

# In-Line Sliding Patio Door Technical Manual



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PROPERTIES  
SYSTEMS TECH

Issue : 16  
Date : 13/10/16  
Ref : TM-0002

# In-Line Sliding Patio Door Contents



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# In-Line Sliding Patio Door Introduction



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The In-line Sliding Patio Door uses a dedicated 86mm deep frame profile which reduces to 70mm deep at the rear which makes it compatible with the full range of 70mm ancillary profiles, add-ons, cills etc. from Profile 22.

The system also offers a choice of 60mm deep sash profiles (chamfered and feature), provided with co-extruded glazing gasket. 28mm glazing is offered as standard using 2365 (bevelled) & 2395 (feature) glazing beads. 24mm glazing is also available using 2335 (bevelled) & 2355 (ovolo) glazing beads. Unfortunately triple glazing above 28mm cannot be accommodated.

2, 3 & 4 pane door options are available, where the minimum/maximum sash width/height is 785/1960mm and 1500/2274mm respectively.

White and a number of popular foiled finishes are available from stock. Additional non-stock foiled finishes are also available via our foilexpress service. For a full list of foil finishes and their availability please refer to the Patiomaster Palette brochure.

A bi-parting 6 point hook lock is standard with a shootbolt option to the head. Handle finishes are white, brass equivalent, black, chrome, gold anodised and silver anodised. To reduce the likelihood of free movement on the two sliding sashes on a 4-pane patio, it is recommended that a shootbolt be fitted.

The following low threshold options are available :

- Silver anodised - Designed primarily for internal use only.

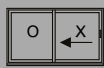
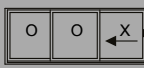

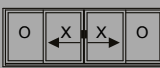
- Thermally broken (black or white painted) - This incorporates a black PVC-U threshold and is suitable for sheltered external applications.

Enhanced security performance is available for 2-pane doors only. For full details please refer to the PAS24 details contained in this manual.

# In-Line Sliding Patio Door Parts Breakdown/Deduction Chart



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PART NO.	DESCRIPTION	 2 PANE		 3 PANE END SLIDER		 3 PANE CTR. SLIDER		 4 PANE	
		DEDUCTION	QTY	DEDUCTION	QTY	DEDUCTION	QTY	DEDUCTION	QTY
1200	OUTER FRAME WIDTH	OW	2	OW	2	OW	2	OW	2
	OUTER FRAME HEIGHT-MECH. JOINTED TO CILL ONLY (LOW THRESHOLD)	OH-11	2	OH-11	2	OH-11	2	OH-11	2
	OUTER FRAME HEIGHT-MECH. JOINT	OH-52	2	OH-52	2	OH-52	2	OH-52	2
	OUTER FRAME HEIGHT -WELDED	OH	2	OH	2	OH	2	OH	2
1251/1252*	SASH WIDTH	(OW/2)-2	4	(OW/3)+23	6	(OW/3)-5	6	(OW/4)+14	8
	SASH HEIGHT (STD THRESHOLD)	OH-84	4	OH-84	6	OH-84	6	OH-84	8
	SASH HEIGHT (LOW THRESHOLD)	OH-58	4	OH-58	4	OH-58	4	OH-58	4
1262 (see note 5.)	O/FRAME REINFORCEMENT WIDTH & HEIGHT -WELDED	OW-80	2	OW-80	2	OW-80	2	OW-80	2
	O/FRAME REINFORCEMENT HEIGHT -MECH. JOINT	OH-200	2	OH-200	2	OH-200	2	OH-200	2
1257 (see note 4.)	SASH REINFORCEMENT WIDTH	SW-136	2	SW-136	2	SW-136	2	SW-136	4
	SASH REINFORCEMENT HEIGHT	SH-136	2	SH-136	4	SH-136	3	SH-136	4
1289	COVER PROFILE	SH	1	SH	2	SH	1	SH	2
	COVER PROFILE (TO THRESHOLD ONLY)	SH-21	1	SH-21	2	SH-21	1	SH-21	2
1204	DISTANCE PROFILE 300mm LTH	-	8	-	12	-	12	-	16
1253	JAMB & HEAD TRIM-HEAD	(OW/2)-93	1	(OW/3)-63	3	((OW/3)x2)-90	1	(OW/2)-116	1
	JAMB & HEAD TRIM-LOCK JAMB (USING 1263)	OH-57	1	OH-57	1	-	-	-	-
	JAMB & HEAD TRIM- FIXED JAMB (USING 1263)	OH-57	1	OH-57	1	OH-57	1	OH-57	1
	JAMB & HEAD TRIM-LOCK JAMB (USING L1335)	OH-39	1	OH-39	1	-	-	-	-
	JAMB & HEAD TRIM- FIXED JAMB (USING L1335)	OH-39	1	OH-39	1	OH-39	1	OH-39	1
1254	CLOSURE PROFILE -HEAD	OW-232	1	2xOW/3) -246	1	(2xOW/3) -198	1	OW-359	1
	CLOSURE PROFILE -LOCK JAMB	(OH/2)-720	2	(OH/2)-720	2	(OH/2)-720	2	(OH/2)-720	2
1255	DRAINAGE TRIM	(OW/2)-83	1	(OW/3)-112	1	(OW/3)-82	1	(OW/4)-61	2
1256	SASH MEETING PROFILE	N/A	-	N/A	1	SH-32	1	SH-32	1
1274	DOOR INTERLOCK	SH	2	SH	4	SH	2	SH	4
1261	TRACK	OW-232	1	(2xOW/3) -248	1	(2xOW/3) -198	1	OW-359	1
1263	THRESHOLD- ALU' BOTTOM	(OW/2)-93	1	(OW/3)-63	1	(2xOW/3)-90	1	(OW/2)-116	1
1351	BRUSH SEAL	CUT TO LTH	-	CUT TO LTH	-	CUT TO LTH	-	CUT TO LTH	-
1273	INTERLOCK BRUSH SEAL (12mm)	SH	2	SH	4	SH	2	SH	4
22480	MIDRAIL -MECH. JOINTED	SW-116	2	SW-116	3	SW-116	3	SW-116	4
2365 & 2395	BEAD	CUT TO LTH	8	CUT TO LTH	12	CUT TO LTH	12	CUT TO LTH	16
S1224	LOW THRESHOLD (ALU)	OW	1	OW	1	OW	1	OW	1
(L) 1334	T/BROKEN LOW THRESHOLD	OW	1	OW	1	OW	1	OW	1
L 1335	T/BROKEN LOW THRESHOLD TRIM	(OW/2)-93	1	(OW/3)-63	1	(2xOW/3)-90	1	(OW/2)-116	1
-	EQUAL GLASS WIDTH DEDUCTION	OW-270/2	-	OW-330/3	-	OW-414/3	-	OW-476/4	-
-	SASH WIDTH GLASS DEDUCTION	SW-133	-	SW-133	-	SW-133	-	SW-133	-
-	SASH HEIGHT GLASS DEDUCTION	SH-133	-	SH-133	-	SH-133	-	SH-133	-
-	MIDRAIL GLASS DEDUCTION STD. THRESHOLD	SMH-152.5	-	SMH-152.5	-	SMH-152.5	-	SMH-152.5	-
-	MIDRAIL GLASS DEDUCTION LOW THRESHOLD	SMH-126.5	-	SMH-126.5	-	SMH-126.5	-	SMH-126.5	-
-	ABOVE MIDRAIL GLASS WIDTH DEDUCTION	(OH-SMH)-152.5	-	(OH-SMH)-152.5	-	(OH-SMH)-152.5	-	(OH-SMH)-152.5	-

**Notes:**

Width deductions are based on equal glass sizes.

Max. Sash height must not exceed 2.5 x sash width.

On a 4 pane slider the master door is the left hand sash when viewed from inside.

SMH - Standard Midrail Height

Dimensions in MM  
All dimensions are nominal.  
DO NOT SCALE

**Handles:**

Left Hand - view from inside, door sliding to the left.

Right Hand - view from inside, door sliding to the right.

\*For simplicity 1252 feature sash will not be referred to within this manual as all technical details are the same as 1251. Where details differ this will be clearly identified.

# In-Line Sliding Patio Door Parts Breakdown



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PART NO	DESCRIPTION				
		2 PANE	3 PANE END SLIDER	3 PANE CTR. SLIDER	4 PANE
		QUANTITY	QUANTITY	QUANTITY	QUANTITY
1270	END CAP FOR 1256	N/A	N/A	2	2
1272	DUST PLUG	2	2	2	4
1268	JOINTING CLEAT-1200	4	4	4	4
1395	6 HOOK LOCK	1	1	1	1
1396	LOCK PLATE	1	1	1	1
(C)(D)(H)(L)(S) 1360L/R	KEY-KEY	1	1	1	1
(C)(D)(H)(L)(S) 1361	BLANK-BLANK	N/A	N/A	N/A	1
(C)(D)(H)(L)(S) 1362	KEY-BLANK	1	1	1	1
(C)(D)(H)(L)(S) 1363	BLANK PLATE	N/A	N/A	N/A	1
(S)D1377	CYLINDER	1	1	1	1
1350	ANTI-LIFT BRACKET	1	1	1	2
P1390/1391	SHOOTBOLT PACKS	1	1	1	1
1286	ROLLERS -LOW PROFILE	2	2	2	4
1373	BUMP STOP 1 PAIR	1	1	1	2
1258	ROUTED STEEL FOR SASH LOCK JAMB	1	1	1	2
1260	OUTER KEEP REIF. LENGTH =1760mm	1	1	N/A	N/A
1266	ALUMINIUM REINFORCEMENT SASH MEETING PROFILE	N/A	N/A	1	1
7756	22480 MIDRAIL MECH. JOINT -50mm LG	2 PER MIDRAIL	2 PER MIDRAIL	2 PER MIDRAIL	2 PER MIDRAIL
1375	LETTER PLATE	1	1	1	1
1287	SASH TO FRAME SCREW 82mm LG	6	10	10	12
F7851030	LOCK/SASH	10	10	10	10
F7600038	KEEP/OUTER	10	10	10	10
F7851016	ROLLER/SASH	4	4	4	8
F7851030	INTERLOCK/SASH	8	16	8	16
F7851030	ANTI-LIFT BRACKET	3	3	3	6
F7757050	CLEAT/OUTER FRAME (HEAD & CILL)	8	8	8	8
F7660016	CLEAT/OUTER FRAME (JAMBS)	8	8	8	8
F7895065	SASH MEETING PROFILE TO SASH FRAME FIXING	N/A	N/A	8	8
F7660045	KEEP TO SASH MEETING PROFILE FIXING	N/A	N/A	10	10
F7851030	SHOOTBOLT/SASH	2	2	2	2
F7600038	SHOOTBOLT/KEEP	2	2	2	2

**Notes:**

- OH = Outer Frame Height  
OW = Outer Frame Width  
SH = Sash Height  
SW = Sash Width

- All Deductions exclude weld allowance.
- Vertical deductions exclude optional cill.

- Fully reinforce sliding sashes and only interlock jambs on fixed sashes.

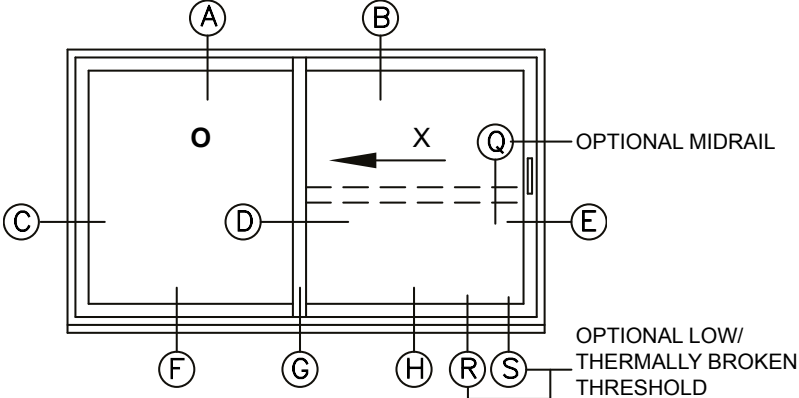
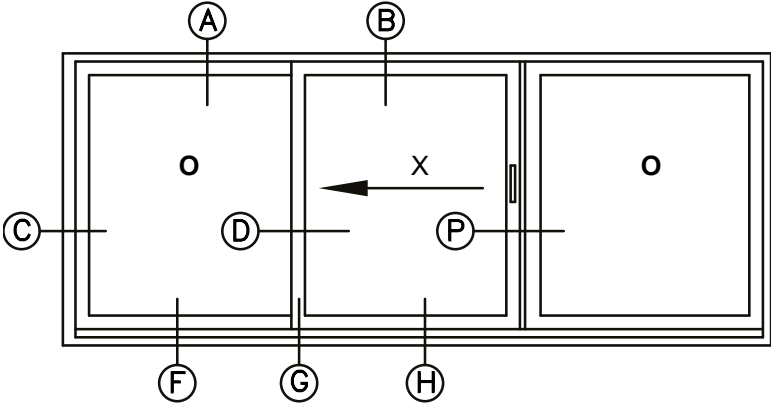
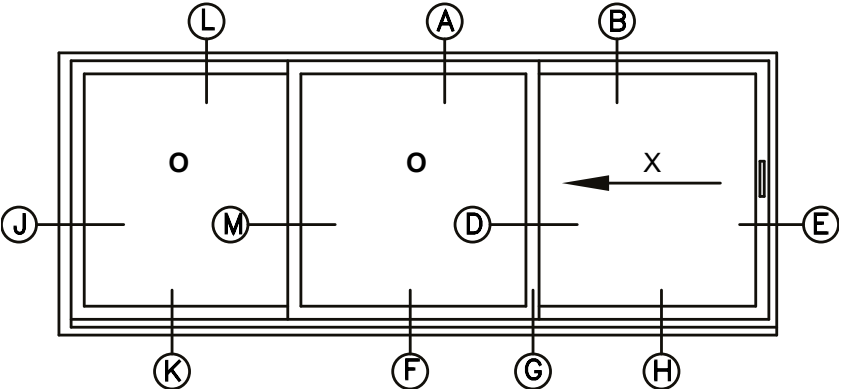
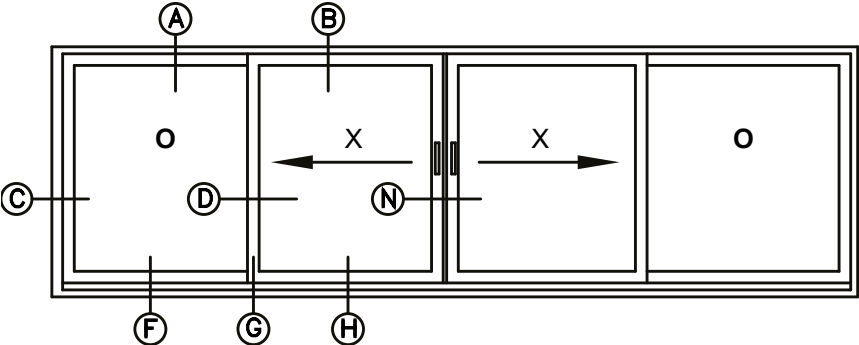
Use 1258 to lock jamb. A standard height sash reinforcement of 1828mm can be used with sashes which fall within the height of 1960mm-2274mm.

- Do not reinforce white, cream foil & white foil outer frames.

- All other foiled outer frames and fixed/sliding sashes must be fully reinforced.

# In-Line Sliding Patio Door Patio Style Assembly Section Reference

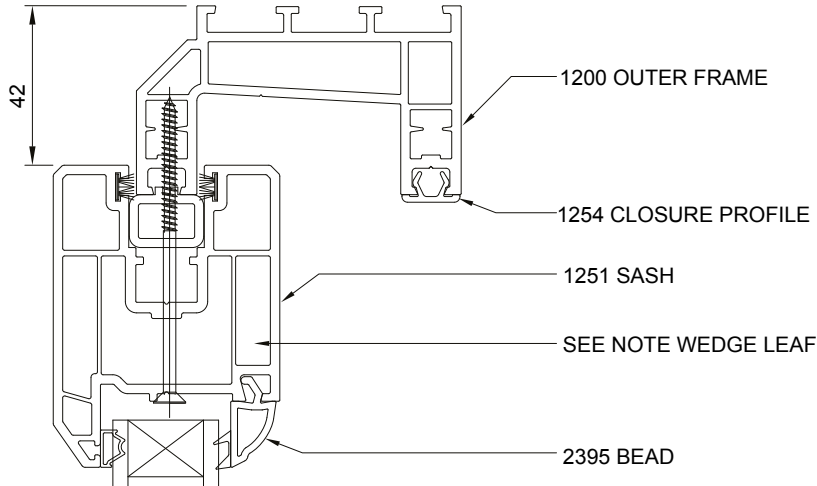
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
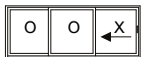
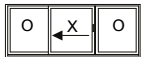
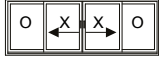
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<p>3 PANE CENTRE SLIDER</p>	
<p>3 PANE END SLIDER</p>	
<p>4 PANE SLIDER</p>	

# In-Line Sliding Patio Door Assembly Sections A, B and C

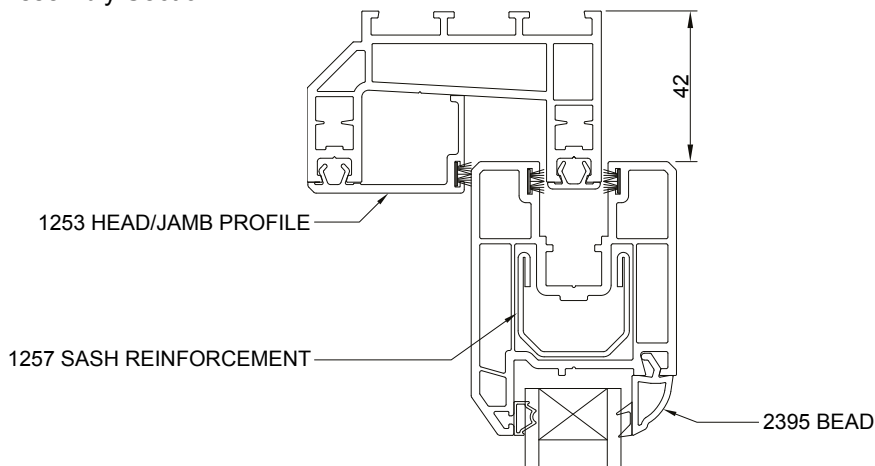
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
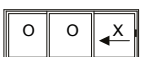
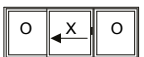
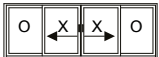
Assembly Section A



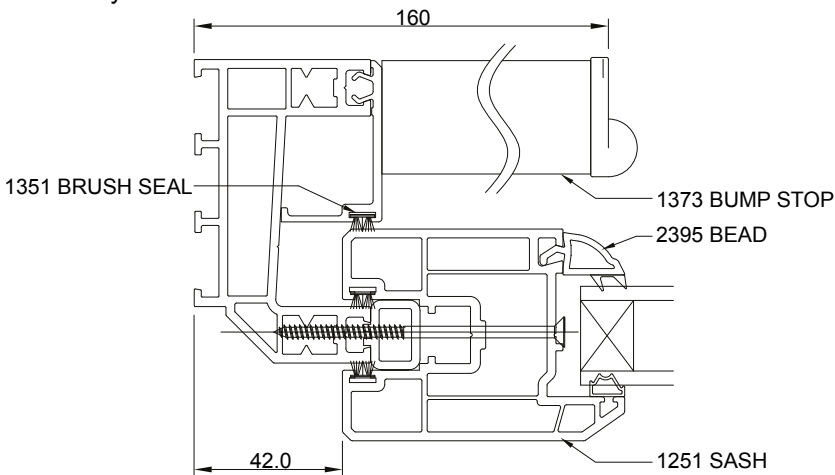
APPLICABLE TO	
	2 PANE END SLIDER
	3 PANE END SLIDER
	3 PANE CTR. SLIDER
	4 PANE SLIDER


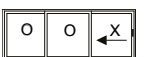
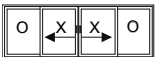
Assembly Section B



APPLICABLE TO	
	2 PANE END SLIDER
	3 PANE END SLIDER
	3 PANE CTR. SLIDER
	4 PANE SLIDER

Assembly Section C



APPLICABLE TO	
	2 PANE END SLIDER
	3 PANE END SLIDER
	4 PANE SLIDER

**Note:**

When positioning the fixed leaf, wedge the leaf towards the outside of the door before fixing to optimise the clearance between the fixed and sliding leaf.

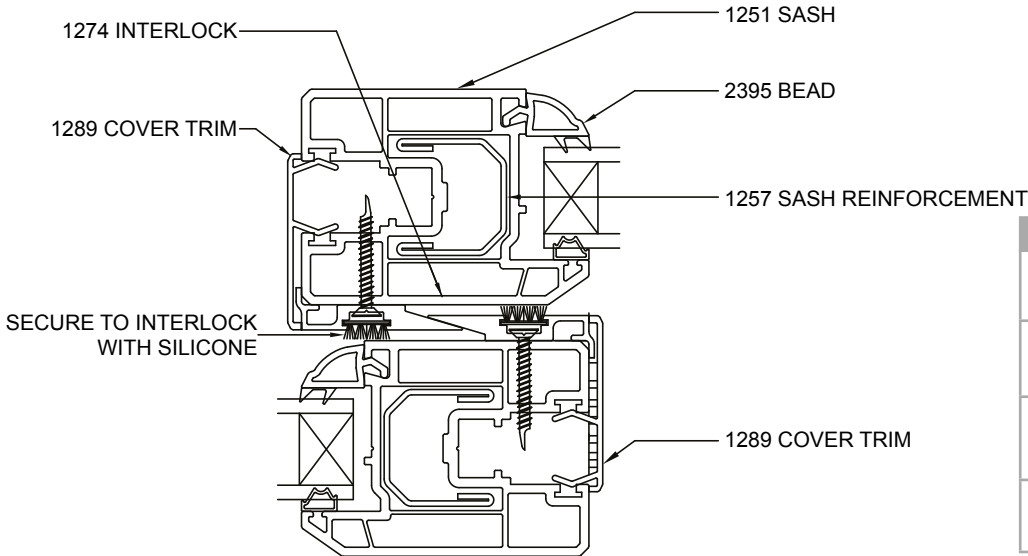
Dimensions in MM  
All dimensions are nominal.  
DO NOT SCALE



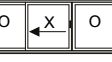
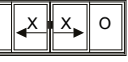
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# In-Line Sliding Patio Door Assembly Sections D and E

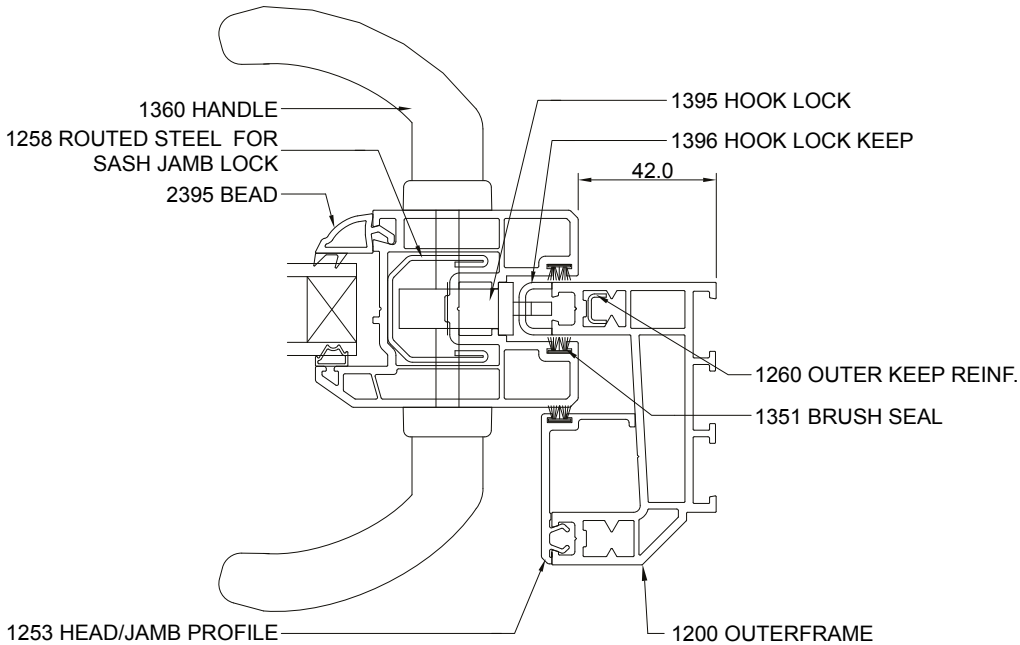
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
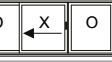
## Assembly Section D



APPLICABLE TO	
	2 PANE END SLIDER
	3 PANE END SLIDER
	3 PANE CTR. SLIDER
	4 PANE SLIDER

## Assembly Section E



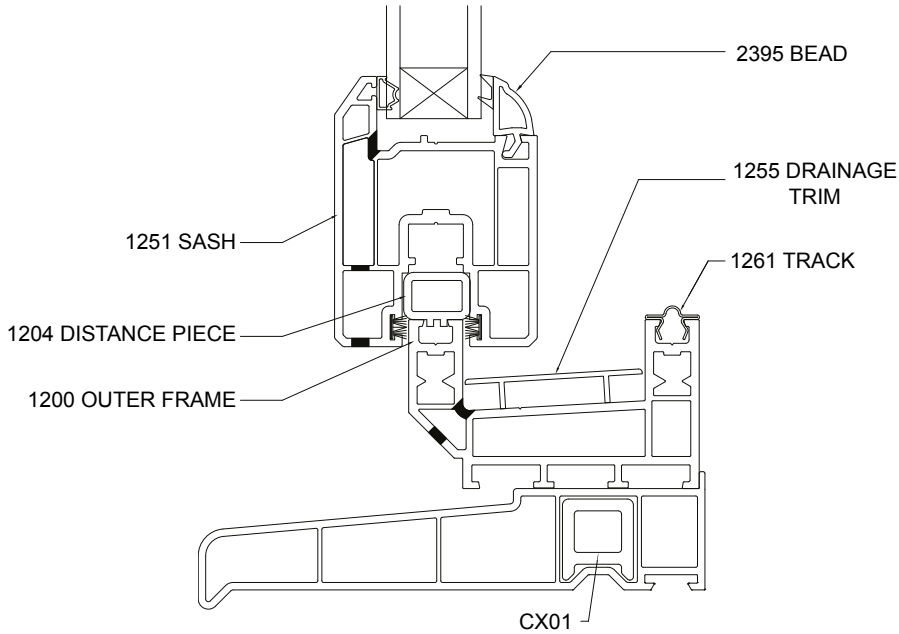
APPLICABLE TO	
	2 PANE END SLIDER
	3 PANE END SLIDER



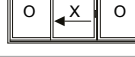



# In-Line Sliding Patio Door Assembly Sections F and G

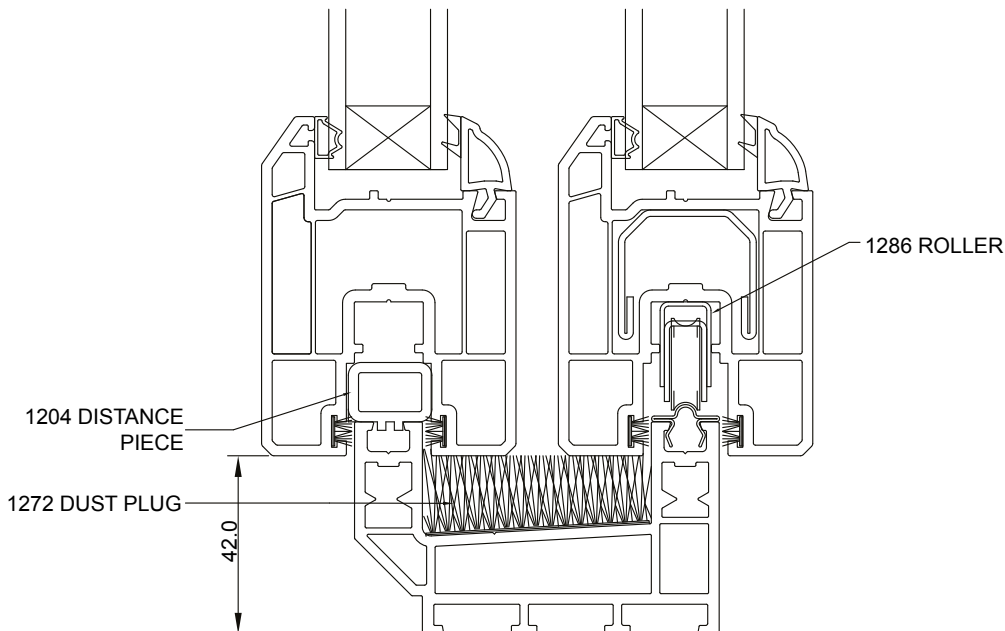
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

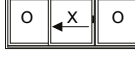
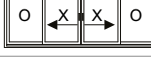
## Assembly Section F



APPLICABLE TO	
	2 PANE END SLIDER
	3 PANE END SLIDER
	3 PANE CTR. SLIDER
	4 PANE SLIDER

## Assembly Section G



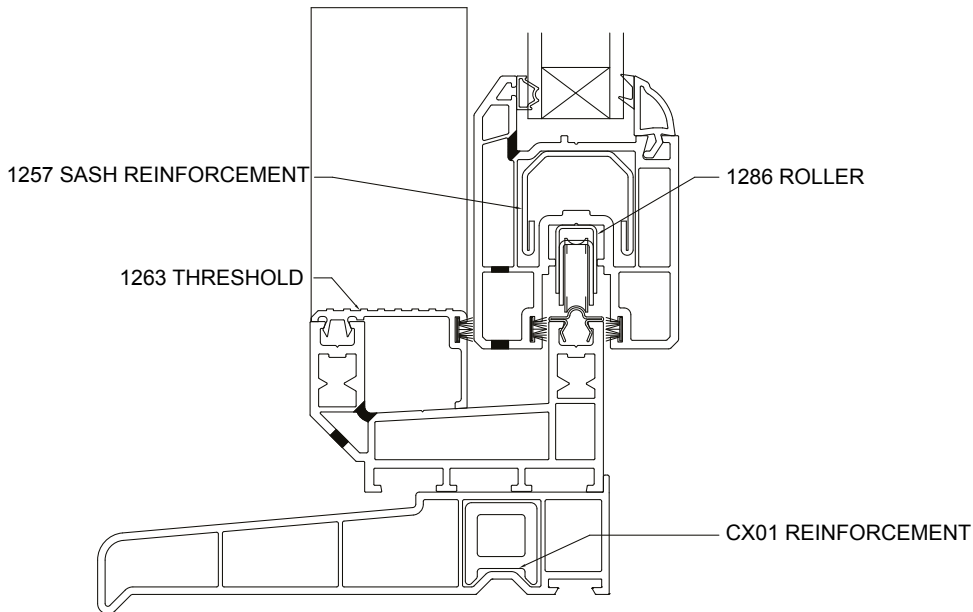
APPLICABLE TO	
	2 PANE END SLIDER
	3 PANE END SLIDER
	3 PANE CTR. SLIDER
	4 PANE SLIDER

# In-Line Sliding Patio Door Assembly Sections H and J



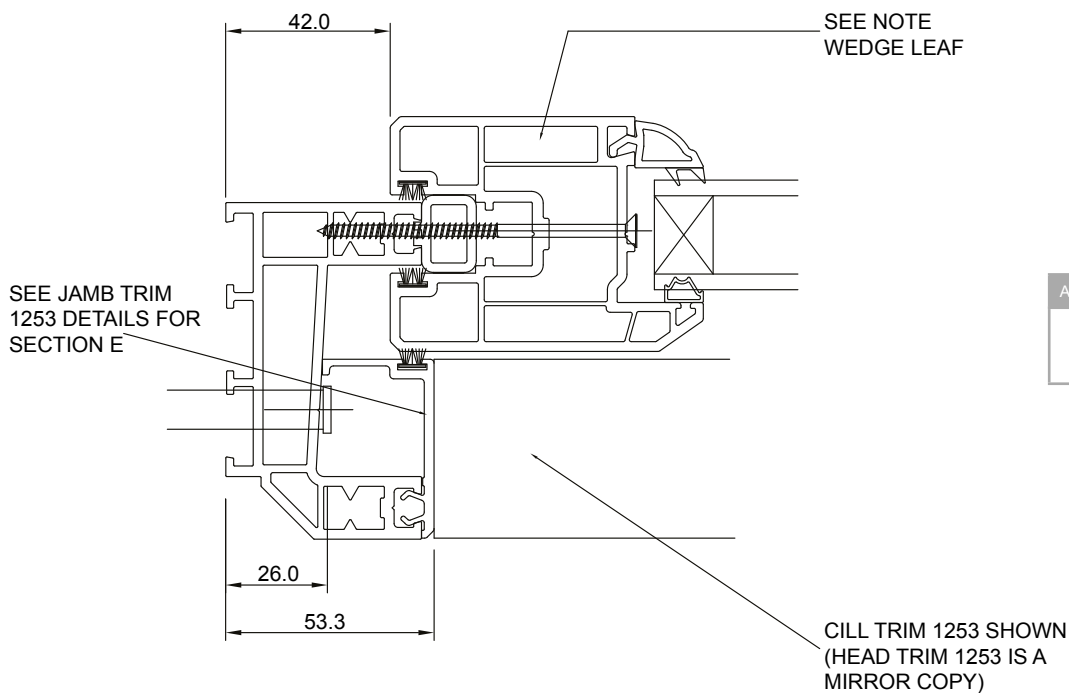
SECTION	DATE	ISS	REFERENCE	PAGE
ASSEMBLY SECTION DRAWINGS	OCTOBER 2016	16	TM-0002	10

## Assembly Section H



APPLICABLE TO	
	2 PANE END SLIDER
	3 PANE END SLIDER
	3 PANE CTR. SLIDER
	4 PANE SLIDER

## Assembly Section J



APPLICABLE TO	
	3 PANE END SLIDER

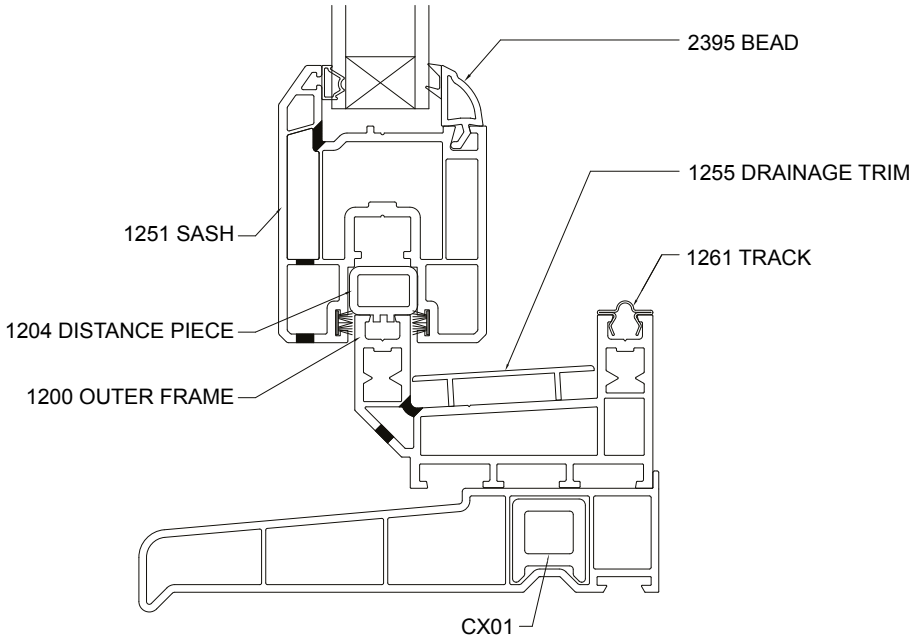
Dimensions in MM  
All dimensions are nominal.  
DO NOT SCALE

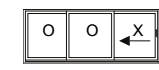
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# In-Line Sliding Patio Door Assembly Sections K and L

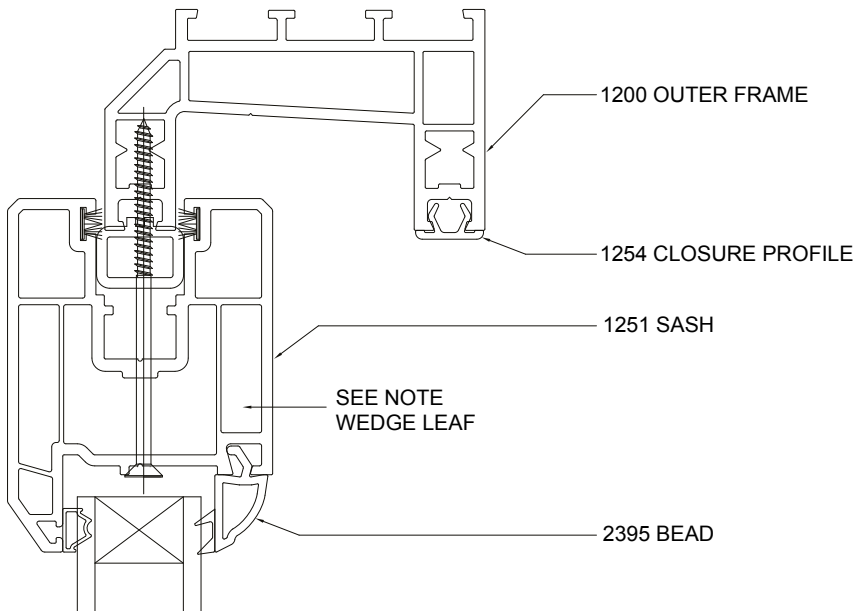
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## Assembly Section K



APPLICABLE TO	
	3 PANE END SLIDER

## Assembly Section L



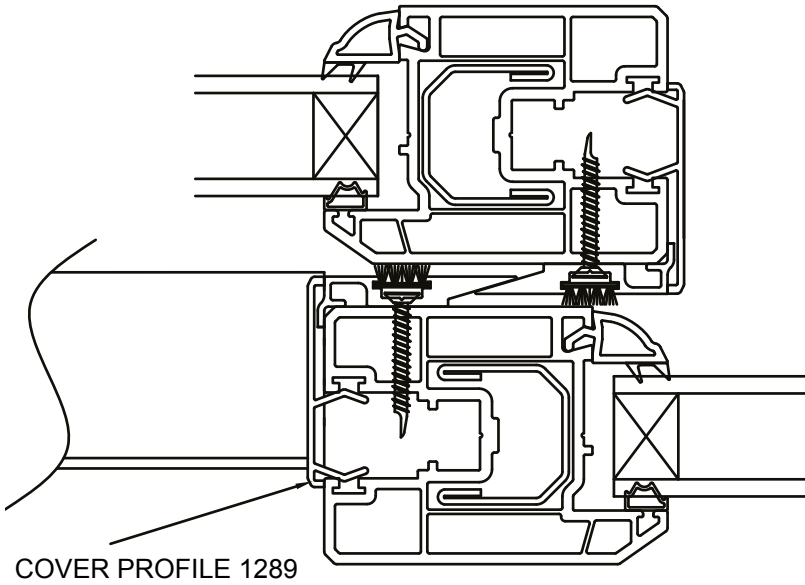
APPLICABLE TO	
	3 PANE END SLIDER

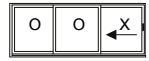
**Note:**  
When positioning the fixed leaf, wedge the leaf towards the outside of the door before fixing to optimise the clearance between the fixed and sliding leaf.

# In-Line Sliding Patio Door Assembly Sections M and N

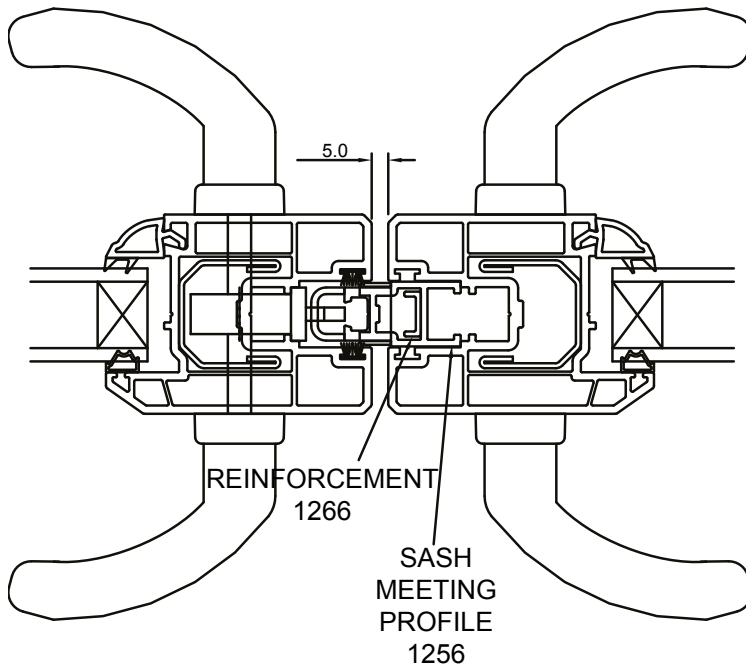
SECTION	DATE	ISS	REFERENCE	PAGE
ASSEMBLY SECTION DRAWINGS	OCTOBER 2016	16	TM-0002	12

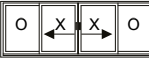
## Assembly Section M



APPLICABLE TO	
	3 PANE END SLIDER

## Assembly Section N

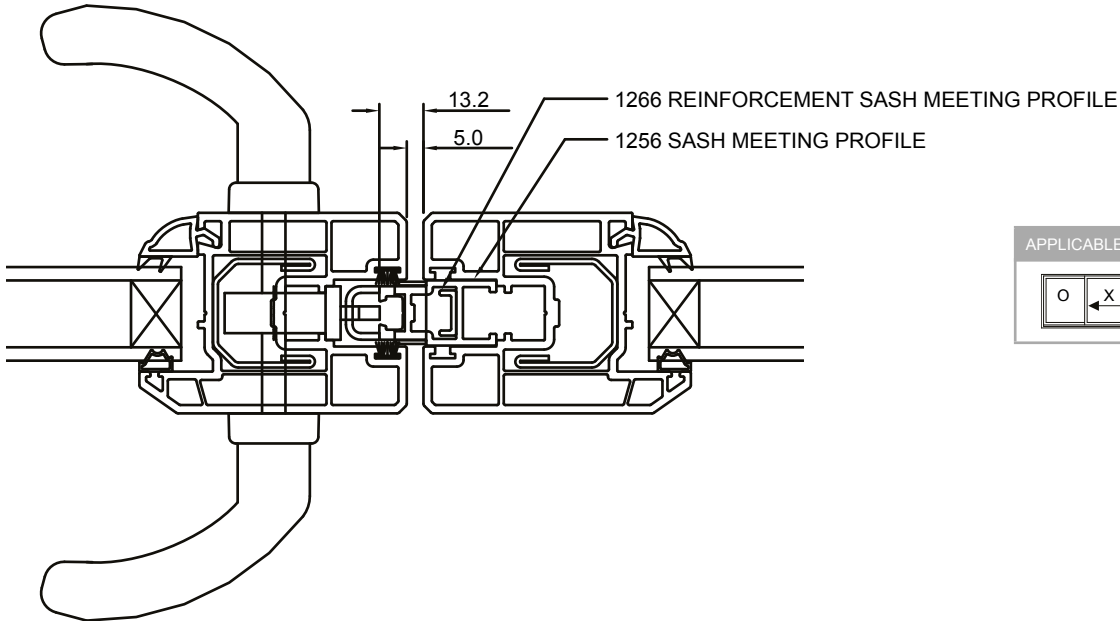


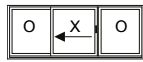
APPLICABLE TO	
	4 PANE SLIDER

# In-Line Sliding Patio Door Assembly Sections P and Q

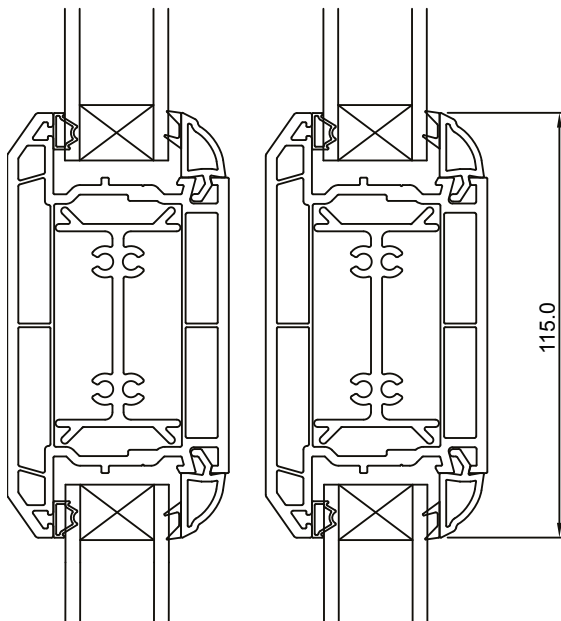
SECTION	DATE	ISS	REFERENCE	PAGE
ASSEMBLY SECTION DRAWINGS	OCTOBER 2016	16	TM-0002	13

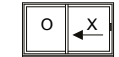
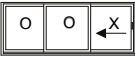
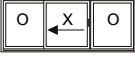
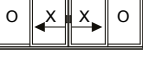
## Assembly Section P



APPLICABLE TO	
	3 PANE CTR. SLIDER

## Assembly Section Q



APPLICABLE TO	
	2 PANE END SLIDER
	3 PANE END SLIDER
	3 PANE CTR. SLIDER
	4 PANE SLIDER

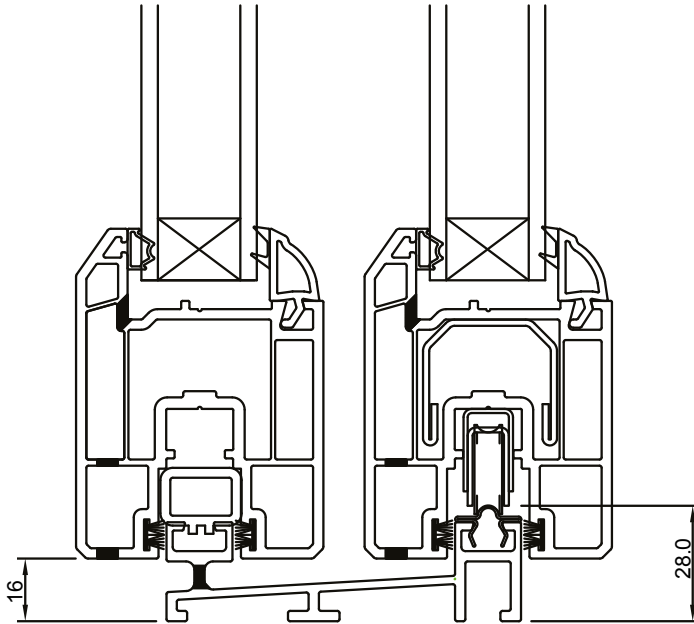
Dimensions in MM  
All dimensions are nominal.  
DO NOT SCALE

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

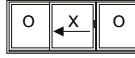
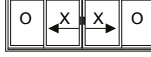
# In-Line Sliding Patio Door Assembly Sections R and S

SECTION	DATE	ISS	REFERENCE	PAGE
ASSEMBLY SECTION DRAWINGS	OCTOBER 2016	16	TM-0002	14

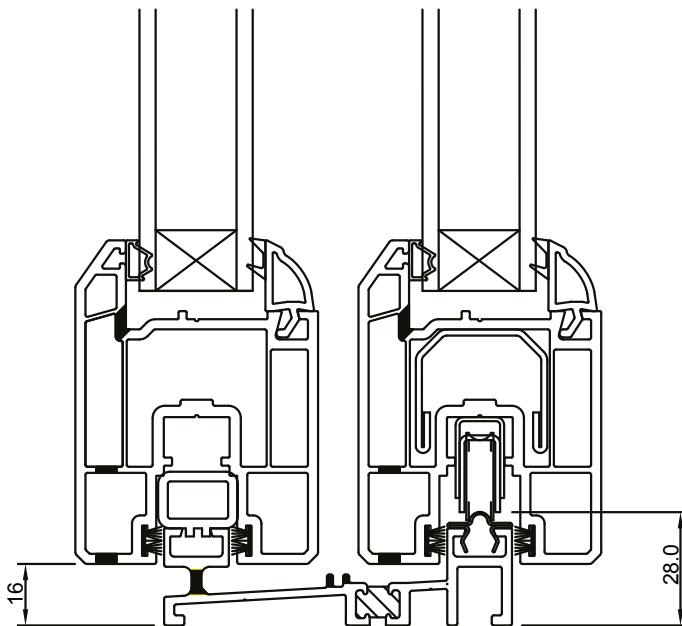
## Assembly Section R




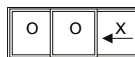
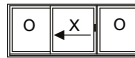
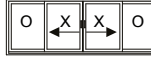
S1224 - Low Threshold

APPLICABLE TO	
	2 PANE END SLIDER
	3 PANE END SLIDER
	3 PANE CTR. SLIDER
	4 PANE SLIDER

## Assembly Section S

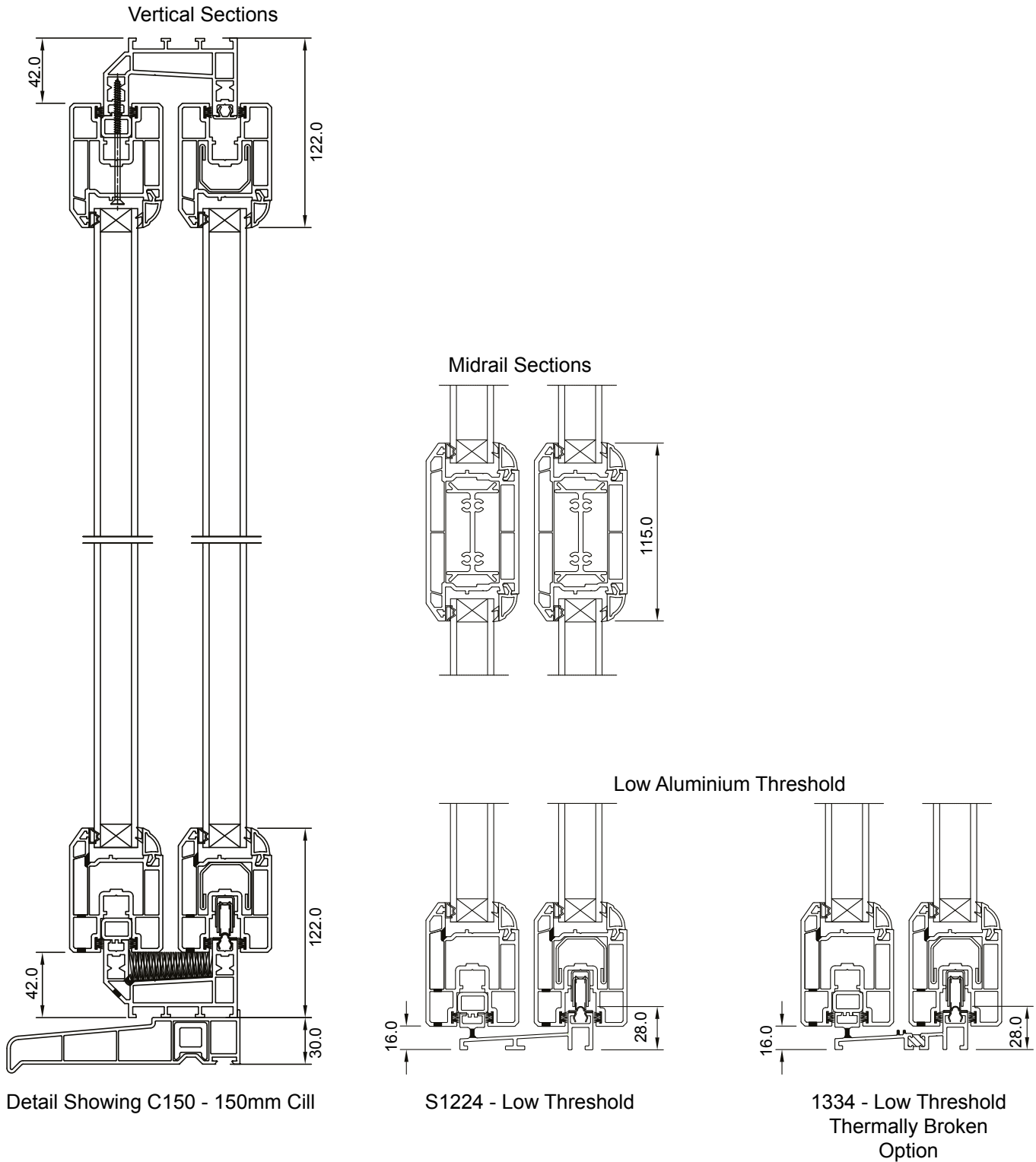


1334 - Low Threshold  
Thermally Broken Option

APPLICABLE TO	
	2 PANE END SLIDER
	3 PANE END SLIDER
	3 PANE CTR. SLIDER
	4 PANE SLIDER

# In-Line Sliding Patio Door Vertical Sections

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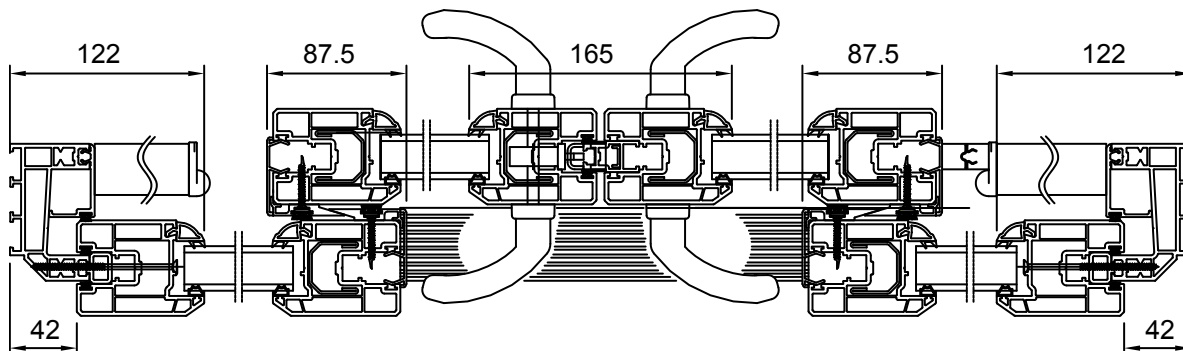
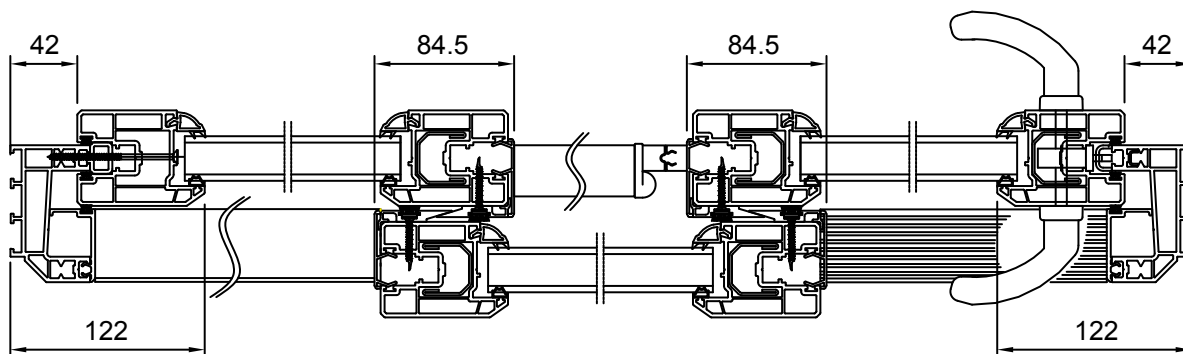
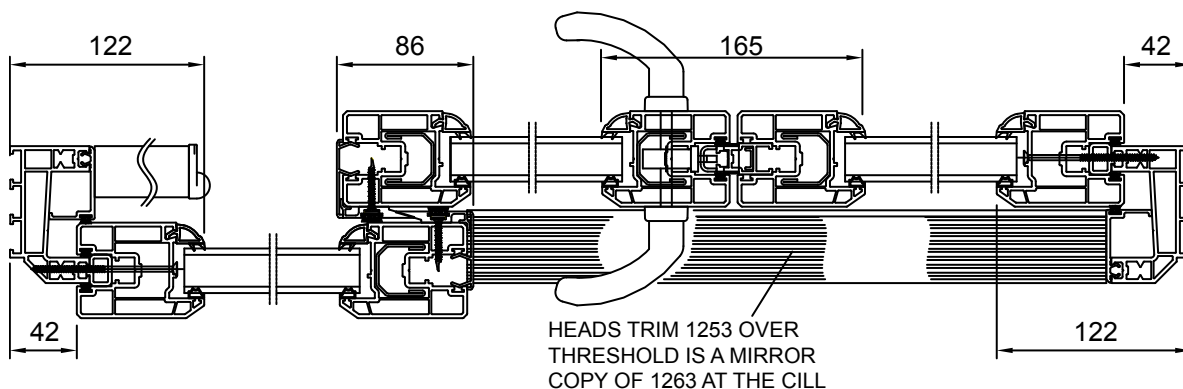
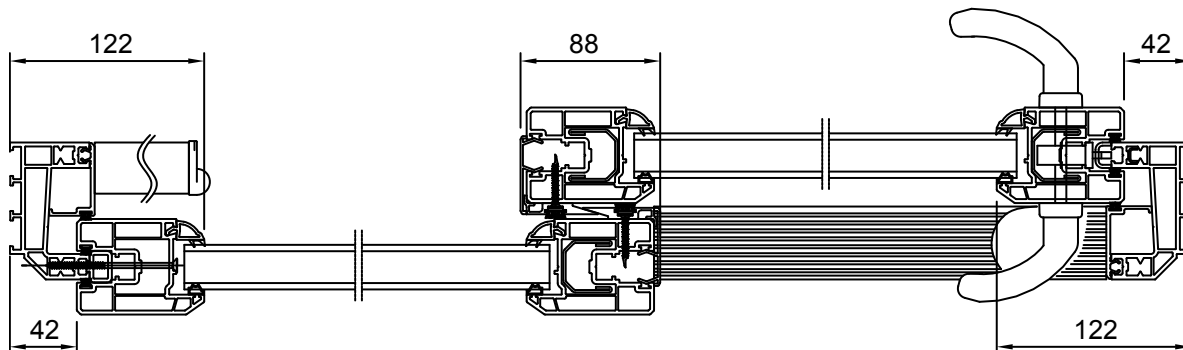
Dimensions in MM  
All dimensions are nominal.  
DO NOT SCALE

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# In-Line Sliding Patio Door Horizontal Sections

SECTION	DATE	ISS	REFERENCE	PAGE
ASSEMBLY SECTION DRAWINGS	OCTOBER 2016	16	TM-0002	16

## Horizontal Sections

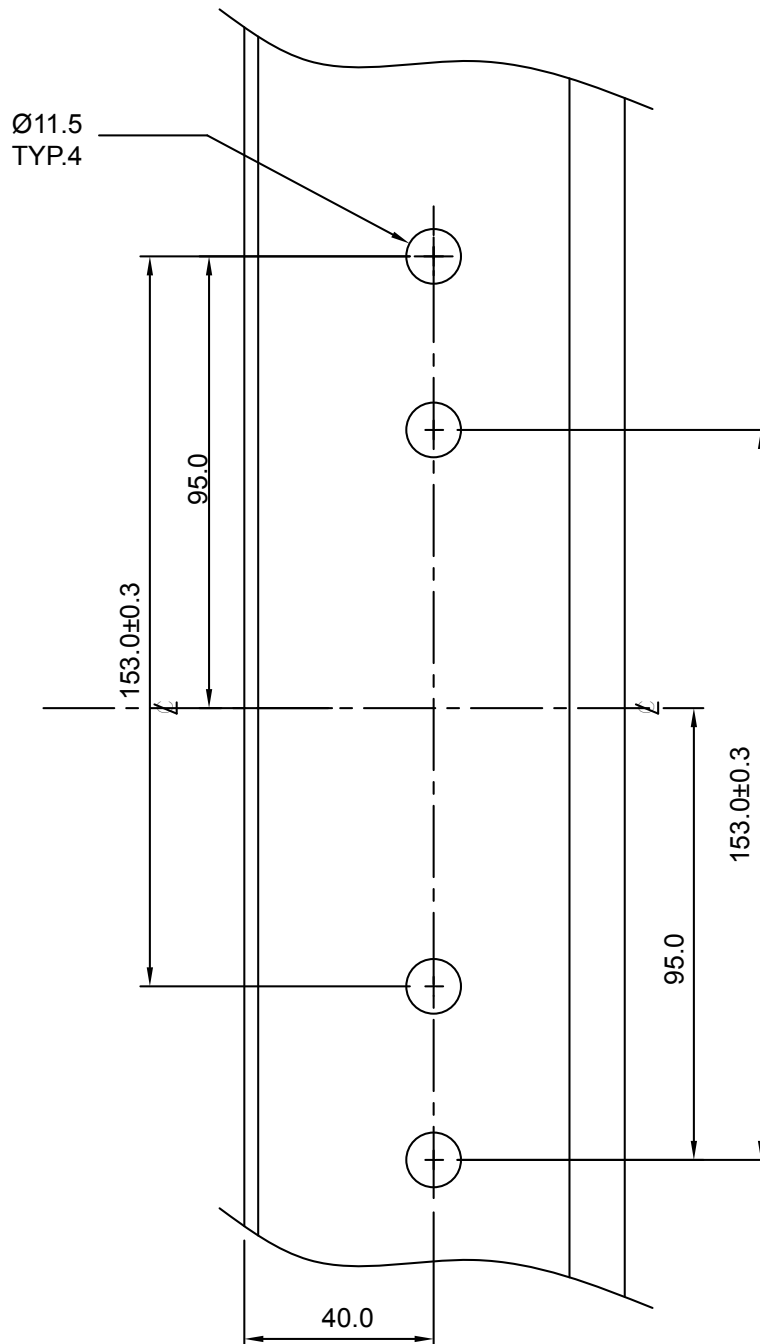




# In-Line Sliding Patio Door Blank Handle Routing

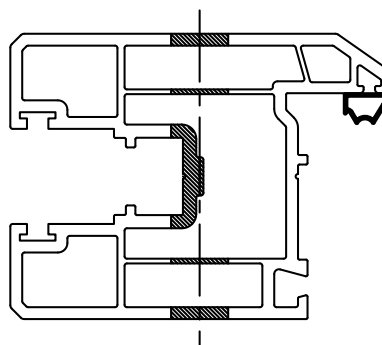
SECTION	DATE	ISS	REFERENCE	PAGE
ROUTING	OCTOBER 2016	16	TM-0002	17

## Blank Handle Routing



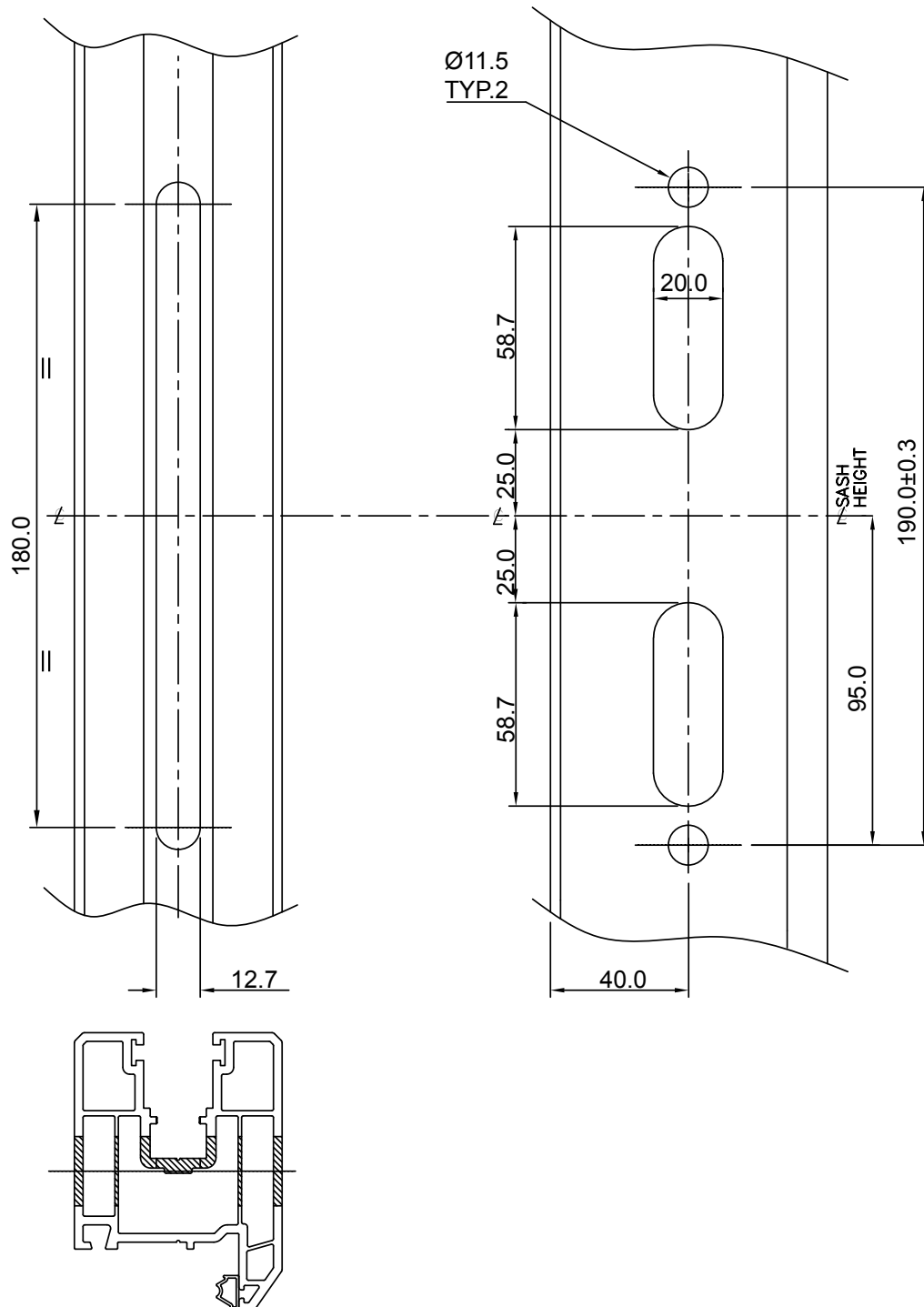
### Note:

1. Tolerance  $\pm 1$ mm unless otherwise stated.
2. Holes to take handle fixing boss has been sized to minimize movement of the handle in operation. Powder coated handles will fit tighter than other handles due to a build up of paint on the locating boss.



# In-Line Sliding Patio Door Lock Routing

SECTION	DATE	ISS	REFERENCE	PAGE
ROUTING	OCTOBER 2016	16	TM-0002	18



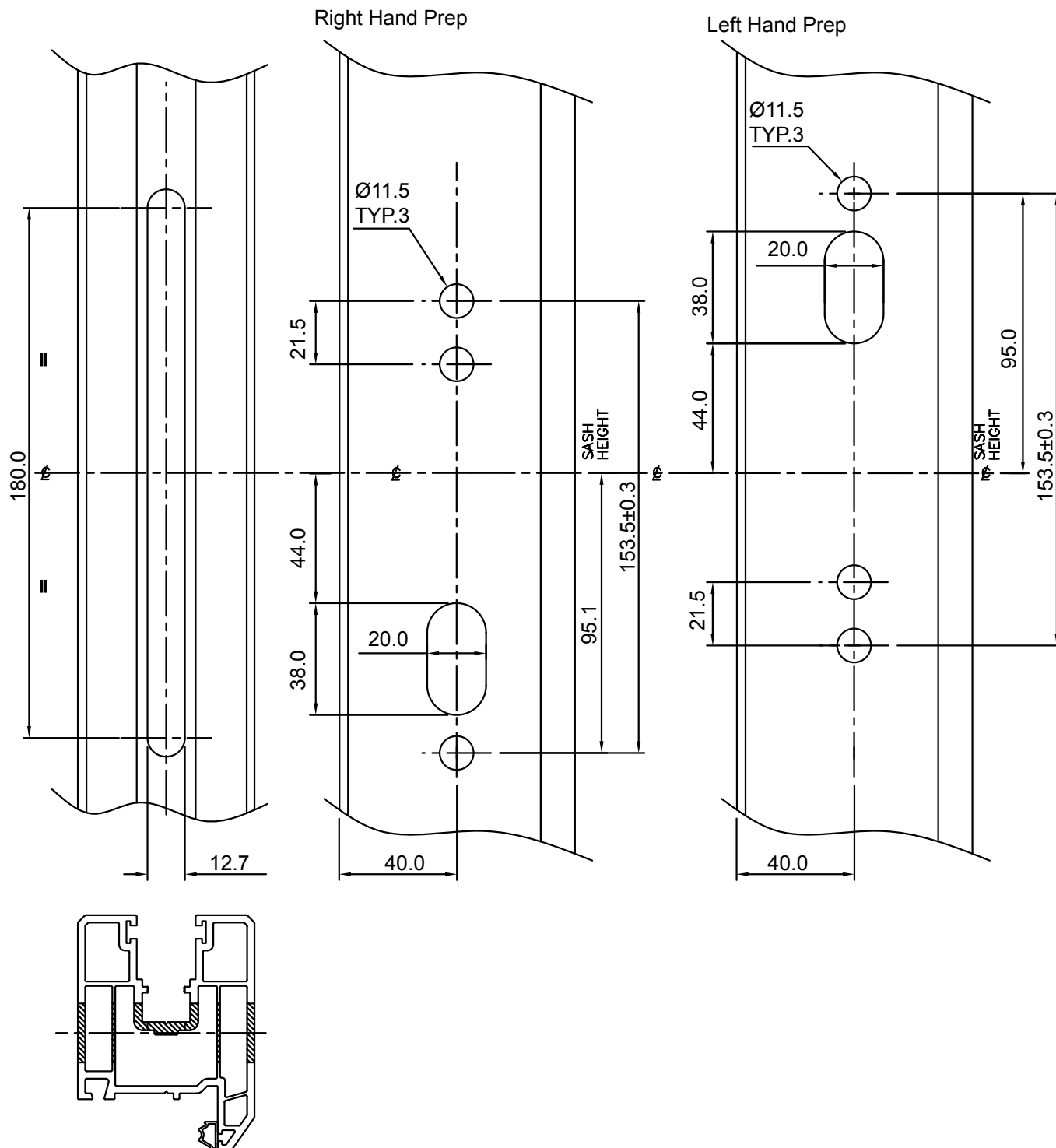
**Note:**

1. Tolerance  $\pm 1$ mm unless otherwise stated.
2. Holes to take handle fixing boss has been sized to minimize movement of the handle in operation. Powder coated handles will fit tighter than other handles due to a build up of paint on the locating boss.

# In-Line Sliding Patio Door Handed Lock Routing

SECTION	DATE	ISS	REFERENCE	PAGE
ROUTING	OCTOBER 2016	16	TM-0002	19

## Handed Lock Routing



### Note:

1. Tolerance  $\pm 1$ mm unless otherwise stated.
2. Holes to take handle fixing boss has been sized to minimize movement of the handle in operation. Powder coated handles will fit tighter than other handles due to a build up of paint on the locating boss.

# In-Line Sliding Patio Door Sash/Outer Frame Drainage

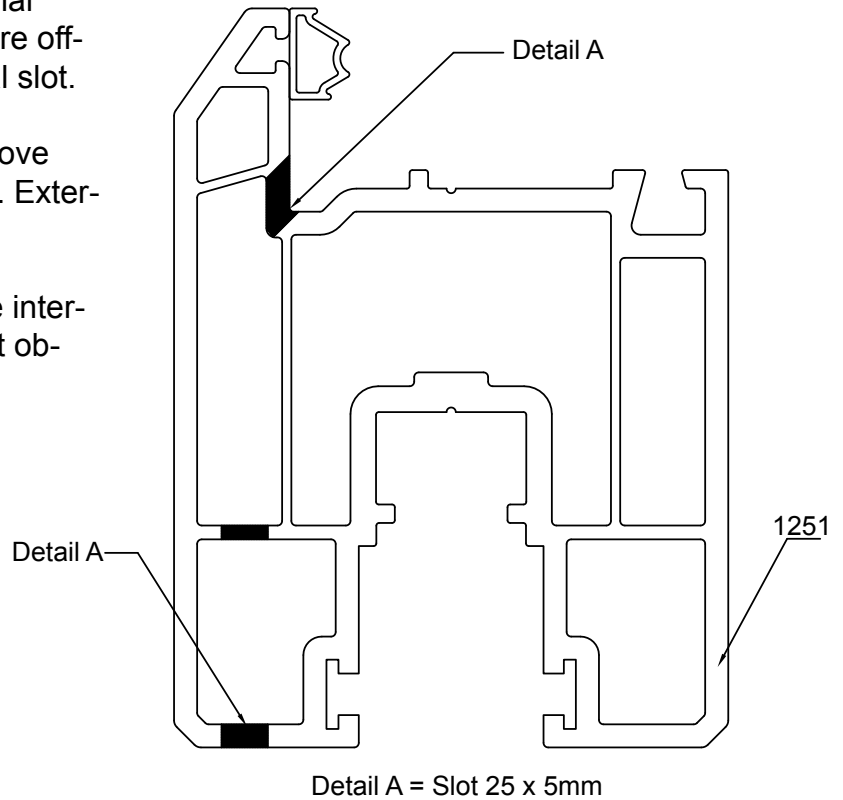
SECTION	DATE	ISS	REFERENCE	PAGE
DRAINAGE	OCTOBER 2016	16	TM-0002	20

## Sash Drainage

For a sash width of 785-1100mm 2 internal drain slots are required., External slots are off-set a minimum of 50mm from the internal slot.

For a sash width of 1101-1500mm as above plus one on the centre internal drain slot. External drain slot offset as above.

Position the internal drain as close to the internal sash corners as possible - But do not obstruct with glazing bridge.



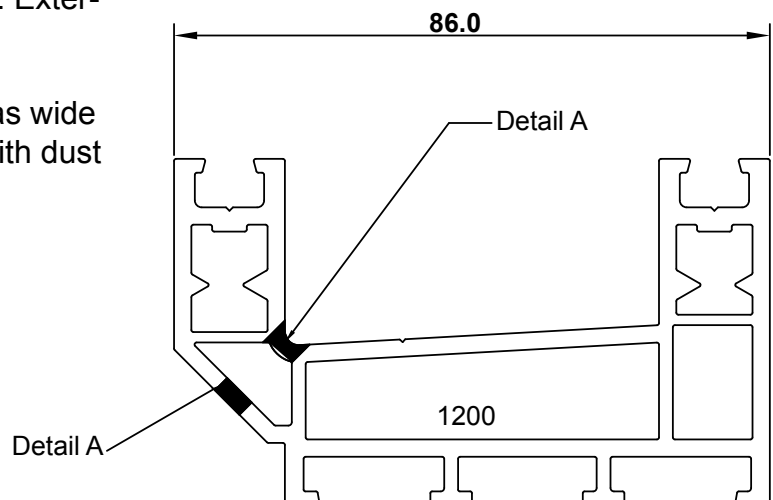
## Outer Frame Drainage

Each sash outer frame segment is to be drained separately.

For a sash width of 785-1100mm, 2 internal drain slots are required. External slots are off-set a minimum of 50mm from the internal slot.

For a sash width of 1101-1500mm as above plus one on the centre internal drain slot. External slot offset as above.

Internal drain slots are to be positioned as wide apart as possible - But do not obstruct with dust plug adjacent to interlock.

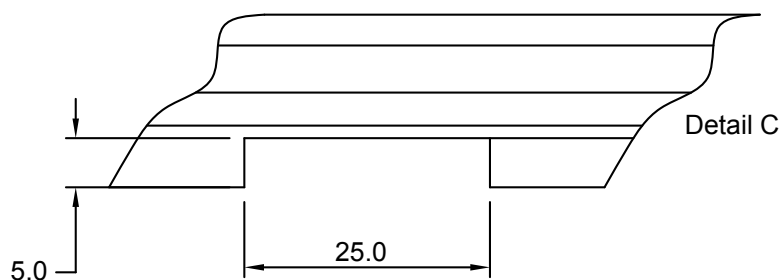
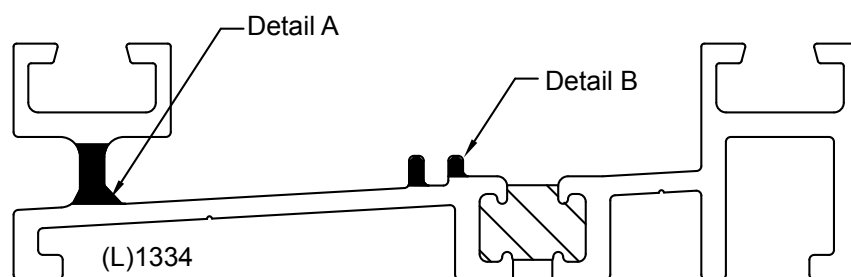


# In-Line Sliding Patio Door Low Threshold Drainage

SECTION	DATE	ISS	REFERENCE	PAGE
DRAINAGE	OCTOBER 2016	16	TM-0002	21

## Low Threshold (L) 1334

(L) 1334 see diagram and for all other detail as above for outframe drainage. Additionally remove feature (see detail B in diagram) at positions offset a minimum of 50mm from external drain slots. Threshold trim (I1335) also to be notched (detail C) at points coincident with detail B.



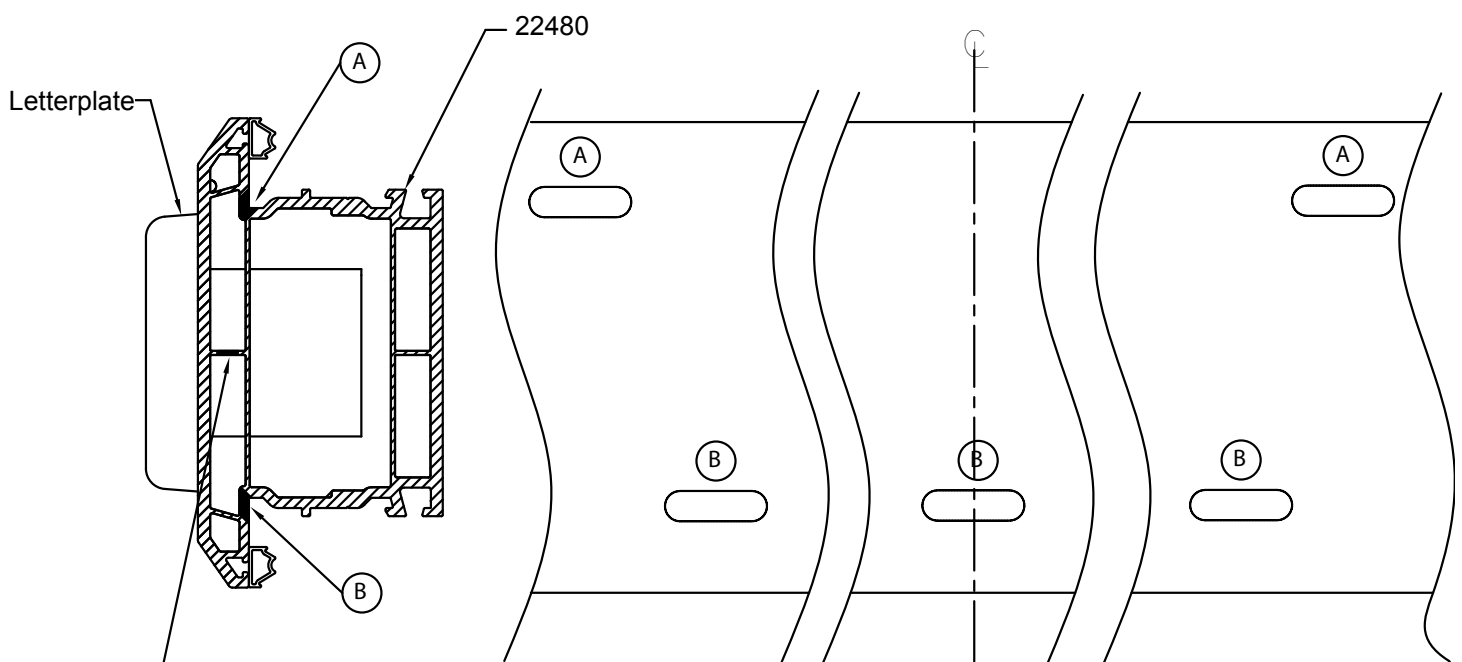
# In-Line Sliding Patio Door Midrail Drainage

SECTION	DATE	ISS	REFERENCE	PAGE
DRAINAGE	OCTOBER 2016	16	TM-0002	22

## Midrail Drainage

Note.

1. For use on midrails with letterplates only.
2. 2 internal/external drain slots, minimum 50 offset positioned close to end of midrail but not obstructed by glazing packers etc.
3. 1 External drain slot, on centre with letter plate routing as **(B)**.
4. For midrails with no letter plate omit on centre external drain slot.



Relieve inner web at the end of the mid-rail ensuring silicone sealant applied an assembly does not block drainage path

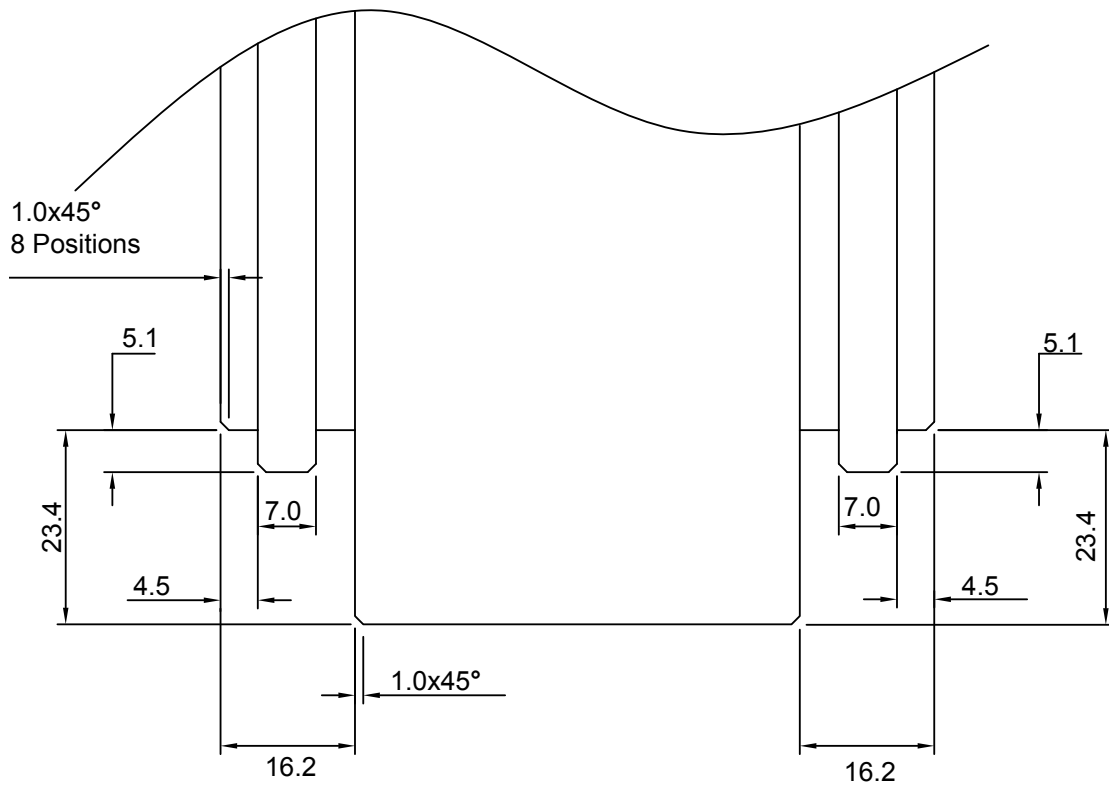
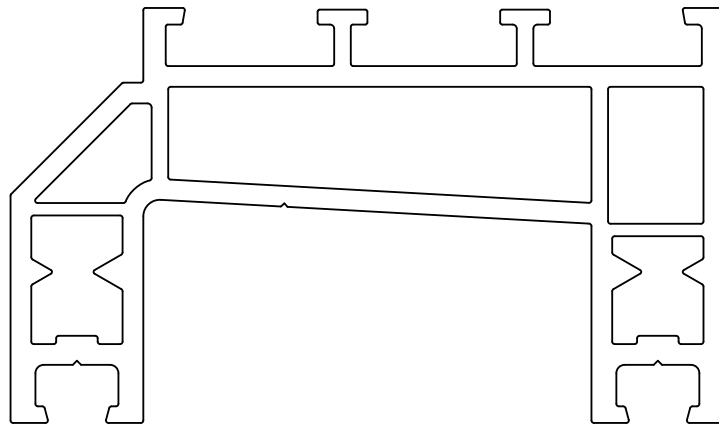
**(A)**= Slot 25x5

**(B)**= Slot 25x5

# In-Line Sliding Patio Door End Preparation 1200

SECTION	DATE	ISS	REFERENCE	PAGE
FRAME JOINTING & PREPARATION	OCTOBER 2016	16	TM-0002	23

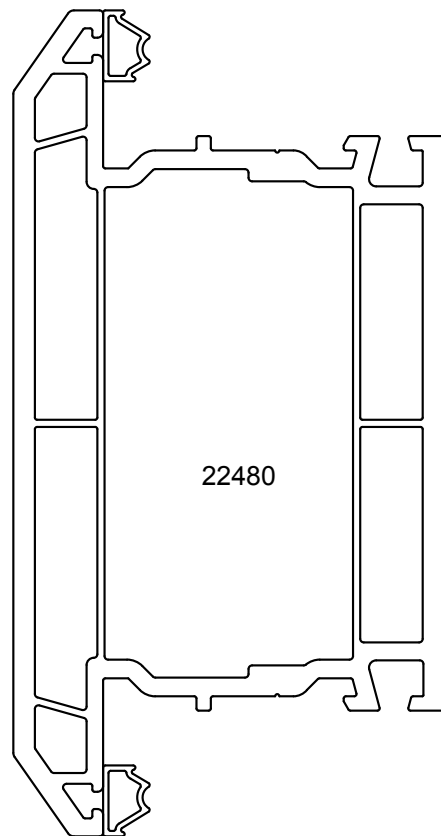
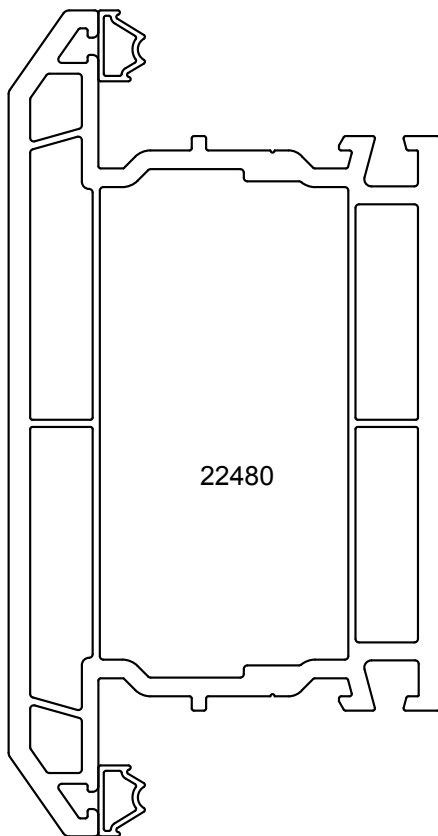
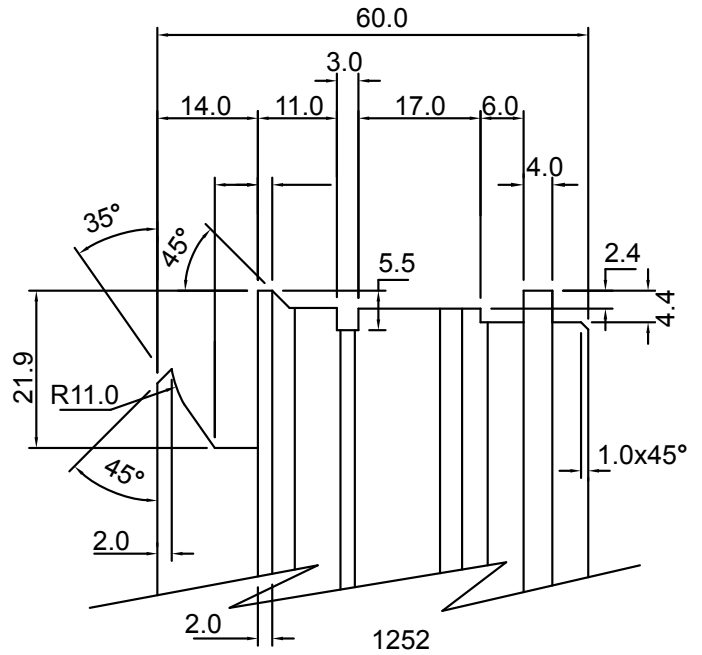
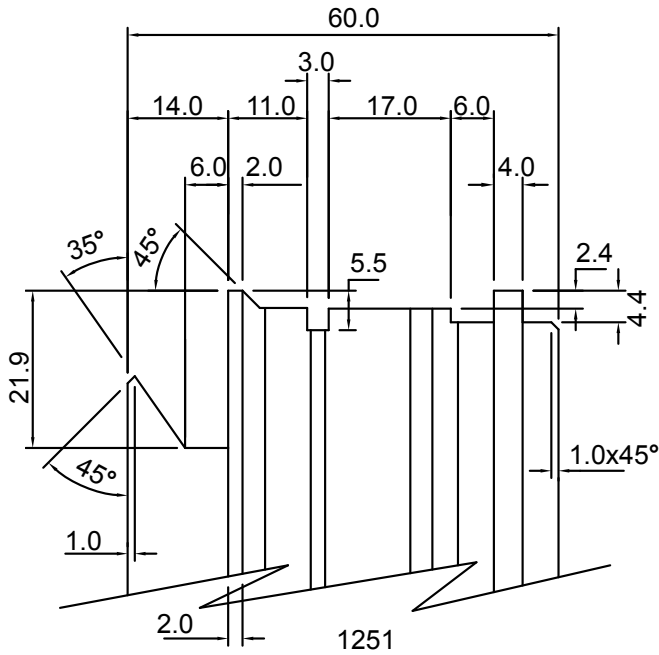
End Preparation 1200



# In-Line Sliding Patio Door End Preparation 22480 - 1251/1252

SECTION	DATE	ISS	REFERENCE	PAGE
ASSEMBLY SECTION DRAWINGS	OCTOBER 2016	16	TM-0002	24

End Preparation 22480 - 1251/1252

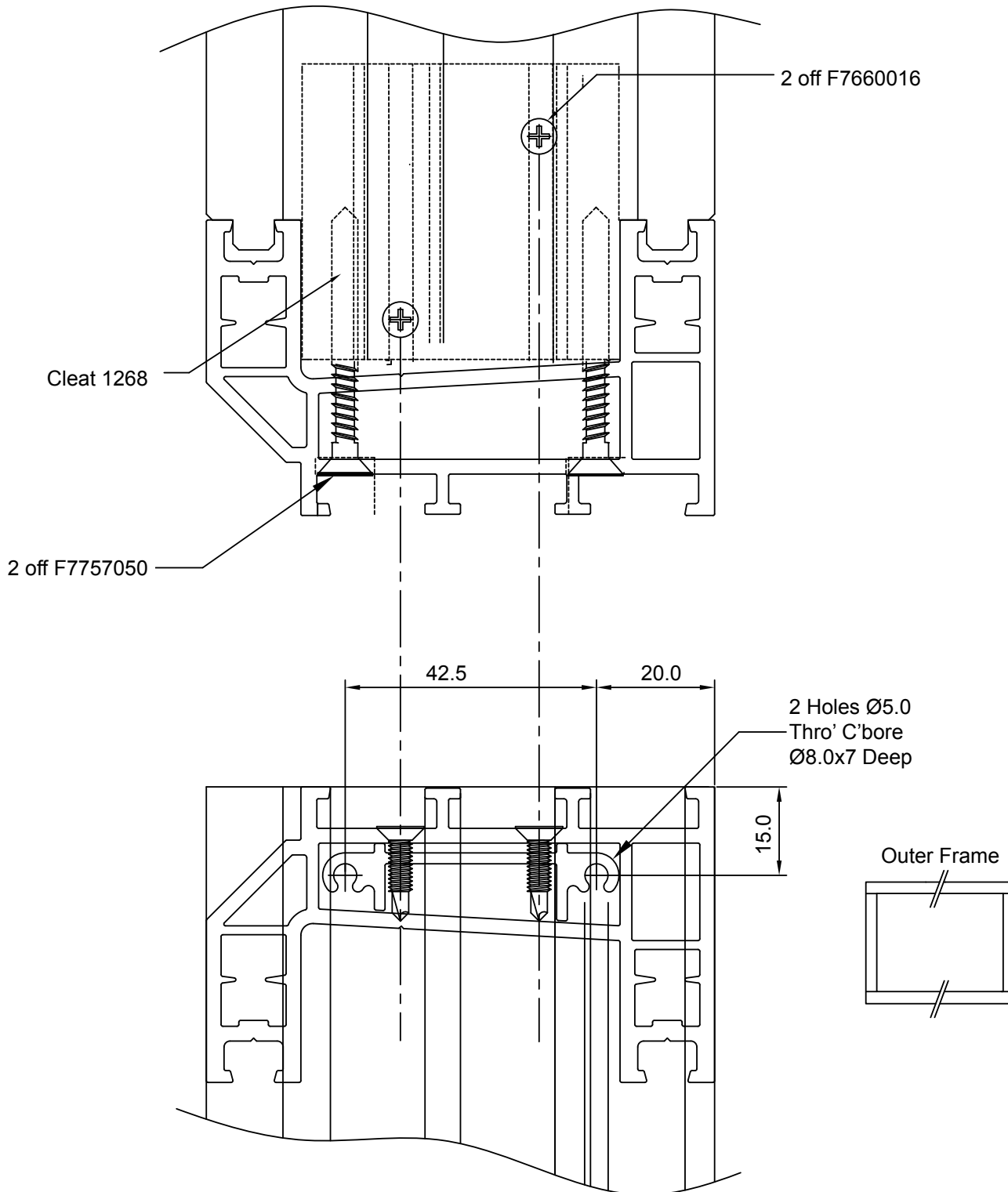




# In-Line Sliding Patio Door Jointing 1200

SECTION	DATE	ISS	REFERENCE	PAGE
FRAME JOINTING & PREPARATION	OCTOBER 2016	16	TM-0002	25

## Jointing 1200



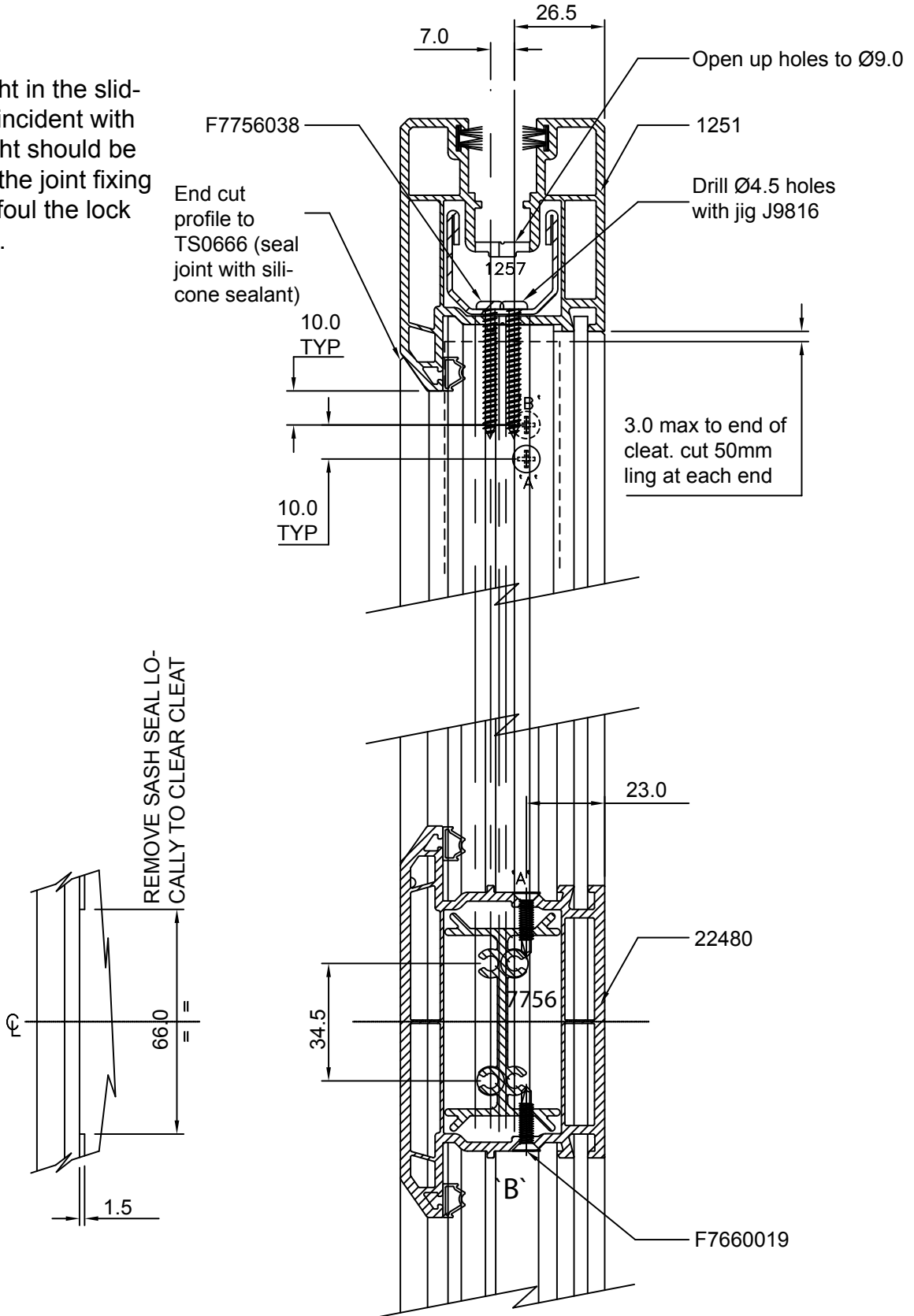
# In-Line Sliding Patio Door Jointing 22480/7756/1251

SECTION	DATE	ISS	REFERENCE	PAGE
FRAME JOINTING & PREPARATION	OCTOBER 2016	16	TM-0002	26

Jointing22480/7756/1251

Note.

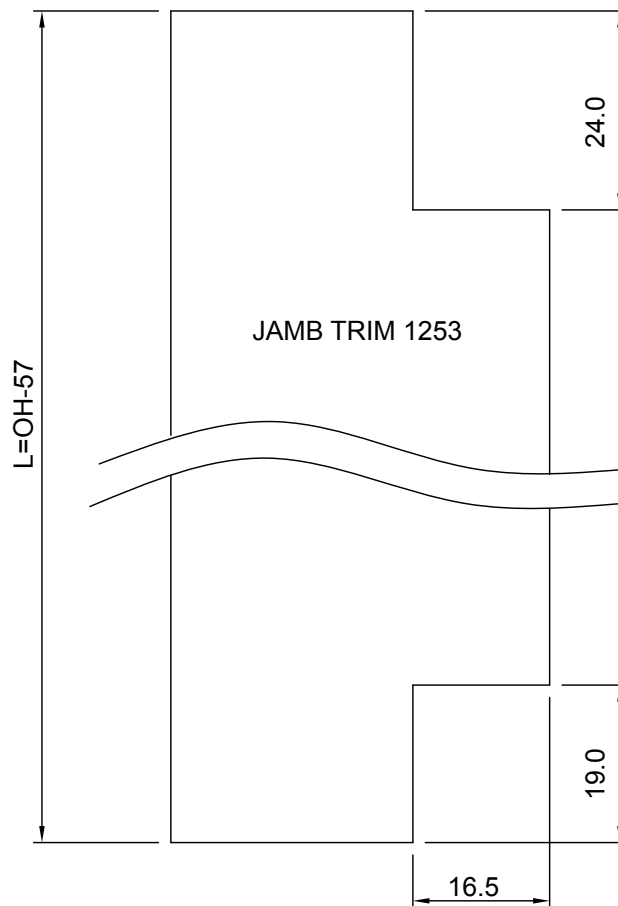
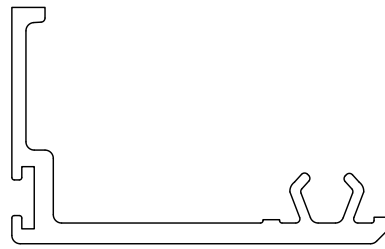
Midrail height in the sliding sash coincident with handle height should be avoided as the joint fixing screws will foul the lock centre case.



# In-Line Sliding Patio Door Jamb Trim Preparation

SECTION	DATE	ISS	REFERENCE	PAGE
FRAME JOINTING & PREPARATION	OCTOBER 2016	16	TM-0002	27

## Jamb Trim Preparation



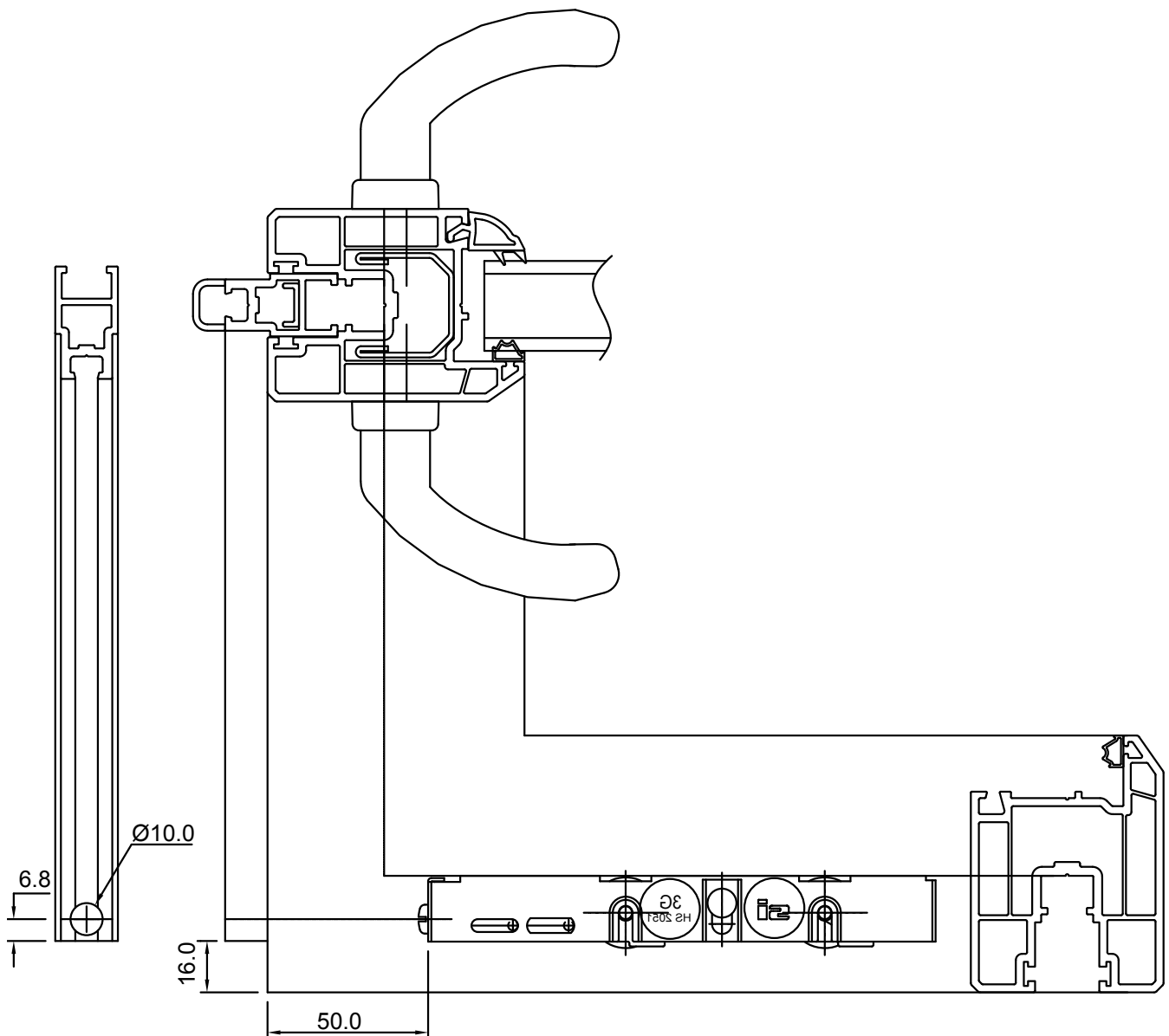
JAMB TRIM (1253) LTH = OH-52

# In-Line Sliding Patio Door 1256 Pre Drilling For Roller Adjustment

SECTION	DATE	ISS	REFERENCE	PAGE
ASSEMBLY	OCTOBER 2016	16	TM-0002	28

## 1256 Pre Drilling for Roller Adjustment

To allow slave sash roller adjustment without the need to remove the meeting style it is recommended that the 1256 be pre-drilled as shown below.



# In-Line Sliding Patio Door Sash Meeting Profile Fixing

SECTION	DATE	ISS	REFERENCE	PAGE
ASSEMBLY	OCTOBER 2016	16	TM-0002	29

## Patio Sash Meeting Profile Fixing

### STEP 1

Fit and fix aluminium reinforcement 1266 with screw

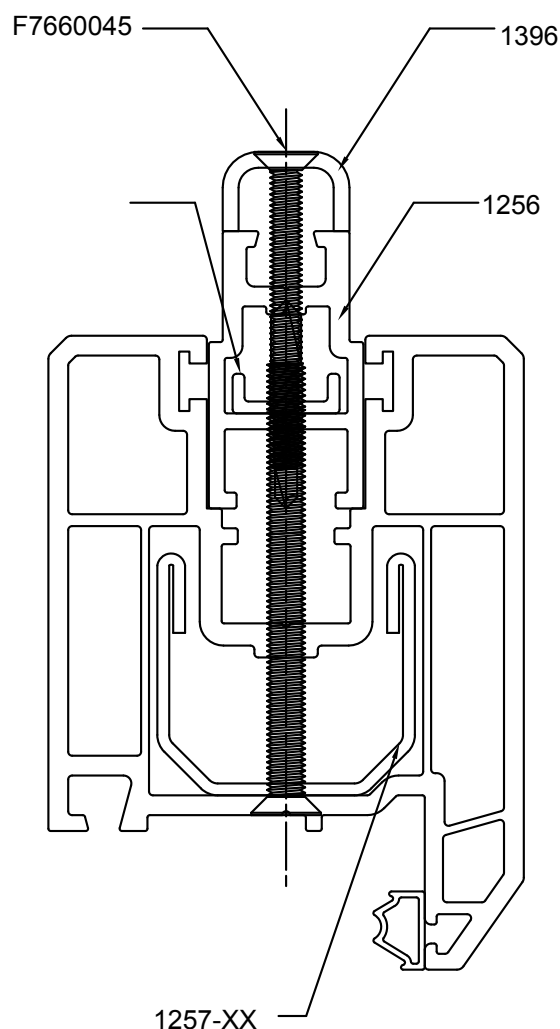
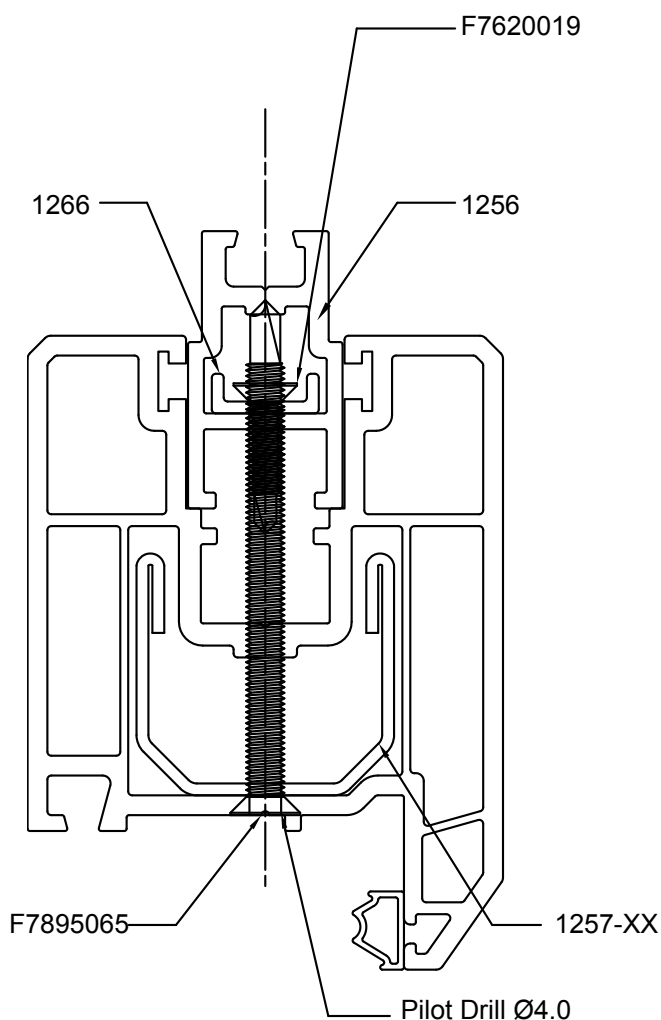
F7620019, drilling through 1256 so that head of screw clamps 1266. (Ensure that keep rail covers holes).

Pilot drill through sash 1251 and steel 1257 using  $\text{Ø}4.0\text{mm}$  drill.

Then fix with screw F7895065 as shown.

### STEP 2

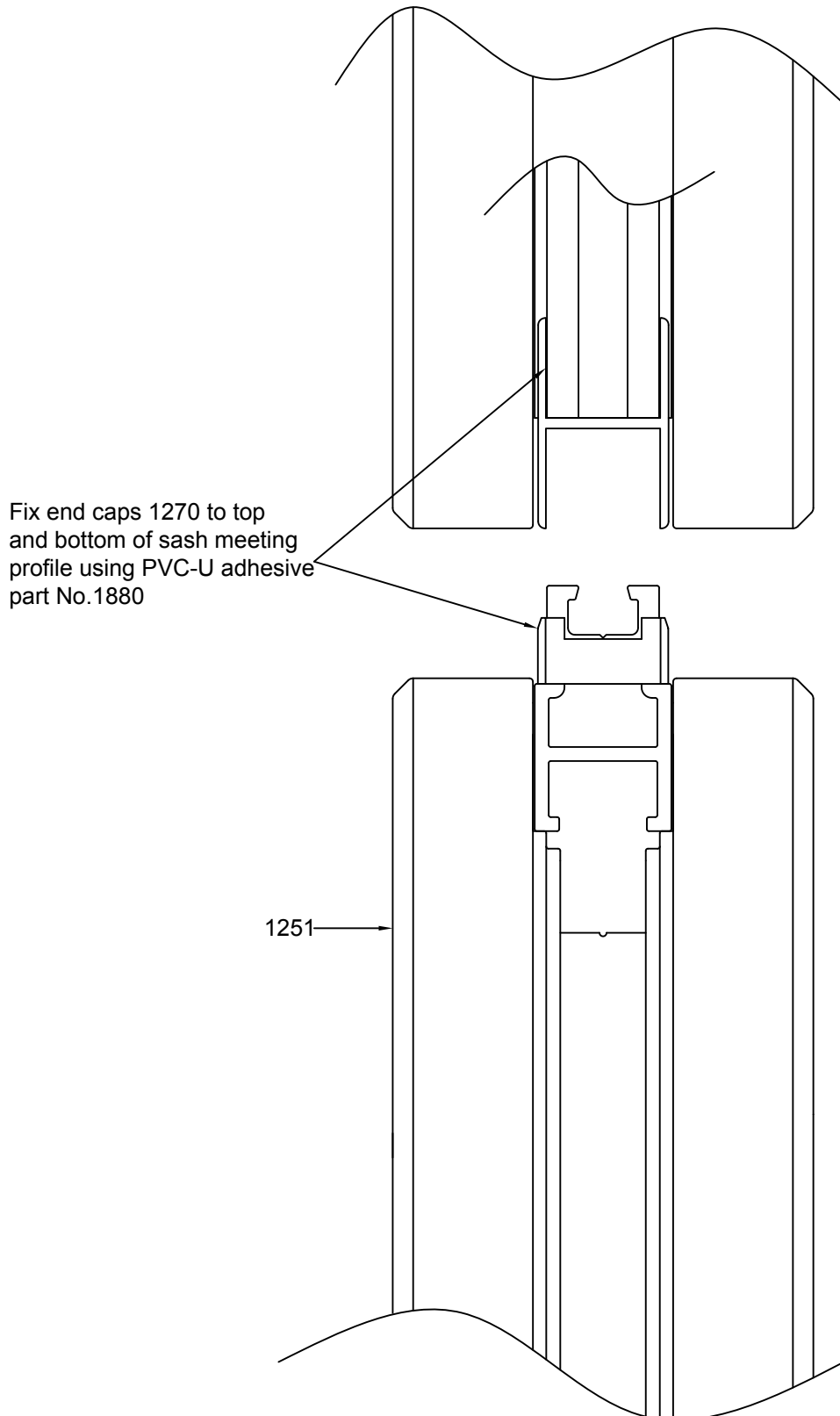
Fix keep 1396 using screw F7660045.



# In-Line Sliding Patio Door Sash Meeting Profile End Cap Fixing

SECTION	DATE	ISS	REFERENCE	PAGE
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## Sash Meeting Profile End Cap Fixing

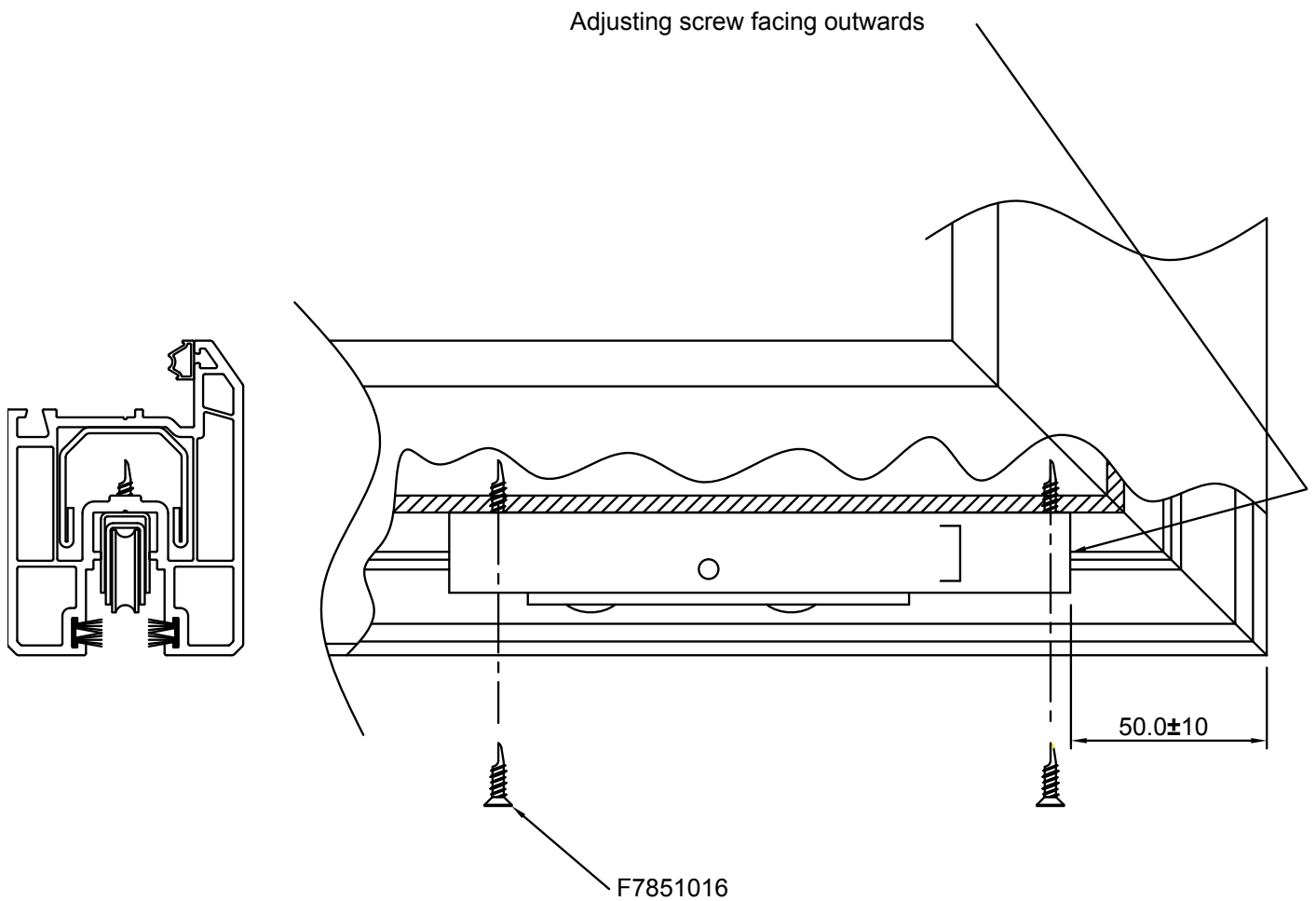


# In-Line Sliding Patio Door Roller Fixing

SECTION	DATE	ISS	REFERENCE	PAGE
ASSEMBLY	OCTOBER 2016	16	TM-0002	31

## Roller Fixing

2 rollers part no. 1286 positioned as shown below from each end of the sliding sash and fixed with screws part no. F7851016.

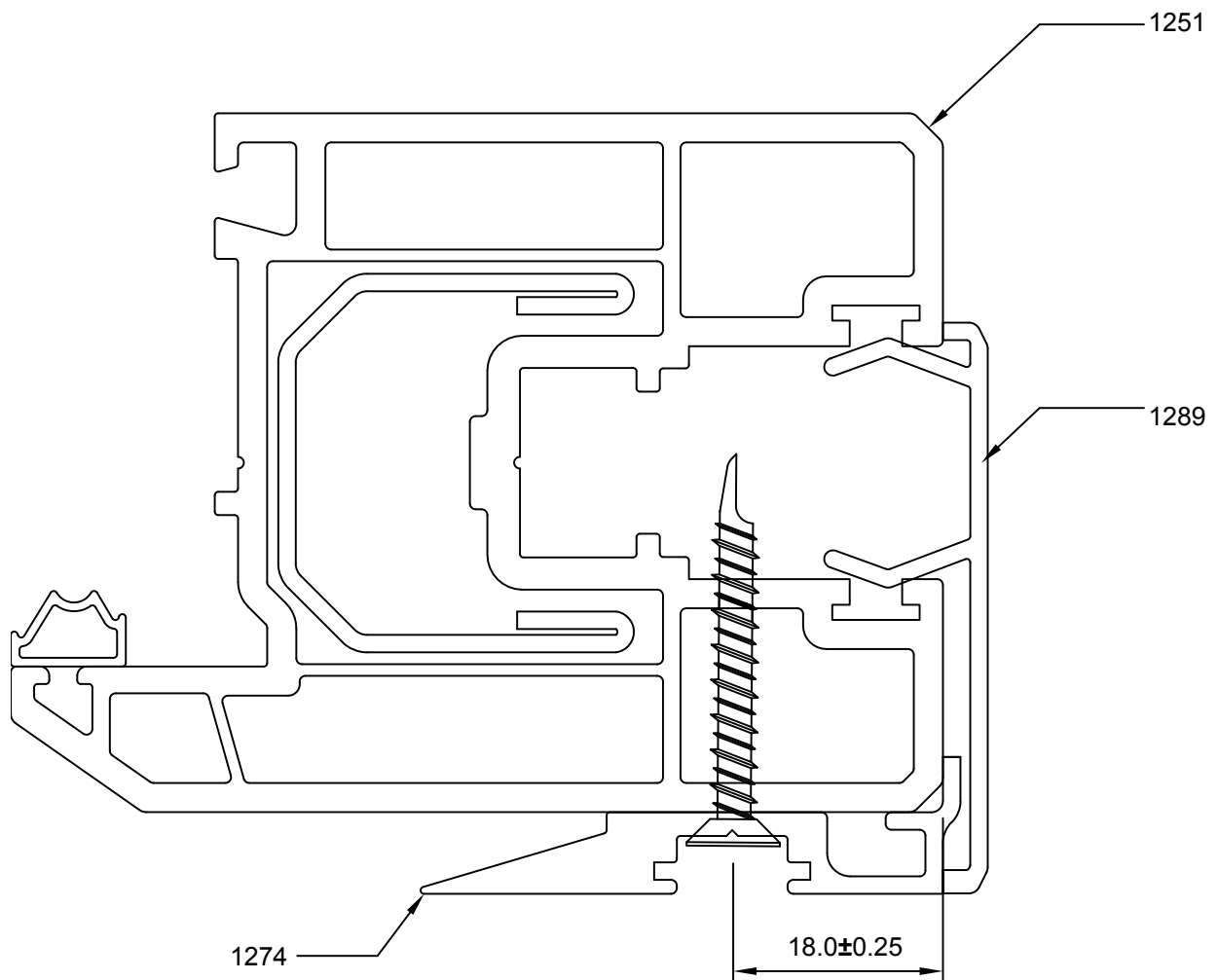


# In-Line Sliding Patio Door Interlock Positioning

SECTION	DATE	ISS	REFERENCE	PAGE
ASSEMBLY SECTION DRAWINGS	OCTOBER 2016	16	TM-0002	32

## Interlock Positioning

Fix the interlock in position shown using screws part no. F7851030, position 100mm in from each end and equi-spaced over the length of the interlock with a max. 300mm pitch. Pre-drill interlock to a  $\text{Ø}5\text{mm}$ .





# In-Line Sliding Patio Door Shootbolt Fixing

SECTION	DATE	ISS	REFERENCE	PAGE
ASSEMBLY	OCTOBER 2016	16	TM-0002	33

## Shootbolt Fitting Instructions:

1. Fit lock 1395 to sash 1251. (with hooks retracted)

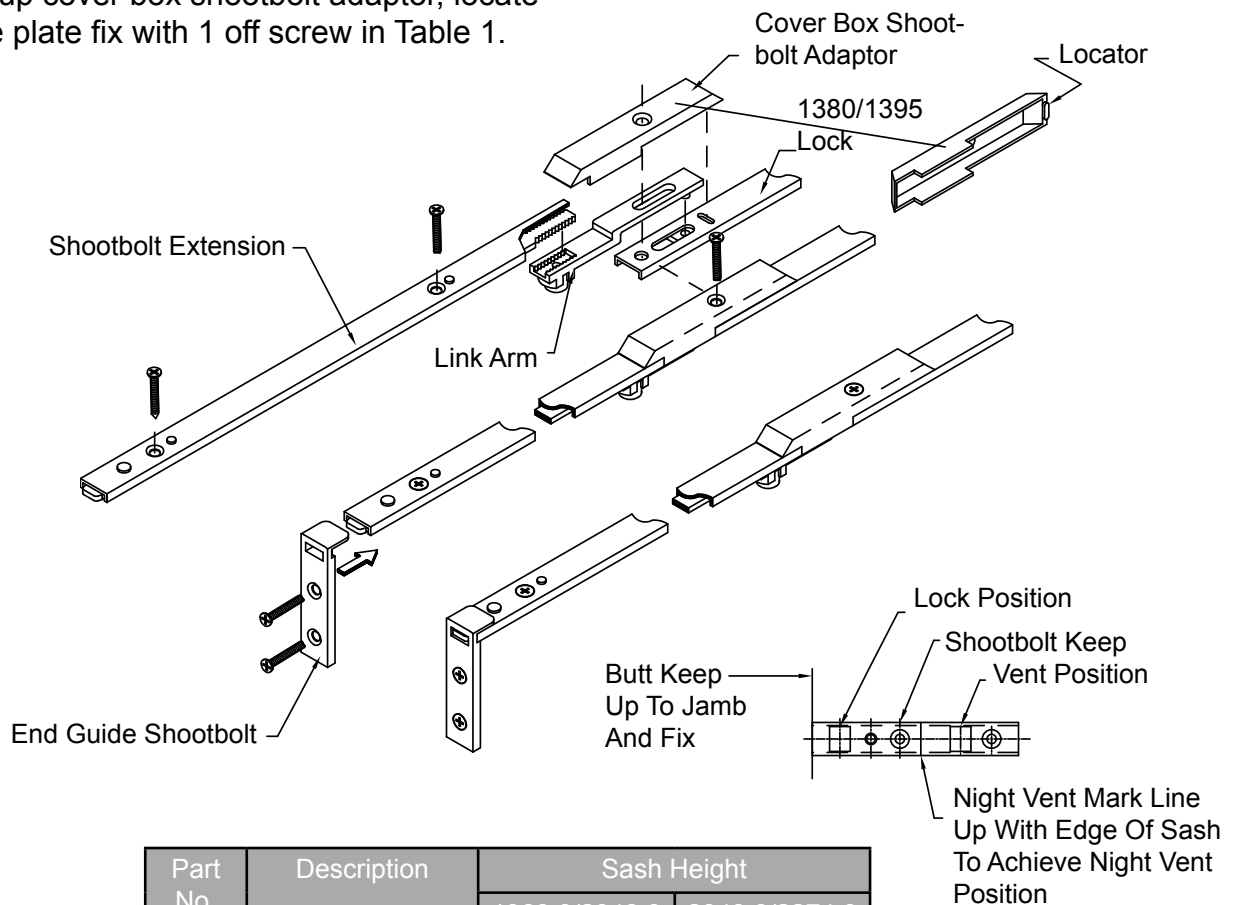
2. Fit link arm to top of lock face plate, locate peg in face plate.

3. With lock in unlocked position offer up appropriate shoot extension to the link arm, mark and square cut face plate and rod. fix with screws in Table 1.

4. Offer up cover box shootbolt adaptor, locate into face plate fix with 1 off screw in Table 1.

5. Push the end guide shootbolt over the end of the shoot extension. fix with 2 off screws in Table 1.

6. For 2 pane & 3 pane end slider butt shootbolt keep up to outer frame jamb and fix with 2 off screws in Table 1. For 3 & 4 pane centre sliders butt shootbolt keep up to sash meeting profile and fix with 2 off screws in Table 1.



Part No.	Description	Sash Height	
		1960.0/2048.0	2049.0/2274.0
P1390	Shootbolt Pack 1	1	
P1391	Shootbolt Pack 2		1

Table 1

F7851030	4.3x030 CSK PZ YD SP - Shootbolt/Sash
F7851038	4.3x040 CSK PZ YD SP - Shootbolt Keep/Outer

# In-Line Sliding Patio Door Anti-Lift Bracket

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ASSEMBLY	OCTOBER 2016	16	TM-0002	34

## In-Line Sliding Patio Door Anti-Lift Bracket

The security of the In-Line Sliding Patio Doors has now been enhanced with the introduction of Anti-Lift Bracket (1350). This maximises security by minimising the clearance at the top of the sliding sash and reducing the risk of it being lifted off the bottom rollers.

The bracket is factory fitted in the euro-groove in a 'retracted' state on sides opposing the lock for all sliding panes. It requires final adjustment to locate into the outer frame (head of door) to reduce clearance but allowing for expansion etc. throughout the life of the door.

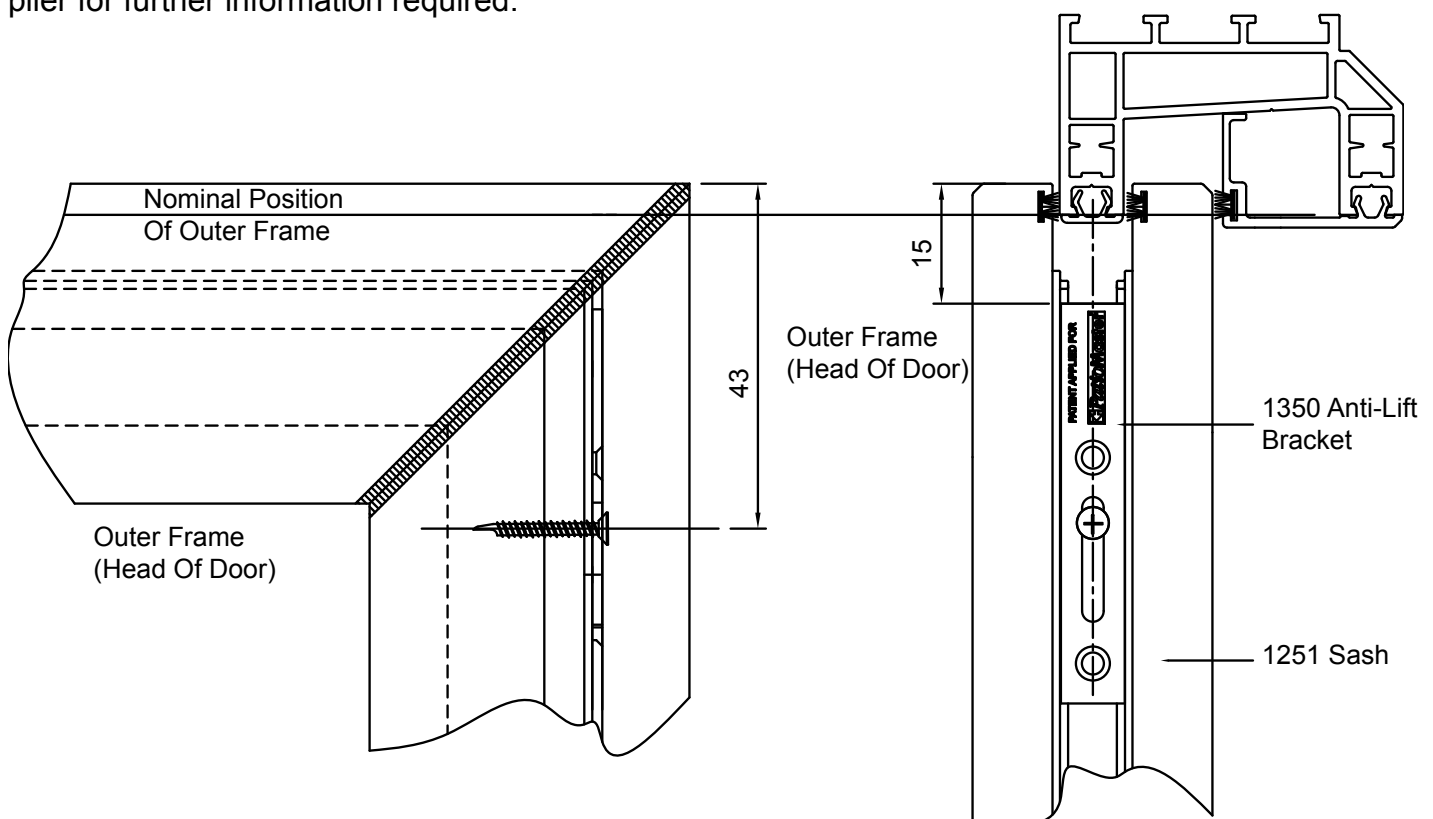
Secure position with two screws (supplied). This is done on-site in situ after installation of the sliding door.

Contact your In-Line Sliding Patio Door Supplier for further information required.

## Factory Fitted Position of The Anti-Lift Bracket

Note: Bracket is fixed temporarily with one screw F7851030.

1. Anti-lift bracket to be factory fitted and adjusted on site.
2. To be fitted on side opposing lock on all sliding panes.
3. Two screws per bracket F7851030 to be included in door pack for final fix.



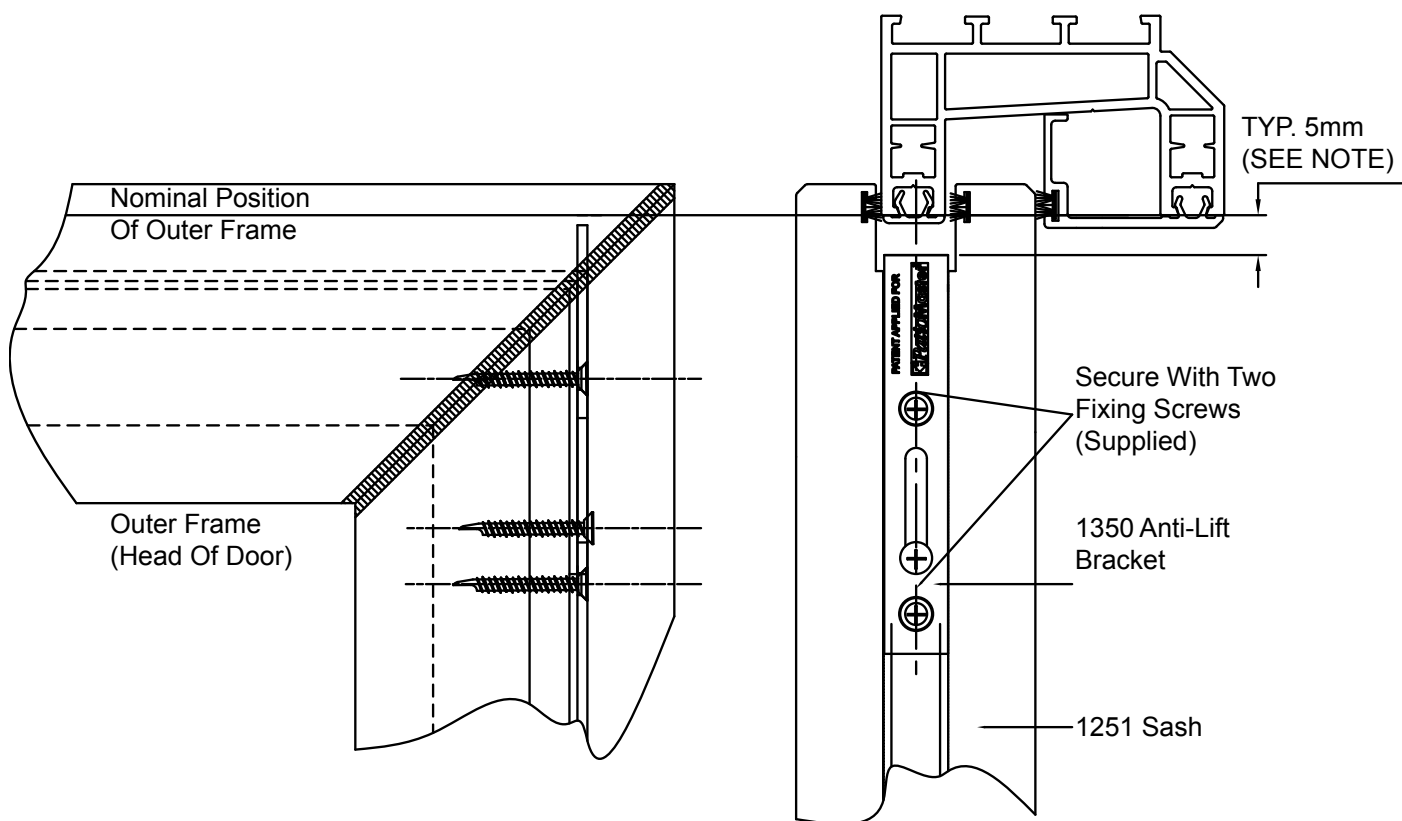
# In-Line Sliding Patio Door Anti-Lift Bracket

SECTION	DATE	ISS	REFERENCE	PAGE
ASSEMBLY	OCTOBER 2016	16	TM-0002	35

## In-Line Sliding Patio Door Anti-Lift Bracket Continued

### Position of The Anti-Lift Bracket On The Door After installation

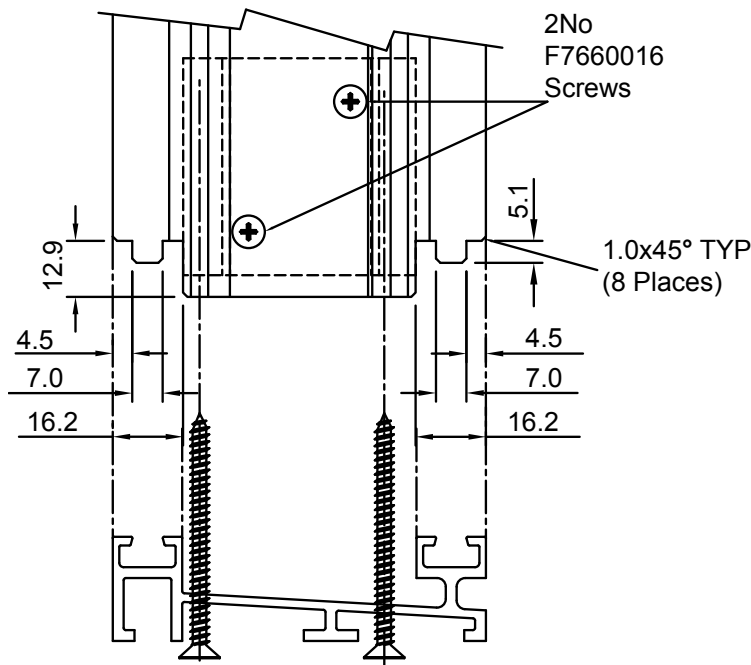
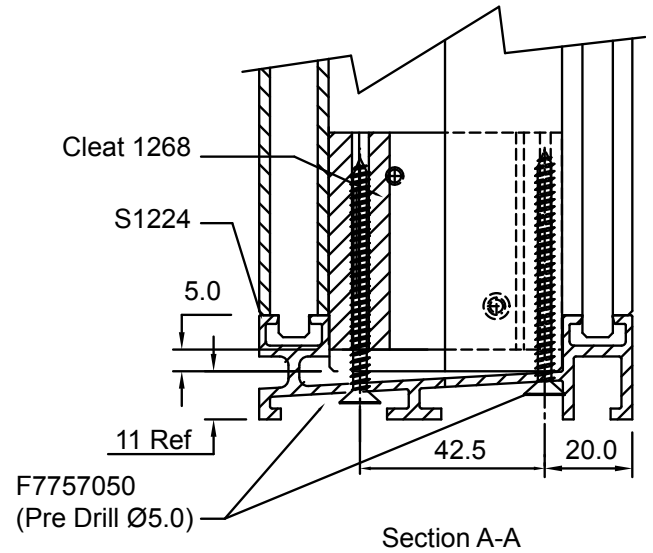
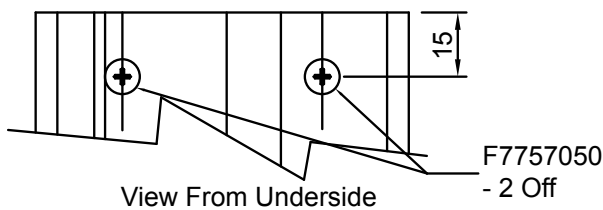
Note: Two additional fixing screws used for final fix F7851030 adjust anti-lift bracket after installation to reduce clearance allowing for expansion etc. throughout life of door.



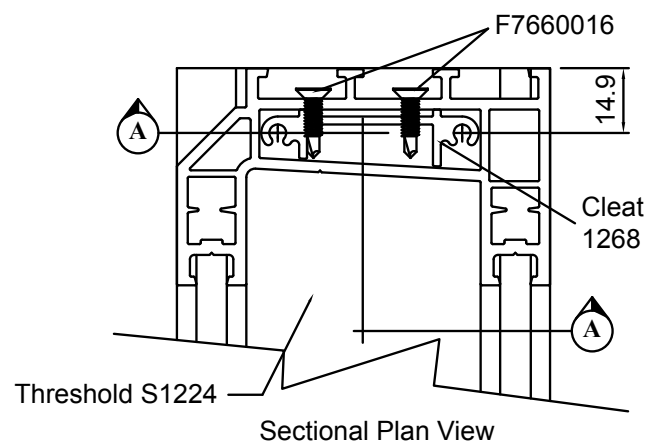
# In-Line Sliding Patio Door Low Threshold Assembly

SECTION	DATE	ISS	REFERENCE	PAGE
ASSEMBLY	OCTOBER 2016	16	TM-0002	36

## Low Threshold Assembly



Exploded End View Showing End Prep Jambs



### Note:

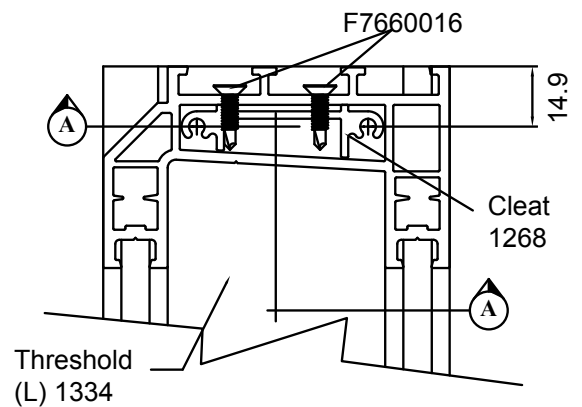
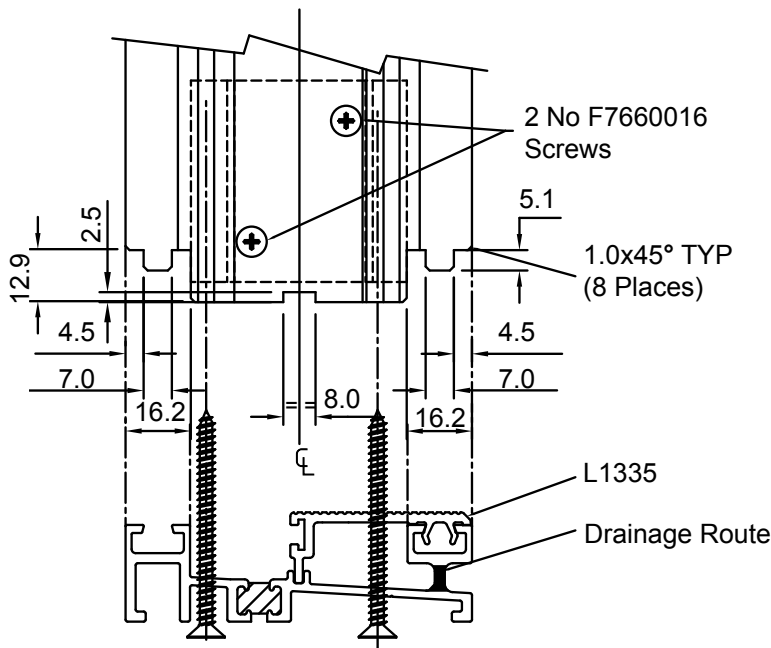
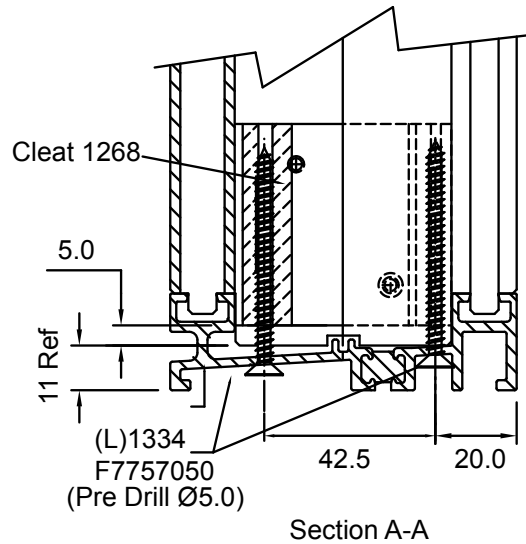
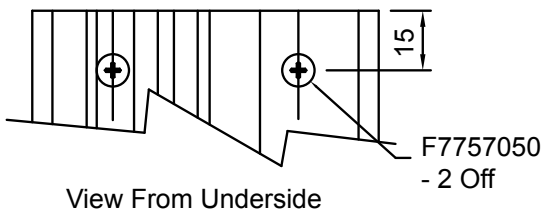
The low threshold is designed primarily for internal use.  
Fix cleat 1268, seal joint and tighten up.  
Do not fit threshold 1263 and drainage trim 1255.

# In-Line Sliding Patio Door Thermally Broken Low Threshold Assembly



SECTION	DATE	ISS	REFERENCE	PAGE
THRESHOLD	OCTOBER 2016	16	TM-0002	37

## Thermally Broken Low Threshold Assembly



### Note:

The T/B low threshold is designed primarily for use in sheltered external applications.

Fix cleat 1278, seal joint and tighten up.

Fit threshold trim L1335.

Do not fit drainage trim 1255.

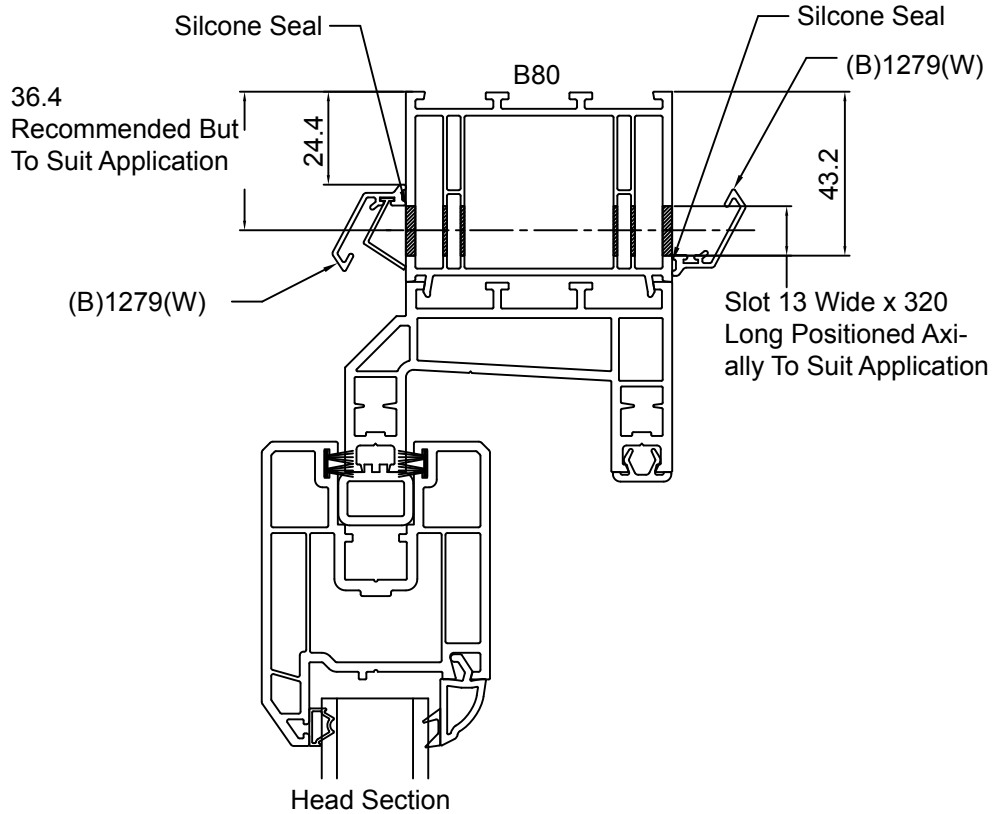
Dimensions in MM  
All dimensions are nominal.  
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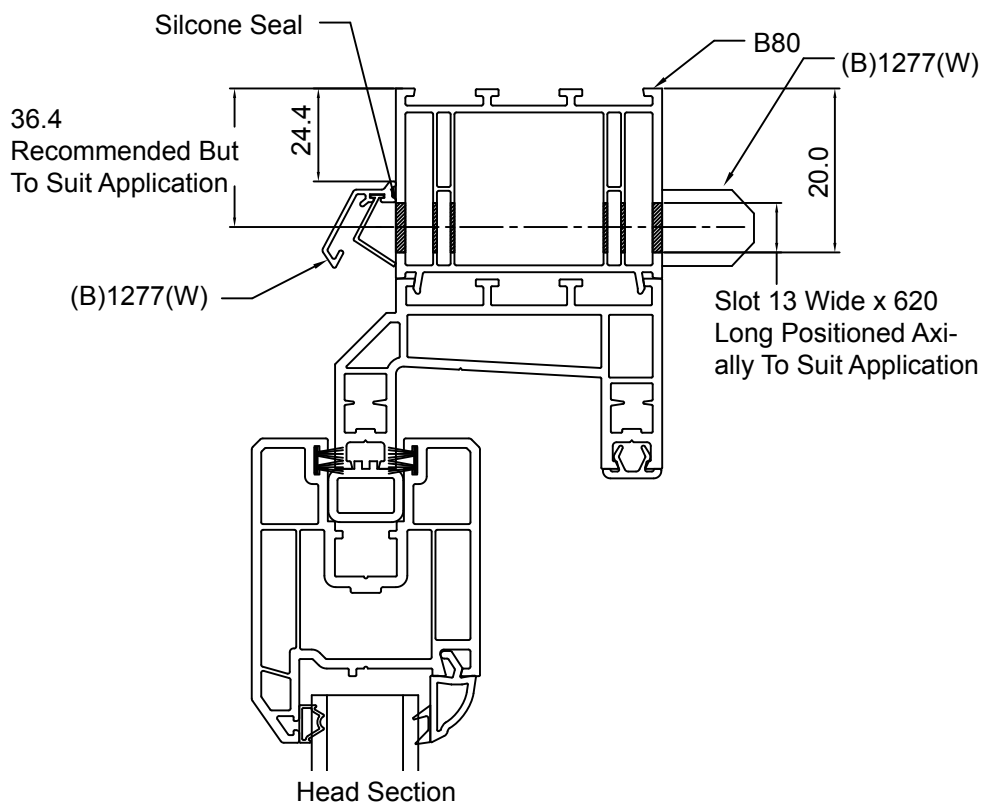
# In-Line Sliding Patio Door Frame Venting

SECTION	DATE	ISS	REFERENCE	PAGE
VENTING	OCTOBER 2016	16	TM-0002	38

## Frame Gas Venting



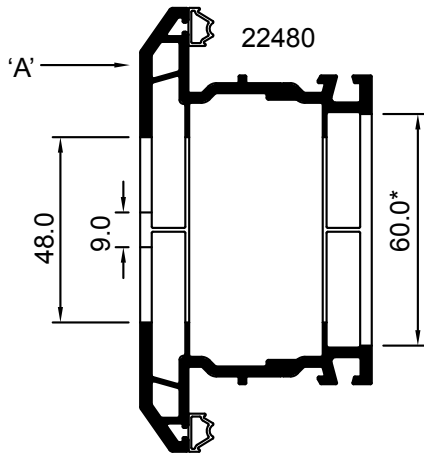
## Frame Venting



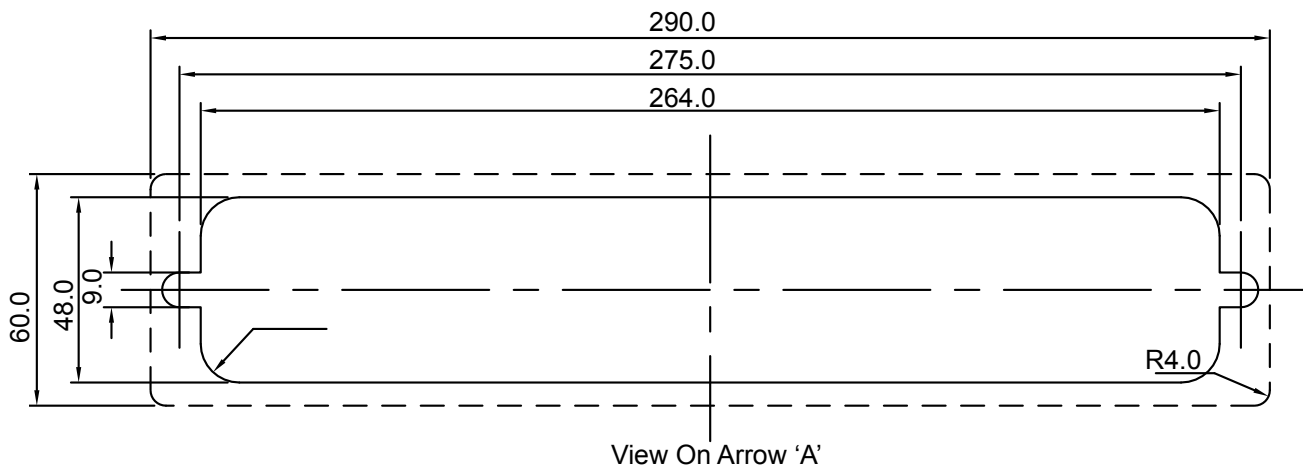
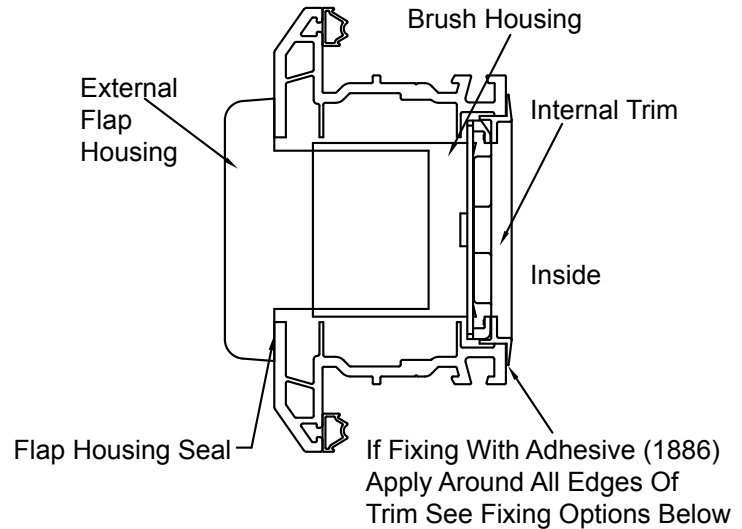
# In-Line Sliding Patio Door Letterplate Fixing - 1375 - 12"

SECTION	DATE	ISS	REFERENCE	PAGE
ASSEMBLY SECTION DRAWINGS	OCTOBER 2016	16	TM-0002	39

## Routing Detail - 1375



\*Ensure That This Dimension Breaks Through Outer Wall Only



### ASSEMBLY

1. Prepare the Midrail as per routing detail.
2. Insert brush housing into internal aperture.
3. Insert flap housing into external aperture and interlock with brush housing (ensure seal is in position as (shown)).
4. Ensure both housings are sitting flush against the profile.
5. Hold internal trim in place to check alignment.
6. Once visual alignment is complete, fix the assembly using one of the options below.

### Fixing - Option 1

7. Secure the external flap/brush housing from the inside with two screws (supplied with kit) then apply adhesive (1886) around edges of internal trim and place in position.

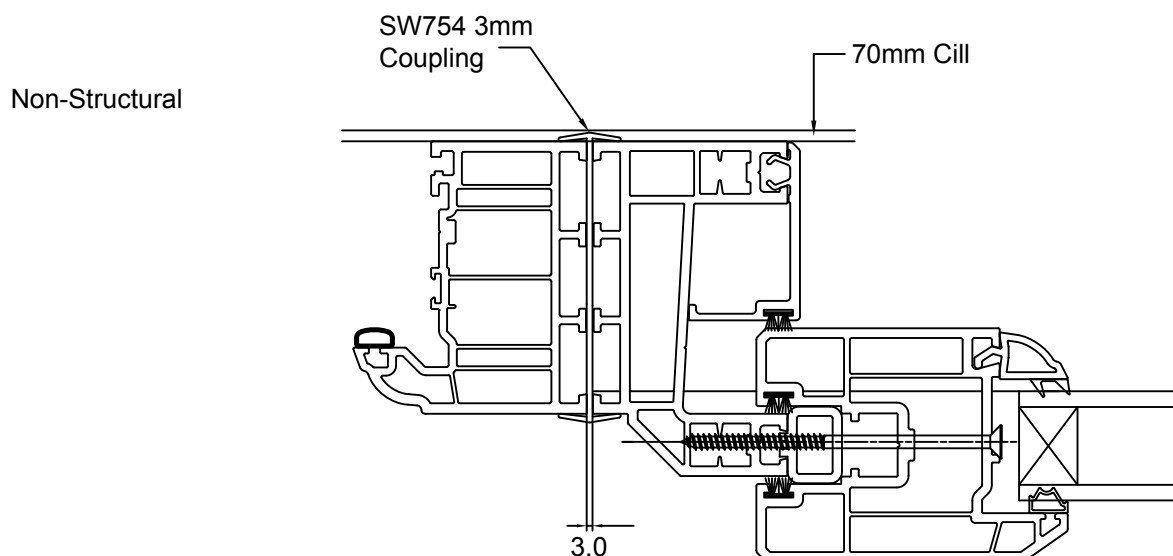
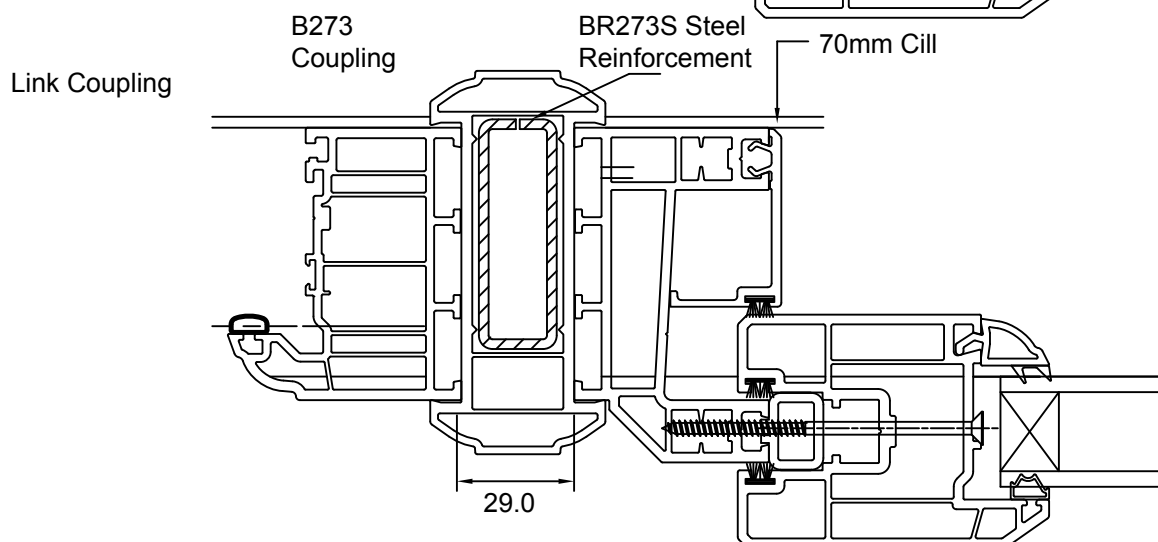
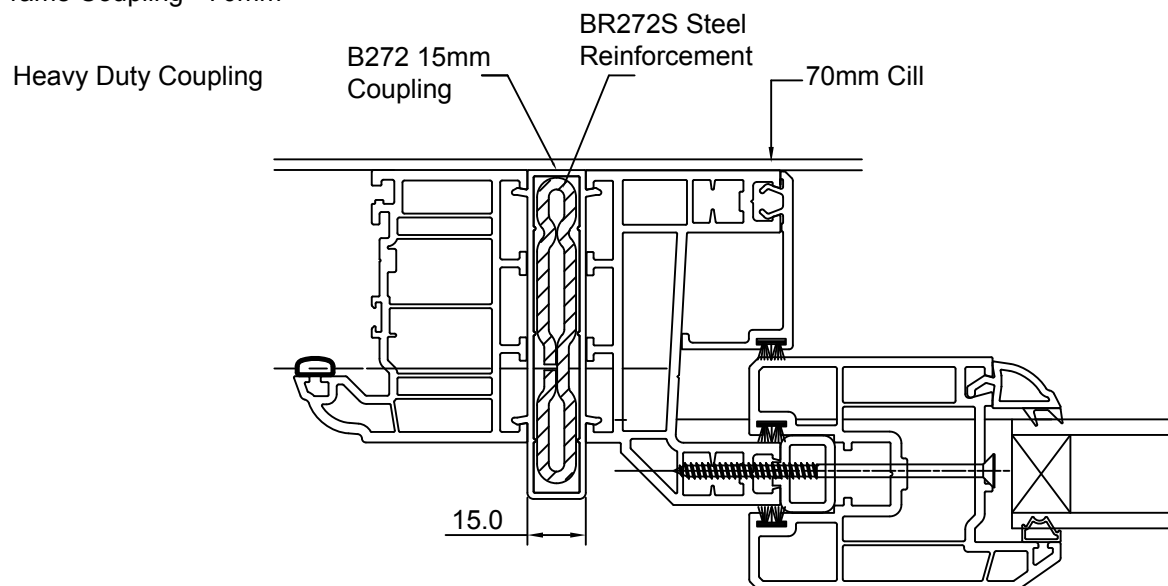
### Fixing - Option 2

8. Secure the external flap/brush housing/internal trim from the inside using two screws (supplied with kit) into the bosses of the flap housing. Take care not to overtighten the screws. Note: Break through the blind holes on the internal trim to access screw fixing.

# In-Line Sliding Patio Door Frame Coupling - 70mm

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FRAME COUPLING	OCTOBER 2016	16	TM-0002	40

Frame Coupling - 70mm



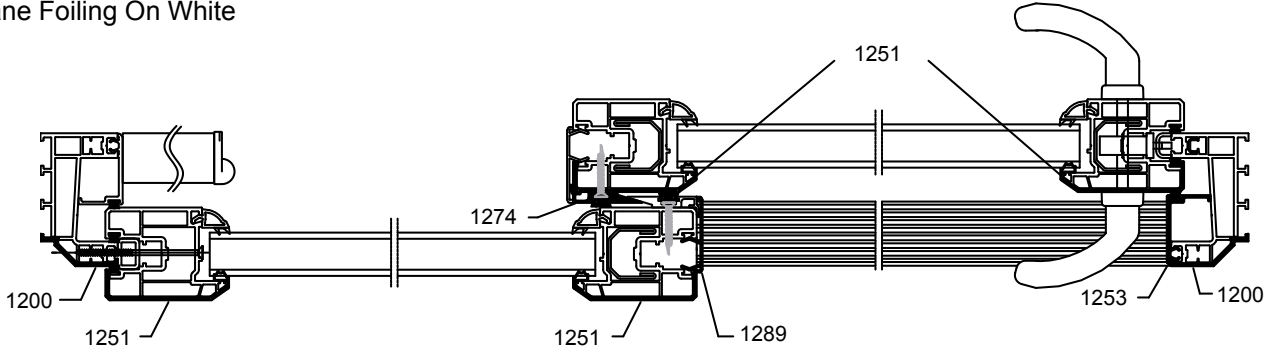


# In-Line Sliding Patio Door Foiling Position

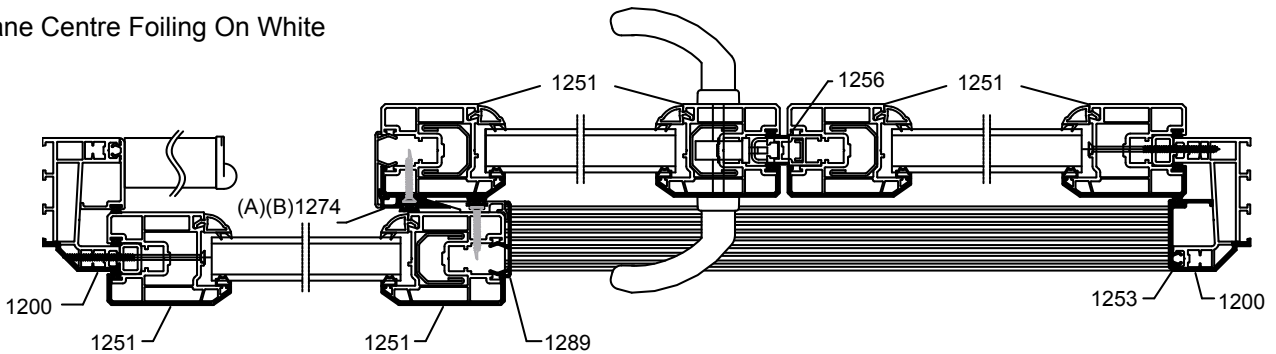
SECTION	DATE	ISS	REFERENCE	PAGE
FOILING POSITION	OCTOBER 2016	16	TM-0002	41

Parts identified are required to be coloured to suit the external colour. All other parts will be white.

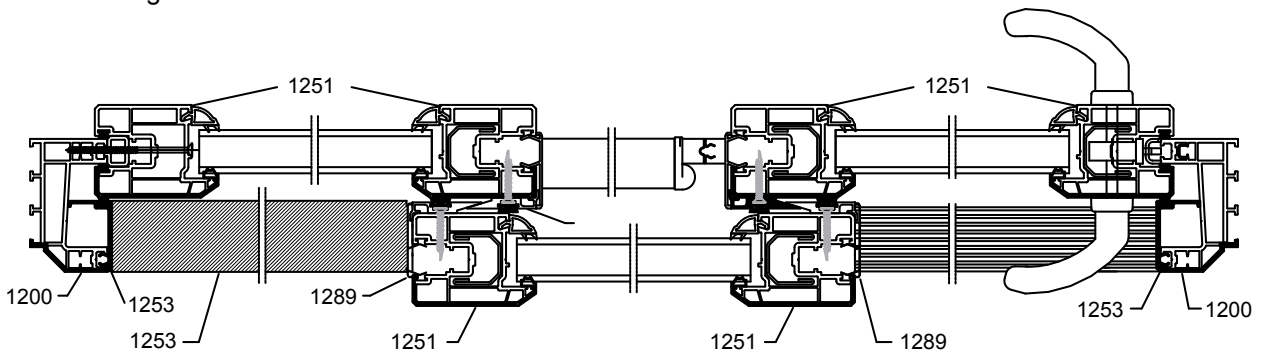
## 2 Pane Foiling On White



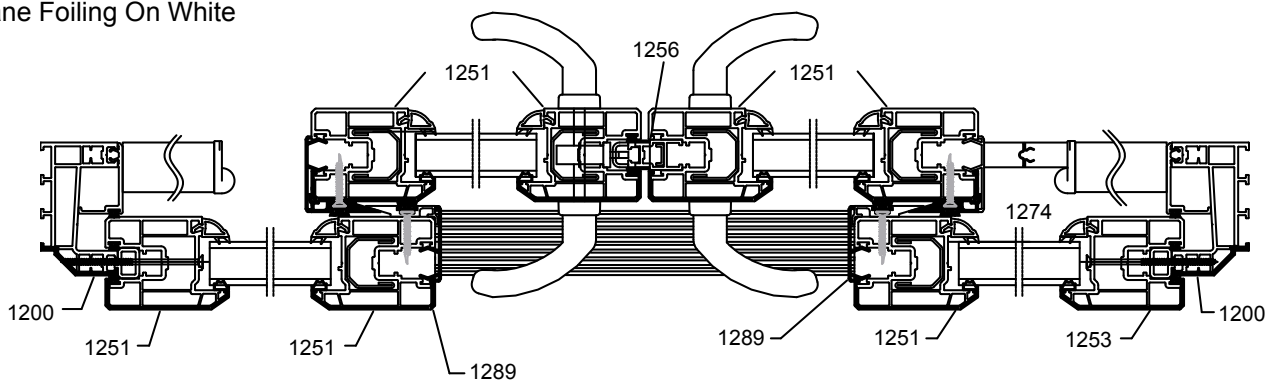
## 3 Pane Centre Foiling On White



## 3 Pane End Foiling On White



## 4 Pane Foiling On White



Note:

Head Trim = 1253

Dimensions in MM  
All dimensions are nominal.  
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# In-Line Sliding Patio Door

## PAS24 Security - Introduction



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### Introduction

This section specifies the build requirements for an PAS24 Security 2 Pane Sliding Patio Doors, designed to comply with the requirements of:

BS6375: General Performance Requirements for Door Assemblies  
PAS 24: Enhanced Security Performance Requirements for Door Assemblies

Although both of the above standards relate to product as manufactured and before installation, it is recommended that on installation, the guidelines given in British standard BS8213-4:2007 code of practice for the Survey & Installation of windows & external door sets.

Each glazed area shall include at least one pane of laminated glass meeting the requirements of BS EN 356:2000, Class P1A, and be glazed in accordance with BS 6262.

Note that all doors manufactured in accordance with this document can be classified as DK (key-key) to clause 4.4.4 of PAS24:2012. I.e. doors can be fitted with a key-key cylinder where appropriate.

### PVC-U Welds

No compromises. Weld strengths to be optimum achievable i.e. watch cleanliness, no tape in welds etc.  
Sizes

Sizes must be as close to nominal as possible (See deductions page). Larger than nominal cavity sizes equates to larger clearances. A maximum tolerance of  $\pm 1\text{mm}$  is allowable on sash & frame finished sizes.

### Reinforcing

It is essential that hardware is fixed back to steel reinforcement and so approximate reinforcement length is not acceptable. The length of reinforcement relative to profile length needs to be right. Fixing of reinforcement is crucial, over fix rather than under fix. For guidelines on the use of reinforcement see BPF document 323/1 - "The Reinforcement of High Impact Modified PVC-U Windows and Doorsets."

### Routing

Routing detail must be to the drawing. Excessive routing weakens the section

### Hardware

Check that the product is to the latest specification. No compromises allowed.

### Screws

Query every screw before using it. Is it the correct one? If you're not sure ask!

### Framing (For PAS 24 Testing)

Assemble the door into it's timber frame and where clearances exist, pack the door to the frame. This is very important at locking points.

Screw fix the door to the frame - over fix rather than under fix. Use minimum No.10 wood screws.

### Glazing

Glass Packing is crucial.

In addition to normal glass packing the clearance between PVC-U/glass/Panel should be minimized at/and adjacent to each locking point. Remember loads can be applied in any one of 3 directions so location packers need fitting so that loads can be taken by the glass/panel without distorting the PVC-U.

Note: All glazing must be made secure by use of security glazing clips. For full details see page 53.

### Final check

Stand the completed assembly vertical and check:-

1. Free operation of hardware.
2. Squareness of frame.
3. Cover of leaf/frame on all 4 sides.

### GENERAL

The testing regime is very demanding & so an extra degree of care and attention needs to be exercised during manufacture.

### SECURED BY DESIGN

Contact with the local Police ALO/CPDA is advisable at an early stage to agree the technical requirements for a particular installation.

In addition to compliance with this document, SBD specify additional requirements for doors. As specifications may change, it is recommended that [www.securedbydesign.com](http://www.securedbydesign.com) is accessed for the latest specifications.

# In-Line Sliding Patio Door

## PAS24 Security - Product Build Specifications



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PAS24 SECURITY	OCTOBER 2016	16	TM-0002	43

### Product Build Specification

The following specifies the range of product that can be made and that will satisfy the requirements of PAS24 Security Patio Doors.

All component parts are supplied by Profile22/ Safeware - alternatives are not acceptable. The requirements of both standards are very demanding - no deviations from this specification are allowable.

ITEM	DESCRIPTION																		
STYLE	2 Pane Sliding Patio Door Without Midrail. No Letter Plate.																		
MAXIMUM FRAME SIZE	2400 x 2200mm																		
MAXIMUM SASH SIZE	1198 x 2116mm																		
MIN FRAME SIZE	1984mm																		
MIN SASH HEIGHT	1900mm																		
PROFILES	Outer Frame 1200 Threshold 1200 Leaf 1251																		
REINFORCEMENTS	Outer Frame Lock Jamb Part No. 1260 Head Part No. 1260 All Frame Members Part No. 1262																		
	<table border="1"> <tr> <td>Leaf - Sliding Lock Stile Part No. 1258 Head &amp; Cill / Interlock Stile Part No. 1257</td> <td>Leaf - Fixed Interlock Stile Part No. 1257</td> </tr> </table>	Leaf - Sliding Lock Stile Part No. 1258 Head & Cill / Interlock Stile Part No. 1257	Leaf - Fixed Interlock Stile Part No. 1257																
Leaf - Sliding Lock Stile Part No. 1258 Head & Cill / Interlock Stile Part No. 1257	Leaf - Fixed Interlock Stile Part No. 1257																		
GLAZING	Glazing is internally beaded using any BS EN 12608 approved bead compatible with 24mm & 28mm units. All glazing must be made secure by the use of security glazing clips. For full details see page 56. All glazing must be to BS EN 6262. Also see BS 6262 Part 4 - "Safety related to human impact."																		
WEATHERSEALS	Bubblex Applies Throughout																		
HARDWARE	Enhanced Security Specific Parts Are: Cylinders (only the following cylinders shall be used)																		
	<table border="1"> <tr> <th>TYPE</th> <th>PART NO.</th> </tr> <tr> <td>KEY-KEY</td> <td>(D) S1377AB</td> </tr> </table>	TYPE	PART NO.	KEY-KEY	(D) S1377AB														
TYPE	PART NO.																		
KEY-KEY	(D) S1377AB																		
	6 Hook Lock - 1395 Security Keep Rail Jamb - 1371 Security Keep Rail Head - 1372 Patio Interlock Bolt Kit - 1374  Security Handle - 1364/L or 1364R/1																		
FIXING SCREWS	<table border="1"> <thead> <tr> <th></th> <th>Part No.</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>6 Hook Lock</td> <td>F7851030</td> <td>4.3 x 030 CSK PZ YD SP</td> </tr> <tr> <td>Security Keep Rail Jamb:</td> <td>F7895038</td> <td>4.8 x 038 CSK PZ BZ TP</td> </tr> <tr> <td>Security Keep Rail Head:</td> <td>F7895038</td> <td>4.8 x 038 CSK PZ BZ TP</td> </tr> <tr> <td>Interlock Prep:</td> <td>F7851030</td> <td>4.3 x 030 CSK PZ YD SP</td> </tr> <tr> <td>Patio Interlock Bolt Kit:</td> <td colspan="2">Screws Supplied With Kit 1370</td> </tr> </tbody> </table> <p>The recommended screw MUST be used; alternative equivalent screws are NOT acceptable.</p> <p>Screws must be secure, but stripped screws are NOT acceptable. For general guidelines on the use of screws see BPF document 335/3, "Specification and guidelines for the selection and application of fasteners for the manufacture of PVC-U Windows and doors."</p>		Part No.	Description	6 Hook Lock	F7851030	4.3 x 030 CSK PZ YD SP	Security Keep Rail Jamb:	F7895038	4.8 x 038 CSK PZ BZ TP	Security Keep Rail Head:	F7895038	4.8 x 038 CSK PZ BZ TP	Interlock Prep:	F7851030	4.3 x 030 CSK PZ YD SP	Patio Interlock Bolt Kit:	Screws Supplied With Kit 1370	
	Part No.	Description																	
6 Hook Lock	F7851030	4.3 x 030 CSK PZ YD SP																	
Security Keep Rail Jamb:	F7895038	4.8 x 038 CSK PZ BZ TP																	
Security Keep Rail Head:	F7895038	4.8 x 038 CSK PZ BZ TP																	
Interlock Prep:	F7851030	4.3 x 030 CSK PZ YD SP																	
Patio Interlock Bolt Kit:	Screws Supplied With Kit 1370																		

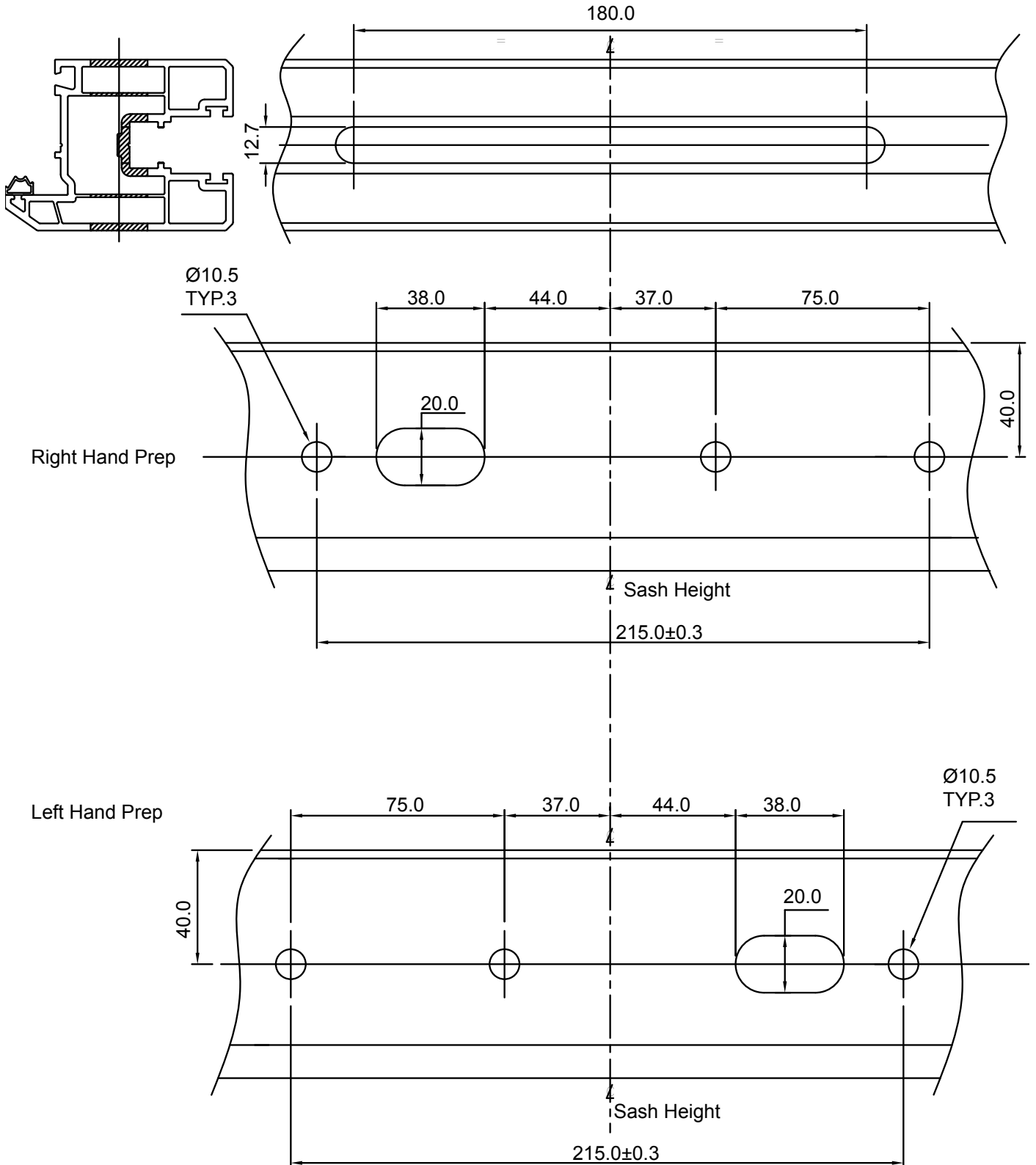
# In-Line Sliding Patio Door

## PAS24 Security - Security Handle Preparation



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1364L/1 & 1364R/1 Security Handle  
Preparation



Dimensions in MM  
All dimensions are nominal.  
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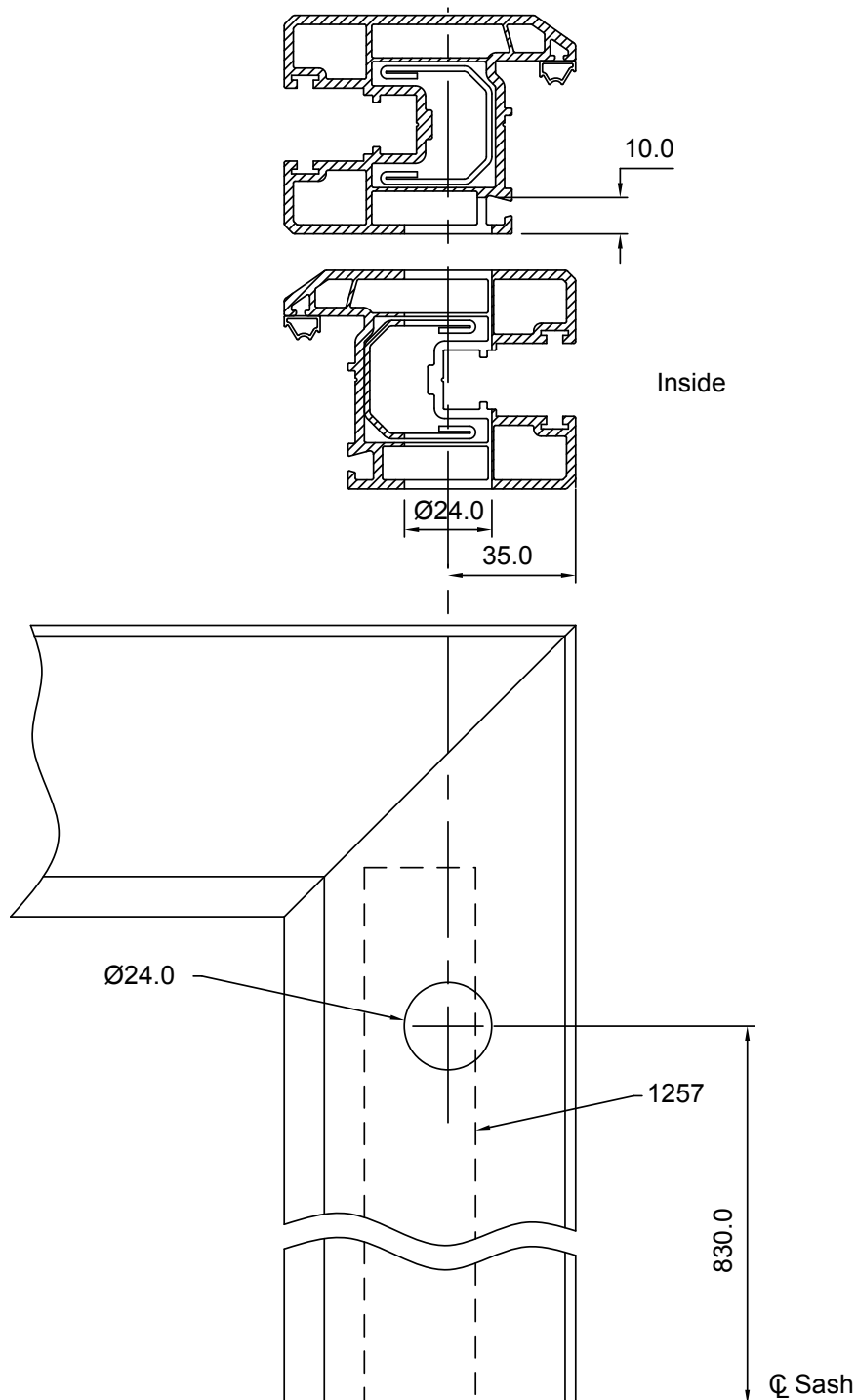
# In-Line Sliding Patio Door PAS24 Security - Interlock Bolt Fitting

SECTION	DATE	ISS	REFERENCE	PAGE
PAS24 SECURITY	OCTOBER 2016	16	TM-0002	45

## Interlock Bolt Fitting

1. Ensure reinforcement length will allow fixings to enter Steel.
2. Drill dia 24.0 through both sashes both at top & bottom of meeting stile.

Step 1



# In-Line Sliding Patio Door

## PAS24 Security - Interlock Bolt Fitting

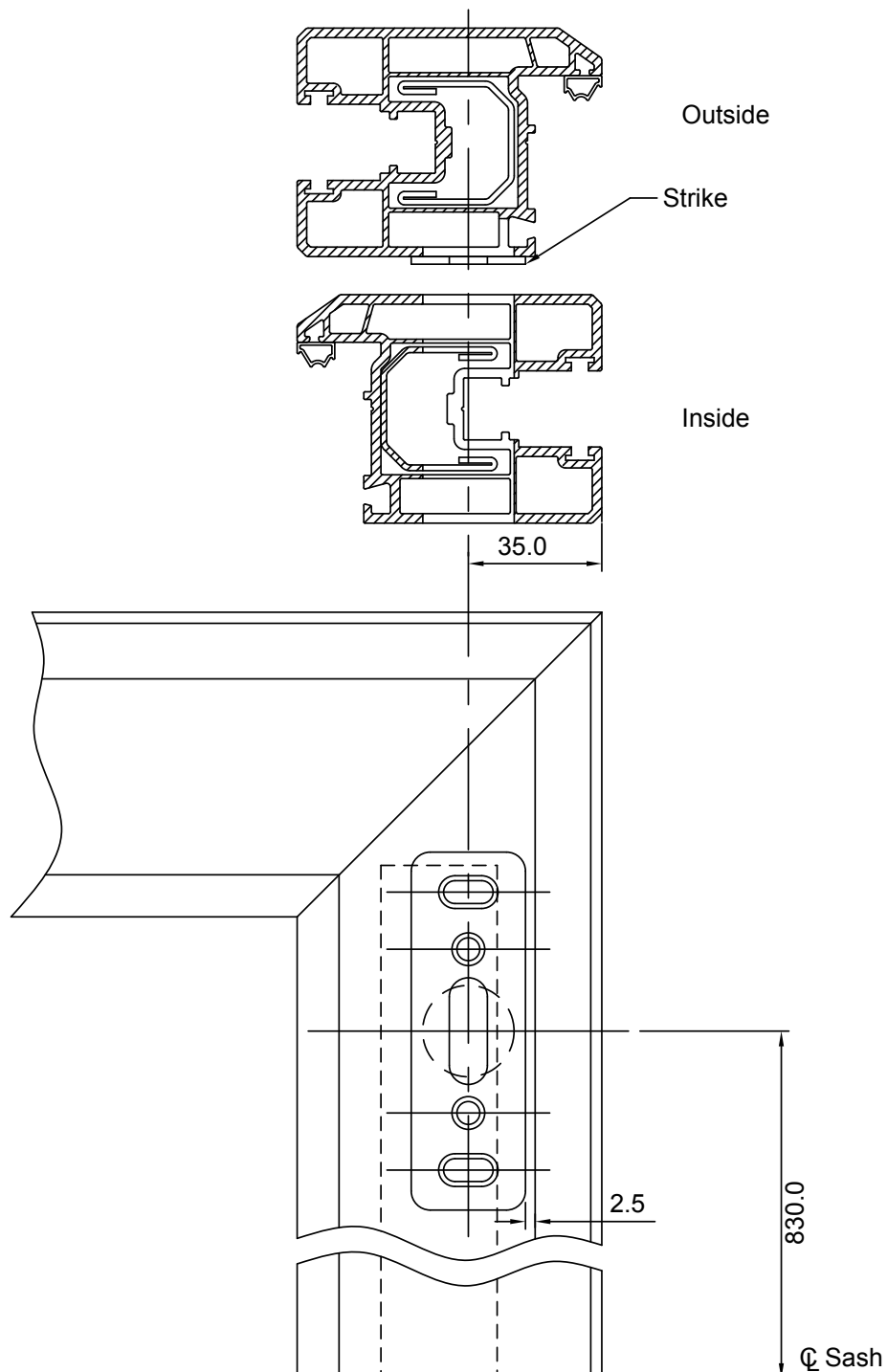
SECTION	DATE	ISS	REFERENCE	PAGE
PAS24 SECURITY	OCTOBER 2016	16	TM-0002	46

### Interlock Bolt Fitting Continued

3. Fit 2 off strikes in position shown (Top & Bottom) & fix with screws supplied with kit.

(4.8x032 CSK self drill). It is advisable that final fix screws are inserted after installation and final adjustments have been made.

Step 2



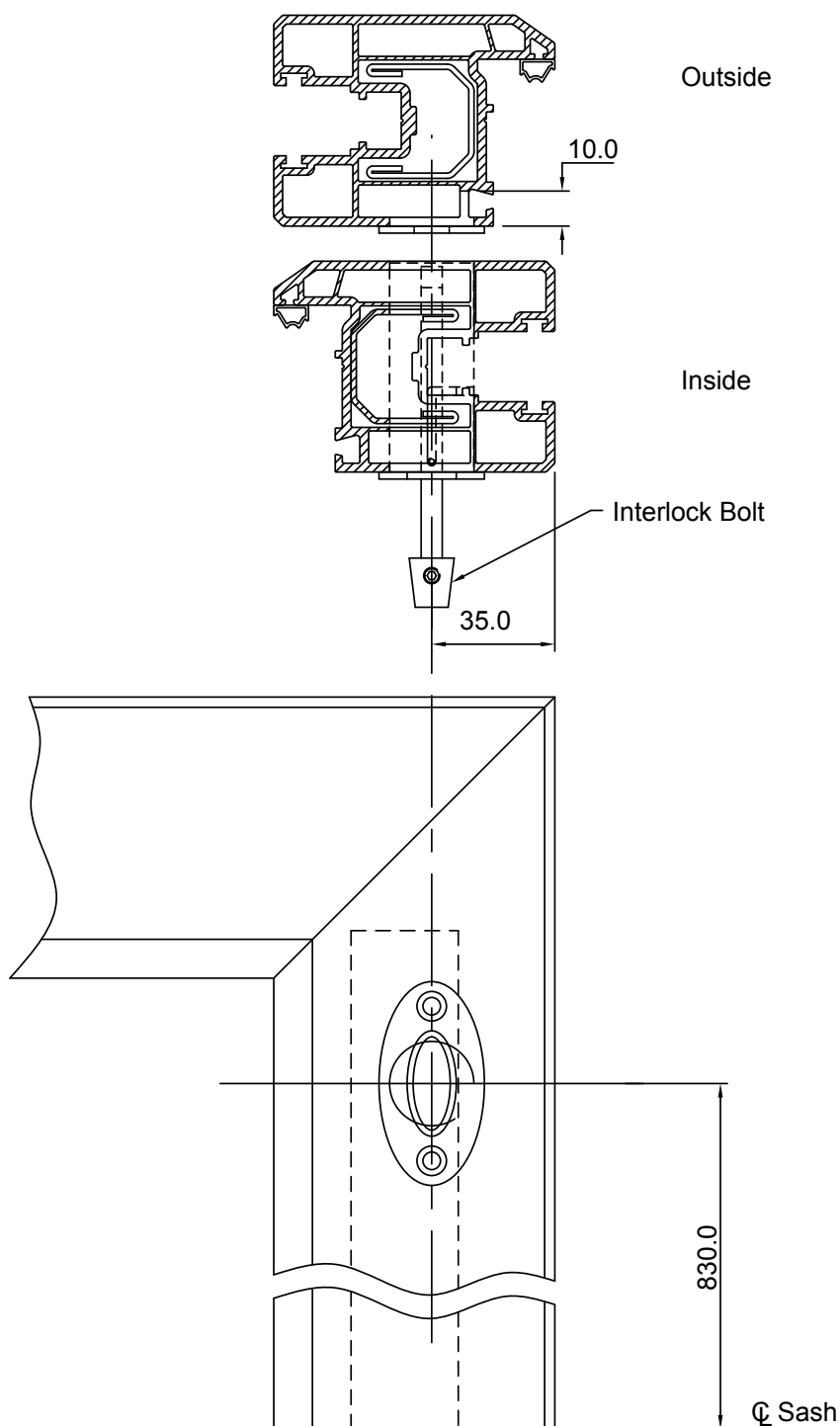
# In-Line Sliding Patio Door PAS24 Security - Interlock Bolt Fitting

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## Interlock Bolt Fitting Continued

4. Fit 2 off Interlock bolts in position shown (Top & Bottom) & fix with 2 off screws per bolt supplied with kit (4.3 x 012 CSK PVC-U screw).

Step 3



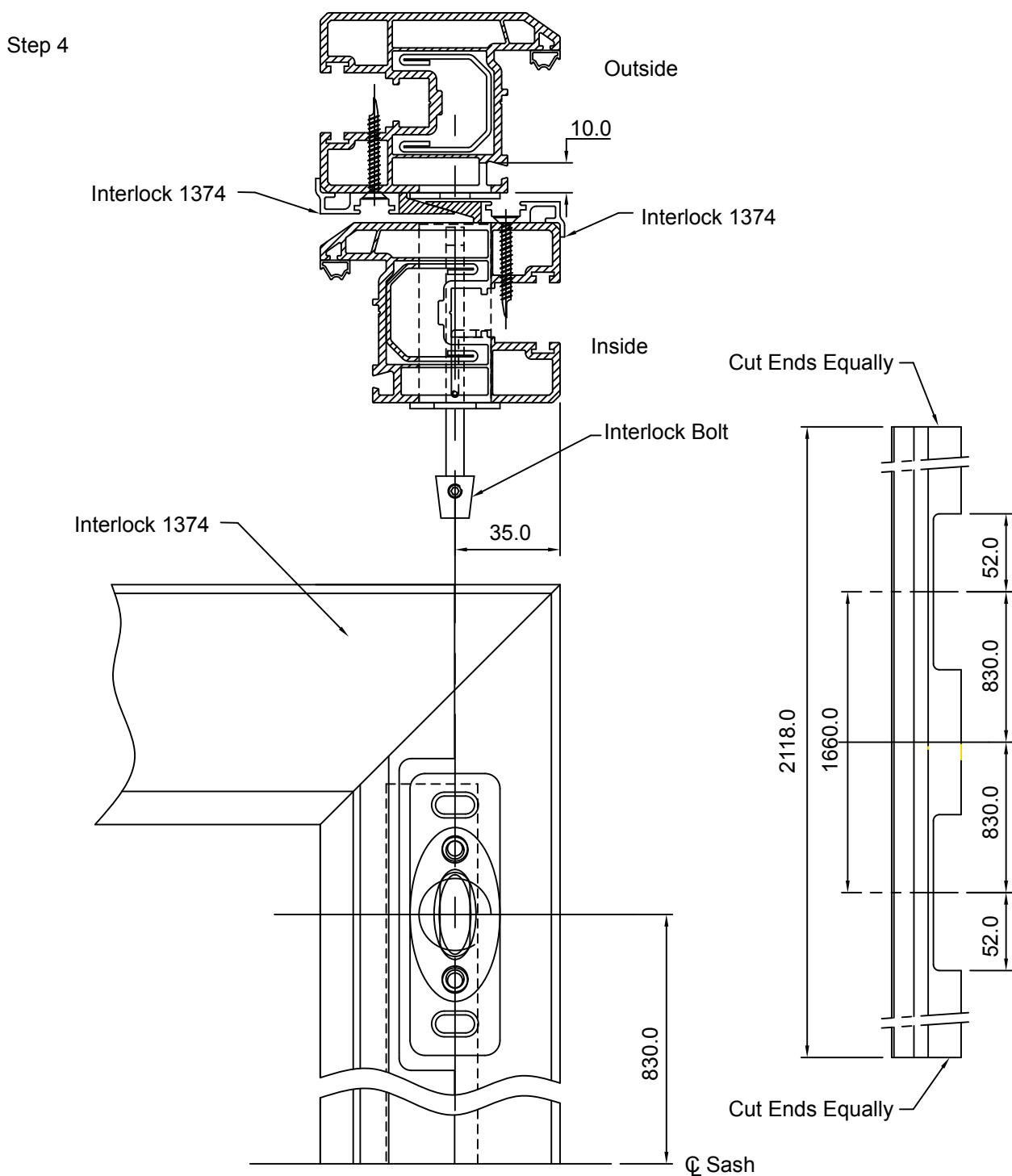
# In-Line Sliding Patio Door PAS24 Security - Interlock Bolt Fitting

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## Interlock Prep 1374 Fitting

Fit 2 off 1374 Interlocks as shown below to both sashes.

Ensure Interlocks are positioned centrally on sash. Mark and cut both equally to suit sash size at top and bottom



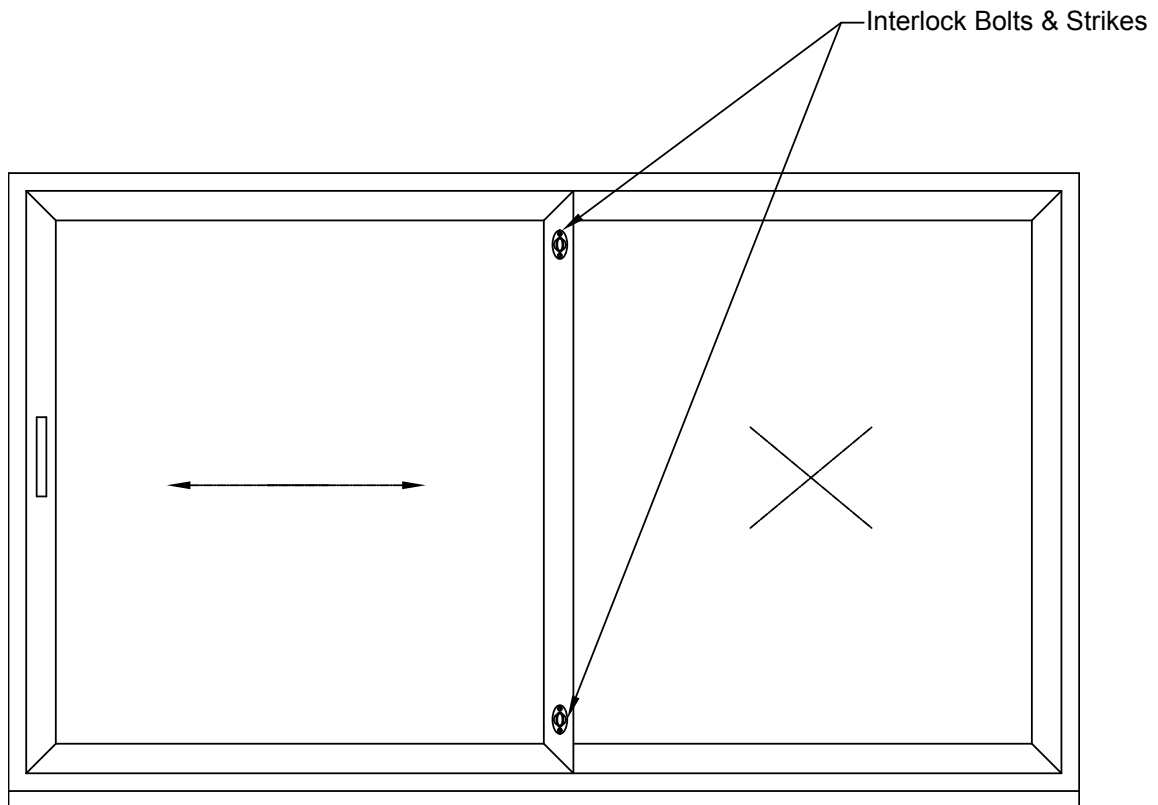


# In-Line Sliding Patio Door PAS24 Security - Interlock Bolt Fitting



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Interlock Bolt Fitting Continued



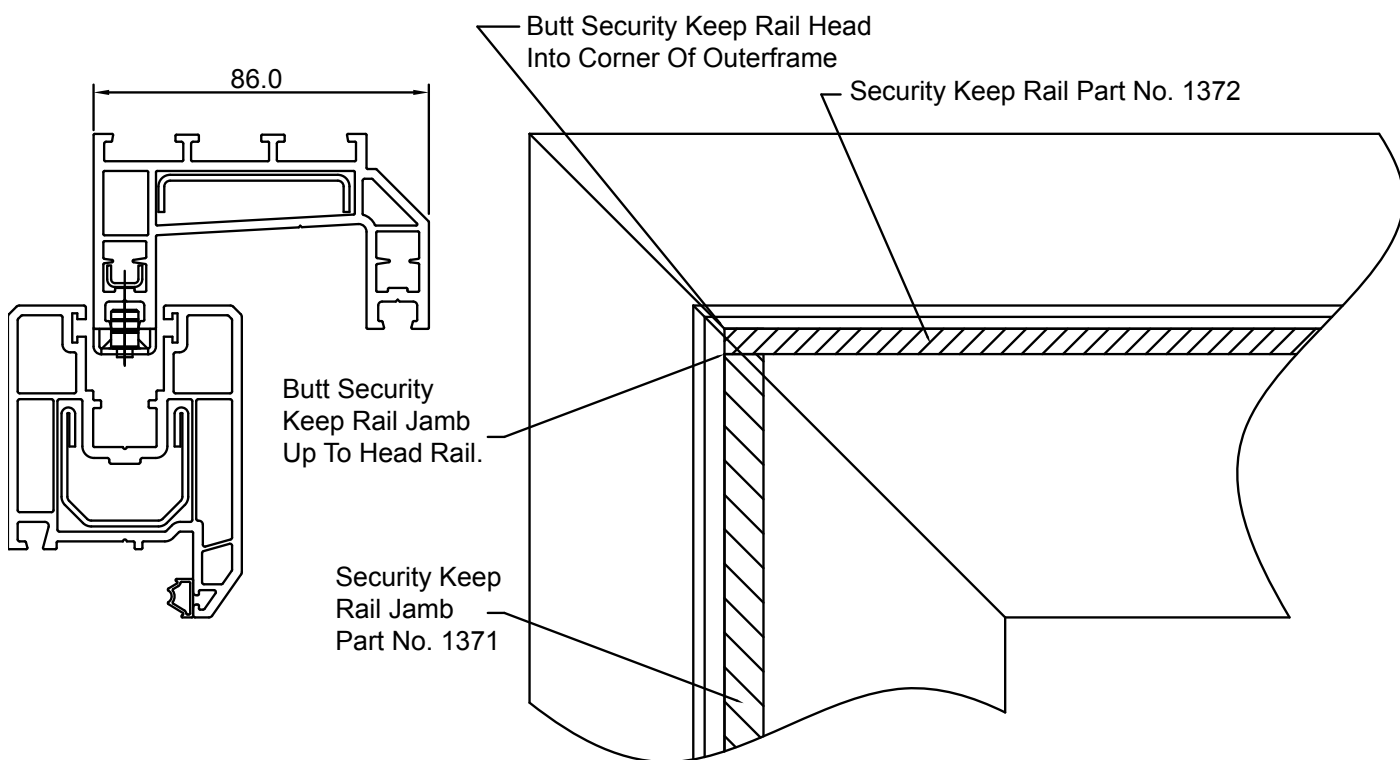
# In-Line Sliding Patio Door PAS24 Security - Security Keep Rail Fitting

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## Security Keep Rail Fitting

Butt security keep rail head 1372 into corner of outer frame and cut opposite end in line with over rebate size of sash to give good support for the sash at the head. Fix with screws shown in the screw fixing table.

Note: This part may have to be fitted, be removed & re-fixed after installation.



# In-Line Sliding Patio Door

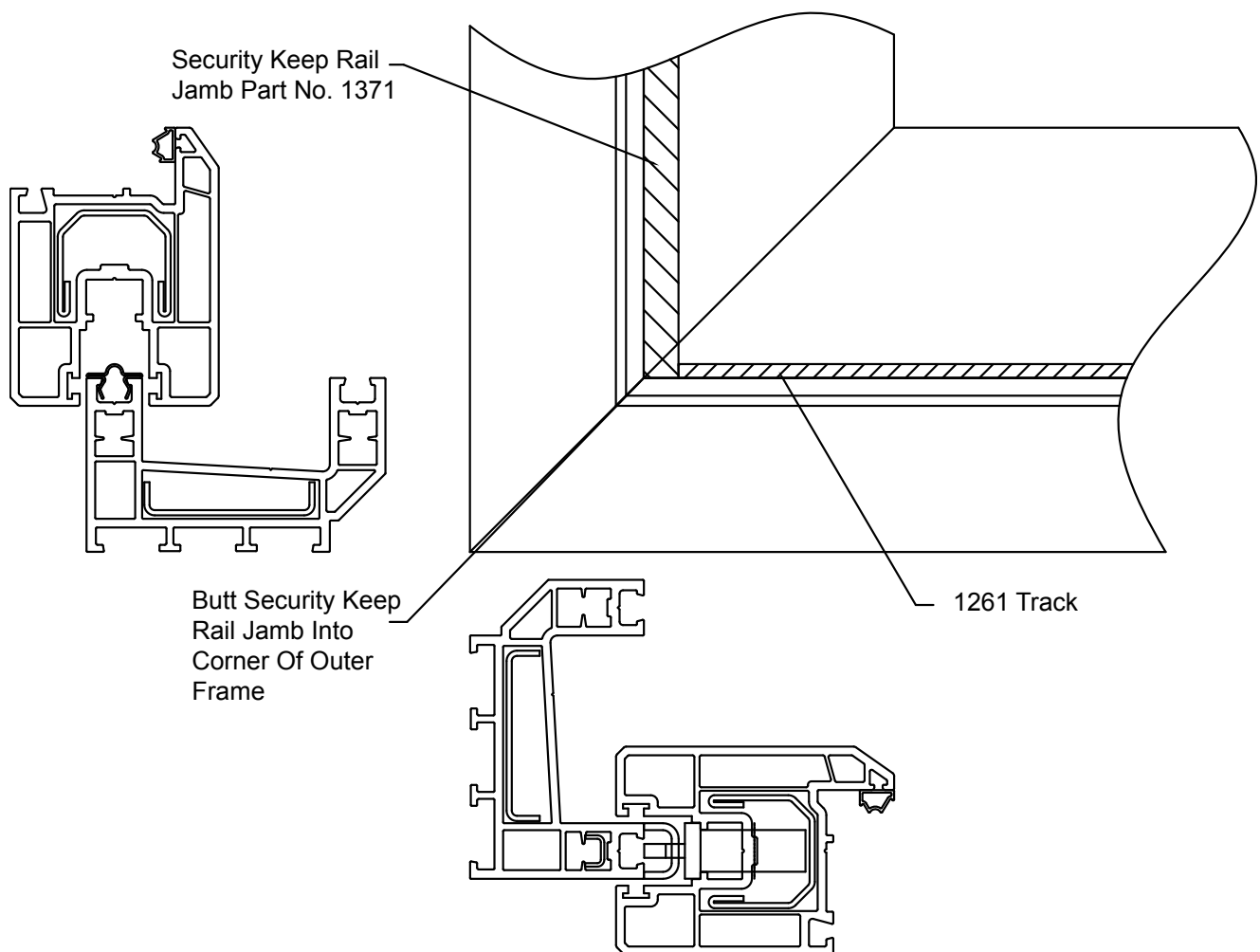
## PAS24 Security - Security Keep Rail Fitting



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### Security Keep Rail Fitting Continued

Cut/Fit security keep rail jamb 1371 on centre of outer frame, ensure keep butt's into bottom corner of outer frame and sits tight against head rail. Fix with screws shown in the screw fixing table.

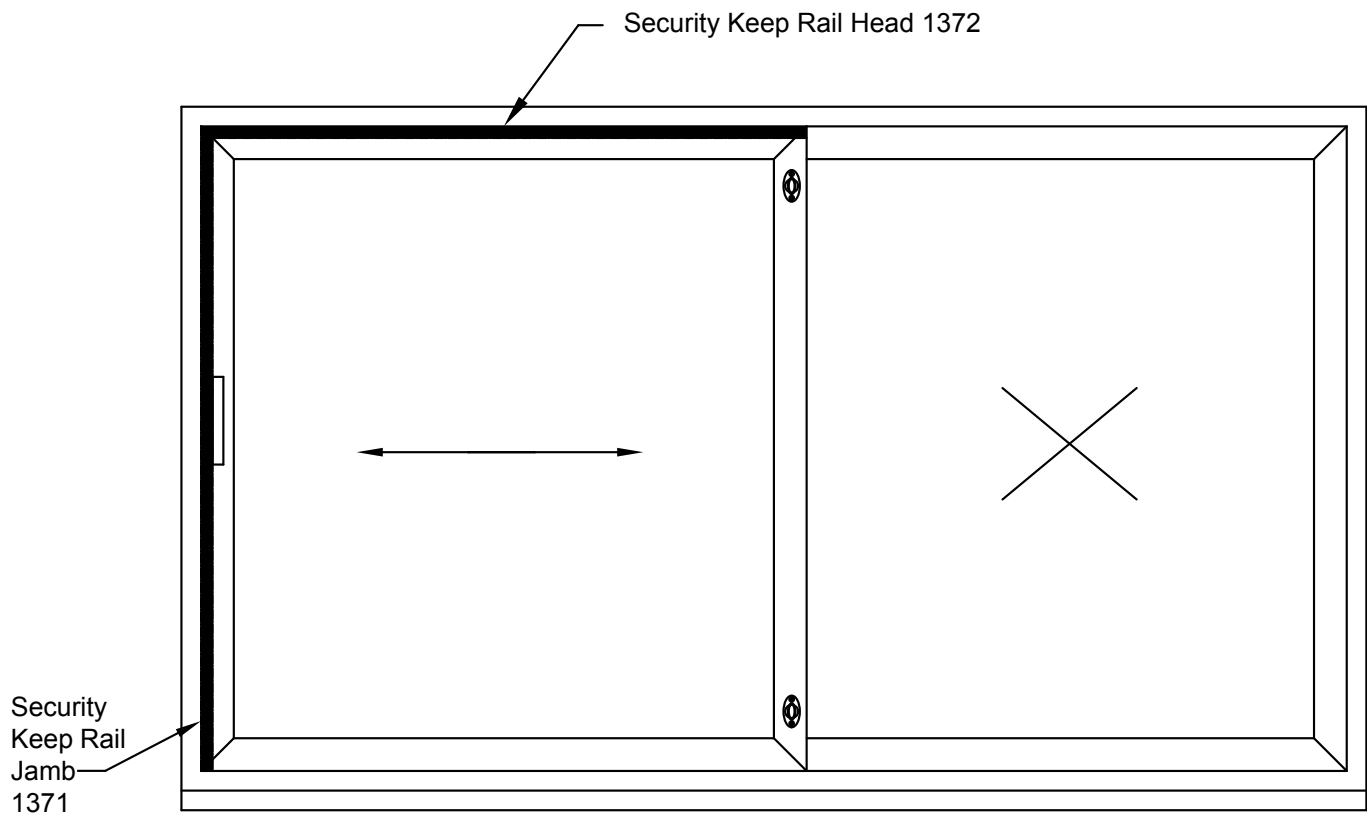


# In-Line Sliding Patio Door PAS24 Security - Security Keep Rail Fitting



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Security Keep Rail Fitting Continued



# In-Line Sliding Patio Door PAS24 Security - Security Glazing Clips



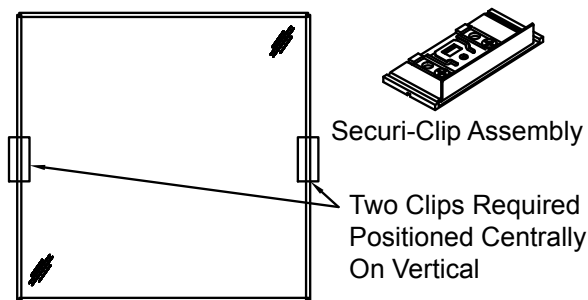
SECTION	DATE	ISS	REFERENCE	PAGE
PAS24 SECURITY	OCTOBER 2016	16	TM-0002	53

## Security Glazing Clips

The fitting of security clips is required on doors using 24mm + 28mm glazing. If required the following procedure must be followed.

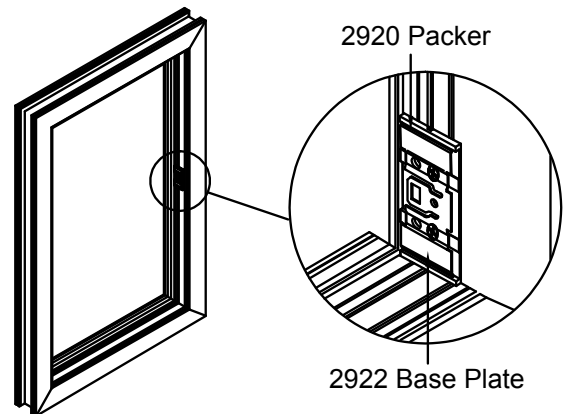
### INTERNAL GLAZING

Fit two clips as shown, always position centrally on the vertical or as close to centre as possible avoiding glass packing. Conventional glass packing to be inboard of security clips.



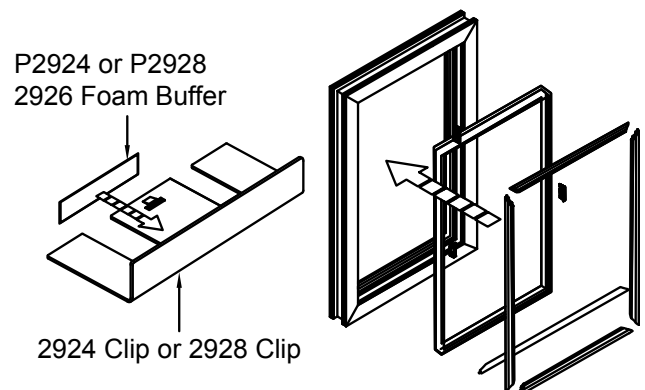
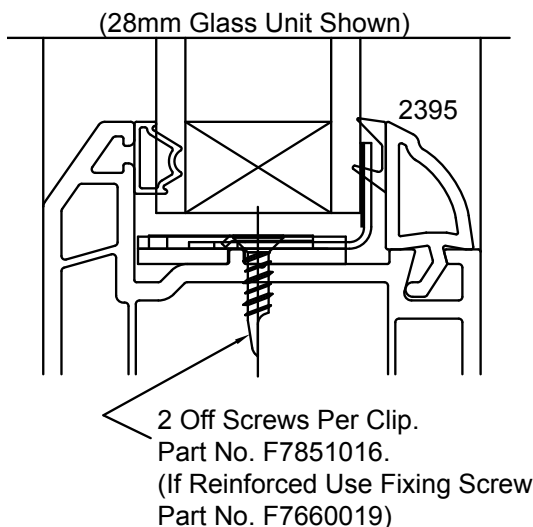
## MANUFACTURING PROCESS FABRICATION (P2920) STANDARD SECURITY

During the fabrication process, apply each Base Packer at the centre of each vertical. Fix with F7660019 screws for reinforced profile, or F7801016 screws for un-reinforced profile. (2 screws per base packer).



### GLAZING

It is recommended that the 'SECURI-CLIPS' (24mm: 2924, 28mm: 2928) are fitted when the glass is finally installed on site after the glass unit has been correctly packed. Apply the 'foambuffer pad' (2926) to the glass facing edge of the Securi-clips. Clip the Securi-clips into the basepackers and finally clip the beads into position.



# In-Line Sliding Patio Door Technical Specification



SECTION	DATE	ISS	REFERENCE	PAGE
TECHNICAL SPECIFICATION	OCTOBER 2016	16	TM-0002	54

## SCOPE

· This specification defines materials, construction and size limitations of the In-Line Sliding Patio Door system, manufactured from Profile 22 products.

· In-Line Sliding Patio Doors are suitable for installation into new building work, or as replacements in existing buildings, being designed for fitting direct to masonry.

· The patio system is also compatible with Profile 22 window and door systems, ideal for use in conservatories.

## MATERIALS

· PVC-U profiles are extruded from impact modified unplasticised polyvinyl chloride, extruded to conform to BS EN 12608.

· Fire resistance to BS 476, part 7, class one.

· Steel reinforcing is roll formed hot dipped galvanised mild steel to FePo2GZ275NA or equivalent.

· Aluminium sections are extruded from HE9TE or HE9TF, complying with BS 1474.

· PVC-U profiles are multi-chambered and have a main wall thickness of between 2.5mm and 3.0mm.

· Sash glazing and bead gasket is co-extruded and meets BS 7412.

· Weatherseals are woven pile weatherstripping.

## QUALITY

· Profile 22 Systems are a BS EN ISO 9001 registered company Certificate No: FM09180.

## CONSTRUCTION

· Outer frames are mitre cut at 45° and then heat welded or alternatively mechanically jointed. White doors are shadow grooved and foiled doors are knife seamed. Foiled on white doors are combinations of both.

· Midrails are mechanically jointed N.B.: ALL MECHANICAL JOINTS SHOULD BE SEALED AGAINST THE INGRESS OF WATER.

· Sash profiles are mitre cut at 45° and then heat welded. Joints finished as outer frames.

· Reinforcing - white, white foiled and cream foiled doors = sliding sash fully reinforced, fixed sash meeting stile reinforced, all other doors = fully reinforced.

· Thermally Broken Low Threshold available for use in sheltered external applications only.

## GLAZING (INTERNAL BEAD)

· The glass is set against a co-extruded sash gasket and backed up with a co-extruded knock-in bead on the room side of the patio sash frame.

## GLAZING

· Glazing should be carried out in accordance with BS 6262.

· Glass should conform to the requirements of BS 6262 for thickness and type.

· The profiles within the patio system will accommodate glazing of 28mm or 24mm in unit thickness.

## INSTALLATION

· Detailed installation recommendations are provided in the technical manual which should be strictly followed.

## PERFORMANCE (WEATHER)

· Full Threshold Patio Door tested to BS 6375-1:2009. Achieving a rating of 1000Pa Wind Loading, 300Pa Air Permeability & 300Pa Water Tightness. Sample tested - 2 pane door 2400mm width x 2200mm height.

· Full Threshold Patio Door tested to BS 6375-1:2009. Achieving a rating of 400Pa Wind Loading, 300Pa Air Permeability & 100Pa Water Tightness. Sample tested - 4 pane door 2850mm width x 2200 height.

· Low Threshold (Thermally Broken with Threshold Trim) Patio Door tested to BS 6375-1:2009. Achieving a rating of 800Pa Wind Loading, 300Pa Air Permeability & 50Pa Water Tightness. Sample tested - 2 pane door 1800mm width x 2060mm height.

# In-Line Sliding Patio Door Technical Specification



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## HARDWARE

- Lock - 6 hook opposing action, providing built in anti-lift, compliant with BS7412 and cycle tested to 103,000 cycles. One piece keep, anchored into steel reinforcing.
- Rollers/Tracking - steel tandem rollers, weight capacity of 80kgs/pair, cycle tested to 150,000 cycles. Tracking section is manufactured from stainless steel.
- Anti-lift bracket fitted as standard to all sliding sashes.

## ENHANCED SECURITY (SECURED BY DESIGN)

- The Secured by Design in-line sliding door has enhanced security specification to allow it to meet the high standards of the Police Approved initiative.
- Key features include: Patio interlock bolts at the top and bottom of the door, a full width security head rail running along the top panel, full height security keep rail to support the sliding door at each corner, PAS24 high security handle with enhanced back plate, and an anti-bump cylinder.

## STYLE AND SIZE LIMITATION

- Styles can be supplied in 2 pane, 3 pane and 4 pane configurations.
- Size limitations. The heights shown below do not include cills or add-on profiles.

STYLE	MAX WIDTH	MAX HEIGHT	MIN WIDTH*	MIN HEIGHT*
2 PANE	3004	2360	1574	1900
3 PANE (CENTRE SLIDER)	4509	2360	2364	1900
3 PANE (END SLIDER)	4425	2360	2380	1900
4 PANE	5928	2360	3068	1900

\* Minimum width and height: The above sizes given are guideline dimensions. These can be dependent upon building regulations and local planning law. In special applications for sizes required less than these please refer to the technical department.

# In-Line Sliding Patio Door Survey & Installation



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SURVEY AND INSTALLATION	OCTOBER 2016	16	TM-0002	56

## General

BS 8213-4:2007 Code of Practice for the Survey and Installation of Windows and External Doorsets gives recommendations for the surveying and installation of non-load bearing windows and external doorsets, to be installed vertically (within 15°) into the external face of buildings.

It gives guidance on the good practices for successful surveying and installation. All aspects of this document should be followed with particular attention given to the product's suitability for its location and the presence of any dead loads. If you are at all unsure then please contact your PatioMaster dealer.

## Survey Notes

The manufacturing sizes should be determined by measuring the structural opening using the methods described in BS 8213-4:2007 Code of Practice for the Survey and Installation of Windows and External Doorsets. However, the following fitting tolerances must be adhered to:

	DEDUCTION-WIDTH		DEDUCTION HEIGHT
PROFILE	up to 3m	3m to 6.0m	up to 2.4mm
WHITE	10mm	15mm	10mm
FOILED	15mm	22mm	15mm

## Preparation of Structural Opening

Check that the opening is the correct size for the new frame (N.B.: For replacement work this should be done prior to removal). Check that any DPC's are sound and not "bridged" by any render or plaster. Check for the practicality of fixings to the lintels.

The base of the opening must be constructed of suitable structural material, e.g.: brick, block, stone, timber etc



# In-Line Sliding Patio Door Installation The Frame

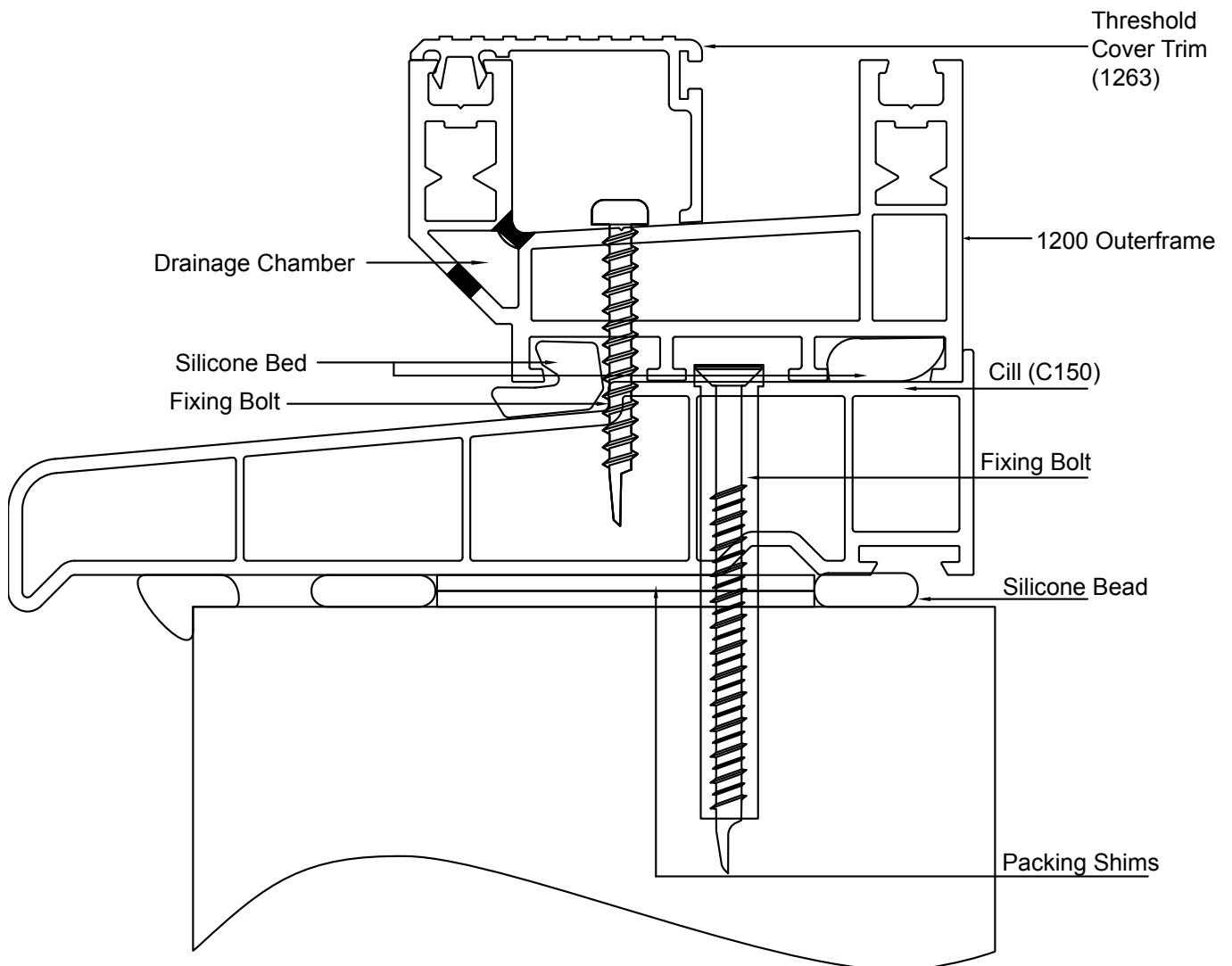
SECTION	DATE	ISS	REFERENCE	PAGE
SURVEY & INSTALLATION	OCTOBER 2016	16	TM-0002	57

## Installing the Frame

Fixing the Cill :-The method shown requires the cill to be fitted to the base of the opening making sure that the base is clean of loose debris and the DPC is intact, apply silicone bed as shown, making sure that the cill is level. Then fix with the appropriate frame fixings 200mm from each end at a maximum of 600mm centres (In accordance with BS 8213-4:2007). Finally fix frame to cill using 50mm self tapping screws.

Note:- For PAS24 fixing centres should be reduced to 100mm from each end and at a maximum of 300mm pitch.

## Fixings Through Cill



# In-Line Sliding Patio Door

## Installing The Frame



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### Installing the Frame Continued

#### Fixing the Assembled Frame

N.B: It is better not to remove the fixed or sliding sashes from the outer frame prior to fixing. However on very large three or four pane units, it will make lifting easier if the sliding door/s are removed. The sash end cover profile (1289) will need to be removed in order to lift off the door/s.

**IMPORTANT** - Do not remove the fixed sashes, as these will not lift back in once the outer frame head and cill are fixed.

**Carefully remove the outer frame cover trims to allow access for fixing bolts.**

#### External (Outside the slider)

Remove head trim first using a sharp wide bladed tool to ease between the front lip and outer frame to gently work trim free. Remove jamb trim next working from the top. Finally remove aluminium threshold trim - N.B.: If this is removed before the jamb trim, it will scratch the surface of the plastic.

#### Internal (Inside the fixed sash)

Either - Remove bump stops and jamb trim OR unscrew fixed sash and slide back.

The cill should be packed and set level on a silicone or mortar bed and fixed to the base of the opening. Before doing this it is advisable to offer the frame in "dry" to ensure that there is sufficient tolerance to fit the frame square and plumb.

When ready to fit the frame, run a line of silicone to the top face of the cill and offer the frame back into position.

Use temporary wedges to set the frame square in the opening (use diagonal measurement across opposite corners of the outer frame to check).

Fix the bottom frame and cill first using fixing bolt centres.

Next pack and fix jambs plumb and true.

**Fixings should be 200mm from top and bottom corners and no more than 600mm centres in between.**

On the locking jambs, the intermediate fixings should be adjacent to the locking points.

The head can now be fixed using the same fixing distances as jambs. However, if head fixings are impractical, and additional foam fixing is used (in accordance with BS 8214-4:2007), then fixings can be as described in 'Fixings Through Cill' section. Ensure that head is fixed level with no bow in either plane.

Re-fix the fixed sash/es if they were moved for jamb fixings. Ensure that the fixing to the head does not distort the frame, use packer (1204) between the fixed sash and outer frame.

Re-fit the jamb cover trims using the removal method in reverse. Cut and fit the drainage trim into the threshold behind the fixed sash.

Finally check that the door locks properly and is secure. Ensure that the location pin on the lock, just above the handle set, is centred on the hole provided in lock plate.

To check for plumb, slide the door almost closed, leaving a small gap. If the gap is not parallel, make any necessary adjustment by raising or lowering the rollers using a posidrive screwdriver, gaining access from the end of the sash (on the interlock side, part remove sash end cover).

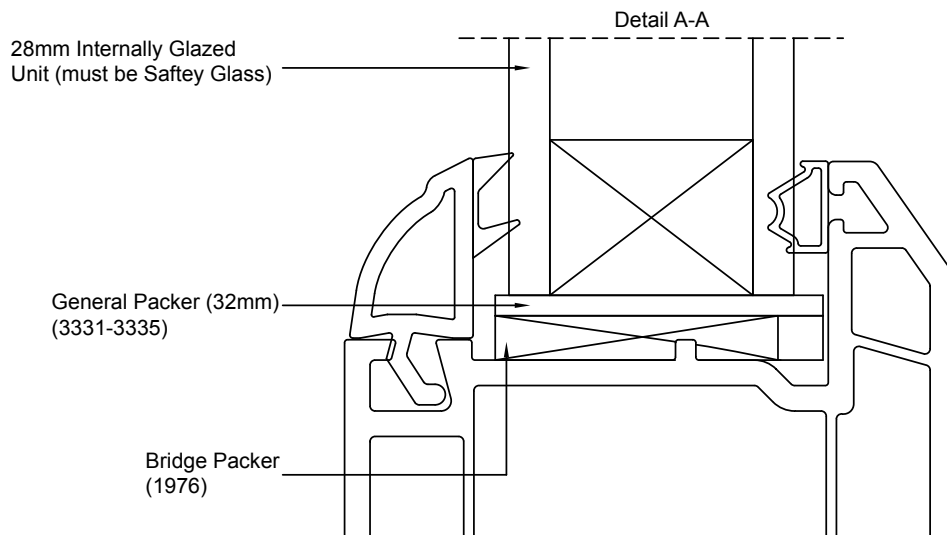
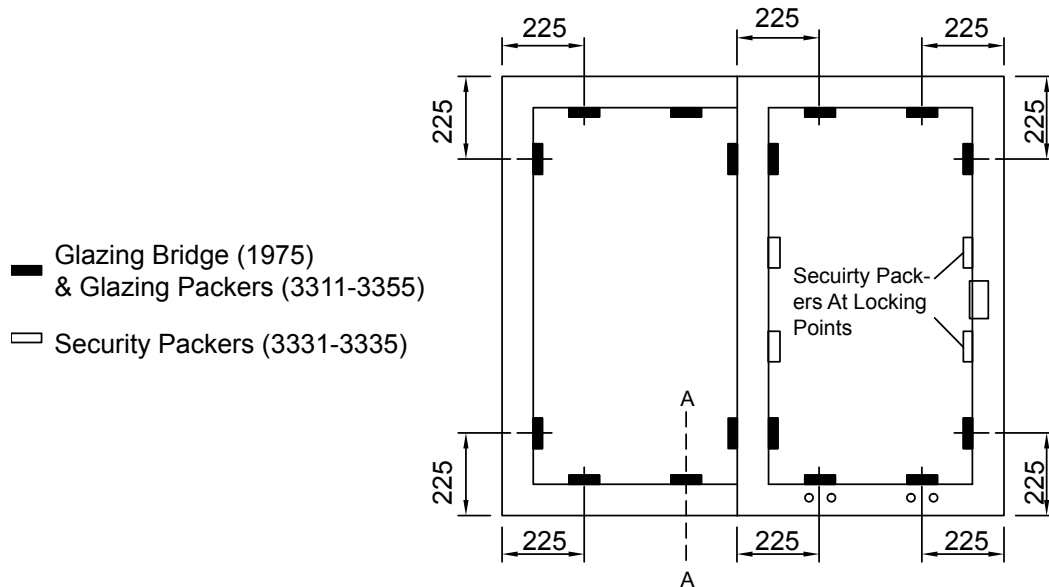
# In-Line Sliding Patio Door Glazing

SECTION	DATE	ISS	REFERENCE	PAGE
SURVEY & INSTALLATION	OCTOBER 2016	16	TM-0002	59

## Glazing

Bridge packers (1975) should be positioned and glazing packers should be glued into position as shown, also additional security packers should be glued in position to the back of the intermediate locking points. Care should be taken not to bow the stiles of the sashes. Glaze up the fixed panel first as access is required through the slider to bead up the interlock stile.

## Location of Packers



# In-Line Sliding Patio Door Perimeter Sealing

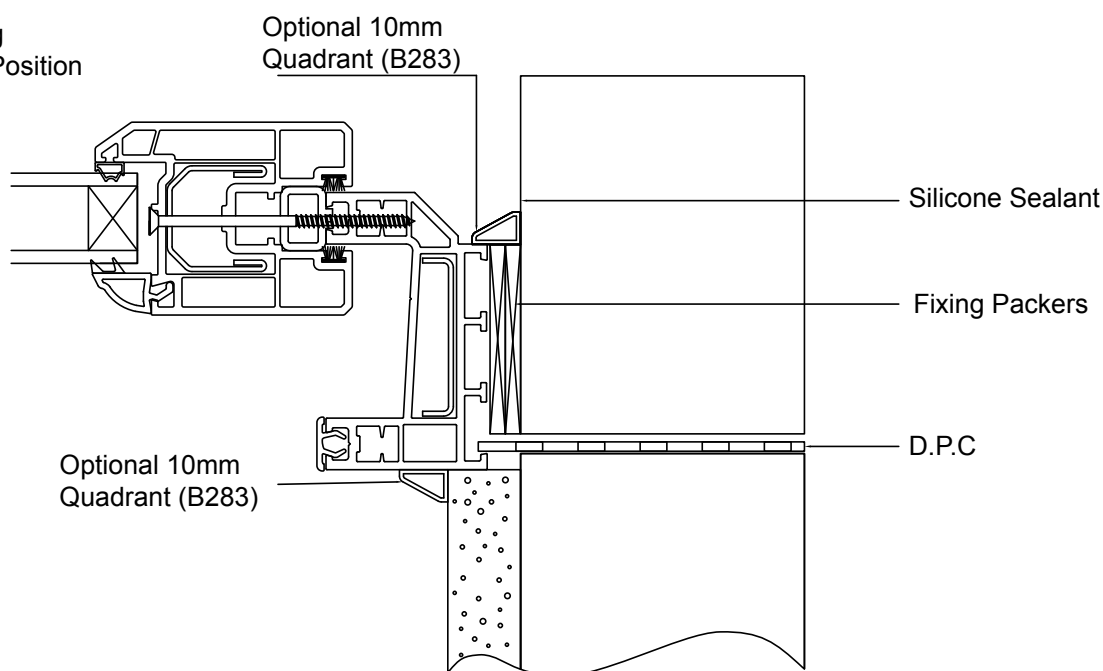
SECTION	DATE	ISS	REFERENCE	PAGE
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## Perimeter Sealing

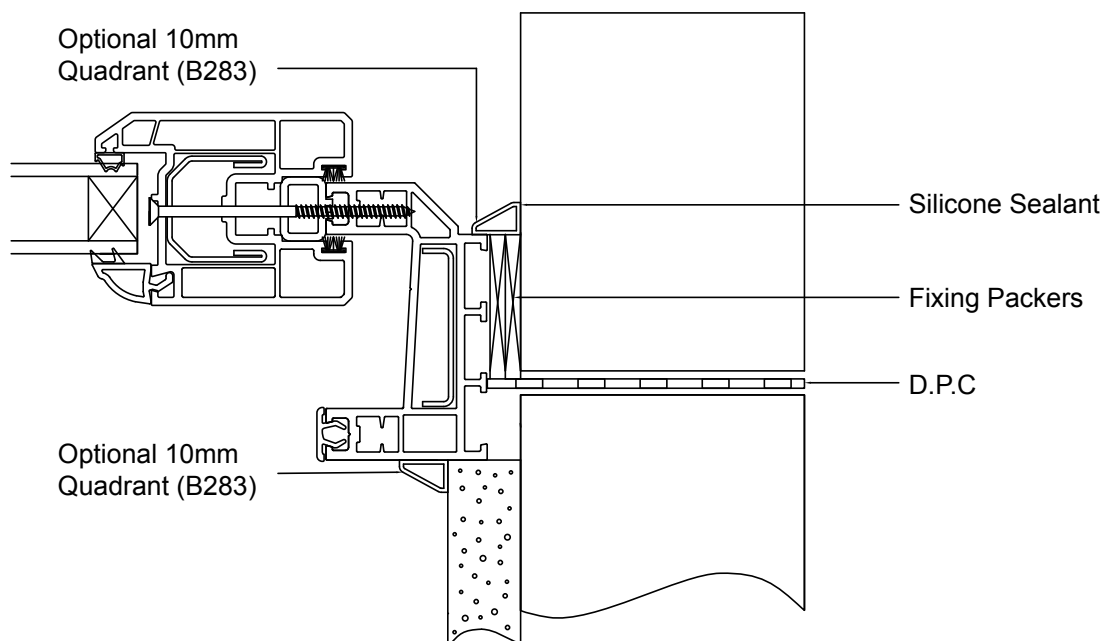
It is advisable to clean down the frame before sealing the perimeter.

The gap between the outer frame and structure must be sealed using a suitable external grade sealant. 5-6mm gaps can be filled with sealant alone, however larger gaps may require the use of foam backing strips.

Perimeter Sealing  
Standard Fitting Position



Frame Rebate Over Plaster Line



# In-Line Sliding Patio Door Assembling The Frame

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## Assembling The Frame

### Mechanically Jointed Option - Outer frames only

In most cases a patio requiring a mechanically jointed outer frame will be supplied fully fabricated. This ensures the patio is supplied complete and to the correct size and specification. It also avoids any unnecessary amount of on-site assembly and allows the installers to see how the finished product goes together. However, should a patio be supplied in kit form then refer to the following assembly instructions.

### Secure & Sealing of Corners

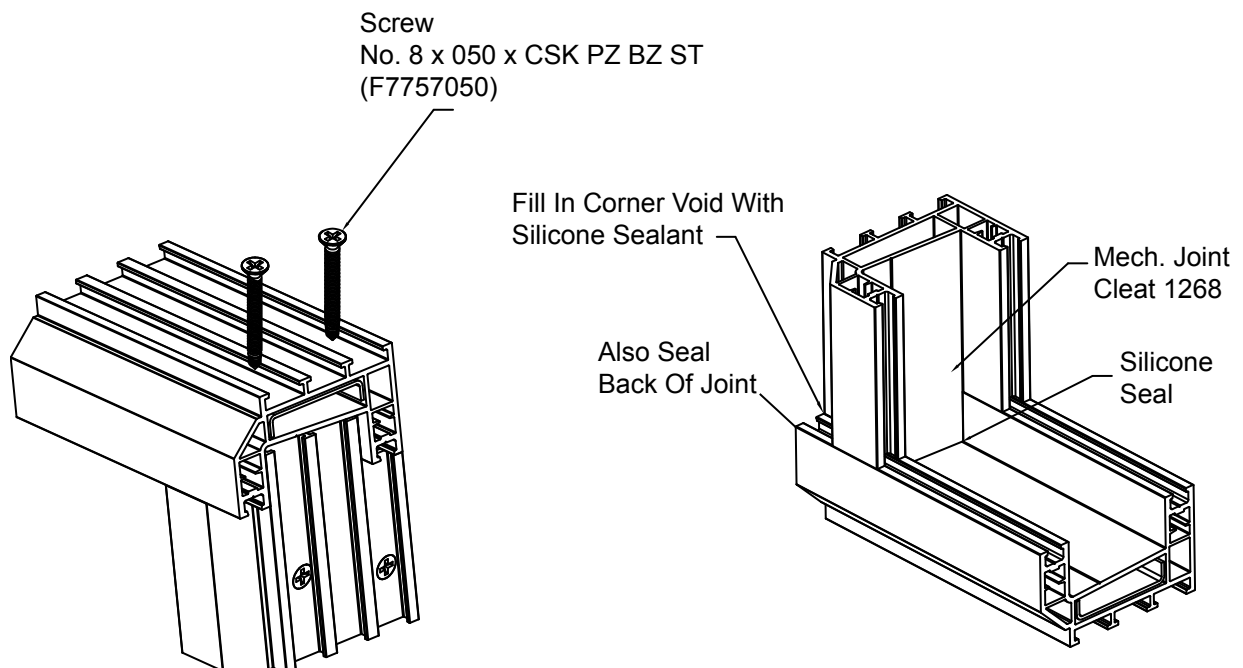
Secure joint as shown.

Screw 2 off 50mm (F7757050) self tapping screws into cleat, pulling the corner tightly together.

Seal inside and outside of joint using clear silicone sealant.

### Outer Frame Corner Cleat

The cleat is pre-assembled into the frame profile. Lay the outer frame down on a suitable surface, making sure the rebates (outside) are all to one side, and that on a two pane door the lock plate jamb is on the correct side. Offer one corner together making the ribs on the back of the jambs line up with the new head (or cill) profile.



# In-Line Sliding Patio Door Assembling The Frame

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## Assembling the Frame Continued

### Fixed Sashes

Stand the frame up against a suitable wall, and lift in the fixed sash/es by “springing” the head and cill in the middle of the frame.

At this stage the assembled frame can be installed into the structural opening.

Once the frame has been fixed, the fixed sash/es can be screwed to the outer frame through the pre-drilled holes using the 100mm tapcon screws supplied. Fit the brush sealing pads into the outer frame, centred above and below where the sashes couple together.

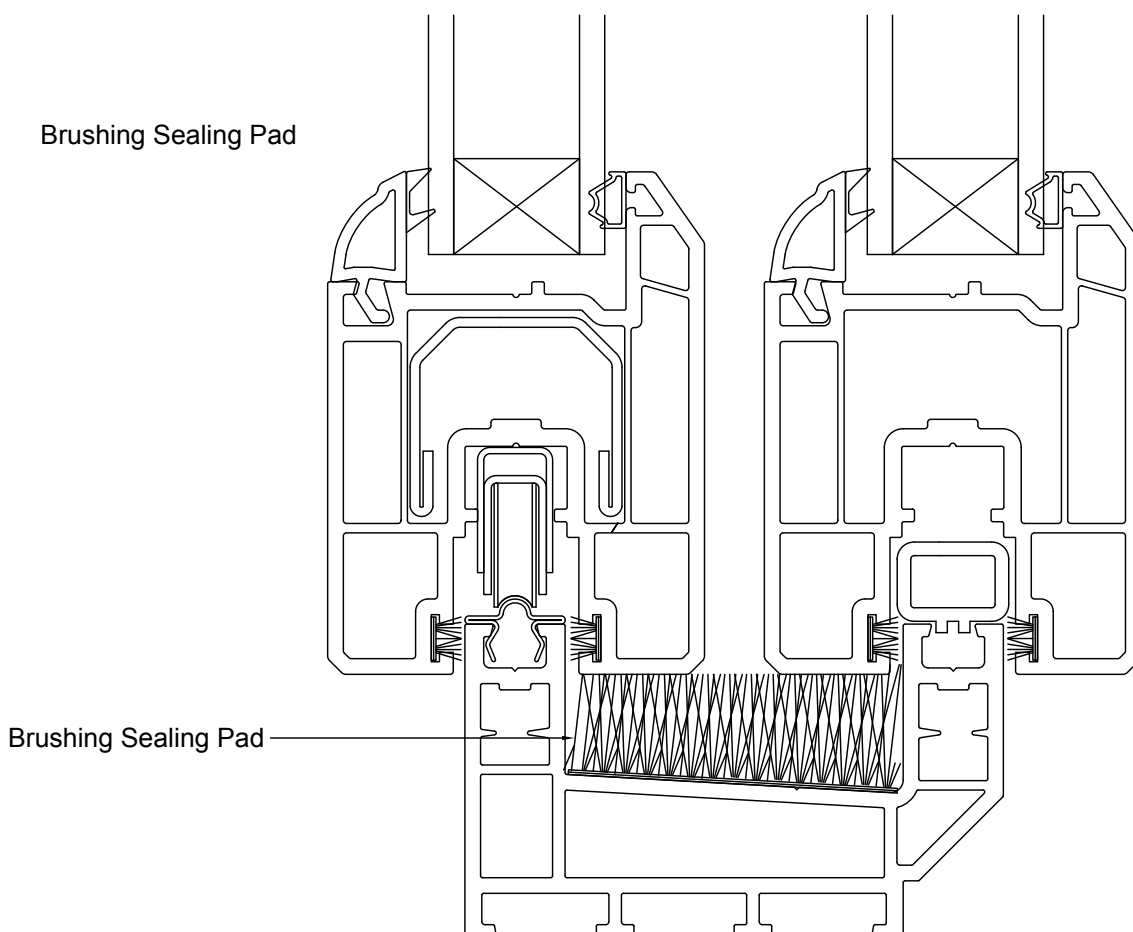
### Bump Stops

Locate the back of the bump stop into the dovetail channel of the outer frame upstand and with a rubber mallet secure into position.

### Trims

Fit the jamb cover (1253) trims first, then fit the head (1253) and black threshold (1263)\* trims using a rubber mallet to tap trim into the outside dovetail. Next fit the dovetail closure profile (1254) to the inside head dovetail and fit the stainless steel track to the inside dovetail at the bottom using a rubber mallet. Finally to cover drainage hole detail - insert Drainage Cover Trim (1255) into the inside channel of the outer frame (Cill) section, behind the fixed panel.

\*For (L) 1334 Low Threshold fit L1335 Threshold Trim.



# In-Line Sliding Patio Door Assembling The Frame

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SURVEY & INSTALLATION	OCTOBER 2016	16	TM-0002	63

## Assembling the Frame Continued

### Sliding Door(s)

Remove the sash end cover profile from the sash. Push the sash up into position at the head and lift the bottom over the track and let the sash drop into position on the track. Fit the handle set on the sash checking that the lock is in the unlocked position and the lever on the handle set is positioned as shown.

Once the final adjustments to the door have been completed and you have checked that the door locks correctly, you can replace the sash end cover profile.

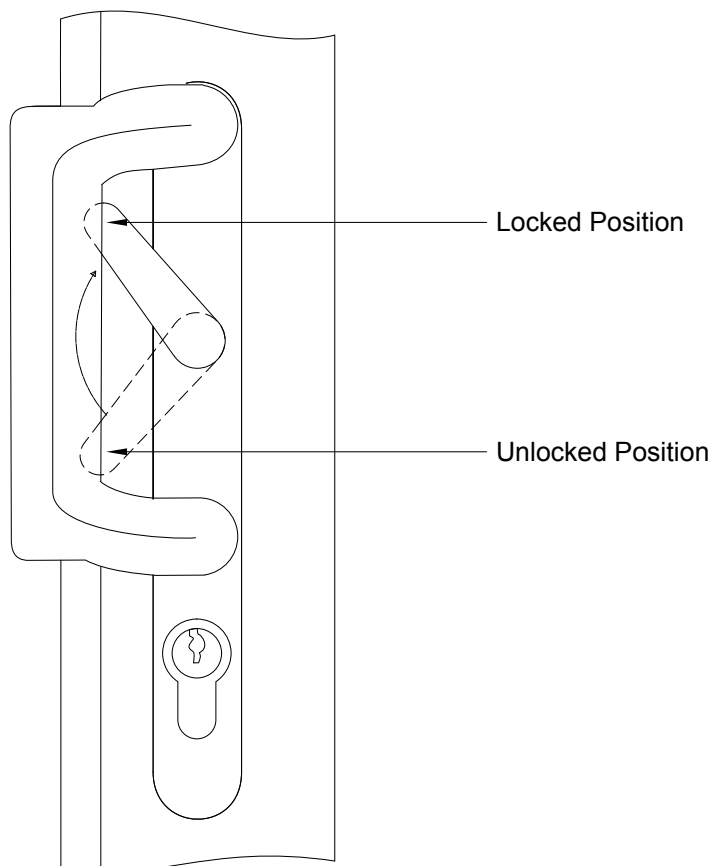
### Meeting Profile (3 and 4 pane doors only)

Adjust both doors so that they are square and parallel with each other. Cut the meeting profile 16mm shorter than sash height. Fix centrally to meeting stile of slave door using 55mm screws supplied. Fit end caps (1270) to top and bottom of the sash meeting profile using a proprietary PVC-U glue. Fit lock plate as stated.

### Lock Plate

Slide the door to a closed position. Mark the lock centre, as shown on the lock face plate, on the outer frame (for 3 and 4 pane doors see meeting profile) Offer the lock plate to the outer frame, making sure that the end caps are fitted, and line up the lock centre line with the horizontal line on the centre of the hook lock keep plate (keeping the words Patiomaster above and below the line. Fix using 8 off screws supplied. Fit closure profile (1254) above and below the lock plate.

Check that the door locks correctly and is square within the frame. Make any adjustments necessary by raising or lowering the rollers using a long shaft posidrive screwdriver, gaining access from the end of the sash. Fit the sash end closure profile.



# In-Line Sliding Patio Door Maintenance



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## INTRODUCTION

Patio doors are designed to be very low maintenance. The general service and maintenance tasks recommended are simple to carry out and do not require specialist skills, tools or equipment.

### Precautions

When using cleaning and lubricating products always follow the manufacturer's instructions; take care not to use an excessive quantity. For cleaning products, always test a small area of the product in an obscure location first.

NOTE: Do not use solvent-based or abrasive cleaning products or products containing bleaching agents. Do not use metal polish or a wirebrush.

## GLASS & WEATHERSEAL MAINTENANCE

### Glass Cleaning

Float glass, used in most double glazed units, is easily scratched and it is therefore recommended that hand jewellery is removed prior to cleaning. Any proprietary household glass cleaner may be used with a soft cloth and it is recommended that heavy external grime be initially removed with a solution of soap and water.

### Leaded Glass Cleaning

In this type of double glazing, lead strips are bonded to the inside/ outside of the outer pane of the unit in a variety of patterns. Take care when cleaning leaded lights as excessive pressure might dislodge the lead from the glass surface. The use of warm soapy water and a soft cloth, moderately applied, will prove an adequate cleaning method.

Note: external lead will oxidise, this is a natural phenomenon and cannot be avoided.

## Weatherseals

During cleaning ensure that the weatherseals fitted to your products do not become dislodged from their grooves. Should this occur, slide back into position immediately, to avoid damage when the door is closed. If the weatherseals are broken or damaged and draughts are felt around the product, ensure prompt replacement by contacting your installer.

Following the initial installation the weatherseal may require bedding in; causing a slight resistance when operating the door, the application of a silicone spray will aid the smooth operation of the door during this period.

## OUTER FRAME & SASH MAINTENANCE

Wash the frame with a soap and water solution, periodically as required, to remove any grime and atmospheric deposits. If required clean with a non-abrasive proprietary cleaner, suitable for plastics, using a soft cloth. Stubborn marks can be removed with a stronger, non-abrasive, proprietary cleaner such as a cream. Always take care not to disturb sealant.

At least every four months, clean the internal and external surfaces of the frame and glass (or glazed panel(s)) to remove atmospheric grime; always use a soft cloth with mild liquid detergent solution, rinse with water and dry off. Periodically check that visible external drainage holes are free from any obstruction; if blocked, remove obstruction and flush through with water to ensure correct drainage.



# In-Line Sliding Patio Door Maintenance



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## HARDWARE MAINTENANCE

### All lock types

The key-way, latch and keeps should be kept free from dirt, debris and obstruction at all times. On an annual basis check operation of the key mechanism with the door leaf open. If the key requires excessive force to engage the lock mechanism then lubricate the key-way with a silicone based spray lubricant; do not use oil or grease. On an annual basis lubricate the bevelled or rounded face of the latch and the latch strike on the keep with a smear of petroleum jelly or grease.

### Multi-point locks

On an annual basis apply a smear of petroleum jelly or grease to each side of each additional hook or bolt. Some multi-point locks are supplied with adjustable keeps. The Adjustment method is specific to the type of lock fitted, however, to achieve optimum performance lock keeps should be adjusted periodically.

### TRACK

Clean and lightly grease the track bearing surface annually with petroleum jelly.

### CYLINDER

Do not attempt to lubricate the locking cylinder.

## FURNITURE & FITTINGS MAINTENANCE

### Handles

On an annual basis clean and remove dirt and debris from moving parts. Lightly oil external moving parts with a light machine oil.

NOTE: Do not use a metal polish. Do not use any abrasive cleaning products or a wire brush.

### Letterplates

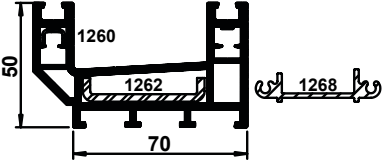
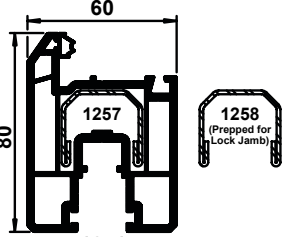
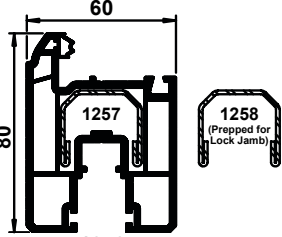
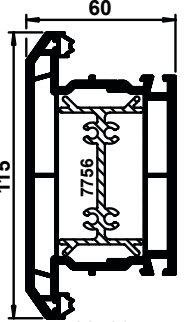








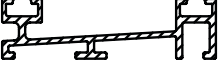


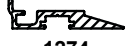




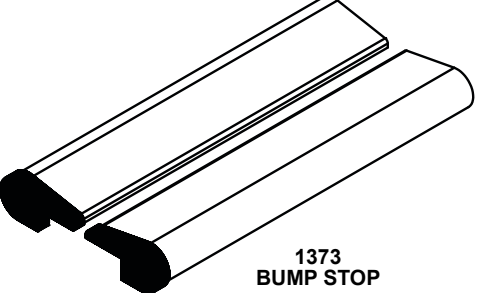
On an annual basis clean and remove dirt and debris from moving parts. Lightly oil external moving parts with a light machine oil.

NOTE: Letterplates with plastic torsion bars (visible when flap is lifted) do not require lubrication. For stubborn stains, use a soft cloth with mild liquid detergent solution, rinse with water and dry off. On an annual basis check that the external frame of the letterplate is flush with the face of the midrail. If evidence of a gap is found tighten the fixing screws located behind the internal flap; do not over-tighten screws. If a gap is still evident apply a small bead of a high modulus silicone around the full perimeter of the external frame.

### Bolts

On an annual basis lubricate the moving parts of surface fitted or mortice bolts with a small amount of petroleum jelly or grease.

# Sliding Patio Door

<b>MAIN PROFILES</b>	 <p>1200 OUTER FRAME</p>	 <p>60 80 1251 CHAMFERED SASH</p>	 <p>60 80 1252 FEATURE SASH</p>	 <p>60 115 7756 22480 MIDRAIL</p>	
	 <p>1253 HEAD/JAMB PROFILE</p>	 <p>1254 CLOSURE PROFILE</p>	 <p>1255 DRAINAGE TRIM</p>	<b>GLAZING BEADS</b>	 <p>2365 28mm BEVELLED BEAD</p>
	 <p>1266 1256 SASH MEETING PROFILE</p>	 <p>1289 COVER TRIM</p>	 <p>L1335 TREAD PROFILE (BLACK PVC-U)</p>		 <p>2395 28mm FEATURE BEAD</p>
	<b>METAL SECTIONS</b>	 <p>S1224 LOW THRESHOLD</p>	 <p>1334 LOW THRESHOLD THERMAL BREAK</p>		<b>WEATHERSEALS</b>
 <p>1263 THRESHOLD</p>		 <p>1274 INTERLOCK</p>	 <p>1261 STAINLESS STEEL TRACK</p>		
 <p>1204 DISTANCE PIECE</p>		 <p>1270 MEETING PROFILE END CAP</p>	<b>ANCILLARIES</b>	 <p>1272 DUST PLUG</p>	
 <p>1373 BUMP STOP</p>					

# In-Line Sliding Patio Door Technical Manual Issue Record



SECTION	DATE	ISS	REFERENCE	PAGE
ASSEMBLY SECTION DRAWINGS	OCTOBER 2016	16	TM-0002	67

Issue 1	09-02-10	Issue 11	29-10-14
Issue 2	20-04-10	Updated Weather Performance Section	Page 56
Added 'Enhanced Security' section	Page 46	Updated Survey & Installation Section	Pages 58-60
Issue 3	07-06-10	Updated Deductions & Parts Breakdown	Page 5
Changes made to 'Build Specification' section	Page 47	Updated Enhanced Security Section	Page 45
Issue 4	30-08-10	Removed 1275 Letterplate Fixing Page	Page 40
Changes made to 'Build Specification' section	Page 47	Changed the word 'Enhanced' to 'PAS24'	Throughout
Issue 5	14-09-11	Amend typo error	Page 34
Section 1250 updated & bead 2369 removed Throughout		Add Security Glazing Clips section	Page 55
Additional deductions for part no. 1253 added	Page 5	Issue 12	22-10-15
Part no. for Letter Plate removed from Deduction Chart	Page 6	Updated 1263 Threshold	Page 11
Re-ordered manual layout		Text Adjustment	Pages 44-45
Updated Wallchart	Page 67	PAS24 Note Added	Page 59
Issue 6	01-06-12	Updated Wallchart	Page 68
Introduction re-written	Page 4	Issue 13	25-07-16
Alteration made to equal glass width deduction & additional deductions added	Page 5	Up issue for new 1200 frame, 1268 cleat and 1262 steel.	Throughout
Dimensional alterations to horizontal section drawings	Page 17	Issue 14	30-08-16
End Prep. details added for 1252 sash	Page 25	Updated to cover typo's and foil changes	Throughout
Updated Wallchart	Page 67	Issue 15	07-09-16
Issue 7	31-08-12	Updated to cover foil changes	Throughout
Bead 2389 replaced by 2395	Throughout	Updated drawings to cover quadrant changes	Page 61
Security handle part number change	Page 45	Issue 16	19/10/16
Updated handle part number in title	Page 46	Part number change	Page 4
Updated Wallchart	Page 67		
Issue 8 05-11-12			
Updated manual to clarify enhanced security reinforcement details	Pages 52 & 53		
Issue 9	24-04-13		
Additional deductions added	Page 5		
Detail for 1256 pre drilling for roller adjustment added	Page 29		
Updated manual to reflect the issue of PAS 24:2012 which now incorporates windows & doorsets	Page 45		
Enhanced security patio door size increased to 2400x2200mm	Page 46		
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Amendments to paragraph for glass options for PAS24 doors	Page 45		
Also to remove thumbturn as an option			
Amend dimension on horizontal assembly section	Page 17		