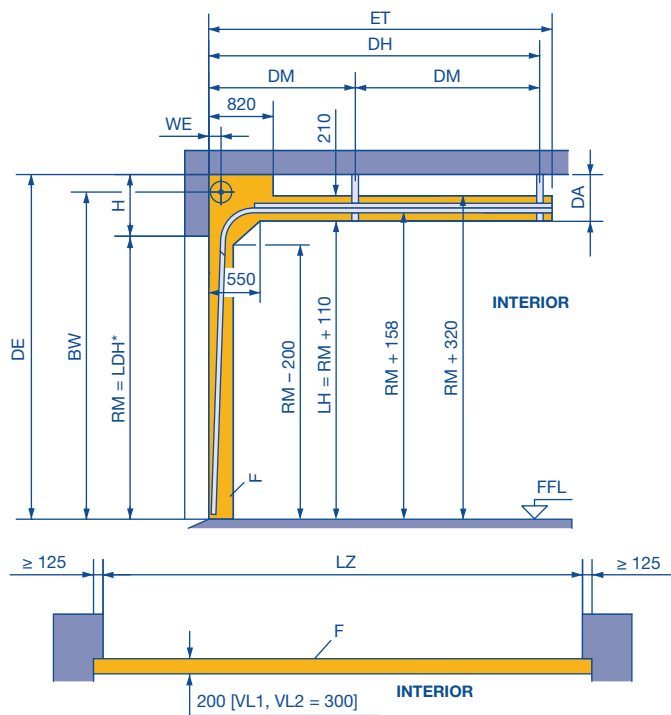


Track Application: N

Normal track application



Door weights for roof loads:

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

Observe min. sideroom, see page 61.

	H	WE	DA
N 1	390	140	280
N 2	440	160	330
N 3	550	180	440
N 3	760	With double spring shaft	

LDH	Clear passage height	L	Anchor length = DE - RM - 125 (see page 66)
RM	Grid height	LH	Track height
BW	Position of shaft support	LZ	Clear frame dimensions
	N 1 = RM + 310	DE	Ceiling height
	N 2 = RM + 335	F	Space for fitting the door
	N 3 = RM + 415		
ET	Min. distance back		
	N 1 + N 2 = RM + 440		
	N 3 = RM + 700		
	With shaft operator		
	N 1 + N 2 = RM + 650		
	With shaft operator N 3 = RM + 700		
DH	Rear ceiling anchor		
	N 1 + N 2 = RM + 195		
	N 3 = RM + 295		
DM	Central ceiling anchor (see page 66)		
WE	Shaft centre from lintel		
H	Min. headroom (see table)		
DA	Distance to ceiling		

Notes:

- Observe the permissible size ranges of the door types on pages 10 – 18 and 21 – 32 under all circumstances!
- The clearance required for fitting the door must be free of supply lines, heater fans, etc.
- For version with wicket door, manually operated: chain hoist recommended!
- ALR F42 Vitraplan and ALR F42 Glazing on request

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

** Or with chain hoist / pull rope

*** Track application with inclination not possible!

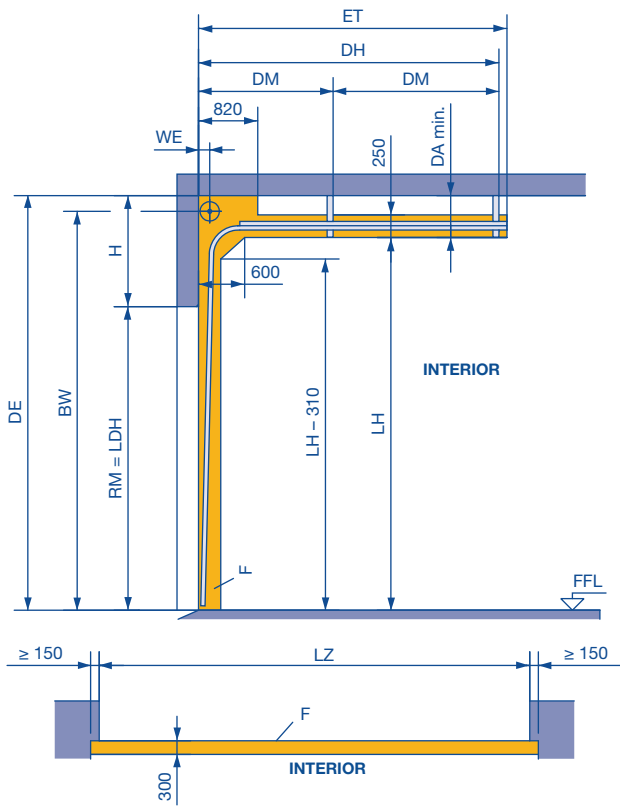
Min. headroom

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

Dimensions in mm

Track Application: H

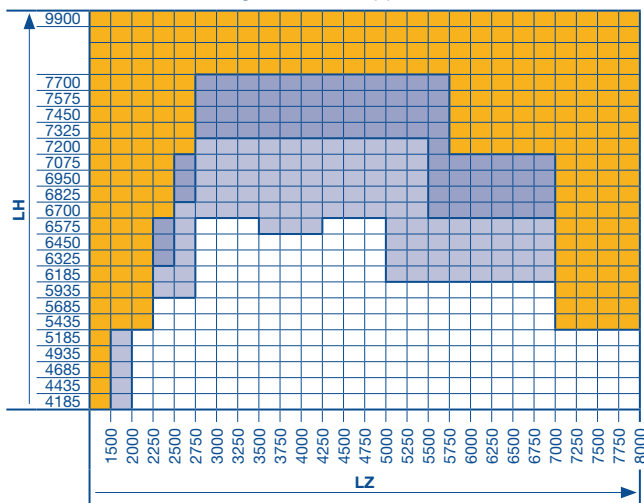
High-lift track application



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

Observe min. sideroom, see page 61.

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.

Table 1: Track heights (LH)
For track applications H, HD

Door height RM	Min. LH	Max. LH		Door height RM	Min. LH	Max. LH	
4500	4960	7800	H 5, WE = 180	7000	7460	9990	H 8, WE = 205 All door types and versions available on request.
4375	4835	7675		6875	7335	9990	
4250	4710	7550		6750	7210	9990	
4125	4585	7425		6625	7085	9990	
4000	4460	7185		6500	6960	9990	
3875	4335	6935		6375	6835	9775	
3750	4210	6685		6250	6710	9650	
3625	4085	6435		6125	6585	9525	
3500	3960	6185		6000	6460	9400	
3375	3835	5935		5875	6335	9275	
3250	3710	5685	5750	6210	9150		
3125	3585	5435	5625	6085	9025		
3000	3460	5185	5500	5960	8900		
2875	3335	4935	5375	5835	8775		
2750	3210	4685	5250	5710	8650		
2625	3085	4435	5125	5585	8525		
2500	2960	4185	5000	5460	8300		
2375	2835	3935	4875	5335	8175		
2250	2710	3685	4750	5210	8050		
2125	2585	3435	4625	5085	7925		
2000	2460	3185				H 5, WE = 180	

Notes:

- Observe the permissible size ranges of the door types on pages 10 – 18 and 21 – 32 under all circumstances!
- ALR F42 Vitraplan and ALR F42 Glazing on request

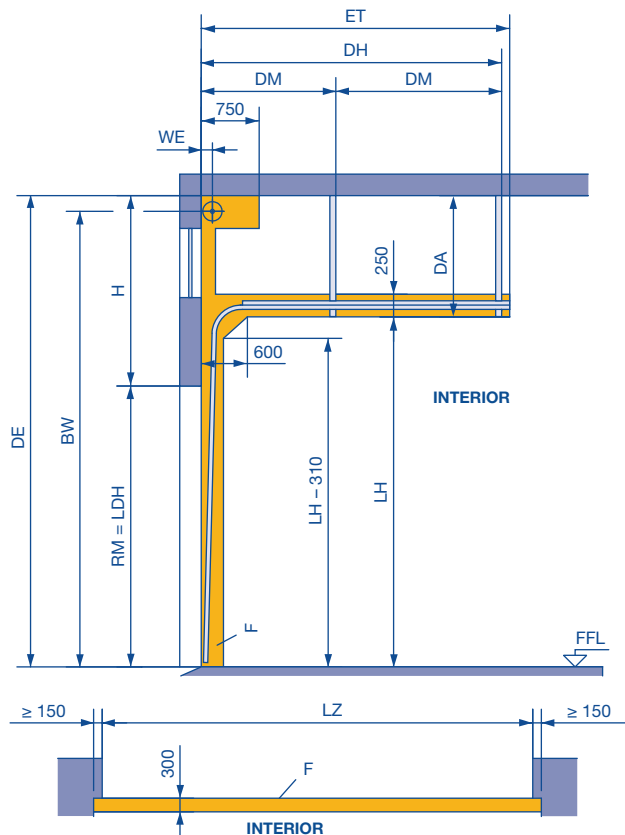
- LDH** Clear passage height
- RM** Grid height
- LH** Track height (see Table 1+2)
- BW** Position of shaft support
H 4 + 5 = LH + 280, H 8 = LH + 305
- DH** Rear ceiling anchor
H 4 + H 5 = 2 x RM - LH + 645 (long spring buffer)
H 4 + H 5 = 2 x RM - LH + 405 (short spring buffer)
H 4 + H 5 = 2 x RM - LH + 405 (long spring buffer + operator)
H 8 = 2 x RM - LH + 485
- DM** Central ceiling anchor (see page 66)
- WE** Shaft centre from lintel (see table 1)
- H** Min. headroom (see page 42)
- 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 66)
- DE** Ceiling height
- LZ** Clear frame dimensions (from 1200)
- ET** Distance back
- F** Space for fitting the door

Dimensions in mm

Track Application: HA

High-lift track application

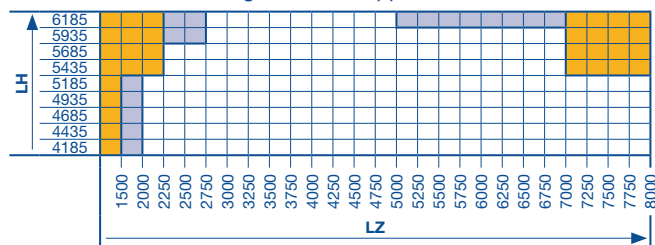
With high-mounted torsion spring shaft



ET = min. distance back	
HA 4	2 × RM - LH + 1120 For manual operation with long spring buffer (standard)
HA 4	2 × RM - LH + 650 For manual operation with short spring buffer (special)
HA 4	2 × RM - LH + 880 For shaft operator with long spring buffer (LH - RM) ≤ 1000
HA 4	2 × RM - LH + 650 For shaft operator with short spring buffer (LH - RM) > 1000

Observe min. sideroom, see page 61.

Table 4
Demarcation of track height for track application HA



Please note:

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

Note:

The clearance required for fitting the door must be free of supply lines, heater fans, etc.

Table 3: Track heights (LH)
for track application HA

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

HA 4, WE = 160

Notes:

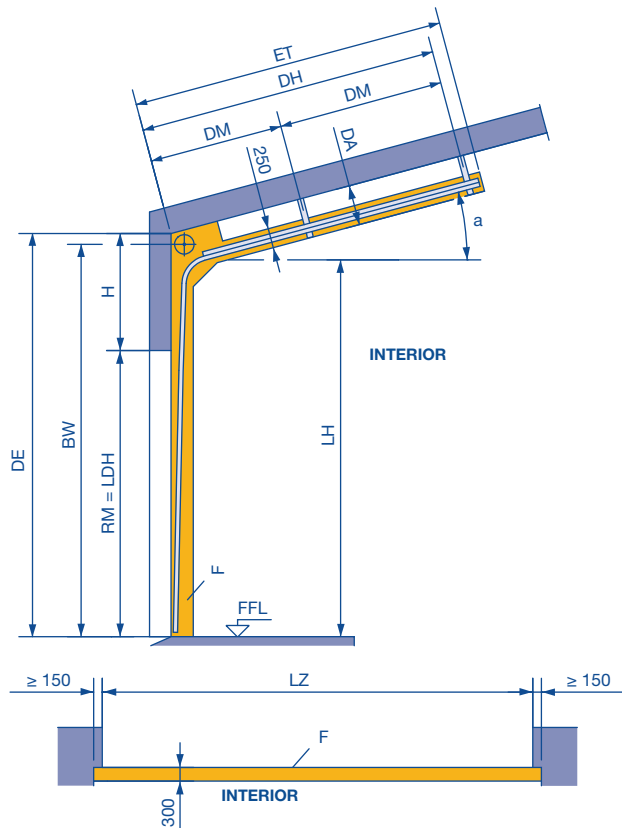
- Observe the permissible size ranges of the door types on pages 10 – 18 and 21 – 32 under all circumstances!
- ALR F42 Vitraplan and ALR F42 Glazing on request

- LDH** Clear passage height
 - RM** Grid height
 - LH** Track height (see Table 3+4)
 - BW** Position of shaft support
Min. = HA 4 = LH + 280
Max. (Ø120) = HA 4 = DE - 140
 - DH** Rear ceiling anchor
HA 4 = 2 × RM - LH + 645 (long spring buffer)
HA 4 = 2 × RM - LH + 405 (short spring buffer)
HA 4 = 2 × RM - LH + 405 (long spring buffer + operator)
 - DM** Central ceiling anchor (see page 66)
 - WE** Shaft centre from lintel (see table 3)
 - H** Min. headroom (see page 42)
 - DA** Distance to ceiling = HA 4 = min. 420
 - L** Anchor length DE - LH - 15 (see page 66)
 - DE** Ceiling height
 - LZ** Clear frame dimensions (from 1200)
 - ET** Distance back
 - F** Space for fitting the door
- All door types available in any version.
 - All door types available, versions with glazing A3, B3, M3, S3, LB, P and / or wicket door on request.
 - Door types APU F42 S-Line, ALR F42 S-Line, APU F42 and ALR F42 are possible; APU F42 Thermo, ALR F42 Thermo and SPU F42 with thermo frames as well as versions with glazing A3, B3, M3, S3, LB, P and / or wicket door on request.
 - All door types in any version on request.

Dimensions in mm

Track Application: HD

High-lift track application With inclination

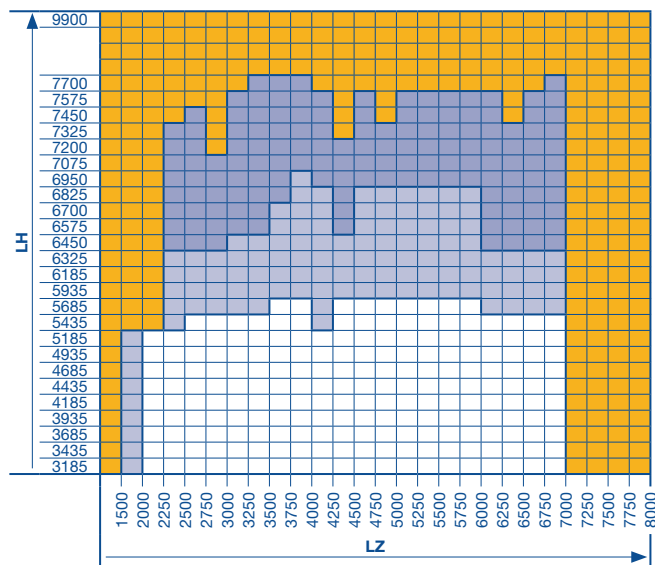


Notes:

- Observe the permissible size ranges of the door types on pages 10 – 18 and 21 – 32 under all circumstances!
- ALR F42 Vitraplan and ALR F42 Glazing on request

Table 5

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



Please note:

1. Select required track height according to the door height in Table 1 on page 50.
2. Determine the intersection of the door width and track height using table 5.
3. Please check if, acc. to the explanations, a request is necessary.

Note:

The clearance required for fitting the door must be free of supply lines, heater fans, etc.

ET = min. distance back		
HD 4 + 5	2 x RM - LH + 1120 - a° x 6.5	For manual operation with long spring buffer (standard)
	2 x RM - LH + 650 - a° x 6.5	For manual operation with short spring buffer (special)
	2 x RM - LH + 880 - a° x 6.5	For shaft operator with long spring buffer (LH - RM) ≤ 1000 and a° ≤ 5°
HD 8	2 x RM - LH + 650 - a° x 6.5	For shaft operator with short spring buffer (LH - RM) > 1000 or a° > 5°
	2 x RM - LH + 950 - a° x 6.5	All versions

See the high-lift track application for all other fitting dimensions.
Observe min. sideroom, see page 61.

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

- DA** Distance to ceiling on request
- L** Anchor length DE - L + 140 (see page 66)
- LH** Track height (see Table 1 on page 50 and Table 5)
- H** Min. headroom (see page 42)
- BW** Position of shaft support
HD 4 + 5 = LH + 280, HD 8 = LH + 305
- DH** Rear ceiling anchor
HD 4 + HD 5 = 2 x RM - LH + 645 - a° x 6.5 (long spring buffer)
HD 4 + HD 5 = 2 x RM - LH + 405 - a° x 6.5 (short spring buffer)
HD 4 + HD 5 = 2 x RM - LH + 405 - a° x 6.5 (long spring buffer + operator)
HD 8 = 2 x RM - LH + 485
- DM** Central ceiling anchor on request
- WE** Shaft centre from lintel (see Table 1 on page 50)
- DE** Ceiling height
- LDH** Clear passage height
- LZ** Clear frame dimensions (**from 1200**)
- ET** Distance back
- RM** Grid height
- F** Space for fitting the door

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

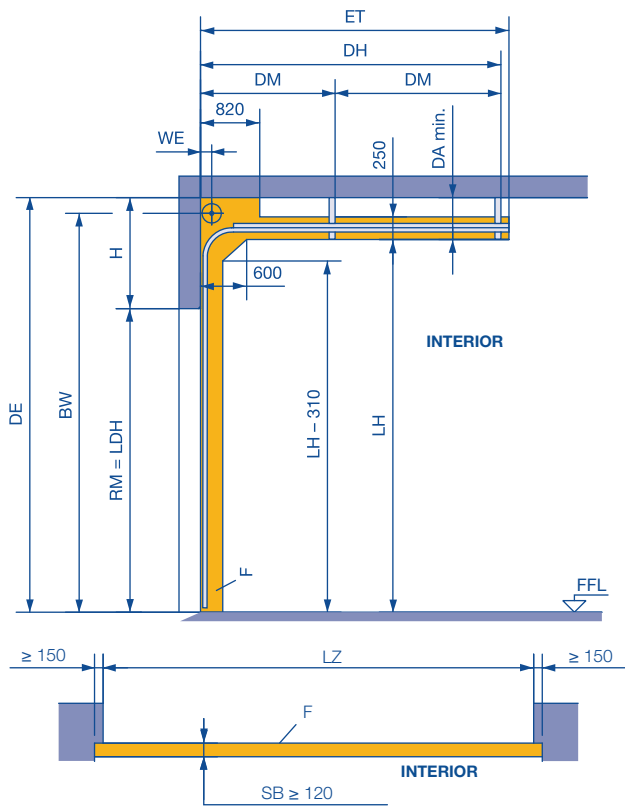
Dimensions in mm

Track Application: HG

High-lift application

With steep track

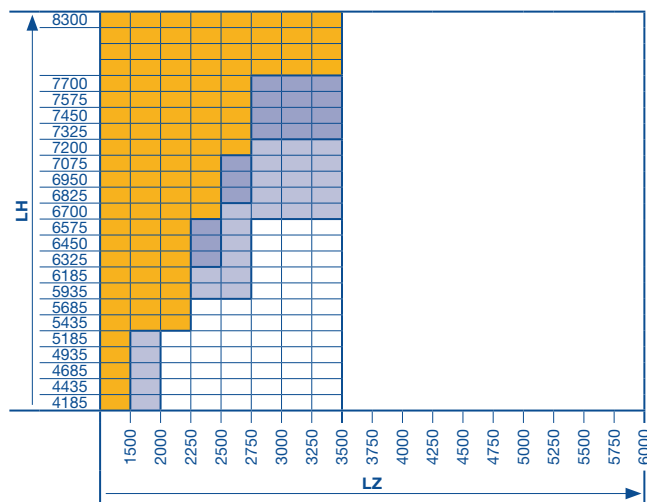
(Application for loading ramp doors)



ET = min. distance back	
HG 4 + 5	2 × RM - LH + 1120 For manual operation with long spring buffer (standard)
	2 × RM - LH + 650 For manual operation with short spring buffer (special)
	2 × RM - LH + 880 For shaft operator with long spring buffer (LH - RM) ≤ 1000
	2 × RM - LH + 650 For shaft operator with short spring buffer (LH - RM) > 1000

Other versions on request.
Observe min. sideroom, see page 61.

Table 7
Demarcation of track height for track application HG



Please note:

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

Notes:

- Door types APU F42 S-Line / ALR F42 S-Line / ALR F42 Glazing, doors with real glass infill and wicket doors are not possible!
- The clearance required for fitting the door must be free of supply lines, heater fans, etc.

Table 6: Track heights (LH)

For track application HG

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

Notes:

- Observe the permissible size ranges of the door types on pages 10 – 18 and 21 – 32 under all circumstances!
- ALR F42 Vitraplan on request

- LDH** Clear passage height
- RM** Grid height
- LH** Track height (see Table 6)
- DH** Rear ceiling anchor =
HG 4 + HG 5 = 2 × RM - LH + 645 (long spring buffer)
HG 4 + HG 5 = 2 × RM - LH + 405 (short spring buffer)
HG 4 + HG 5 = 2 × RM - LH + 405 (long spring buffer + operator)
- DM** Central ceiling anchor (see page 66)
- WE** Shaft centre from lintel (see table 6)
- H** Min. headroom (see page 42)
- Min. DA** HG 4 = 420
HG 5 = 450, 625 with double spring shaft
- SB** Slot width
- L** Anchor length DE - LH - 15 (see page 66)
- ET** Distance back
- DE** Ceiling height
- LZ** Clear frame dimensions (from 1200)
- F** Space for fitting the door

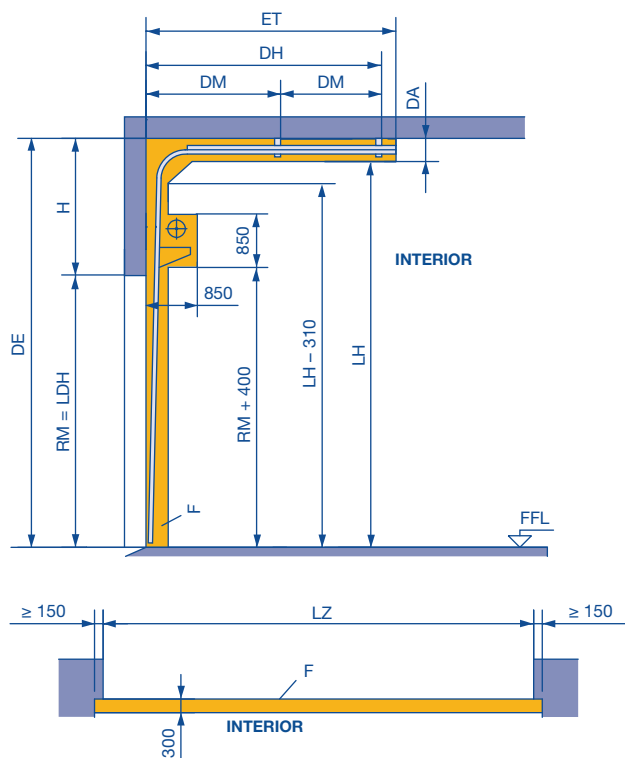
- All door types available in any version.
- All door types available, versions with glazing A3, B3, M3, S3, LB, P on request.
- Door types APU F42 S-Line, ALR F42 S-Line, APU F42 and ALR F42 are possible; APU F42 Thermo, ALR F42 Thermo and SPU F42 with thermo frames as well as versions with glazing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

Dimensions in mm

Track Application: HU

High-lift track application

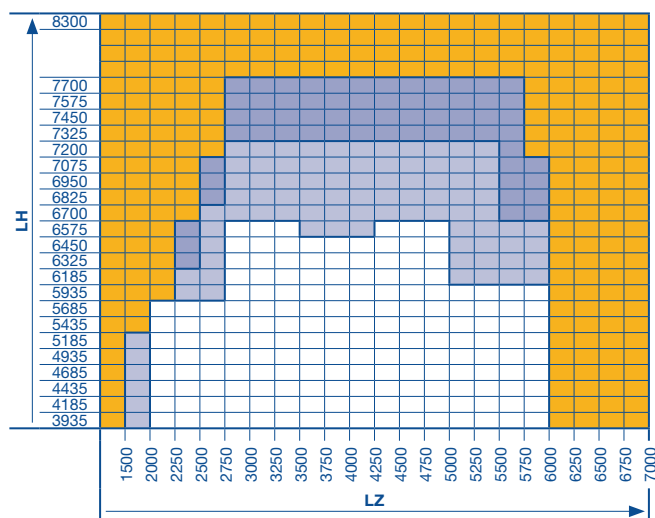
With low-mounted torsion spring shaft



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

Other versions on request.
Observe min. sideroom, see page 61.

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.

Table 6: Track heights (LH)
For track application HU

Door height	Min. LH	Max. LH	
5000	6510	8300	HU 5, WE = 335
4875	6385	8175	
4750	6260	8050	
4625	6135	7925	
4500	6010	7800	
4375	5885	7675	
4250	5760	7550	
4125	5635	7425	
4000	5510	7185	
3875	5385	6935	
3750	5260	6685	
3625	5135	6435	
3500	5010	6185	HU 4, WE = 315
3375	4885	5935	
3250	4760	5685	
3125	4635	5435	
3000	4510	5185	
2875	4385	4935	
2750	4260	4685	
2625	4135	4435	
2500	4010	4185	
2375	3885	3935	

Notes:

- Observe the permissible size ranges of the door types on pages 10 – 18 and 21 – 32 under all circumstances!
- ALR F42 Vitraplan and ALR F42 Glazing on request

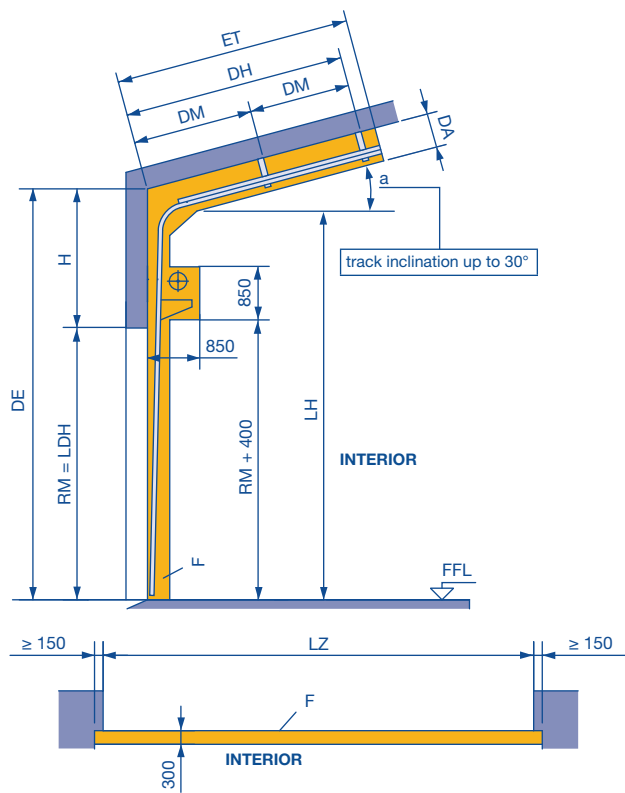
- DE** Ceiling height
- LDH** Clear passage height
- RM** Grid height
- LH** Track height (see Table 6)
- DH** Rear ceiling anchor
HU 4 + HU 5 = 2 x RM - LH + 645 (long spring buffer)
HU 4 + HU 5 = 2 x RM - LH + 405 (short spring buffer)
HU 4 + HU 5 = 2 x RM - LH + 405 (long spring buffer + operator)
- DM** Central ceiling anchor (see page 66)
- WE** Shaft centre from lintel (see table 6)
- H** Min. headroom (see page 42)
- DA** Min. distance to ceiling 250
- L** Anchor length DE - LH - 15 (see page 66)
- LZ** Clear frame dimensions (**from 1200**)
- ET** Distance back
- F** Space for fitting the door

Dimensions in mm

Track Application: RD

High-lift track application

With low-mounted torsion spring shaft and inclination

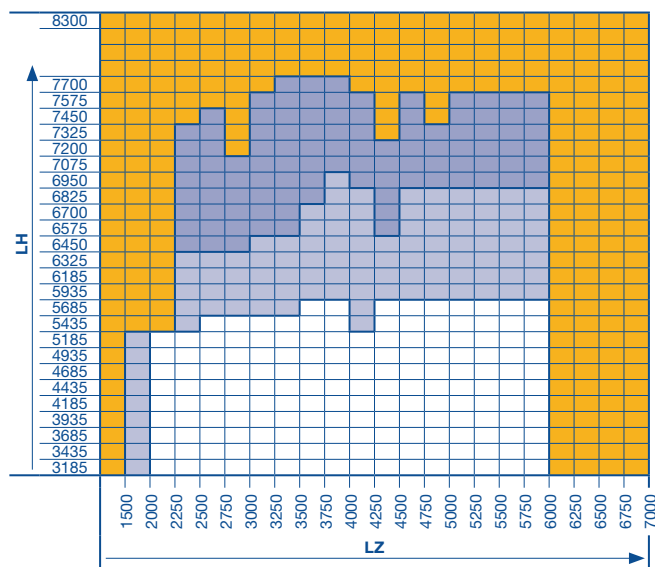


Notes:

- Observe the permissible size ranges of the door types on pages 10–18 and 21–32 under all circumstances!
- ALR F42 Vitraplan and ALR F42 Glazing on request request

Table 8

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



Please note:

1. Select required track height according to the door height in Table 6 on page 54.
2. Determine the intersection of the door width and track height using table 8.
3. Please check if, acc. to the explanations, a request is necessary.

Note:

The clearance required for fitting the door must be free of supply lines, heater fans, etc.

ET = min. distance back	
RD 4 + 5	$2 \times RM - LH + 1120 - a^\circ \times 6.5$ For manual operation with long spring buffer (standard)
	$2 \times RM - LH + 650 - a^\circ \times 6.5$ For manual operation with short spring buffer (special)
	$2 \times RM - LH + 880 - a^\circ \times 6.5$ For shaft operator with long spring buffer = $(LH - RM) \leq 1000$ and $a^\circ \leq 5^\circ$
	$2 \times RM - LH + 650 - a^\circ \times 6.5$ For shaft operator with short spring buffer = $(LH - RM) > 1000$ or $a^\circ > 5^\circ$

See the high-lift track application with inclination for all other fitting dimensions. Observe min. sideroom, see page 61.

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

- DE** Ceiling height
- L** Anchor length DE – L – 15 (see page 66)
- LH** Track height (see Table 6 on page 54)
- H** Min. headroom (see page 42)
- DH** Rear ceiling anchor=
 - RD 4 + RD 5 = $2 \times RM - LH + 645 - a^\circ \times 6.5$ (long spring buffer)
 - RD 4 + RD 5 = $2 \times RM - LH + 405 - a^\circ \times 6.5$ (short spring buffer)
 - RD 4 + RD 5 = $2 \times RM - LH + 405 - a^\circ \times 6.5$ (long spring buffer + operator)
- DM** Central ceiling anchor (see page 66)
- WE** Shaft centre from lintel (see Table 6 on page 54)
- DA** Distance to ceiling on request
- LDH** Clear passage height
- LZ** Clear frame dimensions (from 1200)
- RM** Grid height
- F** Space for fitting the door

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

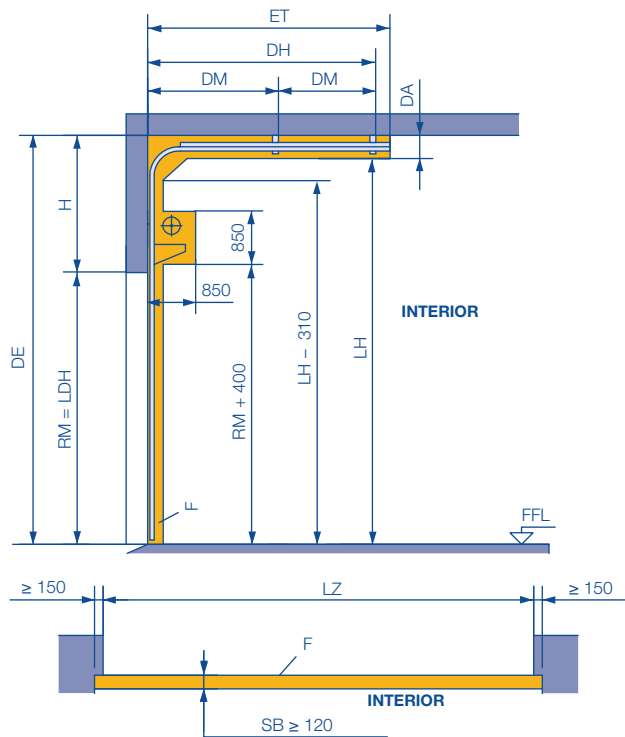
Dimensions in mm

Track Application: RG

High-lift track application

With low-mounted torsion spring shaft and steep track

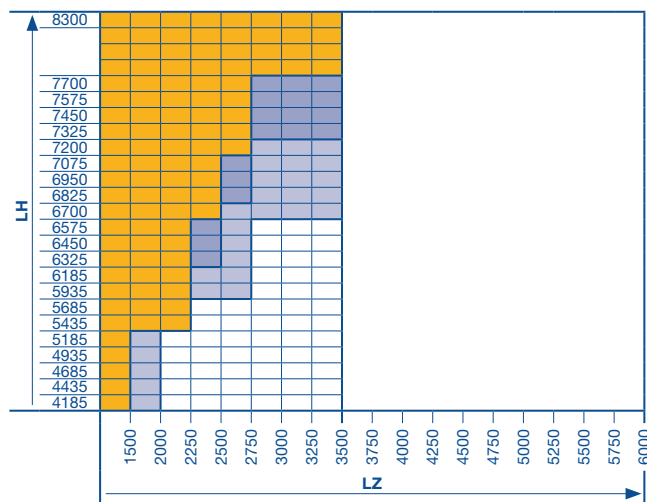
(Application for loading ramp doors)



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

Other versions on request.
Observe min. sideroom, see page 61.

Table 10
Demarcation of track height for track application RG



Please note:

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

Notes:

- Door types APU F42 S-Line / ALR F42 S-Line and wicket doors are not possible!
- The clearance required for fitting the door must be free of supply lines, heater fans, etc.

Table 9: Track heights (LH)

For track application RG

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

Notes:

- Observe the permissible size ranges of the door types on pages 10 – 18 and 21 – 32 under all circumstances!
- ALR F42 Vitraplan and ALR F42 Glazing on request

- LDH** Clear passage height
- RM** Grid height
- LH** Track height (see Table 9)
- DH** Rear ceiling anchor =
RG 4 + RG 5 = 2 x RM - LH + 580 (long spring buffer)
RG 4 + RG 5 = 2 x RM - LH + 340 (short spring buffer)
RG 4 + RG 5 = 2 x RM - LH + 340 (long spring buffer + WA 400)
- DM** Central ceiling anchor (see page 66)
- WE** Shaft centre from lintel (see table 9)
- H** Min. headroom (see page 42)
- DA** Min. distance to ceiling 250
- SB** Slot width
- L** Anchor length DE - LH - 15 (see page 66)
- ET** Distance back
- DE** Ceiling height
- LZ** Clear frame dimensions (from 1200)
- F** Space for fitting the door

□ All door types available in any version.

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

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

□ All door types in any version on request.

Dimensions in mm