

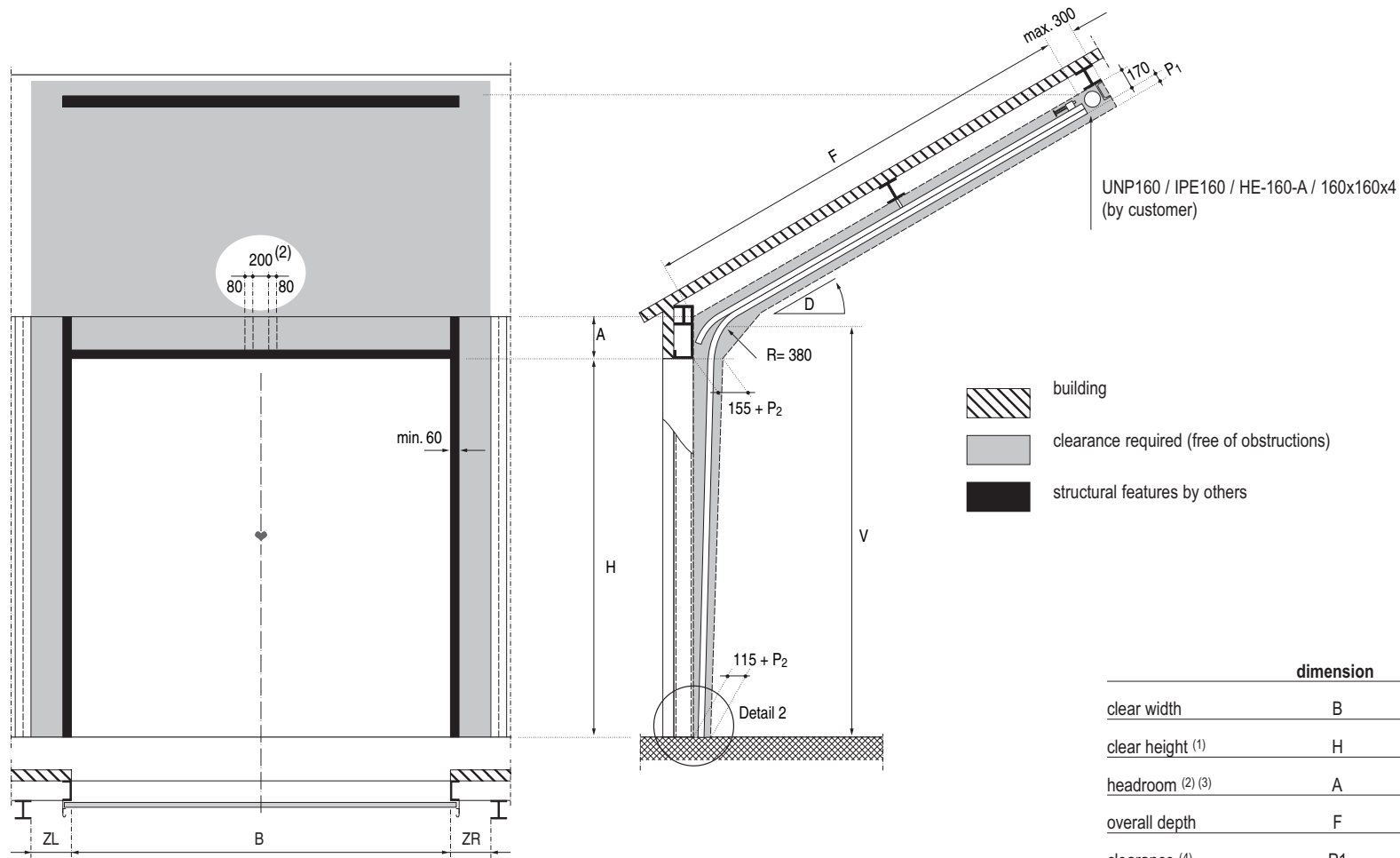
	dimension	minimum	measured
clear width	B	n.a.	.....mm
clear height <sup>(1)</sup>	H	n.a.	.....mm
headroom <sup>(2)</sup>	A	200 mm	.....mm
overall depth <sup>(4)</sup>	F	H + 880 mm	.....mm
sideroom <sup>(5)</sup> pull cord	ZL / ZR	170 / 170 mm	.....mm
track clearance height	V	H + 35 mm	n.a.
free space <sup>(3)</sup>	P1	35 mm	n.a.
	P2	105 mm	n.a.

(1) clear height = H + 10 mm (due to weather strip) see detail 2, page "Details"  
 (2) for springs over the door also use spring supports : A<sup>min</sup> = 300 mm  
 (3) in the case of wicket and/or doors with bracing: P1 = 75 mm  
 (4) excluding torsion springs  
 (5) for manual chain host and electric drive see page 'sideroom required...'

**Important!**

- the clear opening must be level and square
- the fitting surfaces must be plumb and in line
- the finished floor must be laid and level and prevention from water ingress is recommended.
- the fitting surface should preferably be of steel
- if unsure of the structural suitability for door installation please contact our Sales Dept.
- dimensions are indicated in mm

- for sideroom (ZL/ZR) with (electrical) operators, see page "Sideroom required for various operators".
- for details and cross-sections, see page "Details"
- for special applications, contact our Sales Department
- for details of bracing and track mounting points see "spring supports, bracing, track mounting points"



building  
 clearance required (free of obstructions)  
 structural features by others

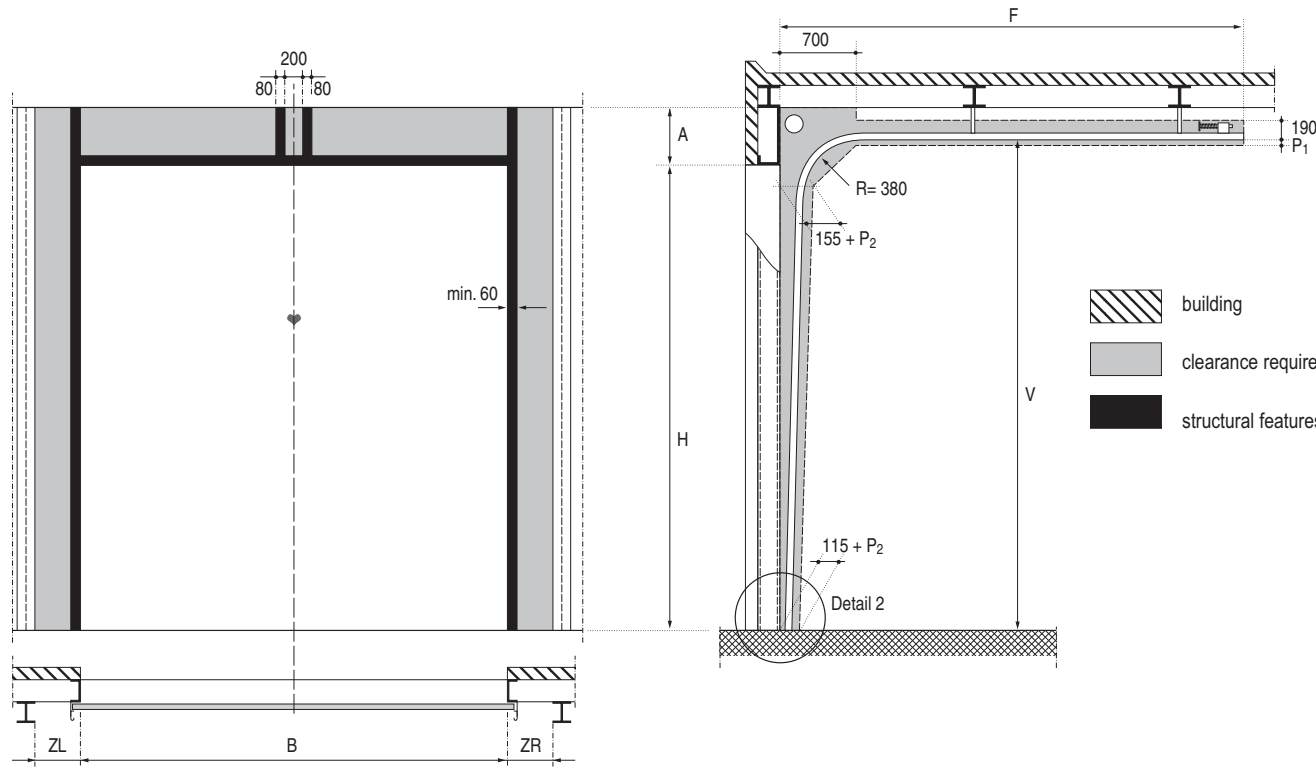
	dimension	minimum	measured
clear width	B	n.a.	..... mm
clear height (1)	H	n.a.	..... mm
headroom (2) (3)	A	250 mm	..... mm
overall depth	F	H + 880 mm	..... mm
clearance (4)	P1	40 mm	n.a.
	P2	105 mm	n.a.
track clearance height	V	H + 35 mm	n.a.
sideroom pull cord (5)	ZL / ZR	170 / 170 mm	..... mm
roof pitch (3)	D	5°	..... °

(1) clear height = H + 10 mm (due to weather strip) see detail 2, page "Details"  
 (2) for springs over the door also use spring supports ; A<sup>min</sup> = 350 mm  
 (3) if D ≤ 20°, A<sup>min</sup> = 200 mm ; D<sup>max</sup> = 40°  
 (4) in the case of wicket and/or doors with bracing: P1 = 75 mm  
 (5) for manual chain host and electric drive see page 'sideroom required...'

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- the fitting surfaces must be plumb and in line
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- for sideroom (ZL/ZR) with (electrical) operators, see page "Sideroom required for various operators".
- electrical operators are recommended for tracks that follow the angle of the roof (pull cord operation is not possible!).
- for details and cross-sections, see page "Details".
- for special applications, contact our Sales Department.
- for details of bracing and track mounting points see "spring supports, bracing, track mounting points"



- building
- clearance required (free of obstructions)
- structural features by others

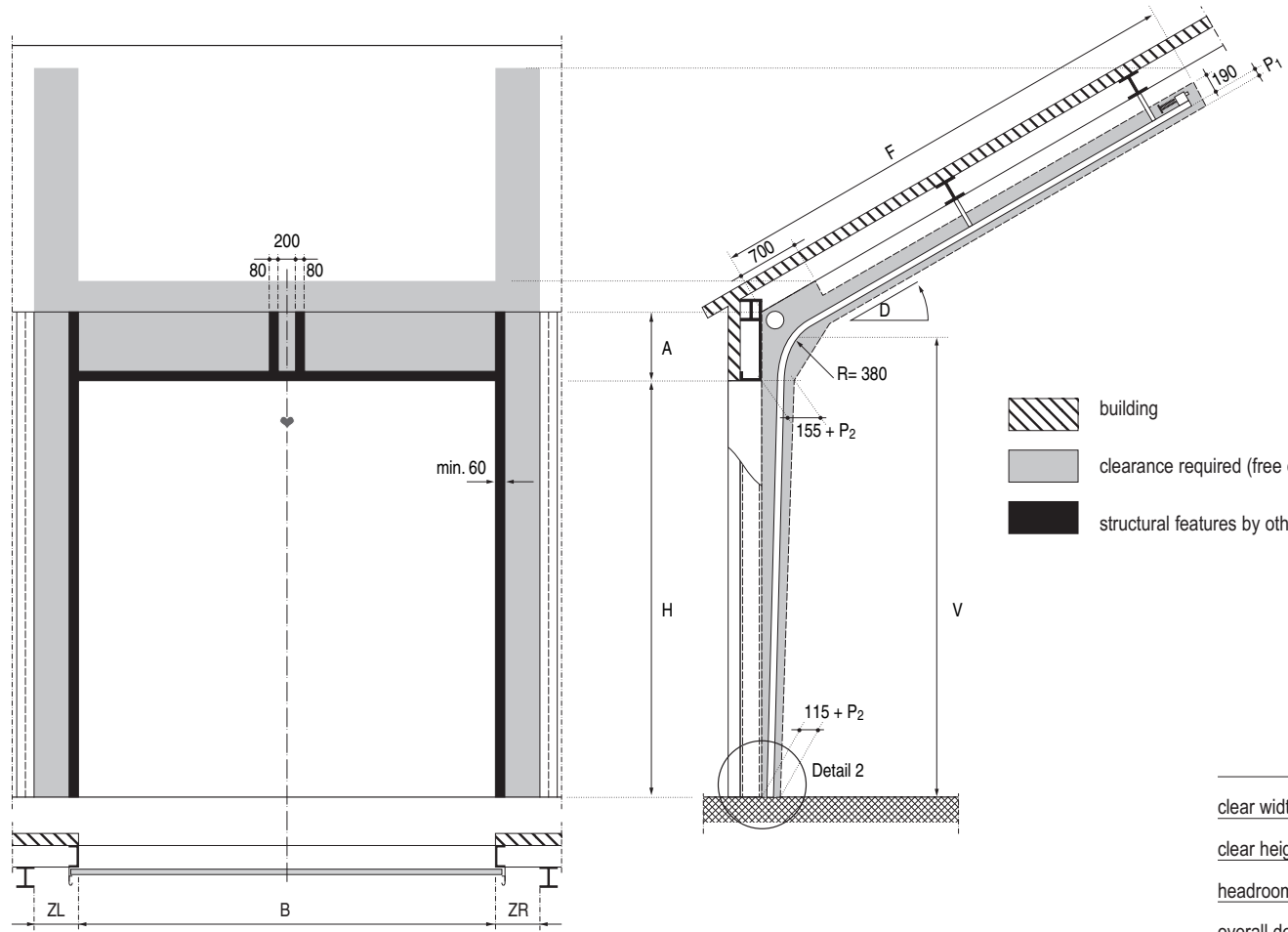
	dimension	minimum	measured
clear width	B	n.a.	..... mm
clear height <sup>(1)</sup>	H	n.a.	..... mm
headroom <sup>(2)</sup>	A	450 mm	..... mm
overall depth	F	H + 902 mm	..... mm
clearance <sup>(3)</sup>	P1	40 mm	n.a.
	P2	105 mm	n.a.
sideroom <sup>(4)</sup> pull cord	ZL / ZR	130 / 130 mm	..... mm
track clearance height	V	H + 198 mm	n.a.

**Important!**

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- dimensions are indicated in mm

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<sup>(1)</sup> clear height = H + 10 mm (due to weather strip) see detail 2, page "Details"  
<sup>(2)</sup> if H > 5300 mm and/or area (BxH) > 25m<sup>2</sup>, A<sup>min</sup> = 530 mm  
<sup>(3)</sup> in the case of wicket and/or doors with bracing : P1 = 75 mm  
<sup>(4)</sup> for manual chain host and electric drive see page 'sideroom required...'



building  
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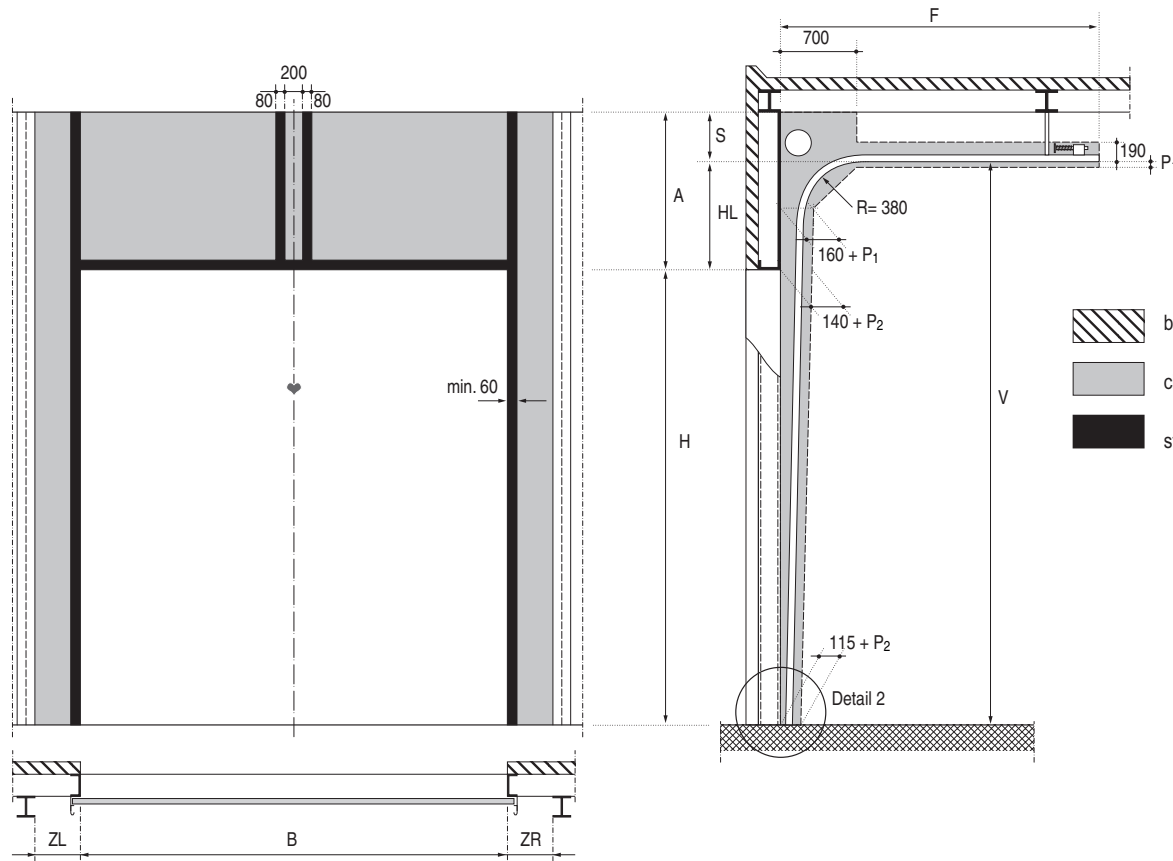
	dimension	minimum	measured
clear width	B	n.a.	..... mm
clear height <sup>(1)</sup>	H	n.a.	..... mm
headroom	A	530 mm	..... mm
overall depth	F	H + 800 mm	..... mm
clearance <sup>(2)</sup>	P1	40 mm	n.a.
	P2	105 mm	n.a.
track clearance height	V	H + 198 mm	n.a.
sideroom <sup>pull cord</sup> <sup>(4)</sup>	ZL / ZR	130 / 130 mm	..... mm
roof pitch <sup>(3)</sup>	D	5°	..... °

<sup>(1)</sup> clear height = H + 10 mm (due to weather strip) see detail 2, page "Details"  
<sup>(2)</sup> in the case of wicket and/or doors with bracing : P1 = 75 mm  
<sup>(3)</sup> D<sub>max</sub> = 45°  
<sup>(4)</sup> for manual chain host and electric drive see page 'sideroom required...'

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- if unsure of the structural suitability for door installation please contact our Sales Dept.
- dimensions are indicated in mm

- for sideroom (ZL/ZR) with (electrical) operators, see page "Sideroom required for various operators"
- at least a manual chain hoist is necessary in the case of tracks that follow the angle of the roof (pull cord operation is not possible)
- for details and cross-sections, see page "Details"
- for special applications, contact our Sales Department
- for details of bracing and track mounting points see "spring supports, bracing, track mounting points"



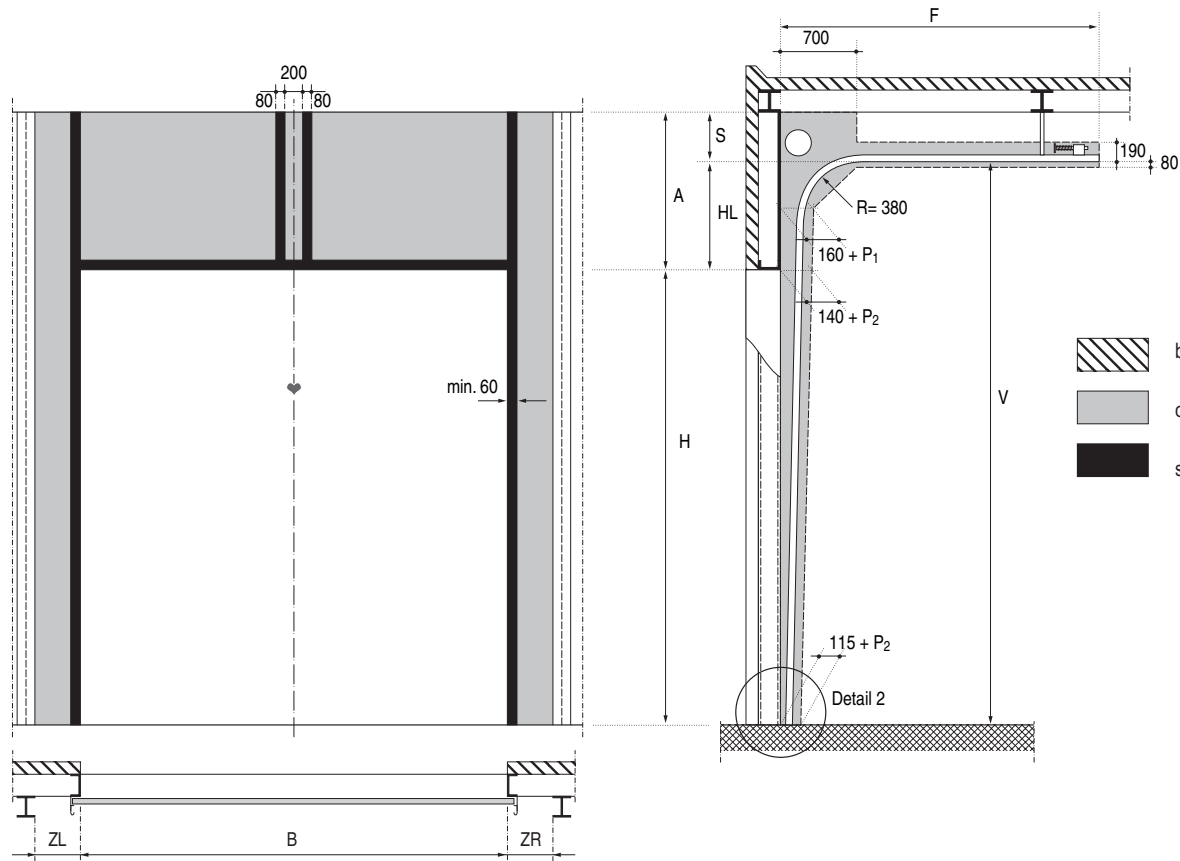
	dimension	minimum	measured
clear width	B	n.a.	..... mm
clear height (1)	H	n.a.	..... mm
mounting space (2)	S	400 mm	n.a.
headroom	A	700 mm	..... mm
overall depth	F	H + 1050 - HL mm	..... mm
clearance (3)	P <sub>1</sub>	40 mm	n.a.
	P <sub>2</sub>	105 mm	n.a.
sideroom pull cord (5)	ZL / ZR	130 / 130 mm	..... mm
track clearance height	V	H + A - S mm	..... mm
high lift	HL (4)	A - S mm	..... mm

(1) clear height = H + 10 mm (due to weather strip) see detail 2, page "Details"  
 (2) if H < 5000 mm and/or B < 5000 mm, then S<sub>min</sub> = 350 mm  
 (3) in the case of wicket and/or doors with bracing : P<sub>1</sub> = 75 mm  
 (4) HL<sub>max</sub> = 4149 mm  
 (5) for manual chain host and electric drive see page 'sideroom required...'

**Important!**

- the clear opening must be level and square
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- the fitting surface should preferably be of steel
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- dimensions are indicated in mm

- for sideroom (ZL/ZR) with (electrical) operators, see page "Sideroom required for various operators"
- for head beam see page "Spring supports..."
- for details and cross-sections, see page "Details"
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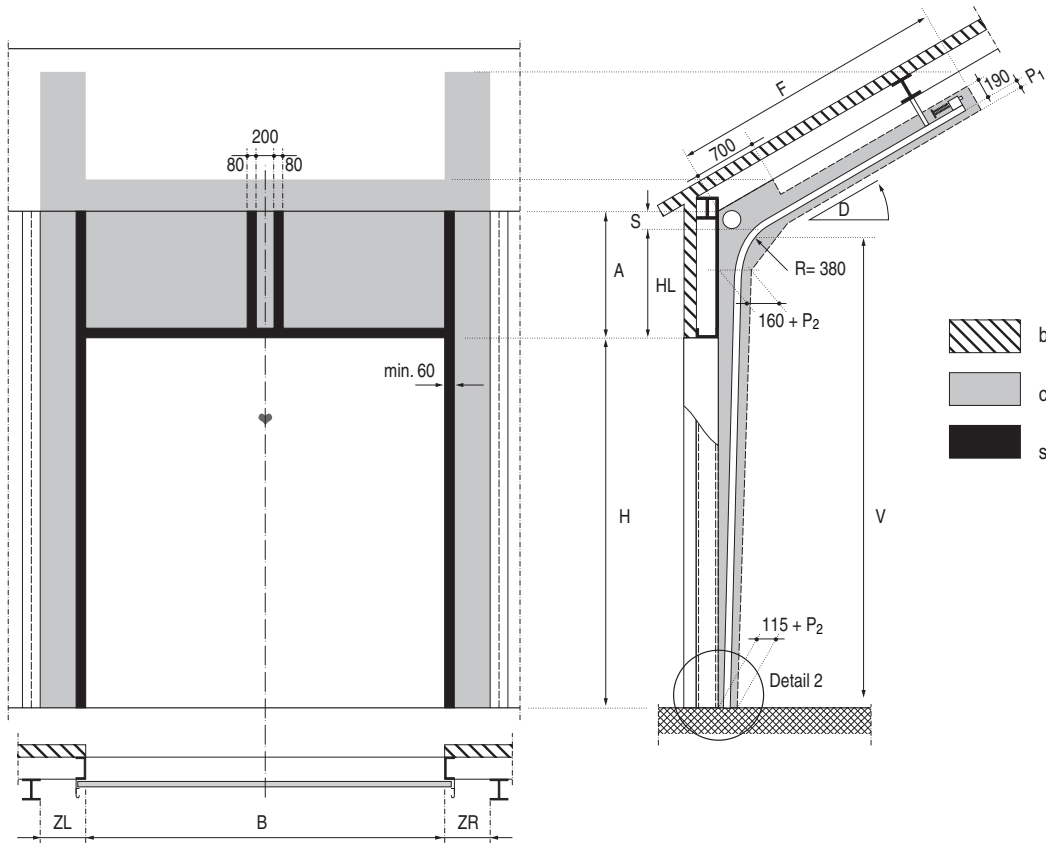
	dimension	minimum	measured
clear width	B	n.a.	..... mm
clear height (1)	H	n.a.	..... mm
drop (2)	S	400 mm	n.a.
headroom	A	700 mm	..... mm
overall depth	F	H + 1050 - HL mm	..... mm
clearance	P1	75 mm	n.a.
	P2	105 mm	n.a.
sideroom pull cord (4)	ZL / ZR	130 / 130 mm	..... mm
track clearance height	V	H + A - S mm	..... mm
high lift (3)	HL (3)	A - S mm	..... mm

(1) clear height = H + 10 mm (due to weather strip) see detail 2, page "Details"  
 (2) if H < 5000 mm and/or B < 5000 mm, then S<sup>min</sup> = 350 mm  
 (3) HL<sup>max</sup> = 4149 mm  
 (4) for manual chain host and electric drive see page 'sideroom required...'

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- for special applications, contact our Sales Department
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building  
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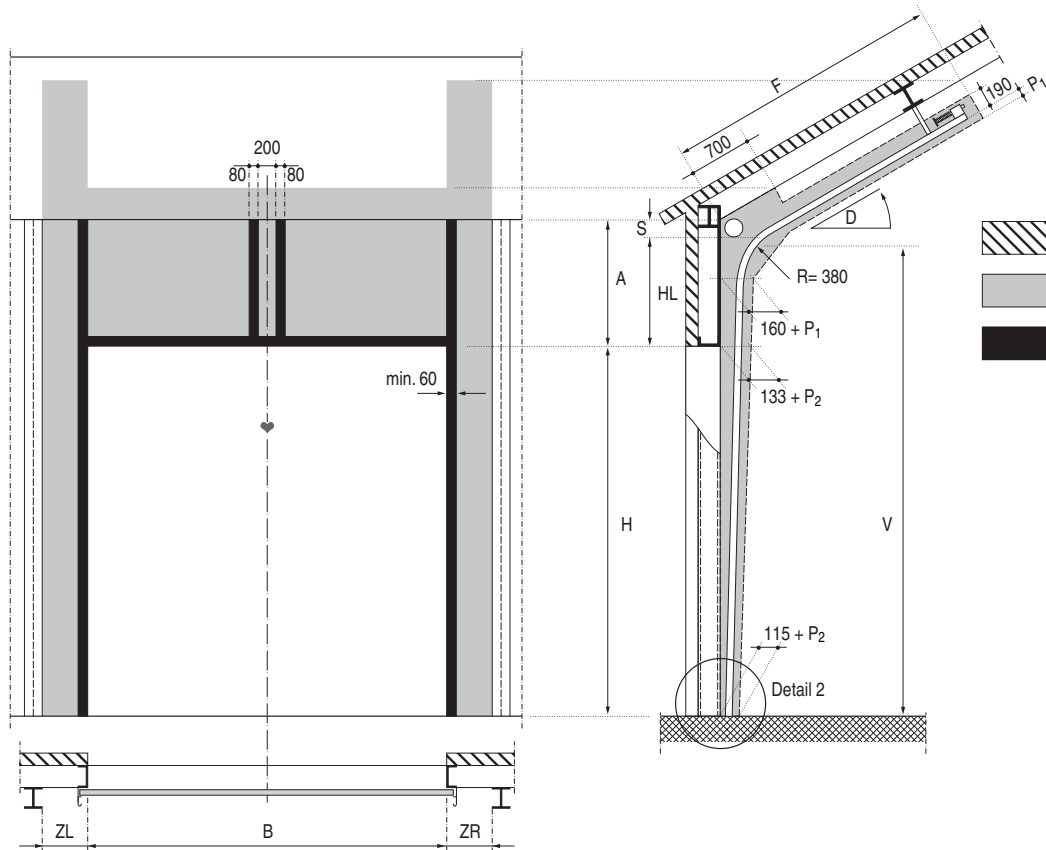
	dimension	minimum	measured
clear width	B	n.a.	..... mm
clear height (1)	H	n.a.	..... mm
drop (2)	S	400 mm	n.a.
headroom	A	700 mm	..... mm
high lift	HL (5)	A - S mm	..... mm
overall depth	F	H + 1050 - HL mm	..... mm
clearance (3)	P1	40 mm	n.a.
	P2	105 mm	n.a.
sideroom <sup>pull cord (6)</sup>	ZL / ZR	130 / 130 mm	..... mm
track clearance height	V	H + A - S mm	..... mm
roof pitch (4)	D	5°	..... °

(1) clear height = H + 10 mm (due to weather strip) see detail 2, page "Details"  
 (2) if H < 5000 mm and/or B < 5000m, then S<sup>min</sup> = 350 mm.  
 (3) in the case of wicket and/or doors with bracing : P1 = 75 mm.  
 (4) D<sup>max</sup> = 45°  
 (5) HL<sup>max</sup> = 4149 mm  
 (6) for manual chain host and electric drive see page 'sideroom required...'

**Important!**

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- for details and cross-sections, see page "Details".
- for head beam see page "Spring supports...".
- for special applications, contact our Sales Department.
- at least a manual chain hoist is necessary in the case of tracks that follow the angle of the roof (pull-cord operation is not possible!)
- for details of bracing and track mounting points see "spring supports, bracing, track mounting points"



	dimension	minimum	measured
clear width	B	n.a.	..... mm
clear height <sup>(1)</sup>	H	n.a.	..... mm
drop <sup>(2)</sup>	S	400 mm	n.a.
headroom	A	700 mm	..... mm
high lift	HL <sup>(4)</sup>	A - S mm	n.a.
overall depth	F	H + 1050 - HL mm	..... mm
clearance	P <sub>1</sub>	75 mm	n.a.
	P <sub>2</sub>	105 mm	n.a.
sideroom <sup>(5)</sup> pull cord	ZL / ZR	130 / 130 mm	..... mm
track clearance height	V	H + A - S mm	..... mm
roof pitch <sup>(3)</sup>	D	5°	..... °

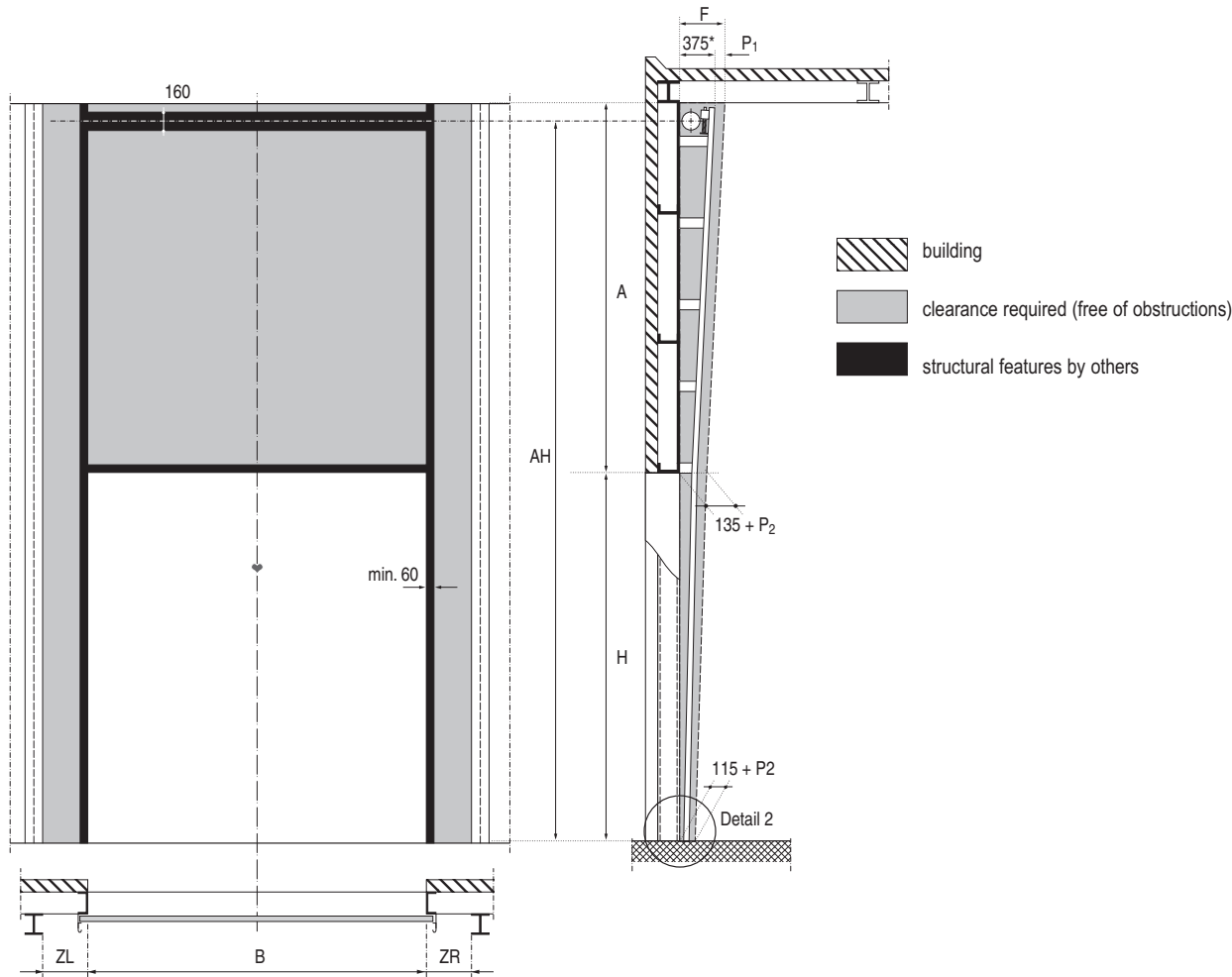
(1) clear height = H + 10 mm (due to weather strip) see detail 2, page "Details"  
 (2) if H < 5000 mm and/or B < 4000 mm, then S<sub>min</sub> = 350 mm.  
 (3) D<sub>max</sub> = 45°  
 (4) HL<sub>max</sub> = 4149 mm  
 (5) for manual chain host and electric drive see page 'sideroom required...'

**Important!**

- the clear opening must be level and square
- the fitting surfaces must be plumb and in line
- the finished floor must be laid and level and prevention from water ingress is recommended.
- the fitting surface should preferably be of steel
- if unsure of the structural suitability for door installation please contact our Sales Dept.
- dimensions are indicated in mm

- for sideroom (ZL/ZR) with (electrical) operators, see page "Sideroom required for various operators".
- for head beam see page "Spring supports...".
- at least a manual chain hoist is necessary in the case of tracks that follow the angle of the roof (pull-cord operation is not possible!).
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	dimension	minimum	measured
clear width	B	n.a	..... mm
clear height (1)	H (4)	n.a	..... mm
headroom (3)	A	H + 557 mm	..... mm
shaft height when $H < 3350$ (3)	AH	2 H + 213 mm	n.a
shaft height when $H > 3350$ (3)	AH	2 H + 233 mm	n.a
overall depth (2)	F	P + 375 mm	..... mm
clearance (2)	P1	40 mm	n.a
	P2	105 mm	n.a
sideroom pull cord (5)	ZL / ZR	110 / 110 mm	..... mm

- (1) clear height =  $H + 10$  mm (due to weather strip) see detail 2, page "Details"
- (2) in the case of wicket and/or doors with bracing :  $P_1 = 75$  mm.
- (3) for headroom (A) of  $H + 432$  mm, the following applies ;

$$H \leq 3350 \text{ mm} : F = P_1 + 375$$

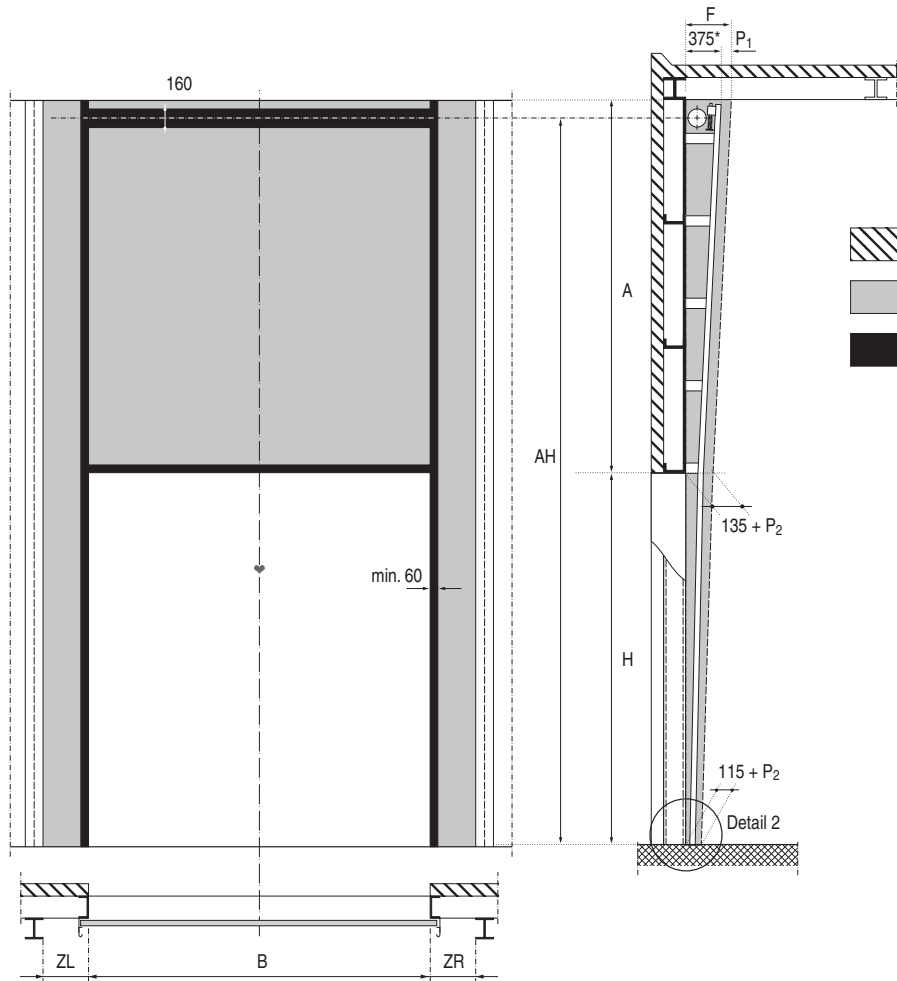
$$H > 3350 \text{ mm} : F = P_1 + 500$$

- (4)  $H_{\text{max}} = 5999$  mm
- (5) for manual chain host and electric drive see page 'sideroom required...'

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- building
- clearance required (free of obstructions)
- structural features by others

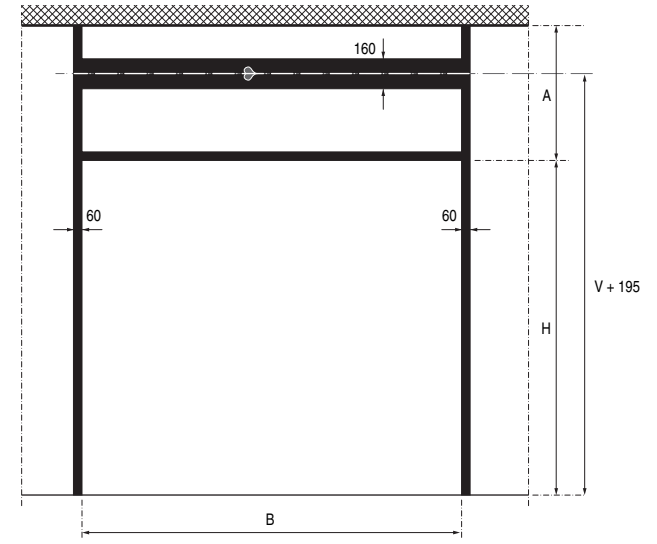
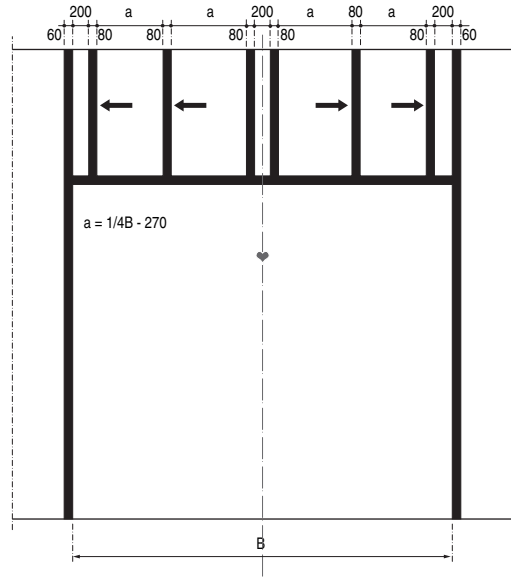
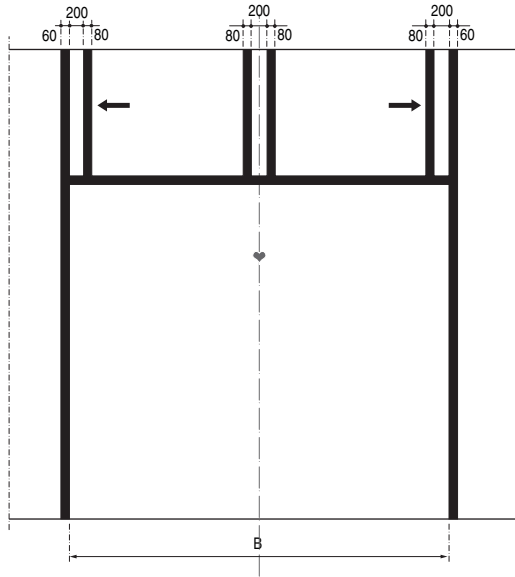
	dimension	minimum	measured
clear width	B	n.a	..... mm
clear height (1)	H (4)	n.a	..... mm
headroom (3)	A	H + 557 mm	..... mm
shaft height when H < 3350 (3)	AH	2 H + 213 mm	n.a
shaft height when H > 3350 (3)	AH	2 H + 233 mm	n.a
overall depth (2)	F	455 mm	..... mm
clearance (2)	P1	75 mm	n.a
	P2	105 mm	n.a
sideroom pull cord (5)	ZL / ZR	110 / 110 mm	..... mm

- (1) clear height = H + 10 mm (due to weather strip) see detail 2, page "Details"
- (2) in the case of wicket and/or doors with bracing : P1 = 75 mm.
- (3) for headroom (A) of H + 425 mm, the following applies ;
  - H ≤ 3350 mm : F = P1 + 375
  - H > 3350 mm : F = P1 + 500
- (4) H<sup>max</sup> = 5999 mm
- (5) for manual chain host and electric drive see page 'sideroom required...'

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- the fitting surface should preferably be of steel
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**2 EXTRA spring supports are necessary when :**

$B > 4200$ mm	B20 <sup>+</sup> / B45 <sup>+</sup> / B350 / B350 <sup>+</sup>
$B > 4200$ mm and $(B \times H) > 25$ m <sup>2</sup>	applies to all track systems
$B > 5000$ mm	applies to all track systems

**4 EXTRA spring supports are necessary when :**

<b>B20 / B20+ / B45 / B45+</b>	<b>B350 / B350+ and High Lift ≤ 2000 mm</b>
$4500 < B \leq 6000$ and $H > 5400$	$4600 < B \leq 5600$ and $H > 6000$
$6000 < B \leq 7000$ and area $(B \times H) > 28$ m <sup>2</sup>	$5600 < B \leq 6100$ and $H > 5000$
$B > 7000$ and area $(B \times H) > 25$ m <sup>2</sup>	$6100 < B \leq 6800$ and area $(B \times H) > 26.5$ m <sup>2</sup>
	$B > 6800$ and area $(B \times H) > 23$ m <sup>2</sup>
<b>B350 / B350+ and High Lift ≤ 1200 mm</b>	<b>B350 / B350+ and High Lift &gt; 2000 mm</b>
$4500 < B \leq 5200$ and $H > 6000$	$B > 5200$ and area $(B \times H) > 27$ m <sup>2</sup>
$5200 < B \leq 6200$ and $H > 5400$	$B > 6000$ and area $(B \times H) > 24$ m <sup>2</sup>
$B > 6200$ and area $(B \times H) > 28$ m <sup>2</sup>	
$B > 7000$ and area $(B \times H) > 25$ m <sup>2</sup>	

**head beam**

for track system B350 / B350<sup>+</sup> and B45 / B45<sup>+</sup>,  
the centre line of the head beam is at : contact us

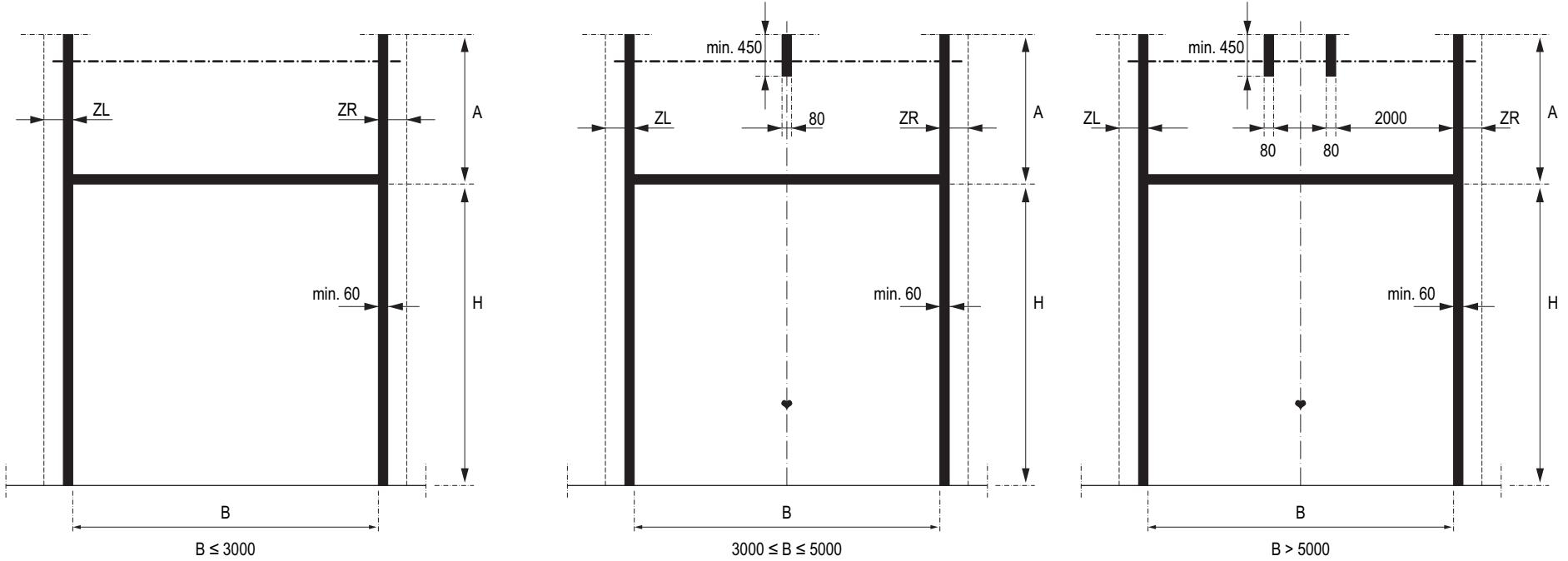
**suspension points for horizontal tracks :**

$B \leq 7000$ mm and $F < 4500$ mm	1 suspension point
$B \leq 7000$ mm and $F \geq 4500$ mm	2 suspension points
$B > 7000$ mm	3 suspension points

**use of section bracing :**

- with dark RAL colours and ISD2 door panel  $B > 4000$  mm
- with IAL2 / IAS2 door when  $B > 4000$  mm
- with ISD2 door when  $B > 4500$  mm
- with wicket in door panel

For exact information on the number of springs and spring supports contact the sales department

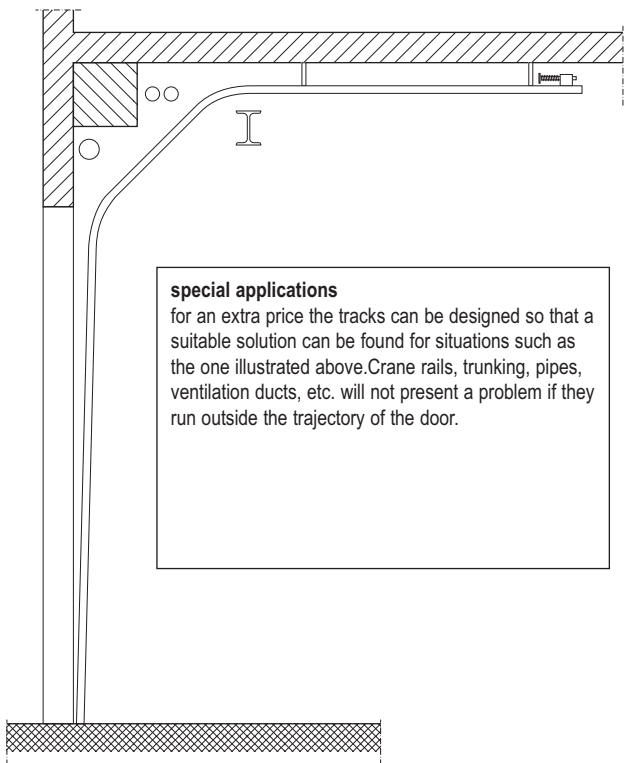


**Restrictions on the use of the spring side plate**

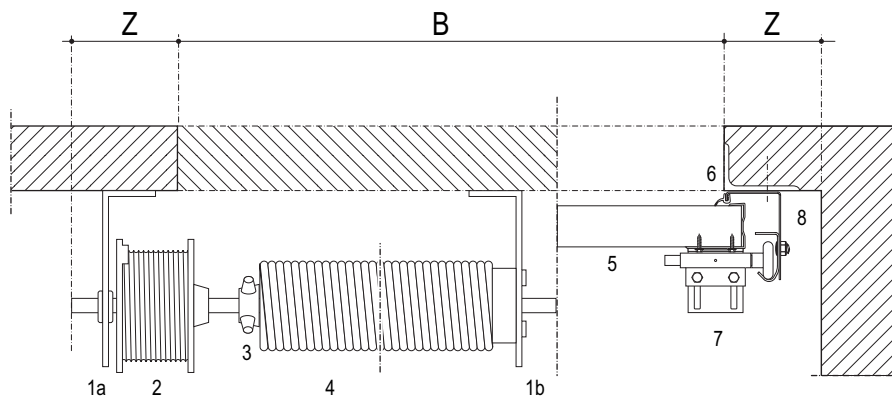
B45(+)	(H ≤ 5500)	B x H < 30 m2
B350(+)	(HL ≤ 1375) and (H - HL ≤ 4572)	B x H < 30 m2
	(1375 < HL ≤ 3050) and (H - HL ≤ 3660)	B x H < 25 m2
B550	(H ≤ 3350)	B x H < 27 m2
B20	no spring side plates possible	

This information is only valid for simplex springs rated at 25.000 cycles  
 max. 2 springs and roof angle max. = 14°

**For exact information on the number of springs and spring supports contact the sales department**



**special applications**  
 for an extra price the tracks can be designed so that a suitable solution can be found for situations such as the one illustrated above. Crane rails, trunking, pipes, ventilation ducts, etc. will not present a problem if they run outside the trajectory of the door.



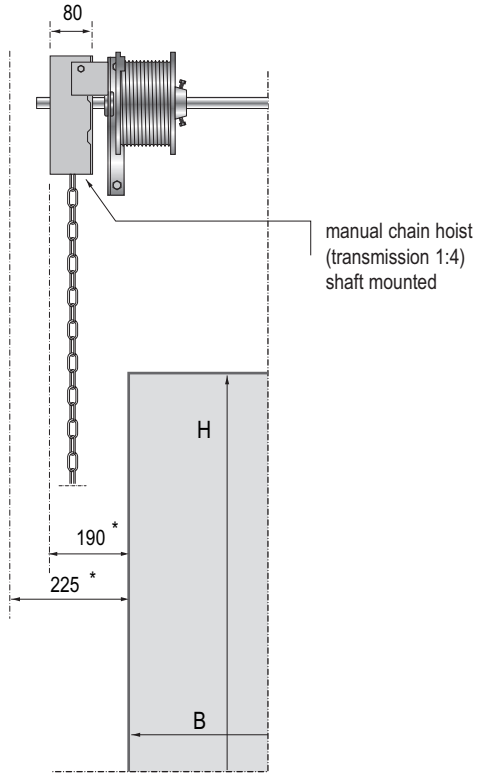
hor. cross-section above counterbalance

hor. cross-section through door section

**minimum sideroom (Z)**  
 (manually operated)

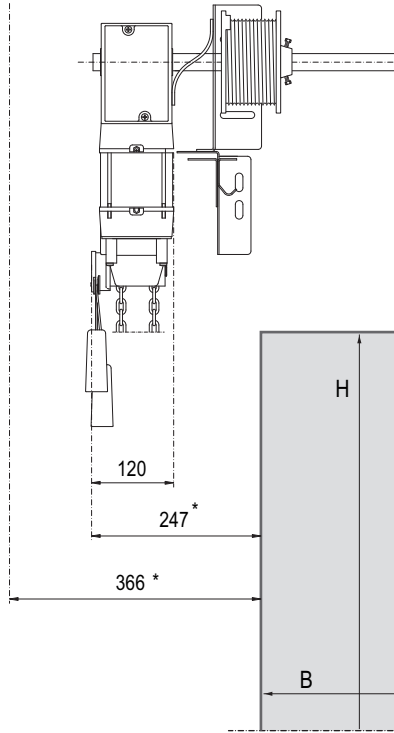
<b>B20 / B20<sup>+</sup></b>	170 mm
<b>B45 / B45<sup>+</sup></b>	130 mm
<b>B350 / B350<sup>+</sup></b>	130 mm
<b>B550</b>	110 mm

- 1a shaft support
- 1b spring support
- 2 cable drum
- 3 winding plug
- 4 spring
- 5 door section
- 6 jamb seal
- 7 roller holder
- 8 track angle

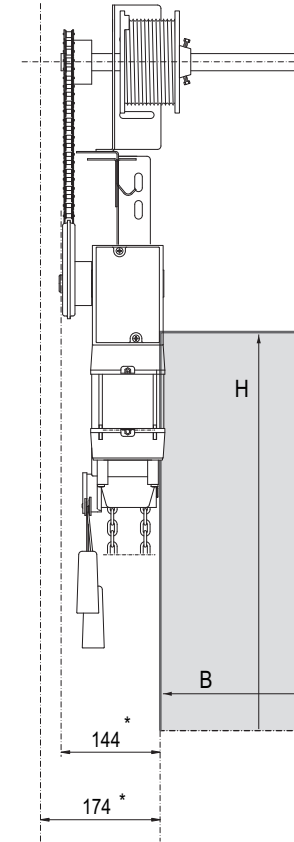


manual chain hoist  
(transmission 1:4)  
shaft mounted

**manual chain hoist**  
ZL or ZR = 225 mm \*\*



**direct drive operator**  
ZL or ZR = 366 mm \*\*



**chain drive operator**  
ZL or ZR = 174 mm \*\*

**manual chain hoist operation (up to a maximum of)**

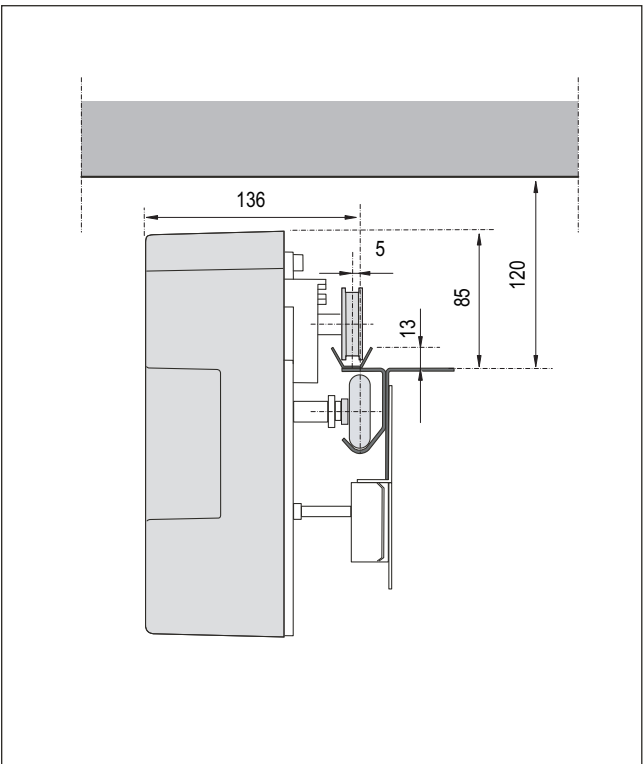
<b>B20</b> (+) not rec.***	<b>B45</b> (+) 25 m <sup>2</sup>
<b>B350</b> (+) 25 m <sup>2</sup>	<b>B550</b> 25 m <sup>2</sup>

**pull-cord operation (up to a maximum of)**

<b>B20</b> 16 m <sup>2</sup>	<b>B45</b> 16 m <sup>2</sup>
<b>B350</b> 9 m <sup>2</sup>	<b>B550</b> 9 m <sup>2</sup>

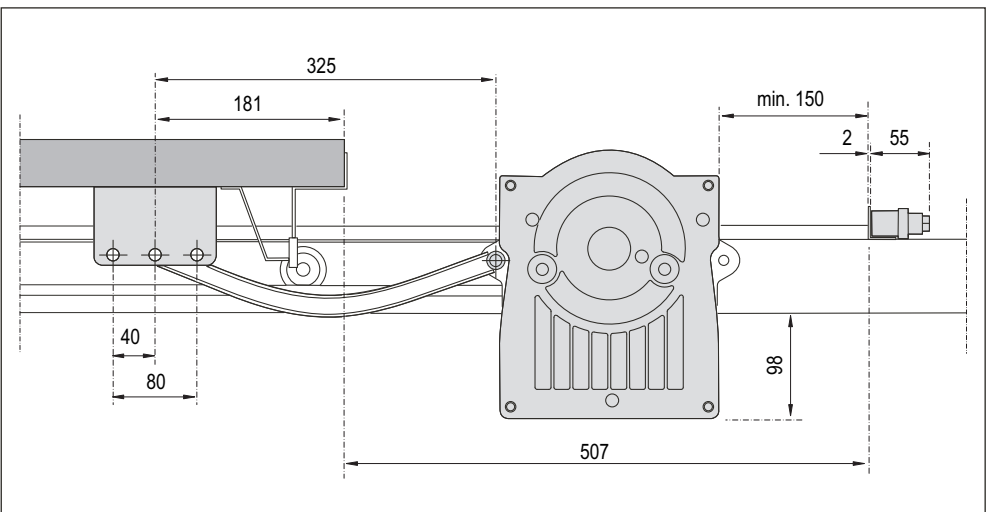
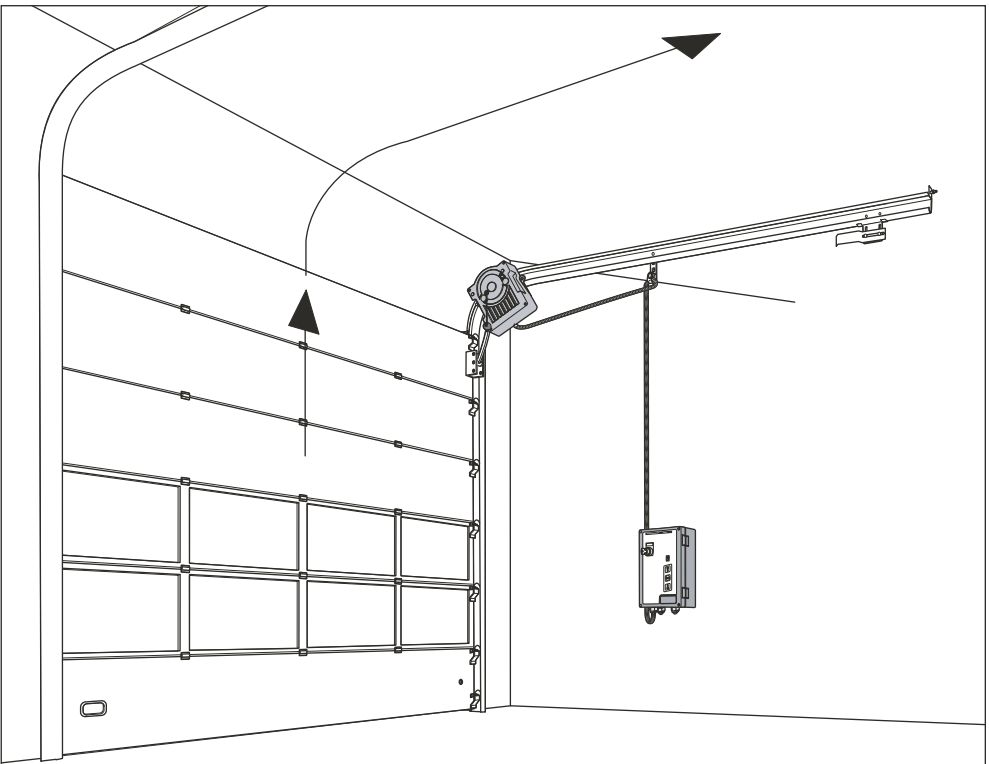
\* sideroom required for installation of the operator  
 \*\* for railsystem B20 add 40 mm.  
 \*\*\* not recommended for safety reasons

**B45 / B45+ / B350 / B350+ / B550 / B20+ > 20°**

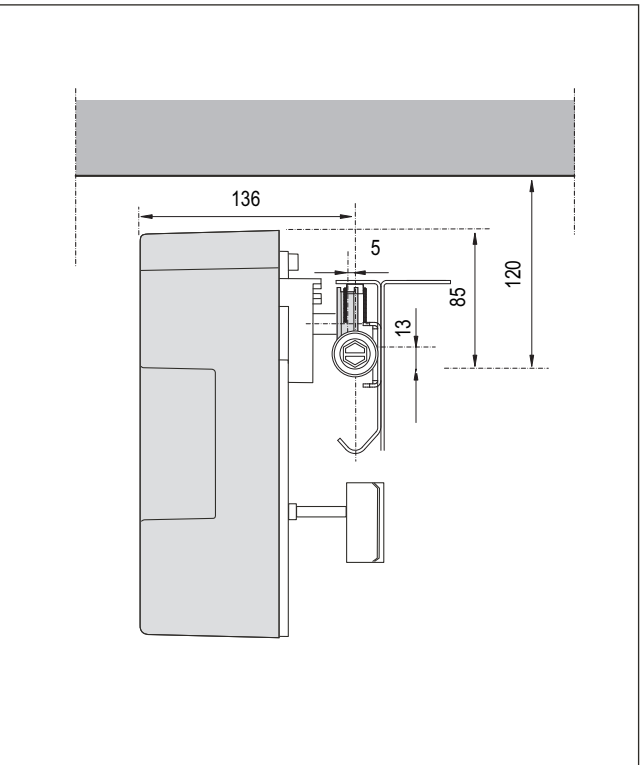


min. side room (ZL/ZR)

<b>B20<sup>+</sup></b>	170 mm
<b>B45 / B45<sup>+</sup></b>	130 mm
<b>B350 / B350<sup>+</sup></b>	130 mm
<b>B550</b>	110 mm

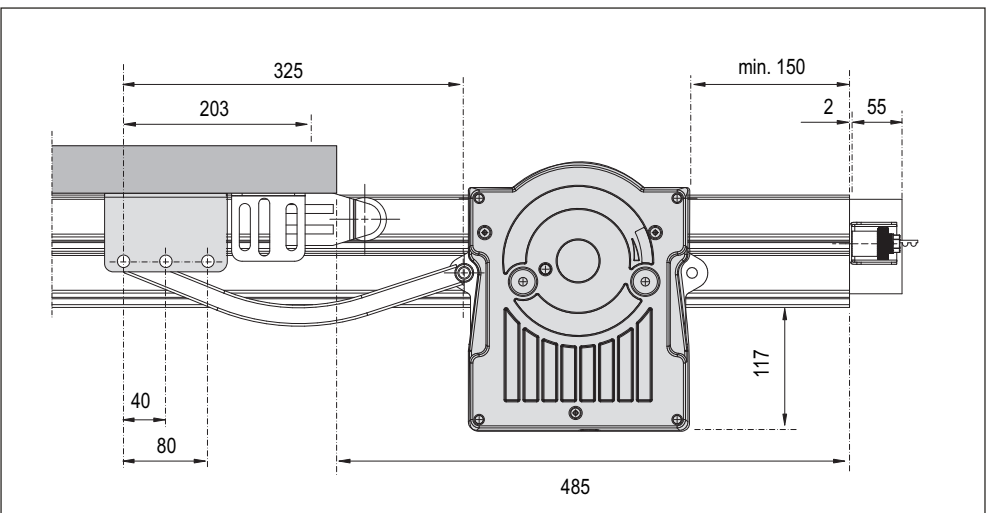
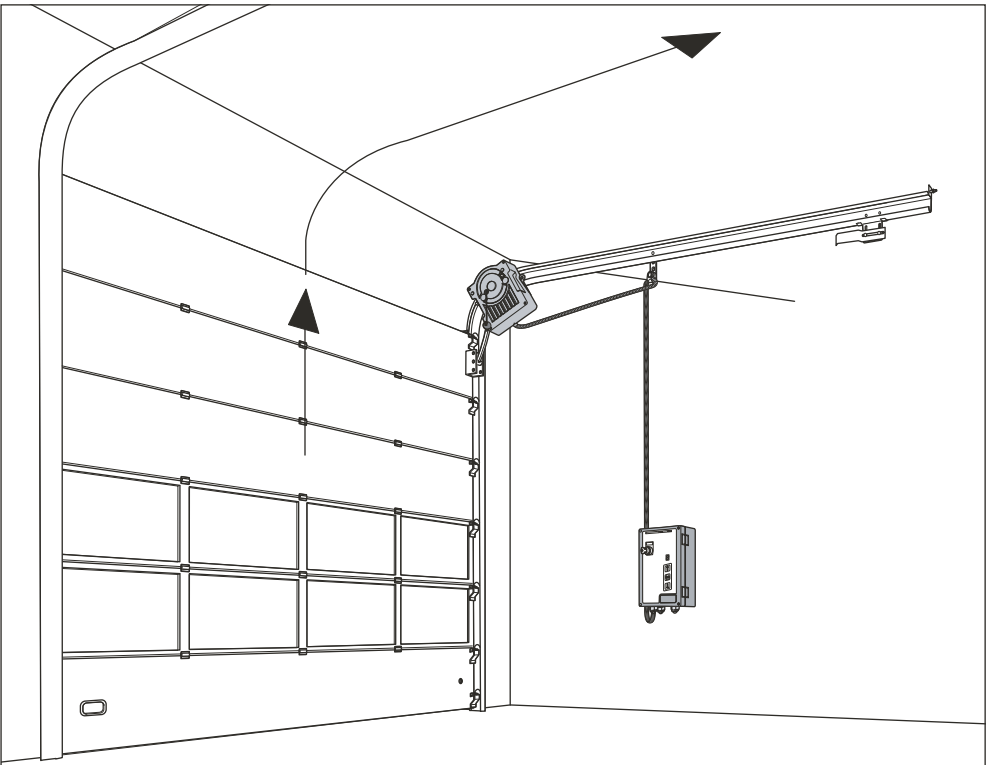


# B20 / B20+ / B20+ < 20°

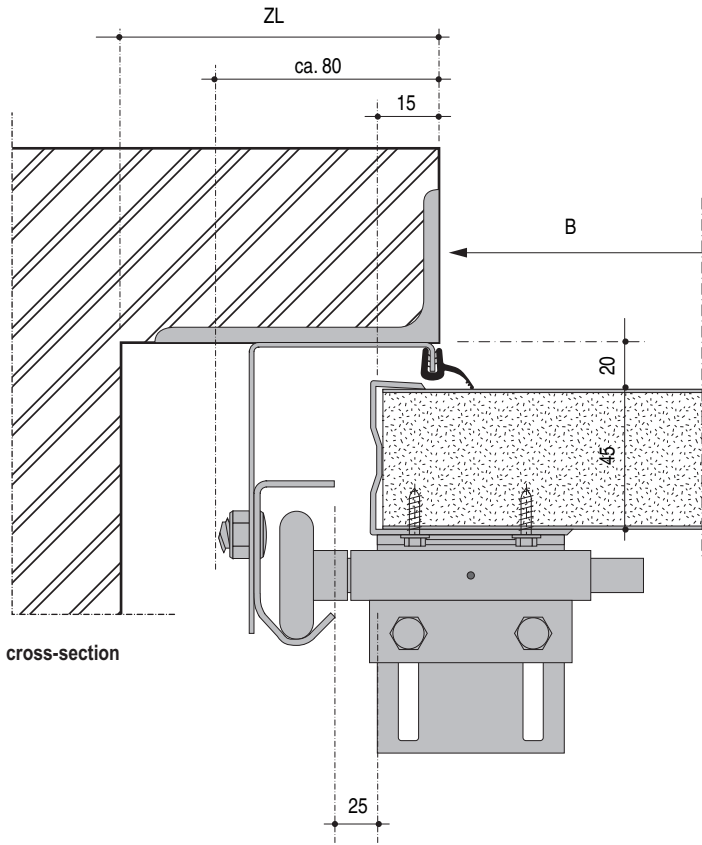


min. side room (ZL/ZR)

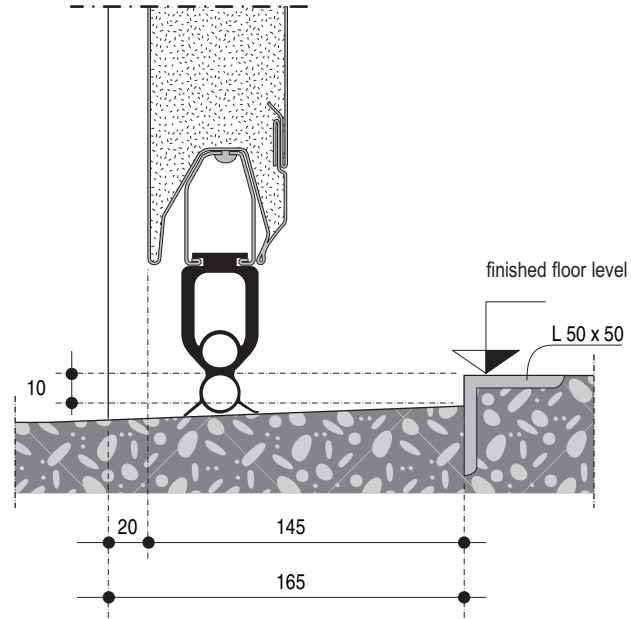
B20 / B20+ 170 mm



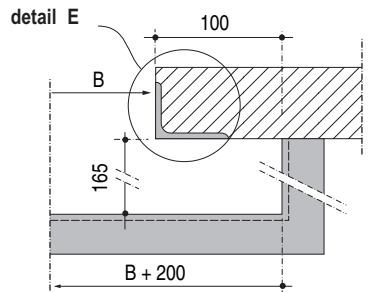




cross-section

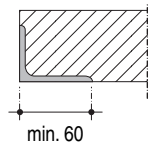


**detail 2**  
weather strip in form of floor angle  
NB: door height is  $H + 10$  mm!

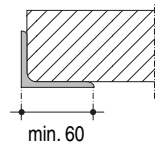


location of weather strip angle

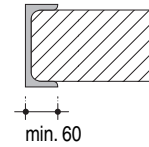
cross-section (floor level)



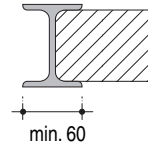
**detail E1**  
angle jamb  
cast in.



**detail E2**  
angle jamb  
surface mounted



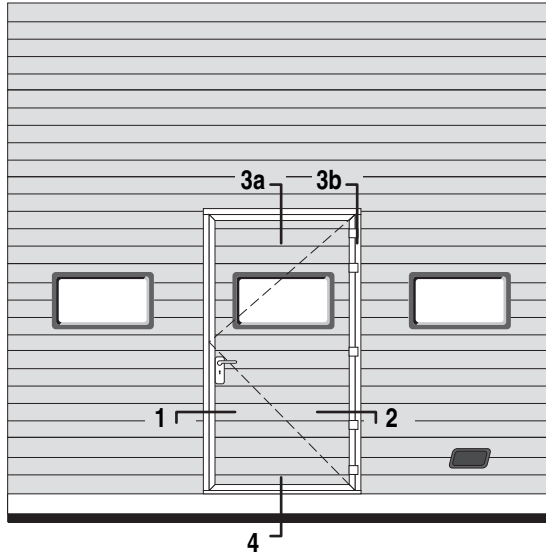
**detail E3**  
channel jamb



**detail E4**  
UB jamb

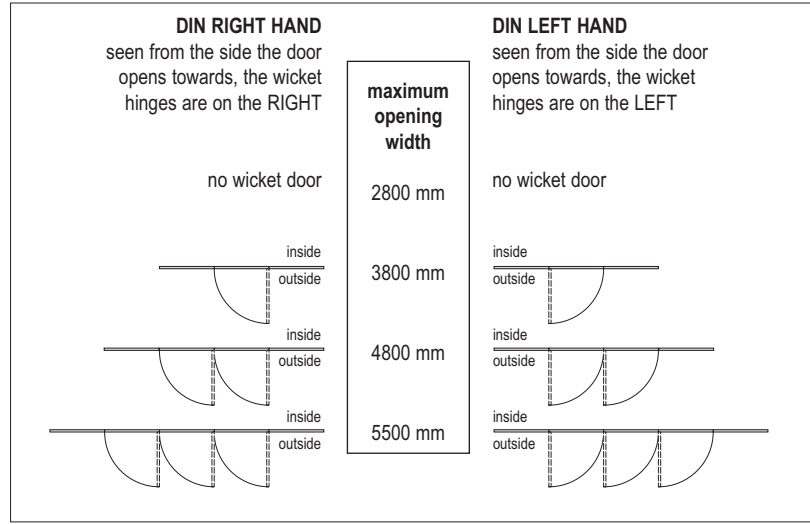


**detail E5**  
concrete



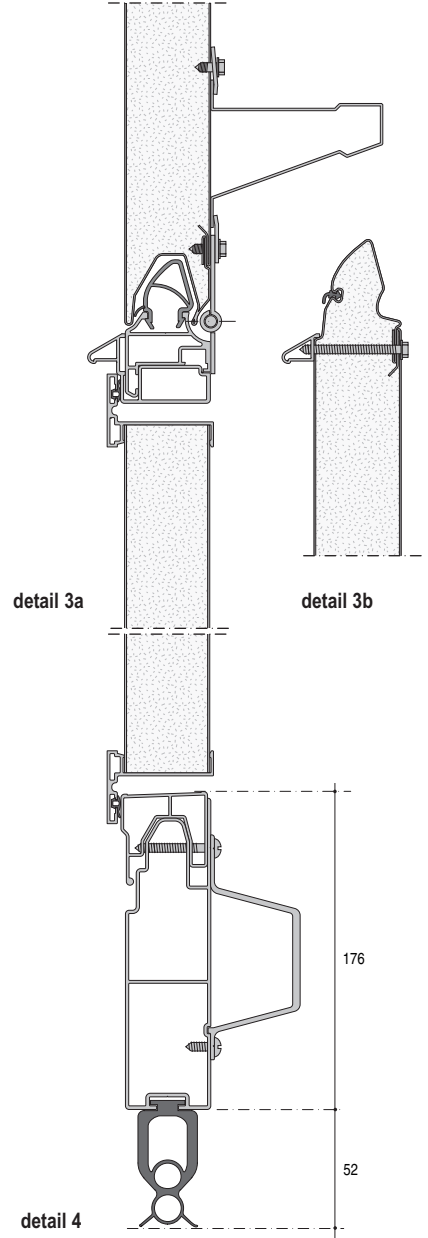
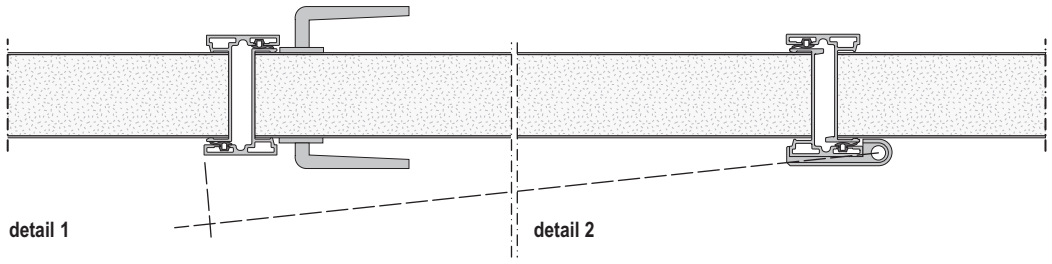
**Outside view of Thermo45 with windows and wicket door**  
 For an Thermo45 door with a Prisma45 section, refer to the wicket door free height and width as shown for Prisma45 with wicket door..

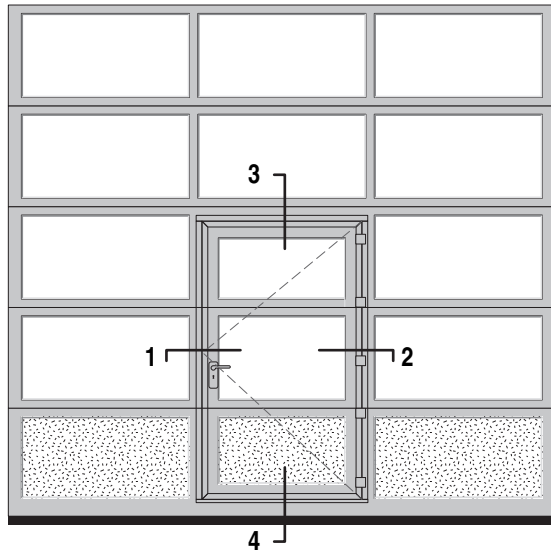
opening width ≤ 5000	field width = $\frac{\text{opening width} - 86}{\text{number of fields}}$
opening width > 5000	field width = $\frac{\text{opening width} - 164}{\text{number of fields}}$



**Dimension wicket door Thermo45**  
 clear opening height = construction with 3 sections - 2007 mm  
 construction with 4 sections - 2132 mm  
 clear opening width = 804 mm  
 or **field width - 175 mm**  
 in the clear opening width ranges shown below :  
 min. wicket door width .....in clear opening width range  
 753 mm .....2801 - 2948 mm  
 777 mm .....3801 - 3899 mm  
 791 mm .....4801 - 4853 mm  
 754 mm .....5600 - 5884 mm

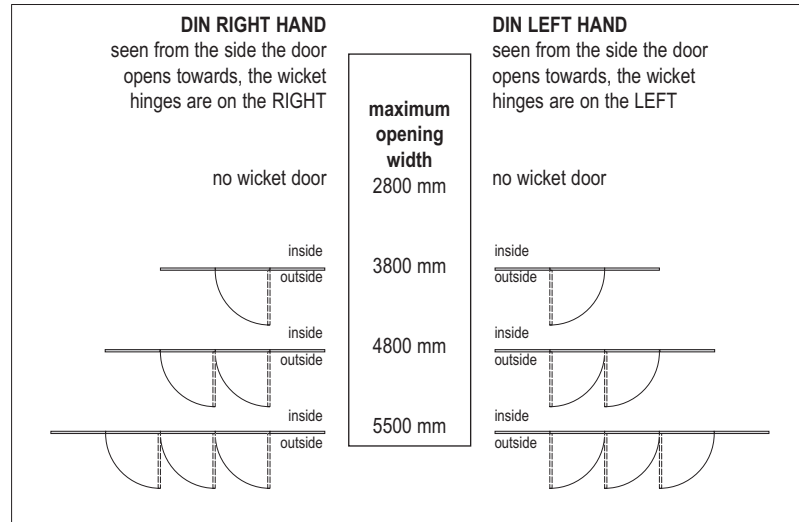
A wicket door can be supplied in the **Thermo45** for a clear opening width up to 6000 mm  
 $B^{\min} = 2801$  mm and  $H^{\min} = 2364$  mm. For rail system B20  $H^{\min} = 2389$  mm!  
**NB** when built into a sectional door a wicket **always opens to the outside!**





View of Prisma 45 door from outside  
(Stucco shown)

opening width ≤ 5000	field width = $\frac{(\text{opening width} - 86)}{(\text{number of fields})}$
opening width > 5000	field width = $\frac{(\text{opening width} - 164)}{(\text{number of fields})}$



**Dimensions wicket door Prisma 45**

3 sections :  
clear opening height = 2007 mm  
clear opening width = field width - 173 mm

4 sections :  
clear opening height = 2132 mm  
clear opening width = field width - 173 mm

A wicket door can be supplied in the **Prisma 45** for a clear opening of max. 6000 mm.  
B<sup>min</sup> = 2800 mm, H<sup>min</sup> = 2372 mm. For rail system B20, H<sup>min</sup> = 2397 mm!  
**NB** when built into a sectional door a wicket *always opens to the outside!*

