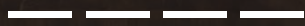




BI-FOLD PLUS



INSTALLATION
GUIDE



INSTALLATION GUIDE

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

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 lose 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

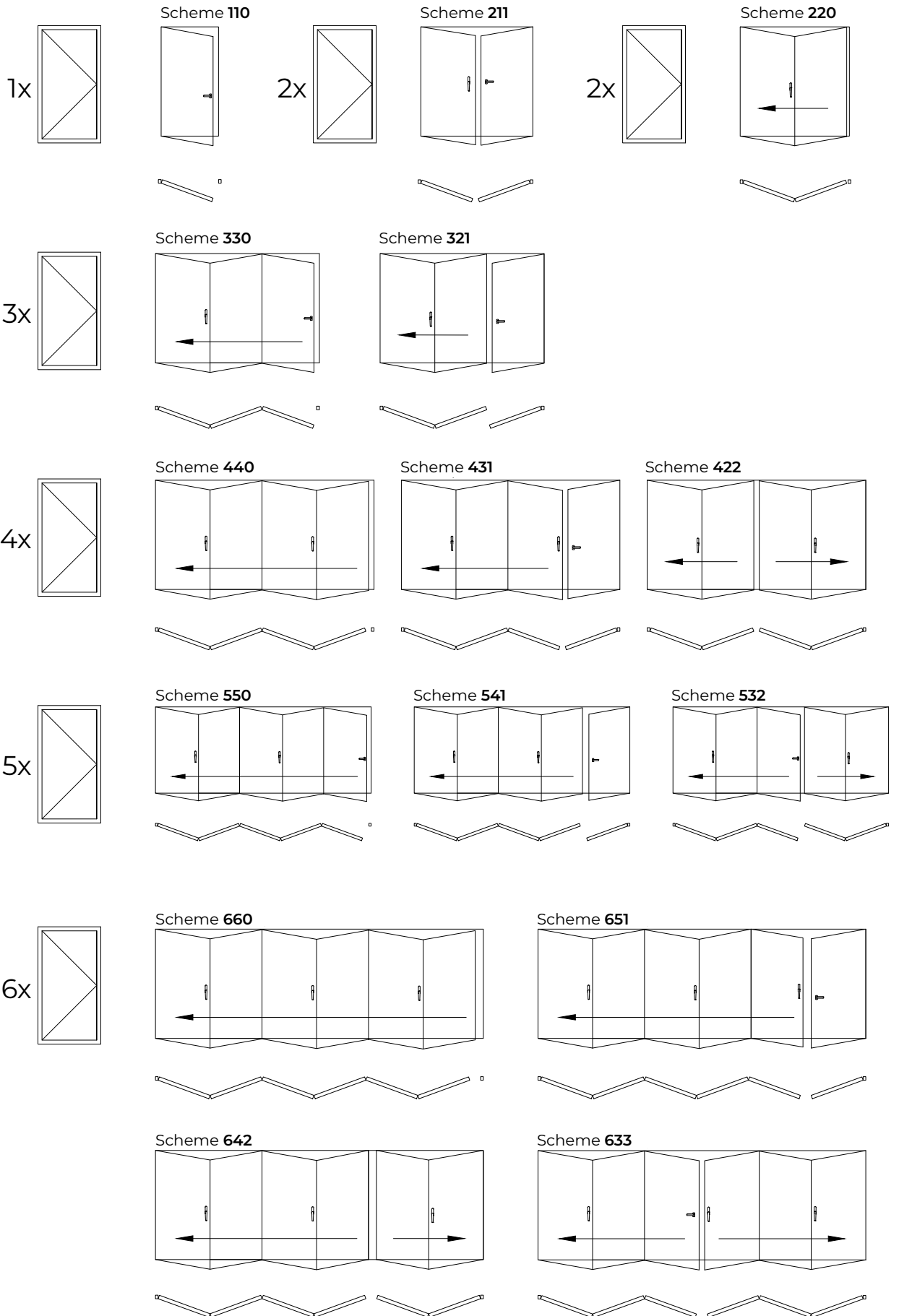
All operating, assembly and adjustment as well as maintenance and care guidelines must be delivered to the user when briefing them. Incorrect operation or failure to observe the instructions may lead to damage and accidents. The customer must store the instructions carefully and hand them over to the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

Recommended **Tools**

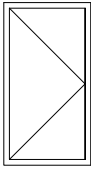
- Appropriate fixings into structural opening
- Mixed selection of frame packers
- Mixed selection of glazing packers
- Rubber mallet or plastic mallet
- Set of HSS drill bits
- Drill / SDS hammer drill
- Saw for cutting aluminium sill
- Long spirit level
- String line
- Tape measure
- No.2 Pozi drive
- 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

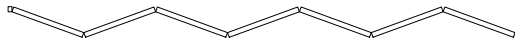
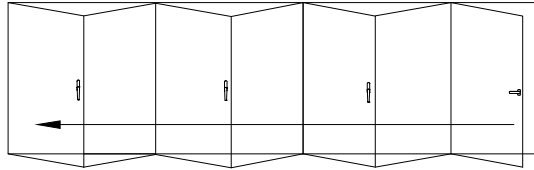
Open in



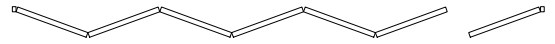
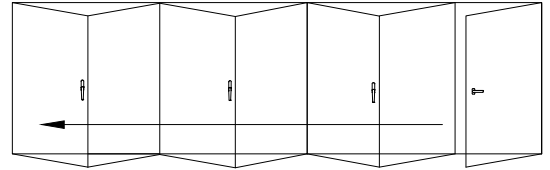
7x



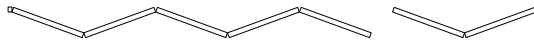
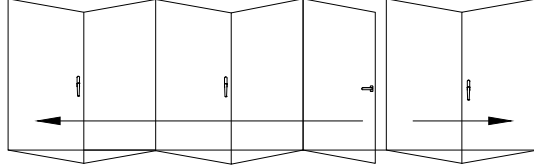
Scheme 770



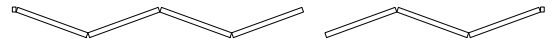
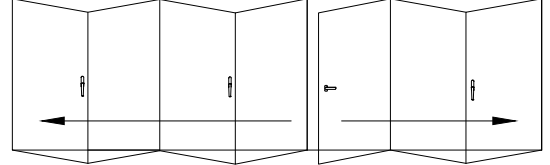
Scheme 761



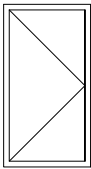
Scheme 752



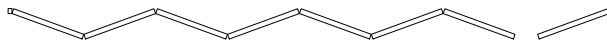
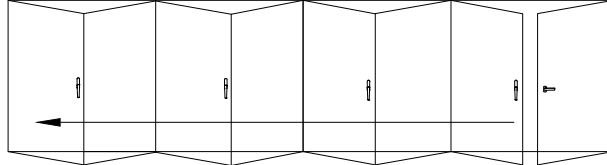
Scheme 743



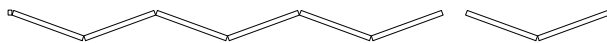
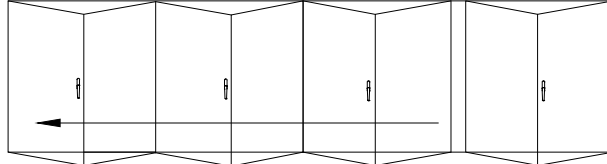
8x



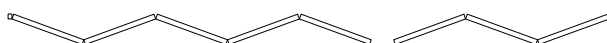
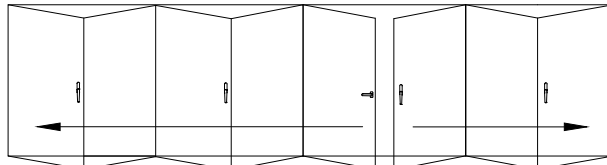
Scheme 871



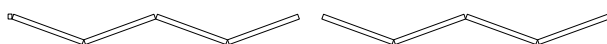
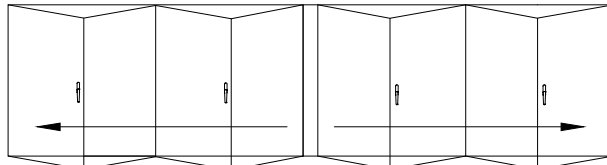
Scheme 862



Scheme 853

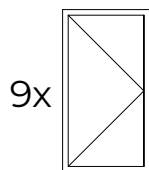


Scheme 844

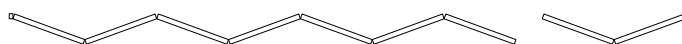
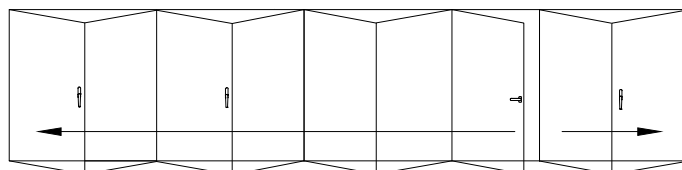


Opening Possibilities

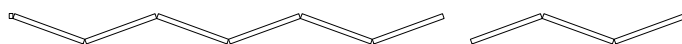
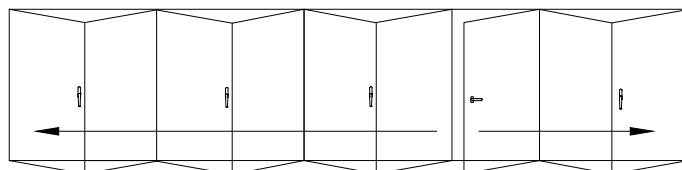
Open in



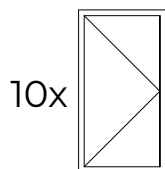
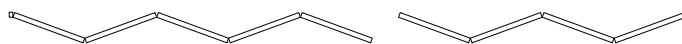
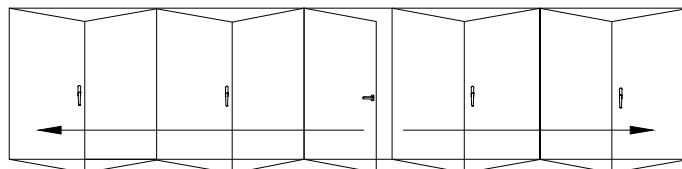
Scheme 972



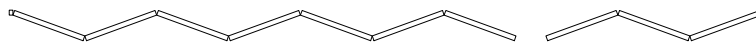
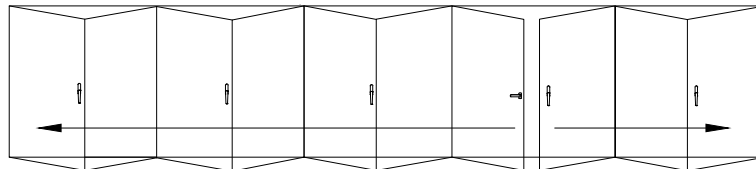
Scheme 963



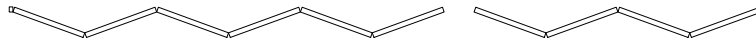
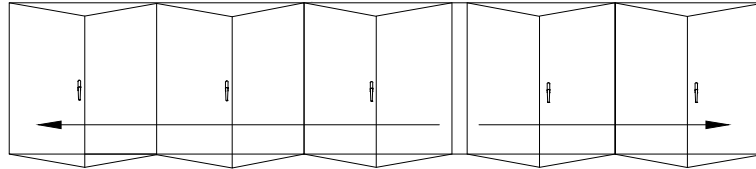
Scheme 954



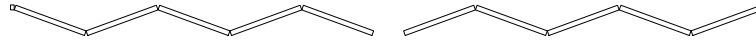
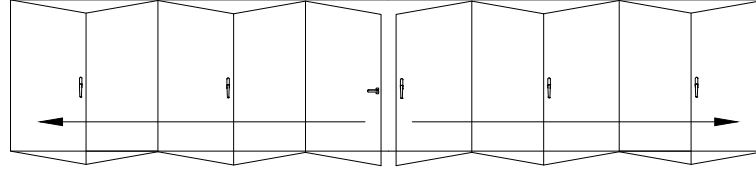
Scheme 1073

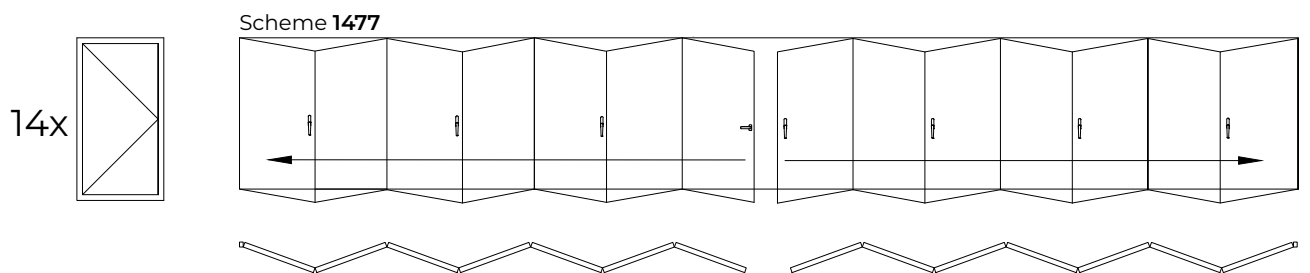
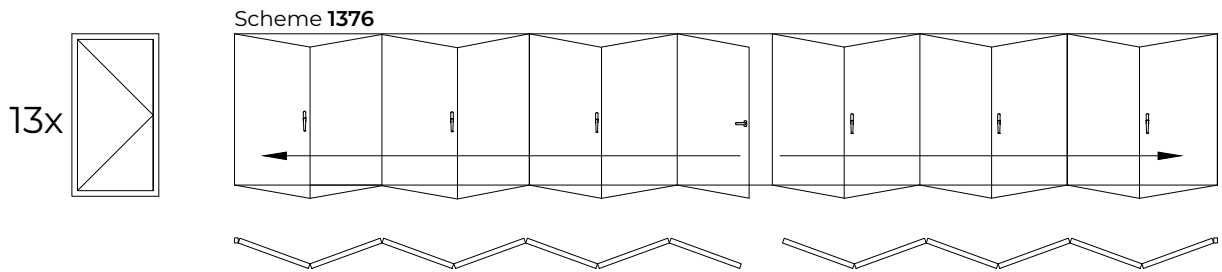
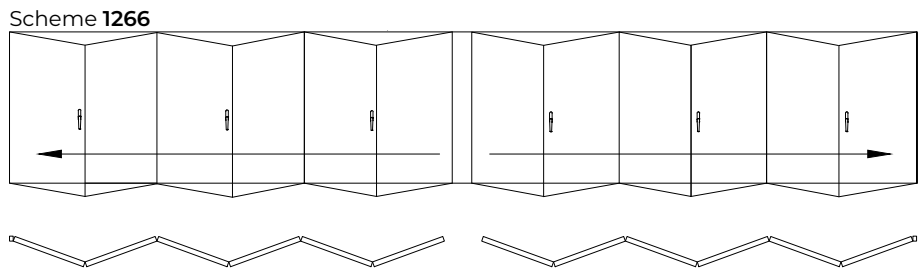
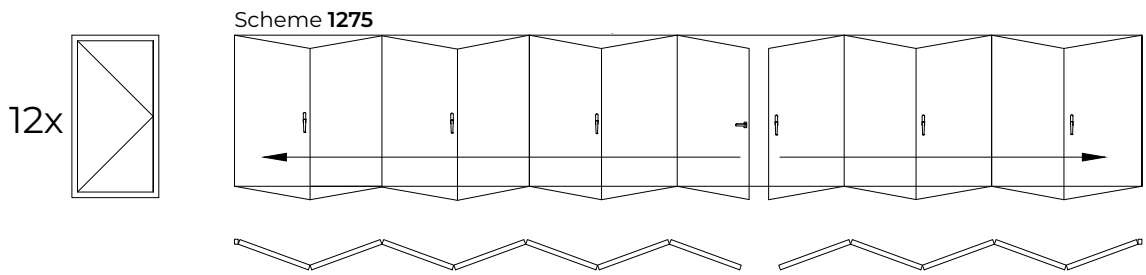
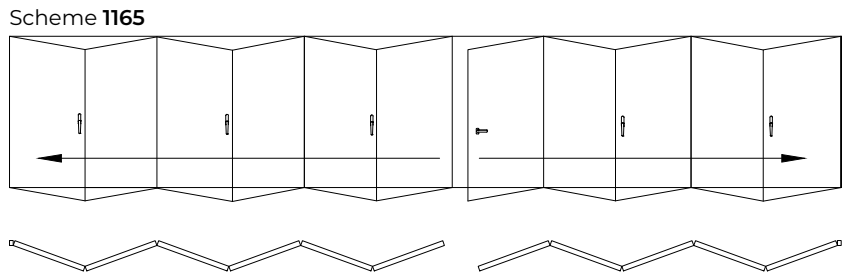
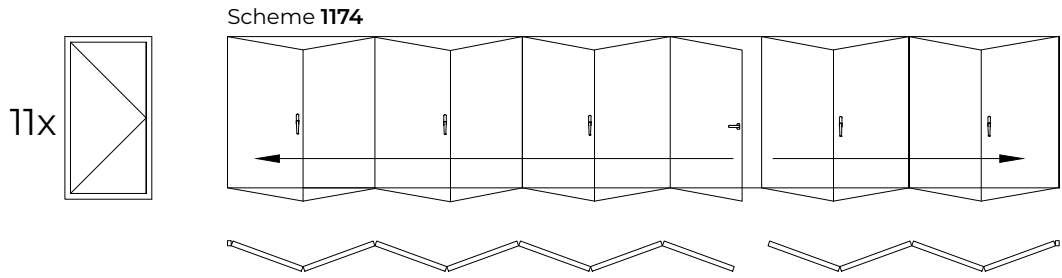


Scheme 1064



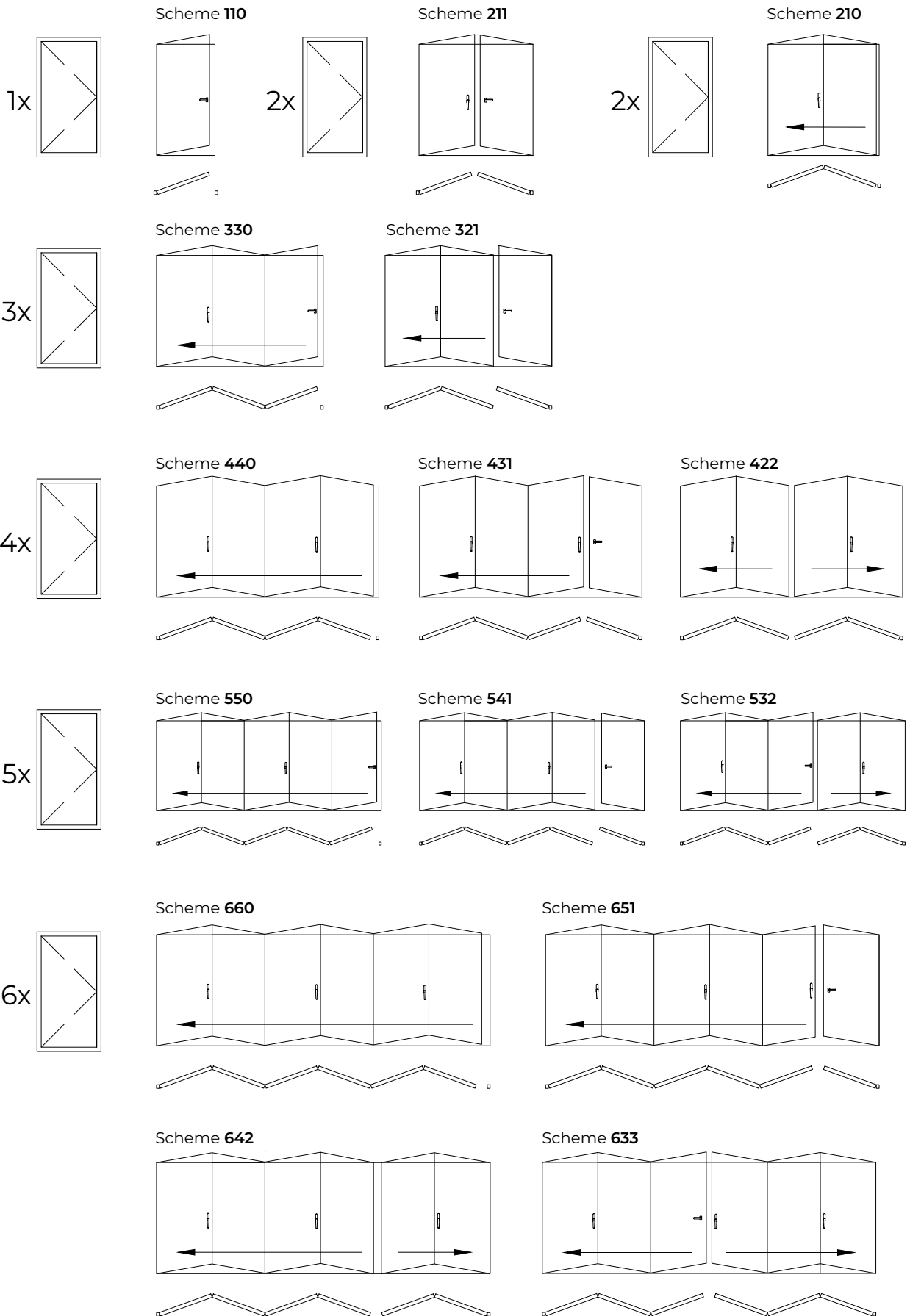
Scheme 1055



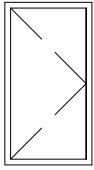


Opening Possibilities

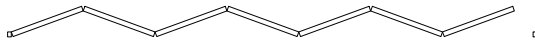
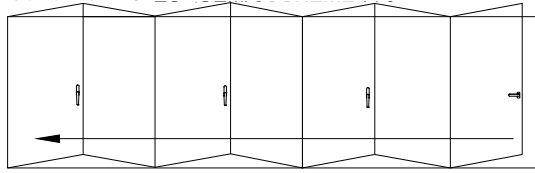
Open out



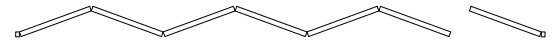
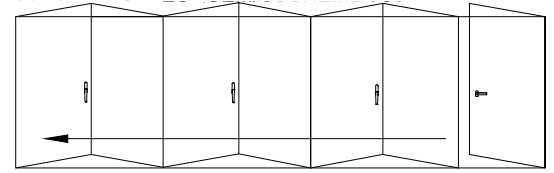
7x



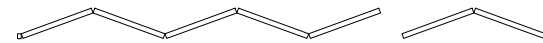
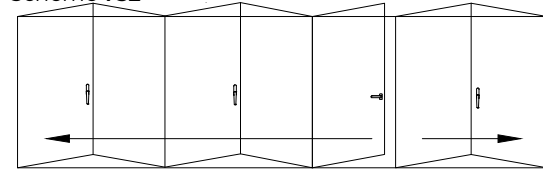
Scheme 770



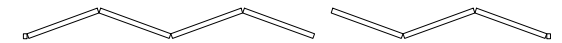
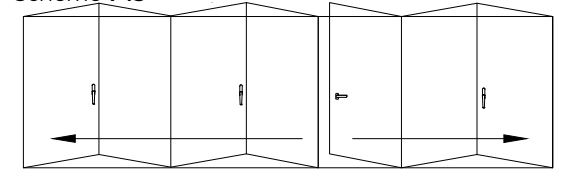
Scheme 761



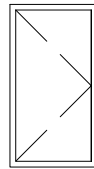
Scheme 752



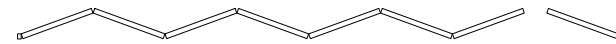
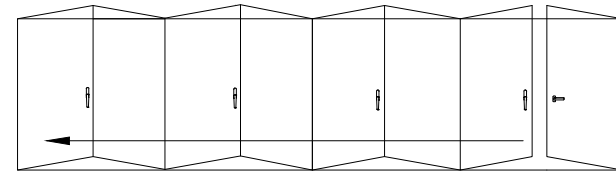
Scheme 743



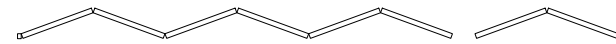
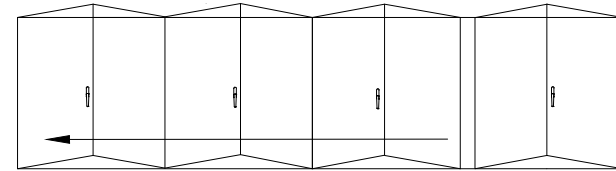
8x



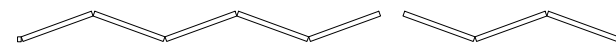
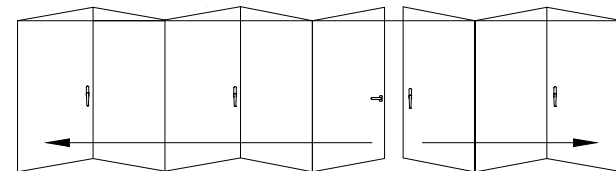
Scheme 871



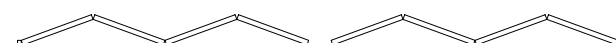
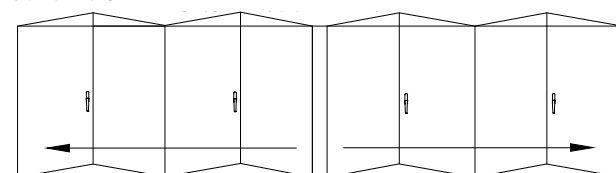
Scheme 862



Scheme 853

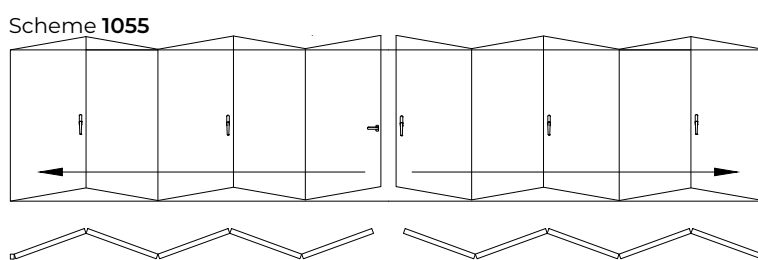
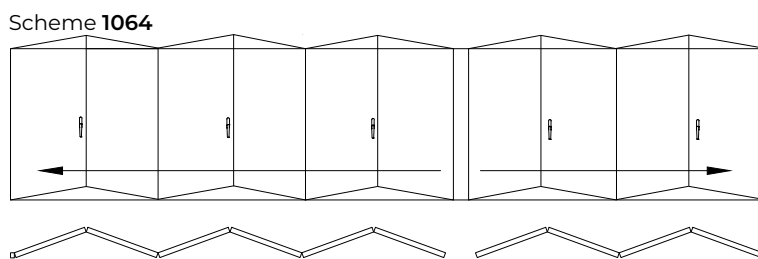
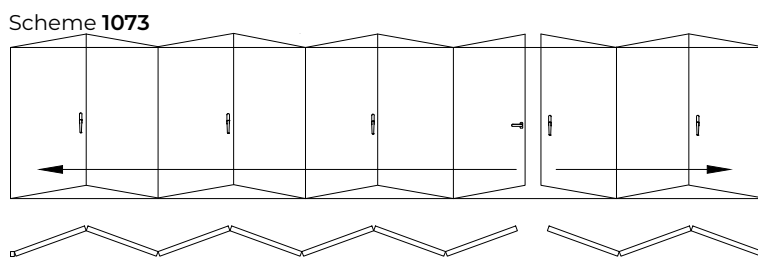
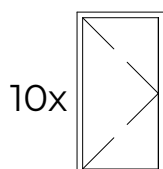
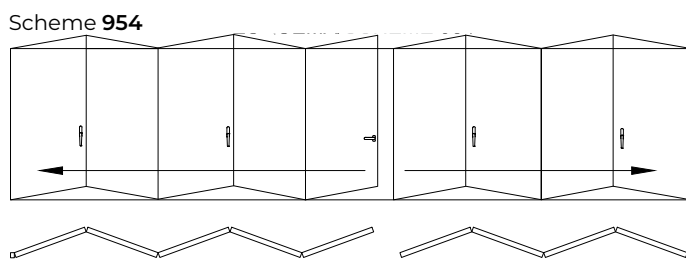
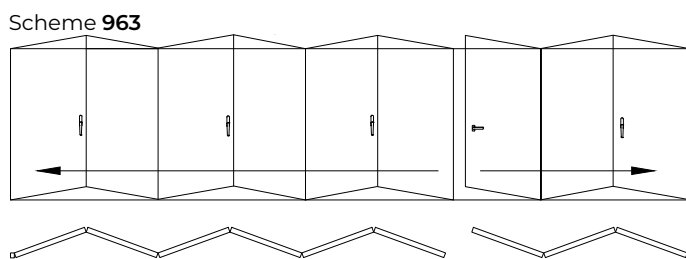
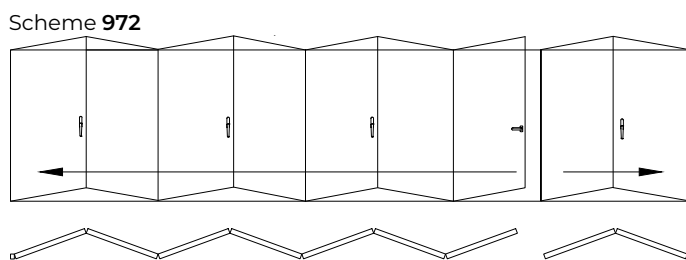
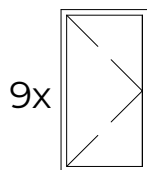


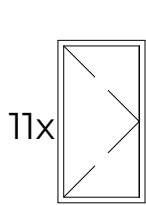
Scheme 844



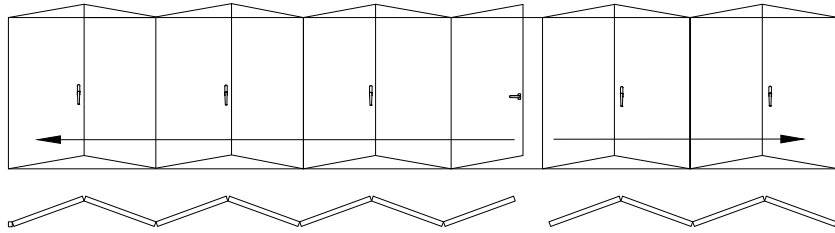
Opening Possibilities

Open out

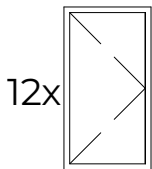
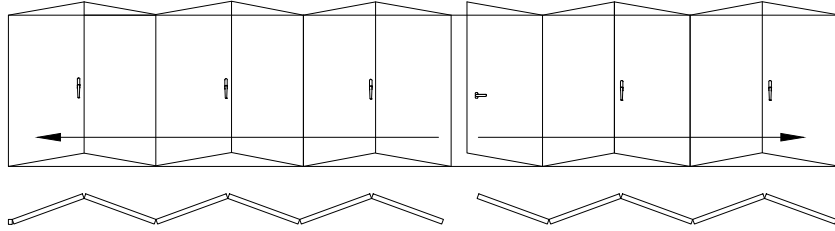




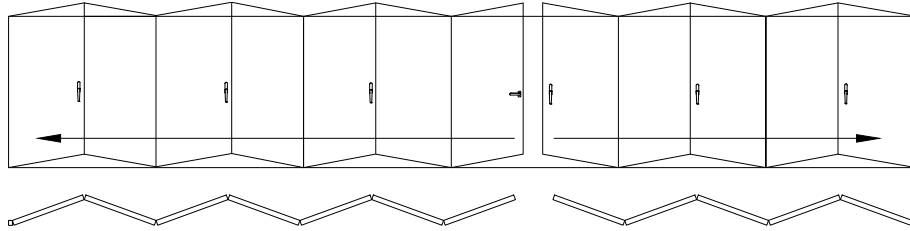
Scheme 1174



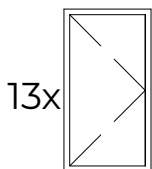
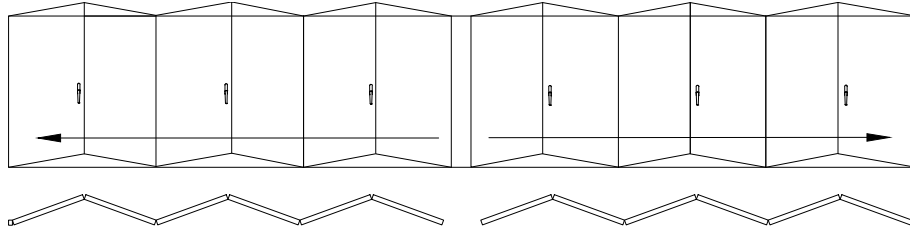
Scheme 1165



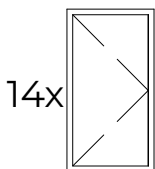
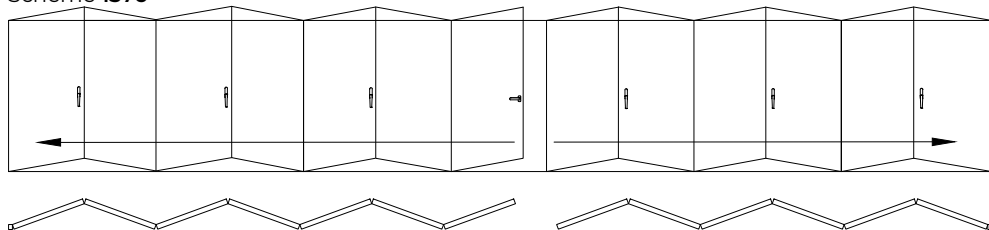
Scheme 1275



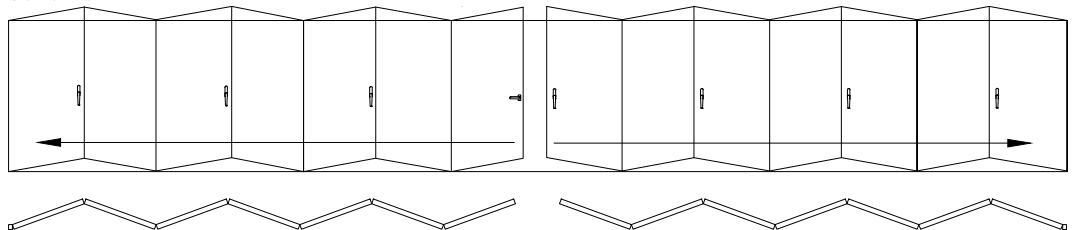
Scheme 1266



Scheme 1376



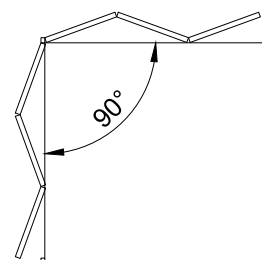
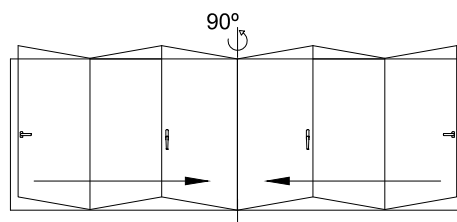
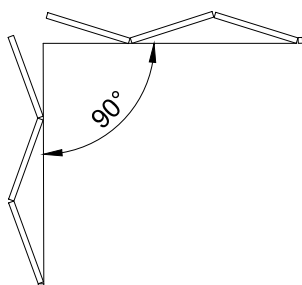
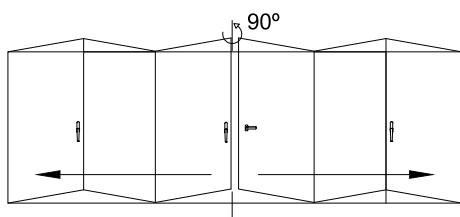
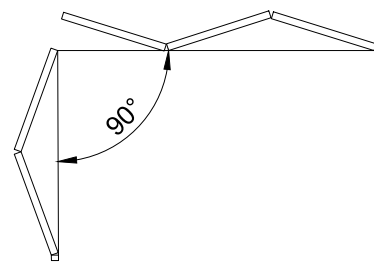
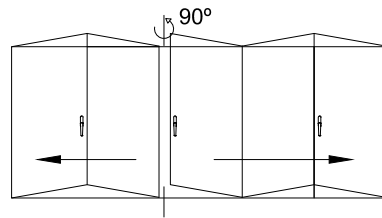
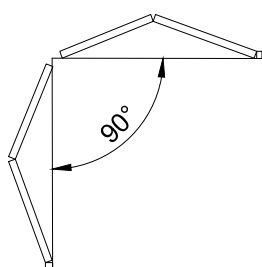
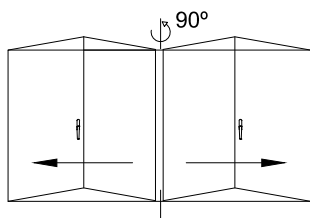
Scheme 1477



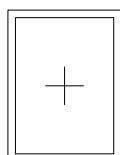
Opening Possibilities

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/m²K)

Please consult typology, dimensions and glazing

Acoustic insulation

Glazing Max. 48 mm / Min. 25 mm

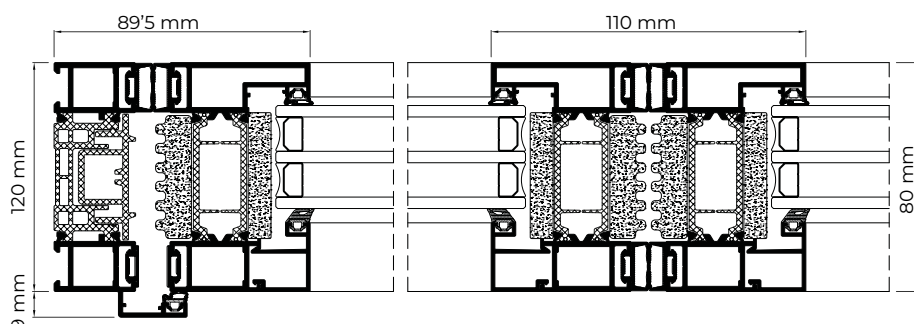
Sightlines

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 <input checked="" type="checkbox"/> 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

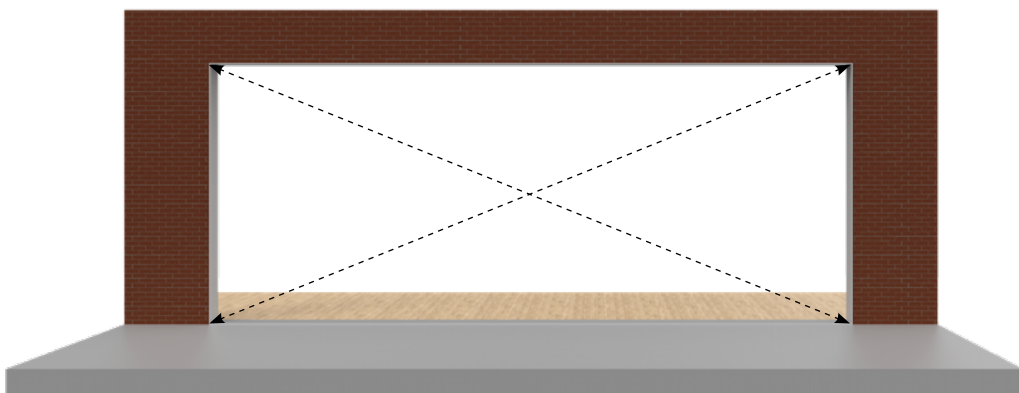
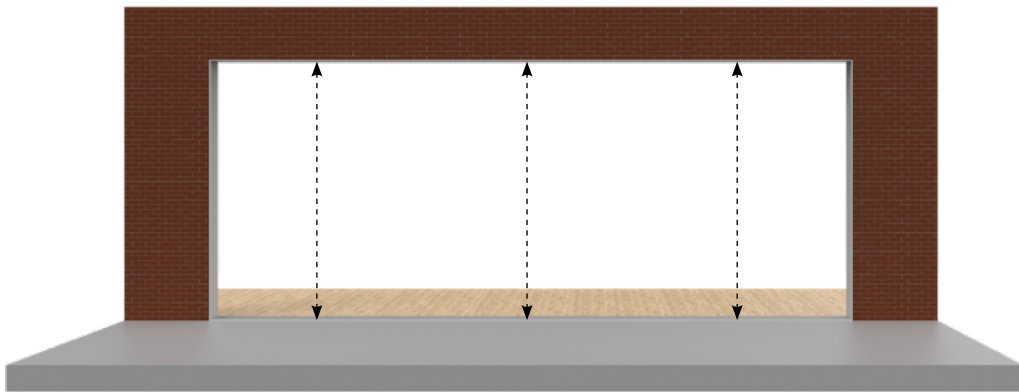
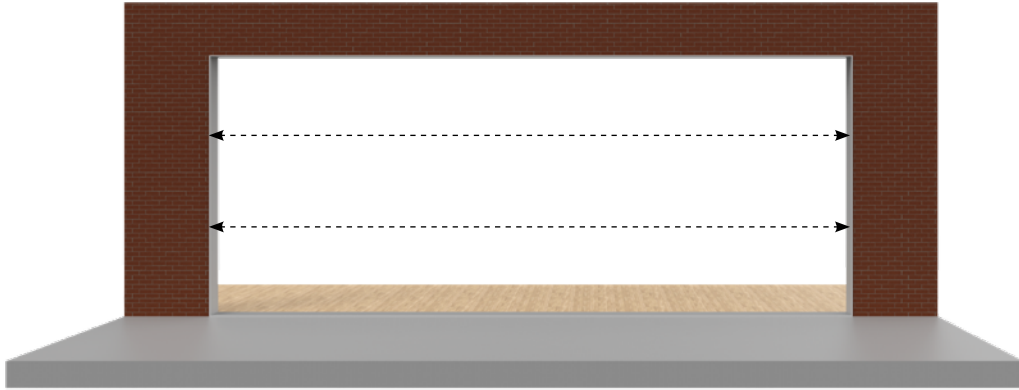
Height (H) = 3000 mm

Consult maximum weight and dimensions according to typologies

Maximum Sash Weight 120 Kg

Installation Guide

- 1 Prepare the opening.



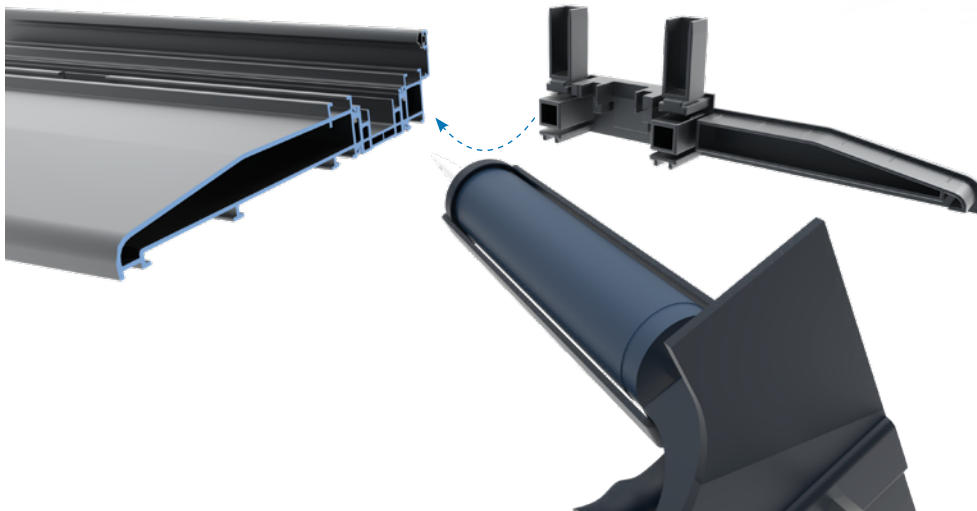
- 1.1 Measure **widths** and **heights** in several points. Also measure diagonals to verify the aperture is square.

Installation Guide

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



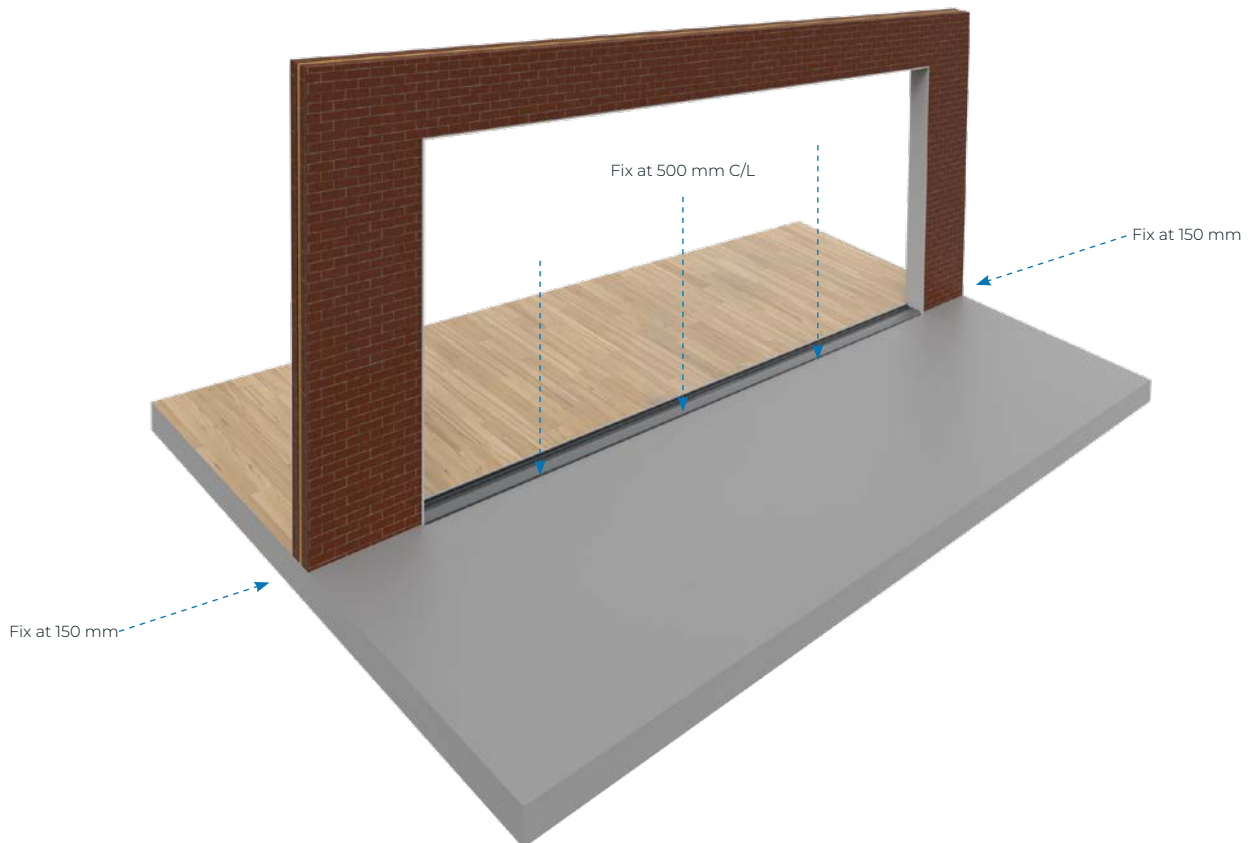
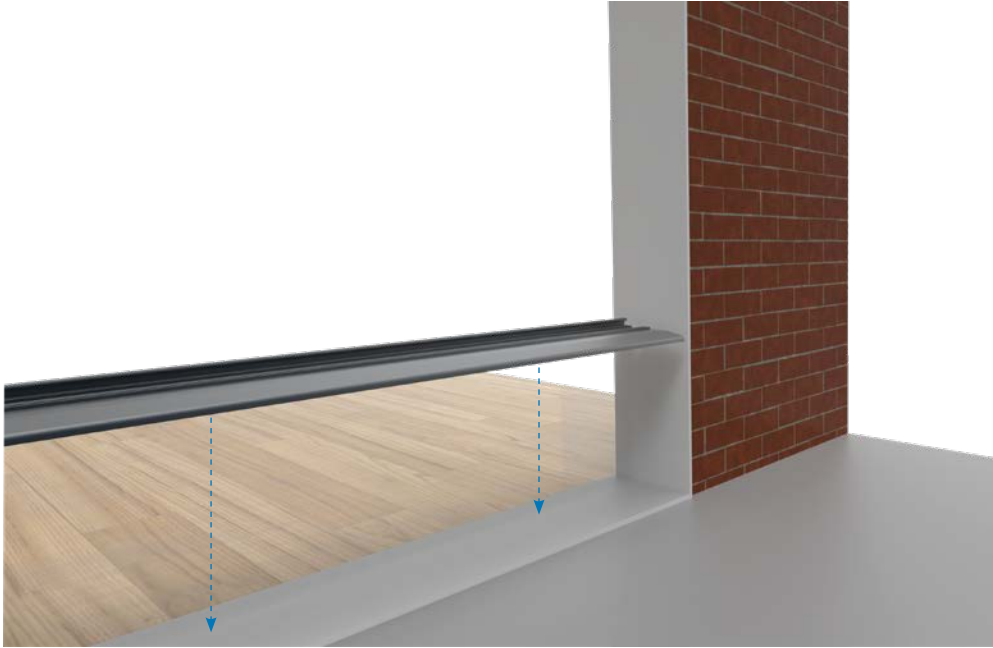
- 3 Sub sill installation (if needed).



! 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.



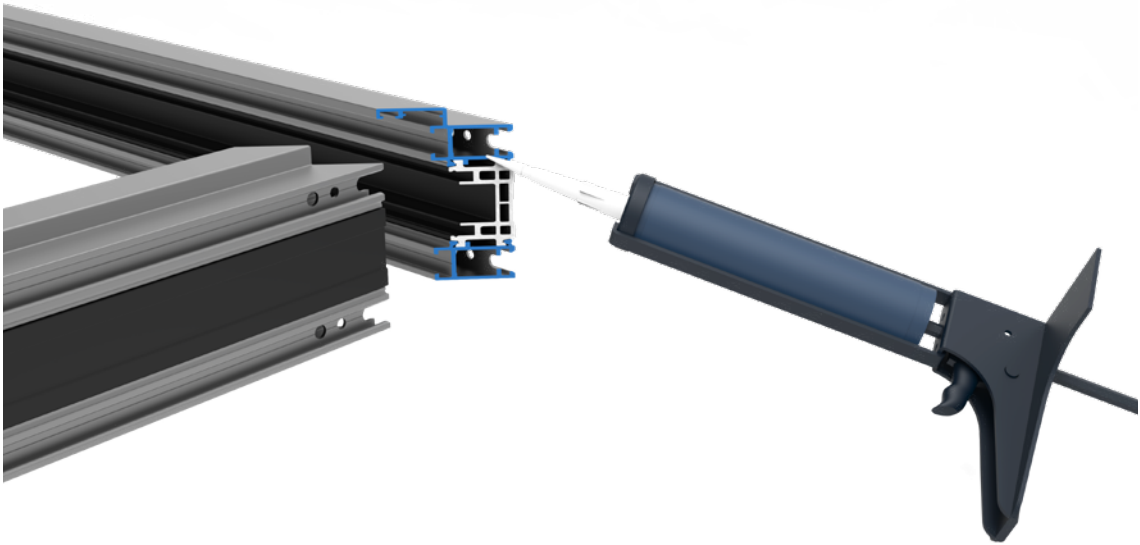
Installation Guide

- 4 Assemble all frame profiles.

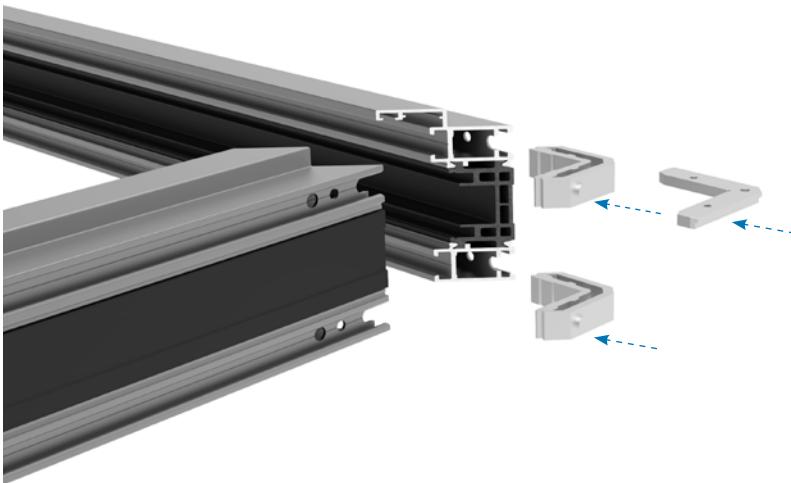


Installation Guide

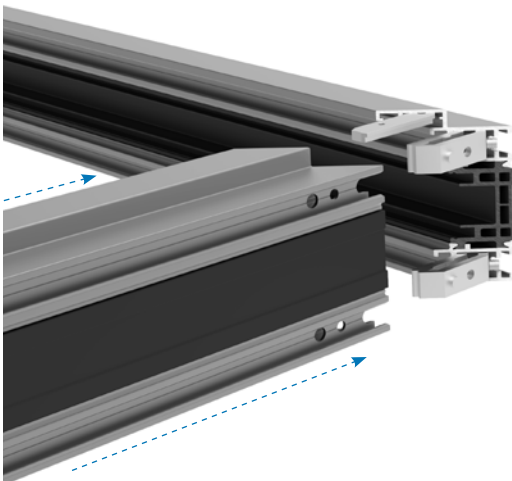
- 4.1 Connect the jambs and bottom track applying suitable sealant to profile ends.



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



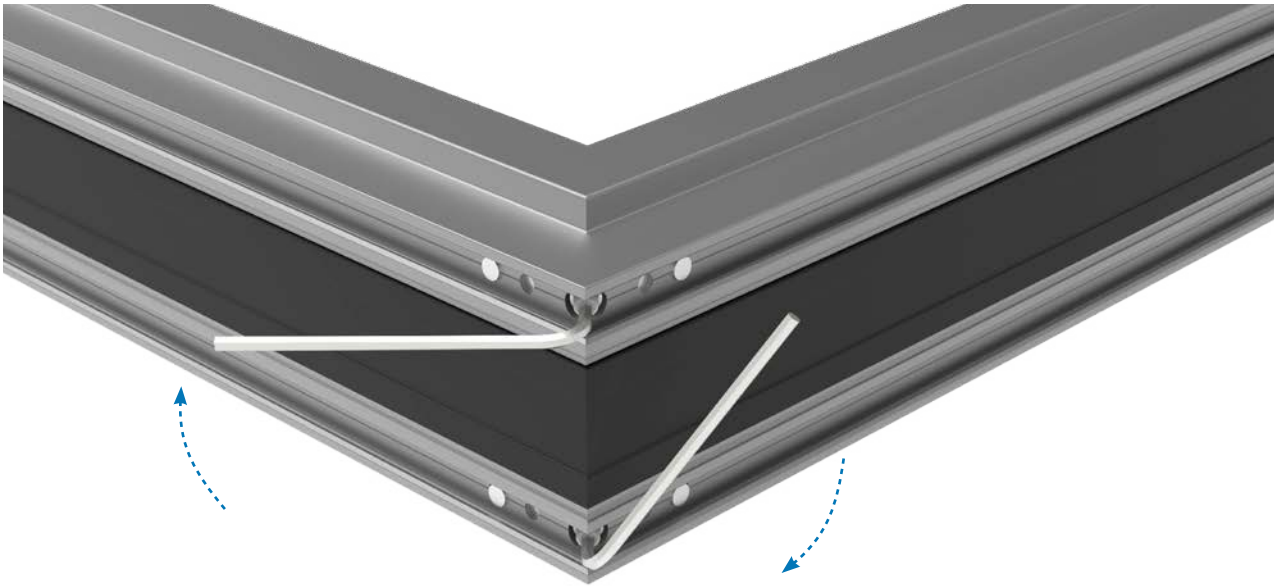
- 4.3 Join the mitre corner.



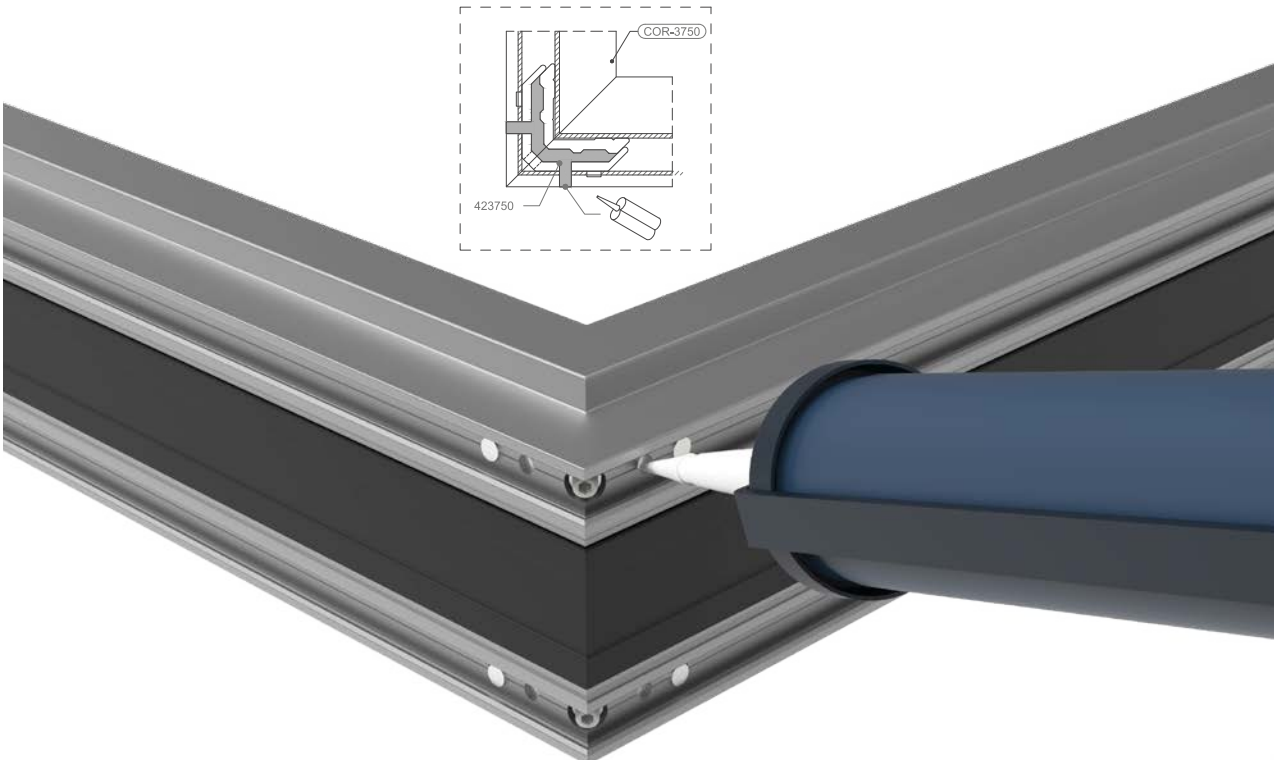
! It is important to seal the bottom profile at both ends to prevent water from draining into the cleats.

Installation Guide

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



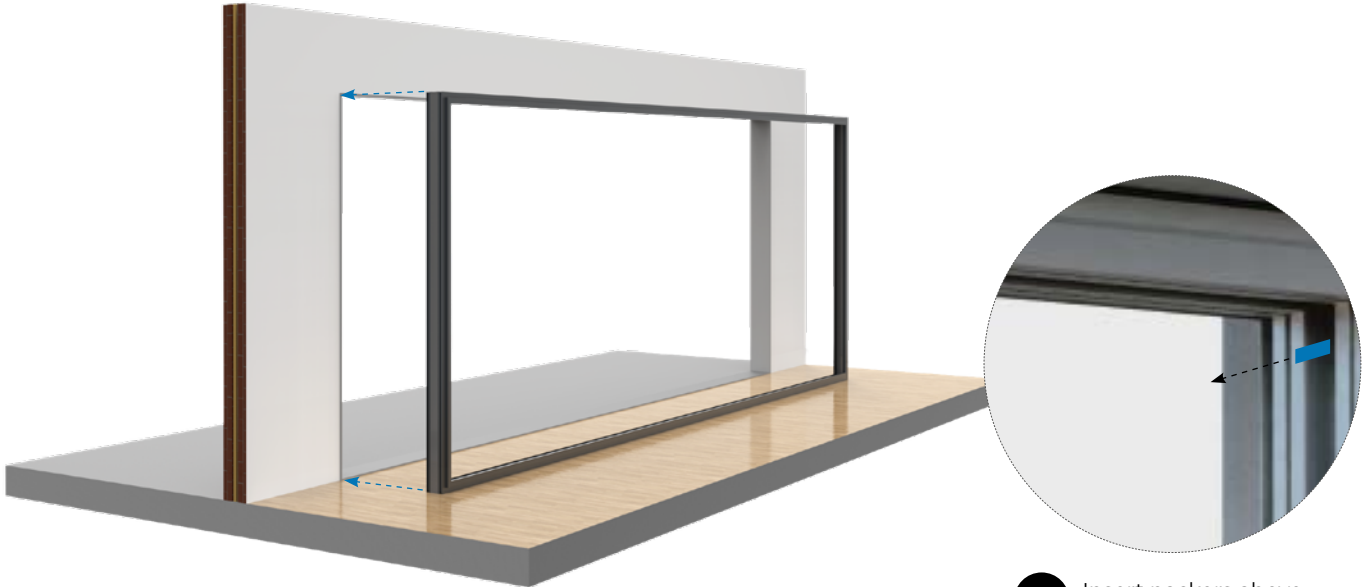
- 4.5** Apply bicomponent adhesive to secure the join.



- 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

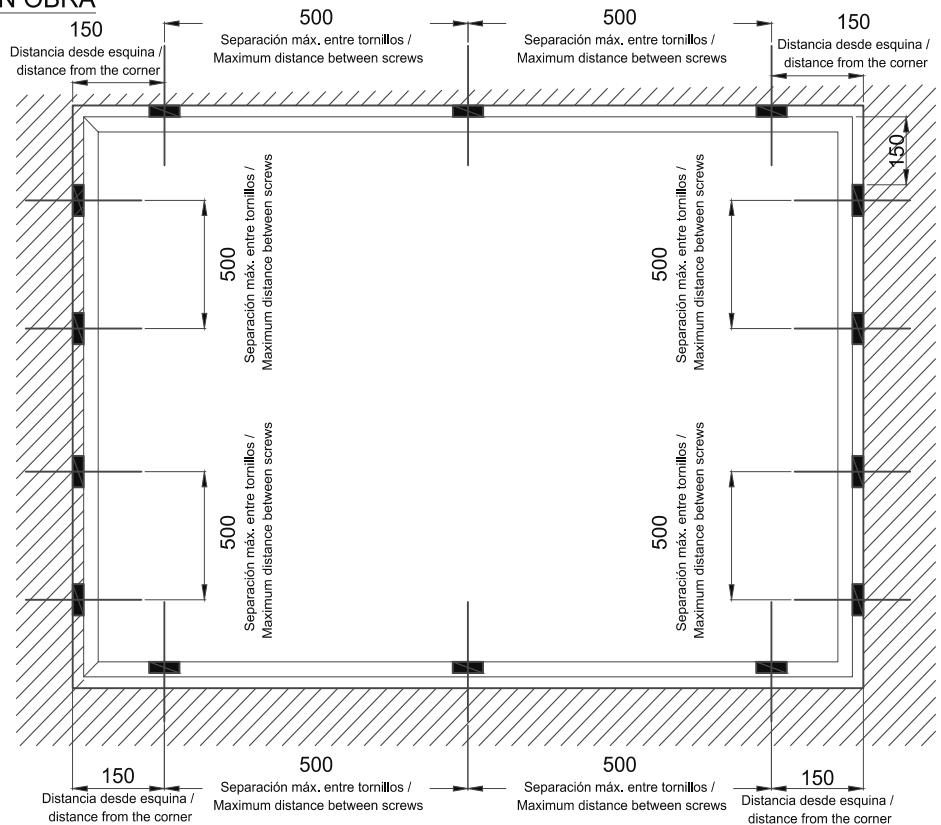
SITE INSTALATION SCHEME

Profundidad mínima del tornillo

Minimum screw depth

Material mm. 20 30 40 50 60

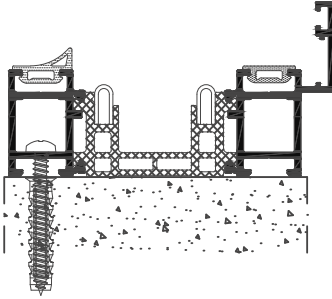
Material	mm.	20	30	40	50	60
LADRILLO HUECO (2 paredes) HOLLOW BRICK (2 walls)						
MADERA U HORMIGÓN LIGERO WOOD AND LIGHTWEIGHT CONCRETE						
PIEDRA STONE						
LADRILLO MACIZO SOLID BRICK						
PARED MACIZA SOLID WALL						
HORMIGÓN CONCRETE						



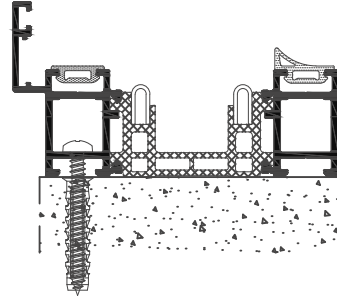
Installation Guide

! 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

- 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

- 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.

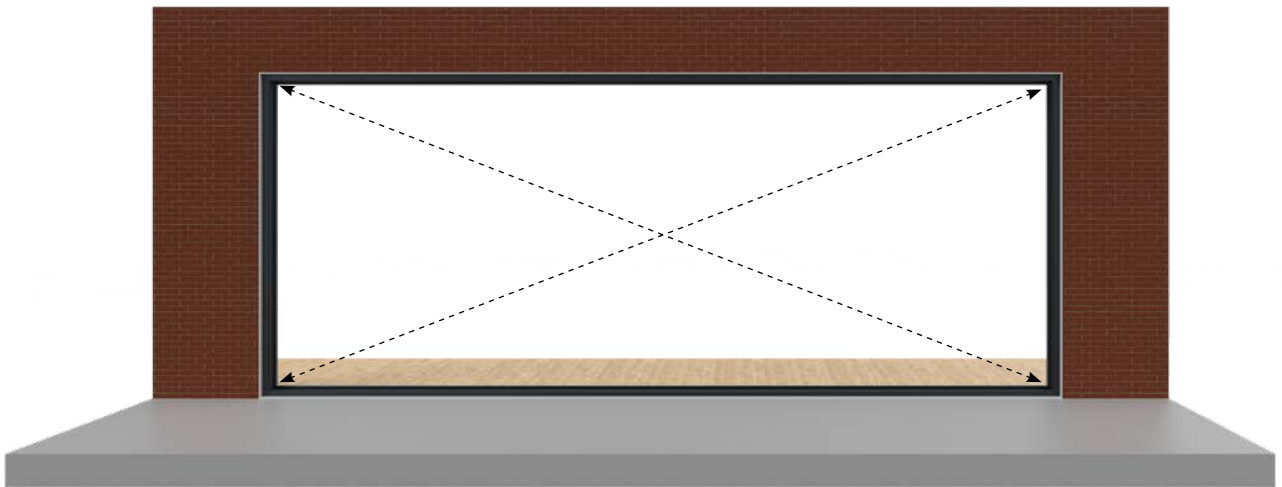
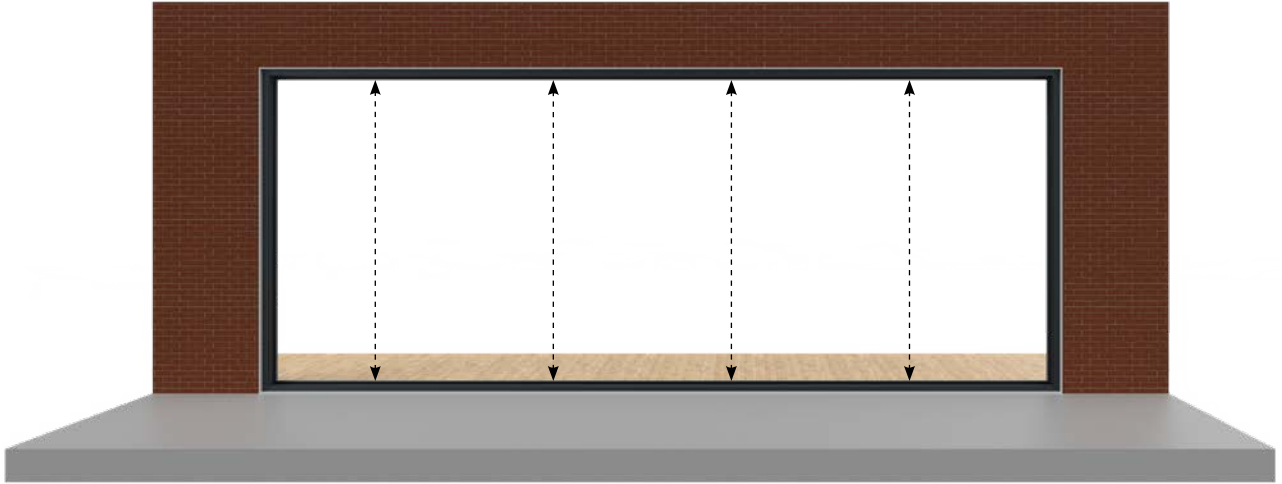


- 7.2** Insert suitable sealant to fixing hole, then screw preferred fixing in place. Repeat process along the bottom track, ensuring fixings are within 900 mm intervals.

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

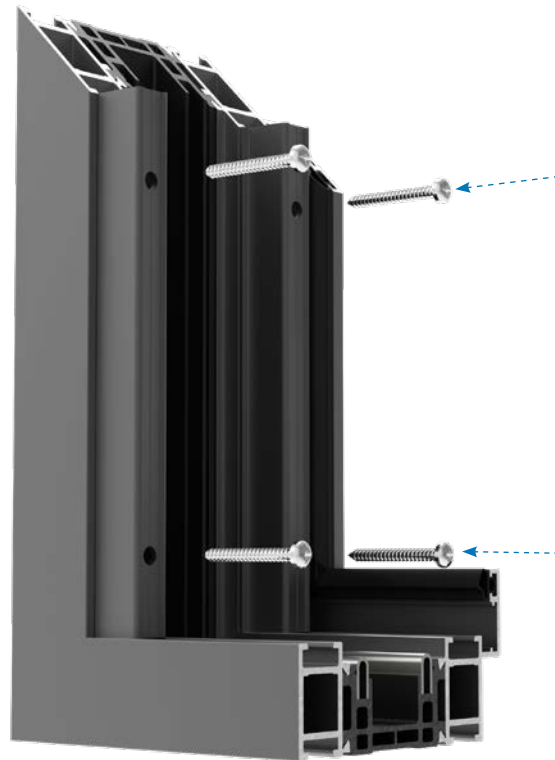
Installation Guide

- 8 Accurately measure the internal frame dimensions.



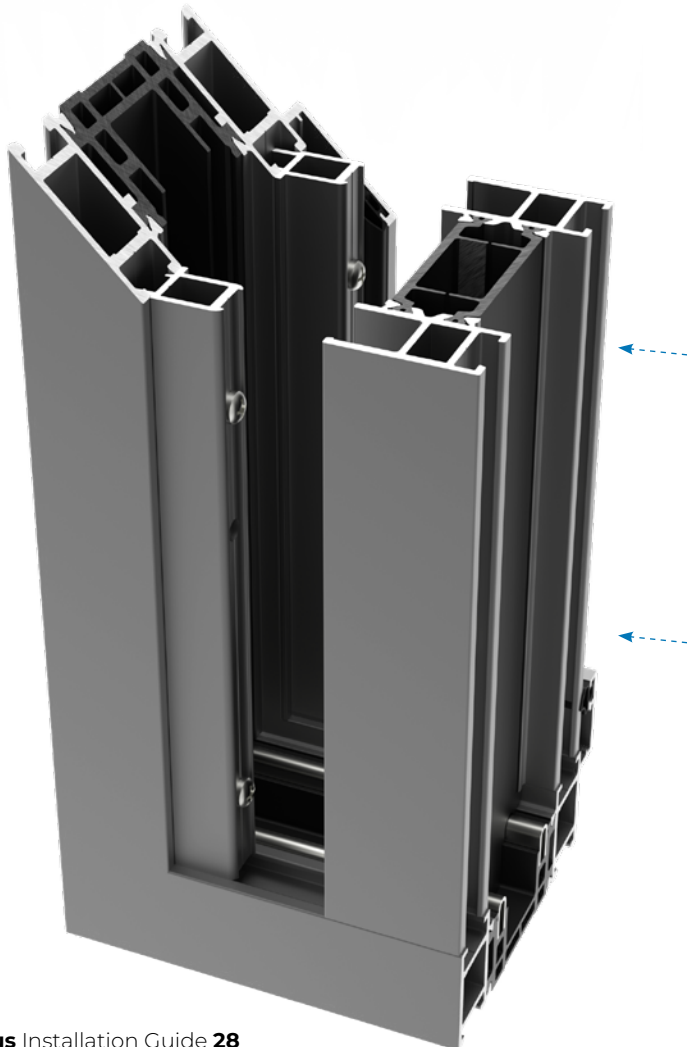
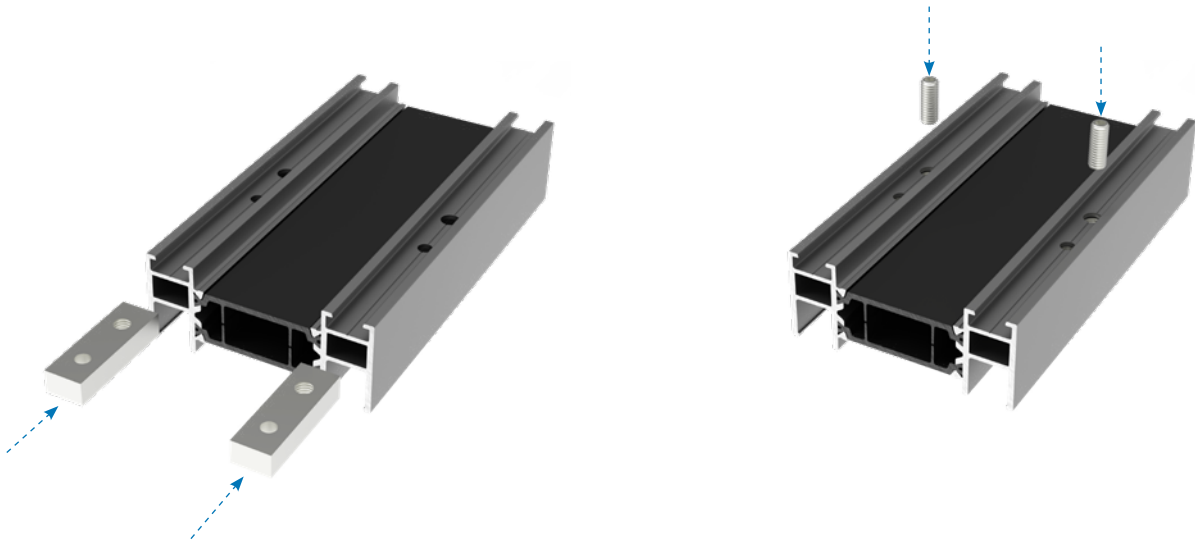
Installation Guide

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



Installation Guide

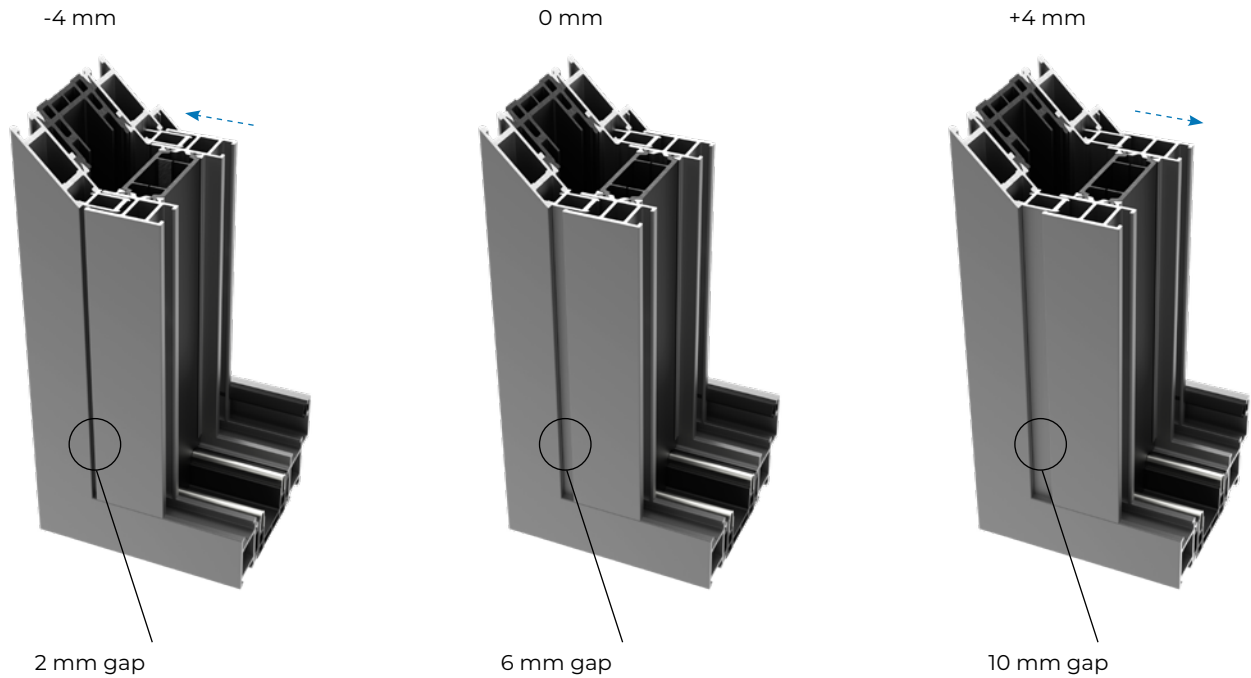
- 9.2** Insert the fixing blocks into the adjustable jamb and secure them with the grub screws.



- 9.3** Place the jamb into the frame.

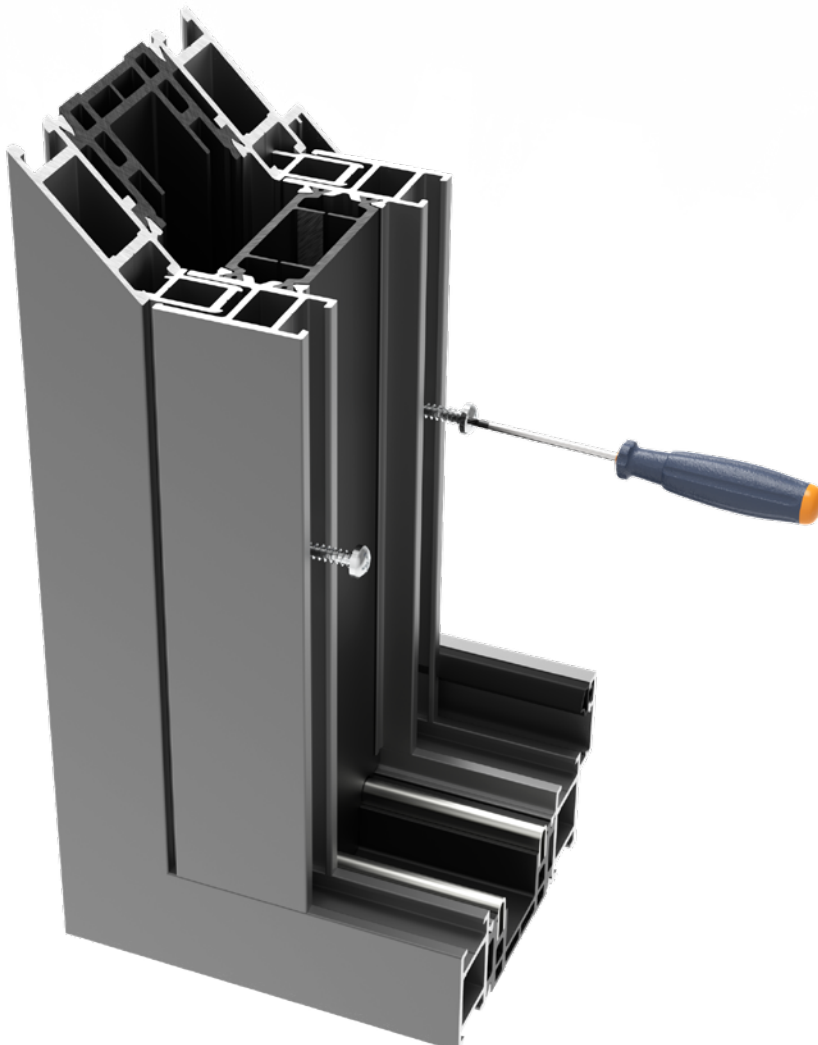
Installation Guide

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.

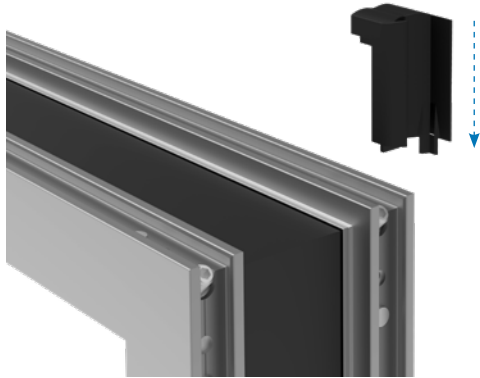
9.5 Secure the desired position with fixing screws.



Installation Guide

10*

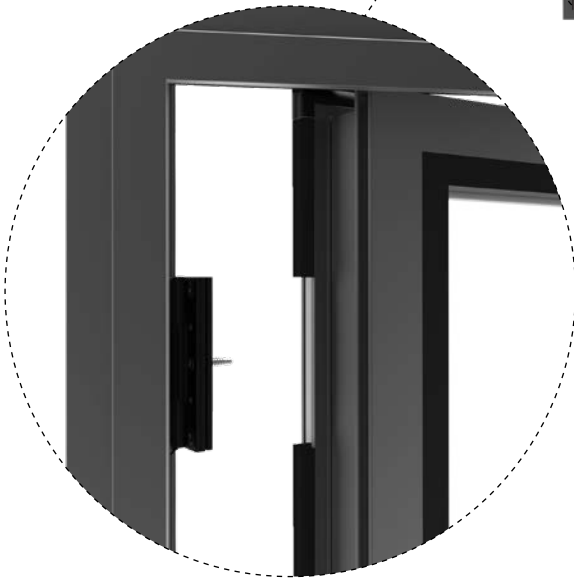
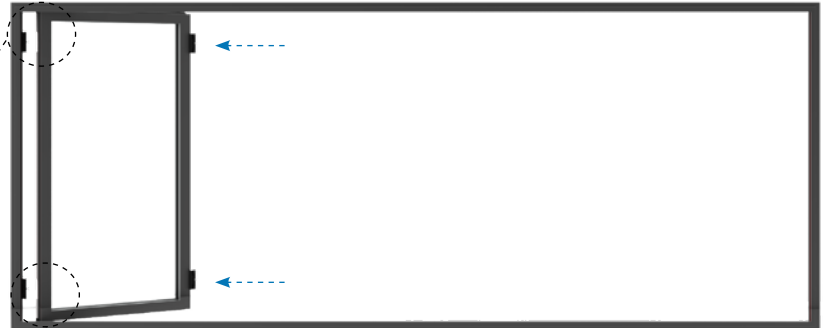
The assembly of the sash will be carried out in a similar way to the frame assembly. The steps detailed in section 4 will be repeated, but using the sash profiles. The external upper and lower gaskets will be installed right after.



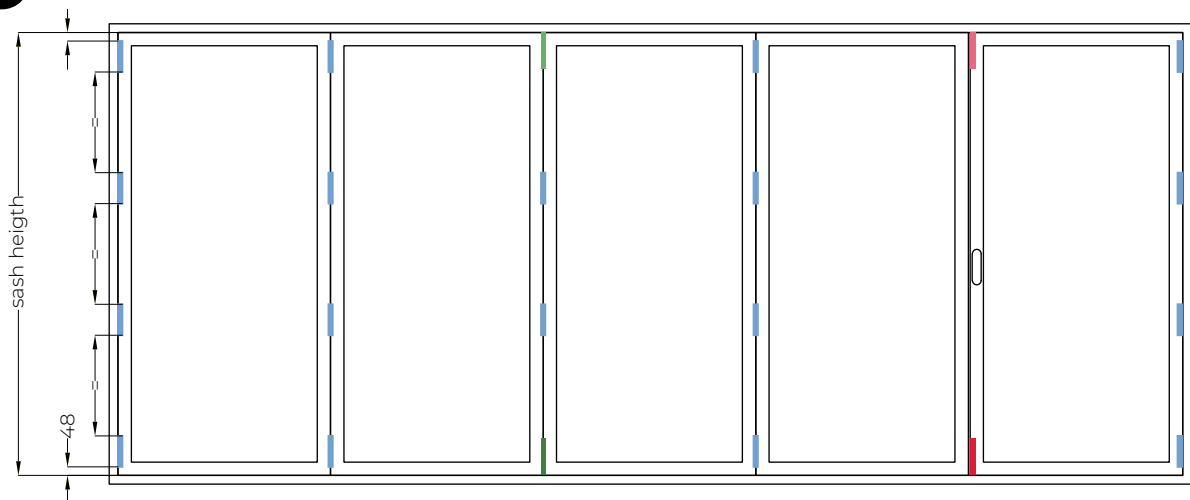
Installation Guide

- 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.

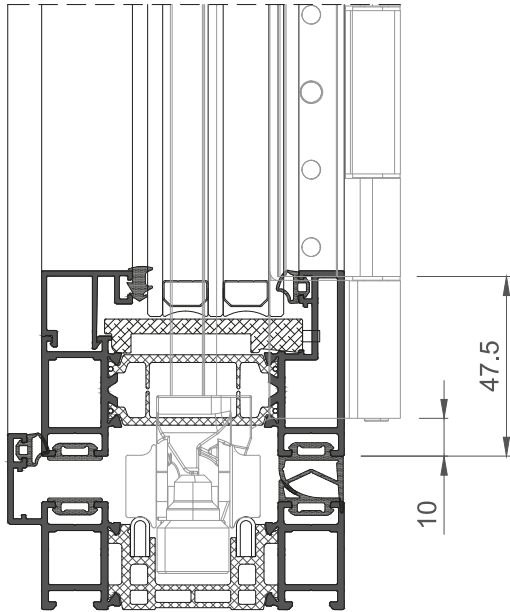


- | Hinge
- | Top guide
- | Top half guide
- | Bottom roller
- | Bottom half roller

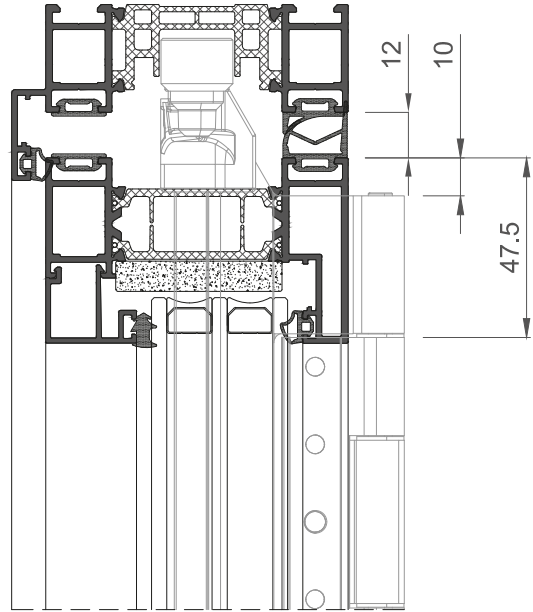
Installation Guide

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

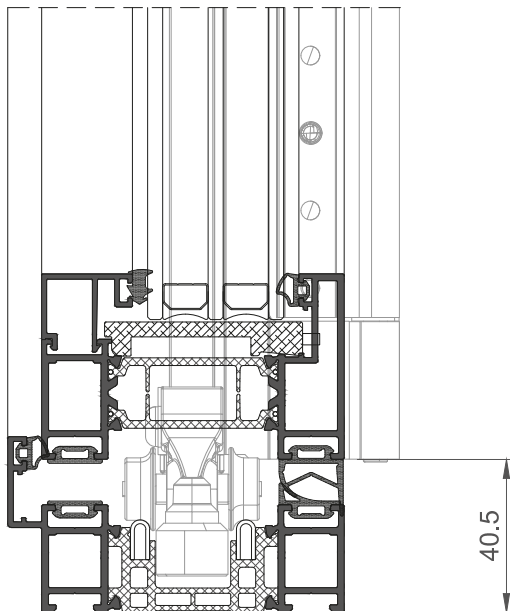
Bottom roller position



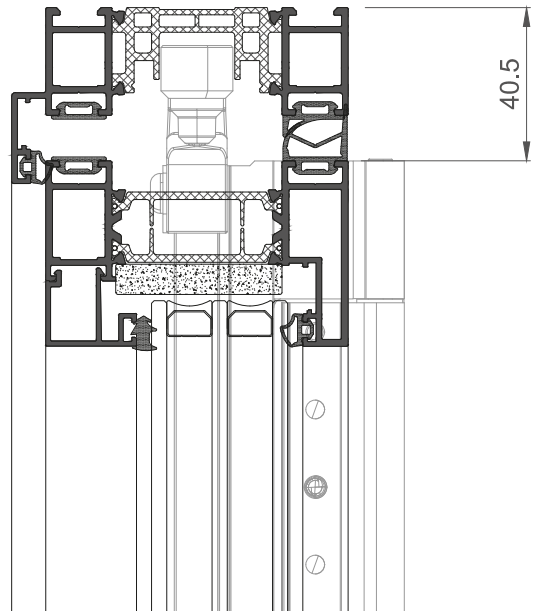
Top guide position



Bottom half roller position

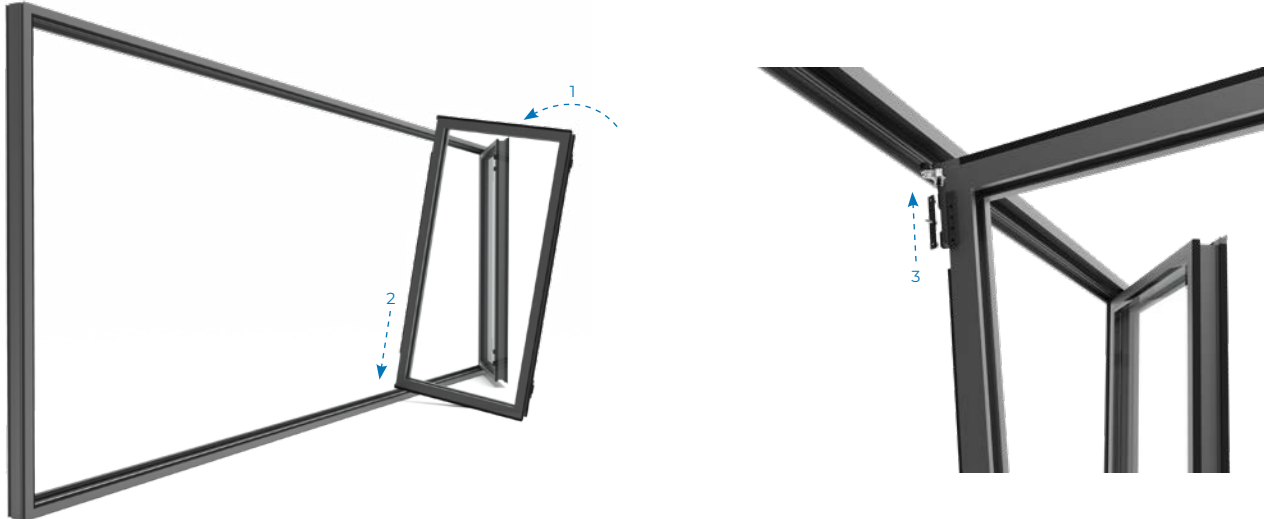


Top half guide position

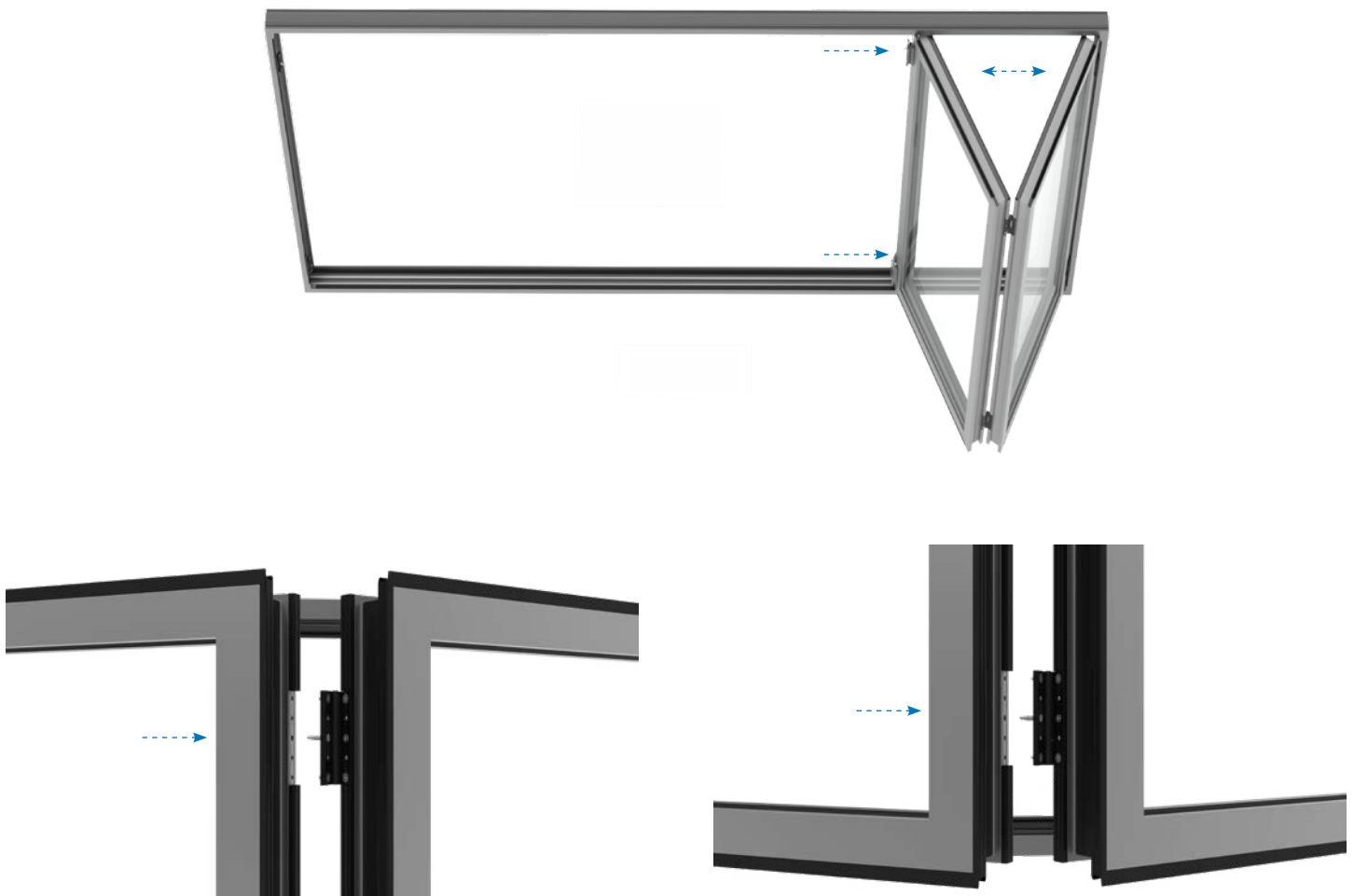


Installation Guide

- 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).

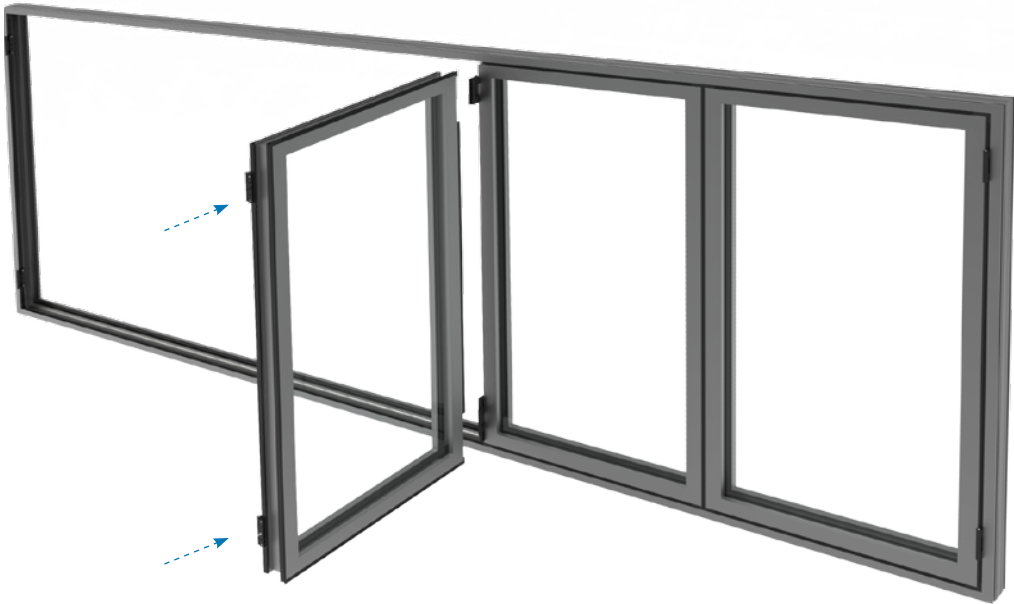


- 12.2** Slide second panel to align clamping plates with hinges attached to the first panel. Locate the hinge leaf over the clamping plate and secure with machine screws.



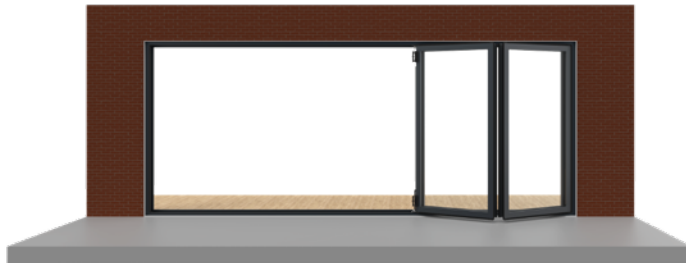
Installation Guide

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



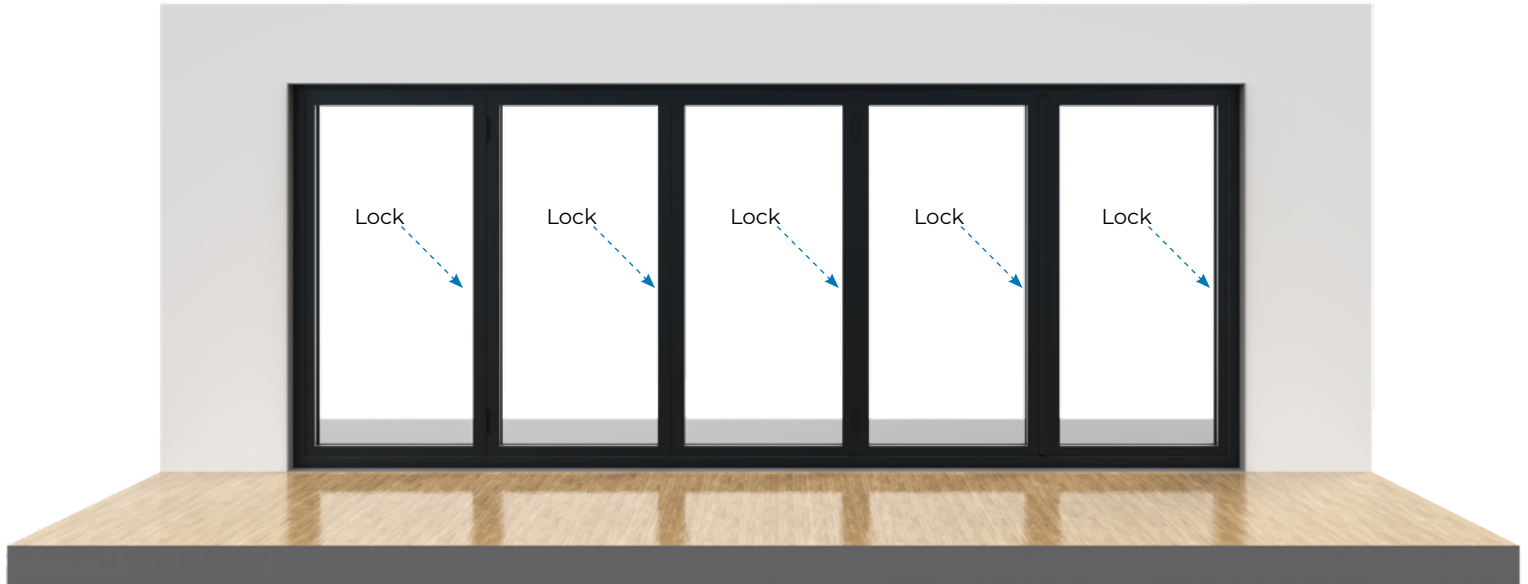
Installation Guide

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

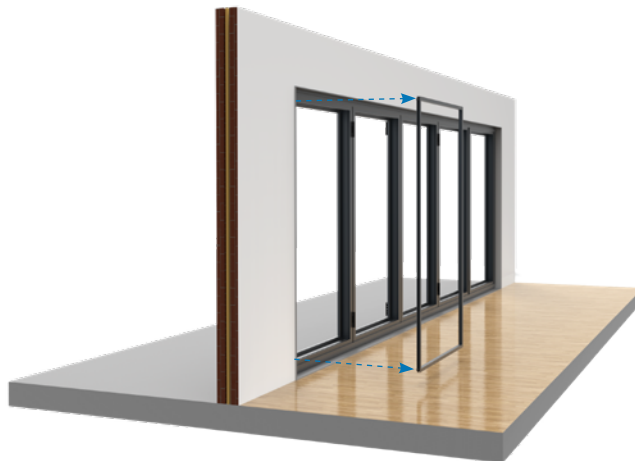


Installation Guide

- 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.



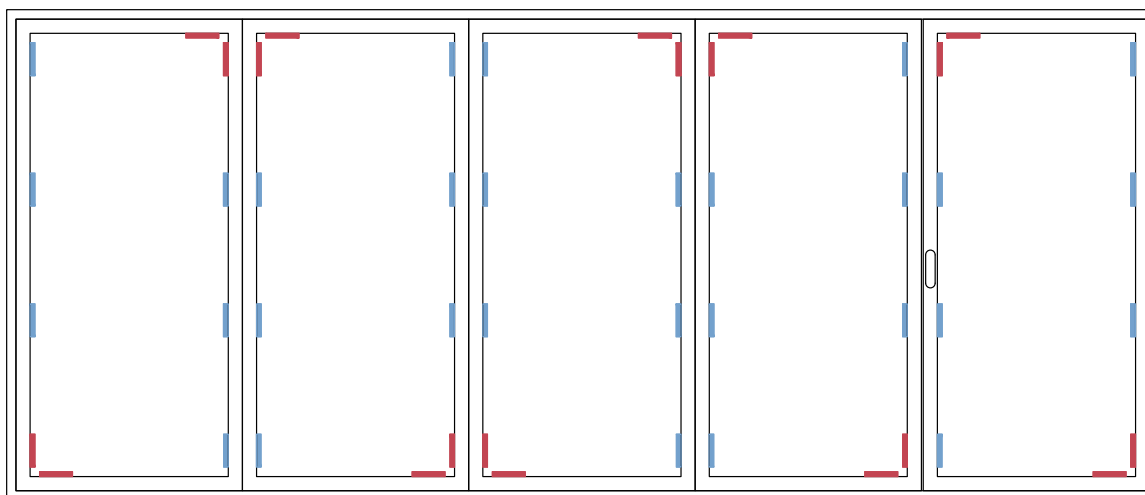
Installation Guide

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

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



Installation Guide

- 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

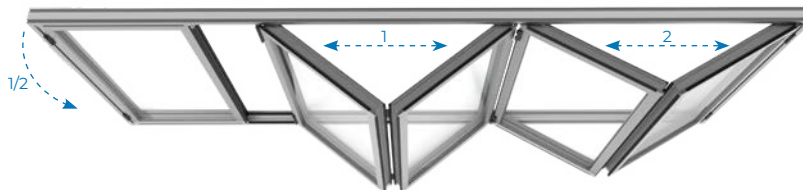
18.1 Check the running operation for the bi-folding door without swinging door.

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:

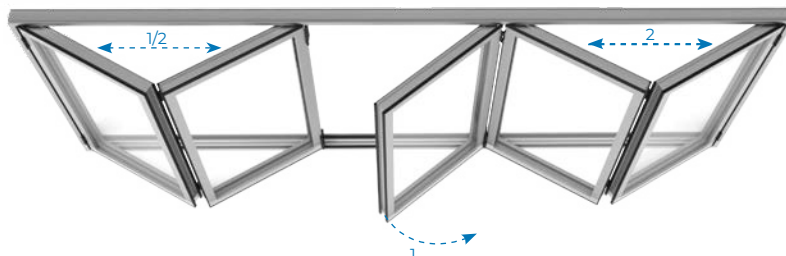
1. Slide each pair of folding panels back to align with frame.
2. Secure the panels by locking with shoot bolt lock.



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

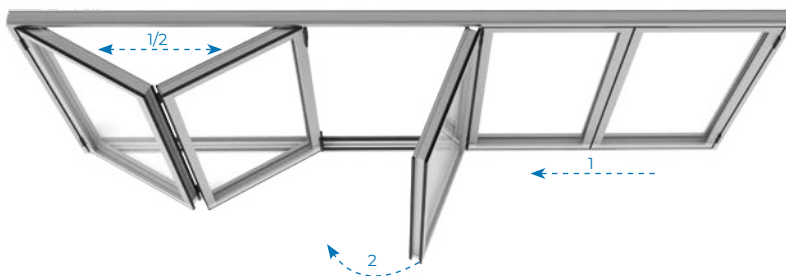
To open doors:

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

19.1 Final assembly outer opening 541.



Installation Guide

19.2 Final assembly outer opening 532.



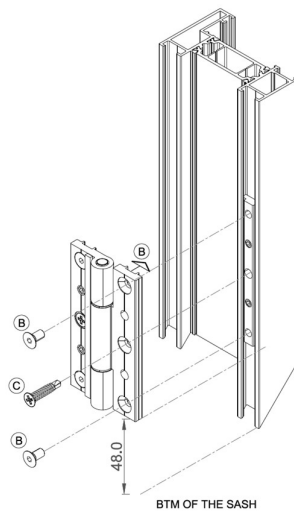


Ancillary profile & accessory installation guide

Final hinge fixing

When installed on site, secure the hinge in position with 'final fix' a countersunk self-drilling screw into centre hole (C).

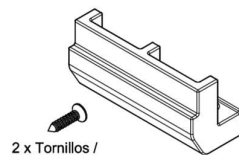
NOTE- Do NOT fit this final fix screw until door alignment and set up is satisfactory & 'toe and heeled' correctly.



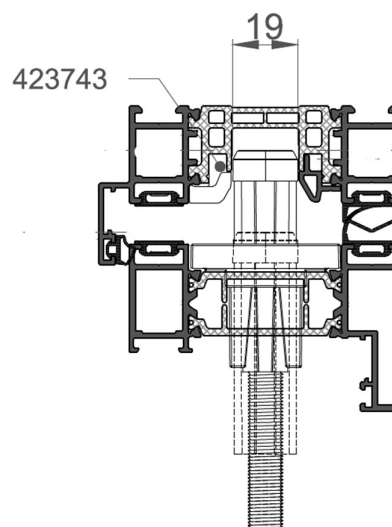
Shoot bolt reinforcement (423743)

It is important to install part number 423743 where the shoot bolt engages the frame.

423743 Resbalón superior
Upper slip

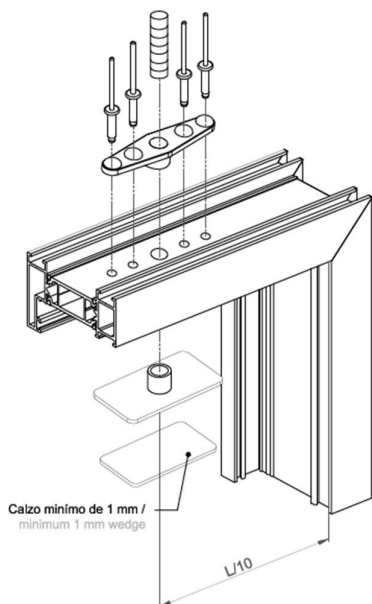


2 x Tornillos /
Screws 822919

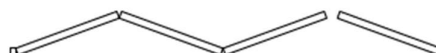
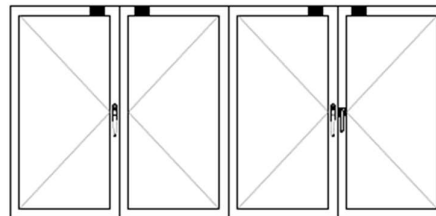




Glass adjuster detail (part is special request)



Posicionamiento del regulador de vidrio Advisable layout for the glass adjuster

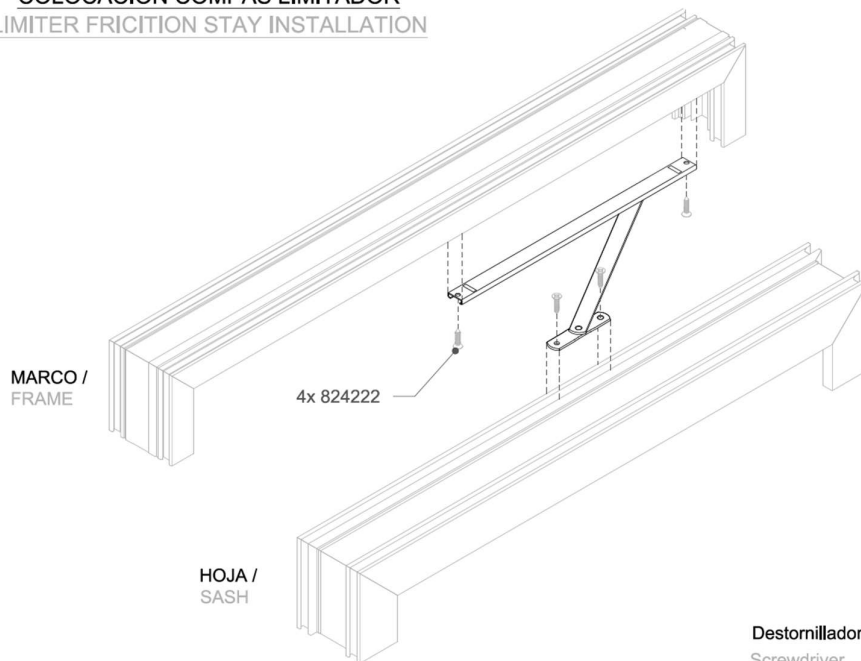


En caso de utilizar el regulador de vidrio 443758, se debe sustituir el calzo superior por este accesorio.


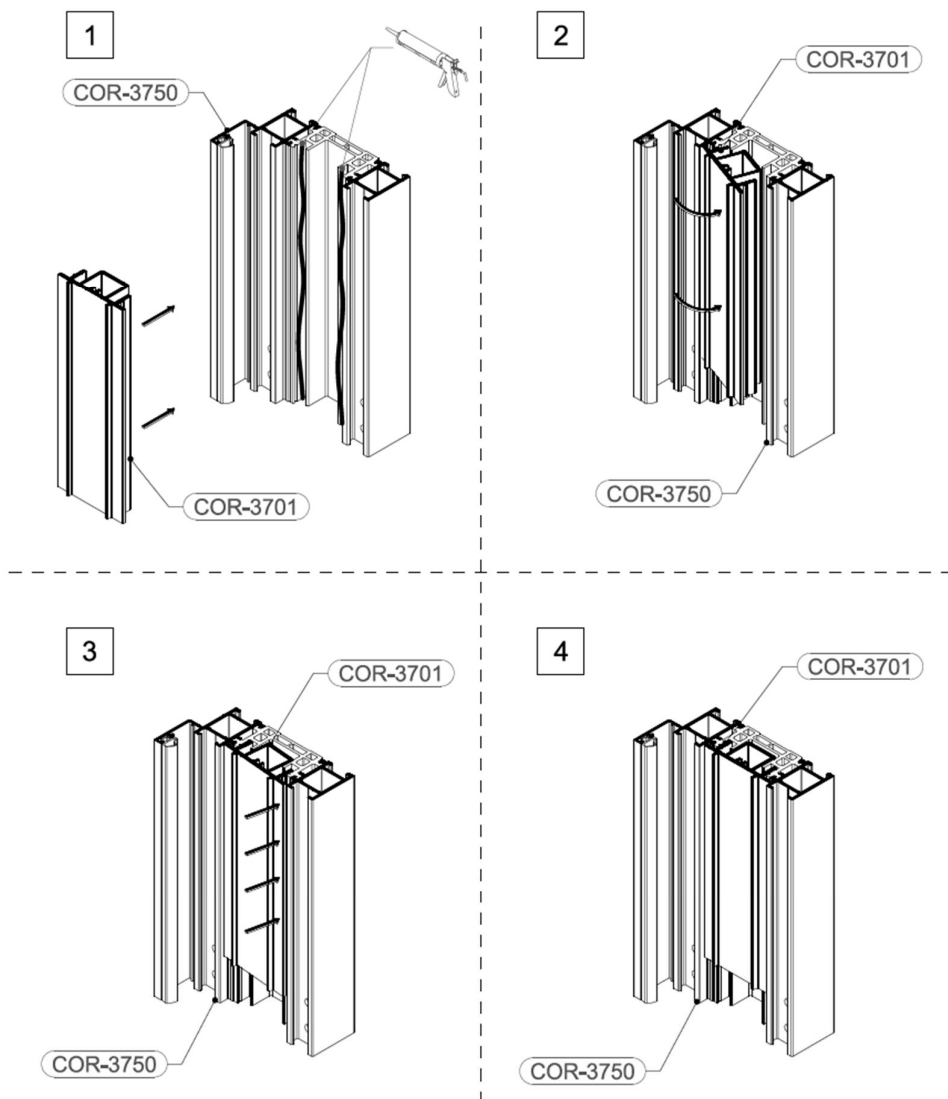
In case of using the glass adjuster 443758, the upper wedge must be replaced with this accessory

Door restrictor

COLOCACIÓN COMPAS LIMITADOR LIMITER FRICITION STAY INSTALLATION



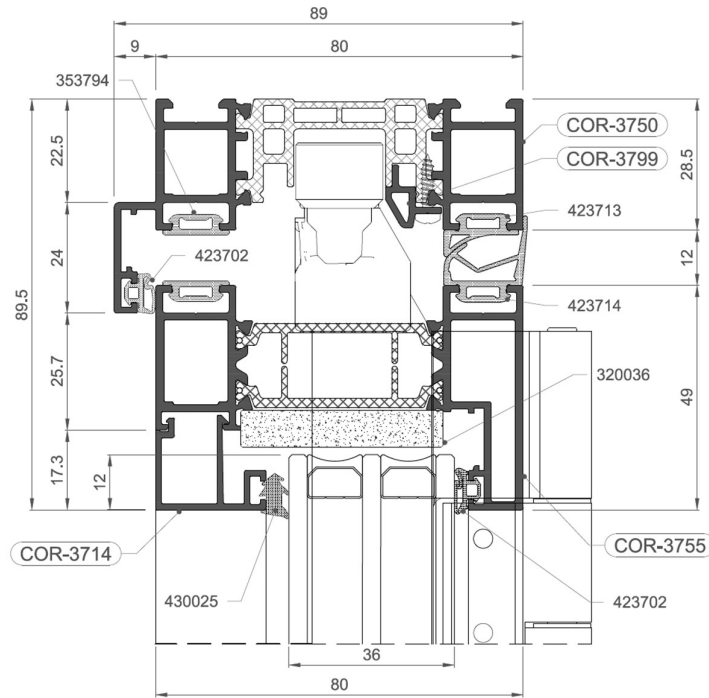
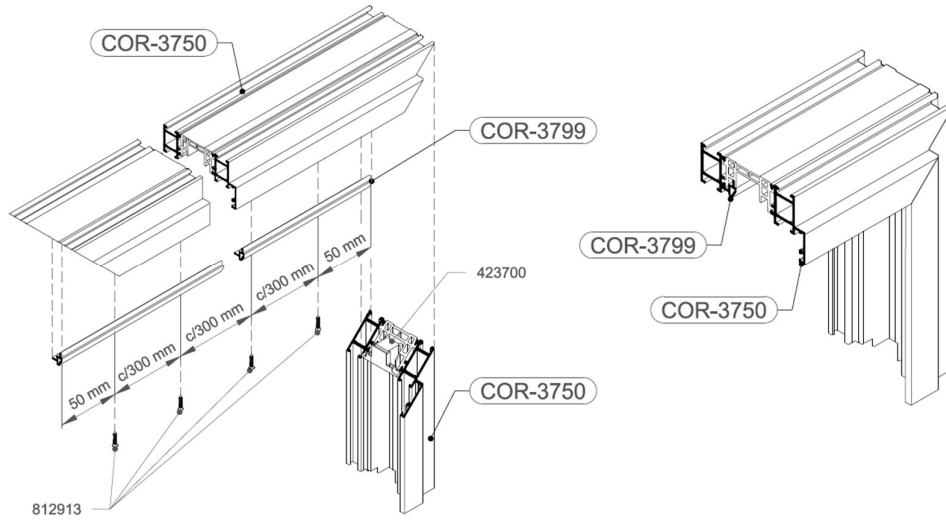
Frame cover 3750



Sellado con mastic neutro sin disolventes.
Seal with mastic neutro without solvent.

3799 Track Reinforcement

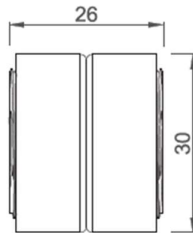
Fix 50mm from each end and every 300mm using screws 812913 (2.9x13)



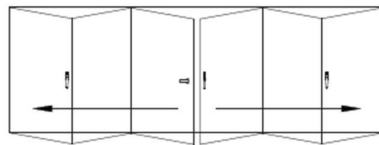
Magnet Catches

RETENEDORES MAGNÉTICOS MAGNETIC PANEL CATCHES

353737*
RETENEDOR MAGNÉTICO 26mm
MAGNETIC PANEL CATCH 26mm



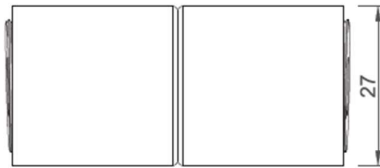
Para uso con cierre intermedio manilla plana
For use on "inline" positions, flat handle



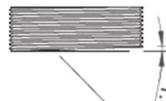
Ref. 353747

Ref. 353737

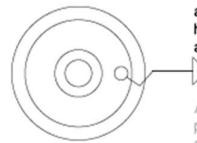
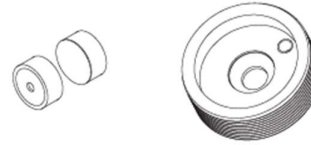
353747*
RETENEDOR MAGNÉTICO 60mm
MAGNETIC PANEL CATCH 60mm



Para uso en paneles con manilla de puerta
For use at door handle positions



Instalar a 1.96° degree angle face to door face, tilt toward heel side as drawing
Posicionar la cara inclinada 2 grados hacia la superficie de la puerta, inclinando hacia el lado de la bisagra

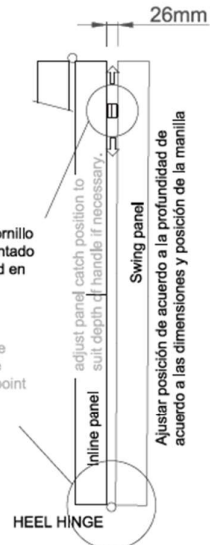


Se recomienda posicionar el tornillo anti rotación en horizontal orientado hacia la bisagra por simplicidad en ambos paneles

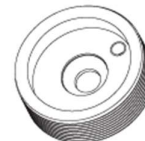
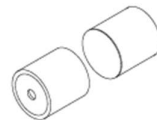
Anti rotation screw hole may be positioned in any direction - we suggest horizontally and also point toward the heel hinge on both panels for simplicity



Posicionar la cara plana contra la superficie de la hoja
Install flat underside to door face



Ajustar posición de acuerdo a la profundidad de acuerdo a las dimensiones y posición de la manilla



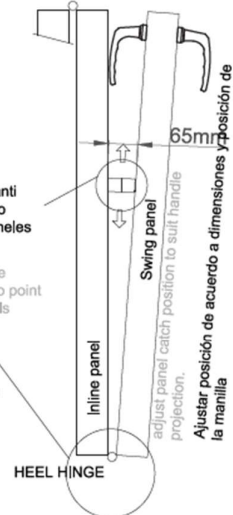
Se debe posicionar el tornillo anti rotación en horizontal orientado hacia la bisagra en ambos paneles

Anti rotation screw hole may be positioned horizontally and also point toward the hinge on both panels

Parte superior puerta
Top of door

Parte inferior puerta
Bottom of door

Point toward swing door/heel hinge

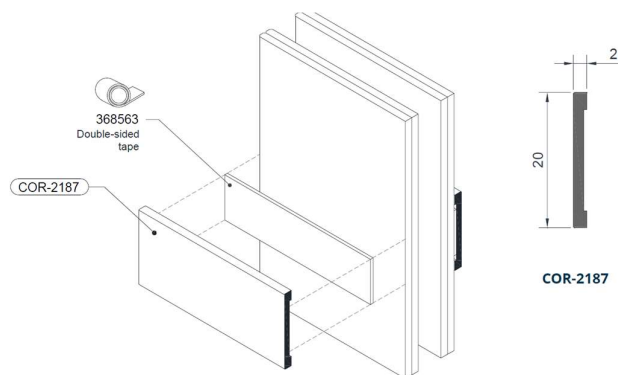
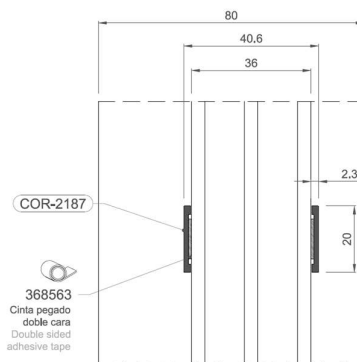


Ajustar posición de acuerdo a dimensiones y posición de la manilla

Astragal Bar

Astragal bar will be supplied 3-5mm oversized, it will need to be trimmed in on site.

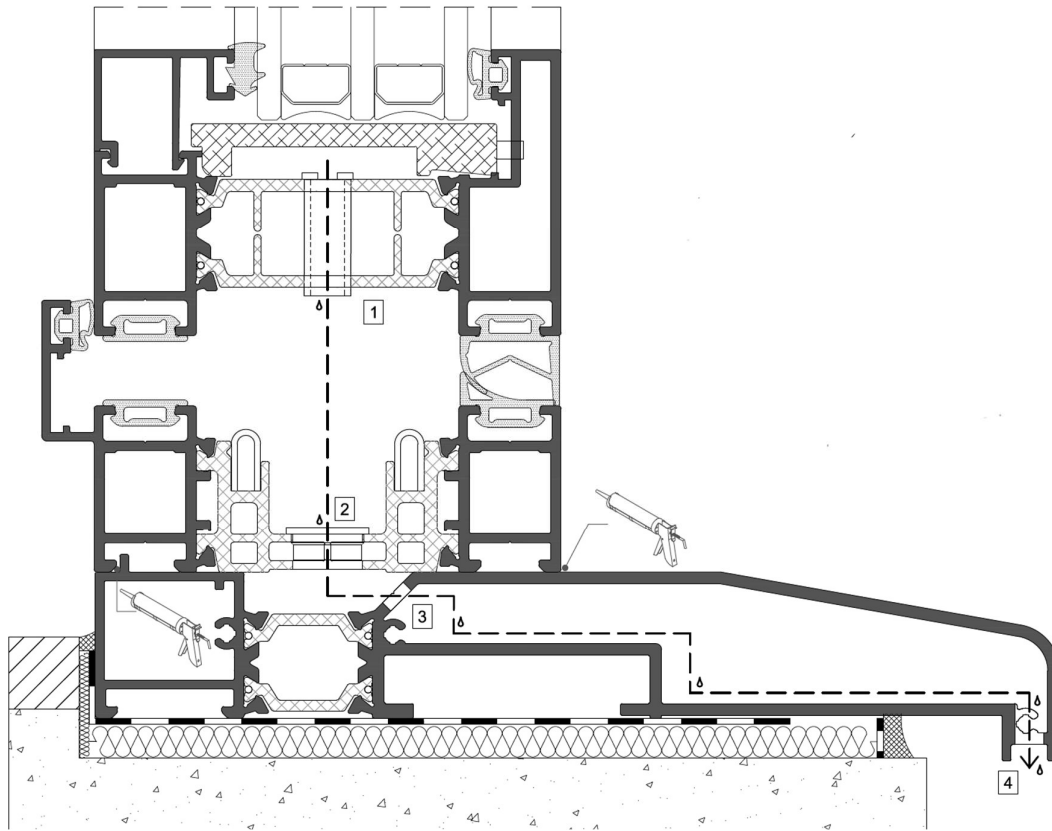
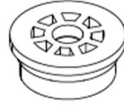
The aluminium is applied to the glass surface with double sided tape, it is also recommended to apply a bead of low module silicone above and below the profile.





Concealed frame drainage cover 912060

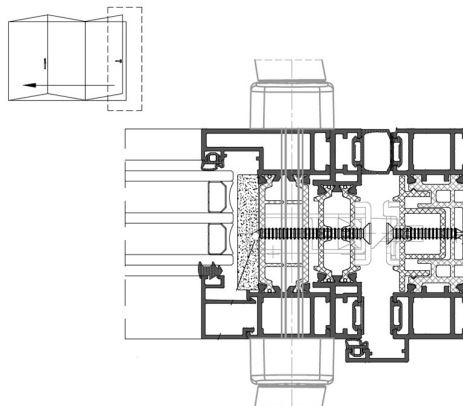
Accessory 912060 is designed to help prevent debris from entering the drainage hole.



Multi point lock keeps

The door will arrive with only the centre keep installed to allow for any adjustment during 'toe & heeling).

Once the door is installed correctly the remaining keeps & screws can be installed.



Verstellung der Schlieteile/Schlieleisten
adjustment of strike plates/one-piece strike plates

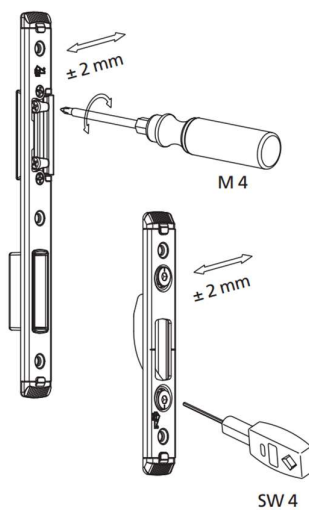


Table of screws

TABLAS DE TORNILLOS / SCREWS TABLES

		DIÁMETRO / DIAMETER						DIN 7981
		Ø 2,2	Ø 2,9	Ø 3,5	Ø 3,9	Ø 4,2	Ø 4,8	Ø 5,5
LONGITUD / LENGTH	6,5	-	399769	813565	-	-	-	-
	9,5	812295	-	813595	-	814295	814809	-
	13	-	812913	813513	813913	814213	814813	815513
	16	-	812916	-	813916	814216	814816	999087
	19	-	-	813519	813919	814219	814819	999088
	22	-	812922	-	813922	814222	814822	-
	25	-	-	813525	-	-	814825	815525
	32	-	-	813532	-	814232	814832	999089
	38	-	-	813538	-	814238	-	999090
	45	-	-	-	813945	814245	814845	815545
	50	-	-	399770	-	-	814850	999095
	60	-	-	813560	813960	814260	814860	999100
	70	-	-	-	-	-	814870	815570
	80	-	-	-	-	-	814880	999097
100	-	-	-	-	-	814810	-	

		DIÁMETRO / DIAMETER						DIN 7982
		Ø 2,2	Ø 2,9	Ø 3,5	Ø 3,9	Ø 4,2	Ø 4,8	Ø 5,5
LONGITUD / LENGTH	6,5	-	-	-	-	-	-	-
	9,5	-	822995	823595	823909	-	-	-
	13	-	-	823513	823913	-	824813	-
	16	-	-	823516	823916	-	824816	-
	19	-	822919	823519	823919	824219	824819	999103
	22	-	-	-	-	824222	824822	999104
	25	-	-	823525	823925	-	824825	999106
	32	-	-	-	-	-	824832	999107
	35	-	-	-	-	-	-	999109
	38	-	-	-	-	-	-	999108
	45	-	-	823545	823945	824245	-	999110
	50	-	-	823550	-	824250	-	-
	60	-	-	-	-	824260	-	-
	70	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	
100	-	-	-	-	-	824810	-	

		MÉTRICA / METRICS		
		M4	M5	M8
LONGITUD / LENGTH	6	373810	-	-
	8	399760	-	-
	16	-	810516	-
	25	-	810525	-
	35	364771	-	-
	40	-	-	810840
	45	-	274210	-
	80	-	294600	-
100	-	301110	-	

		DIÁMETRO / DIAMETER		
		Ø2,9	Ø3,9	Ø4,8
LONGITUD / LENGTH	13	852913	843913	-
	19	-	-	844819
	22	-	853922	-
	45	-	-	844845

		DIÁMETRO / DIAMETER			
		Ø2,9	Ø3,5	Ø3,9	Ø4,2
LONGITUD / LENGTH	13	852912	843513	853913	-
	19	-	-	-	-
	22	-	853522	-	-
	25	-	853525	-	-
	32	-	-	-	854232