



## Series 412 ViewMASTER™ Bi-fold Door

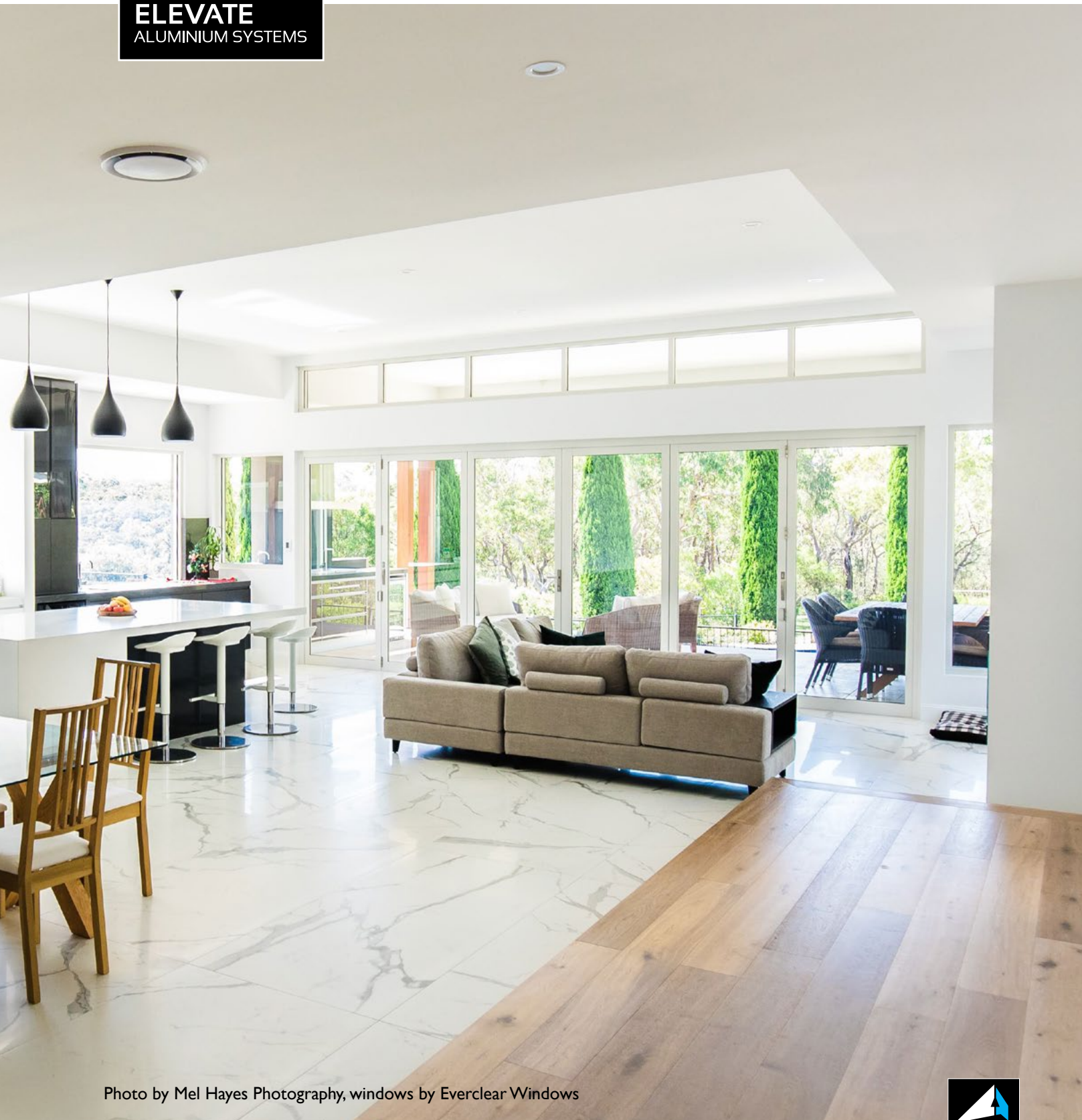


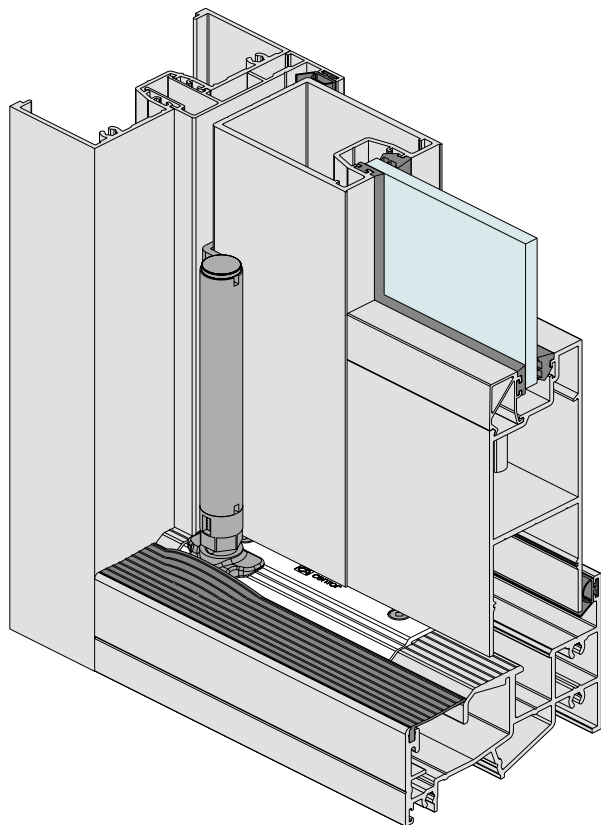
Photo by Mel Hayes Photography, windows by Everclear Windows



# Series 412 ViewMASTER™ BI-FOLD DOOR

DATE: AUG 20  
REPLACES: MAY 13  
SCALE: NOT TO SCALE

## KEY FEATURES/PERFORMANCE CHARACTERISTICS



Series 412 ViewMASTER™ Bi-fold Door  
External view.

- Series 412 Bi-fold door (bottom rollers) has been designed to accept the 50mm thick heavy duty Series 50 and 52 doors.
- Can be manufactured with compliant panels up to 3000mm high (refer span tables).
- Bi-fold doors roll on Centor™ F3 stainless steel bearing rollers running in heavy duty concealed sill track.
- Heavy duty F3 will carry door panels up to 80kg.
- The Surelock™ adjustment on the bottom pivots and carriers allow all panels to be lifted or lowered easily with a small flat screwdriver and spanner.
- Sill rollers and pivots are positioned under the door panels and covered with flexible co-extruded Santoprene flap. This sill flap folds over the sill carrier brackets as they roll along the sill.
- The sill flap keeps dust and water away from the sill rollers.
- As the rollers are under the doors there is no external projections. The 102mm frame is flush inside and out.
- Carriers, pivots, hinges and fixings supplied in 304 / 316 stainless steel.
- Top guide runs in semi rigid PVC channel insert to reduce noise.
- Snap-on jamb adapter allows us to offer an extensive range of jambs to cover almost any situation.
- Run through conventional CentreGLAZE™ jambs allow us to offer highlights over bi-fold doors with run through jambs. Run through jambs are significantly stronger and waterproof.
- A variety of lever and lock options including multi-point and lever compression locking for added security and improved weather performance.
- Successfully tested to resist 300Pa water and suitable for air conditioned buildings when weather resisting sill is used.
- Can be configured to incorporate single or double entry doors so access can be achieved without opening the whole unit.
- We can fit Centor™ SIE roller flyscreens behind Series 412 bi-fold doors, details of SIE flyscreen shown in this section.

Maximum Panel Height*	3000mm
Maximum Panel Width*	1000mm
Maximum Glass Thickness	≤34mm

\* Subject to individual site conditions and wind loads. Contact AWS Technical Support for more information, Email [techsupport@awsaustralia.com.au](mailto:techsupport@awsaustralia.com.au)



### 2D & 3D CAD FILES AVAILABLE

To access 2D & 3D CAD models visit our online specifier resource centre  
[www.specifyaws.com.au](http://www.specifyaws.com.au)



### MORE INFORMATION

For the latest updates regarding this product visit our website  
[www.elevatealuminium.com.au/412](http://www.elevatealuminium.com.au/412)

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## SOUND REDUCTION

A number of glass combinations have been tested with this system to achieve sound reduction numbers listed below.

Glass Description	Rating
6.5mm Laminated glass	Rw28
8.38 Laminated glass	Rw31

NOTE: The actual tests were carried out on a product very similar to this window (Series 411).

## HOW TO SPECIFY

### SYSTEM NAME

Elevate™ Aluminium Systems Series  
412 ViewMASTER™ Bi-fold Door

### FINISH

Powder Coat  
Anodised

### COLOUR

Select from the AWS range of approved powder coat or anodising colours

### GLASS

Specify thickness ≤ 24mm

Specify thermal performance where applicable (Uv & SHGC)

Specify acoustic performance where applicable (RW)



### Specification Assistance

Need help specifying this product? Email [techsupport@awsaustralia.com.au](mailto:techsupport@awsaustralia.com.au) and our qualified technical advisors will assist you with product selection and specification for your project.

# Series 412 ViewMASTER™ BI-FOLD DOOR

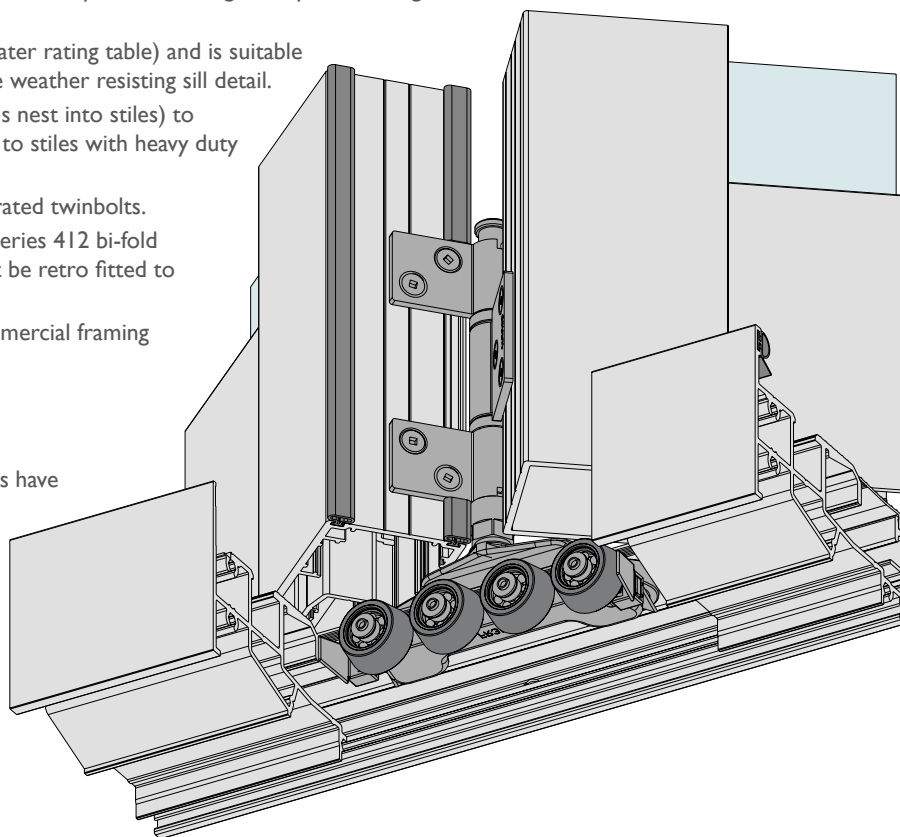
DATE: AUG 20  
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## DESIGN FEATURES

- The Elevate™ Series 412 ViewMASTER™ bottom rolling Bi-fold door has been designed to accept the 50mm thick heavy duty Series 50 and 52 doors. 50mm thick doors are almost 70% stronger than conventional 45mm thick doors. This allows us to make this Bi-fold door up to 3000mm high.
- Bi-fold doors roll on Centor™ F3 stainless steel bearing rollers running in heavy duty track.  
The heavy duty F3 roller will carry door panels up to 80Kg.
- The detail below shows the heavy duty quad articulated intermediate carrier. The detail also shows the track sweeps positioned both sides of the rollers. These sweeps as the name implies sweep the track in front of rollers.
- The Surelock™ adjustment on the bottom pivots and carriers allow all panels to be lifted or lowered to follow head and sill easily. Adjustment is done with a small flat screwdriver and spanner. As the structure (building) settles the doors can be adjusted to suit.
- Top carrier guides are fitted with side-thrust roller. These stainless steel rollers run in semi rigid PVC channel to reduce noise.
- Carriers, pivots, hinges and accompanying fixings come in 304 / 316 stainless steel as standard.
- The bottom rollers are positioned under the door panel and are covered with flexible co-extruded Santoprene flap.
- Bottom rolling bi-fold doors are ideal for renovation installations as you don't need a steel beam over to support the weight of the door panels.
- Rebated French door stiles give a flush appearance when the two doors meet (e.g. 3L1R and 3L3R) and provide superior weather protection.
- Concealed lock keeper specially designed to fit in the cavity on the leading edge of the "lazy side" door. This recessed keeper plus the rebated stile makes it difficult for intruders to access the latch and bolt for forced entry.
- With the snap-on jamb adaptor we can offer a very extensive range of jambs to cover almost any situation. This includes the nailing fin residential jambs.
- Bi-fold door with highlights have run through jambs to make the unit more stable and waterproof.
- The highlights can be fixed glazing, adjustable glass louvres or awning sashes. Highlight awning sashes can be fitted with concealed electric winders for the ultimate finish.
- Doors can be supplied with a variety of lever lock options including multi point locking for added security.
- Successfully water tested at 300Pa (refer water rating table) and is suitable for air-conditioned buildings when using the weather resisting sill detail.
- Seamless type door panel construction (rails nest into stiles) to conceal the assembly joint. Rails connected to stiles with heavy duty spigots.
- Bi-fold panels can be secured with key operated twinbolts.
- We can fit Centor roller flyscreen behind Series 412 bi-fold doors. Please note this flydoor system can't be retro fitted to existing Bi-fold.
- Compatible with most 102mm Elevate commercial framing and window systems

### Limitations:

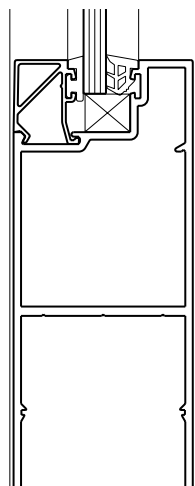
- The flat door sill and internal opening doors have no water resistance rating and are not suitable for airconditioned buildings.



# Series 412 ViewMASTER™ BI-FOLD DOOR

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**DOOR OPTIONS** Elevate™ offers two different types of doors that are suitable for Series 412 ViewMASTER™ as shown below.



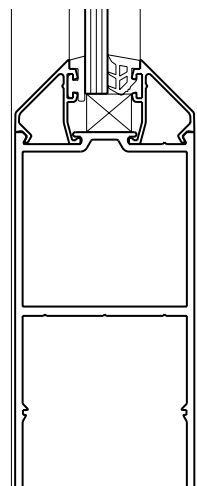
**Series 50**  
Horizontal external glazing beads only on rails with wrap around stiles. Heavy duty extruded aluminium corner spigot joinery.

Series 50 doors are about 34% stronger than Series 52,

Series 50 will accept glass from 4mm to 10.50mm thick.

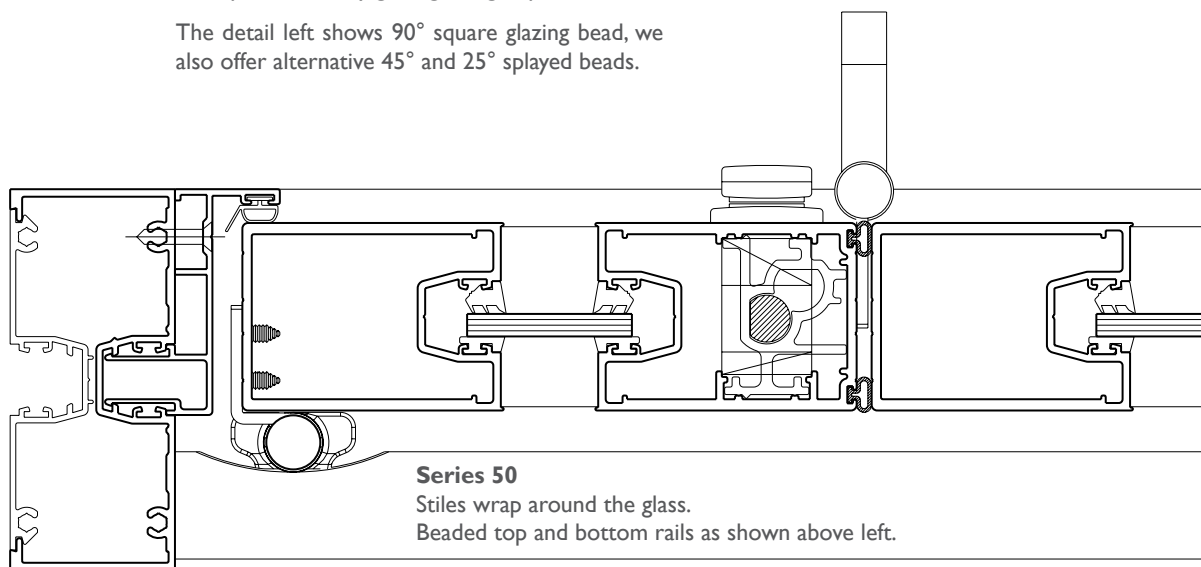
Tall braced glazing beads with captive co-extruded Santoprene security glazing wedge option.

The detail left shows 90° square glazing bead, we also offer alternative 45° and 25° splayed beads.



**Series 52**  
Fully beaded (inside and out) on rails and stiles with heavy duty extruded aluminium corner spigot joinery.

We offer a large variety of glazing beads to cover glass thickness from 4mm to 34mm thick.



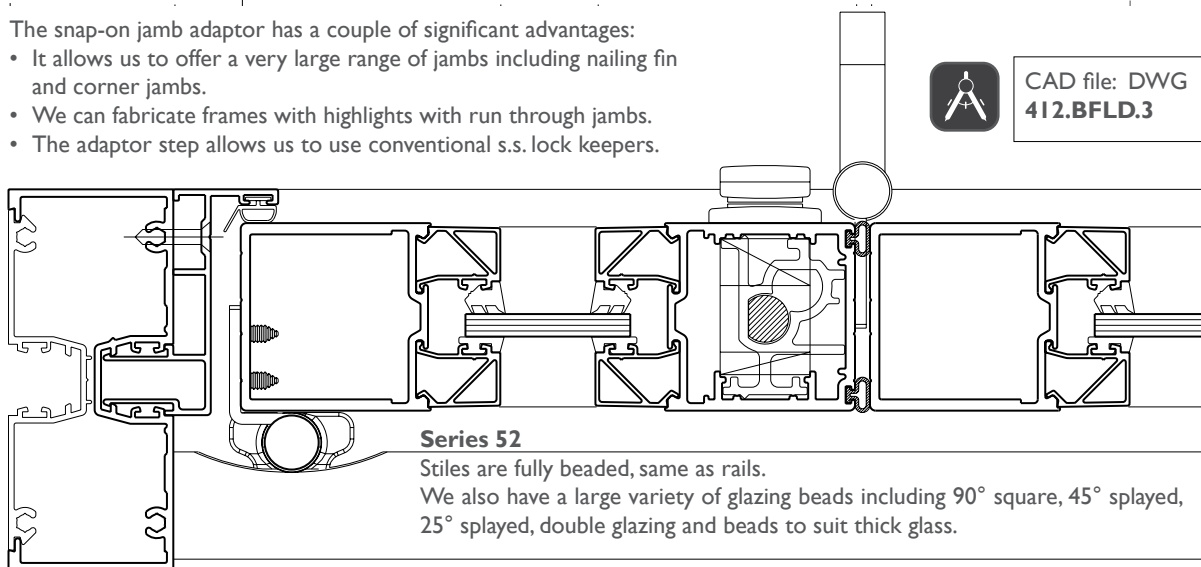
**Series 50**  
Stiles wrap around the glass.  
Beaded top and bottom rails as shown above left.

The snap-on jamb adaptor has a couple of significant advantages:

- It allows us to offer a very large range of jambs including nailing fin and corner jambs.
- We can fabricate frames with highlights with run through jambs.
- The adaptor step allows us to use conventional s.s. lock keepers.



CAD file: DWG  
412.BFLD.3

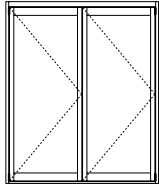


**Series 52**  
Stiles are fully beaded, same as rails.  
We also have a large variety of glazing beads including 90° square, 45° splayed, 25° splayed, double glazing and beads to suit thick glass.

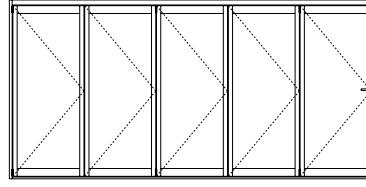
# Series 412 ViewMASTER™ BI-FOLD DOOR

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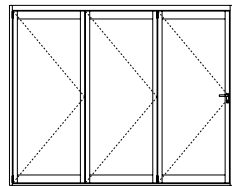
## PRODUCT RANGE & LIMITATIONS



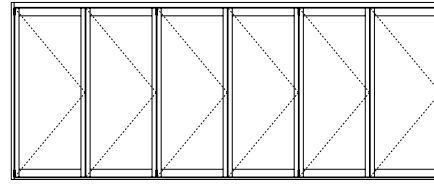
**type 2L**  
Doors fold to one side with no loose leaves.  
Min. width = 1528mm  
Max. width = 2128mm



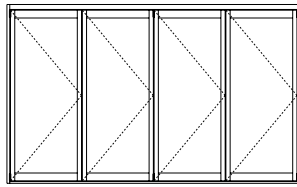
**type 5L**  
Doors fold to one side with one loose leaf on the end.  
Min. width = 3640mm  
Max. width = 5140mm



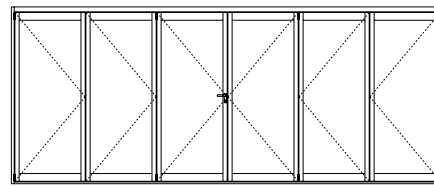
**type 3L**  
Doors fold to one side with one loose leaf on the end.  
Min. width = 2232mm  
Max. width = 3132mm



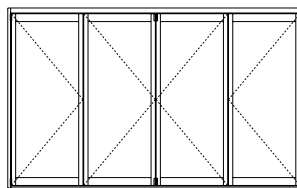
**type 6L**  
Doors fold to one side with no loose leaves.  
Min. width = 4344mm  
Max. width = 6144mm



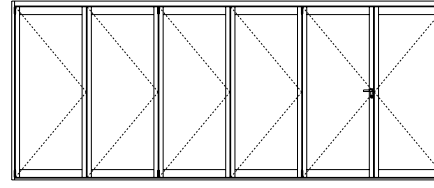
**type 4L**  
Doors fold to one side with no loose leaves.  
Min. width = 2936mm  
Max. width = 4136mm



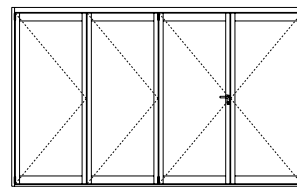
**type 3L3R**  
Doors fold to both sides with pair of French doors.  
Min. width = 4344mm  
Max. width = 6144mm



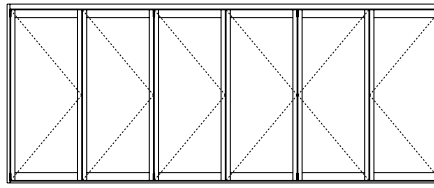
**type 2L2R**  
Doors fold to both sides with no loose leaves.  
Min. width = 2936mm  
Max. width = 4136mm



**type 5L1R**  
Doors fold to one side with pair of French doors at end.  
Min. width = 4344mm  
Max. width = 6144mm



**type 3L1R**  
Doors fold to one side with pair of French doors at end.  
Min. width = 2936mm  
Max. width = 4136mm



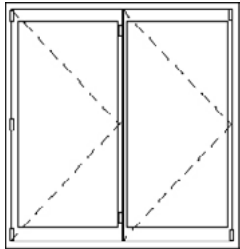
**type 4L2R**  
Doors fold to both sides with no loose leaves.  
Min. width = 4344mm  
Max. width = 6144mm



# Series 412 ViewMASTER™ BI-FOLD DOOR

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## PERFORMANCE & LIMITATIONS



Typical example  
type.2L

### Important Notes:

The Ratings listed right cover the strength of the stile only.

**S** = Serviceability limit state (deflection = L/180 and L/250).

**U** = Ultimate strength limit state (factored yield strength = 104 MPa).

These tables have been calculated using section properties.

Serviceability strength rating has been limited to 3333 Pa and Ultimate strength rating has been limited to 5000 Pa.

### Bi-fold Door Meeting Stile Strength Guide

Panel Height mm	Panel Width mm	Series 50			Series 52		
		S (Pa)	S (Pa)	U (Pa)	S (Pa)	S (Pa)	U (Pa)
		I/180	I/250		I/180	I/250	
2100	700	2627	1891	5000	1957	1409	4550
2100	800	2331	1678	5000	1736	1250	4029
2100	900	2105	1516	4890	1568	1129	3630
2100	1000	1929	1389	4469	1437	1035	3318
2400	700	1741	1254	4651	1297	934	3453
2400	800	1540	1109	4106	1147	826	3048
2400	900	1385	997	3687	1032	743	2738
2400	1000	1264	910	3357	942	678	2493
2700	700	1214	874	3562	904	651	2711
2700	800	1071	771	3218	798	575	2389
2700	900	961	692	2884	716	516	2141
2700	1000	874	630	2619	651	-	1944
3000	700	880	634	2945	656	-	2187
3000	800	776	558	2592	578	-	1924
3000	900	695	500	2319	518	-	1722
3000	1000	631	-	2102	-	-	-

Wind Ratings (Pa) Bi-fold door meeting stiles.

Applies to those doors that don't have French meeting stiles:

2L, 2LIR, 3L, 4L, 2L2R, 4LIR, 3L2R, 5L, 4L2R, 6L, 2R, 2RIL, 3R, 4R, 4RIL, 3R2L, 5R, 4R2L and 6R.

The following configurations are slightly weaker as they contain one set of French meeting stiles: 3LIR, 5LIR, 3L3R, 3RIL and 5RIL.

For this meeting stile combination go to the Series 400 swing door Pa tables.

### Maximum Bi-fold Door Panel Sizes

Maximum panel weight 80 kg per panel.

Minimum panel width 700mm (on equal panel doors without loose door leaf - 2L, 2R, 4L, 4R, 6L, 6R, 2L2R, 2L4R & 4L2R)  
600mm (on remaining door types with a loose leaf in the configuration).

Maximum panel width 1000mm

Maximum panel height 3000mm

Panel sizes will vary depending on weight, design wind load and allowable metal deflection.

Double glazed doors may be limited by the availability of large IGU panels.

Hinge quantity 3. hinges - height less than or equal to 2200mm

4. hinges - height greater than to 2200mm

When using four hinges we recommend that the lower central inner hinge has the pull handle.

### Sound Transmission Loss

Door glazed with 6.38mm laminated glass rates Rw28 (A)

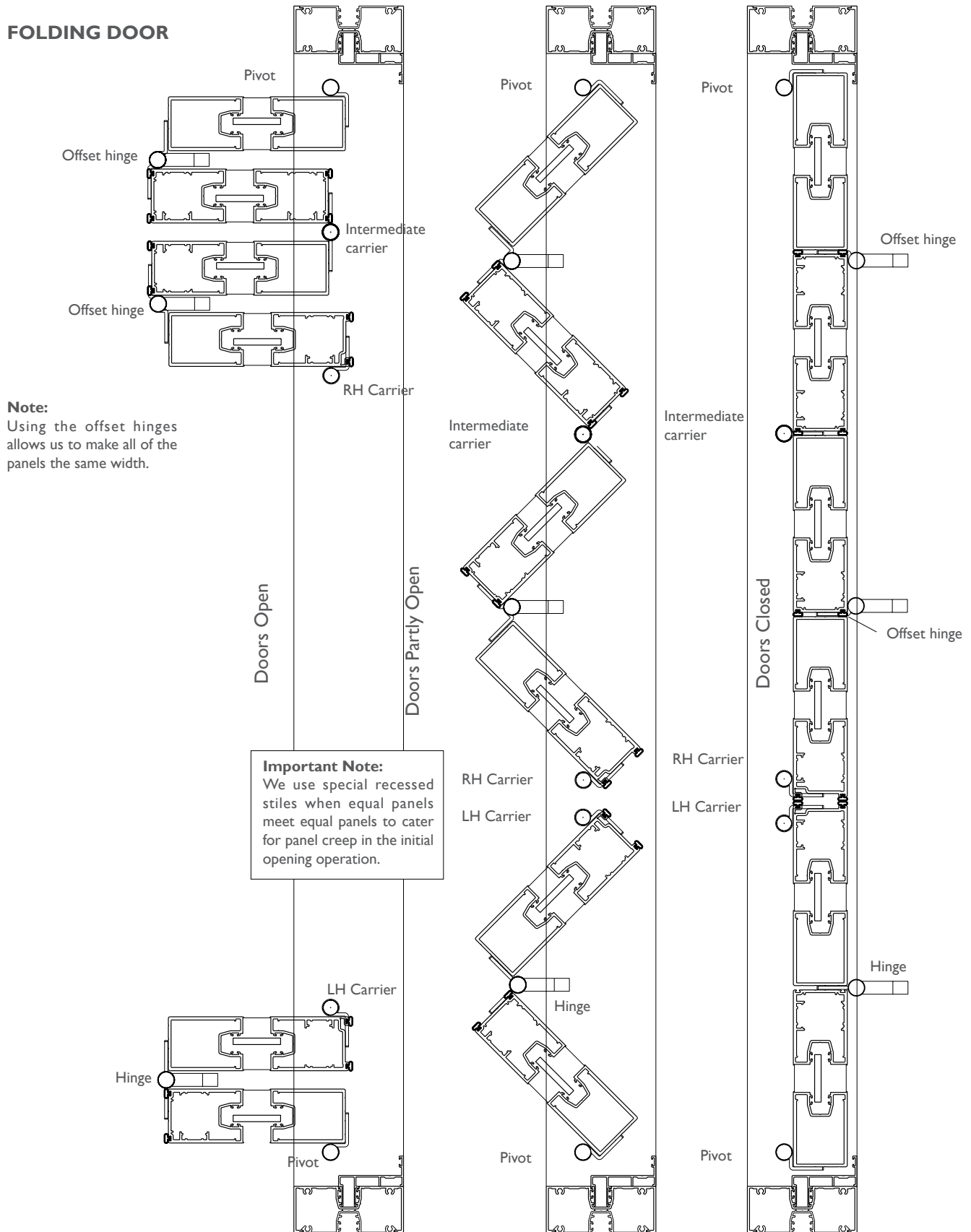
Door glazed with 19mm IGU made up of two layers of 5mm toughened glass rates 32 dB(A)

Based on tests carried out on a similar product (Series 548).

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## FOLDING DOOR





# Series 412 ViewMASTER™ BI-FOLD DOOR

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## F3 HEAD

Head bolted to structure @ 600mm maximum centres.

Semi rigid PVC head insert channel to reduce roller noise.

### Water Resistance:

E3 head shown on this page has been tested to resist 300Pa water.

Stainless steel head guide roller.

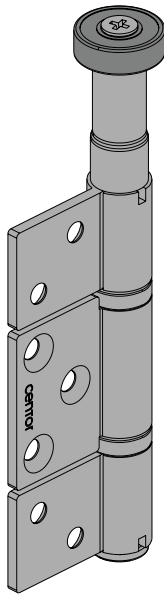
Recess in the external edge of head section acts as a drip groove and encourages water to leave the frame.

Weatherpile seal.

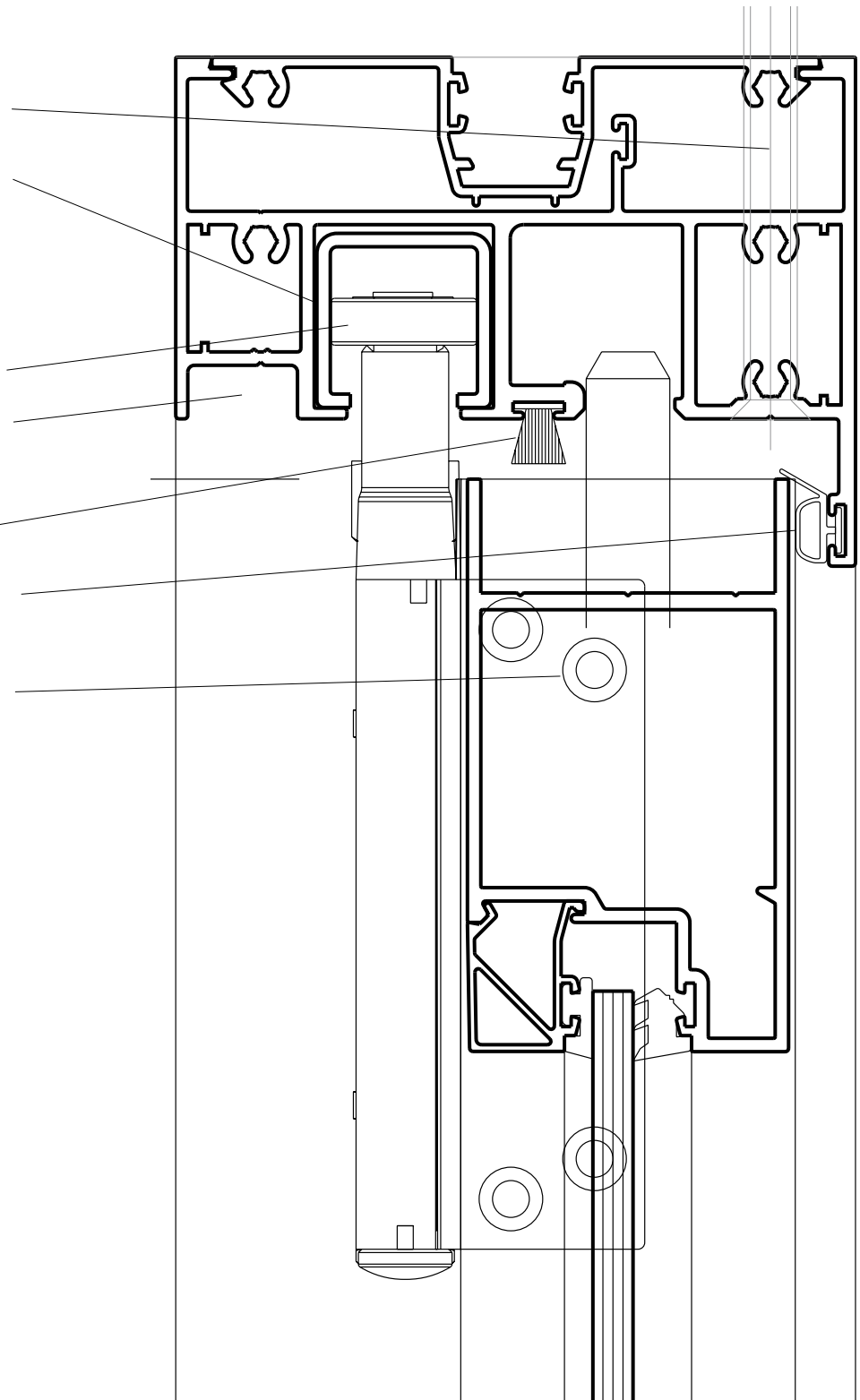
Co-extruded Santoprene bulb seal.

Stainless steel hinges secured to door stiles with 10# countersunk stainless steel self tapping screws.

Type F3 stainless steel top intermediate roller guide assembly.



This top guide carries no vertical loading. All weight is carried by the articulated bottom rollers. There is approximately 5mm plus and minus adjustment in this top guide. The detail right shows the guide in the nominal location.

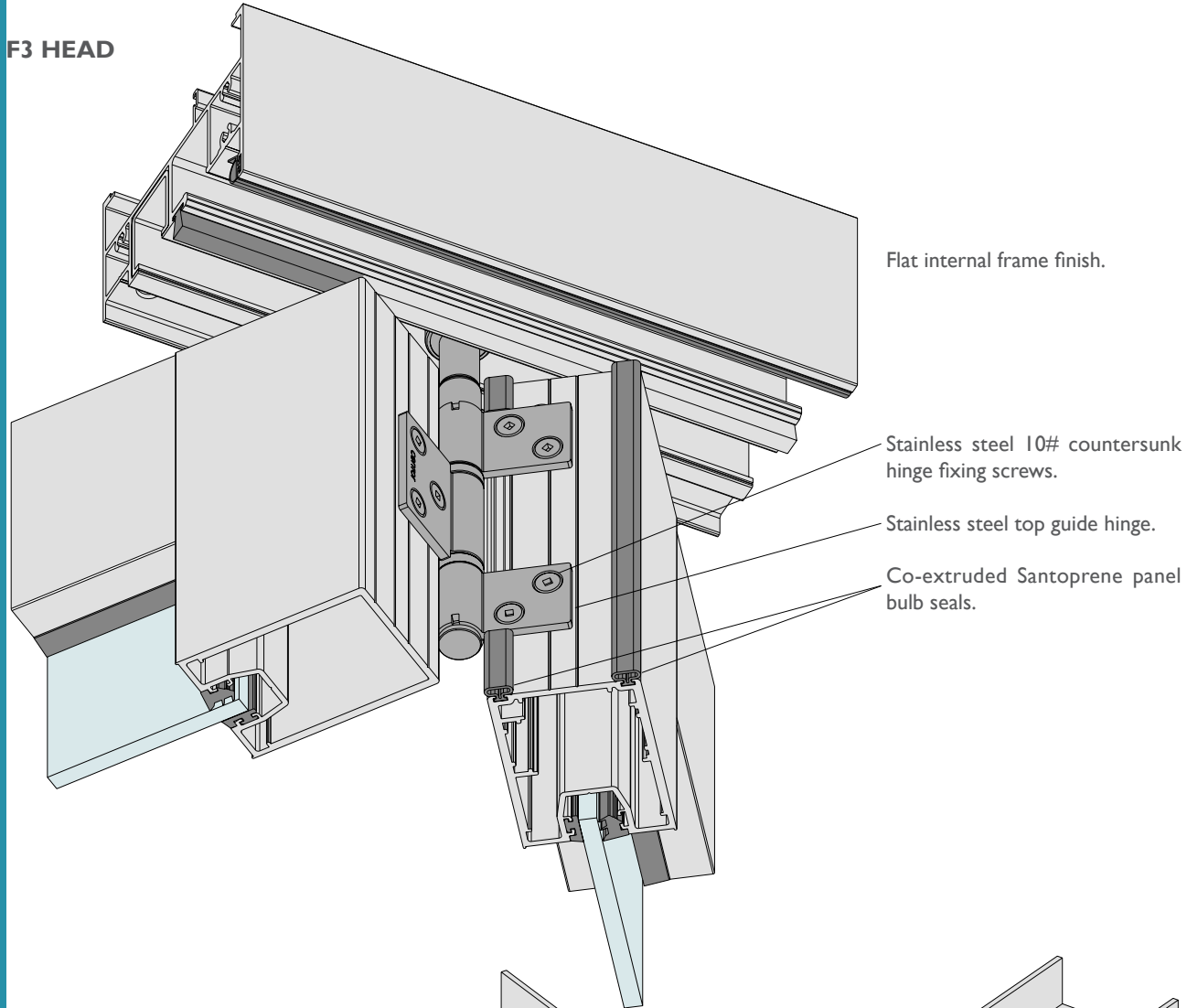


CAD file: DWG  
412.BFLD.1

# Series 412 ViewMASTER™ BI-FOLD DOOR

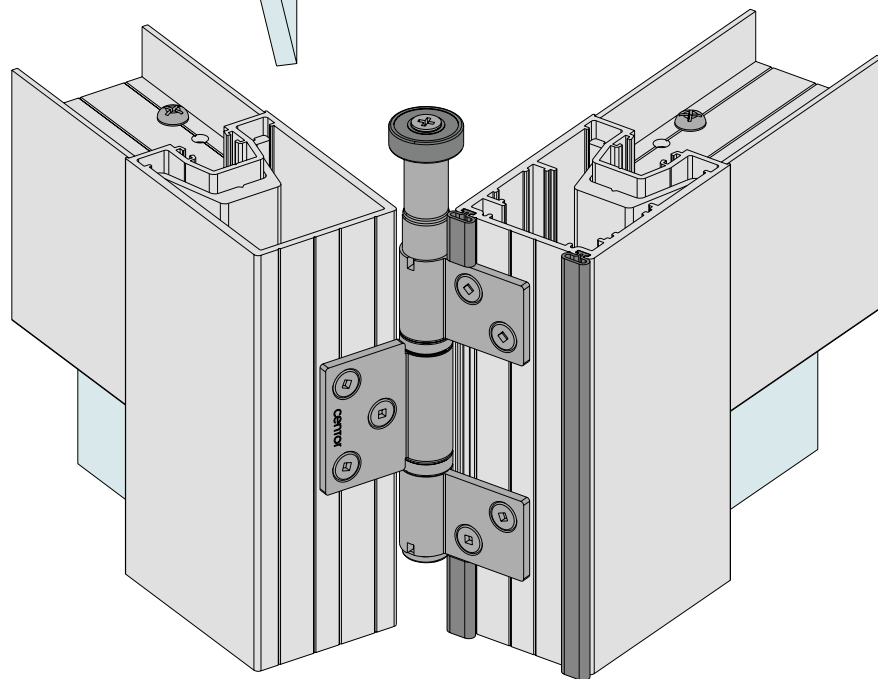
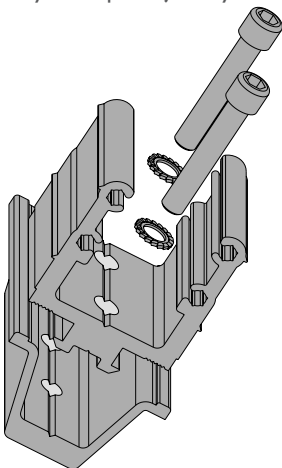
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## F3 HEAD



Top guide stainless steel roller bearing running in semi-rigid PVC insert.

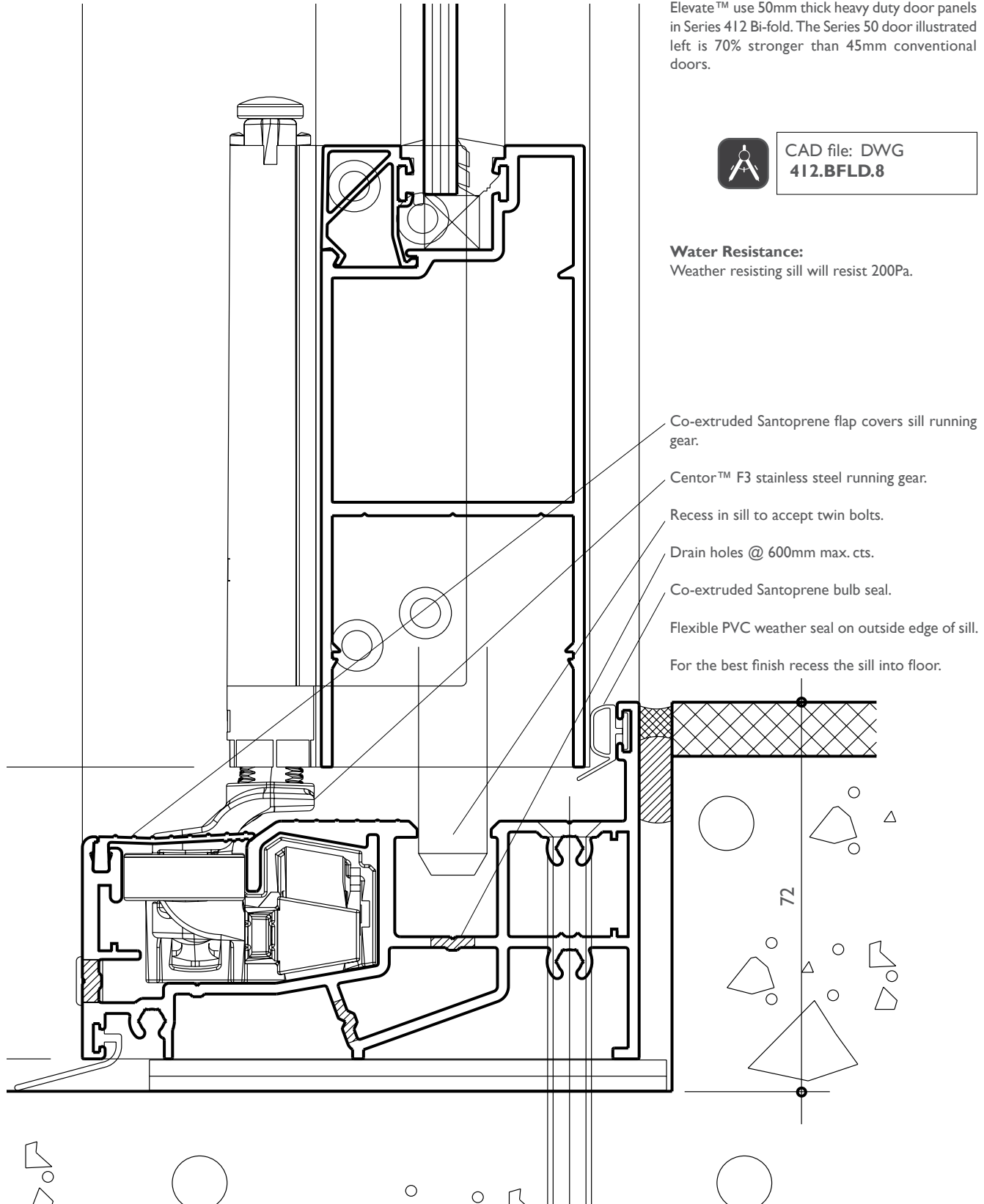
Heavy duty door panel joinery.



# Series 412 ViewMASTER™ BI-FOLD DOOR

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## SILL - WEATHER RESISTING

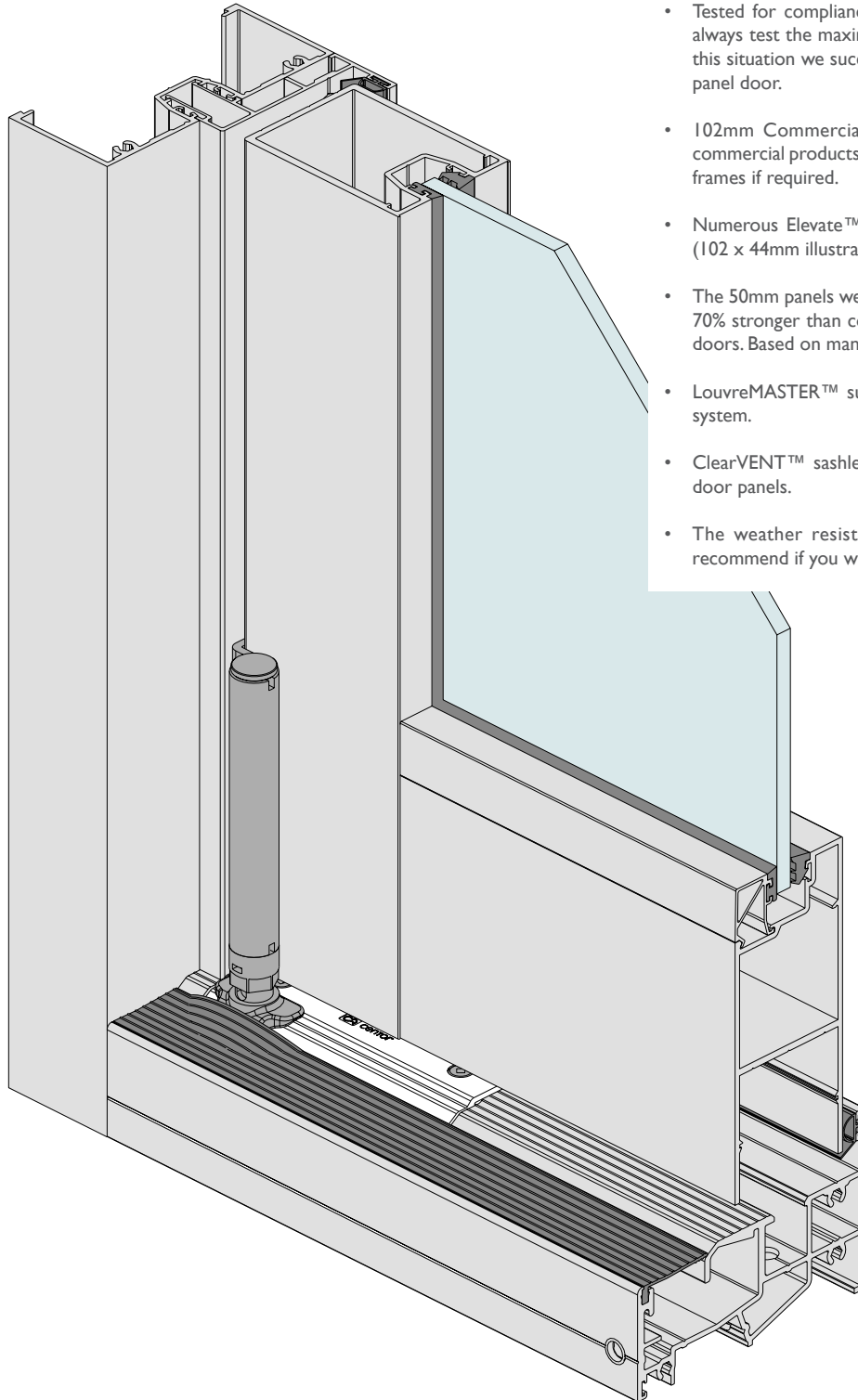


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# Series 412 ViewMASTER™ BI-FOLD DOOR

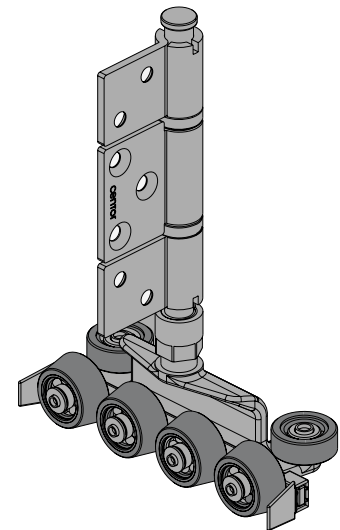
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## SILL - WEATHER RESISTING



Some of the major features with the Elevate™ ViewMASTER™ bottom running Bi-fold door frame are :

- Tested for compliance with relevant Australian Standards. We always test the maximum recommended size when possible. In this situation we successfully tested a 3000mm x 4000mm four panel door.
- 102mm Commercial frame matches adjoining Architectural commercial products. Can be coupled to most of these matching frames if required.
- Numerous Elevate™ CentreGLAZE™ jamba to choose from (102 x 44mm illustrated).
- The 50mm panels we use in this Bi-fold door are approximately 70% stronger than conventional industry standard 45mm thick doors. Based on manufacturers published span charts.
- LouvreMASTER™ sun control shutters can be fitted into this system.
- ClearVENT™ sashless double-hung inserts can be fitted into door panels.
- The weather resisting sill shown on this page is what we recommend if you want to keep water out.



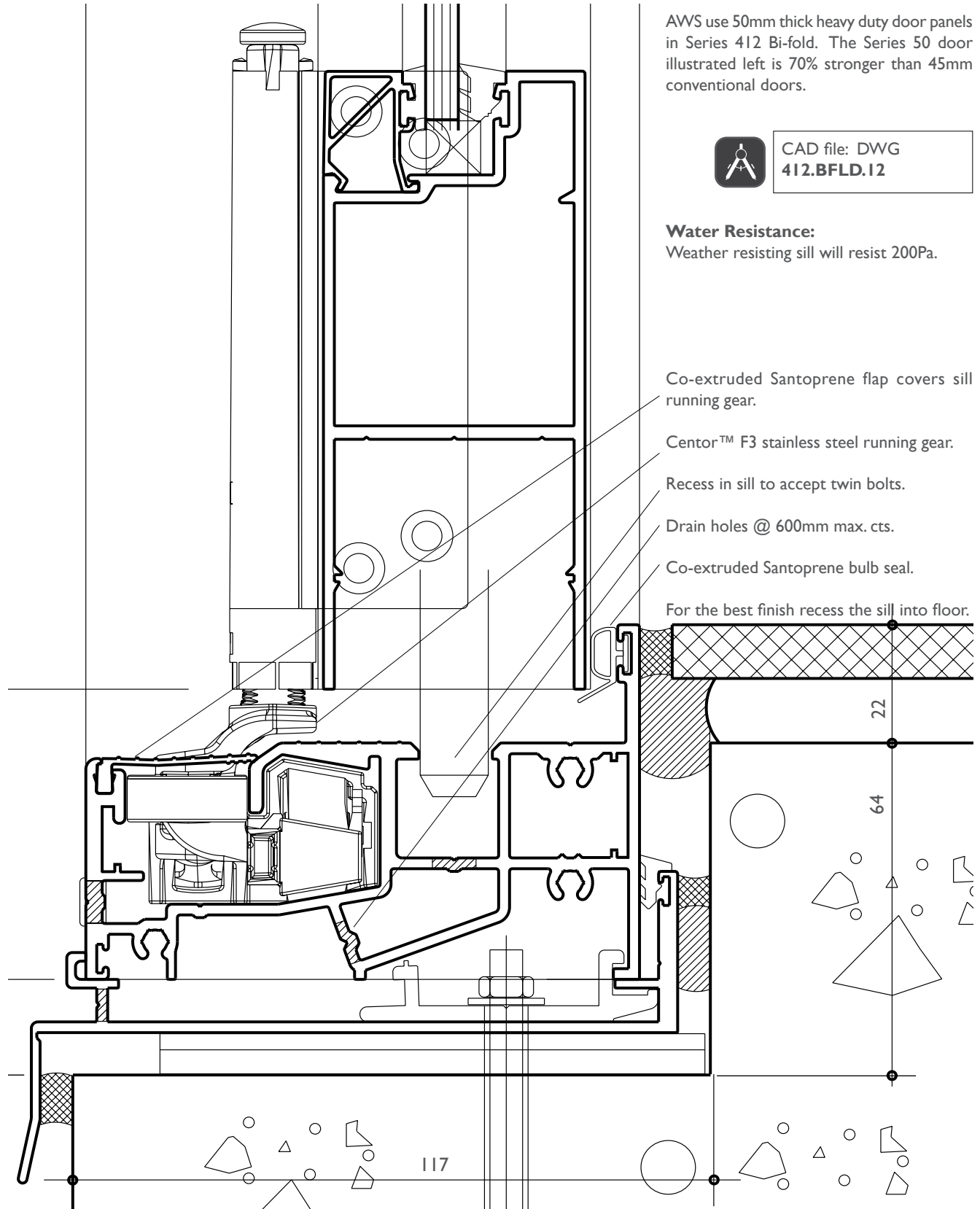
Quad articulated intermediate bottom roller.

We offer a variety of sill types with this Bi-fold door system. The detail on this page shows the weather resisting option.

# Series 412 ViewMASTER™ BI-FOLD DOOR

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## SILL - WEATHER RESISTING WITH SUB-SILL



AWS use 50mm thick heavy duty door panels in Series 412 Bi-fold. The Series 50 door illustrated left is 70% stronger than 45mm conventional doors.



CAD file: DWG  
412.BFLD.12

**Water Resistance:**  
Weather resisting sill will resist 200Pa.

Co-extruded Santoprene flap covers sill running gear.

Centor™ F3 stainless steel running gear.

Recess in sill to accept twin bolts.

Drain holes @ 600mm max. cts.

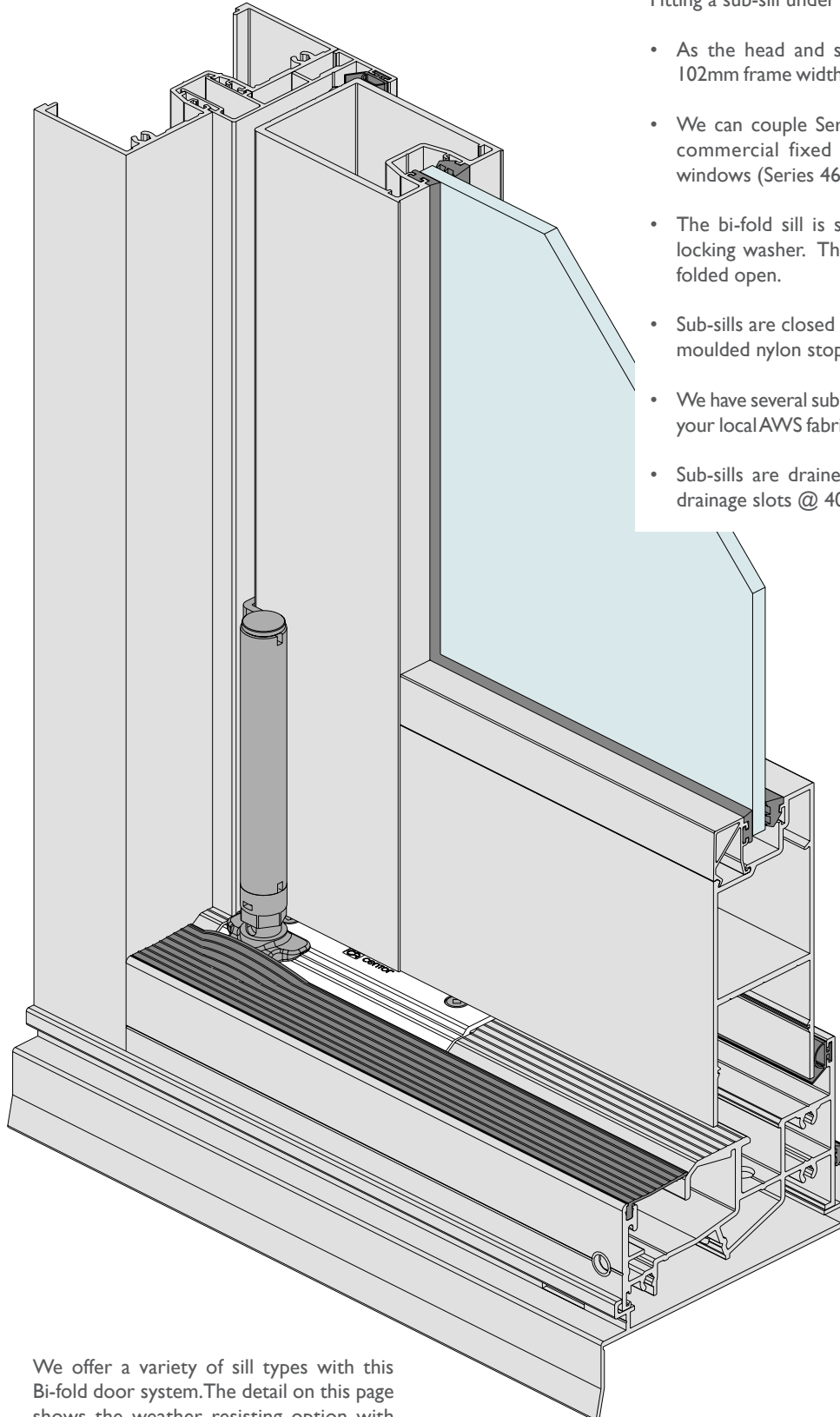
Co-extruded Santoprene bulb seal.

For the best finish recess the sill into floor.

# Series 412 ViewMASTER™ BI-FOLD DOOR

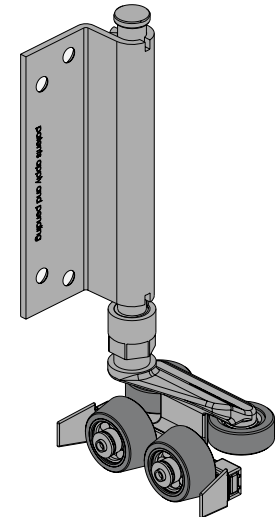
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## SILL - WEATHER RESISTING WITH SUB-SILL



Fitting a sub-sill under the frame improves the door :

- As the head and sill rolling hardware falls within the 102mm frame width we can fit the frame into sub-frames .
- We can couple Series 412 to Series 400, 406 and 424 commercial fixed lights and all of the Architectural windows (Series 461 to 467).
- The bi-fold sill is secured to the sub-sill with custom locking washer. This prevents sill roll as the doors are folded open.
- Sub-sills are closed off at the ends with custom injection moulded nylon stop ends.
- We have several sub-sill that will accept Series 412, contact your local AWS fabricator for details on the other options.
- Sub-sills are drained on the front edge via 20 x 6mm drainage slots @ 400mm maximum centres.



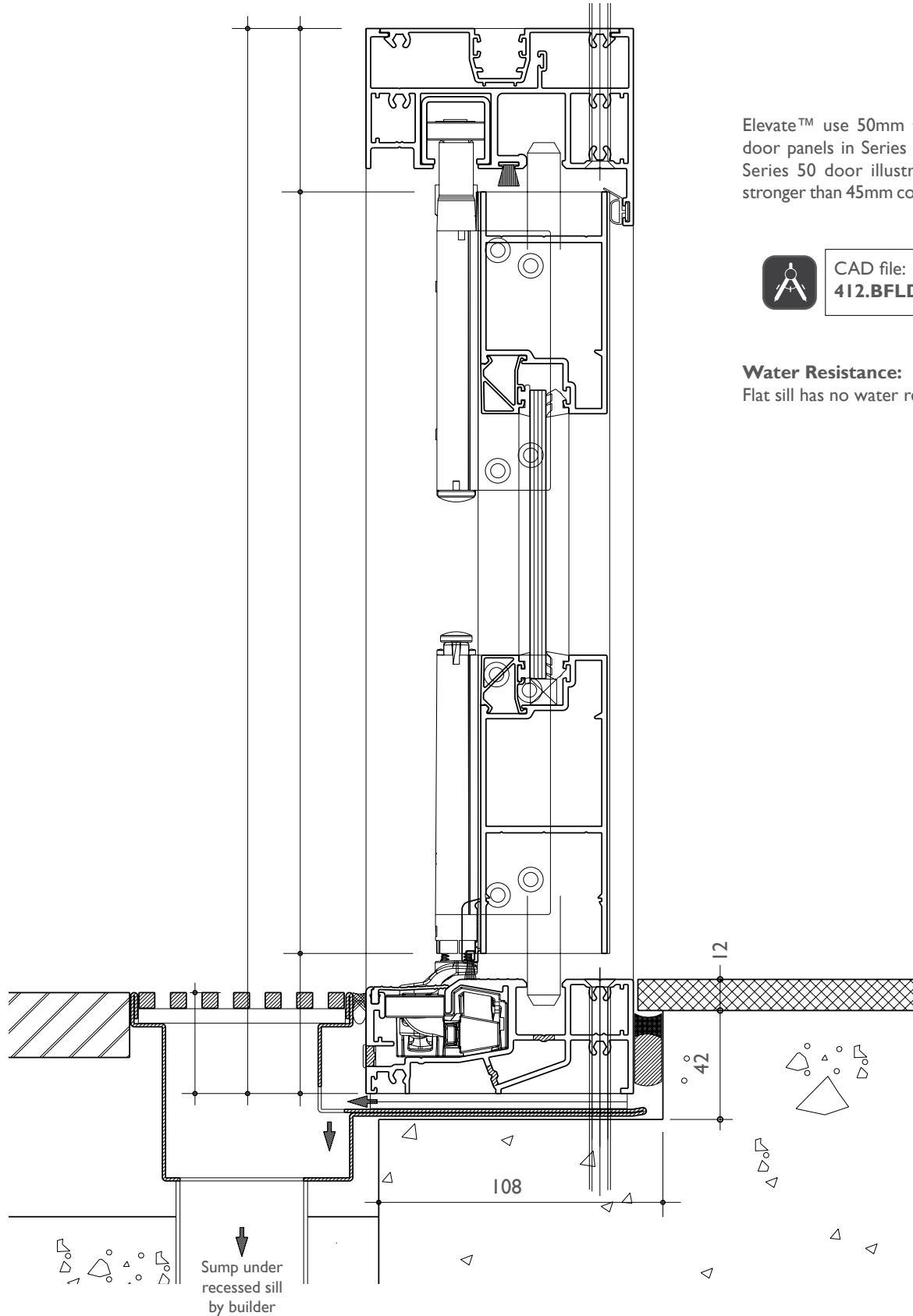
Dual articulated end bottom roller.

We offer a variety of sill types with this Bi-fold door system. The detail on this page shows the weather resisting option with sub-sill under.

# Series 412 ViewMASTER™ BI-FOLD DOOR

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## SILL - FLAT RECESSED



Elevate™ use 50mm thick heavy duty door panels in Series 412 Bi-fold. The Series 50 door illustrated left is 70% stronger than 45mm conventional doors.



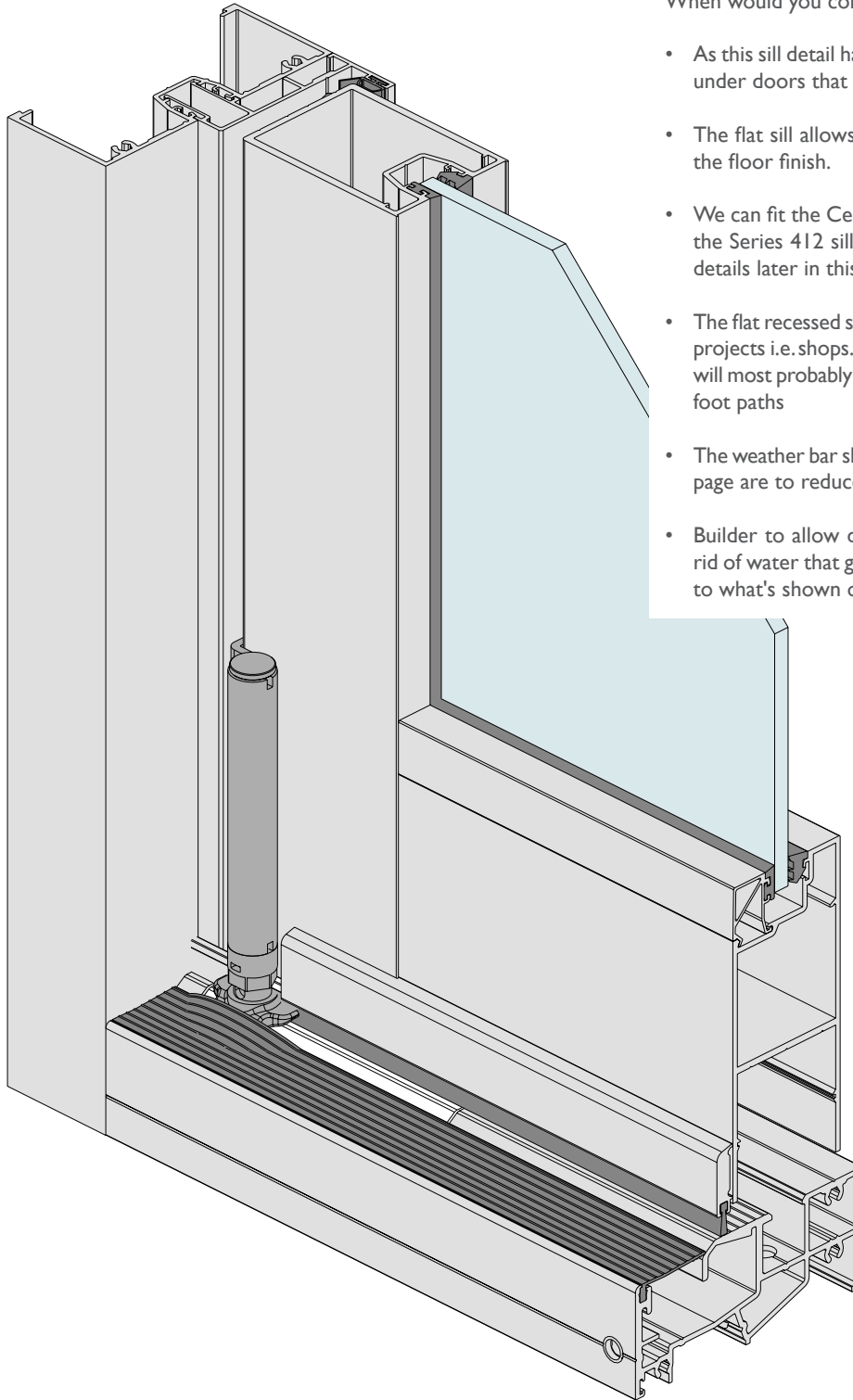
CAD file: DWG  
412.BFLD.9

**Water Resistance:**  
Flat sill has no water resistance.

# Series 412 ViewMASTER™ BI-FOLD DOOR

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## SILL - FLAT RECESSED



When would you consider the flat recessed sill :

- As this sill detail has no water resistance it has to be used under doors that are in protected or internal situations.
- The flat sill allows you to completely recess the sill into the floor finish.
- We can fit the Centor™ SIE roller screen behind any of the Series 412 sills including this flat sill, refer screening details later in this section.
- The flat recessed sill would also be suitable for commercial projects i.e. shops. Remember that bi-fold doors on shops will most probably have to open in to stay away from public foot paths
- The weather bar shown on the details on this and previous page are to reduce dust and insect intrusion.
- Builder to allow drainage under the recessed sill to get rid of water that gets into track and bolt recesses, similar to what's shown on previous page.

We offer a variety of sill types with this Bi-fold door system.  
The detail on this page shows the flat recessed sill option.



# Series 412 ViewMASTER™ BI-FOLD DOOR

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## SILL - WEATHER RESISTING with LINEAL DRAIN

Elevate™ use 50mm thick heavy duty panels in Series 412 Bi-fold. The Series 50 door illustrated is 70% stronger than 45mm conventional doors,

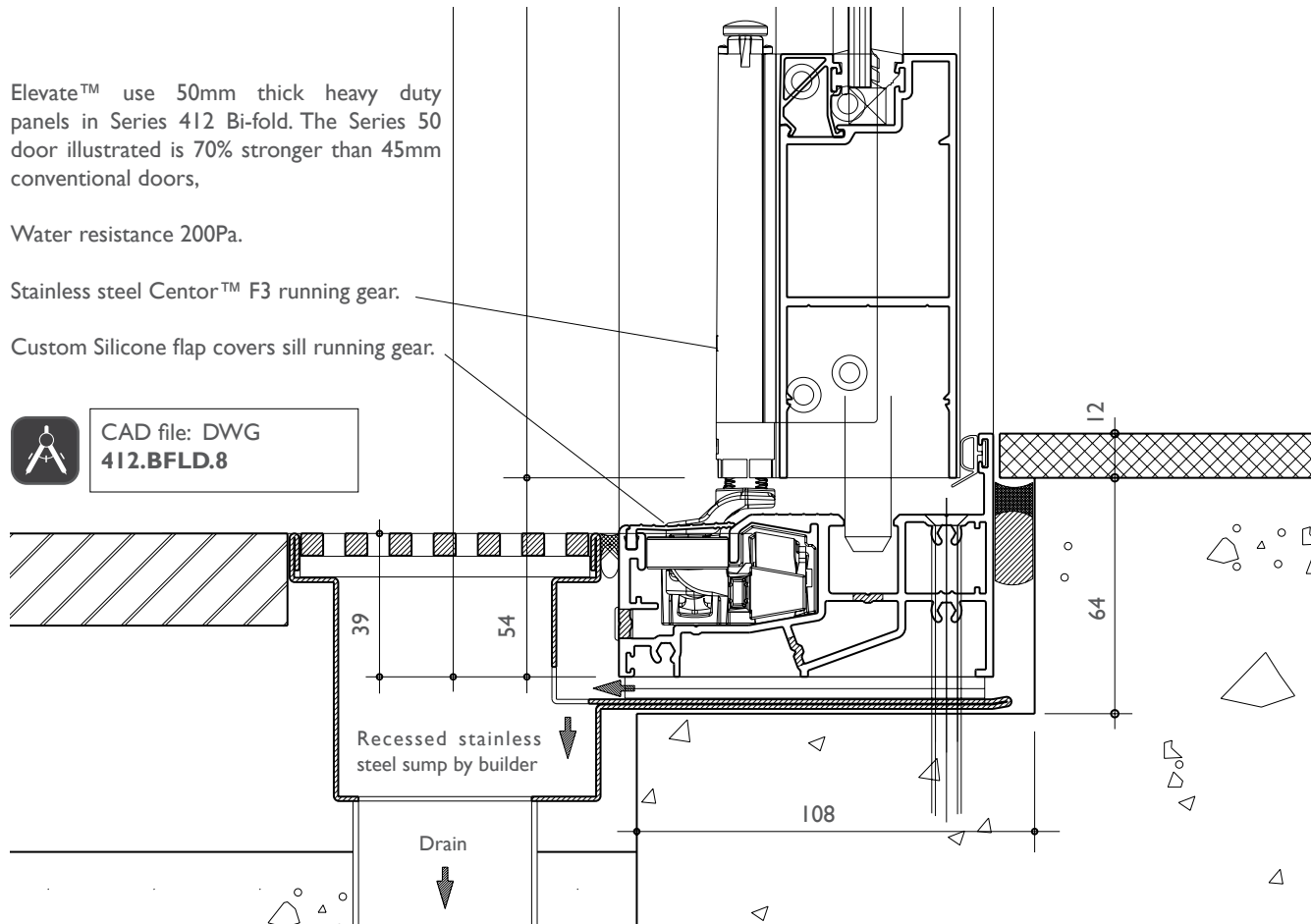
Water resistance 200Pa.

Stainless steel Centor™ F3 running gear.

Custom Silicone flap covers sill running gear.



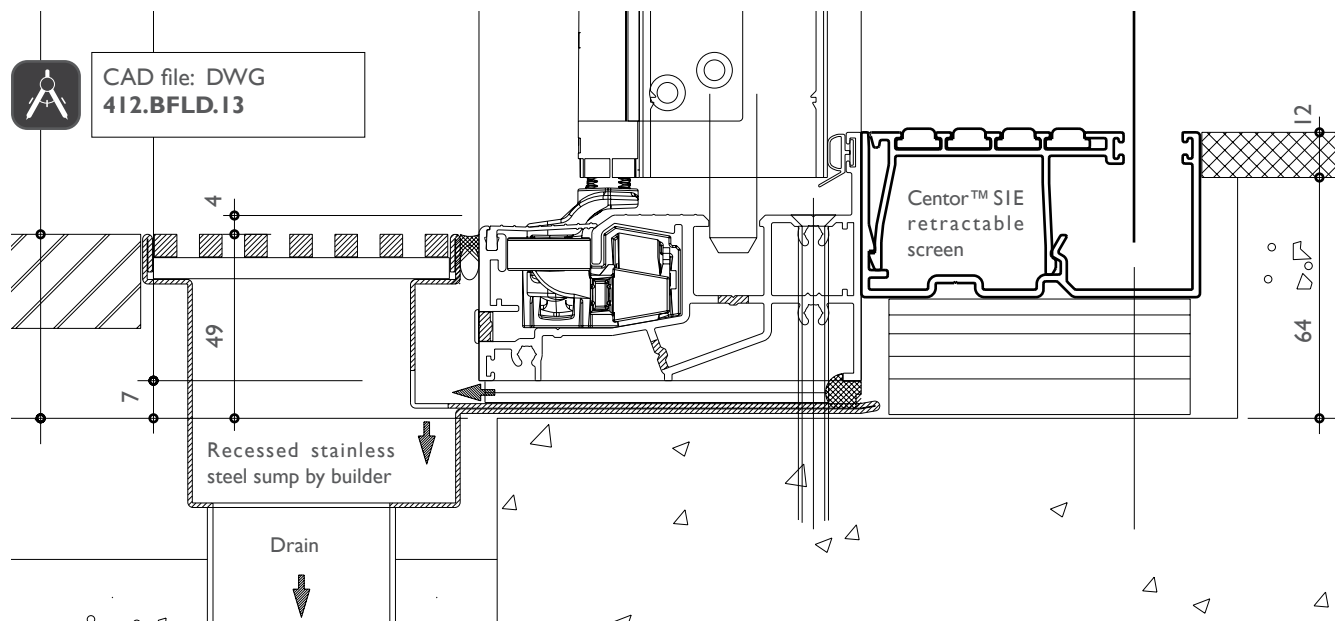
CAD file: DWG  
412.BFLD.8



## SILL - WEATHER RESISTING with LINEAL DRAIN and Centor™ SIE RETRACTABLE SCREEN/S



CAD file: DWG  
412.BFLD.13



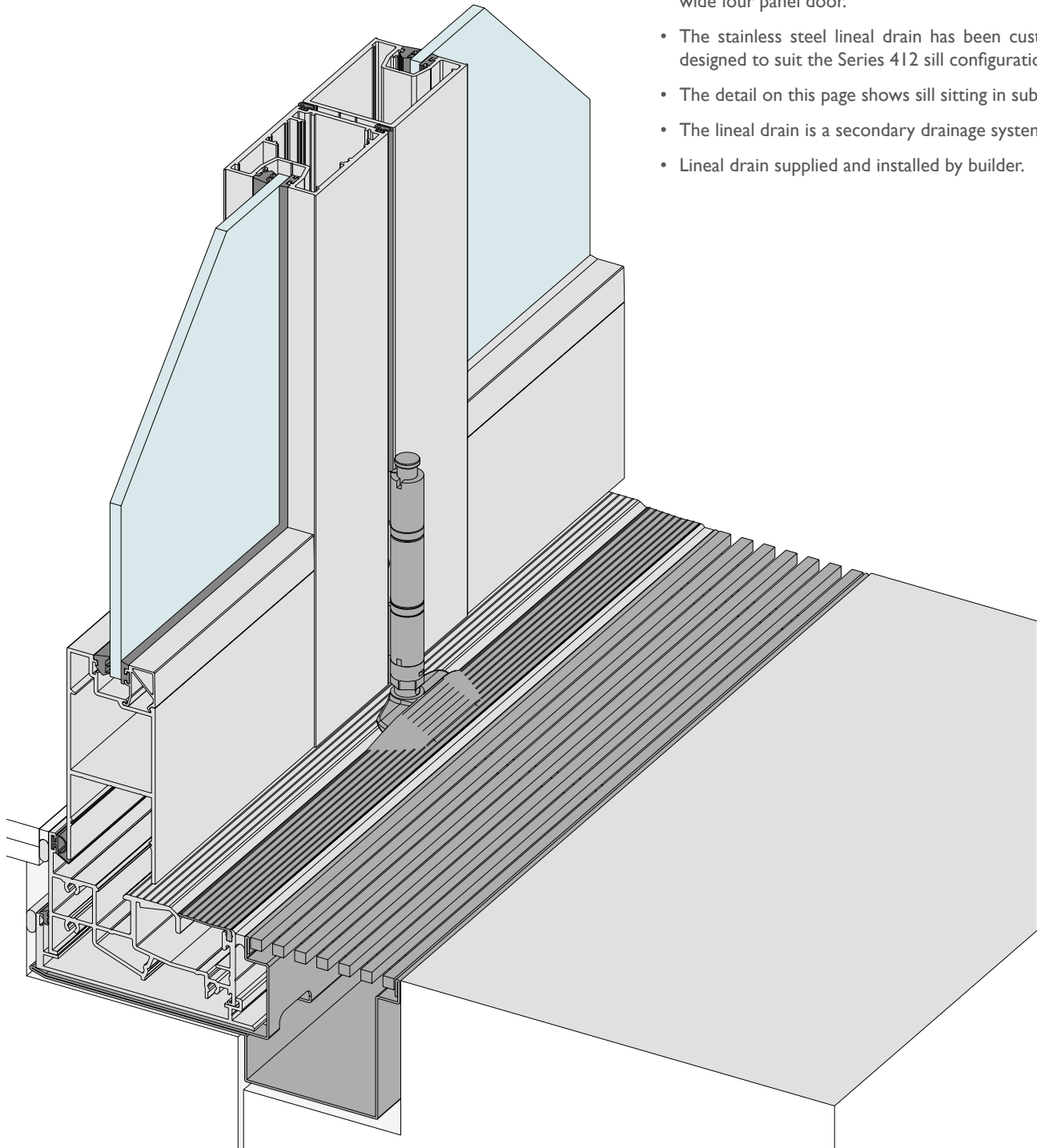
# Series 412 ViewMASTER™ BI-FOLD DOOR

DATE: AUG 20  
REPLACES: MAY 13  
SCALE: NOT TO SCALE

## SILL - WEATHER RESISTING with LINEAL DRAIN

Some of the features with Elevate™ ViewMASTER™ bottom rolling weather resisting sill doors are :

- Tested for compliance with relevant Australian Standards. We always test the maximum recommended size when possible. In this situation we successfully tested a 3000mm high x 4000mm wide four panel door.
- The stainless steel lineal drain has been custom designed to suit the Series 412 sill configuration.
- The detail on this page shows sill sitting in sub-sill.
- The lineal drain is a secondary drainage system.
- Lineal drain supplied and installed by builder.



# Series 412 ViewMASTER™ BI-FOLD DOOR

DATE: AUG 20  
REPLACES: MAY 13  
SCALE: NOT TO SCALE

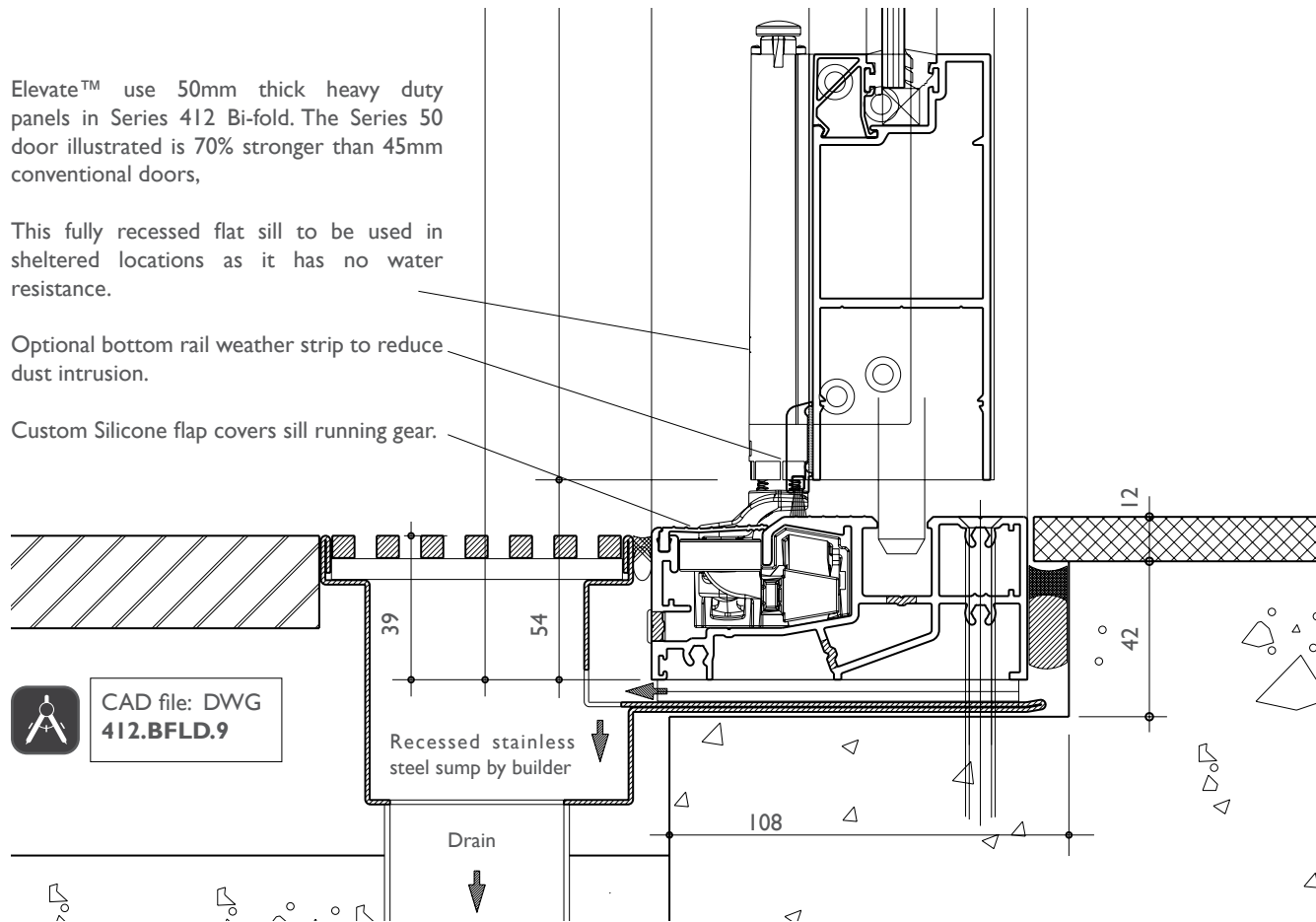
## SILL - FLAT RECESSED OPEN OUT PANELS with LINEAL DRAIN

Elevate™ use 50mm thick heavy duty panels in Series 412 Bi-fold. The Series 50 door illustrated is 70% stronger than 45mm conventional doors,

This fully recessed flat sill to be used in sheltered locations as it has no water resistance.

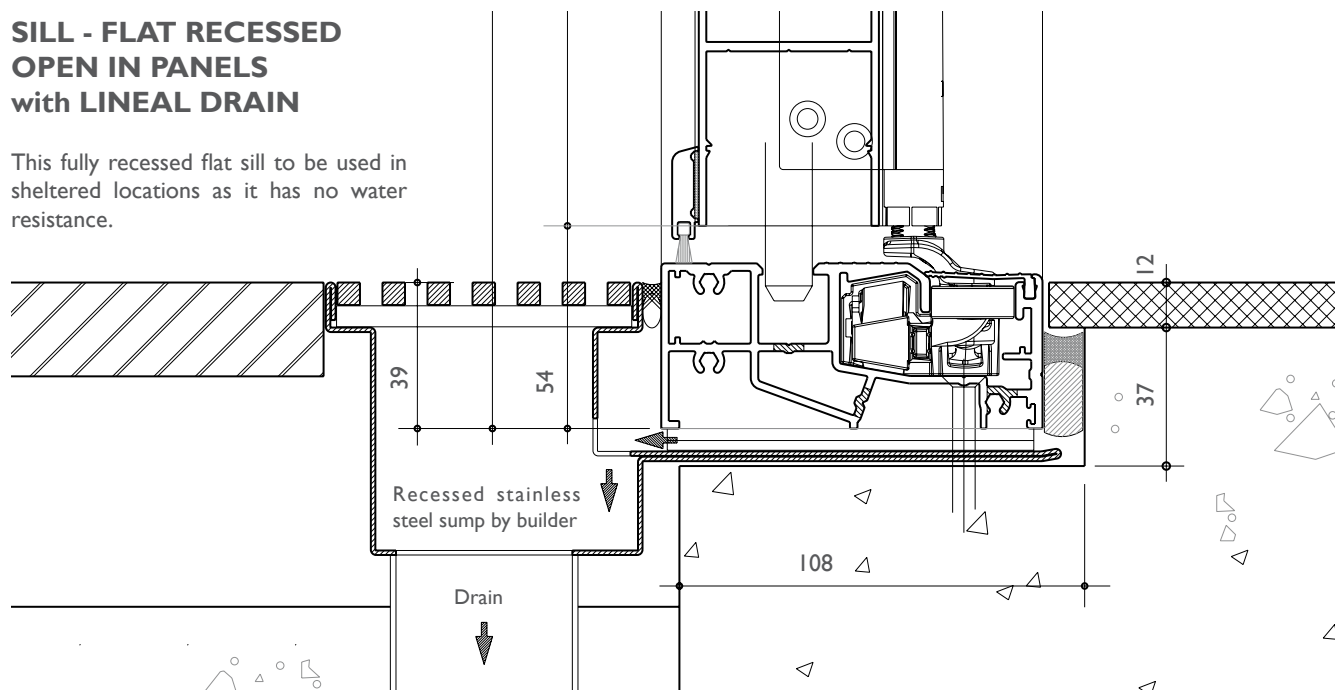
Optional bottom rail weather strip to reduce dust intrusion.

Custom Silicone flap covers sill running gear.



## SILL - FLAT RECESSED OPEN IN PANELS with LINEAL DRAIN

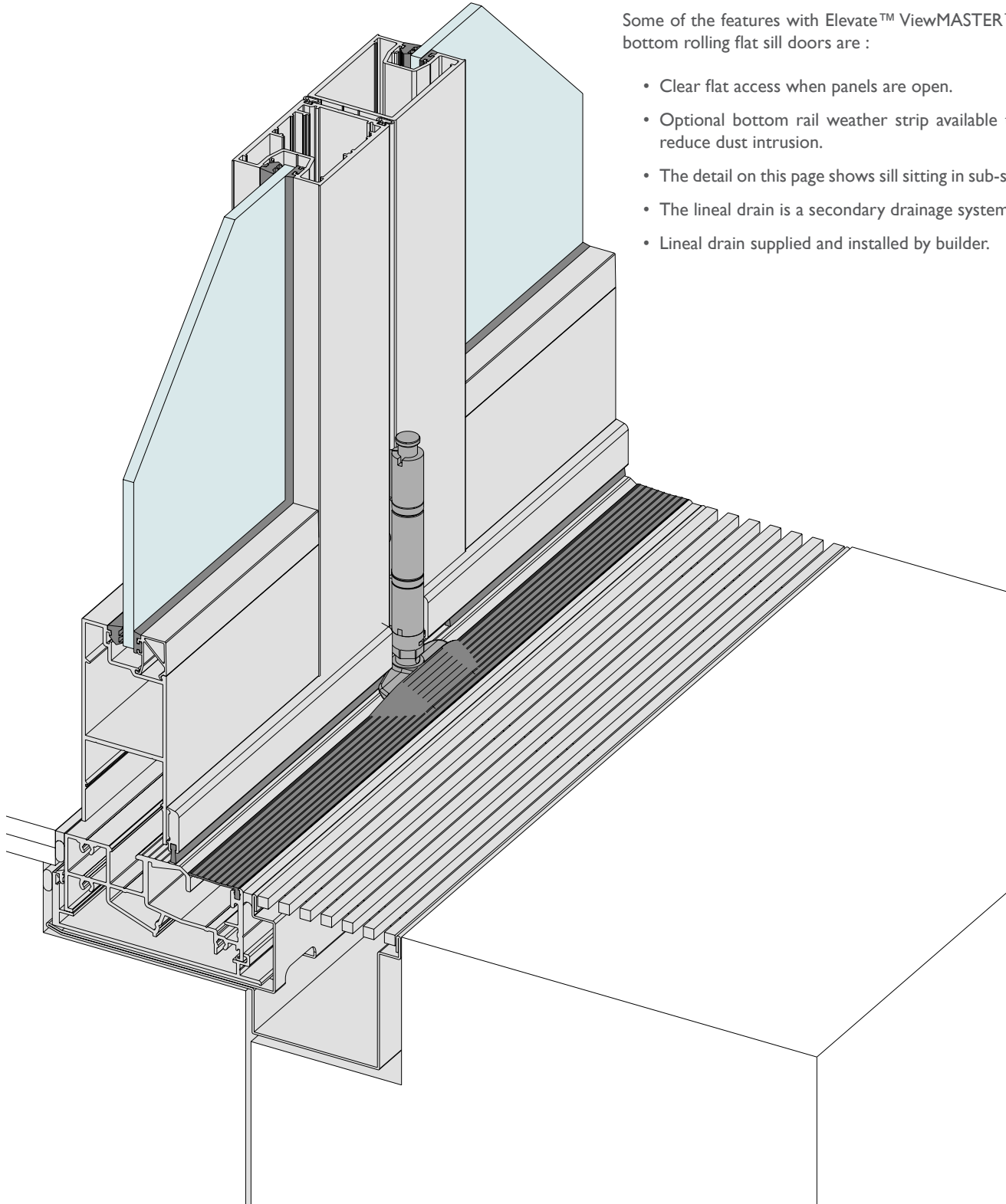
This fully recessed flat sill to be used in sheltered locations as it has no water resistance.



# Series 412 ViewMASTER™ BI-FOLD DOOR

DATE: AUG 20  
REPLACES: MAY 13  
SCALE: NOT TO SCALE

## SILL - FLAT RECESSED OPEN OUT PANELS with LINEAL DRAIN



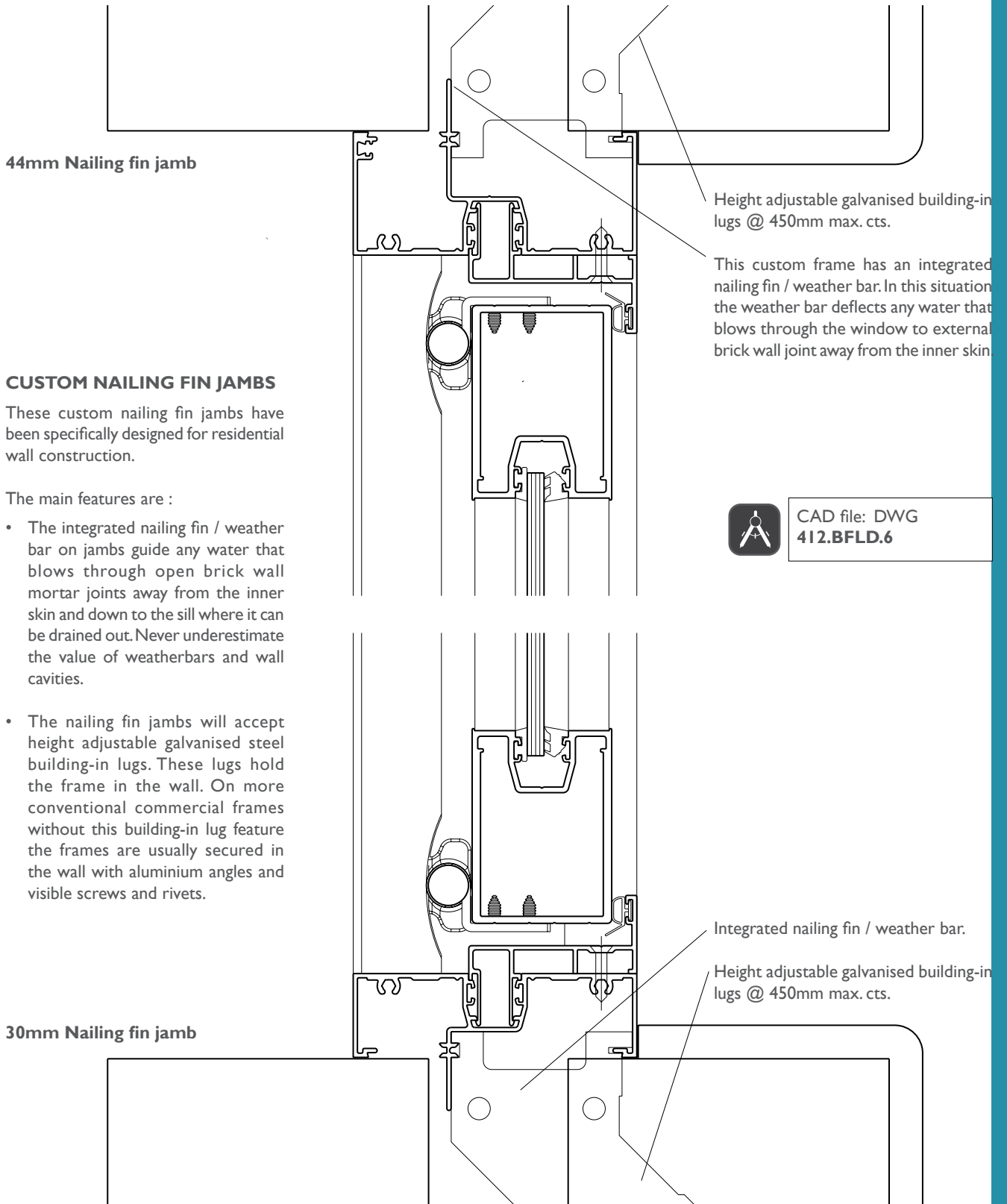
Some of the features with Elevate™ ViewMASTER™ bottom rolling flat sill doors are :

- Clear flat access when panels are open.
- Optional bottom rail weather strip available to reduce dust intrusion.
- The detail on this page shows sill sitting in sub-sill.
- The lineal drain is a secondary drainage system.
- Lineal drain supplied and installed by builder.

# Series 412 ViewMASTER™ BI-FOLD DOOR

DATE: AUG 20  
REPLACES: MAY 13  
SCALE: NOT TO SCALE

## TYPICAL CAVITY BRICK JAMB DETAILS SHOWING ALTERNATIVE JAMBS

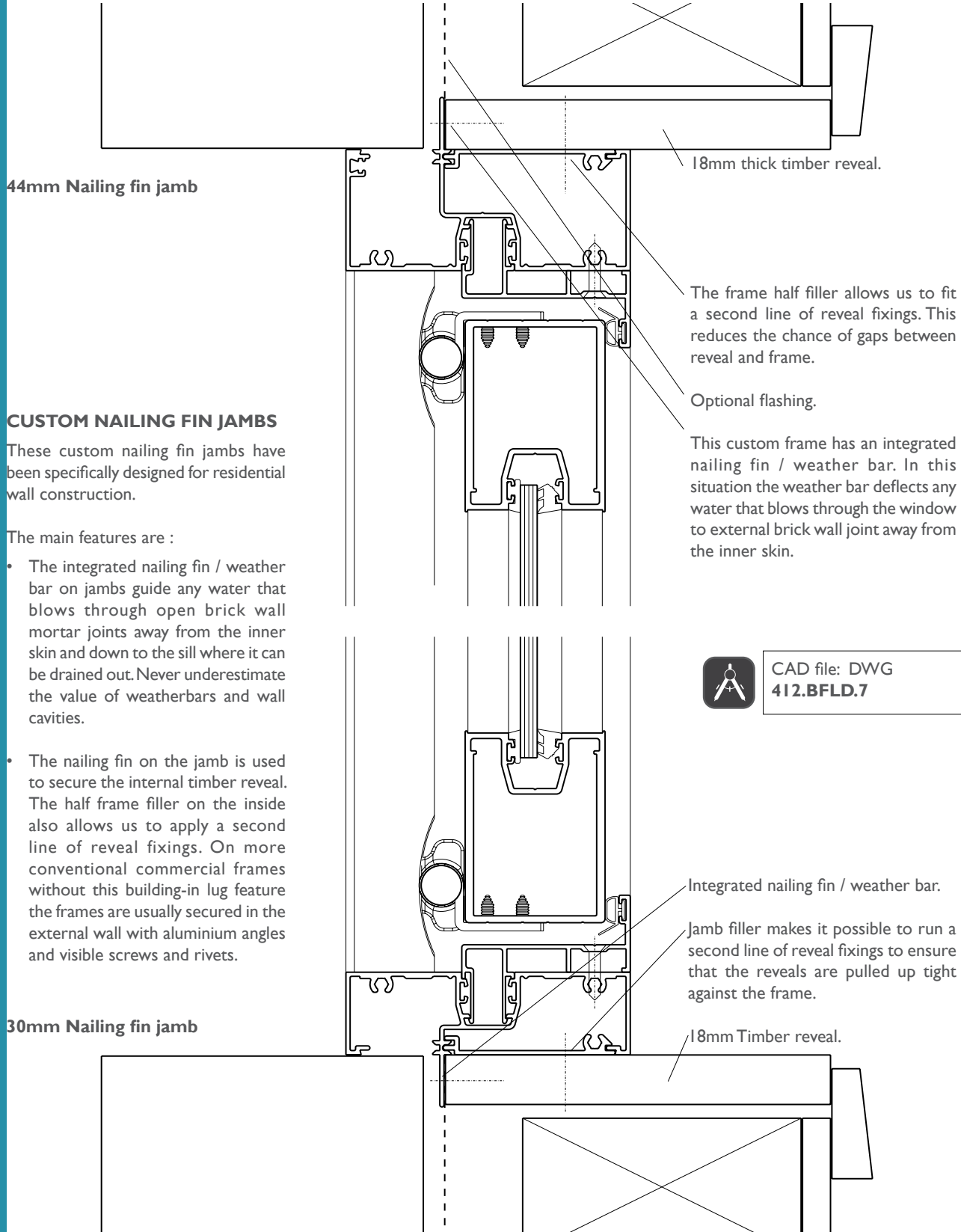


CAD file: DWG  
412.BFLD.6

# Series 412 ViewMASTER™ BI-FOLD DOOR

DATE: AUG 20  
REPLACES: MAY 13  
SCALE: NOT TO SCALE

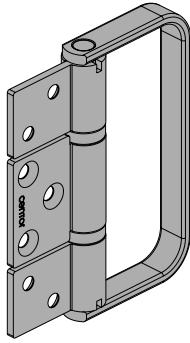
## TYPICAL BRICK VENEER JAMB DETAILS SHOWING ALTERNATIVE JAMBS



# Series 412 ViewMASTER™ BI-FOLD DOOR

DATE: AUG 20  
REPLACES: MAY 13  
SCALE: NOT TO SCALE

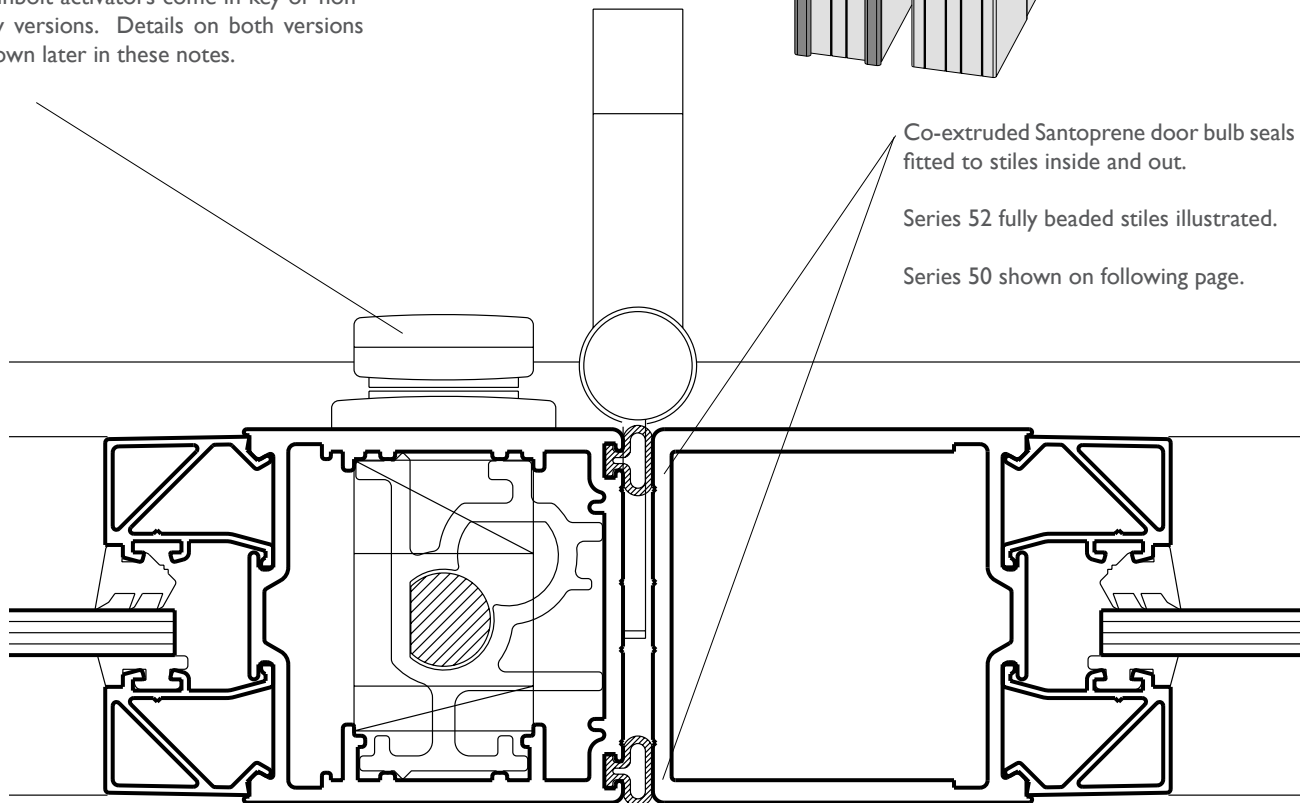
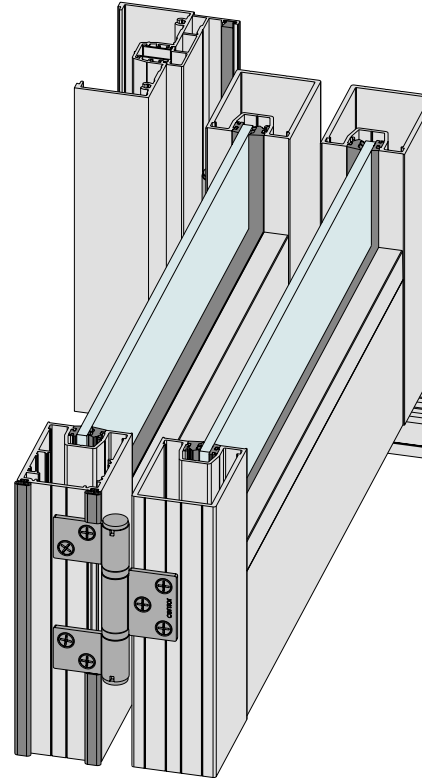
## MEETING STILES - HINGE



Custom designed stainless steel central hinge/s has pull handle as shown above to make it easier to close and secure the folding panels.

Custom designed stainless steel hinges easily locate into stiles and are fixed with countersunk stainless steel screws.

Proprietary ANDO™ and ICON™ twinbolt activators come in key or non-key versions. Details on both versions shown later in these notes.



Co-extruded Santoprene door bulb seals fitted to stiles inside and out.

Series 52 fully beaded stiles illustrated.

Series 50 shown on following page.

Heavy duty meeting stiles designed for over height doors, refer span chart at the start of this section. Series 52 illustrated.

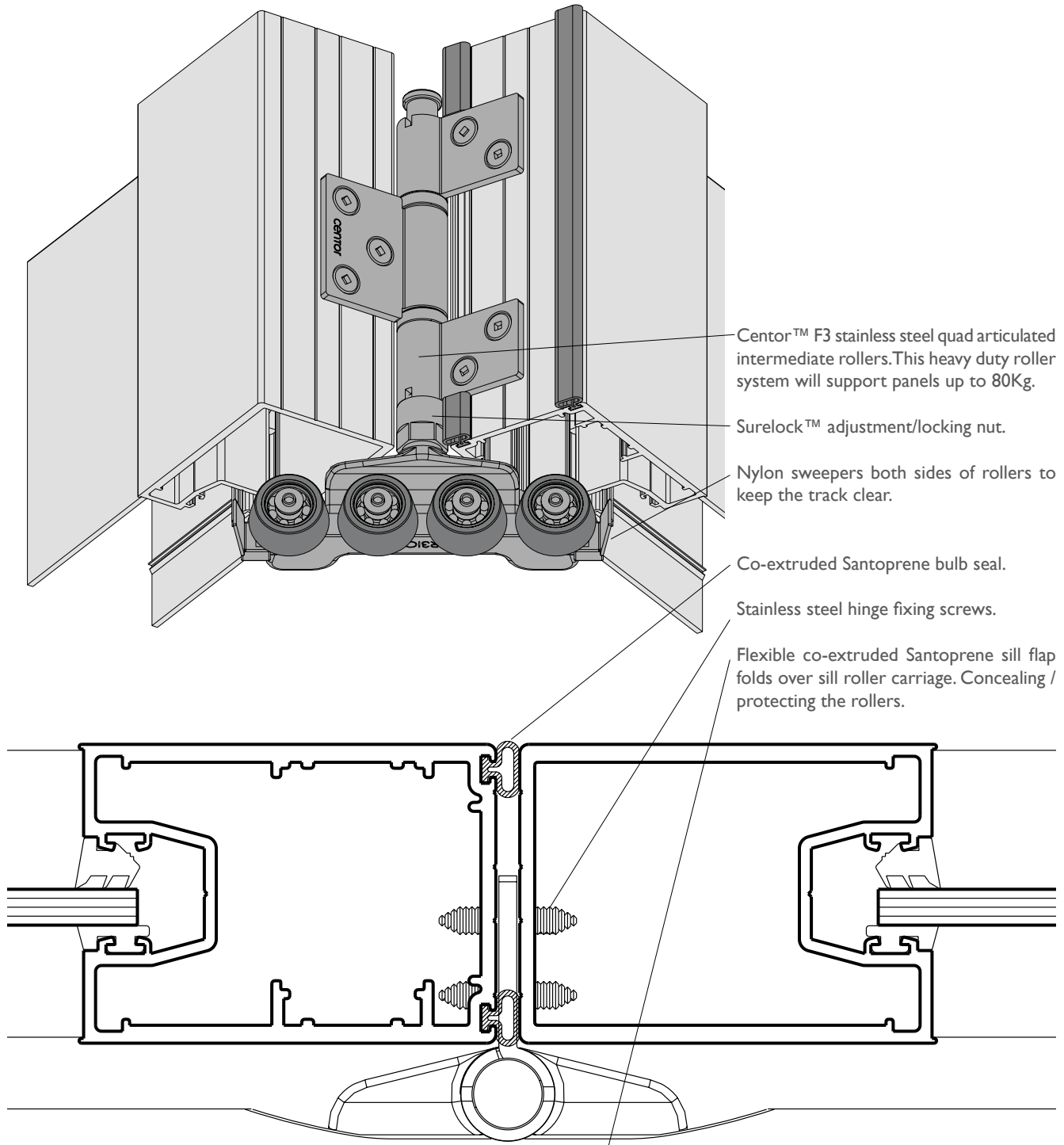


CAD file: DWG  
412.BFLD.4

Series 412  
ViewMASTER™ BI-FOLD DOOR

DATE: AUG 20  
REPLACES: MAY 13  
SCALE: NOT TO SCALE

MEETING STILES - SILL ROLLER



Heavy duty meeting stiles designed for over height doors, refer span chart at the start of this section.  
Series 50 illustrated above.  
Series 50 stiles are significantly stronger than Series 52.



CAD file: DWG  
412.BFLD.3



# Series 412 ViewMASTER™ BI-FOLD DOOR

DATE: AUG 20  
REPLACES: MAY 13  
SCALE: NOT TO SCALE

## FRENCH MEETING STILES

French meeting stiles have been designed to accept:

- ANDO™ Lever twinbolt for the keeper stile.
- ANDO™ Lever latch set illustrated below.  
This proprietary locks come in two or four point locking.  
When the panel height exceeds 2100mm we recommend four point locking to keep the top and bottom of the stile against the seals under wind load.
- ANDO™ lever furniture comes in a variety of powder coat finishes and marine grade 316 stainless steel.
- ICON™ locks can also be fitted to Series 412 stiles, refer details on later page.
- Lock stile will also accept Lockwood 3580 and Legge 995MF latch sets.
- When using the Lockwood, Legge or Dorma latch sets use finger operated flushbolts on the keeper stile.

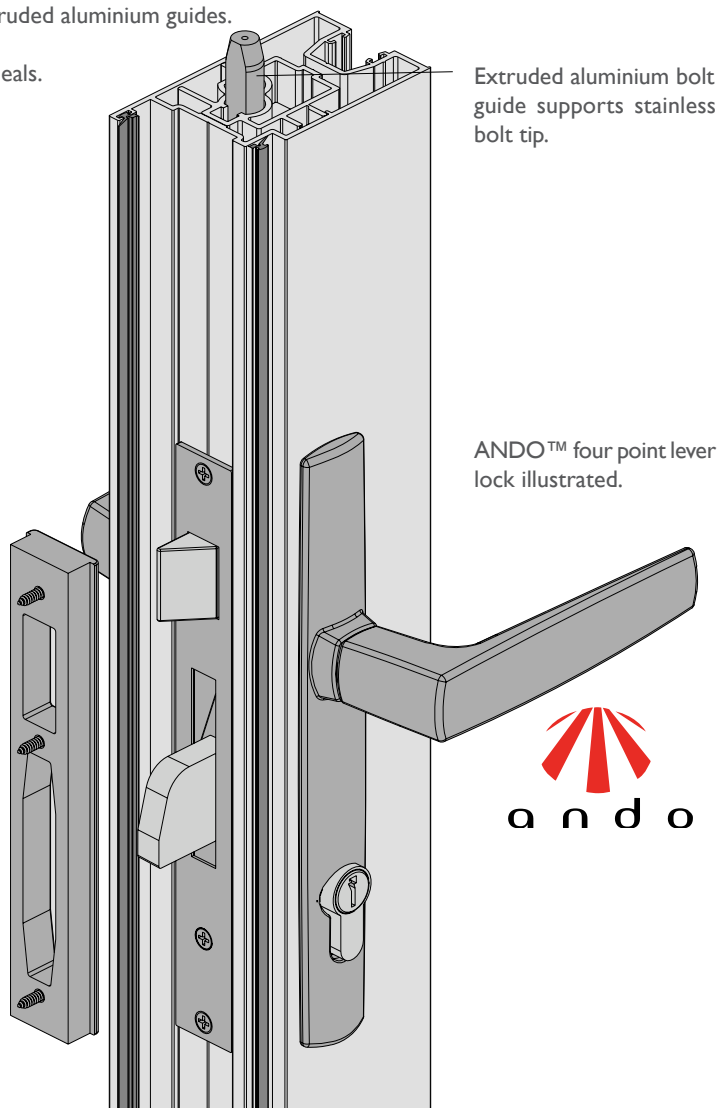
Detailed information on all of these hardware options shown on following pages.

Flushbolts and ANDO™ bolts are supported with custom extruded aluminium guides.

Meeting stiles are sealed with co-extruded Santoprene wiper seals.



Custom glass  
filled nylon  
keeper.

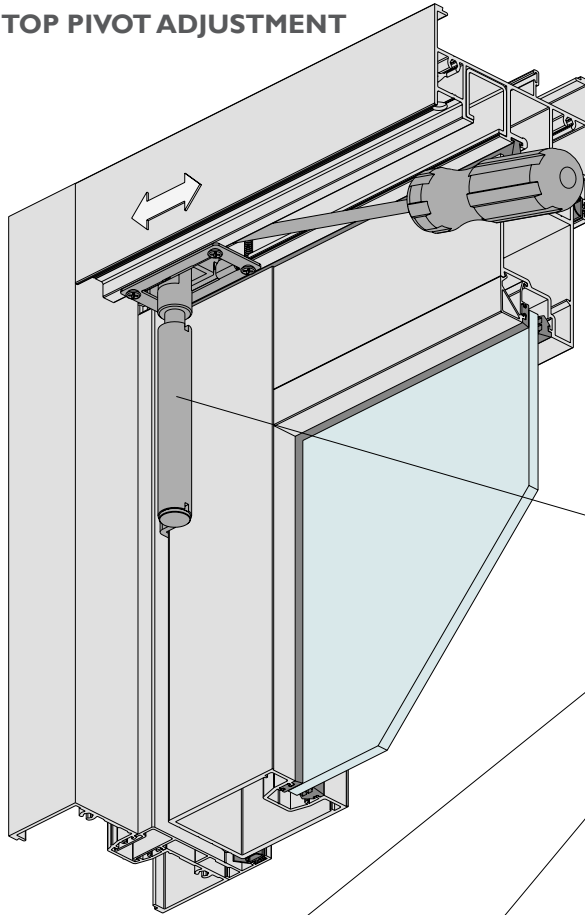


See the ANDO™ lock on our web site:  
[www.elevatealuminium.com.au](http://www.elevatealuminium.com.au)

Series 412  
ViewMASTER™ BI-FOLD DOOR

DATE: AUG 20  
REPLACES: MAY 13  
SCALE: NOT TO SCALE

JAMB - TOP PIVOT ADJUSTMENT



Pivots are adjustable horizontally via screw in the head guide recess.

and

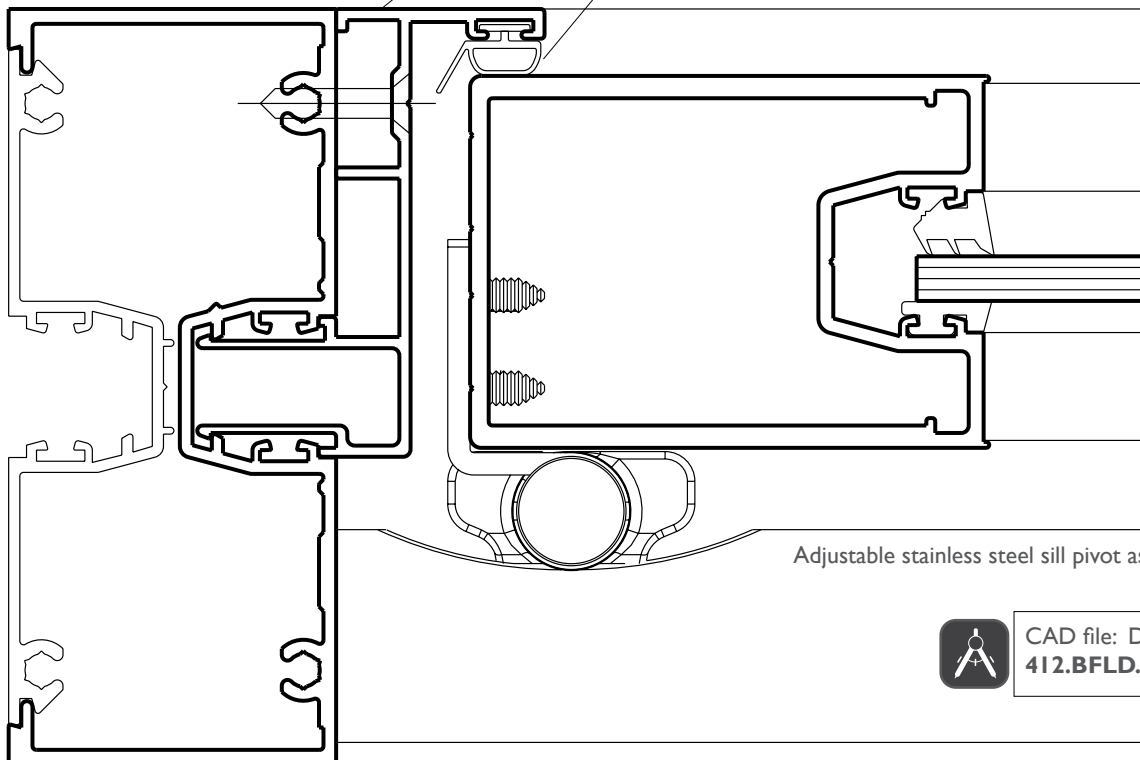
Vertically via the Surelock™ adjustment in the sill pivots.

When correct adjustment is reached and doors operate well lock the Surelock™ nut into position.

Floating top pivot hinge.

Custom jamb adaptor snaps into CentreGLAZE™ framing.

Co-extruded Santoprene bulb seal.



Adjustable stainless steel sill pivot assembly.

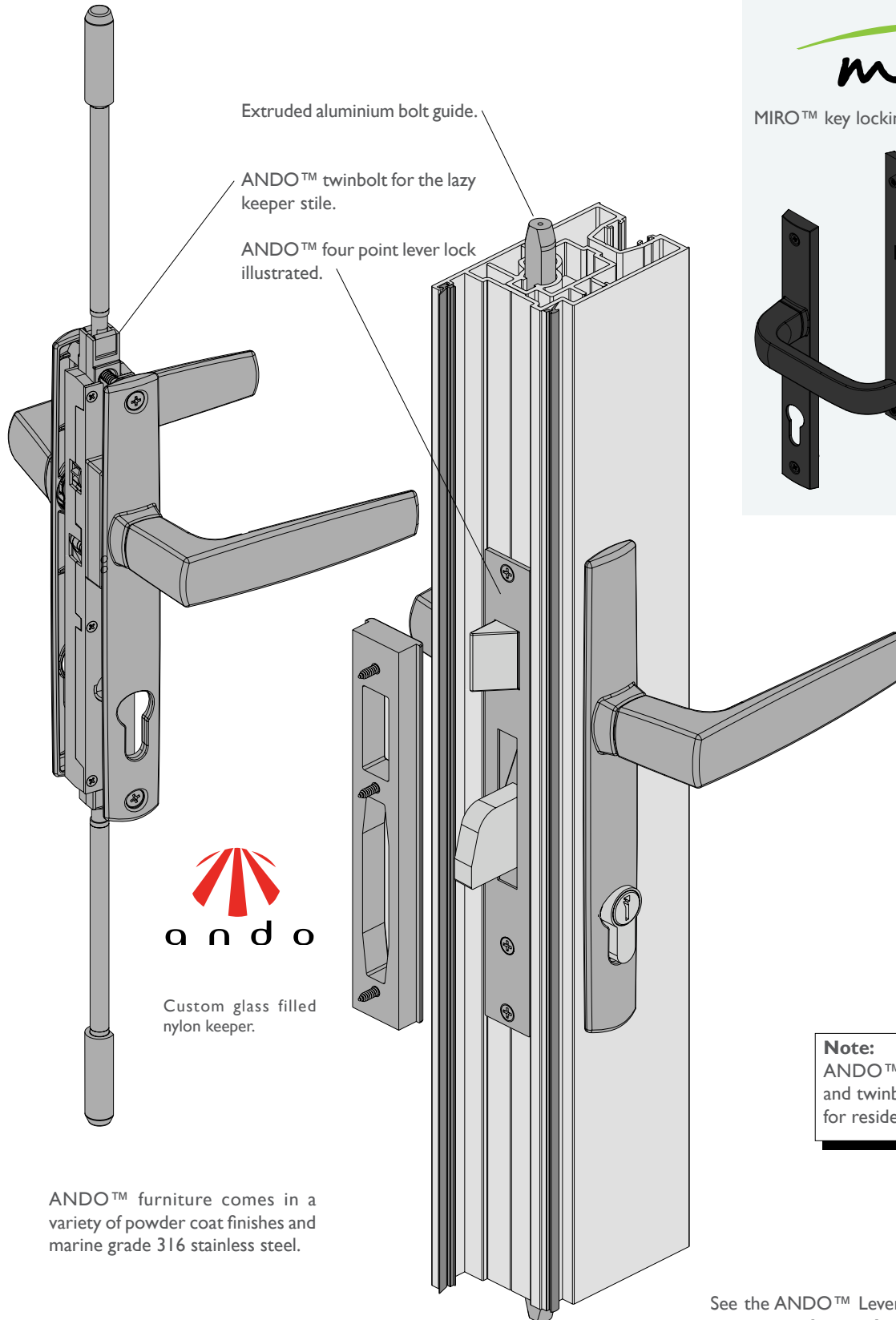


CAD file: DWG  
412.BFLD.3

# Series 412 ViewMASTER™ BI-FOLD DOOR

DATE: AUG 20  
REPLACES: MAY 13  
SCALE: NOT TO SCALE

## PROPRIETARY ANDO™ LEVER LOCK



ANDO™ furniture comes in a variety of powder coat finishes and marine grade 316 stainless steel.

## Alternative Handle Available



MIRO™ key locking twinbolt activator.



### Note:

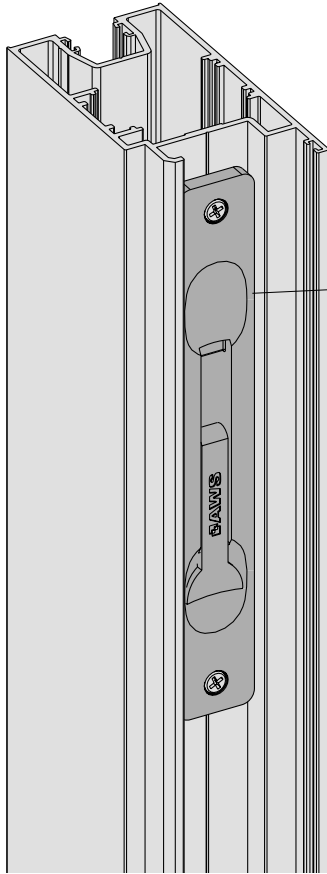
ANDO™ lever lock sets and twinbolts are designed for residential applications.

See the ANDO™ Lever locks on our web site: [www.elevatealuminium.com.au](http://www.elevatealuminium.com.au)

# Series 412 ViewMASTER™ BI-FOLD DOOR

DATE: AUG 20  
REPLACES: MAY 13  
SCALE: NOT TO SCALE

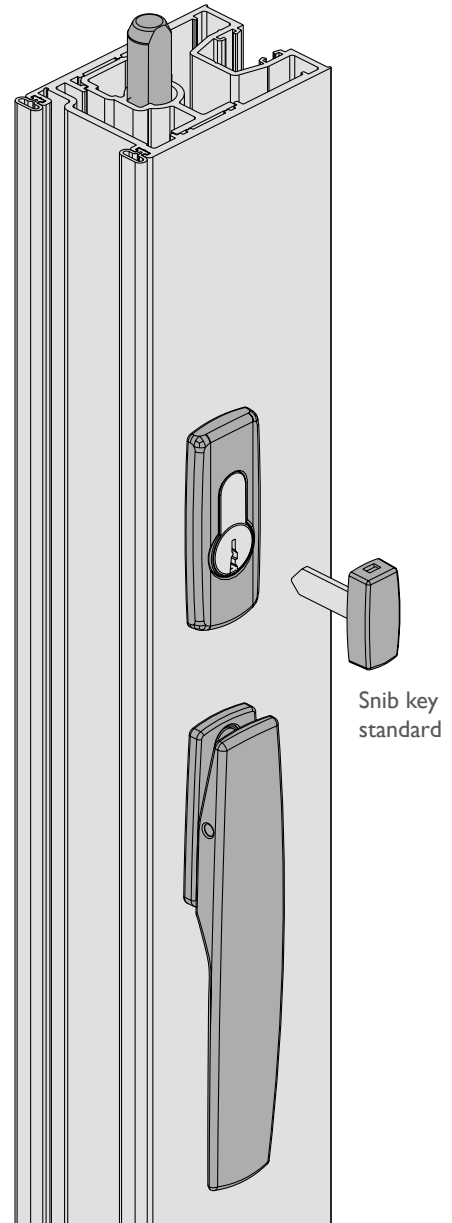
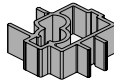
## FLUSH BOLT AND PROPRIETARY ANDO™ BI-FOLD ACTIVATOR



Series 50 French stiles illustrated on this page.

Surface mounted flushbolt nests into the French keeper stile as shown left.

Bolts secured with custom extruded aluminium guide both ends of stile that prevents the shoot bolt from turning and dropping.

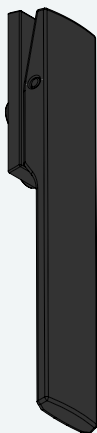


Snib key standard

### Alternative Activator Available



MIRO™ bi-fold activator



### Twinbolt Options

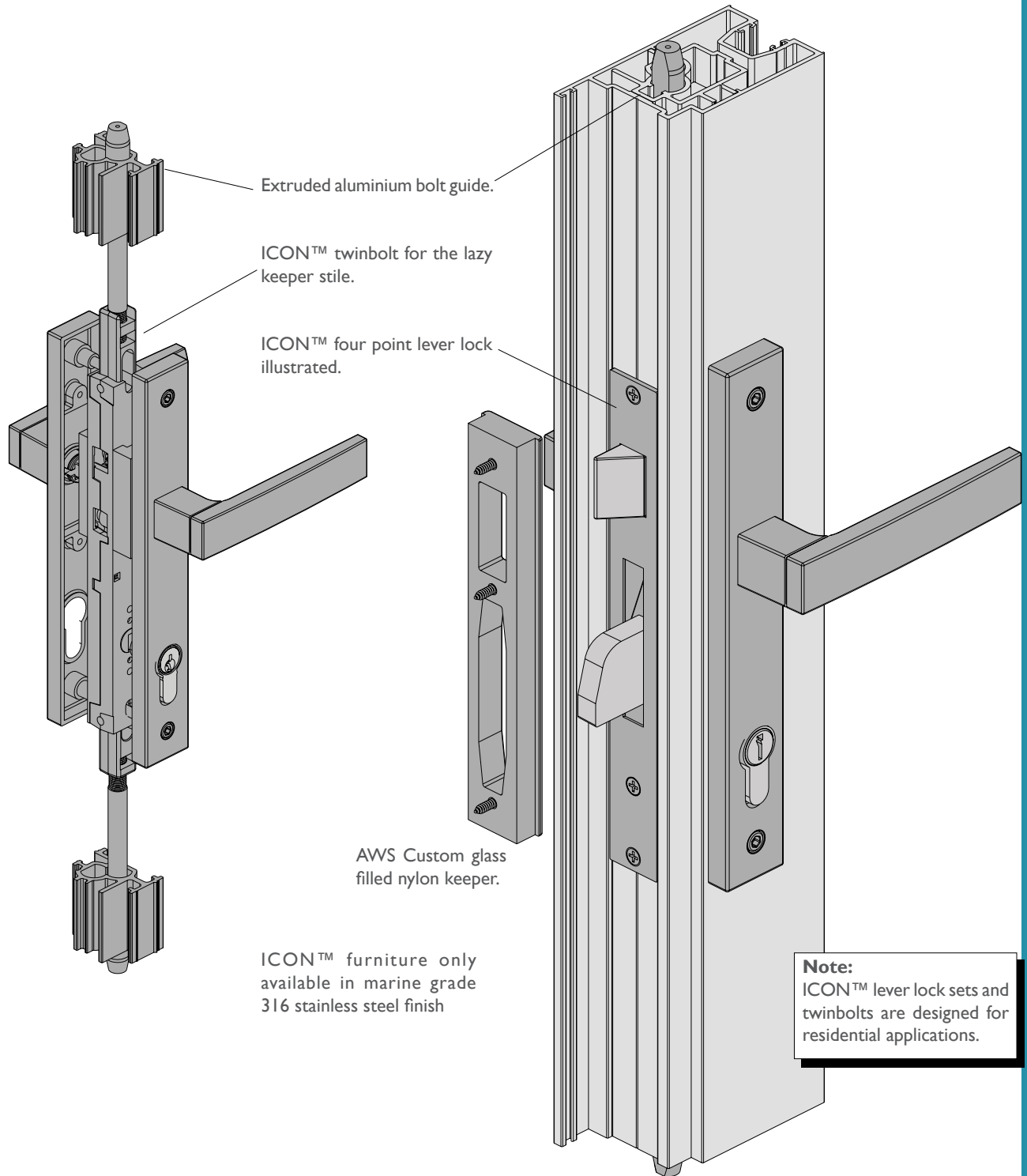
- Key lock twinbolt as shown above.
- Non-key lock twinbolt.

See the ANDO™ Bi-fold activators open and close on our web site: [www.elevatealuminium.com.au](http://www.elevatealuminium.com.au)

# Series 412 ViewMASTER™ BI-FOLD DOOR

DATE: AUG 20  
REPLACES: MAY 13  
SCALE: NOT TO SCALE

## PROPRIETARY ICON™ LEVER LOCK

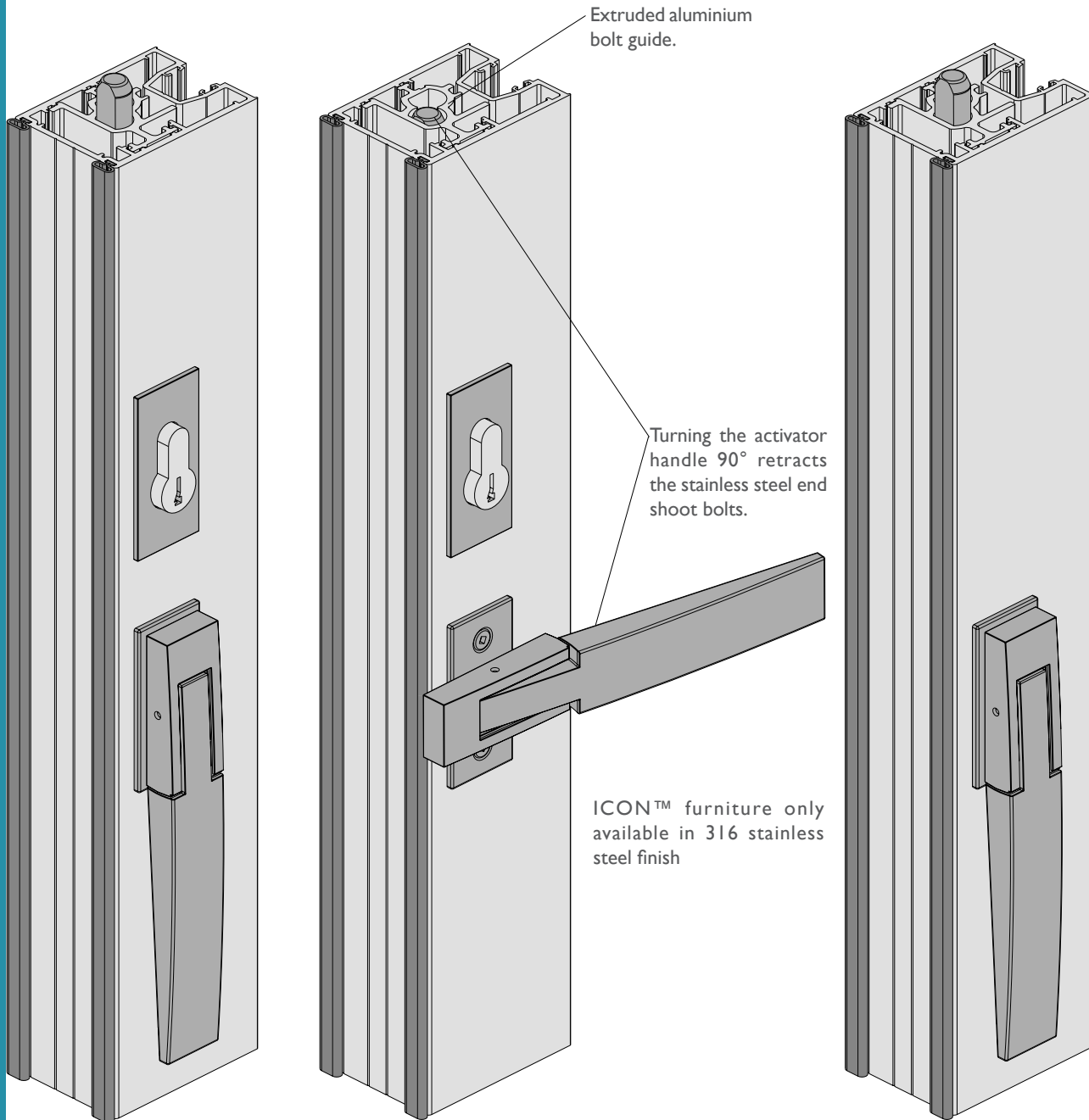


See the ICON™ Lever locks open and close on our web site: [www.elevatealuminium.com.au](http://www.elevatealuminium.com.au)

Series 412  
ViewMASTER™ BI-FOLD DOOR

DATE: AUG 20  
REPLACES: MAY 13  
SCALE: NOT TO SCALE

PROPRIETARY ICON™ BI-FOLD ACTIVATOR



Extruded aluminium bolt guide.

Turning the activator handle 90° retracts the stainless steel end shoot bolts.

ICON™ furniture only available in 316 stainless steel finish

**Key Option**  
Proprietary ICON™ key Bi-fold activator.

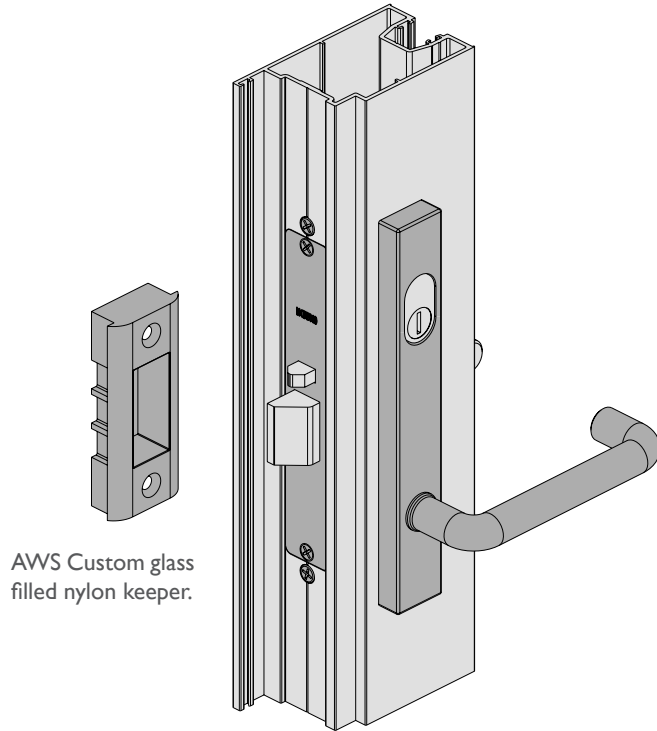
**Non-Key Option**  
Proprietary ICON™ non key Bi-fold activator also available.

See the ICON™ Bi-fold activators open and close on our web site: [www.elevatealuminium.com.au](http://www.elevatealuminium.com.au)

# Series 412 ViewMASTER™ BI-FOLD DOOR

DATE: AUG 20  
REPLACES: MAY 13  
SCALE: NOT TO SCALE

## LOCKWOOD 3580 LOCK

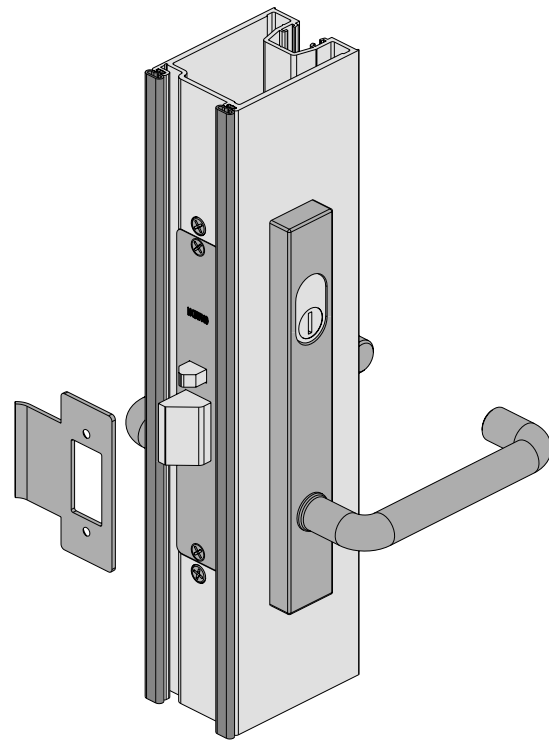


AWS Custom glass filled nylon keeper.

Lockwood Series 3580 short backset cylinder mortice lock- 30mm backset, with Lockwood Series 4800 or 5800 furniture.

There are numerous lock and furniture options refer Lockwood catalogue and/or web site ([www.lockwoodsecurity.com](http://www.lockwoodsecurity.com)).

AWS Series 50 door French stile illustrated. This lock can also be fitted into Series 52 fully beaded French stile.

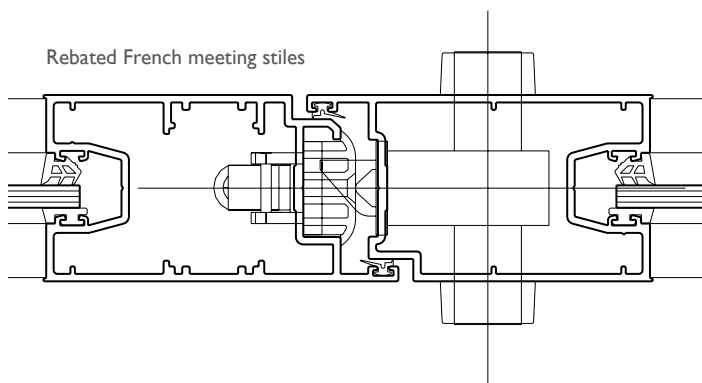


Lockwood Series 3580 short backset cylinder mortice lock- 30mm backset can be fitted into Series 50 Bi-fold stile as shown right.

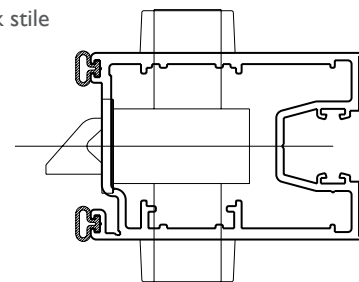
On Series 52 use 25.40mm backset, with Lockwood Series 4800 or 5800 furniture.

There are numerous lock and furniture options refer Lockwood catalogue and/or web site ([www.lockwoodsecurity.com](http://www.lockwoodsecurity.com)).

Jamb stile uses the standard stainless steel keeper that comes with the lock.



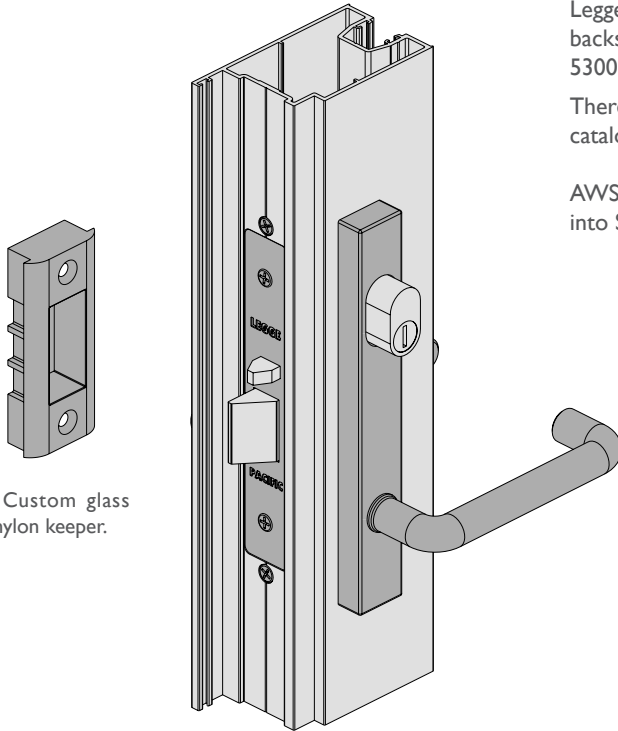
Bi-fold lock stile



# Series 412 ViewMASTER™ BI-FOLD DOOR

DATE: AUG 20  
REPLACES: MAY 13  
SCALE: NOT TO SCALE

## LEGGE 995MF LOCK

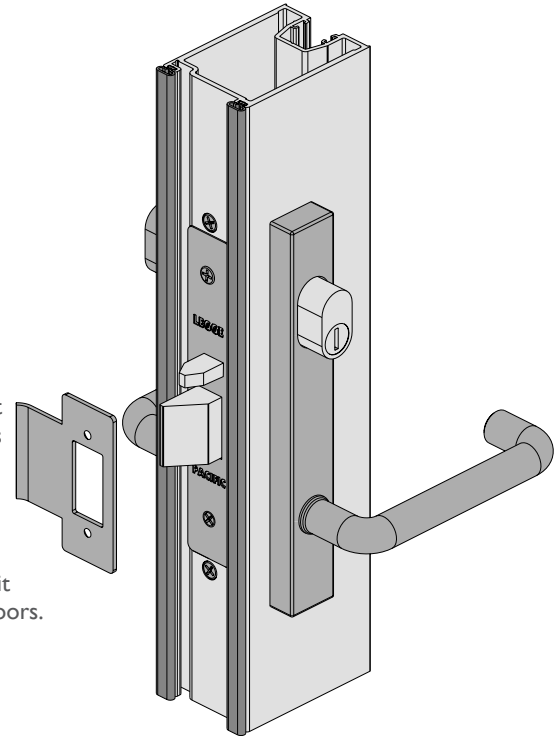


AWS Custom glass filled nylon keeper.

Legge Pacific 995MF multi function narrow stile mortise lock - 30mm backset, with extended cylinders and with Dalco narrow style Series 5300 or 5400 furniture.

There are numerous furniture options refer Dalco Narrow Style Furniture catalogue and/or web site ([www.ingersollrand.com.au](http://www.ingersollrand.com.au)).

AWS Series 50 door French stile illustrated. This lock can also be fitted into Series 52 fully beaded French stile.

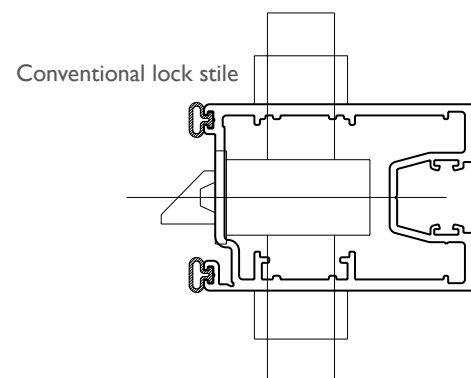
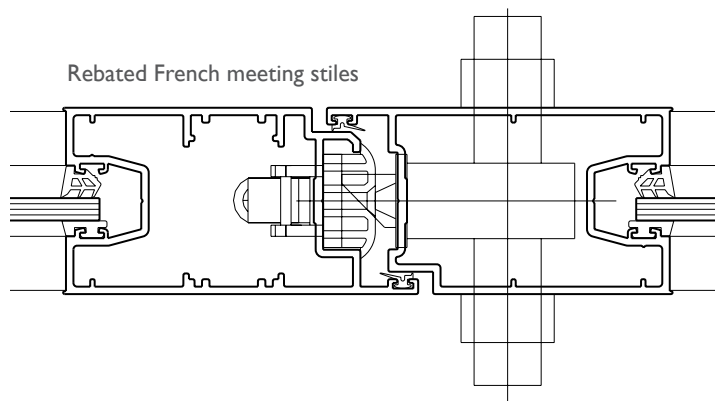


Legge Pacific 995MF multi function narrow stile mortise lock - 30mm backset can be fitted into Series 50 Bi-fold stile as shown right, with extended cylinders and with Dalco narrow style Series 5300 or 5400 furniture.

There are numerous furniture options refer Dalco Narrow Style Furniture catalogue and/or web site ([www.irarchitecturalhardware.com.au](http://www.irarchitecturalhardware.com.au)).

Series 52 doors are **not suitable** with Legge 995MF lock as we can only fit the 23mm backset into the Bi-fold stile and 23mm is not enough on Bi-fold doors.

Jamb stile uses the standard stainless steel keeper that comes with the lock.





# Series 412 ViewMASTER™ BI-FOLD DOOR

DATE: AUG 20  
REPLACES: MAY 13  
SCALE: NOT TO SCALE

## CENTOR SCREEN PRODUCTION FEATURES

By far the largest and most robust retractable screening system on the market. The detail in this section show the screen fitted behind Series 412 Bi-fold door. The screen can be fitted to any of the Bi-fold door configurations up to 8811 mm wide (with Standard weave mesh).

The S4 screen frame can be coloured to match the Bi-fold door frame.

Load Balancing Technology™ (LBT™) allows for effortless fingertip control. With no spring-loading to fight against, the screen's lead-stile remains firmly in any chosen position until further pressure is applied. Load-balancing also means far greater mesh tension across the screen, eliminating any tendency to sag.

Tight Technology™ manufacturing techniques ensure control of the horizontal edges of the screen so they remain straight and tight across the widest spans.

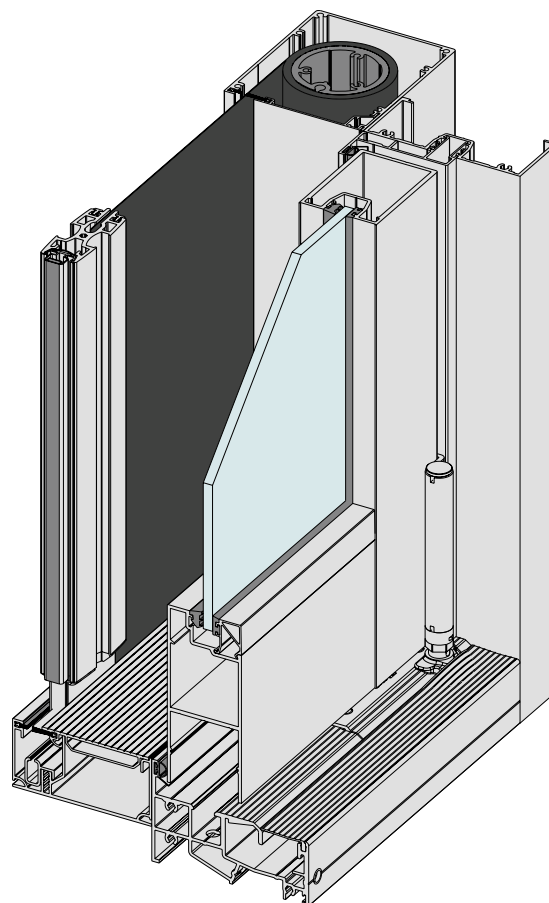
A shock absorption system allows visitors taken in by the screen's unobtrusiveness and near invisibility to walk away with little more than a surprise.

Should strong winds blow the screen out of the top or bottom channels the mesh will self-feed back onto the roll as it is rolled away.

The S4 screen is an evolution of the highly successful S1 screen with completely redesigned operating system including top and bottom tabs on the mesh to improve blowout resistance and allow blackout blinds to be added.

S4 is manufactured in stainless steel and reinforced engineered polymers. PetScreen Lite, the tough PVC coated polyester mesh used in the screen, is hard wearing and resistant to damage from pets and children. The mesh is easy to clean and can be replaced if damaged (service call required).

Large size screens available 3200mm high x 4611 mm wide single or 9013mm wide double bi-parting screens (with Standard weave mesh). It's possible with a cavity sliding door and the S4 screen to get about 95% clear opening.



### Screen Maintenance

Screen fabric should be cleaned with a soft brush or a damp soft cloth.

Tracking should be regularly cleaned to prevent the build-up of dirt and debris.

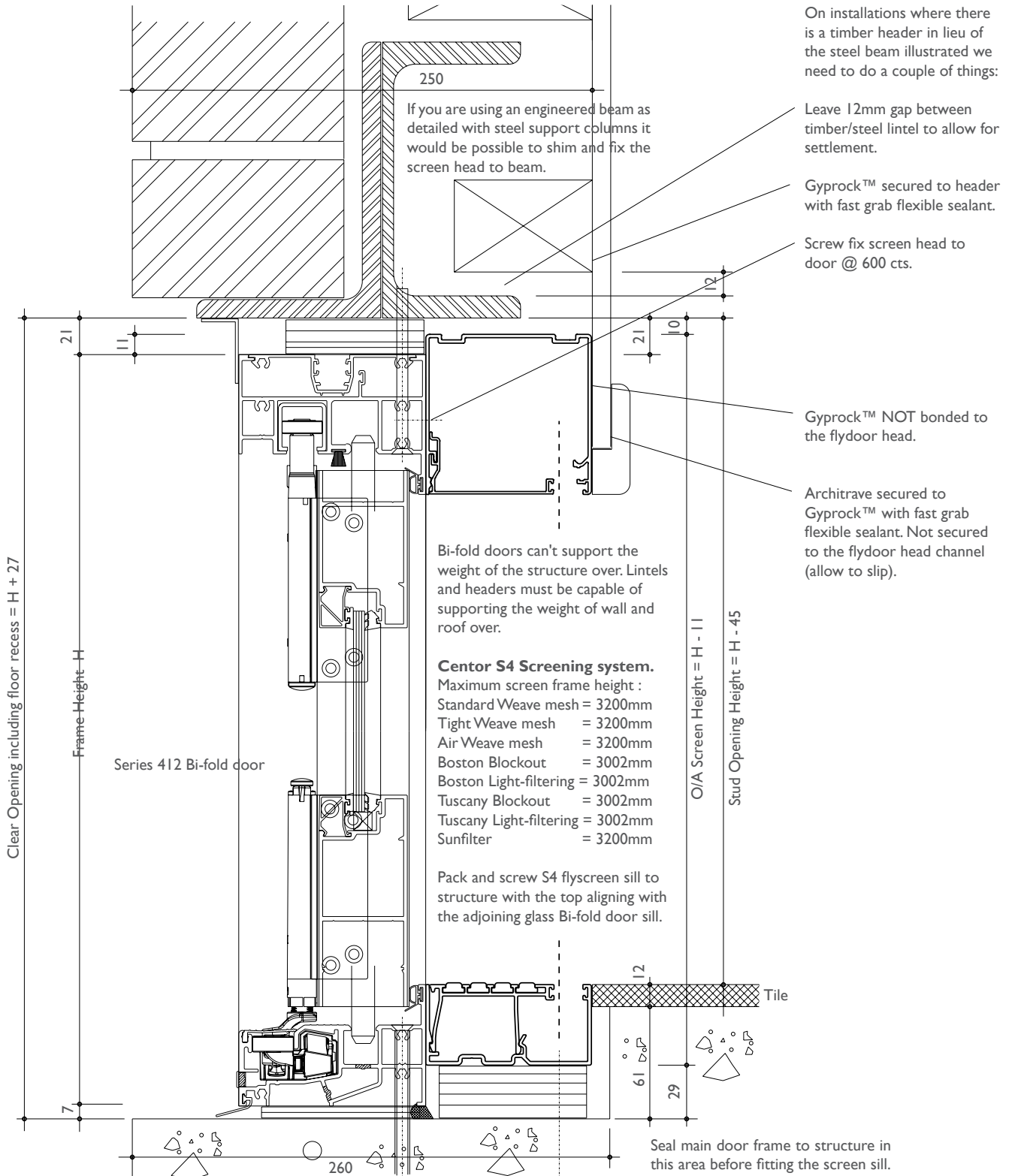
A vacuum cleaner fitted with a nozzle is effective. The S4 has an "easy fit" sill cover to facilitate simple cleaning and maintenance by the homeowner.

Operating mechanisms are fully contained and do not require maintenance other than keeping clear of dirt and debris.

# Series 412 ViewMASTER™ BI-FOLD DOOR

DATE: AUG 20  
REPLACES: MAY 13  
SCALE: NOT TO SCALE

## TYPICAL VERTICAL CROSS SECTION - Centor™ S4 ROLLER SCREEN - NO SUB-SILL

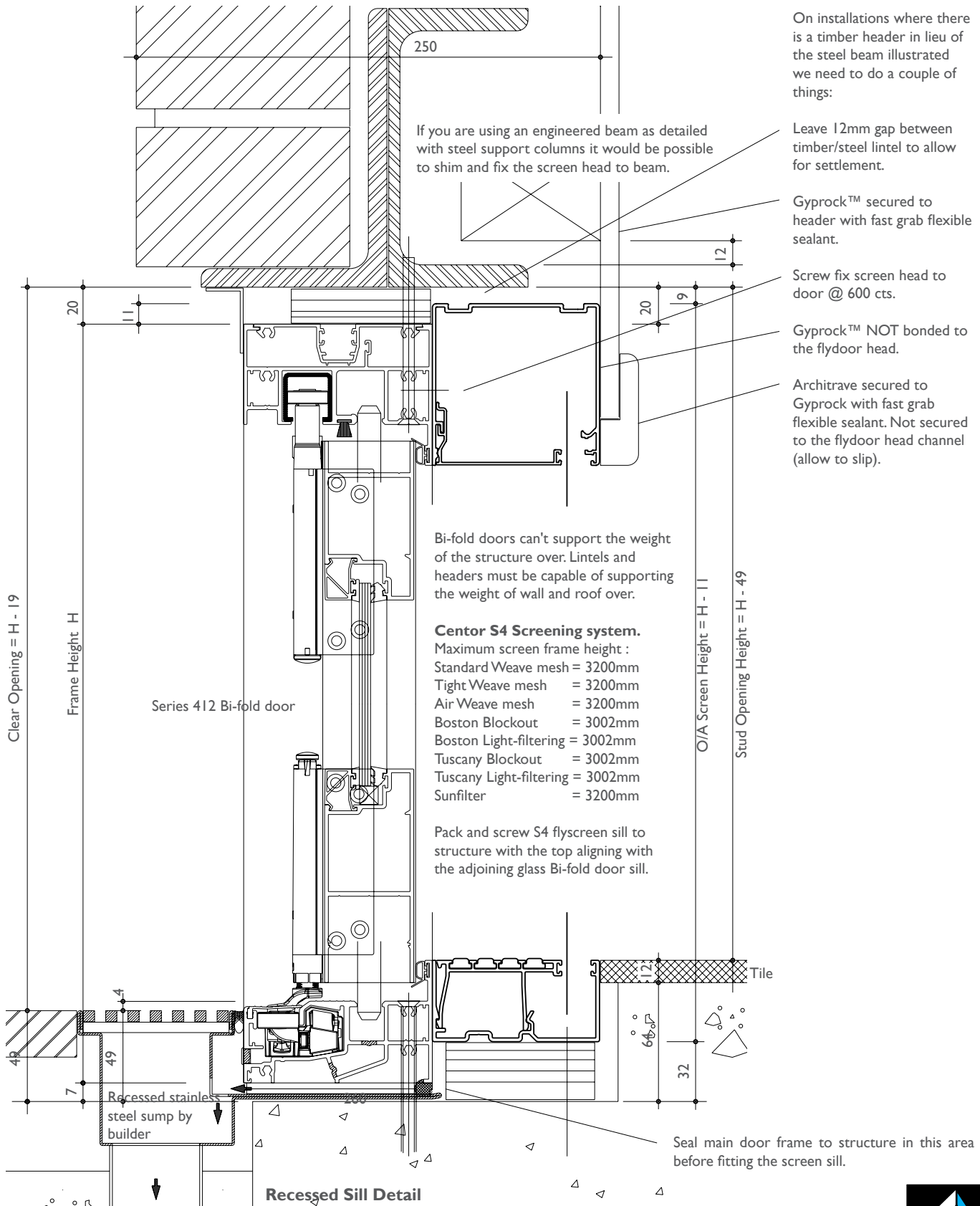


Recessed Sill Detail

# Series 412 ViewMASTER™ BI-FOLD DOOR

DATE: AUG 20  
REPLACES: MAY 13  
SCALE: NOT TO SCALE

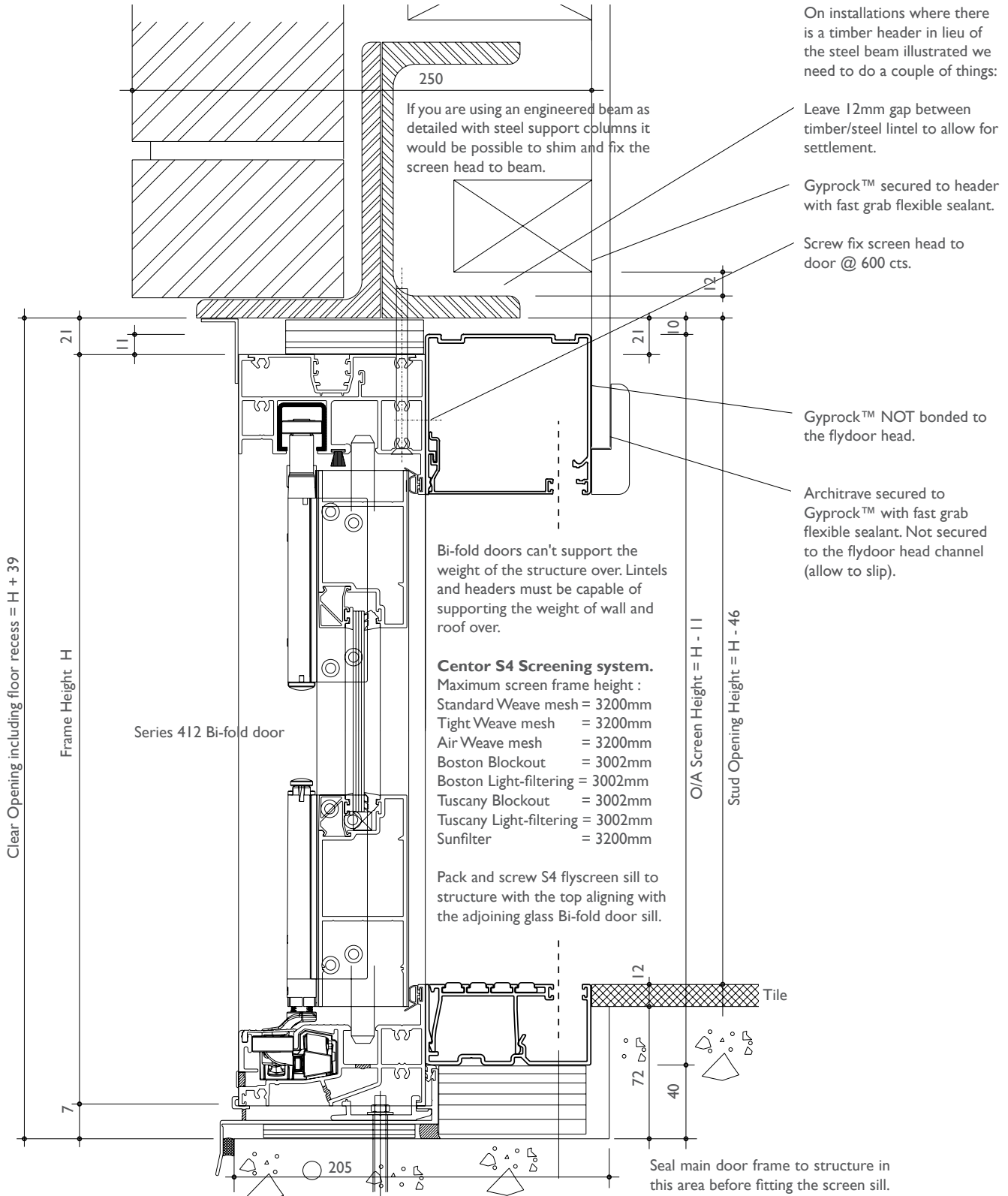
## TYPICAL VERTICAL CROSS SECTION - Centor™ S4 SCREEN - NO SUB-SILL



# Series 412 ViewMASTER™ BI-FOLD DOOR

DATE: AUG 20  
REPLACES: MAY 13  
SCALE: NOT TO SCALE

## TYPICAL VERTICAL CROSS SECTION - Centor™ S4 ROLLER SCREEN - WITH SUB-SILL

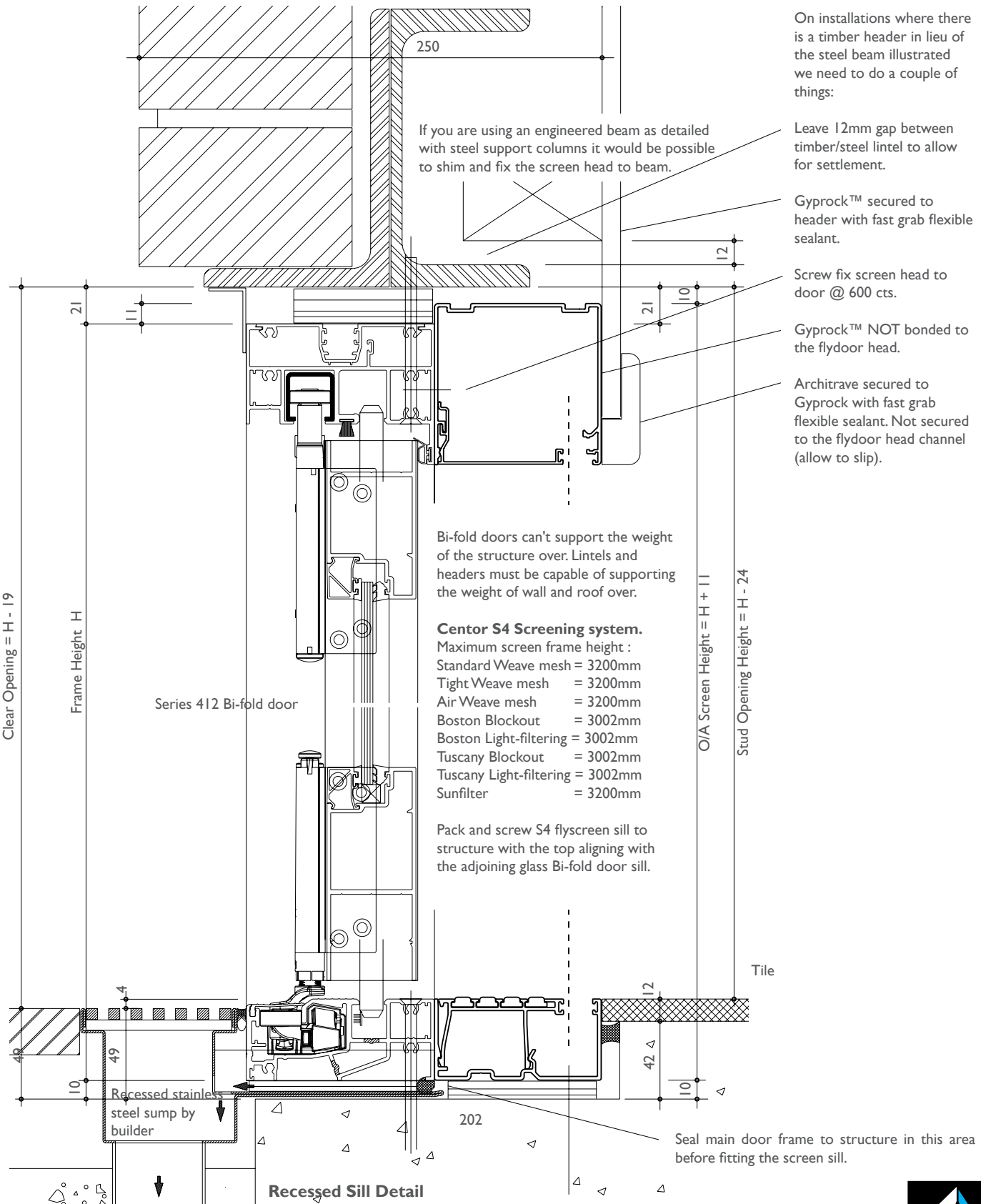


Recessed Sill Detail

# Series 412 ViewMASTER™ BI-FOLD DOOR

DATE: AUG 20  
REPLACES: MAY 13  
SCALE: NOT TO SCALE

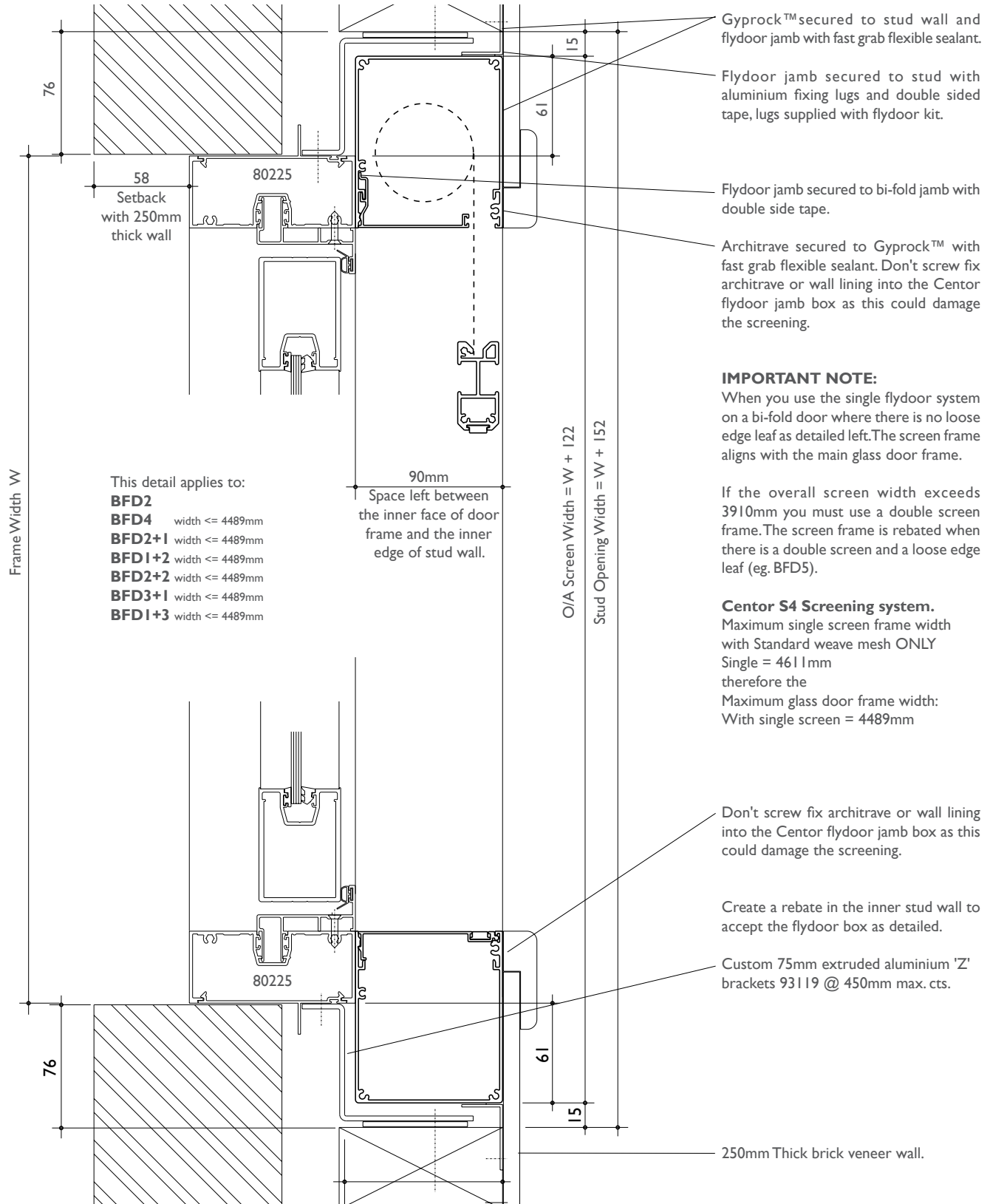
## TYPICAL VERTICAL CROSS SECTION - Centor™ S4 SCREEN - FLAT SILL



# Series 412 ViewMASTER™ BI-FOLD DOOR

DATE: AUG 20  
REPLACES: MAY 13  
SCALE: NOT TO SCALE

## TYPICAL HORIZONTAL CROSS SECTION - SINGLE Centor™ S4 SCREEN FLUSH FINISH



This detail applies to:

- BFD2**
- BFD4** width <= 4489mm
- BFD2+1** width <= 4489mm
- BFD1+2** width <= 4489mm
- BFD2+2** width <= 4489mm
- BFD3+1** width <= 4489mm
- BFD1+3** width <= 4489mm

Gyprock™ secured to stud wall and flydoor jamb with fast grab flexible sealant.

Flydoor jamb secured to stud with aluminium fixing lugs and double sided tape, lugs supplied with flydoor kit.

Flydoor jamb secured to bi-fold jamb with double side tape.

Architrave secured to Gyprock™ with fast grab flexible sealant. Don't screw fix architrave or wall lining into the Centor flydoor jamb box as this could damage the screening.

**IMPORTANT NOTE:**

When you use the single flydoor system on a bi-fold door where there is no loose edge leaf as detailed left. The screen frame aligns with the main glass door frame.

If the overall screen width exceeds 3910mm you must use a double screen frame. The screen frame is rebated when there is a double screen and a loose edge leaf (eg. BFD5).

**Centor S4 Screening system.**

Maximum single screen frame width with Standard weave mesh ONLY  
Single = 4611mm  
therefore the  
Maximum glass door frame width:  
With single screen = 4489mm

Don't screw fix architrave or wall lining into the Centor flydoor jamb box as this could damage the screening.

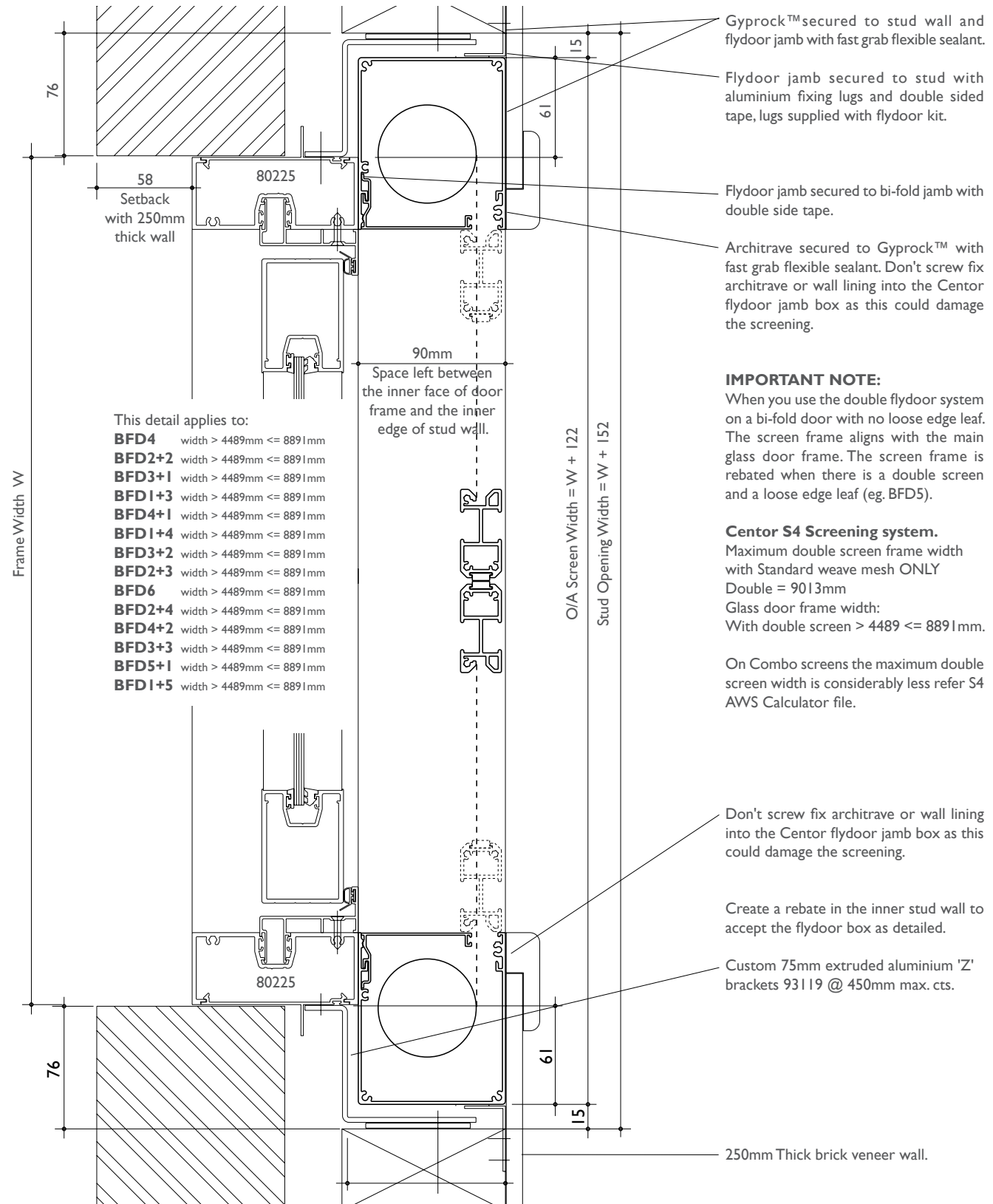
Create a rebate in the inner stud wall to accept the flydoor box as detailed.

Custom 75mm extruded aluminium 'Z' brackets 93119 @ 450mm max. cts.

# Series 412 ViewMASTER™ BI-FOLD DOOR

DATE: AUG 20  
REPLACES: MAY 13  
SCALE: NOT TO SCALE

## TYPICAL HORIZONTAL CROSS SECTION - DOUBLE Centor™ S4 SCREEN FLUSH FINISH

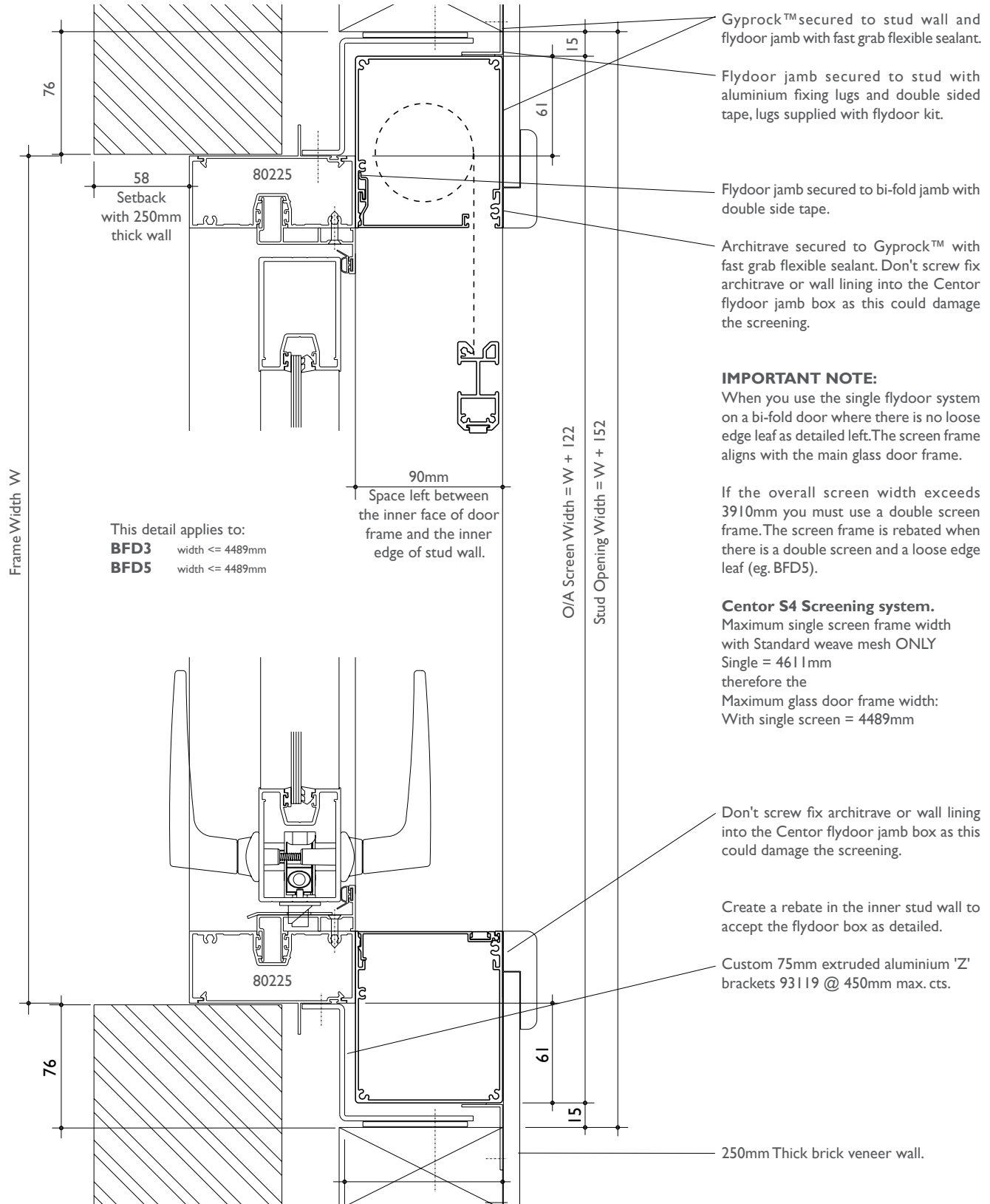


- This detail applies to:
- BFD4** width > 4489mm <= 8891mm
  - BFD2+2** width > 4489mm <= 8891mm
  - BFD3+1** width > 4489mm <= 8891mm
  - BFD1+3** width > 4489mm <= 8891mm
  - BFD4+1** width > 4489mm <= 8891mm
  - BFD1+4** width > 4489mm <= 8891mm
  - BFD3+2** width > 4489mm <= 8891mm
  - BFD2+3** width > 4489mm <= 8891mm
  - BFD6** width > 4489mm <= 8891mm
  - BFD2+4** width > 4489mm <= 8891mm
  - BFD4+2** width > 4489mm <= 8891mm
  - BFD3+3** width > 4489mm <= 8891mm
  - BFD5+1** width > 4489mm <= 8891mm
  - BFD1+5** width > 4489mm <= 8891mm

# Series 412 ViewMASTER™ BI-FOLD DOOR

DATE: AUG 20  
REPLACES: MAY 13  
SCALE: NOT TO SCALE

## TYPICAL HORIZONTAL CROSS SECTION - SINGLE Centor™ S4 SCREEN FLUSH FINISH

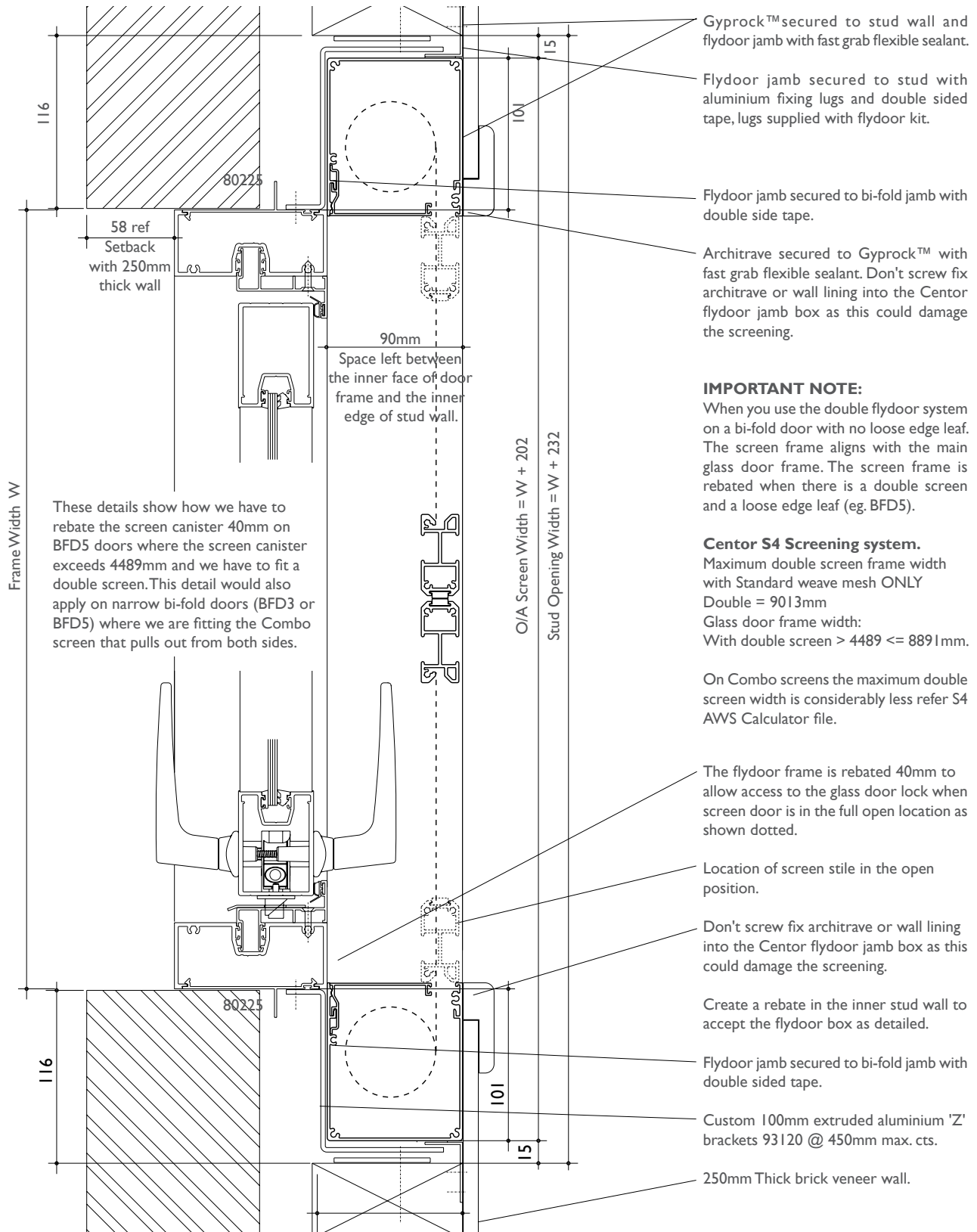




# Series 412 ViewMASTER™ BI-FOLD DOOR

DATE: AUG 20  
REPLACES: MAY 13  
SCALE: NOT TO SCALE

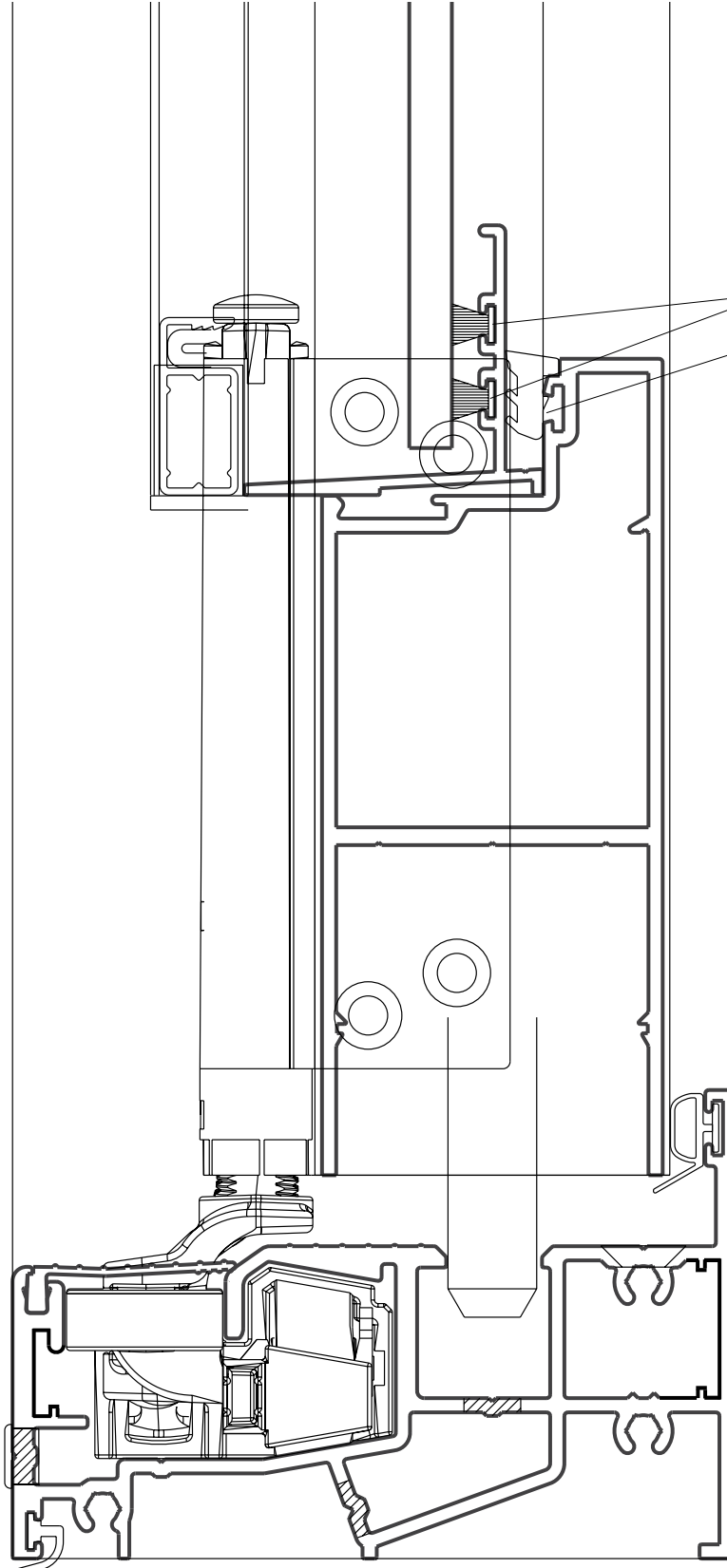
## TYPICAL HORIZONTAL CROSS SECTION - DOUBLE Centor™ S4 SCREEN FLUSH FINISH



# Series 412 ViewMASTER™ BI-FOLD DOOR

DATE: AUG 20  
REPLACES: MAY 13  
SCALE: NOT TO SCALE

## ClearVENT™ SASHLESS DOUBLE-HUNG INSERT



ClearVENT™ Sashless double-hung sashes can be inlaid into Series 50 ViewMASTER™ doors as shown on this and the following page.

The ClearVENT™ inlay comes in flyscreen version as displayed on these pages or non-flyscreen (no external screen acceptor channel).

Clearly nominate your preference when specifying.

Inlay sill double weatherpile sealed to glass.

Roll-in wedge closes off the inlay to door sill gap.

### Door Bottom Rail

Optional flyscreen shown.

Fitting a screened ClearVENT™ into one of the door panels is a way of screening the Bi-fold unit.

For more details on sashless double-hung insert go to Series 464 ClearVENT™ windows.

# Series 412 ViewMASTER™ BI-FOLD DOOR

DATE: AUG 20  
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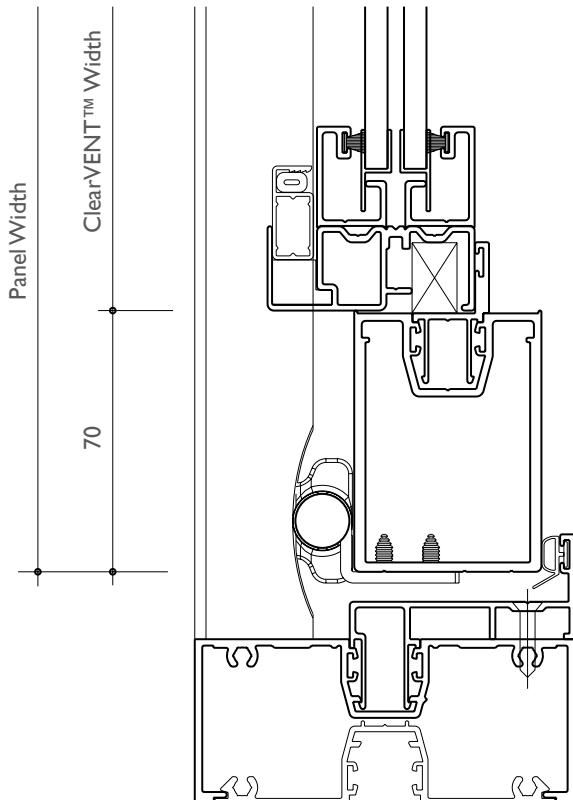
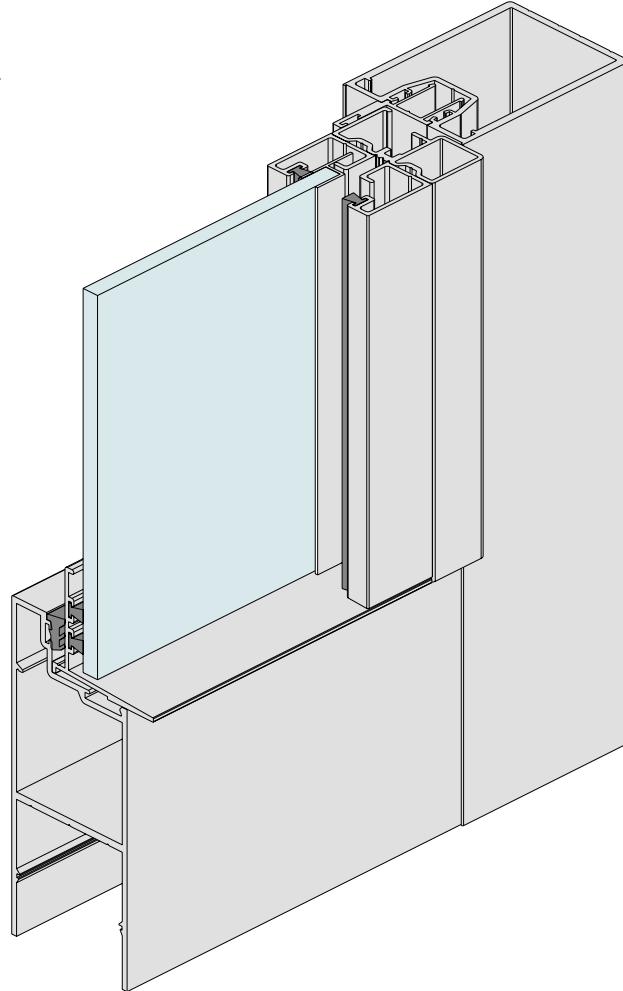
## ClearVENT™ SASHLESS DOUBLE-HUNG INSERT

ClearVENT™ insert nests into Series 50 door panel with or without flyscreen. The isometric detail right shows the non-flyscreen jamb adaptor. Where the plan view below shows the flyscreen adaptor.

Refer Series 464 Architectural Commercial window for full details on ClearVENT™ options and production information.

### Recommend

When ClearVENT™ inserts are fitted into door panels we recommend that you fit a midrail with fixed lowlight to brace the door panel.



# Series 412 ViewMASTER™ BI-FOLD DOOR

DATE: AUG 20  
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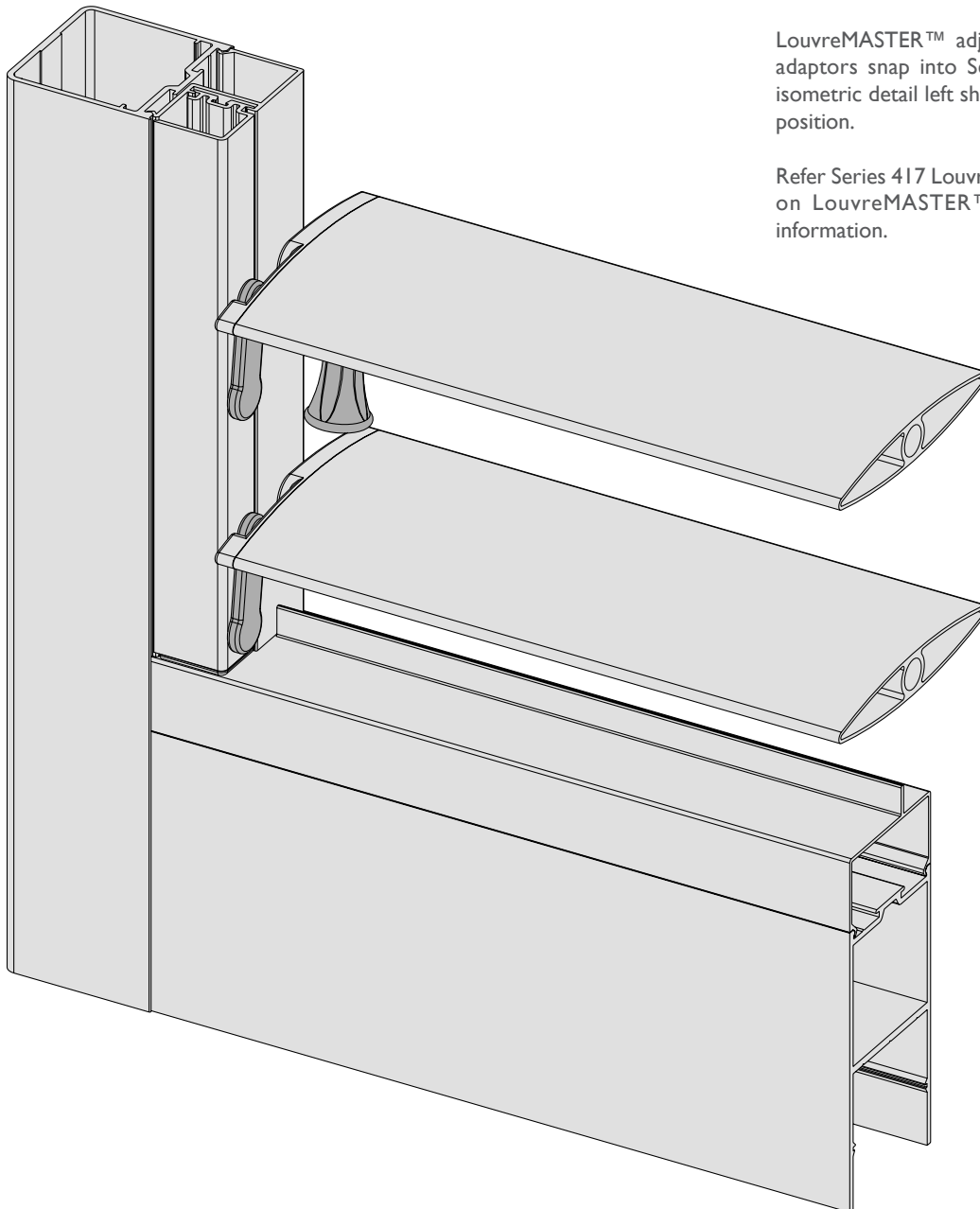
## LouvreMASTER™ SUN CONTROL SHUTTERS

LouvreMASTER™ sun control shutters (Series 417) can be fitted into a large variety of AWS products:

- Series 411 ViewMASTER™ Bi-fold doors and windows.
- Series 412 ViewMASTER™ Bi-fold doors and windows.
- Series 410 FoldMASTER™ Bi-fold doors and windows.
- Series 52 Hinged or sliding doors.
- Series 400 awning and casement windows.



CAD file: DWG  
417.LVR.6



LouvreMASTER™ adjustable aluminium shutter adaptors snap into Series 52 door panel. The isometric detail left shows the blades in the open position.

Refer Series 417 LouvreMASTER™ for full details on LouvreMASTER™ options and technical information.