

TECHNICAL MANUAL

101.6mm COMMERCIAL FRAME CENTRE GLAZED - DOUBLE GLAZED

101.6mm COMMERCIAL FRAME CENTRE GLAZED - DOUBLE GLAZED



COPYRIGHT

This Technical manual remains the property of Rapid Aluminium and contains privileged information which is the subject of copyright and the manual or any part thereof may not be reproduced, copied or loaned in any form without the written permission of Rapid Aluminium Trading P/L. This manual is to be returned to Rapid Aluminium when requested.

DISCLAIMER

Whilst every effort and utmost care has been made to ensure the technical details contained within this manual are accurate, Rapid Aluminium can take no responsibility for any loss or damage whatsoever arising as a result of any errors contained in this manual. This is merely a guideline for fabrication and assembly purposes. Also, interpretation of standards or codes within this manual is Rapid Aluminium's interpretation for such codes. Responsibility for code compliance remains with the user of this manual. In some cases product dimensions may vary or be changed without notice. The user of this manual should not act or rely upon on any information contained in this manual without first obtaining appropriate professional advice relating to their particular circumstances. Rapid Aluminium Trading P/L disclaims all liability for loss or damage suffered by any party who acts or fails to act in reliance of this manual.

RAPID ALUMINIUM GENERAL WARRANTY

No warranty, condition or term applies to the supply by Rapid Aluminium of products and their components manufactured by it unless it is set out in this Condition or is implied by law and cannot be excluded. If any term is implied into this Condition by law, and it would be illegal for Rapid Aluminium to exclude it, then so far as the law allows, the liability of Rapid Aluminium for breach of that term is limited to the cost of repair or replacement (at Rapid's option) of any product or component manufactured by it that Rapid Aluminium determines is defective in materials under normal use and service. Rapid Aluminium is not liable for any other direct or indirect cost, loss or damage to person or property, or for any consequential losses, including cartage and installation. While any product or component is in the custody of Rapid Aluminium for investigation or repair it will be at the risk of the purchaser and Rapid Aluminium or its employees or agents will not be liable for any damage to it. Rapid Aluminium is not liable to the purchaser unless the purchaser notifies Rapid Aluminium in writing immediately on it becoming aware of the alleged defect, and in any event no later than 30 days after the date of delivery. Rapid Aluminium is not liable for any product or component that is not manufactured by it, but Rapid will use its reasonable endeavors to obtain for the purchaser the benefit of any applicable manufacturer's warranty.

101.6mm COMMERCIAL FRAME CENTRE GLAZED - DOUBLE GLAZED



CONTENTS

1 SPECIFICATION

1.1 Performance and features

2 LOAD CHARTS

2.1-2.6 Wind Pressure Tables

3 EXTRUSIONS

3.1 - 3.7 Extrusion profiles

4 COMPONENTS

4.1 - 4.3 Accessories

5 GENERAL ARRANGEMENTS

5.1 - 5.8 Elevations and plan views

6 MACHINING DETAILS

6.1 - 6.2 Punching details

7 GLAZING DETAILS

7.1 Double glazed table

8 GLAZING DETAILS

8.1 Sub sill sealing details

101.6mm COMMERCIAL FRAME CENTRE GLAZED - DOUBLE GLAZED



SPECIFICATION

FRAME DIMENSIONS

- 101.6mm x 50mm

MAX PERFORMANCE

- Water Penetration: 600Pa Water

MAXIMUM SIZES

- Max mullion height: 5100
- Max mullion centres: 2200

Refer wind load charts for sizing and max pressures.

GLAZING

- Double Glazed: 22mm - 30mm

101.6mm COMMERCIAL FRAME CENTRE GLAZED - DOUBLE GLAZED

LOAD TABLE - RC401 \ RC404 COUPLED MULLION

SECTION PROPERTIES

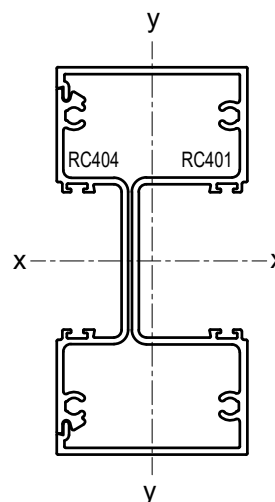
$I_{xx}: 992 \times 10^3 \text{ mm}^4$

Alloy: 6060 T5

Max Stress 110 Mpa

S = Serviceability limit state I/250

U = Ultimate limit state



Mullion Height	Maximum Design Pressure (Pa)							
3300	S	750	610					
	U	2010	1620					
3200	S	820	670	570				
	U	2140	1730	1460				
3100	S	910	740	620	550			
	U	2280	1850	1560	1370			
3000	S	1000	820	690	610	550		
	U	2440	1980	1680	1470	1310		
2900	S	1110	910	770	680	610	560	530
	U	2620	2120	1800	1580	1420	1300	1210
2800	S	1240	1010	860	760	690	630	590
	U	2810	2280	1940	1700	1530	1410	1320
2700	S	1390	1130	970	850	770	720	670
	U	3030	2470	2100	1840	1660	1530	1440
2600	S	1560	1270	1090	960	880	810	770
	U	3280	2670	2280	2010	1810	1680	1580
2500	S	1760	1440	1240	1100	1000	930	890
	U	3550	2900	2480	2190	1990	1840	1740
2400	S	2000	1640	1410	1260	1150	1080	1030
	U	3870	3160	2710	2400	2180	2030	1940
Mullion Ctrs		800	1000	1200	1400	1600	1800	2000

This table is based on theoretical section properties

101.6mm COMMERCIAL FRAME CENTRE GLAZED - DOUBLE GLAZED

LOAD TABLE - RC406 / RC407 STD SPLIT MULLION

SECTION PROPERTIES

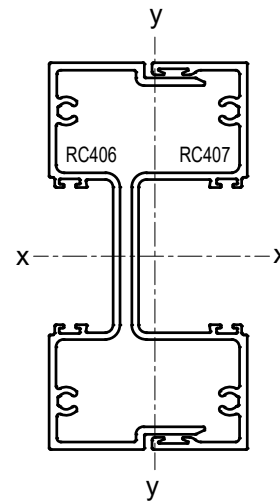
$I_{xx}: 1164 \times 10^3 \text{ mm}^4$

Alloy: 6060 T5

Max Stress 110 Mpa

S = Serviceability limit state I/250

U = Ultimate limit state



Mullion Height	Maximum Design Pressure (Pa)							
4350	S	880	710	600				
	U	2360	1910	1610				
4200	S	970	780	660	580			
	U	2510	2030	1720	1500			
4050	S	1070	870	730	640	580	530	
	U	2680	2170	1840	1600	1430	1310	
3900	S	1180	960	810	710	640	590	550
	U	2860	2320	1970	1720	1540	1410	1310
3750	S	1310	1060	910	800	720	660	620
	U	3070	2490	2110	1850	1660	1520	1420
3600	S	1460	1190	1010	890	800	740	700
	U	3300	2680	2280	2000	1800	1650	1540
3450	S	1630	1330	1140	1000	910	840	790
	U	3560	2890	2460	2170	1950	1800	1690
3300	S	1830	1500	1280	1130	1030	960	900
	U	3850	3130	2670	2350	2130	1970	1850
3150	S	2070	1690	1450	1290	1170	1090	1040
	U	4170	3400	2910	2570	2330	2160	2050
3000	S	2350	1920	1650	1470	1350	1260	1210
	U	4540	3710	3180	2820	2560	2390	2270
Mullion Ctrs		800	1000	1200	1400	1600	1800	2000

This table is based on theoretical section properties

101.6mm COMMERCIAL FRAME CENTRE GLAZED - DOUBLE GLAZED

LOAD TABLE - RC408 / RC409 HD SPLIT MULLION

SECTION PROPERTIES

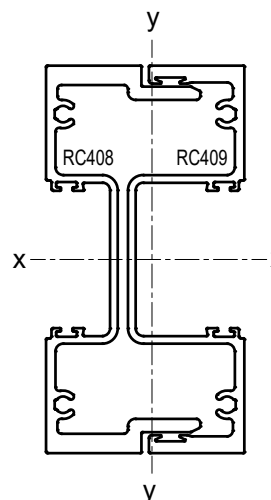
$I_{xx}: 1849 \times 10^3 \text{ mm}^4$

Alloy: 6060 T5

Max Stress 110 Mpa

S = Serviceability limit state I/250

U = Ultimate limit state



Mullion Height	Maximum Design Pressure (Pa)							
5700	S	1400	1130	960	840	750	680	630
	U	3740	3030	2560	2230	1990	1810	1670
5400	S	1540	1250	1060	930	830	760	700
	U	3990	3230	2730	2380	2130	1940	1790
5100	S	1700	1380	1170	1020	920	840	780
	U	4260	3450	2920	2550	2280	2080	1930
4800	S	1880	1520	1300	1140	1020	940	880
	U	4550	3690	3130	2740	2450	2240	2080
4500	S	2080	1690	1440	1270	1140	1050	980
	U	4880	3960	3360	2940	2640	2420	2260
4200	S	2320	1890	1610	1420	1280	1180	1110
	U	5240	4260	3620	3180	2860	2630	2460
3900	S	2590	2120	1810	1600	1450	1340	1260
	U	5650	4600	3910	3440	3110	2860	2680
3600	S	2910	2380	2040	1800	1640	1520	1440
	U	6000	4980	4250	3740	3380	3130	2950
3300	S	3000	2690	2310	2050	1870	1740	1660
	U	6000	5410	4620	4080	3700	3440	3250
3000	S	3000	3000	2630	2340	2150	2010	1920
	U	6000	5900	5050	4480	4070	3800	3610
Mullion Ctrs		800	1000	1200	1400	1600	1800	2000

This table is based on theoretical section properties

101.6mm COMMERCIAL FRAME CENTRE GLAZED - DOUBLE GLAZED

LOAD TABLE - RC405 TRANSOM

SECTION PROPERTIES

$I_{xx}: 1769 \times 10^3 \text{ mm}^4$

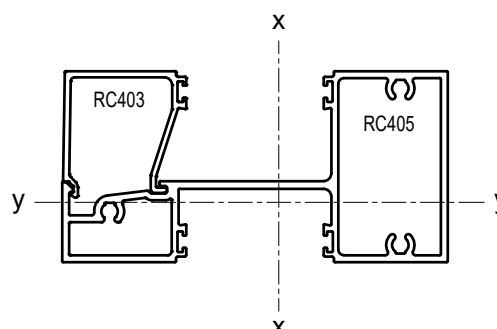
$I_{yy}: 227 \times 10^3 \text{ mm}^4$

Alloy: 6060 T5

Max Stress 110 Mpa

S = Serviceability limit state l/250

U = Ultimate limit state



Transom Ctrs	Maximum Design Pressure (Pa)							
1700	S	3000	3000	3000	2850	2230		
	U	6000	6000	4270	3390	2760		
1600	S	3000	3000	3000	3000	2250		
	U	6000	6000	4500	3550	2790		
1500	S	3000	3000	3000	3000	2300		
	U	6000	6000	4740	3610	2860		
1400	S	3000	3000	3000	3000	2360		
	U	6000	6000	4780	3680	2950		
1300	S	3000	3000	3000	3000	2450		
	U	6000	6000	4870	3800	3070		
1200	S	3000	3000	3000	3000	2570	1960	
	U	6000	6000	5030	3970	3220	2680	
1100	S	3000	3000	3000	3000	2720	2080	
	U	6000	6000	5260	4180	3420	2850	
1000	S	3000	3000	3000	3000	2910	2240	
	U	6000	6000	5570	4470	3670	3080	
900	S	3000	3000	3000	3000	3000	2440	1930
	U	6000	6000	5990	4840	3990	3360	2860
800	S	3000	3000	3000	3000	3000	2690	2130
	U	6000	6000	6000	5320	4410	3720	3180
Max Weight								
Transom length		1200	1350	1500	1650	1800	1950	2100

This table is based on theoretical section properties

101.6mm COMMERCIAL FRAME CENTRE GLAZED - DOUBLE GLAZED

LOAD TABLE - RC402 / RC404 TRANSOM

SECTION PROPERTIES

$I_{xx}: 1437 \times 10^3 \text{ mm}^4$

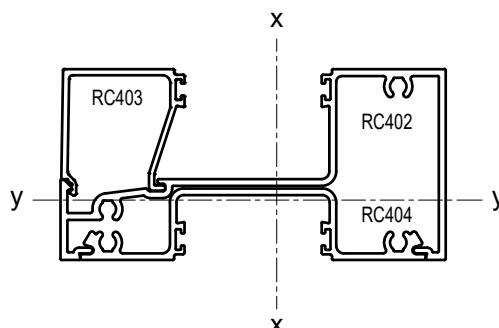
$I_{yy}: 142 \times 10^3 \text{ mm}^4$

Alloy: 6060 T5

Max Stress 110 Mpa

S = Serviceability limit state l/250

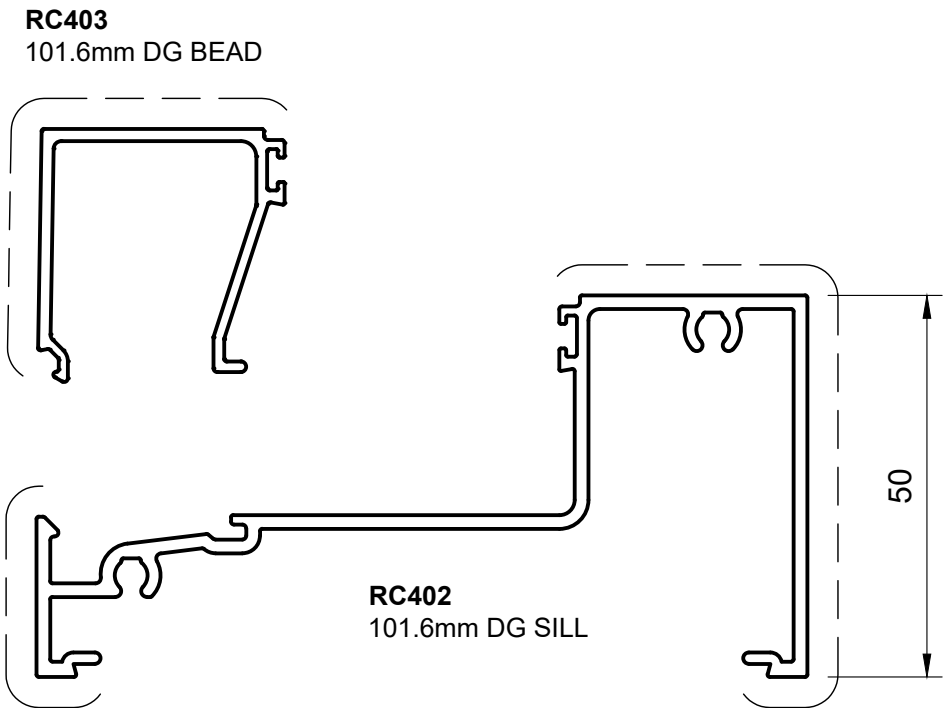
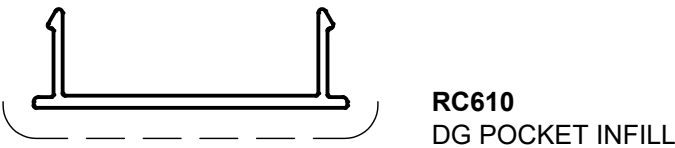
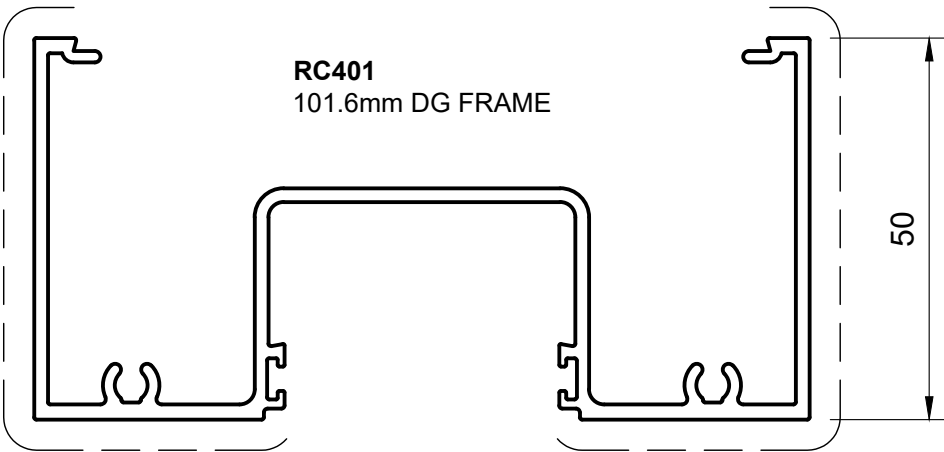
U = Ultimate limit state



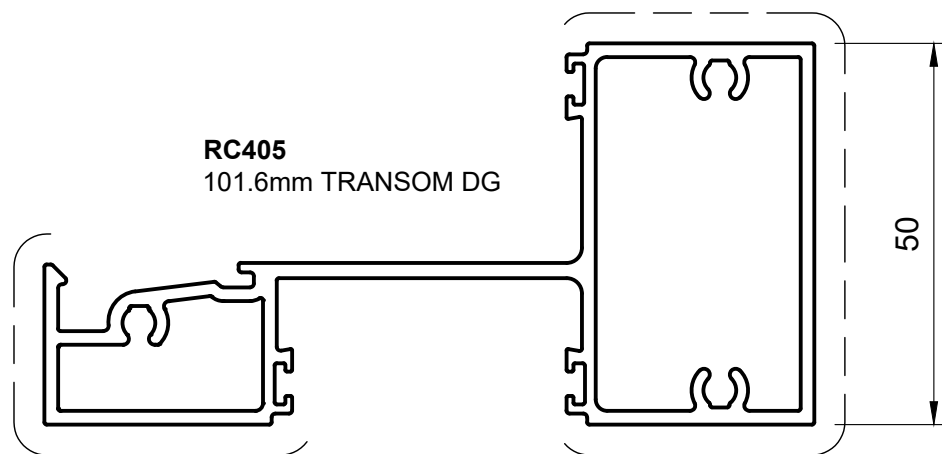
Transom Ctrs	Maximum Design Pressure (Pa)							
1700	S	3000	3000	3000	3000			
	U	6000	6000	4700	3850			
1600	S	3000	3000	3000	3000			
	U	6000	6000	4970	3940			
1500	S	3000	3000	3000	3000			
	U	6000	6000	5240	3980			
1400	S	3000	3000	3000	3000			
	U	6000	6000	5270	4070			
1300	S	3000	3000	3000	3000	2760		
	U	6000	6000	5380	4200	3390		
1200	S	3000	3000	3000	3000	2890		
	U	6000	6000	5550	4380	3560		
1100	S	3000	3000	3000	3000	3000		
	U	6000	6000	5800	4620	3780		
1000	S	3000	3000	3000	3000	3000		
	U	6000	6000	6000	4930	4050		
900	S	3000	3000	3000	3000	3000		
	U	6000	6000	6000	5340	4410		
800	S	3000	3000	3000	3000	3000		
	U	6000	6000	6000	5870	4870		
Max Weight		120	120	120	90	70		
Transom length		1200	1350	1500	1650	1800	1950	2100

This table is based on theoretical section properties

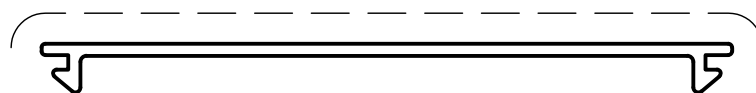
101.6mm COMMERCIAL FRAME
CENTRE GLAZED - DOUBLE GLAZED
EXTRUSION PROFILES



101.6mm COMMERCIAL FRAME CENTRE GLAZED - DOUBLE GLAZED EXTRUSION PROFILES



CF405
101.6mm FLAT FILLER

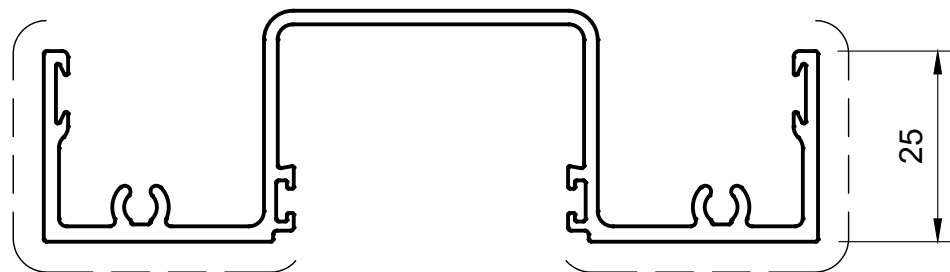
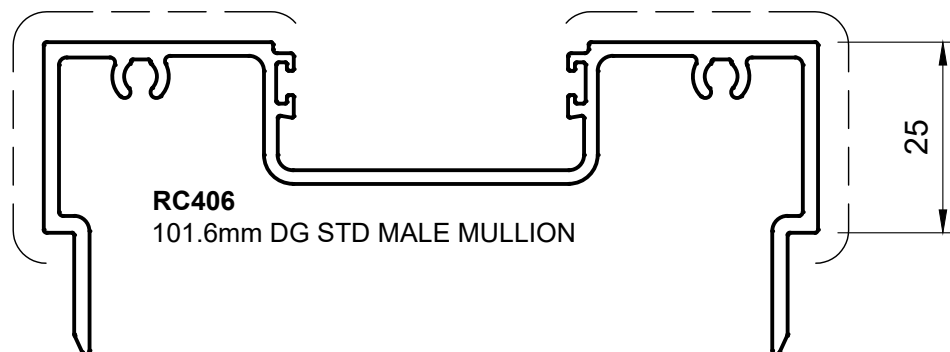


RC404
101.6mm GLAZING ADAPTOR DG



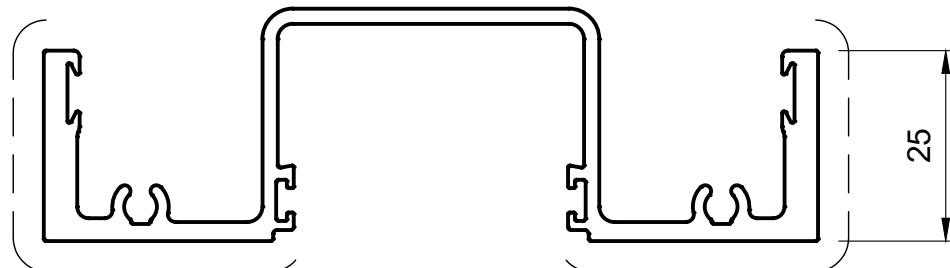
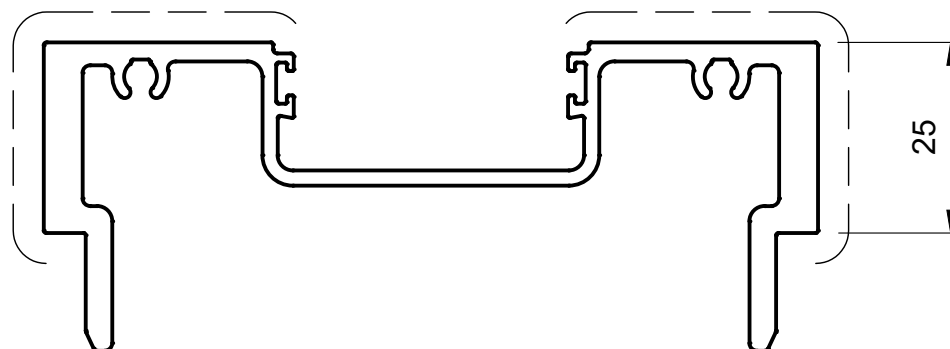
101.6mm COMMERCIAL FRAME CENTRE GLAZED - DOUBLE GLAZED

EXTRUSION PROFILES



RC407
101.6mm DG STD FEMALE MULLION

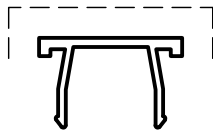
RC408
101.6mm DG HD MALE MULLION



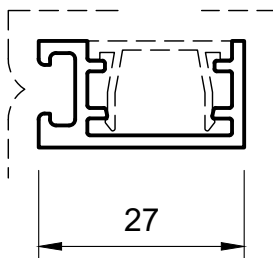
RC409
101.6mm DG HD FEMALE MULLION

101.6mm COMMERCIAL FRAME CENTRE GLAZED - DOUBLE GLAZED

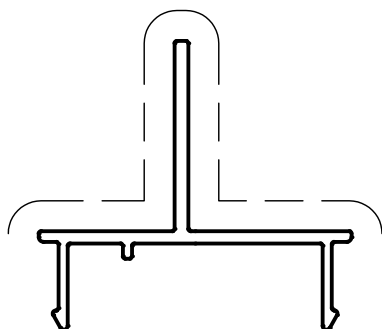
EXTRUSION PROFILES



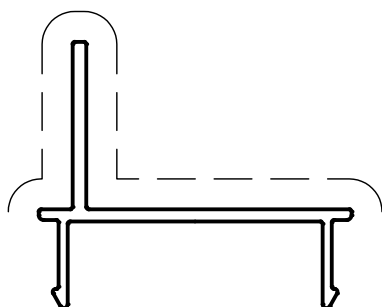
CF306
INFILL



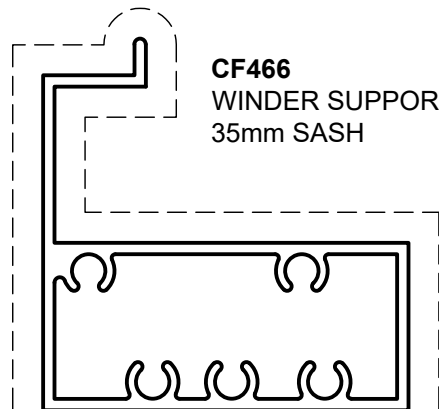
CF429C
PLANT ON DOOR STOP



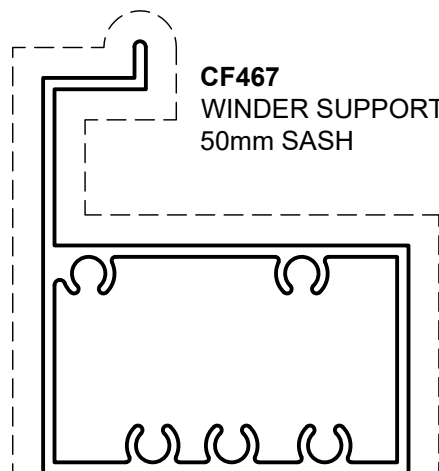
RC411
50mm AWNING STOP - 101.6mm DG



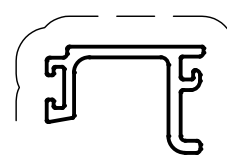
RC412
35mm AWNING STOP - 101.6mm DG



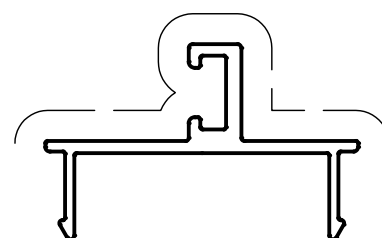
CF466
WINDER SUPPORT
35mm SASH



CF467
WINDER SUPPORT
50mm SASH

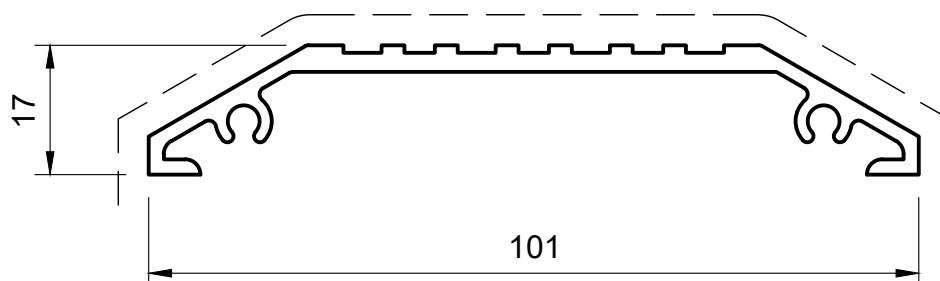


DG POCKET REDUCER

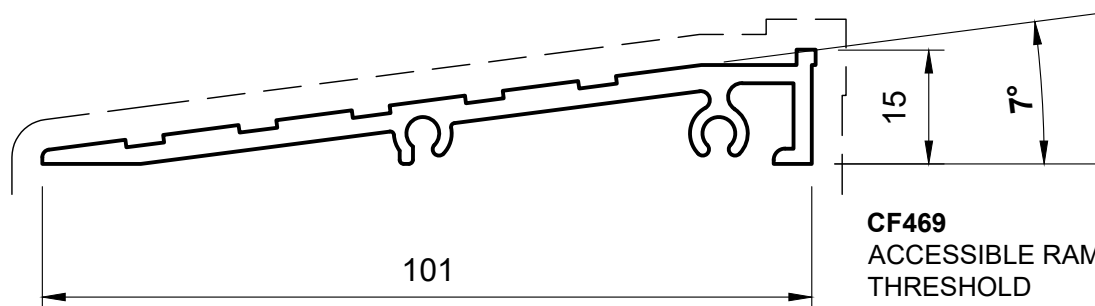


RC413
45mm DOOR STOP - 101.6mm DG

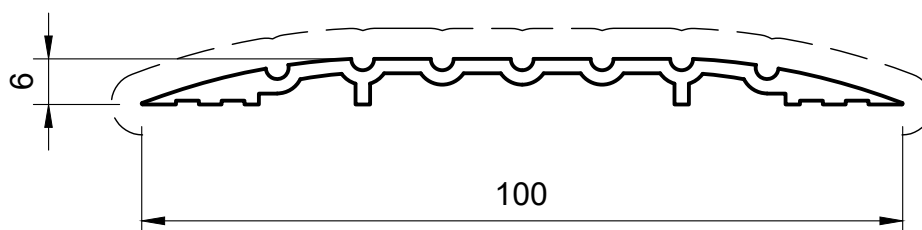
101.6mm COMMERCIAL FRAME CENTRE GLAZED - DOUBLE GLAZED EXTRUSION PROFILES



CF468
BEVELLED
THRESHOLD



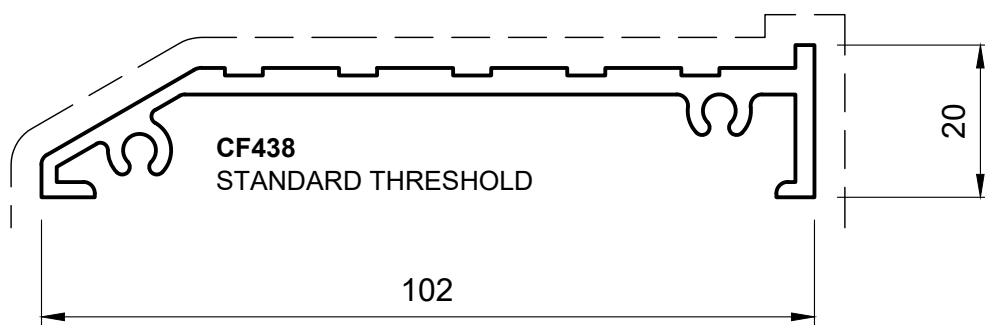
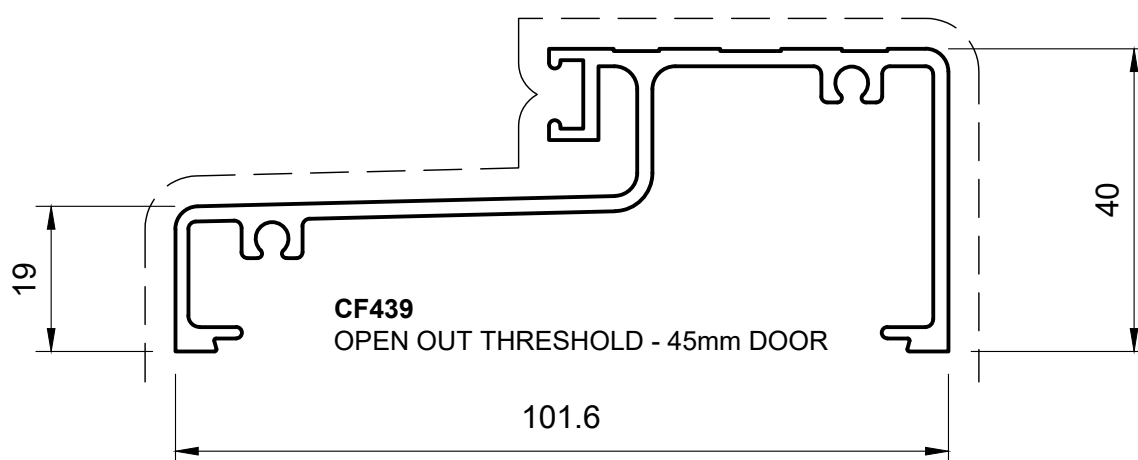
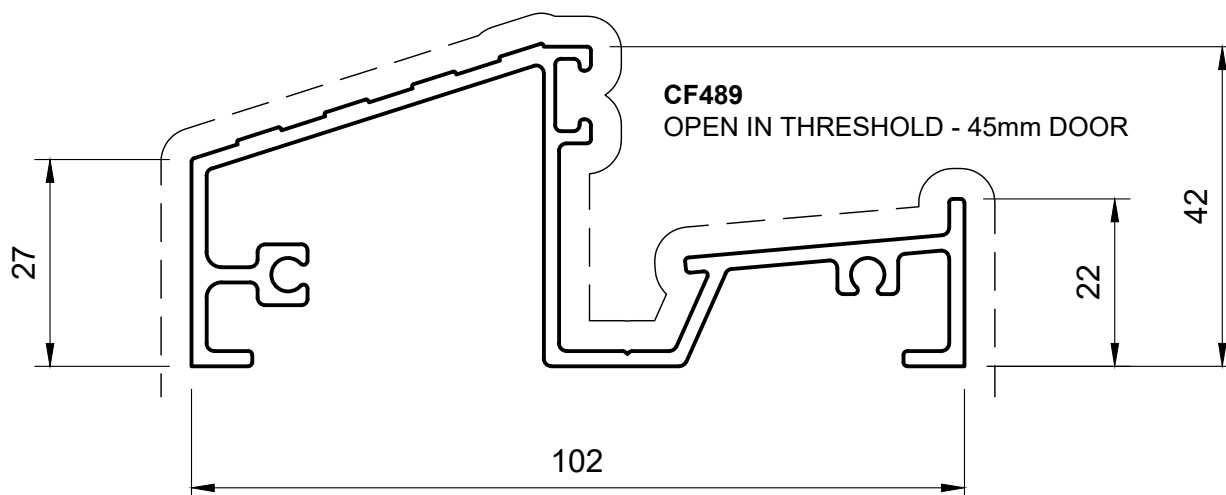
CF469
ACCESSIBLE RAMP
THRESHOLD



CF469
LOW PROFILE
THRESHOLD

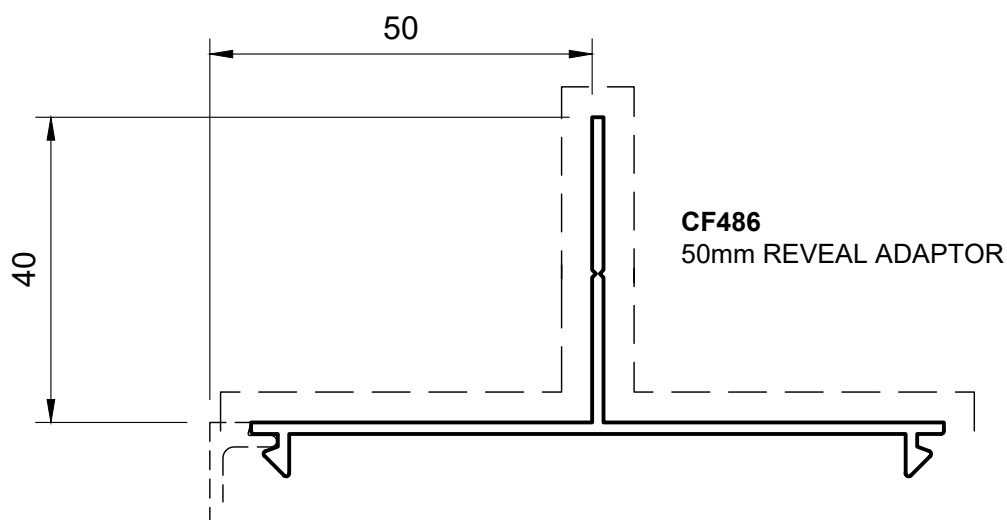
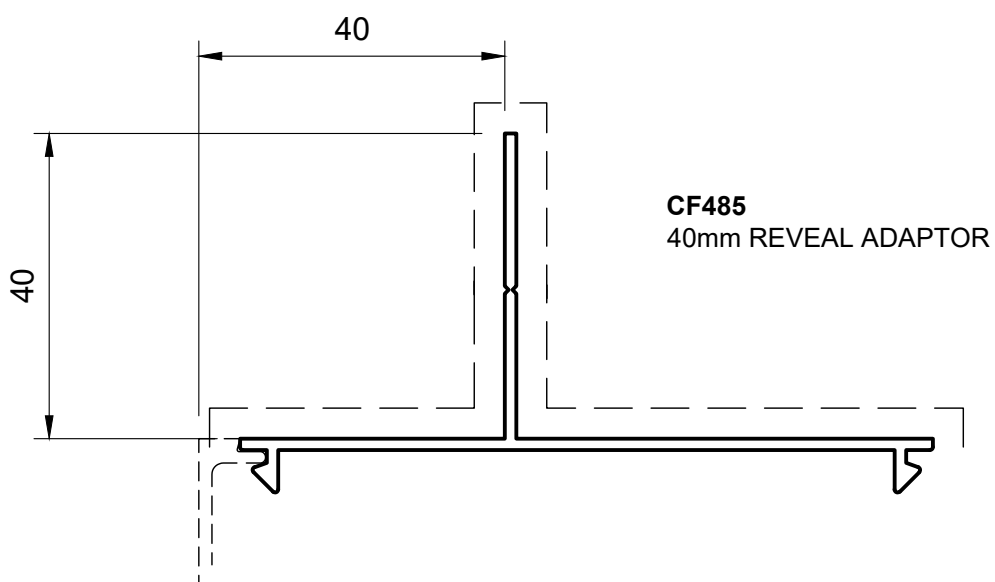
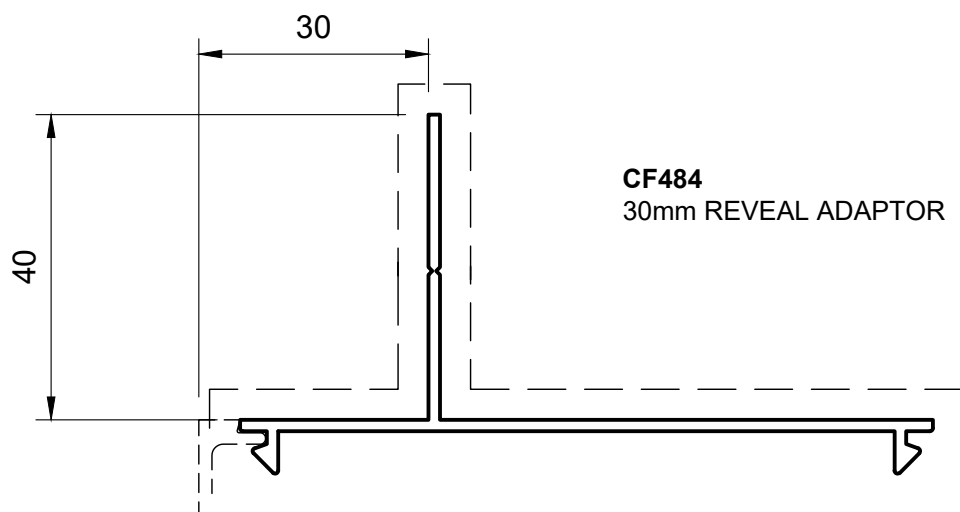
101.6mm COMMERCIAL FRAME CENTRE GLAZED - DOUBLE GLAZED

EXTRUSION PROFILES



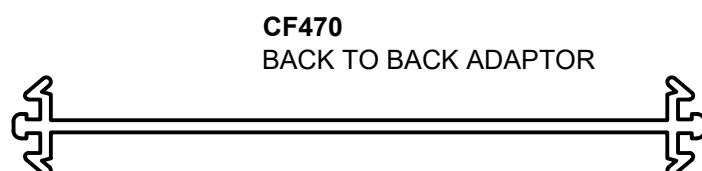
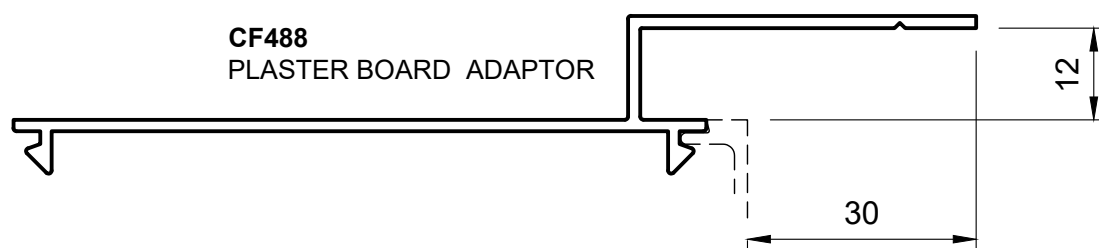
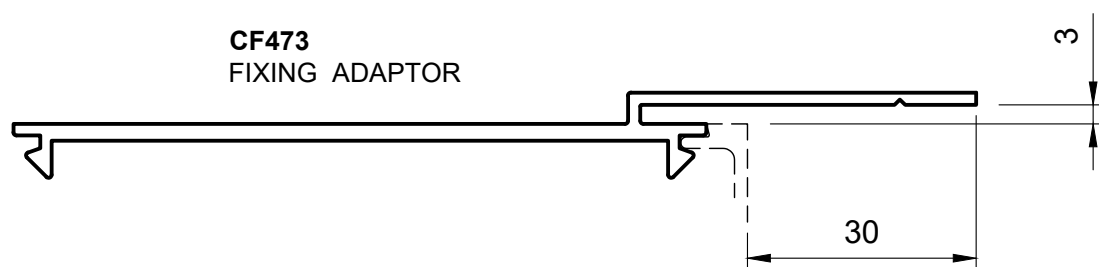
101.6mm COMMERCIAL FRAME CENTRE GLAZED - DOUBLE GLAZED

EXTRUSION PROFILES



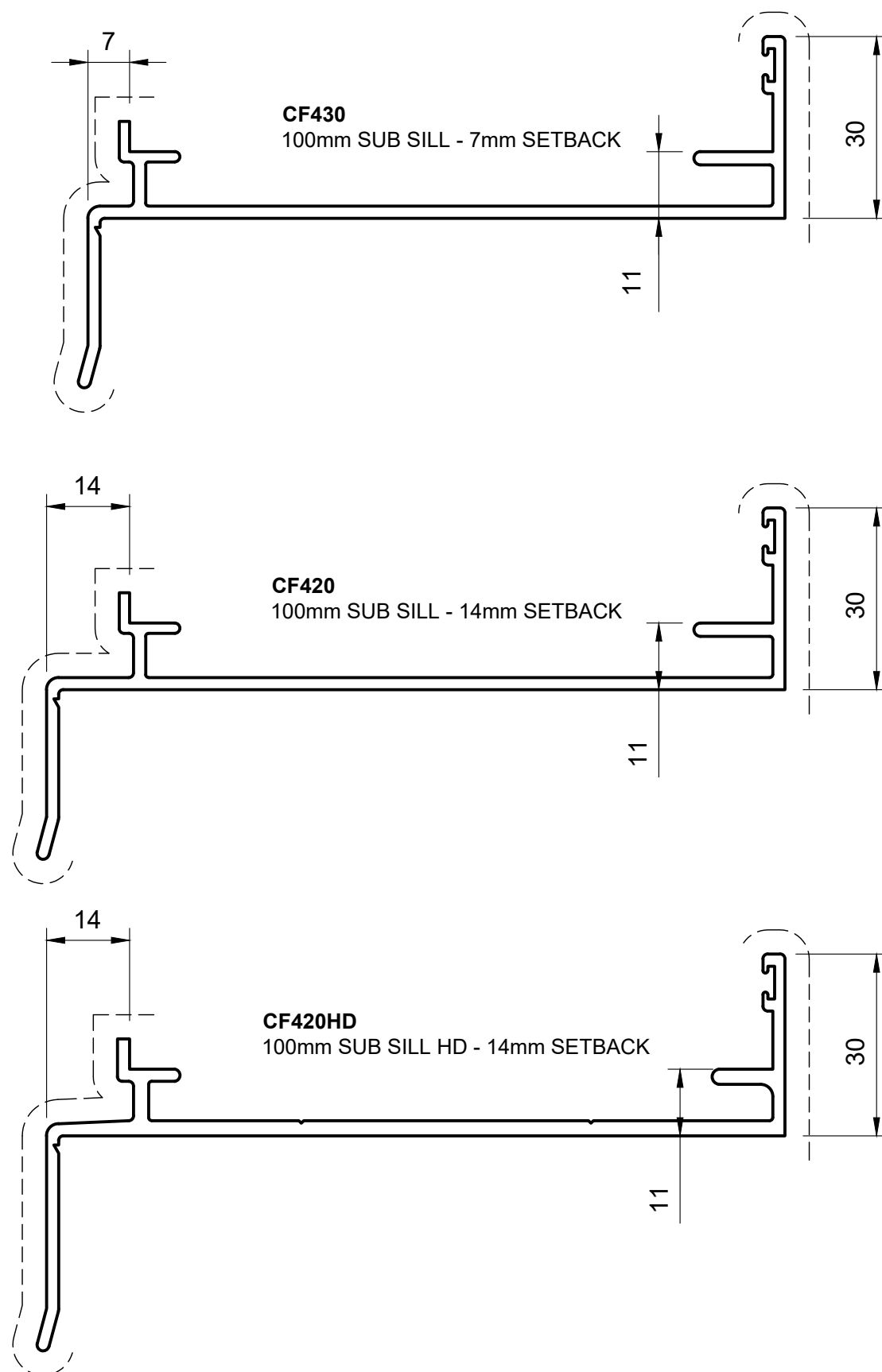
101.6mm COMMERCIAL FRAME CENTRE GLAZED - DOUBLE GLAZED

EXTRUSION PROFILES

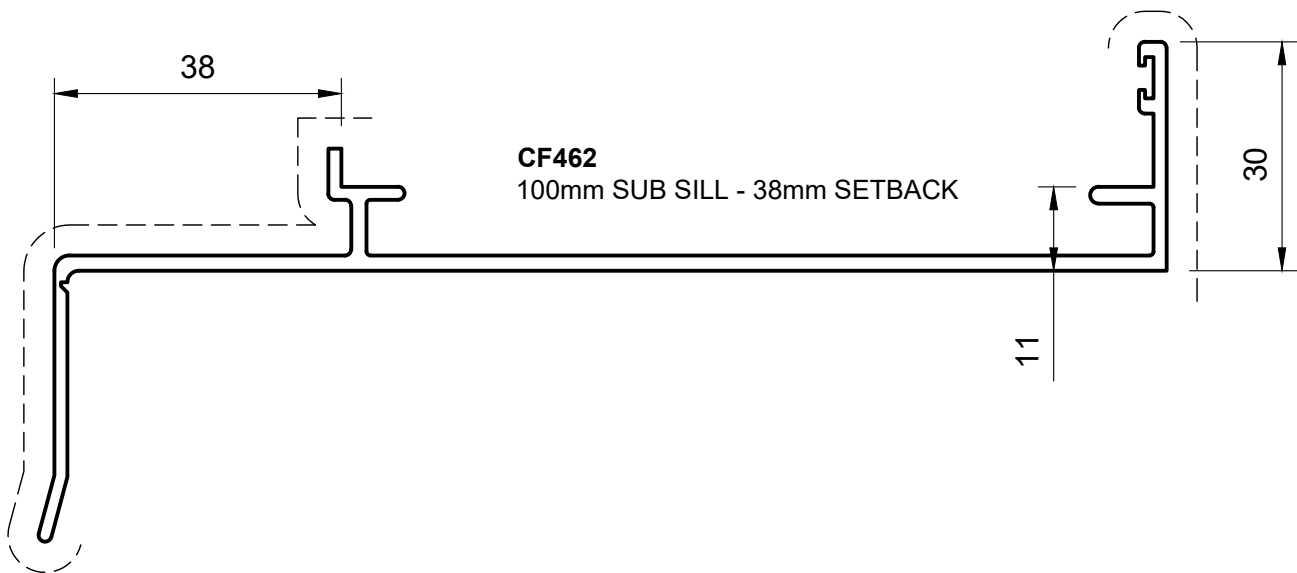
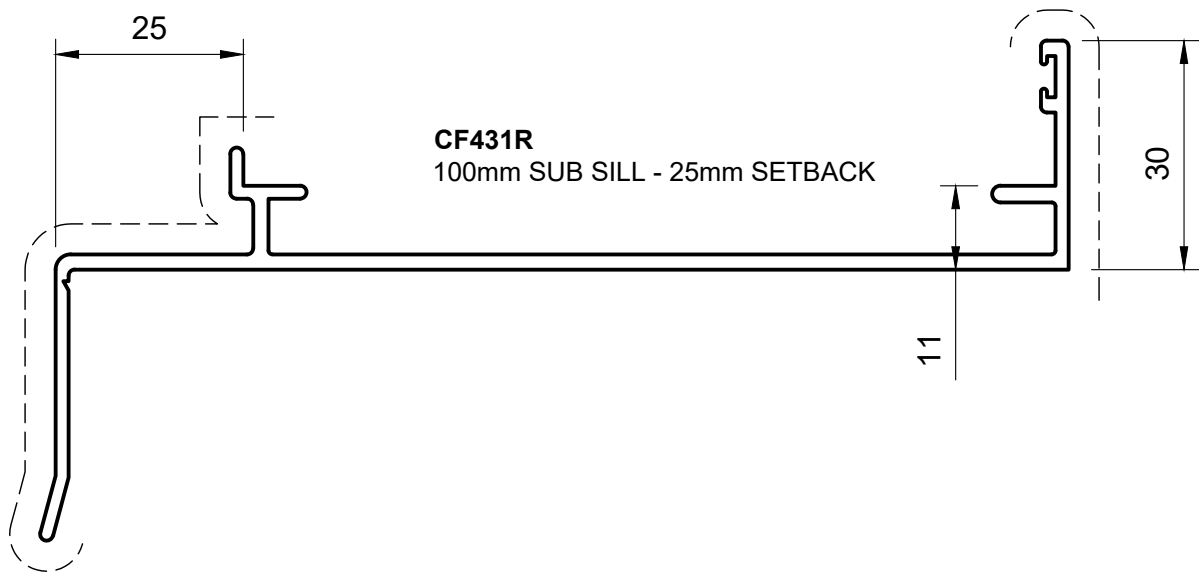


101.6mm COMMERCIAL FRAME CENTRE GLAZED - DOUBLE GLAZED

100mm SUB SILLS

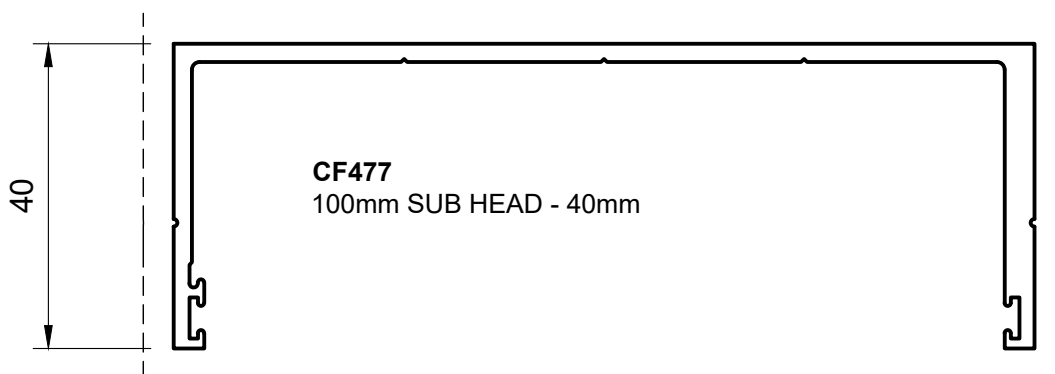
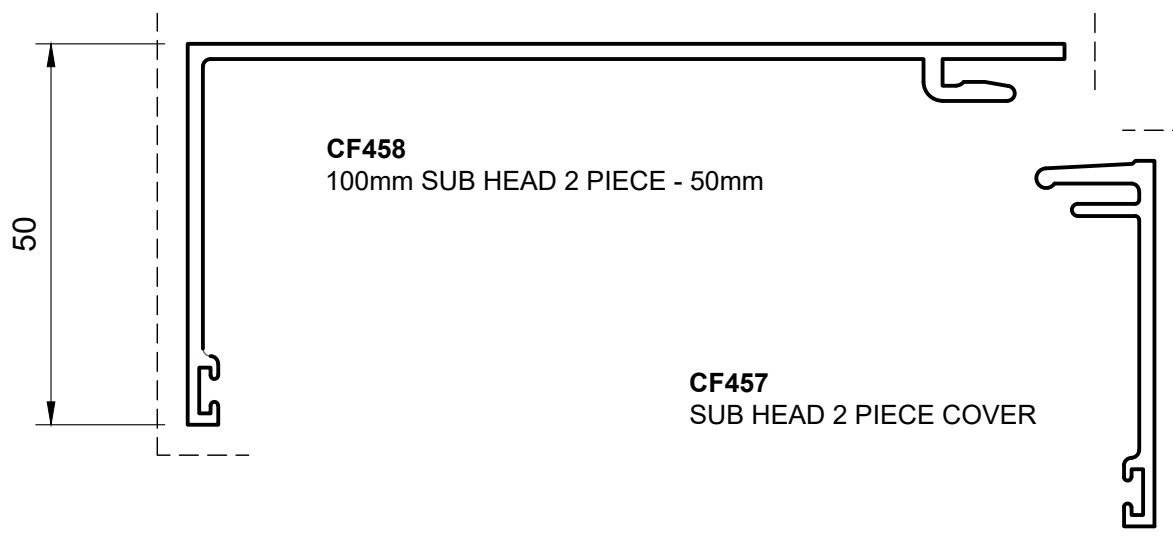
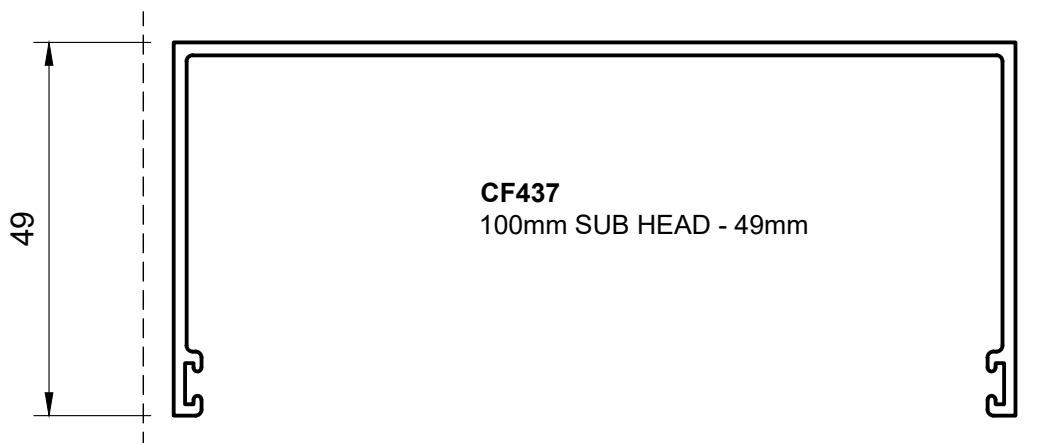


101.6mm COMMERCIAL FRAME
CENTRE GLAZED - DOUBLE GLAZED
100mm SUB SILLS



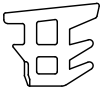
101.6mm COMMERCIAL FRAME CENTRE GLAZED - DOUBLE GLAZED

100mm SUB HEADS



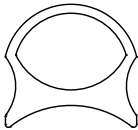
101.6mm COMMERCIAL FRAME
CENTRE GLAZED - DOUBLE GLAZED
ACCESSORIES



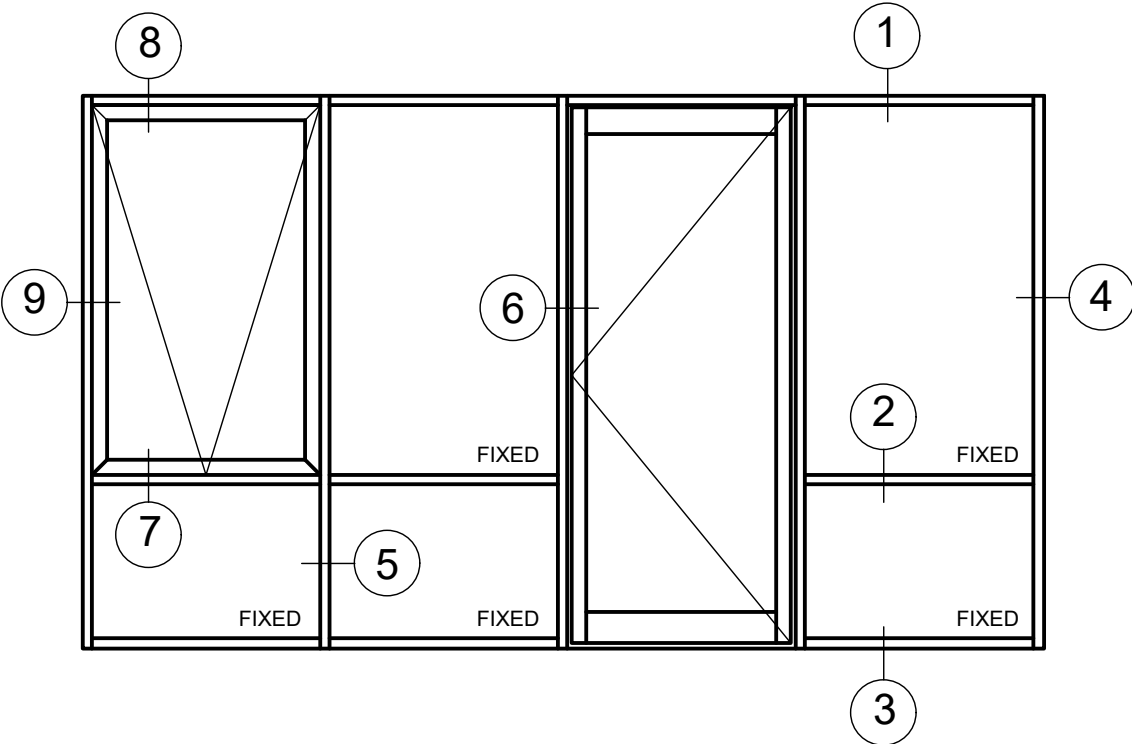
 CFH204 GLAZING WEDGE (4mm GAP) 100m ROLL	 CFH205 GLAZING WEDGE (5mm GAP) 100m ROLL
 CFH206 GLAZING WEDGE (6mm GAP) 100m ROLL	 CFH207 GLAZING WEDGE (7mm GAP) 100m ROLL
 CFH208 GLAZING WEDGE (8mm GAP) 100m ROLL	 CFH260 CAPTIVE WEDGE (6mm GAP) 100m ROLL

101.6mm COMMERCIAL FRAME
CENTRE GLAZED - DOUBLE GLAZED
ACCESSORIES



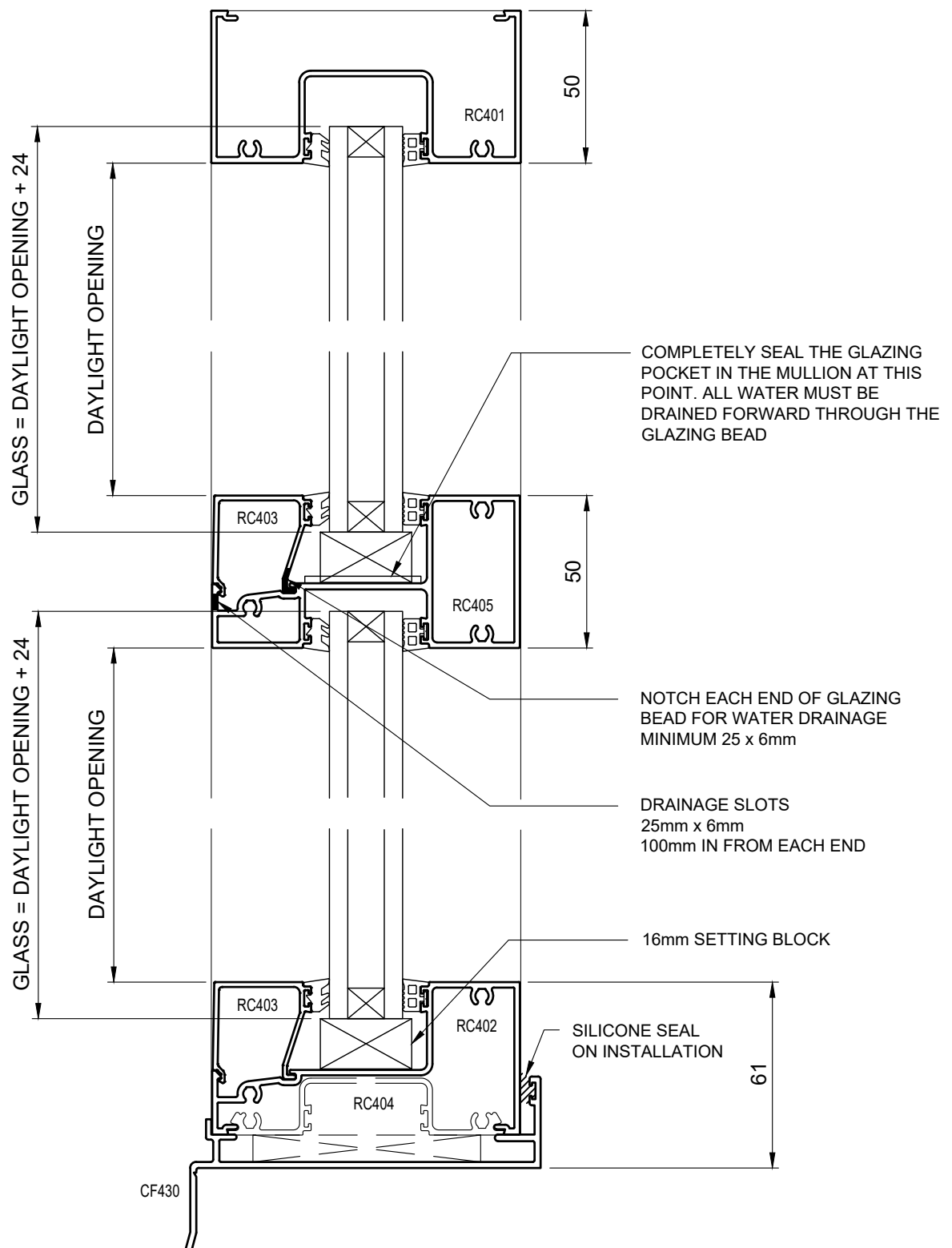
 CFH220 CAPTIVE WEDGE (2mm GAP) 200m ROLL	 CFH5 MULLION SEAL 200m ROLL
 CFH13 SASH SEAL 200m ROLL	 CFH4 DOOR BUFFER 200m ROLL

101.6mm COMMERCIAL FRAME
CENTRE GLAZED - DOUBLE GLAZED
CONFIGURATIONS



101.6mm COMMERCIAL FRAME CENTRE GLAZED - DOUBLE GLAZED

HEAD / SILL / TRANSOM

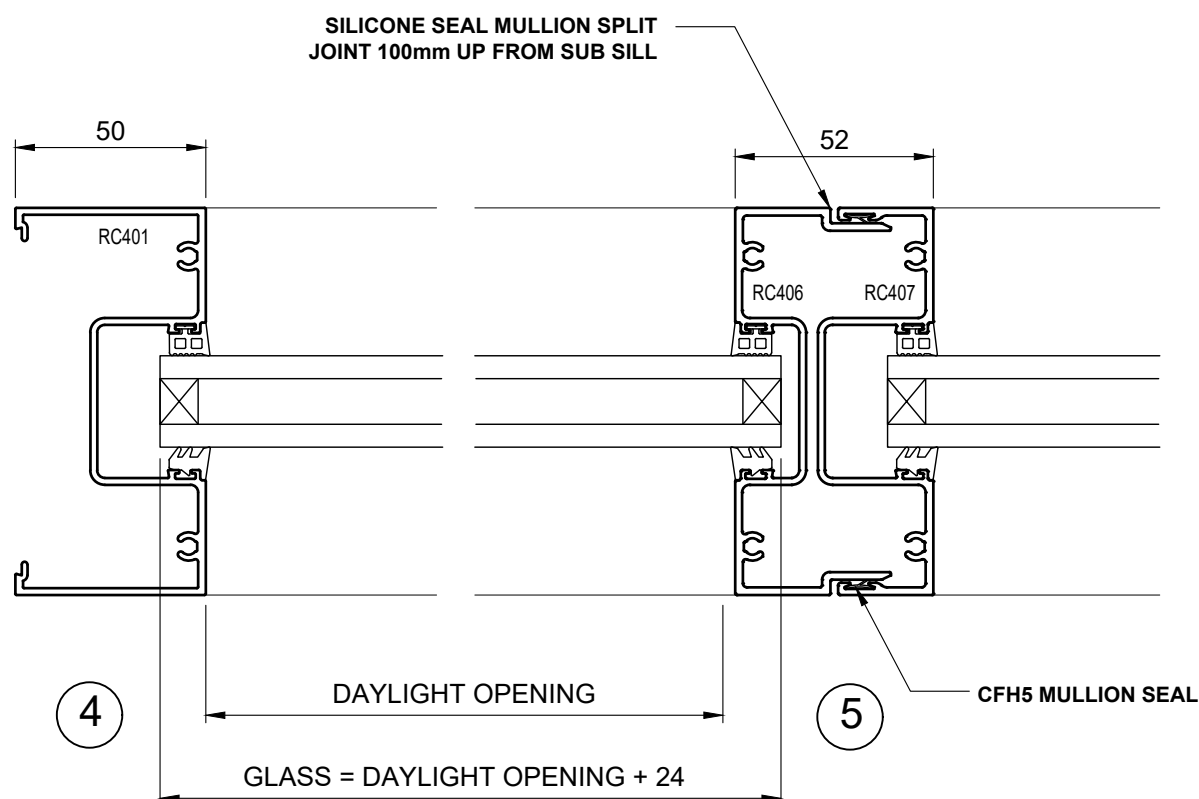


NOTE:

- ALL JOINTS TO BE SEALED USING A SUITABLE SMALL JOINT SEALANT OR CLOSED CELL FRAME GASKET

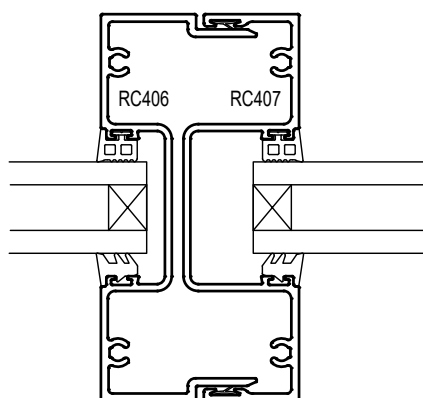
101.6mm COMMERCIAL FRAME CENTRE GLAZED - DOUBLE GLAZED

JAMB / MULLION

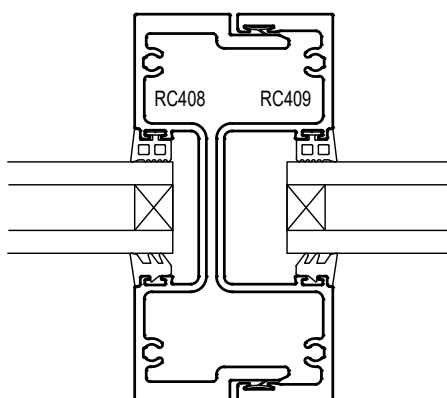


MULLION OPTIONS

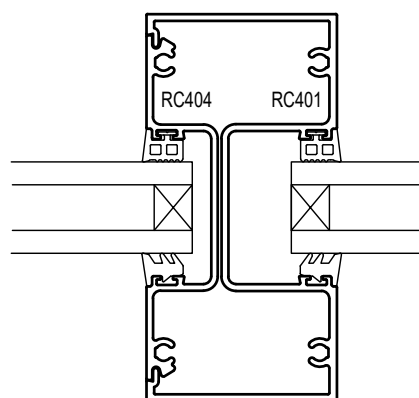
STD SPLIT MULLION



**HEAVY DUTY SPLIT
MULLION**



COUPLED MULLION

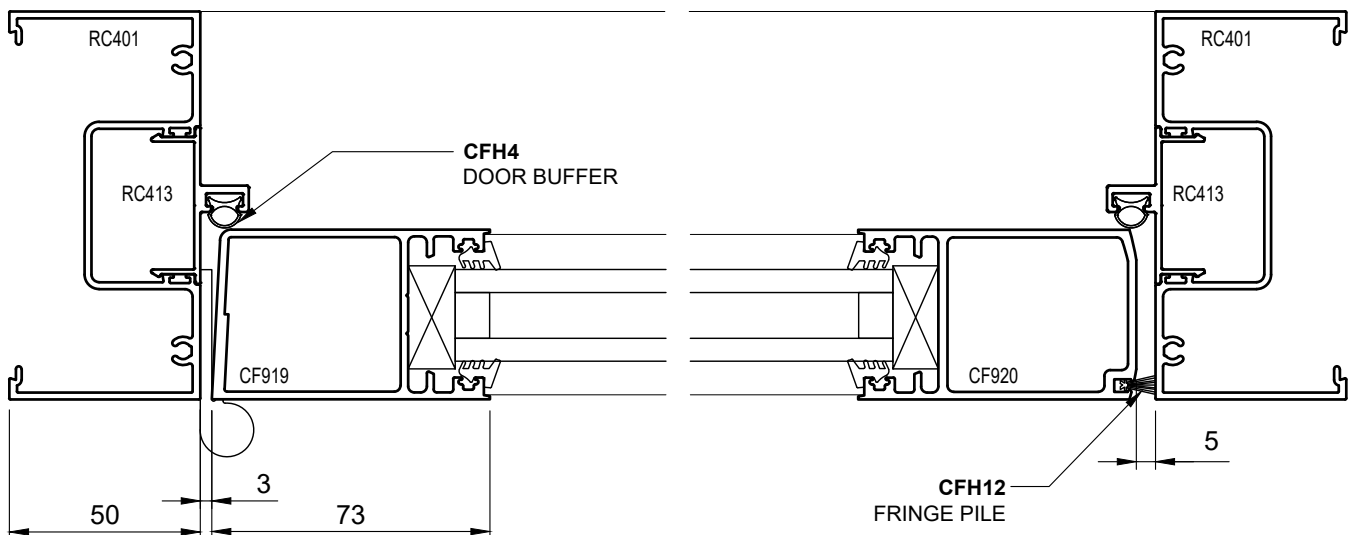


NOTE:

- ALL JOINTS TO BE SEALED USING A SUITABLE SMALL JOINT SEALANT OR CLOSED CELL FRAME GASKET

101.6mm COMMERCIAL FRAME CENTRE GLAZED - DOUBLE GLAZED

HORIZONTAL DETAIL - 45mm HINGED DOOR JAMB - OPEN OUT

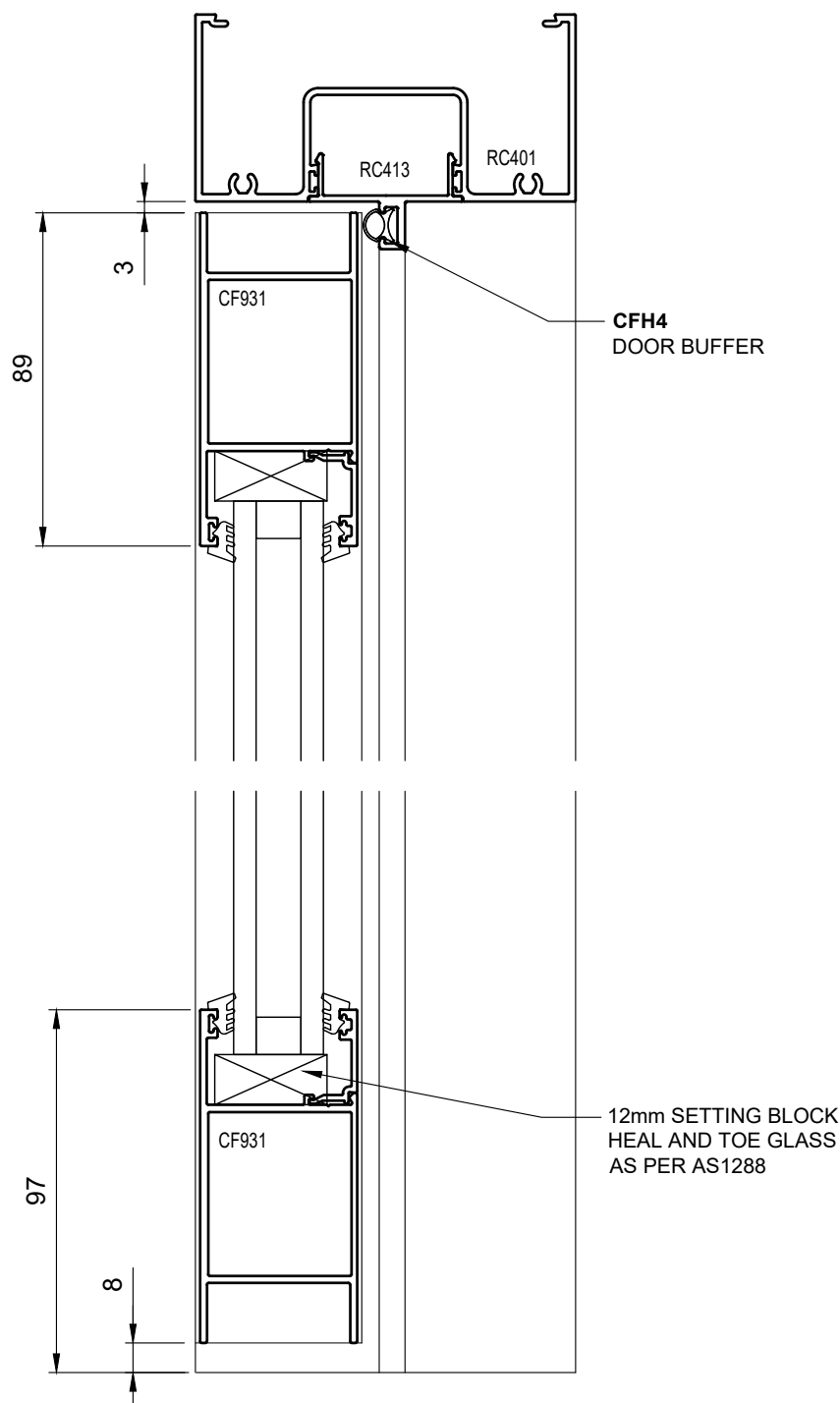


NOTE:

- ALL JOINTS TO BE SEALED USING A SUITABLE SMALL JOINT SEALANT OR CLOSED CELL FRAME GASKET

101.6mm COMMERCIAL FRAME CENTRE GLAZED - DOUBLE GLAZED

VERTICAL DETAIL - 45mm HINGED DOOR - OPEN OUT

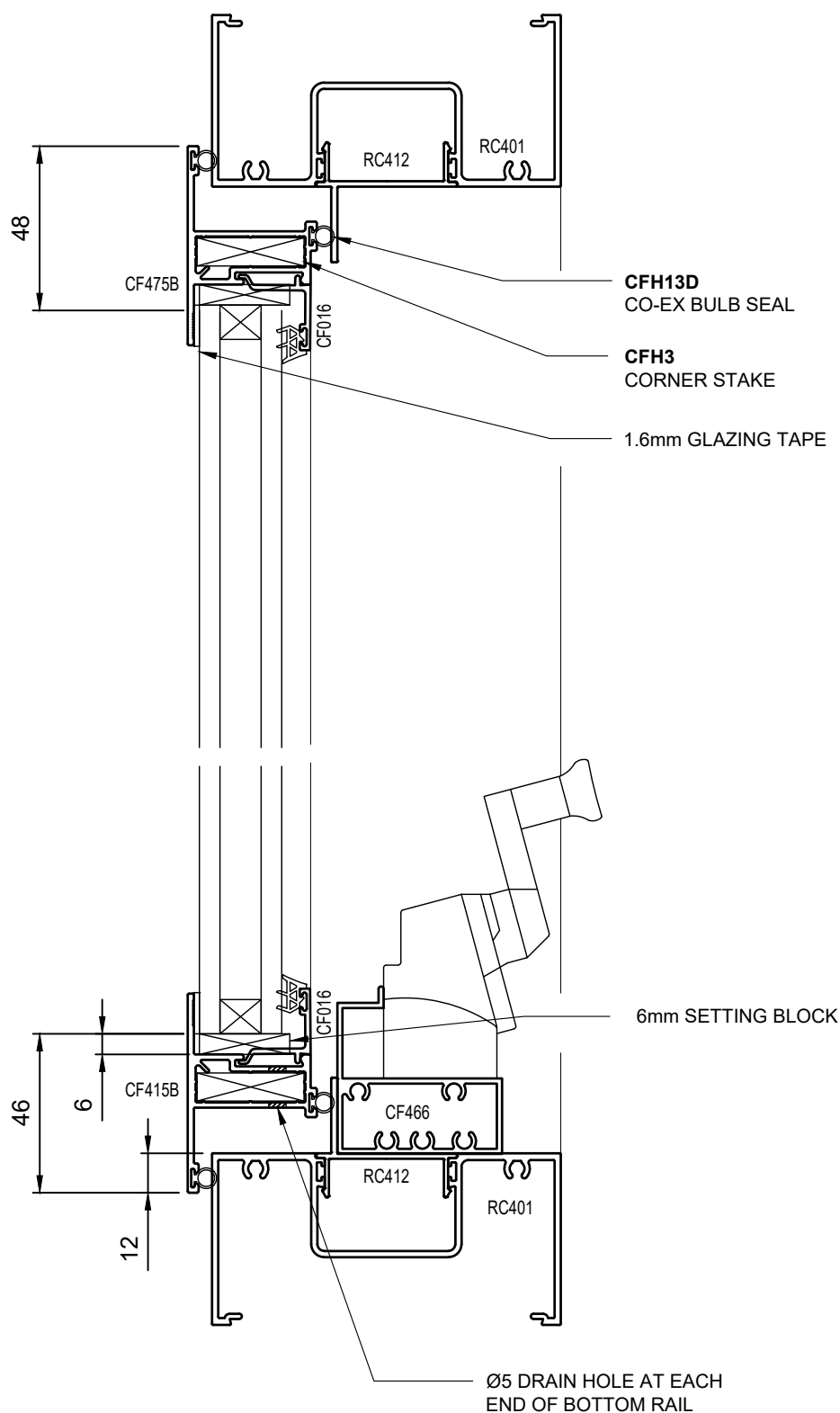


NOTE:

- ALL JOINTS TO BE SEALED USING A SUITABLE SMALL JOINT SEALANT OR CLOSED CELL FRAME GASKET

101.6mm COMMERCIAL FRAME CENTRE GLAZED - DOUBLE GLAZED

VERTICAL DETAIL - 35mm AWNING

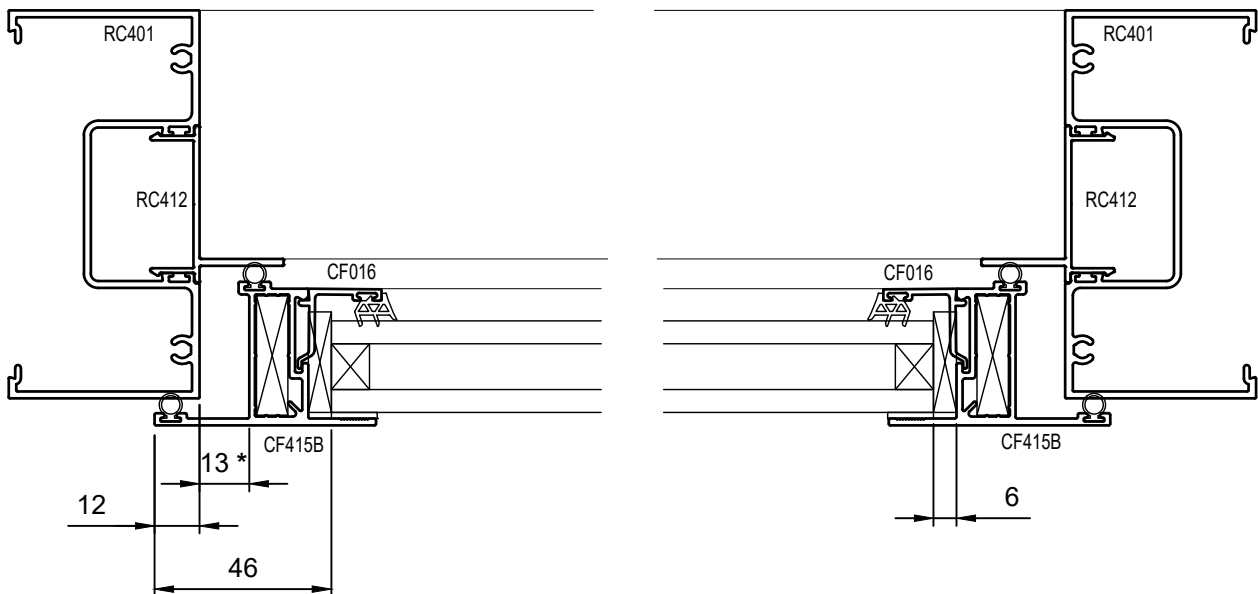


NOTE:

- ALL JOINTS TO BE SEALED USING A SUITABLE SMALL JOINT SEALANT OR CLOSED CELL FRAME GASKET

101.6mm COMMERCIAL FRAME CENTRE GLAZED - DOUBLE GLAZED

HORIZONTAL DETAIL - 35mm AWNING

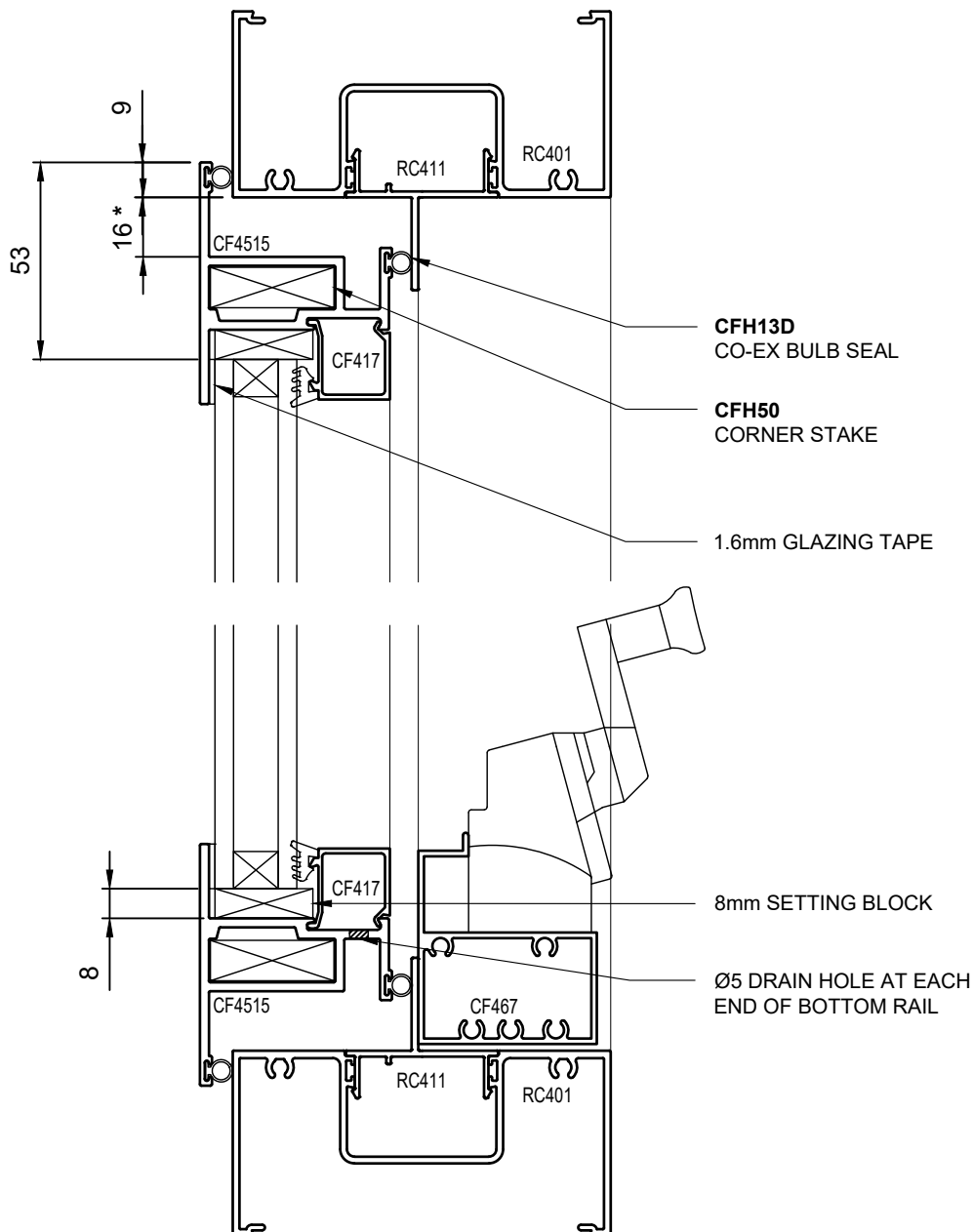


NOTE:

- ALL JOINTS TO BE SEALED USING A SUITABLE SMALL JOINT SEALANT OR CLOSED CELL FRAME GASKET

101.6mm COMMERCIAL FRAME CENTRE GLAZED - DOUBLE GLAZED

VERTICAL DETAIL - 50mm AWNING

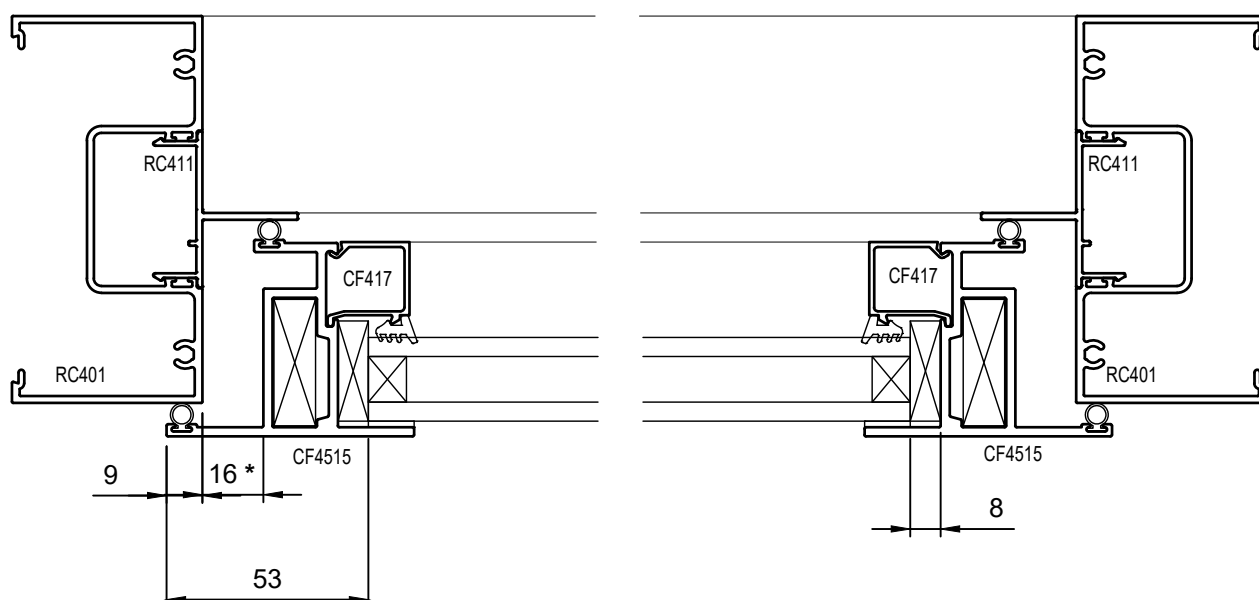


NOTE:

- ALL JOINTS TO BE SEALED USING A SUITABLE SMALL JOINT SEALANT OR CLOSED CELL FRAME GASKET

101.6mm COMMERCIAL FRAME CENTRE GLAZED - DOUBLE GLAZED

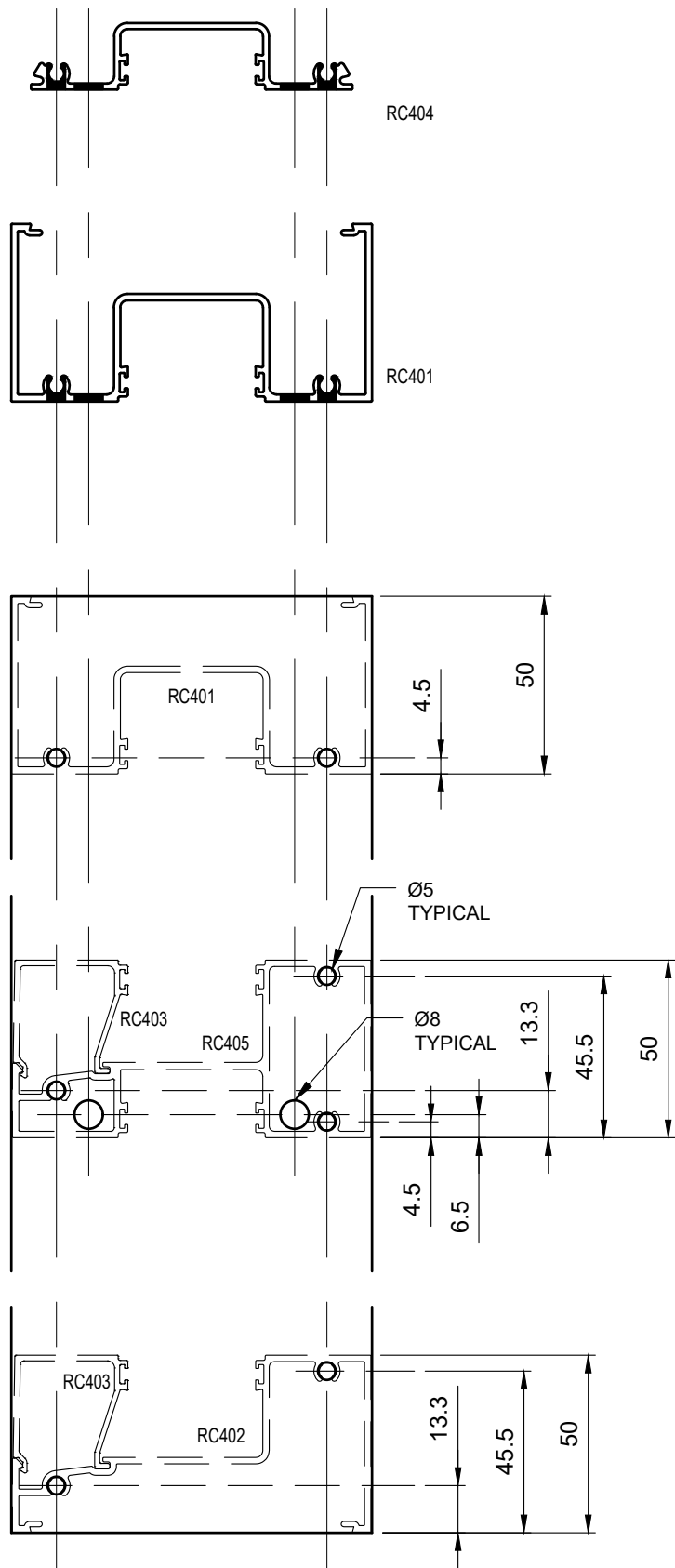
HORIZONTAL DETAIL - 50mm AWNING



NOTE:

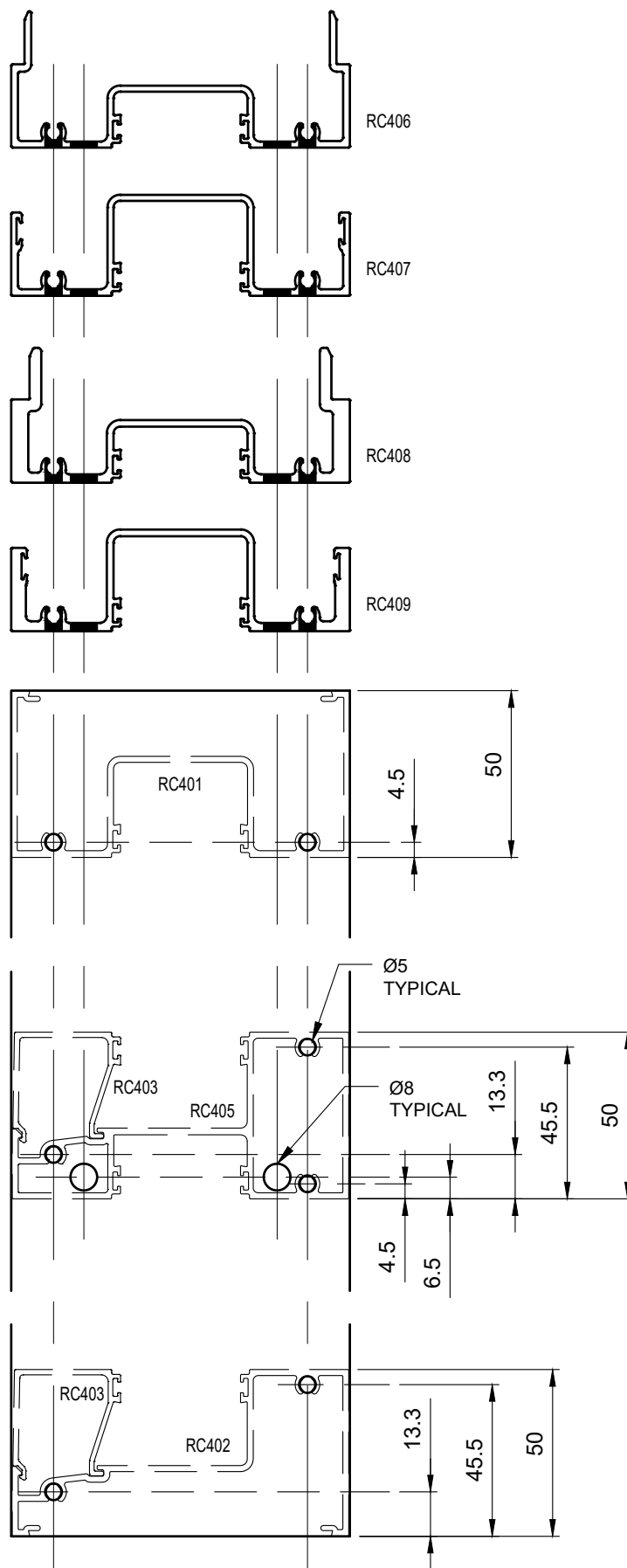
- ALL JOINTS TO BE SEALED USING A SUITABLE SMALL JOINT SEALANT OR CLOSED CELL FRAME GASKET

101.6mm COMMERCIAL FRAME
CENTRE GLAZED - DOUBLE GLAZED
MACHINING - JAMB ASSEMBLY HOLES

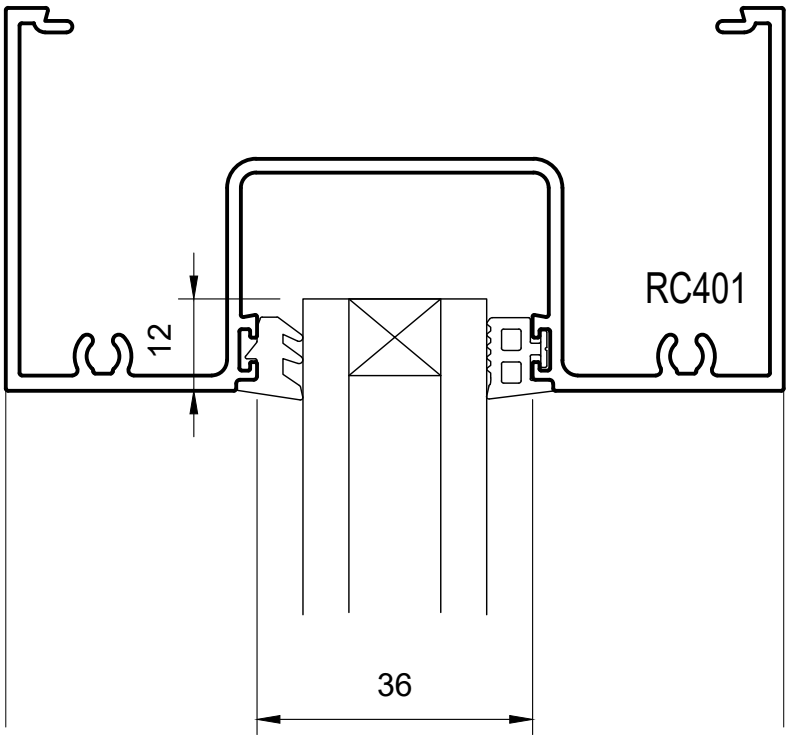


101.6mm COMMERCIAL FRAME CENTRE GLAZED - DOUBLE GLAZED

MACHINING - JAMB ASSEMBLY HOLES



101.6mm COMMERCIAL FRAME
CENTRE GLAZED - DOUBLE GLAZED
GLAZING DETAILS - CAPTIVE

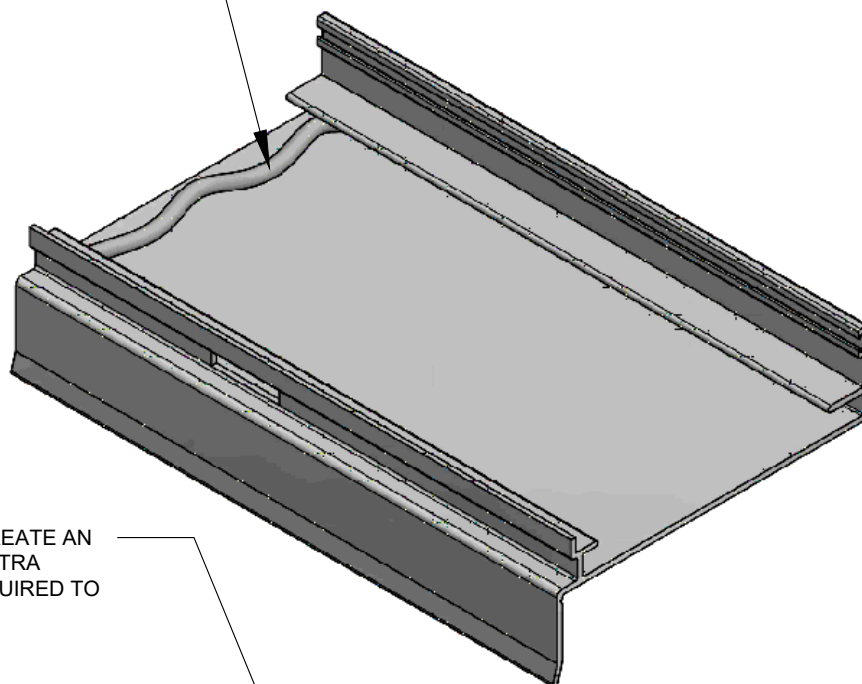


SINGLE GLAZE - CAPTIVE		
GLASS THICKNESS	WEDGE	CAPTIVE
22mm	CFH208 - 8mm	CFH260 - 6mm
24mm	CFH206 - 6mm	CFH260 - 6mm
25mm	CFH205 - 5mm	CFH260 - 6mm
26mm	CFH204 - 4mm	CFH260 - 6mm
28mm	CFH206 - 6mm	CFH220 - 2mm
30mm	CFH204 - 4mm	CFH220 - 2mm

101.6mm COMMERCIAL FRAME CENTRE GLAZED - DOUBLE GLAZED

SUB SILL END DAM SEALING

LAY A BED OF SILICONE ACROSS THE BASE OF THE SUB SILLS, CAREFULLY SEALING INTO THE CORNERS AND UP THE VERTICAL SUB SILL LEGS



INSTALL A 25 x 25mm ANGLE TO CREATE AN END DAM IN THE SUB SILL. ADD EXTRA SILICONE IN THE CORNERS IF REQUIRED TO ENSURE WATER TIGHTNESS

RIVET ANGLE TO SUB SILL TO ENSURE THE SILICONE SEAL IS NOT DISTURBED OR BROKEN

