

Architect: Hartmann & Schüpbach Architekten

CS 77 WINDOWS & DOORS
INSTALLATION GUIDE



INDEX

1. FITTING	4
1.1. Fitting in the structural work	5
1.2. Fitting accessories	6
Checking hardware	6
Adjusting barrel hinges	6
Adjusting hidden hinges	7
Adjusting Invision hinges	8
Adjusting Invisi hinges	9
2. GLAZING	10
2.1. Before fitting the glass panels	11
Decompression & drainage	11
2.2. Fitting the glass panels	13
Inside glazing	13
Outside glazing	14
Heel and toe	15
Main sash bottom panel	15
Tilt & turn (DAW) inward opening sash	16
3. ADDITIONAL NOTES	18
3.1. Glazing table	19
Fixed windows, outward opening windows and doors	19
Inward opening windows	20
Outside glazed fixed windows	21
Hidden vent windows	22



Please read through the entire guide before beginning installation.

- 1.** It is extremely important that work on the Reynaers systems is performed by the supplier of the systems (or a Reynaers approved installer). In this way the system guarantee remains preserved.
- 2.** Hardware parts of the Reynaers system should only be replaced by the original parts provided by the Reynaers dealer.
- 3.** The information in this guide is intended to assist in the installation of the Reynaers systems and needs to be used in conjunction with the specific fabrication drawings for your project.
- 4.** In case this guide does not provide an answer to all your questions, please contact your local Reynaers professional. They can give you detailed advice on the installation of the Reynaers window & door system(s).

1. FITTING

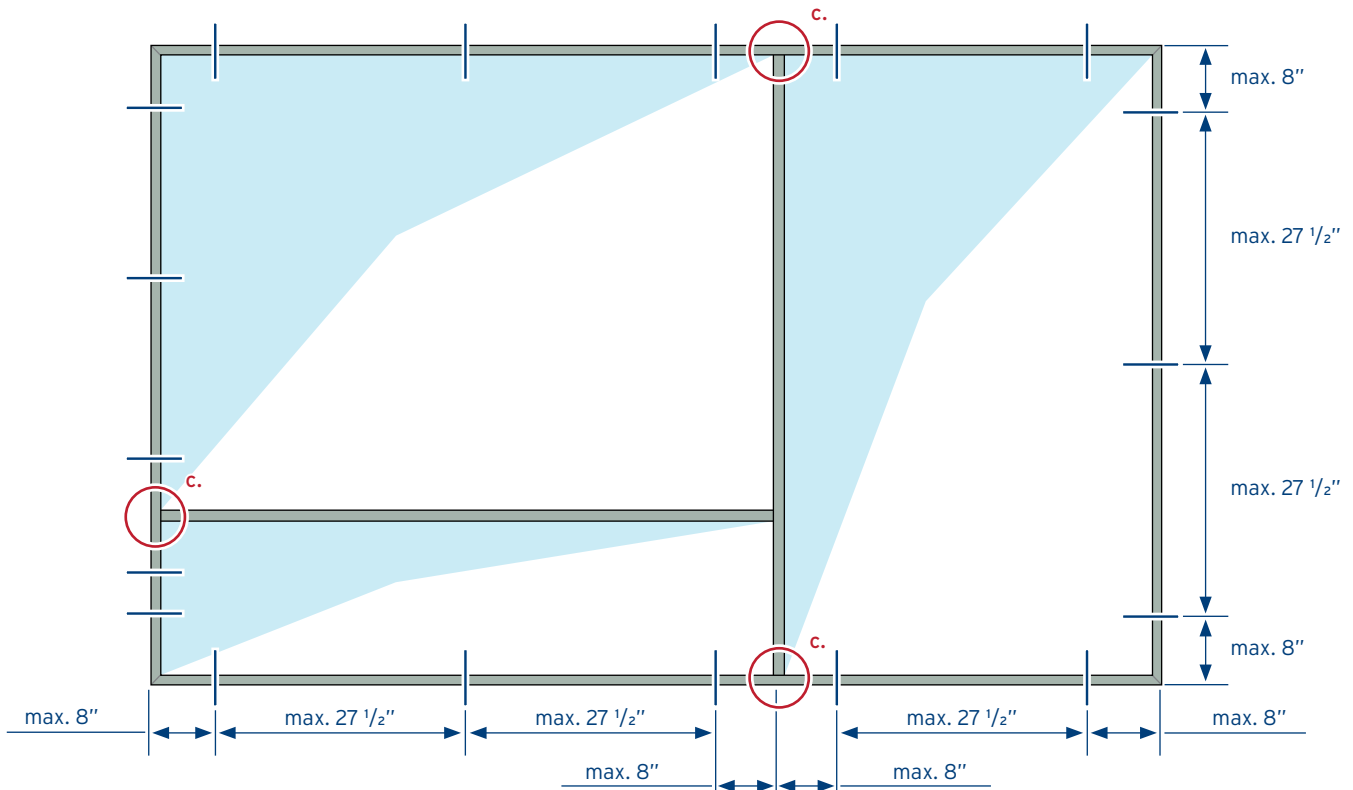


1.1. FITTING IN THE STRUCTURAL WORK

Attachment to the building is either by direct fixing through the profile, e.g. screws and plugs, or by using fixing lugs. When using screws and plugs ensure that the minimum edge distances¹ are in accordance with the processing guidelines of the sub structure manufacturer/supplier/installer. The anchorage should in no way affect the carrying capacity of the adjacent building components.

! BEFORE INSTALLATION COMMENCES: make sure the element is plumb and level. Use a level and ensure that profiles aren't twisted, damaging the element and its insertions. Measuring corner-to-corner and assuring that the dimensions match is one easy way to make sure.

- a. Anchorages shall be of aluminum or stainless/galvanized steel, corrosion resistant, so that the aluminum profiles are not subjected to bi-metallic corrosion.
- b. When installing elements, fixings are required on all sides with a max distance from each corner of 8" and max distance between fixings of 27 1/2".



- c. Where transom/mullions and outer frame profiles meet, the fixing must be applied maximum 8" from both sides of the transom/mullion. In this way, expansion and shrinkage of the transom/mullion (because of fluctuations in temperature) are possible without any damage.
- d. We recommend to position fixings at the height of each hinge and locking point.
- e. When screws and plugs are used directly through the profiles, the chambers in the bottom outer frame may not be pierced, so as to avoid water infiltration in this region.



NOTE: The anchoring should be applied in such a way that possible expansion / shrinkage of the element is not obstructed.

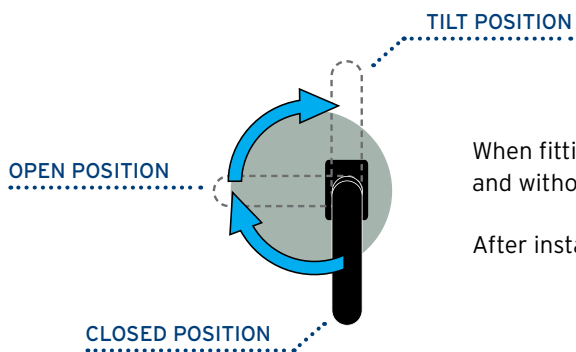
1.2. FITTING ACCESSORIES



The choice of the fixing points, number of locking points, number of hinges, max. vent weight, max. vent sizes, vent profile used etc. depends on the instructions of the system supplier and the accessory producer.

Sliding and moving parts should be provided with neutral grease.

CHECKING HARDWARE



When fitting, please check whether all accessories can be operated easily and without restriction.

After installation is complete, make sure all accessories function properly.*

ADJUSTING BARREL HINGES

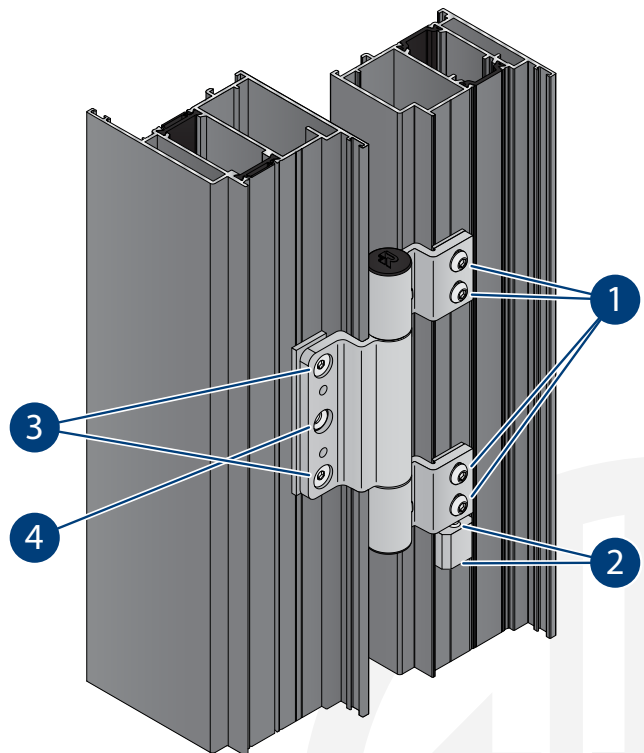
Reynaers barrel hinges are adjustable after fabrication, allowing for detailed adjustment in height, depth and tilt of the door, should that be necessary.

Vertical adjustment:

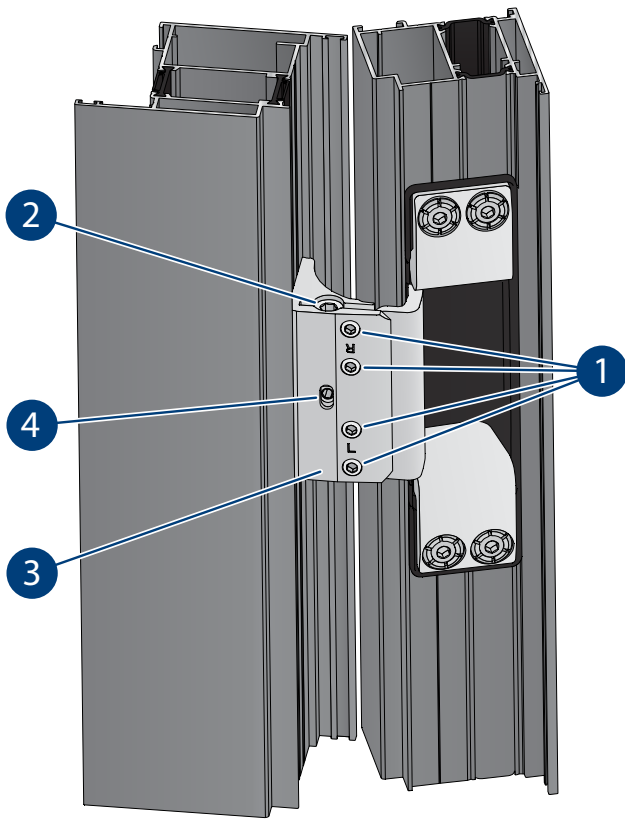
- Loosen the screws (1) slightly
- From underneath, rotate the Allen screw to adjust the height accordingly (2)
- Re-tighten screws (1)

Horizontal adjustment:

- Loosen the screws (3) slightly (1/4 rotation)
- Rotate the spindle to adjust the position accordingly (4)
- Re-tighten screws (3)



* For correct operation, please see the Reynaers *Operation, Care & Maintenance manual*.



ADJUSTING HIDDEN HINGES

Reynaers barrel hinges are adjustable after fabrication, allowing for detailed adjustment in height, depth and tilt of the door, should that be necessary.

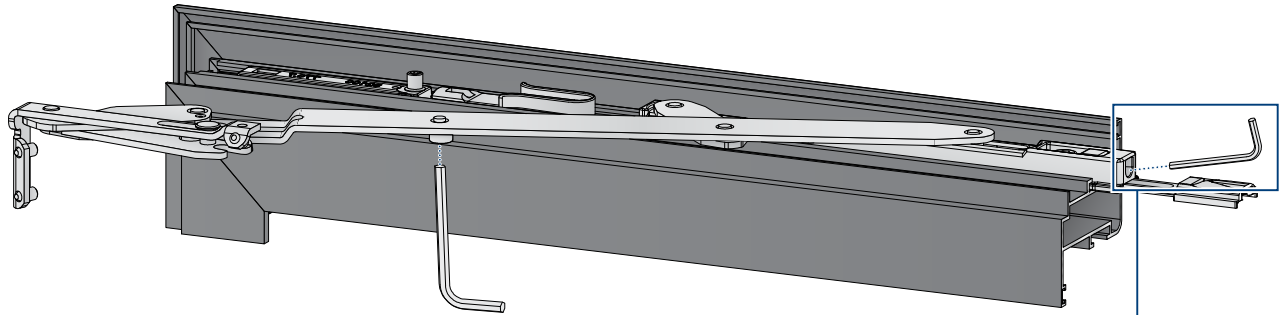
Vertical adjustment:

- Loosen the screws (1) slightly
- Loosen vertical adjustment screws (3) by two turns at both hinges. Raise the door using the vertical adjustment screw (2) at the lower hinge.
- Loosen vertical adjustment screw (2) by two turns at the upper hinge, and lower the door using vertical adjustment screw (2) at the bottom hinge.
- Reset vertical adjustment screws (2) at the upper hinge.
- Tighten adjustment screws (3) at both hinges.
- Tighten clamping screws (1) at both hinges.

Horizontal adjustment:

- Loosen the clamping screws (1) slightly
- Loosen both safety screws (2) slightly
- Adjust shadow groove (3)
- Re-tighten the safety screws (2)
- Re-tighten clamping screws (1)

CAUTION: Over-tightening of the clamping screws (1) can damage the tread.

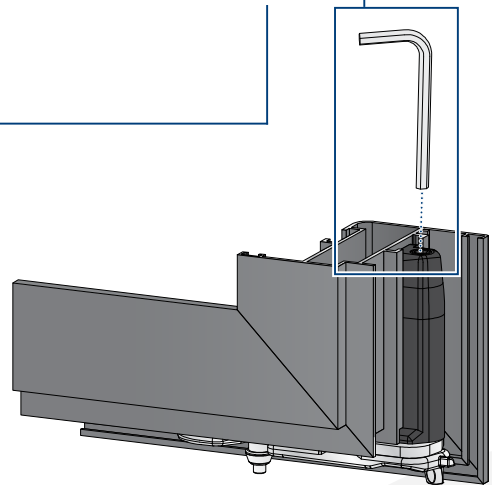
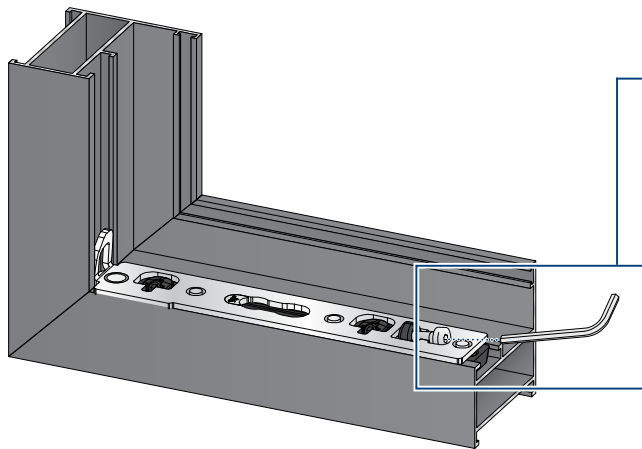
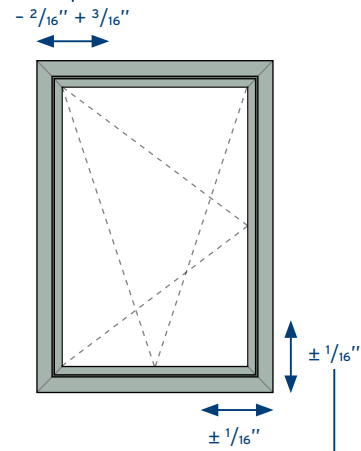


ADJUSTING INVISION HINGES

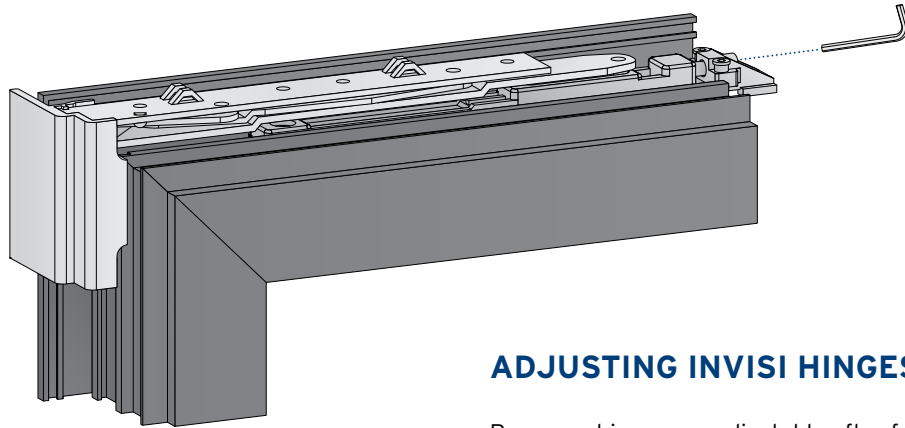
Reynaers hinges are adjustable after fabrication, allowing for detailed adjustment in height, depth and tilt of the window. There are two types of window hinges, **Invision** and **Invisi**. For help in determining your consult your local Reynaers contact or study the fabrication drawings accompanying your project.

The window has three anchor points:

- **SASH CORNER:** use an Allen key (SW 2.5) and turn to move the sash vertically.
- **TOP SASH:** use an Allen key (SW 4) and turn to regulate how tight the window closes on the frame.
- **TOP SASH:** use an Allen key (SW 2.5) and turn to move the sash horizontally.
- **BOTTOM FRAME:** use an Allen key (SW 4) and turn to move the sash horizontally.

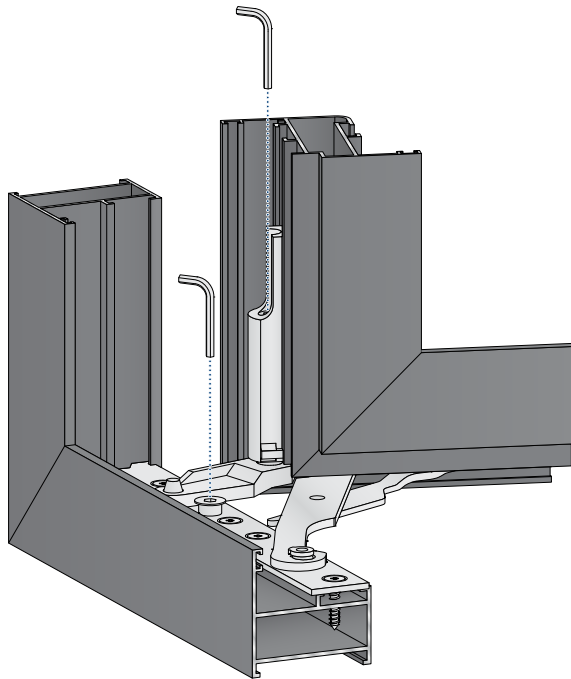


CAUTION: Reynaers advises against adjusting the windows, as this might make your window unbalanced which could lead to damage.



ADJUSTING INVISI HINGES

Reynaers hinges are adjustable after fabrication, allowing for detailed adjustment in height, depth and tilt of the window. There are two types of window hinges, **Invision** and **Invisi**. For help in determining your consult your local Reynaers contact or study the fabrication drawings accompanying your project.



The window has three anchor points:

- **BOTTOM SASH CORNER:** use an Allen key (SW 4) and turn to move the sash horizontally.
- **BOTTOM FRAME CORNER:** use an Allen key (SW 4) and turn to regulate.
- **TOP SASH:** use an Allen key (SW 2.5) and turn to move the sash vertically.

CAUTION: Reynaers advises against adjusting the hardware, as this might make your window unbalanced which could lead to damage.

2. GLAZING

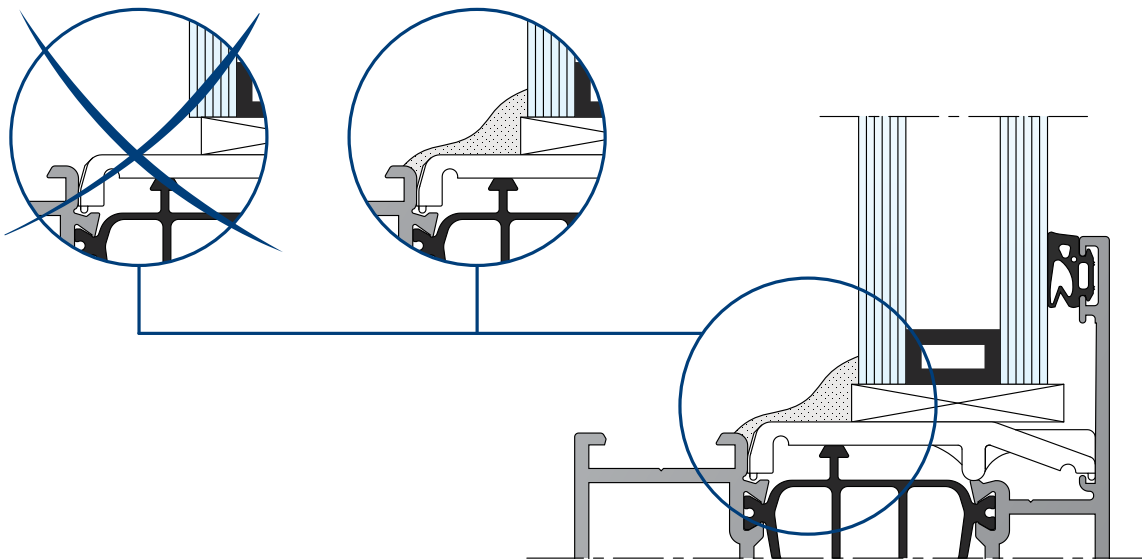


2.1. BEFORE FITTING THE GLASS PANELS

Reynaers' systems are designed for EPDM gasket or neutral silicone glazing. In case of silicone glazing a backing rod should be applied to create a correct opening between the glass panel and the aluminum frame. For easy and reliable fitting, durability and re-glazing simplicity, we recommend using only Reynaers' gaskets – specially adapted for our profiles.

The following precautions should be taken when fitting the glazing:

- Cut the glazing gaskets $\frac{1}{4}$ " per foot longer than is necessary to avoid openings in the corners at a later stage.
- Drainage holes should be drilled to avoid build-up of moisture. This is also necessary in the case of silicone glazing (see fabrication drawings).
- Glass panels should be at least $\frac{1}{2}$ " ($\frac{1}{4}$ " per side) smaller than the actual measured glazing size.
- The glass supports on the bottom of the glass panel should be sealed (see illustration below).

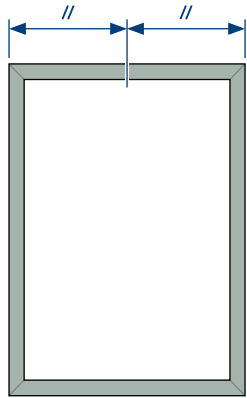


DECOMPRESSION & DRAINAGE

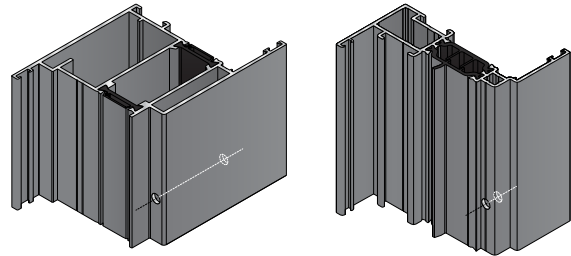
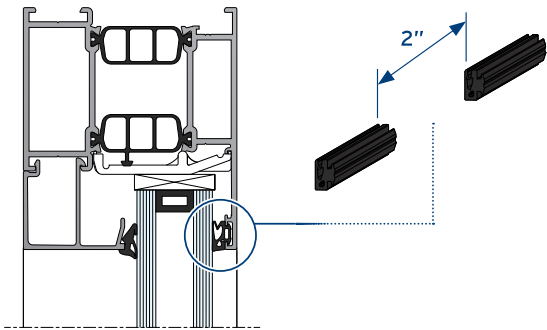
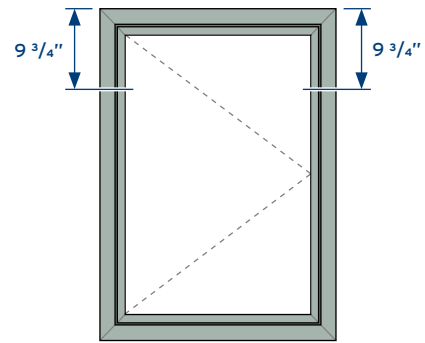
It is important to keep decompression and drainage holes free of any blockage. Decompression holes are located on the sides – drainage holes in the bottom profile. When applying gaskets and foam, please advise that these need to be cut and fitted to prevent blockage.

For Reynaers HI-variants (High Insulation), a foam tape is applied between the profile and glass. What is important is that this foam strip only runs between setting blocks and not over them. Also it is important that the foam strip does not block drainage holes.

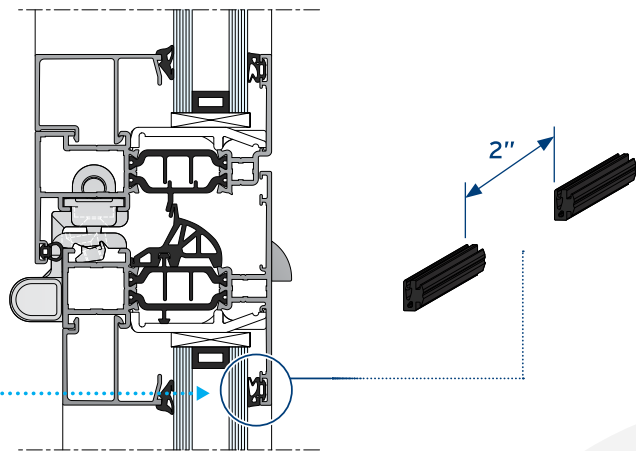
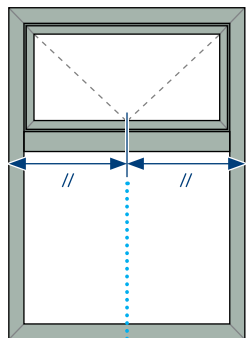
FIXED*



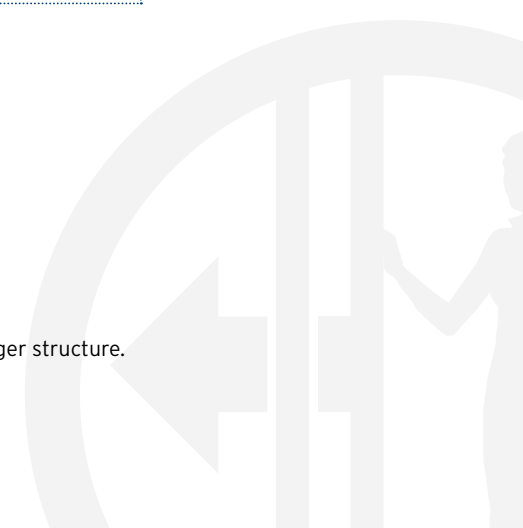
OPERABLE



COMBINATION



NOTE: Remember all fixed panes need to have a decompression notch, even those part of a bigger structure.

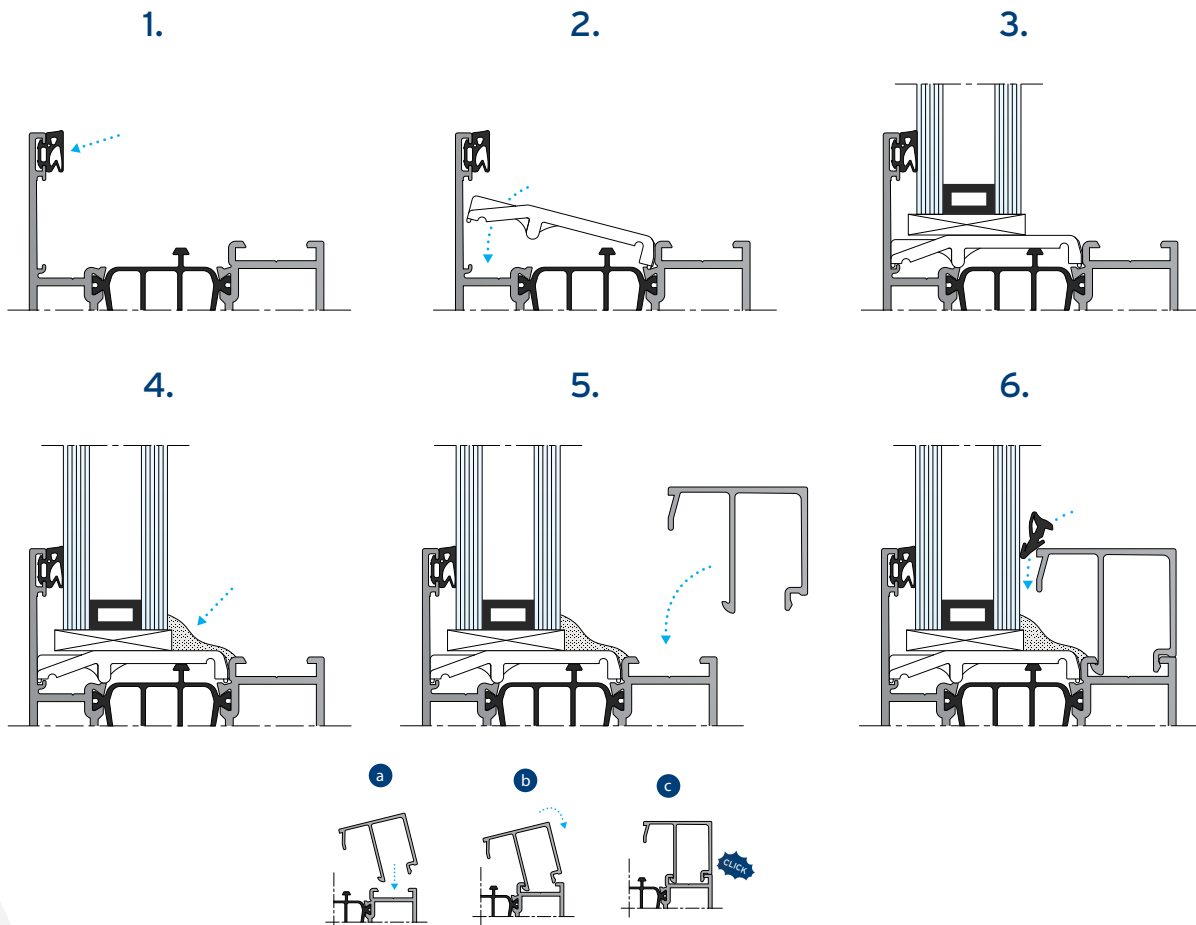


2.2. FITTING THE GLASS PANELS

INSIDE GLAZING

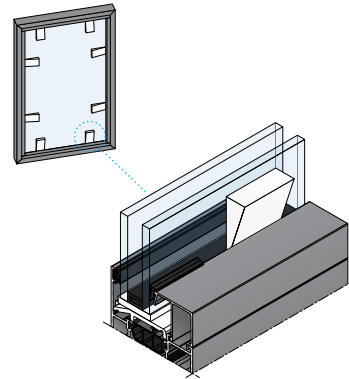
Glass panels should not come into contact with the aluminum frame; always use glazing blocks and gaskets. Wedging prevents this contact and also ensures correct positioning of the glass in the frame, distributing the weight equally onto the rollers to avoid deformation.

1. Insert outer gasket, making sure it is cut oversized $\frac{1}{4}$ " per foot.
2. Insert glazing blocks and supports.
3. Position the glass with spacers (for detailed instructions, see the following pages).
4. Seal off glass supports.
5. Clip in glazing beads.
6. Insert outer gasket, making sure it is cut oversized $\frac{1}{4}$ " per foot.



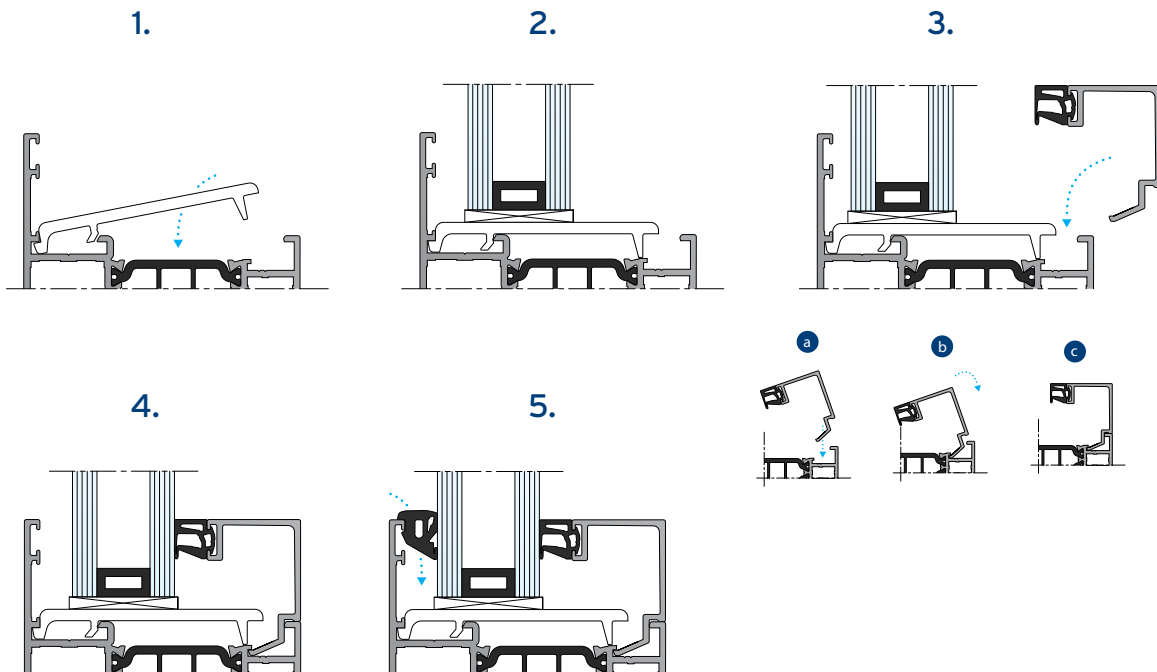
NOTE: If needed, wooden or PVC spacers can be used to insert gasket.

If needed, wooden or PVC spacers can be used when wedging gasket. ▶



OUTSIDE GLAZING

Glass panels should not come into contact with the aluminum frame; always use glazing blocks and gaskets. Wedging prevents this contact and also ensures correct positioning of the glass in the frame, distributing the weight equally onto the rollers to avoid deformation.



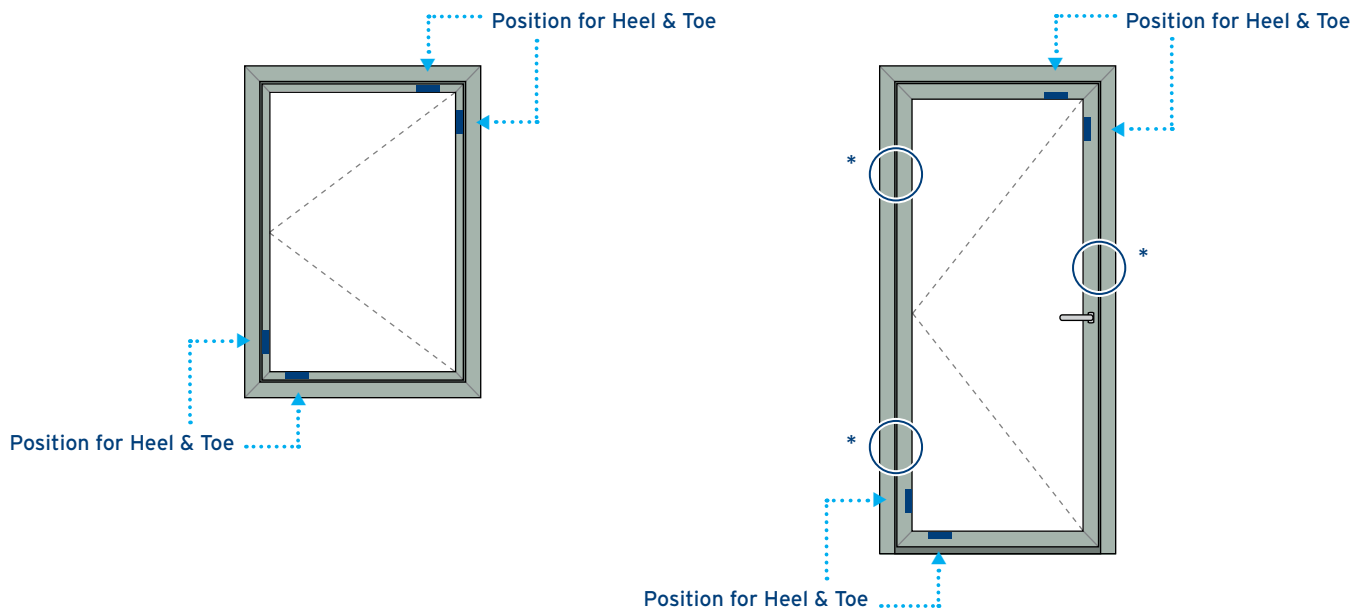
1. Insert glazing blocks and supports.
2. Position the glass with spacers (for detailed instructions, see the following pages). Make sure to leave room for the glazing bead to be twisted in.
3. Clip in glazing beads. Make sure outer gasket is securely attached to the bead.
4. Make sure glazing bead and glass is correctly positioned.
5. Insert inner gasket, making sure it is cut oversized $\frac{1}{4}$ " per foot.



HEEL AND TOE

In order to simplify fixing of the glazing we dispose of glass supports that can be used to level the bottom of the rebate. In this case it will be possible to apply rectangular glazing blocks.

MAIN SASH BOTTOM PANEL



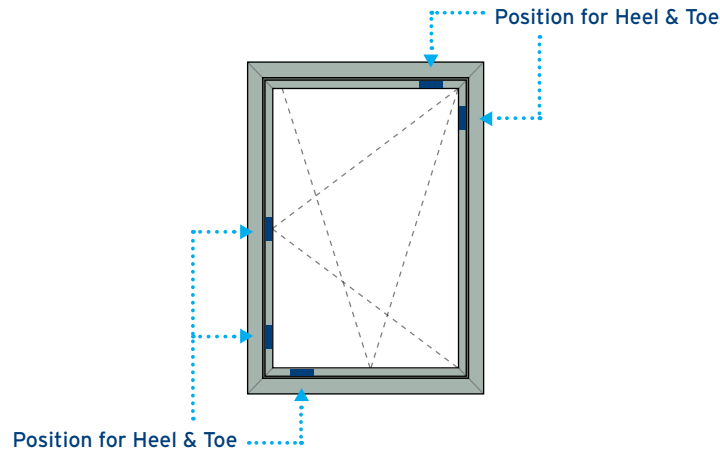
It is most important that the panel is toe & heeled. The toe & heeling of this panel squares up the main door sash to the outer frame.

1. Fit packers to the bottom corner nearest the hinge.
2. Fit packers to the top corner (diagonally opposite). Using the glazing shovel placed in the gap between the panel and the mid rail of the door sash apply pressure on the shovel to lift the whole sash and the panel/unit to ensure that the sash remains parallel with the outer frame.
3. Open, close, lock and unlock the sash/sashes to ensure correct operation.
4. Once you are comfortable that the sash latches and locks correctly apply acrylic sealant to all packers to hold them in place (under no circumstances should silicone be used as silicone will break down the hot melts of DGU's).
5. Bead up the sash/sashes as normal taking care not to dislodge the packers.

* Solid fixings required at hinge and lock points.

NOTE: When packing, the handle needs to be in the unlocked position, with the door closed on its latch.

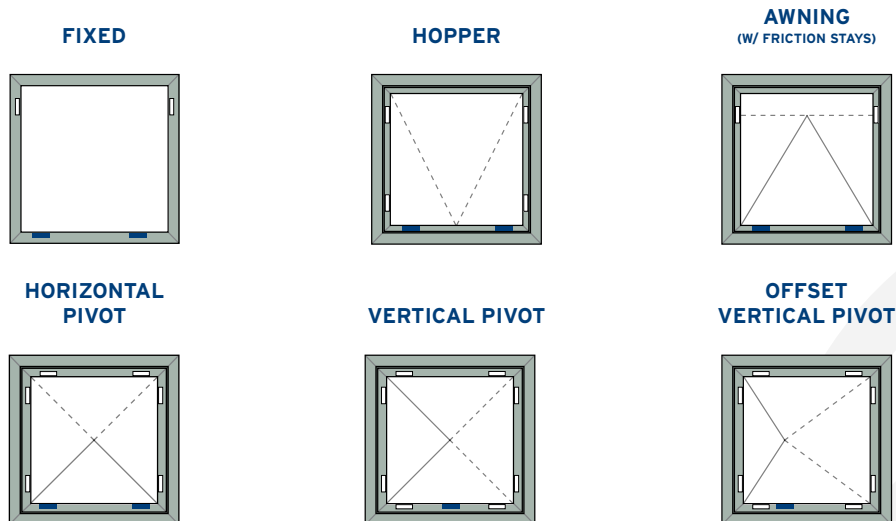
TILT & TURN (DAW) INWARD OPENING SASH



1. Fit packers to the bottom corner nearest the hinge.
2. Fit packers to the top corner (diagonally opposite). Using the glazing shovel placed in the gap between the unit and the top rail of the tilt & turn sash apply pressure on the shovel to lift the whole sash so that it is parallel to the door sash. Place additional packers as required between the sash and the unit to ensure that the sash remains parallel with the door sash.
3. Fit packers in the middle of the tilt & turn sash on the hinge side between the unit and the sash using the glazing shovel (if required) placed between the unit and the sash just above the tilt & turn handle, apply pressure on the shovel to ensure the tilt & turn sash and the door sash are parallel. Place packers as required between the tilt & turn unit to ensure both jambs remain parallel.
4. Open, close, lock and unlock the tilt & turn sash to ensure correct operation.
5. Bead up the sash as normal taking care not to dislodge the packers.

ADDITIONAL TYPES

The following sketches indicate the different glazing blocks in different types of windows:





3. ADDITIONAL NOTES



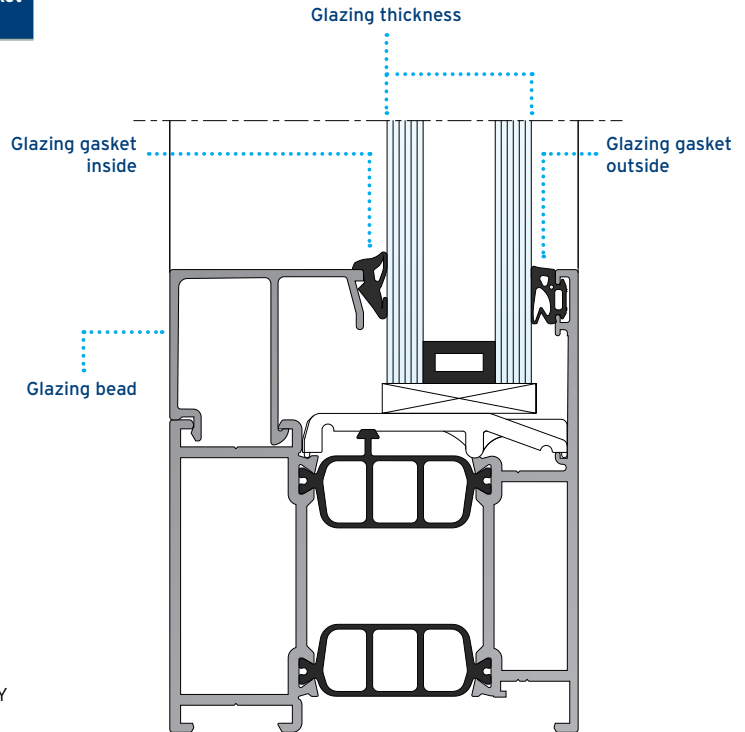


3.1. GLAZING TABLE

In the table below you will be able to look up what glazing bead as well as which inner and outer gasket to use at different glazing thicknesses. Thicknesses marked with (!) have recessed versions of the glazing bead.

FIXED WINDOWS, OUTWARD OPENING WINDOWS AND DOORS

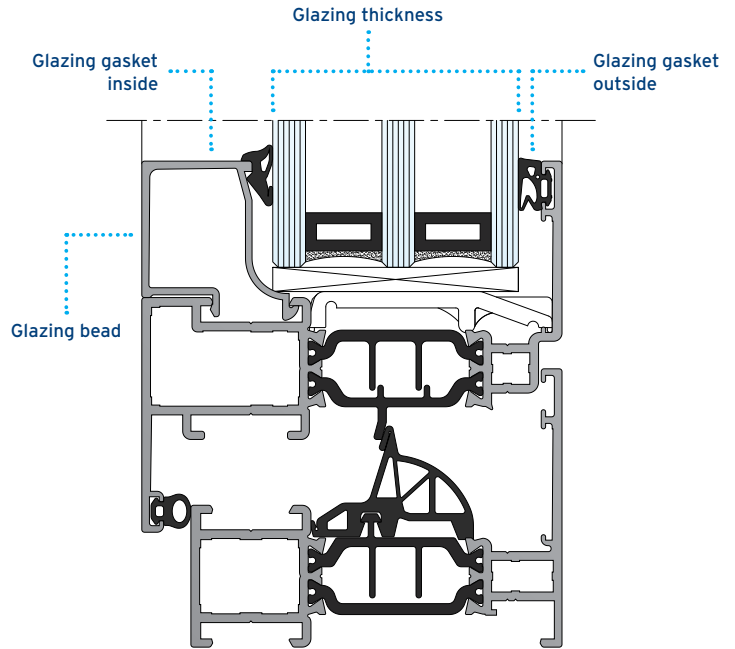
Glazing bead	Glazing gasket inside	Glazing thickness	Glazing gasket outside
030.3619.XX	080.9128.04	4 mm	080.9114.SY
		5 mm	
	080.9126.SY	6 mm	
		7 mm	
		8 mm	
030.3618.XX	080.9126.SY	9 mm	
		10 mm	
	080.9125.SY	11 mm	
030.3617.XX	080.9126.SY	12 mm	
		13 mm	
	080.9125.SY	14 mm	
030.3616.XX	080.9126.SY	15 mm	
		16 mm	
	080.9125.SY	17 mm	
030.3615.XX	080.9126.SY	18 mm	
		19 mm	
	080.9125.SY	20 mm	
030.3614.XX	080.9126.SY	21 mm	
		22 mm	
	080.9125.SY	23 mm	
030.3613.XX	080.9126.SY	24 mm	
		25 mm	
	080.9125.SY	26 mm	
030.3612.XX	080.9126.SY	27 mm	
		28 mm	
	080.9125.SY	29 mm	
030.3611.XX	080.9126.SY	30 mm	
		31 mm	
	080.9125.SY	32 mm	
030.3610.XX	080.9126.SY	33 mm	
		34 mm	
	080.9125.SY	35 mm	
030.3609.XX	080.9126.SY	36 mm	
		37 mm	
	080.9125.SY	38 mm	
	080.9124.SY	39 mm	



Glazing bead	Glazing gasket inside	Glazing thickness	Glazing gasket outside
030.3608.XX	080.9126.SY	40 mm	080.9114.SY
	080.9125.SY	41 mm	
	080.9124.SY	42 mm	
030.3607.XX	080.9126.SY	43 (!) mm	
	080.9125.SY	44 (!) mm	
	080.9124.SY	45 (!) mm	
030.3606.XX	080.9126.SY	46 (!) mm	
	080.9125.SY	47 (!) mm	
	080.9124.SY	48 (!) mm	
030.3200.XX	080.9126.SY	49 (!) mm	
		50 (!) mm	
	080.9125.SY	51 (!) mm	
	080.9124.SY	52 (!) mm	

INWARD OPENING WINDOWS

Glazing bead	Glazing gasket inside	Glazing thickness	Glazing gasket outside
030.3639.XX	080.9128.04	4 mm	
		5 mm	
	080.9126.SY	6 mm	
		7 mm	
	080.9125.SY	8 mm	
030.3638.XX	080.9124.SY	9 mm	
	080.9126.SY	10 mm	
	080.9125.SY	11 mm	
030.3637.XX	080.9124.SY	12 mm	
	080.9126.SY	13 mm	
	080.9125.SY	14 mm	
030.3636.XX	080.9124.SY	15 mm	
	080.9126.SY	16 mm	
	080.9125.SY	17 mm	
030.3635.XX	080.9124.SY	18 mm	
	080.9126.SY	19 mm	
	080.9125.SY	20 mm	
030.3634.XX	080.9124.SY	21 mm	
	080.9126.SY	22 mm	
	080.9125.SY	23 mm	
030.3633.XX	080.9124.SY	24 mm	
	080.9126.SY	25 mm	
	080.9125.SY	26 mm	
030.3632.XX	080.9124.SY	27 mm	
	080.9126.SY	28 mm	
	080.9125.SY	29 mm	
030.3631.XX	080.9124.SY	30 mm	
	080.9126.SY	31 mm	
	080.9125.SY	32 mm	
030.3630.XX	080.9124.SY	33 mm	
	080.9126.SY	34 mm	
	080.9125.SY	35 mm	
030.3629.XX	080.9124.SY	36 mm	
	080.9126.SY	37 mm	
	080.9125.SY	38 mm	
030.3628.XX	080.9124.SY	39 mm	
	080.9126.SY	40 mm	
	080.9125.SY	41 mm	
030.3627.XX	080.9124.SY	42 mm	
	080.9126.SY	43 (!) mm	
	080.9125.SY	44 (!) mm	
	080.9124.SY	45 (!) mm	

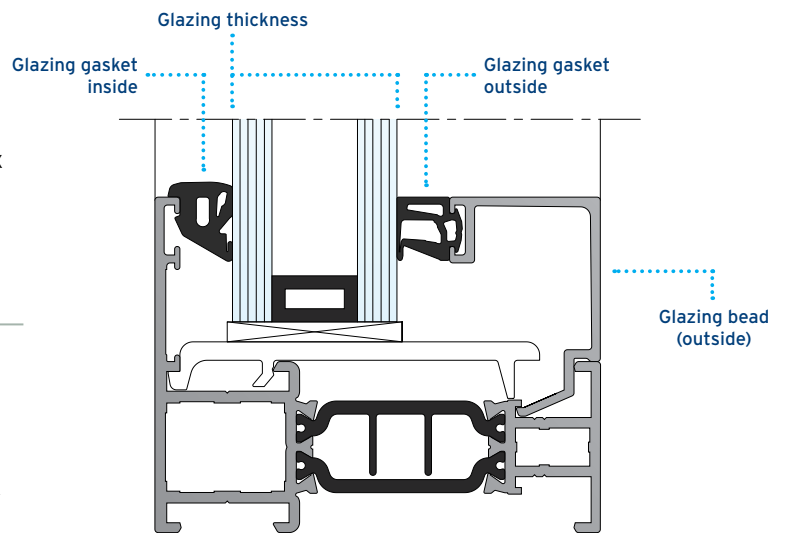


080.9114.SY

Glazing bead	Glazing gasket inside	Glazing thickness	Glazing gasket outside
030.3626.XX	080.9126.SY	46 (!) mm	080.9114.SY
	080.9125.SY	47 (!) mm	
	080.9124.SY	48 (!) mm	
030.3197.XX	080.9126.SY	49 (!) mm	080.9116.04
	080.9125.SY	50 (!) mm	
	080.9124.SY	51 (!) mm	
030.3196.XX	080.9130.04	52 (!) mm	080.9114.SY
	080.9128.04	53 (!) mm	
	080.9130.04	54 (!) mm	
	080.9128.SY	55 (!) mm	
	080.9126.SY	56 (!) mm	
	080.9125.SY	57 (!) mm	
030.3621.XX	080.9124.SY	58 (!) mm	080.9114.SY
	080.9126.SY	59 (!) mm	
	080.9125.SY	60 (!) mm	
030.3621.XX	080.9126.SY	61 (!) mm	080.9114.SY
	080.9125.SY	62 (!) mm	
	080.9124.SY	63 (!) mm	

OUTSIDE GLAZED FIXED WINDOWS

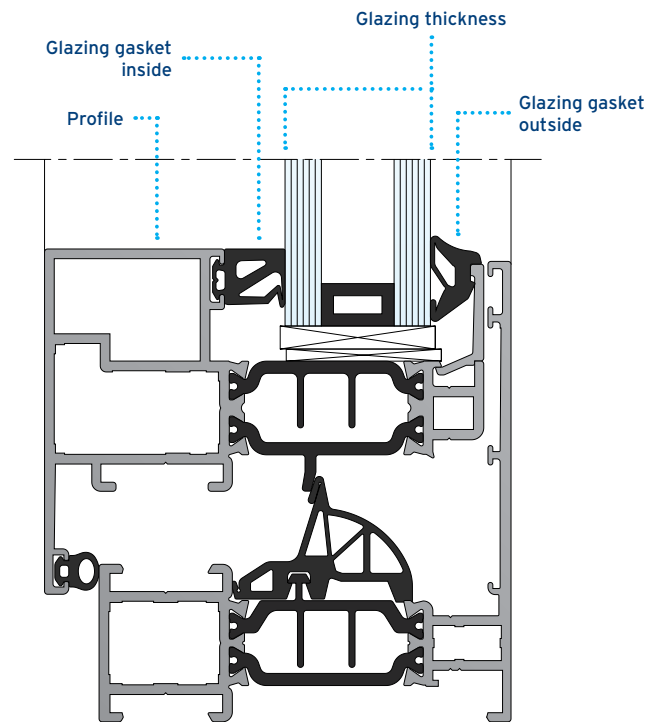
Glazing gasket outside	Glazing thickness	Glazing gasket inside	Glazing bead		
080.9120	4 mm	080.9128.04	030.3899.XX		
	5 mm				
080.9118.04	6 mm				
	7 mm				
080.9116.04	8 mm				
	9 mm				
080.9114.SY	10 mm				
	11 mm				
080.9120.04	12 mm			080.9130.04	030.3898.XX
	13 mm			080.9128.04	
080.9118.04	14 mm	080.9130.04			
	15 mm	080.9128.04			
080.9116.04	16 mm	080.9130.04			
	17 mm	080.9128.04			
080.9114.SY	18 mm	080.9130.04			
	19 mm	080.9128.04			
20 mm					
080.9120.04	21 mm	080.9130.04	030.3897.XX		
	22 mm	080.9128.04			
080.9118.04	23 mm	080.9130.04			
	24 mm	080.9128.04			
080.9116.04	25 mm	080.9130.04			
	26 mm	080.9128.04			
080.9114.SY	27 mm	080.9130.04			
	28 mm	080.9128.04			
29 mm					
080.9120.04	30 mm	080.9130.04		030.3896.XX	
	31 mm	080.9128.04			
080.9118.04	32 mm	080.9130.04			
	33 mm	080.9128.04			
080.9116.04	34 mm	080.9130.04			
	35 mm	080.9128.04			
080.9114.SY	36 mm	080.9130.04			
	37 mm	080.9128.04			
	38 mm				
	39 mm				





HIDDEN VENT WINDOWS

Profile	Glazing gasket inside	Glazing thickness	Glazing gasket outside	
008.2504.XX	080.9120.04	21 mm	080.9130.04	
		22 mm	080.9128.04	
		23 mm	080.9126.SY	
		24 mm		
		25 mm	080.9125.SY	
	080.9118.04	080.9118.04	26 mm	080.9126.SY
			27 mm	080.9125.SY
		080.9116.04	28 mm	080.9124.SY
			29 mm	080.9125.SY
	080.9114.SY (*)	080.9114.SY (*)	30 mm	080.9124.SY
			31 mm	080.9125.SY
	008.2503.XX	080.9120.04	32 mm	080.9124.SY
33 mm			080.9125.SY	
080.9118.04		080.9118.04	34 mm	080.9126.SY
			35 mm	080.9125.SY
		080.9116.04	36 mm	080.9124.SY
37 mm			080.9125.SY	
080.9114.SY (*)		080.9114.SY (*)	38 mm	080.9124.SY
			39 mm	080.9125.SY
	40 mm		080.9124.SY	
008.2502.XX	080.9120.04	41 mm	080.9125.SY	
		42 mm	080.9126.SY	
	080.9118.04	080.9118.04	43 mm	080.9125.SY
			44 mm	080.9124.SY
		080.9116.04	45 mm	080.9125.SY
	46 mm		080.9124.SY	
	080.9114.SY (*)	080.9114.SY (*)	47 mm	080.9125.SY
48 mm			080.9124.SY	
49 mm			080.9124.SY	







NEED VISUAL GUIDANCE?

Reynaers has its own dedicated YouTube channel with product & training videos among other interesting videos. Either scan the QR code in the top left of the page or follow the link below:

 www.youtube.com/ReynaersAluminium



TOGETHER FOR BETTER

REYNAERS INC.

21430 N 15th Ln, Ste 100 · Phoenix, AZ 85027

t (480) 272-9688 · f (623) 455-9146

www.reynaers.us · info@reynaers.us