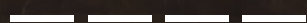




# BI-FOLD PLUS



INSTALLATION  
**GUIDE**



# INSTALLATION GUIDE

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## IMPORTANT

The purpose of this guide is to ensure the highest quality standards in the installation of the **Bi-Fold Plus door**.

Before starting the process, it is necessary to review all the steps to ensure that there is no loss of performance in the installation process.

The installation must be carried out and supervised by duly trained and qualified professionals.

It is important to ensure good leveling and plumbing of the door, whether it is due to irregularities of the support surface of the frames or if it is due to possible deflections of the structures that will support the weight of the system, in order to be sure the system works correctly and it does not appear anomalies in the rolling of the leaves.

Make sure that the building never transmits loads to the door.

## General Installation Instructions

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### 1. ASSEMBLY INSTRUCTIONS

Read these assembly instructions before beginning any installation work. Install as recommended otherwise the door unit may not function properly and any warranty, written or implied, will be void.

### 2. QUALIFICATIONS

The assembly instructions are only for the attention of qualified installers who are trained and qualified in window and doors installation techniques, and are aware of the manufacturer's recommendations for the system used.

### 3. TRANSPORT AND STORAGE

Parts that could come loose during transportation can be damaged or cause accidents.

All packaging opened to allow the goods to be inspected must be closed and properly sealed for further transport.

Any goods that will be further transported must be loaded safely and securely.

### 4. INCOMING GOODS

All goods received must be inspected for any transport damage prior to being removed from the vehicle. The goods received must match the delivery note.

### 5. SITE SURVEY

It is important to check the conditions on site before starting the assembly.

Check for any apparent defects and deficiencies around the structural opening.

Check structural conditions such as the wall construction, load capacity or adhesiveness of the edges.

Check for contractual agreements, supplied assembly detail, heat protection or humidity proofing.

**ATTENTION!** *The fixing materials are not part of the scope of supply. The installer must ensure that the fixing materials are suitable for the respective substructure and the assembly is completed correctly.*

### 6. HANDOVER

All operating, assembly and adjustment as well as maintenance and care guidelines must be delivered to the user when briefing them. Incorrect operation or failure to observe the instructions may lead to damage and accidents. The customer must store the instructions carefully and hand them over to the new owner in the event of sale.



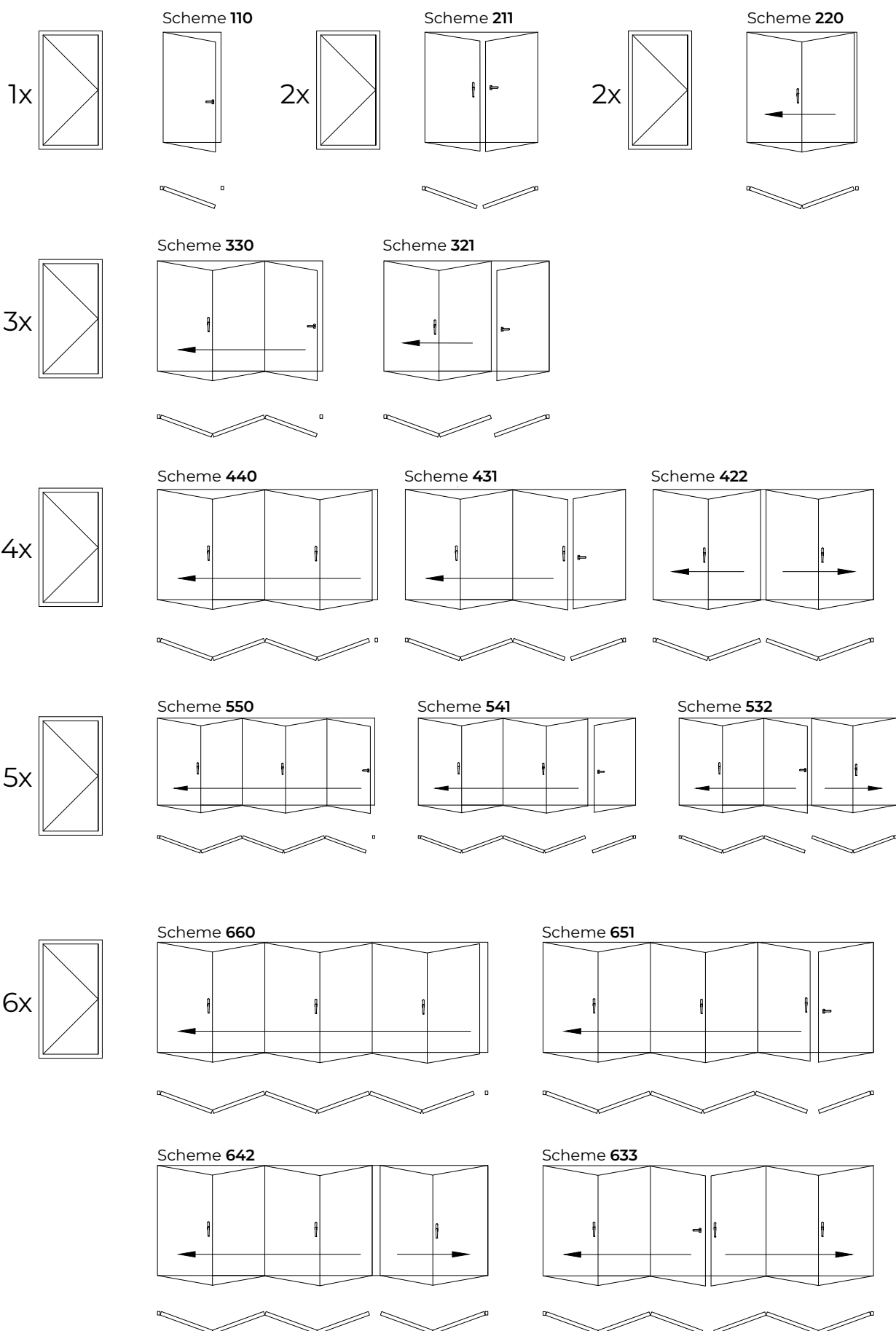
## Recommended **Tools**

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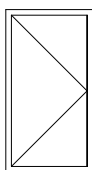
- Appropriate fixings into structural opening
- Mixed selection of frame packers
- Mixed selection of glazing packers
- Rubber mallet or plastic mallet
- Set of HSS drill bits
- Drill / SDS hammer drill
- Saw for cutting aluminium sill
- Long spirit level
- String line
- Tape measure
- No.2 Pozi drive
- 2.5 mm; 3 mm; 4 mm Allen Keys
- Level or Laser Level
- Gloves
- Vacuum Cups
- Caulk Gun and Low modulus Silicone
- Paper Towels
- Utility knife
- Silicone and gun
- Set square
- Tressels x4

# Opening Possibilities

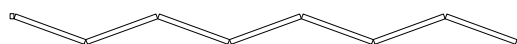
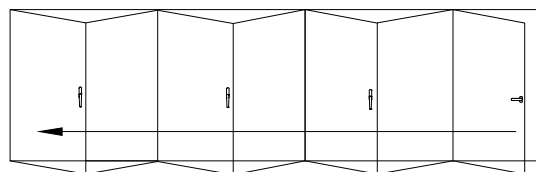
Open in



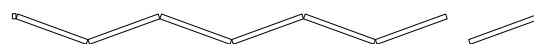
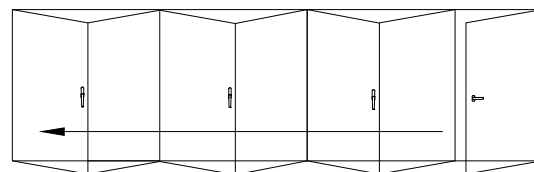
7x



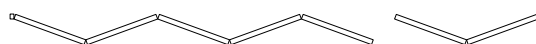
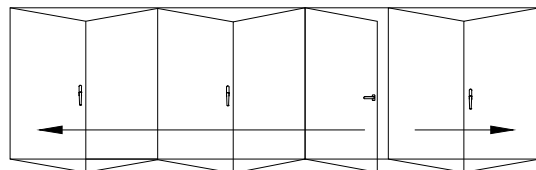
**Scheme 770**



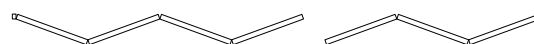
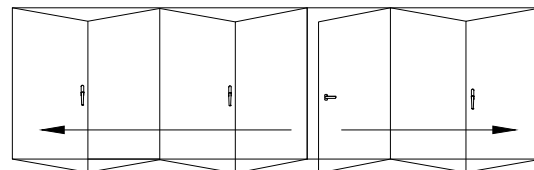
**Scheme 761**



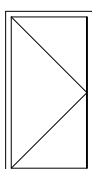
**Scheme 752**



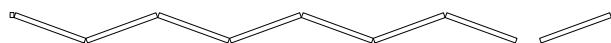
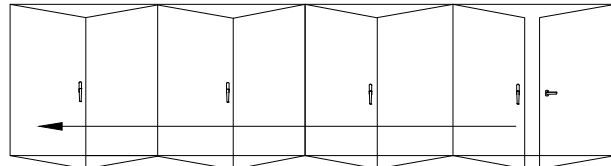
**Scheme 743**



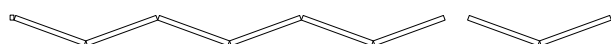
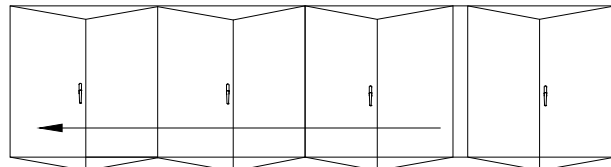
8x



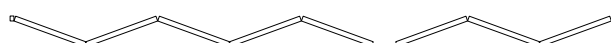
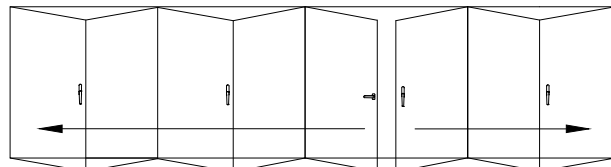
**Scheme 871**



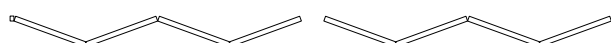
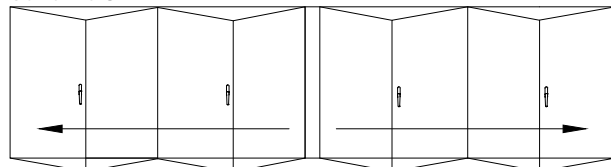
**Scheme 862**



**Scheme 853**



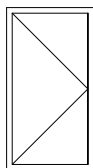
**Scheme 844**



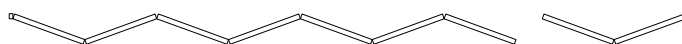
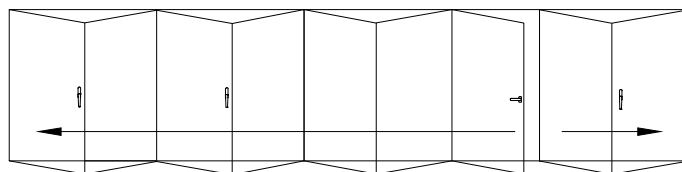
## Opening Possibilities

Open in

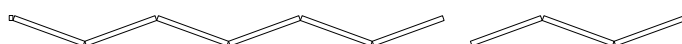
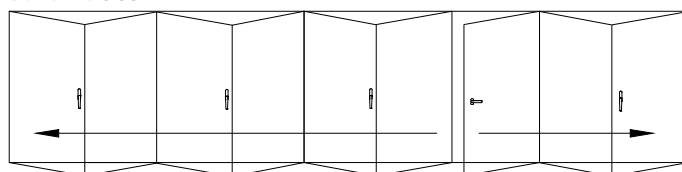
9x



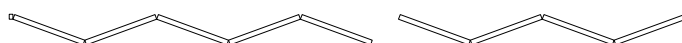
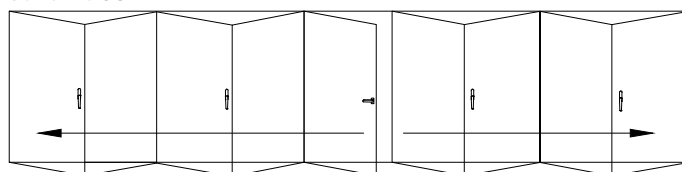
Scheme 972



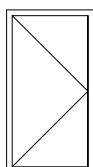
Scheme 963



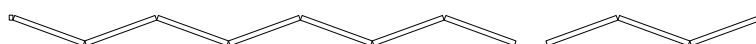
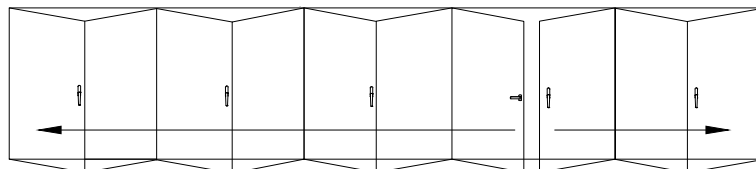
Scheme 954



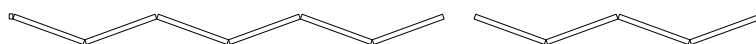
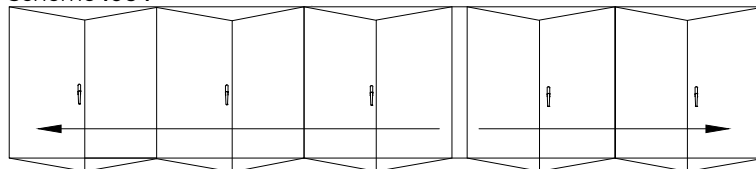
10x



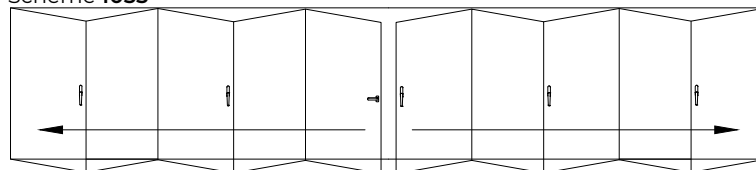
Scheme 1073



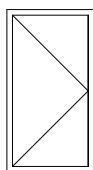
Scheme 1064



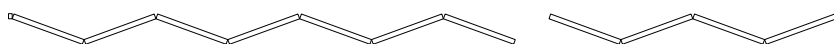
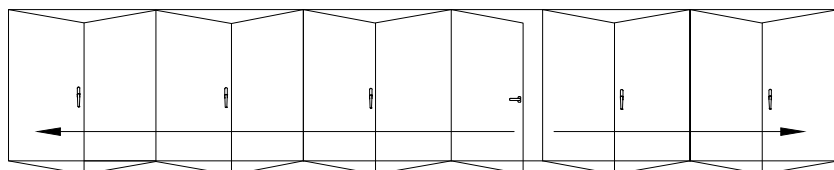
Scheme 1055



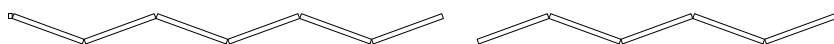
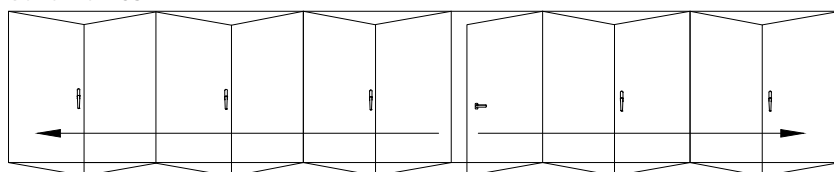
11x



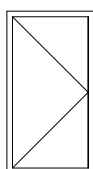
Scheme 1174



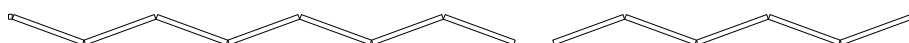
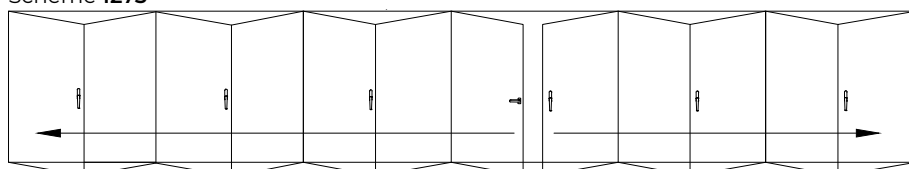
Scheme 1165



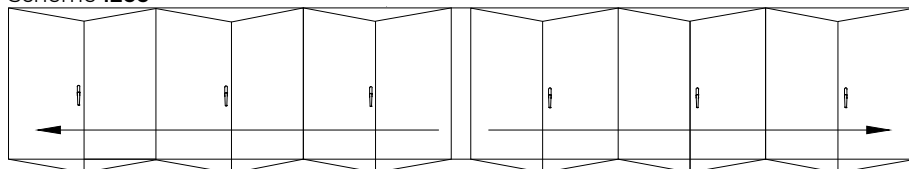
12x



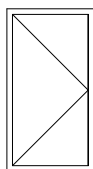
Scheme 1275



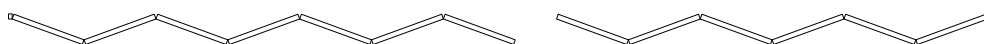
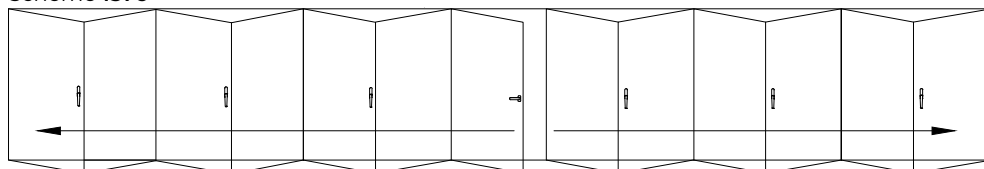
Scheme 1266



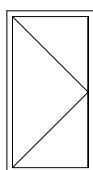
13x



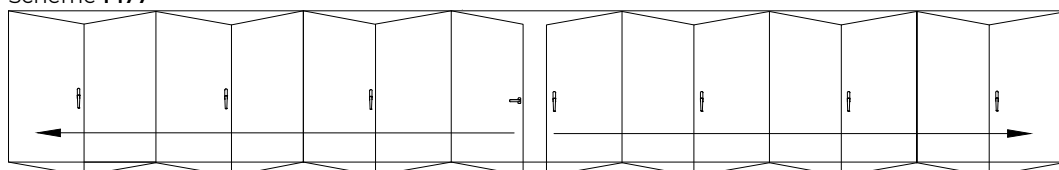
Scheme 1376



14x

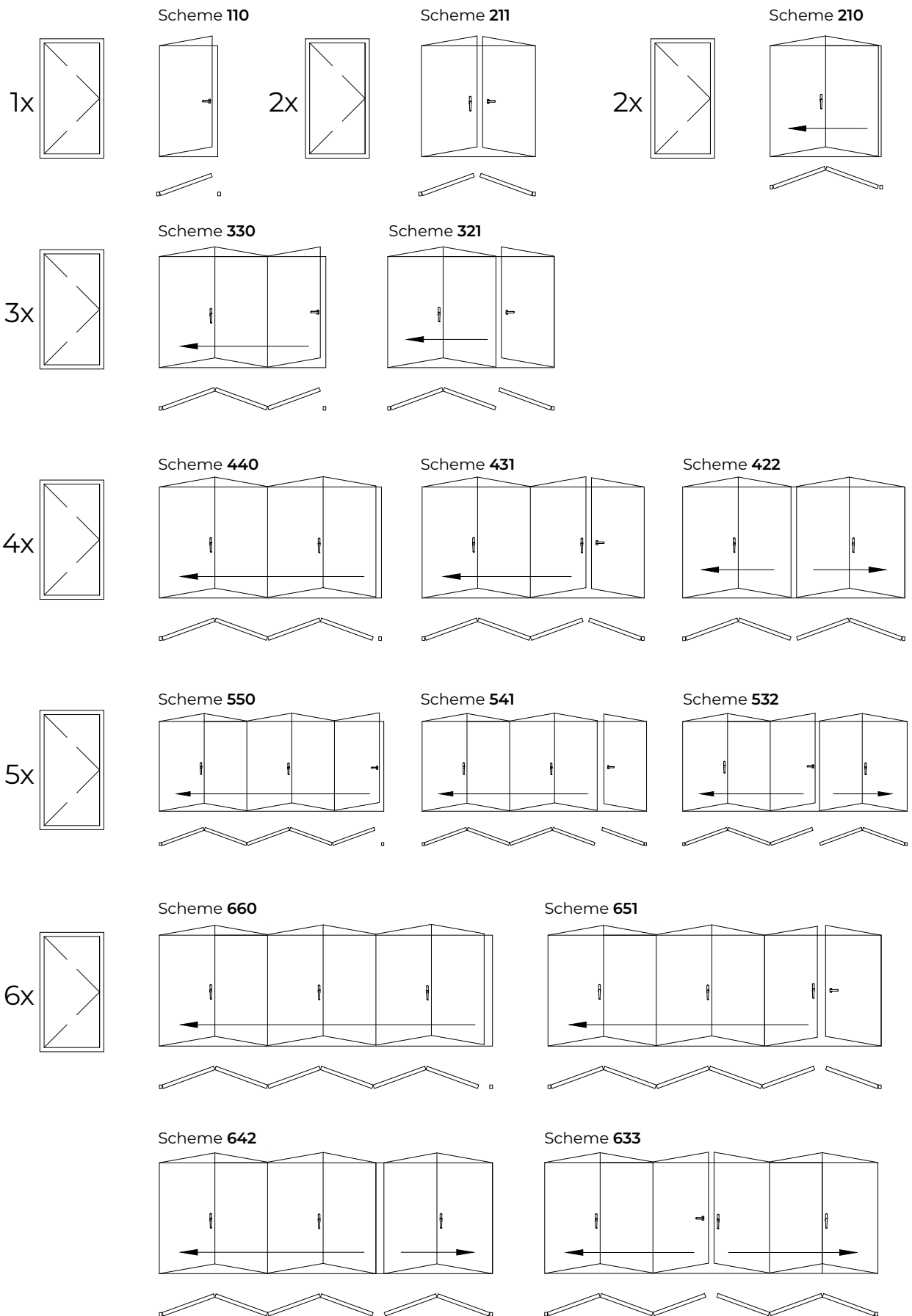


Scheme 1477

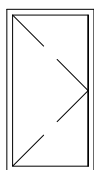


# Opening Possibilities

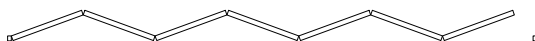
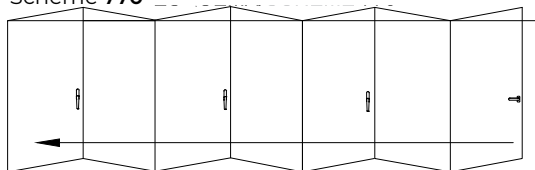
## Open out



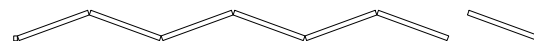
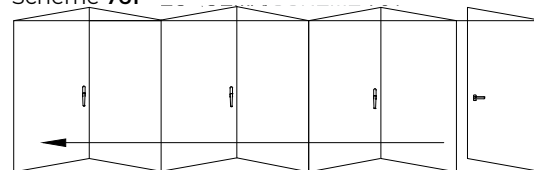
7x



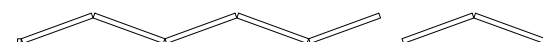
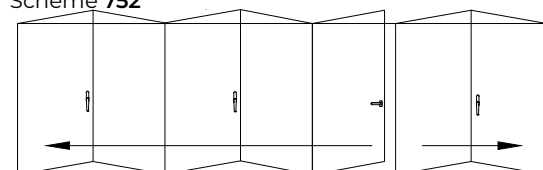
Scheme **770**



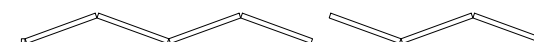
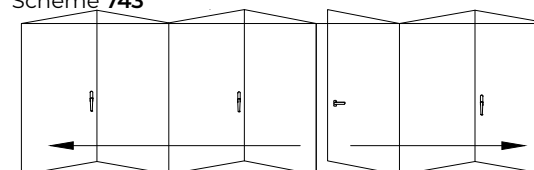
Scheme **761**



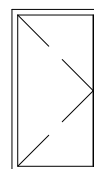
Scheme **752**



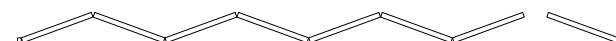
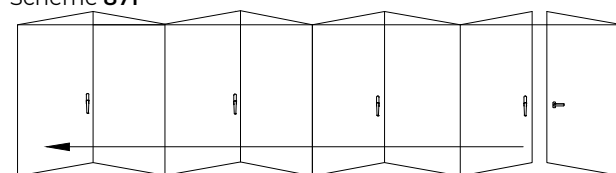
Scheme **743**



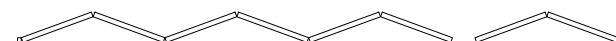
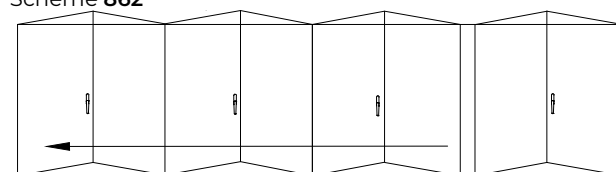
8x



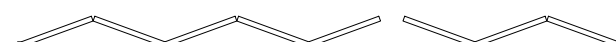
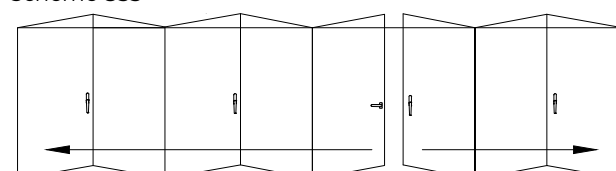
Scheme **871**



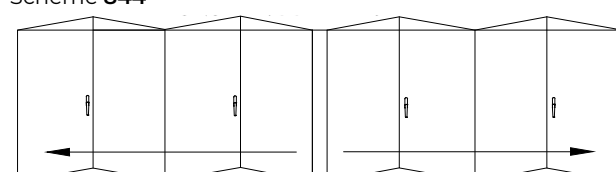
Scheme **862**



Scheme **853**



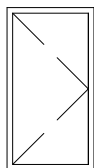
Scheme **844**



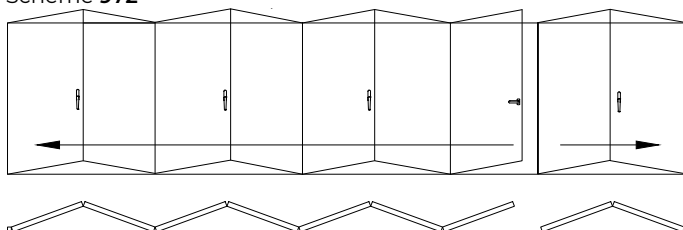
## Opening Possibilities

Open out

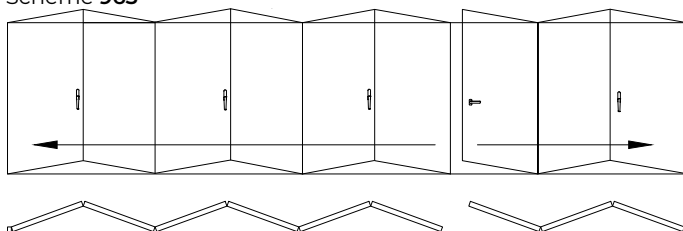
9x



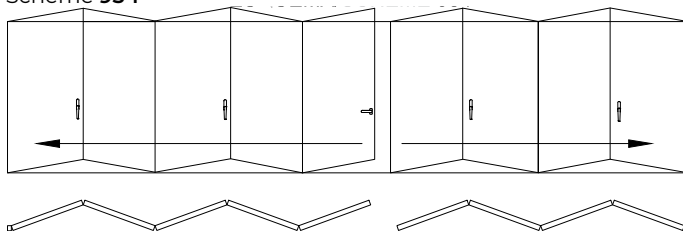
Scheme 972



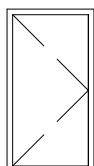
Scheme 963



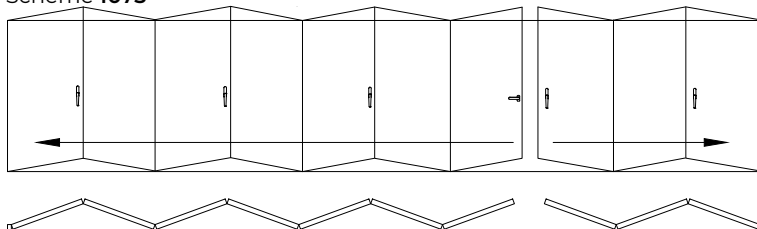
Scheme 954



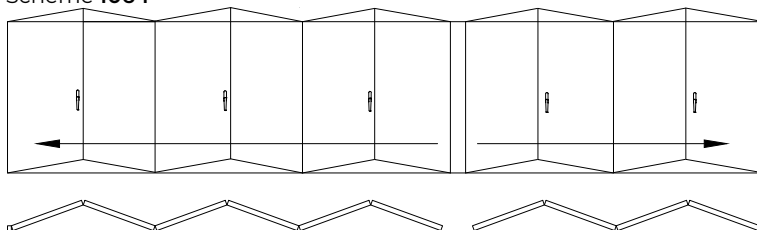
10x



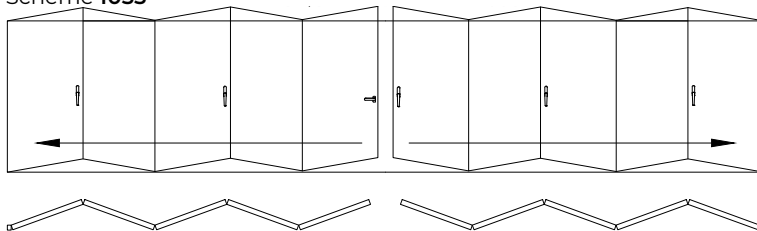
Scheme 1073



Scheme 1064

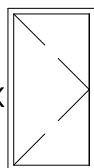


Scheme 1055

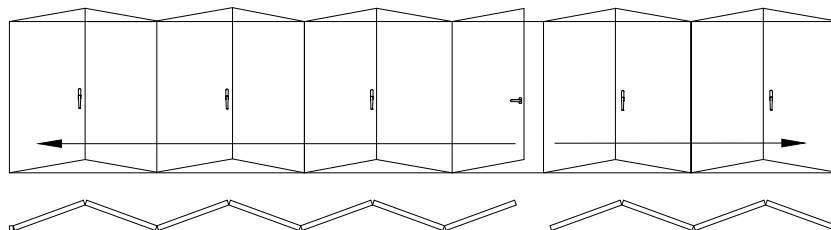




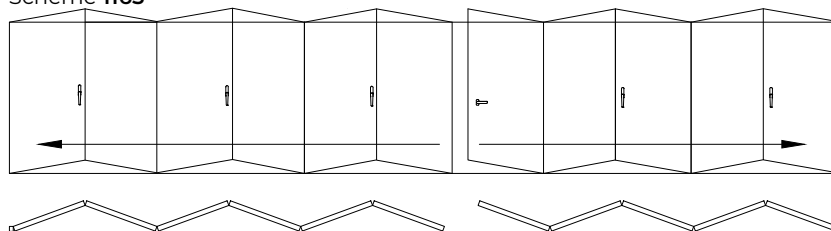
11x



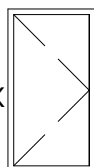
**Scheme 1174**



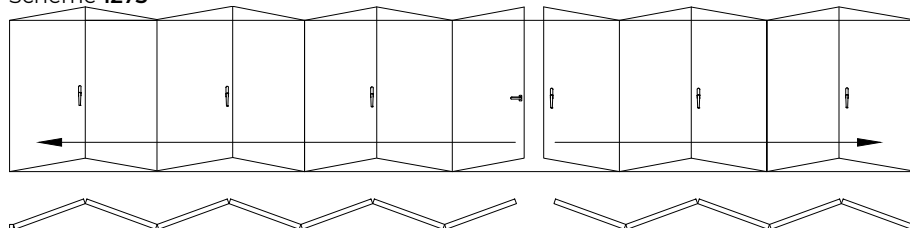
**Scheme 1165**



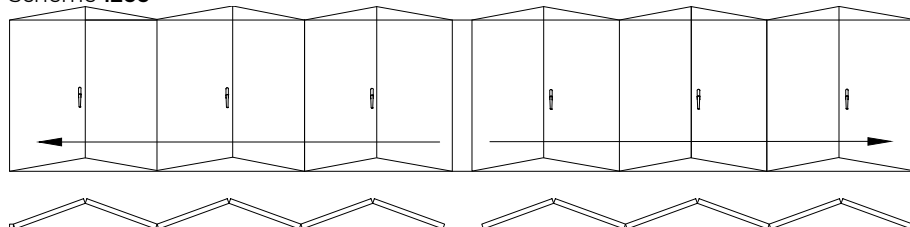
12x



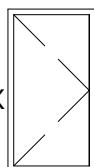
**Scheme 1275**



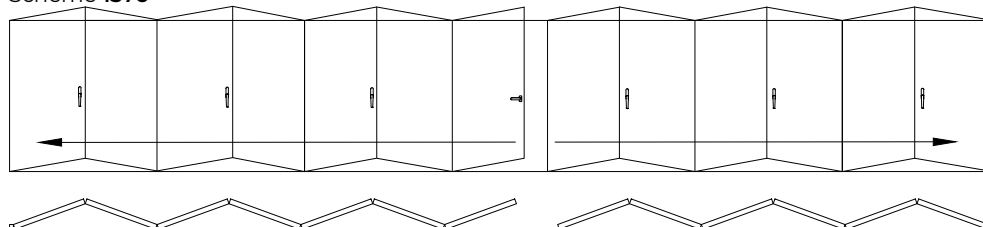
**Scheme 1266**



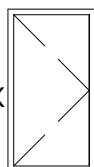
13x



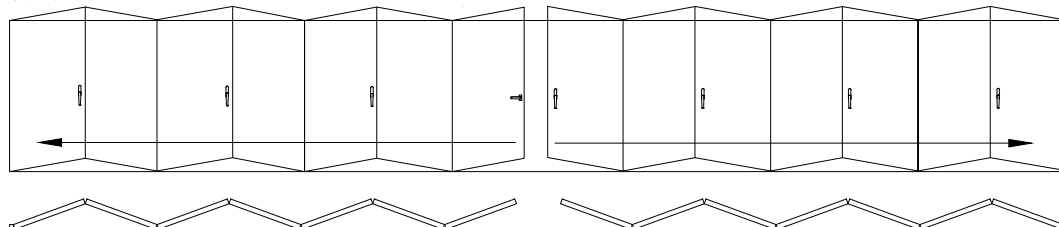
**Scheme 1376**



14x



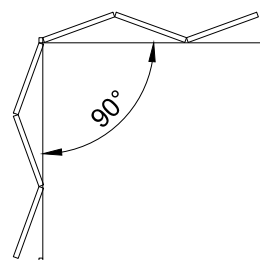
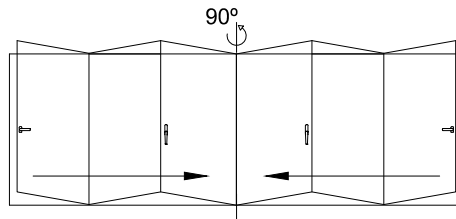
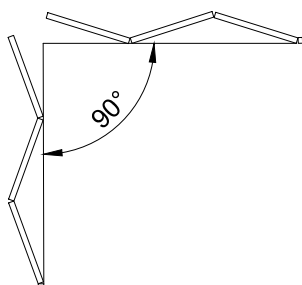
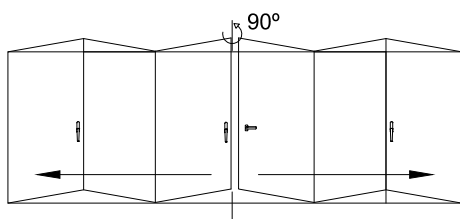
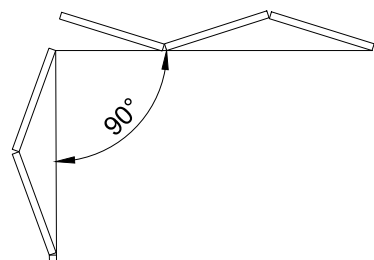
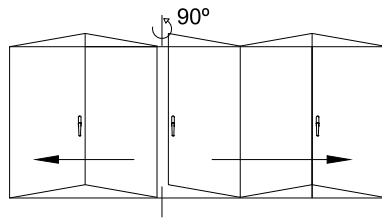
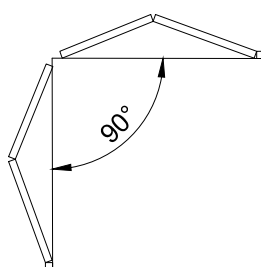
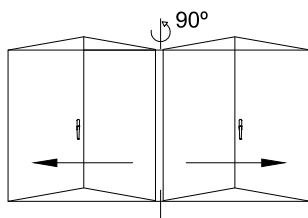
**Scheme 1477**



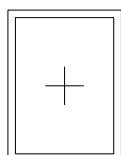
## Opening Possibilities

### Open out

#### 90° corner opening



#### fixed lights



# Bi-Fold Plus Technical Data

**Standard sliding system** with straight aesthetic and a reduced interlock section of 47 mm, ideal for closing large spans without using a lift & slide solution, it combines great thermal and acoustic performance with large glazed surfaces of up to 88%.

## Transmittance

**$U_w \geq 0,8$  (W/m<sup>2</sup>K)**

Please consult typology, dimensions and glazing

## Acoustic insulation

Glazing Max. 48 mm / Min. 25 mm

## Sightlines


Frame 80 mm  
Sash 80 mm

## Profile Thickness

Door 1,8 mm

**Polyamide Strip Length** 45 mm

## Features

Air permeability	Class 4*
Wind resistance	Class C3*
Water tightness	Class E750*
Security test	PAS24  PASSED**

Reference Test 3 sashes.

\*Configuration 321. 3,73 x 2,50 m

\*\*Configuration 321. 2,70 x 2,50 m

## Finishes

Possibility of dual colour systems  
Colour powder coating (RAL, mottled and rough)  
Wood effect powder coating  
Anti-bacterial powder coating  
Anodized

## Opening possibilities

Open in: Bi-fold from 2 to 14 sashes

Open out: Bi-fold from 2 to 14 sashes, possibility of corner sash at 90° without mullion

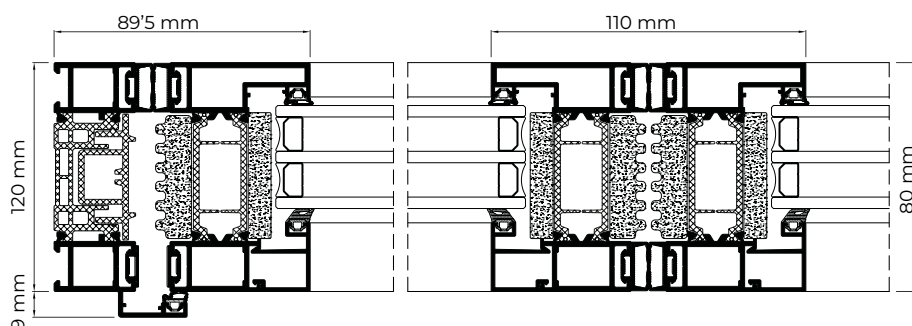
## Maximum Dimensions/Sash

Width (L) = 1200 mm

Height (H) = 3000 mm

Consult maximum weight and dimensions according to typologies

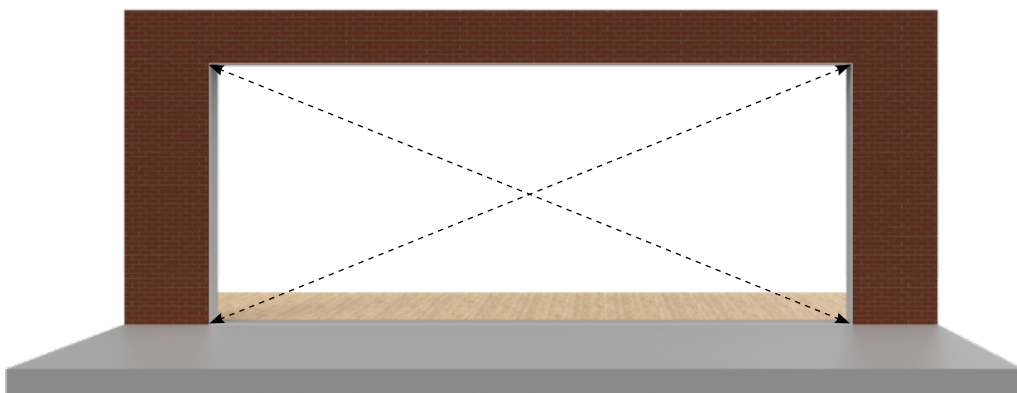
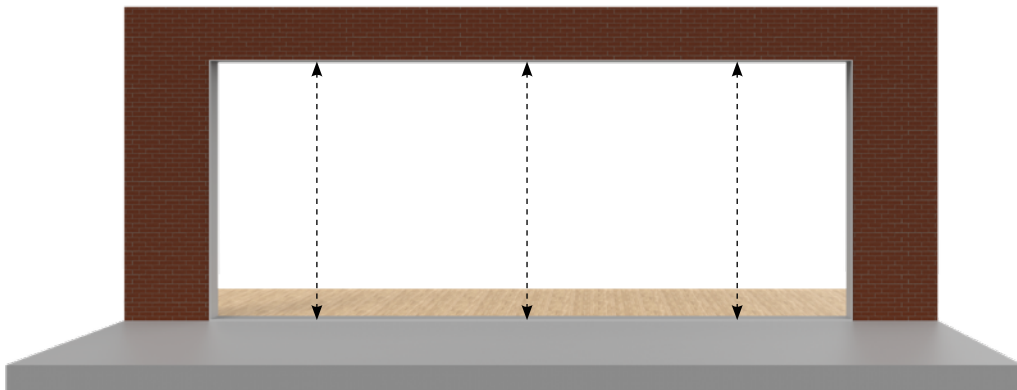
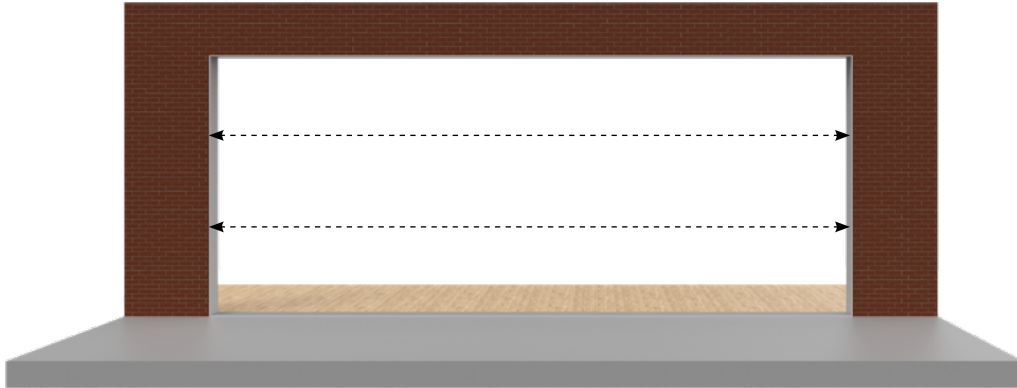
**Maximum Sash Weight** 120 Kg



## Installation Guide

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- 1 Prepare the opening.



- 1.1 Measure **widths** and **heights** in several points. Also measure diagonals to verify the aperture is square.

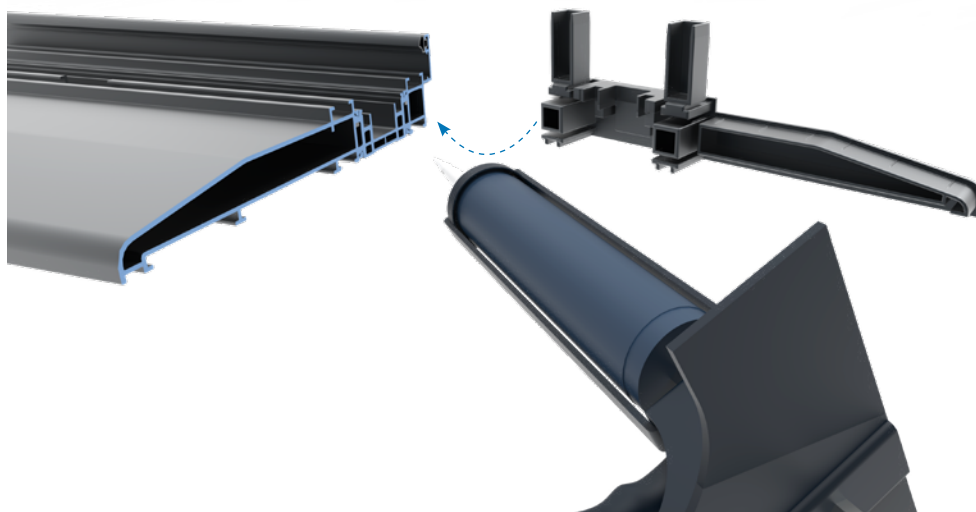
## Installation Guide

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- 2** Level the threshold in both directions, packing accordingly.



- 3** Sub sill installation (if needed).

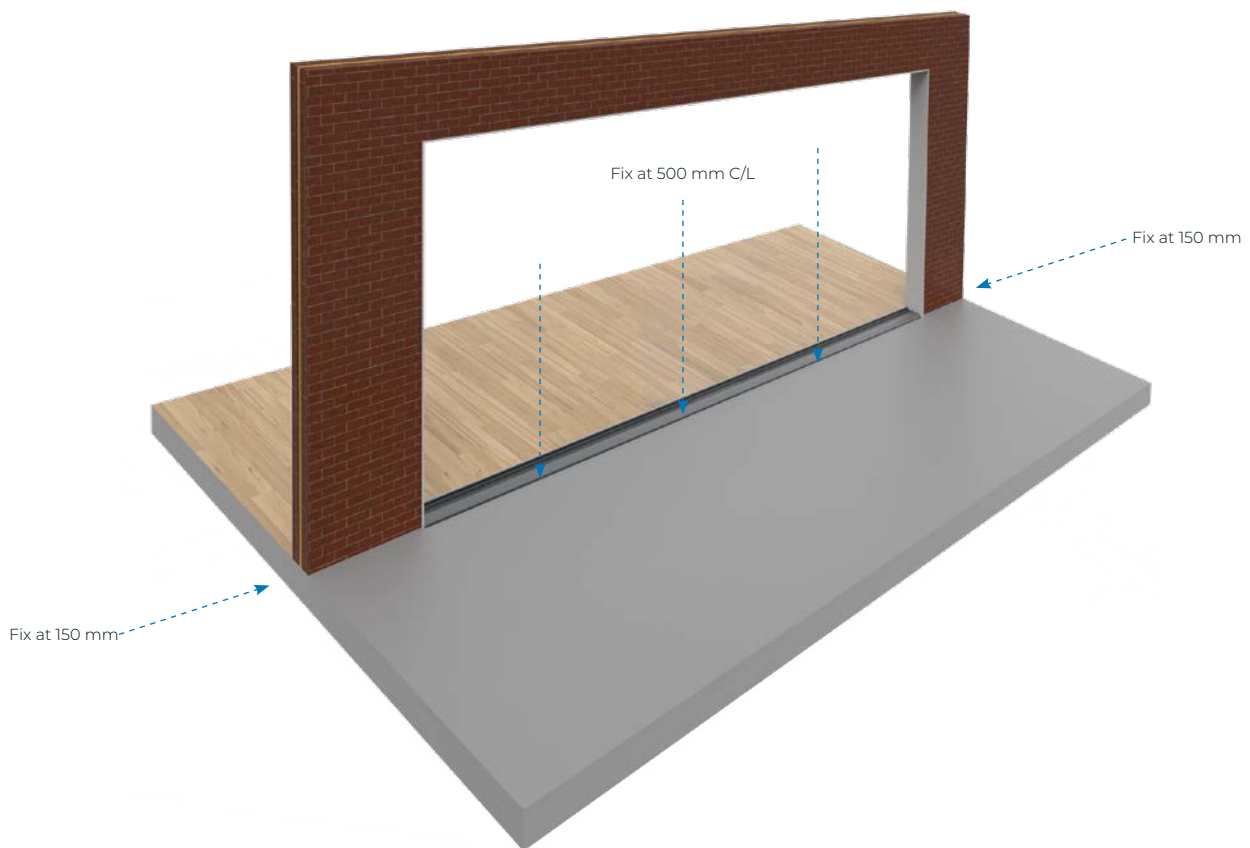
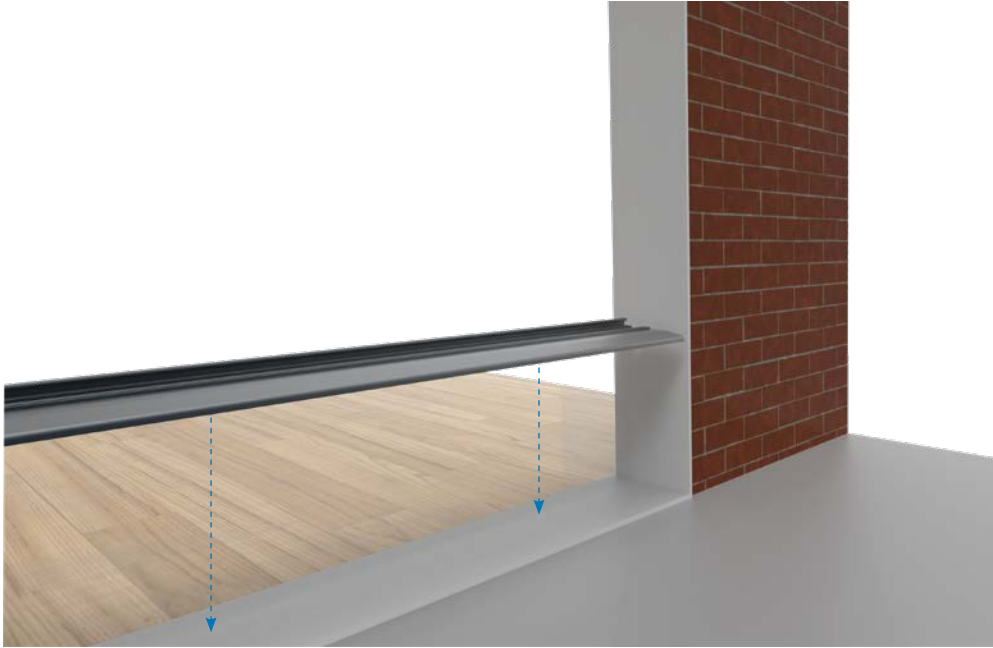


**!** The need for any sub-sill should be determined at the beginning of the project.

## Installation Guide

3.2

Place the sub-sill on the aperture. Use specified fixings to fix the sill at minimum 150mm from each end, and spacing every 500mm centres.



## Installation Guide

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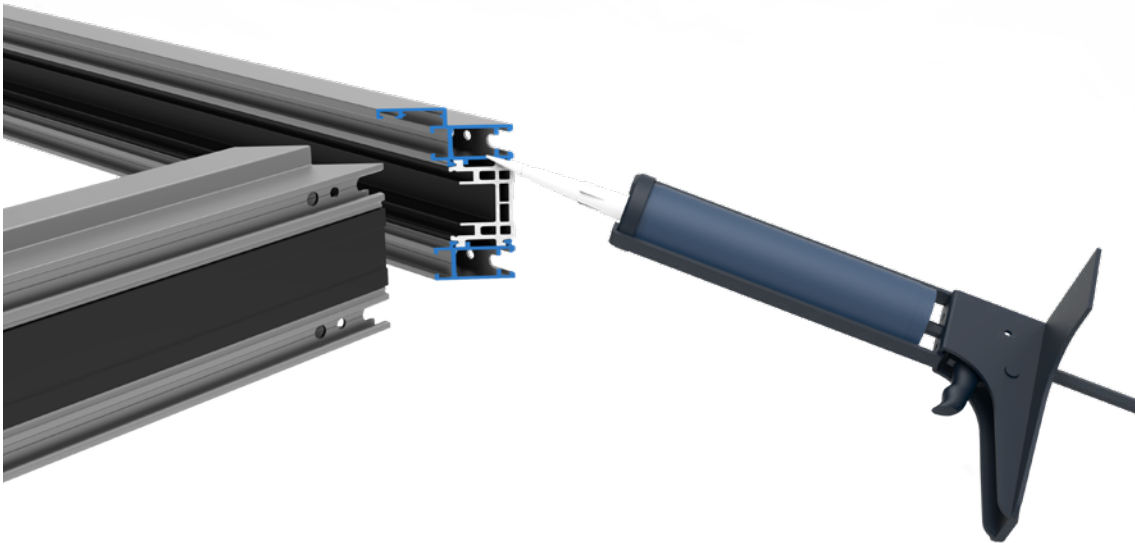
- 4 Assemble all frame profiles.



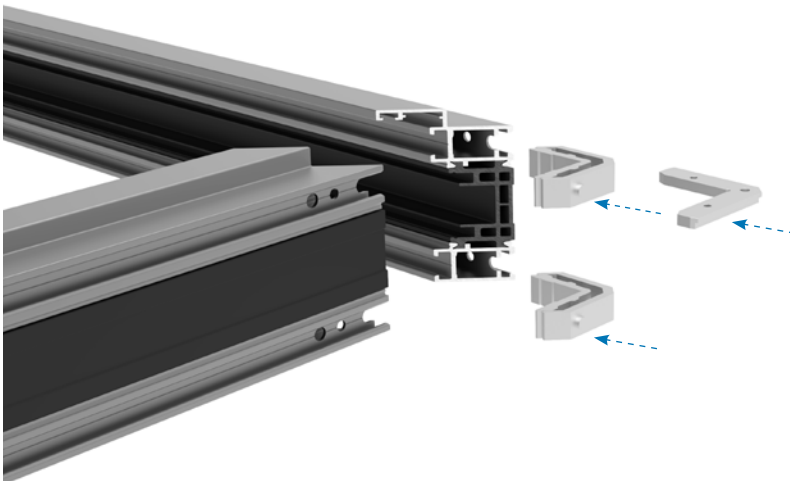
## Installation Guide

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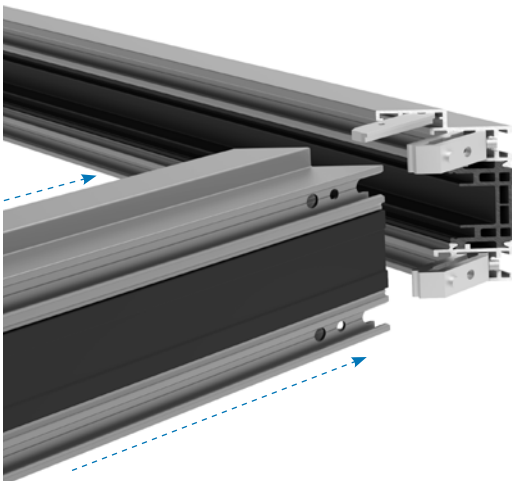
- 4.1** Connect the jambs and bottom track applying suitable sealant to profile ends.



- 4.2** Insert main, secondary and alignment cleats to the frame.



- 4.3** Join the mitre corner.

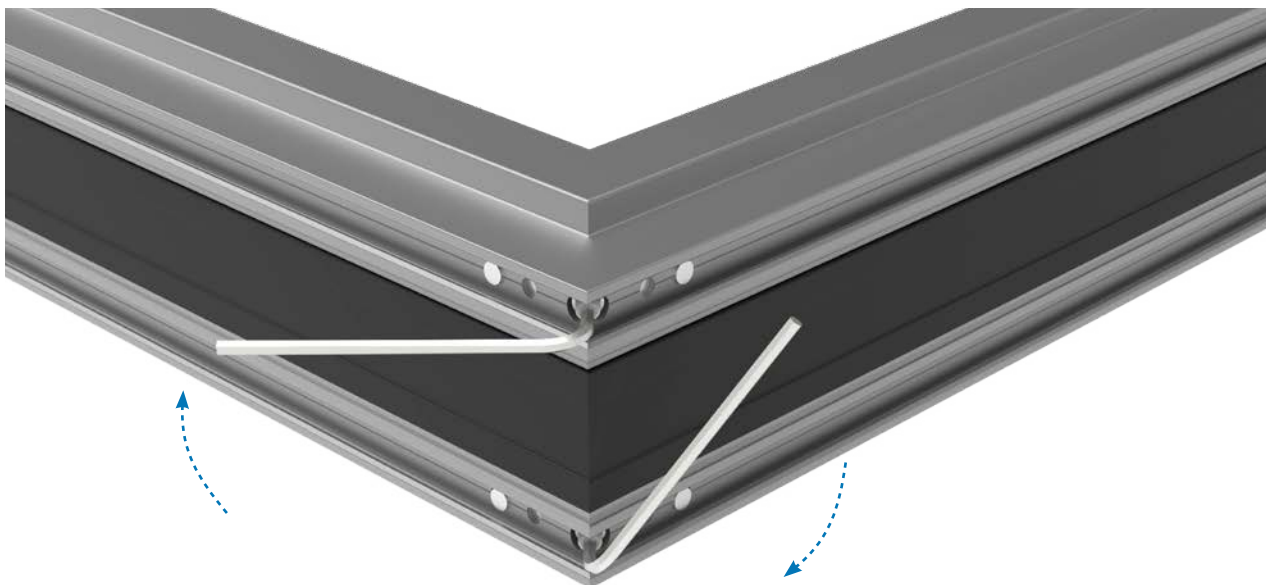


! It is important to seal the bottom profile at both ends to prevent water from draining into the cleats.

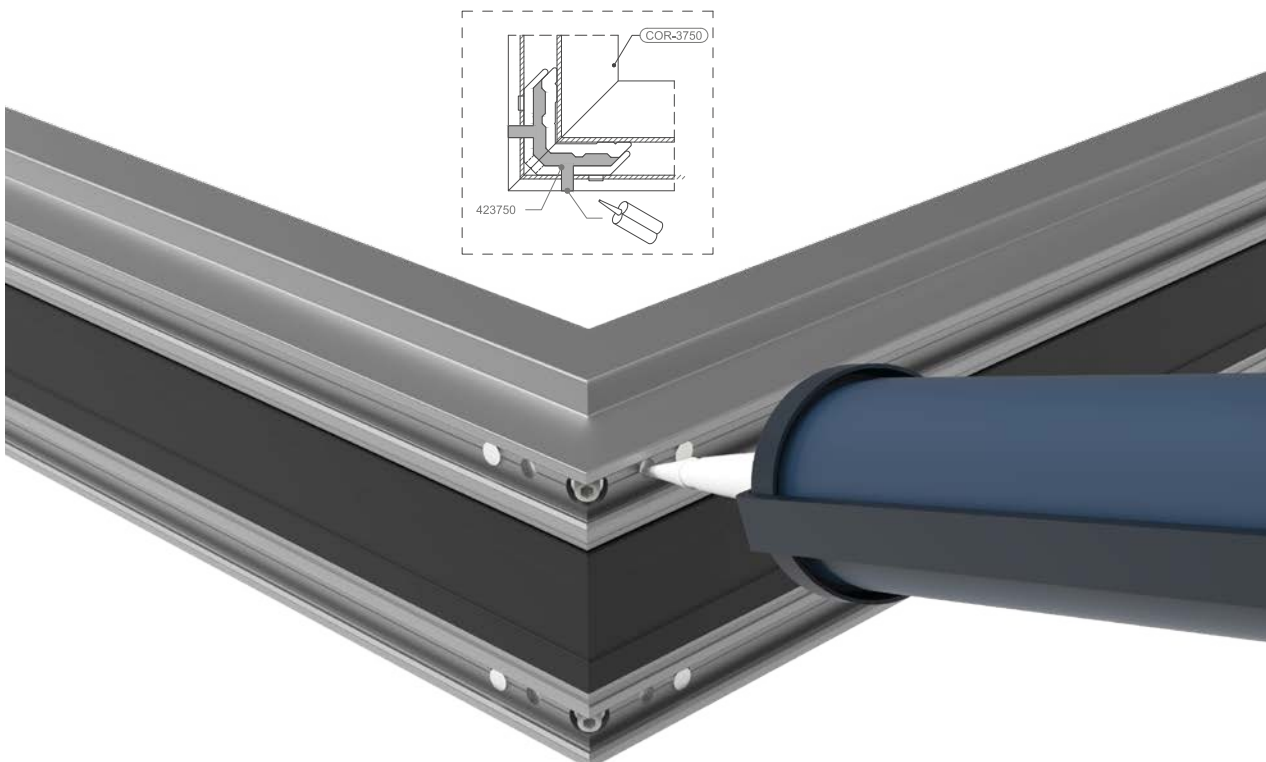


## Installation Guide

- 4.4** Tighten the cleat with an allen key.



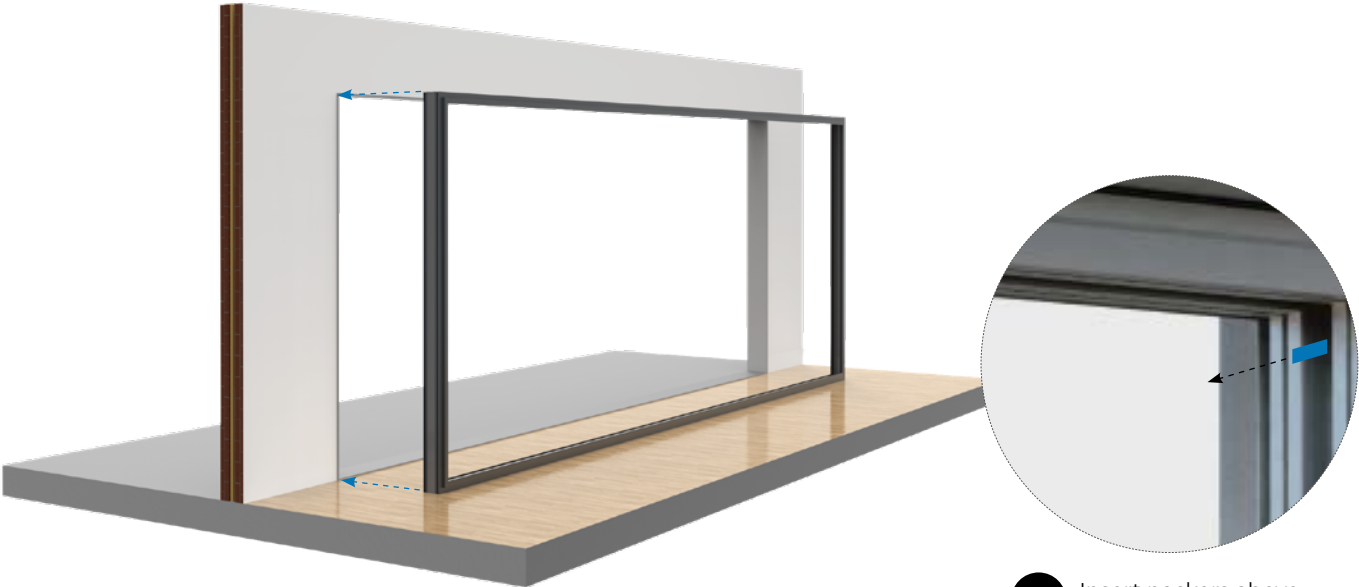
- 4.5** Apply bicomponent adhesive to secure the join.



- 4.6** Check join, remove excess sealant and repeat the process.

# Installation Guide

- 5
- Insert the frame into prepared structural opening and pack as necessary to ensure that the frame is held plumb and square inside the opening.



- 5.1
- Insert packers above both jambs.

The recommended separation between screws should not exceed 500 mm.  
The depth of the fastening on site should never be less than 30 mm. (See table with recommendations for use)

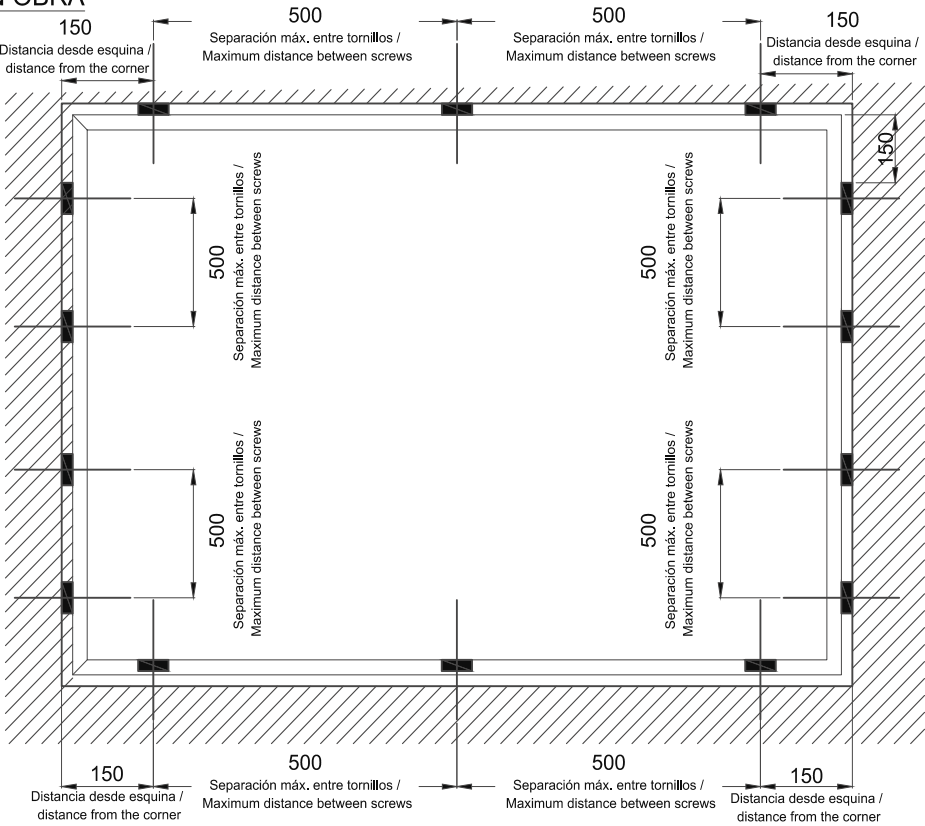
## ESQUEMA DE COLCACIÓN EN OBRA

### SITE INSTALATION SCHEME

#### Profundidad mínima del tornillo

##### Minimum screw depth

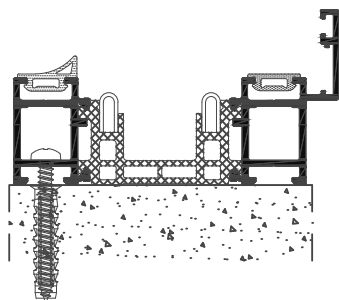
Material	mm.	20	30	40	50	60
LADRILLO HUECO (2 paredes) HOLLOW BRICK (2 walls)						
MADERA U HORMIGÓN LIGERO WOOD AND LIGHTWEIGHT CONCRETE						
PIEDRA STONE						
LADRILLO MACIZO SOLID BRICK						
PARED MACIZA SOLID WALL						
HORMIGÓN CONCRETE						



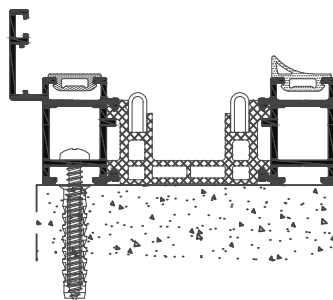
## Installation Guide

! Frame screws are positioned as shown below:

Inward opening



Outward opening



**5.2** Pack out jambs accordingly when level.

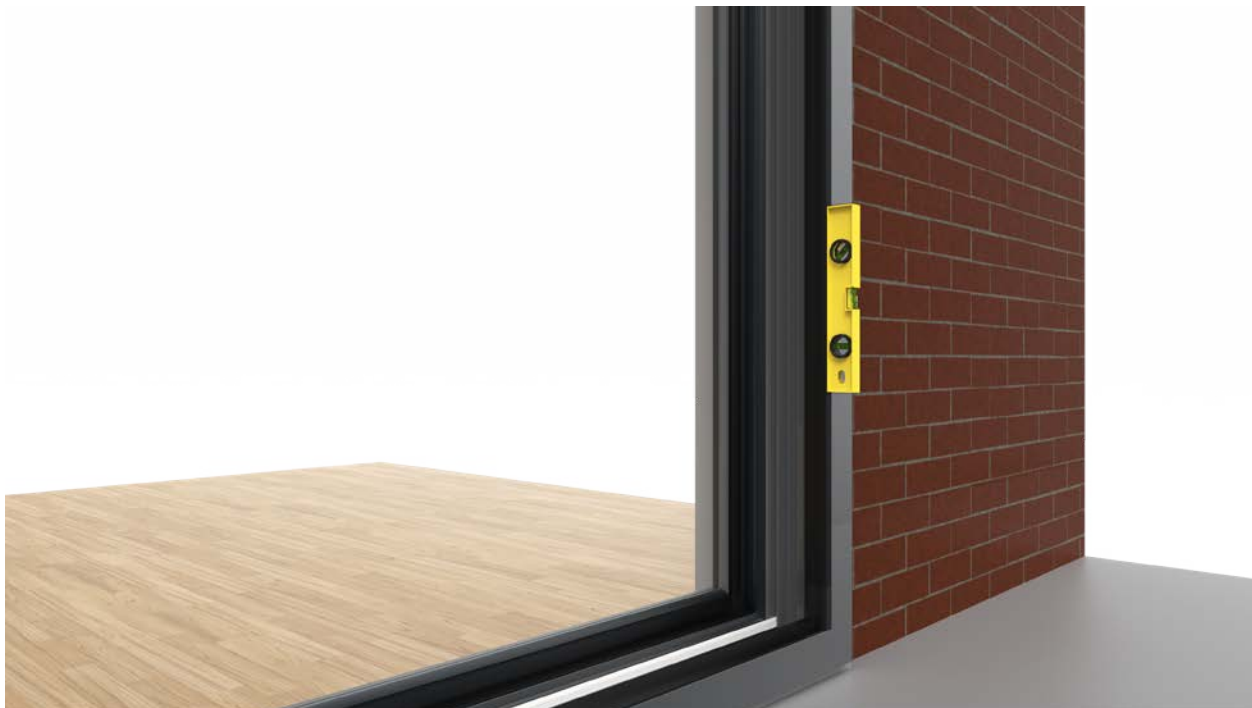


**5.3** Pack out across the top track for consistent internal frame sizes. Ensure the track doesn't bow in any direction. Ensure that the building does not transmit any loads into the frame.

## Installation Guide

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- 6** Level out jambs in both directions and fix them.



- 7** Fix the top track. Where possible, fixing points should be on both sides of the frame, in a zig-zag pattern.



## Installation Guide

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- 7.1** Drill and countersink an appropriate sized fixing hole through the frame. This should be no more than 200 mm from the external corner of the frame.



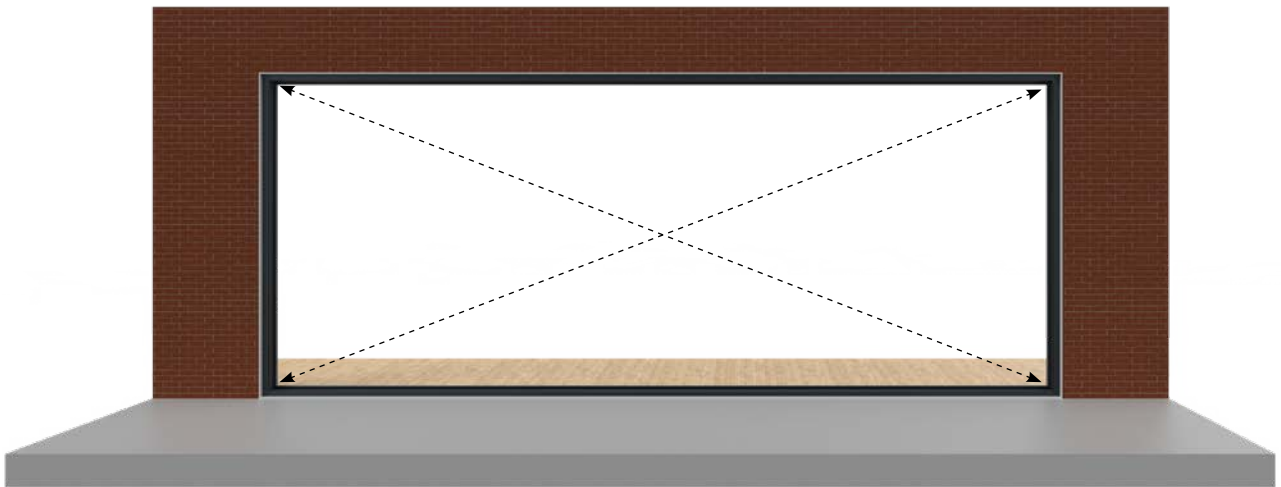
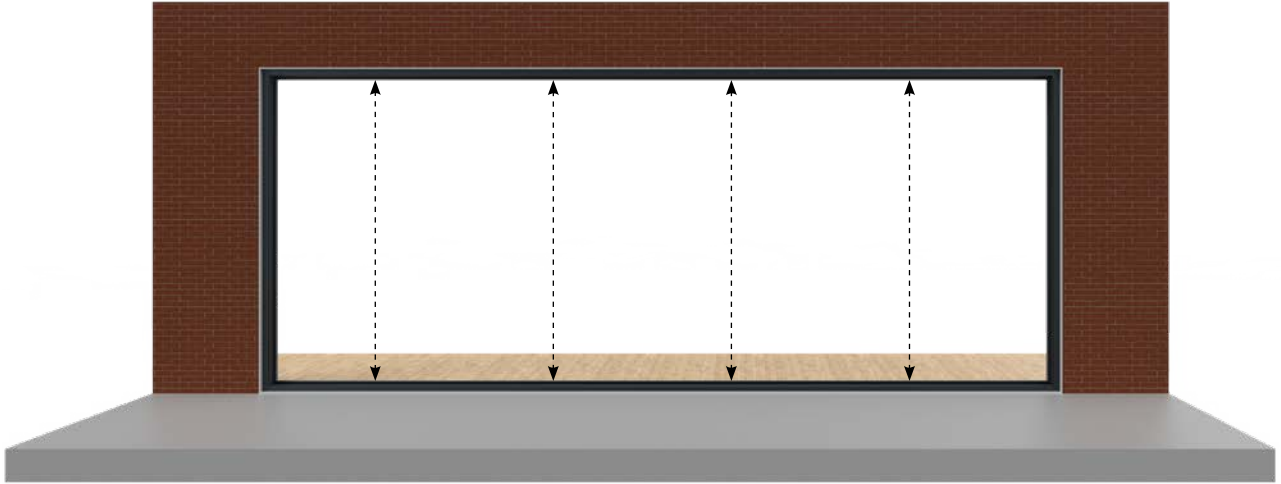
- 7.2** Insert suitable sealant to fixing hole, then screw preferred fixing in place. Repeat process along the bottom track, ensuring fixings are within 900 mm intervals.

Repeat the step 7 on the four profiles of the frame (horizontal and vertical), so as to properly fix it to the wall.

## Installation Guide

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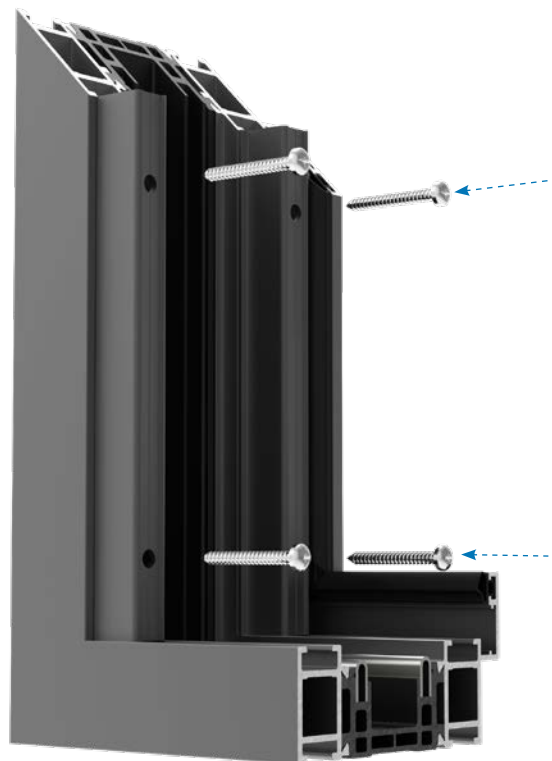
- 8 Accurately measure the internal frame dimensions.



## Installation Guide

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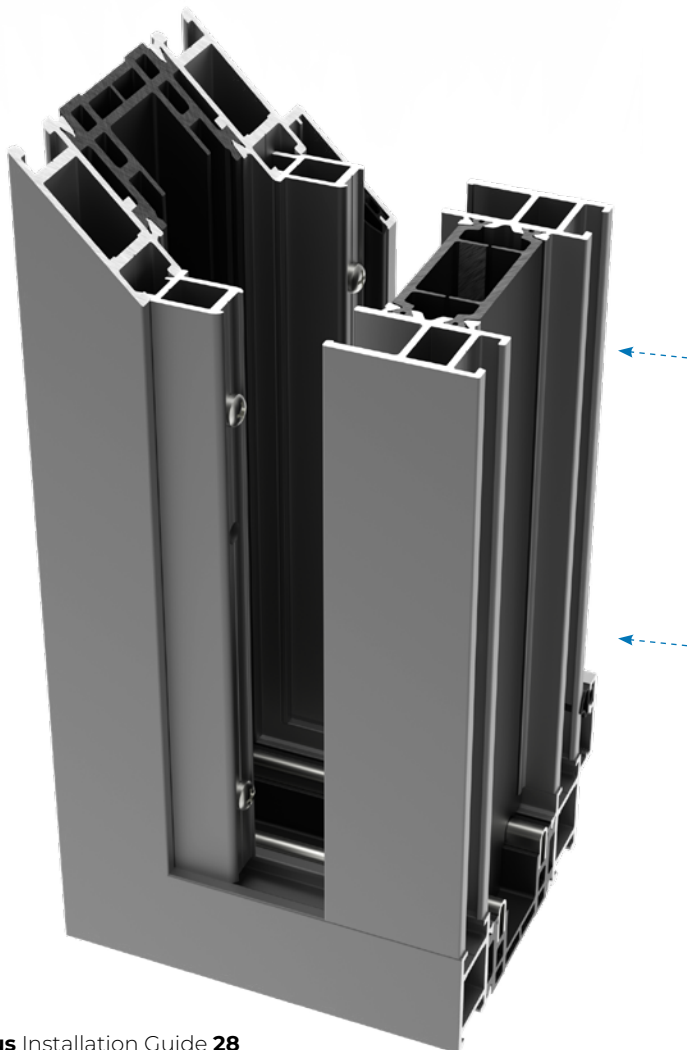
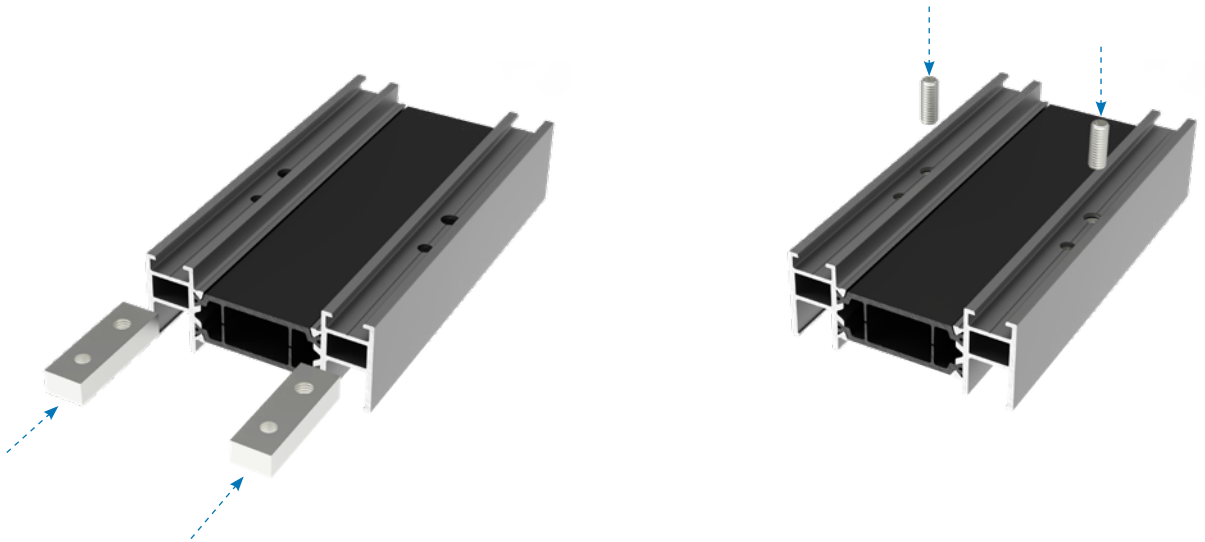
- 9.1** Place the packer for adjustable jamb and secure it with screws.



## Installation Guide

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- 9.2** Insert the fixing blocks into the adjustable jamb and secure them with the grub screws.

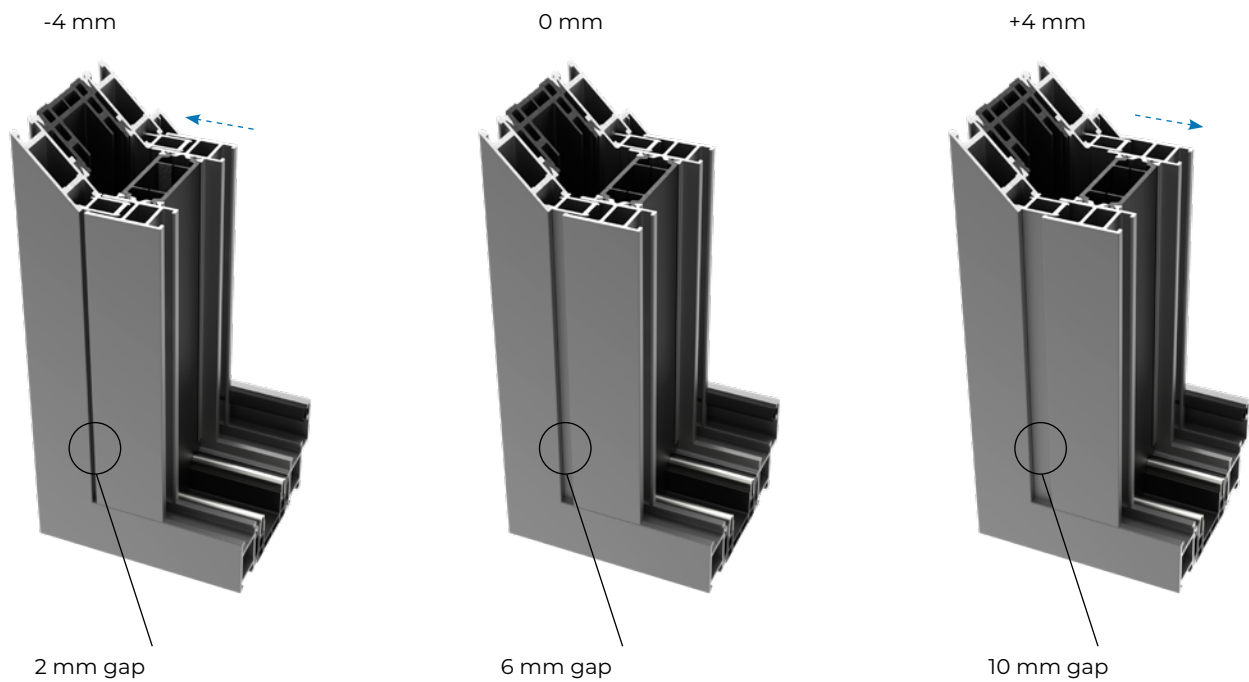


- 9.3** Place the jamb into the frame.



## Installation Guide

**9.4** Fit the adjustable jamb profile into outer frame up to the end.



! Adjustable jamb is designed to have both positive and negative adjustment as shown above.

**9.5** Secure the desired position with fixing screws.

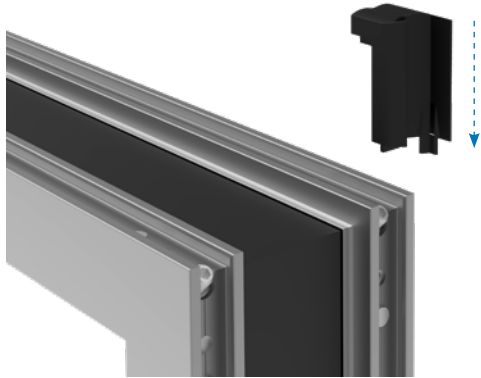


## Installation Guide

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10\*

The assembly of the sash will be carried out in a similar way to the frame assembly. The steps detailed in section 4 will be repeated, but using the sash profiles. The external upper and lower gaskets will be installed right after.

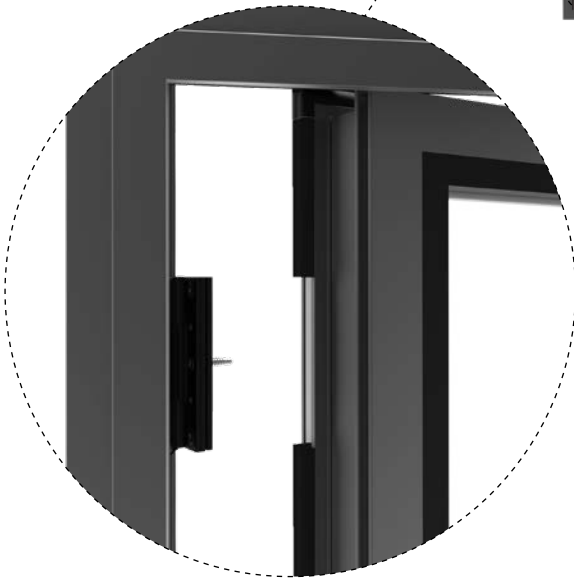
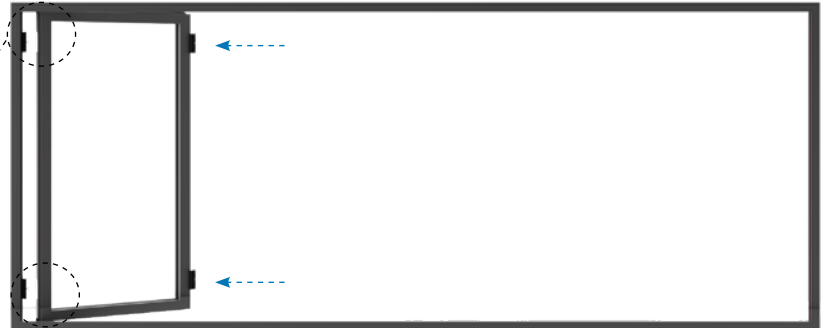


## Installation Guide

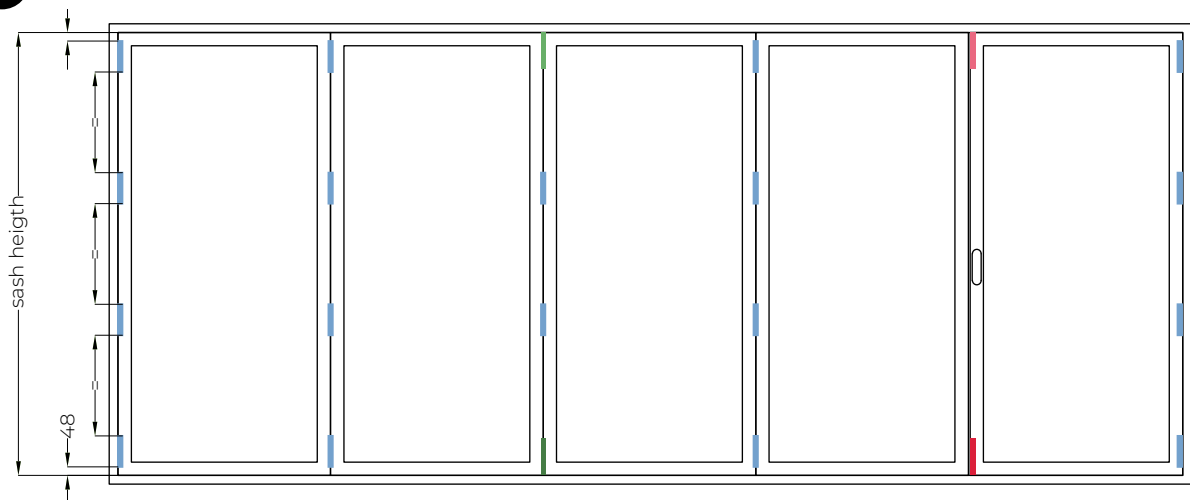
- 11** Align the side of first panel that has campling plates on with hinges attached to outer frame adjustable jamb. Locate the hinge leaf over the clamping plate and secure with machine screws.



Look for the panel glass beads to determine the interior side.  
Look for the panel drainage holes to determine the bottom side.



- 11.1** Position the hinges as the scheme below. Look up to further details on the technical catalogue.



Hinge

Top guide

Top half guide

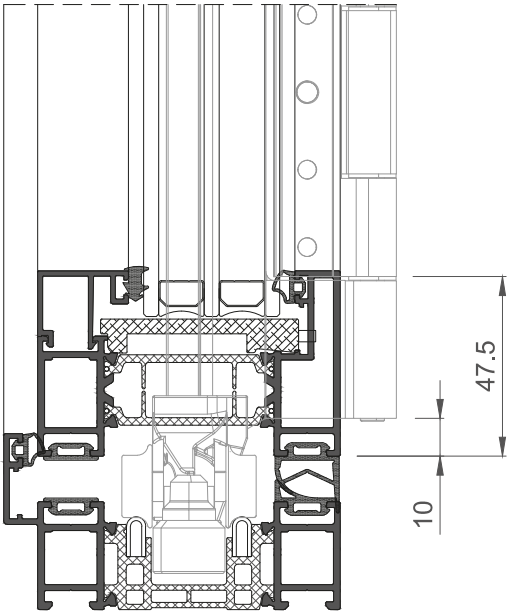
Bottom roller

Bottom half roller

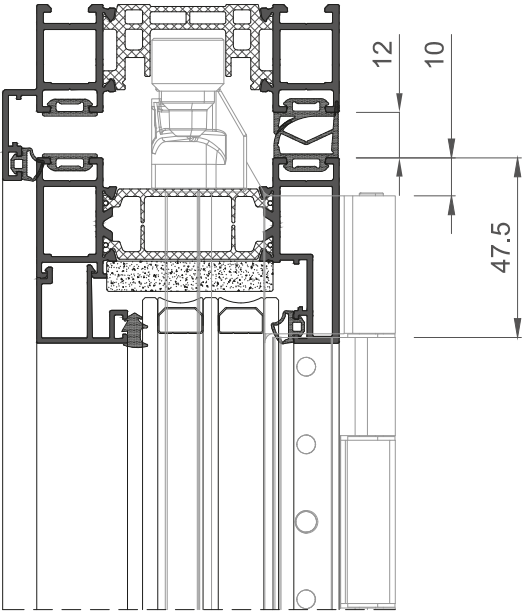
# Installation Guide

**11.2** Verify that the position of the guides and rollers of each sash is accurate to ensure a proper operation of the window.

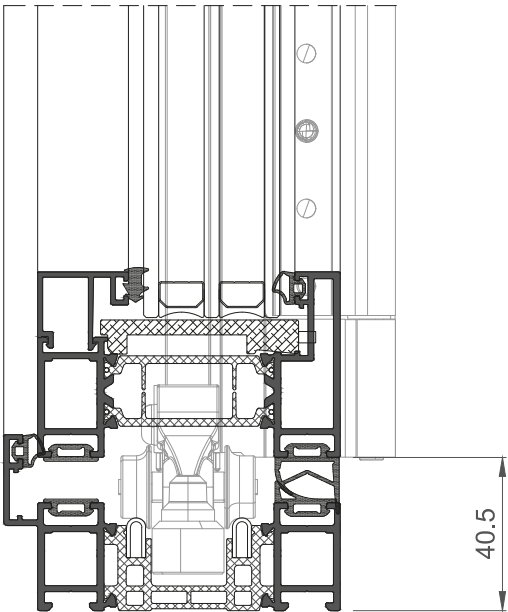
Bottom roller position



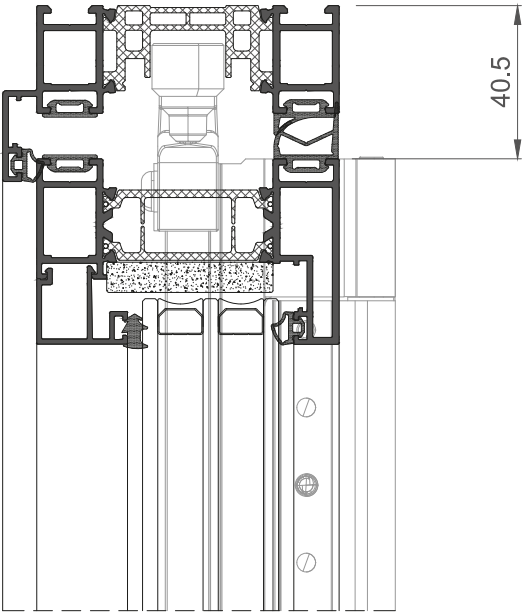
Top guide position



Bottom half roller position

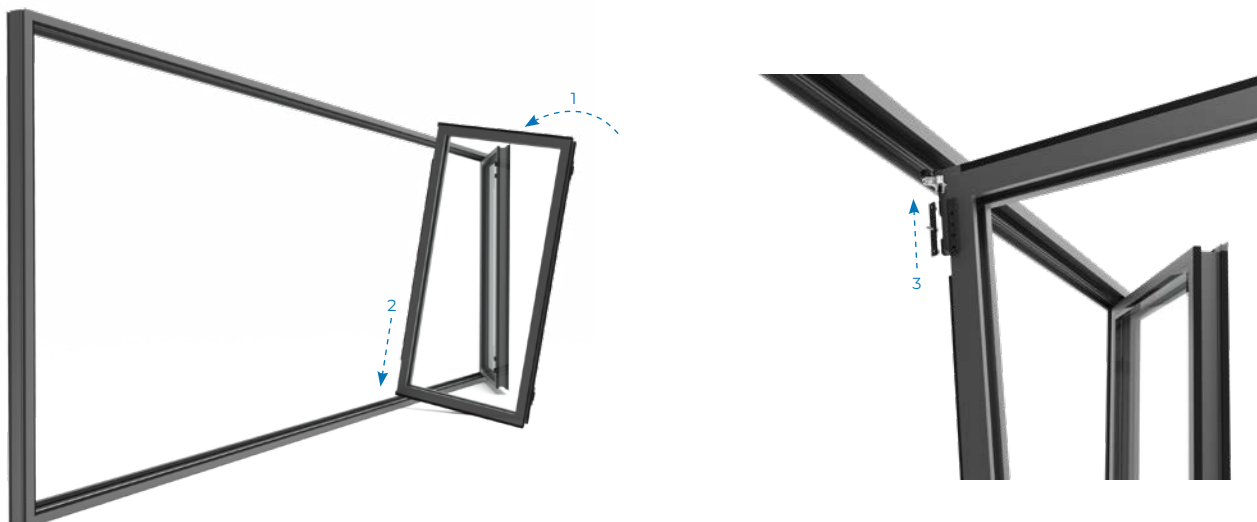


Top half guide position

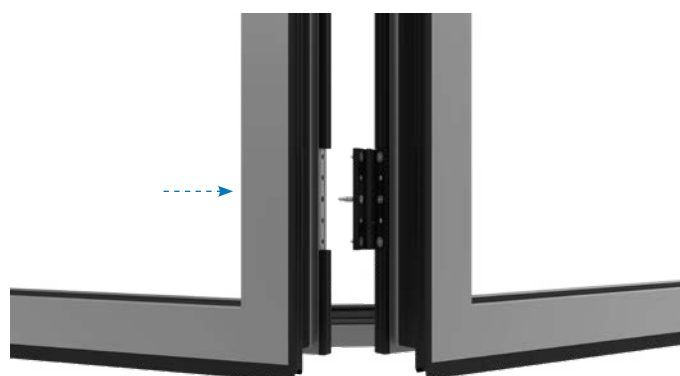
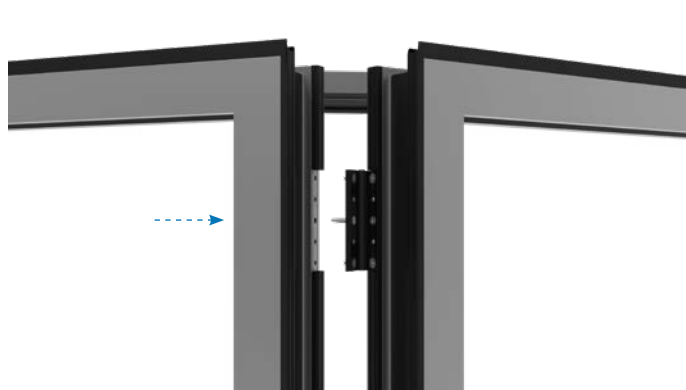


## Installation Guide

- 12.1** Slightly lean second panel (1) and fit the bottom roller guides into middle channel of the bottom track (2). Align the top guides and fit them into middle channel at the top (3).



- 12.2** Slide second panel to align clamping plates with hinges attached to the first panel. Locate the hinge leaf over the clamping plate and secure with machine screws.

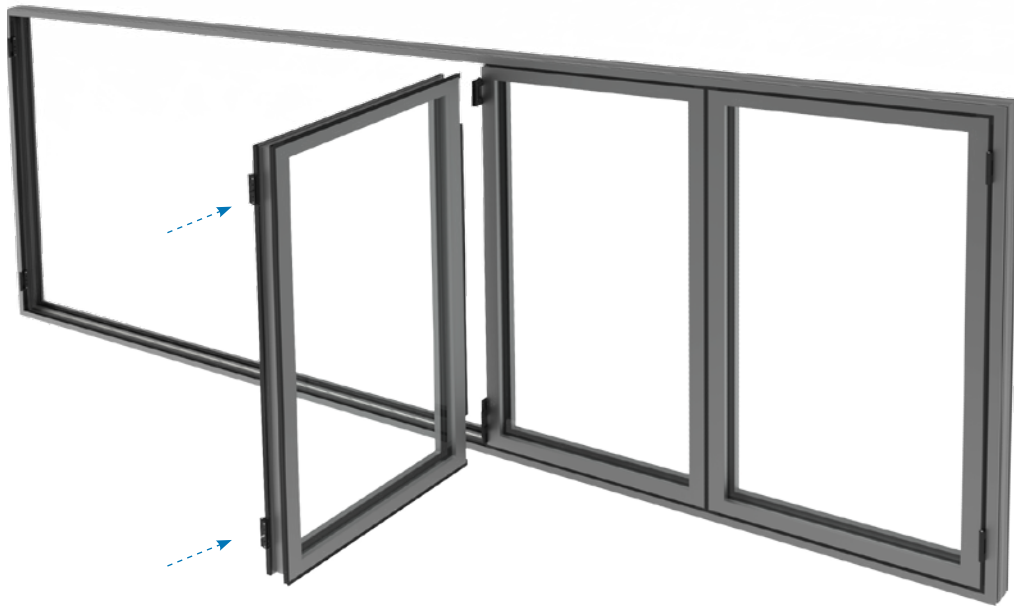


## Installation Guide

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13

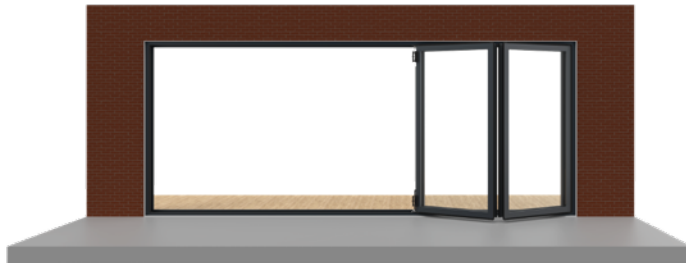
Lock first two panels together before installing third panel.  
Align third panel clamping plates with hinges attached to second panel.



## Installation Guide

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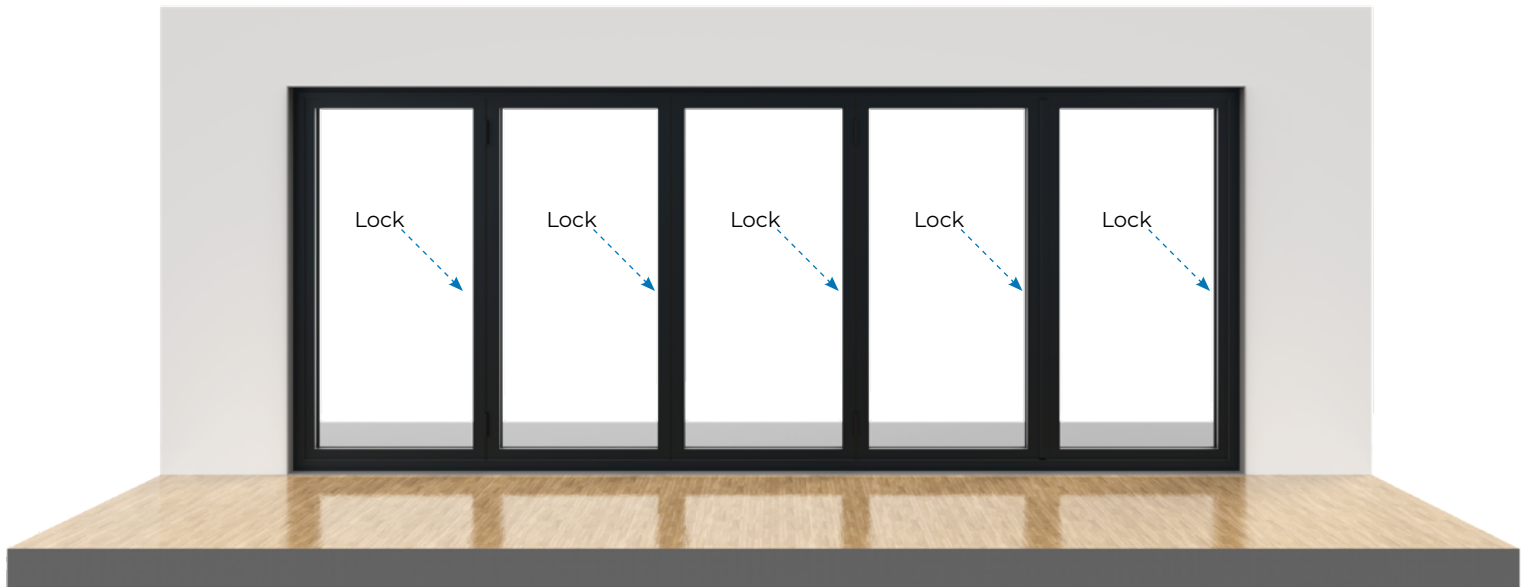
- 14** Repeat steps 12 and 13 for the rest of the panels.



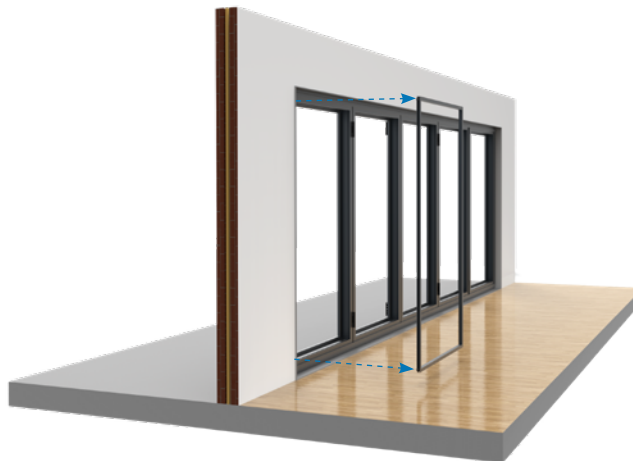
## Installation Guide

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- 15** Before glazing, lock all doors panels and fully engage the locks.



- 16.1** Starting from the first panel hinged to the jamb remove all beads, taking care to note where the beads are removed.





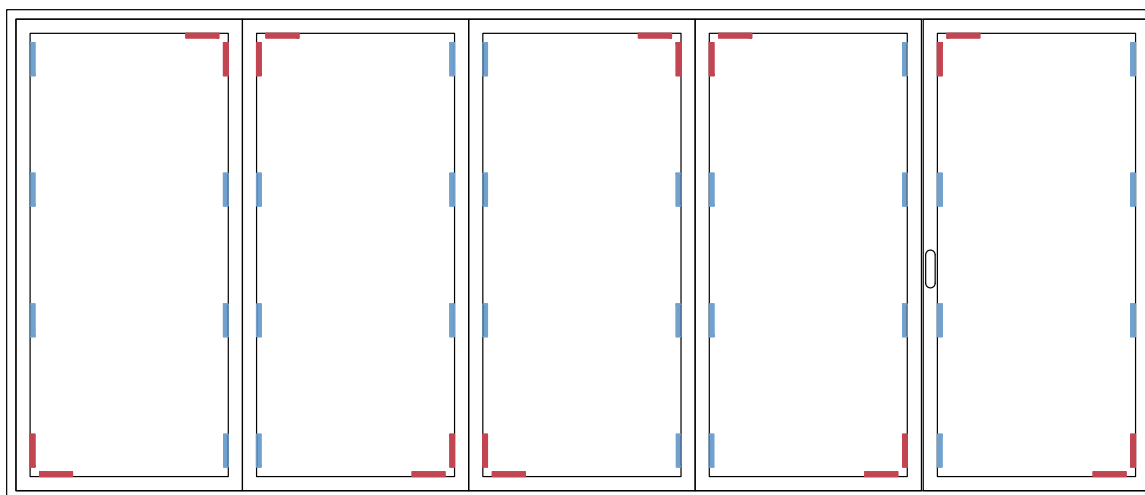
## Installation Guide

### 16.2 Glazing packers are required.



IT IS RECOMMENDED TO POSITION THE GLAZING PACKERS ACCORDING TO THESE CONFIGURATIONS.

The distance between the axis of the wedges and the edge of the glass, will be approx.  $L/10$  ( $L$  = glass length).



Name of the glazing packers:

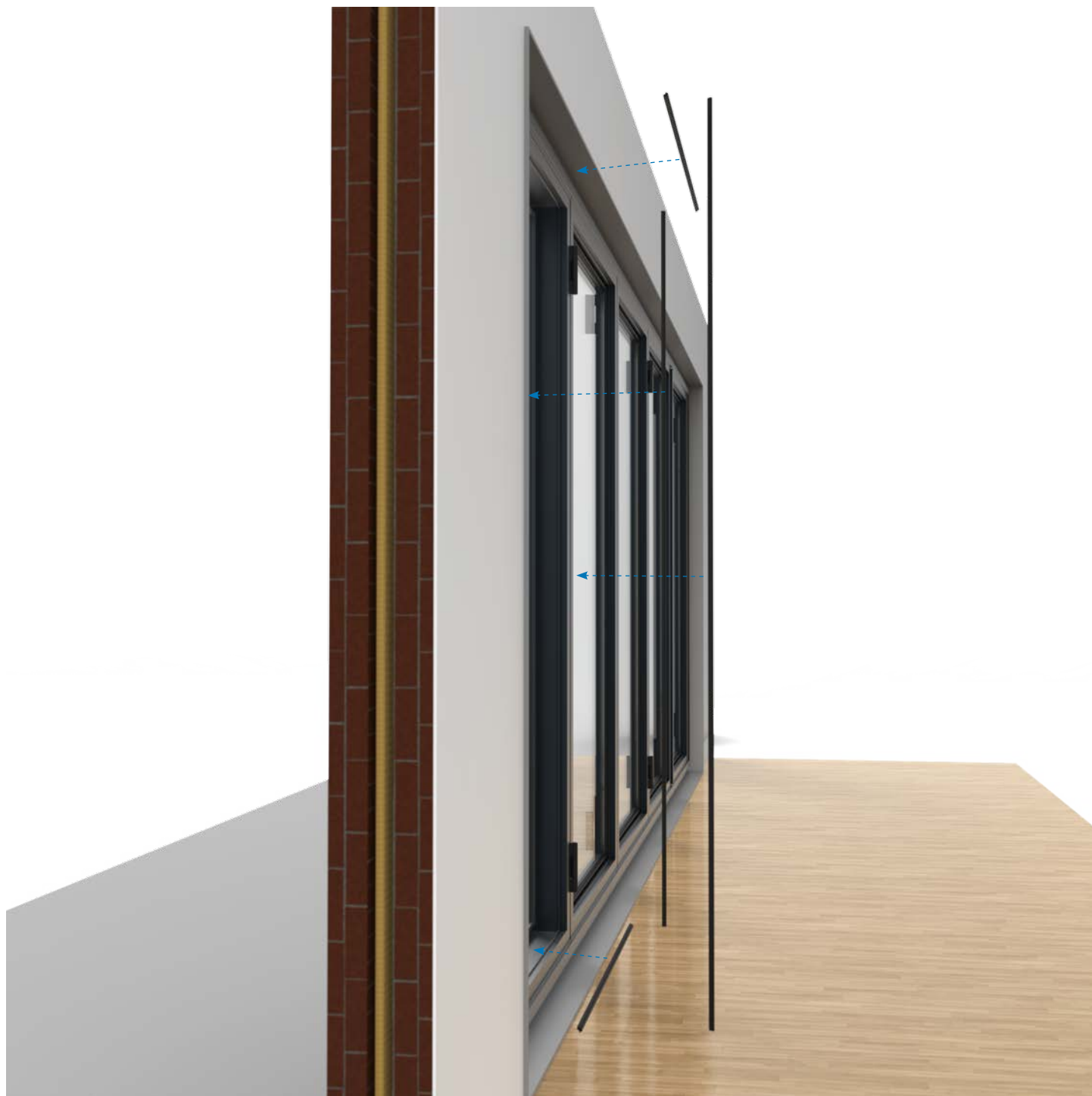
- 'Toe and heel'. Load carry packer must be used to keep panels square and level.
- Supporting packers to prevent movement and provide rigidity to panel. Should be installed between all hardware components.

- ! Glazing packers must be placed towards the inside of the bearing points.
- The glazing packers must be fitted as shown in the sketch shown above, without adding other glazing packers in different positions.

## Installation Guide

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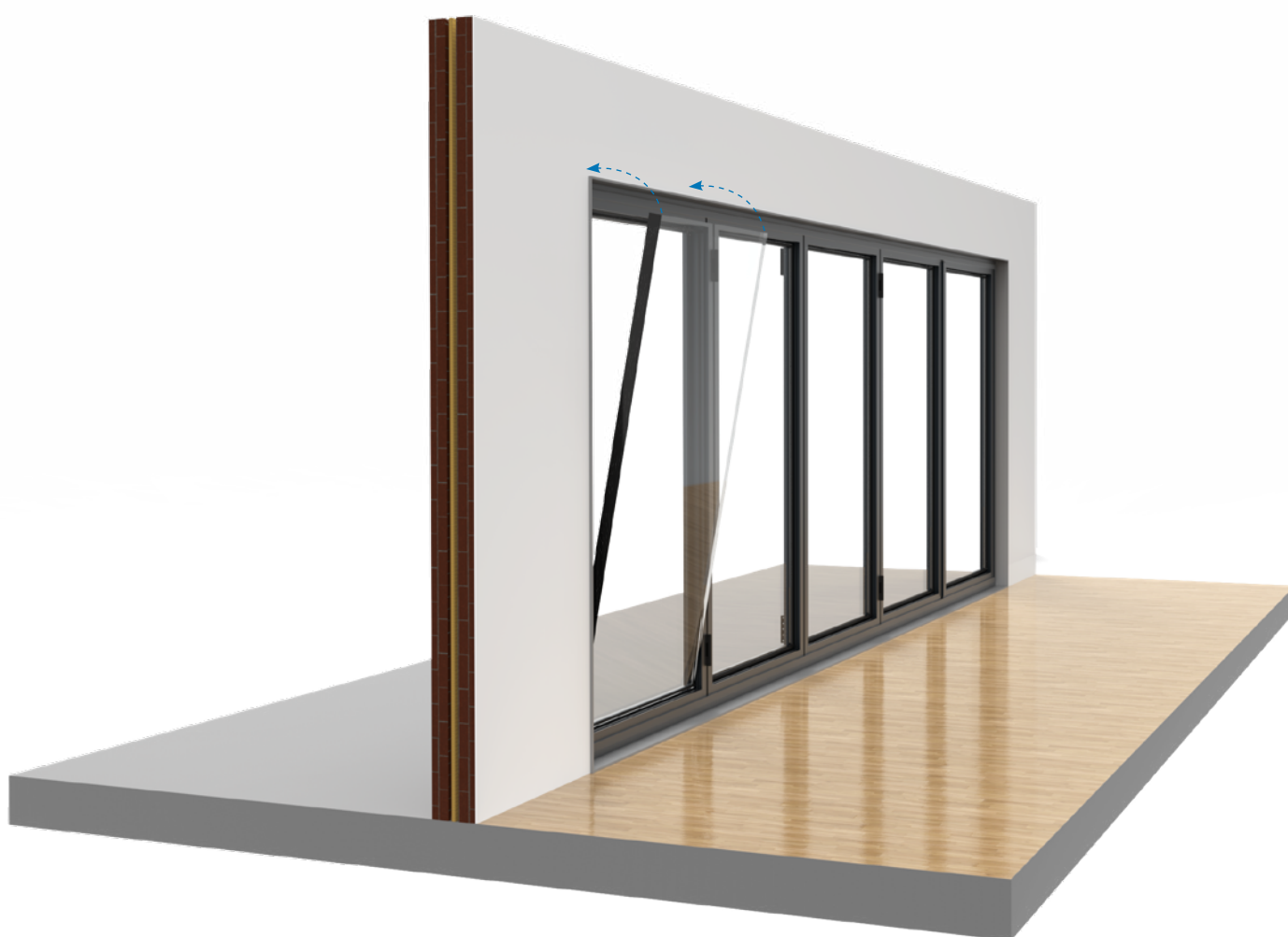
- 16.3** Instal external sealing gasket one by one.



## Installation Guide

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- 16.4** Install the glass into the frame.  
Ensure to support inner and outer layer of the glass.



## Installation Guide

- 16.5** Replace beading, starting with shortest pieces first and tapping into place with a plastic mallet.



! The beads can be clipped onto the frame in both directions as shown in the picture.



with pre-assembled gasket



without gasket

- 17** Repeat the 'toe and heeling' process for all panels, ensuring that all door gaps are equal and parallel.

# Installation Guide

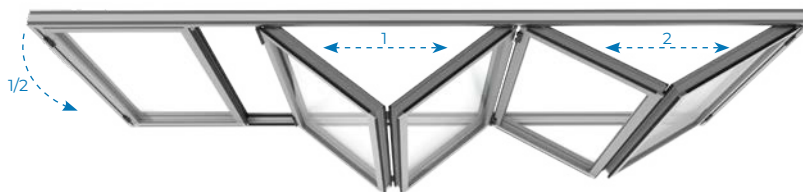
## 18.1 Check the running operation for the bi-folding door without swinging door.

To open doors:

1. Release the shoot bolt locks on all other panels.
2. Slide the folding panels away to one side.

To close doors:

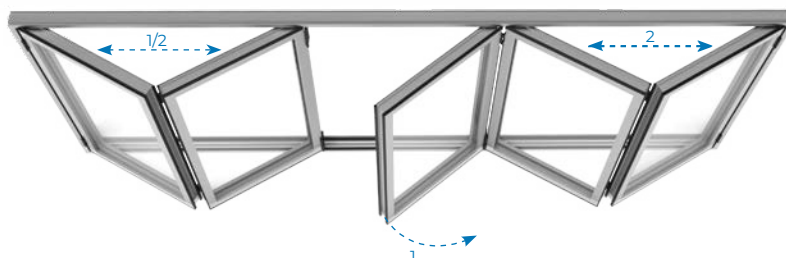
1. Slide each pair of folding panels back to align with frame.
2. Secure the panels by locking with shoot bolt lock.



## 18.2 Check the running operation for the bi-folding door with swinging door.

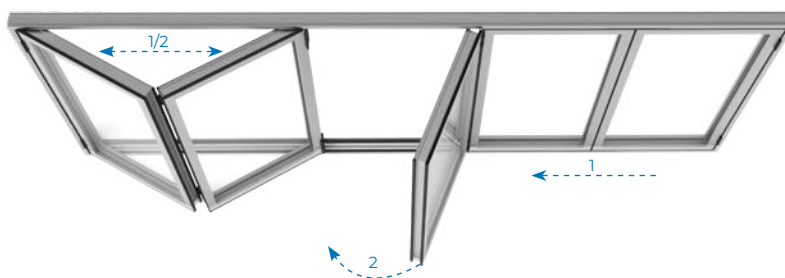
To open doors:

1. Release the shoot bolt locks on all other panels.
2. Slide the folding panels away to one side.



To close doors:

1. Slide each pair of folding panels back to align with frame.
2. Secure the panels by locking with shoot bolt lock.



## Installation Guide

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### 19.1 Final assembly outer opening 541.



## Installation Guide

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### 19.2 Final assembly outer opening 532.





## **Bi-Fold Plus** Installation Guide

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