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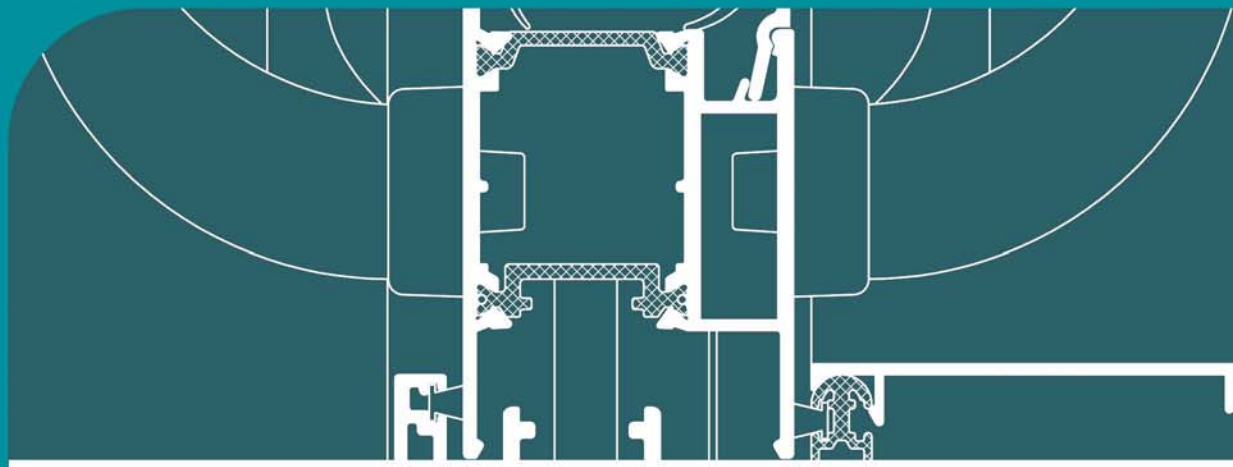
ARCHITECTURAL ALUMINIUM SOLUTIONS



Crown Sliding Patio Door

CROWN

Product Manual

CROWN

Crown Patio Door

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Specification

Scope

This specification details materials, construction, finish and size limitations for the Crown Patio Door. This range is designed to meet high performance requirements in a variety of applications.

Materials

Aluminium profiles are extruded from aluminium alloy 6063 or 6060 T6 complying with the recommendations of BS EN 755-9:2001. Polyester powder coat finishes are available to BS EN 12206-1:2004 in a wide range of colours. Anodised finish is to BS 3987 Grade AA25 etch silver.

Weatherstripping is a woven pile internally and externally, set in undercut grooves in the frame.

The thermal barrier is achieved using two polyamide extrusions separating the internal and external faces.

Construction

Frame members are square cut and shouldered (where necessary). Joints are secured using stainless self tapping screws into screw ports extruded into the profile. All joints shall be sealed during fabrication against water entry.

The thermal barrier section is achieved using two separate aluminium extrusions and polyamide extrusions mechanically jointed to form a single compound profile.

Assembly and Installation

Detailed instructions are provided in this publication, which must be strictly conformed to. Only parts supplied by Sapa should be used in the manufacture of Crown Patio Doors.

Thermal Performance

Crown Patio Doors can meet and surpass the area weighted average U values stipulated in Part L of the Building Regulations. Lower U-values can be achieved using double glazed units with enhanced thermal insulation, such as ‘soft coat’ low emissivity glass, argon gas filling and thermally enhanced spacer bar.

Hardware

Panels slide on adjustable stainless steel tandem rollers. Panels are locked using a multipoint lock with 6 hooks into a full length keep. Both lock and keep are mild steel zinc plated to give corrosion resistance of Grade 4 in accordance with BS EN 1670. Handles and panel stops are zinc die castings.

Glazing

Drainage in accordance with details listed in this manual meets the requirements of “Ventilated and Drained Glazing System”, as specified in BS6262. Glass must conform to BS6262 for thickness and type. Insulating glass units of 24mm, 28mm and 32mm can be accommodated.

Glass is set against extruded self adhesive Nitrile rubber gaskets retained in the aluminium sash profile for security. Final retention of the glass is achieved by the application of a co-extruded PVCu / Nitrile wedge gasket between the inner face of the glass and the bead.

Performance

When tested in accordance with BS6375:Part 1:2009 The products listed in this manual, when manufactured installed and glazed strictly to the enclosed details, will meet UK exposure category 1200.

Water Tightness	Class 7A (300 Pascals)
Air Permeability	Class 2 (300 Pascals)
Wind Resistance	Class A2 (800 Pascals)**

** Exposure category varies with Width/Height of door. An accurate figure can be obtained using BS6399:Part 2 calculations and inertia values given on page 2-18.

Size Limitations

Note

All sizes given are in millimetres, and relate to the overall size of the outerframe.

Maximum height = 2500

Minimum height = 1830

2 Pane

Maximum width = 3230

Minimum width = 1530

3 Pane

Maximum width = 4810

Minimum width = 2260

4 Pane

Maximum width = 6408

Minimum width = 3009

Max weight per sliding panel = 80Kg.

General Arrangements

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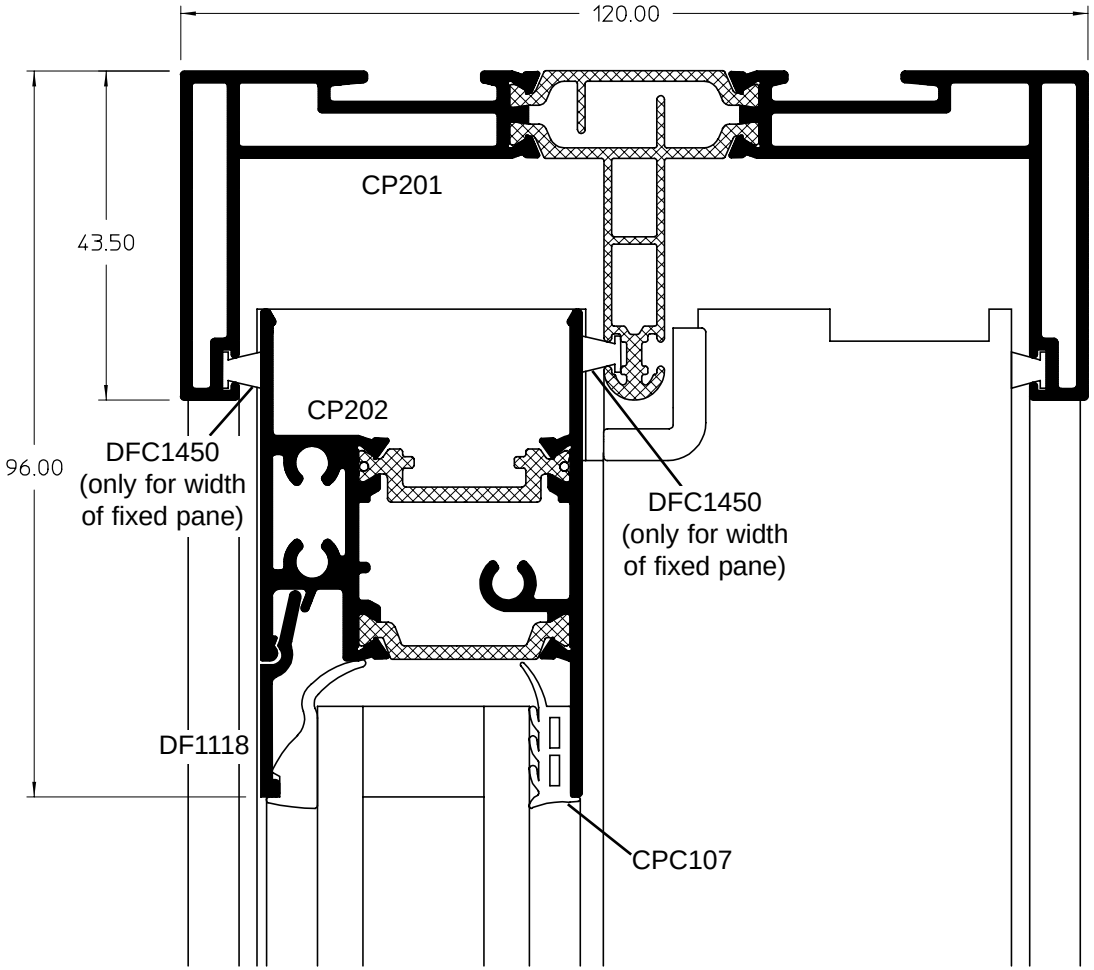
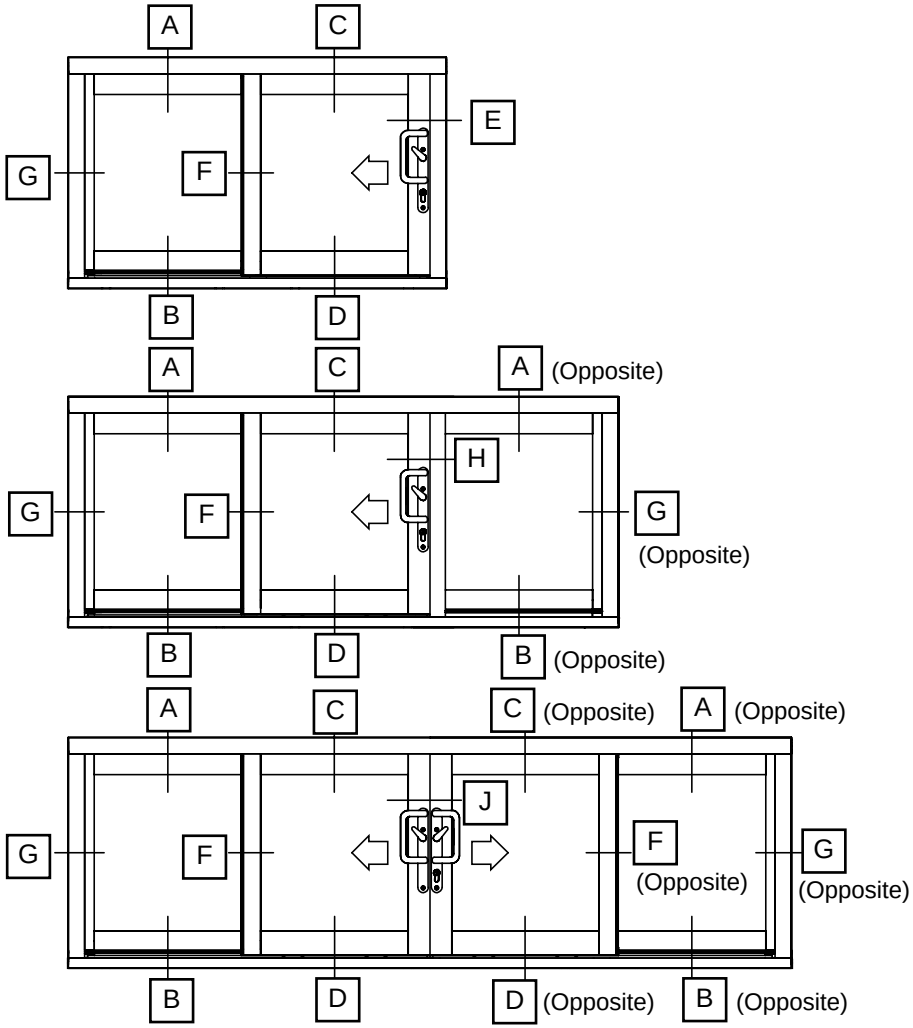
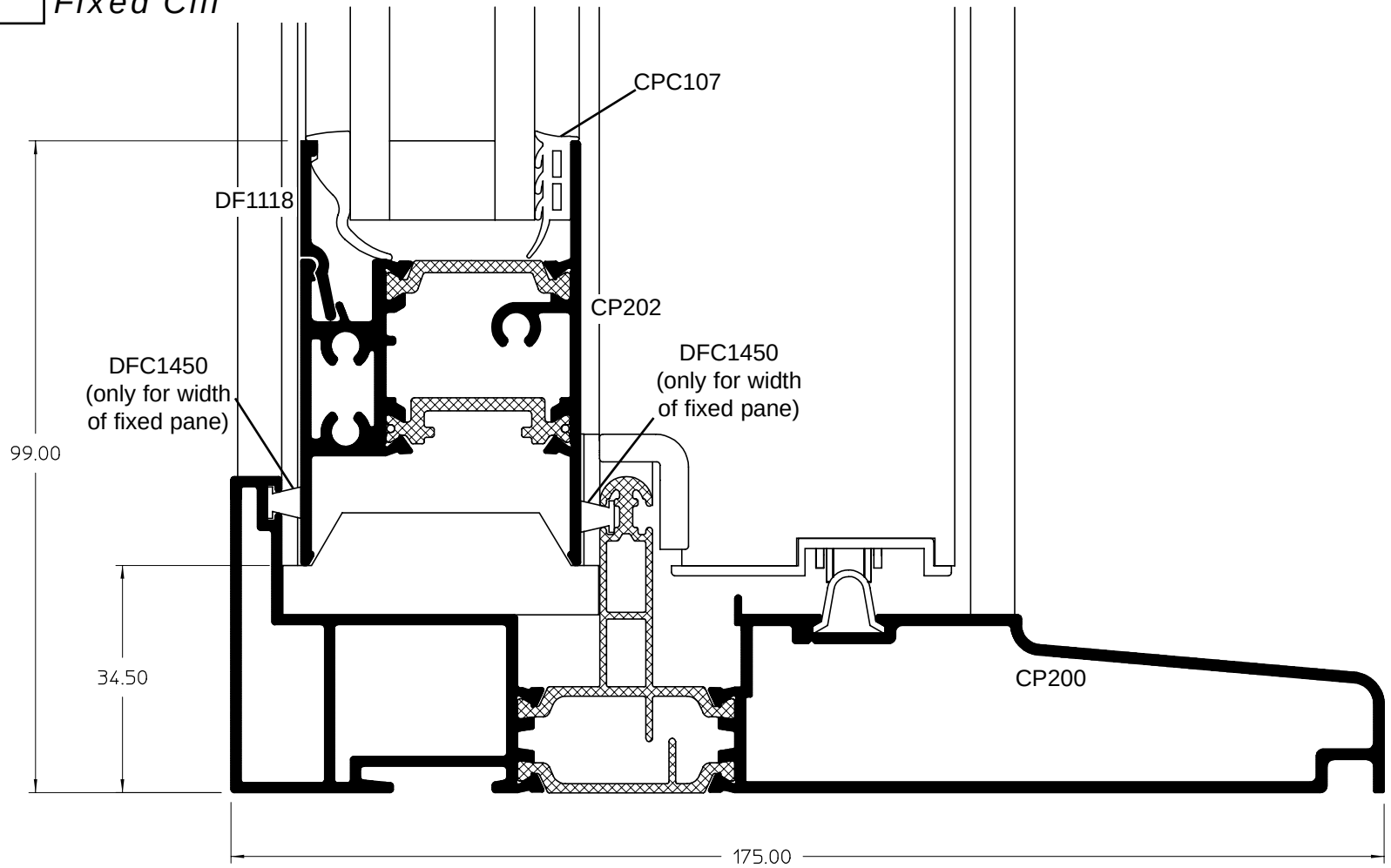
A Fixed Head

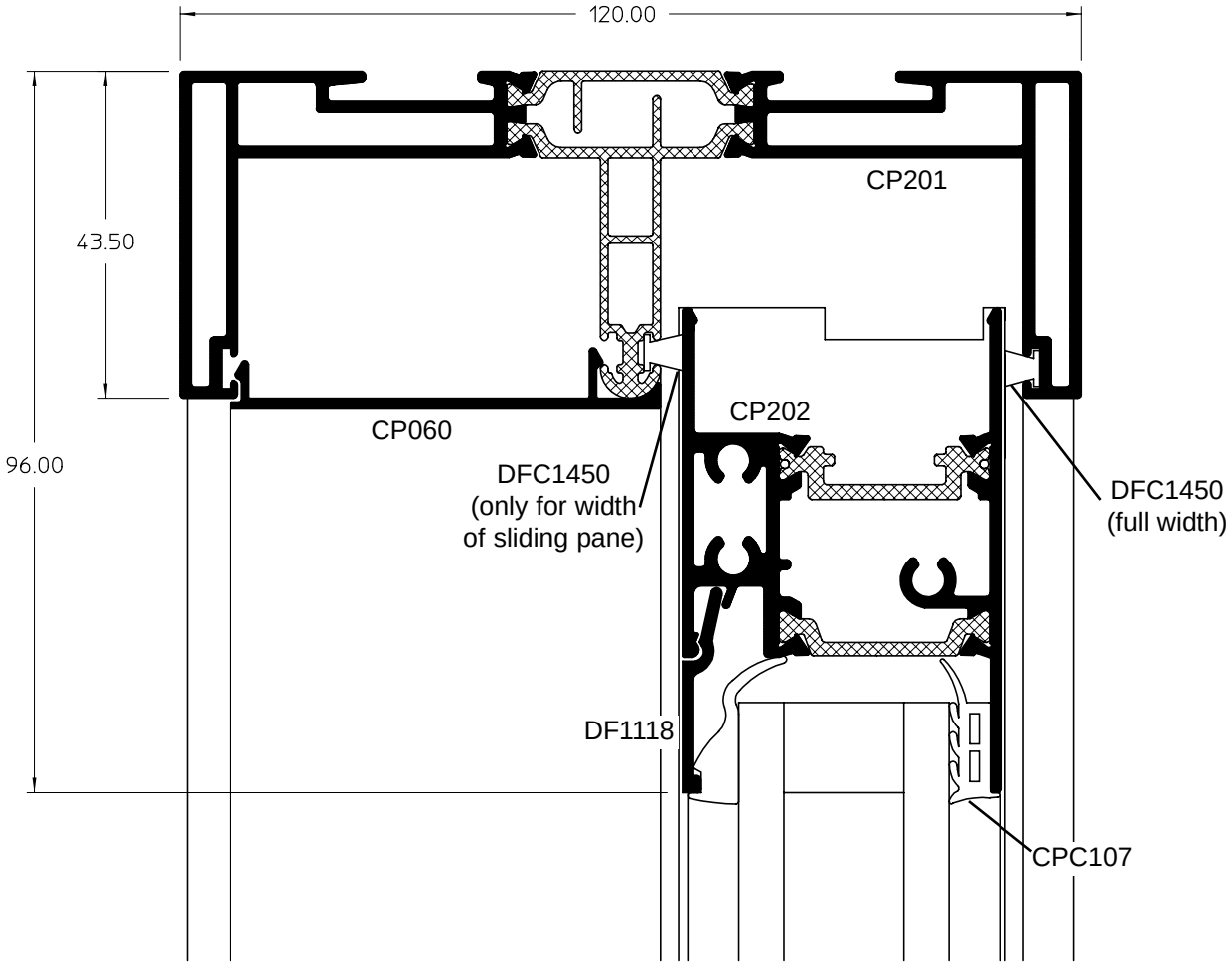




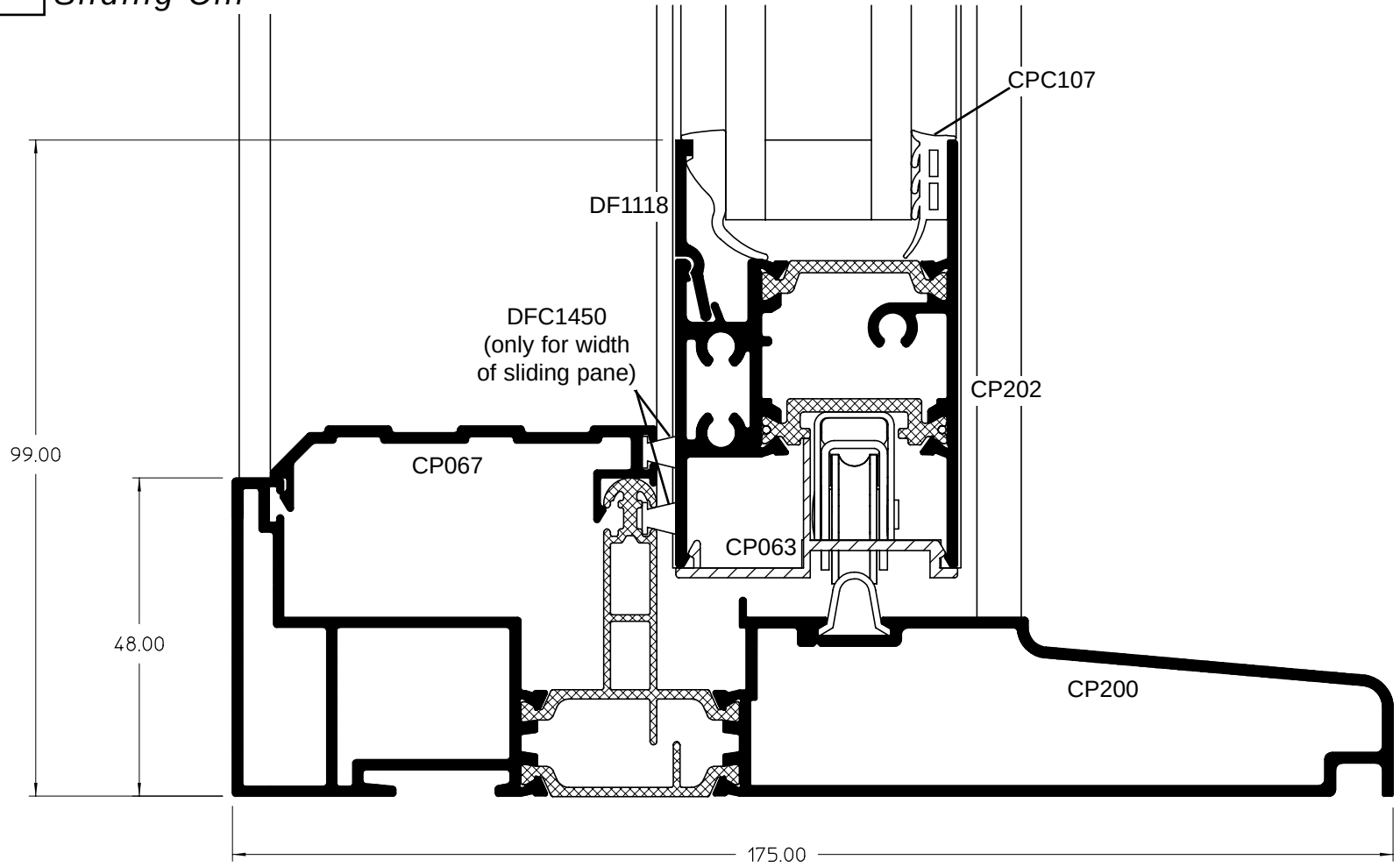
B *Fixed Cill*



C *Sliding Head*



D *Sliding Cill*



General Arrangements

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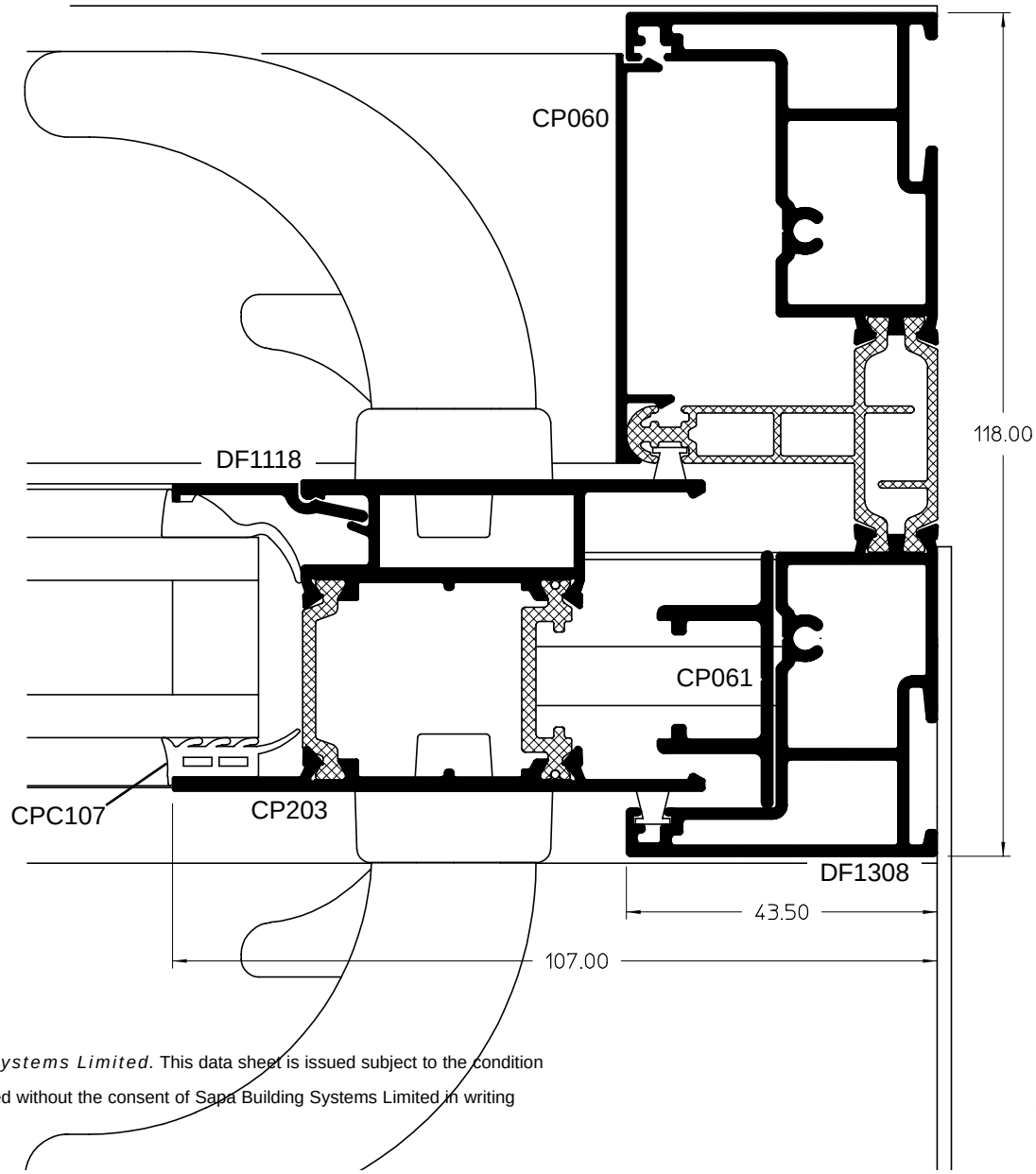
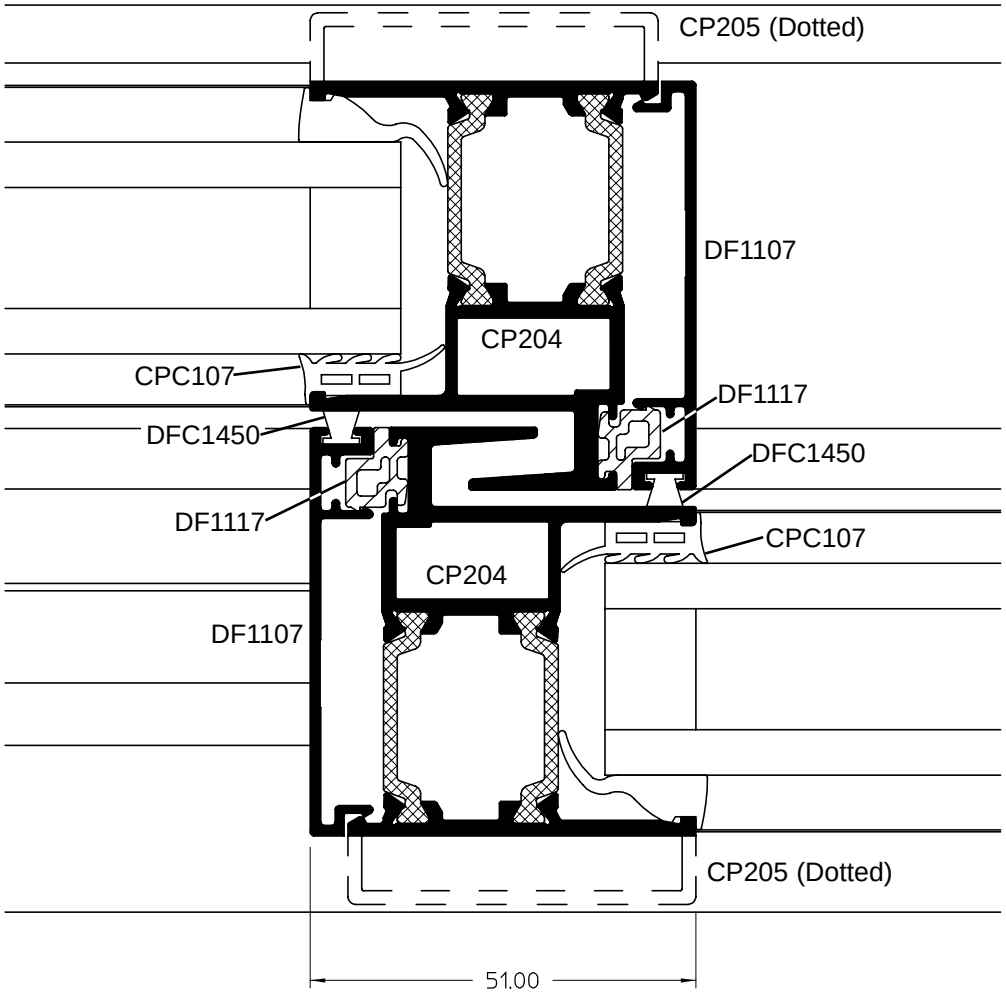
E *Locking Jamb*



F *Interlocks*



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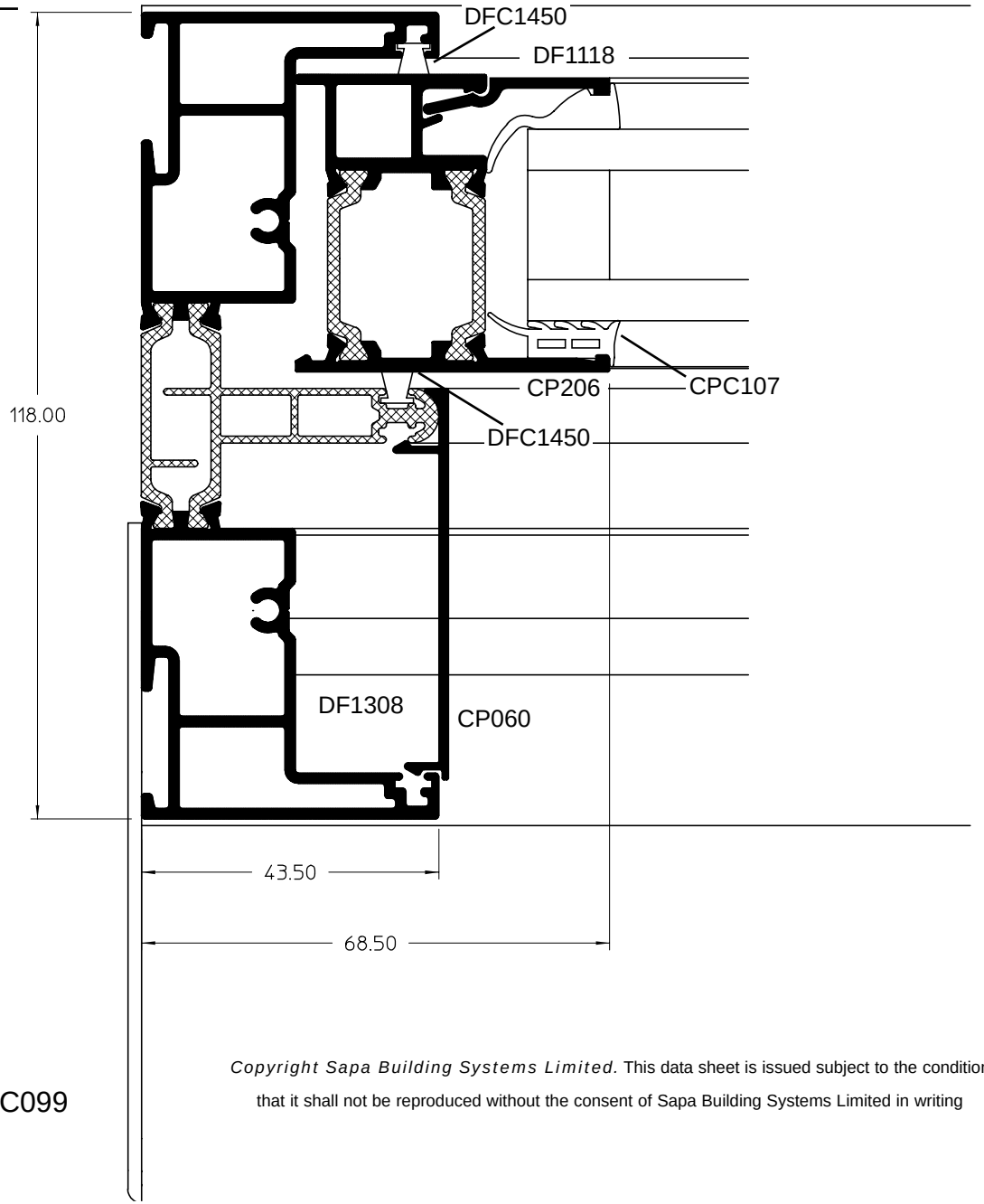
G *Fixed Jamb*

General Arrangements



General Arrangements

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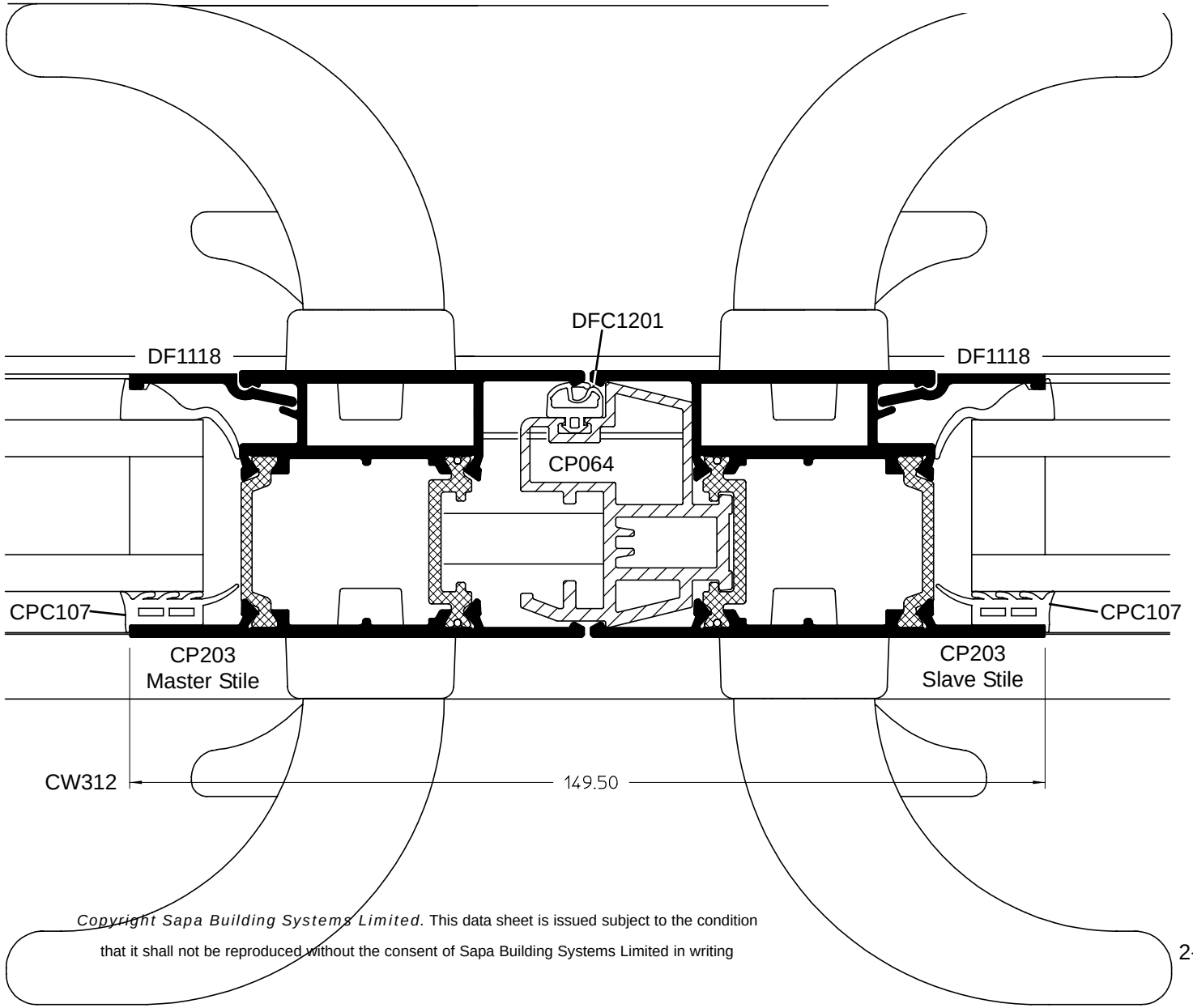
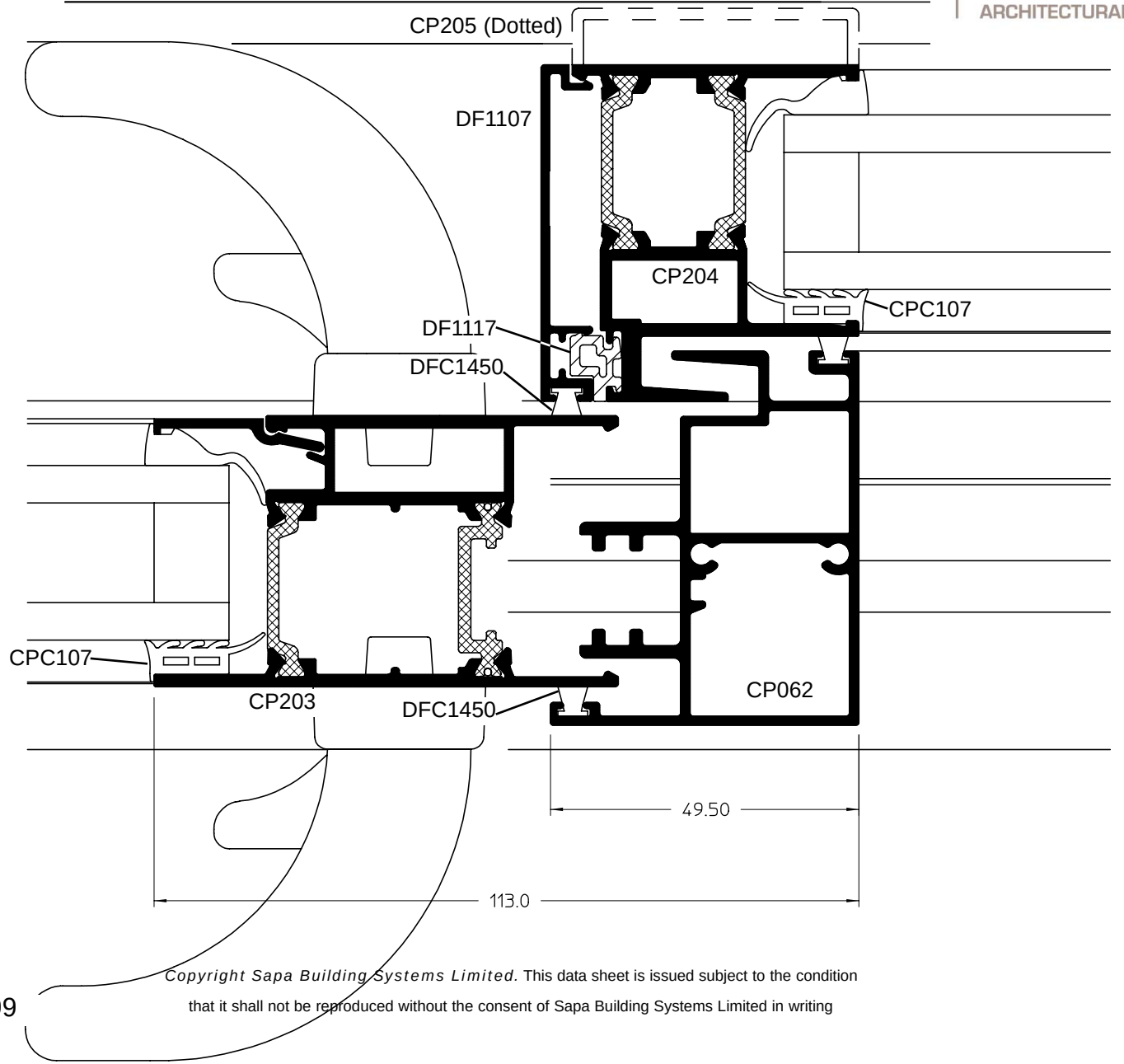
J Meeting Stiles



General Arrangements

H 3-Pane Mullion



Profile Inertia Values

This page gives information on the inertia values of the framing profiles calculated in accordance with :- BS EN 14024 : 2004.

BS6399 Part 2 must be used to calculate the inertia value required.

The table gives inertia values for varying spans of profile.

Select the nearest span BELOW the actual span and use the value shown to compare against the inertia required.

Loading shown with orientation of illustrated profiles.

	Iyy Sag	*Ixx* Windload

Parts List - Profiles

NOTE - 'A' and 'B' ref in brackets after some profiles relates to reference for SP/SP finish only

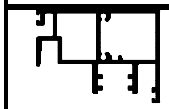
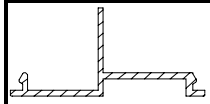
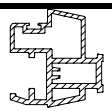
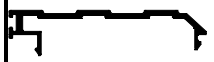
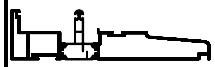
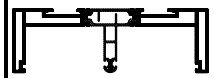
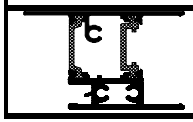
Illustration	Part No.	Description
	CP060	Outerframe Closer
	CP061	Lock Jamb Adaptor
	CP062	3-Pane Mullion
	CP063	Bottom Rail Liner (PVC)
	CP064	4-Pane Meeting Stile Adaptor (PVC)
	CP067	Threshold Closer
	CP200	Cill
	CP201	Head
	CP202	Rail

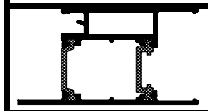
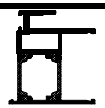
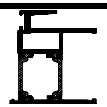
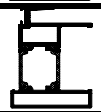
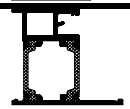
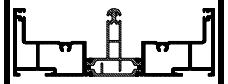
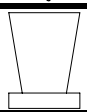
Illustration	Part No.	Description
	CP203	Lock Stile
	CP204	Standard Interlock
	CP204-A	Standard Outer Interlock
	CP204-B	Standard Inner Interlock
	CP205	Heavy Duty Outer Interlock
	CP205-A	Heavy Duty Outer Interlock
	CP205-B	Heavy Duty Inner Interlock
	CP206	Fixed Stile
	DF1107	Interlock Capping

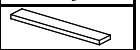
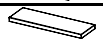
Illustration	Part No.	Description
	DF1117	Outer Interlock Insulator
	DF1118	Bead
	DF1308	Jamb (Straight VS / HS)
	C1193	Stainless Steel Track

Parts List - Gaskets & Weather Seals

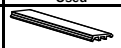
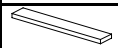
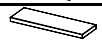
Illustration	Part No.	Description
	CPC107	5.5mm Self Adhesive Retained Gasket - 8.5m (Black)
	DFC1201	Bulb / Flipper Seal - 2.5m (Black)
	DFC1420	3.5mm Self Adhesive Retained Gasket - 8.5m (Black)
	DFC1450	4.8 x 7 Woolpile with Fin - 550m (Grey)
	W262	3-4mm Wedge gasket (Orange ID) - 100m (Black / White)
	W264	5-6mm Wedge gasket (White ID) - 100m (Black / White)
	W266	7-8mm Wedge gasket (Black ID) - 100m (Black)

Parts List - Accessory Pack Contents

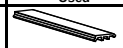
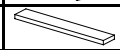
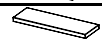
CPC115 - 2 Pane Door - Accessory Bag Contents

Part Number	Description	Quantity	Illustration / Where Used
C3101	Patio Cill Infill - 65mm	2	
C3102	Cill End Cap (RH)	1	
C3103	Cill End Cap (LH)	1	
CPC105	Stile to Rail Clamp Plate	8	
CPC106	Lock / Roller Fixing Tap Plate	8	
CPC108	Cill End Plug	5	
CPC109	9.5mm Hole Plug	4	
CPC120	Fixed Pane Retaining Bracket	1	
CPC122	5mm Hole Plug	2	
DFP1400	Interlock End Moulding (RH)	1	
DPF1401	Interlock End Moulding (LH)	1	
DFP1402	Cill End Plug (In Polyamide)	4	
DFC1415	6mm Glazing Packer	6	
DFC1699	4.3 x 25mm Csk Pozi PA Self Drill Self Tapper	18	Lock & Roller Fixing
ST81PPSS	No. 8 x 1" Pan Pozi Self Tapper	8	Outerframe Corner Jointing
ST10112XPSS	No 10 x 11/2" Pan Torx Self Tapper	6	Outer Interlock ro Rail Fixing
ST10134PPSS	No. 10 x 1 3/4" Pan Pozi Self Tapper	17	Panel Corner Jointing (Except Outer Interlock)
ST102CPSS	No. 10 x 2" Csk Pozi Self Tapper	1	Fixed Pane Retaining Brkt to Interlock
ST1034CPSS	No. 10 x 3/4" Csk Pozi Self Tapper	1	Fixed Pane Retaining Brkt to Interlock
Inner Bag			
ST1034PPSS	No. 10 x 3/4" Csk Pozi Self Tapper	6	Anti Lift Block & Bump Stop Fixing
ST1034CPSS	No. 10 x 3/4" Csk Pozi Self Tapper	3	Fixed Pane Retaining Brkt to Interlock & Bump Stop Fixing
ST8112CPSS	No. 8 x 1 1/2" Csk Pozi Self Tapper	14	Keep Fixing
CPC104	Fixed Pane Packer	3	
CWC115	Anti-Lift Block	8	

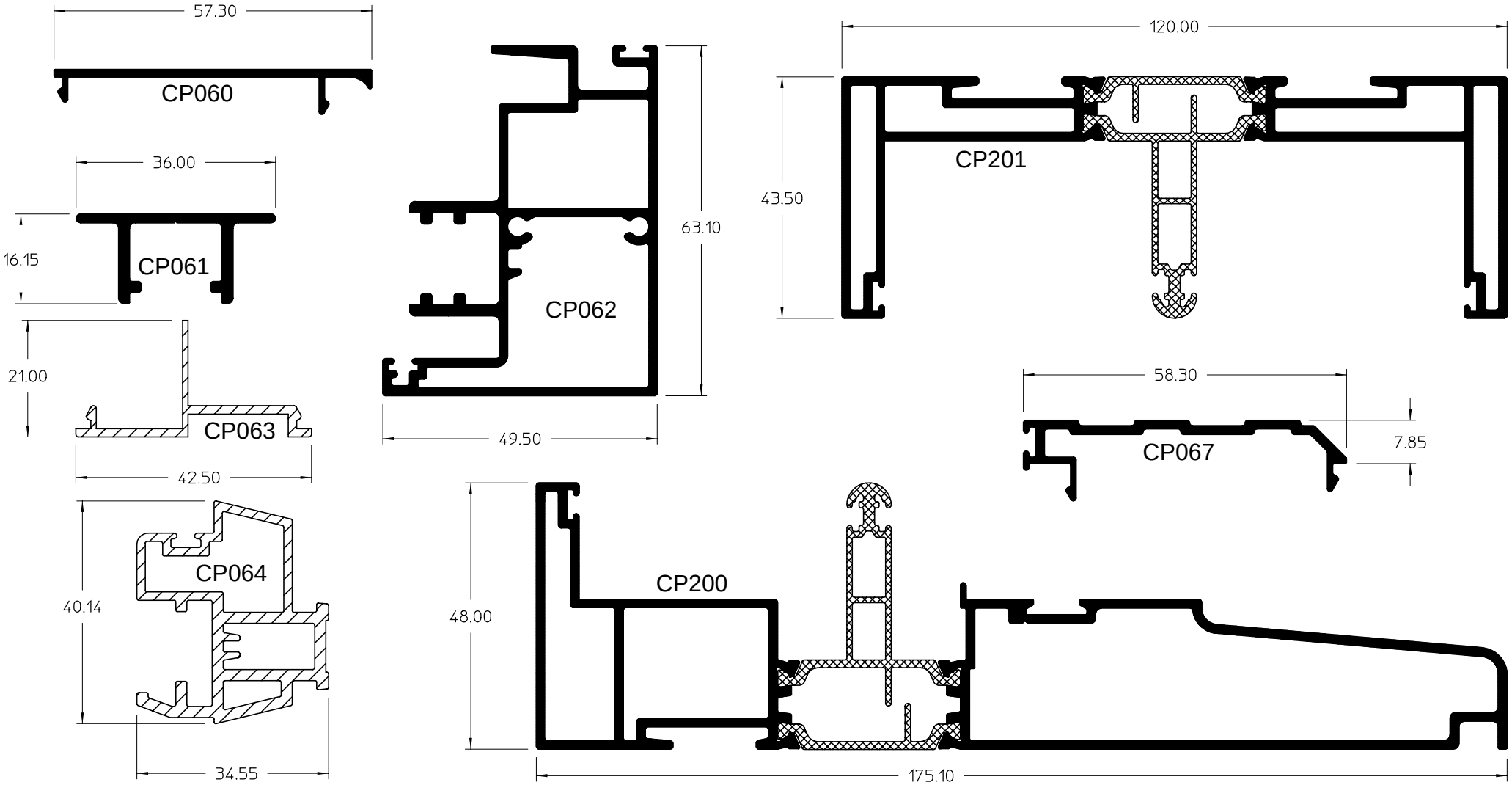
CPC116 - 3 Pane Door - Accessory Bag Contents

Part Number	Description	Quantity	Illustration / Where Used
C3101	Patio Cill Infill - 65mm	1	
C3102	Cill End Cap (RH)	1	
C3103	Cill End Cap (LH)	1	
CPC105	Stile to Rail Clamp Plate	12	
CPC106	Lock / Roller Fixing Tap Plate	8	
CPC108	Cill End Plug	6	
CPC109	9.5mm Hole Plug	8	
CPC120	Fixed Pane Retaining Bracket	2	
CPC122	5mm Hole Plug	2	
DFP1400	Interlock End Moulding (RH)	1	
DPF1401	Interlock End Moulding (LH)	1	
DFP1402	Cill End Plug (In Polyamide)	4	
DFC1415	6mm Glazing Packer	8	
DFC1699	4.3 x 25mm Csk Pozi PA Self Drill Self Tapper	18	Lock & Roller Fixing
ST81PPSS	No. 8 x 1" Pan Pozi Self Tapper	12	Outerframe Corner Jointing & 3-Pane Mullion Fixing
ST10112XPSS	No 10 x 11/2" Pan Torx Self Tapper	6	Outer Interlock ro Rail Fixing
ST10134PPSS	No. 10 x 1 3/4" Pan Pozi Self Tapper	28	Panel Corner Jointing (Except Outer Interlock)
ST102CPSS	No. 10 x 2" Csk Pozi Self Tapper	2	Fixed Pane Retaining Brkt to Interlock
ST1034CPSS	No. 10 x 3/4" Csk Pozi Self Tapper	2	Fixed Pane Retaining Brkt to Interlock
Inner Bag			
ST1034PPSS	No. 10 x 3/4" Csk Pozi Self Tapper	6	Anti Lift Block & Bump Stop Fixing
ST1034CPSS	No. 10 x 3/4" Csk Pozi Self Tapper	3	Fixed Pane Retaining Brkt to Interlock & Bump Stop Fixing
ST8112CPSS	No. 8 x 1 1/2" Csk Pozi Self Tapper	14	Keep Fixing
CPC104	Fixed Pane Packer	6	
CWC115	Anti-Lift Block	8	

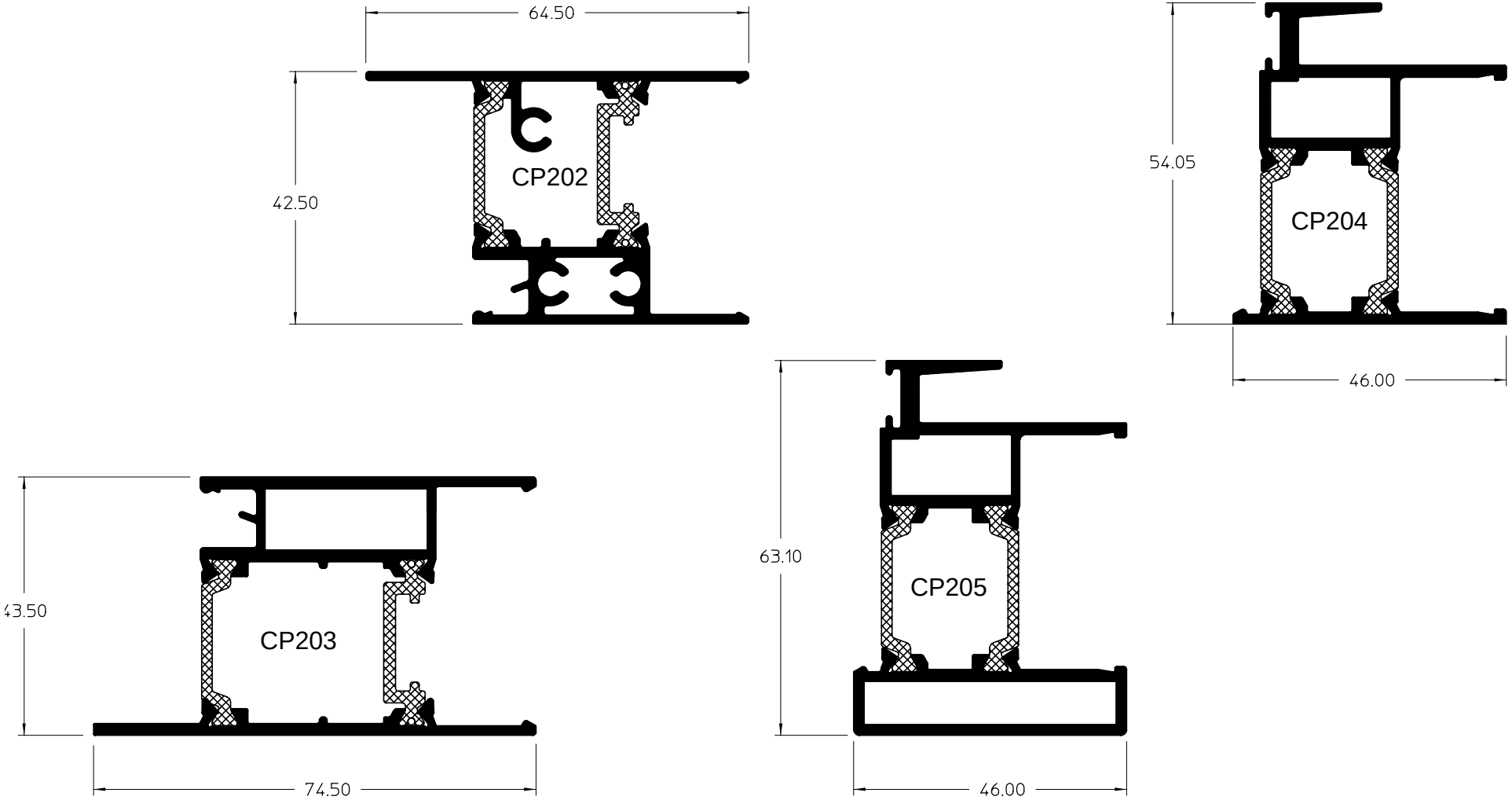
CPC117 - 4 Pane Door - Accessory Bag Contents

Part Number	Description	Quantity	Illustration / Where Used
C3101	Patio Cill Infill - 65mm	2	
C3102	Cill End Cap (RH)	1	
C3103	Cill End Cap (LH)	1	
CPC105	Stile to Rail Clamp Plate	16	
CPC106	Lock / Roller Fixing Tap Plate	14	
CPC108	Cill End Plug	6	
CPC109	9.5mm Hole Plug	8	
CPC120	Fixed Pane Retaining Bracket	2	
DFP1400	Interlock End Moulding (RH)	2	
DPF1401	Interlock End Moulding (LH)	2	
DFP1402	Cill End Plug (In Polyamide)	4	
DFC1415	6mm Glazing Packer	12	
DFC1699	4.3 x 25mm Csk Pozi PA Self Drill Self Tapper	22	Lock & Roller Fixing
ST81PPSS	No. 8 x 1" Pan Pozi Self Tapper	14	Outerframe Corner Jointing
ST10112XPSS	No 10 x 11/2" Pan Torx Self Tapper	12	Outer Interlock ro Rail Fixing
ST10134PPSS	No. 10 x 1 3/4" Pan Pozi Self Tapper	34	Panel Corner Jointing (Except Outer Interlock)
ST102CPSS	No. 10 x 2" Csk Pozi Self Tapper	2	Fixed Pane Retaining Brkt to Interlock
ST1034CPSS	No. 10 x 3/4" Csk Pozi Self Tapper	2	Fixed Pane Retaining Brkt to Interlock
Inner Bag			
ST1034PPSS	No. 10 x 3/4" Csk Pozi Self Tapper	10	Anti Lift Block & Bump Stop Fixing
ST1034CPSS	No. 10 x 3/4" Csk Pozi Self Tapper	3	Fixed Pane Retaining Brkt to Interlock & Bump Stop Fixing
ST8112CPSS	No. 8 x 1 1/2" Csk Pozi Self Tapper	14	Keep Fixing
CPC104	Fixed Pane Packer	6	
CWC115	Anti-Lift Block	12	

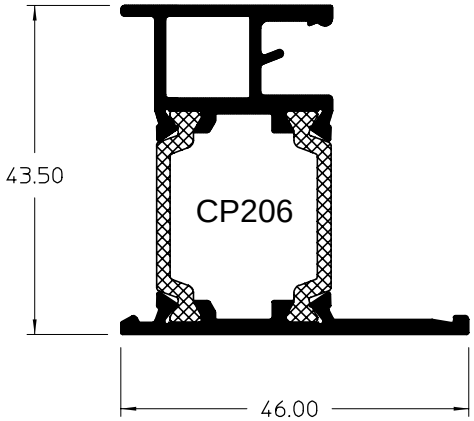
Profile Identification

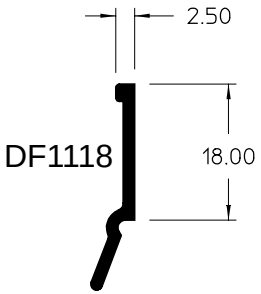


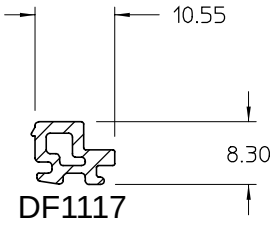
Profile Identification

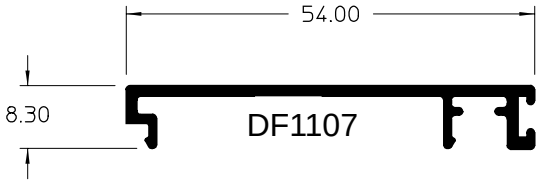


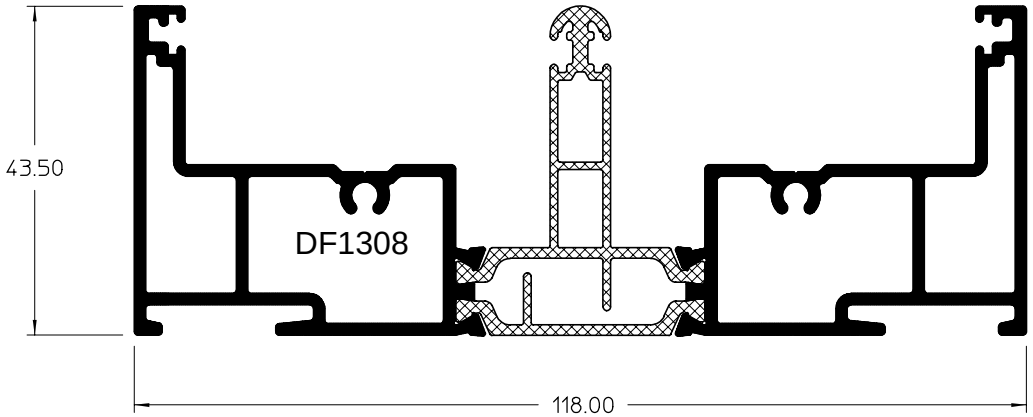
Profile Identification











Preparation for Fabrication

Establishing Dimensions

It is essential that work sizes are based on correct site dimensions and with adequate clearances around the door to allow for correct positioning/fixing.

Preliminaries

Ensure that the door design is within the parameters given in the specification. Ascertain the vertical and horizontal work sizes for each individual door unit. Ascertain the basic window design i.e. number and positions of panes. The correct interlock profile required can be calculated using BS6399:Part 2 and inertia value calculation sheet on page 2-??.

Metal and Glass Cutting

Refer to the data and diagrams on the subsequent pages to determine all bar lengths and glass sizes.

All patio doors are supplied in either cut to size kits or standard size kits for cutting down to suit actual door required. When cutting down kit, any end preparations on bars must be completely removed and re-prepared on the cut end.

Details of actual end preparation required are fully detailed for individual profiles on the following pages. Also detailed are the position and size of any holes and the appropriate tooling.

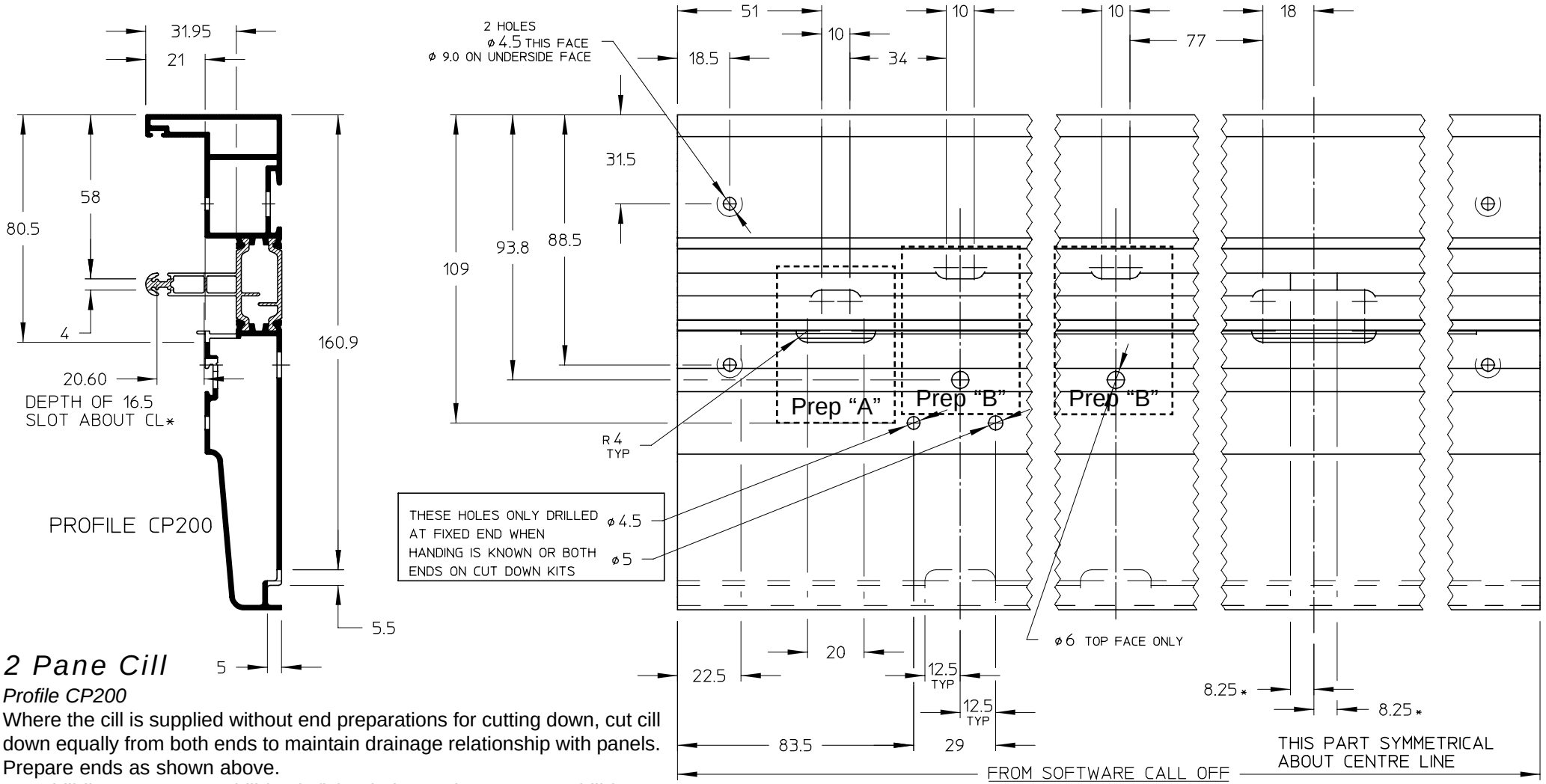
Cutting Calculations

Formulae are given below for 2 pane (OX or XO), 3 pane (OXO) & 4 pane (OXXO) doors. (W refers to overall frame width, H refers to overall frame height).

Metal tolerance of plus or minus 0.5mm - Glass tolerance of plus 0mm, minus 3.0mm.

Component	2 Pane	3 Pane	4 Pane
Head & Cill	W	W	W
Head & Threshold Closer	(W-102)/2	(W-115)/3	(W-50)/2
All Rails	(W-154.5)/2	(W-193)/3	(W-244.5)/4
Bottom Rail Liner	(W-9.5)/2	(W+25)/3	(W+45.5)/4
SS Track	W-130	(W-117)/1.5	W-130
Horizontal Beads	(W-190.5)/2	(W-247)/3	(W-244.5)/4
Jamb	H-38.5	H-38.5	H-38.5
Lock Jamb Adaptor	H-40.5		
Lock Jamb Closer	H-94.5		
Fixed Jamb Closer	H-38.5	H-38.5	H-38.5
All Stiles & Interlocks	H-66	H-66	H-66
Inner Interlock Cover	H-56.5	H-56.5	H-56.5
Outer Interlock Cover	H-66	H-66	H-66
Inner Interlock Insulator	H-110.5	H-110.5	H-110.5
Outer Interlock Insulator	H-128	H-128	H-128
Vertical Beads	H-195	H-195	H-195
3 Pane Mullion		H-38.5	
4 Pane Adaptor			H-66
Glass Width	(W-178.5)/2)	(W-229)/3)	(W-292.5)/4)
Glass Height	H-171	H-171	H-171

Machining Details - Outerframe



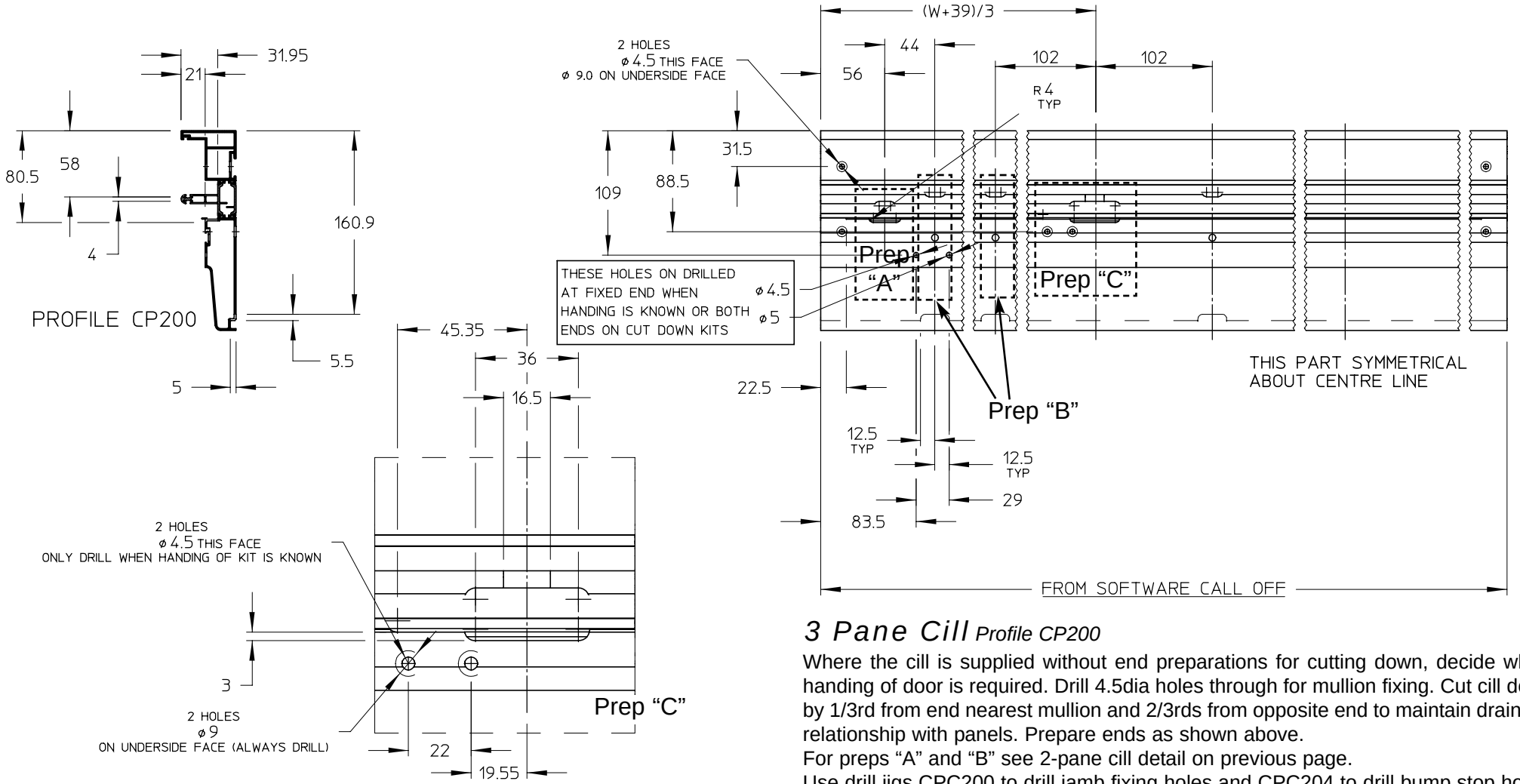
2 Pane Cill

Profile CP200

Where the cill is supplied without end preparations for cutting down, cut cill down equally from both ends to maintain drainage relationship with panels. Prepare ends as shown above.

Use drill jigs CPC200 to drill jamb fixing holes and CPC204 to drill bump stop holes.

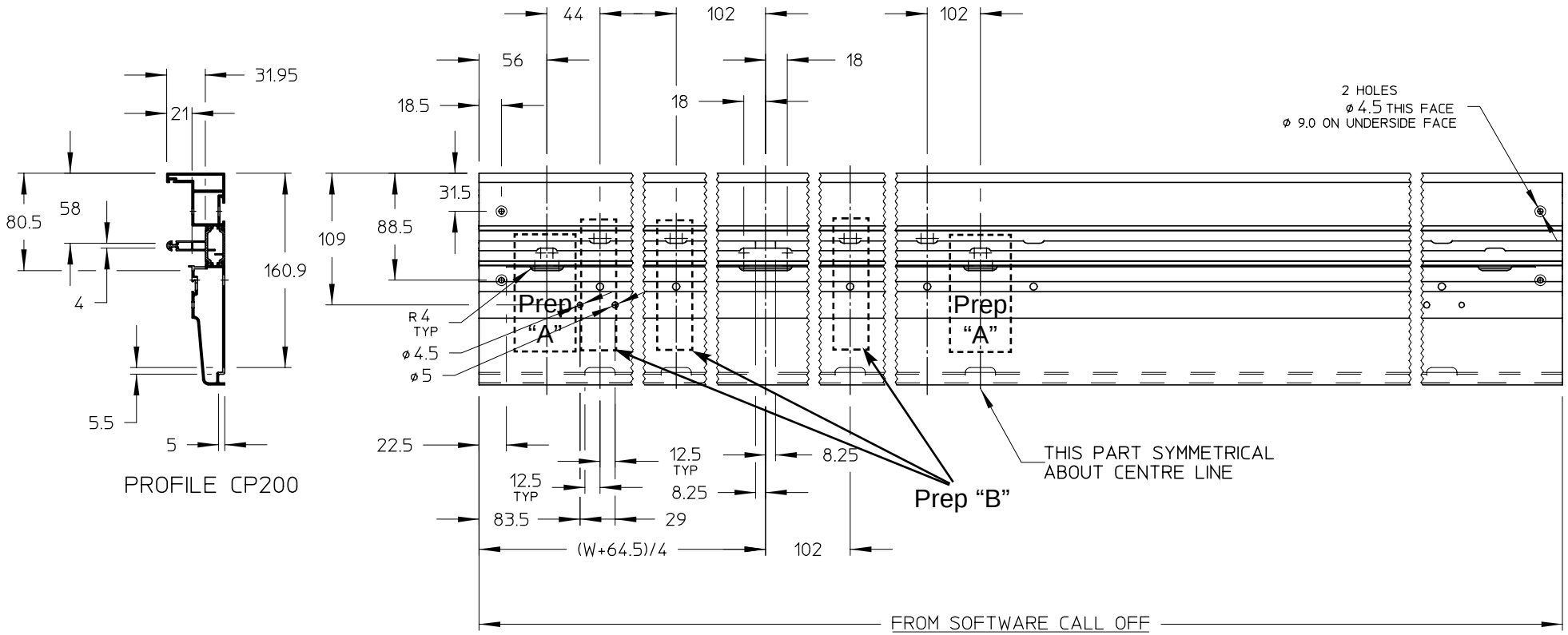
Machining Details - Outerframe



3 Pane Cill *Profile CP200*

Where the cill is supplied without end preparations for cutting down, decide which handing of door is required. Drill 4.5dia holes through for mullion fixing. Cut cill down by 1/3rd from end nearest mullion and 2/3rds from opposite end to maintain drainage relationship with panels. Prepare ends as shown above.
For preps "A" and "B" see 2-pane cill detail on previous page.
Use drill jigs CPC200 to drill jamb fixing holes and CPC204 to drill bump stop holes.

Machining Details - Outerframe



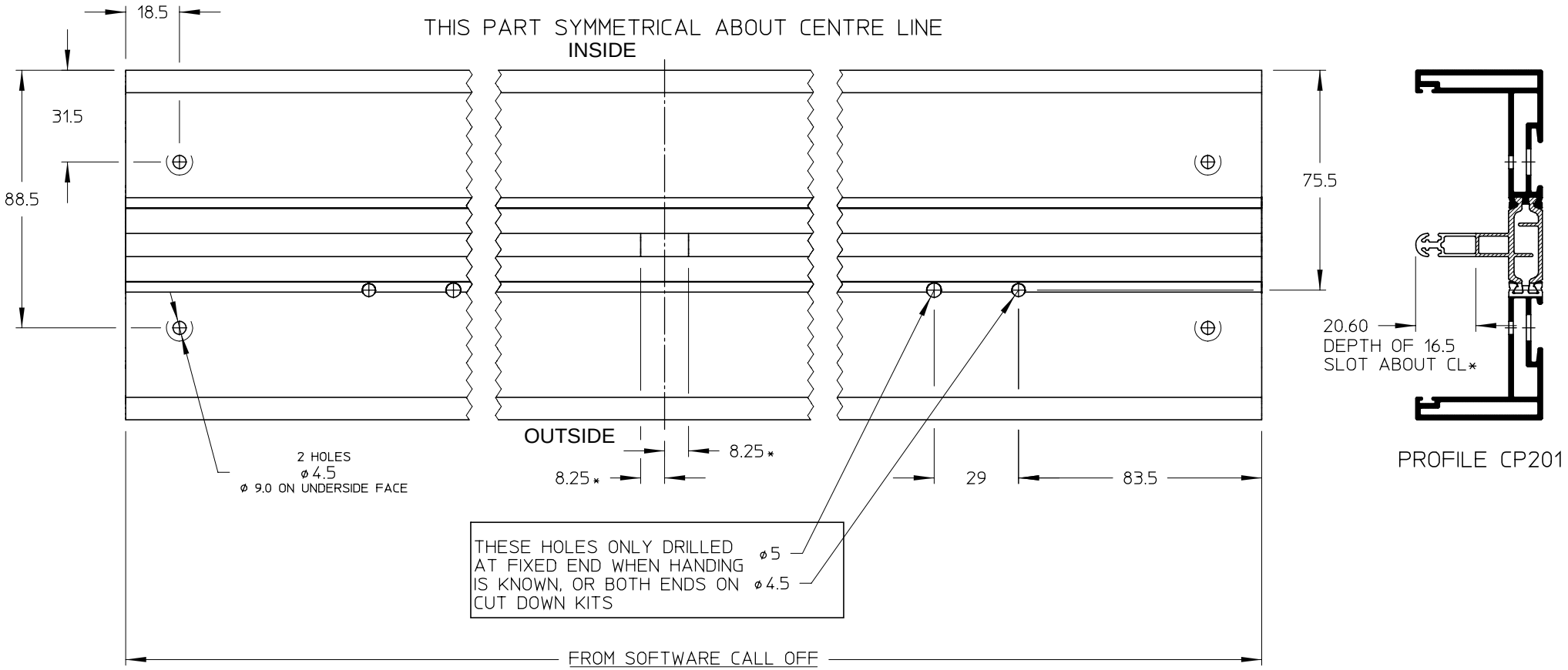
4 Pane Cill *Profile CP200*

Where the cill is supplied without end preparations for cutting down, cut cill down equally from both ends to maintain drainage relationship with panels.
Prepare ends as shown above.
For preps "A" and "B" see 2-pane cill detail on page 4-2.
Use drill jigs CPC200 to drill jamb fixing holes and CPC204 to drill bump stop holes.

Machining Details - Outerframe

2 Pane Head *Profile CP201*

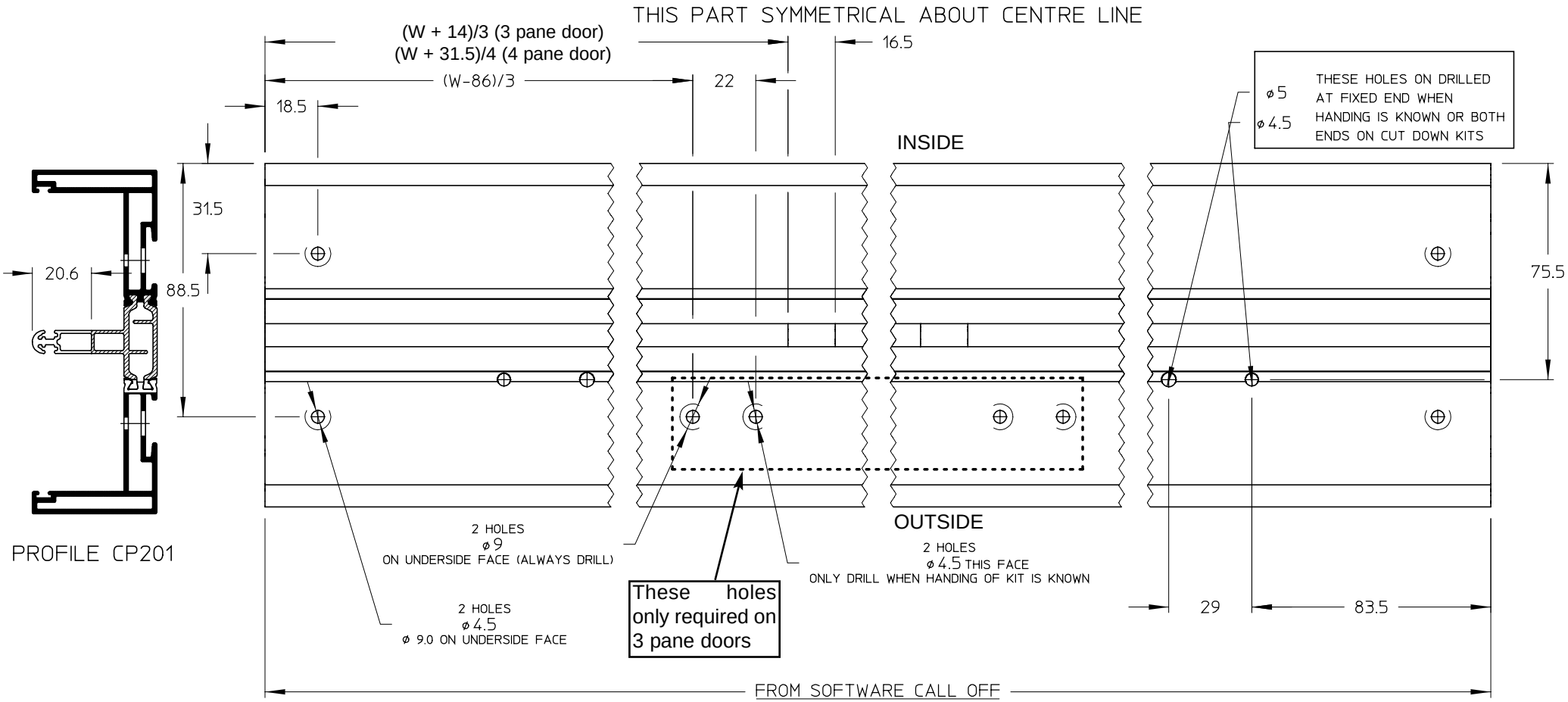
Where the head is supplied without end preparations for cutting down, cut head down equally from both ends. Prepare ends as shown below.
Use drill jigs CPC200 to drill jamb fixing holes and CPC204 to drill bump stop holes.



Machining Details - Outerframe

3 & 4 Pane Head *Profile CP201*

Where the head is supplied without end preparations for cutting down, decide which handing of door is required. Drill 4.5dia holes through for mullion fixing. On 3 pane doors cut head down by 1/3rd from end nearest mullion and 2/3rds from opposite end to maintain drainage relationship with panels. On 4 pane doors, cut head down equally from both ends. Prepare ends as shown below.
Use drill jigs CPC200 to drill jamb and mullion fixing holes and CPC204 to drill bump stop holes.

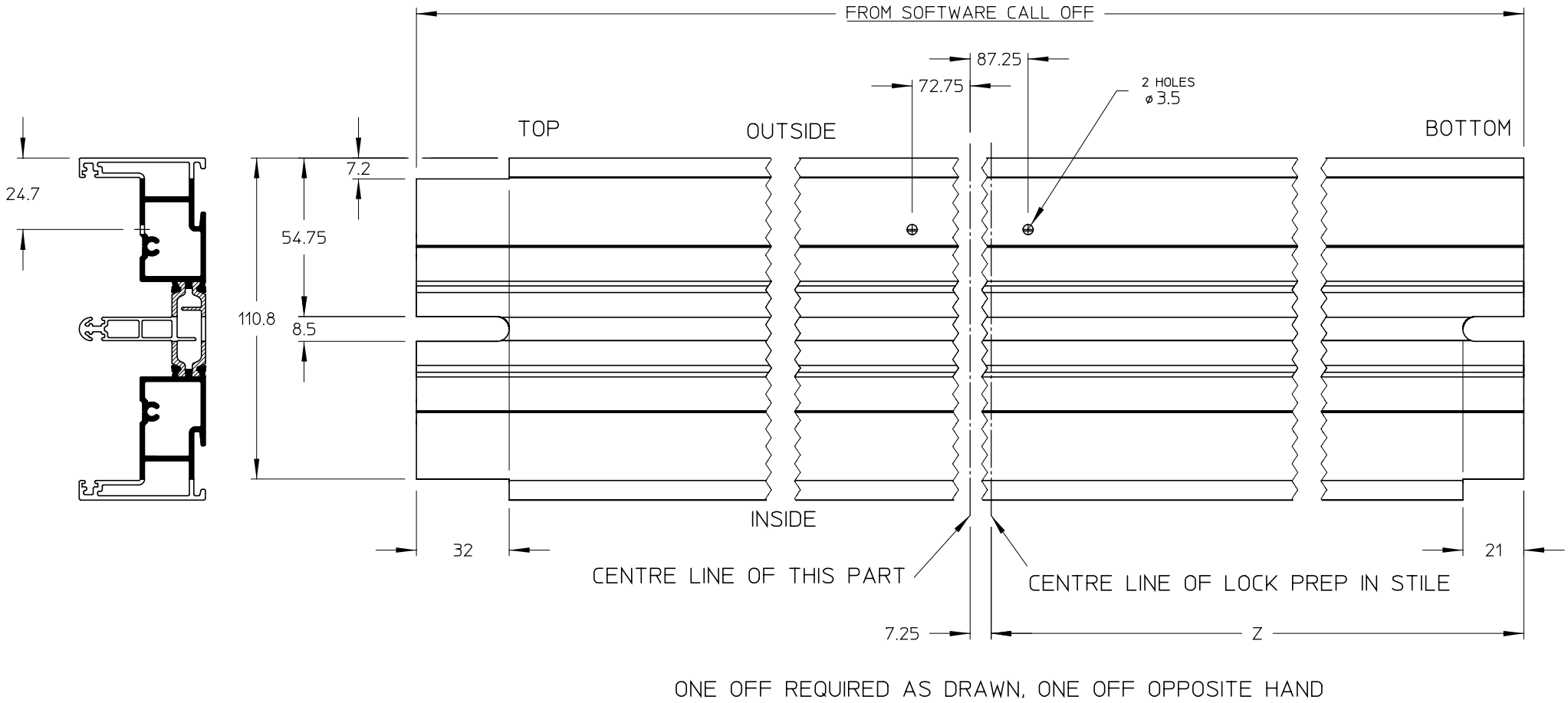


Machining Details - Outerframe

Machining Details - Outerframe

Jamb *Profile DF1308*

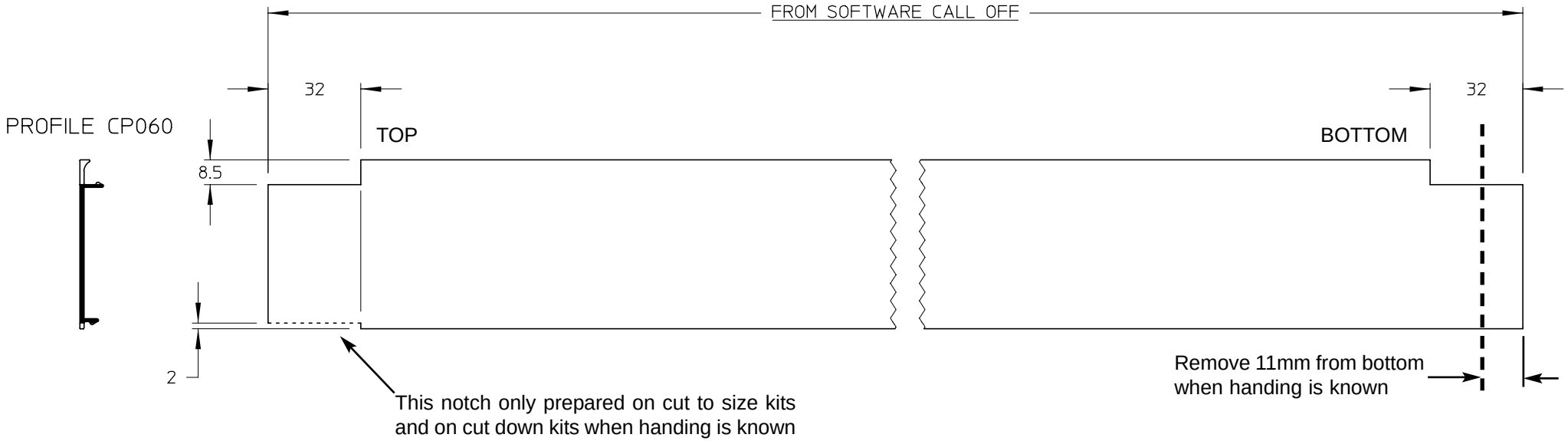
Where jambs are supplied without end preparations for cutting down, prepare ends as shown below. On non-handed kits, the keep preparation is always 7.25mm below the centre of the adaptor (as shown below). On cut to size kits, the lock height from the underside of the cill is always 1036mm.
In this case Dim “Z” = 1010mm.



ONE OFF REQUIRED AS DRAWN, ONE OFF OPPOSITE HAND

Fixed Jamb Closer *Profile CP060*

Fixed jamb closers are always supplied 11mm over length and once handing is decided must be cut down by 11mm from the bottom. The 2 x 32 notch shown dotted is only prepared on cut to size kits. On cut down kits, it must be prepared once the handing is known.



Machining Details - Panel

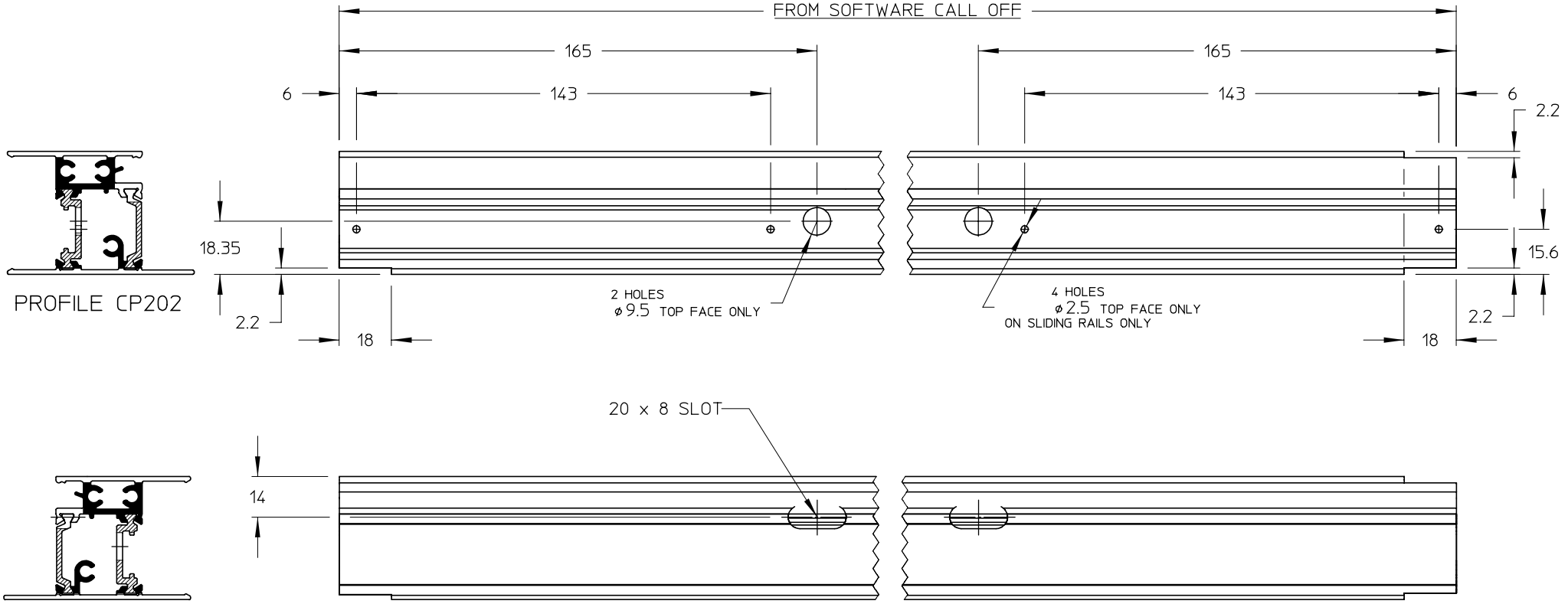
Rails Profile CP202

Where rails are supplied without end preparations for cutting down, prepare ends as shown below.
Use drill jig CPC201 to drill drainage & roller fixing holes.

2 PANE DOORS -
2 OFF AS DRAWN, 2 OFF OPPOSITE HAND

3 PANE DOORS -
3 OFF AS DRAWN, 3 OFF OPPOSITE HAND

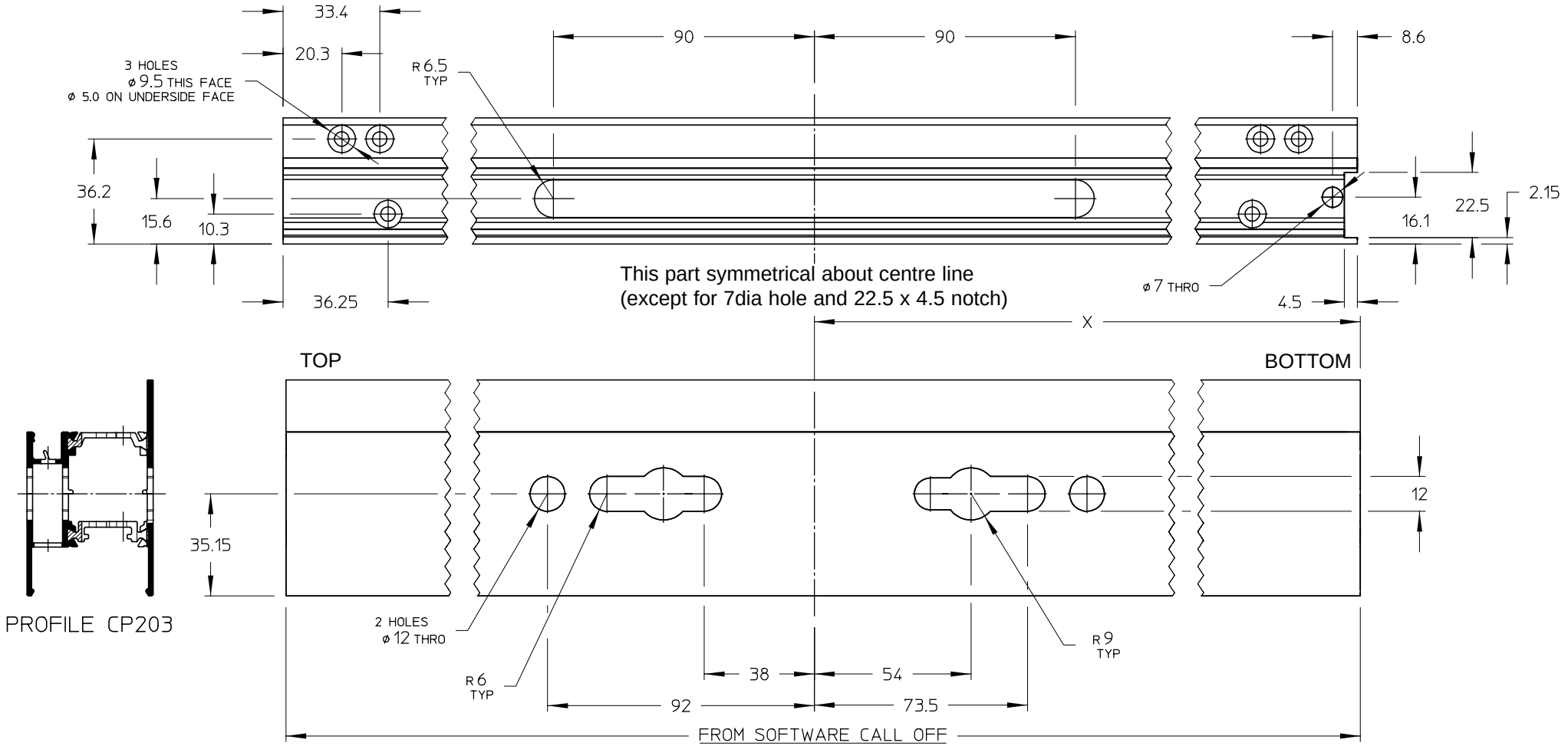
4 PANE DOORS -
4 OFF AS DRAWN, 4 OFF OPPOSITE HAND



Machining Details - Panel

Lock Stile Profile CP203

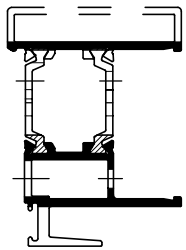
Where the lock stile is supplied without end preparations for cutting down, prepare ends as shown below. On cut down kits, the lock preparation is always at the centre of the stile. On cut to size kits, the lock height from the underside of the cill is always 1036mm. In this case Dim “X” = 1001.5mm.
Use drill jig CPC202 to drill rail fixing holes.

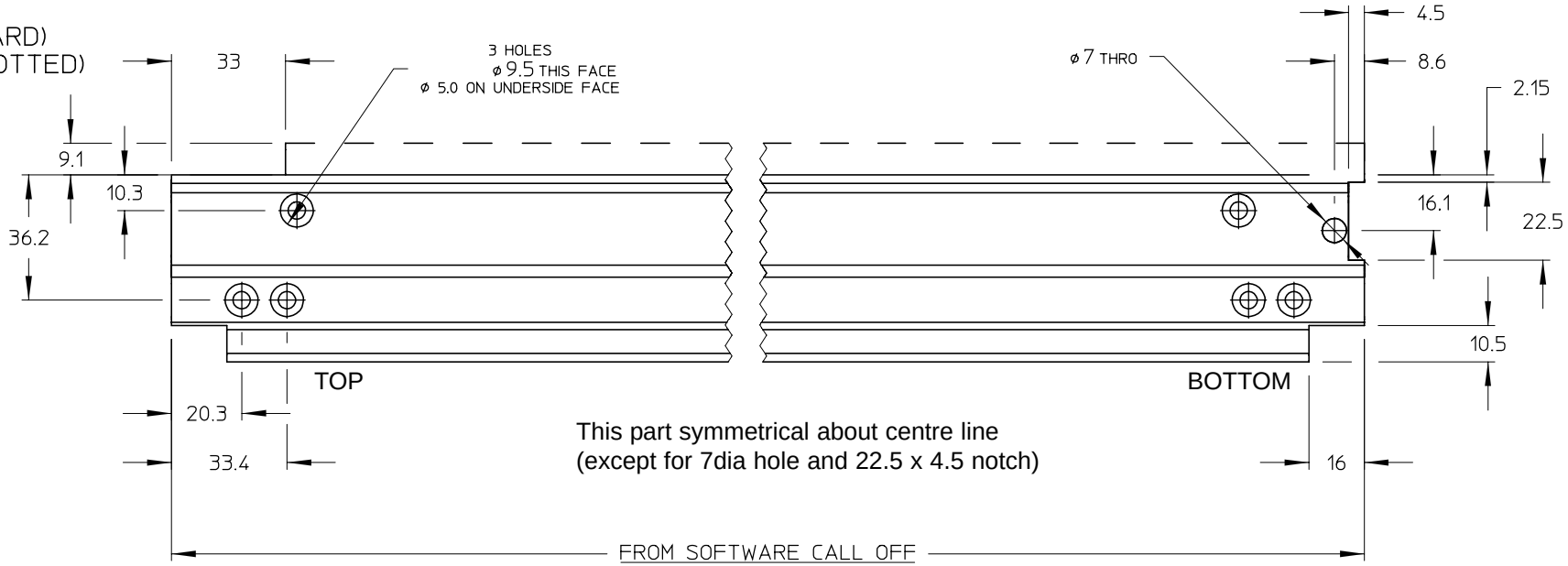


Outer (Sliding) Interlock *Profile CP204 or CP205*

Where the outer Interlock is supplied without end preparations for cutting down, prepare ends as shown below.
Use drill jig CPC202 to drill rail fixing holes.

PROFILE CP204 (STANDARD)
PROFILE CP205 (HD - DOTTED)

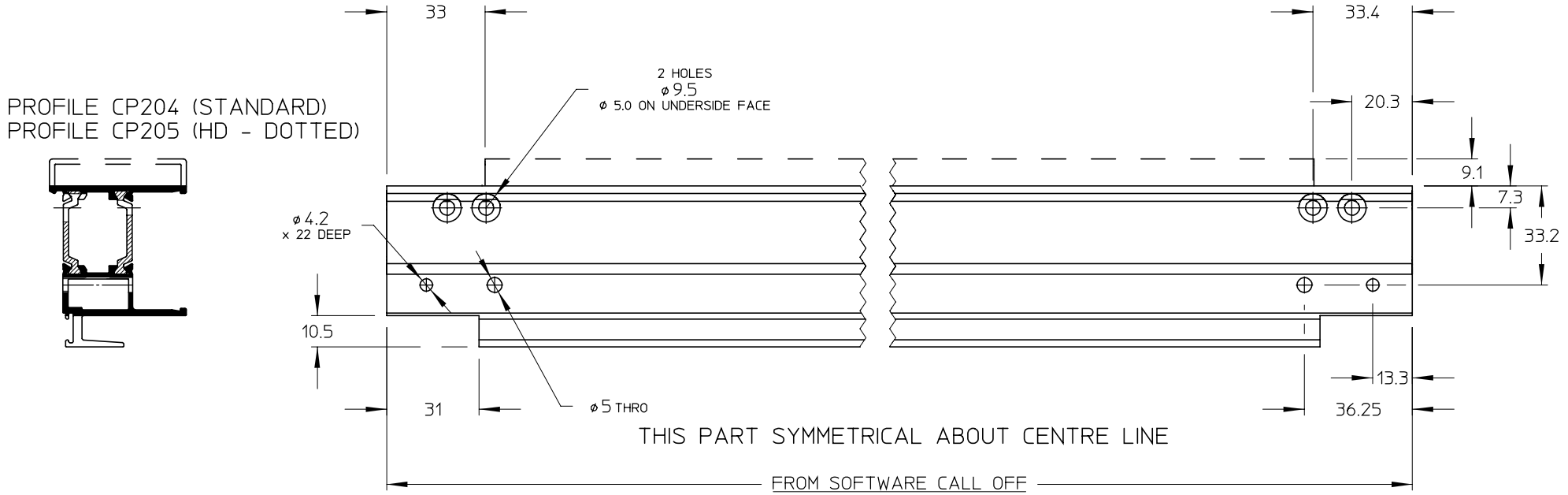




Machining Details - Panel

Inner (Fixed) Interlock *Profile CP204 or CP205*

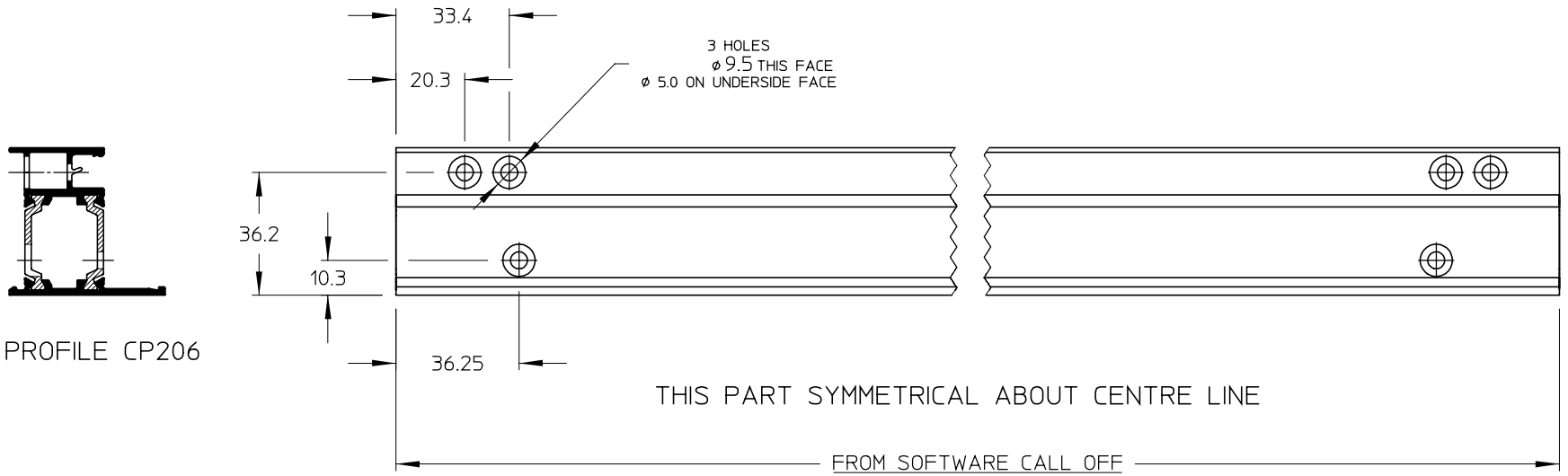
Where the inner Interlock is supplied without end preparations for cutting down, prepare ends as shown below.
Use drill jig CPC202 to drill rail fixing holes.



Machining Details - Panel

Fixed Stile *Profile CP206*

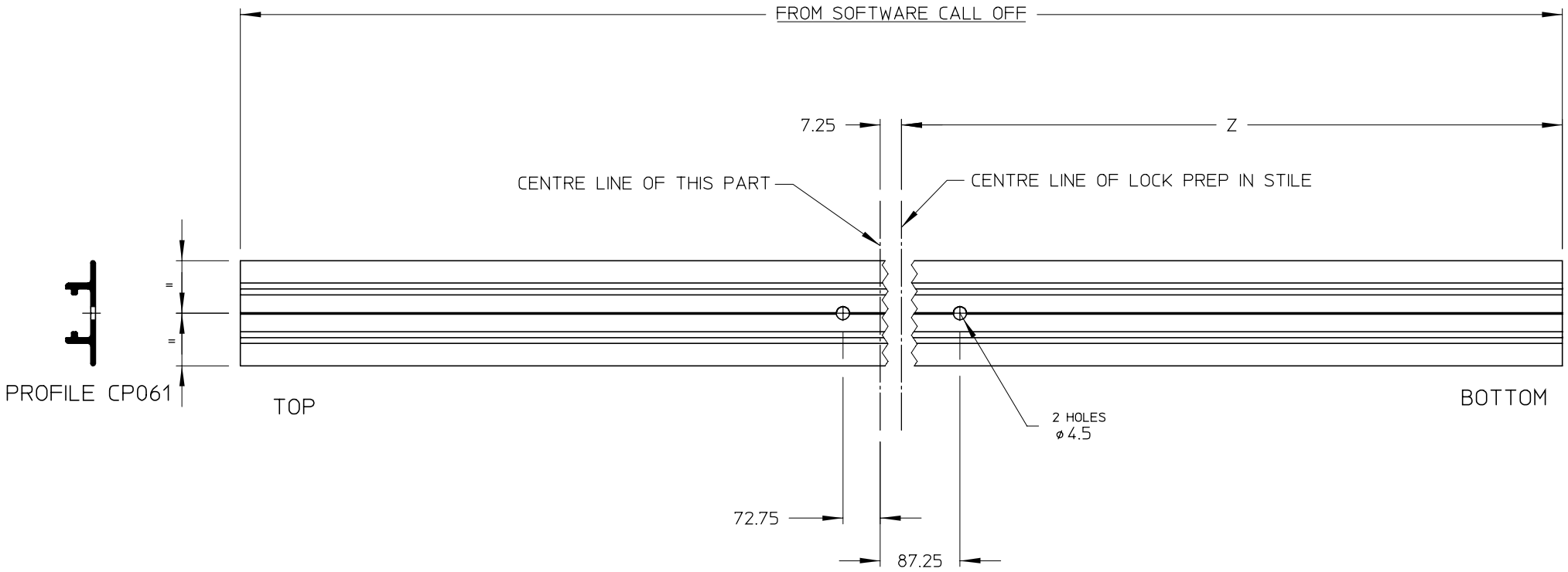
Where the fixed stile is supplied without end preparations for cutting down, prepare ends as shown below.
Use drill jig CPC202 to drill rail fixing holes.



Machining Details - Panel

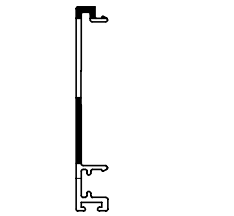
Lock Jamb Adaptor *Profile CP061*

On non-handed kits, the keep preparation is always 7.25mm below the centre of the adaptor (as shown below). On cut to size kits, the lock height from the underside of the cill is always 1036mm.
In this case Dim “Z” = 1010mm.

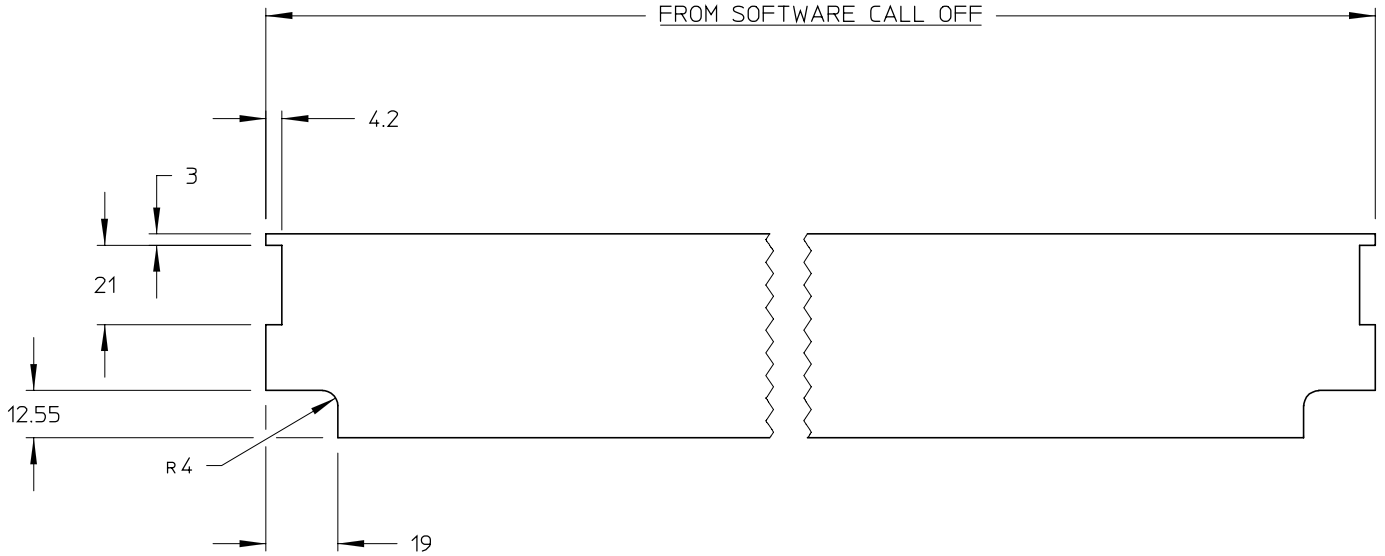


Outer Interlock Cover *Profile DF1107*

Where the interlock cover is supplied without end preparations for cutting down, prepare ends as shown below.



PROFILE DF1107

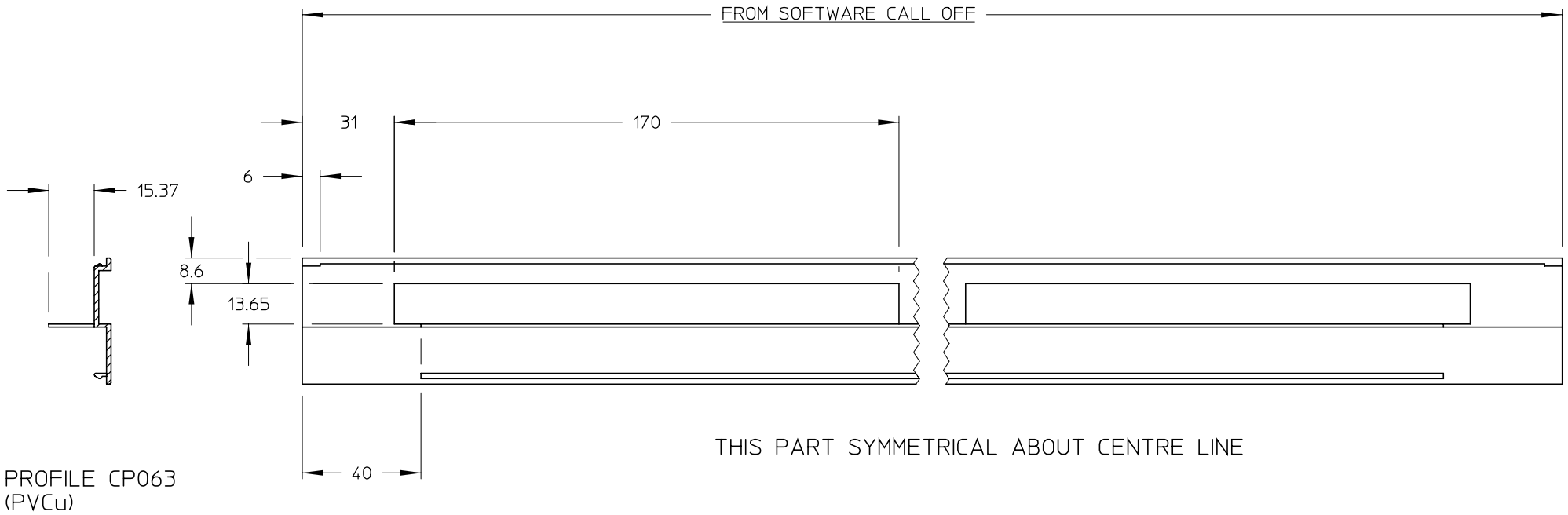


THIS PART SYMMETRICAL ABOUT CENTRE LINE

Machining Details - Panel

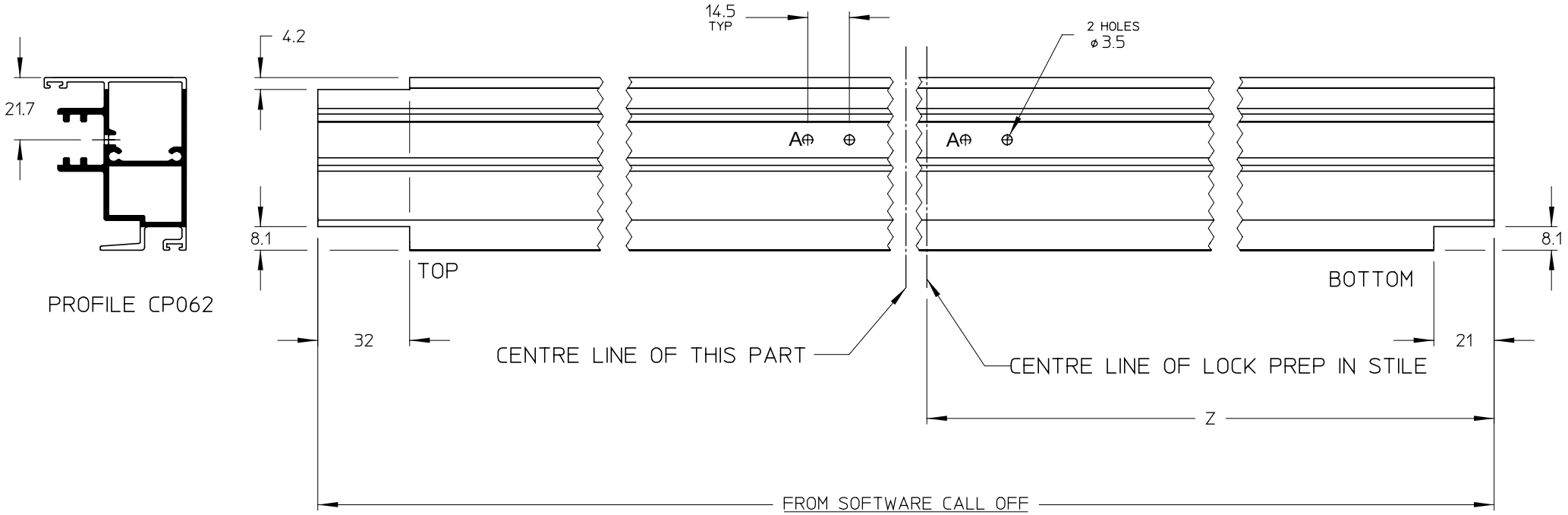
Bottom Rail Liner *Profile CP063*

The bottom rail liner is always supplied fully prepared. Where it is required to be cut down, remove the correct amount from the centre of the bar and butt joint it at the centre.



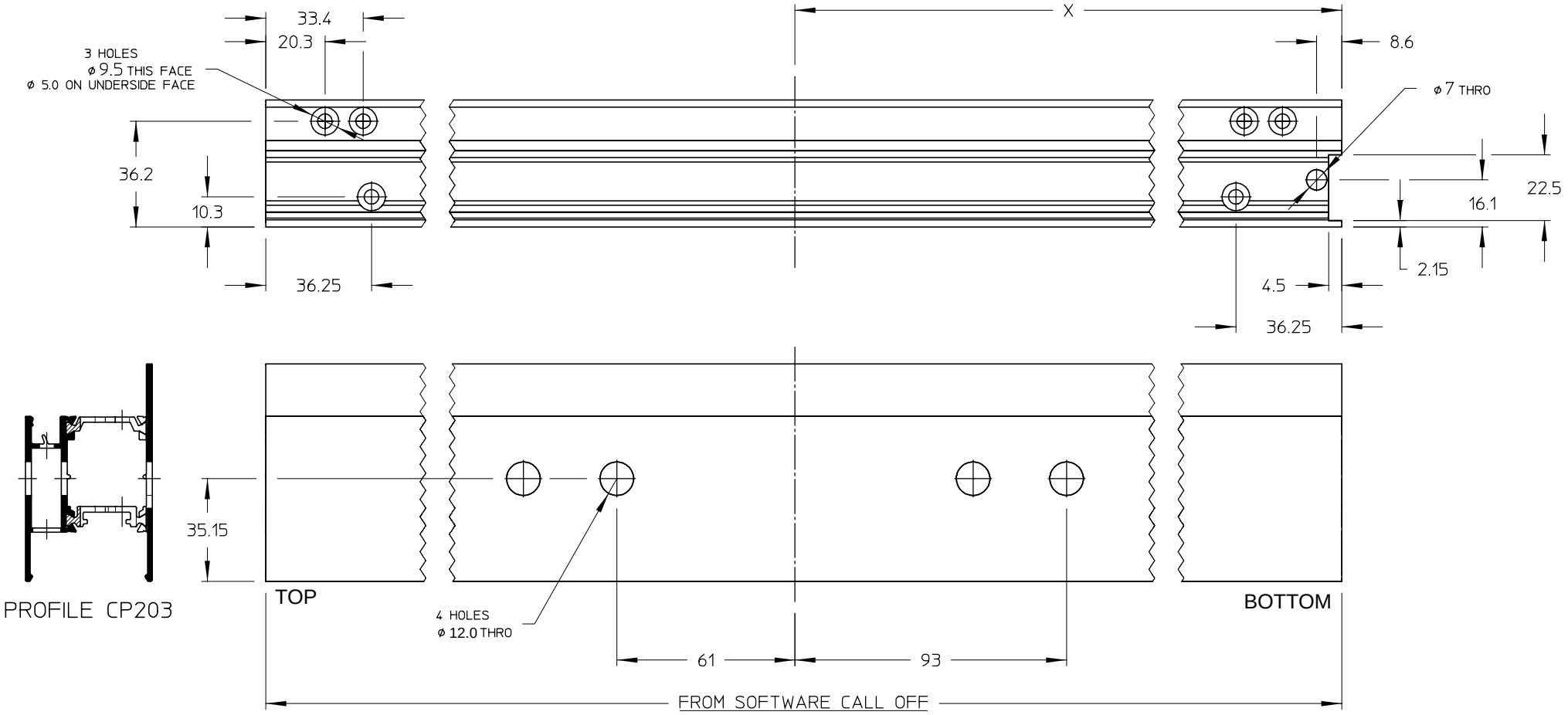
3 Pane Mullion *Profile CP062*

Where the 3 pane mullion is supplied without end preparations for cutting down, prepare ends as shown below. On non-handed kits, the keep preparation is always 7.25mm below the centre of the mullion and in addition, holes “A” are drilled 7.25 above the centre line (as shown below). On cut to size kits, the lock height from the underside of the cill is always 1036mm and in this case holes “A” are omitted.
In this case Dim “Z” = 1010mm.



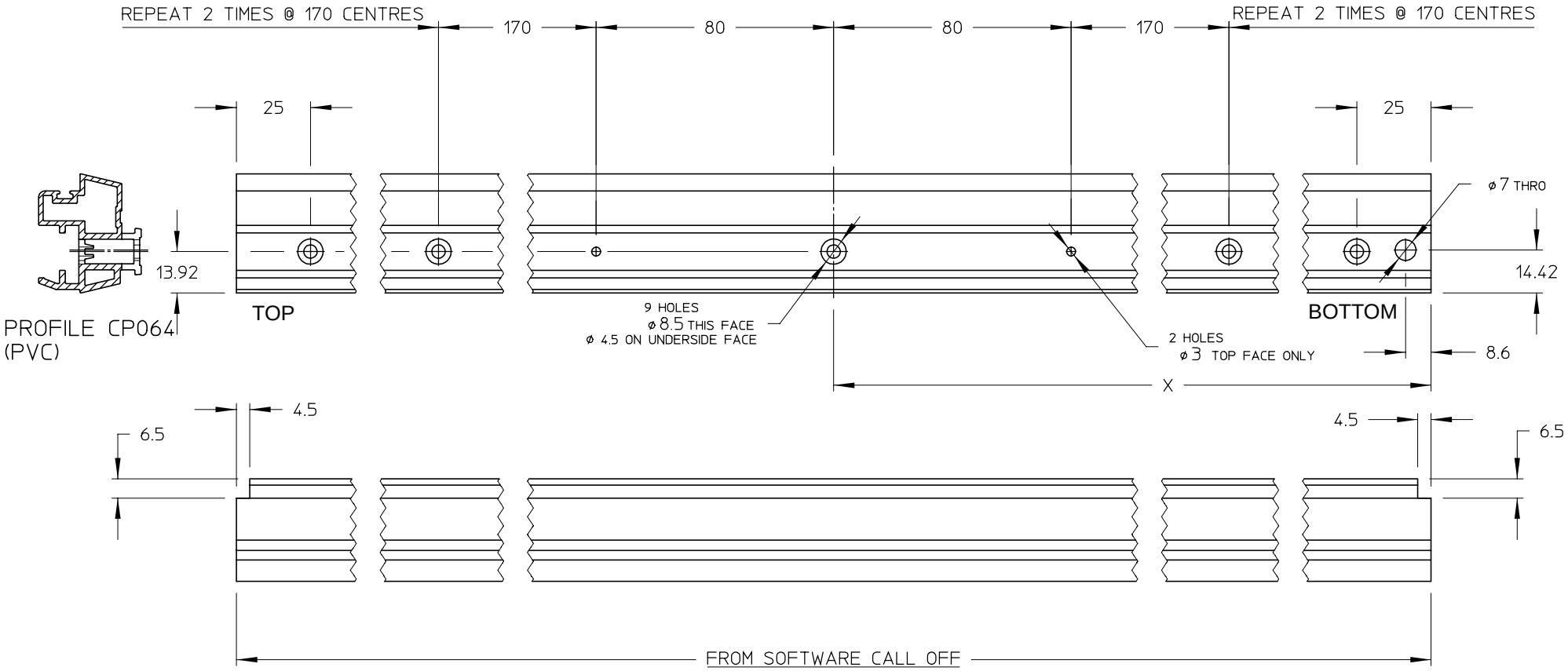
Meeting Stile *Profile CP203*

Where the slave stile is supplied without end preparations for cutting down, prepare ends as shown below. On cut down kits, the lock preparation is always at the centre of the stile. On cut to size kits, the lock height from the underside of the cill is always 1036mm. In this case Dim “X” = 1002.5mm.
Use drill jig CPC202 to drill rail fixing holes.



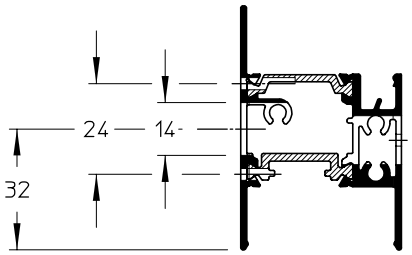
4 Pane Meeting Stile Adaptor *Profile CP064*

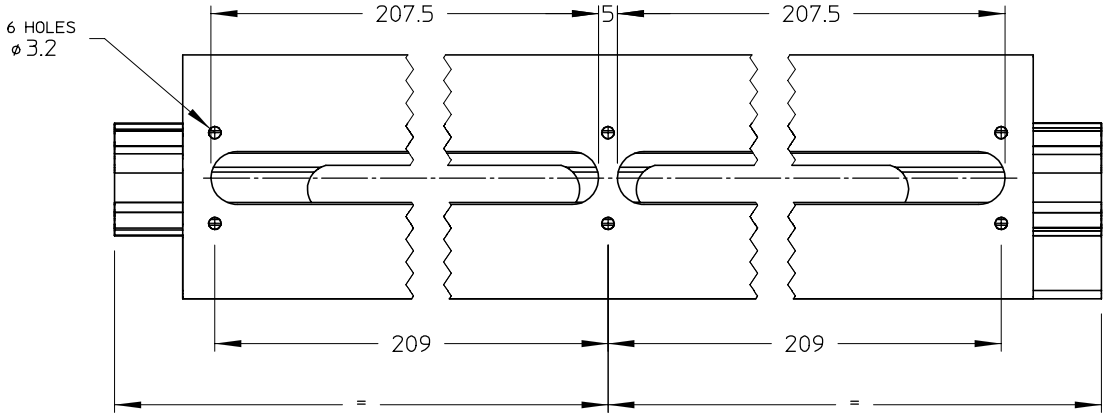
Where the meeting stile adaptor is supplied without end preparations for cutting down, prepare ends as shown below. On non-handed kits, the lock preparation is always at the centre of the stile. On cut to size kits, the lock height from the underside of the cill is always 1036mm. In this case Dim “X” = 1002.5mm.
Use drill jig CPC203 to drill fixing holes.

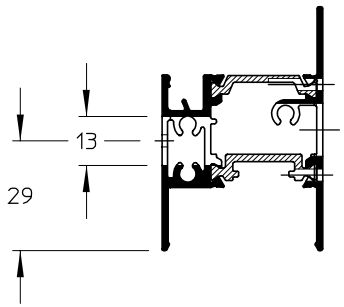


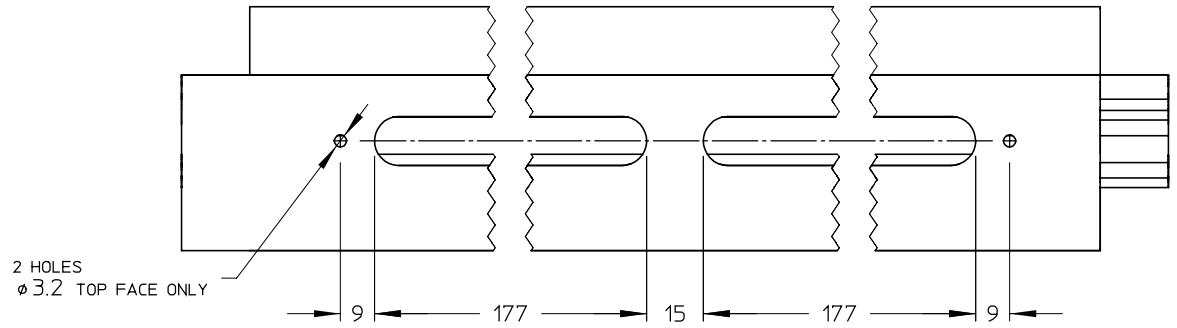
Trickle Ventilator *Profile CP202*

Trickle ventilators can be fitted to the top rails of inner panels only. Where rails must be cut down, reduce by equal amounts from both ends and re-prepare end machining as shown on page 4-7. Where trickle ventilators occur, omit drainage preps from rail.









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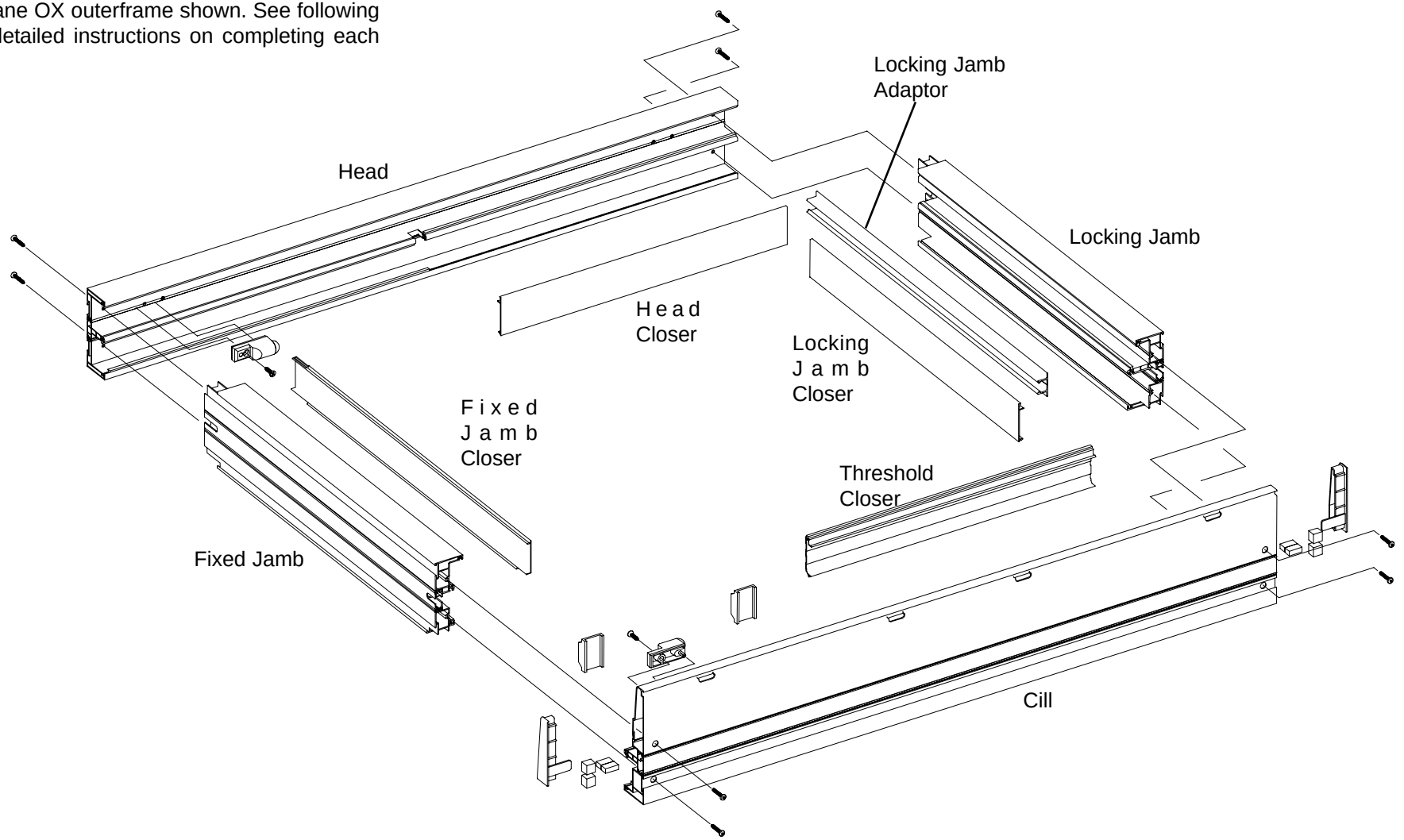
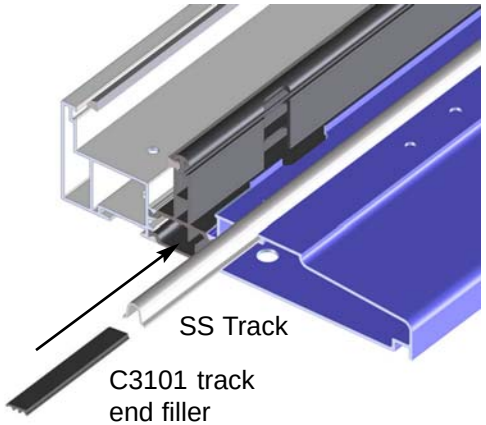
Assembly - Outerframe

Typical 2 pane OX outerframe shown. See following pages for detailed instructions on completing each joint.



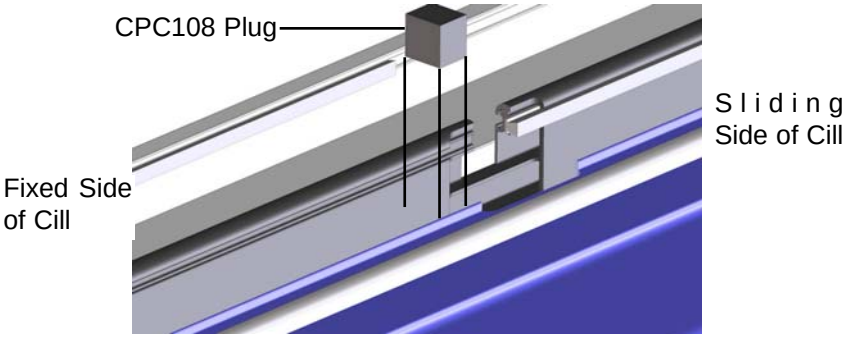
Track Assembly

Slide stainless steel track into groove in cill. Fit track end fillers (C3101) to the gap at either end of the cill as shown below. On 3 pane units, at the non-sliding end, slide track filler CPC111 into track recess.



Fitting Cill Plug at Interlock Drainage Point

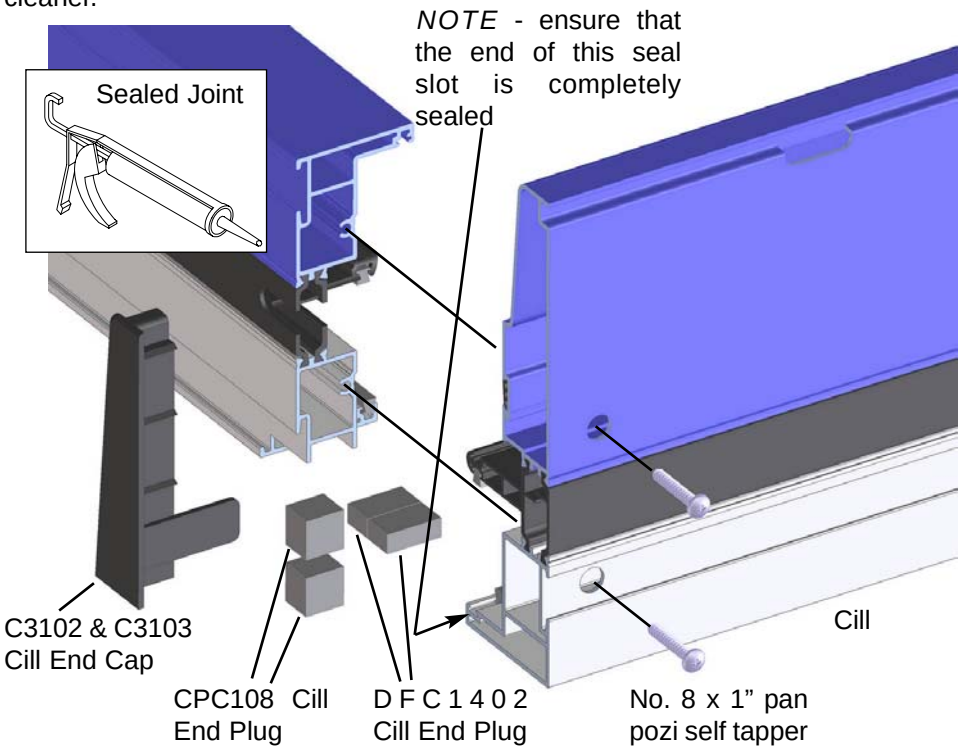
At every interlock drainage point, fit plug CPC108 as shown below - seal into position using Henkel Terostat 934 (clear) or 939 (grey, black or white).



Jamb to Cill Assembly

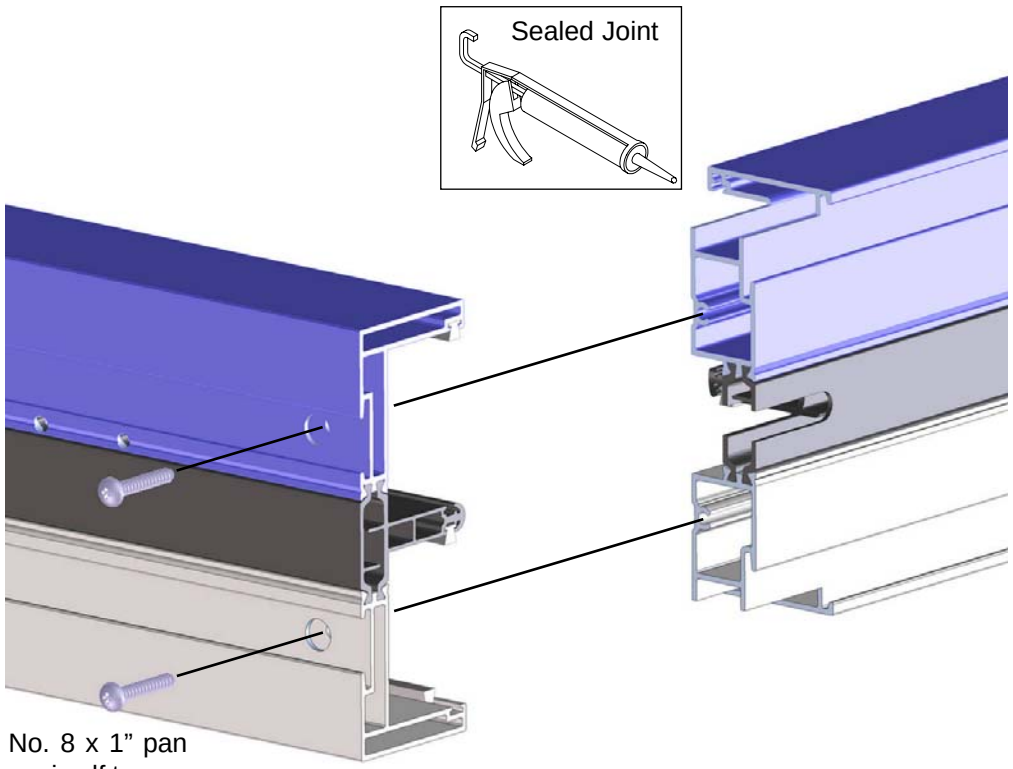
Slide pile DFC1450 into appropriate grooves in jamb and cill (see general arrangements). Coat entire cut ends of both jambs with Henkel Terostat 934 (clear) or 939 (grey, black or white). Seal plugs DFC1402 & CPC108 into recesses in cill as shown below and cill end cap C3102 & C3103 using the same sealant. Apply a generous amount of sealant to cill rebate / jamb inner face joint.

Assemble using 2 off No. 8 x 1" pan pozi self tappers per joint. Check for any weak spots in sealing and rectify. Clean off excess sealant immediately using Teroson FL cleaner.



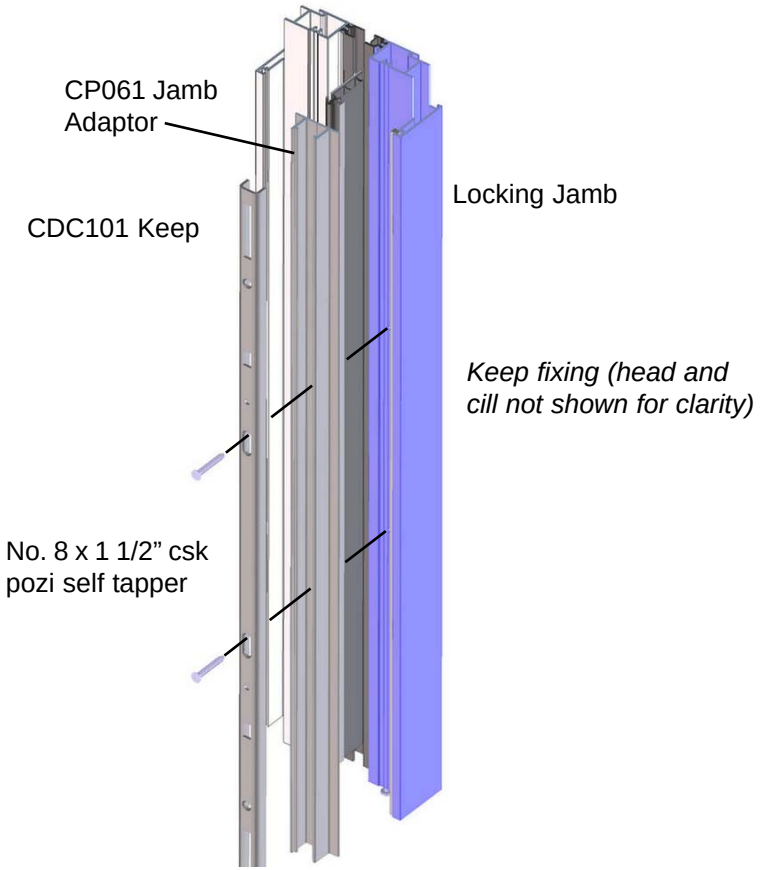
Jamb to Head Assembly

Slide pile DFC1450 into appropriate grooves in jamb and head (see general arrangements). Coat entire cut ends of both jambs with Henkel Terostat 934 (clear) or 939 (grey, black or white). Assemble using 2 off No. 8 x 1" pan pozi self tappers per joint. Check for any weak spots in sealing and rectify. Clean off excess sealant immediately using Teroson FL cleaner.



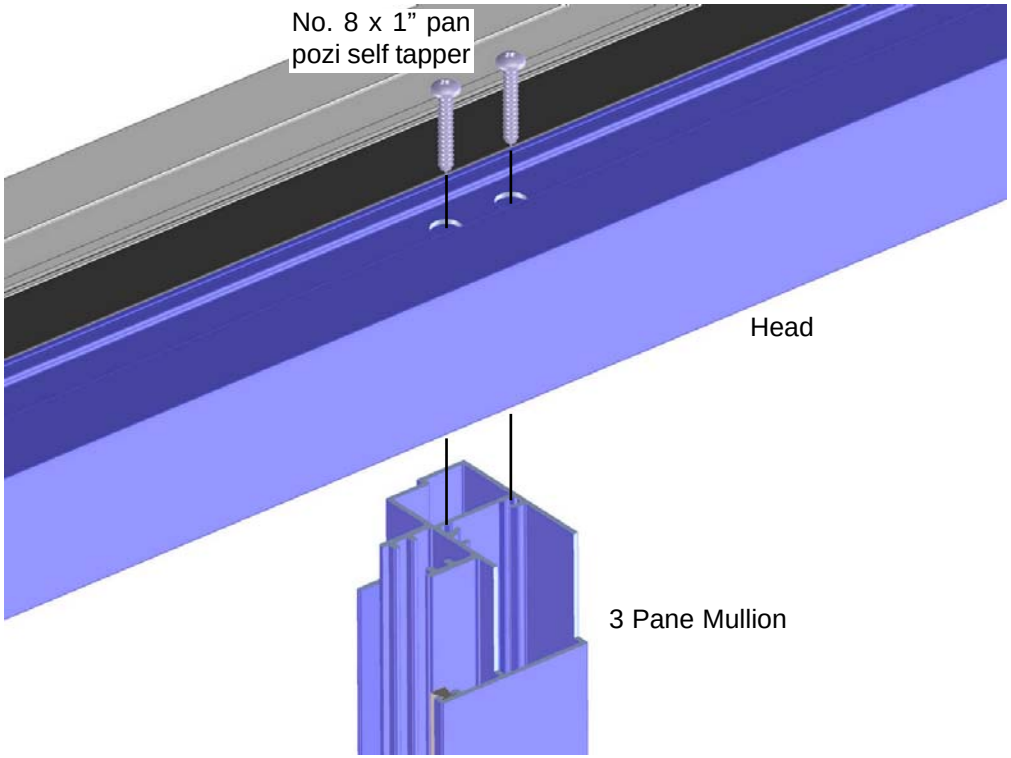
Keep and Jamb Adaptor Fixing

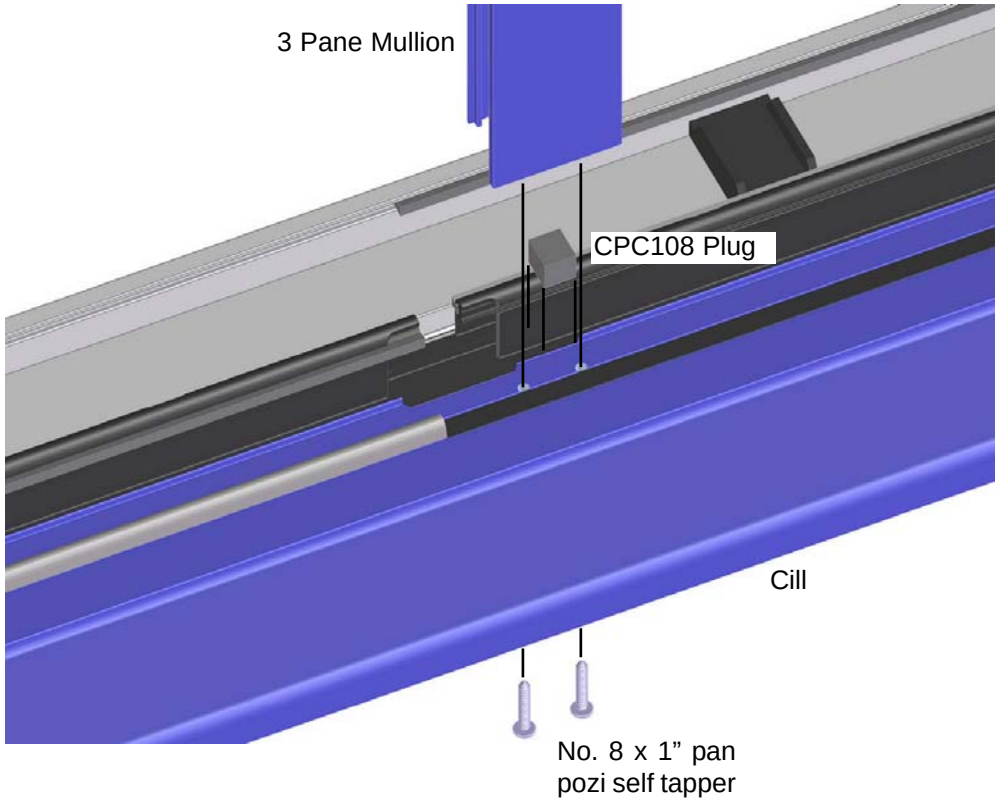
Fix keep (CDC101) using only two No. 8 x 1 1/2" csk self tapper through the two central slotted holes, though the jamb adaptor into the jamb. Final fixing is carried out after installation / adjustment through the remaining holes using the same screws.



Fitting of 3 Pane Mullions

Slide pile DFC1450 into groove in 3 pane mullion. Coat entire cut ends of mullion with Henkel Terostat 934 (clear) or 939 (grey, black or white). Fit plug CPC108 as shown under mullion at cill - seal into position using Henkel Terostat 934 (clear) or 939 (grey, black or white). Assemble using 2 off No. 8 x 1" pan pozi self tappers per joint. Check for any weak spots in sealing and rectify. Clean off excess sealant immediately using Teroson FL cleaner. Fitting of keep is similar to the 2 pane as shown on previous page but without the adaptor profile.

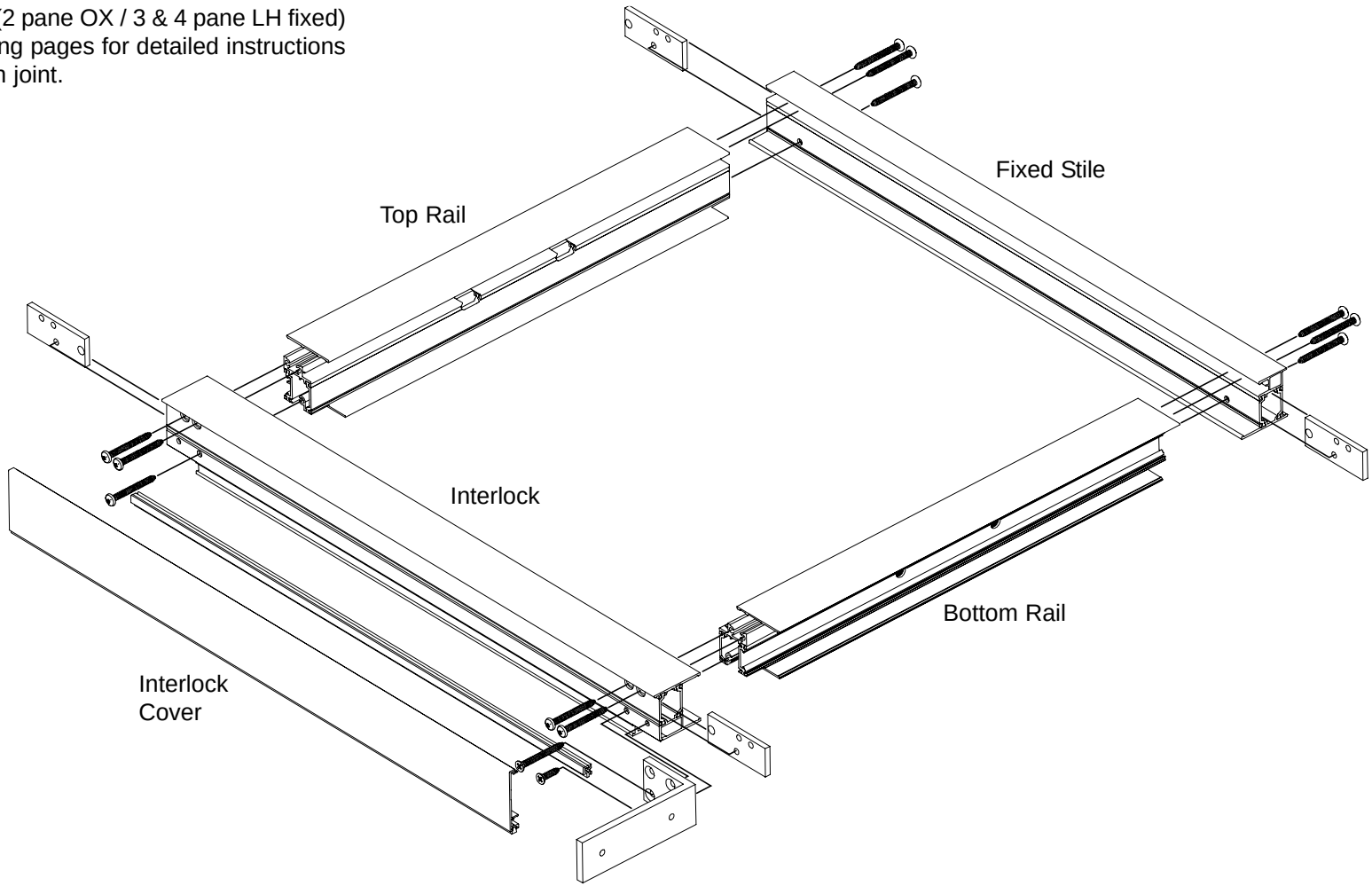




It is ESSENTIAL that the 9.5 dia clearance holes on the under side of the cill for fitting the 3 pane mullion have CPC109 hole plugs SEALED into them, including any un-used holes on non-handed cut down kits.

Assembly - Fixed Pane

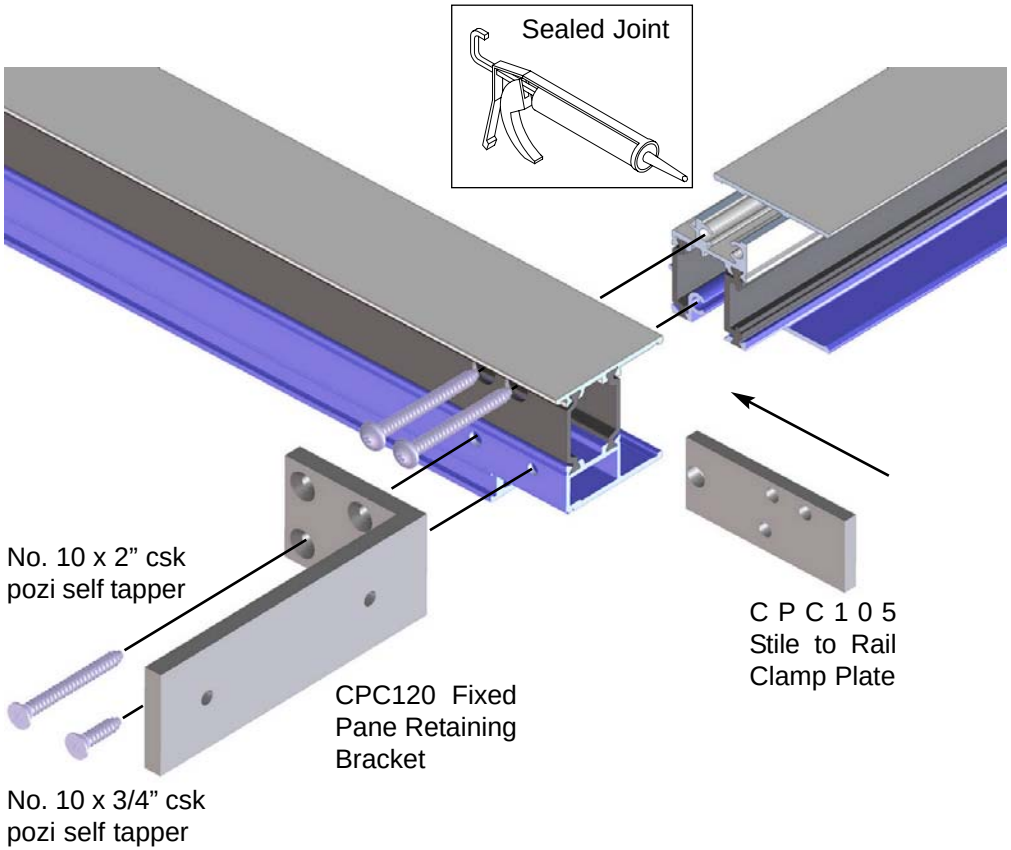
Typical fixed pane (2 pane OX / 3 & 4 pane LH fixed) shown. See following pages for detailed instructions on completing each joint.



Assembly - Fixed Pane

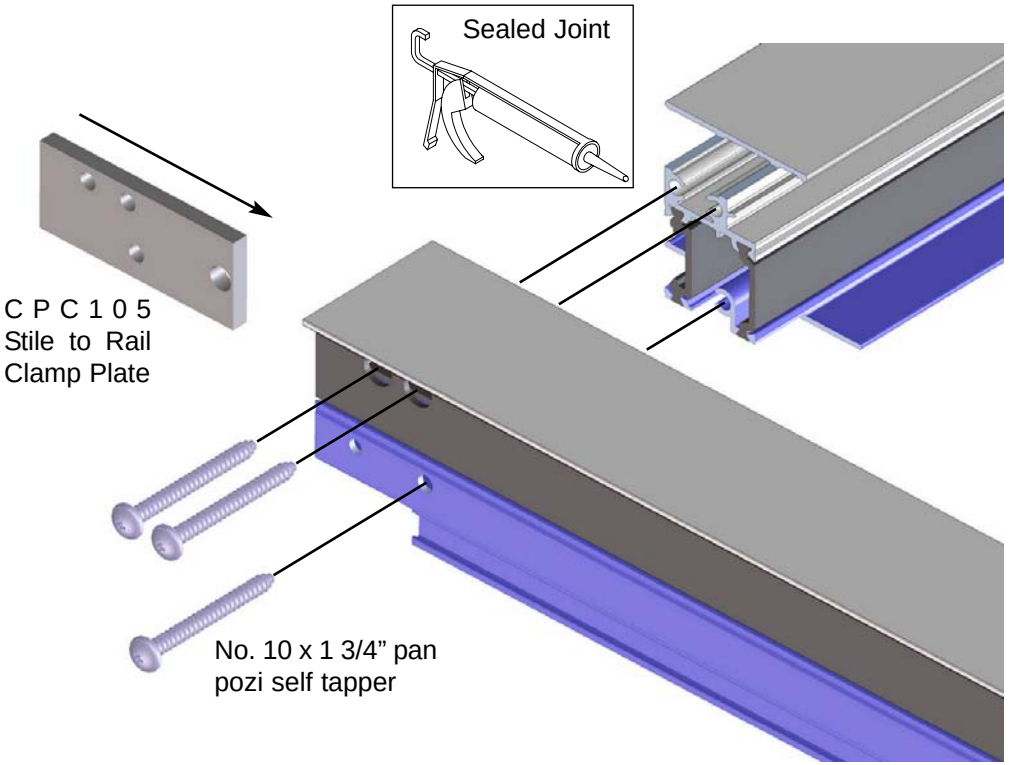
Bottom Rail to Interlock

Coat entire cut ends of all rails with Henkel Terostat 934 (clear) or 939 (grey, black or white). Assemble using 2 off No. 10 x 1 3/4" pan pozi, 1 off No. 10 x 2" csk pozi and 1 off No. 10 x 3/4" csk pozi self tappers. Clean off excess sealant immediately using Teroson FL cleaner.



Top Rail to Interlock

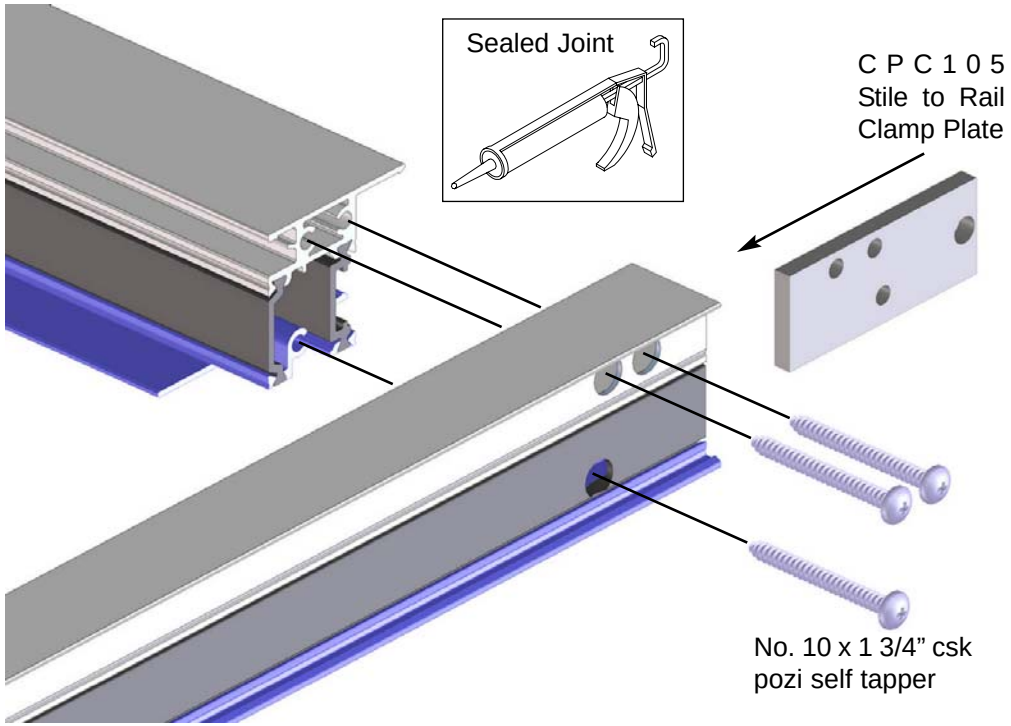
Coat entire cut ends of all rails with Henkel Terostat 934 (clear) or 939 (grey, black or white). Assemble using 3 off No. 10 x 1 3/4" pan pozi self tappers. Clean off excess sealant immediately using Teroson FL cleaner.



Assembly - Fixed Pane

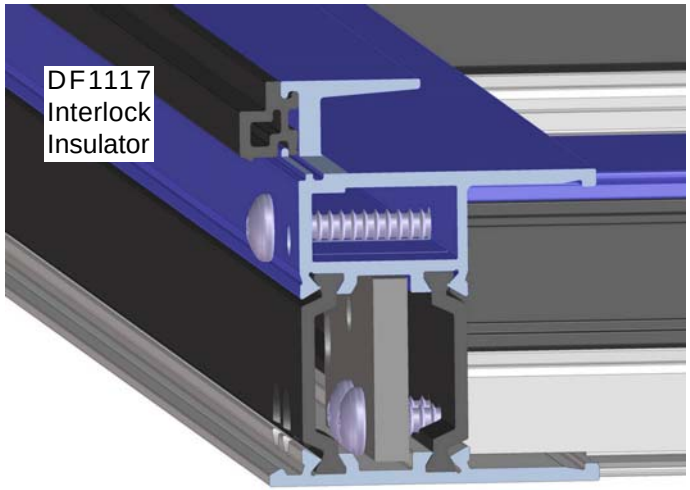
Rails to Fixed Stile

Coat entire cut ends of all rails with Henkel Terostat 934 (clear) or 939 (grey, black or white). Assemble using 3 off No. 10 x 1 3/4" pan pozi self tappers. Clean off excess sealant immediately using Teroson FL cleaner.



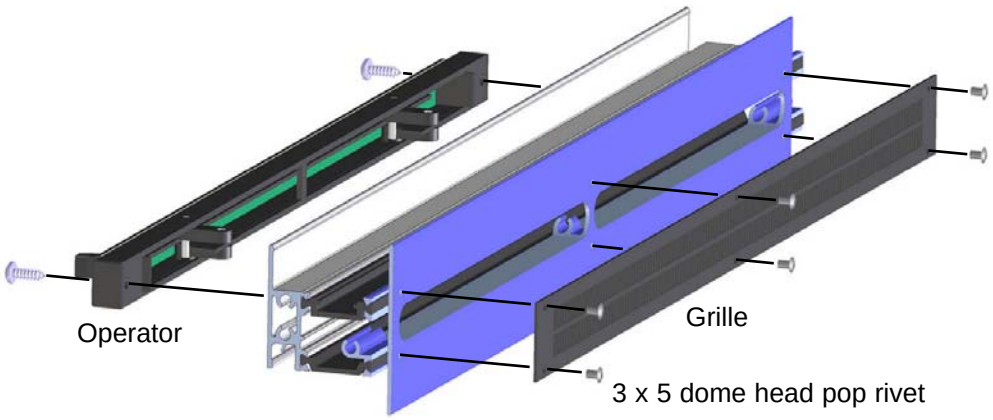
Fitting of DF1117 Interlock Insulator

Slide DF1117 interlock insulator into groove in interlock in the orientation shown. Do not seal or crimp into place since it needs to slide in the groove during pane installation. DO NOT fit interlock capping at this stage.



Trickle Vent Fitting (DFP1454)

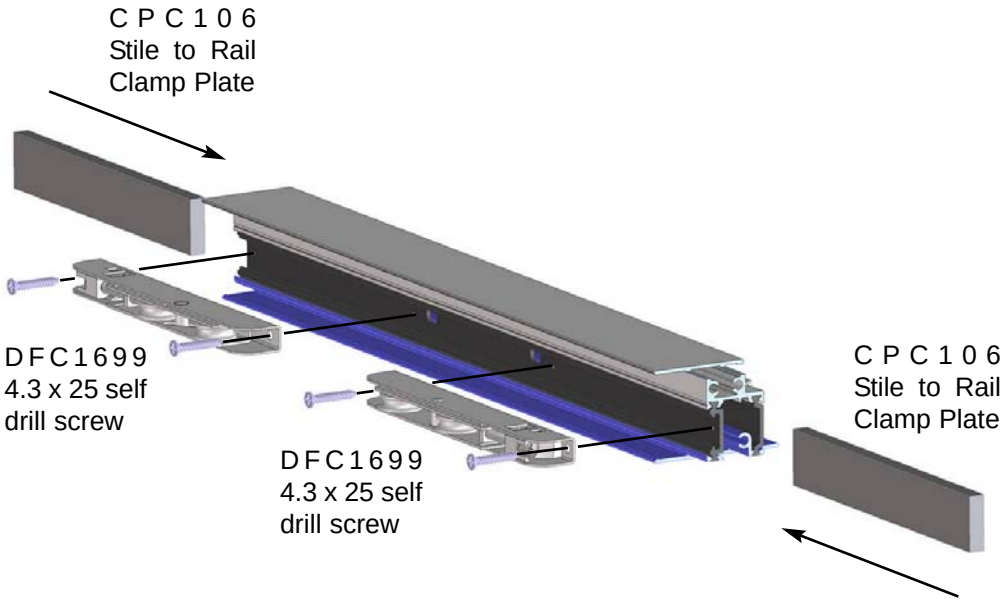
Where trickle vents are specified, fix outer grille using 6 off 3 x 5 dome head pop rivets. Fix inner operator using screws supplied.



Assembly - Sliding Pane

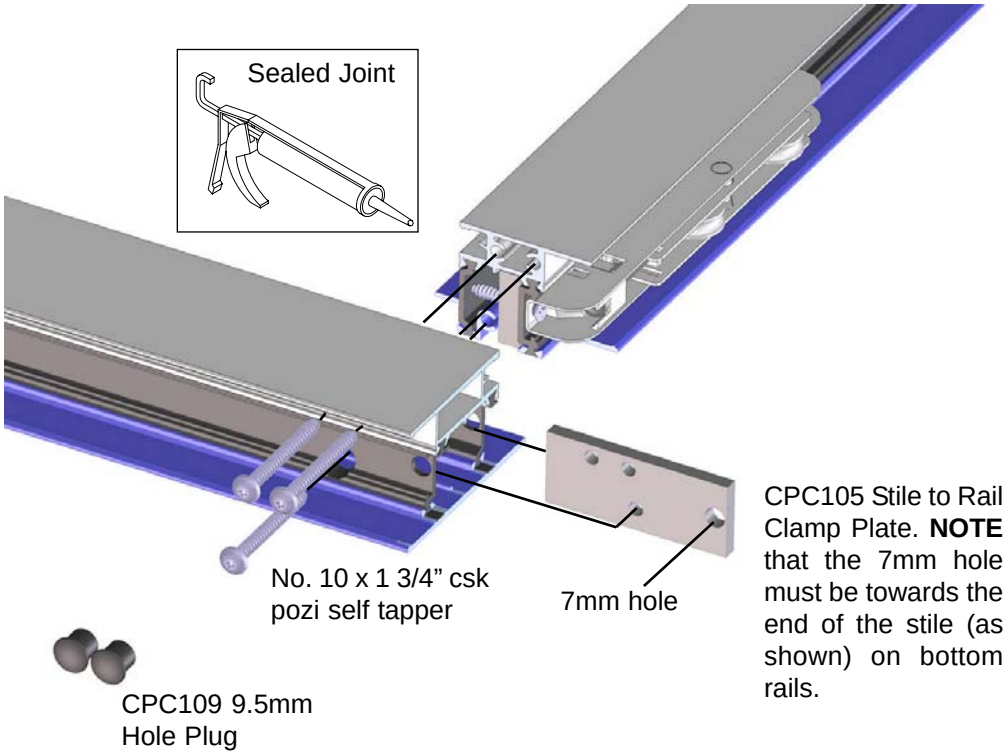
Fitting Rollers (CPC103)

Use 2 off DFC699 4.3 x 25 csk pozi PA self drill screws and 1 off CPC106 Roller fixing tapping plate per roller. Ensure that all screws penetrate the tapping plate.



Lock Stile to Rail

Coat entire cut ends of all rails with Henkel Terostat 934 (clear) or 939 (grey, black or white). Note orientation of clamp plate. Assemble using 3 off No. 10 x 1 3/4" pan pozi self tappers. Clean off excess sealant immediately using Teroson FL cleaner. Fit CPC109 hole plugs.

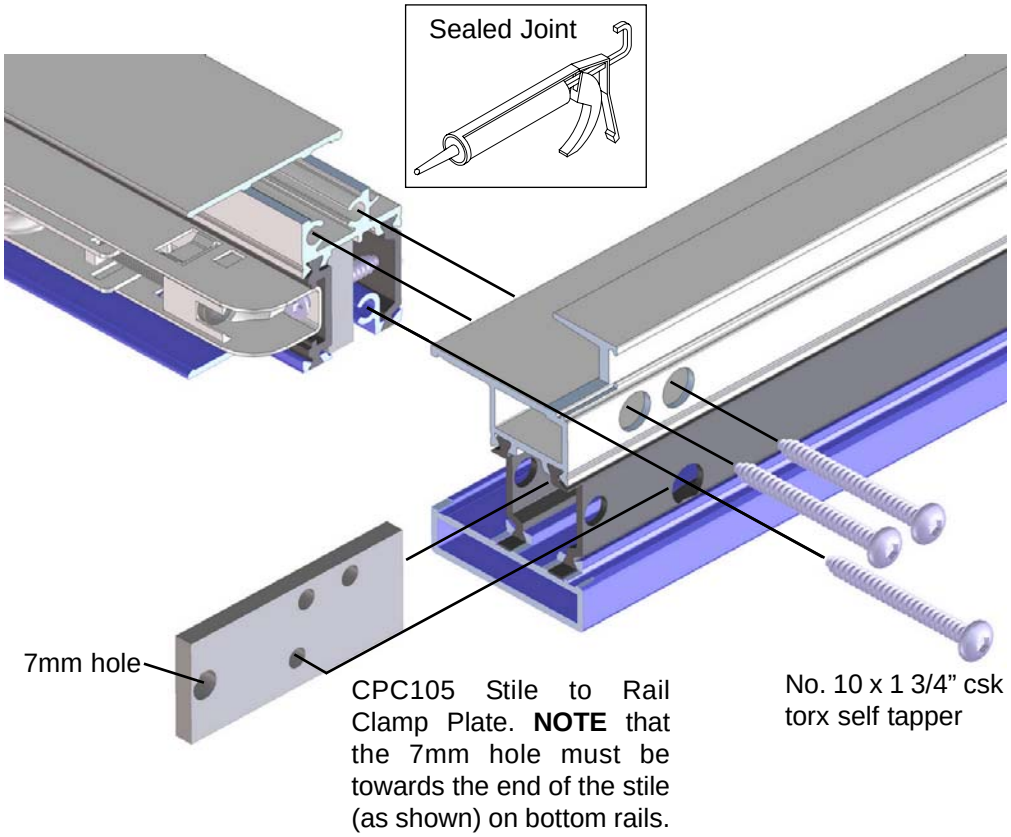


CPC105 Stile to Rail Clamp Plate. **NOTE** that the 7mm hole must be towards the end of the stile (as shown) on bottom rails.

Assembly - Sliding Pane

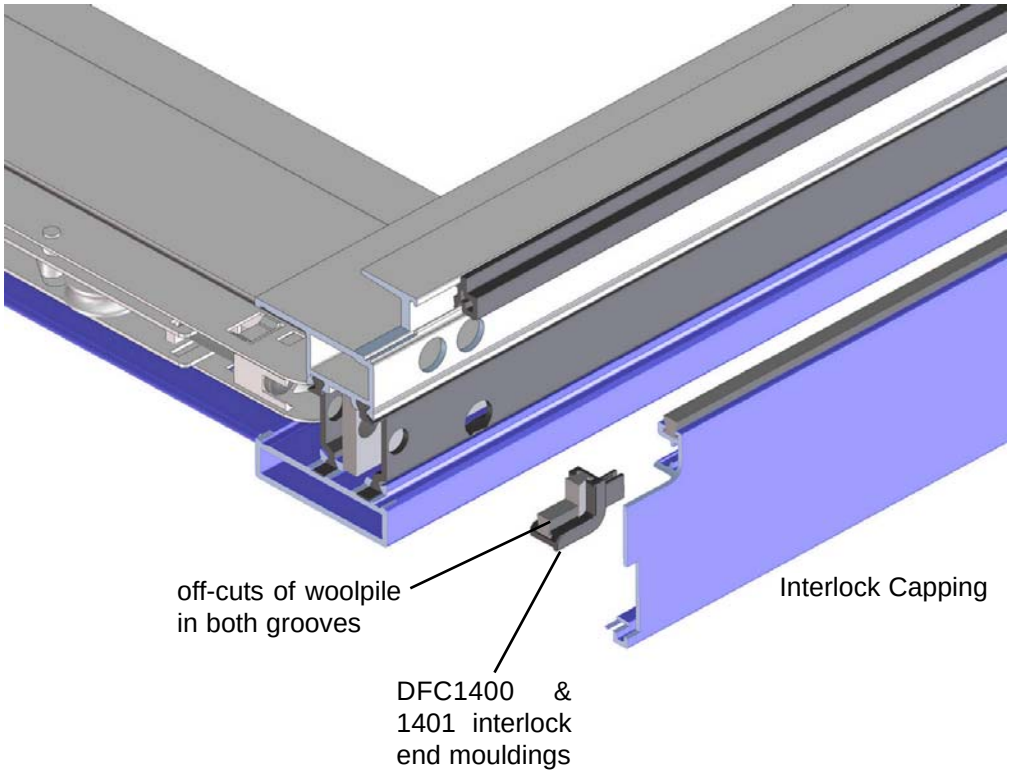
Interlock to Rail

Note use of Torx head screws on all outer interlock to rail fixings. Coat entire cut ends of all rails with Henkel Terostat 934 (clear) or 939 (grey, black or white). Note orientation of clamp plate. Assemble using 3 off No. 10 x 1 3/4" pan torx self tappers. Clean off excess sealant immediately using Teroson FL cleaner.



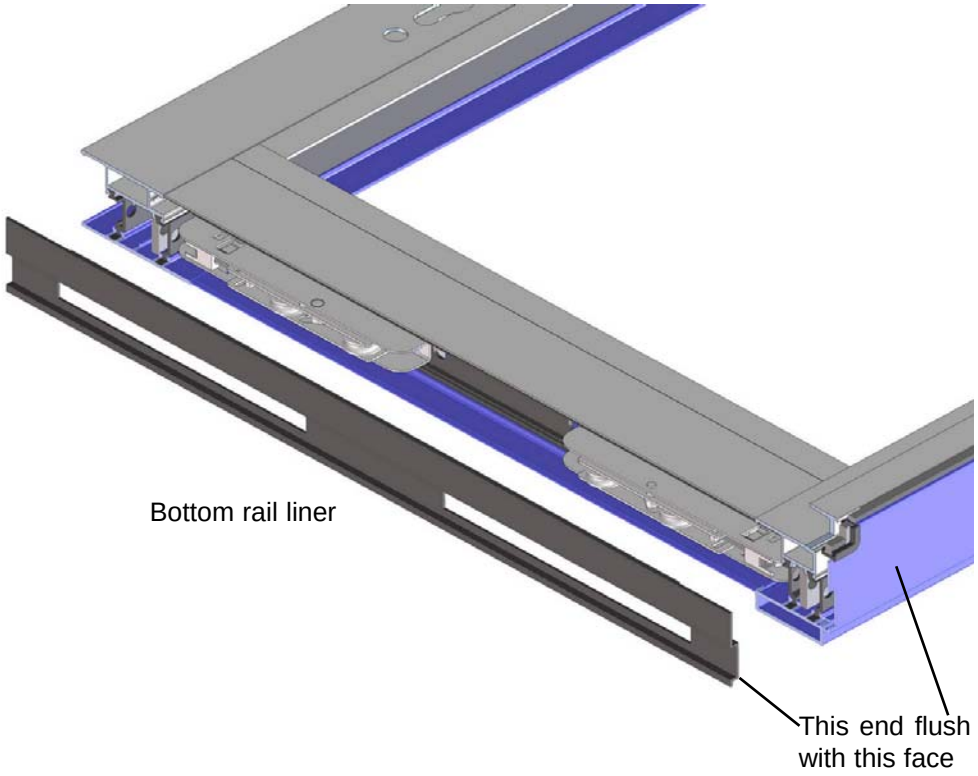
Fitting Interlock Capping

Slide DFC1450 pile into groove in interlock capping. Slide DF1117 interlock insulator into groove in interlock in the orientation shown. Fit off-cuts of woolpile from kit components to both grooves DFC1400 & 1401 interlock end mouldings as shown - hold woolpiles in place using cynoacrylate adhesive. Push end mouldings onto both ends of DF1107 interlock capping, then clip capping onto interlock ensuring that it is flush with the interlock at both ends.



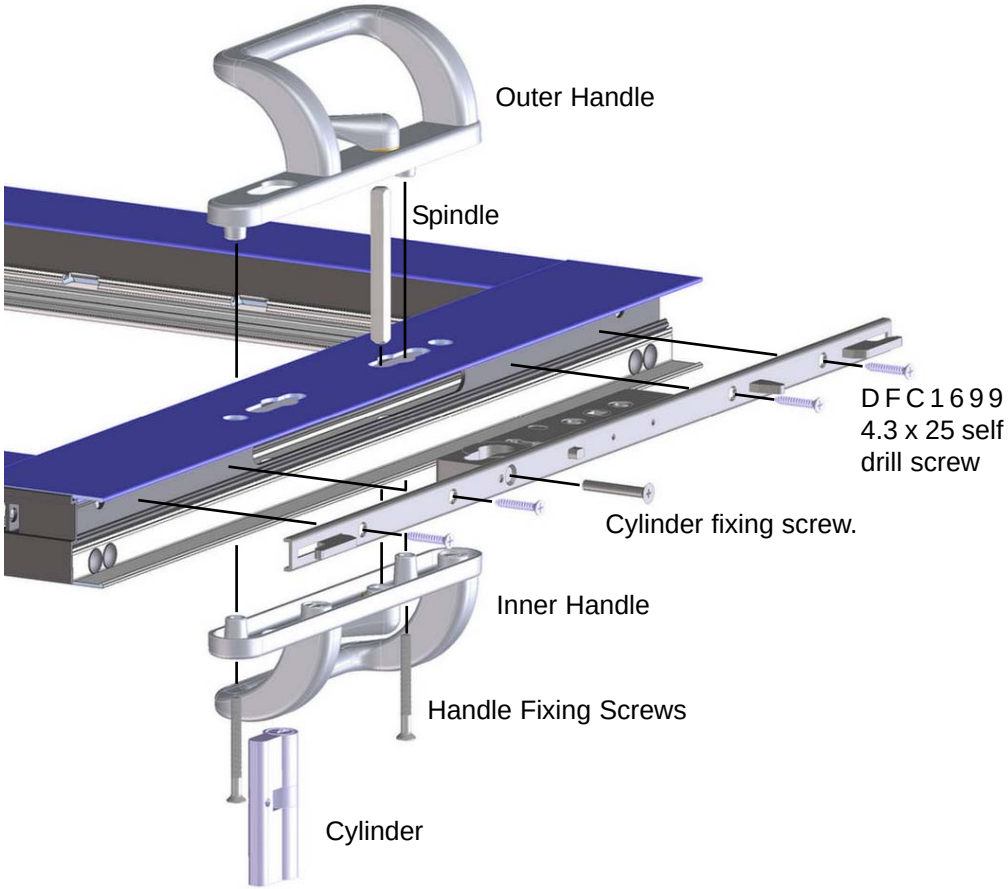
Fitting Bottom Rail Liner

Clip CPC063 bottom rail liner into bottom rail as shown below. Ensure that end is flush with the outside face of the interlock capping. If necessary, use sealant to ensure a good fit is maintained especially near the ends.



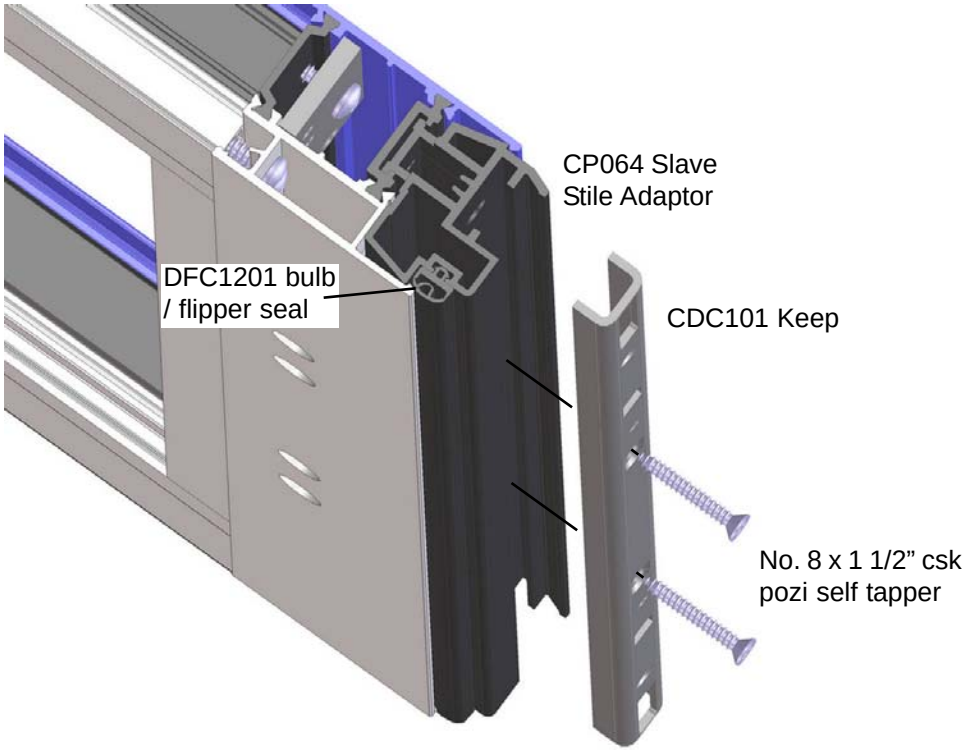
Fitting Lock and Handle

Offer lock into stile (do not fix yet). Fit Cylinder using screw supplied. Fix handles and spindle using screws supplied. Now fix lock using DFC699 4.3 x 25 csk pozi PA self drill screws. Fitting of 4-pane dummy handles is similar (but without lock, spindle or cylinder). (Illustration of lock has been shortened for clarity - actual lock has 6 hooks).



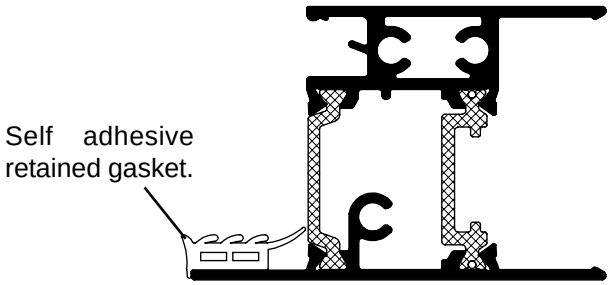
Fitting 4 Pane Slave Stile Adaptor and Keep

Fit DFC1201 bulb / flipper seal to CP063 Adaptor. Slide adaptor into slave stile ensuring seal is towards the inside. Fix keep (CDC101) using only two No. 8 x 1 1/2" csk self tapper through the two central slotted holes, though the into the slave stile. Final fixing is carried out after installation / adjustment through the remaining holes using the same screws.



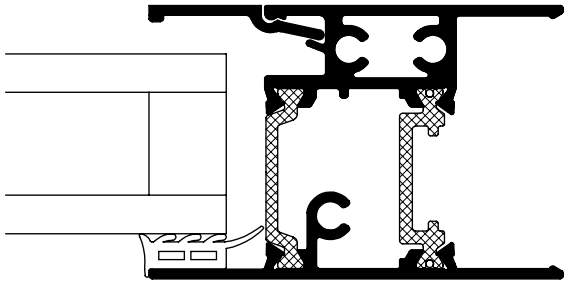
Glazing - All Panes

Remove protective backing from self adhesive retained gasket and fit to outer rebate on all for sides of the pane as shown below.



Fit DFC1415 glazing packers using a little silicone to hold them in place. Take care not to cover any drainage slots. Fit one near each bottom corner of each pane and on sliding panes only, one near the top of the stile/interlock.

Offer glass into pane by first carefully shuffling it into the glazing channel of the interlock, taking care not to knock the retained gasket off. Centralise the glass then fit the beads as shown below. All joints in beads must be sealed using Henkel Terostat. Note, beads are supplied over length for cutting down.



Fit inner wedge gasket by either mitre cutting or notching at the corners.

Fitting Frame Into Aperture

It is vitally important that the cill is laid flat and level to achieve good performance. Jambs must be vertical in both planes, and no twist or other distortion allowed in the frame.

Prior to installing the frame, the opening should be checked to ensure that it is free of debris, and that any projecting brickwork has been trimmed back.

Any damaged damp proof membranes should be replaced or additional membranes incorporated.

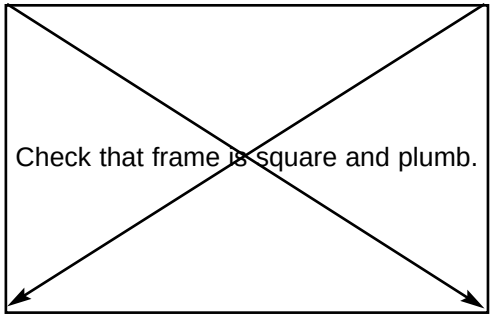
When the opening was originally measured a suitable gap should have been allowed around the window, this will allow the window to be packed to ensure that it is plumb and square within the opening.

Ideally the frame should be bedded on mortar.

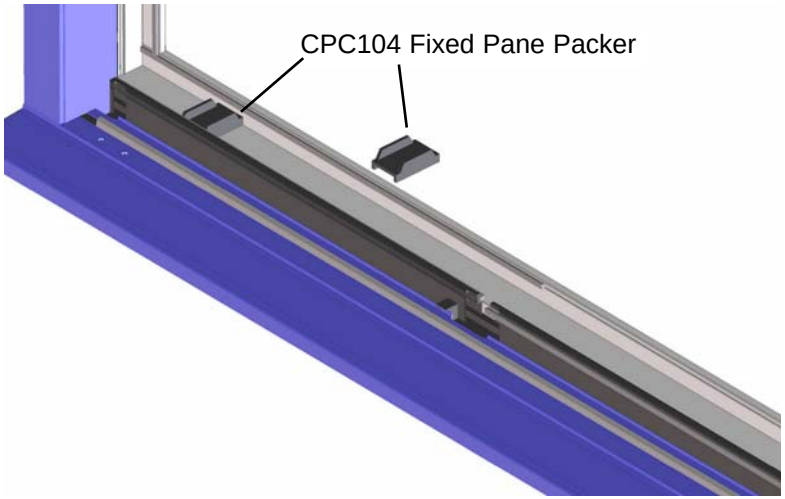
The frame can then be positioned in the opening and held square by packing at the very corners of the frame, taking care not to damage or deform the frame profiles.

To check for squareness, measure the diagonals from corner to corner, these diagonal dimensions should not differ by more than 1 or 2mm, if they do then adjust the packing until the frame is square within the opening.

The lay of the frame in to out can be checked by using a spirit level on the jambs. On replacement applications, the correct position of the frame might not align with the original. This will require some remedial work to make good the plaster reveal around the frame on the inside as well as any render that is present on the outside.

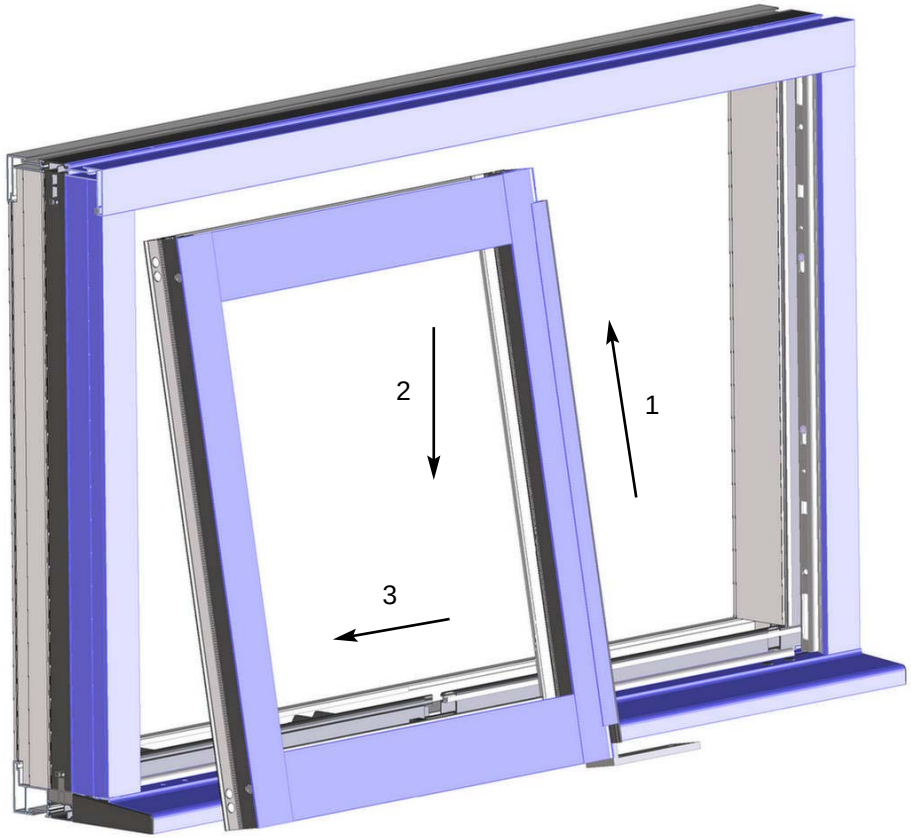


Fit CPC104 Fixed pane packers into inner recess of cill near to corners of fixed pane as shown below.

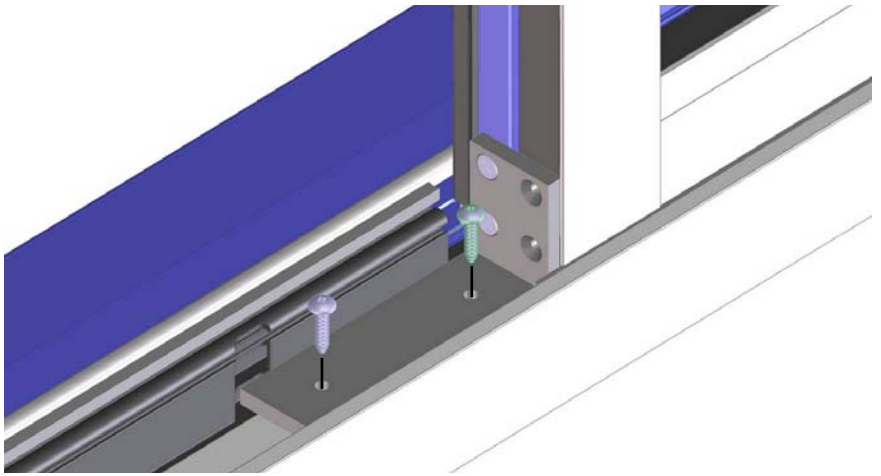


Fitting Fixed Pane

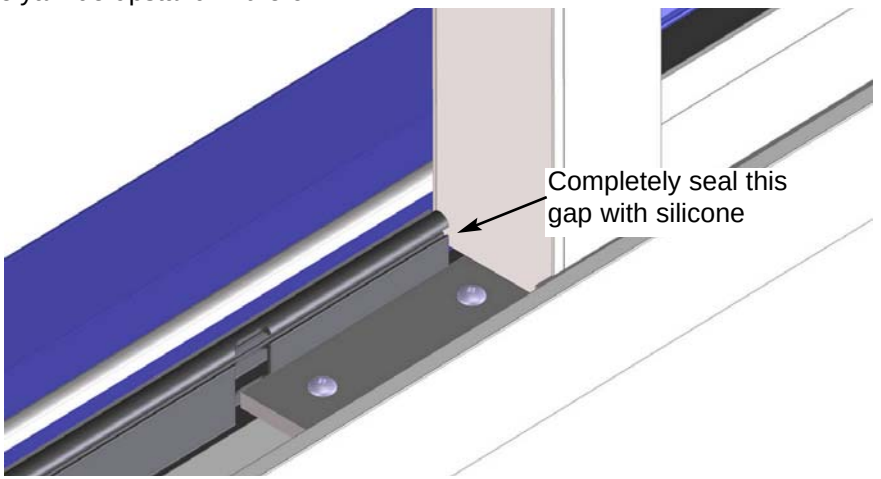
Lift fixed pane into inner head channel, then swing bottom into inner cill channel and gently lower the pane onto the packers. Slide pane FULLY into fixed jamb.



Drill 4.2 dia through holes in fixed pane retaining bracket into cill. Fix using 2 off No. 10 x 3/4" pan pozi self tappers.

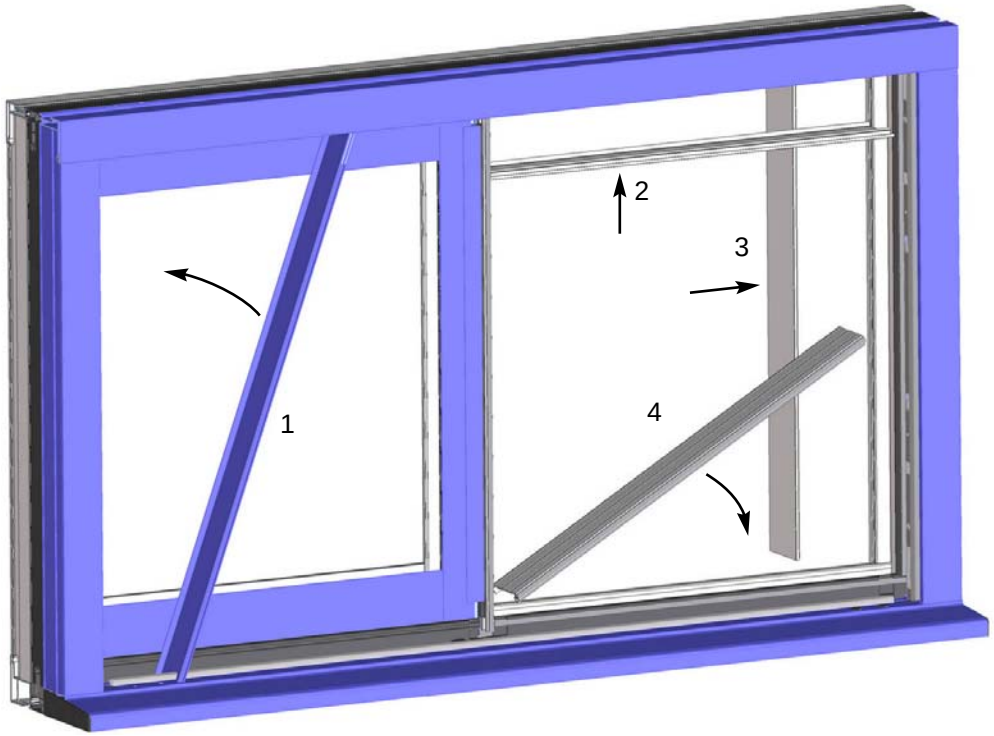


Clip DF1107 fixed interlock capping into place with the bottom resting on the fixed pane retaining bracket. Completely seal the gap between the interlock capping and the polyamide upstand in the cill



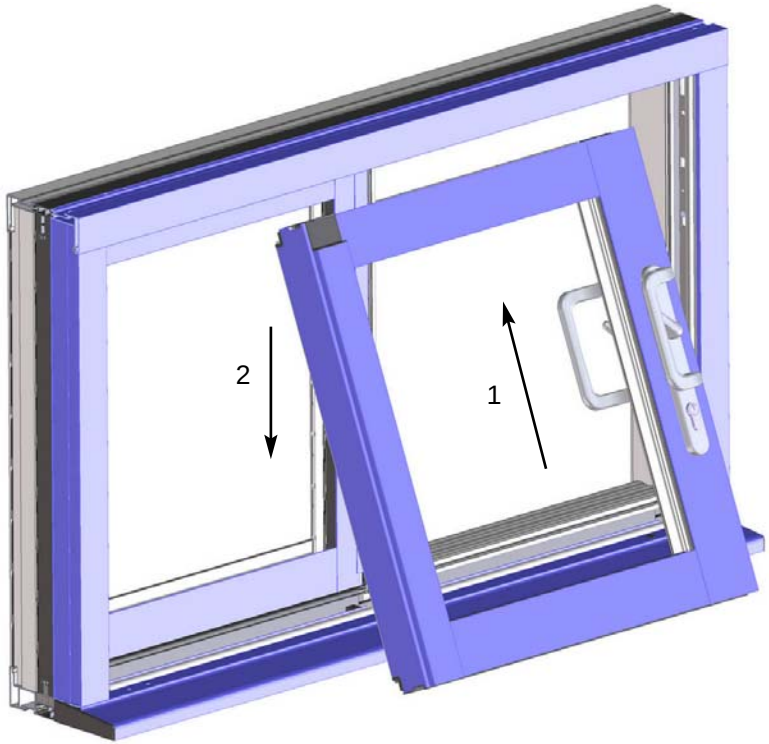
Fitting Head, Jamb & Threshold Closers

Clip in head, jamb and threshold closers in the sequence shown below. Seal butt joints in all internal closers using Henkel Terostat.



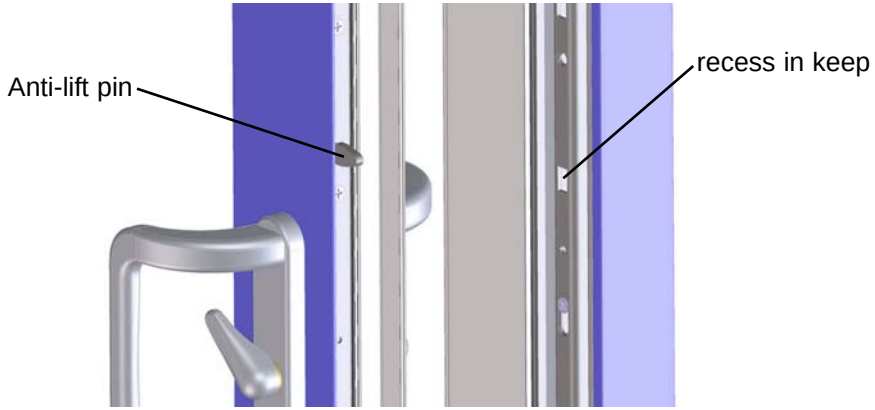
Fitting Sliding Pane

Lift sliding pane into outer head channel then swing bottom of pane inwards and gently lower the rollers onto the track. Slide pane to a near closed position and check that the lock stile is parallel to the jamb. If necessary adjust rollers using a pozi drive screw driver through the hole at the bottom of the stile / interlock (remove interlock capping to gain access to the interlock end roller adjustment). reduce the load on the roler adjustment screw by lifting the pane slightly whilst adjusting. The ideal nominal gap between the bottom rail liner and the top of cill is 6mm.



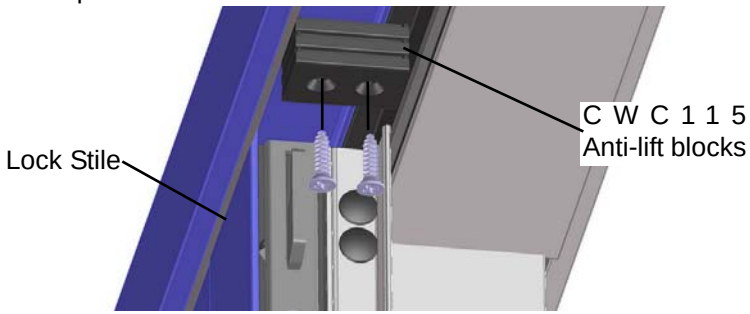
Adjusting Keep

Slacken two keep fixing screws previously fitted. Line up recess in keep with anti-lift pin on lock. Re-tighten screws and check lock operation. Adjust if necessary. Once Keep is correctly adjusted, fit No. 8 x 1 1/2" csk pozi self tappers to all remaining keep fixing holes. Fit C1630 trim above and below keep. (NB trim does NOT fit into stile).



Fitting Anti Lift Blocks

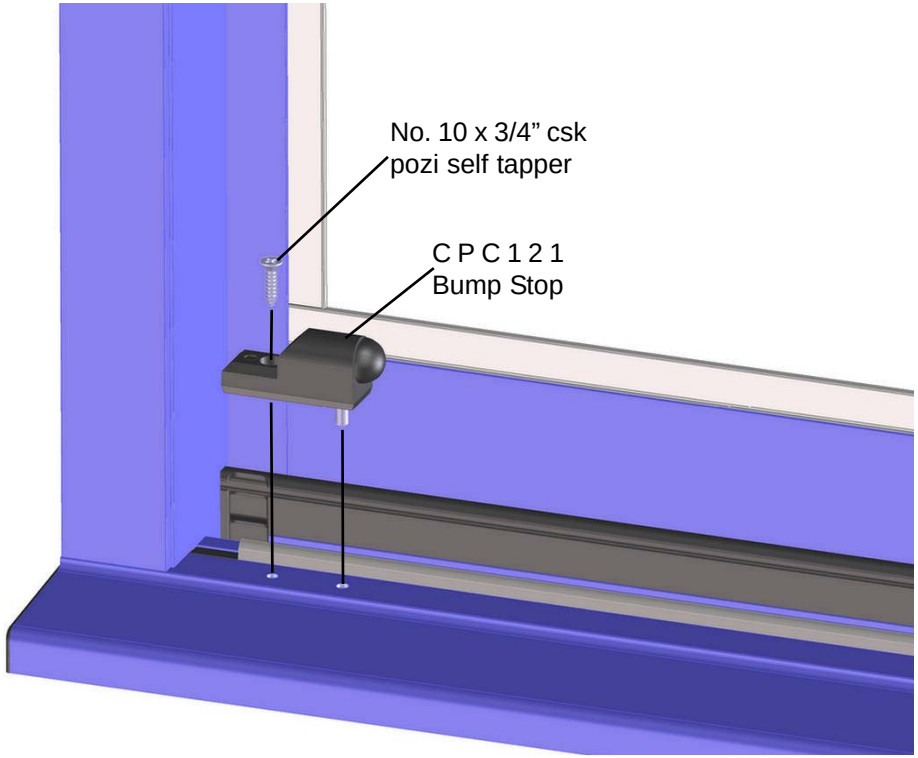
Temporarily remove handles and cylinder. Without bump stops fitted, carefully open door as far as it will go. Using CWC115 anti-lift block as a template, with it held tight against the polyamide upstand, drill two 4.2 dia holes. Fit 2 or 3 anti-lift blocks depending on clearance using No. 10 x 3/4" csk pozi self tapper. Repeat as close to lock jamb as possible.



Fitting Bump Stops

Fix CPC121 Bump Stops to head and cill using No. 10 x 3/4" csk pozi self tapper as shown below. On non-handed 2 & 3 pane cut down kits, where there are un-used bump stop fixing holes, fill them using CPC122 5mm hole plugs.

Re-fit handles and test operation of the door. Make any necessary adjustments and re-check operation.



Sealing

The recommended sealant for the exterior is Low Modulous Neutral Cure Silicone Sealant. Backing foam should be used where the perimeter gap is over 5mm. Where the gap is within the 5mm range, a neat application of silicone is all that is required on the outside.

A final check of the internal and external perimeter seals should be undertaken. Any weak spots that are identified should be rectified and tooled to a high visual finish. Any excess sealant must be cleaned off of the finished surfaces using appropriate cleaner.

Cleaning After Installation

If excess sealant is to be cleaned off. Ensure that any solvent used will not damage any of the metal finishes, synthetic rubbers or plastics which may be present.

Warning

Take particular care if there is any cement or plaster on the aluminium. It is harmful to the metal finish and should be washed off while still wet. DO NOT RUB or particles of grit will permanently damage the metal or paint finish.

Routine Cleaning

No aluminium finish is “Maintenance Free” and hence should be cleaned at regular intervals. See surface treatment suppliers literature/website for cleaning and maintenance requirements.

Maintenance

Locks and rollers are sealed for life and require no special regular maintenance other than wiping the faceplate of the lock and the stainless steel track down with a damp cloth periodically. In addition, regular checks must be made to ensure that the track is not damaged or obstructed in any way. If you are unsure DO NOT operate the door and seek professional help.

Operating And Safety Instructions

In order to preserve functionality of the door, and to guarantee safety, it is imperative the directives listed below are observed.

- *The door sash must not be burdened with additional weight.*
- *Do not place any objects between the sliding pane and frame.*
- *Do not allow children to operate the door.*
- *Do not leave pane open during strong winds.*
- *Caution! A slamming pane can lead to injuries while closing. Do not grasp the door between the sliding pane and frame.*