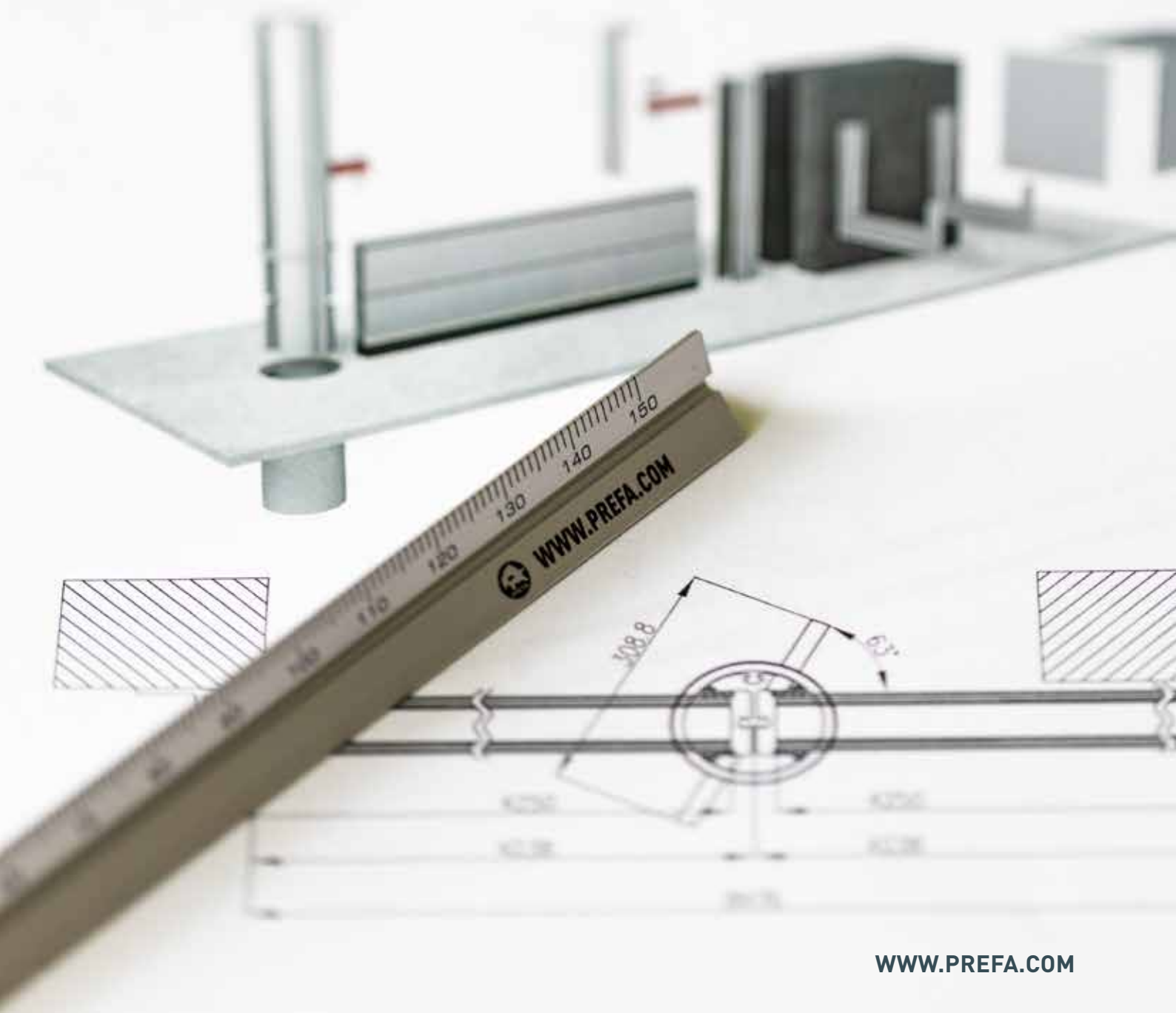




PREFA FLOOD PROTECTION

PLANNING GUIDE





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4	PREFA PROTECTS BUILDINGS AND GROUNDS
5	SYSTEM OVERVIEW
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MEMBER OF:



Water is an unpredictable force of nature.
We take flood protection seriously.

Due to rising average temperatures, climate researchers expect extreme weather events to occur more frequently. This means we must be prepared for the likelihood that major flooding could occur more often than has been the case in recent decades. Flood protection measures, such as the construction of dams by the public sector, but also private protection measures, represent a sensible investment in the future.

PREFA knows from its own experience how powerful a flood can be and the damage that it can cause. This is what motivated us to develop a demountable flood protection system made of aluminum in cooperation with our affiliate NEUMAN Aluminium Strangpresswerk. Lightweight yet extremely robust aluminium profiles protect doors, gates, windows, and entire areas from flooding.

THE SYSTEM

- Demountable flood protection made of aluminium
- The profiles are sealed by means of special, replaceable foam rubber seals.
- Protection is ensured with the placement of the first panel.

THE APPLICATION

- Aluminium barrier panels are inserted into fastening profiles or uprights (anchored in ground sleeves) at each end.
- The barrier panels are to be installed using a tongue and groove system.
- Fixation of barrier panels with provided clamp.
- The barrier panels fill up as the water level rises.

THE POSSIBILITIES

- Property and landscape protection.
- The length of the flood barrier can be increased as needed.
- The height of existing protective walls can be increased.
- Individual adjustment of the barrier panel length.



PREFA BUILDING PROTECTION

Keeps water out of the house.
Individualized protection for specific buildings.

Water can cause permanent damage both in and on houses. Stay one step ahead with PREFA flood protection to secure endangered buildings against water ingress using individualized systems. The system can be installed in front of, in or behind the reveal, and the permanently installed fastening profiles can be matched in colour to the appearance of your façade.



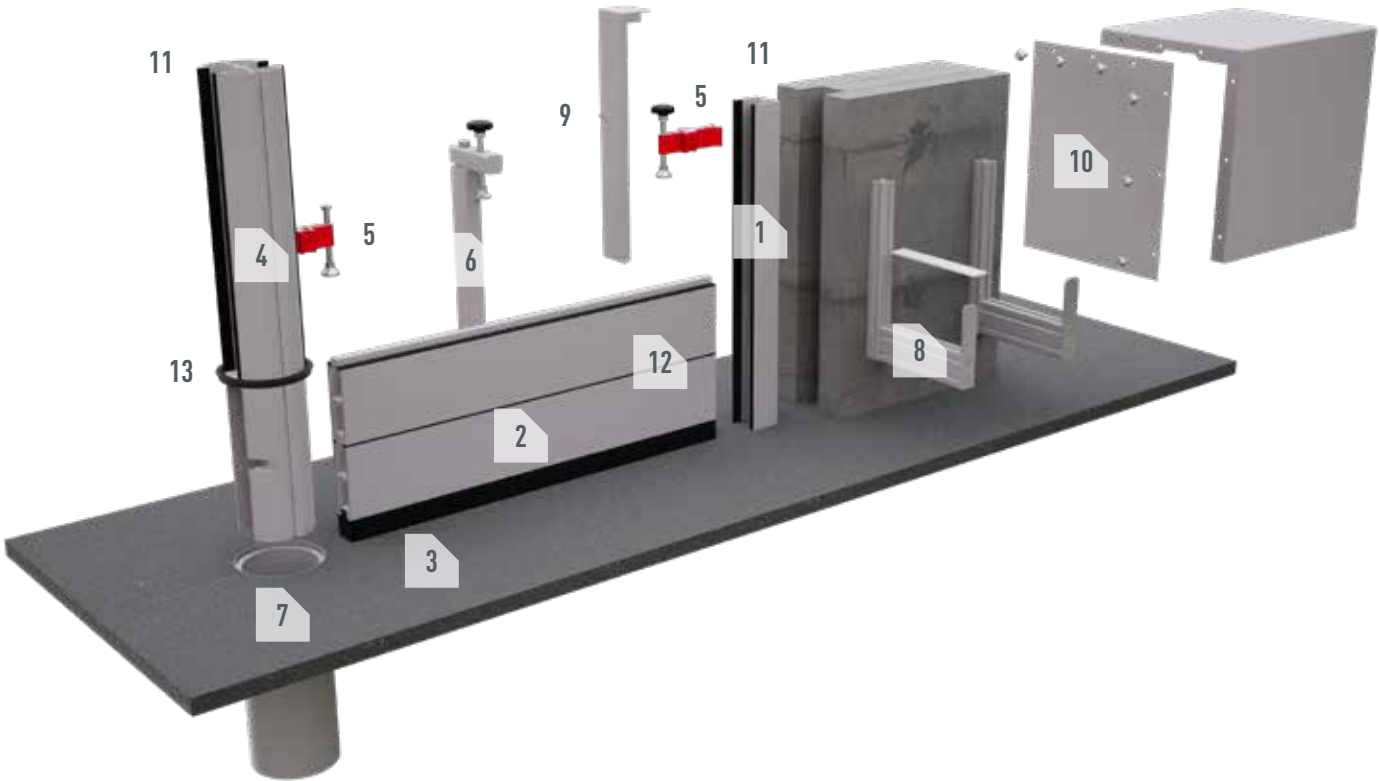
PREFA LANDSCAPE PROTECTION

Intelligent landscape protection.
Flexible solutions for special locations.

Areas adjacent to rivers and streams (access roads, streets or paths) are often faced with flooding during high water. With PREFA flood protection, entire areas can be sealed off from flooding with ground sleeves anchored in the ground. Existing dams can be raised in height and the flood barrier can be adjusted to the water level at any time until the final height is reached.



SYSTEM OVERVIEW



LEGEND

BARRIER PANELS	SYSTEM 25	SYSTEM 50	SYSTEM 80
THICKNESS	25 mm	50 mm	80 mm
WEIGHT	2.99 kg/m	5.60 kg/m / 4.12 kg/m	7.78 kg/m
PANEL HEIGHT	200 mm	150 mm / 200 mm	200 mm
GROOVE	17 mm	15 mm	15 mm

CENTRE COLUMN	
DIAMETER	140 mm / 185 mm
HEIGHT	750-2150 mm
DESIGN (thickness)	50 or 80 mm

- 1. WALL PROFILE**
Fixed to the main structure as U-profile as well as base profile, in front or behind the jam.

2. BARRIER PANELS
Illustrated here: the lowest barrier panel connected to the ground seal (no. 3)

3. GROUND SEAL
Ensures sealing between the lowest barrier panel and the ground (ground seal or permanent ground seal).

4. CENTRE COLUMN (ROUND PROFILE)
For longer barriers with multiple fields, these uprights can be used as intermediate columns.
- 5. COMPRESSION CLAMP**
For clamping the barrier panels in place.

6. RETAINER
Prevents vertical deflection of the barrier panels and increases pressure on the ground seal.

7. GROUND SLEEVE
Sleeve fixed in the ground with concrete for inserting the centre column.

8. WALL BRACKET
For storing the barrier panels when not in use.

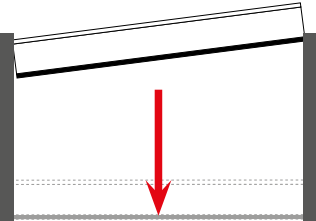
9. COVER
For covering the wall profiles when not in use.
- 10. STORAGE CASING**
For covering the panels when stored outdoors.

11. BASE PROFILE SEAL
Ensures sealing between the wall profile/centre column and the barrier panel.

12. BARRIER PANEL SEAL
Ensures sealing between the barrier panels.

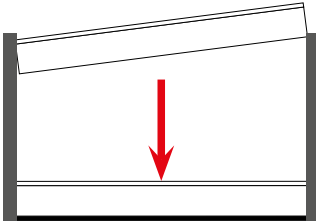
13. SEAL FOR COVER AND GROUND SLEEVE
Ensures sealing between the centre column/cover and ground sleeve.

FUNCTIONALITY



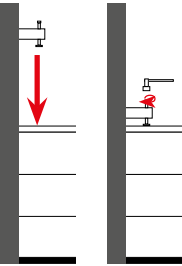
1. INSERT THE LOWERMOST BARRIER PANEL

Start installation by inserting the barrier panel with the ground seal angled from above into the guide of the base profiles. Push the barrier panel downwards firmly until the ground seal rests properly on the ground. To reduce friction, we recommend spraying the seals of the base profile with silicone spray beforehand (never use oil-based sprays).



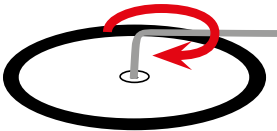
2. INSERT FURTHER BARRIER PANELS

Once the lowermost barrier panel is securely and evenly positioned, continue with the insertion of further barrier panels. To do so, insert the elements from above at an angle into the guide of the base profiles as in step 1 and press them downwards until the tongue and groove engage and the seals have proper contact.



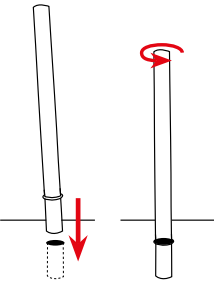
3. INSTALL THE COMPRESSION CLAMPS

Slide the compression clamps with the articulated feet downwards into the guide of the base profiles and press them down until the articulated foot touches the top barrier panel. Then slightly tighten the screw on the compression clamp using a hexagon spanner.



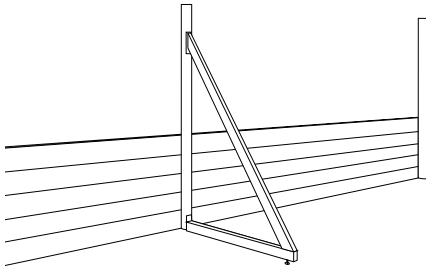
4. OPEN THE GROUND SLEEVES

If you are using centre uprights for perimeter protection, steps 4-6 must also be carried out. Unscrew the countersunk screw in the cover plate of the ground sleeve by about one centimeter and use this to pull out the cover plate and remove it.



5. INSTALL CENTRE COLUMN

You can now anchor the centre column in the exposed ground sleeve using rotation. As you do so, make sure that the sealing ring on the lower end fits.

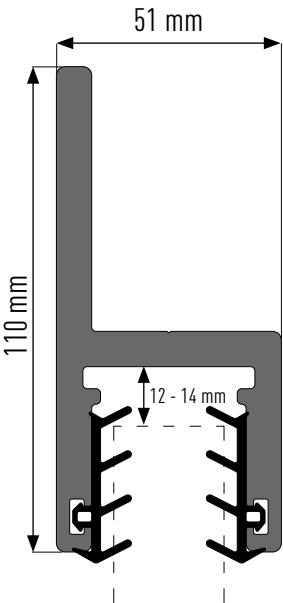


6. INSTALL A SUPPORT IF NEEDED

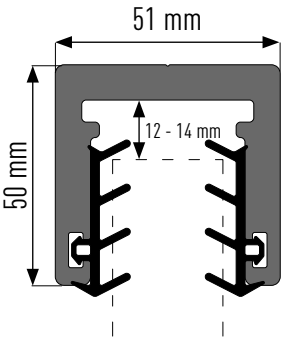
If the erected protective wall has an area exceeding 2 x 2 metres, the use of an additional support must be taken into consideration (special design).

DETAILS – SYSTEM 25

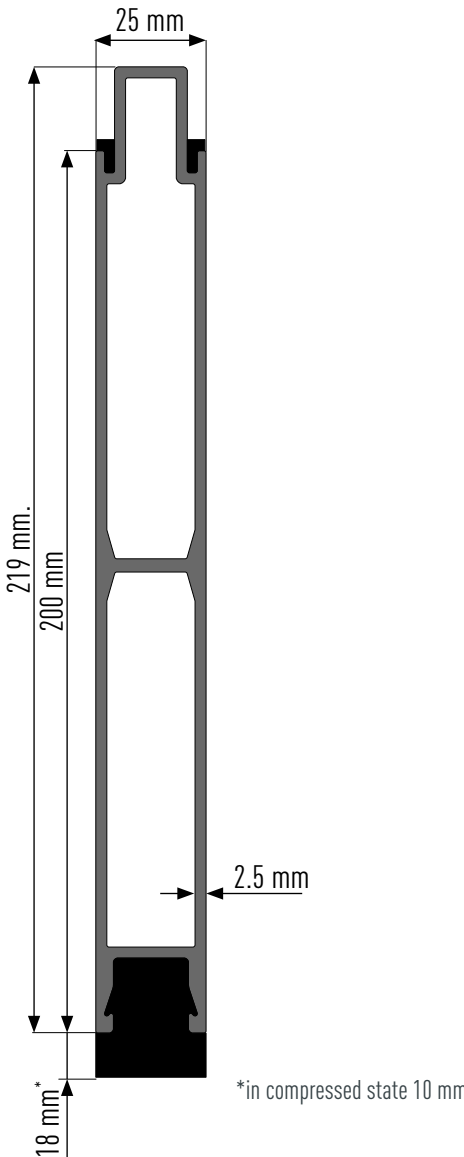
BASE PROFILE



U-PROFILE*

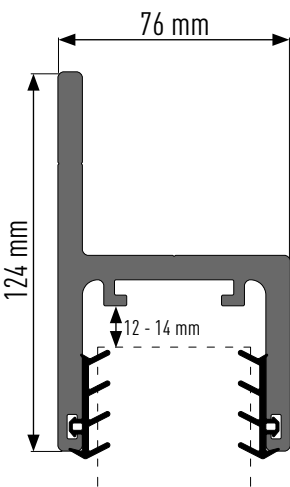


BARRIER PANELS (200 mm)

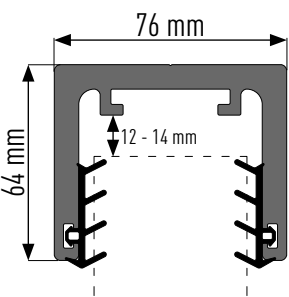


DETAILS – SYSTEM 50

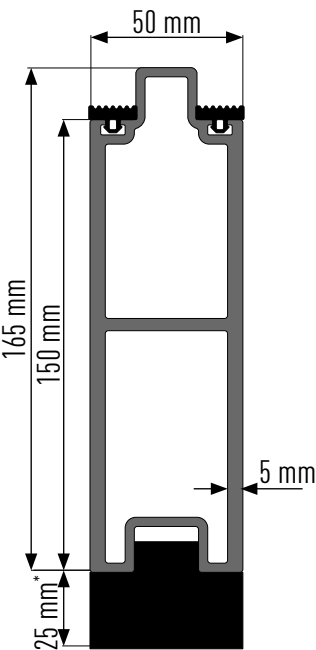
BASE PROFILE*



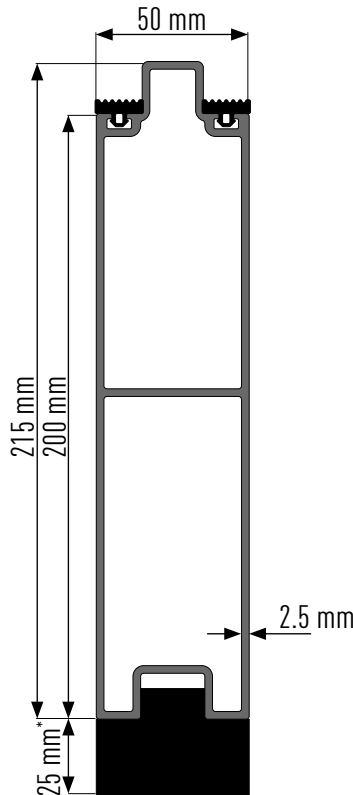
U-PROFILE*



BARRIER PANELS (150 mm)

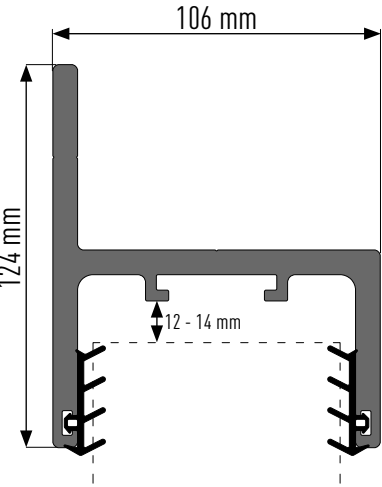


BARRIER PANELS (200 mm)

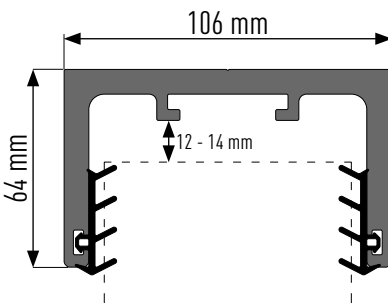


DETAILS – SYSTEM 80

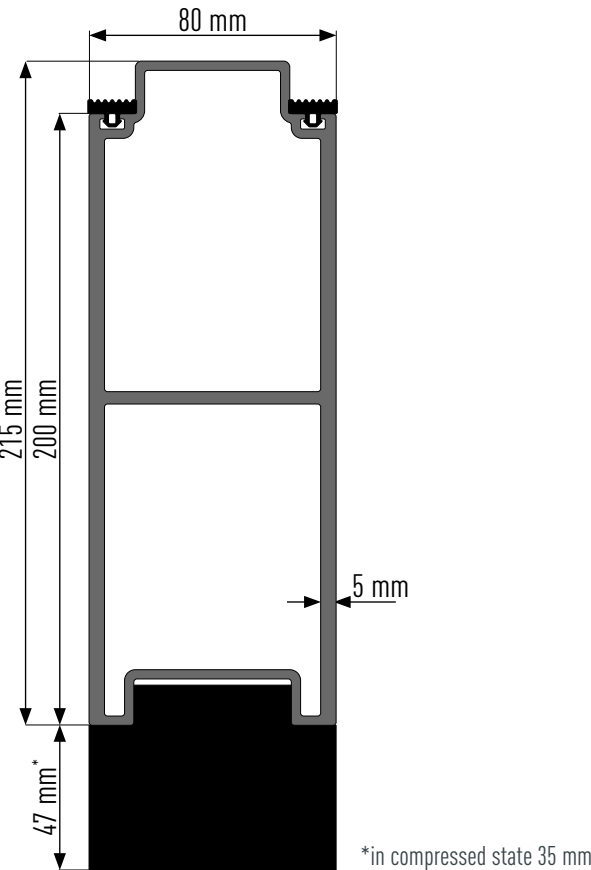
BASE PROFILE*



U-PROFILE*

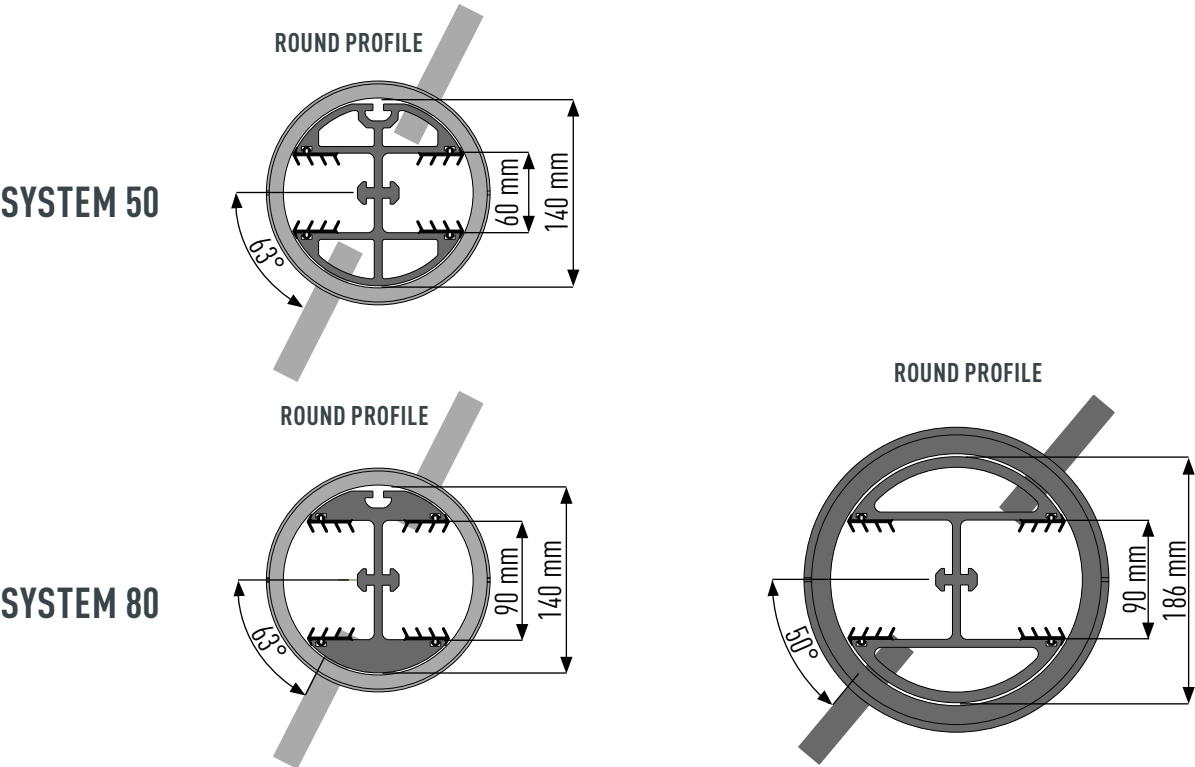


BARRIER PANELS (200 mm)

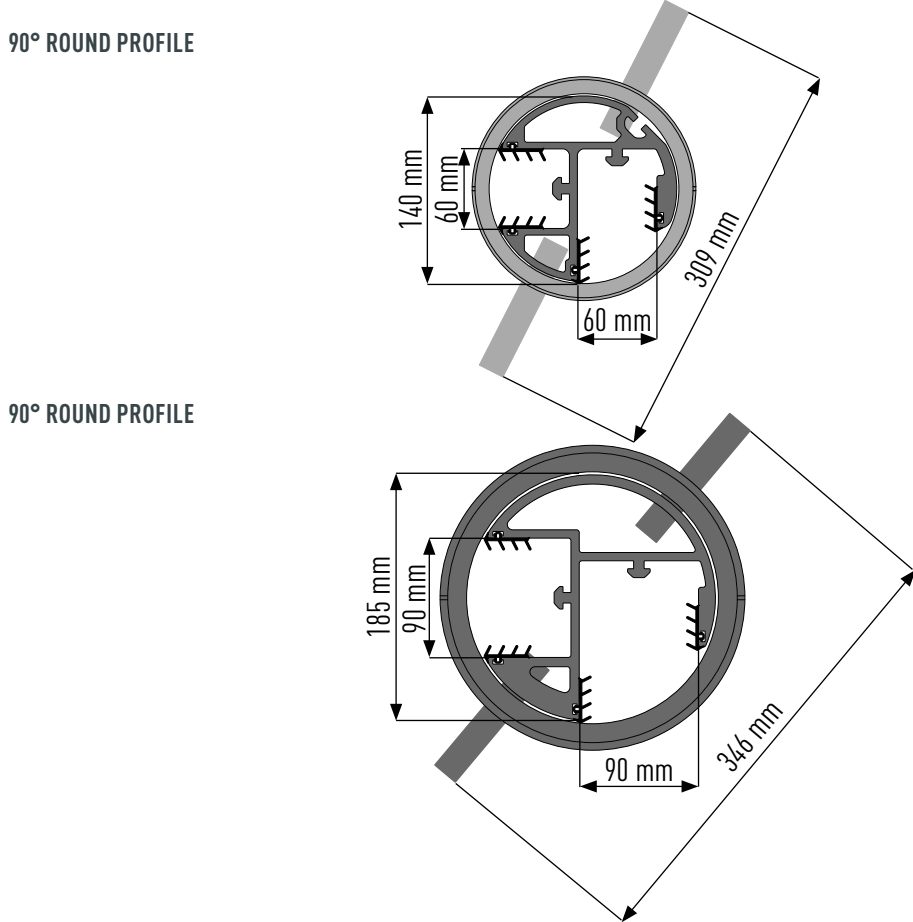


ALL BASE AND U-PROFILES (*) ARE KEPT IN STOCK IN THE FOLLOWING LENGTHS: 750 , 1,350 , 1,750 , 2,150 MM

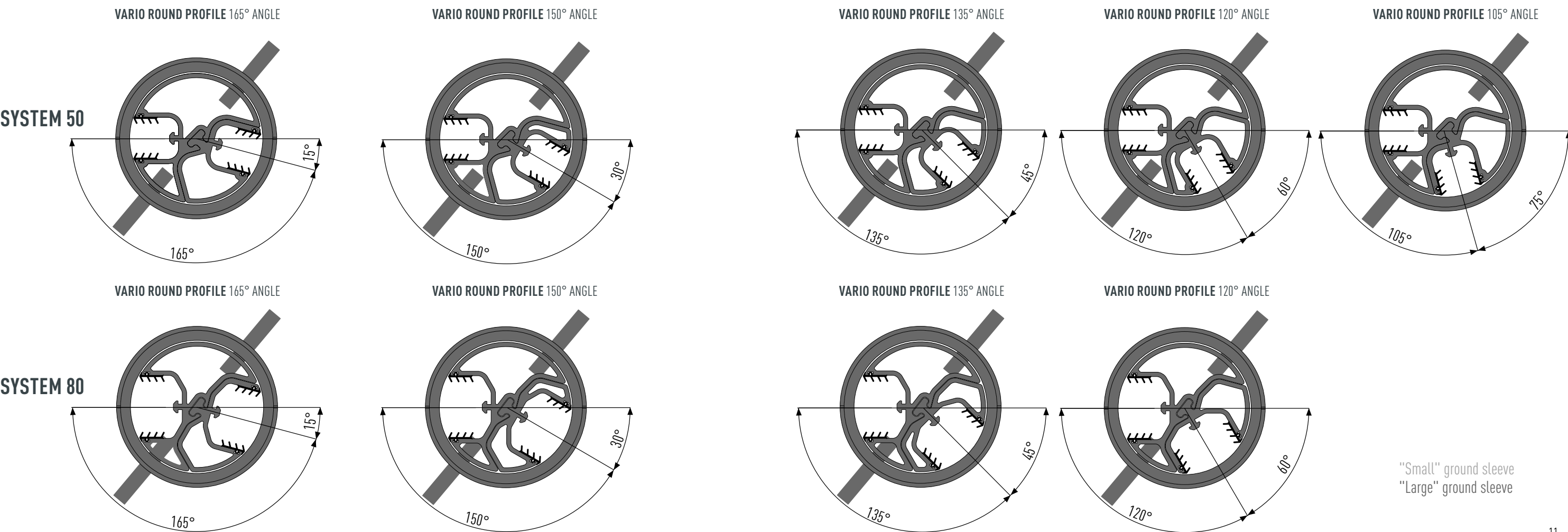
CENTRE COLUMN (ROUND PROFILE)



ROUND PROFILE 90°



VARIO ROUND PROFILE



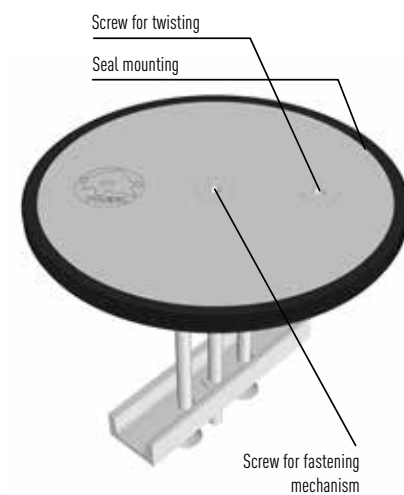


ALUMINIUM GROUND SLEEVE COVER

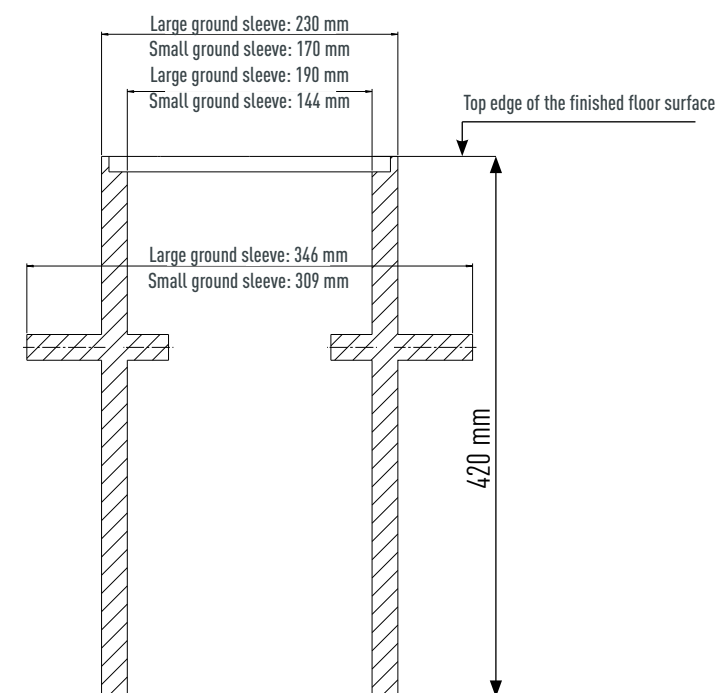
LIFTING AID



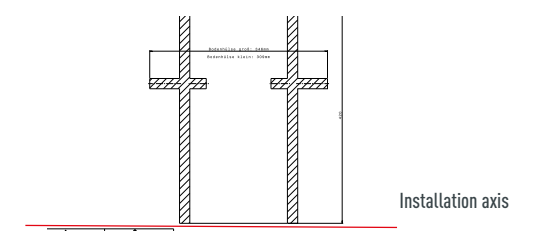
STAINLESS STEEL GROUND SLEEVE COVER (DRIVEABLE)



GROUND SLEEVE (installation from 35 cm wall width)



GROUND SLEEVE (isometric view)

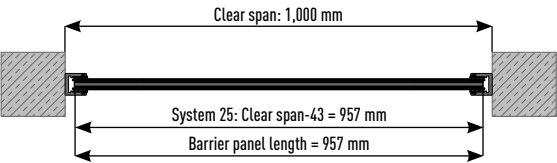




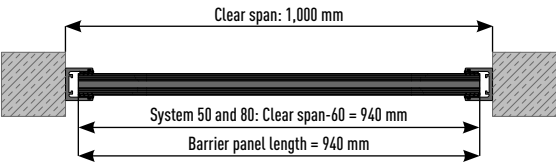
CALCULATION THE BARRIER PANEL LENGTH

INSTALLATION IN THE REVEAL

SYSTEM 25

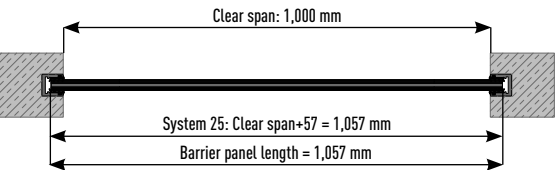


SYSTEM 50 AND 80

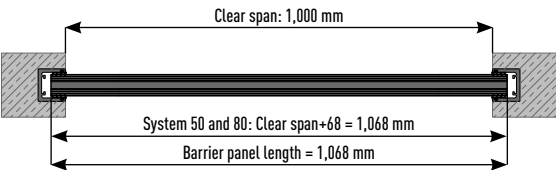


FLUSH MOUNTING

SYSTEM 25

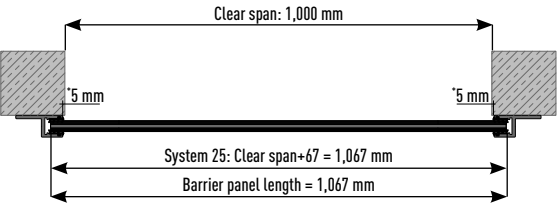


SYSTEM 50 AND 80

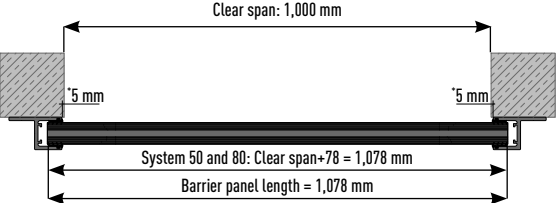


INSTALLATION IN FRONT OF OR BEHIND THE REVEAL

SYSTEM 25

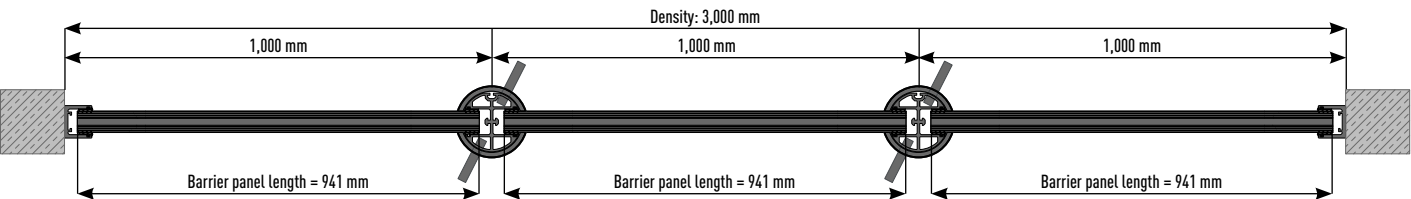


SYSTEM 50 AND 80



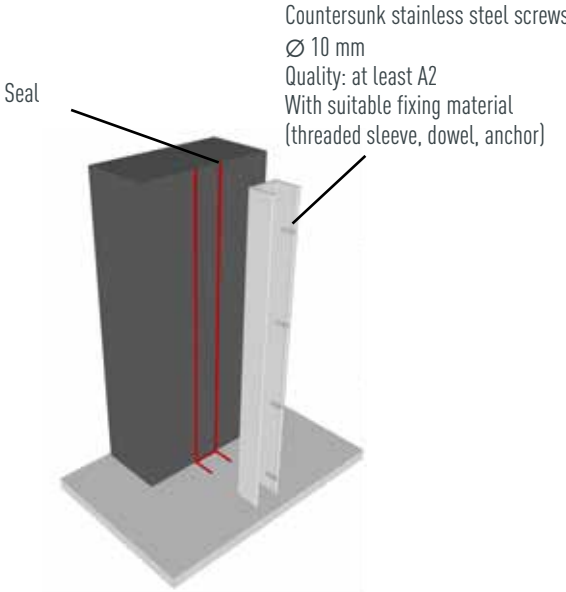
CENTRE COLUMN

SYSTEM 50 AND 80

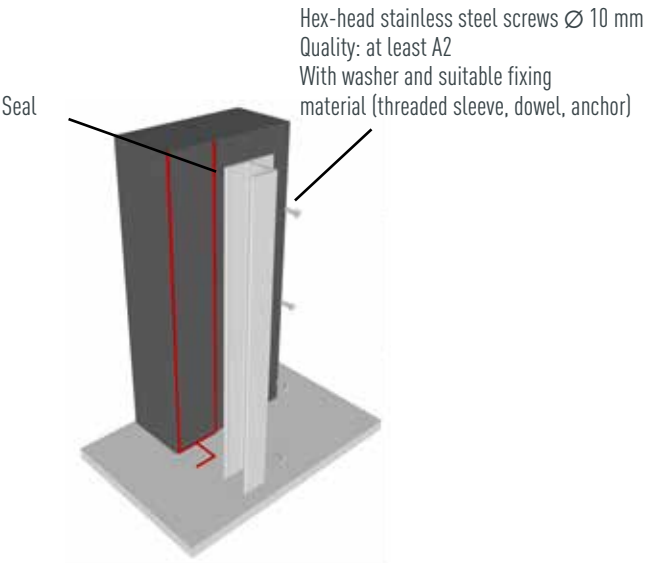


PROFILE INSTALLATION

U-PROFILE INSTALLATION



BASE PROFILE INSTALLATION



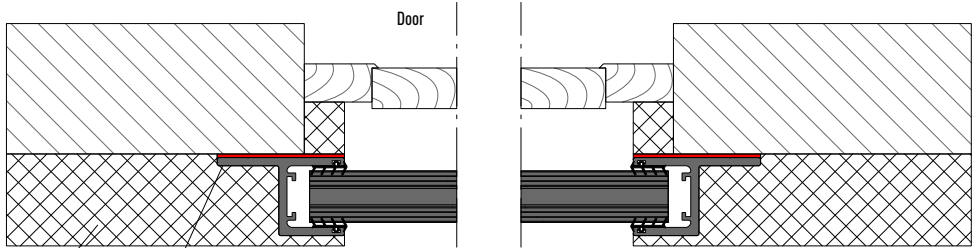
NUMBER OF FASTENING HOLES

LENGTHS	SYSTEM 25		SYSTEM 50		SYSTEM 80	
	U-profile	Base profile 25	U-profile	Base profile	U-profile	Base profile
750 mm	4	4	4	4	4	4
1.350 mm	7	7	7	7	7	7
1.750 mm	9	9	9	9	9	9
2.150 mm	11	11	11	11	11	11
Minimum diameter for fixings	8 mm		10 mm		10 mm	

INSTALLATION WITH FULL THERMAL INSULATION MASONRY

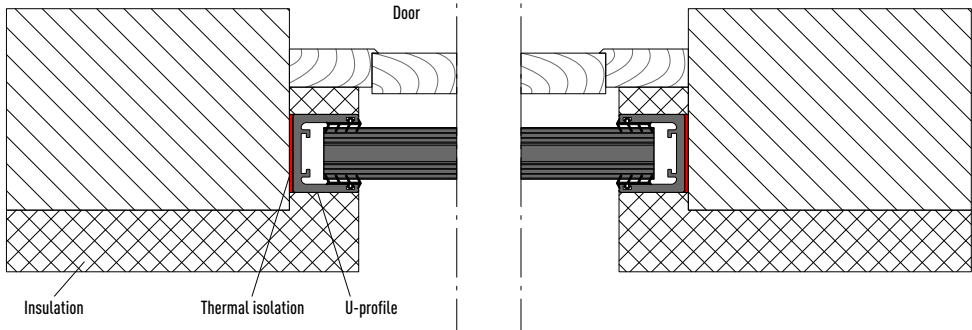
BASE PROFILE INSTALLATION IN FRONT OF/BEHIND THE REVEAL

- Remove insulation.
- Install base profile.
- Reestablish insulation.
- Apply fabric and plaster.
- With this type of installation, it is particularly important to check the load-bearing capacity of the installation surface.



U-PROFILE INSTALLATION IN THE REVEAL

- Make slot in insulation.
- Install the U-profile, possibly with thermal isolation, and seal it.
- When the barrier panels are not in use, the slot is covered with the cover profile.



TECHNICAL DATA

BARRIER PANELS	SYSTEM 25	SYSTEM 50	SYSTEM 80
panel thickness	25 mm	50 mm	80 mm
Weight	2.99 kg/m	5.60 kg/m / 4.12 kg/m	7.78 kg
height of barrier panels	200 mm	150 mm / 200 mm	200 mm
Groove	17 mm	15 mm	15 mm

CENTRE COLUMN	50	80	80 LARGE
diameter	140 mm	140 mm	186 mm
Height	750–2150 mm	750–2150 mm	750–2150 mm
Weight	10.40 kg/m	11.26 kg/m	14.68 kg/m

GROUND SLEEVE	SMALL	LARGE
diameter	170 mm	230 mm
Depth	420 mm	420 mm



STORAGE

We recommend using PREFA's aluminium wall brackets for optimal storage of the flood protection system. This allows the barrier panels to be stacked on the wall brackets so that the ground barrier panels are on the top to facilitate rapid assembly in an emergency.

Never store aluminium barriers in direct contact to each other. Use separating strips made of plastic or wood material to protect the barrier panels from cold fusion due to the effects of moisture.

The compression clamps and the ground seal can be stored on or in the barrier panels.

LIABILITY

PREFA accepts no liability for improper installation and/or maintenance or the use of non-original accessories. Structural defects, in particular inadequate waterproofing of the building substance, hydrostatic forces and improper handling of the components, including damage caused by the mechanical impact by persons or objects, are also excluded from liability on the part of PREFA. PREFA cannot guarantee absolute prevention of damage.

STATICS

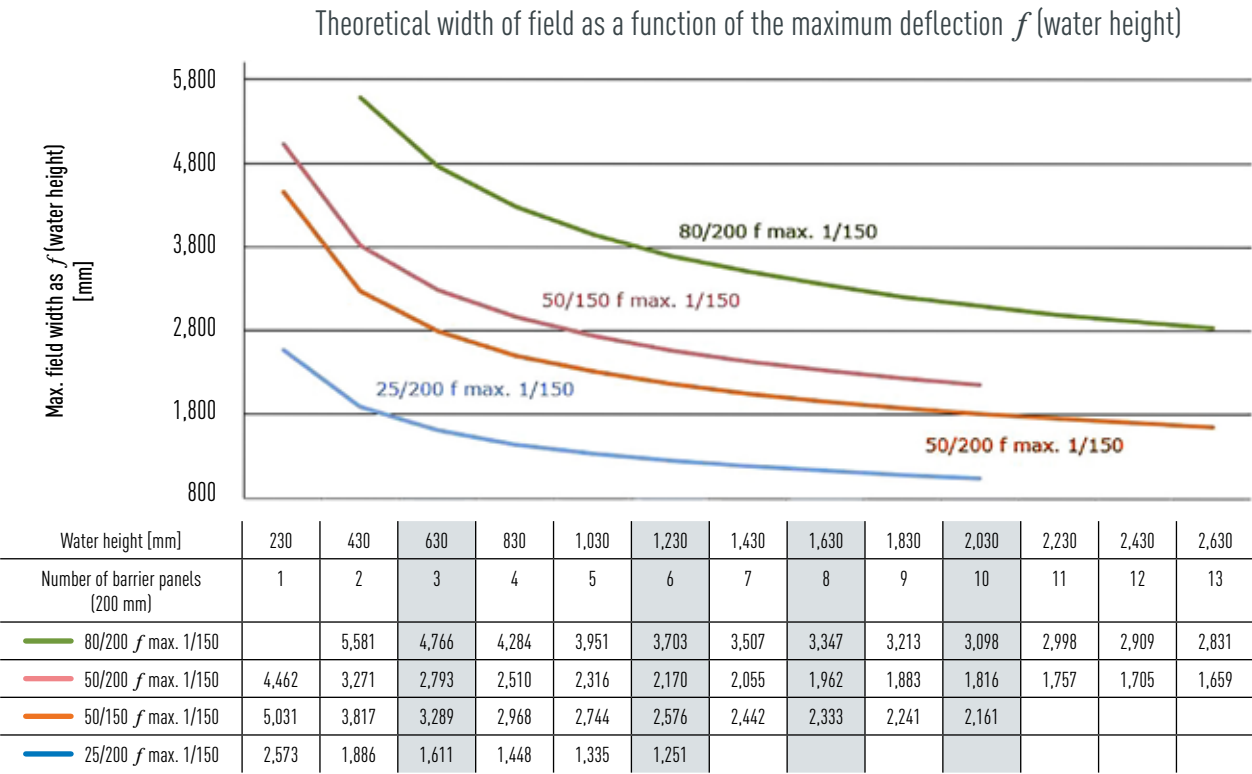
Caution! Before the PREFA flood protection barrier panel system is installed, it must first be clarified whether the building and the mounting surface are suitable for the installation from a structural point of view.

Water can have hydrostatic force effects on structures in the form of uplift due to vertical water pressure and/or displacement due to horizontal water pressure, which can occur when structures are protected from flooding by a flood protection system and therefore cannot fill with water.

Only an expert structural engineer can answer the question of whether a particular structure is at risk due to floating or lateral water pressure in the event of a flood and when it may be necessary to permit internal flooding. PREFA is not liable for damage caused by hydrostatic forces.

MAINTENANCE

The flood protection system should be set up and taken down once per year for regular maintenance. This allows you to run through the handling as well as check for functionality and completeness. All seals should be cleaned and treated with silicone spray after each use and be replaced if damaged.





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- Personal, all-round service at every stage

LET'S TALK ABOUT IT.



PREFA UNITED KINGDOM

PREFA UK LTD

1 Chapel Street • Warwick • CV34 4HL

OFFICE.UK@PREFA.COM
UK.PREFA.COM

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