency crank handle

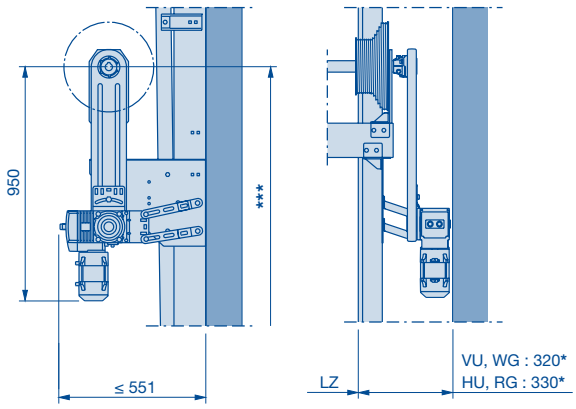
Shaft operator WA 400 for track applications HU, RG, VU and WG

As shown in the figure, the operator can be fitted either left or right, viewed from the inside.
Note: 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
** Dimension + 40 mm if using a non-jointed emergency crank handle

*** On request

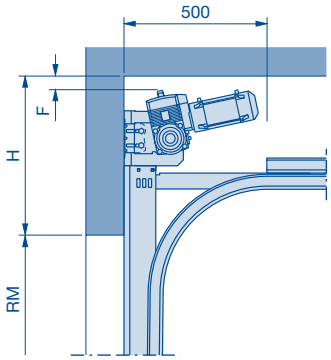
BW Position of shaft support
LZ Clear frame dimensions

Shaft Operator WA 400

For central mounting

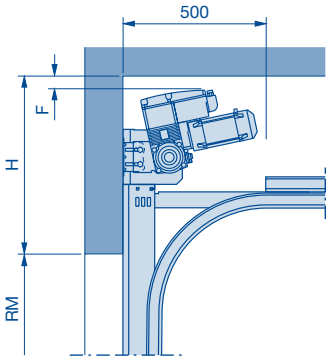
Shaft operator WA 400 for track application N

Control A / B 445, 460



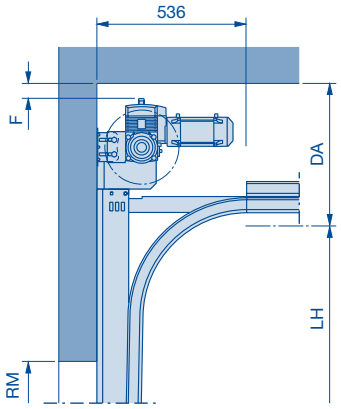
Track application	A / B 445, 460		B 460 FU	
	Min. H	Min. F	Min. H	Min. F
N 1	645	50	710	45
N 2	645	50	710	45
N 3	–	–	710	45

Control B 460 FU



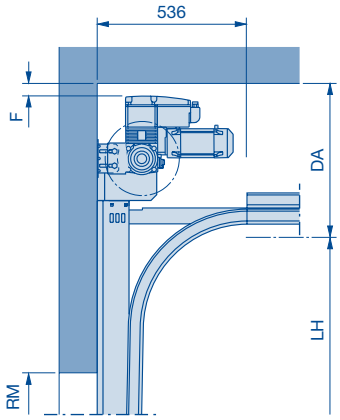
Shaft operator WA 400 for track applications H and HG

Control A / B 445, 460



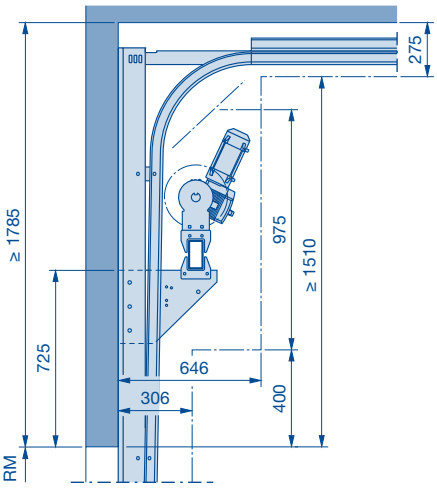
Track application	A / B 445, 460		B 460 FU	
	Min. DA	Min. F	Min. DA	Min. F
H 4	500	50	540	45
H 5	500	50	540	45
H 8	–	–	565	45

Control B 460 FU

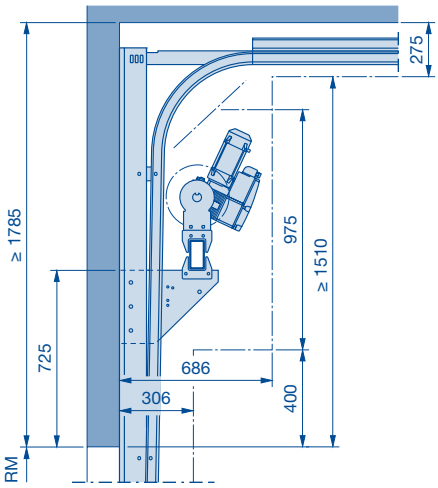


Shaft operator WA 400 for track applications HU and RG

Control A / B 445, 460



Control B 460 FU



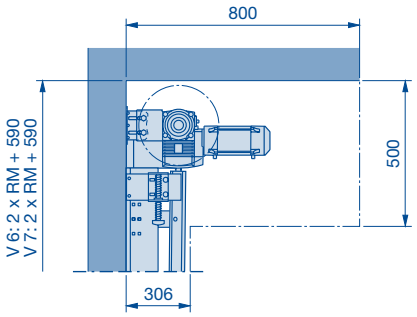
Note:
WA 400 as a centre motor in conjunction with double spring shaft on request!

H	Headroom	**LH**	Track height
RM	Grid height	**F**	Clearance ceiling / shaft operator
DA	Distance to ceiling		

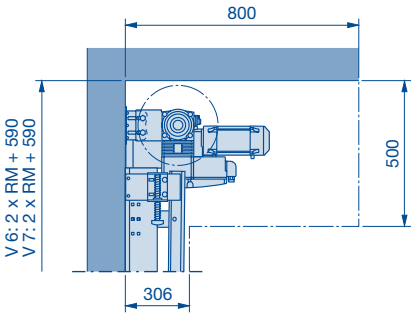
Shaft Operator WA 400
For central mounting
Chain Drive Operator ITO 400

Shaft operator WA 400 for track application V

Control A / B 445, 460



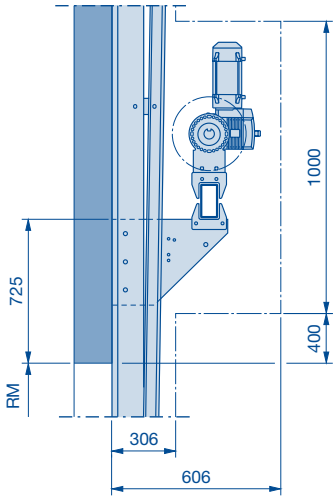
Control B 460 FU



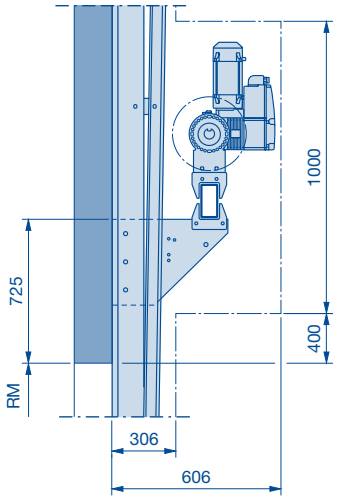
Note:
WA 400 as a centre motor in conjunction with double spring shaft on request!

Shaft operator WA 400 for track applications VU and WG

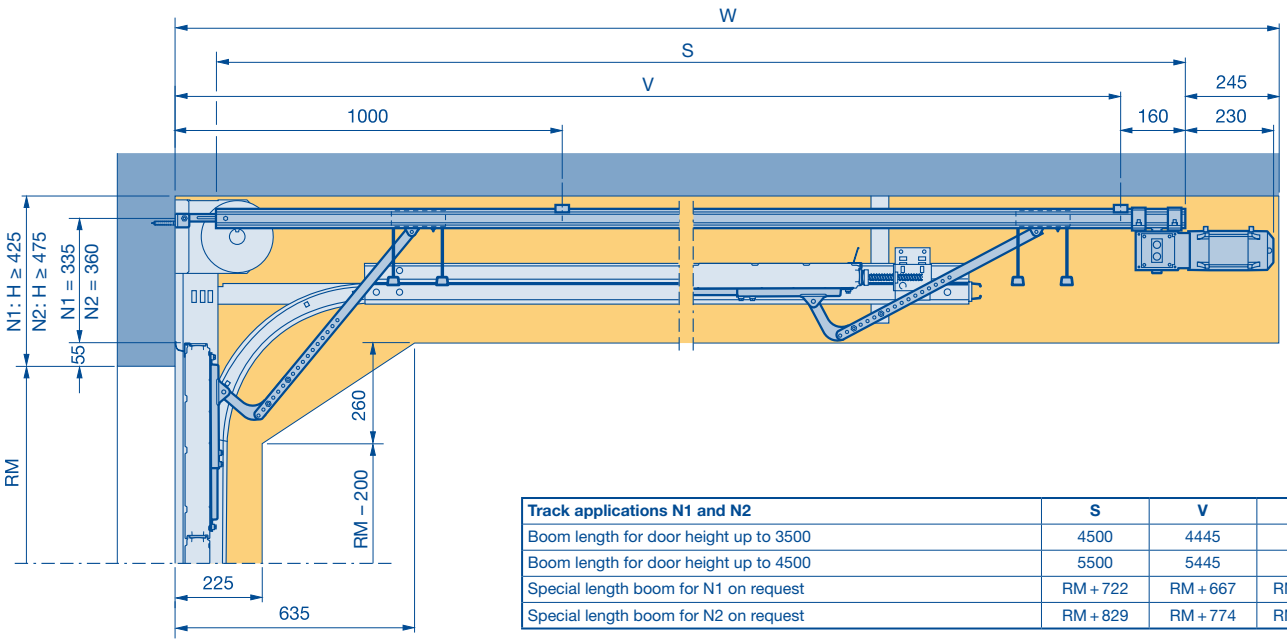
Control A / B 445, 460



Control B 460 FU



ITO 400 track application N up to LZ ≤ 8000 (doors with wicket doors on request)



Track applications N1 and N2	S	V	W
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 on request	RM + 722	RM + 667	RM + 1072
Special length boom for N2 on request	RM + 829	RM + 774	RM + 1179

Shaft Operator WA 300 / WA 400
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.)

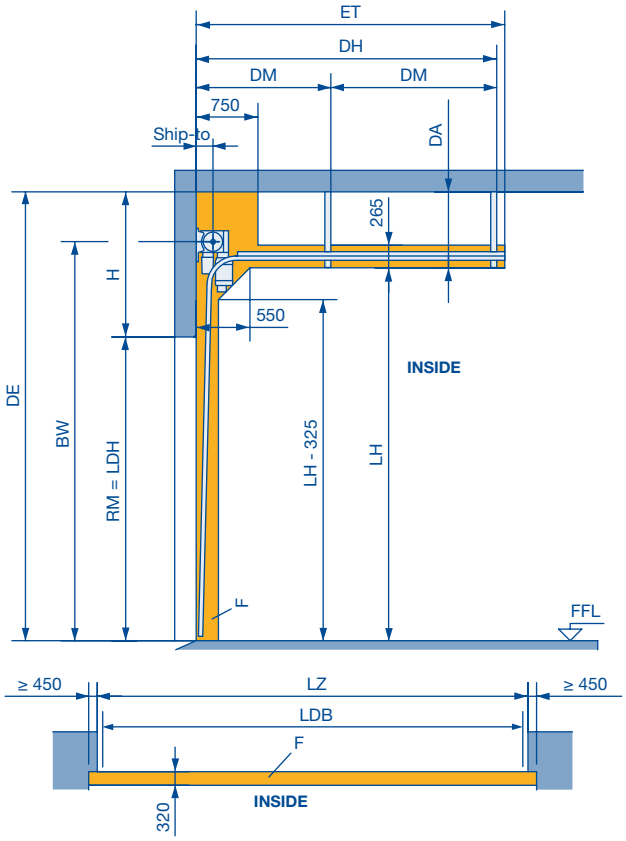
Fitting	WA 300 S4 Integrated / external control 360		WA 400 Control 445 and 460								WA 400 Control B 460 FU					
			Frame-mounted operator				Chain box operator									
			A control with optosensors / B control with optosensors or VL 1 / 2; HLG		A control VL 1, VL 2; HLG		A control with optosensors / B control with optosensors or VL 1 / 2; HLG		A control VL 1, VL 2; HLG							
													Optosensors		VL 1, VL 2 (HLG)	
	Max. speed in mm/s, open / close [5]	Max. speed in mm/s, open / close [6]	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	Frame-mounted operator [1]	Chain box operator [1]	Without twin roller Max. speed in mm/s, open / close	With twin roller Max. speed in mm/s, open / close	Without twin roller Max. speed in mm/s, open / close	With twin roller Max. speed in mm/s, open / close
N1	190	95	24	150	30	190	24	150	30	190	Yes	Yes	300 / 200	375 / 200	300 / 300	375 / 300 (375)
N2	210	105	19	170	30	265	19	170	30	265	Yes	Yes	300 / 200	450 / 200	300 / 300	450 / 300 (450)
N3	–	–	–	–	–	–	13	155	16	290	Yes	Yes	300 / 200	450 / 200	300 / 300	450 / 300 (450)
H4	160 / 190 [1;4]	80 / 95 [1;4]	19 / 16	180	30 / 24	290	19 / 16	180	30 / 24	290	Yes	Yes	300 / 200	450 / 200	300 / 300	450 / 300 (450)
H5	210	105	19 / 16 [2]	210 [2]	24 / 19	290	16 / 13	180	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)
HG4	160 / 190 [1;4]	80 / 95 [1;4]	19 / 16	180	30 / 24	290	19 / 16	180	30 / 24	290	Yes	Yes	300 / 200	450 / 200	300 / 300	450 / 300 (450)
HG5	210	105	19 / 16 [2]	210 [2]	24 / 19	290	16 / 13	180	24 / 19	290	Yes	Yes	300 / 200	440 / 200	300 / 300	440 / 300 (440)
HU4	160 / 190 [1;4]	80 / 95 [1;4]	19 / 16	180	30 / 24	290	19 / 16	180	30 / 24	290	Yes	Yes	300 / 200	450 / 200	300 / 300	450 / 300 (450)
HU5	210	105	19 / 16 [2]	210 [2]	24 / 19	290	16 / 13	180	24 / 19	290	Yes	Yes	300 / 200	440 / 200	300 / 300	440 / 300 (440)
RG4	160 / 190 [1;4]	80 / 95 [1;4]	19 / 16	180	30 / 24	290	19 / 16	180	30 / 24	290	Yes	Yes	300 / 200	450 / 200	300 / 300	450 / 300 (450)
RG5	210	105	19 / 16 [2]	210 [2]	24 / 19	290	16 / 13	180	24 / 19	290	Yes	Yes	300 / 200	440 / 200	300 / 300	440 / 300 (440)
V6	160 / 190 [1;4]	80 / 95 [1;4]	16	180	24	300	16	180	24	300	Yes	Yes	450 / 200 [3]		450 / 200 (450) [3]	
V7	190	95	19 / 16 [2]	210 [2]	19	275	13	170	19	275	Yes	Yes	440 / 200 [3]		440 / 200 (440) [3]	
V9	–	–	–	–	–	–	16 [2]	250 [2]	16	250	Yes	Yes	440 / 200 [3]		440 / 200 (440) [3]	
VU6	160 / 190 [1;4]	80 / 95 [1;4]	16	180	24	300	16	180	24	300	Yes	Yes	450 / 200 [3]		450 / 200 (450) [3]	
VU7	190	95	19 / 16 [2]	210 [2]	19	275	13	170	19	275	Yes	Yes	440 / 200 [3]		440 / 200 (440) [3]	
VU9	–	–	–	–	–	–	16 [2]	250 [2]	16	250	Yes	Yes	440 / 200 [3]		440 / 200 (440) [3]	
WG6	160 / 190 [1;4]	80 / 95 [1;4]	16	180	24	300	16	180	24	300	Yes	Yes	450 / 200 [3]		450 / 200 (450) [3]	
WG7	190	95	19 / 16 [2]	210 [2]	19	275	13	170	19	275	Yes	Yes	440 / 200 [3]		440 / 200 (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!

Track Application: H with Direct Drive Operator

High-lift track application



Note:

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

Door weights for roof loads:

SPU 67 Thermo	= 450 N/m²
APU 67 Thermo / ALR 67 Thermo	= 500 N/m²
ALR 67 Thermo Glazing	= 600 N/m²

- Other versions on request
- Observe the min. sideroom, see page 41

LDH Clear passage height
RM Grid height
LH Track height = ceiling height – 740
Max. LH = 2 × RM – 815 (max. LH ≤ 10200)
BW Position of shaft support H 10 + H 11 = LH + 350
ET Min. distance back = H 10 + H 11 = 2 × RM – LH + 785
DH Rear ceiling anchor
H 10 + H 11 = 2 × RM – LH + 419
DM Central ceiling anchor (see page 55)
WE Shaft centre from lintel

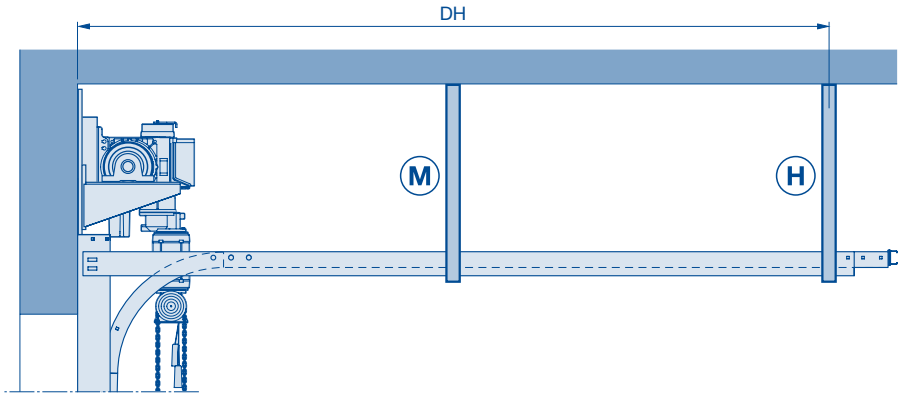
WE	RM	Cable drum
145	≤ 6000	Ø 250
205	> 6000	Ø 355

H Min. headroom = 1200
DA Min. distance to ceiling H 10 + H 11 = 740
DE Ceiling height
LZ Clear frame dimensions
LDB Clear passage width with ThermoFrame (see page 41)
F Space for fitting the door

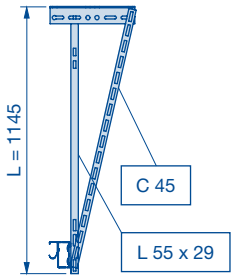
Ceiling Anchors

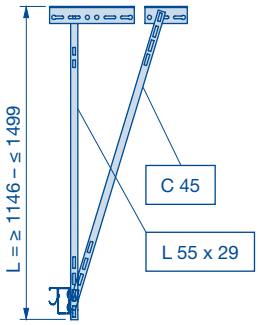
Track suspensions for track application H with direct drive operator

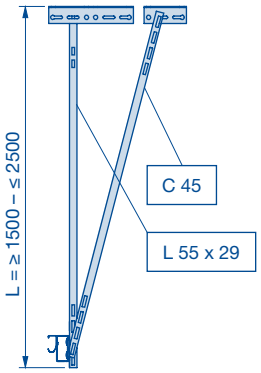
Track suspensions as ceiling anchors in five lengths, standard length 1145 mm.
DH = rear ceiling anchor (see page 54), door weights for roof loads (see page 54).



C-rail (suspensions) only track application size H 10, H 11				
LZ	**DH**	**M**	**H**	**DM**
≤ 6000	1234 ≤ 1561	–	1	–
	1562 ≤ 7976	1	1	DH / 2
> 6000	1234 ≤ 1561	–	1	–
	1562 ≤ 3726	1	1	DH / 2
	3727 ≤ 5976	2	1	DH / 3





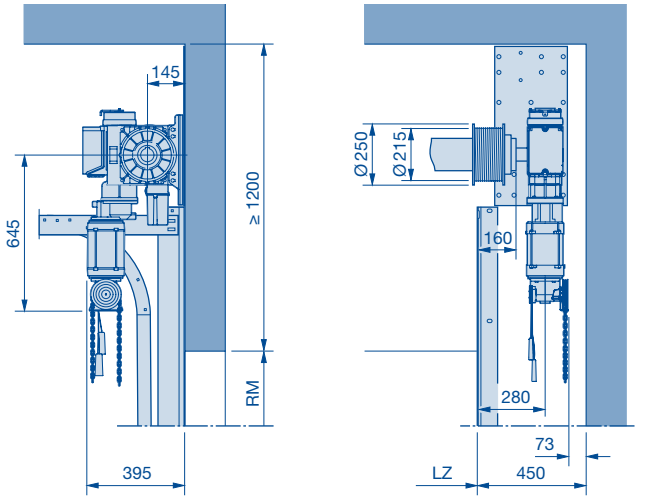


DH Rear ceiling anchor
DM Central ceiling anchor
M Centre suspension
H Rear suspension
LZ Clear frame dimensions

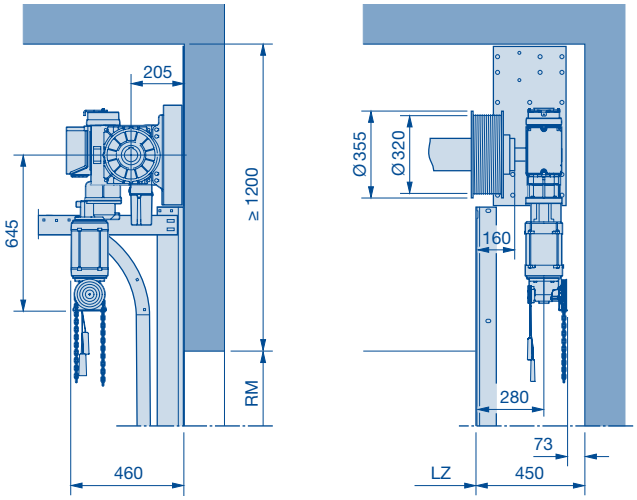
Direct Drive Operators S75 and S140

Direct drive operators S75 and S140 for track application H

RM ≤ 6000



RM > 6000



Door leaf speeds – Control 445 R and 460 R

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

LZ Clear frame dimensions
RM Grid height

Notes

Notes

Notes

Hörmann: Quality without Compromise


Hörmann KG Amshausen, Germany


Hörmann KG Antriebstechnik, Germany


Hörmann KG Brandis, Germany


Hörmann KG Brockhagen, Germany


Hörmann KG Dissen, Germany


Hörmann KG Eckelhausen, Germany


Hörmann KG Freisen, Germany


Hörmann KG Ichtershausen, Germany


Hörmann KG Werne, Germany


Hörmann Genk NV, Belgium


Hörmann Alkmaar B.V., Netherlands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GARAGE DOORS

OPERATORS

INDUSTRIAL DOORS

LOADING EQUIPMENT

HINGED DOORS

DOOR FRAMES

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