

**Vortex 61.5mm**

04-2018-V.03

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## Vortex 61.5mm

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# GULF EXTRUSIONS

Gulf Extrusions Co. LLC, the flagship company of the Al Ghurair Group of Companies, was founded in 1976, Dubai, UAE where it has over the years earned the reputation known as one of the most innovative and reliable companies in the Middle East.

Located close to its raw material supplier Dubai Aluminium Company Ltd (DUBAL), the world's largest single smelter site, Gulf Extrusions has become one of the largest extrusion plants in the region.

Gulf Extrusions quality products can be seen in many of today's progressive structures. The company was formed with the sole purpose to meet the increasing demands for aluminium extrusions in domestic, regional and international markets.

Gulf Extrusions six presses and highly skilled workforce are able to produce 65,000 metric tonnes per annum with a rated capacity of 24,000 tonnes for powder coated finish, 6,000 tonnes for anodized finish and can offer more than 30,000 profile designs. These extrusions cover numerous industries ranging from architectural to transportation, engineering to structural sections, components for household items, HVAC and customized products.

During the progressive stages of Gulf Extrusions, from its inception to expansion, the company not only has acquired a majority share in the local market, it has also made its presence felt globally throughout the GCC countries, Indian sub -continent, South East Asia, Australia, Africa, Europe and Canada.

Our commitment and utmost priority is to provide customers with the finest quality of aluminium extrusions.

Gulf Extrusions looks ahead to inevitable challenges and product advancements of the new era.

Quality is an inseparable element of all activities carried out at Gulf Extrusions. Gulf Extrusions is dedicated to respond and deliver on time, high quality, tailor-made and cost effective products. The management and staff are committed to implement a comprehensive and integrated Quality Management System in accordance with the International Quality Standards of ISO 9001 and ISO 14001.

### INTERNATIONAL STANDARD COMPLIANCE

#### Extrusions Dimensions Tolerances:

- BS EN 755 - 9:2008
- BS EN 12020 - 2:2008
- DIN 1748, DIN 17615
- ASTM B221

#### Powder Coated Finish:

- BS:6496 Clause: 10.4, 10.5, 10.6, 10.7 & 10.8
- ISO 2360 / 2813 / 2409 / 2931
- Minimum Film Thickness – 60 Microns

#### Anodizing Finish:

- BS EN 12373-1 2001 Clause 7 (BS:6161 Part 6)
- BS:3987 Clause 2, 3, 5, 6
- Appendix- A, B, C, D, E, F, G, H, J, K, L Minimum Film Thickness- 16 Microns



### PRODUCT QUALITY CERTIFICATES



#### Qualicoat (European Powder Coaters Association):

- A quality label for coating on metal for Architectural Applications
- A product license under the control of EWAA (European Wrought Aluminium Association) in Zurich Switzerland



#### Qualanod (European Anodizers Association):

- A quality label organization to guarantee high quality Aluminium Anodizing.
- A product license under the control of EWAA (European Wrought Aluminum Association) in Zurich Switzerland



- SASO



- ESMA



#### Management:

- ISO 9001 (Quality Management System)



- ISO/TS 16949:2009 (Management System)



#### Environment:

- ISO 14001 (Environment Management System)



#### Membership in International Organization:



- AAC member (Aluminium Anodizers Council - USA)
- AEC member (Aluminum Extruders Council - USA)



- DIN EN 15088

**CHEMICAL COMPOSITIONS**

**ALLOY 6005A**

Element	Minimum	Maximum
Si	0.50	0.90
Fe	-	0.35
Cu	-	0.30
Mn	-	0.50
Mg	0.40	0.70
Cr	-	0.30
Zn	-	0.20
Ti	-	0.10
Other Each	-	0.05
Other Total	-	0.15
Aluminium	Remainder	

**ALLOY 6060**

Element	Minimum	Maximum
Si	0.30	0.60
Fe	0.10	0.30
Cu	-	0.10
Mn	-	0.10
Mg	0.35	0.60
Cr	-	0.05
Zn	-	0.15
Ti	-	0.10
Other Each	-	0.05
Other Total	-	0.15
Aluminium	Remainder	

**ALLOY 6063**

Element	Minimum	Maximum
Si	0.20	0.60
Fe	-	0.35
Cu	-	0.10
Mn	-	0.10
Mg	0.45	0.90
Cr	-	0.10
Zn	-	0.10
Ti	-	0.10
Other Each	-	0.05
Other Total	-	0.15
Aluminium	Remainder	

**ALLOY 6082**

Element	Minimum	Maximum
Si	0.70	1.30
Fe	-	0.50
Cu	-	0.10
Mn	0.40	1.00
Mg	0.60	1.20
Cr	0.04	0.15
Zn	-	0.20
Ti	-	0.10
Other Each	-	0.05
Other Total	-	0.15
Aluminium	Remainder	

**ALLOY 6061**

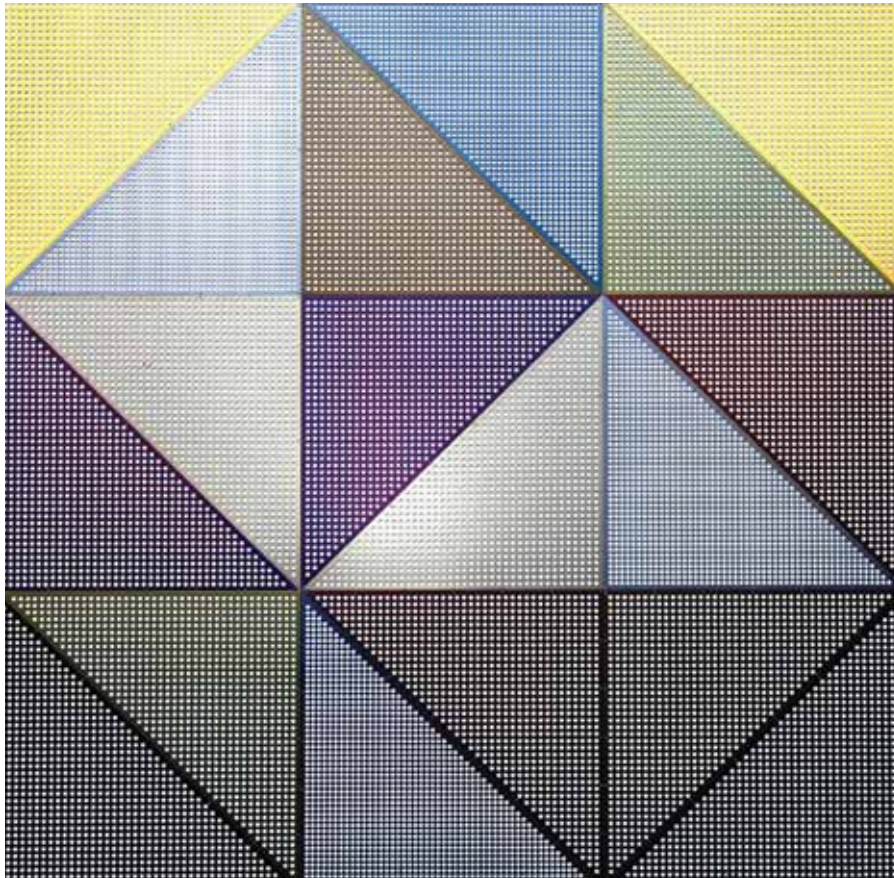
Element	Minimum	Maximum
Si	0.40	0.80
Fe	-	0.70
Cu	0.15	0.40
Mn	-	0.15
Mg	0.8	1.20
Cr	0.04	0.35
Zn	-	0.25
Ti	-	0.15
Other Each	-	0.05
Other Total	-	0.15
Aluminium	Remainder	

**ANODIZING**

A wide range of anodizing treatment options are possible for the aluminium profile sections of this system. The color choices from Gulf Extrusions range from Natural, Gold, and Bronze to Spectro colors (Red, Blue, Green, and Gray).

This surface treatment process involves first pre-treatment with scotch brite brushing for the unfinished profiles, and then subsequently fully immersing the aluminium profiles in an acidic electrolyte solution through which electric current is passed creating an anodic film on the profiles ranging from 5-30MICs.

The process is guaranteed and certified for use by QUALANOD - A quality label Organization to guarantee high quality aluminium anodizing and the company's ISO 9001 certification.





# Authorization to use the quality sign



This is to certify that

## GULF EXTRUSIONS CO. LLC

P.O. BOX 5598  
AE – Dubai

### Licence number: 2000

is authorized to use the quality sign which is shown above, according to the regulations for the use of the quality label for ARCHITECTURAL ANODIZING as described in the current edition of the Specifications for the QUALANOD quality label for sulfuric acid-based anodizing of aluminium (Edition 01.01.2017). Architectural anodizing is one of the four types of anodizing covered by the Specifications.

**Date of issue of the licence:** 10.03.2000  
**Period of validity of the licence:** until 31.12.2018

Zurich, 23 November 2017

#### QUALANOD

José Arenas  
President

#### CERTIFICATION BODY

Josef Schoppig  
AC-Fiduciaire SA



Phone: +41 (0)43 305 09 70 Fax: +41 (0)43 305 09 98  
E-Mail: j.schoppig@actreu.ch Website: www.qualanod.net

Mailing address:  
QUALANOD, P.O. Box 1507, CH-8027 Zurich

Domicile:  
QUALANOD  
c/o AC-Fiduciaire SA (certification body)  
Tödistrasse 42, CH-8002 Zurich

**POWDER COATING**

- Horizontal & Vertical Powder coating lines with an Annual Capacity of 24 000 MT  
Powder Coating BS: 6496 Clause: 10.4, 10.5, 10.6, 10.7, & 10.8  
ISO 2360/2813/2409/2931  
Minimum Film Thickness - 60 Microns

A wide choice of colors for powder coating can be used for the aluminium profile sections.

From Gulf Extrusions the following powder types are available

- Polyester Façade (PE-F)
- Super Durable Façade (SDF) & Hyper Durable Façade (HDF) (Where SDF & HDF are equivalent to Poly-Vinylidene DiFluoride (PVDF) in terms of corrosion performance)
- Anti Bacterial (recommended to be used in Hospitals)
- Anti Static (recommended for laboratories, electronics assembly buildings) and Heat Resistant in nature.

This surface treatment process involves the following pre-treatment

1. Degreasing
2. Washing
3. Etching
4. Washing
5. Chromatising
6. Double washing in dematerialized water

Once completed, powder is applied using an electrostatic spraying process with charged powder particles, followed by curing in an oven under a controlled temperature of 180-200C for paint polymerization where the paint layer is at least 60mic.

This whole process is certified for use from QUALICOAT - A quality label for coating on metal for Architectural Applications.

GUARANTEE PERIOD:  
10 years for PE-F Quality  
25 years for PE-SDF

# Authorization

## to use the quality sign



This is to certify that

**GULF EXTRUSIONS CO. LLC**

P.O. BOX 5598  
AE – Dubai

**Licence number: 1901**

is authorized to use the quality sign which is shown above according to the REGULATIONS FOR THE USE OF THE QUALICOAT QUALITY SIGN FOR PAINT, LACQUER AND POWDER COATINGS ON ALUMINIUM FOR ARCHITECTURAL APPLICATIONS.

**Date of issue of the licence:** 15.03.2000  
**Period of validity of the licence:** until 31.12.2018

Zurich, 31 October 2017

**QUALICOAT**

*M. C. Panam*

Mohammed C. Panam  
President

**CERTIFICATION BODY**

*JS*

Josef Schoppig  
AC-Fiduciaire SA



Mailing address:  
QUALICOAT, P.O. Box 1507, CH-8027 Zurich  
Domicile:  
QUALICOAT c/o AC-Fiduciaire SA, Tödistrasse 42, CH-8002 Zurich

Phone: +41 (0)43 305 09 70/79  
Fax: +41 (0)43 305 09 98  
E-mail: info@qualicoat.net  
Internet: www.qualicoat.net

# INTRODUCTION TO THE SYSTEM

## **Vortex 61.5mm:**

Vortex 61.5 is a unique curtain wall structure that combines multi-structural grid to create various aspects, starting by the conventional curtain wall system passing through the two way horizontal capping curtain wall systems to the four way structural curtain wall systems.

Vortex 61.5 has proven to be a curtain wall solution perfectly tailored to the Middle East market requirement.

## **FEATURES:**

The "Vortex 61.5" system consists of 61.5mm width structure components allowing several external appearances. It is fast to manufacture and to install. With the wide range of profile selection, the system can provide the possibility of large glass panels, maintaining the stiffness and rigidity of the curtain wall structure. Mullions can be reinforced by Aluminium or Steel tubes to enhance the free span area, making it possible for the use in high structures. Special casements for the "Vortex 61.5" system have been developed giving two options of cold and thermally insulated profiles. Casements are Italian openings with selected stay arms to ensure the tightness and stability of the opening.

Vortex uses the same structures for multifunctional applications:

Four way structural aspects is a curtain wall aspect which conceals the aluminium structure from the outside making it completely invisible. Concealed openings are designed in order to keep the external appearance of the structure uniform even in the presence of the opening. The four way structural applications is obtained by fixing a glass toggle to the glass holding the panel by a specially designed aluminium spacer, well sealed by a structural sealant to ensure the rigidity of panel. The space between glass panels is sealed by a neutral sealant for aesthetic and water tightness purposes; this application is the most common application in the MENA region. Glass thickness range between 6mm – 32mm

## Test Certificate Curtain Wall 61.5Mm



محص المواد  
Materials Testing  
www.bodycote.com  
www.middleeast.bodycote.com

### Confirmation of Testing Compliance CLADDING TECHNOLOGY DIVISION

Ref. AFBT Report No: DLR0547 Date: July 2009

AFBT COTC No: WQ09 05602 / COTC547

**System Supplier:**  
Gulf Extrusions Co.,  
P. O. Box 5598,  
Dubai,  
U. A. E.

**Installer:**  
Gulf Extrusions Co.,  
P. O. Box 5598,  
Dubai,  
U. A. E.

**Project:** System Development  
**System:** STICK SYSTEM CURTAIN WALL

Al Futtaim Bodycote (AFB) tested components from the above-mentioned system at their Dubai laboratory on the date shown for the following parameters:

- Air Infiltration ASTM E283-04
- Water Penetration ASTM E331-00 (Static)
- Wind Resistance ASTM E330-02 (Serviceability)
- Wind Resistance ASTM E330-02 (Safety)

At the time of test, the system was found to comply with specification requirements for all the parameters tested. This confirmation of testing compliance relates only to the system described above, installed and tested at AFB Dubai laboratory, as fully detailed in test report referenced above.

Tests marked '\*' in this report are not included in our UKAS schedule of accreditation.

Signed:  Test Engineer

Signed:  Cladding Manager

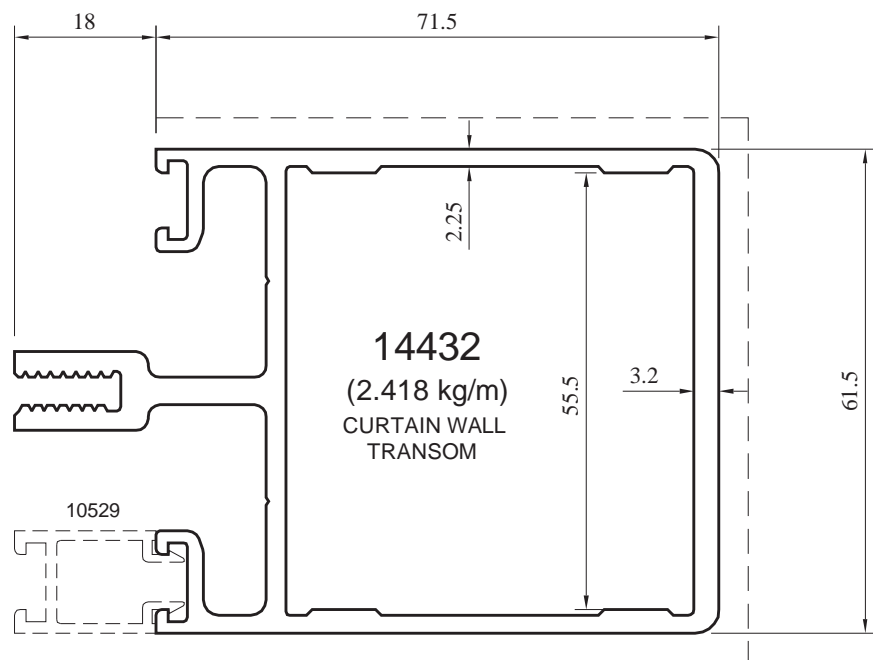
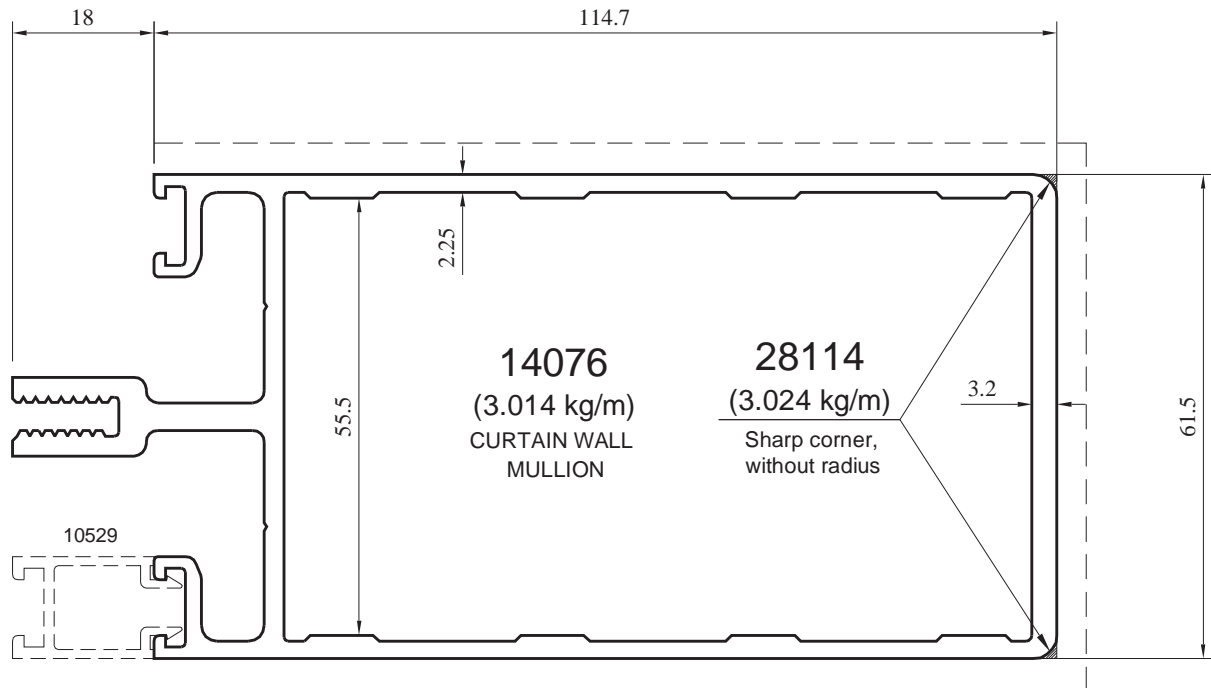
Al Futtaim Bodycote Testing LLC - P.O. Box 34924 - Dubai - United Arab Emirates  
Tel: +971 (0)4 885 1001 - Fax: +971 (0)4 885 4004 - E-mail: dubai.lab@bodycote.com

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# PROFILES

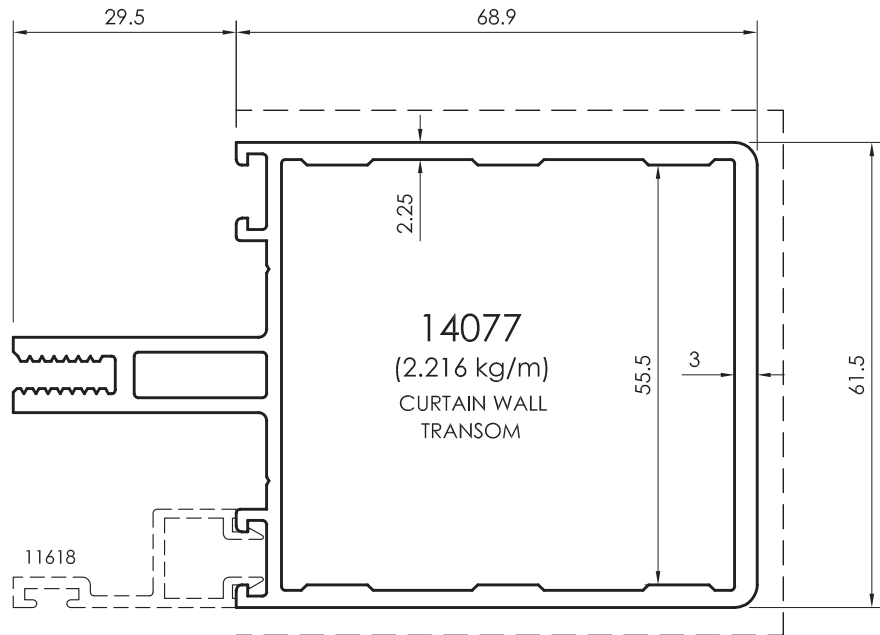
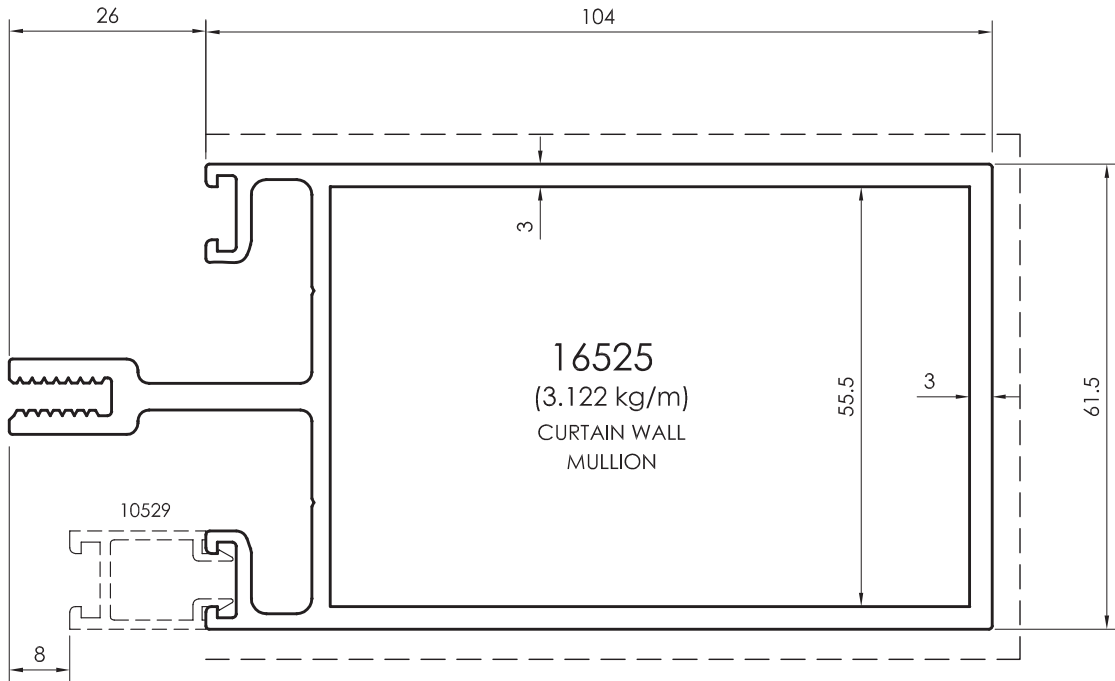
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Visible area\_\_\_\_\_

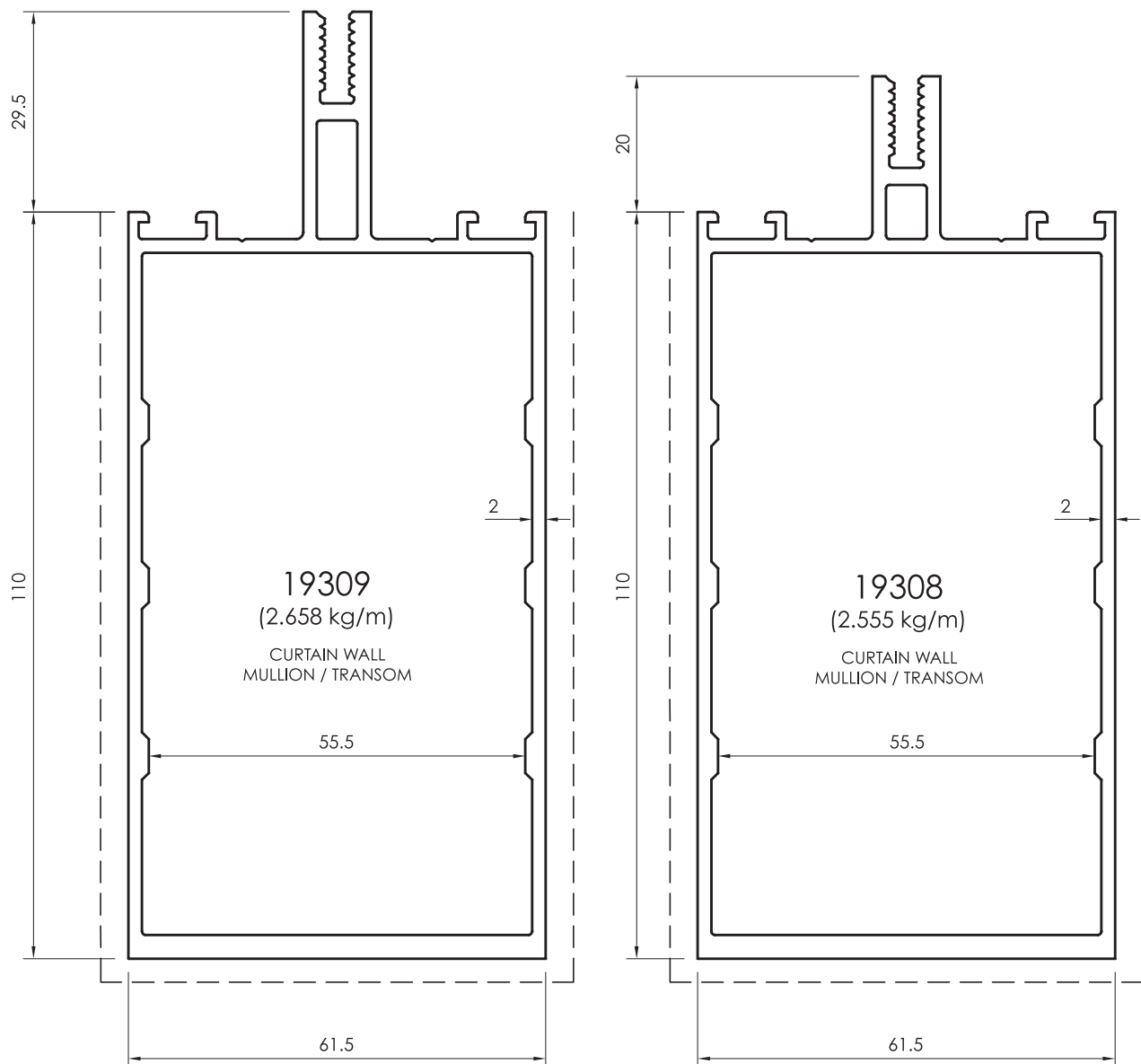


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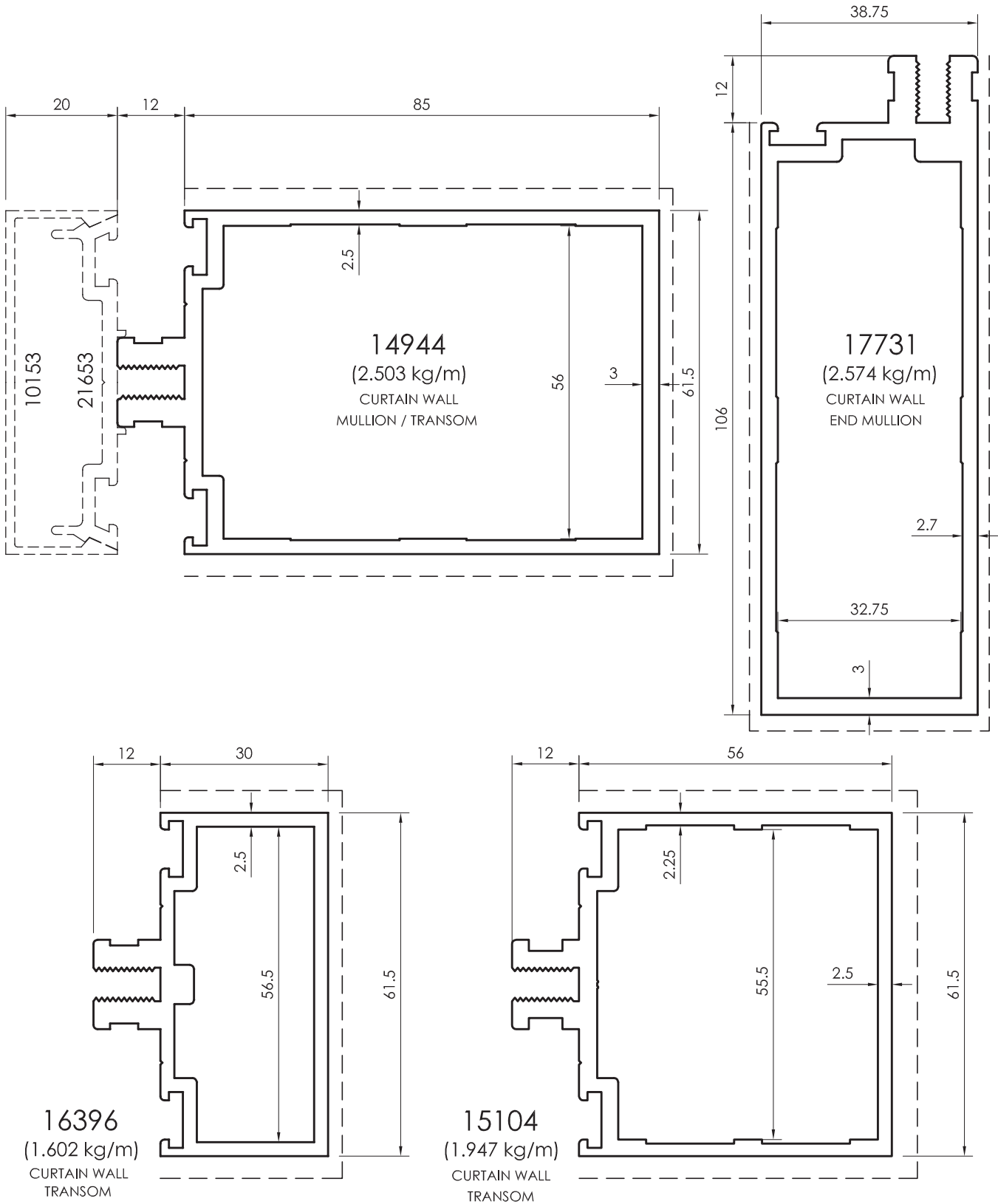
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## Mullion / Transom Profiles



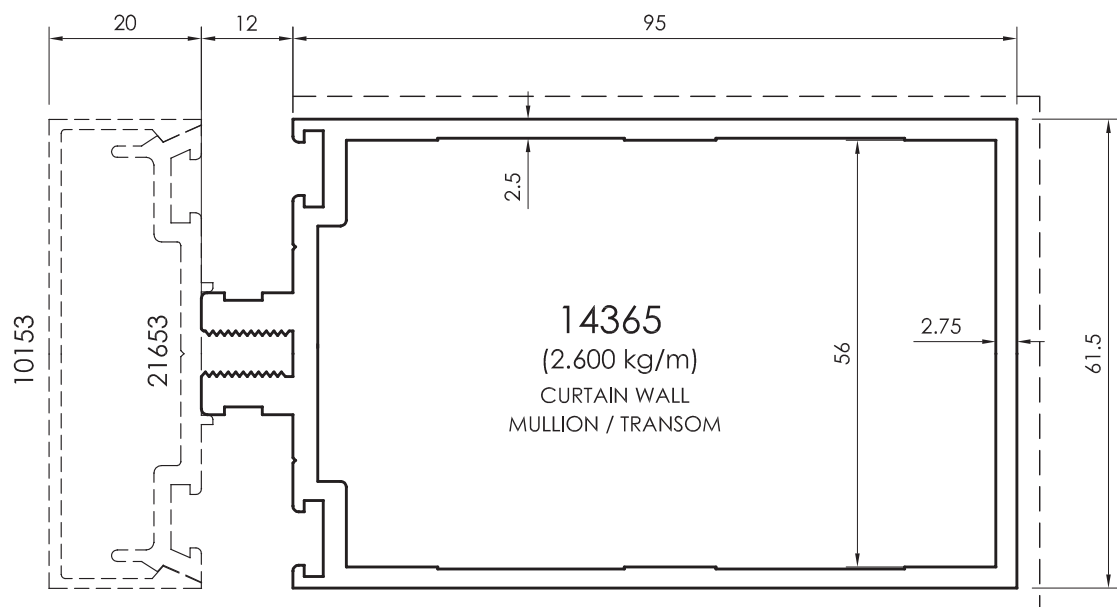
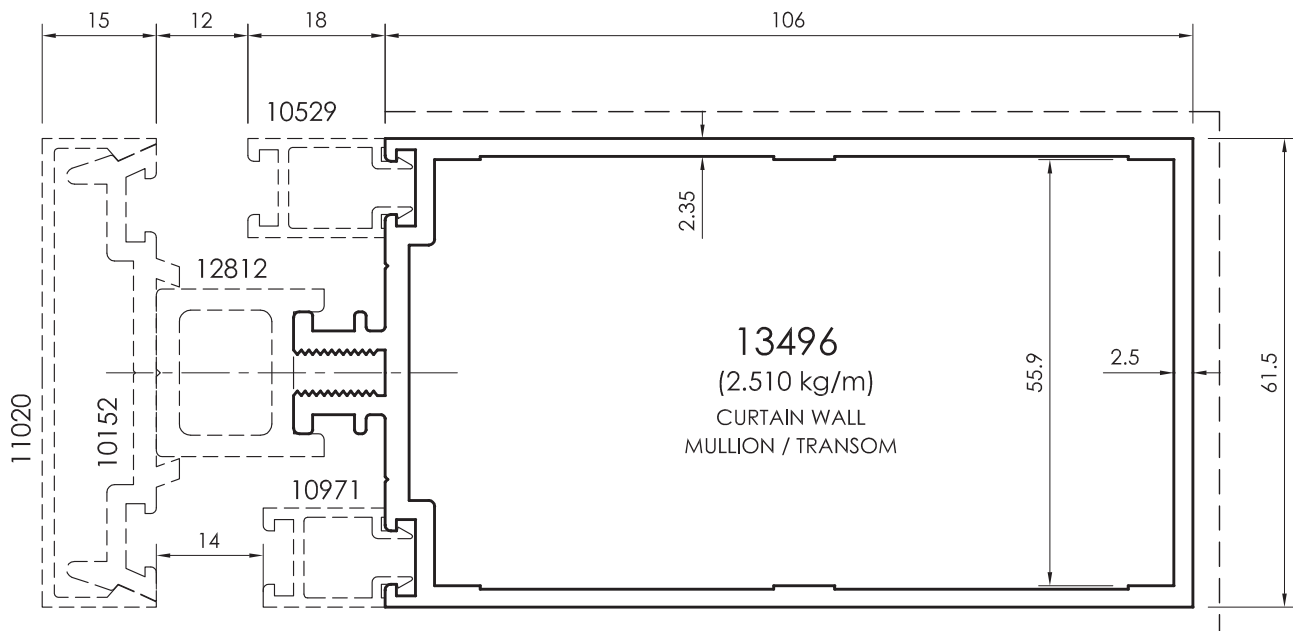
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Mullion / Transom Profiles



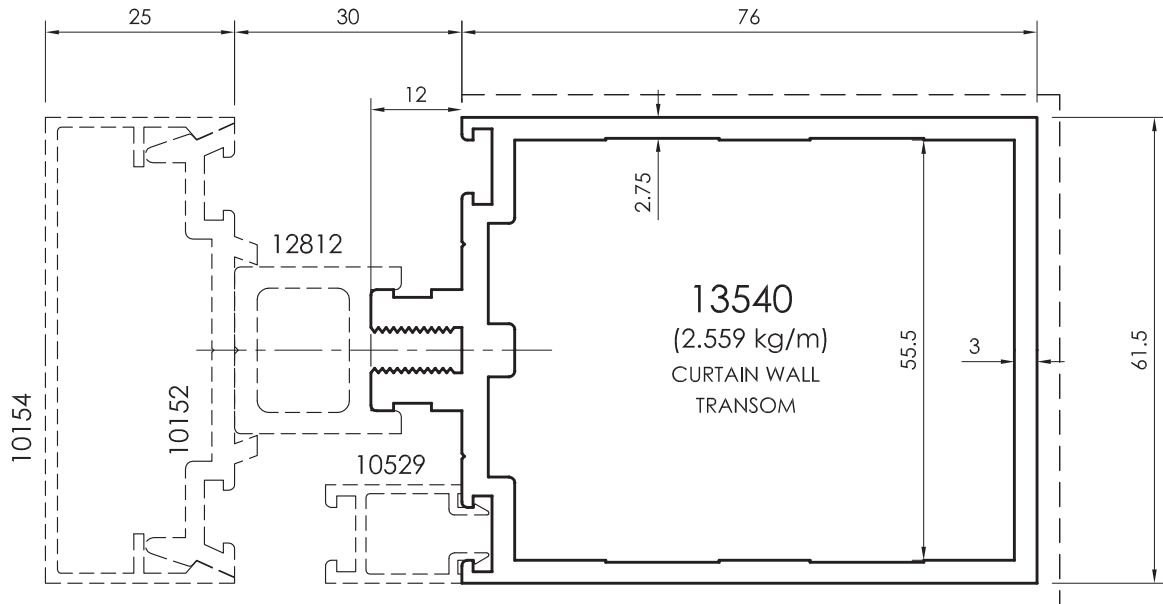
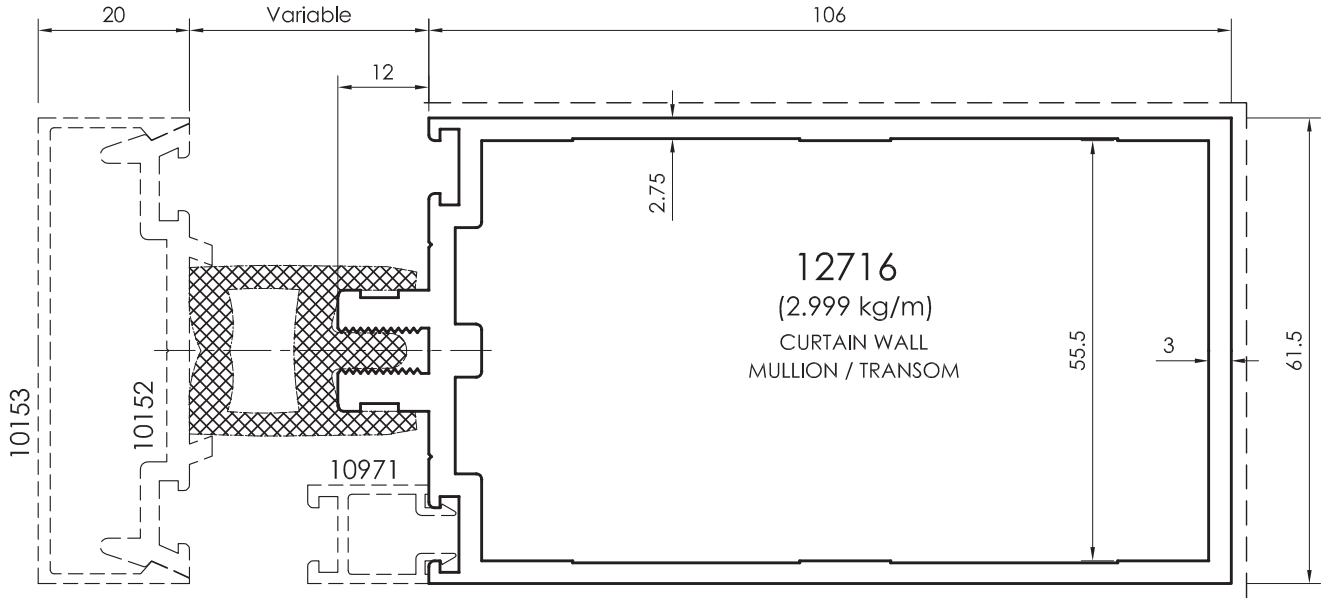
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## Mullion / Transom Profiles



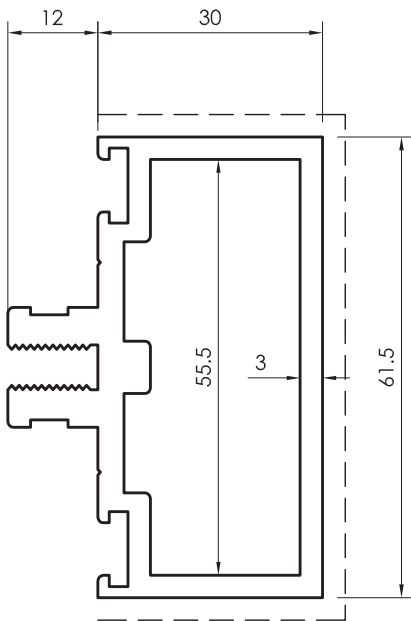
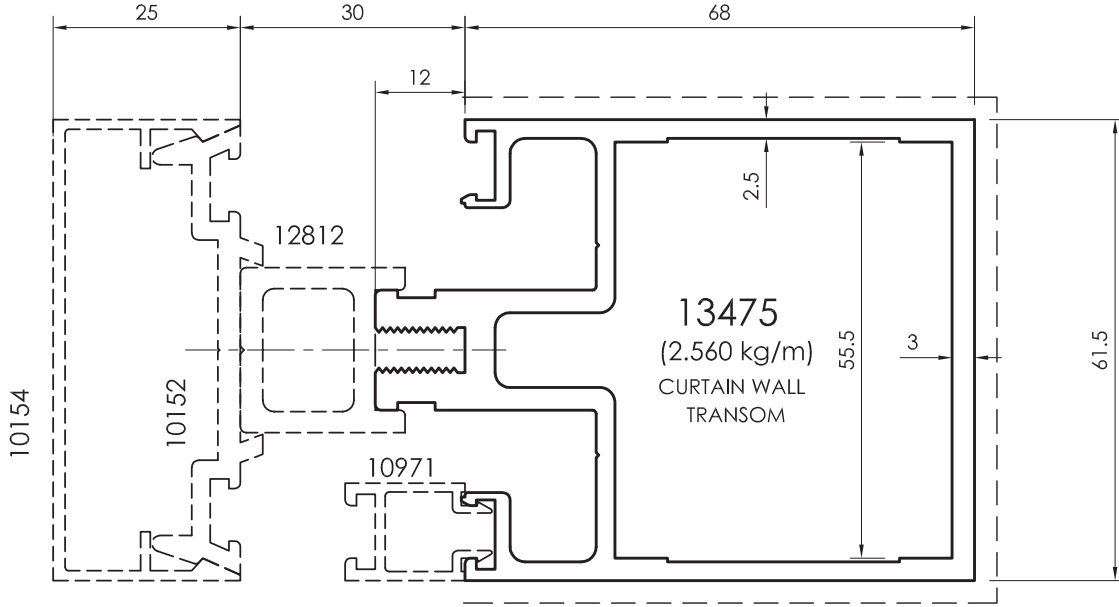
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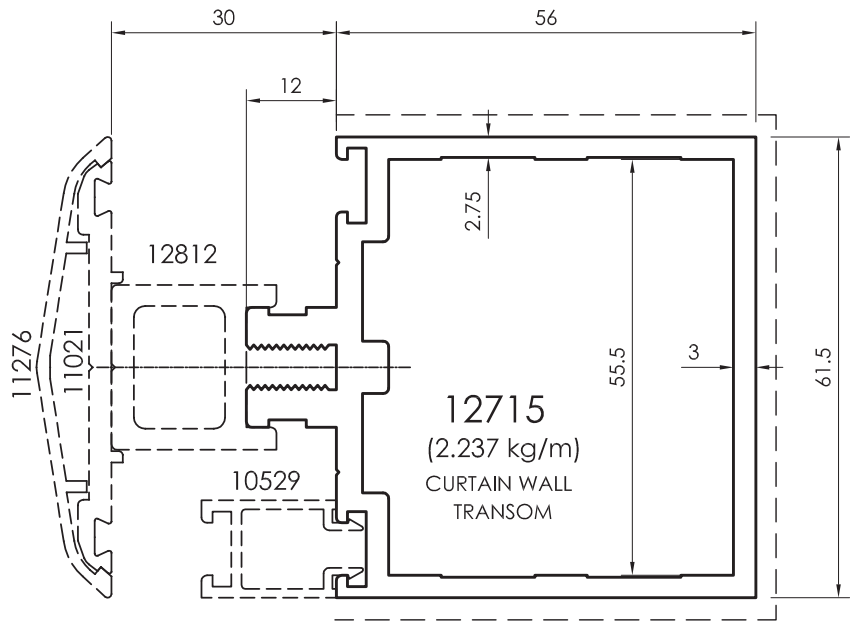


All dimensions in mm  
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Mullion / Transom Profiles



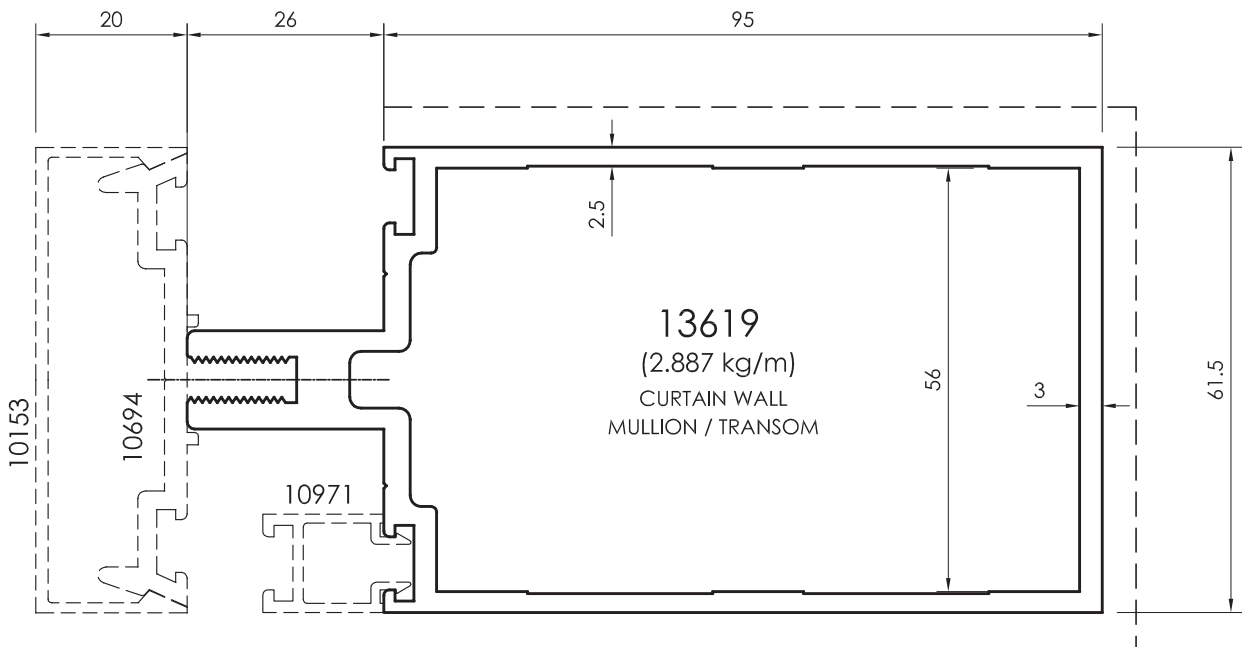
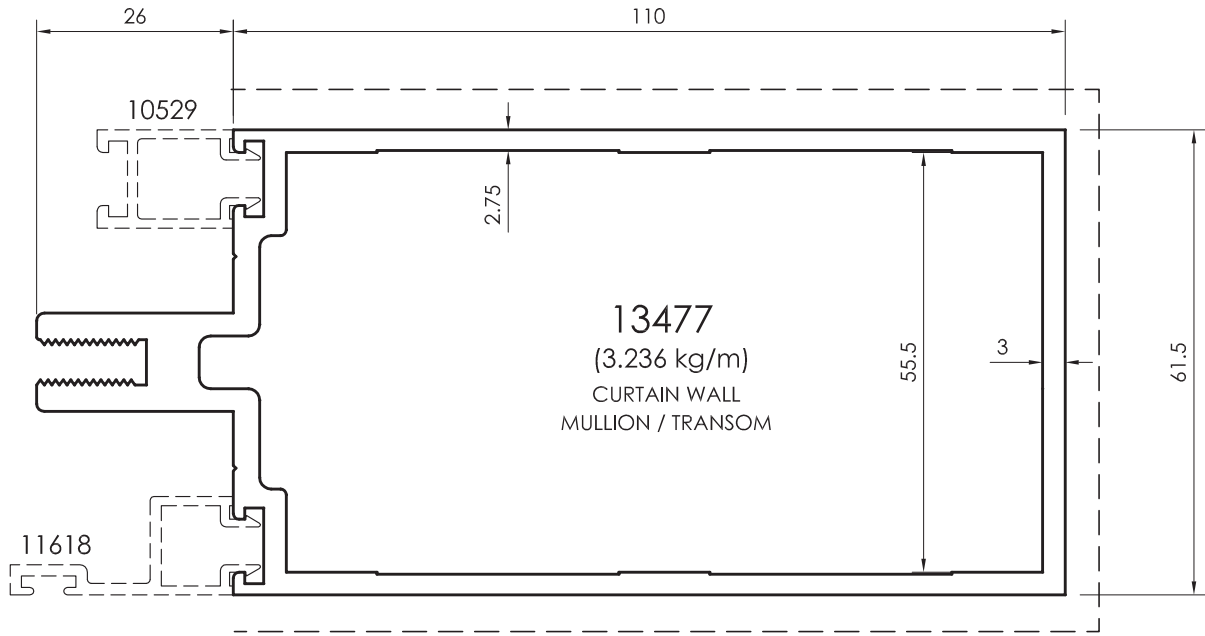
**13050**  
(1.854 kg/m)  
CURTAIN WALL  
TRANSOM



**12715**  
(2.237 kg/m)  
CURTAIN WALL  
TRANSOM

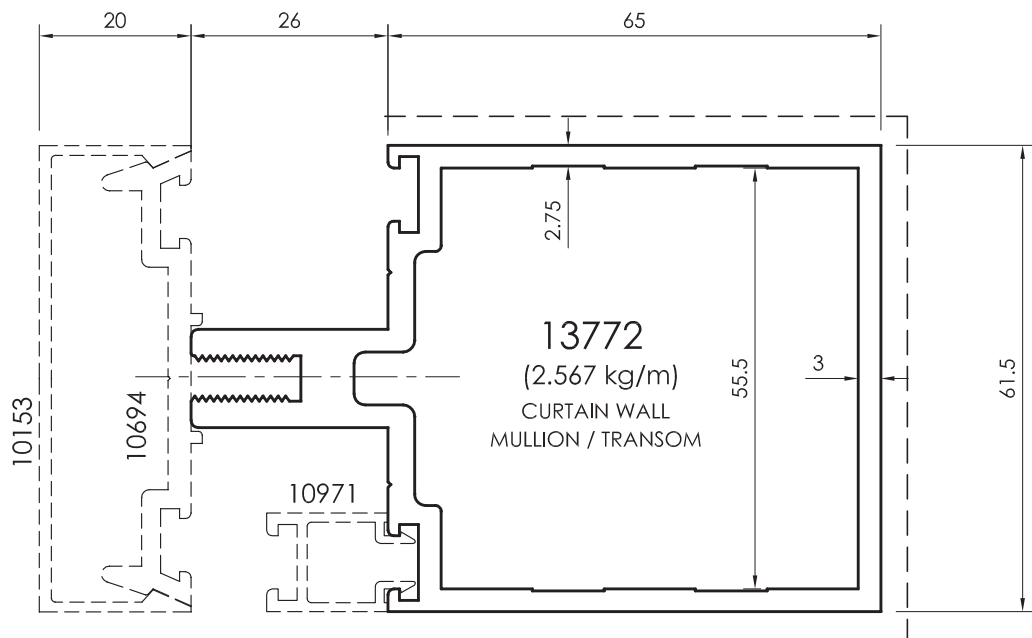
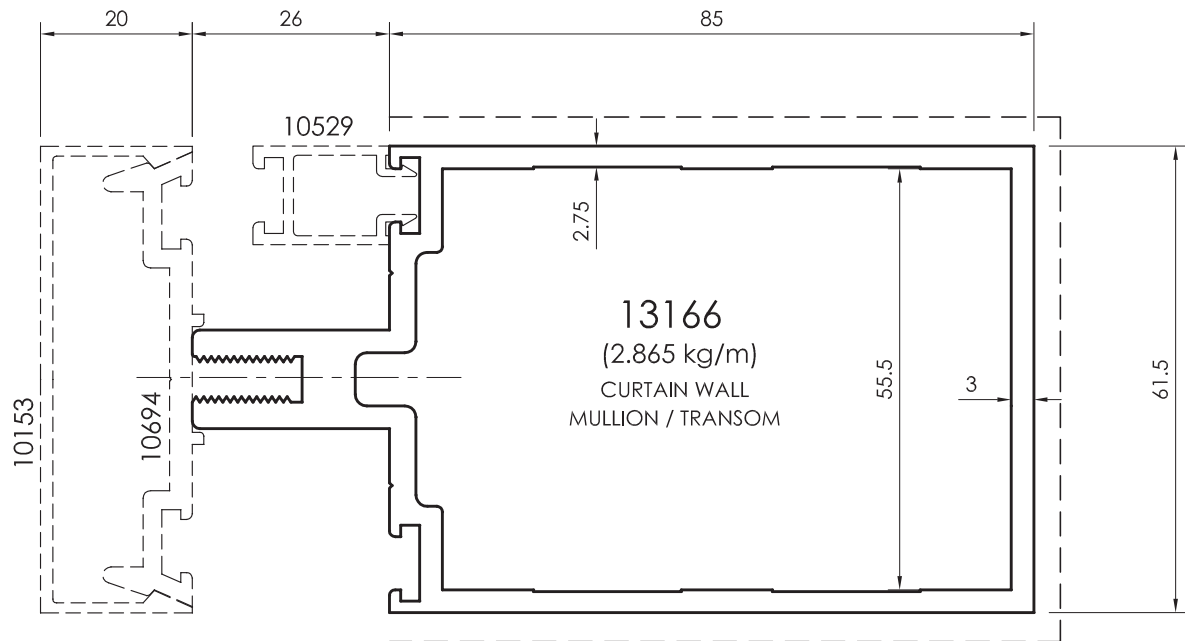
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Mullion / Transom Profiles



All dimensions in mm  
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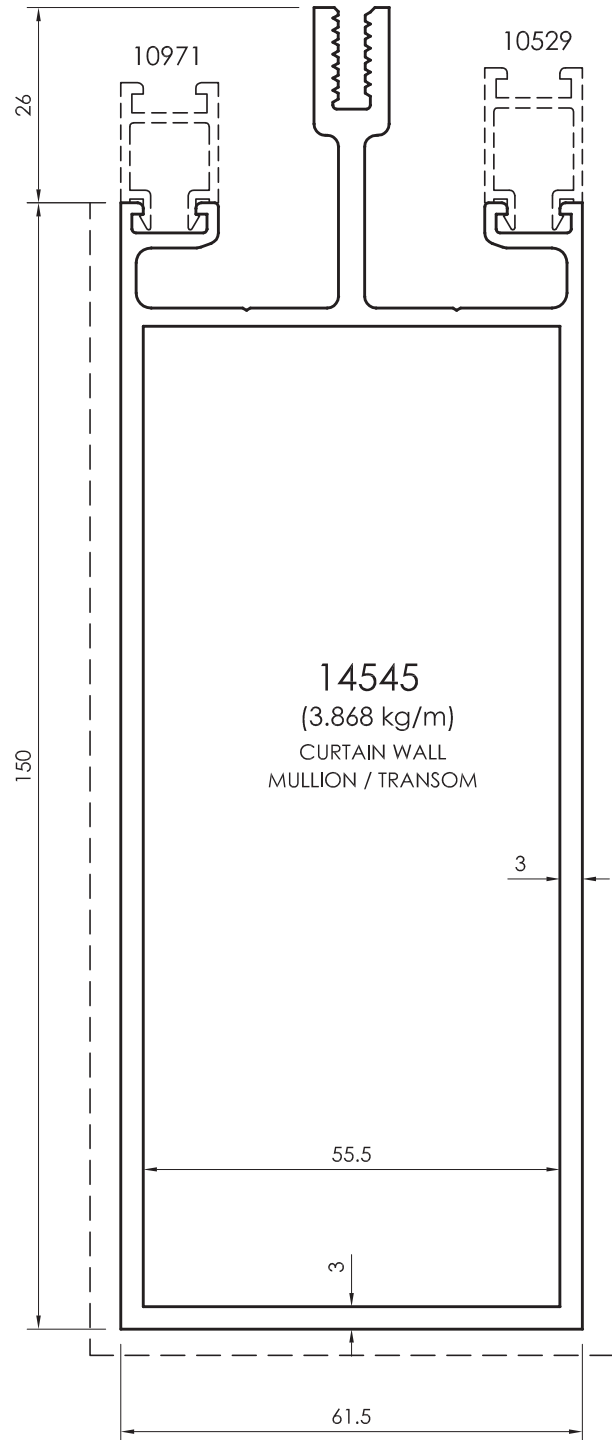
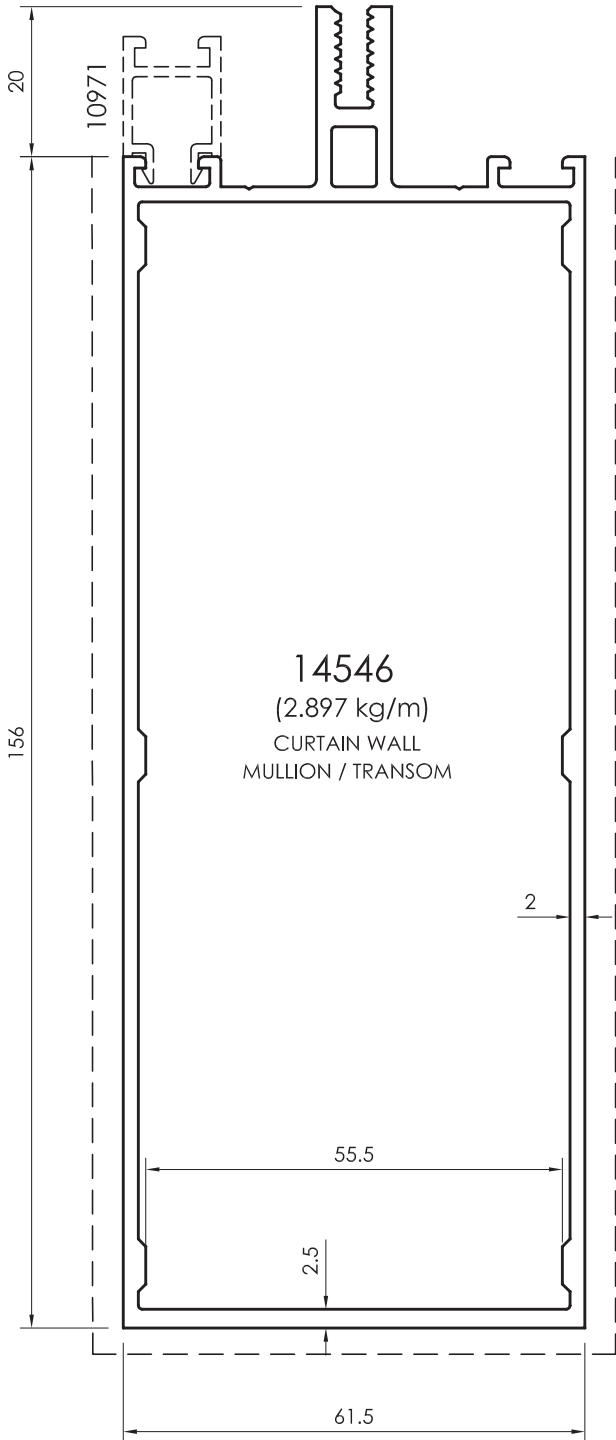
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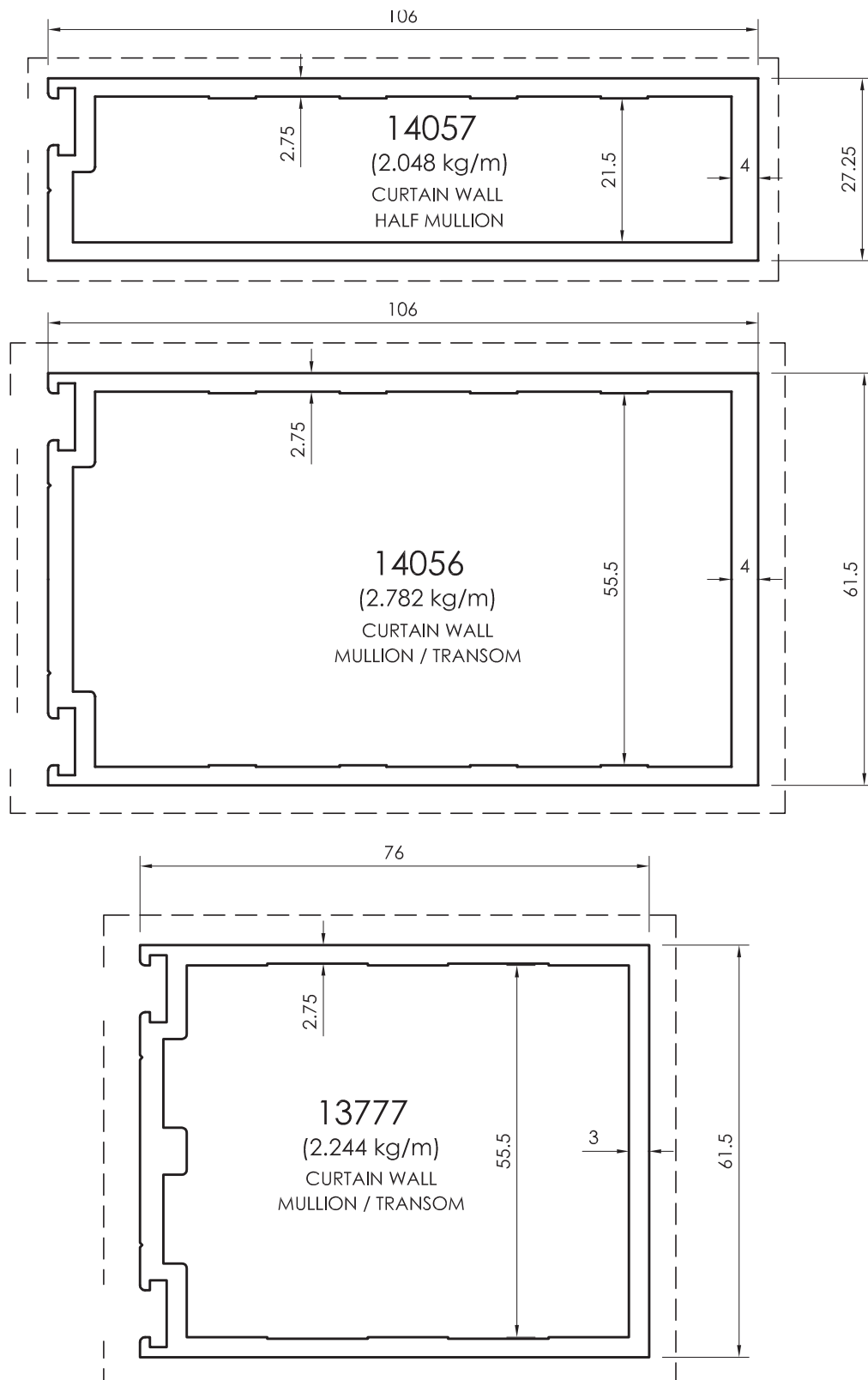


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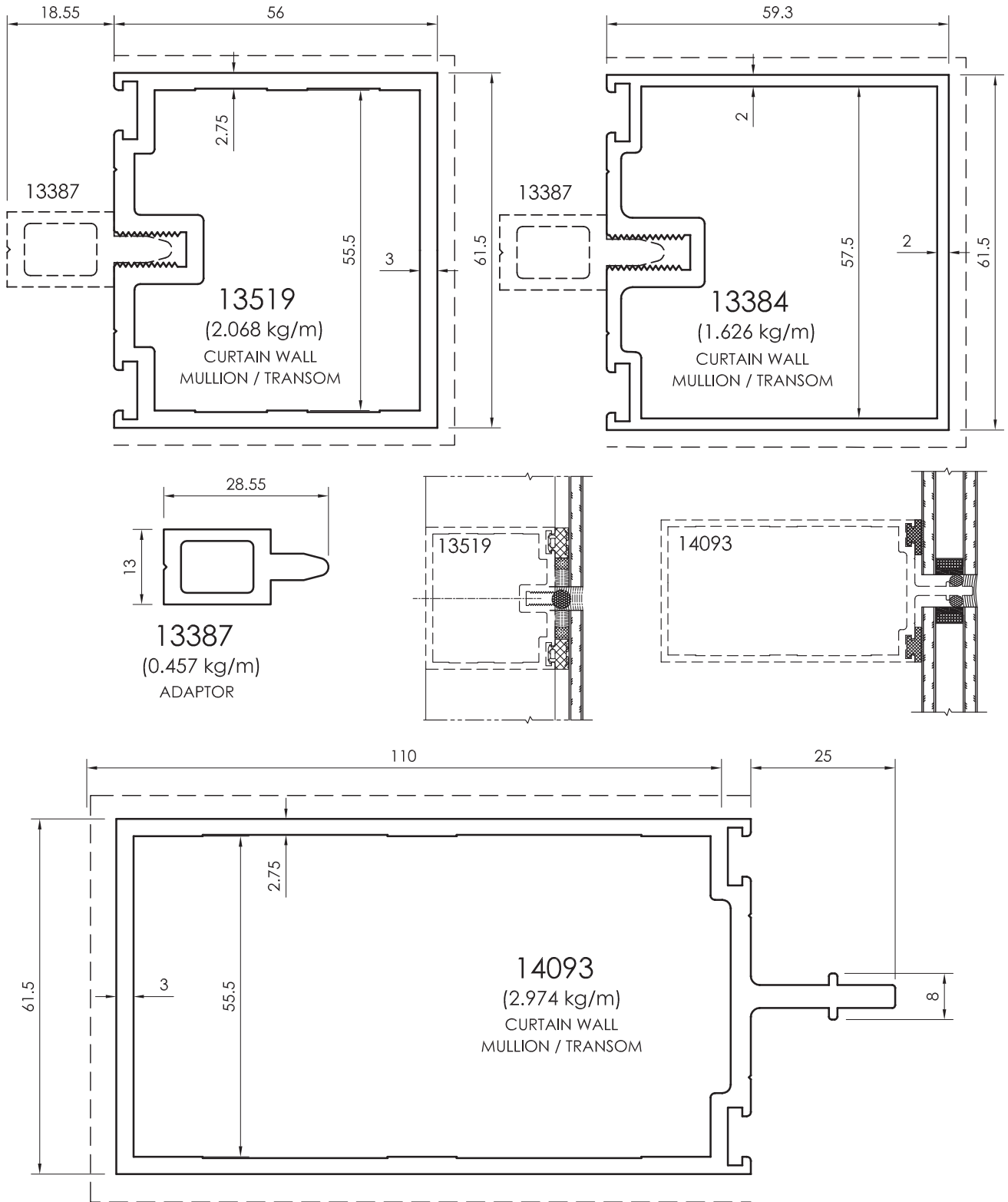
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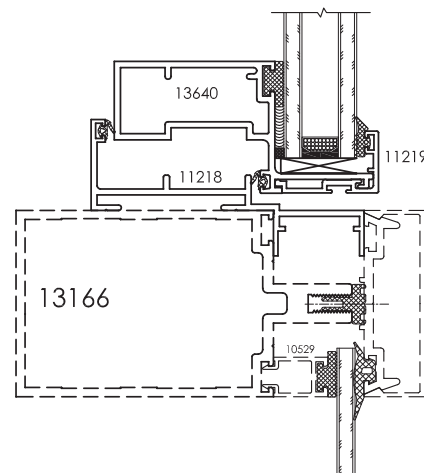
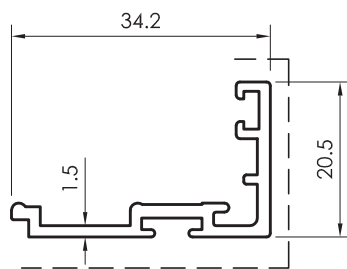
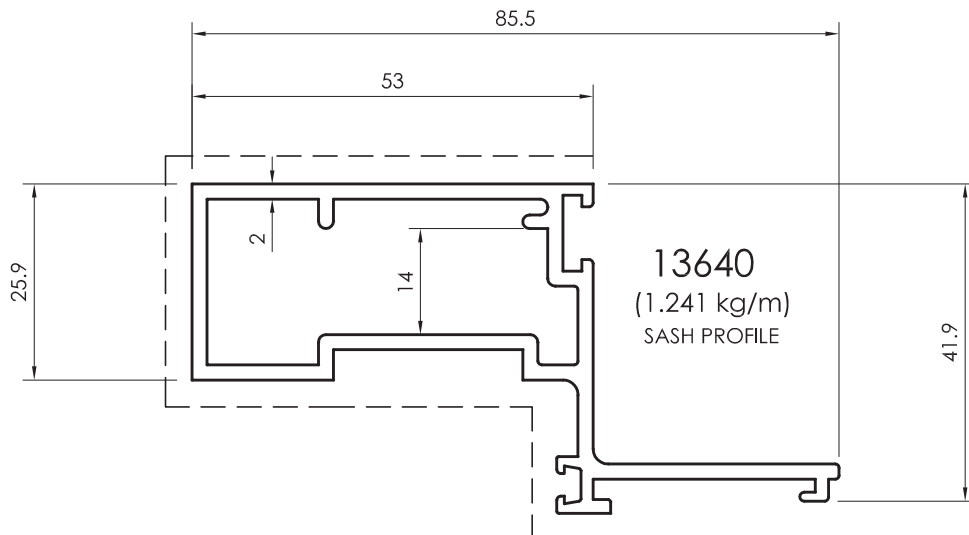
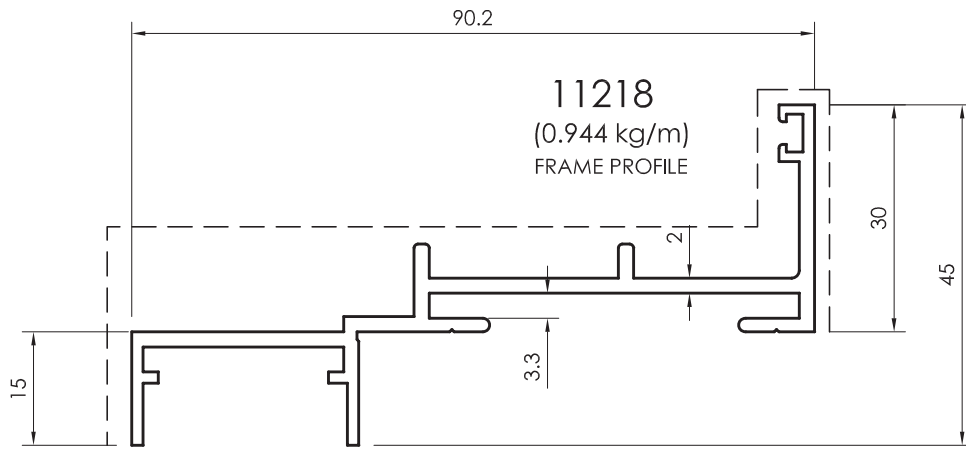
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Mullion / Transom Profiles



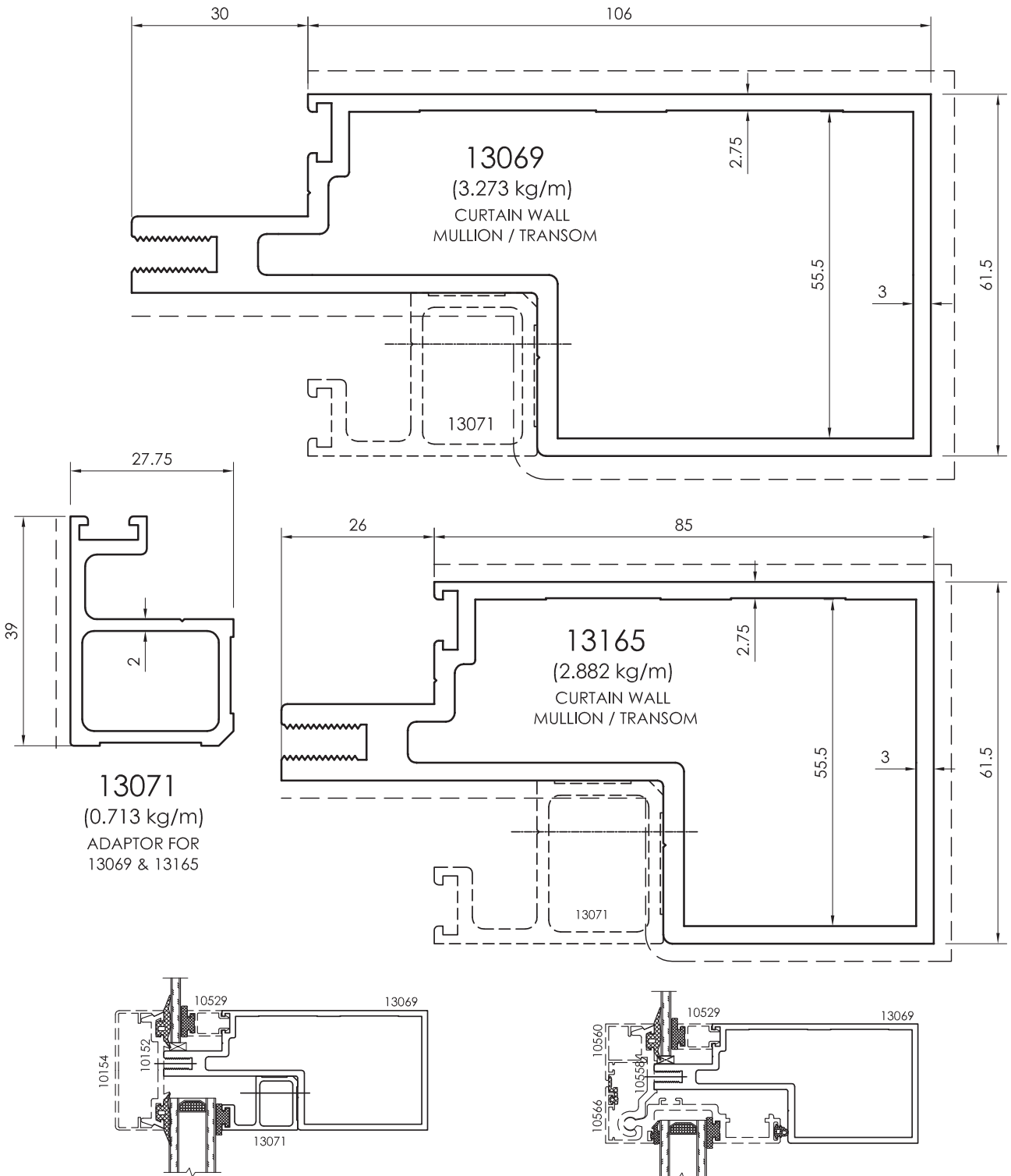
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## Frame / Sash Profiles



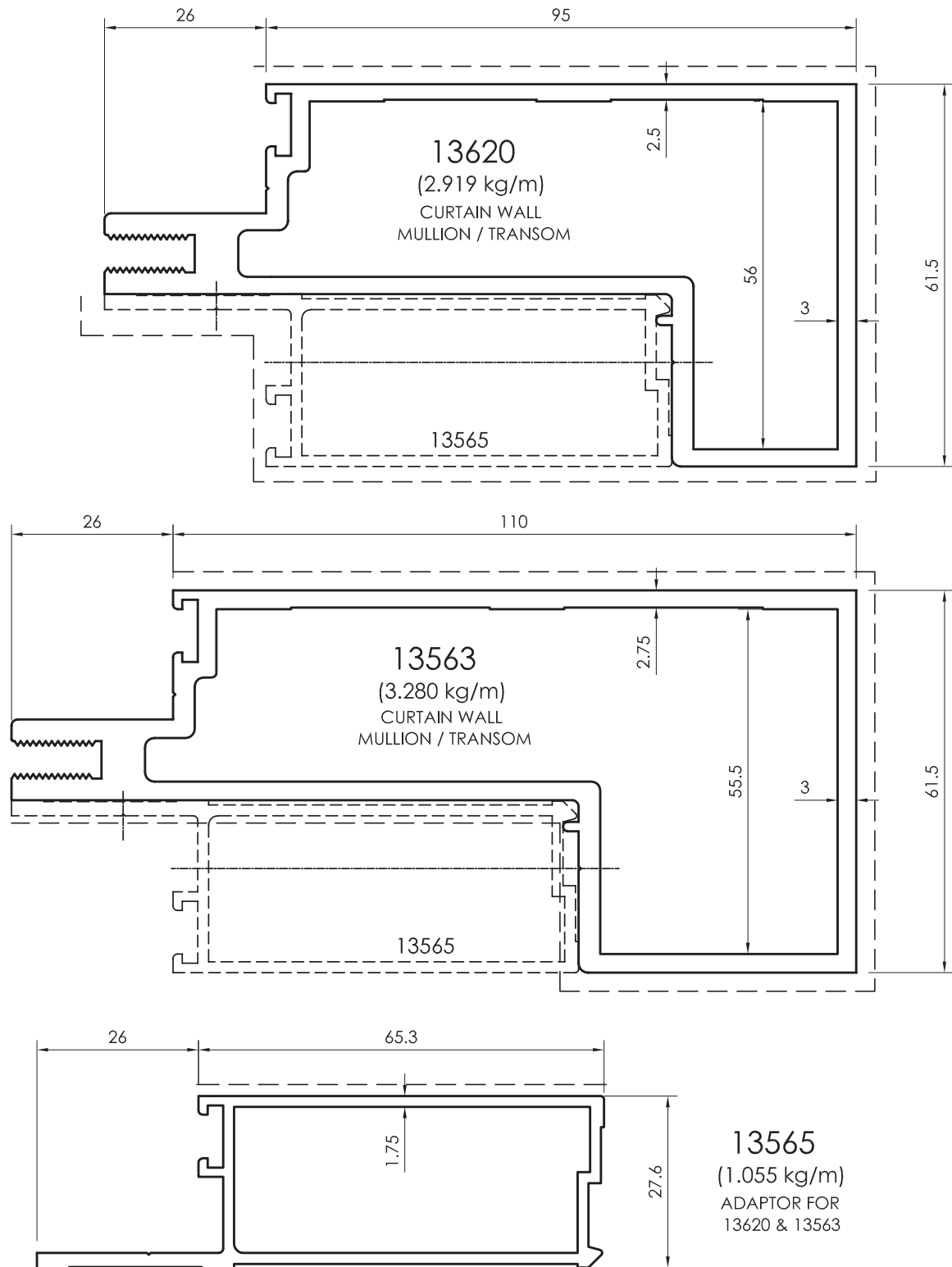
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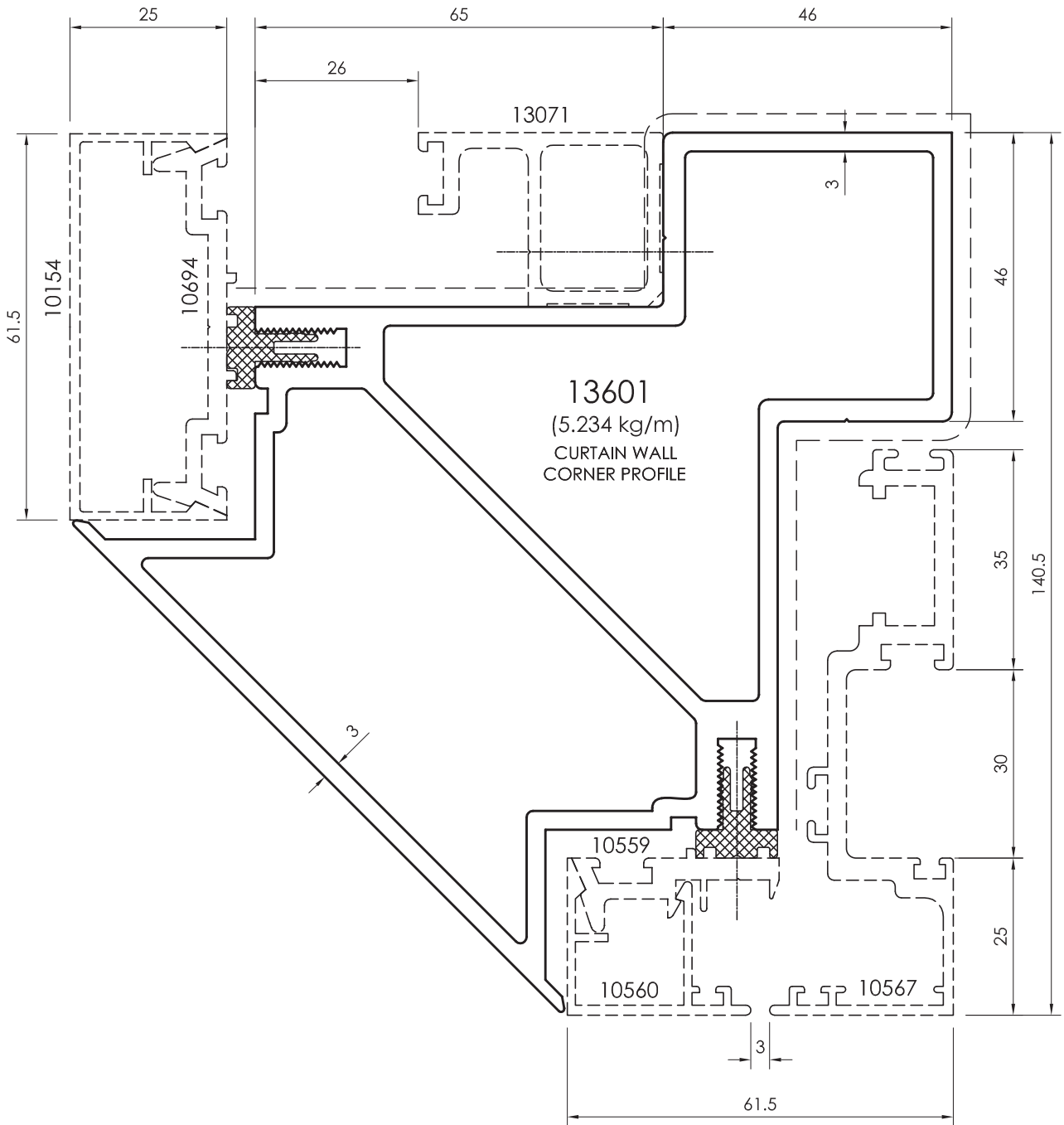
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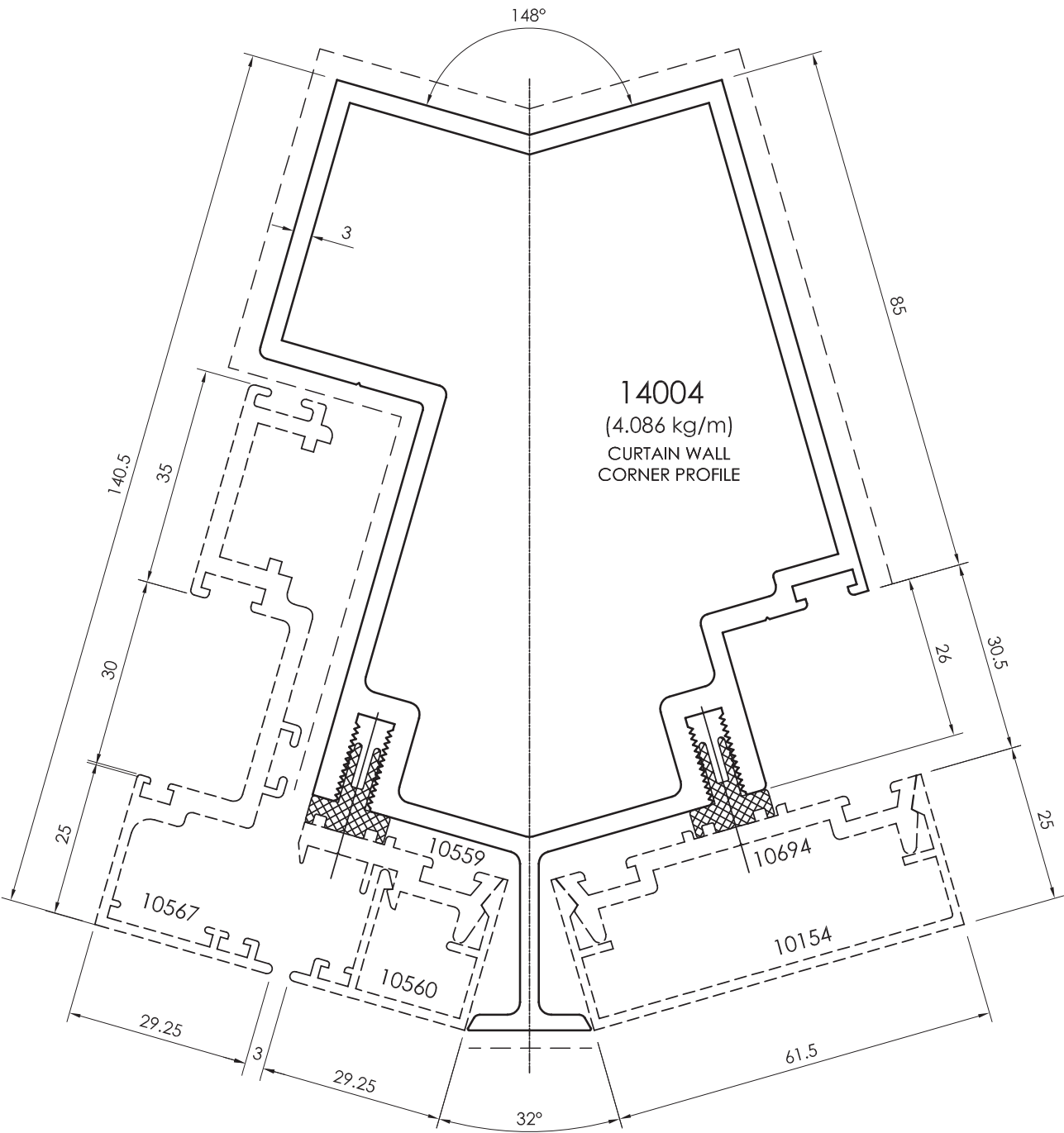
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90° Corner Profile



All dimensions in mm  
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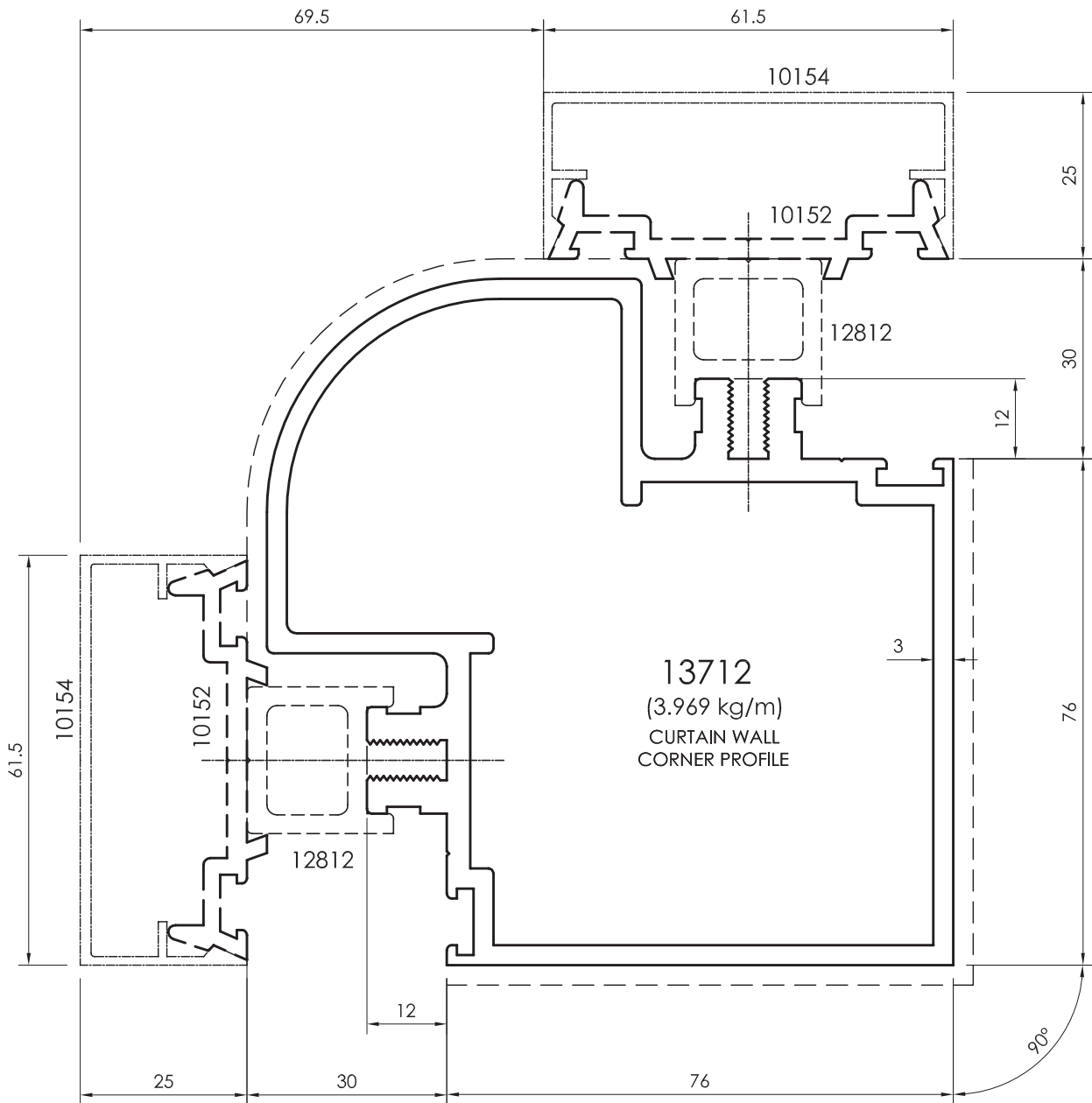
148° Corner Profile



All dimensions in mm  
Visible area\_\_\_\_\_

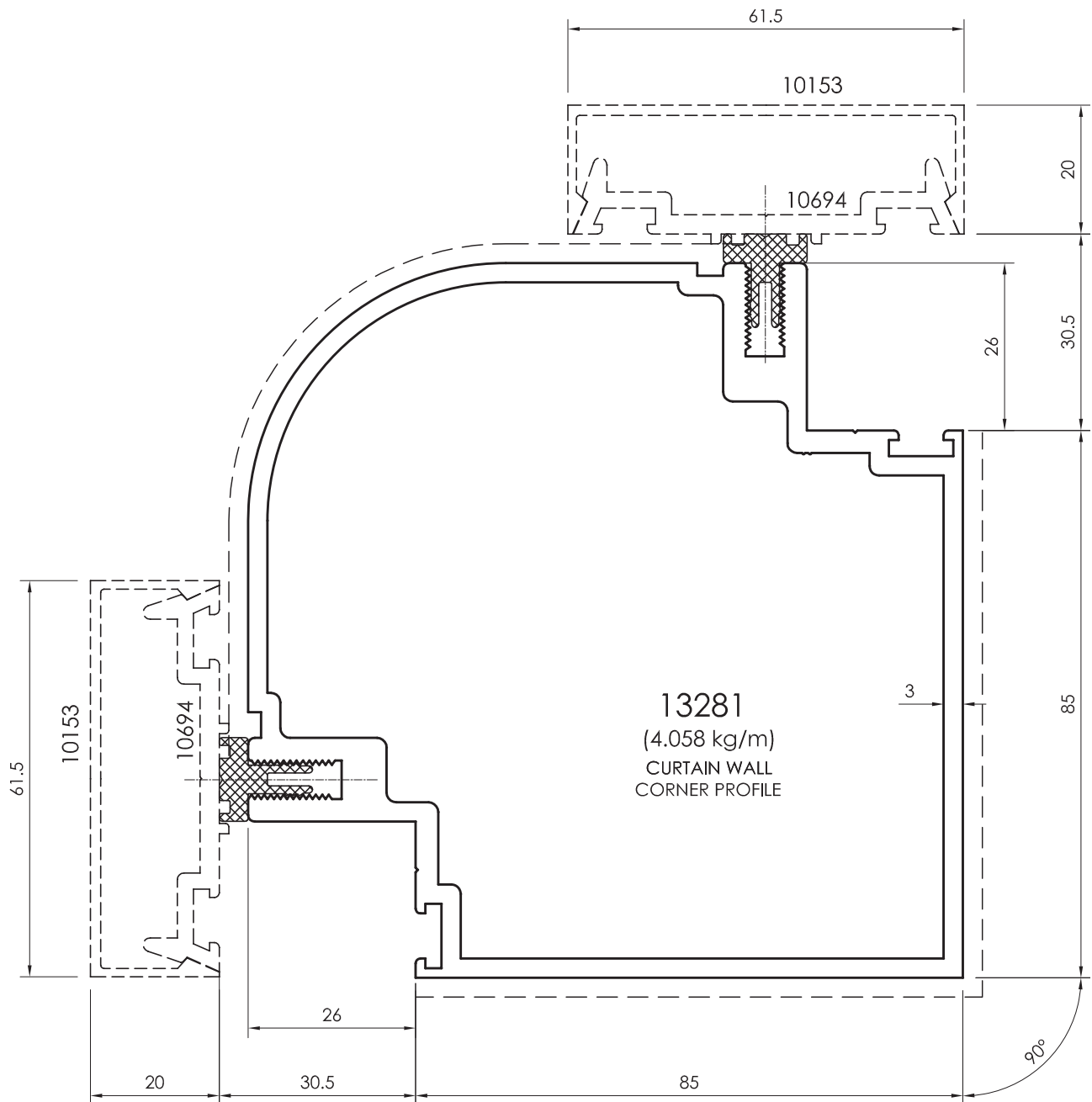


Corner Profiles



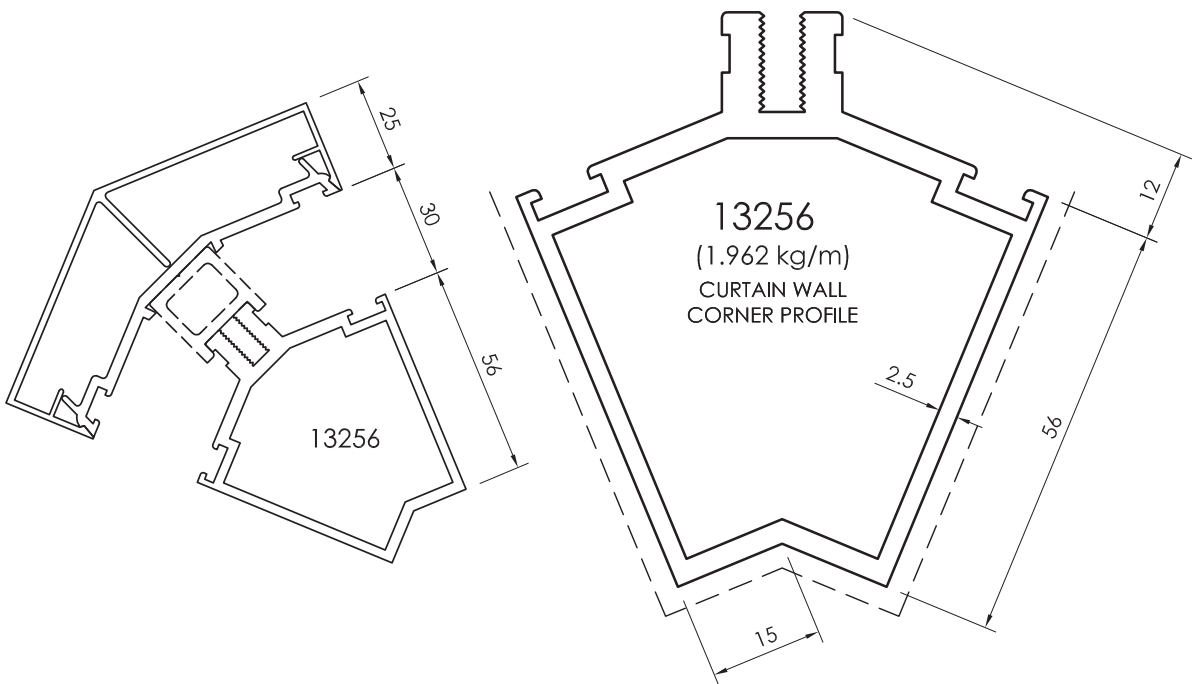
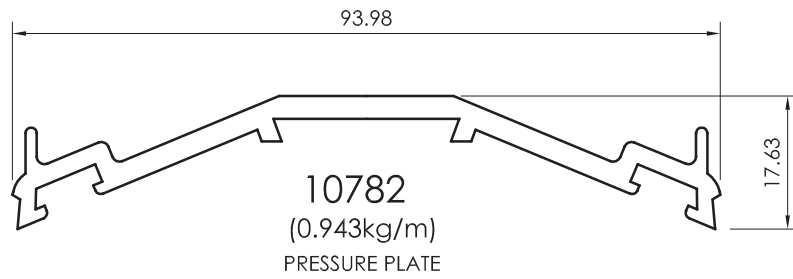
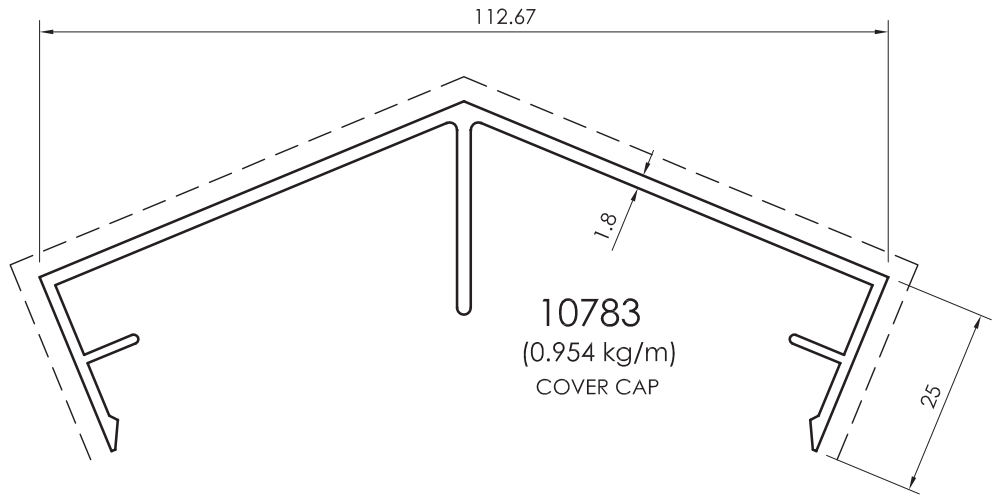
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## Corner Profiles



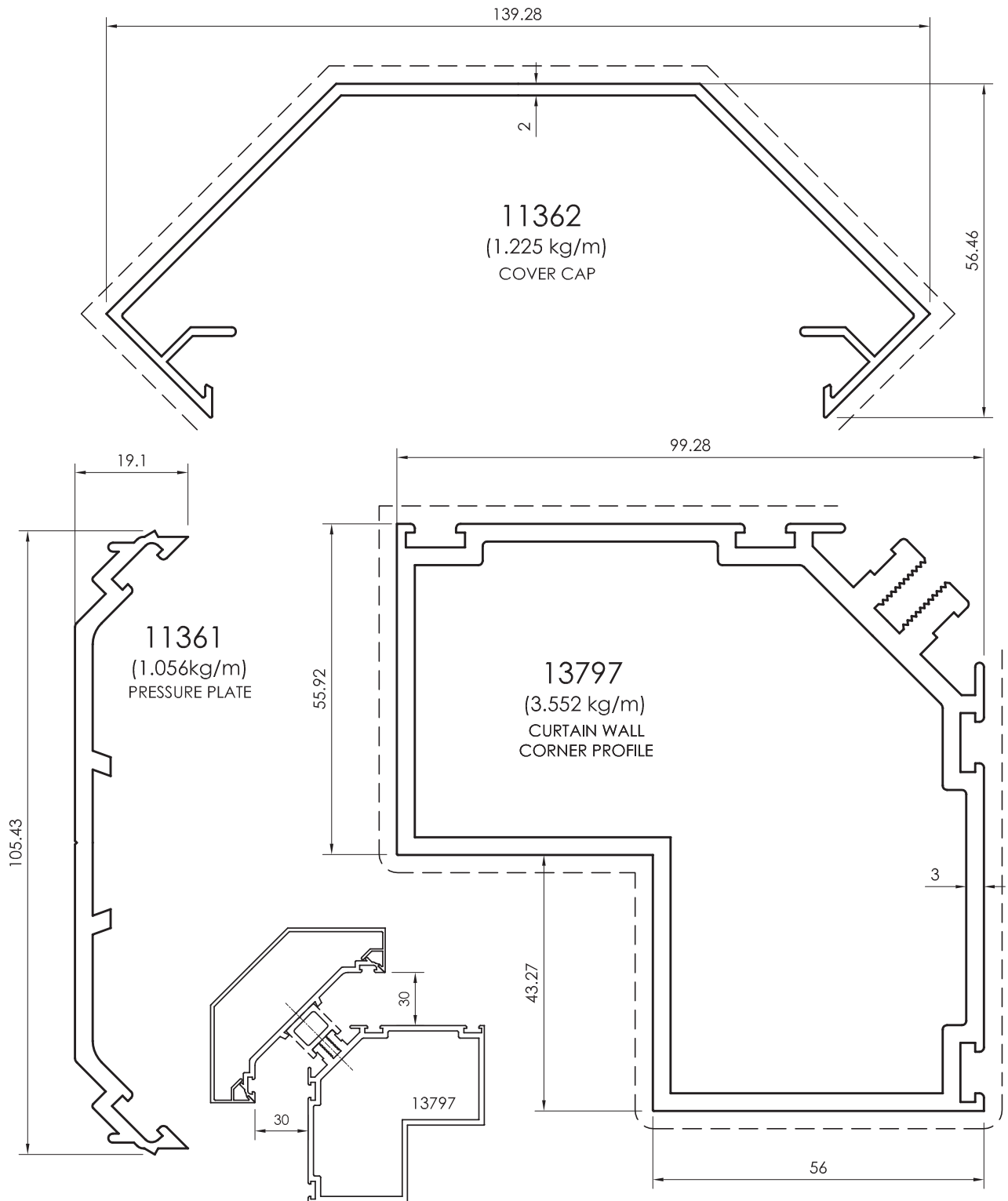
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Corner Profiles



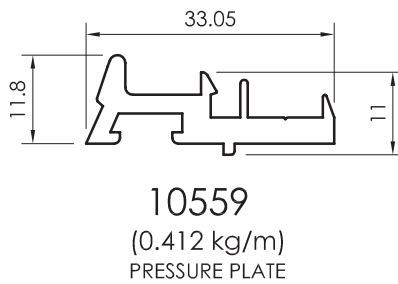
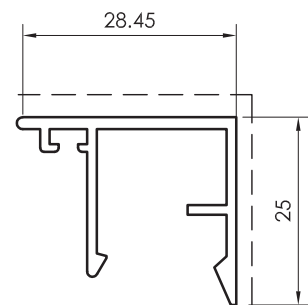
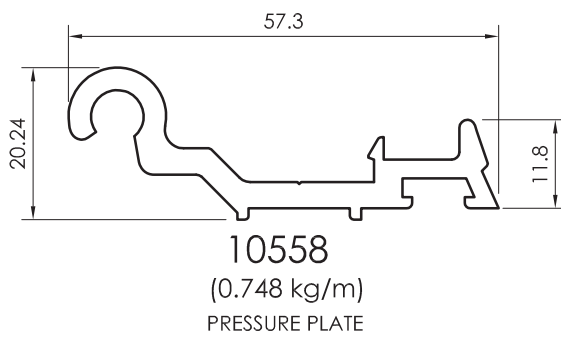
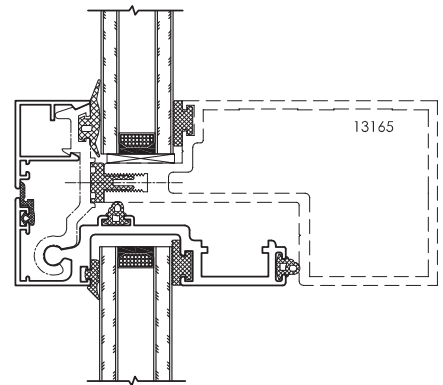
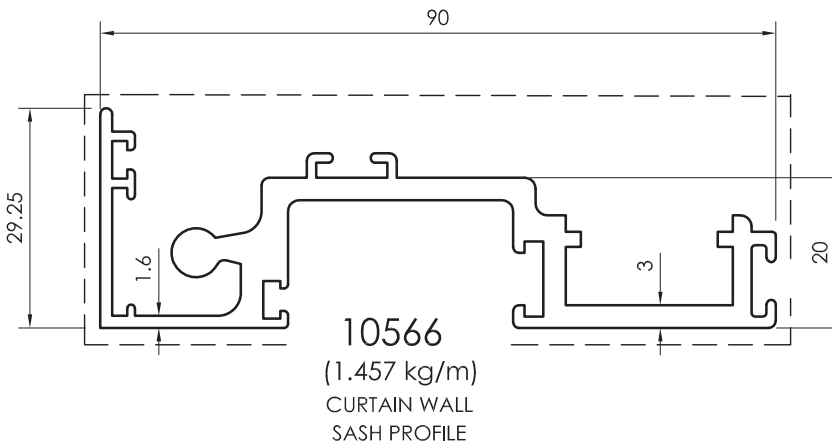
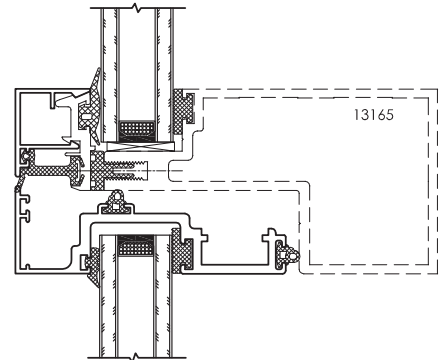
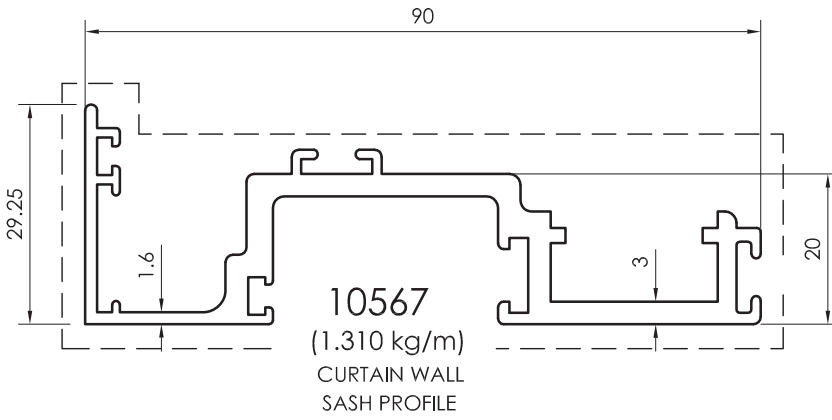
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## Corner Profiles



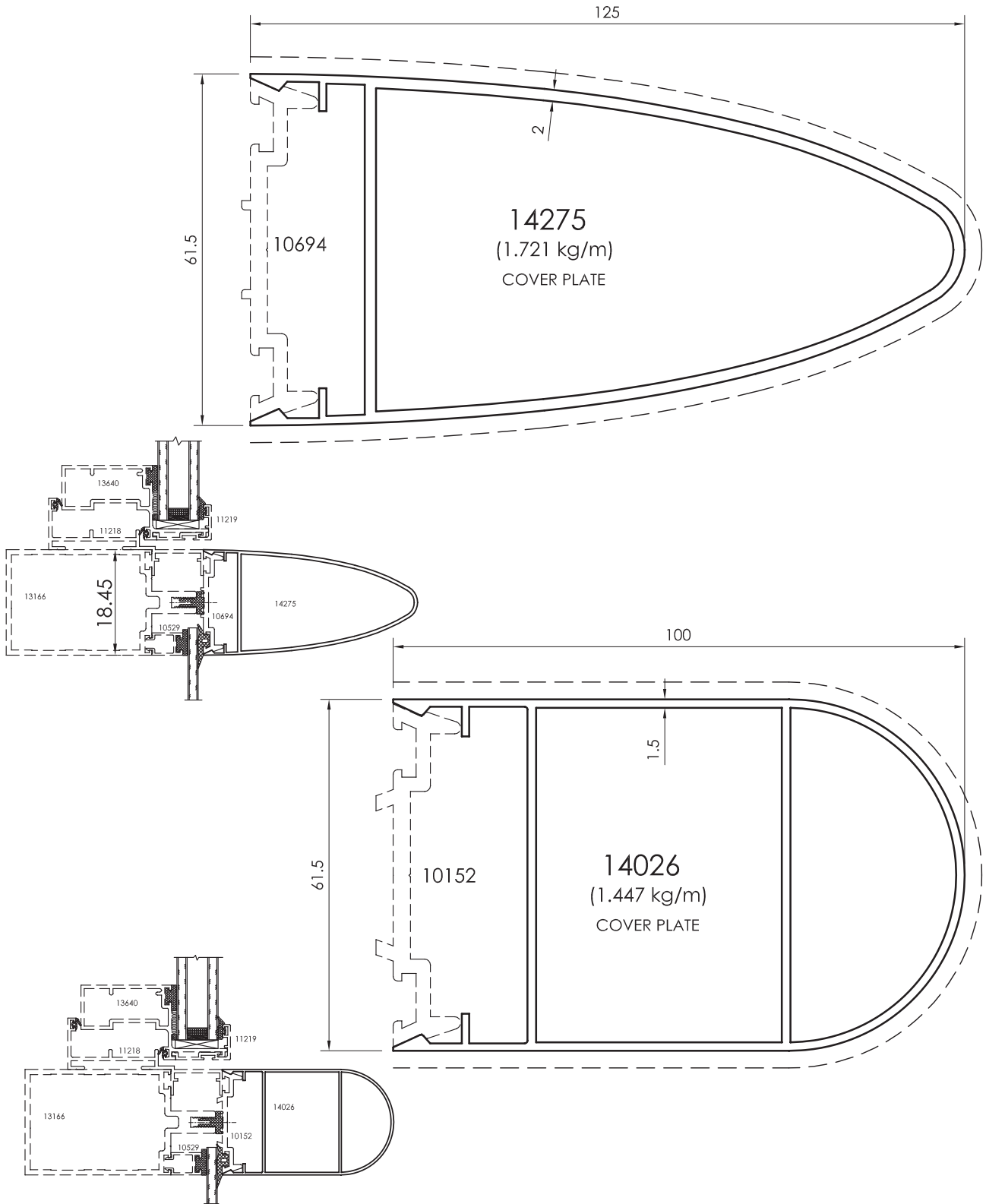
All dimensions in mm  
 Visible area.....

Curtain Wall Profile



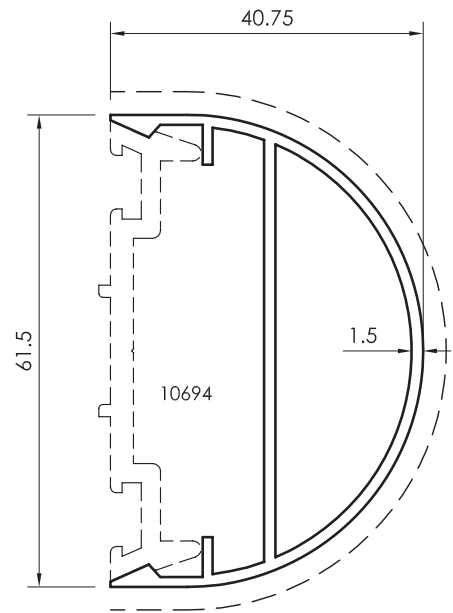
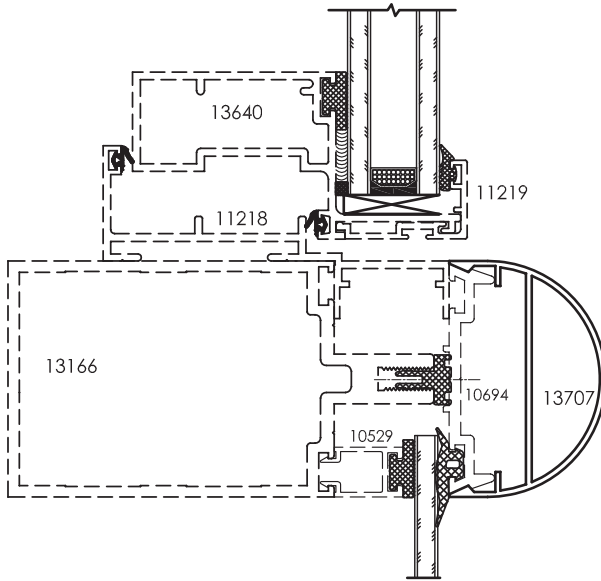
All dimensions in mm  
----- Visible area

Curtain Wall Profile

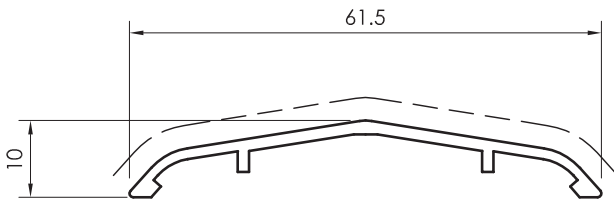


All dimensions in mm  
 Visible area\_\_\_\_\_

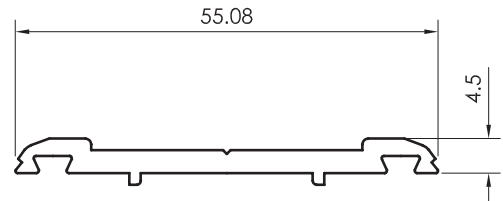
Curtain Wall Profile



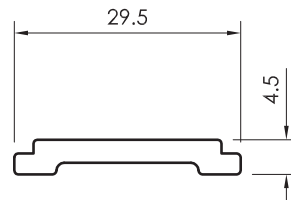
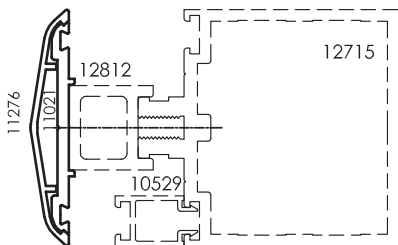
**13707**  
(0.724 kg/m)  
COVER PLATE



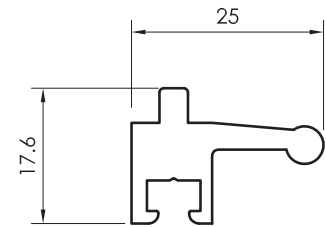
**11276**  
(0.270 kg/m)  
COVER PLATE



**11021**  
(0.455 kg/m)  
PRESSURE PLATE



**11686**  
(0.259 kg/m)  
LOCK PROFILE



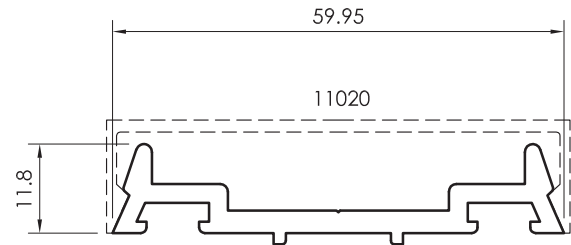
**11434**  
(0.454 kg/m)  
GLASS TOGGLER

All dimensions in mm  
----- Visible area

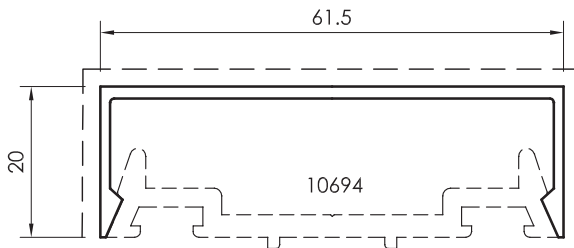
## Curtain Wall Profile



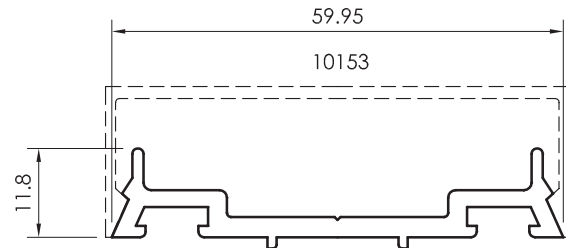
**11020**  
(0.380 kg/m)  
COVER PLATE



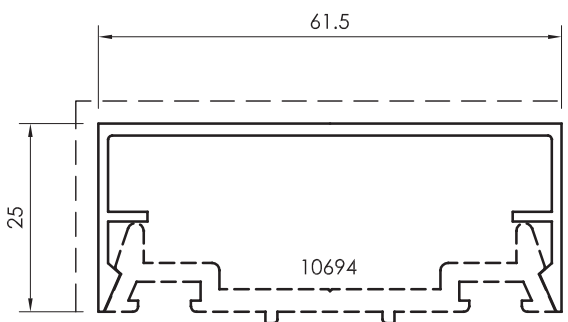
**10694**  
(0.638 kg/m)  
PRESSURE PLATE



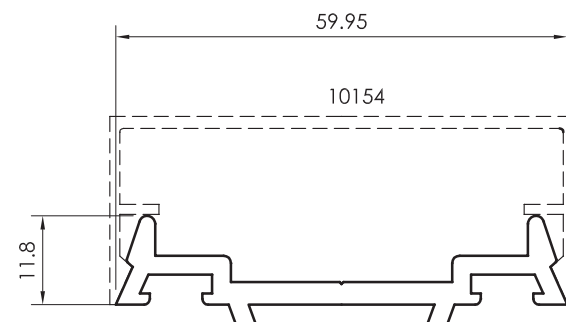
**10153**  
(0.411 kg/m)  
COVER PLATE



**21653**  
(0.567 kg/m)  
PRESSURE PLATE



**10154**  
(0.483 kg/m)  
COVER PLATE

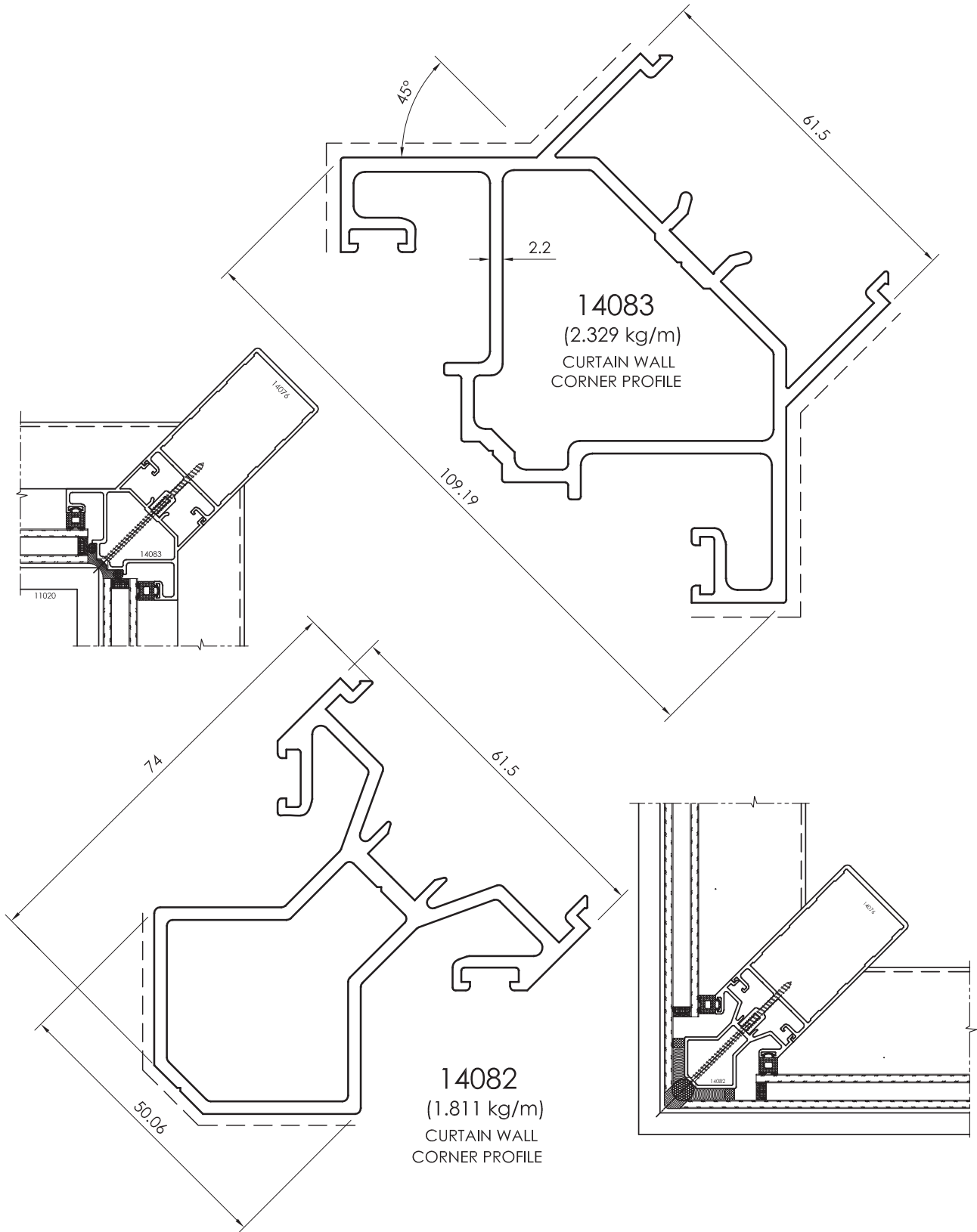


**10152**  
(0.668 kg/m)  
PRESSURE PLATE

All dimensions in mm  
Visible area\_\_\_\_\_

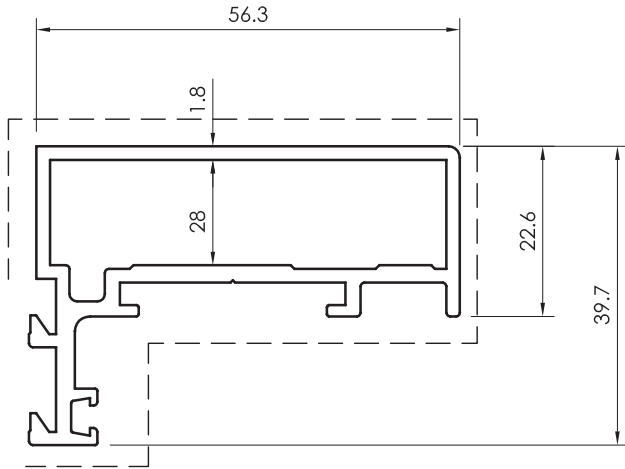


Corner Profiles

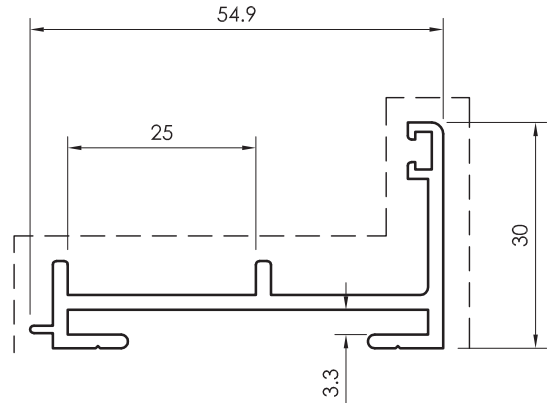


All dimensions in mm  
 - - - - - Visible area

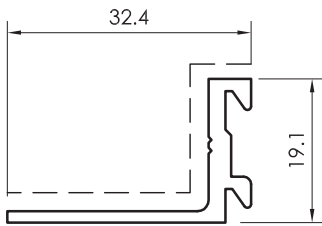
Curtain Wall Profile



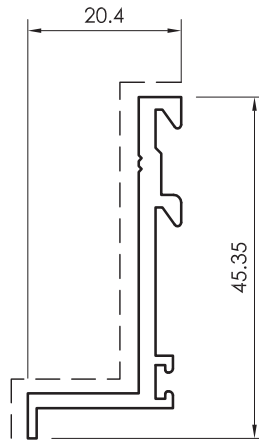
**14079**  
(1.036 kg/m)  
SASH PROFILE



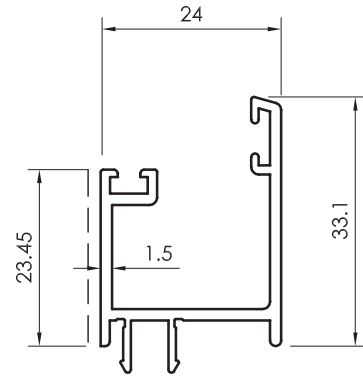
**11619**  
(0.606 kg/m)  
FRAME PROFILE



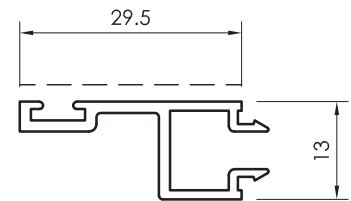
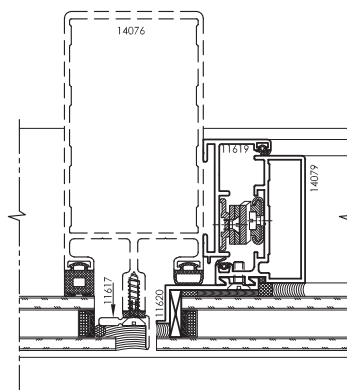
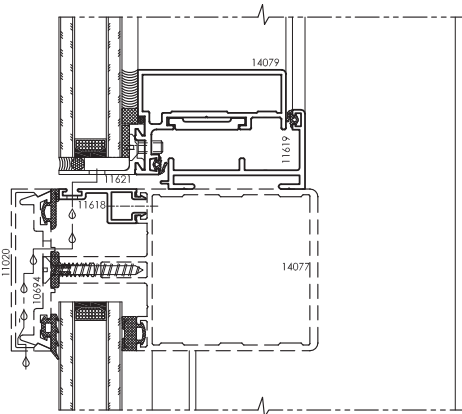
**11621**  
(0.288 kg/m)  
GLASS HOLDER



**11620**  
(0.426 kg/m)  
GLASS HOLDER



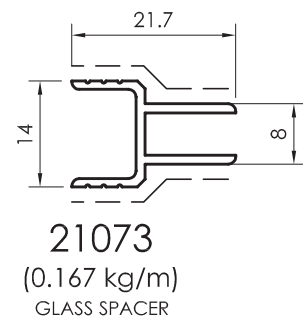
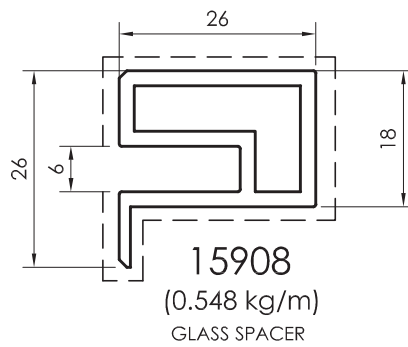
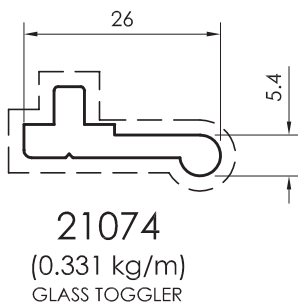
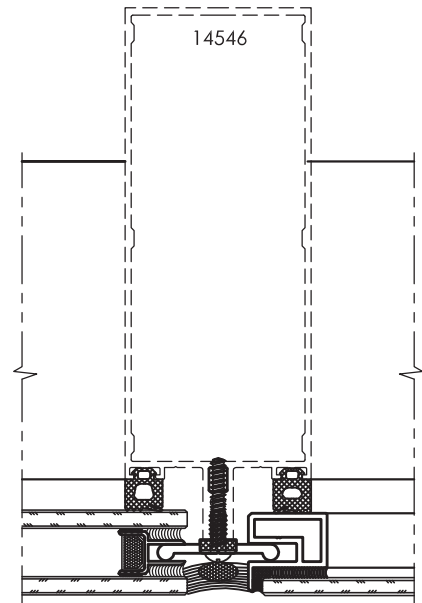
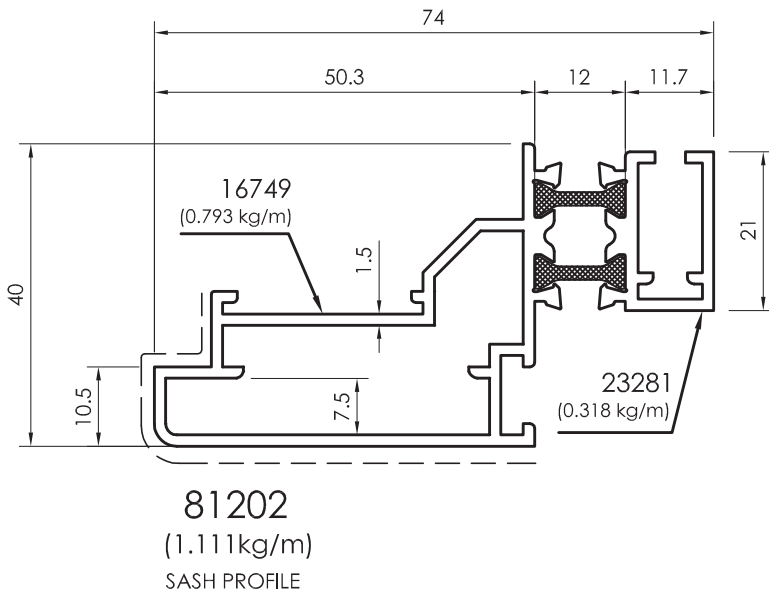
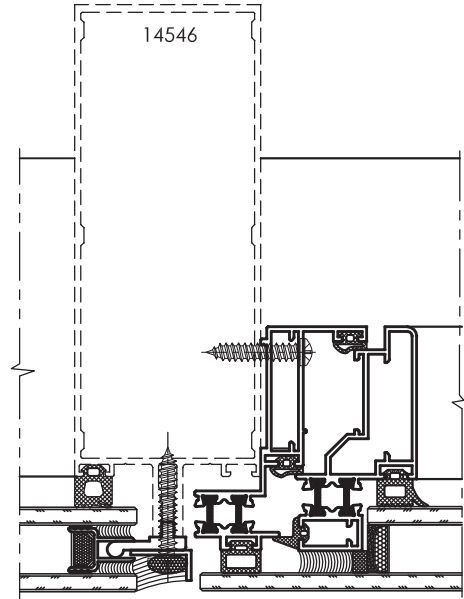
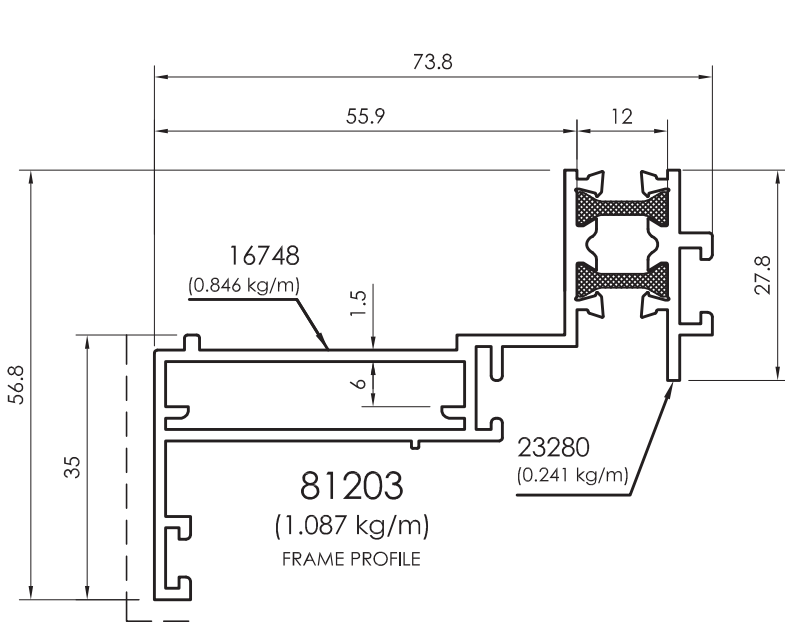
**24373**  
(0.407 kg/m)  
GLAZING CLIP



**11618**  
(0.257 kg/m)  
ADAPTOR

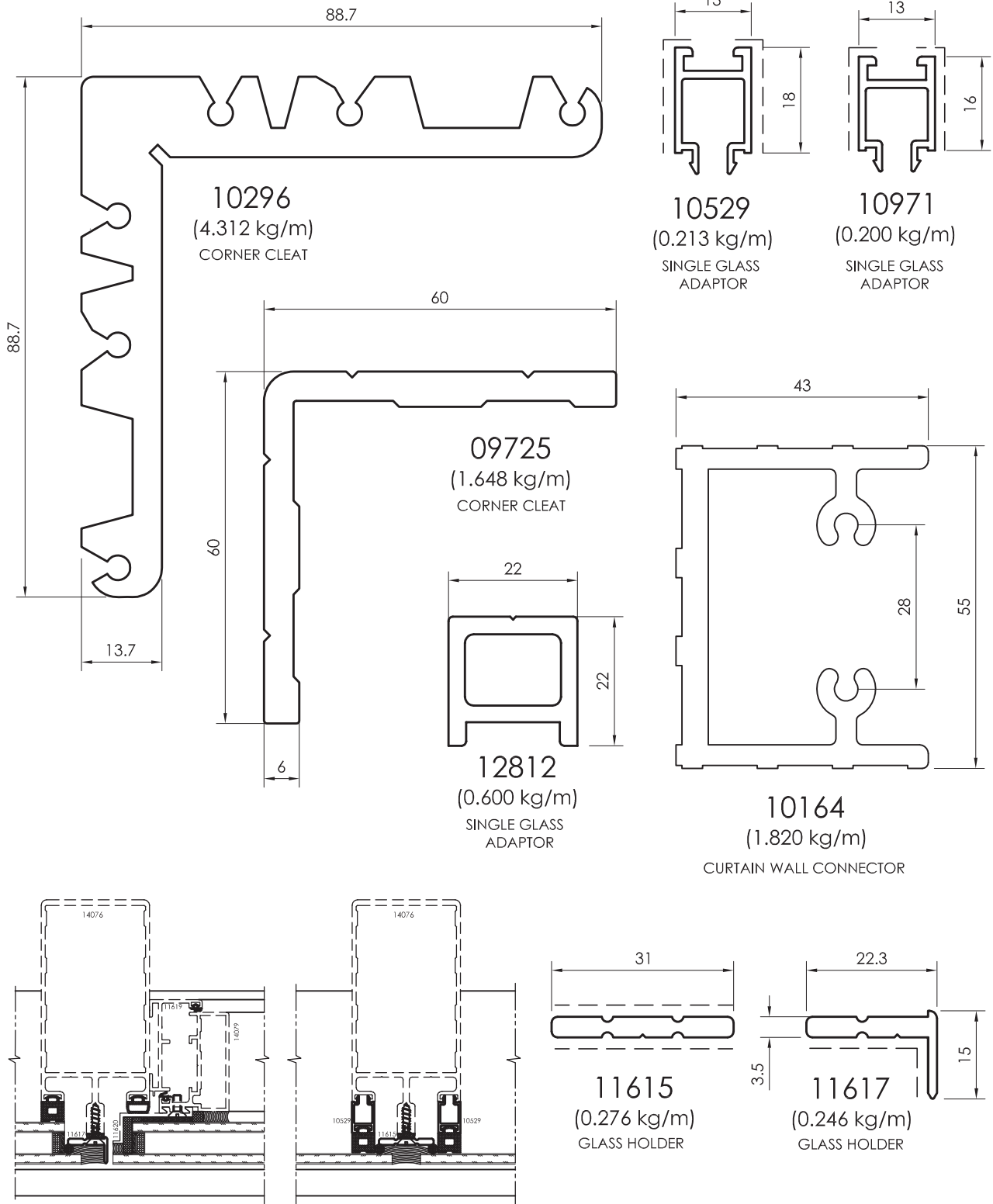
All dimensions in mm  
Visible area \_\_\_\_\_

Curtain Wall Profile



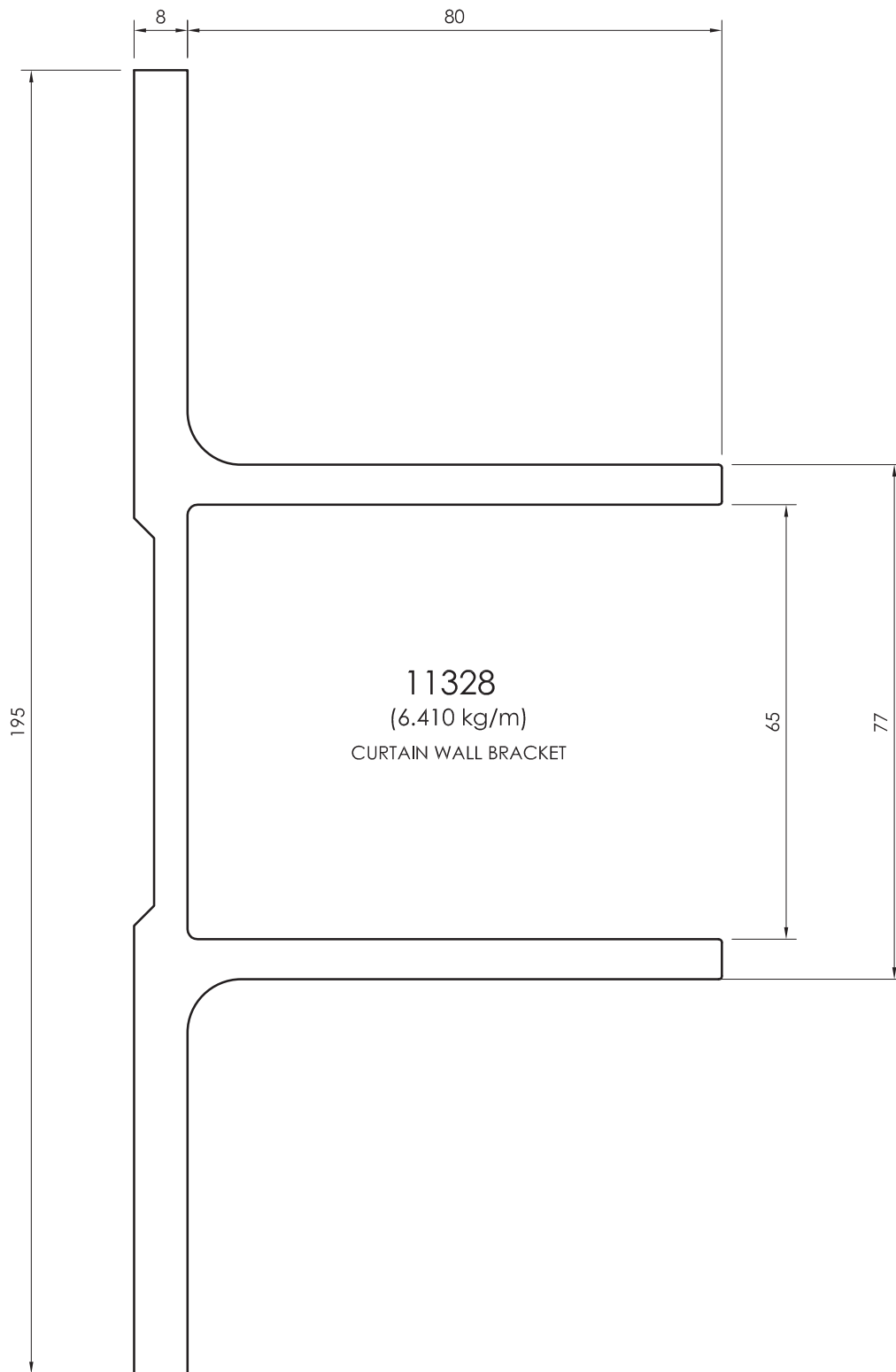
All dimensions in mm  
----- Visible area

Curtain Wall Profile



All dimensions in mm  
Visible area \_\_\_\_\_



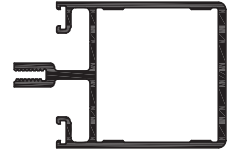
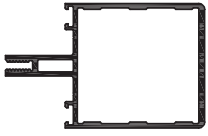
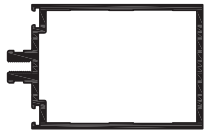
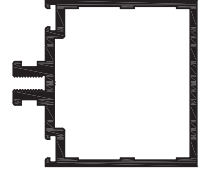

Curtain Wall Profile






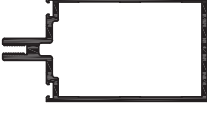
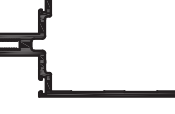

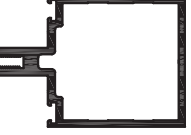
All dimensions in mm  
 -----Visible area



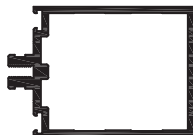
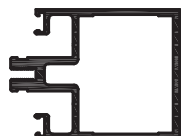
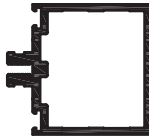

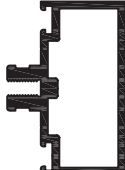




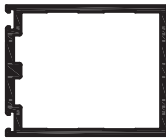
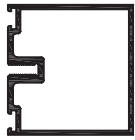
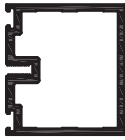

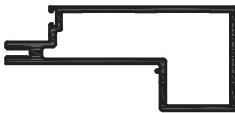
# PROFILE LIST


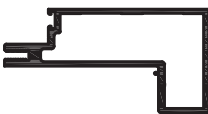
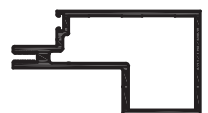
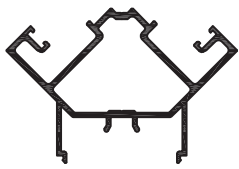
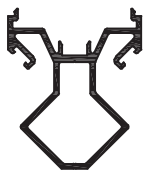
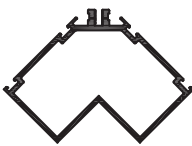

Profile Reference	Child Profile	Profile Section	Page	Weight KG/M	IX cm <sup>4</sup>	IY cm <sup>4</sup>	WX cm <sup>3</sup>	WY cm <sup>3</sup>
16525	--		15	3.122	62.349	191.125	20.275	27.619
14076	--		14	3.014	215.592	61.032	32.067	19.848
14432	--		14	2.418	41.885	72.020	13.621	14.998
14077	--		15	2.216	80.926	38.397	14.549	12.486
14944	--		17	2.503	48.356	109.319	15.725	22.084
15104	--		17	1.947	33.400	39.155	10.861	11.355
14093	--		25	2.974	206.764	62.958	28.978	20.474

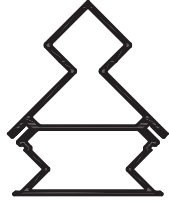

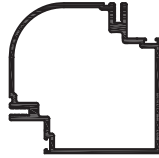
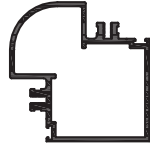


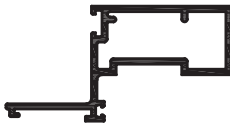



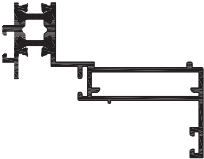
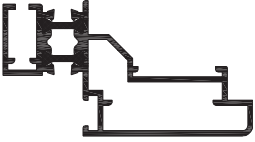
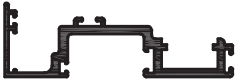
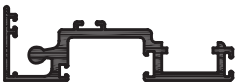


Profile Reference	Child Profile	Profile Section	Page	Weight KG/M	IX cm <sup>4</sup>	IY cm <sup>4</sup>	WX cm <sup>3</sup>	WY cm <sup>3</sup>
14545	--		23	3.868	449.821	85.996	49.601	27.965
14546	--		23	2.897	386.964	66.047	43.851	21.477
13477	--		21	3.236	244.451	63.372	35.900	20.608
13619	--		21	2.887	173.908	52.905	14.549	17.204
13166	--		22	2.865	140.525	51.496	24.853	16.746
12716	--		19	2.999	190.801	61.454	30.950	19.985
13772	--		22	2.567	81.095	41.100	17.013	13.658








Profile Reference	Child Profile	Profile Section	Page	Weight KG/M	IX cm <sup>4</sup>	IY cm <sup>4</sup>	WX cm <sup>3</sup>	WY cm <sup>3</sup>
13496	--		18	2.510	159.068	53.662	26.254	17.451
14365	--		18	2.600	136.868	52.334	24.594	17.019
13540	--		19	2.559	88.725	47.110	19.613	15.320
13475	--		20	2.560	64.359	42.206	15.905	13.725
12715	--		20	2.237	44.636	37.029	13.065	12.042
13050	--		20	1.854	11.709	24.642	5.119	8.013
16396	--		17	1.602	21.406	10.596	6.959	4.737





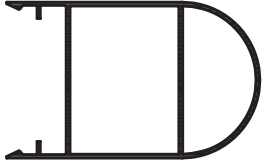


Profile Reference	Child Profile	Profile Section	Page	Weight KG/M	IX cm <sup>4</sup>	IY cm <sup>4</sup>	WX cm <sup>3</sup>	WY cm <sup>3</sup>
17731	--		17	2.574	23.109	150.467	10.932	24.192
14056	--		24	2.782	165.994	65.229	30.761	20.237
13777	--		24	2.244	70.636	46.775	17.622	15.211
13384	--		25	1.626	29.908	28.416	8.794	9.241
13519	--		25	2.068	34.358	36.840	11.315	11.974
14057	--		24	2.048	97.703	9.460	18.246	6.932
13563	--		28	3.280	233.314	45.632	31.808	12.879

Profile Reference	Child Profile	Profile Section	Page	Weight KG/M	IX cm <sup>4</sup>	IY cm <sup>4</sup>	WX cm <sup>3</sup>	WY cm <sup>3</sup>
13069	--		27	3.273	226.799	52.033	31.603	15.418
13620	--		28	2.919	171.107	36.101	25.656	10.113
13165	--		27	2.882	133.080	41.369	22.126	12.091
14083	--		39	2.329	78.754	29.549	14.405	7.247
14082	--		39	1.811	26.051	26.056	8.472	6.206
13797	--		34	3.552	117.013	185.134	9.961	15.496
13256	--		33	1.962	39.740	24.522	9.521	6.949

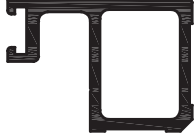



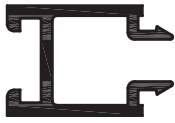
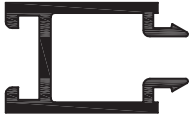

Profile Reference	Child Profile	Profile Section	Page	Weight KG/M	IX cm <sup>4</sup>	IY cm <sup>4</sup>	WX cm <sup>3</sup>	WY cm <sup>3</sup>
13601	--		29	5.234	262.678	262.678	33.557	33.557
14004	--		30	4.086	294.892	122.428	36.829	23.984
13281	--		32	4.058	229.362	229.365	40.730	40.730
13712	--		31	3.969	158.968	158.968	30.354	30.354
14079	--		40	1.036	4.749	14.783	1.920	4.487
11619	--		40	0.606	1.157	8.200	0.535	2.459
13640	--		26	1.241	8.933	24.499	3.642	5.023

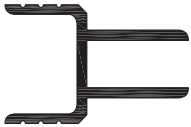




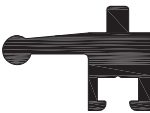

Profile Reference	Child Profile	Profile Section	Page	Weight KG/M	IX cm <sup>4</sup>	IY cm <sup>4</sup>	WX cm <sup>3</sup>	WY cm <sup>3</sup>
11218	--		26	0.944	2.5287	30.959	0.981	6.145
81203	23280 + 16748		41	1.087	6.748	25.253	2.104	2.502
81202	23281 + 16749		41	1.111	5.567	19.415	2.532	2.171
10567	--		35	1.310	2.862	37.060	1.522	8.024
10566	--		35	1.457	2.875	41.153	1.528	8.384
10558	--		35	0.748	0.719	8.176	0.583	2.752
10559	--		35	0.412	0.108	1.354	0.131	0.783








Profile Reference	Child Profile	Profile Section	Page	Weight KG/M	IX cm <sup>4</sup>	IY cm <sup>4</sup>	WX cm <sup>3</sup>	WY cm <sup>3</sup>
10152	--		38	0.668	0.210	8.547	0.245	2.851
10694	--		38	0.638	0.180	8.299	0.215	2.768
21653	--		38	0.567	0.138	7.275	0.160	2.425
11021	--		37	0.455	0.023	4.015	0.071	1.457
10782	--		33	0.943	0.591	19.731	0.543	6.327
10153	--		38	0.411	0.529	8.064	0.357	2.620
11020	--		38	0.380	0.239	6.896	0.202	2.242

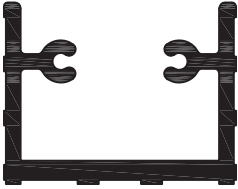
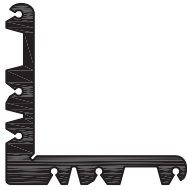



Profile Reference	Child Profile	Profile Section	Page	Weight KG/M	IX cm <sup>4</sup>	IY cm <sup>4</sup>	WX cm <sup>3</sup>	WY cm <sup>3</sup>
10154	--		38	0.483	1.070	10.299	0.585	3.326
11276	--		37	0.270	0.067	3.371	0.111	1.213
10783	--		33	0.954	4.700	44.535	1.676	7.905
13707	--		37	0.724	3.016	12.191	1.321	3.964
14026	--		36	1.447	45.769	30.828	8.777	10.025
14275	--		36	1.721	89.820	31.944	13.385	10.380
13565	--		28	1.055	4.991	27.715	3.208	5.405



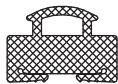




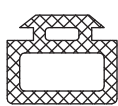
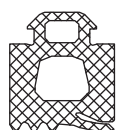
Profile Reference	Child Profile	Profile Section	Page	Weight KG/M	IX cm <sup>4</sup>	IY cm <sup>4</sup>	WX cm <sup>3</sup>	WY cm <sup>3</sup>
13071	--		27	0.713	2.495	3.843	1.491	1.751
15908	--		41	0.548	0.940	1.497	0.579	1.136
12812	--		42	0.600	1.087	1.376	0.916	1.251
10560	--		35	0.326	1.065	0.683	0.602	0.398
10971	--		42	0.200	0.180	0.232	0.276	0.207
10529	--		42	0.213	0.196	3.138	0.302	0.254
11618	--		40	0.257	0.181	0.812	0.215	0.458



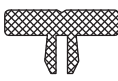


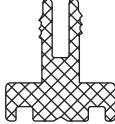

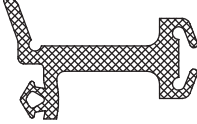

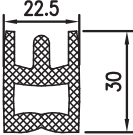
Profile Reference	Child Profile	Profile Section	Page	Weight KG/M	IX cm <sup>4</sup>	IY cm <sup>4</sup>	WX cm <sup>3</sup>	WY cm <sup>3</sup>
21073	--		41	0.167	0.130	0.187	0.185	0.170
11620	--		40	0.426	3.194	0.372	1.326	0.259
11621	--		40	0.288	0.430	0.856	0.340	0.711
11219	--		26	0.311	0.409	1.321	0.273	0.574
21074	--		41	0.331	0.071	0.695	0.102	0.483
11434	--		37	0.454	0.234	0.776	0.249	0.483
24373	--		40	0.407	1.414	1.355	0.684	1.081


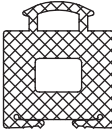


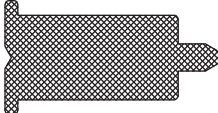
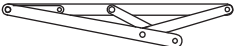
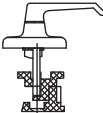
Profile Reference	Child Profile	Profile Section	Page	Weight KG/M	IX cm <sup>4</sup>	IY cm <sup>4</sup>	WX cm <sup>3</sup>	WY cm <sup>3</sup>
13387	--		25	0.457	0.271	1.157	0.417	0.725
11615	--		42	0.276	0.009	0.830	0.055	0.535
11617	--		42	0.246	0.080	0.456	0.071	0.349
11686	--		37	0.259	0.012	0.715	0.050	0.485
11362	--		34	1.225	15.172	98.054	1.453	10.018
11361	--		34	1.056	0.667	41.468	0.098	6.660
11328	--		43	6.410	--	--	--	--

Profile Reference	Child Profile	Profile Section	Page	Weight KG/M	IX cm <sup>4</sup>	IY cm <sup>4</sup>	WX cm <sup>3</sup>	WY cm <sup>3</sup>
10164	--		42	1.820	11.879	28.024	5.158	10.190
10296	--		42	4.312	--	--	--	--
09725	--		42	1.648	--	--	--	--
19308	--		16	2.555	190.458	51.340	27.174	16.695
19309	--		16	2.658	215.784	54.402	28.280	16.715

# ACCESSORIES

Gasket/Accessories Reference	Section	Description	Unit
EPDM/IN/R2		EPDM RUBBER USED WITH MULLION & TRANSOM	Linear Meter
EPDM/IN/3A		EPDM RUBBER USED WITH MULLION & TRANSOM	Linear Meter
GE-CW-043		EPDM RUBBER USED WITH SASH 81202	Linear Meter
GE-CW-03		EPDM RUBBER USED WITH SASH 81202	Linear Meter
GE-G-045		EPDM RUBBER USED WITH FRAME 81203	Linear Meter
600.13.001		EPDM RUBBER USED WITH SASH	Linear Meter
CW / 70 RUB / 1		EPDM RUBBER USED WITH FRAME & SASH	Linear Meter
GE-CW-050		EPDM RUBBER USED WITH FRAME 81203	Linear Meter
GE-G-039		EPDM RUBBER USED WITH MULLION & TRANSOM	Linear Meter
CW / 61.5 RUB / 1		EPDM RUBBER USED WITH PRESSURE PLATE	Linear Meter

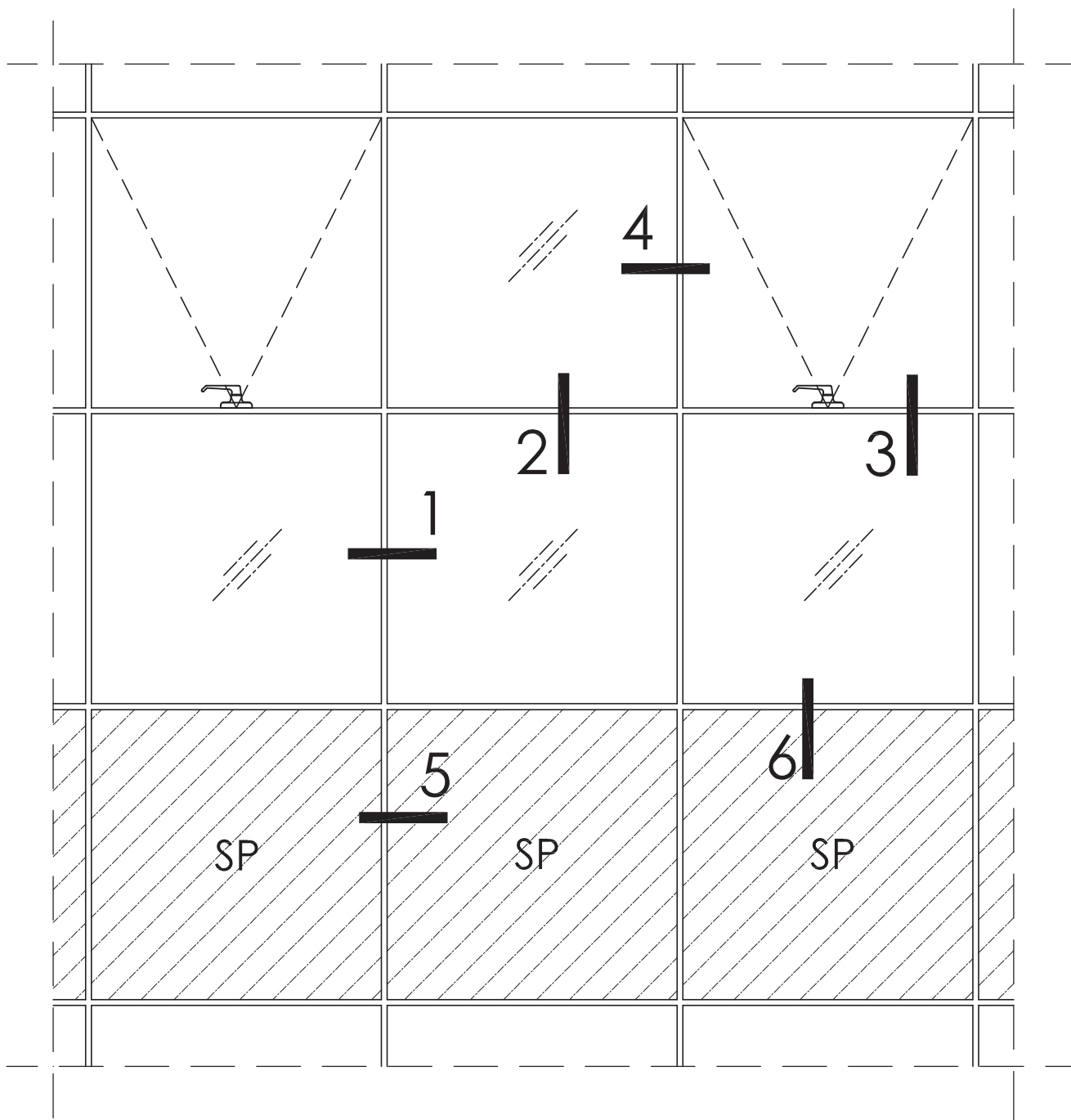
Gasket/Accessories Reference	Section	Description	Unit
CW / 70 RUB / 3		EPDM RUBBER USED WITH FRAME & SASH	Linear Meter
CW / 61.5 RUB / 2		EPDM RUBBER USED WITH PRESSURE PLATE	Linear Meter
CW / 61.5 RUB / T		STRIP THERMAL	Linear Meter
09029-11R		EPDM RUBBER USED WITH MULLION-TRANSOM & SASH	Linear Meter
09039-2R		EPDM RUBBER USED WITH PRESSURE PLATE	Linear Meter
T-RUB-01		STRIP THERMAL	Linear Meter
10566-RUB		EPDM RUBBER USED WITH SASH 10566 & 10567	Linear Meter
10560-RUB		EPDM RUBBER USED WITH PROFILE 10560	Linear Meter
566/567/01		EPDM RUBBER USED WITH SASH 10560 & 10567	Linear Meter
CW / 61.5 RUB / 3		EPDM RUBBER USED WITH MULLION & TRANSOM	Linear Meter

Gasket/Accessories Reference	Section	Description	Unit
CW / 70 RUB / T		STRIP THERMAL	Linear Meter
EPDM/IN/R1		EPDM RUBBER USED WITH MULLION / TRANSOM	Linear Meter
GE-G-060		EPDM RUBBER FOR TRANSOM COVER CLIP	Linear Meter
GE-G-025		EPDM RUBBER FOR TRANSOM COVER CLIP	Linear Meter
GE-G-111		SUITABLE NOZE	Linear Meter
GE-Stay Arm		FRICTION STAY ARM	Piece
GE-Locking System		LOCKING SYSTEM	Piece



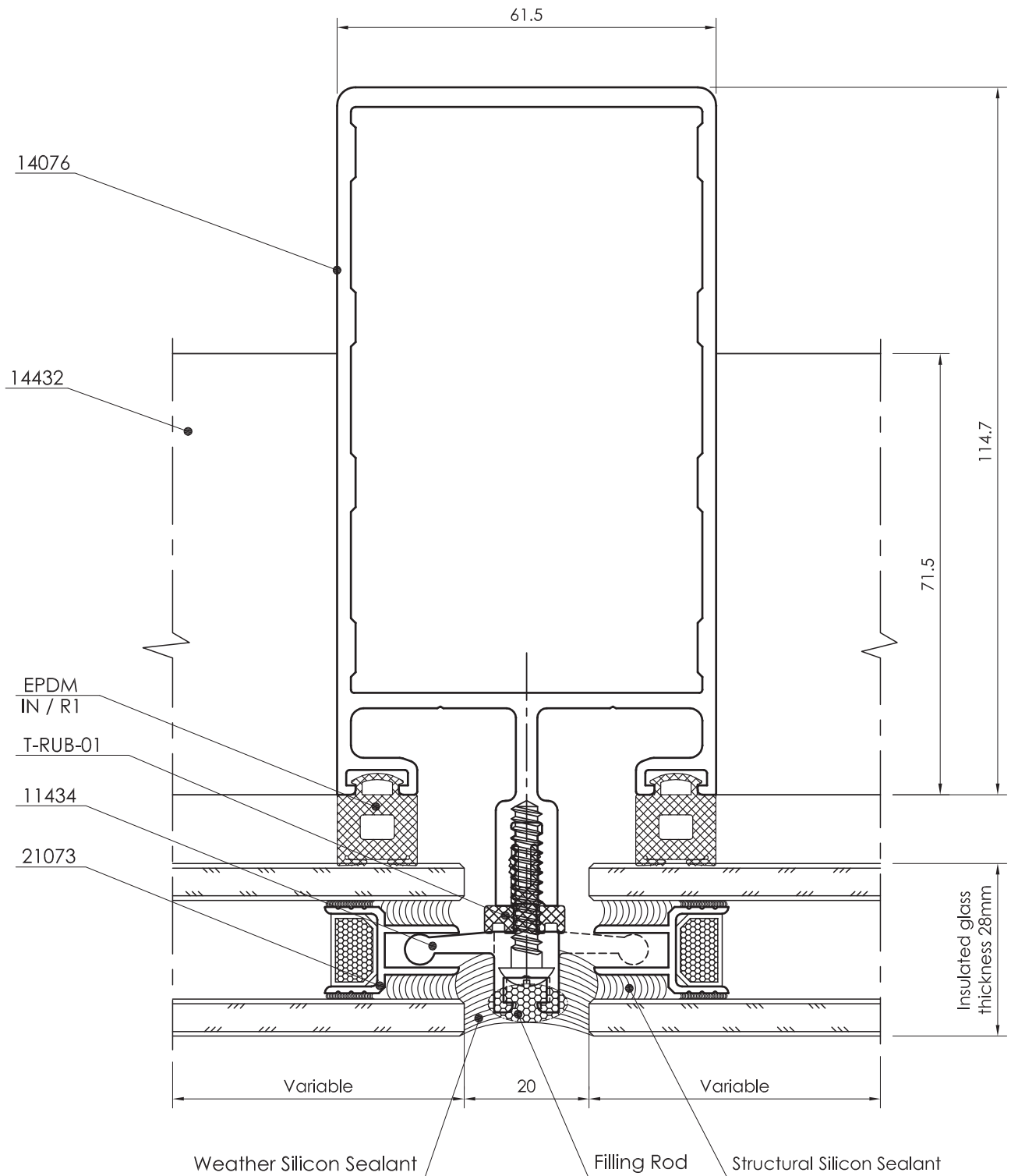
# ASSEMBLY DRAWINGS

## 61.5mm 4-way Structural Glazing



All dimensions in cross sections are shown in mm  
Profile are not necessarily shown to scale

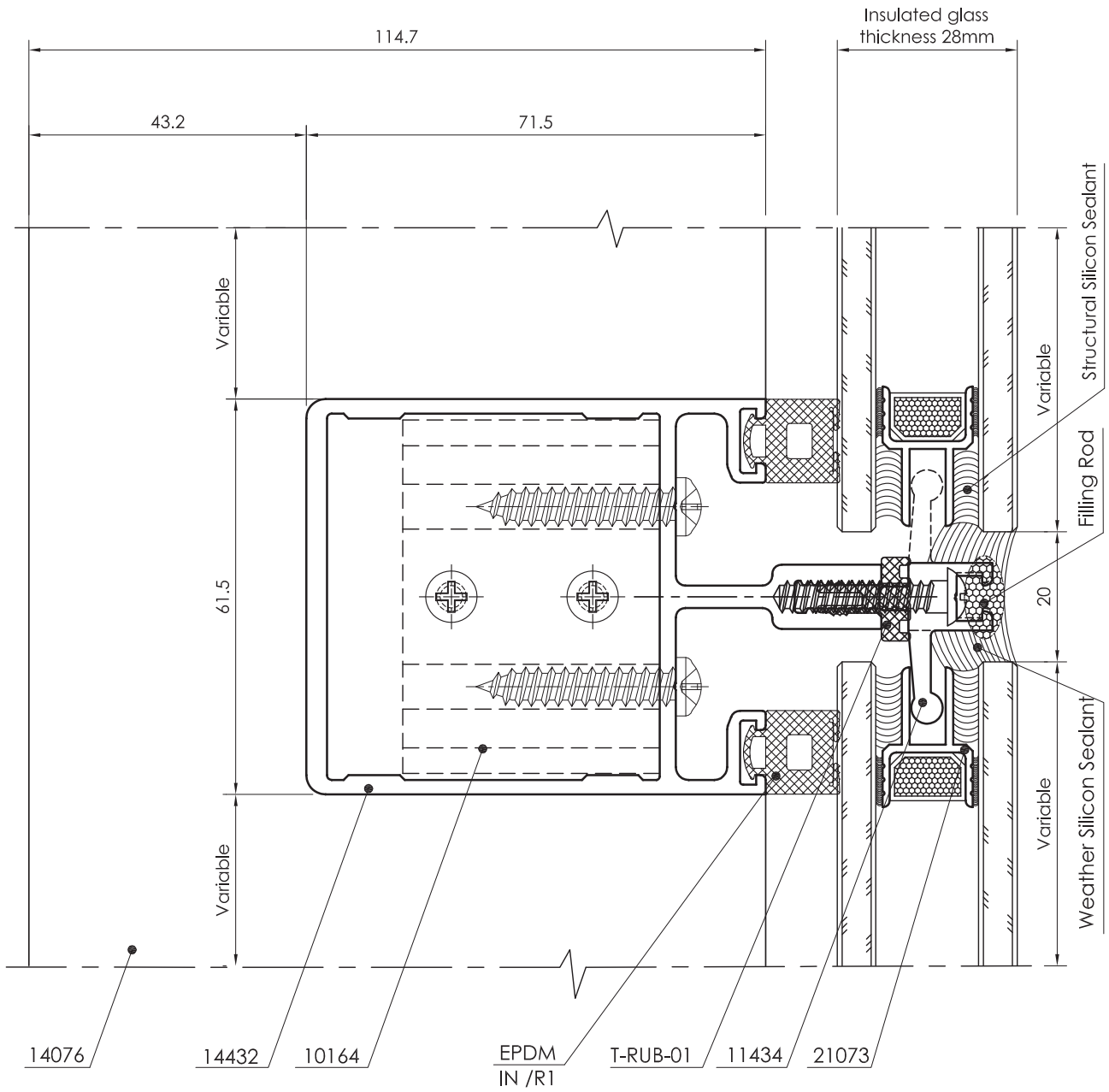
61.5mm 4-way Structural Glazing  
Detail - 1



All dimensions in mm  
----- Visible area

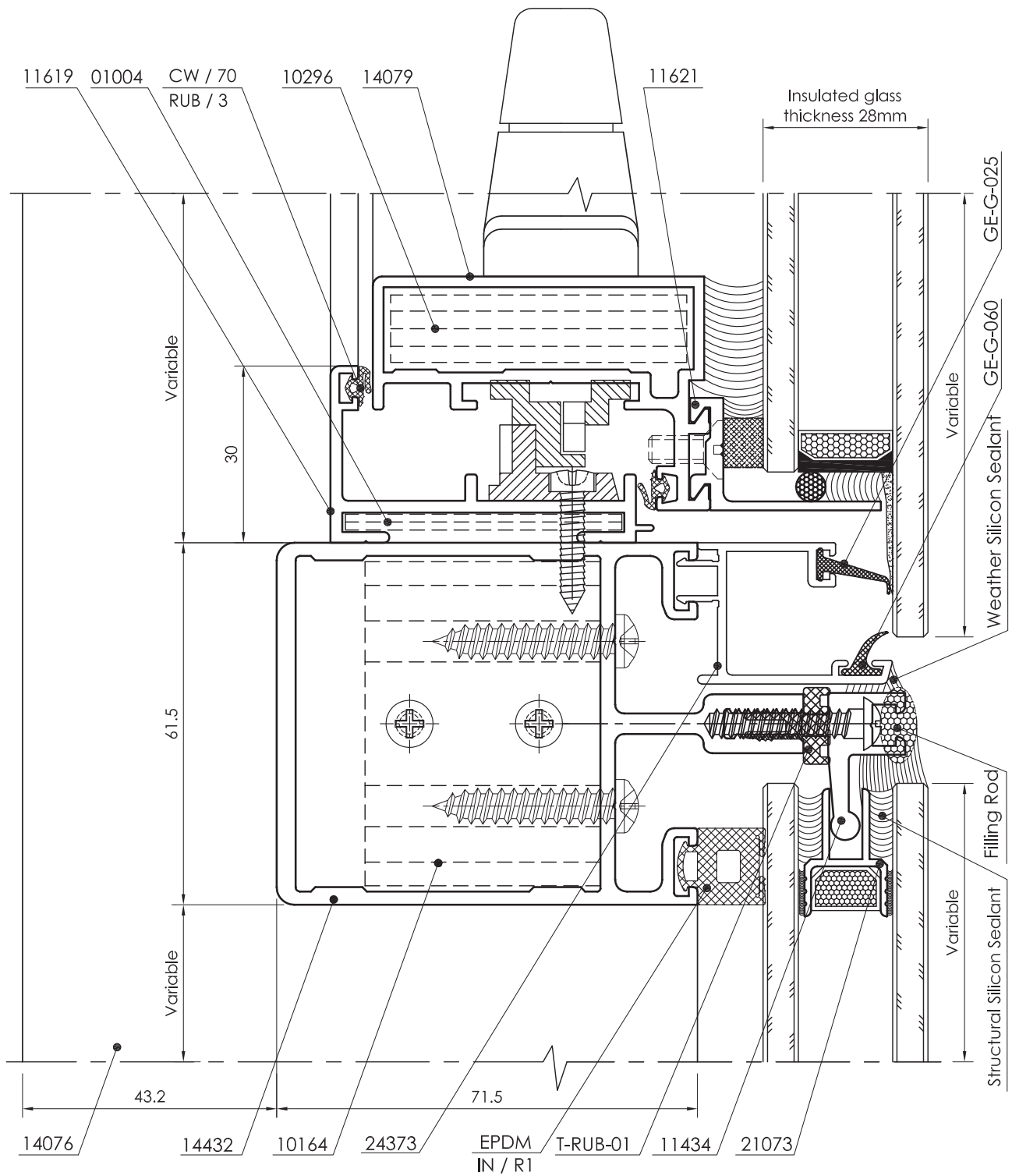
61.5mm 4-way Structural Glazing

Detail - 2



All dimensions in mm  
Visible area\_\_\_\_\_

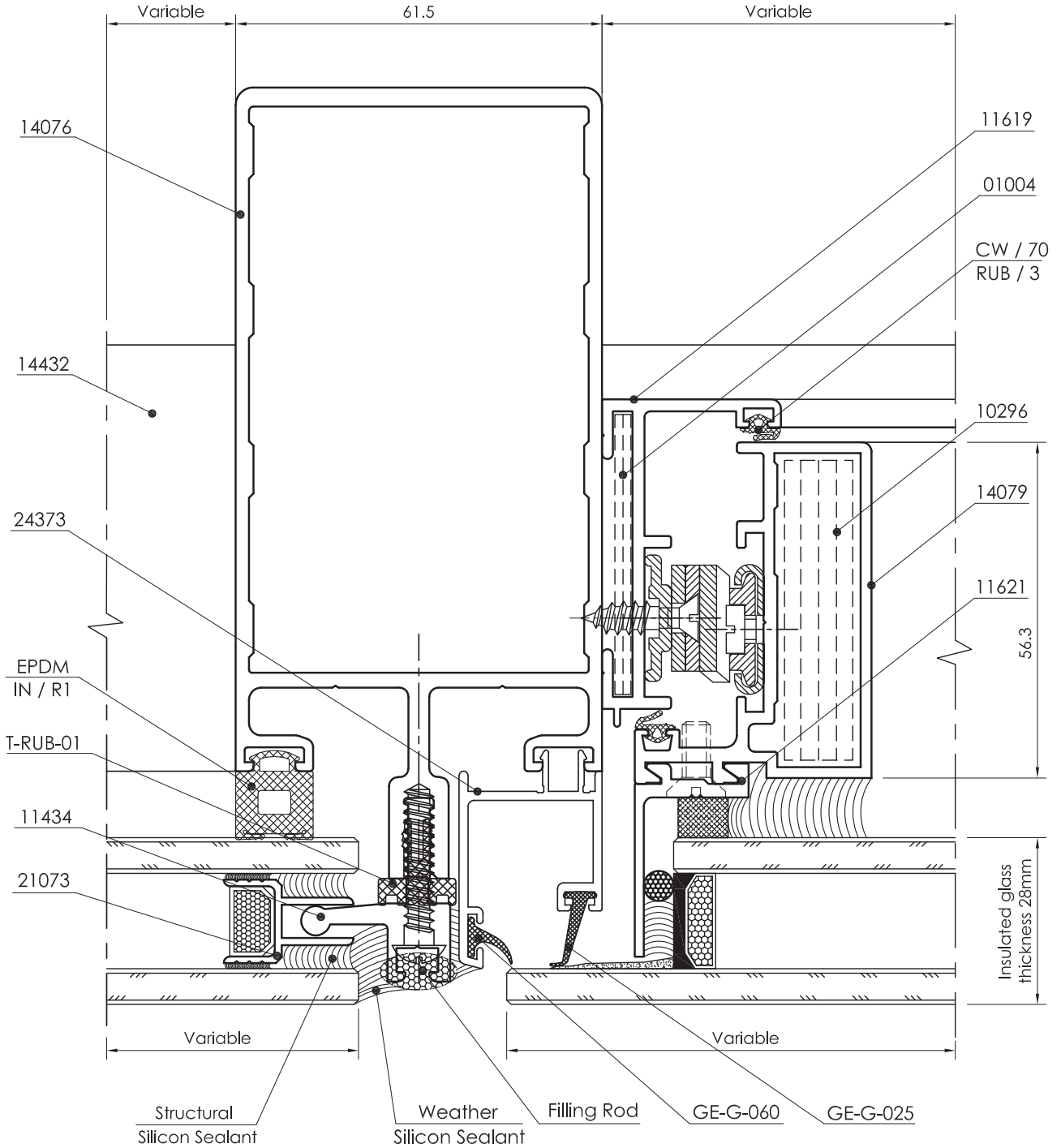
61.5mm 4-way Structural Glazing  
Detail - 3



All dimensions in mm  
----- Visible area

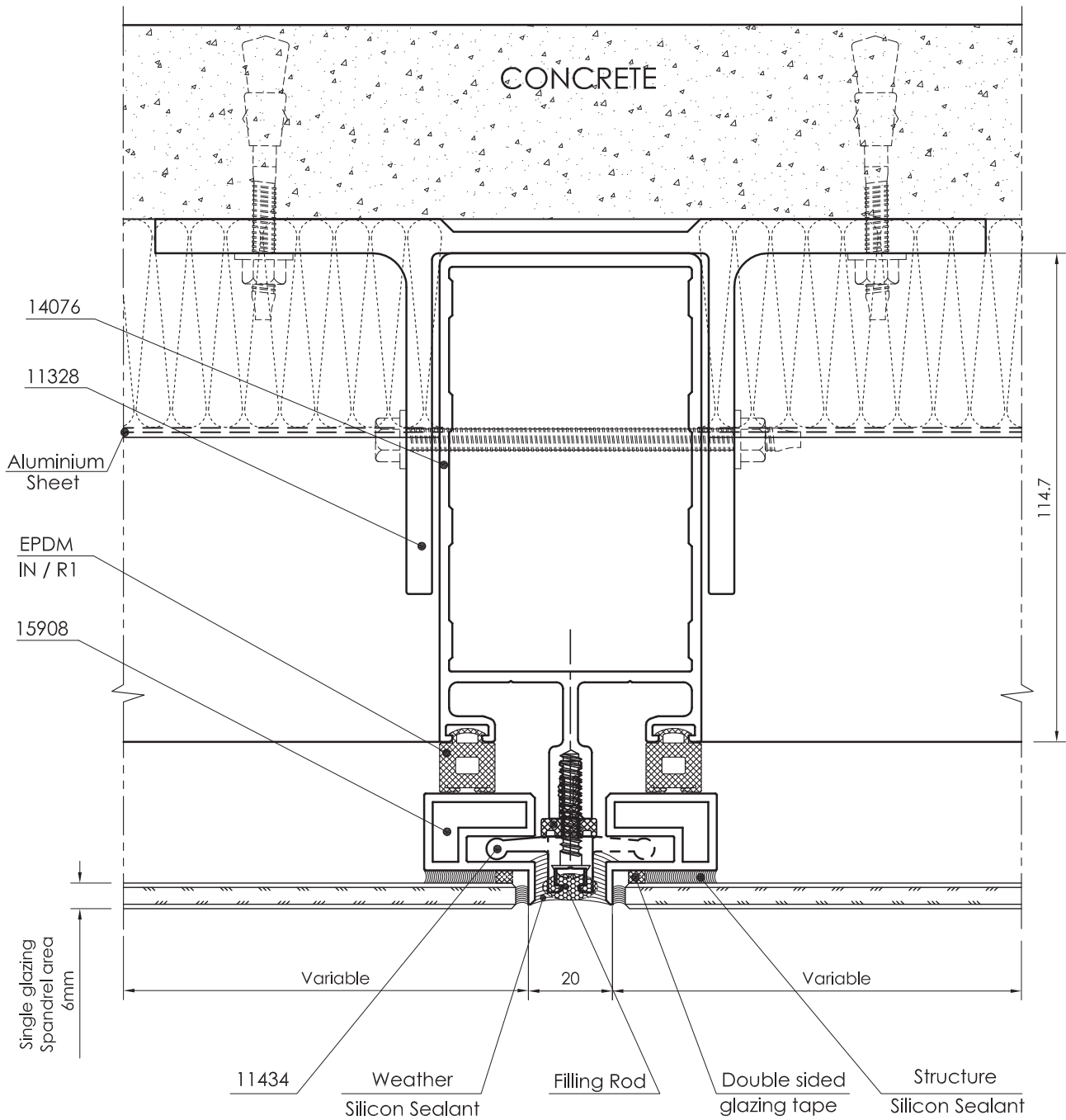
61.5mm 4-way Structural Glazing

Detail - 4



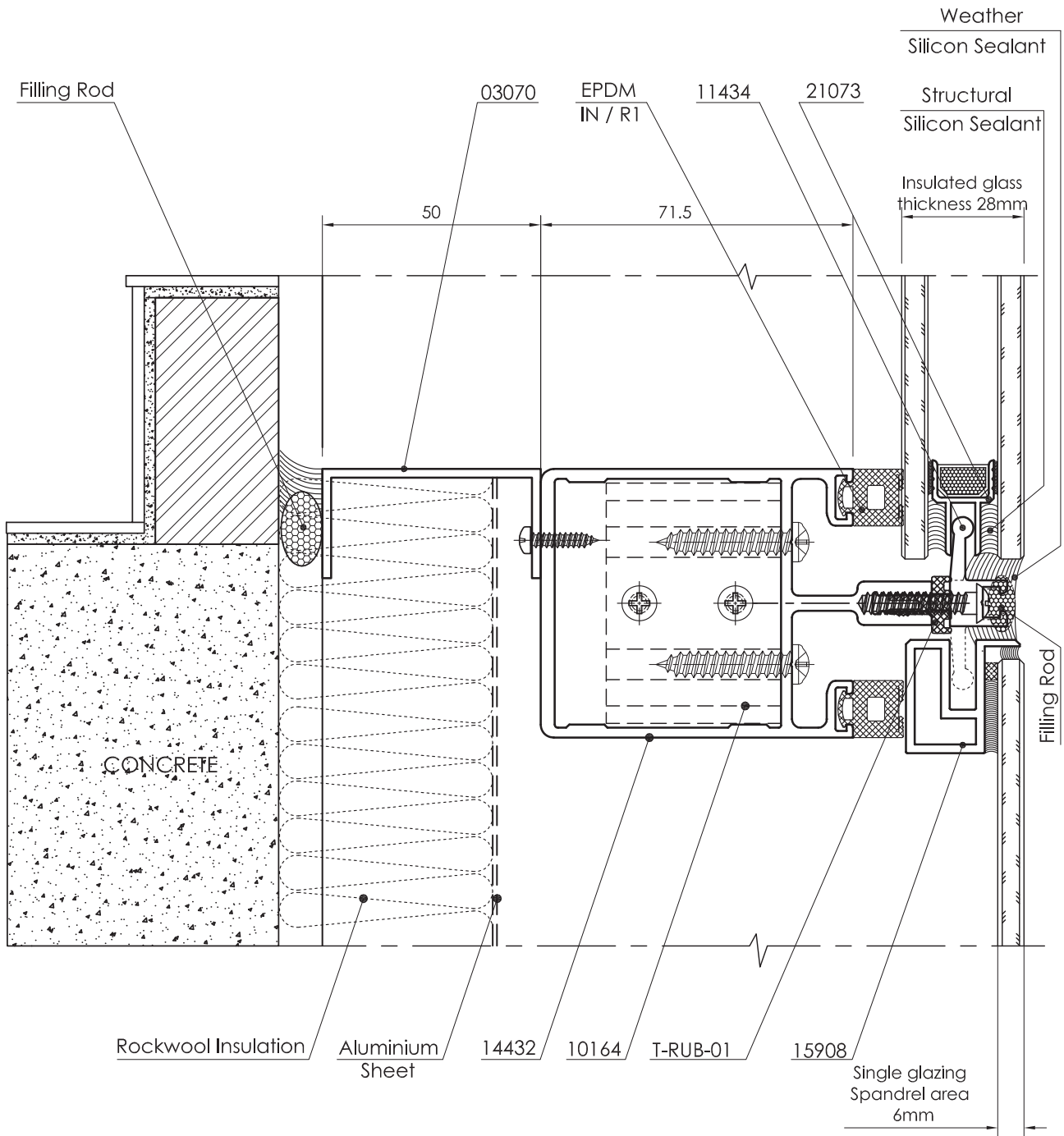
All dimensions in mm  
Visible area\_\_\_\_\_

61.5mm 4-way Structural Glazing  
Detail - 5



All dimensions in mm  
----- Visible area

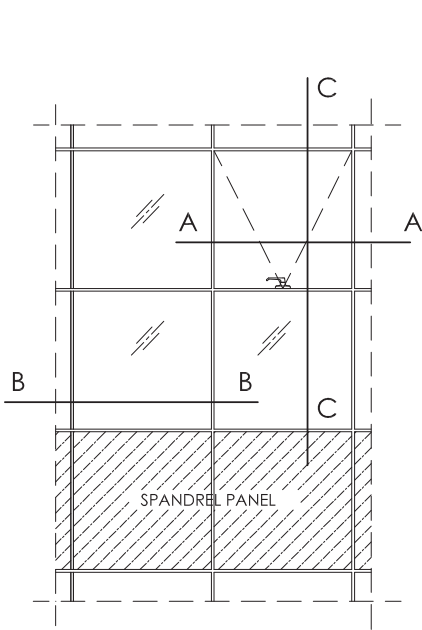
**61.5mm 4-way Structural Glazing**  
Detail - 6



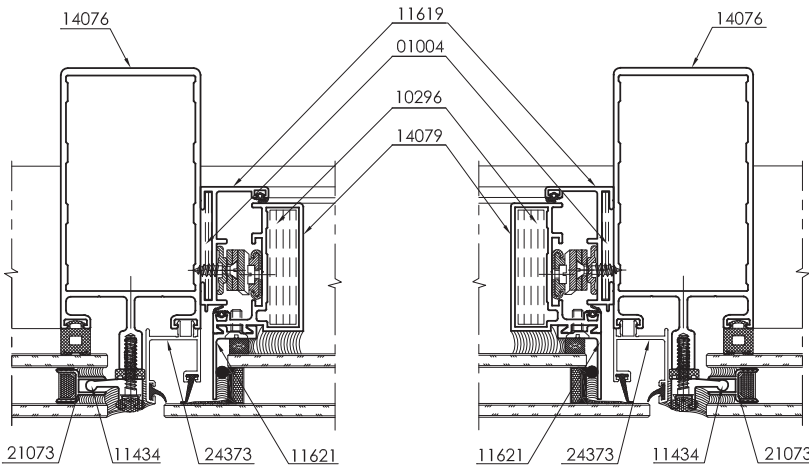
All dimensions in mm  
Visible area\_\_\_\_\_



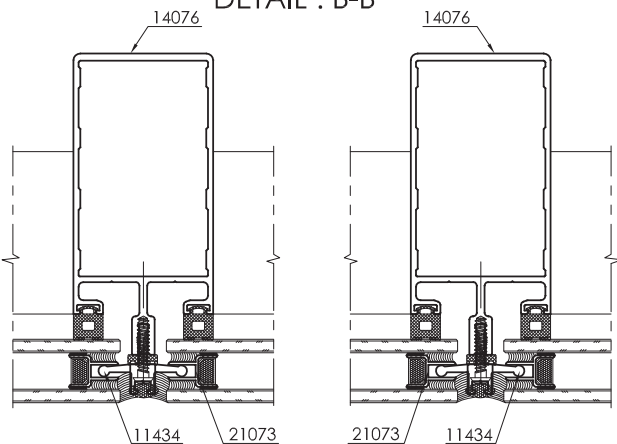
61.5mm 4-way Structural Glazing



DETAIL : A-A

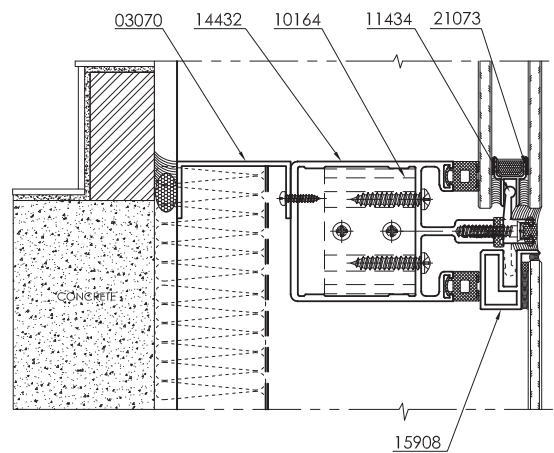
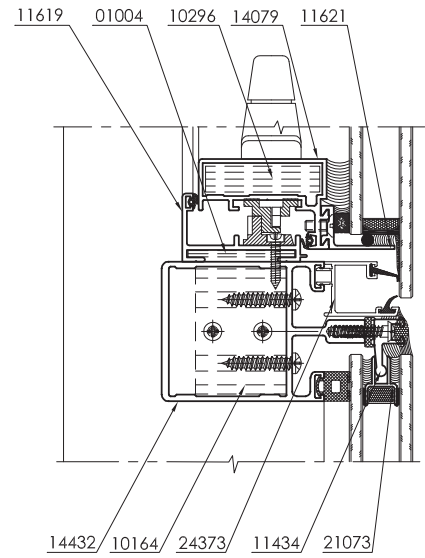
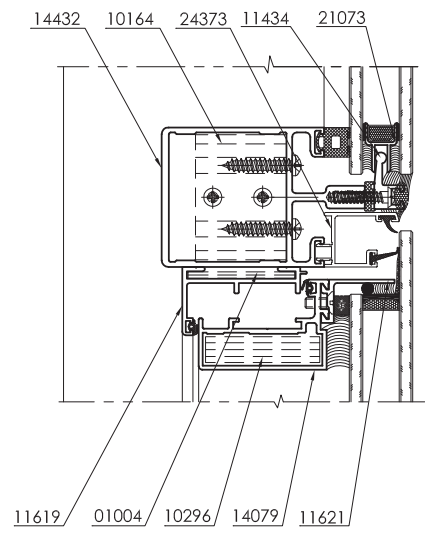


DETAIL : B-B



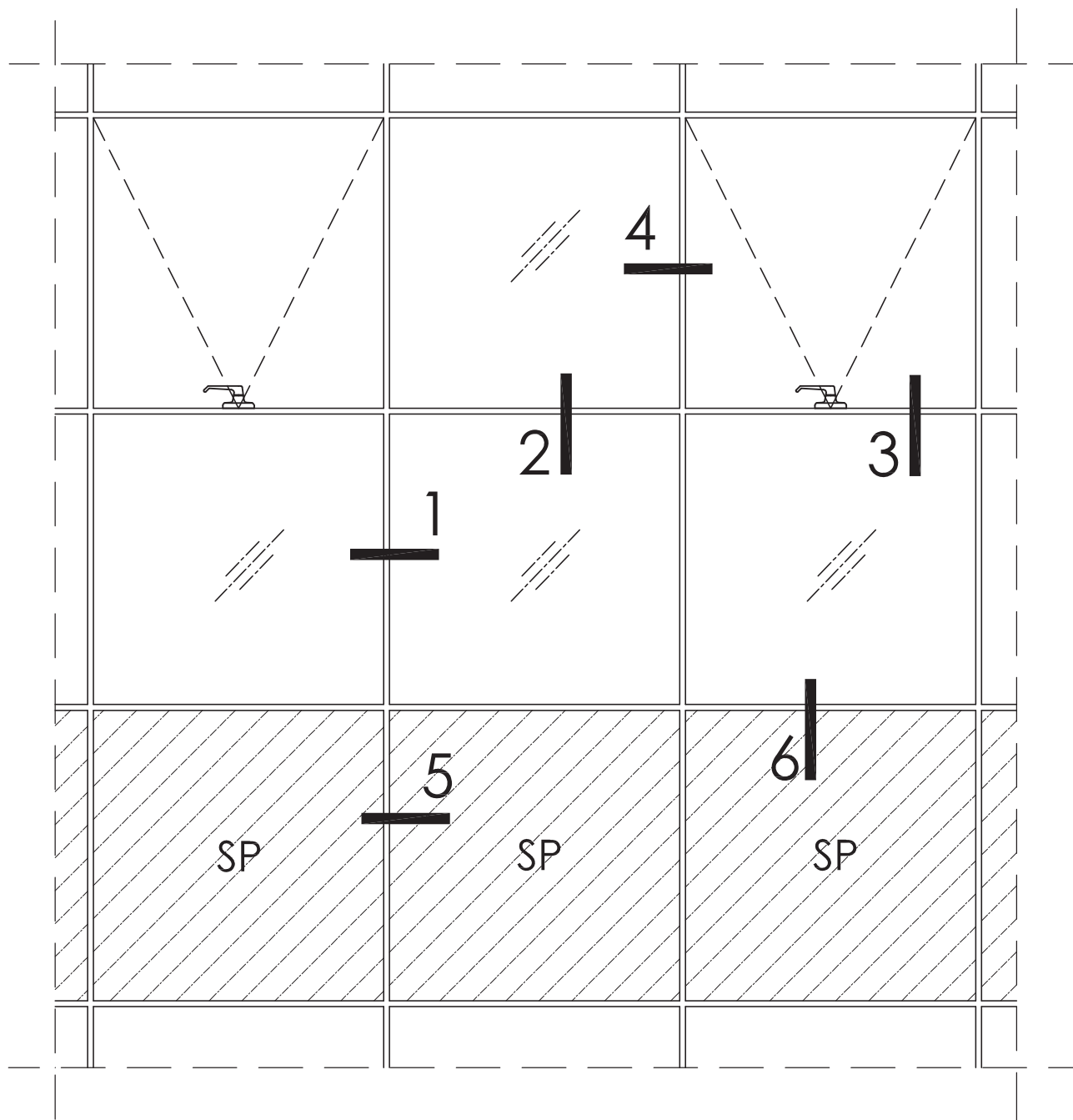
Profiles		
Description	Shape	Section No.
Mullion		14076
Transom		14432
Frame		11619
Sash		14079
Connector		10164
Angle 40x40x3		01004
Corner cleat		10296
Glass spacer		21073
Glass Toggler		11434
Glass spacer		15908
Bracket		11328
U-Channel		03070
Glazing clip		24373
Glass Holder		11621

DETAIL : C-C



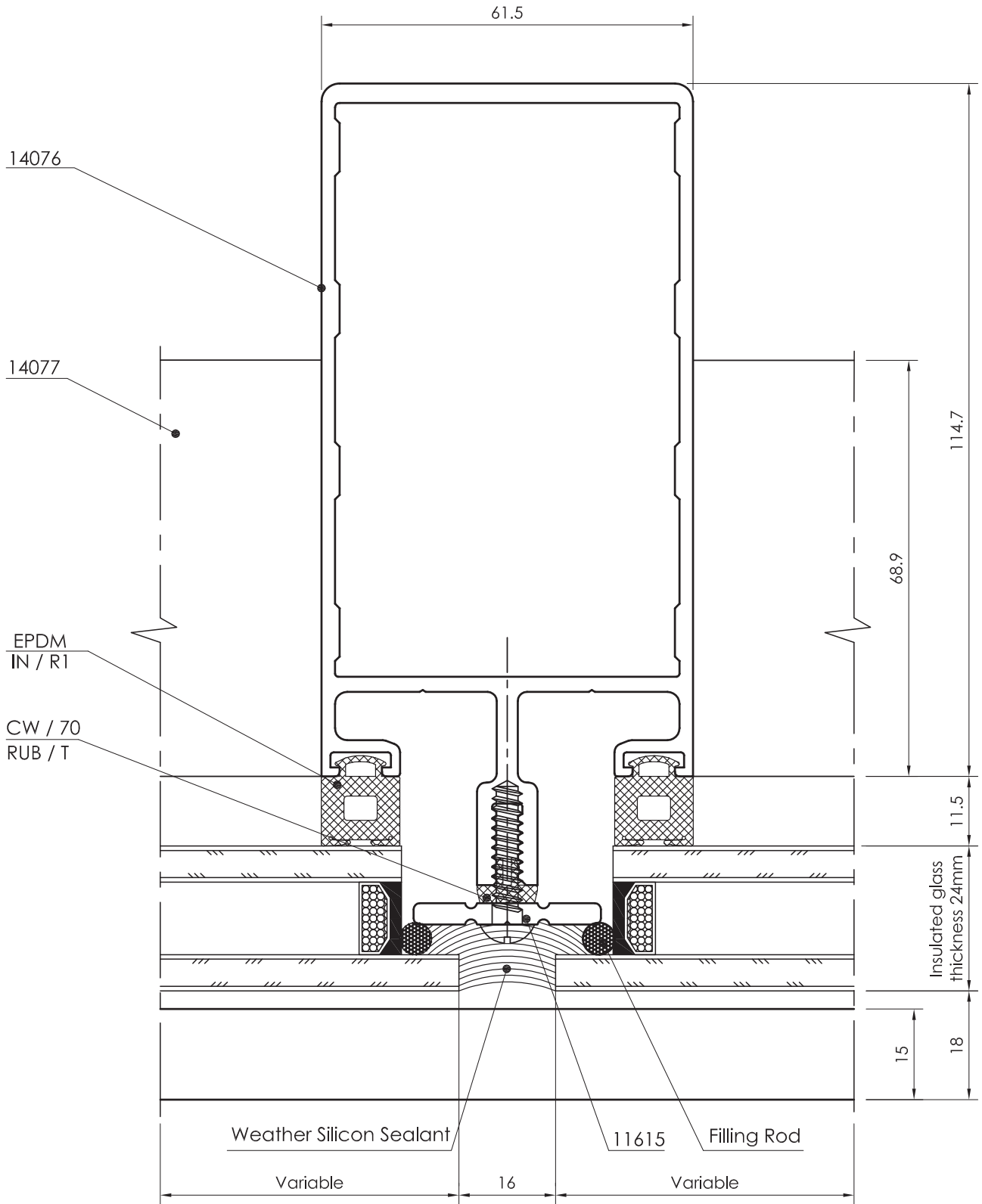
All dimensions in mm  
----- Visible area

## 61.5mm 2-way Structural Glazing



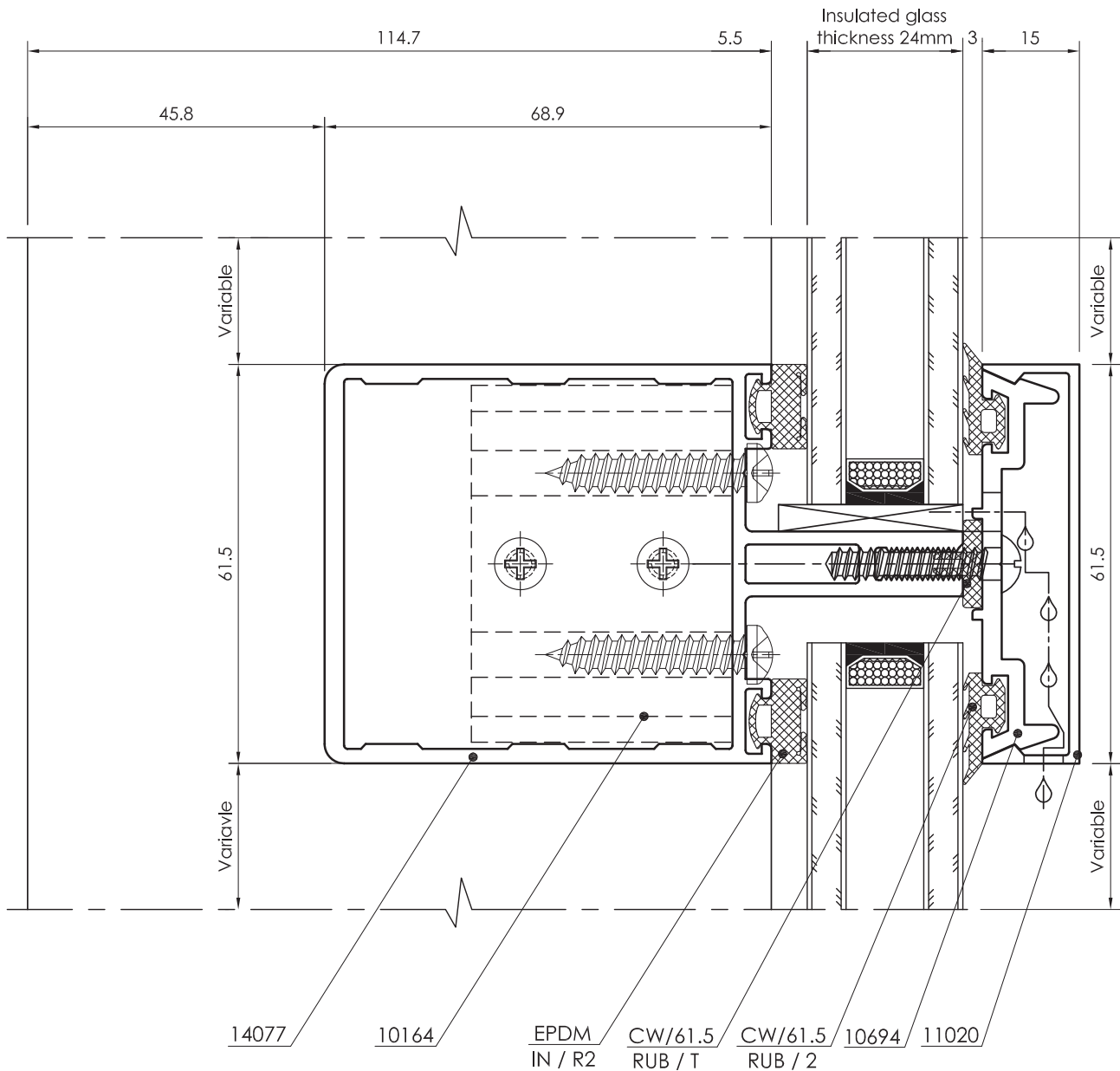
All dimensions in cross sections are shown in mm  
Profile are not necessarily shown to scale

**61.5mm 2-way Structural Glazing**  
Detail - 1



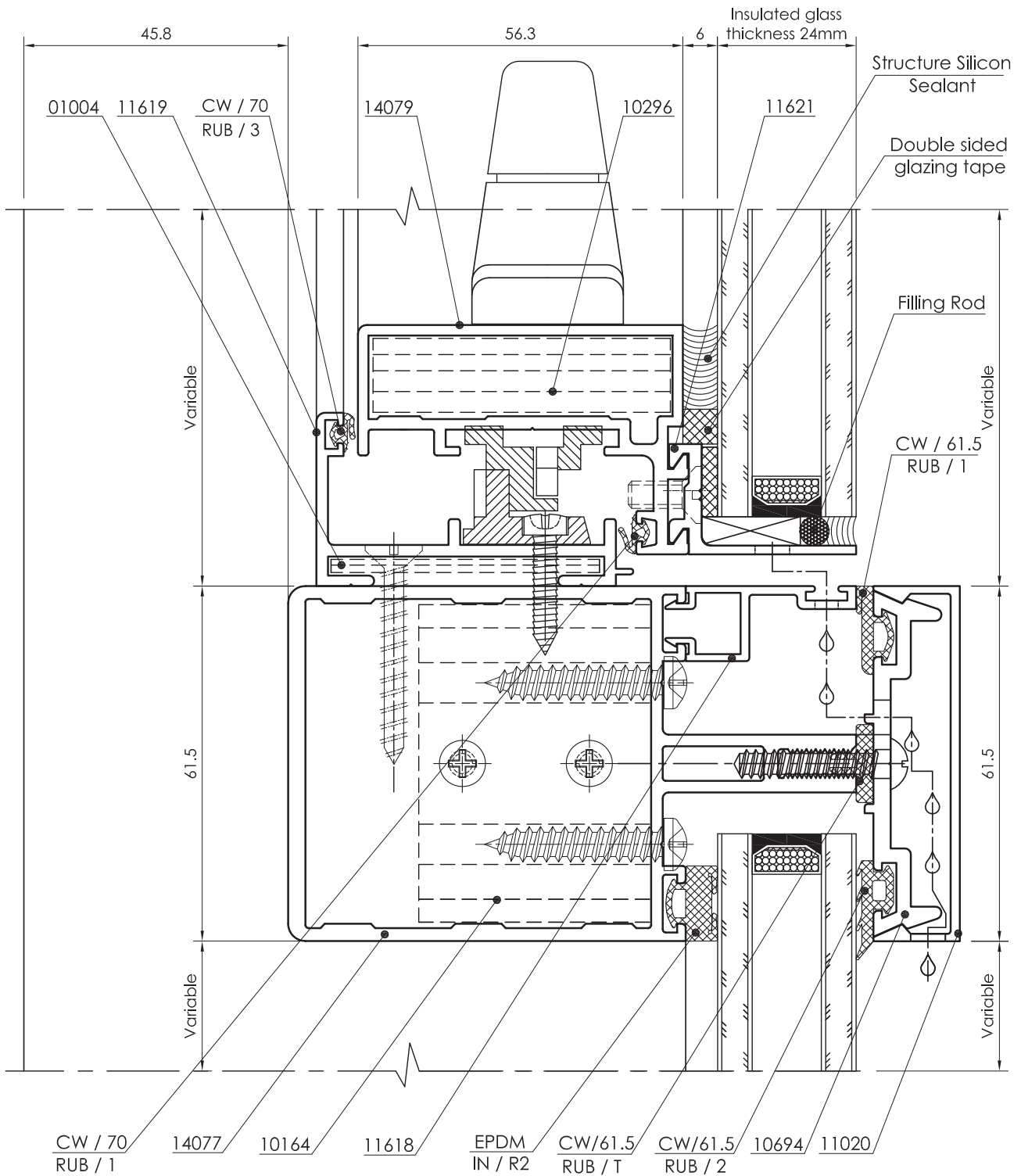
All dimensions in mm  
----- Visible area

61.5mm 2-way Structural Glazing  
Detail - 2



All dimensions in mm  
Visible area\_\_\_\_\_

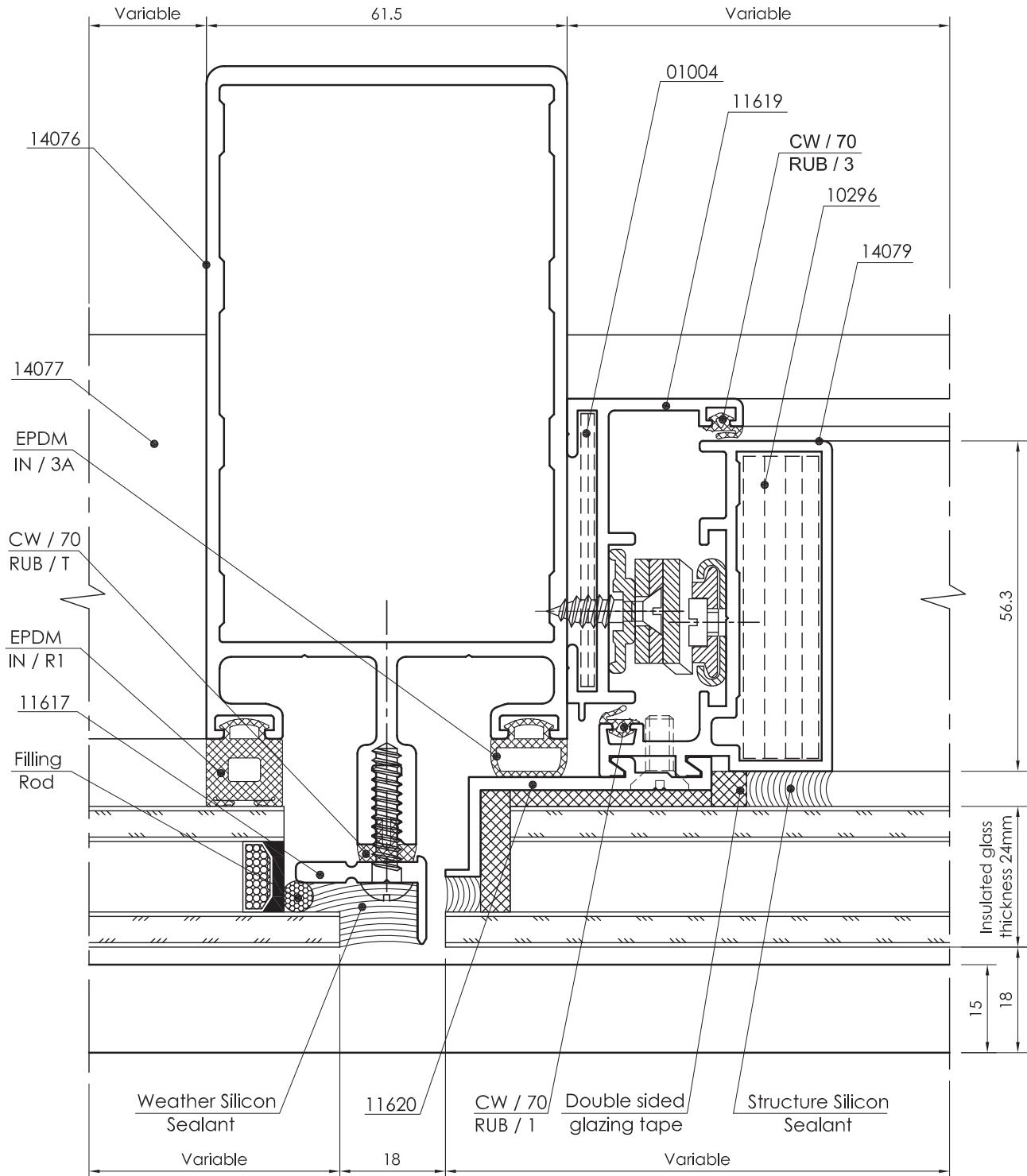
61.5mm 2-way Structural Glazing  
Detail - 3



All dimensions in mm  
----- Visible area

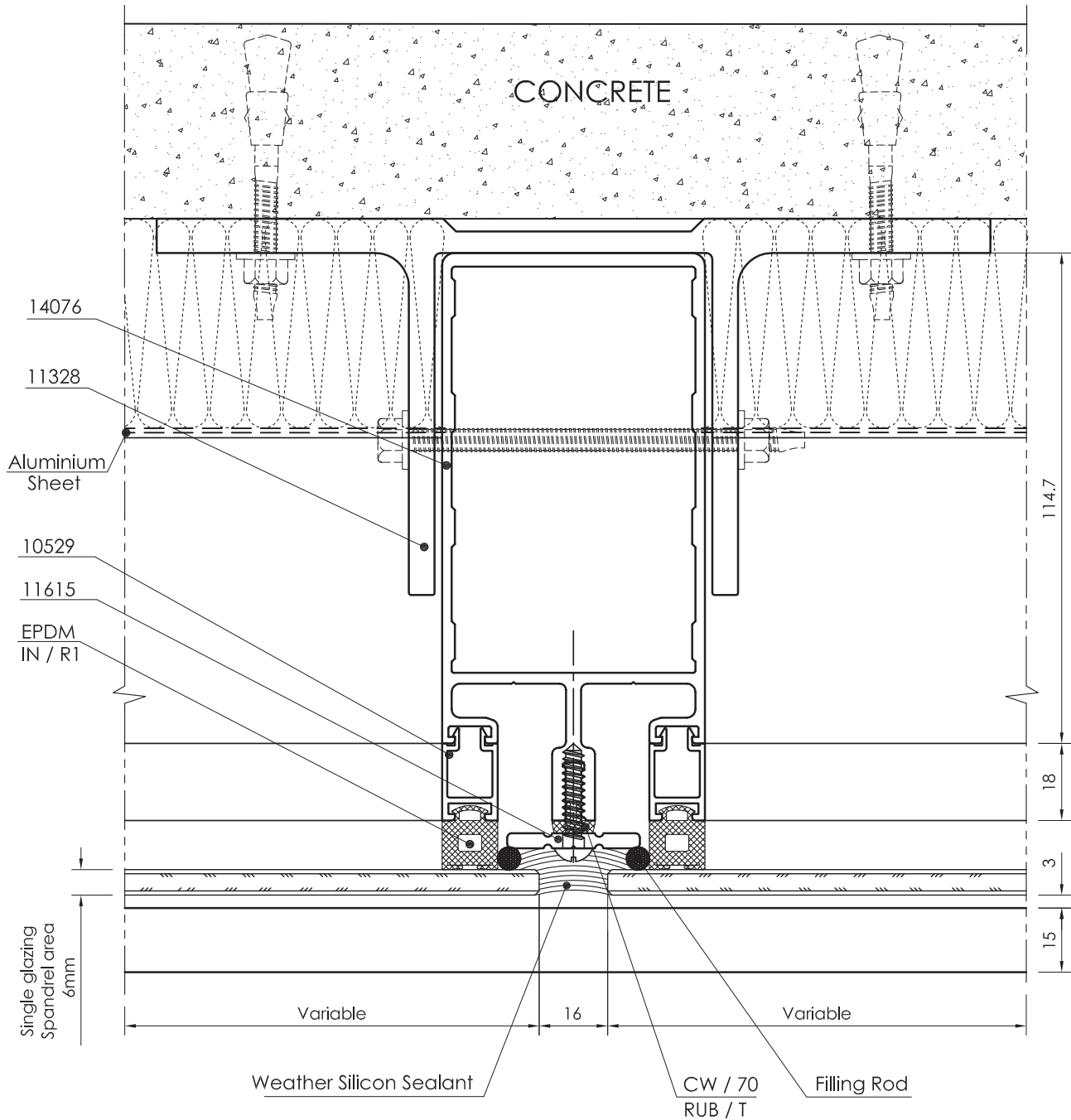
61.5mm 2-way Structural Glazing

Detail - 4



All dimensions in mm  
Visible area\_\_\_\_\_

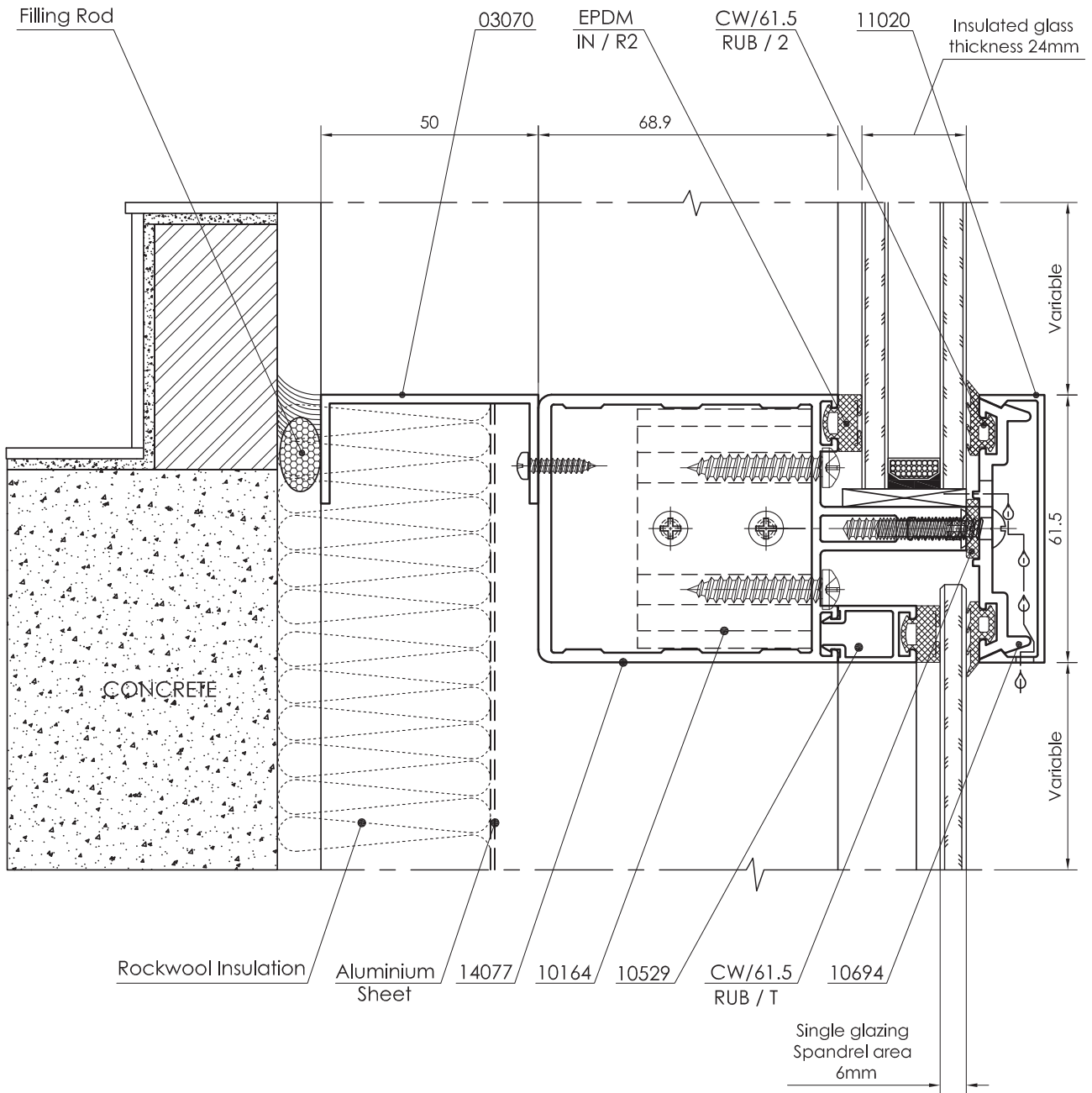
61.5mm 2-way Structural Glazing  
Detail - 5



All dimensions in mm  
--- Visible area

61.5mm 2-way Structural Glazing

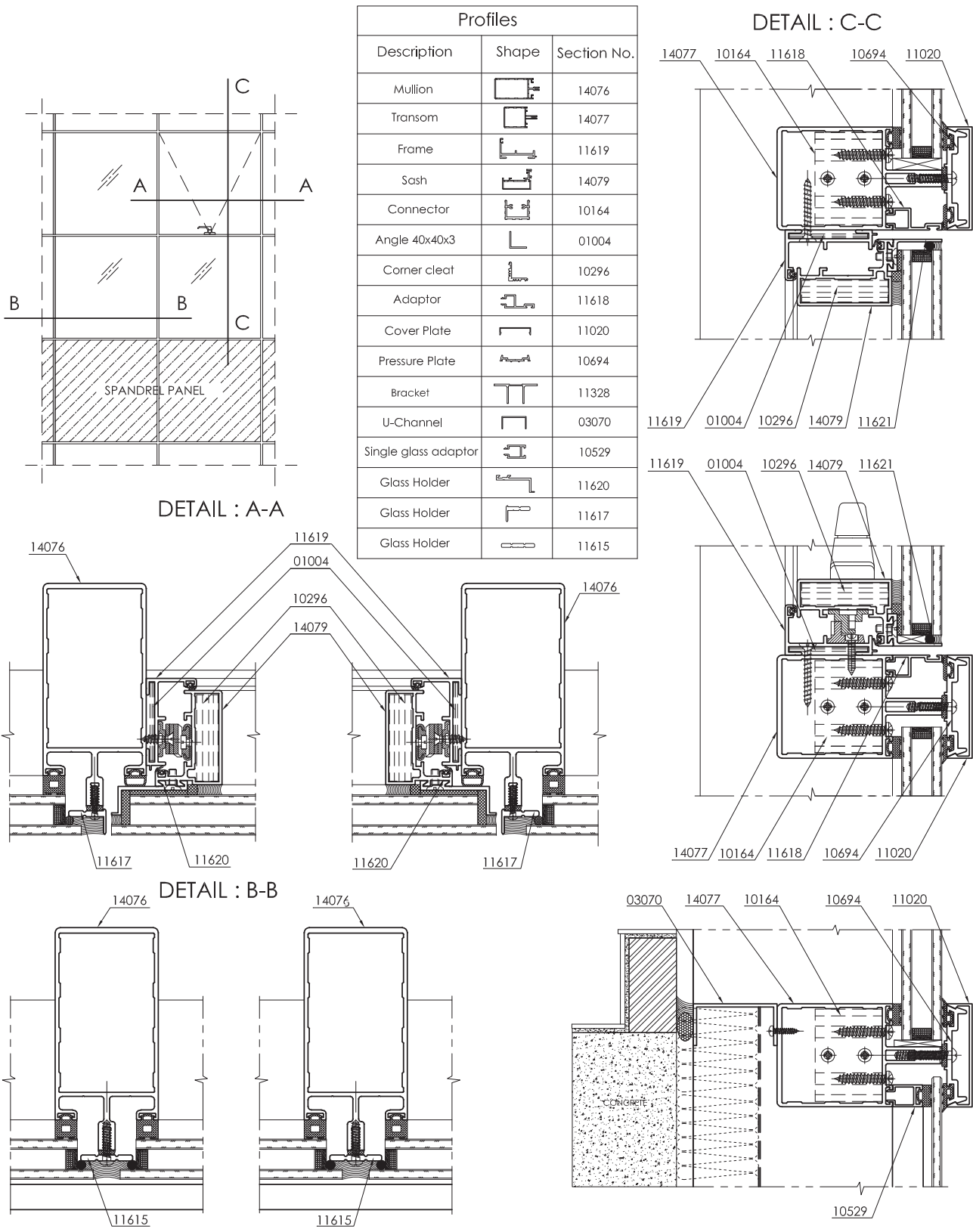
Detail - 6



All dimensions in mm  
Visible area\_\_\_\_\_

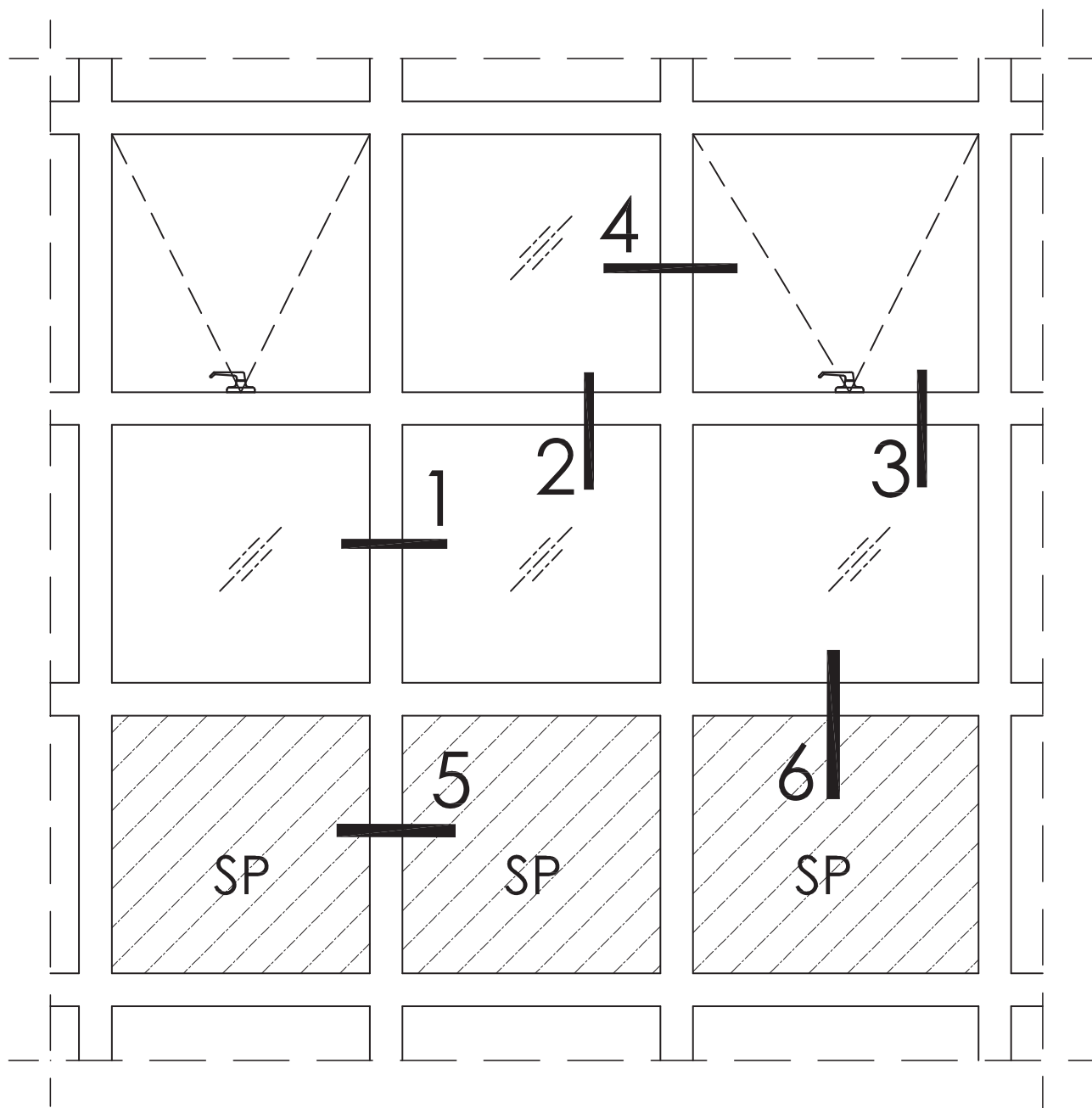


61.5mm 2-way Structural Glazing



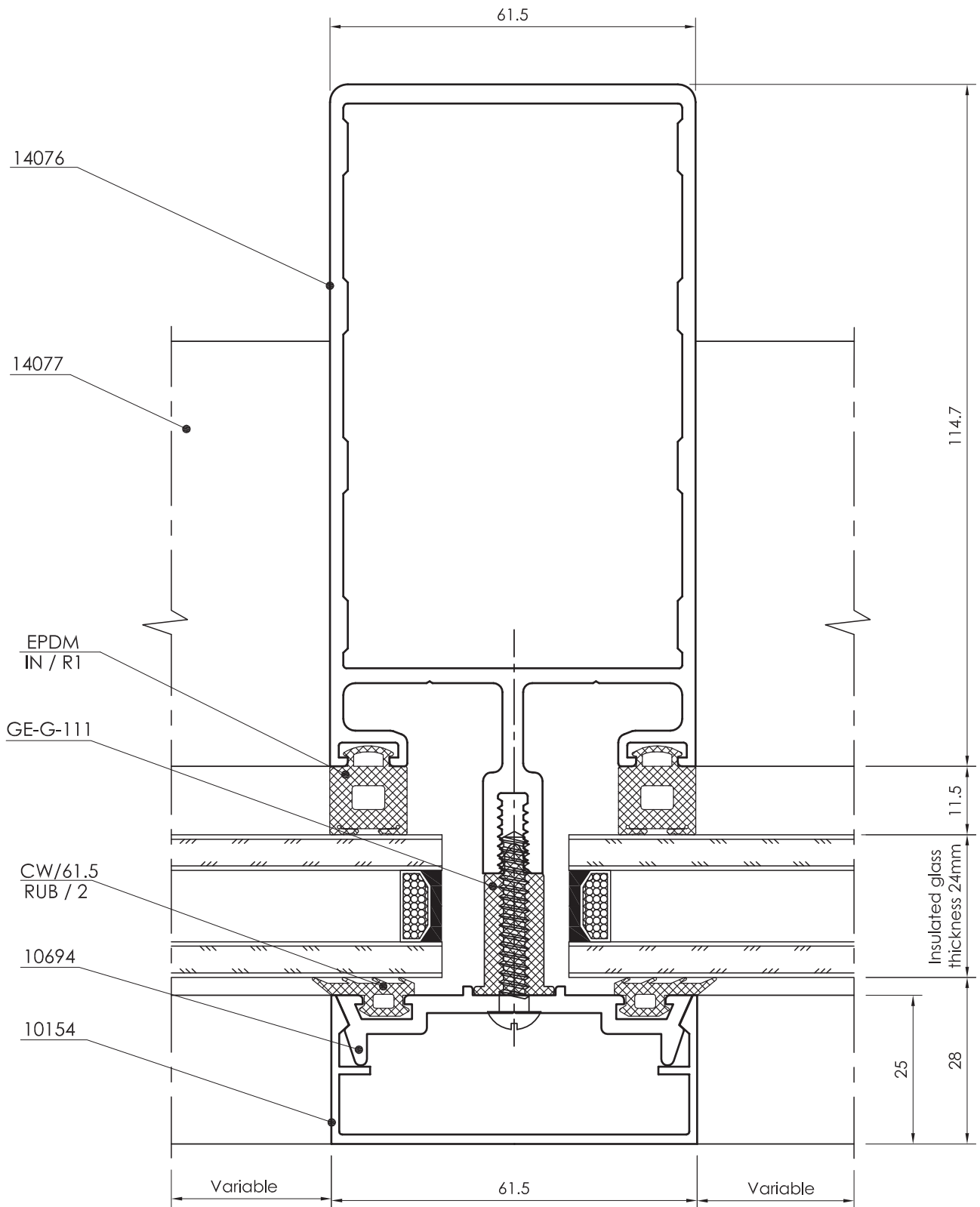
All dimensions in mm  
 ----- Visible area

## 61.5mm Conventional



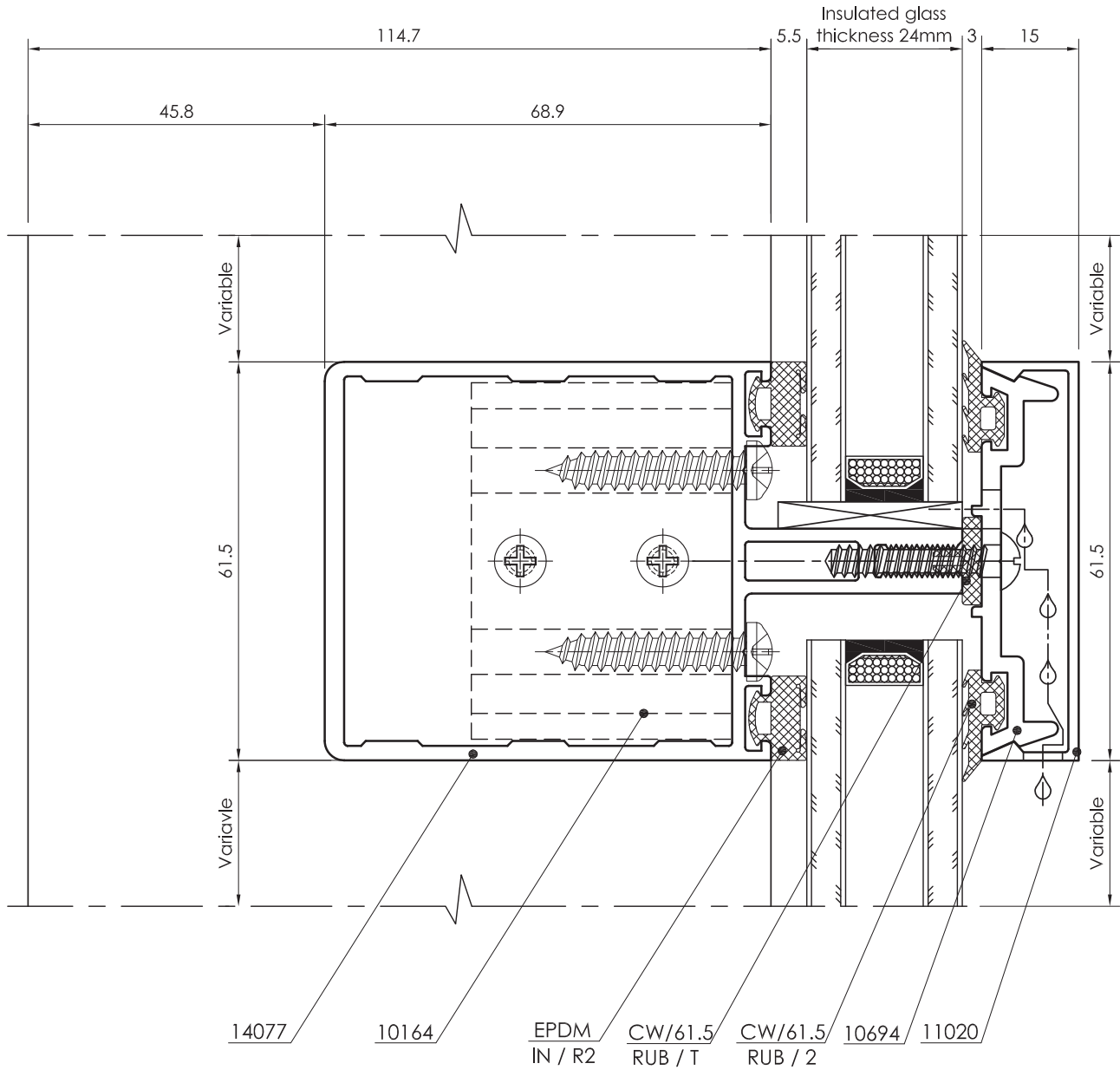
All dimensions in cross sections are shown in mm  
Profile are not necessarily shown to scale

61.5mm Conventional  
Detail - 1



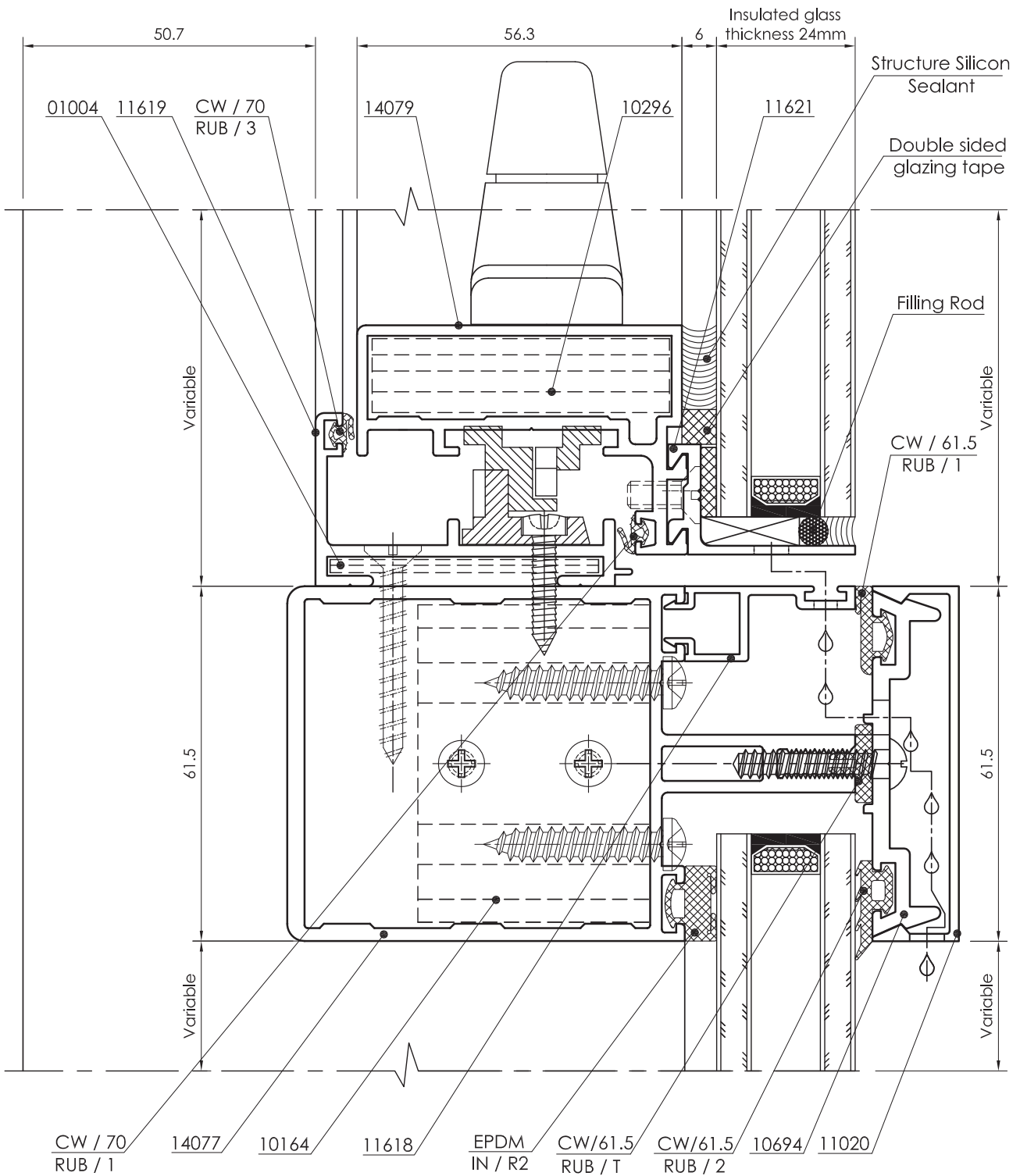
All dimensions in mm  
----- Visible area

**61.5mm Conventional**  
Detail - 2



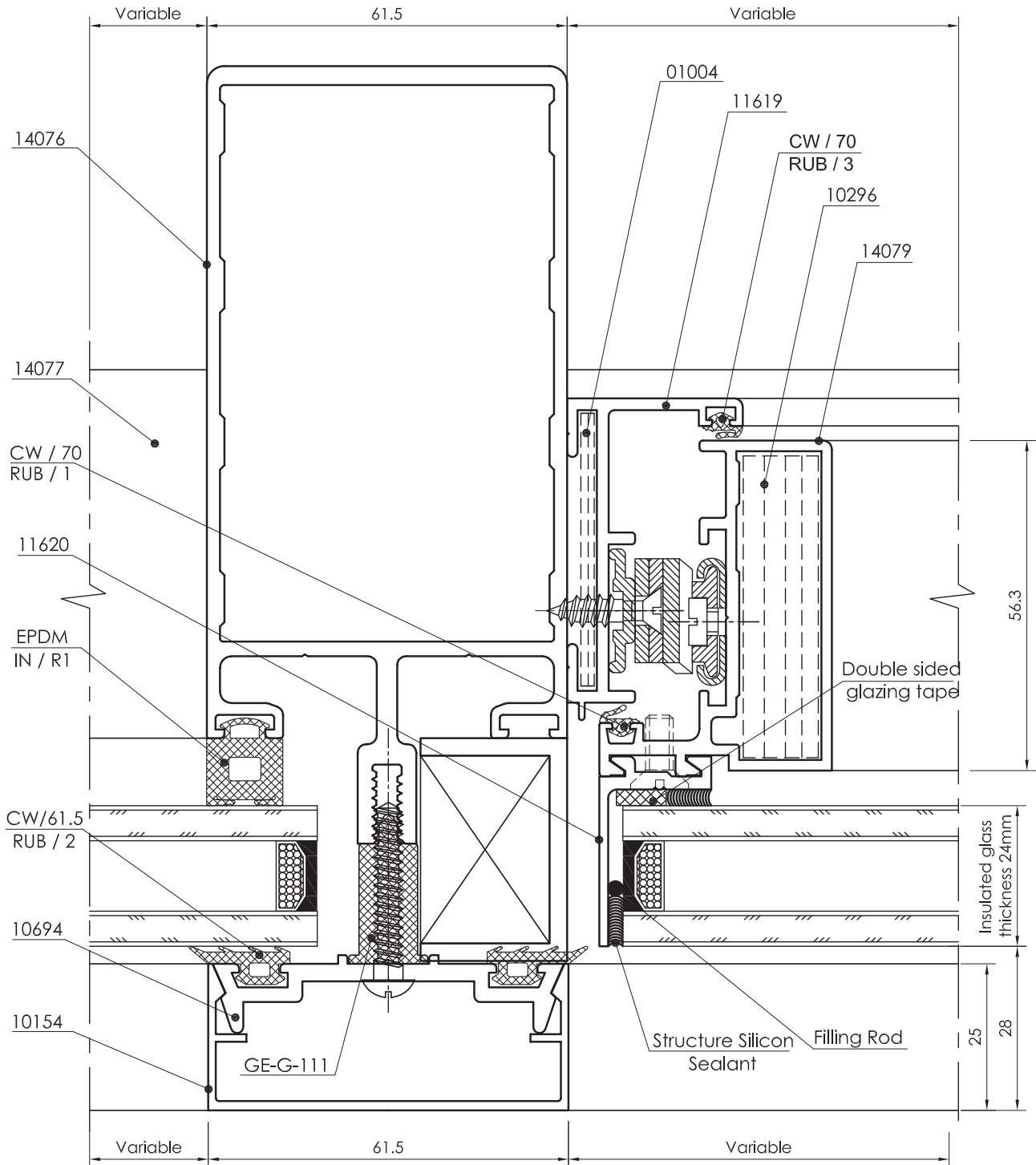
All dimensions in cross sections are shown in mm  
Profile are not necessarily shown to scale

61.5mm Conventional  
Detail - 3



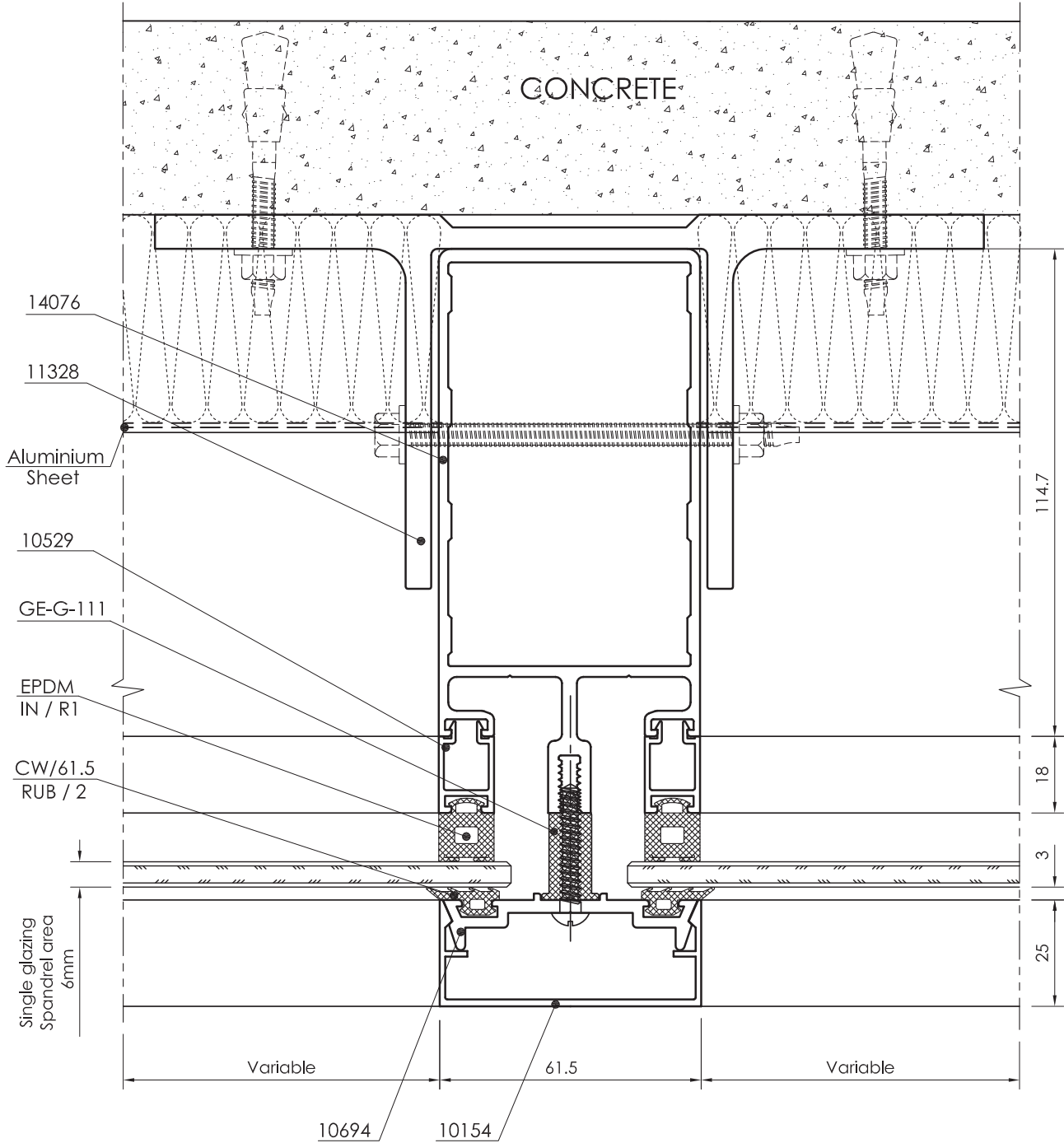
All dimensions in mm  
----- Visible area

61.5mm Conventional  
Detail - 4



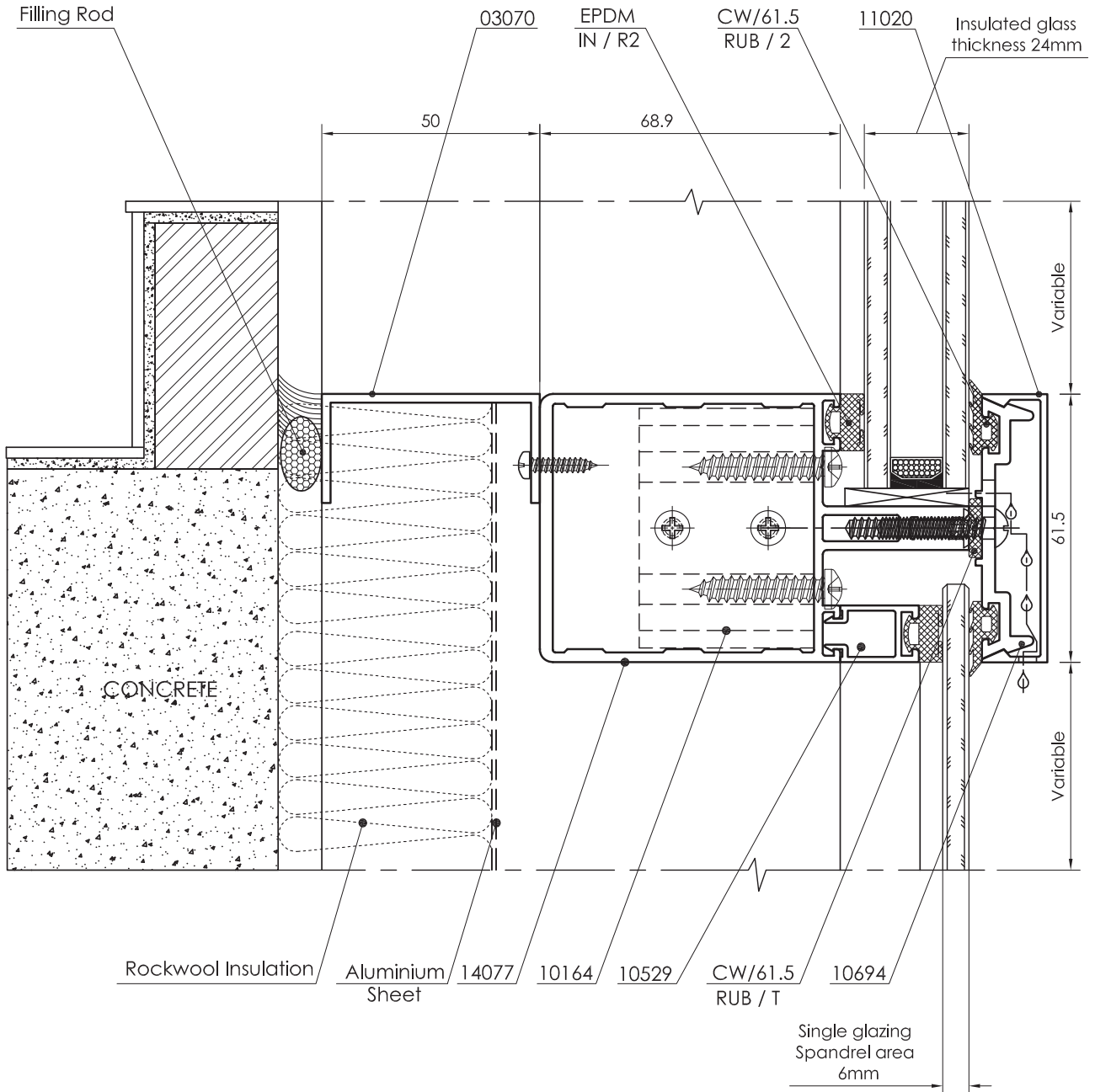
All dimensions in mm  
Visible area\_\_\_\_\_

61.5mm Conventional  
Detail - 5



All dimensions in mm  
----- Visible area

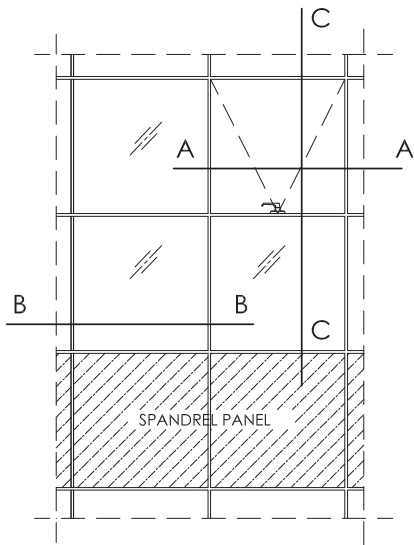
61.5mm Conventional  
Detail - 6



All dimensions in mm  
Visible area\_\_\_\_\_



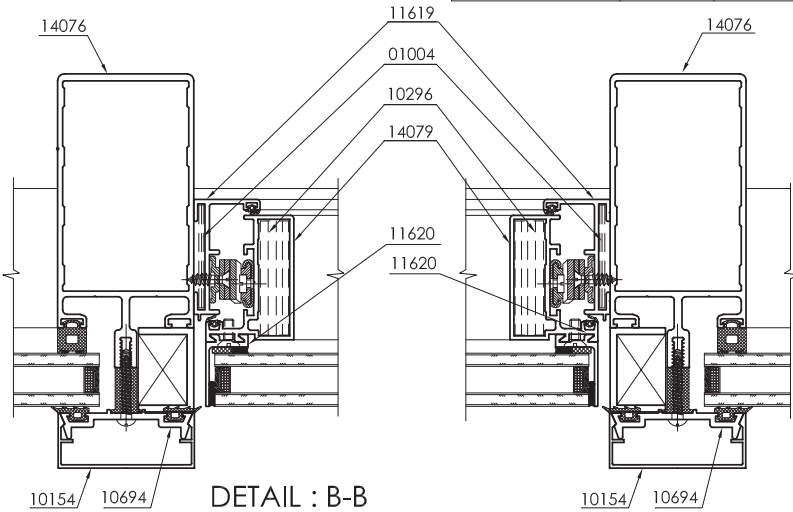
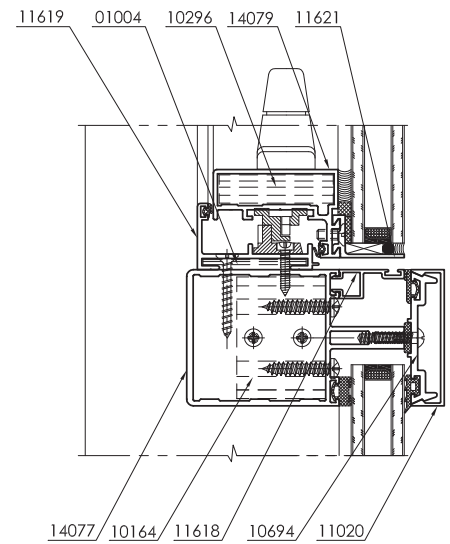
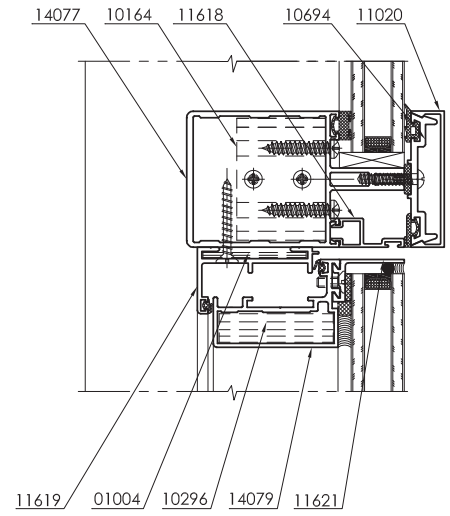
61.5mm Conventional



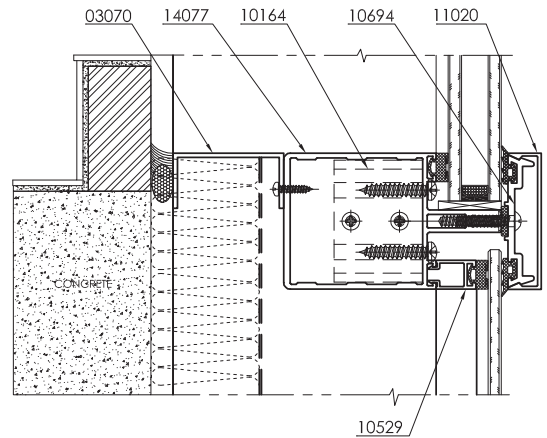
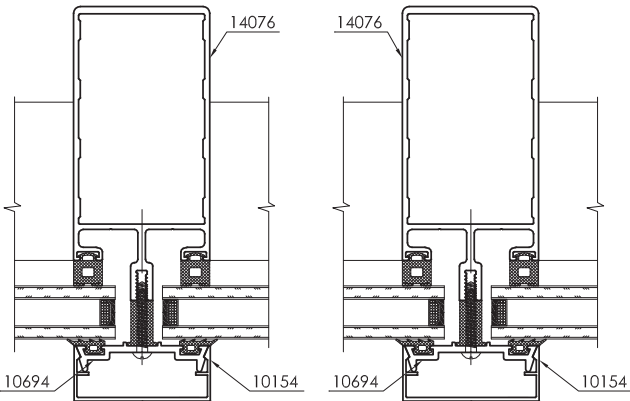
DETAIL : A-A

Profiles		
Description	Shape	Section No.
Mullion		14076
Transom		14077
Frame		11619
Sash		14079
Connector		10164
Angle 40x40x3		01004
Corner cleat		10296
Adaptor		11618
Cover Plate		11020
Cover Plate		10154
Pressure Plate		10694
Bracket		11328
U-Channel		03070
Single glass adaptor		10529
Glass Holder		11621

DETAIL : C-C



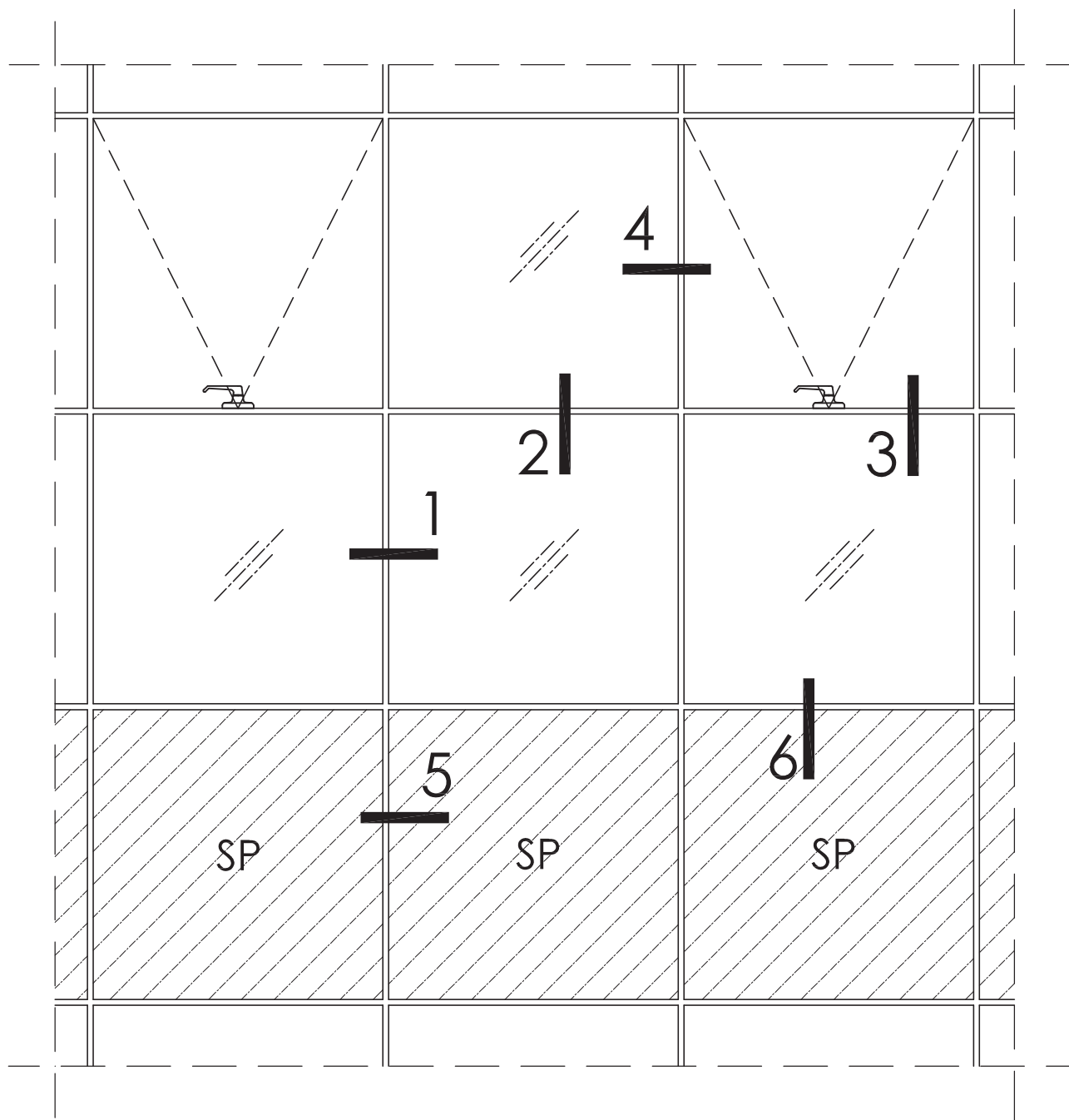
DETAIL : B-B



All dimensions in mm  
 ----- Visible area

**61.5mm 4-way Structural Glazing**

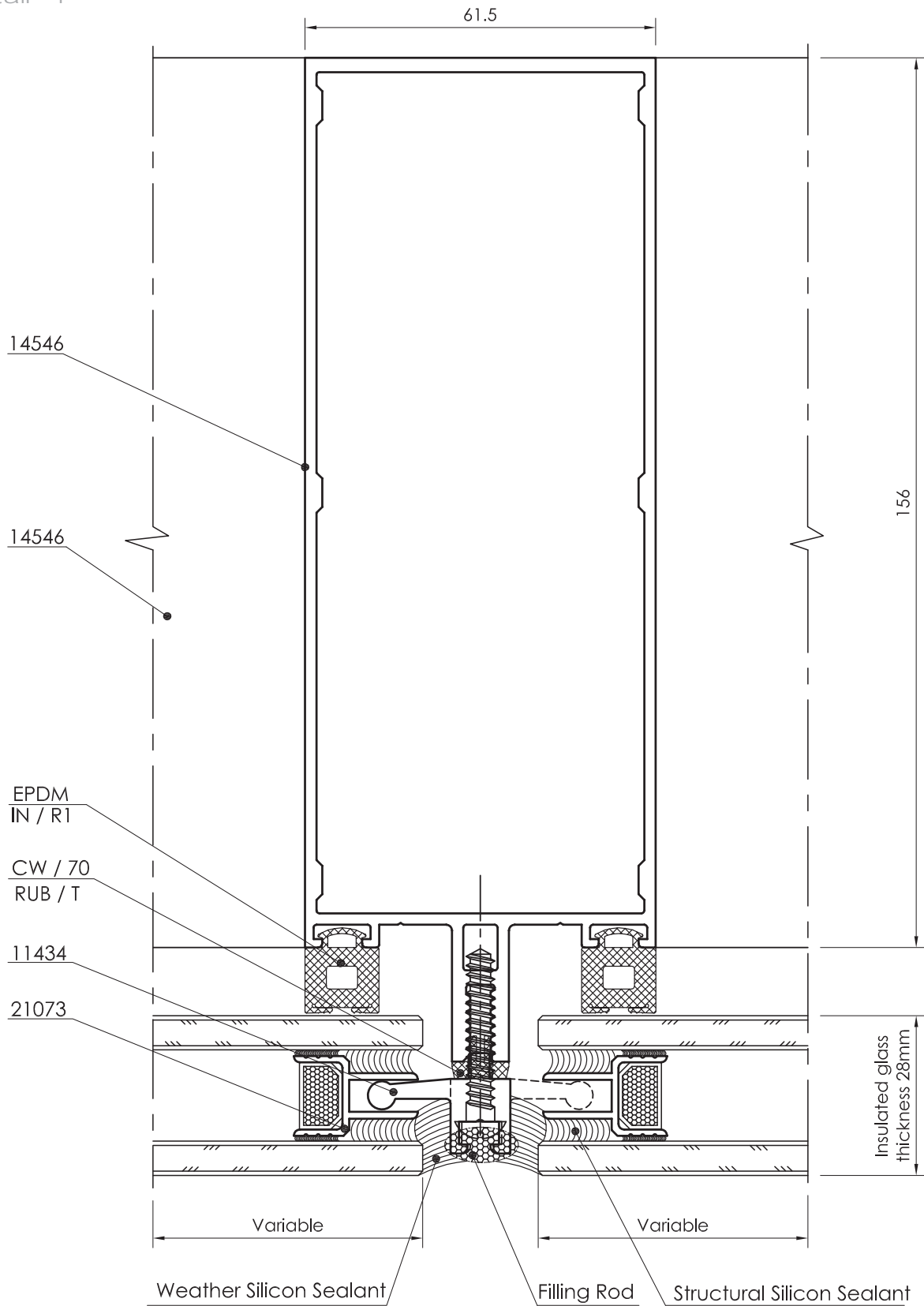
Thermal Break



All dimensions in cross sections are shown in mm  
Profile are not necessarily shown to scale

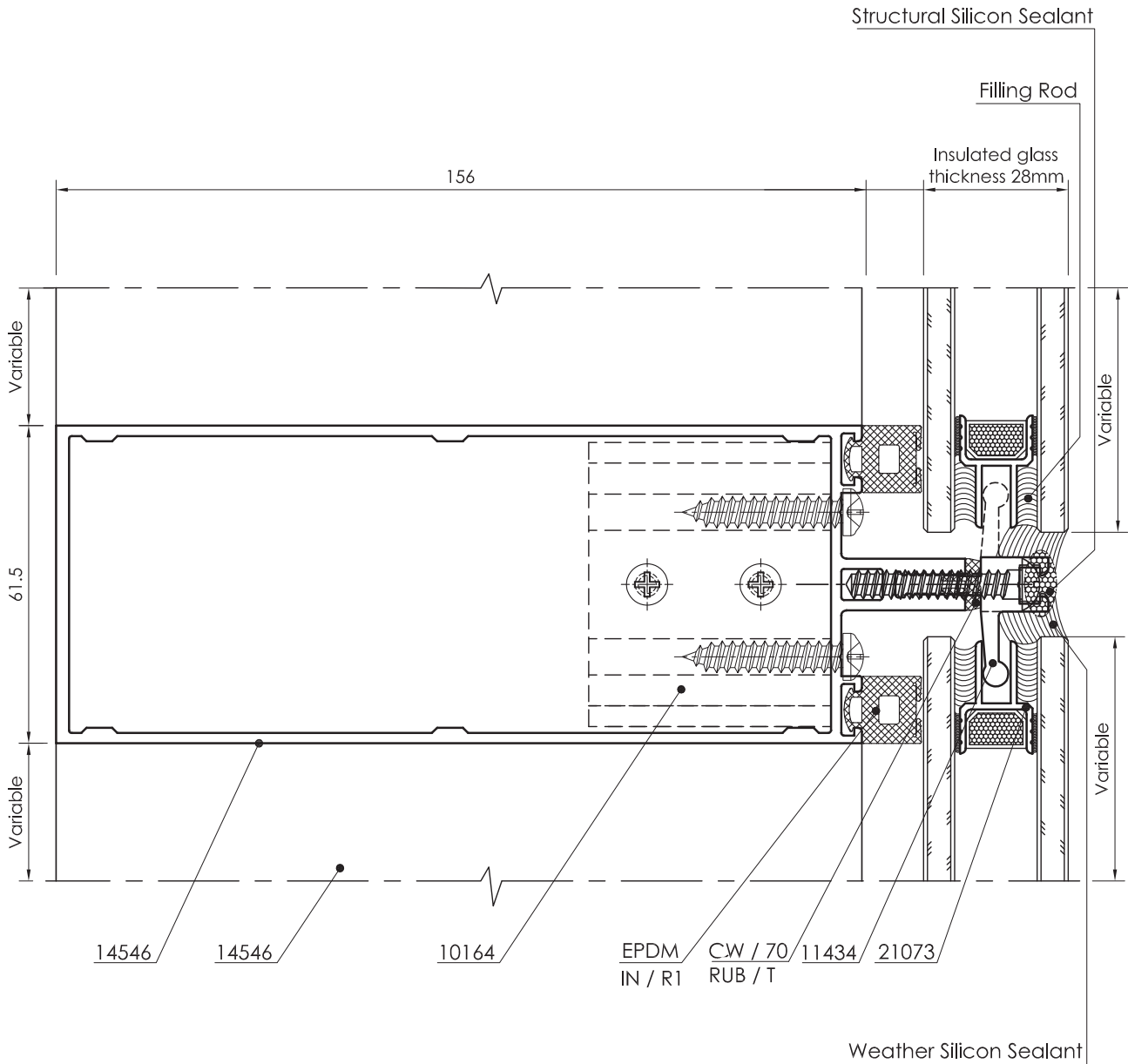
61.5mm 4-way Structural Glazing

Detail - 1



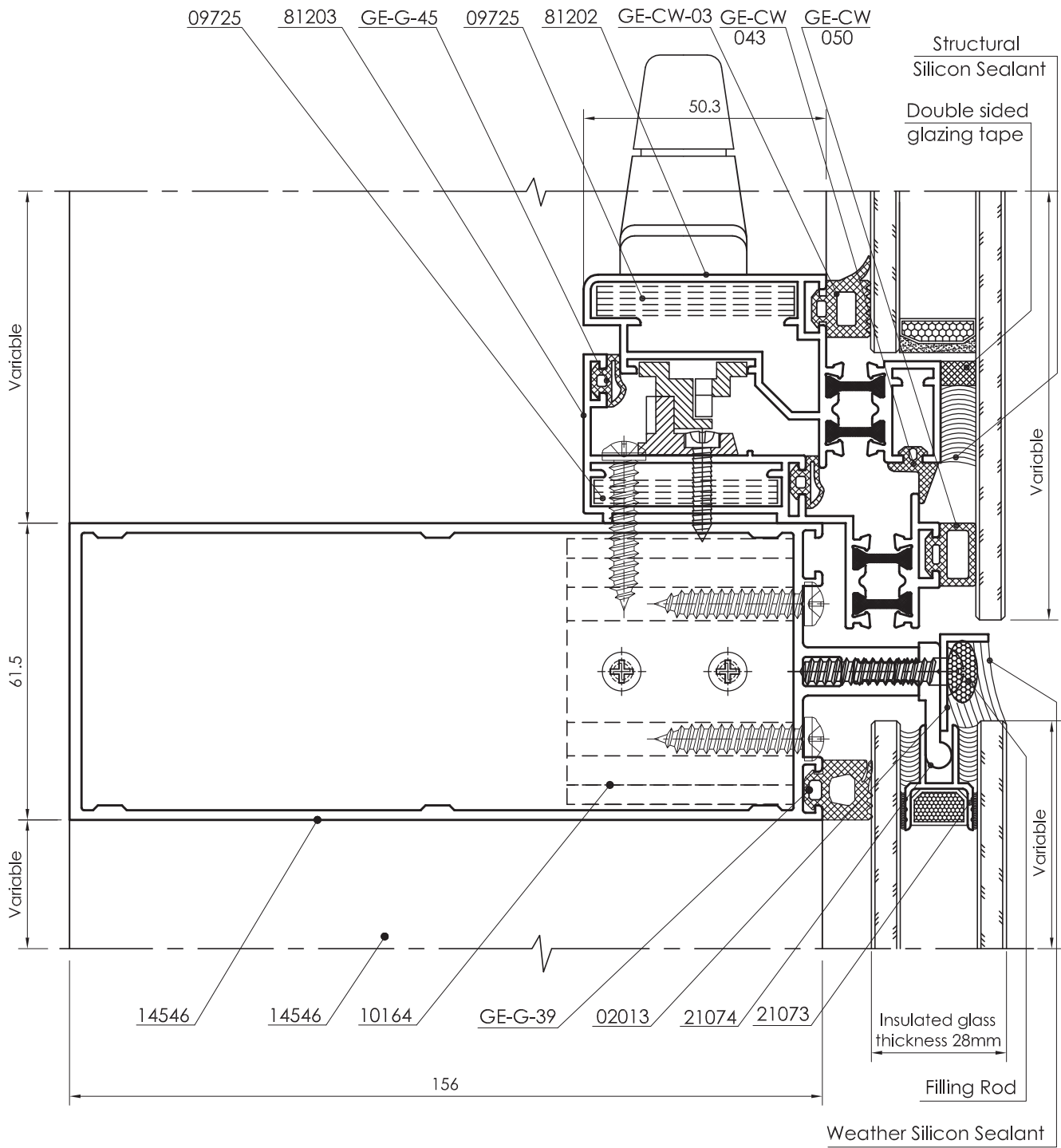
All dimensions in mm  
----- Visible area

**61.5mm 4-way Structural Glazing**  
Detail - 2



All dimensions in mm  
Visible area\_\_\_\_\_

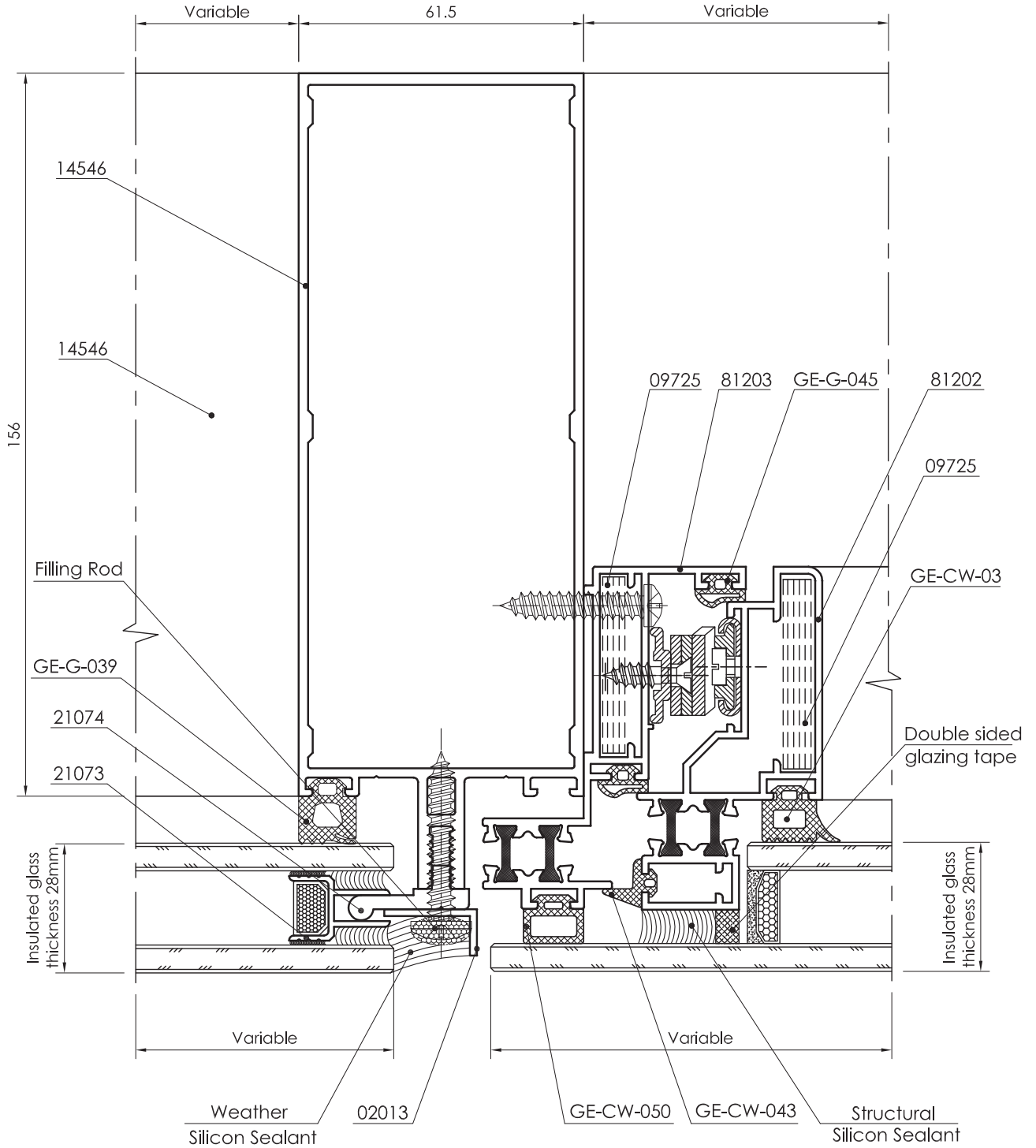
61.5mm 4-way Structural Glazing  
Detail - 3



All dimensions in mm  
----- Visible area

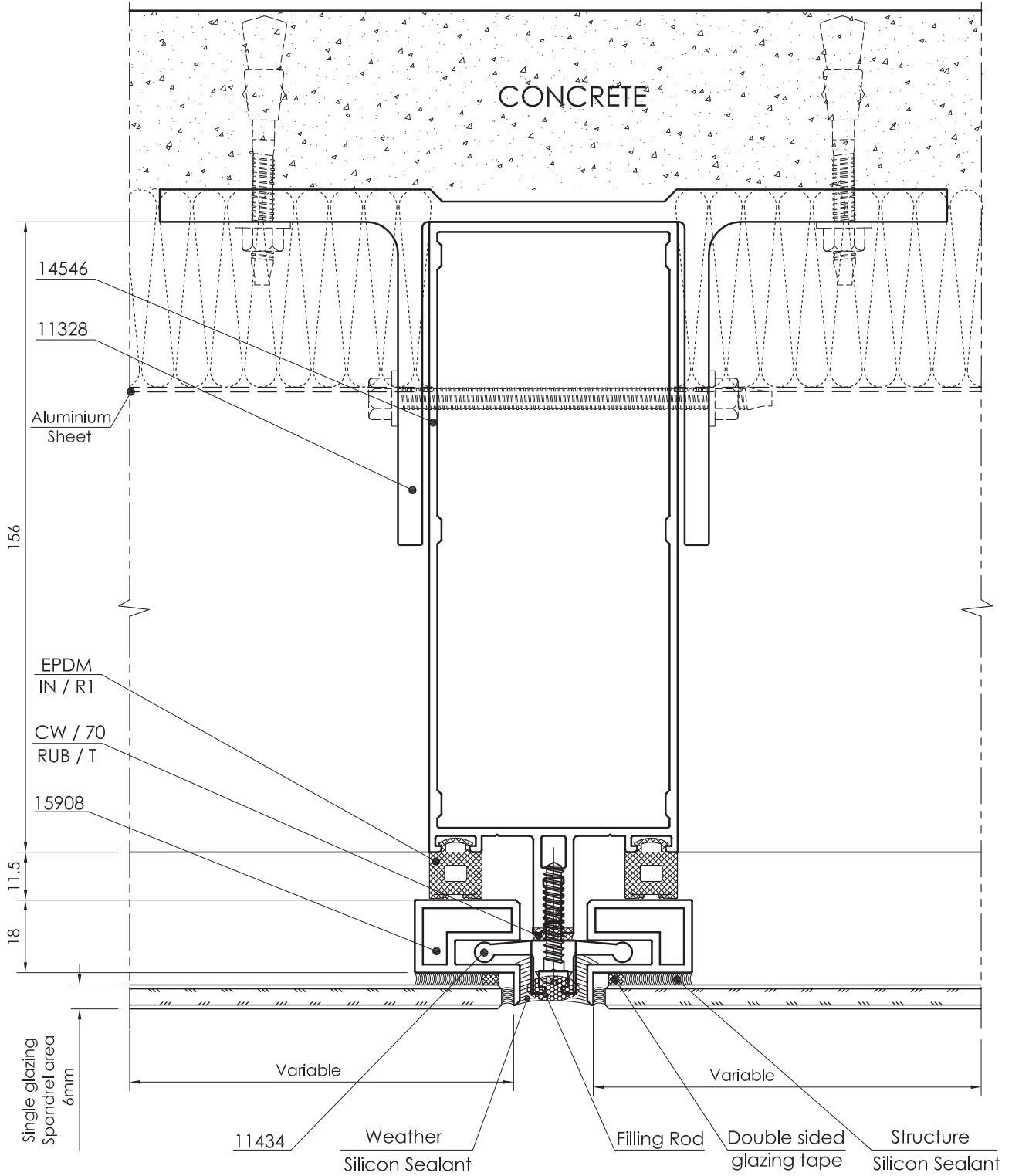
61.5mm 4-way Structural Glazing

Detail - 4



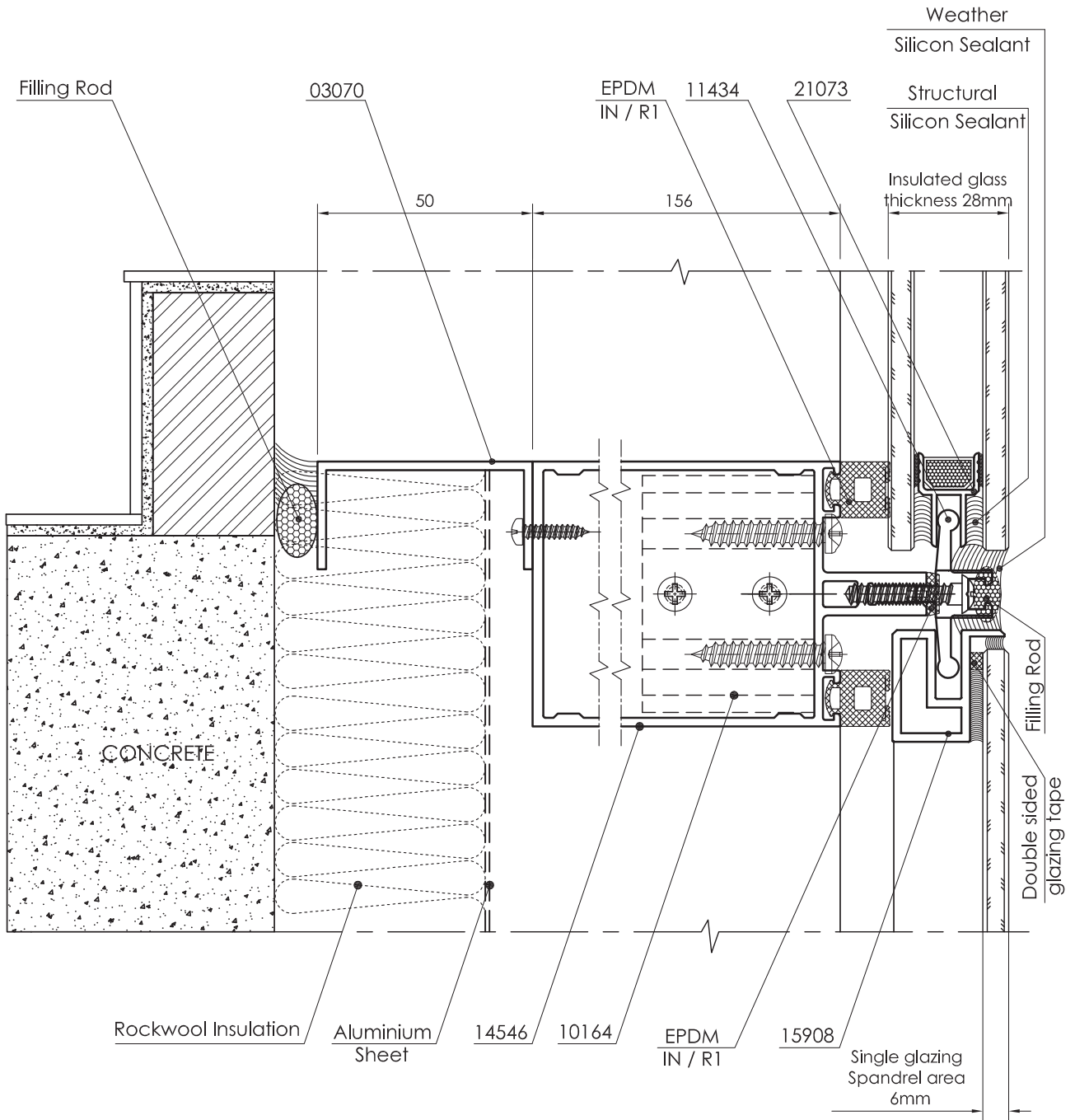
All dimensions in mm  
Visible area\_\_\_\_\_

61.5mm 4-way Structural Glazing  
Detail - 5



All dimensions in mm  
----- Visible area

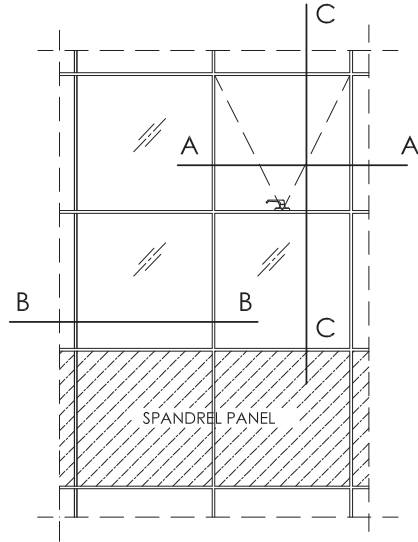
61.5mm 4-way Structural Glazing  
Detail - 6



All dimensions in mm  
Visible area\_\_\_\_\_

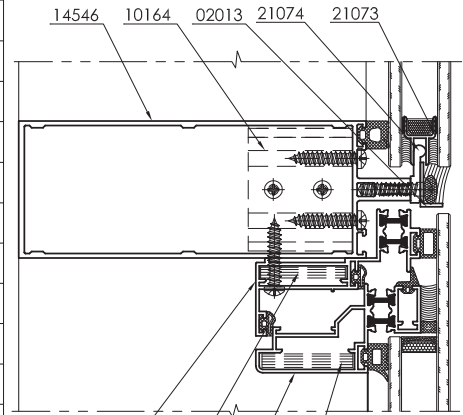


## 61.5mm 4-way Thermal Break

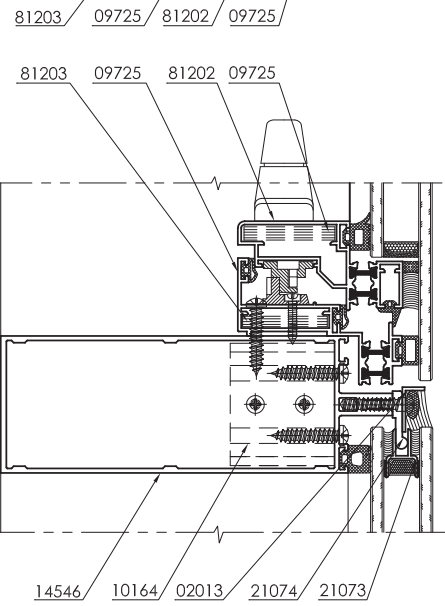
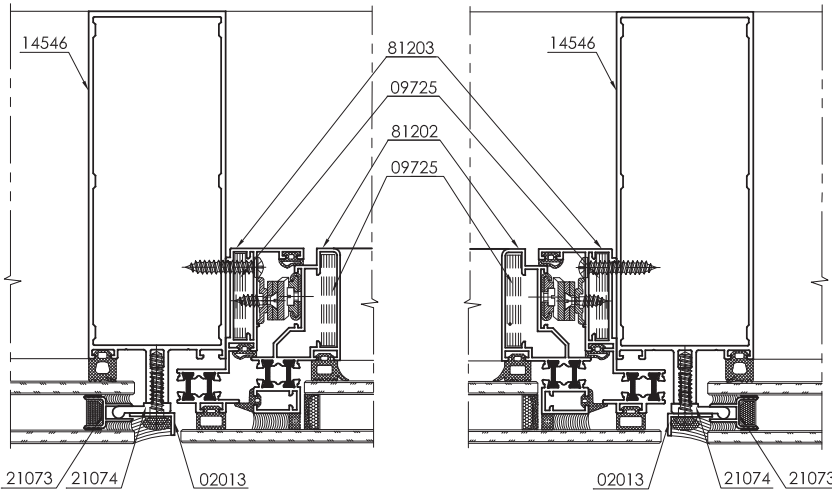


Profiles		
Description	Shape	Section No.
Mullion / Transom		14546
Frame		81203
Sash		81202
Connector		10164
Angle 20x10x1.5		02013
Corner cleat		10296
Corner cleat		09725
Glass spacer		21073
Glass Toggler		11434
Glass spacer		15908
Bracket		11328
U-Channel		03070
Glass Toggler		21074

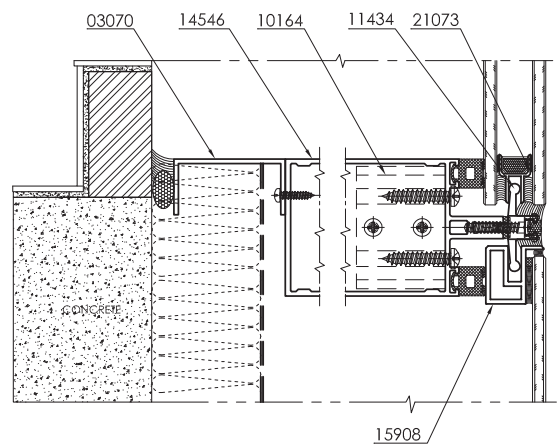
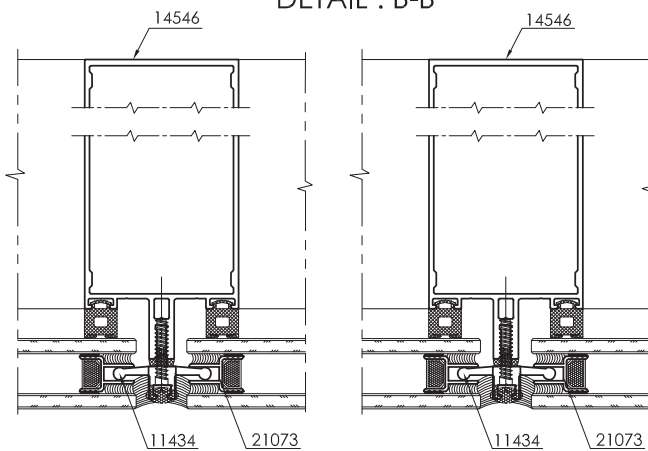
DETAIL : C-C



DETAIL : A-A

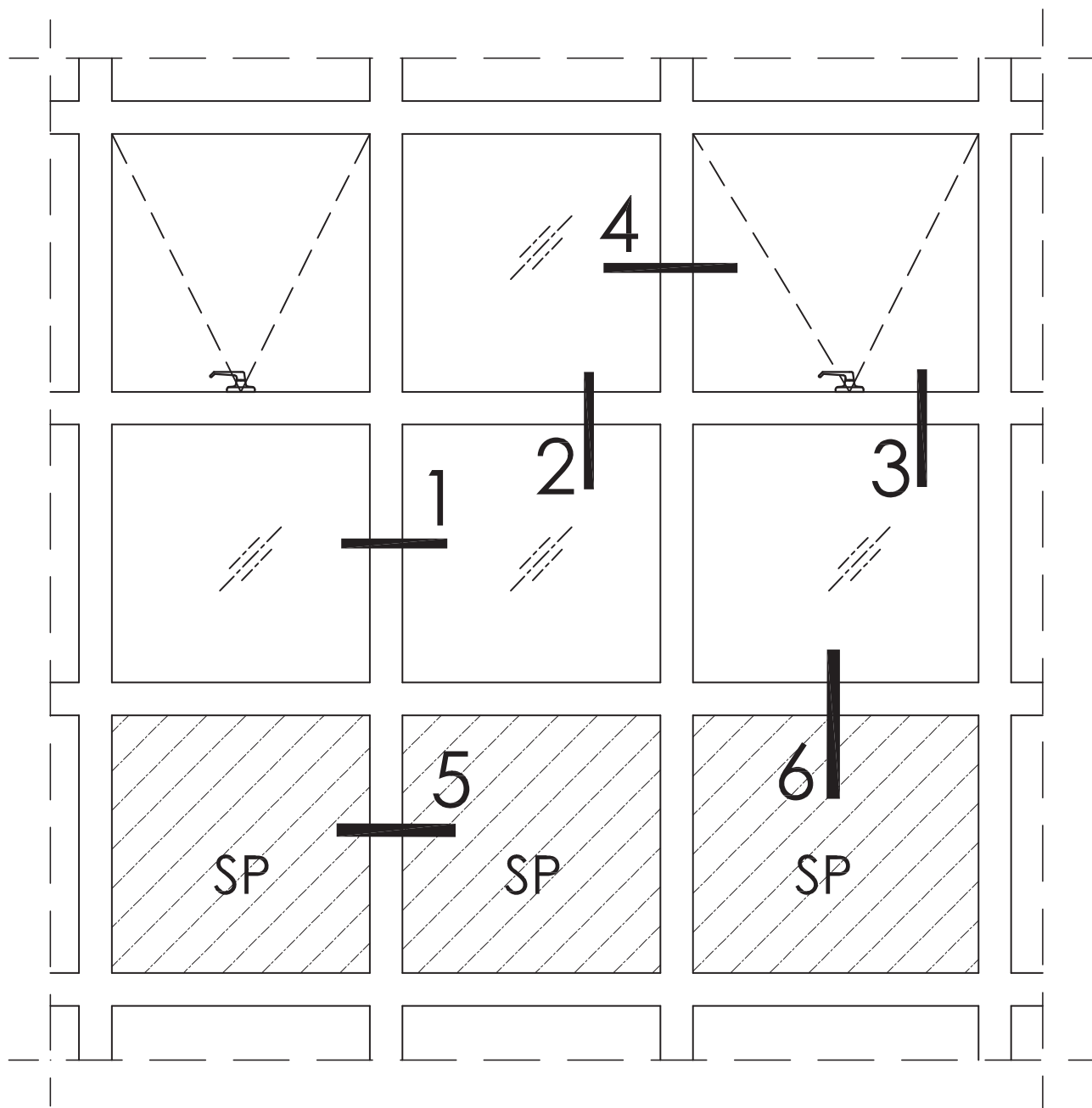


DETAIL : B-B



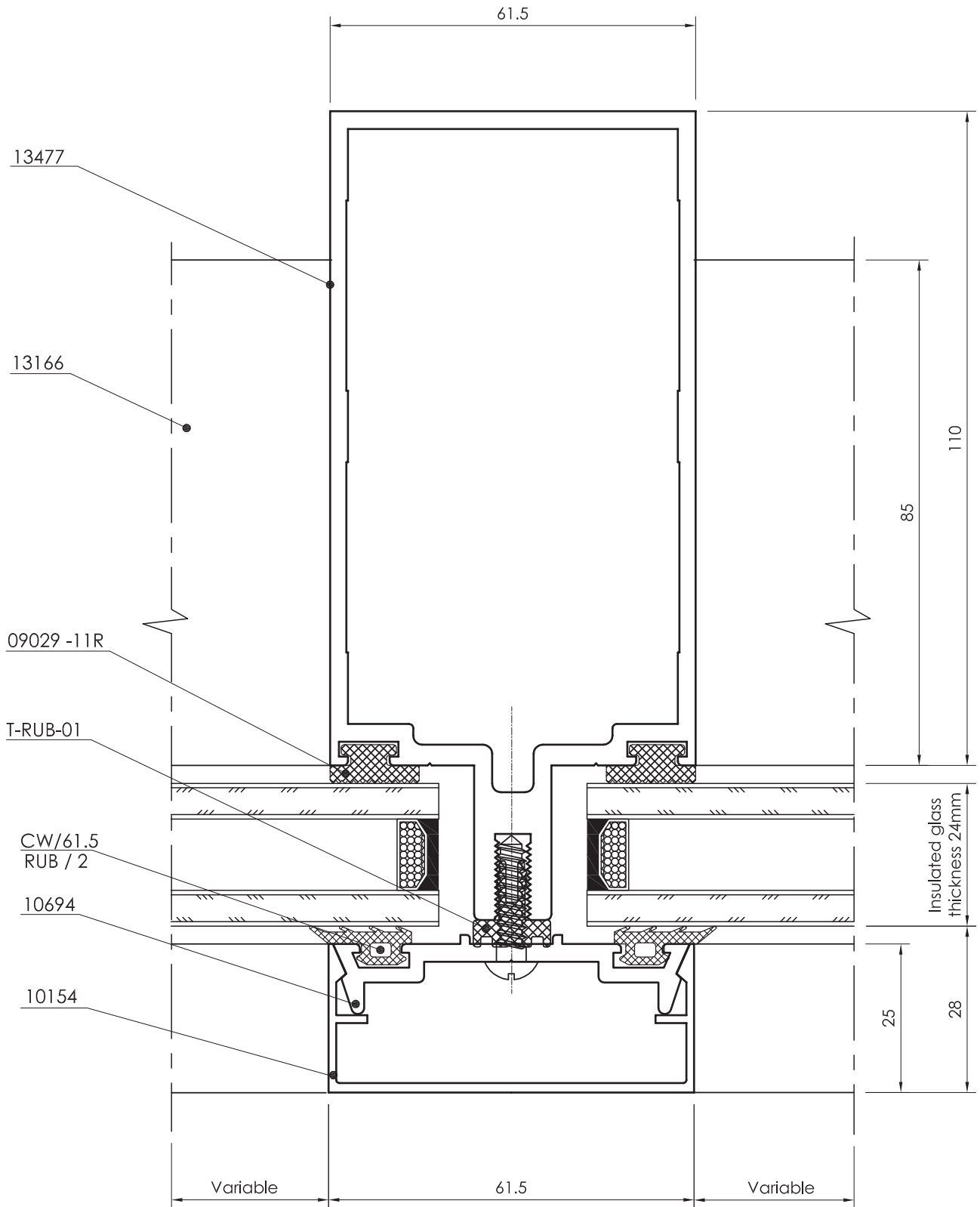
All dimensions in mm  
----- Visible area

## 61.5mm Conventional



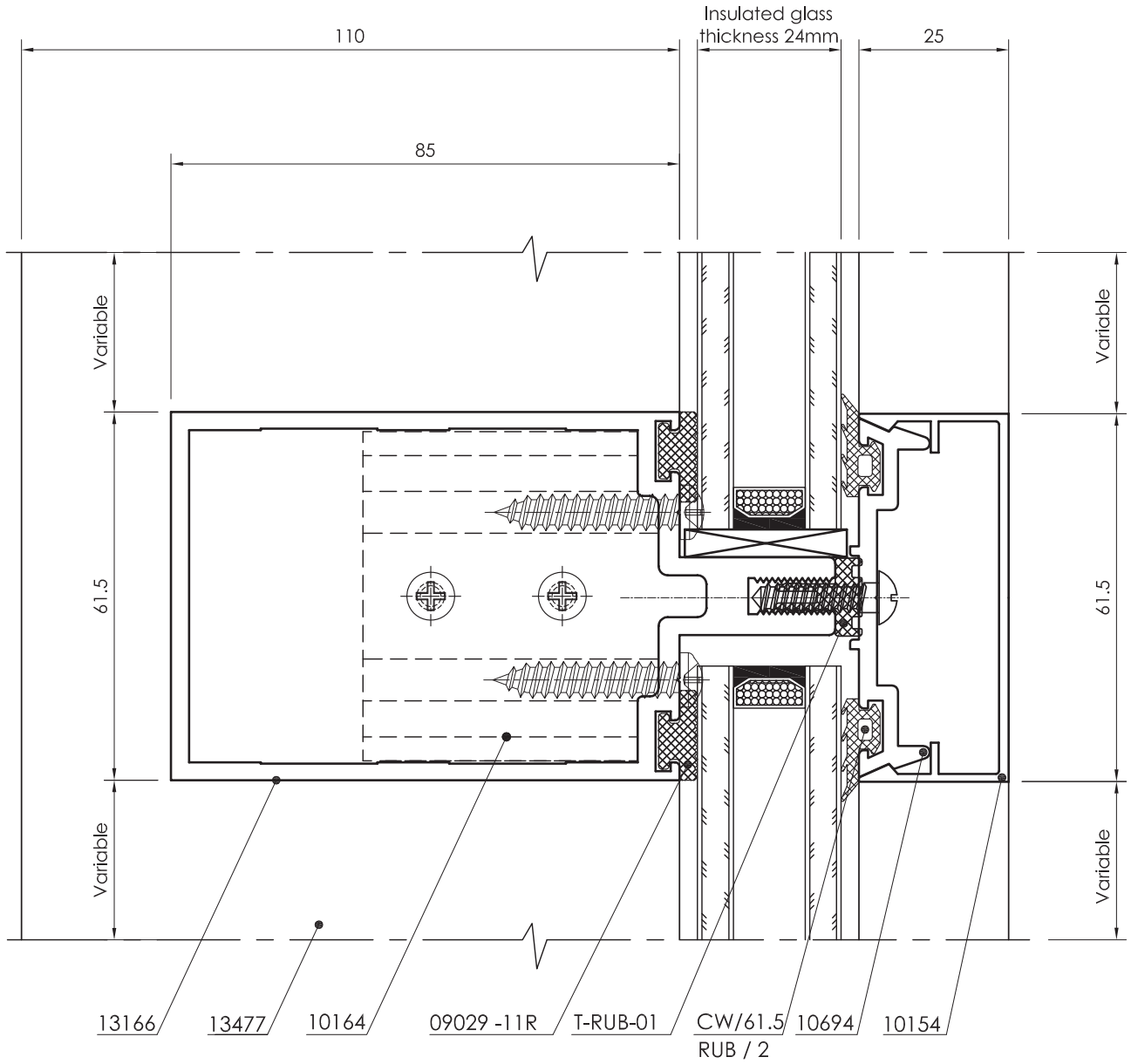
All dimensions in cross sections are shown in mm  
Profile are not necessarily shown to scale

61.5mm Conventional  
Detail - 1



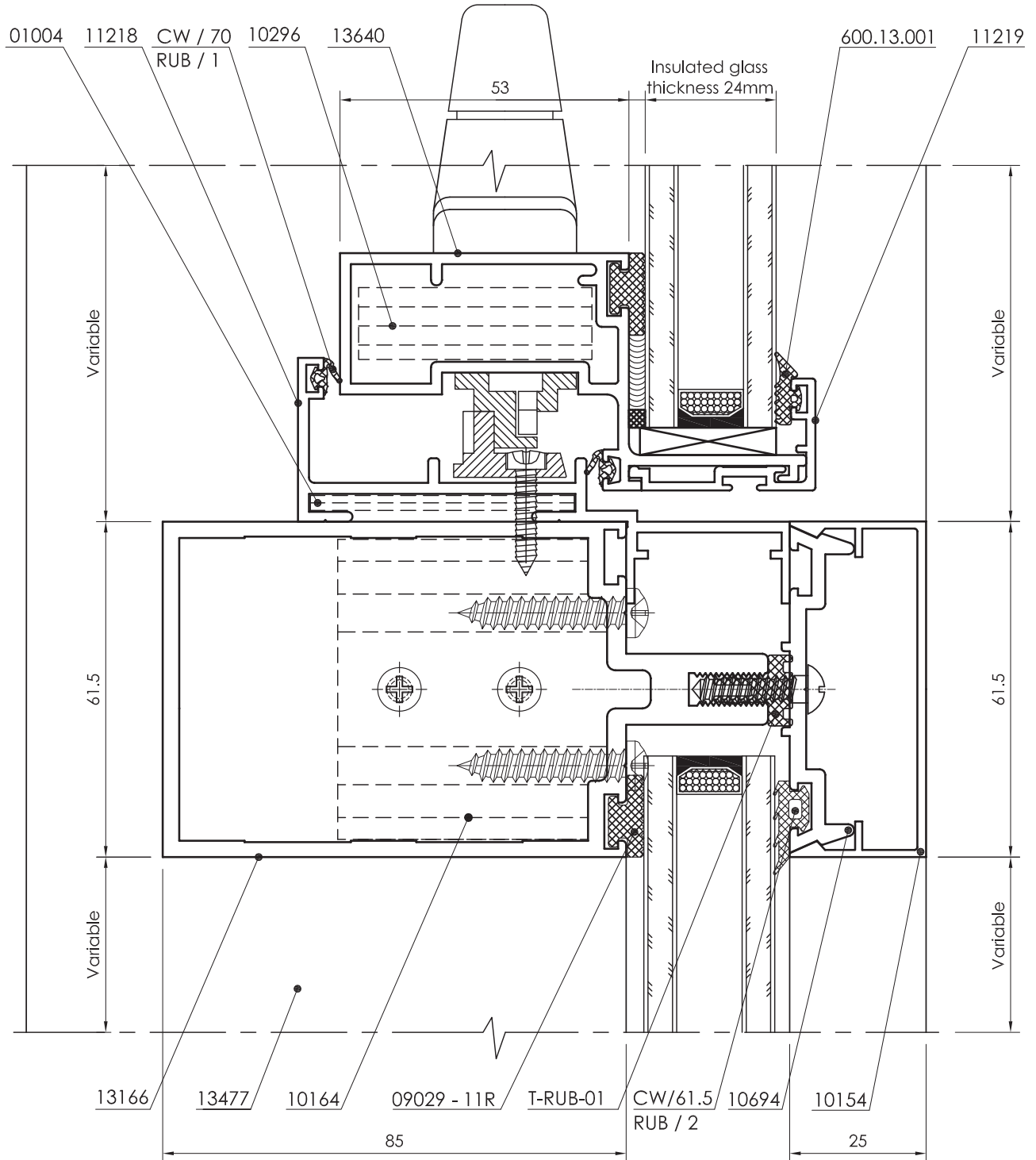
All dimensions in mm  
----- Visible area

61.5mm Conventional  
Detail - 2



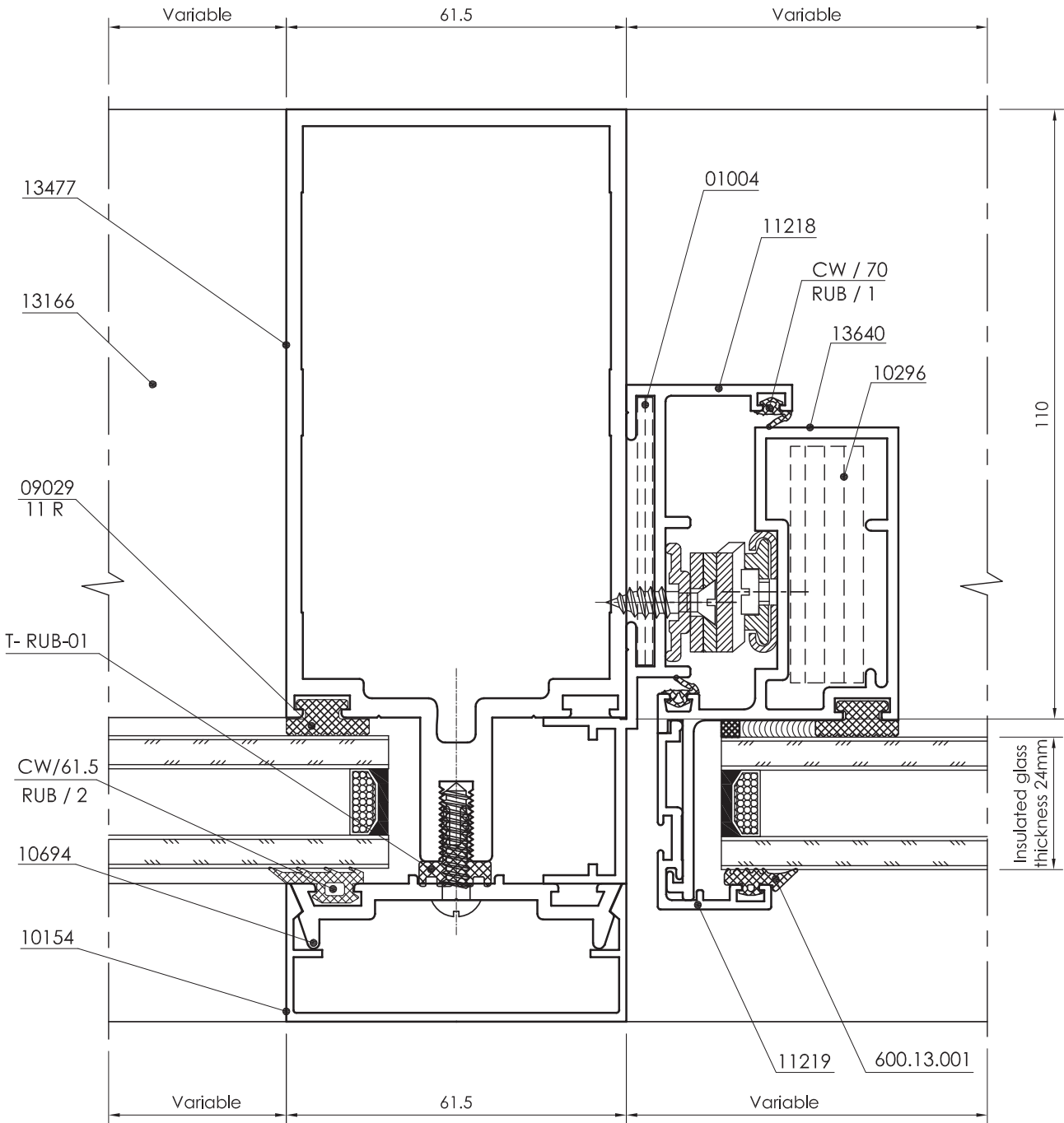
All dimensions in mm  
Visible area\_\_\_\_\_

61.5mm Conventional  
Detail - 3



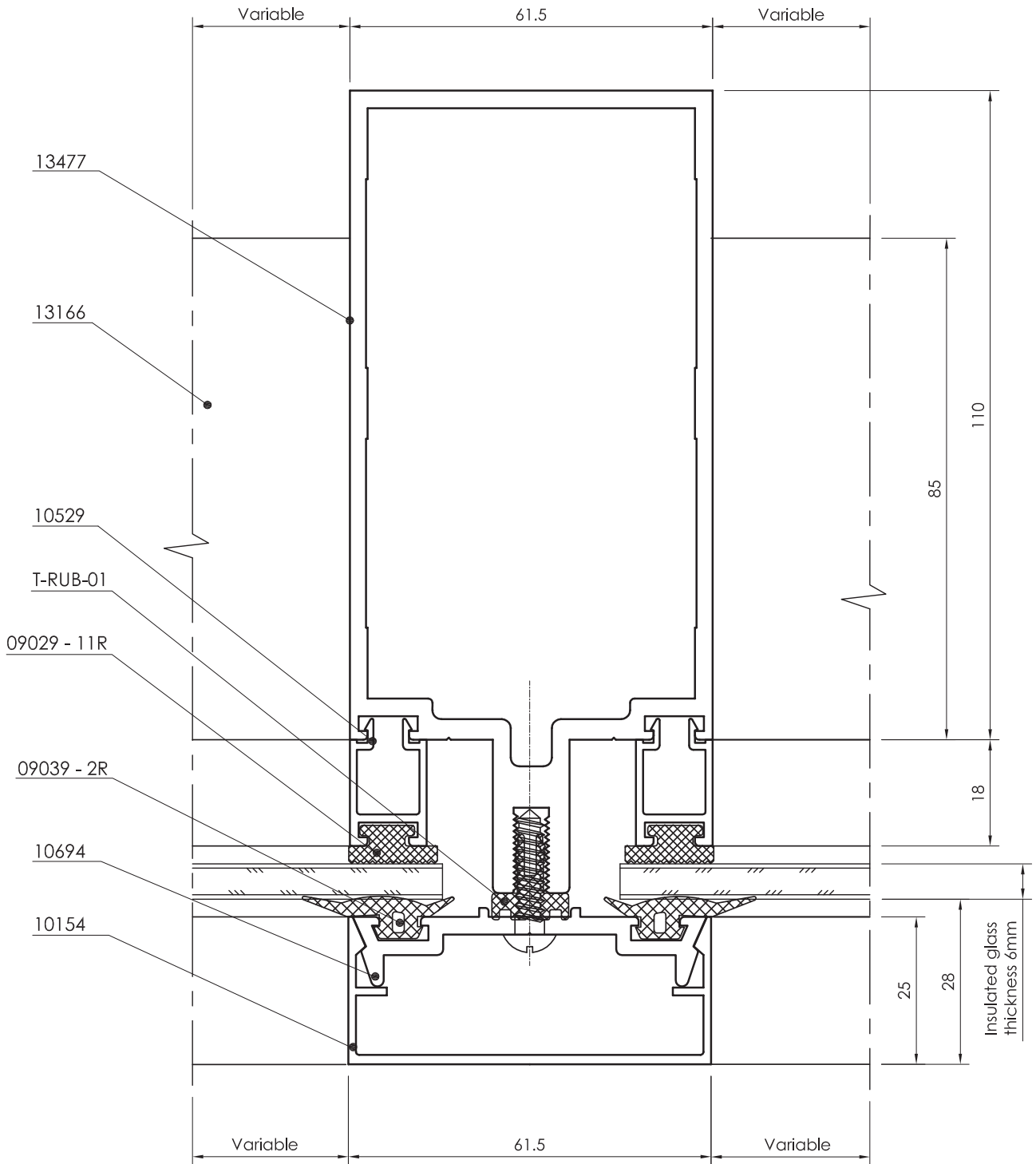
All dimensions in mm  
----- Visible area

61.5mm Conventional  
Detail - 4



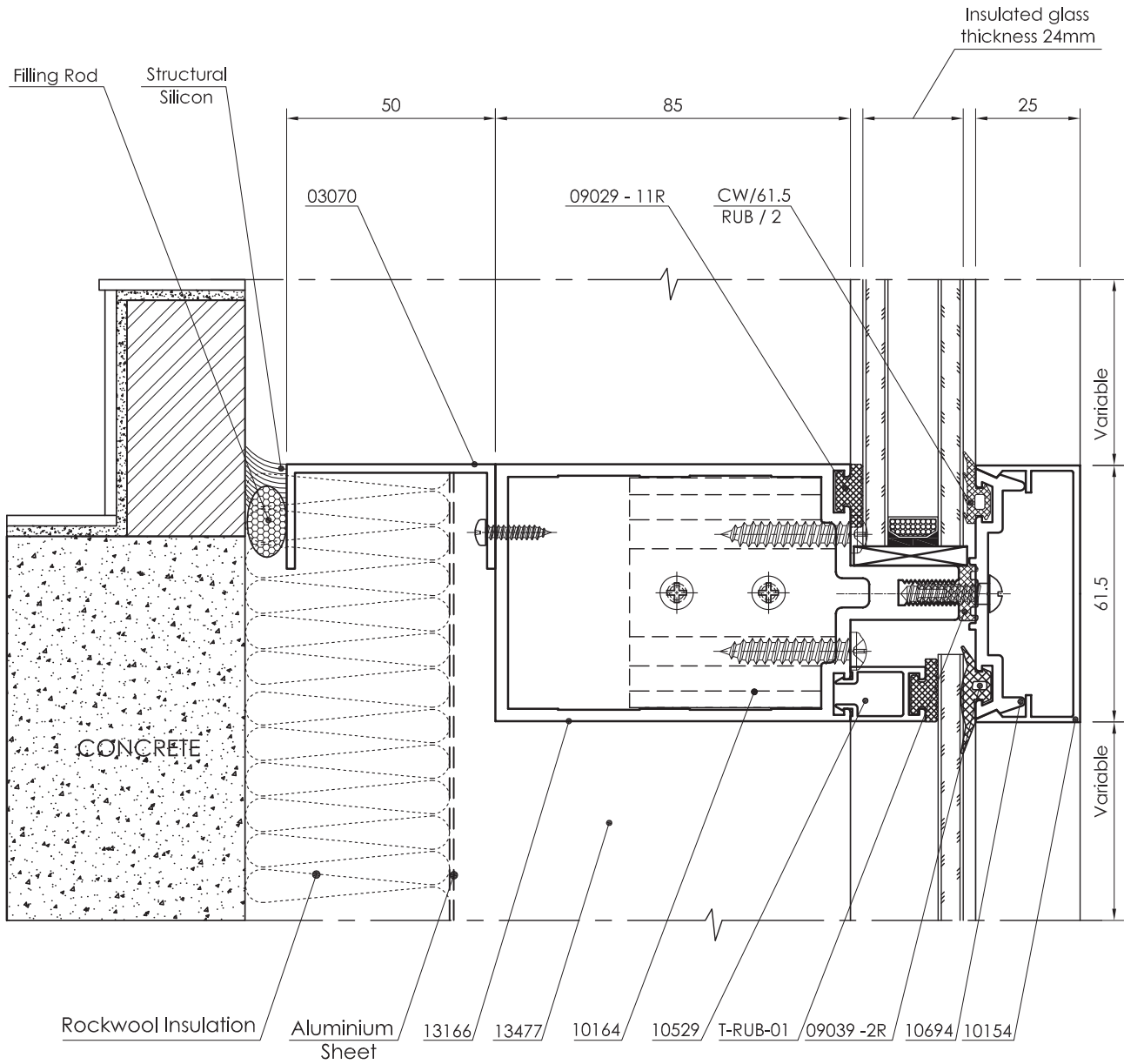
All dimensions in mm  
Visible area\_\_\_\_\_

61.5mm Conventional  
Detail - 5



All dimensions in mm  
----- Visible area

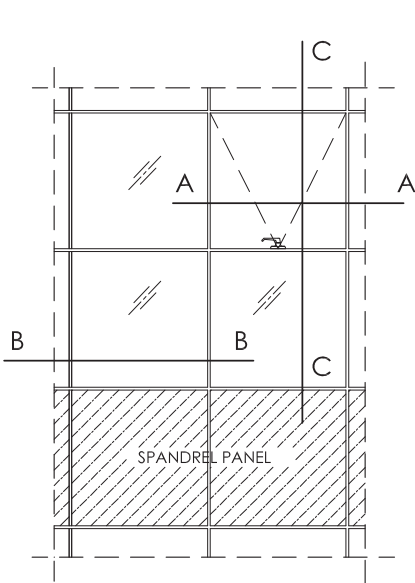
**61.5mm Conventional**  
Detail - 6



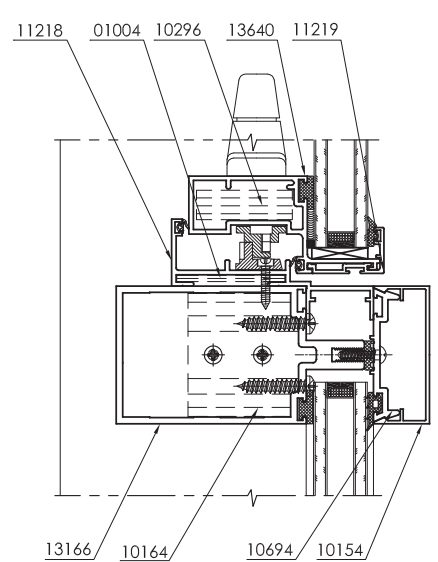
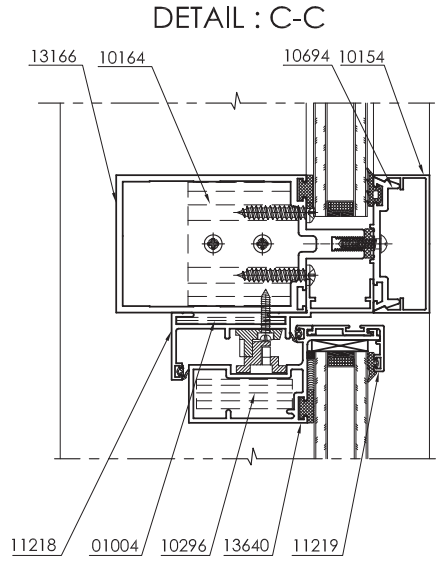
All dimensions in mm  
Visible area\_\_\_\_\_



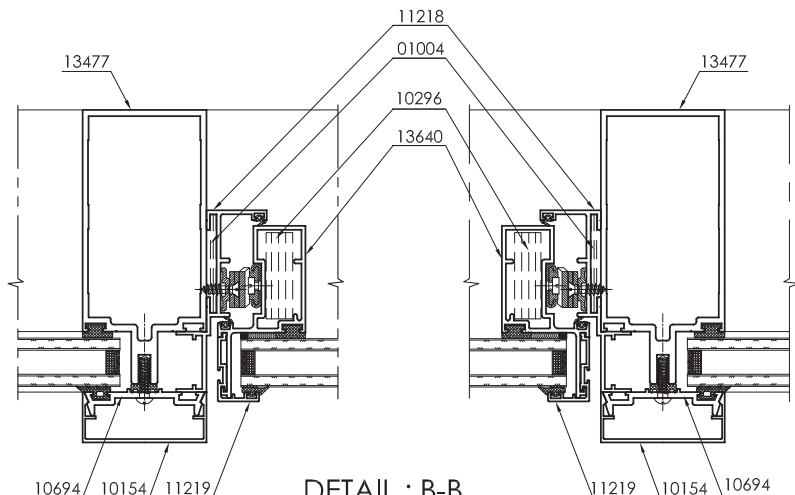
61.5mm Conventional



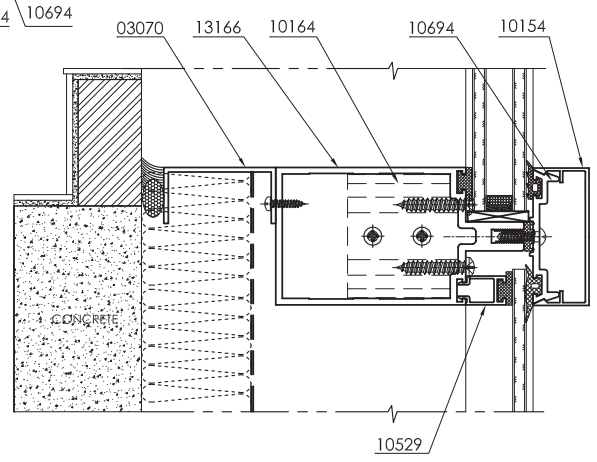
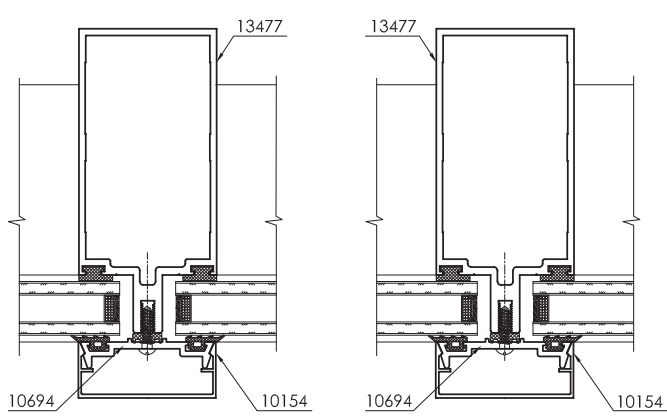
Profiles		
Description	Shape	Section No.
Mullion		13477
Transom		13166
Frame		11218
Sash		13640
Connector		10164
Angle 40x40x3		01004
Corner cleat		10296
Glass Holder		11219
Single glass adaptor		10529
Cover Plate		10154
Pressure Plate		10694
Bracket		11328
U-Channel		03070



DETAIL : A-A

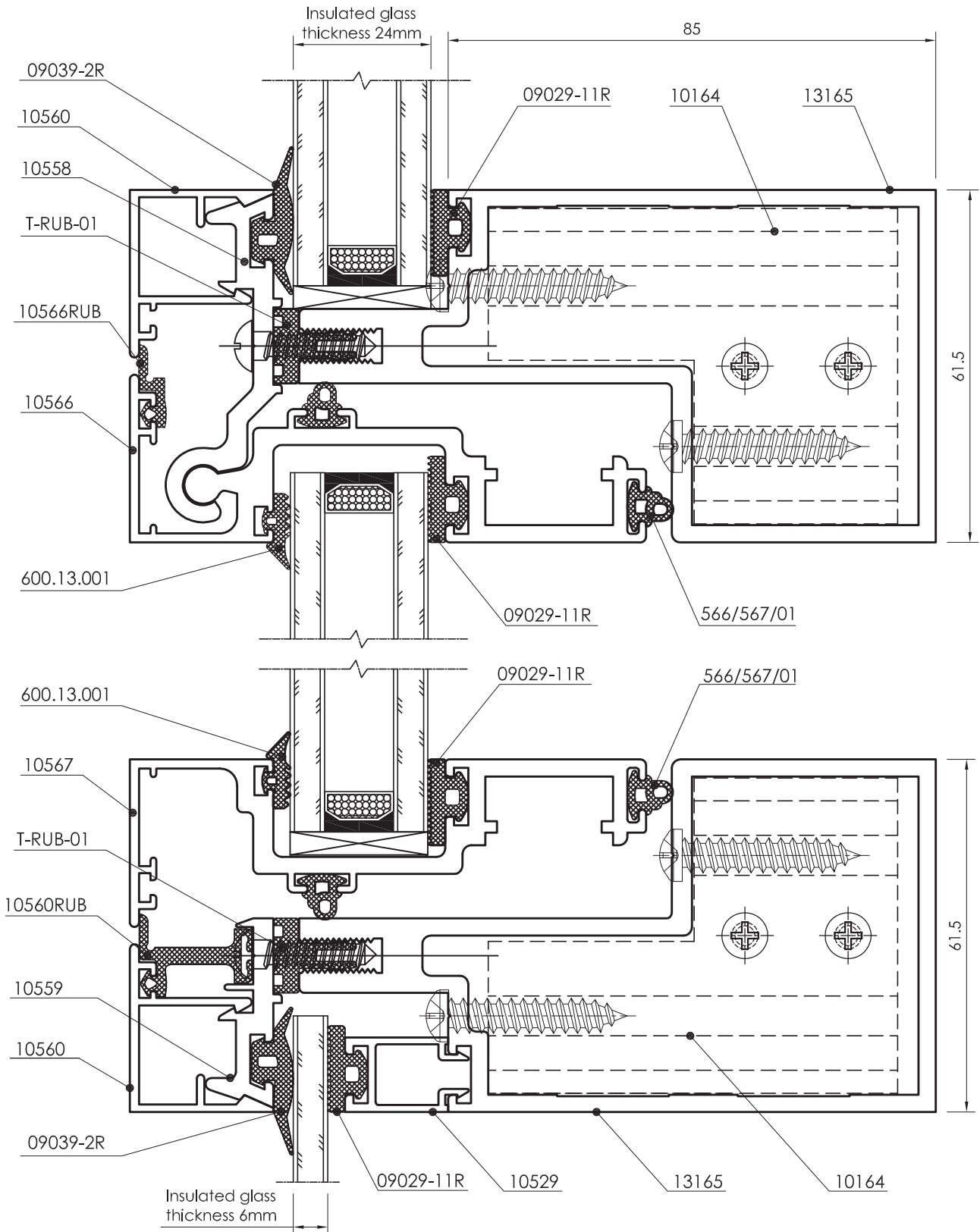


DETAIL : B-B

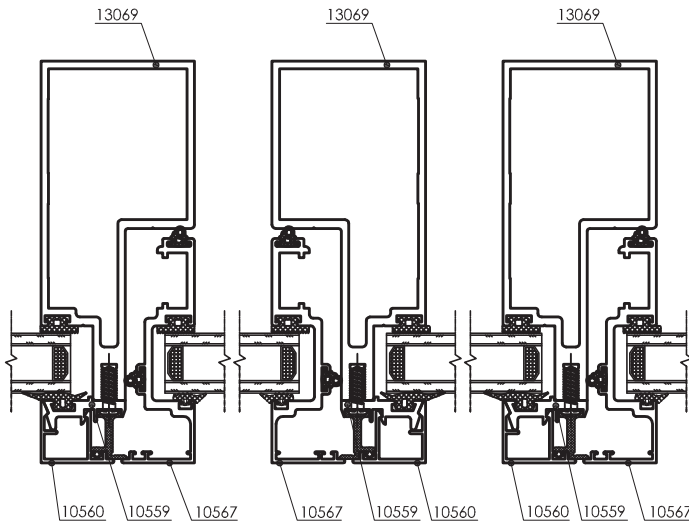
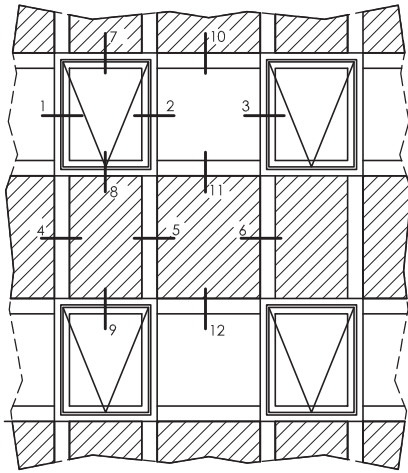


All dimensions in mm  
----- Visible area

61.5mm Curtain Wall



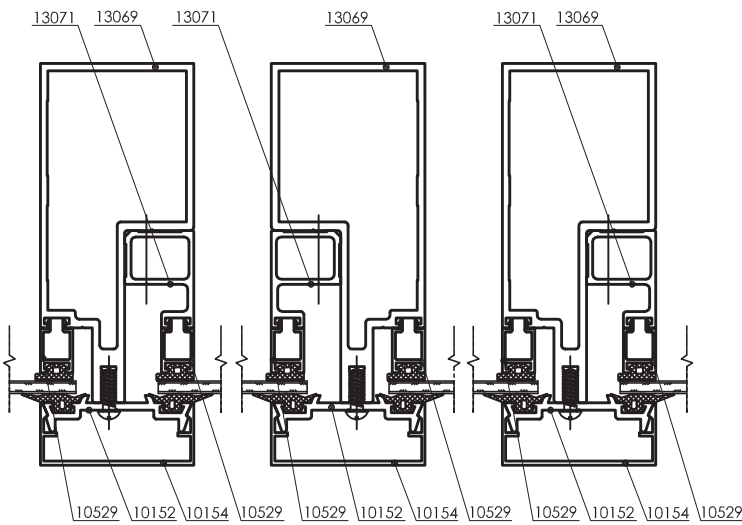
All dimensions in mm  
Visible area\_-----



DETAIL-1

DETAIL-2

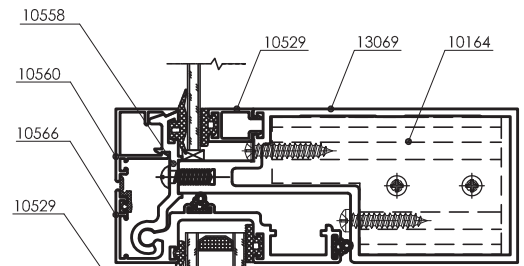
DETAIL-3



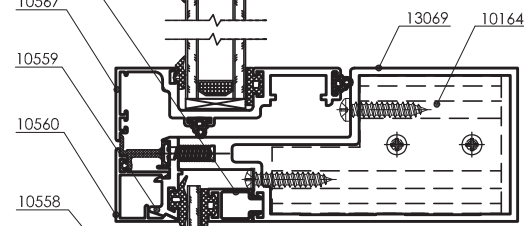
DETAIL-4

DETAIL-5

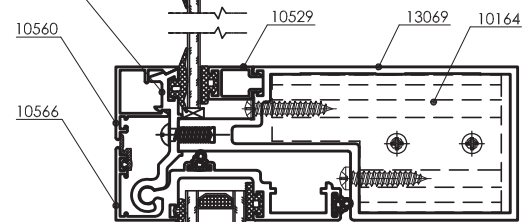
DETAIL-6



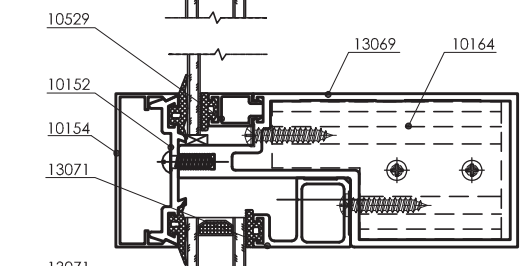
DETAIL-7



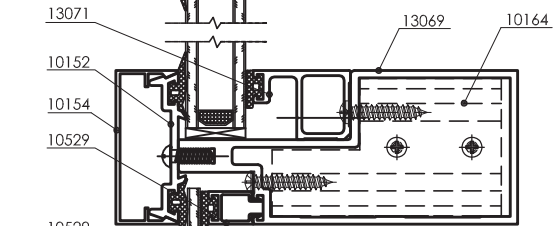
DETAIL-8



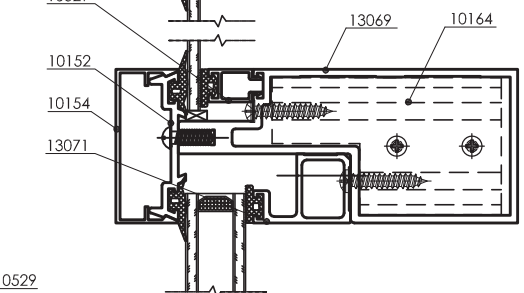
DETAIL-9



DETAIL-10



DETAIL-11

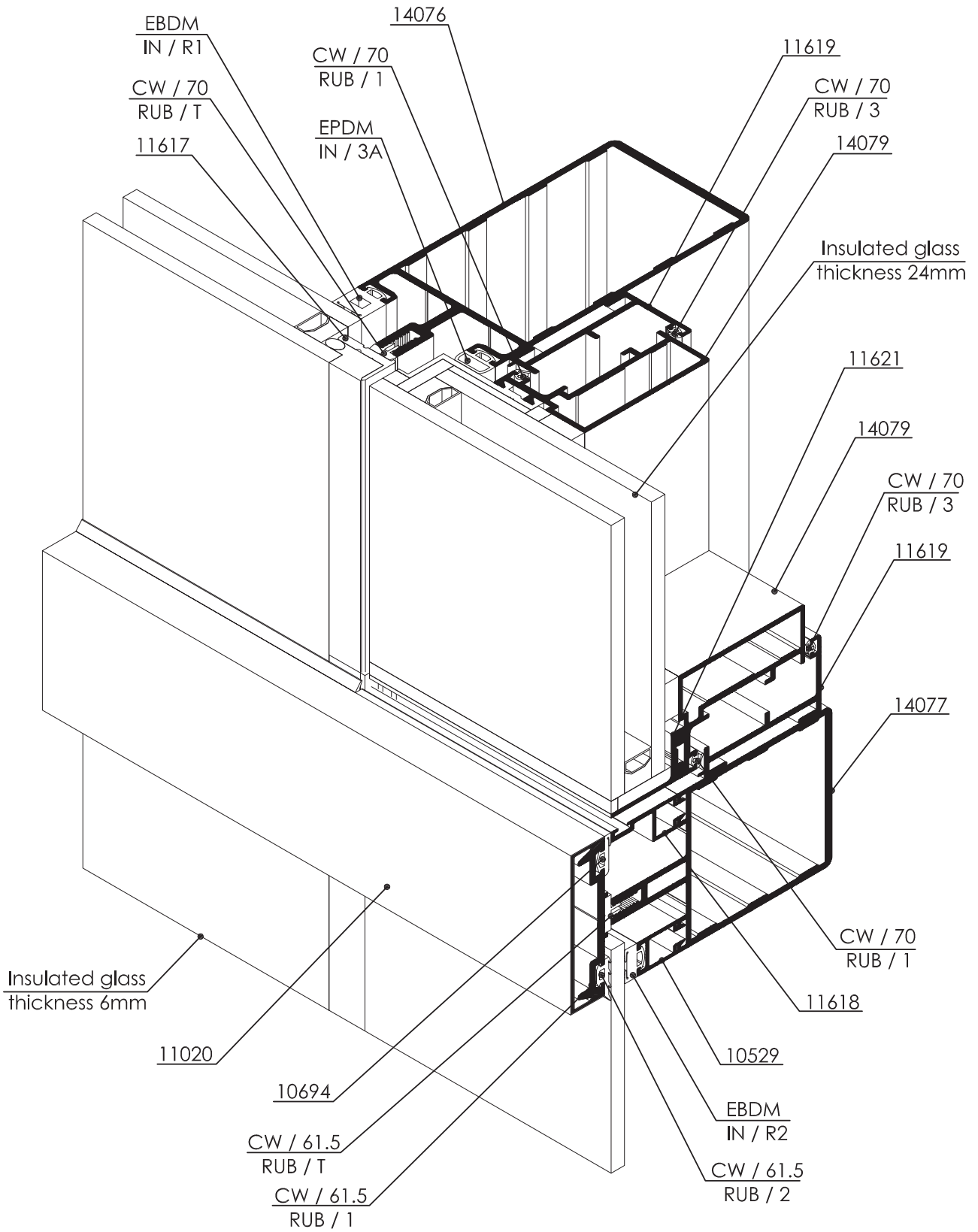


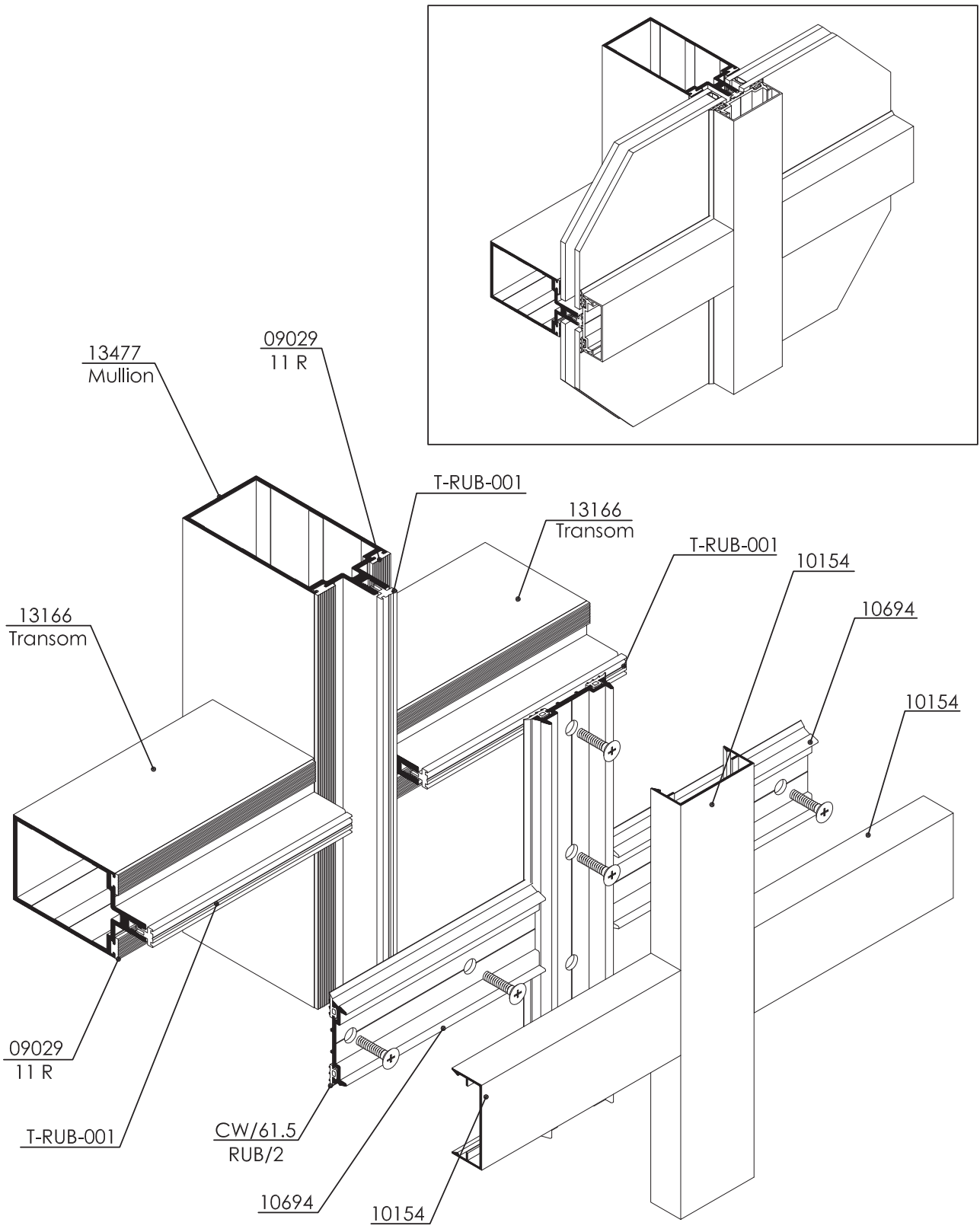
DETAIL-12

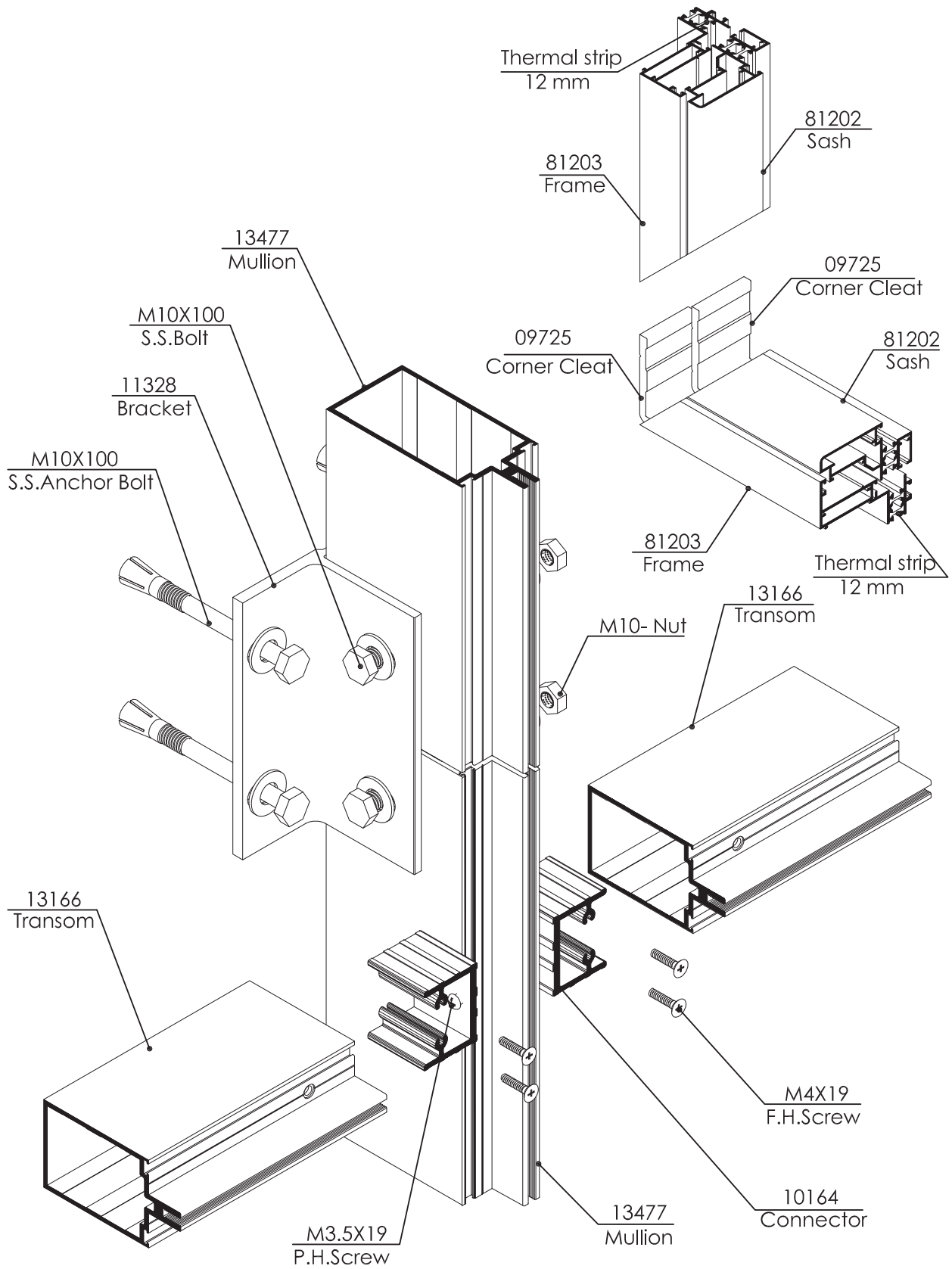
All dimensions in mm  
----- Visible area



# 3D SECTIONS









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