

Hinged Series 45mm

11-2014-V.02

All rights reserved.

No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means electronic, mechanical, photocopying, recording or otherwise, without prior permission of Gulf Extrusions.

Hinged Series 45mm

45 - A	GULF EXTRUSIONS	03
45 - B	QUALITY AND CERTIFICATIONS	04 - 09
45 - C	INTRODUCTION TO THE SYSTEM	10
45 - D	TESTING	11 - 12
45 - E	PROFILES	13 - 52
45 - F	PROFILE LIST	53 - 71
45 - G	ACCESSORIES	73 - 76
45 - H	ASSEMBLY DRAWINGS	77 - 121
45 - I	3D SECTIONS	123 - 130

GULF EXTRUSIONS

Gulf Extrusions Co. LLC, the flagship company of the Al Ghurair Group of Companies, was founded in 1978, 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 10,000 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:1474 (amended version – consists of BS EN 755 Series)
- 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

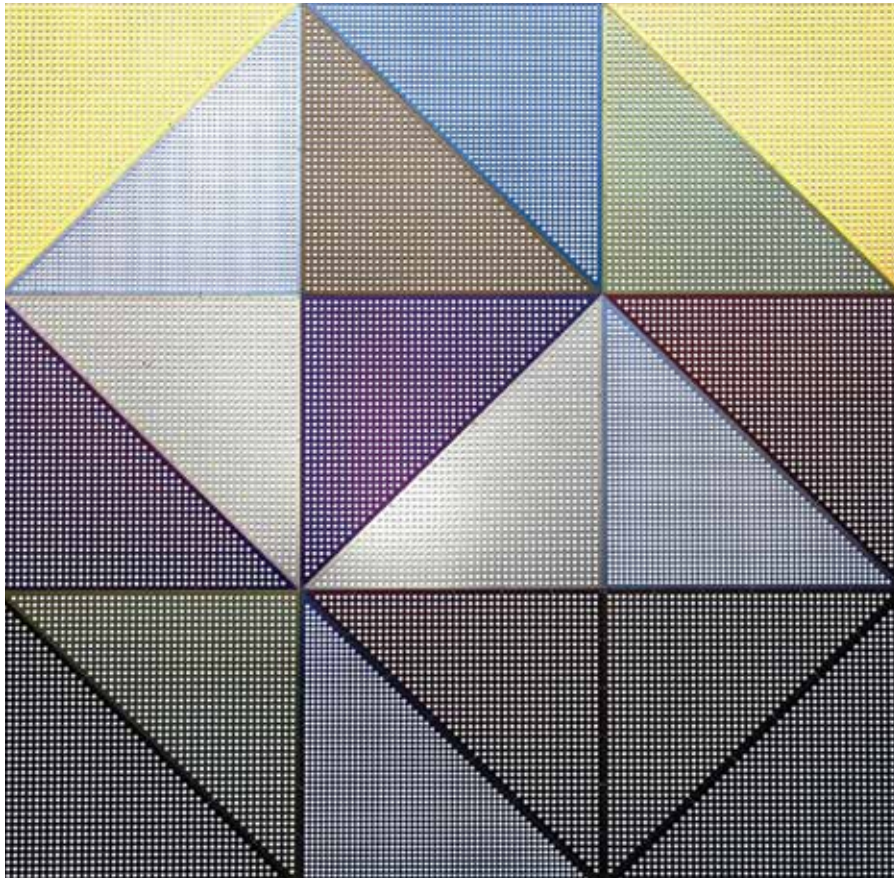
Element	Minimum	Maximum
Si	0.40	0.80
Fe	-	0.70
Cu	0.15	0.40
Mn	-	0.15
Mg	0.8	1.20
Cr	0.04	0.35
Zn	-	0.25
Ti	-	0.15
Other Each	-	0.05
Other Total	-	0.15
Aluminium	Remainder	

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



Qualanod

This is to certify that




Gulf Extrusions Co. LLC
 P.O. Box 5598
 AE – 5598 Dubai

Licence number: 2000

is authorized to use the quality sign which is shown above according to the REGULATIONS FOR USE OF THE QUALANOD QUALITY LABEL FOR SULPHURIC ACID-BASED ANODIZING OF ALUMINIUM.

Date of issue of the licence:	10.03.2000
Period of validity of the licence:	until 31.12.2014

Zurich, 15 November 2013

<p>QUALANOD</p>  <p>Timur Ulucak President</p>	<p>CERTIFICATION BODY</p>  <p>Josef Schoppig AC-Fiduciaire SA</p> 
--	---

<p>Mailing address: QUALANOD, P.O. Box 1507, CH-8027 Zurich Domicile: QUALANOD c/o AC-Fiduciaire SA, Tödistrasse 47, CH-8002 Zurich</p>	<p>Phone: +41 (0)43 305 09 70 Fax: +41 (0)43 305 09 98 E-mail: info@qualanod.net Internet: www.qualanod.net</p>
--	--

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. Ltd

P.O. Box 5598
AE – 5598 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 31.12.2014

Zurich, 17 December 2013

QUALICOAT

Mohammed C. Panam
President

CERTIFICATION BODY

Josef Schoppig
AC-Fiduciaire SA



Mailing address:
QUALICOAT, P.O. Box 1507, CH-8027 Zurich
Domicile:
QUALICOAT c/o AC-Fiduciaire SA, Tödistrasse 47, 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

The 45mm Gulf Ex. Hinged Series is a design concept to combine esthetics and performance. Full solution package is supported to fulfill the requirements to cover the needed applications. It is designed for heavy duty use according to the American National Standard. The results have been impressive.

All profiles are available in all colors in order to meet today's modern architectural requirements. For better performance of the system, alignment cleats for the frame and shutter are used.

Specially designed EPDM Gaskets are made available with the system to enhance the performance and create easy assembly. Other accessories such as rollers and handles come as part of the system.

Sections:

The sections in Gulf Extrusions line are produced by extruding aluminum on a wide range of presses starting with 800 tons to 4400 tons press. They are made of aluminum alloy 6060, 6063, 6082 and 6005 according to British Standard Specification for extrusion Dimension Tolerances BS EN 755-9:2008 and BS EN 12020-2:2008.

Frame:

Strong cross sectional profile of 45mm, a wide range of frames are available to suit most of the required applications in the building codes.

Sash:

Tubular straight, elegant and stylish of 52mm width. A wide range is available to cover all the needed applications and glass thickness.

Assembly:

Assembly of the frames is done by 45° cut same as the sashes at a custom 45° cut. All of the mounting components are made of aluminum.

Glazing:

Standard or isolating from 4 to 28mm, maintained by two EPDM joints and bead clipped at a minimum height of 22 mm (back of groove)

Bead must be on the inside of the installation.

The System consists of a different frame and different sash profile that will be used on the four sides, where this system provides the options for inward and outward opening.

The System covers arch shapes, louvers, pivot windows and swing doors.

TESTING

- Air infiltration
- Static air pressure water penetration
- Wind resistance - serviceability
- Wind resistance - safety

Air Infiltration (ASTM E283-04)

Test Pass/Fail Criteria

At 300 pascals, the average air flow through the fixed glazing shall not exceed 2.0m³/hour/m² based on the gross surface area of the wall measured from the exterior.

Calculation of permissible air infiltration through the sample

Permissible airflow rate through sample = 2.0m³/hour/m² at +300pa

Area of whole sample = 0.97m²

Permissible airflow rate through sample = 1.9m³/hour at +300Pa

Static Air Pressure Water Penetration (ASTM E331-00)

Test Pass/Fail Criteria

There shall be no water leakage. Water leakage is defined as penetration of water beyond a plane parallel to the glazing (the vertical plane) intersecting the innermost project of the test specimen, not including interior trim and hardware. For products with non-planar glazing surfaces (domes, vaults, pyramids, etc.) the plane defining the water penetration is the plane defined by the innermost edge of the unit frame.

Wind Resistance - Serviceability (ASTM E331-02)

Test Pass/Fail Criteria

At both positive and negative applications of the peak test pressure, no permanent damage shall have occurred and the maximum deflection shall not exceed the following.

Framing members generally - 1/175 of the span of the member measured between the points of attachment to the building.

Wind resistance - Safety (ASTM E330-02)

Test Pass/Fail criteria

At both positive and negative applications of peak pressure. There shall be no permanent damage to framing member, panels or anchors.

Glazing beads and decorative cappings shall remain securely held and gaskets shall not be displaced.

Permanent deformation to wall framing members shall not exceed 1/250 of the span measured between points of attachment one hour after loading has been removed.

Al Futtaim Exova LLC
Dubai Investments Park
P.O. Box 34924, Dubai
United Arab Emirates

T: +971 (0)4 885 1001
F: +971 (0)4 885 4004
E: dubai.lab@exova.com
W: www.exova.com



Testing. Advising. Assuring.

Confirmation of Testing Compliance FAÇADE TESTING & ADVISORY SERVICES DIVISION

Ref. AFE Report No: DLR0569 Date: December 2009

AFE COTC No: WQ09 10429 / COTC0569

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: Hinged Window 45mm Series

Al Futtaim Exova (AFE) 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 AFE Dubai laboratory, as fully detailed in test report referenced above.

Signed:

Test Engineer

Signed:

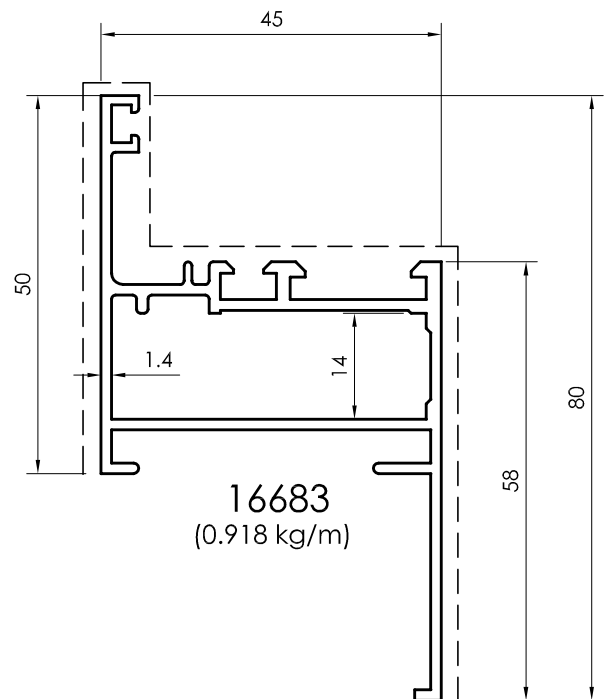
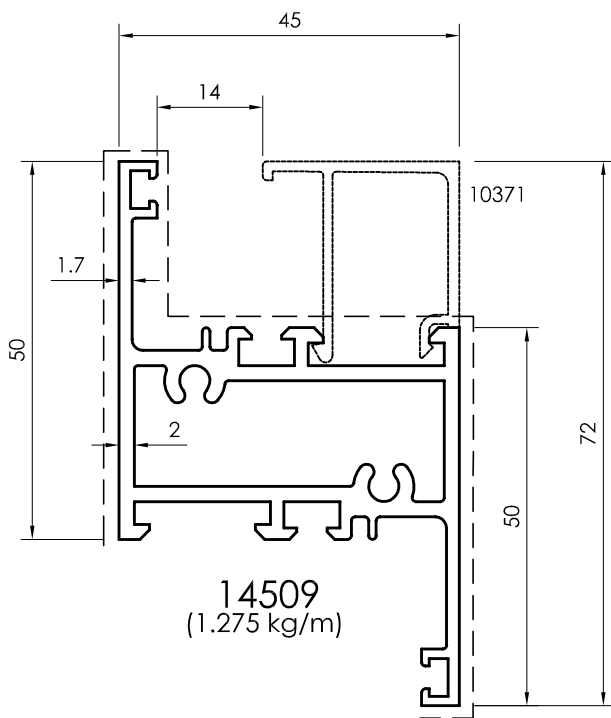
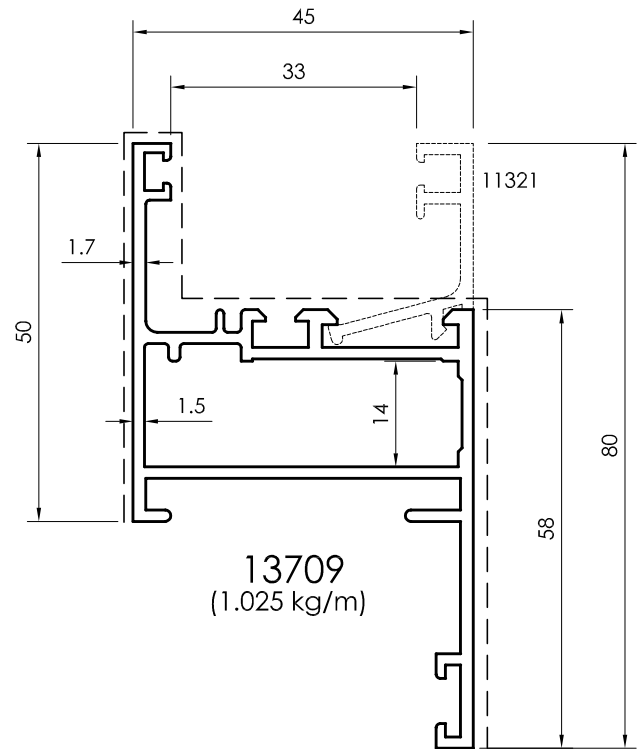
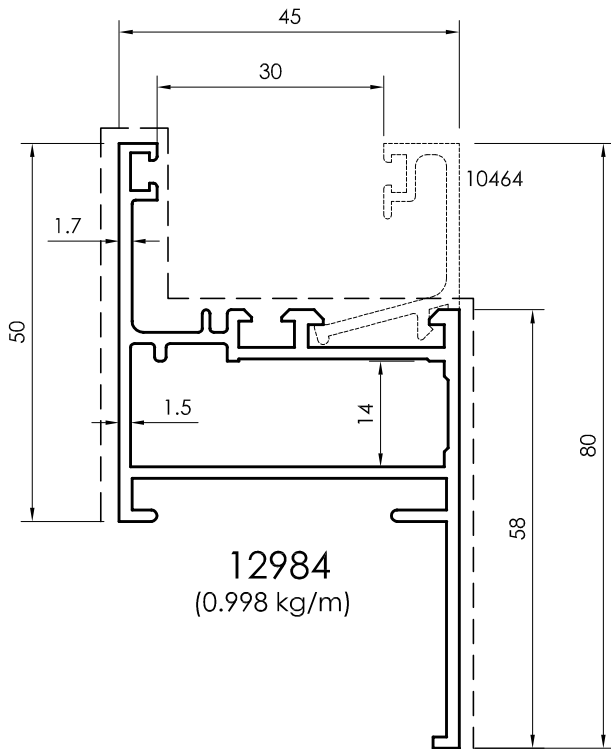
Manager

Company Commercial License No: 546636



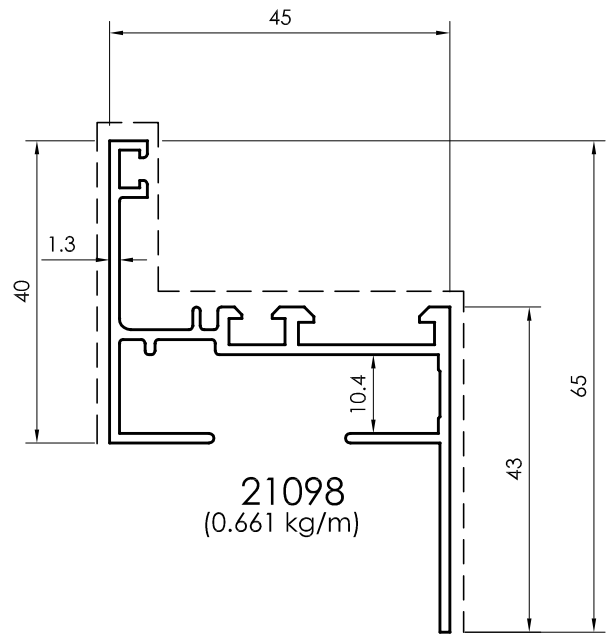
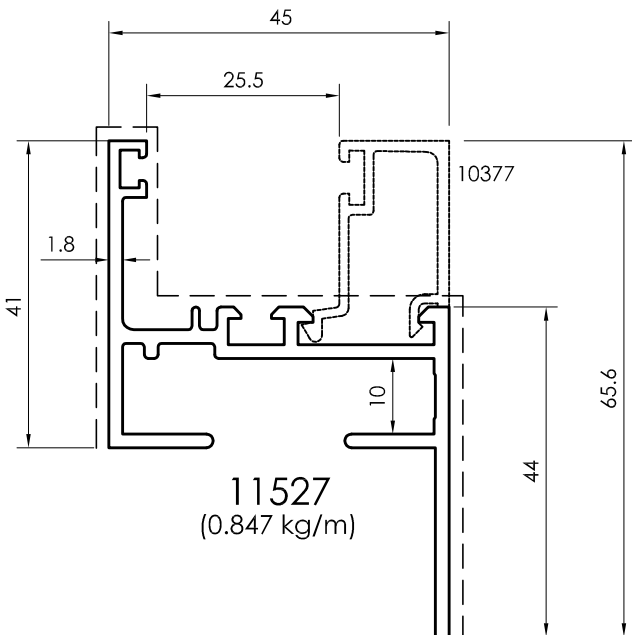
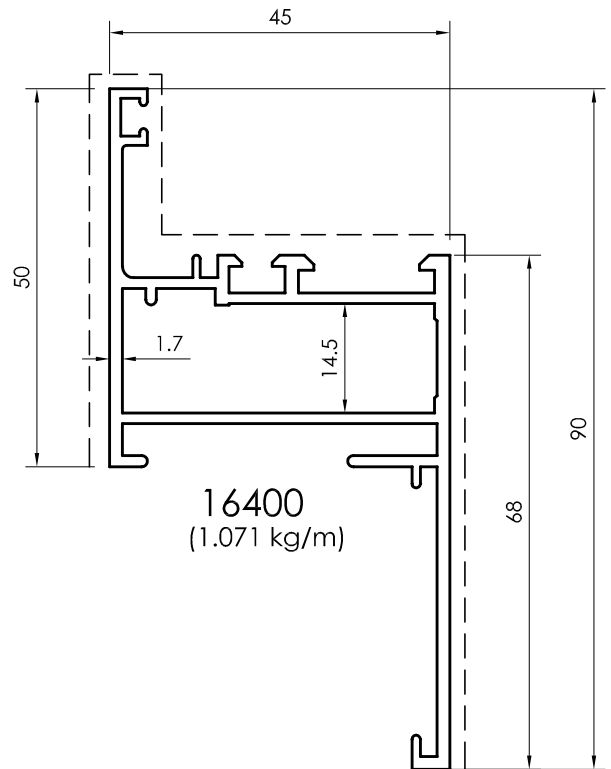
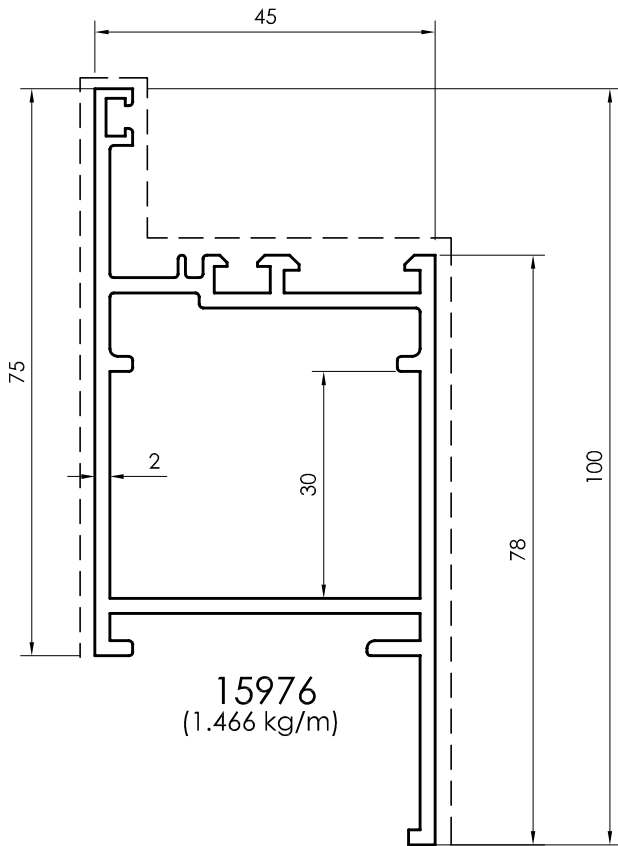
PROFILES

Frame Profiles



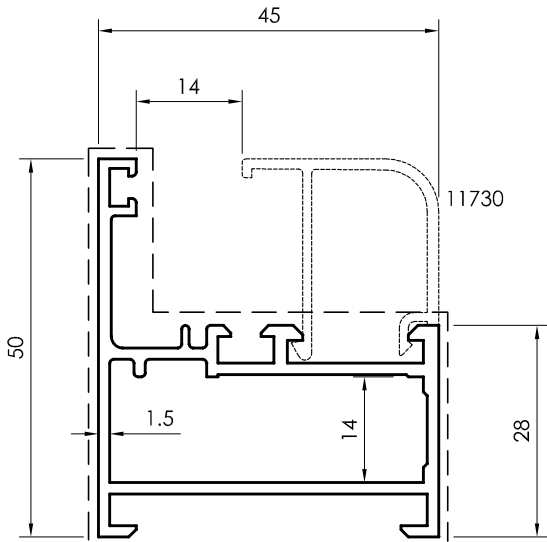
All dimensions in mm
Visible area_____

Frame Profiles

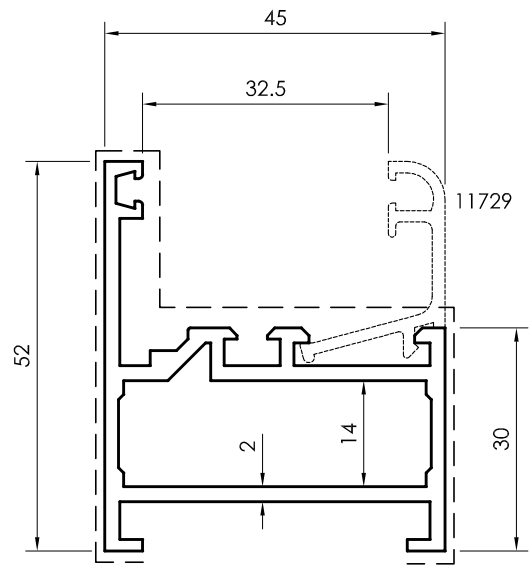


All dimensions in mm
 - - - - - Visible area

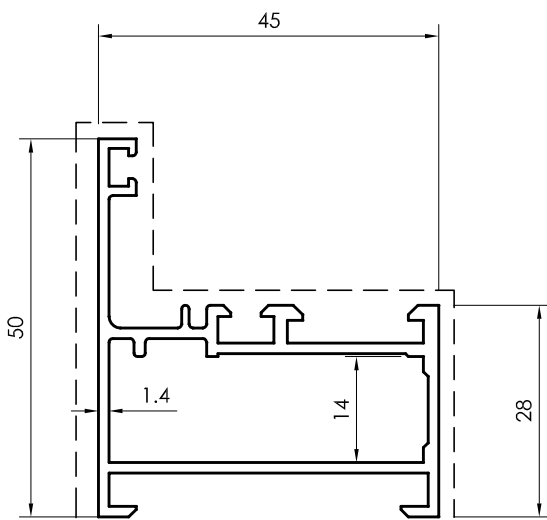
Frame Profiles



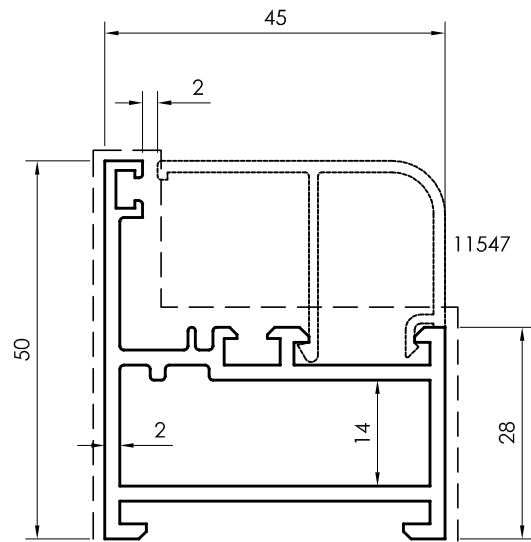
12983
(0.828 kg/m)



12936
(1.036 kg/m)



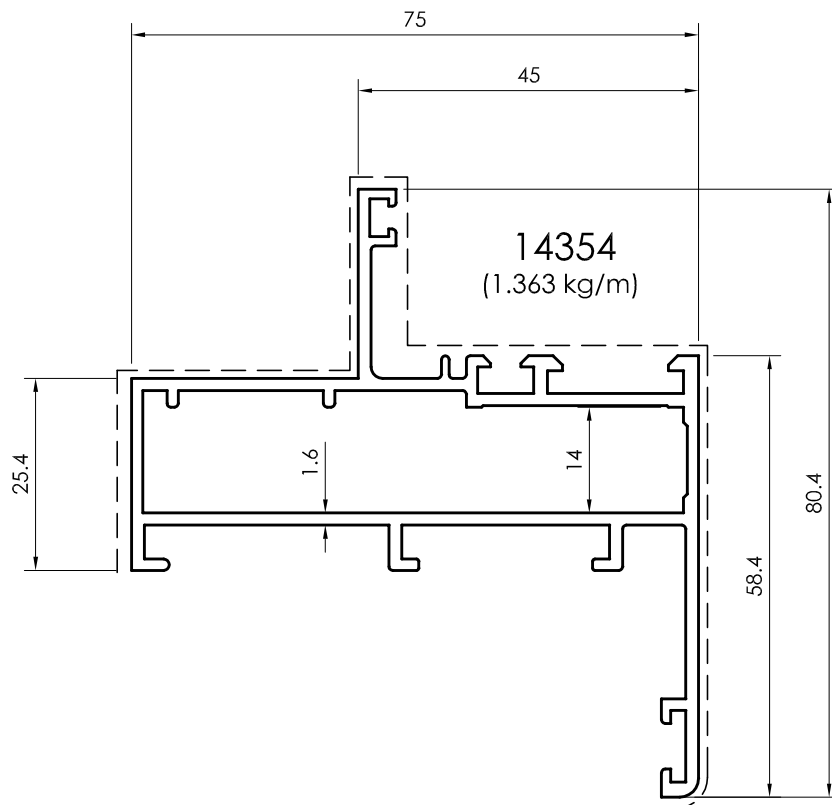
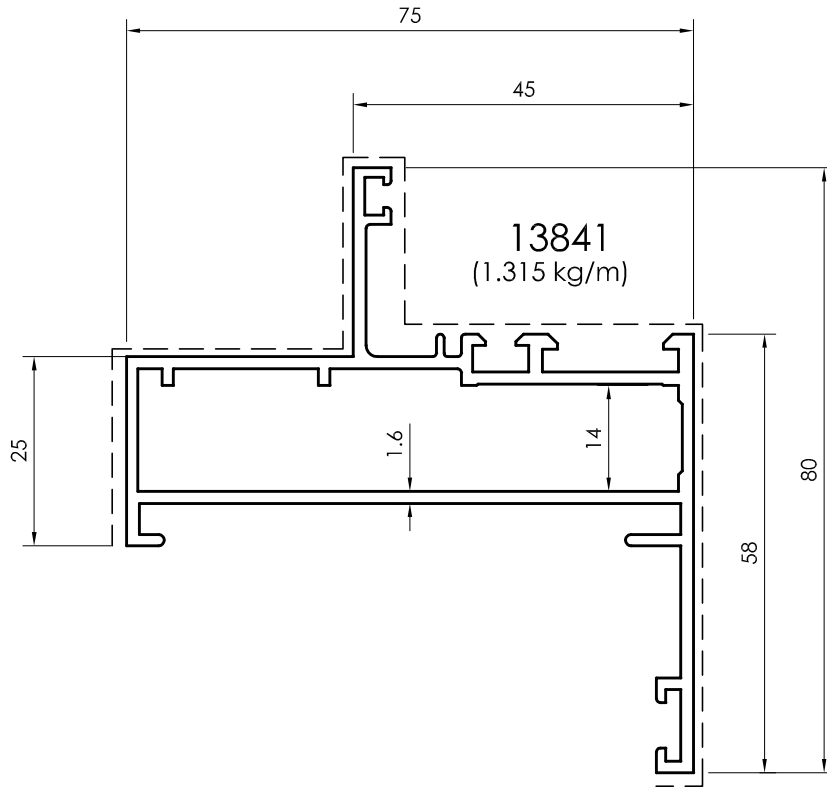
16682
(0.780 kg/m)



14956
(1.013 kg/m)

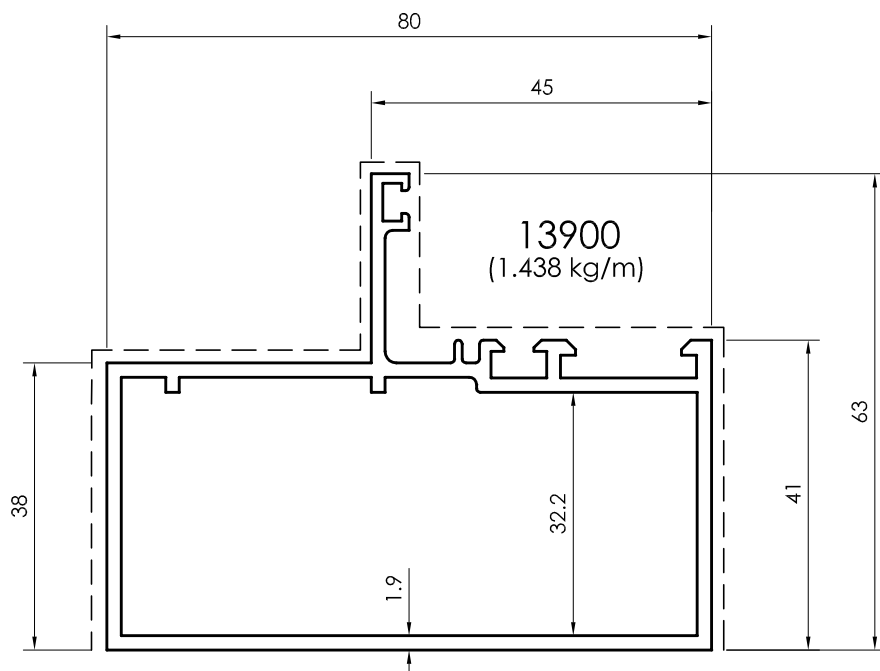
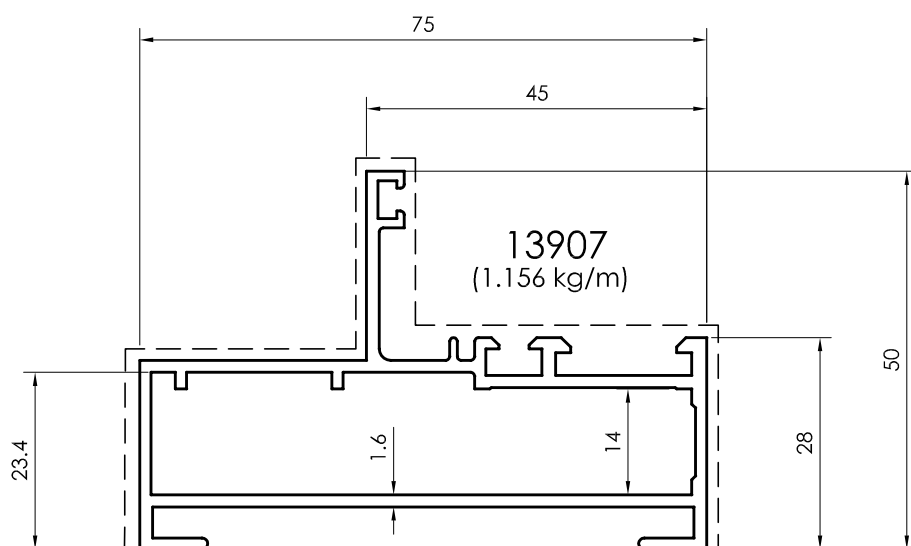
All dimensions in mm
Visible area_____

Frame Profiles



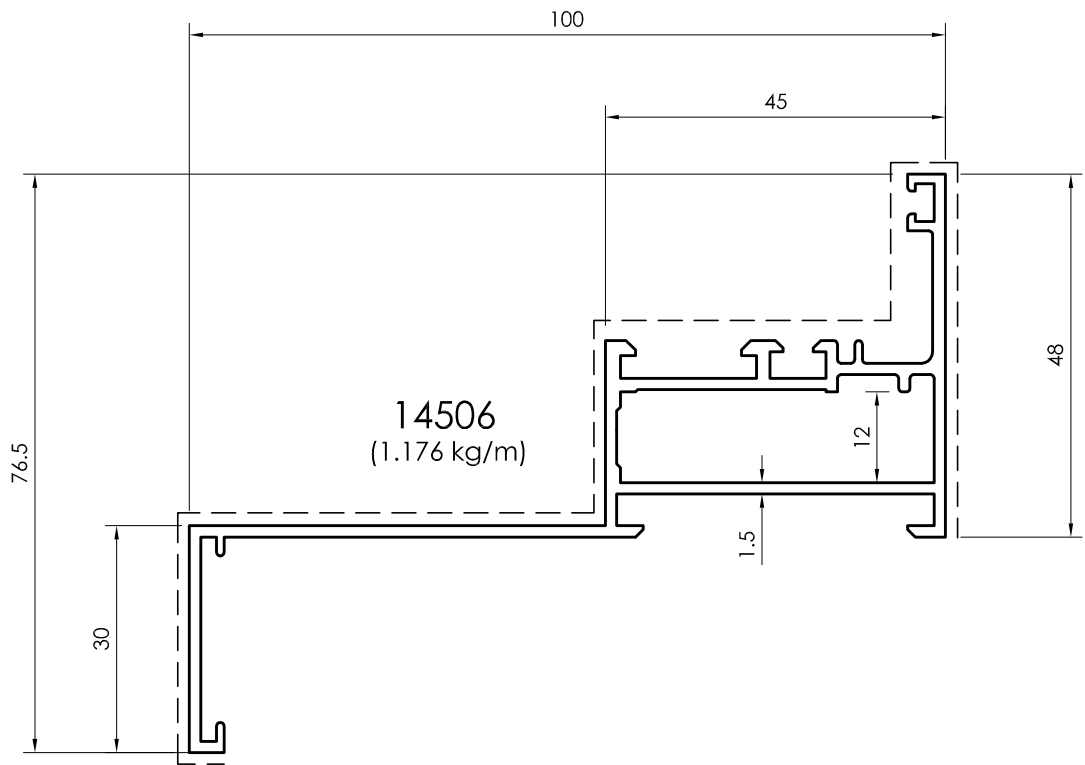
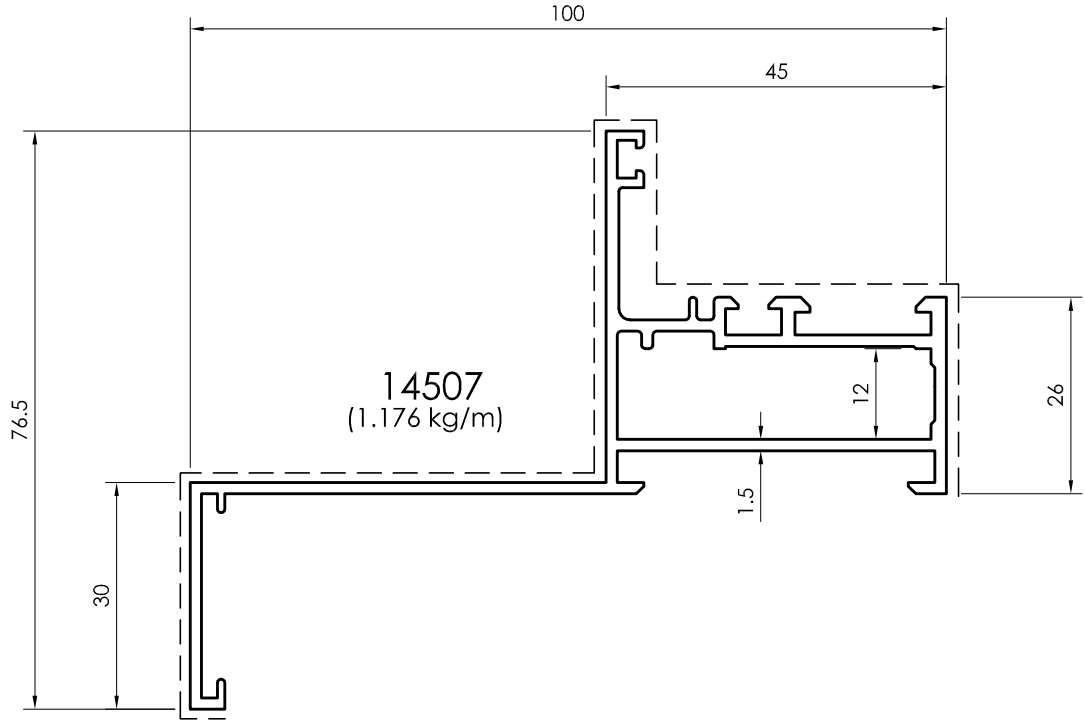
All dimensions in mm
 - - - - - Visible area

Frame Profiles



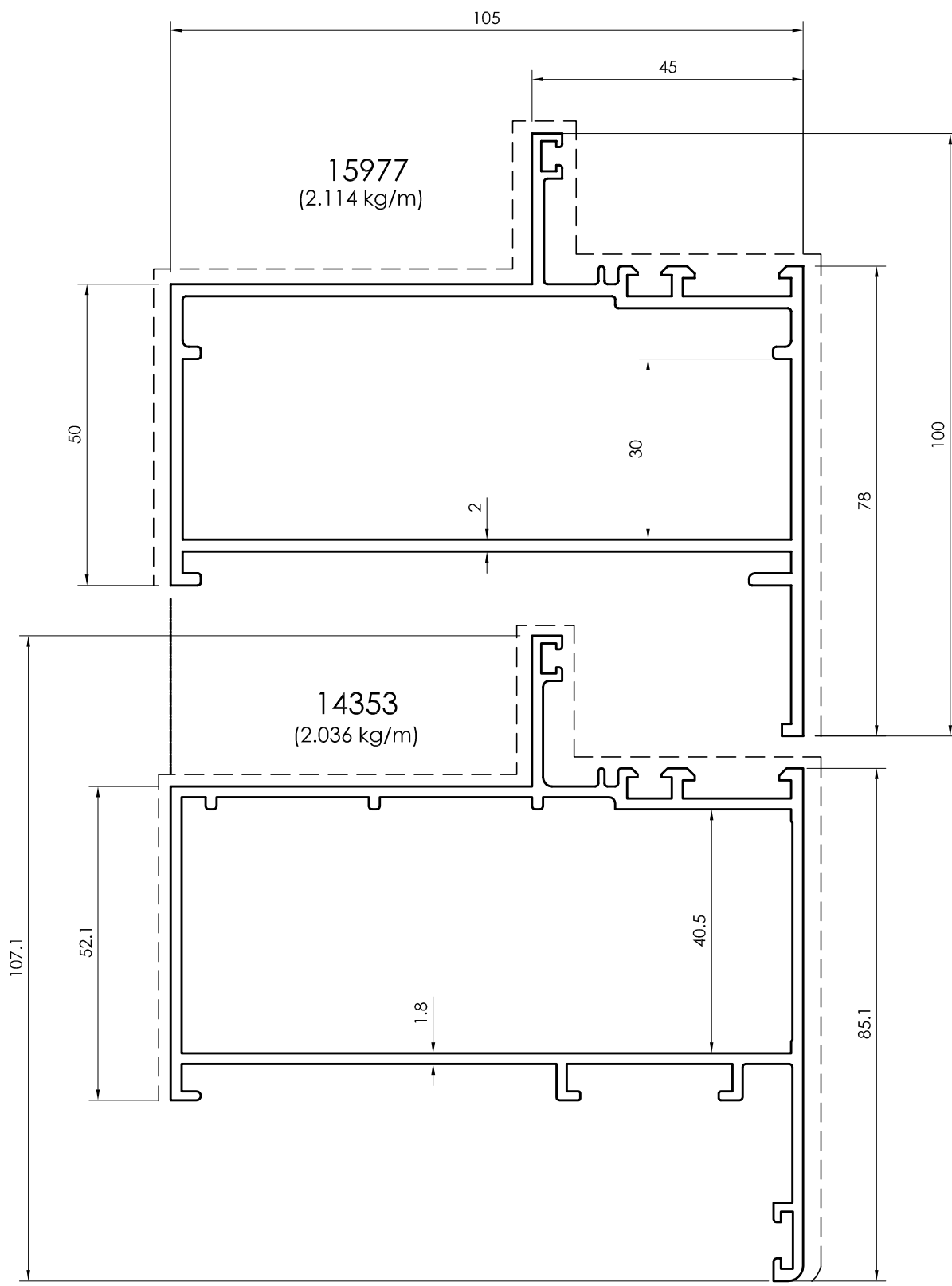
All dimensions in mm
Visible area_____

Frame Profiles



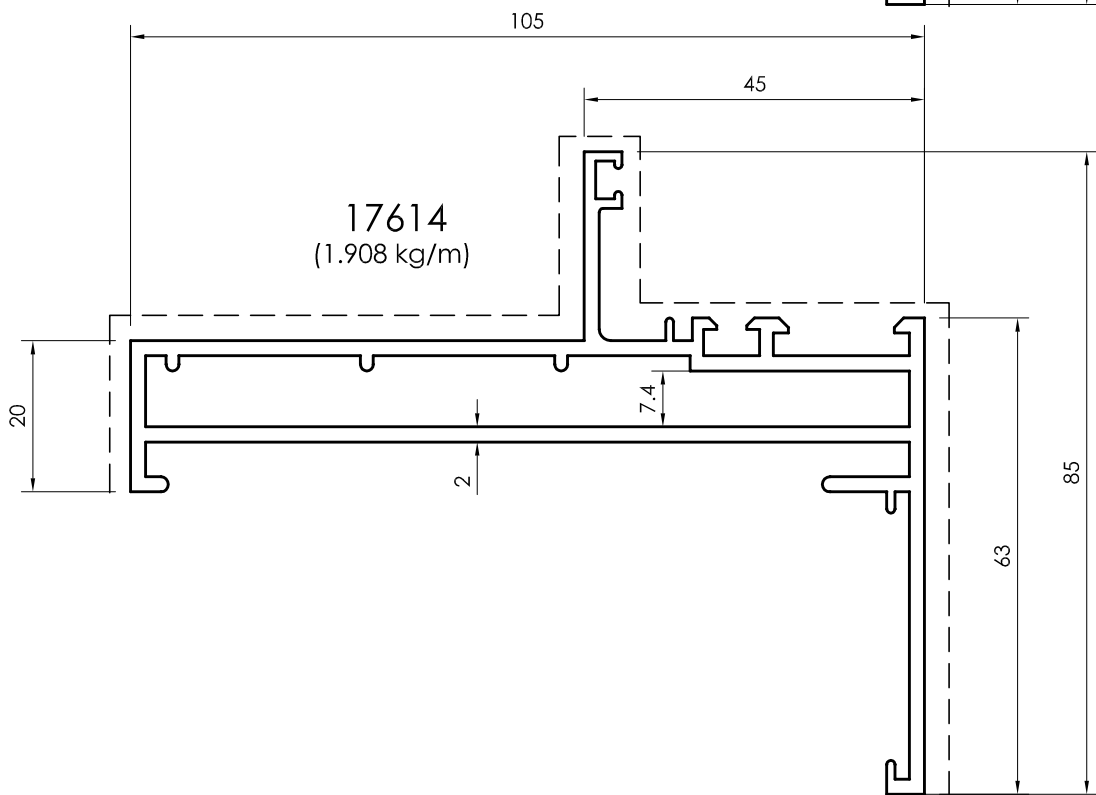
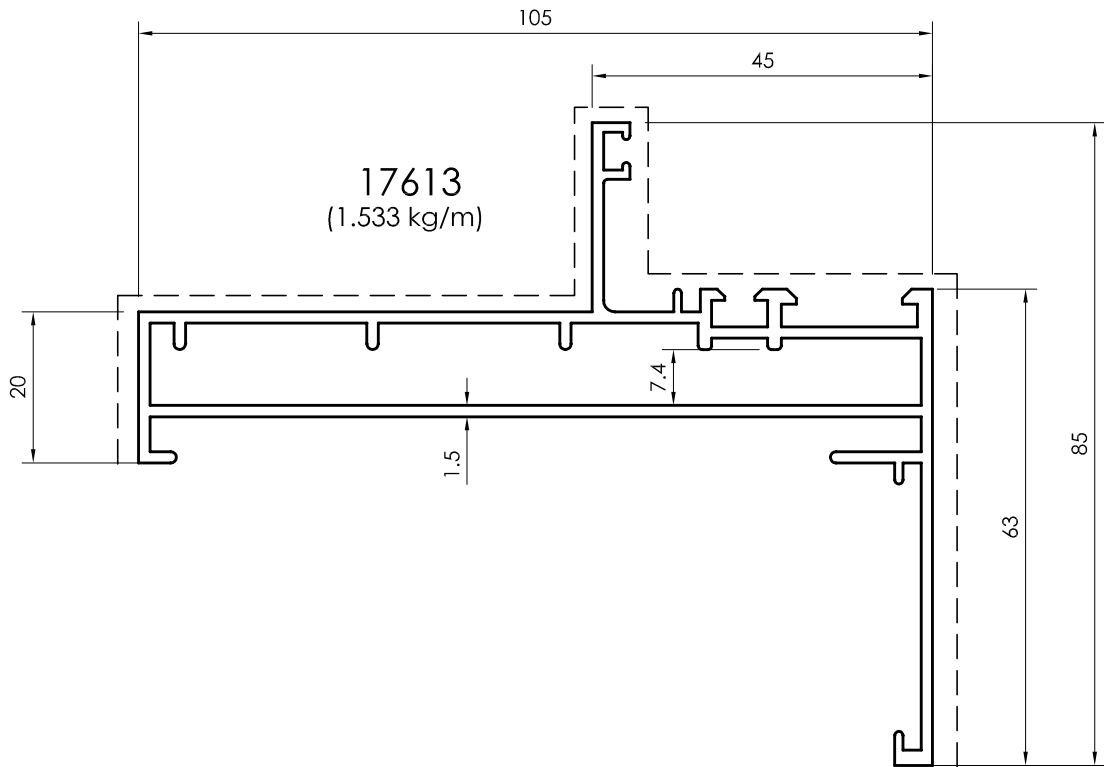
All dimensions in mm
 - - - - - Visible area

Frame Profiles



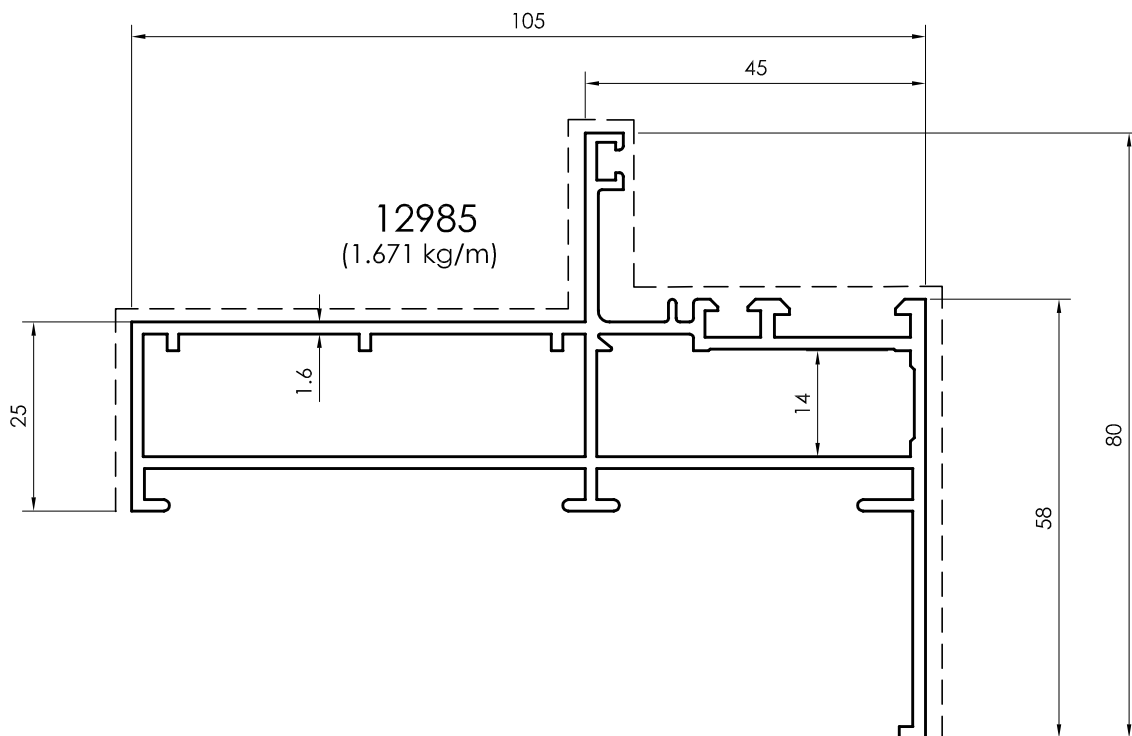
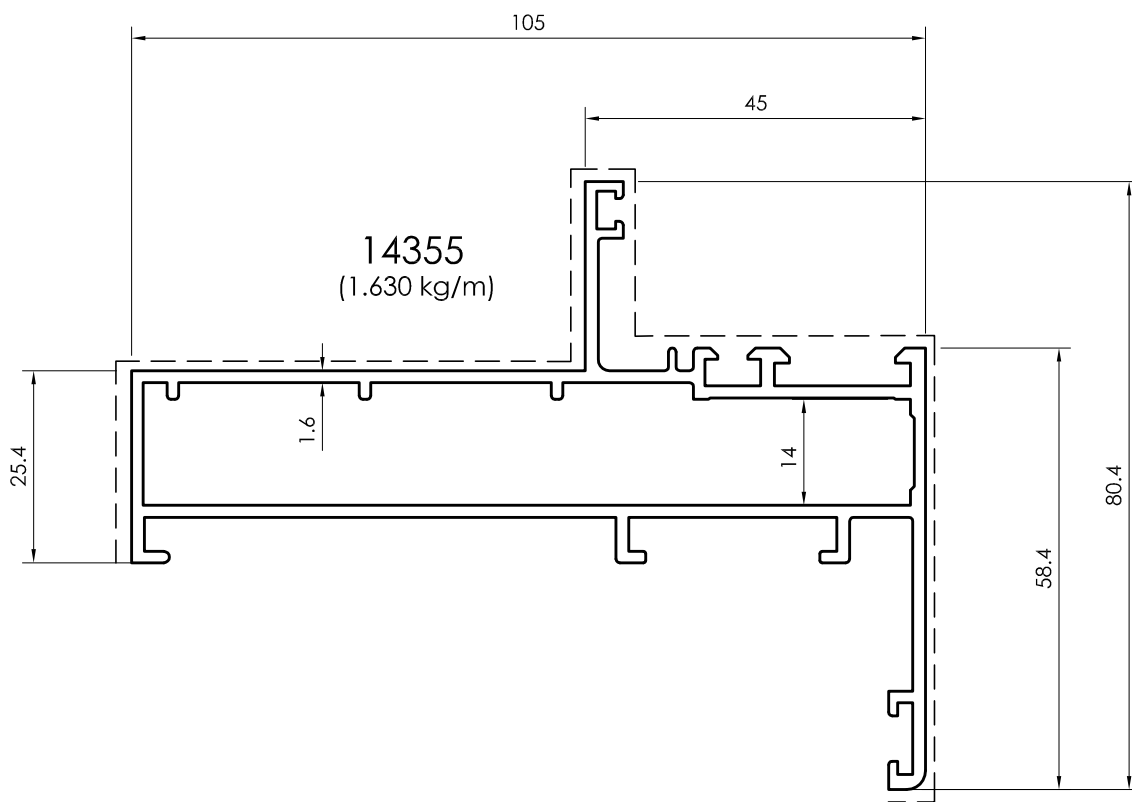
All dimensions in mm
Visible area_____

Frame Profiles



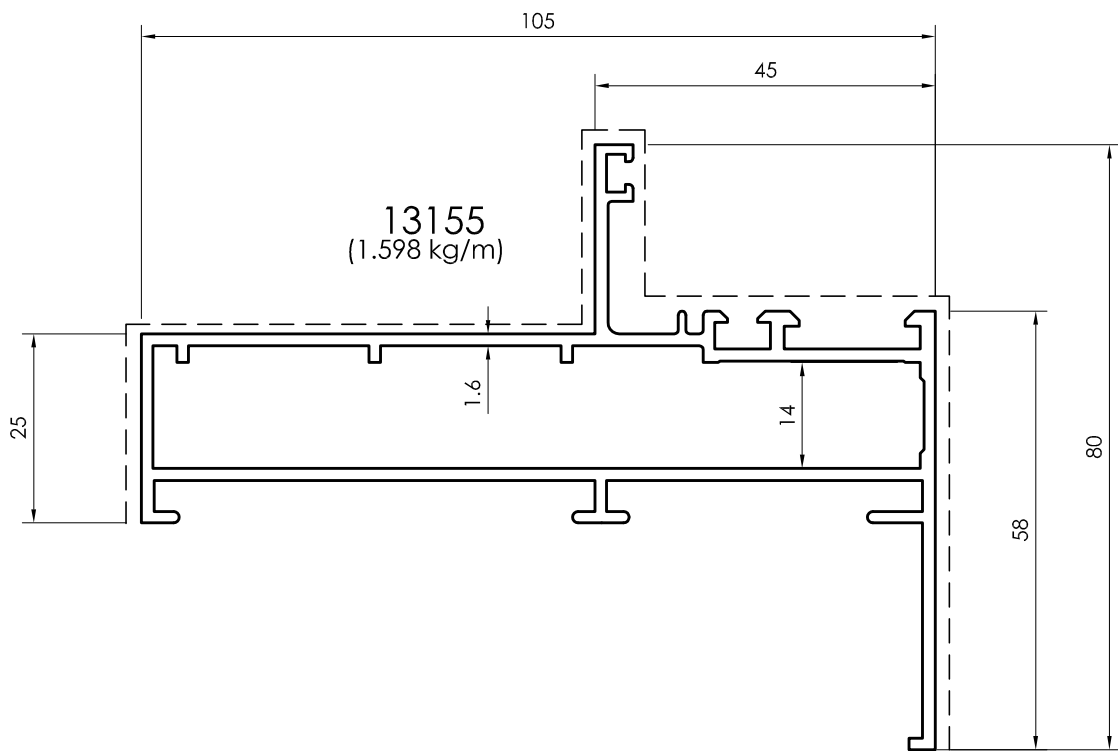
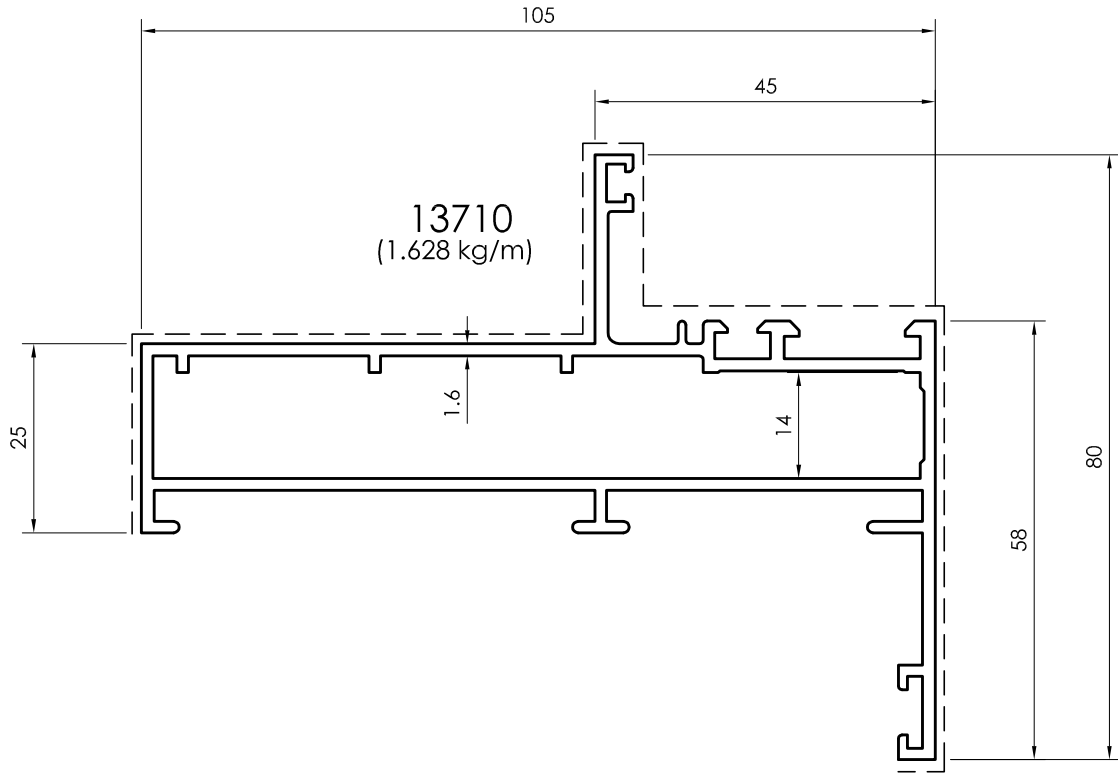
All dimensions in mm
 - - - - - Visible area

Frame Profiles



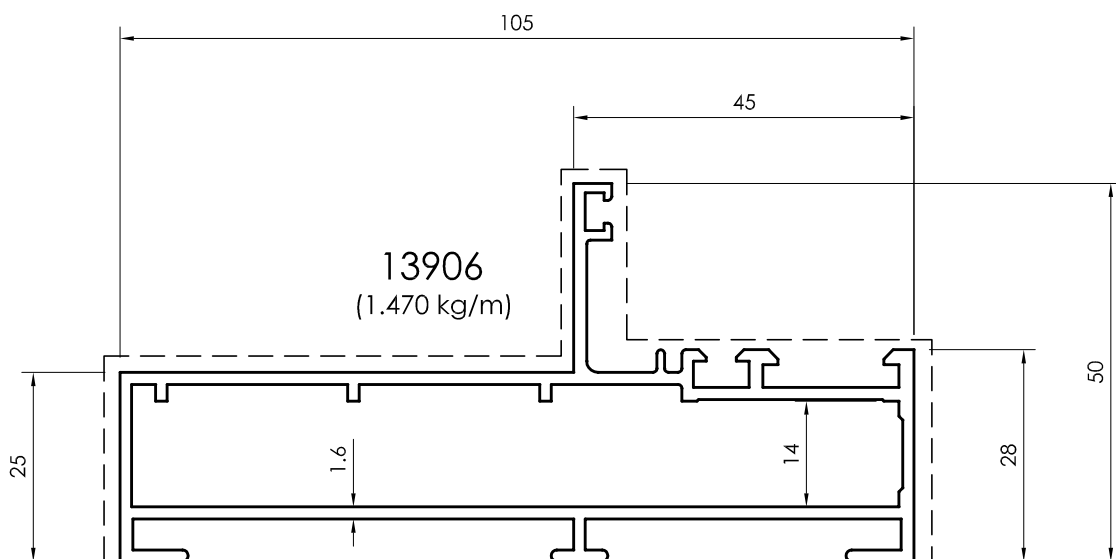
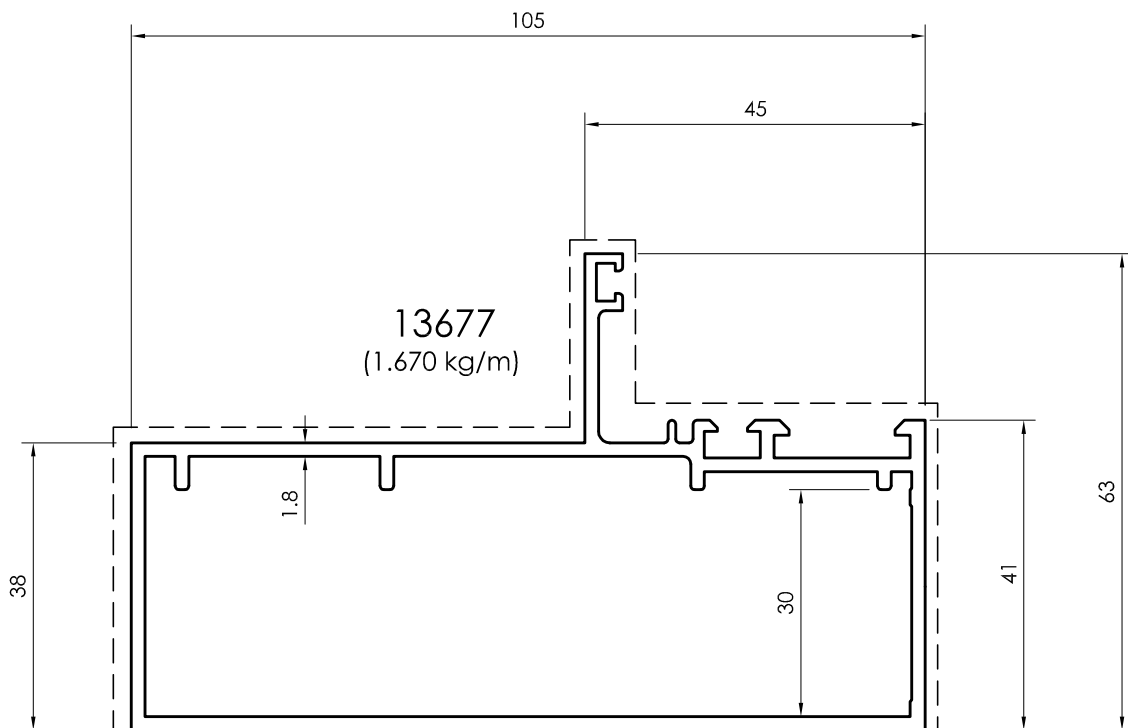
All dimensions in mm
Visible area_____

Frame Profiles



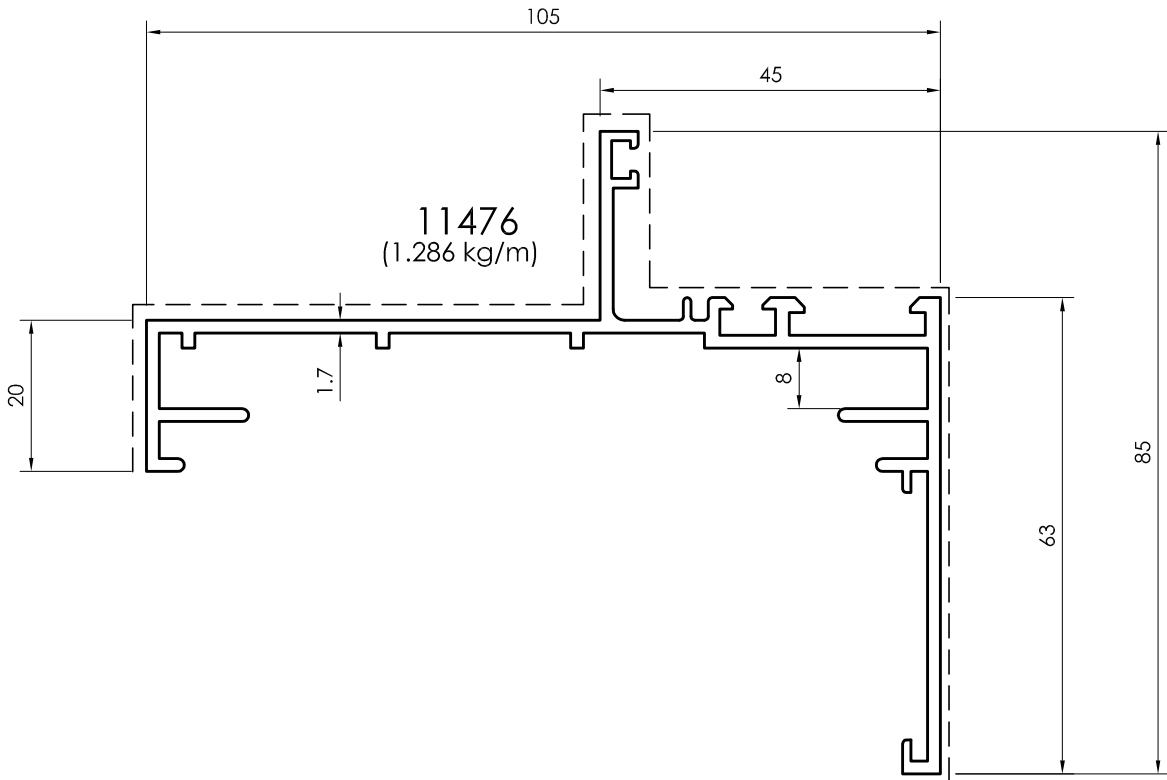
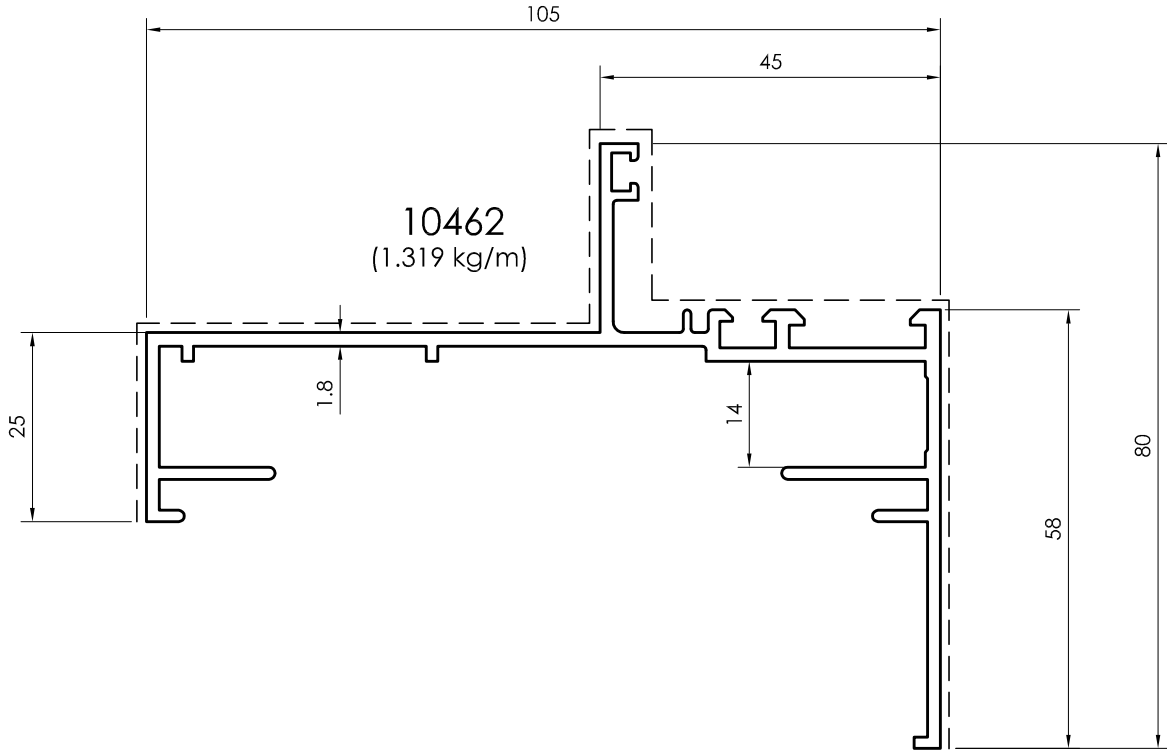
All dimensions in mm
 - - - - - Visible area

Frame Profiles



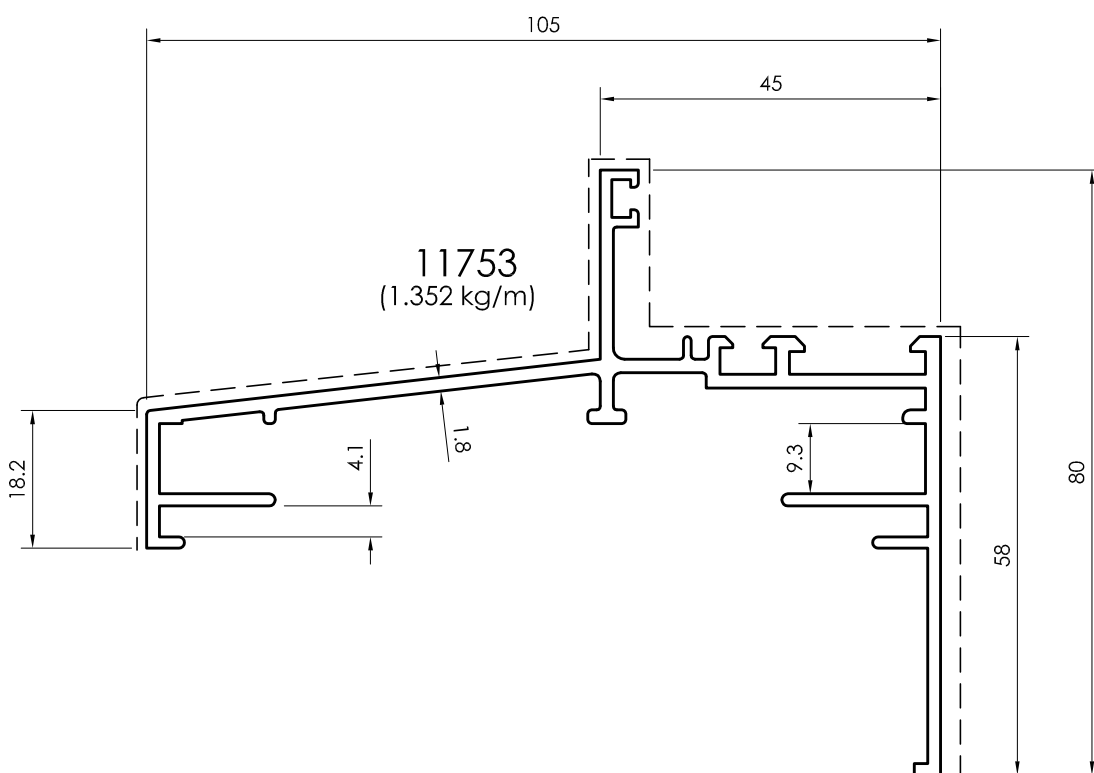
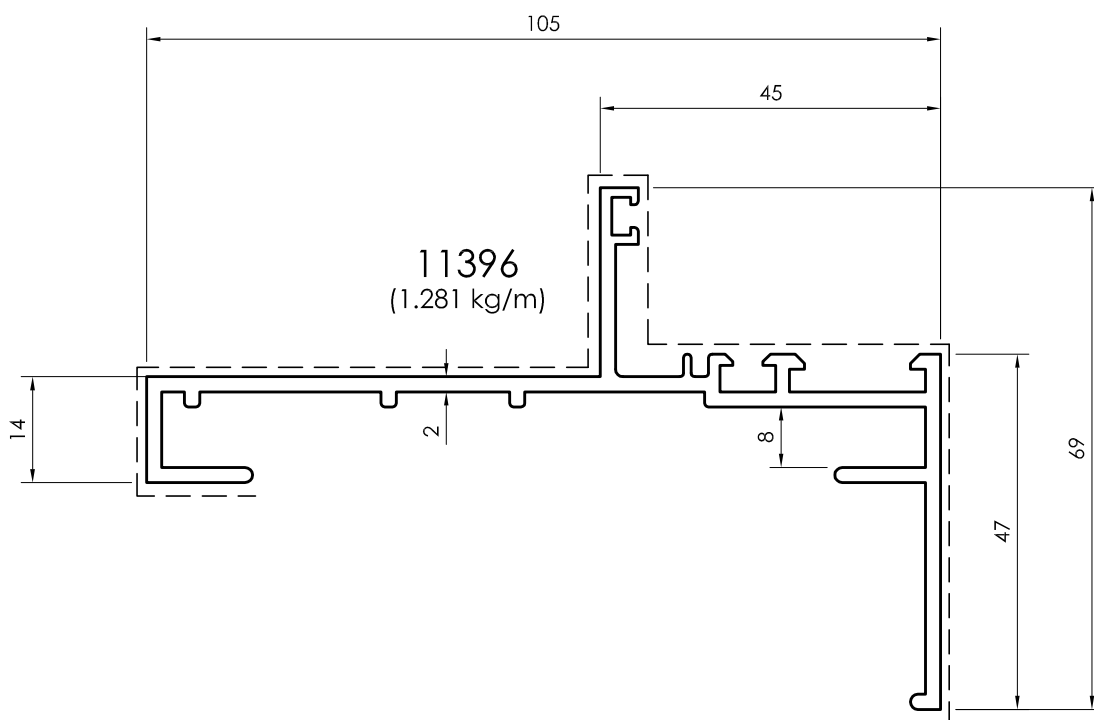
All dimensions in mm
Visible area_____

Frame Profiles



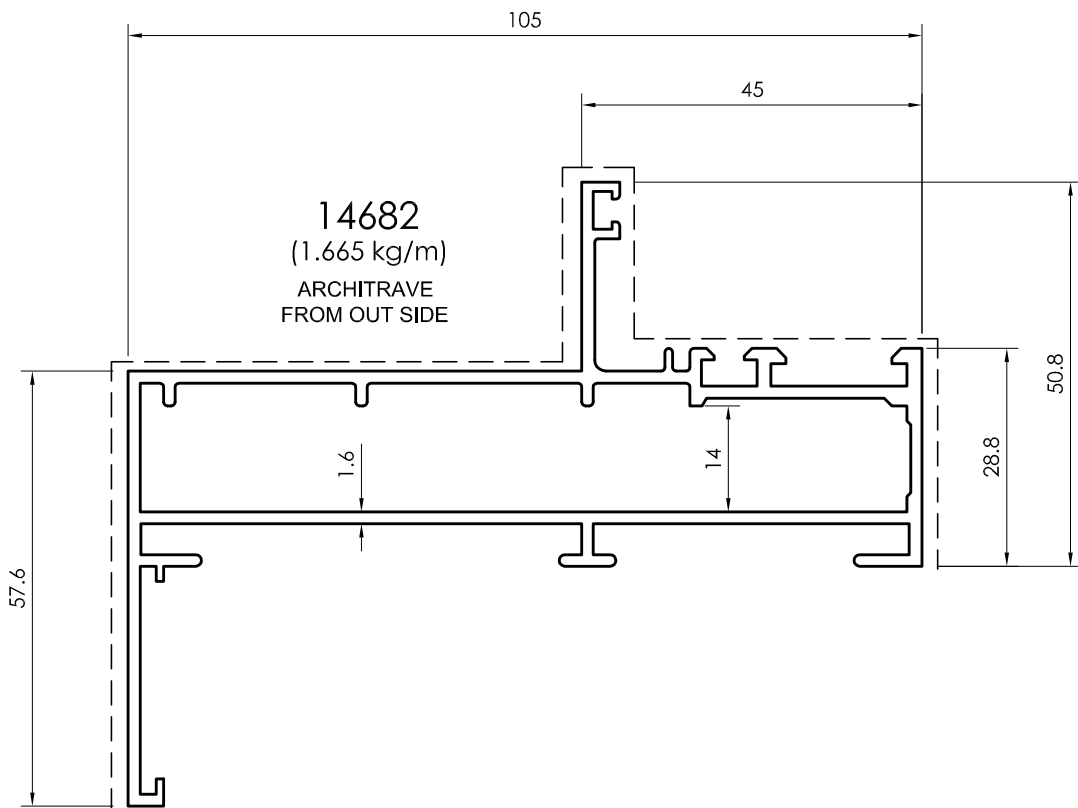
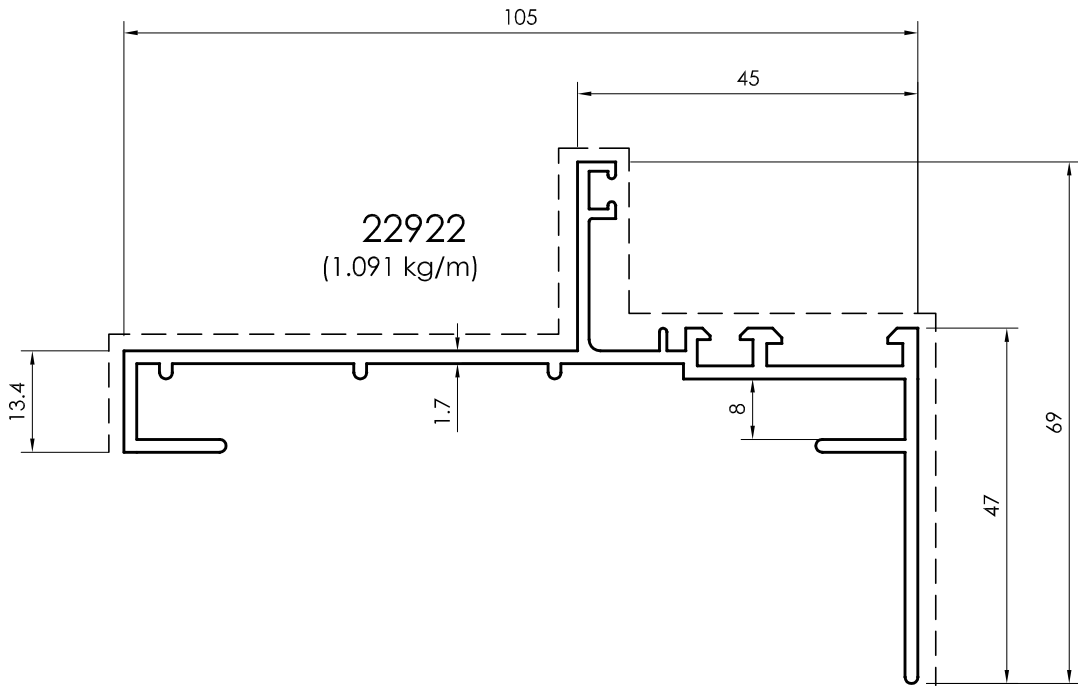
All dimensions in mm
 ----- Visible area

Frame Profiles



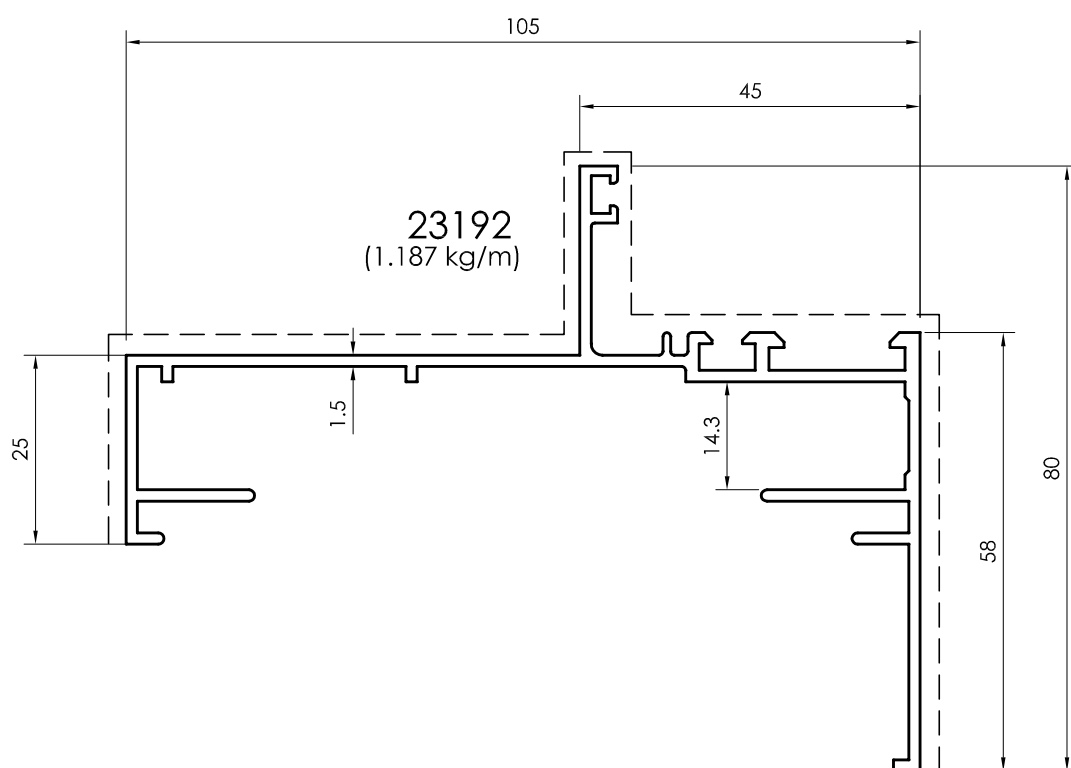
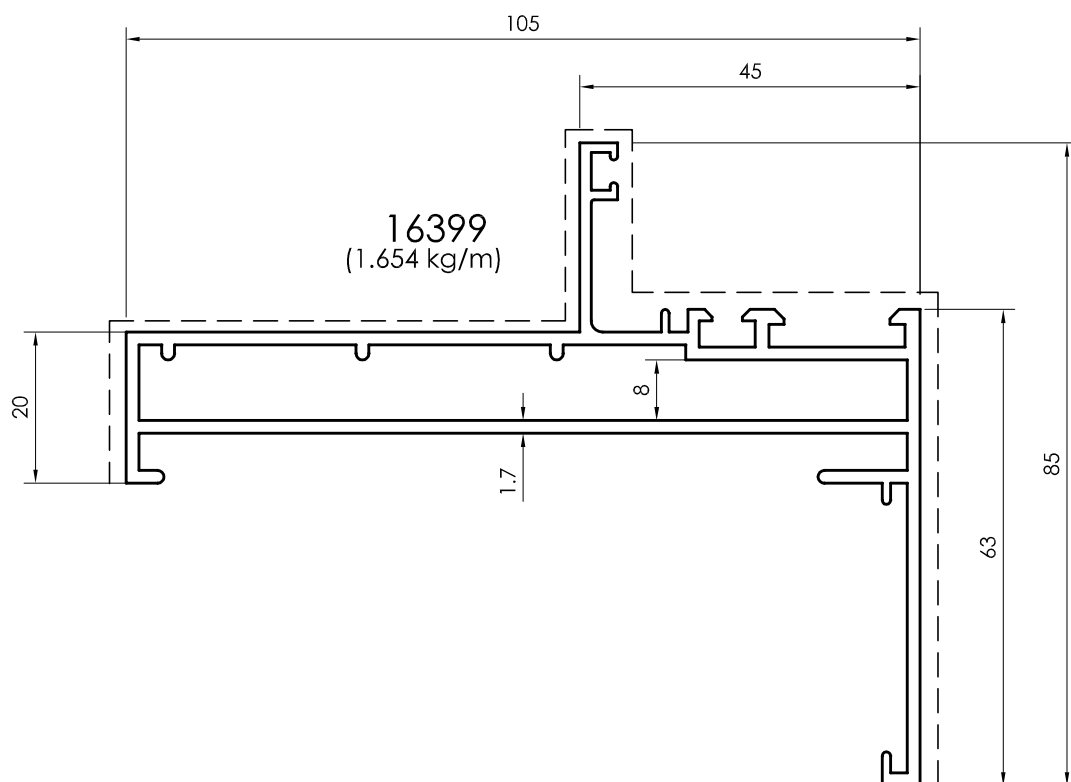
All dimensions in mm
Visible area_____

Frame Profiles



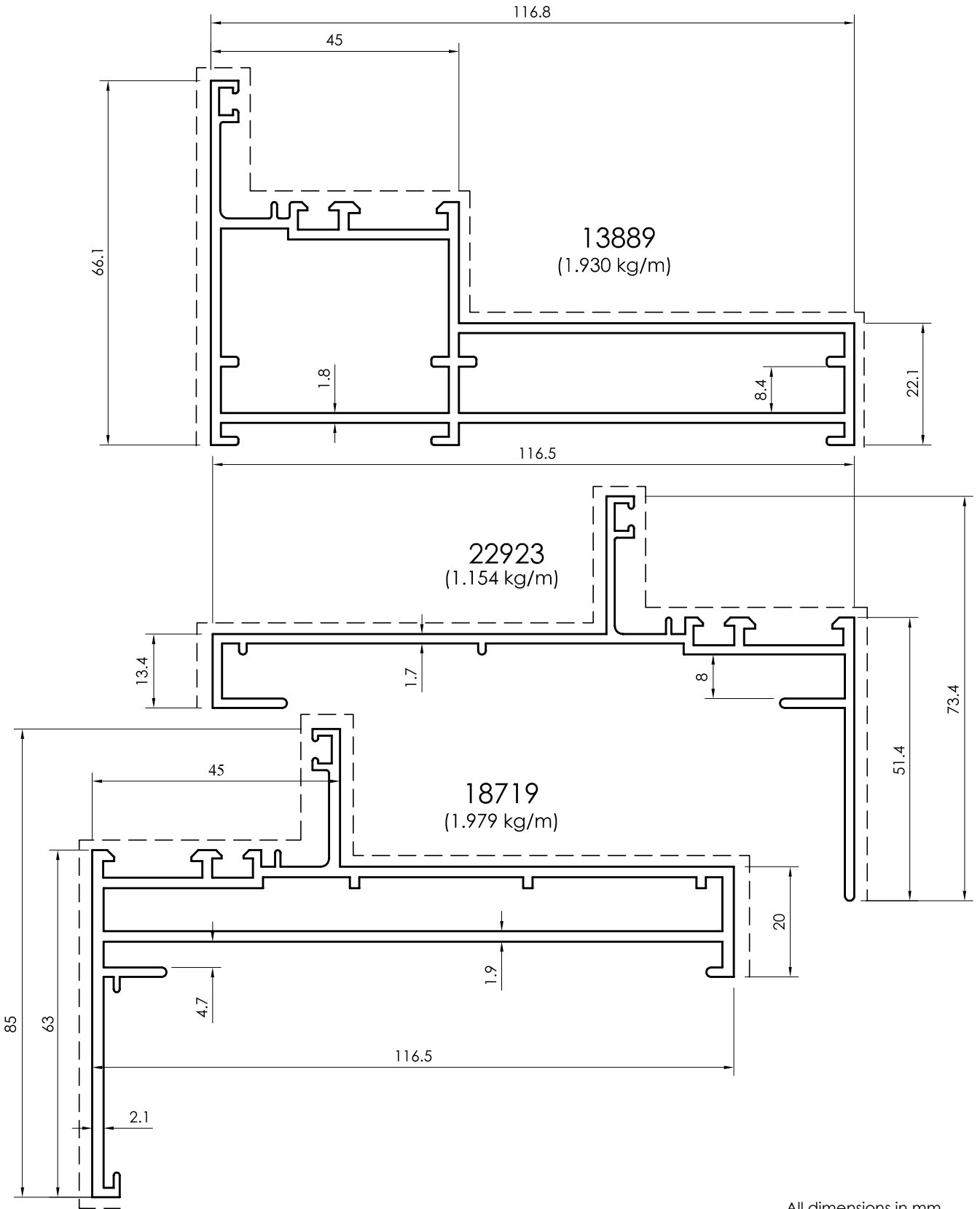
All dimensions in mm
 - - - - - Visible area

Frame Profiles



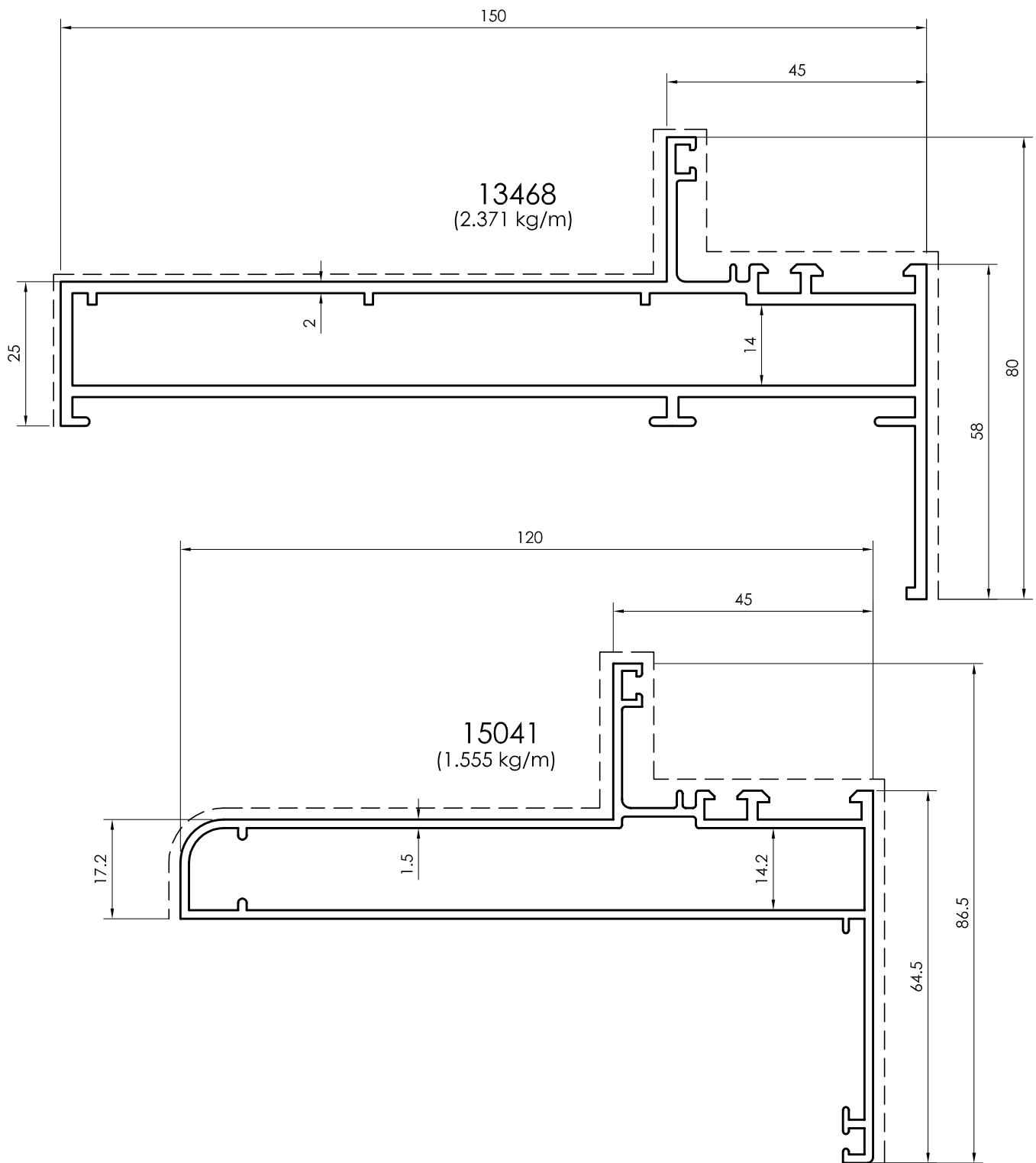
All dimensions in mm
Visible area_____

Frame Profiles



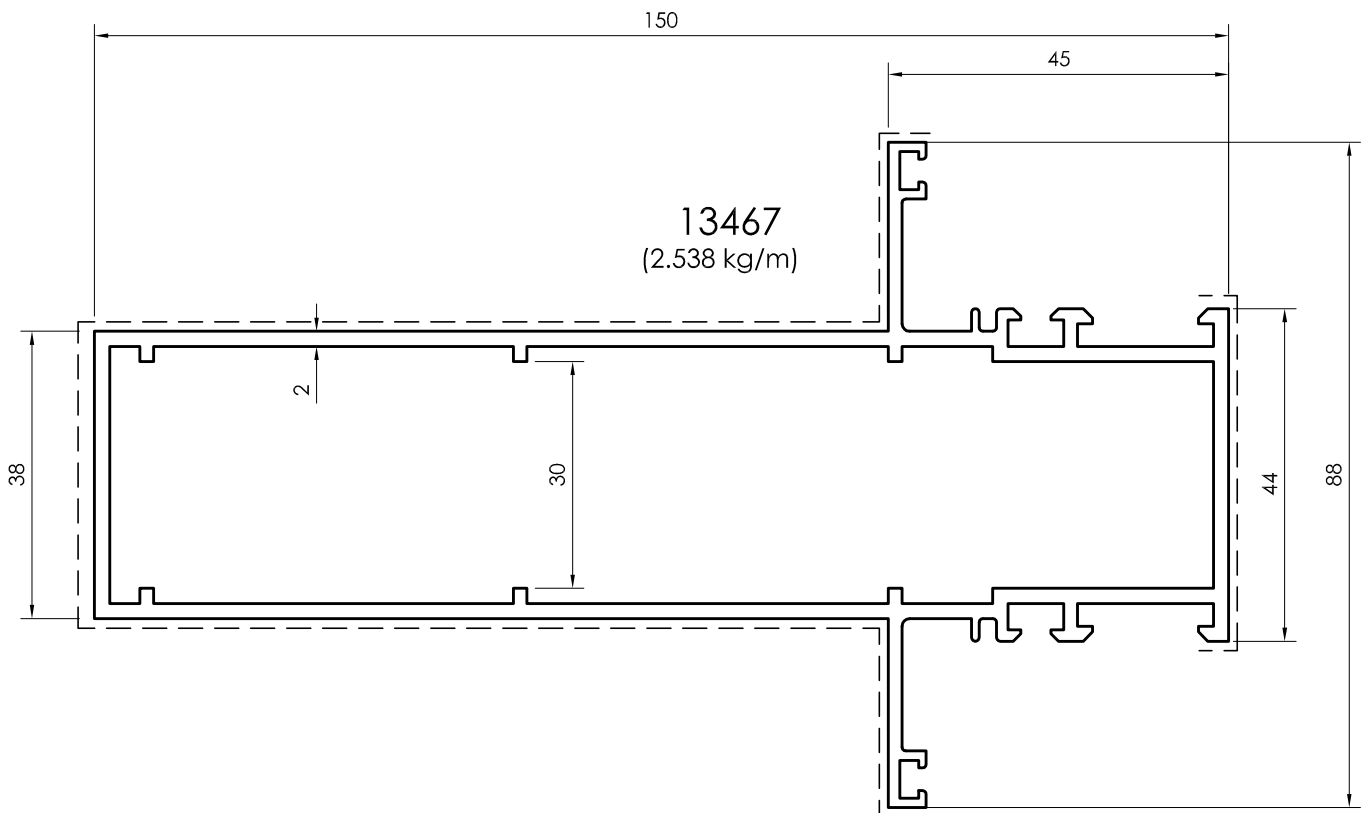
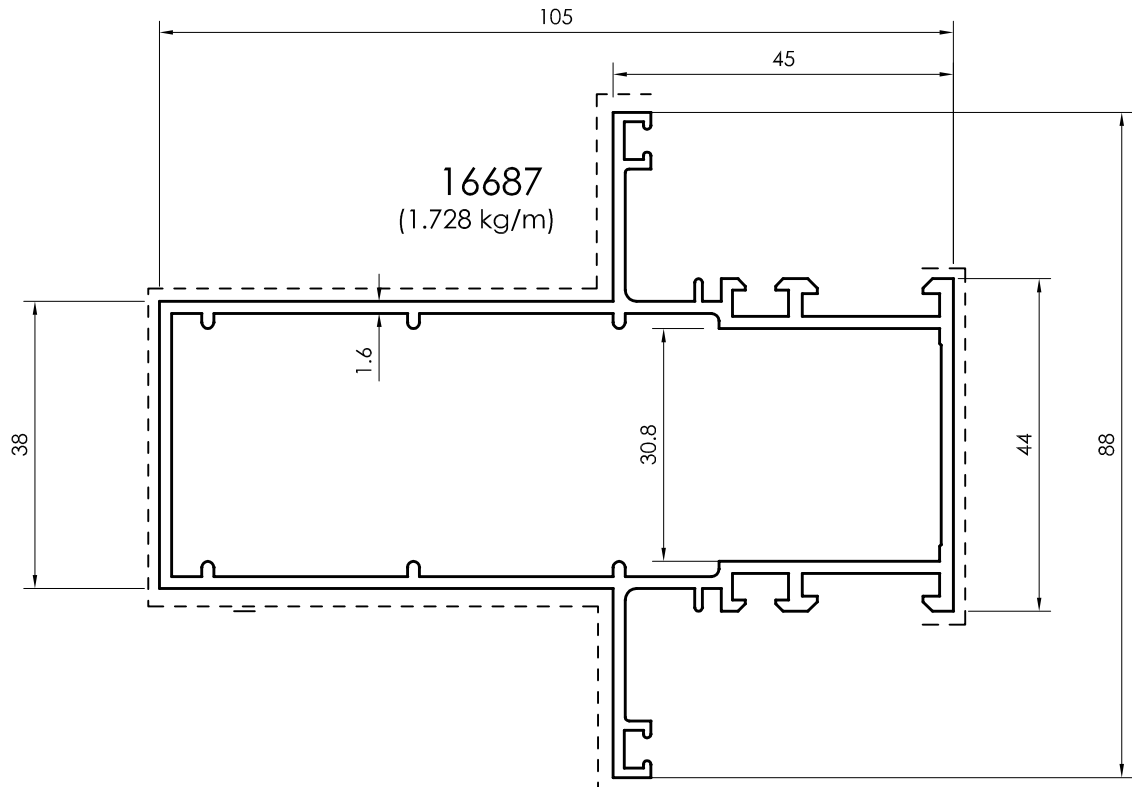
All dimensions in mm
 - - - - - Visible area

Frame Profiles



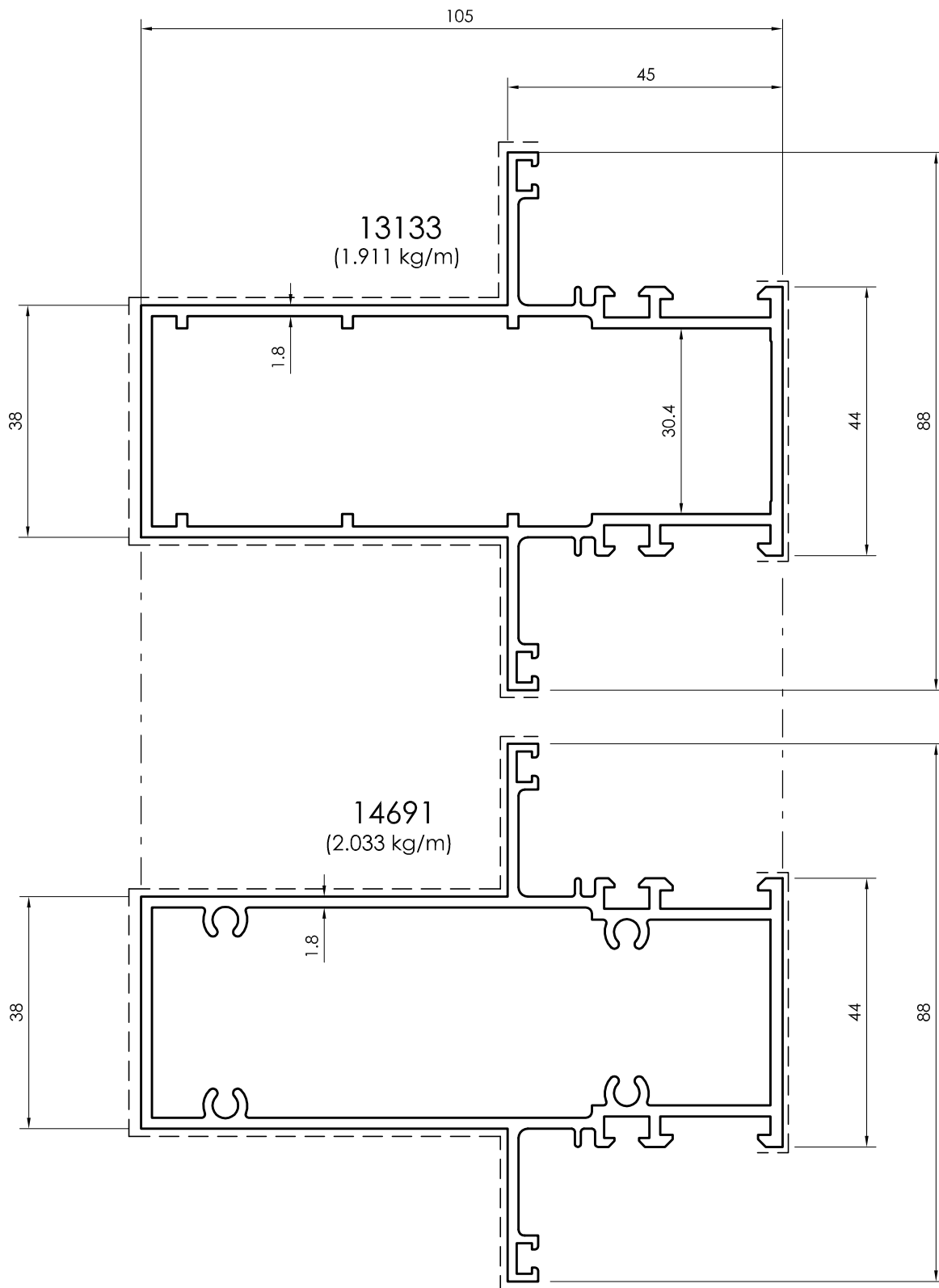
All dimensions in mm
Visible area_____

T - Profiles



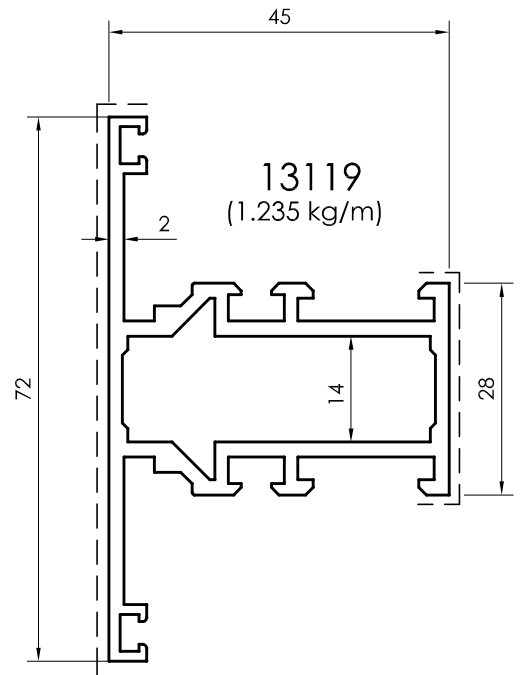
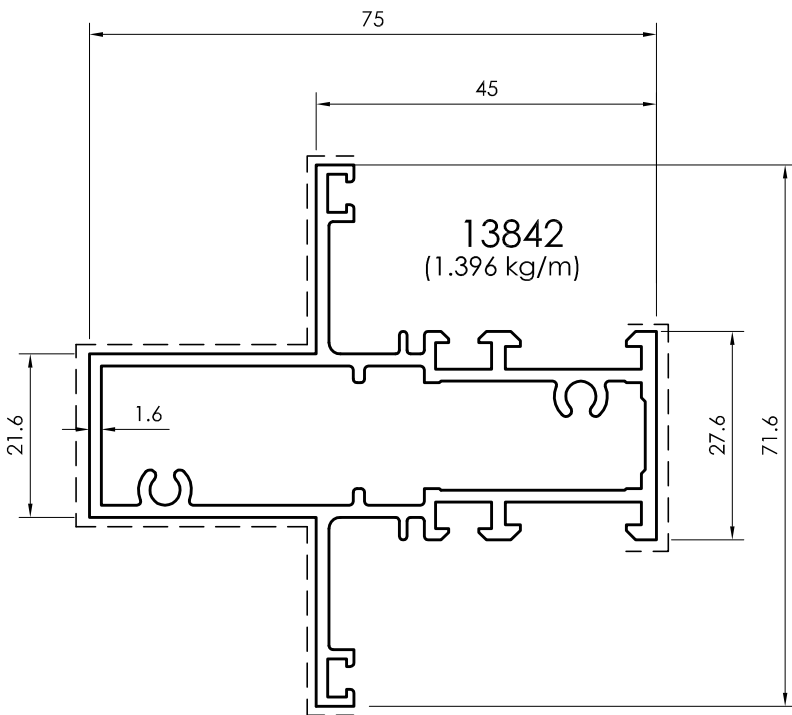
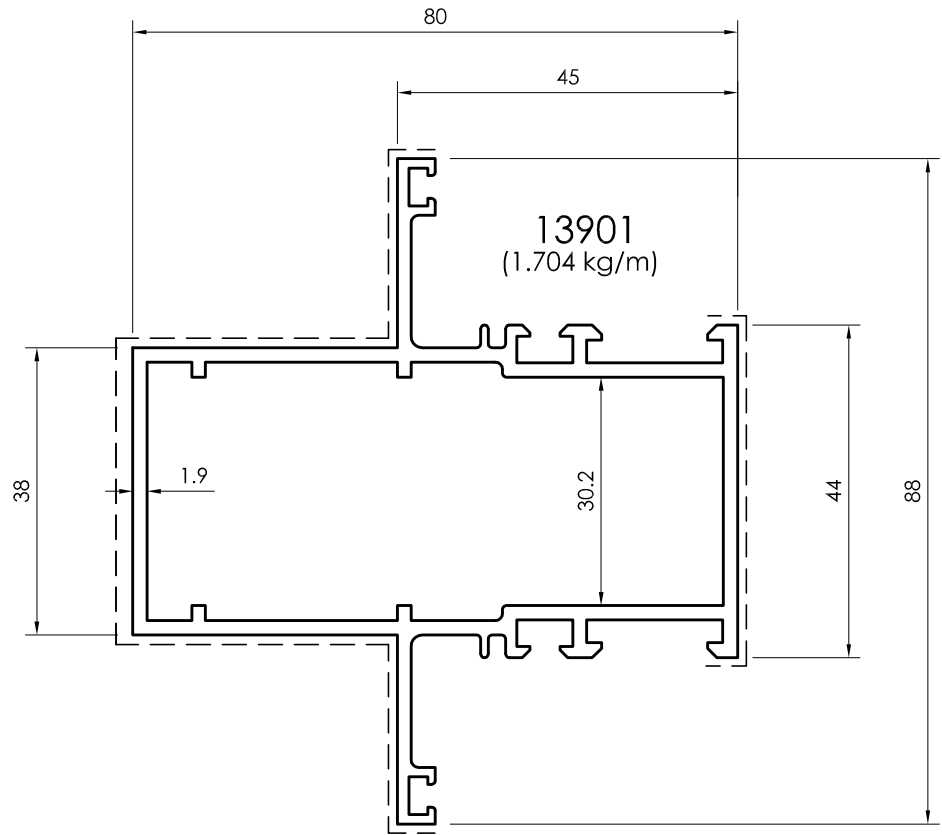
All dimensions in mm
 - - - - - Visible area

T - Profiles



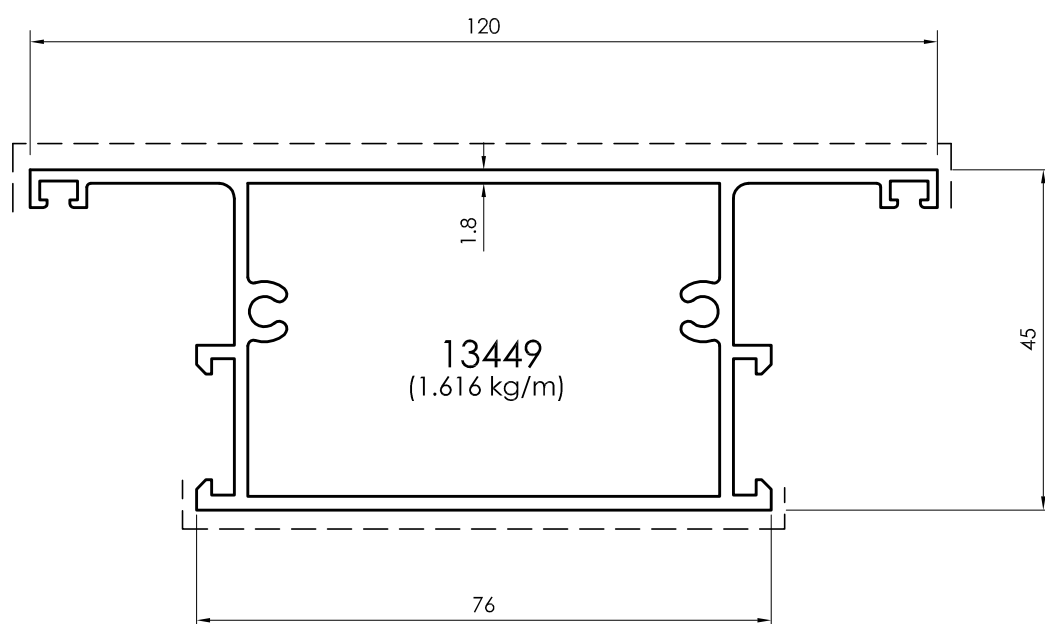
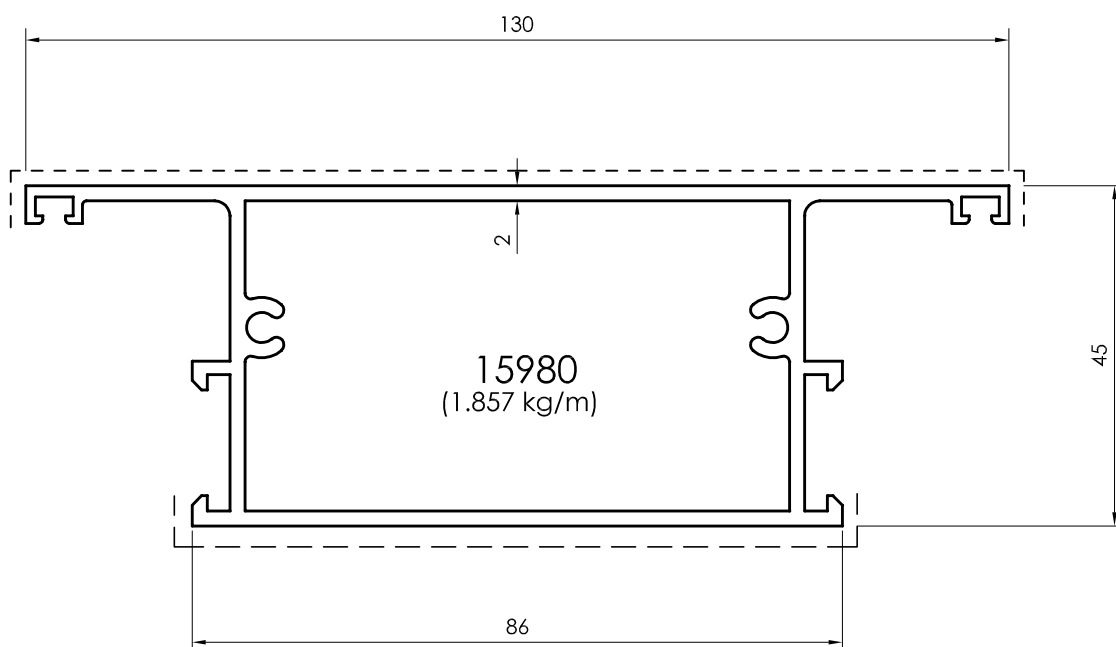
All dimensions in mm
Visible area_____

T - Profiles



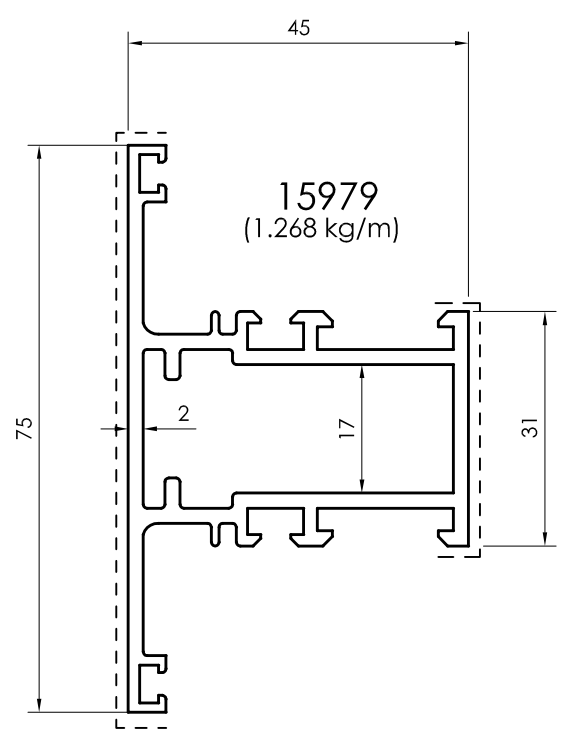
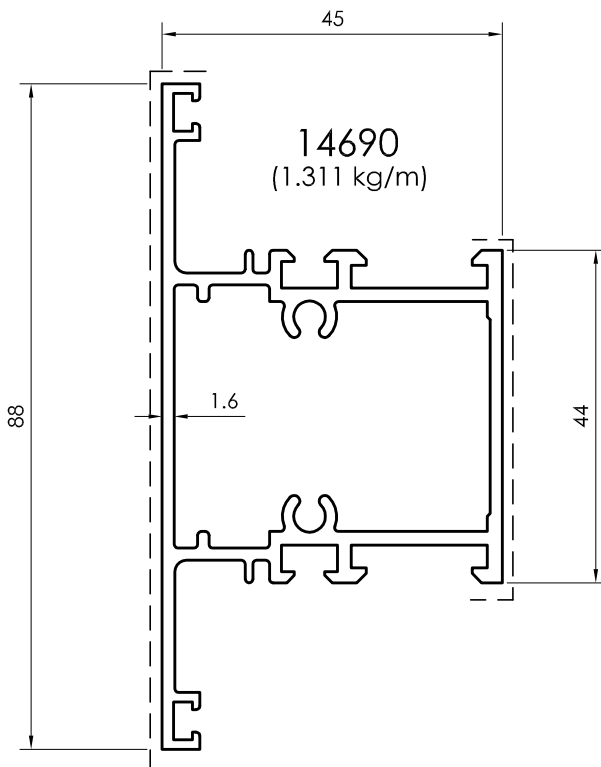
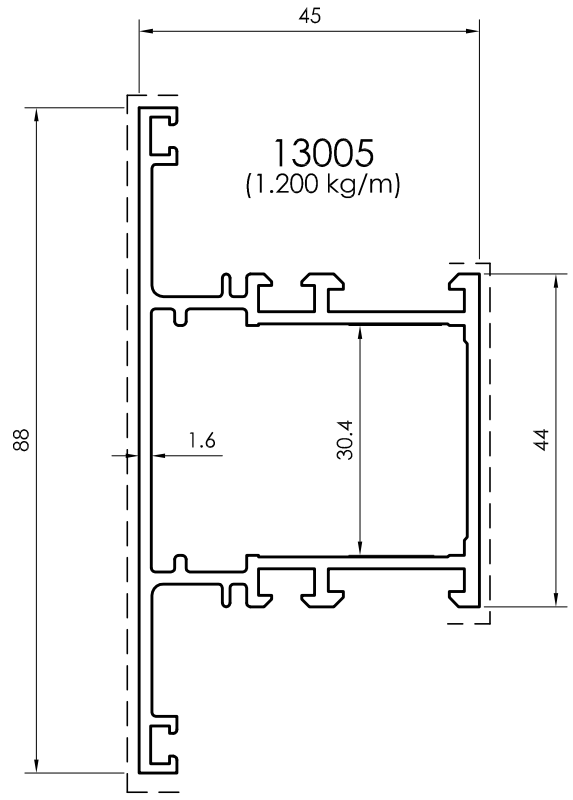
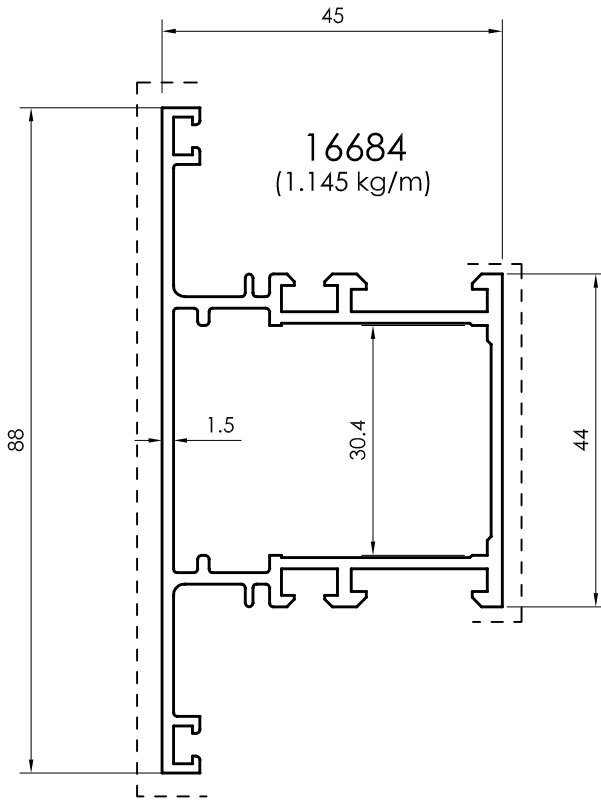
All dimensions in mm
----- Visible area

T - Profiles



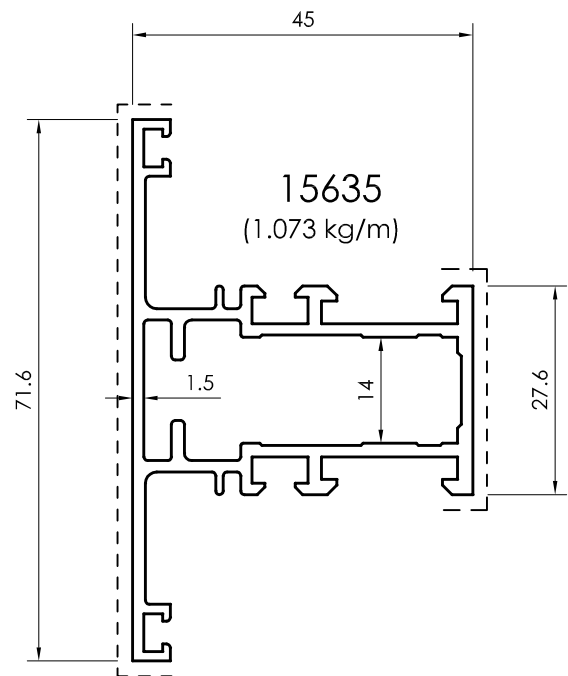
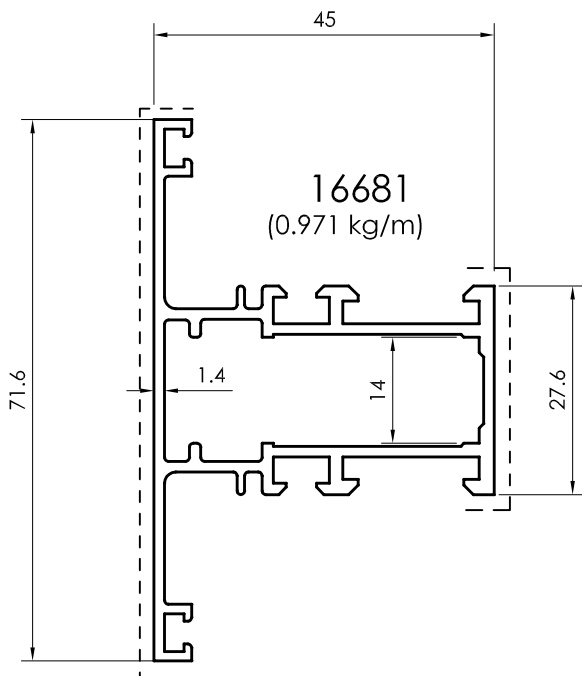
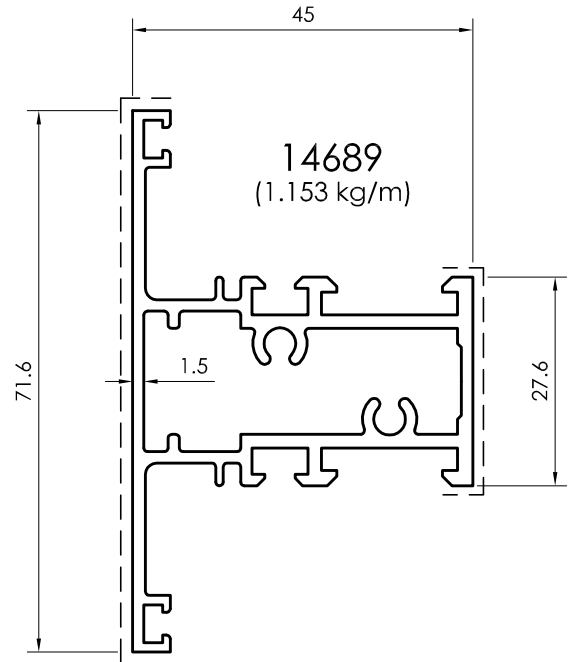
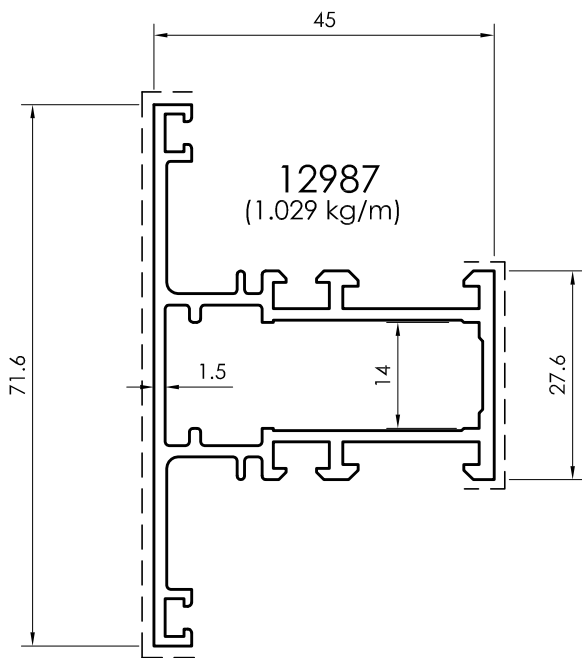
All dimensions in mm
Visible area_____

T - Profiles



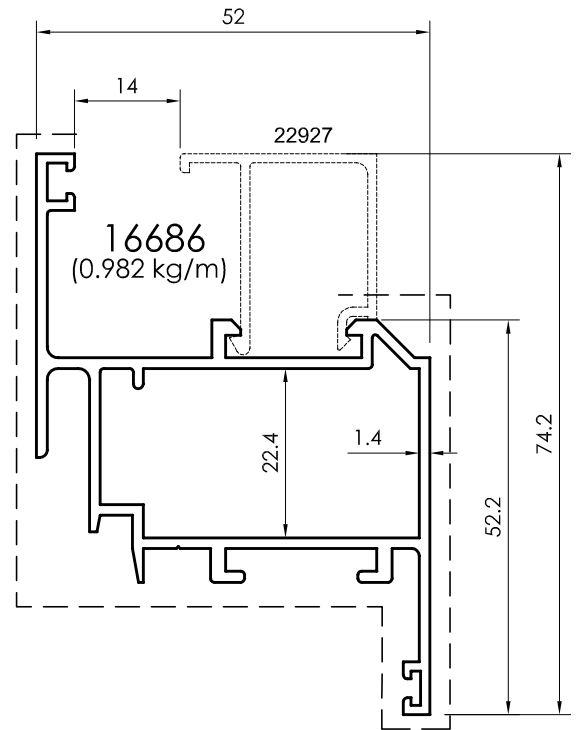
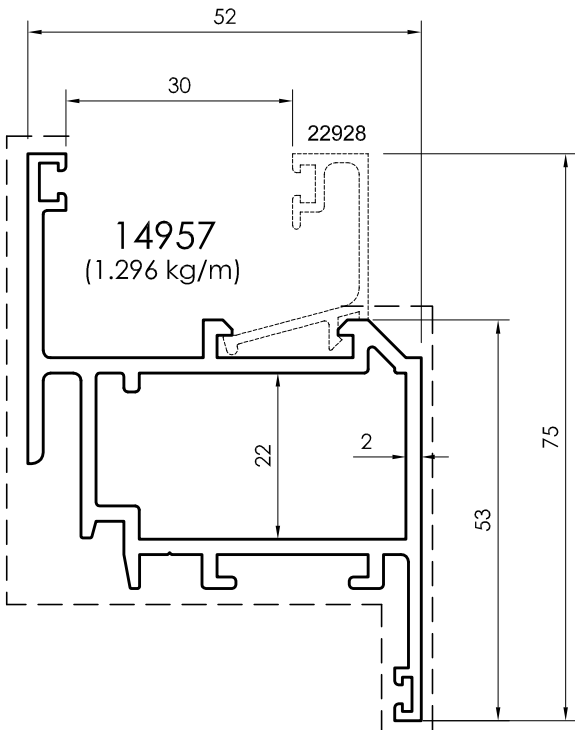
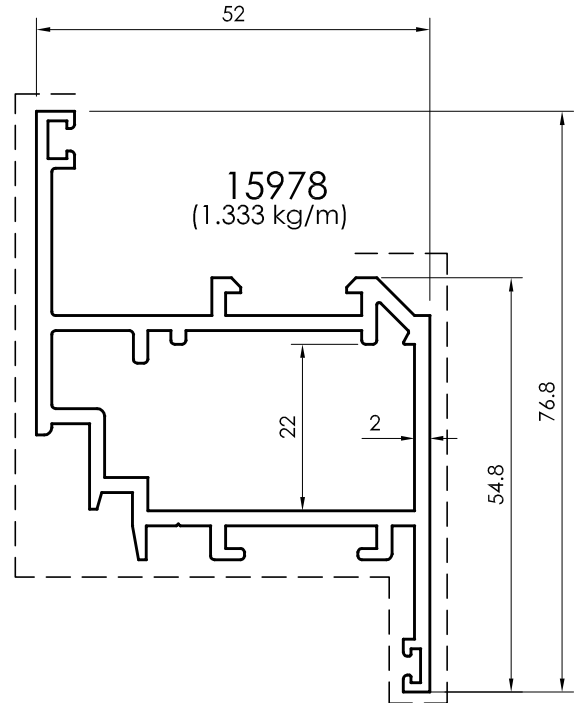
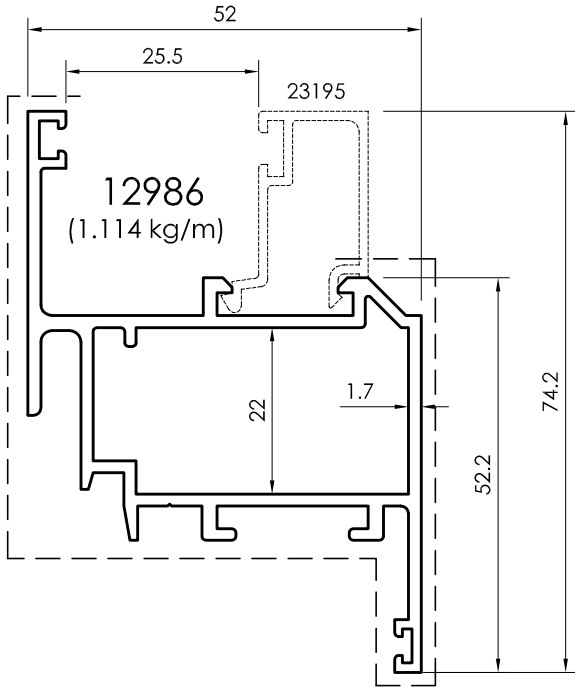
All dimensions in mm
 ----- Visible area

T - Profiles



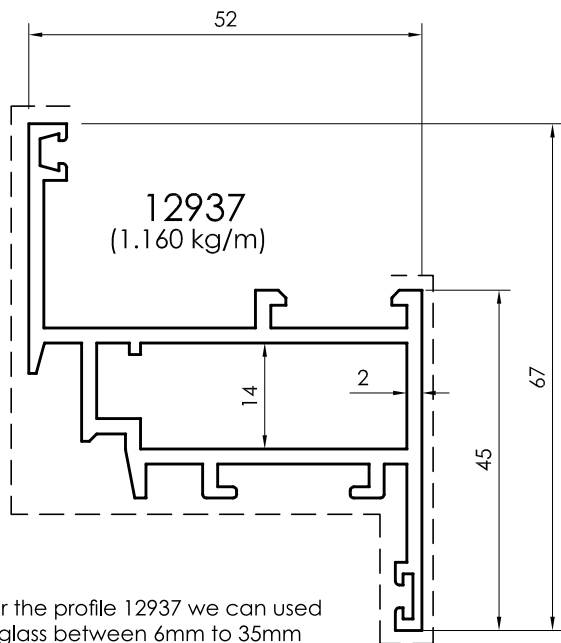
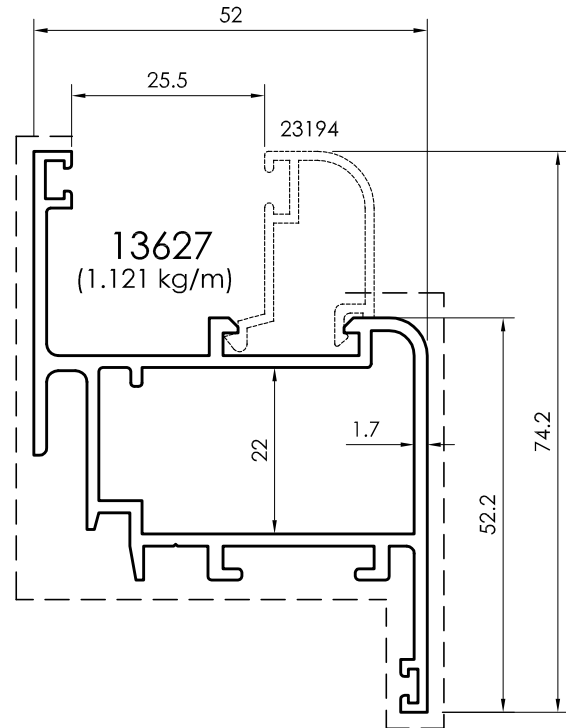
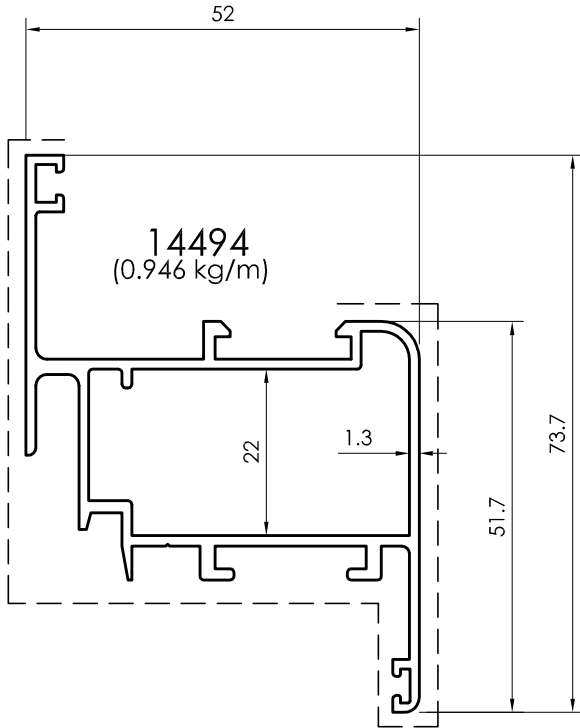
All dimensions in mm
Visible area_____

Sash Window Profiles - Inward Opening

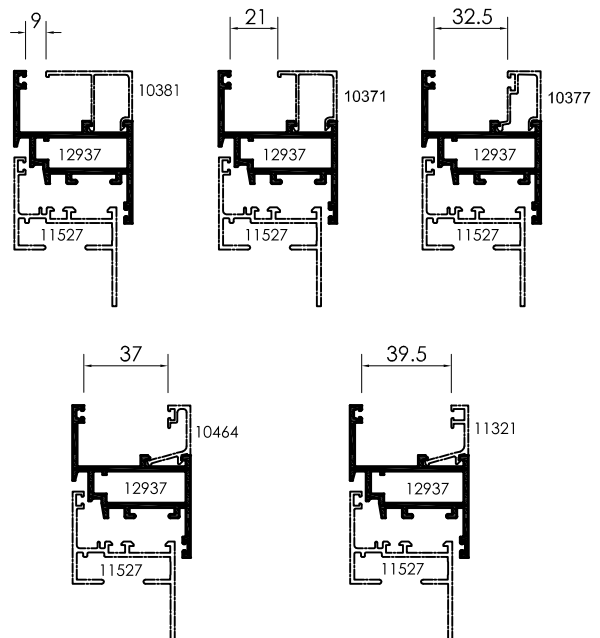


All dimensions in mm
----- Visible area

Sash Window Profiles - Inward Opening

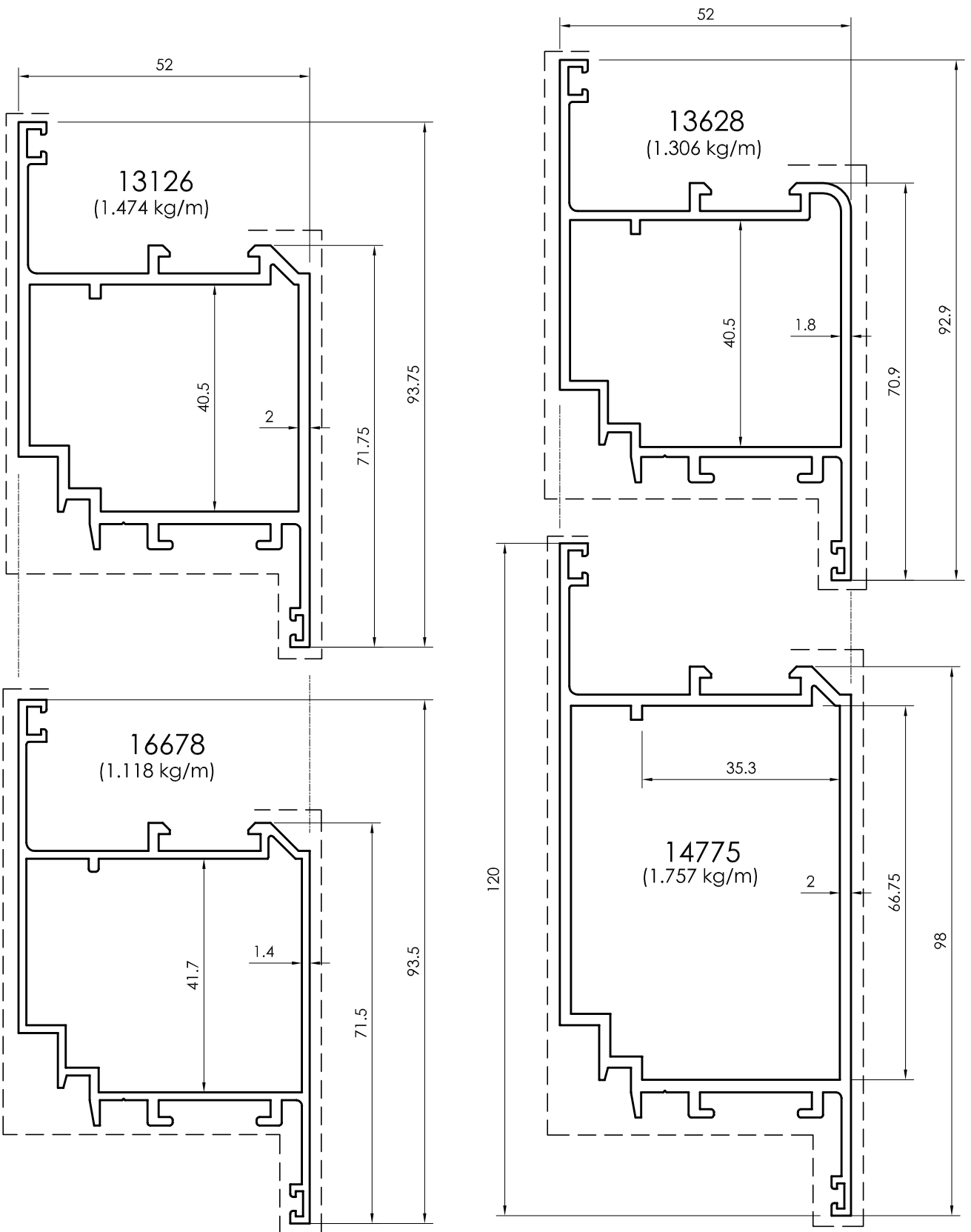


For the profile 12937 we can use glass between 6mm to 35mm



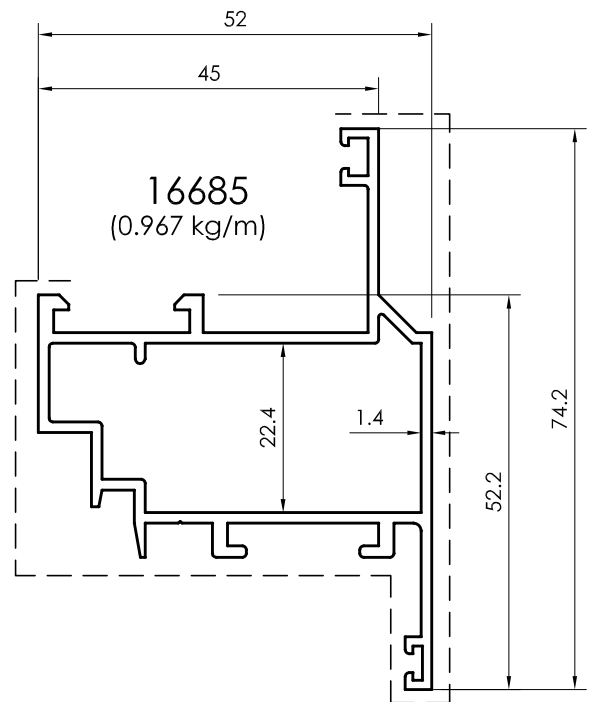
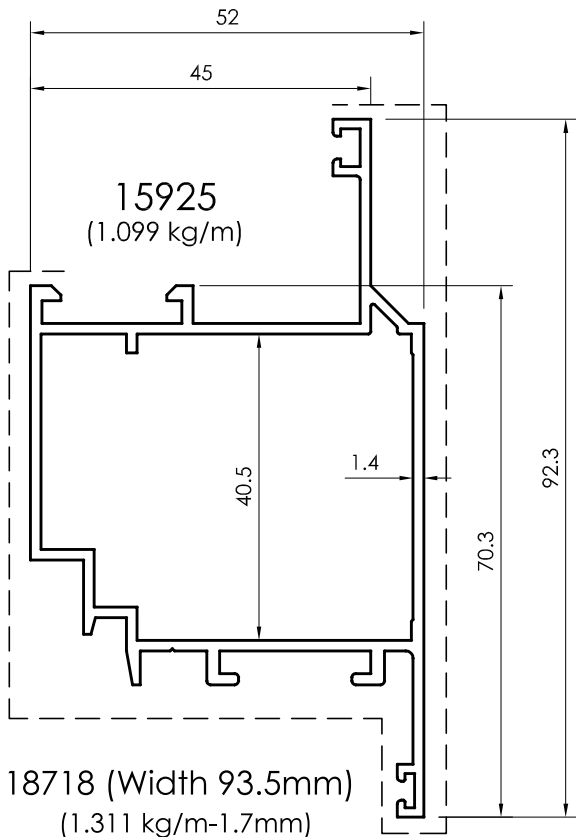
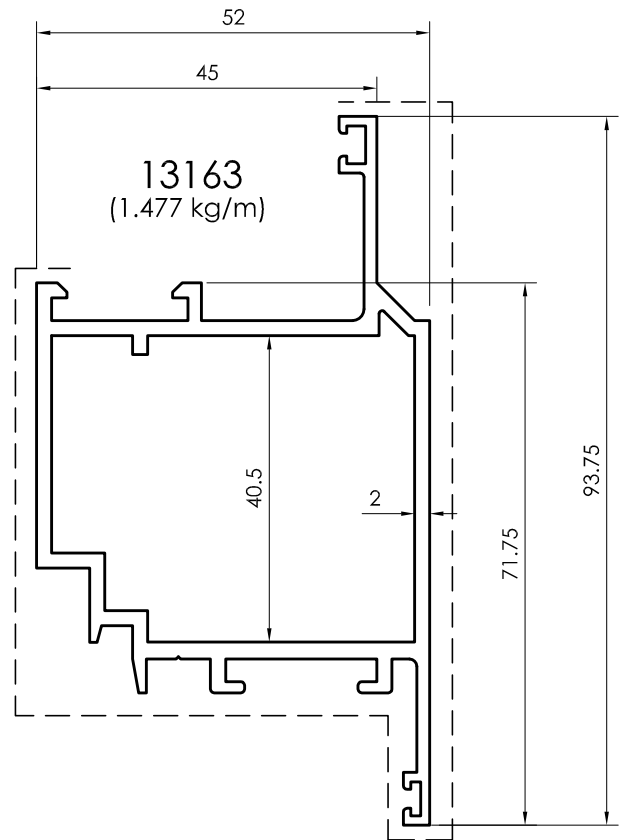
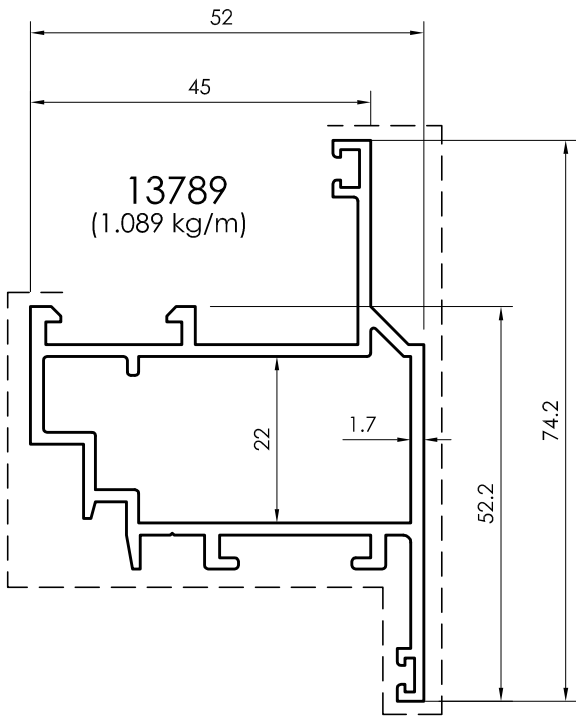
All dimensions in mm
Visible area_____

Sash Window Profiles - Inward Opening



All dimensions in mm
 ----- Visible area

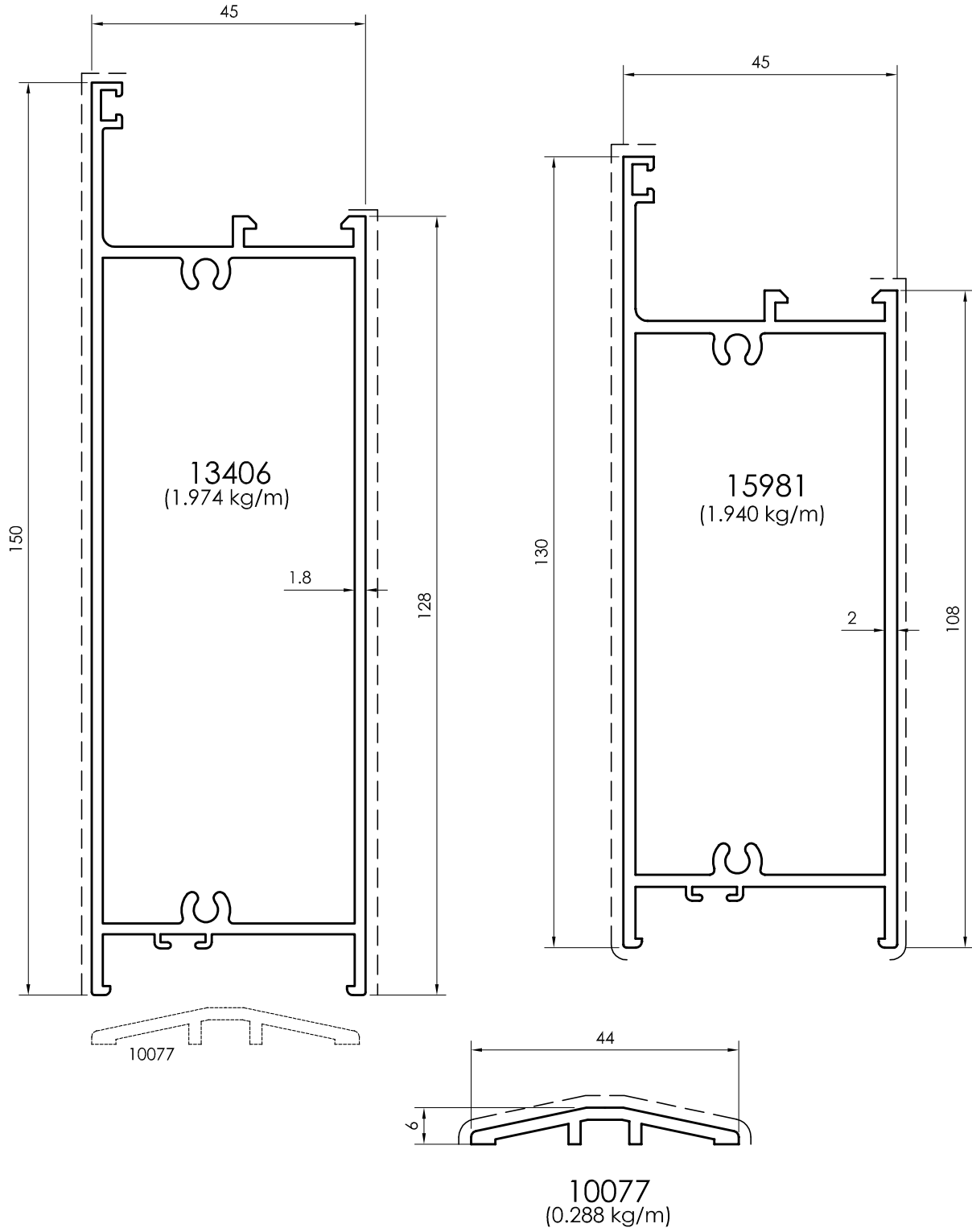
Sash Window / Door Profiles - Outward Opening



18718 (Width 93.5mm)
(1.311 kg/m-1.7mm)

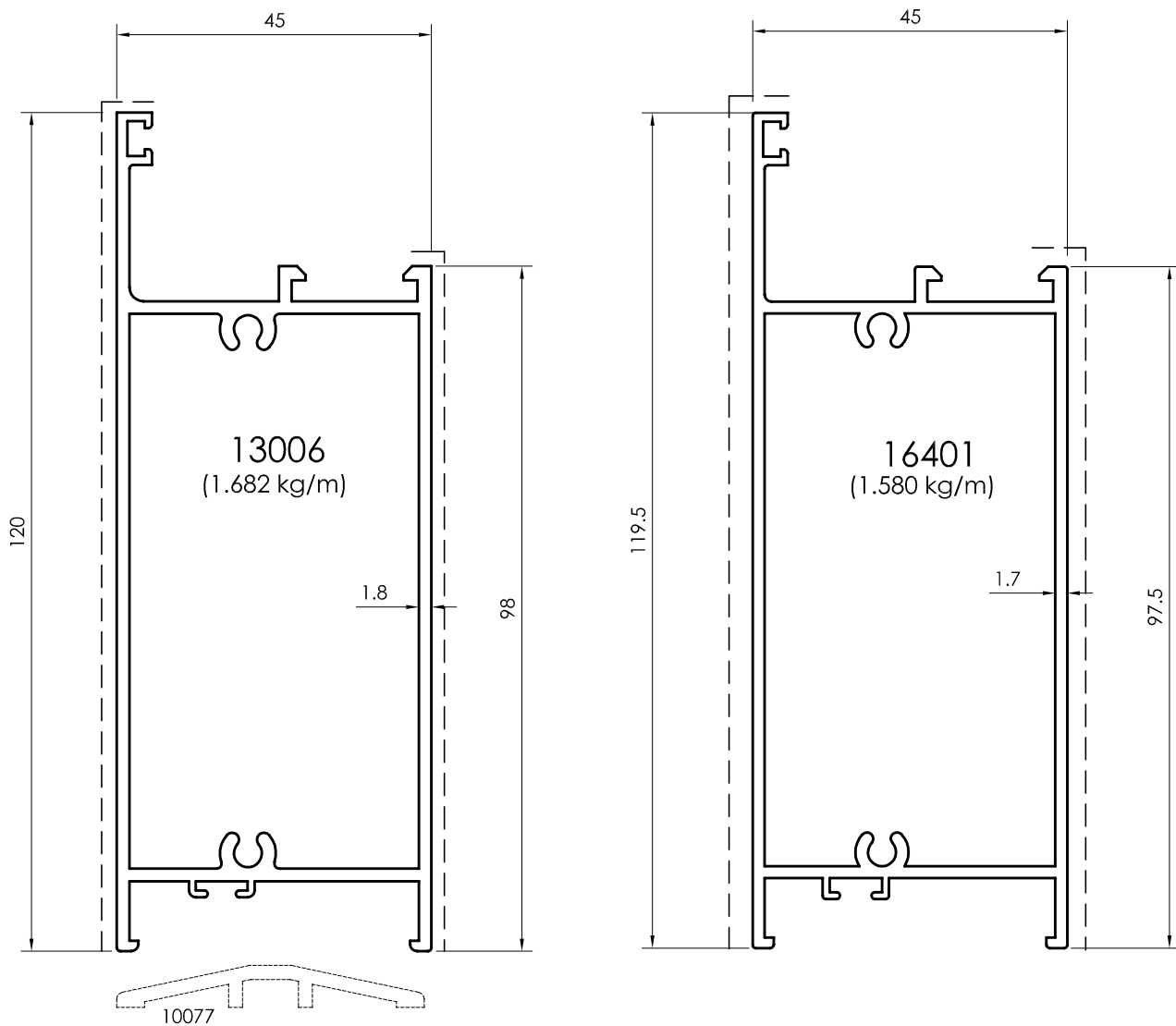
All dimensions in mm
Visible area_____

Bottom Door Profiles

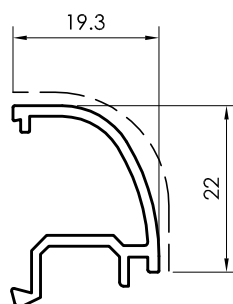
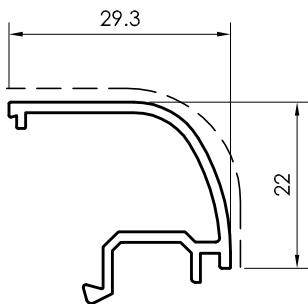
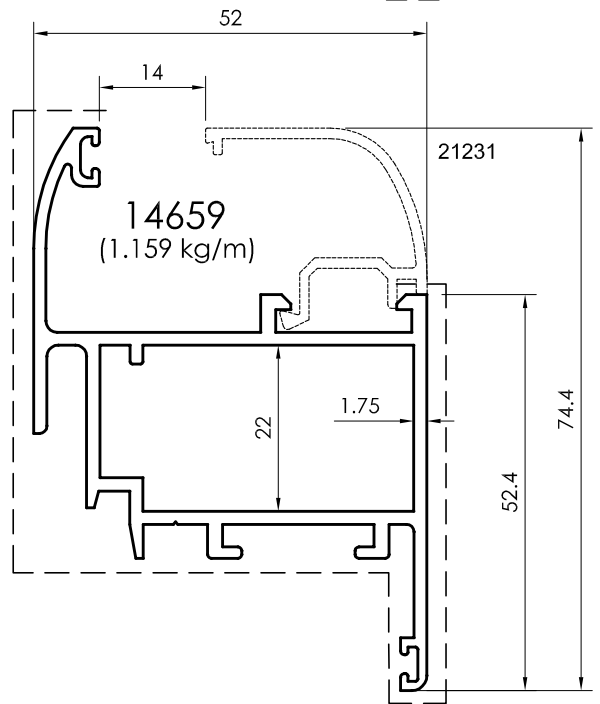
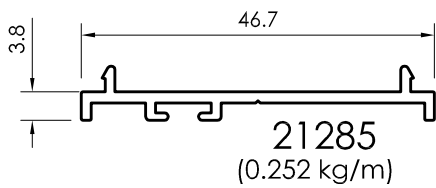
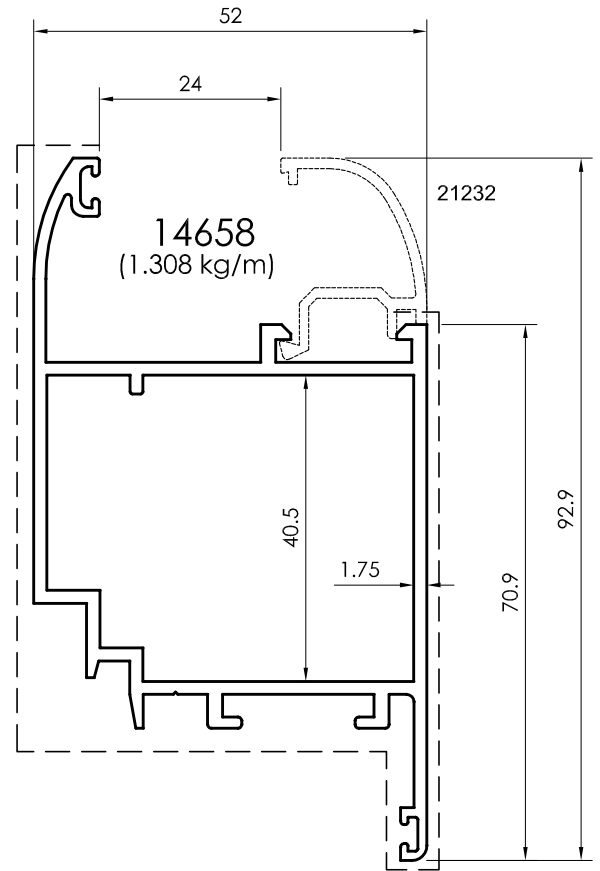
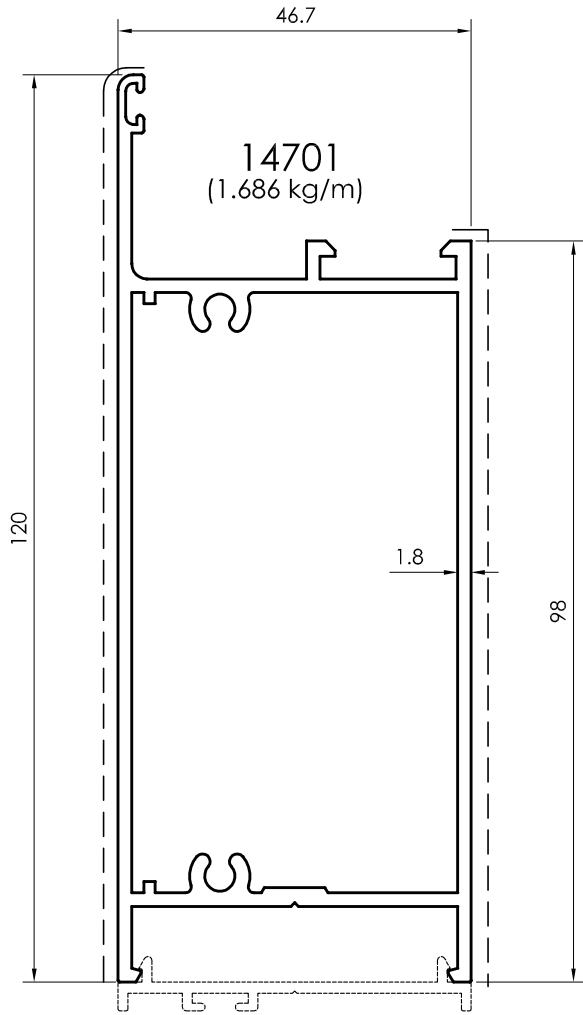


All dimensions in mm
 ----- Visible area

Bottom Door Profiles



All dimensions in mm
Visible area_____

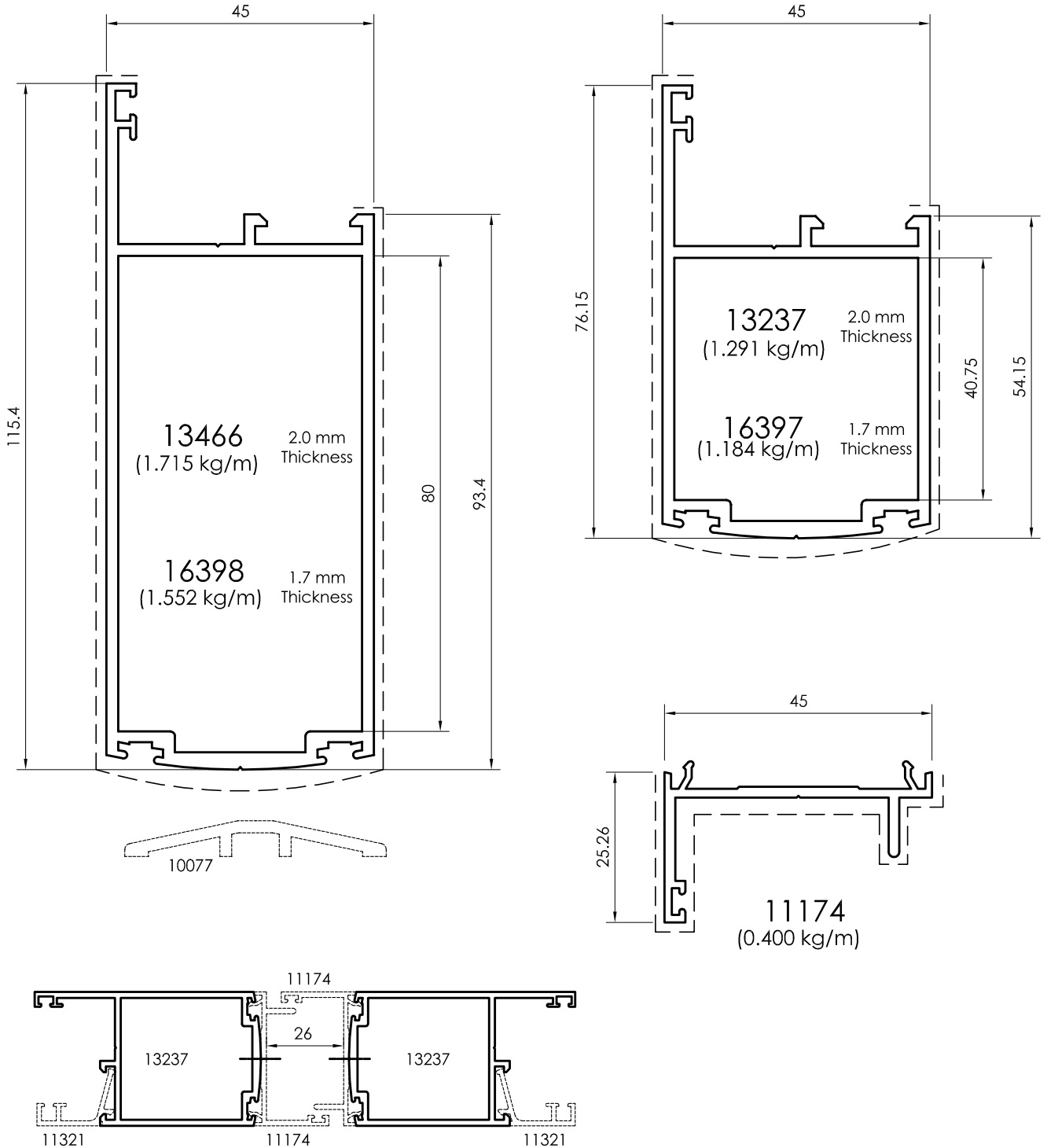


FOR 6MM & 8MM GLASS

FOR 18MM & 20MM GLASS

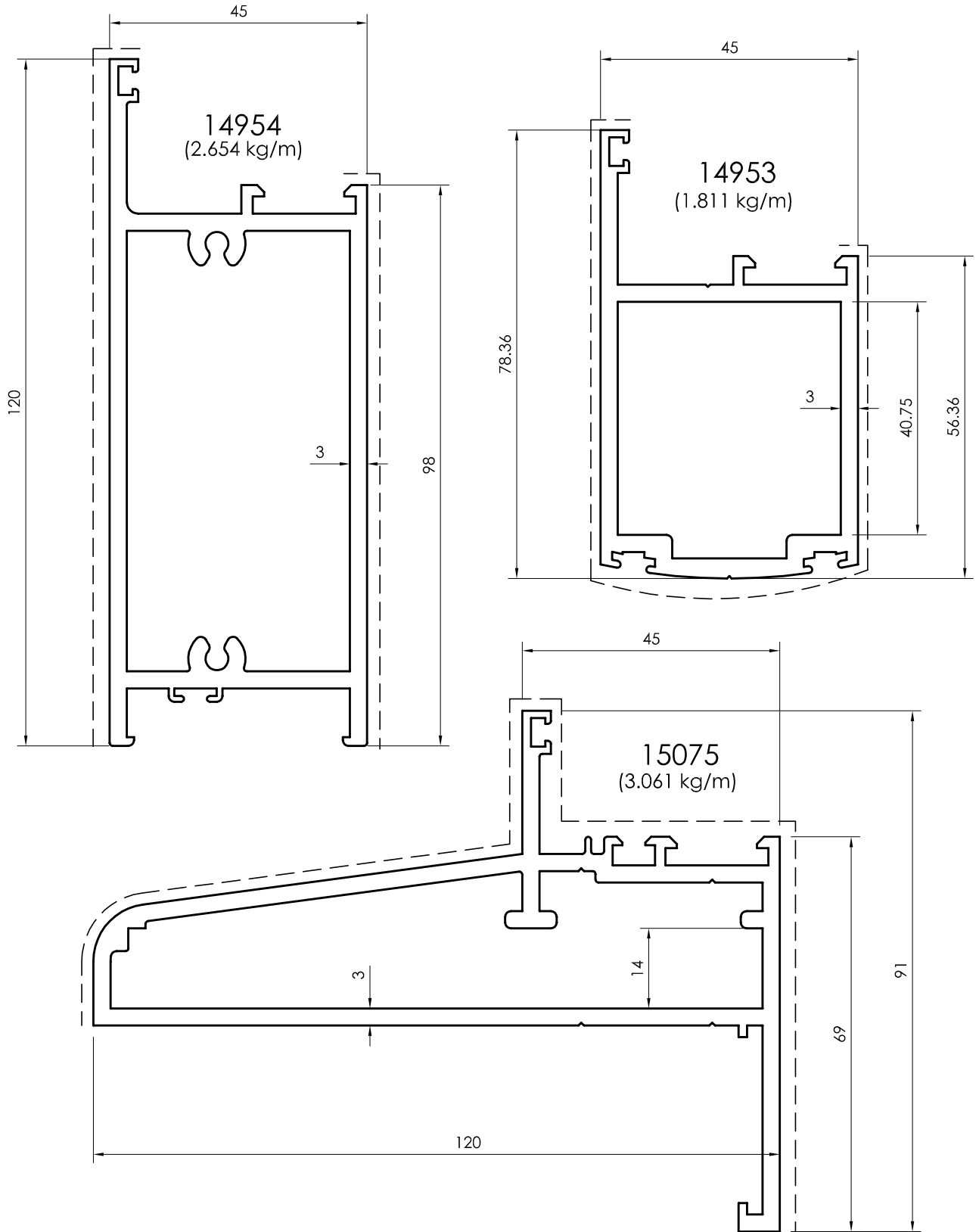
All dimensions in mm
----- Visible area

Swing Door Profiles



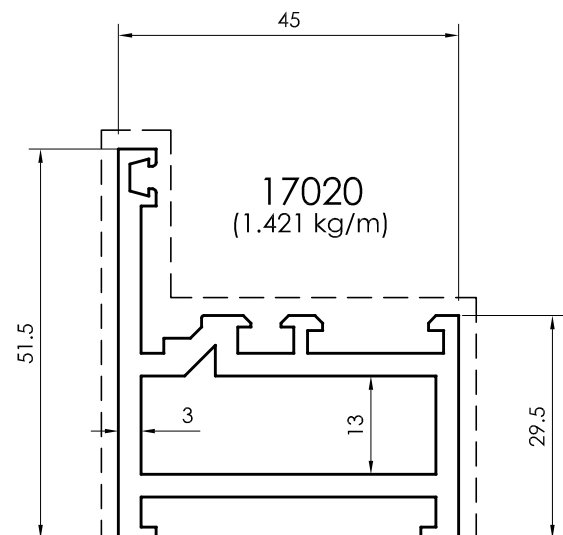
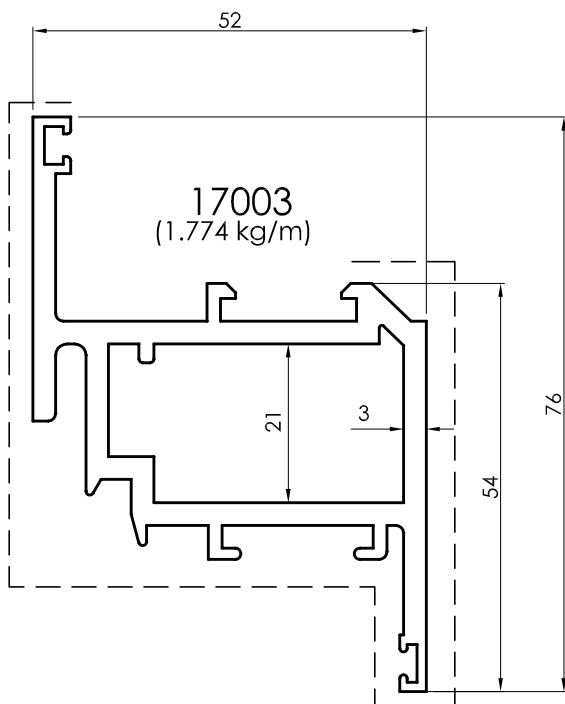
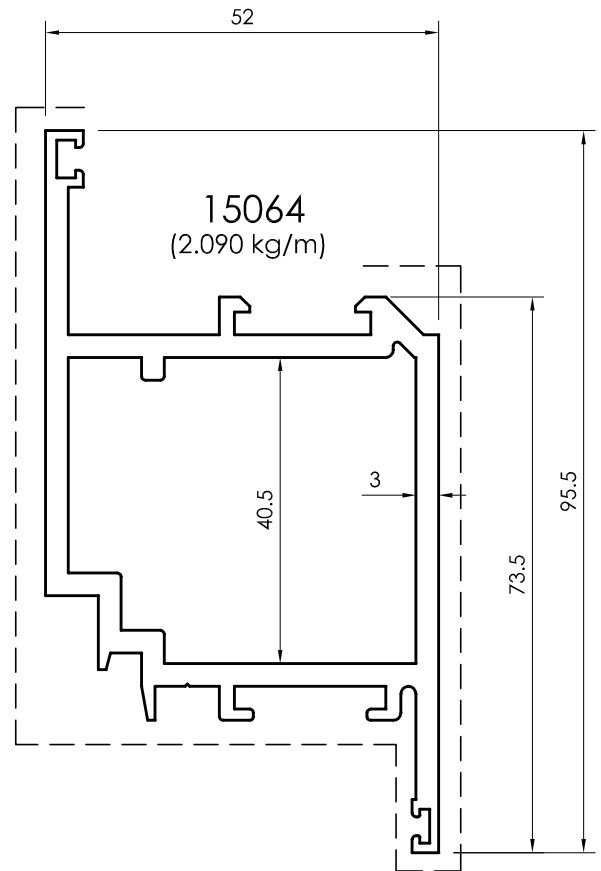
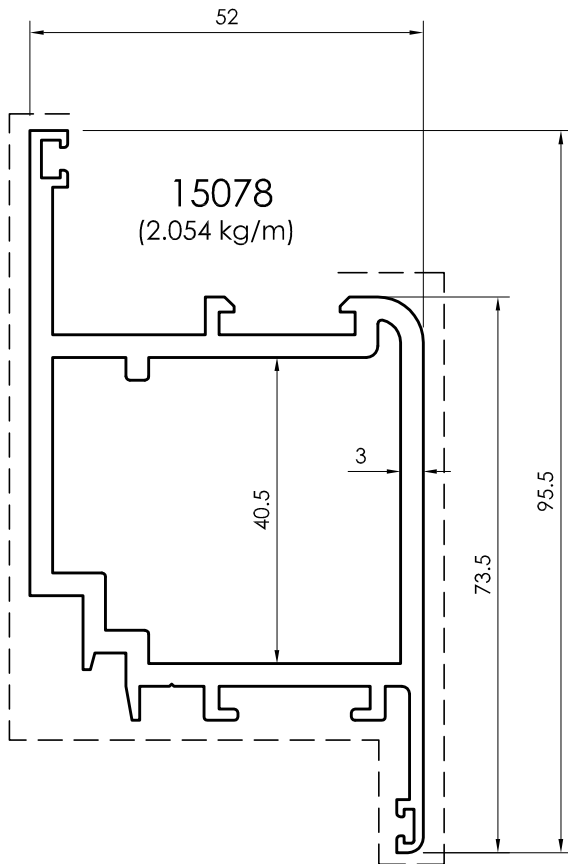
All dimensions in mm
Visible area_____

Hinged 45 - 3mm



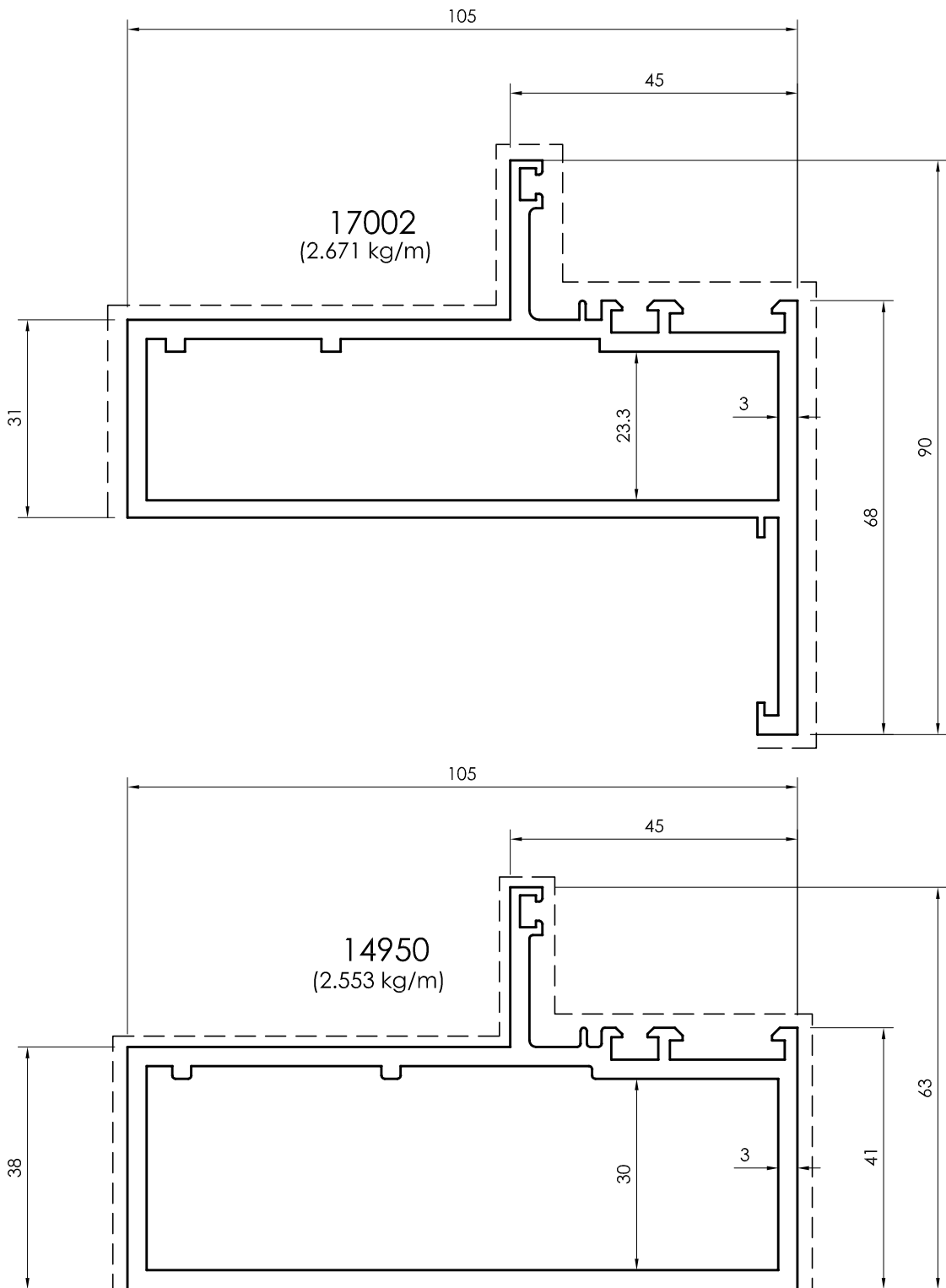
All dimensions in mm
 ----- Visible area

Hinged 45 - 3mm



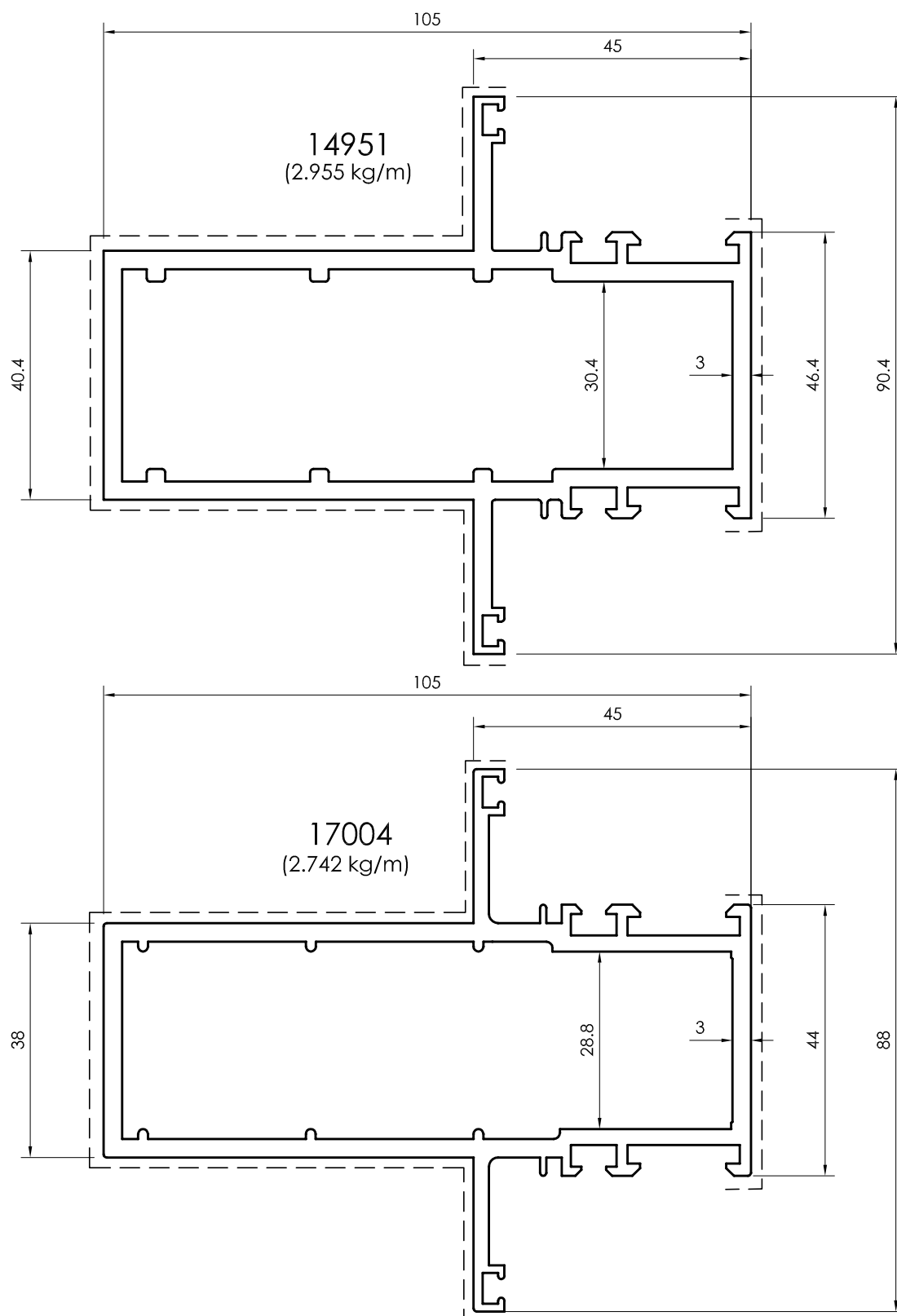
All dimensions in mm
Visible area_____

Hinged 45 - 3mm



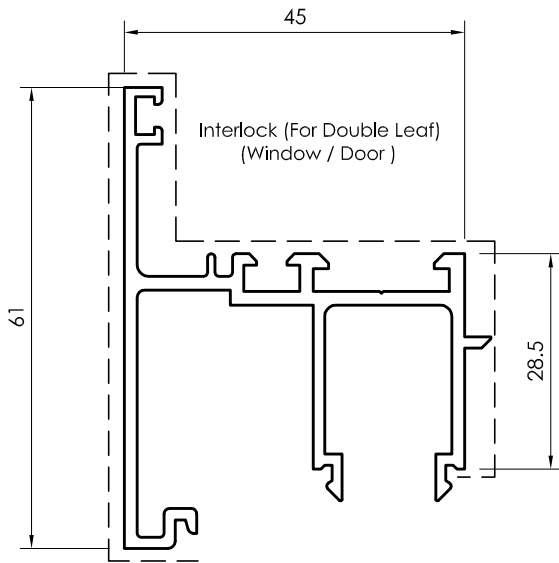
All dimensions in mm
 - - - - - Visible area

Hinged 45 - 3mm



All dimensions in mm
Visible area_____

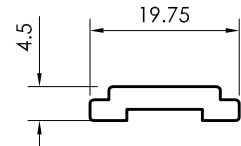
Complementary Profiles



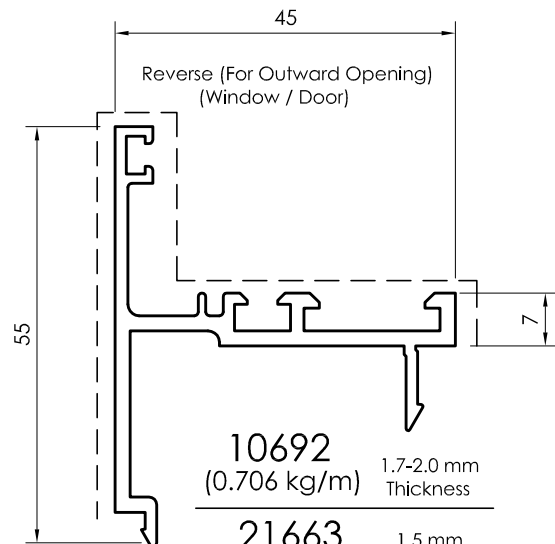
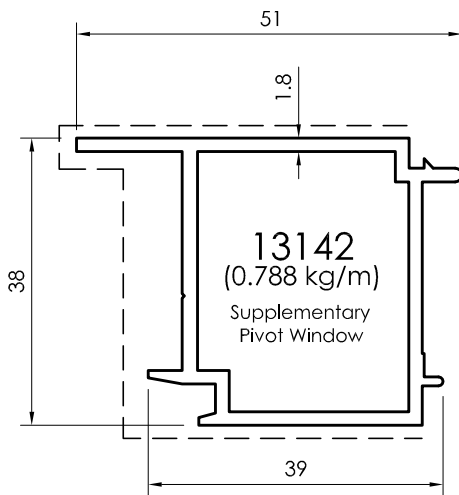
10463
(0.933 kg/m) 1.7 mm Thickness

23193
(0.820 kg/m) 1.4 mm Thickness

21100
(0.802 kg/m) 1.3 mm Thickness

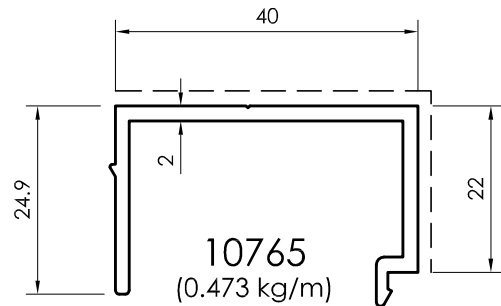
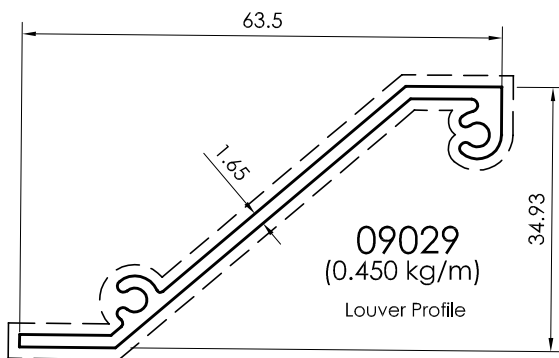


09888
(0.175 kg/m)
Supplementary
To lock



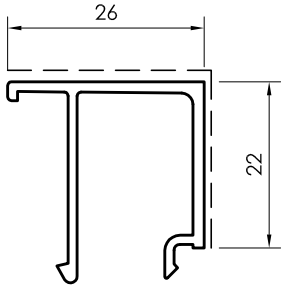
10692
(0.706 kg/m) 1.7-2.0 mm Thickness

21663
(0.629 kg/m) 1.5 mm Thickness



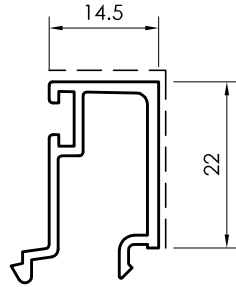
All dimensions in mm
----- Visible area

Glazing Beads Profiles



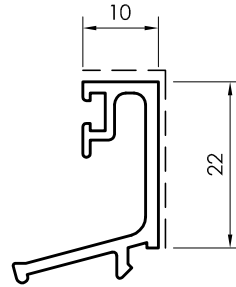
10371
(0.298 kg/m)

FOR 6MM & 8MM GLASS



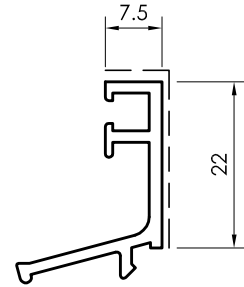
10377
(0.282 kg/m)

FOR 20MM GLASS



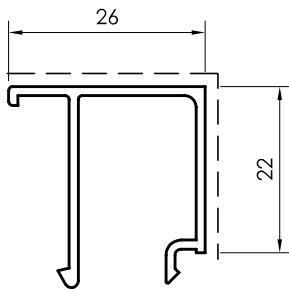
10464
(0.271 kg/m)

FOR 24MM GLASS



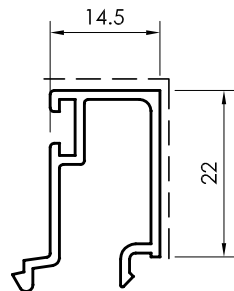
11321
(0.251 kg/m)

FOR 28MM GLASS



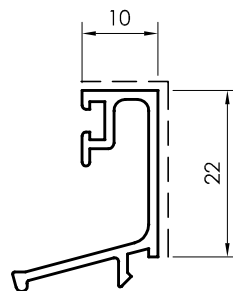
22927
(0.269 kg/m)

FOR 6MM & 8MM GLASS



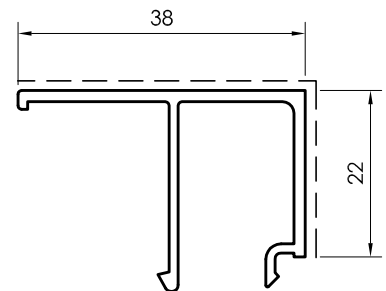
23195
(0.258 kg/m)

FOR 20MM GLASS



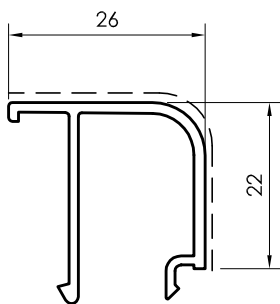
22928
(0.226 kg/m)

FOR 24MM GLASS



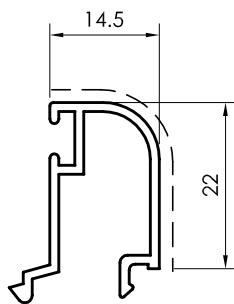
10381
(0.353 kg/m)

FOR SHEET 1.0MM & 2.0MM



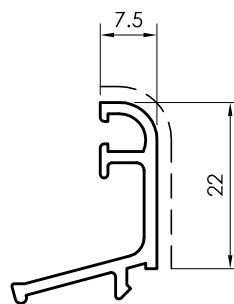
11730
(0.286 kg/m)

FOR 6MM & 8MM GLASS



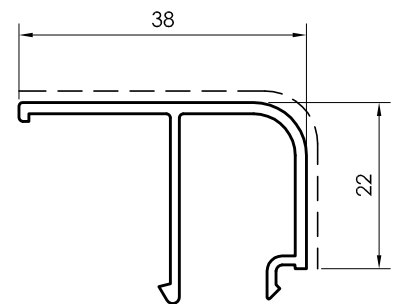
23194
(0.249 kg/m)

FOR 20MM GLASS



11729
(0.242 kg/m)

FOR 28MM GLASS

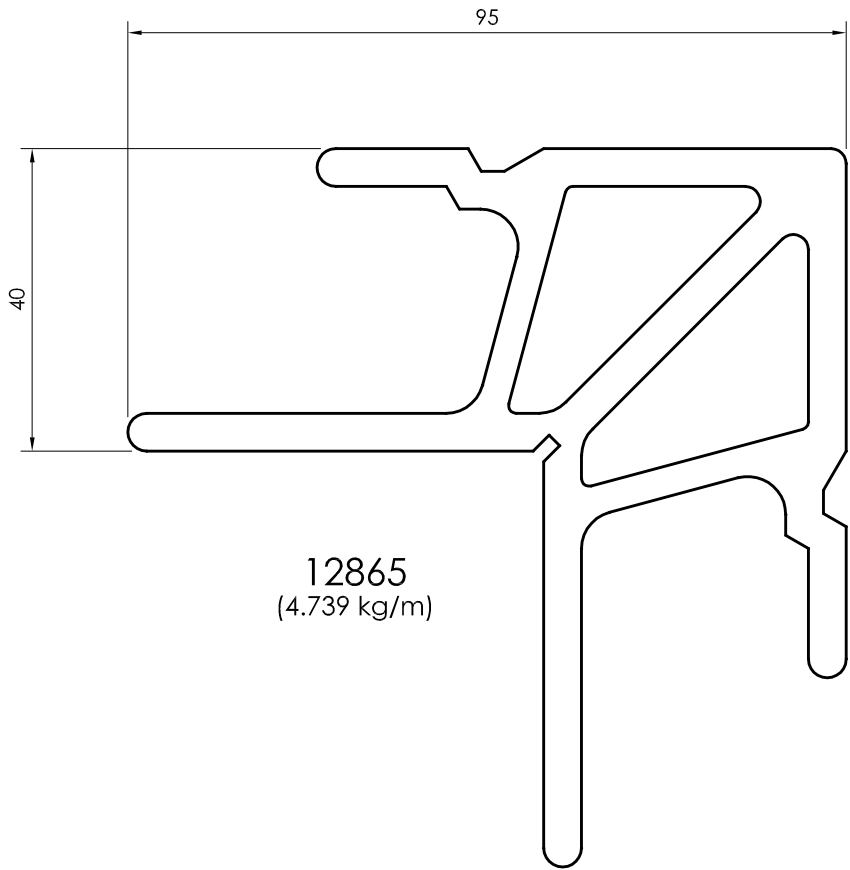
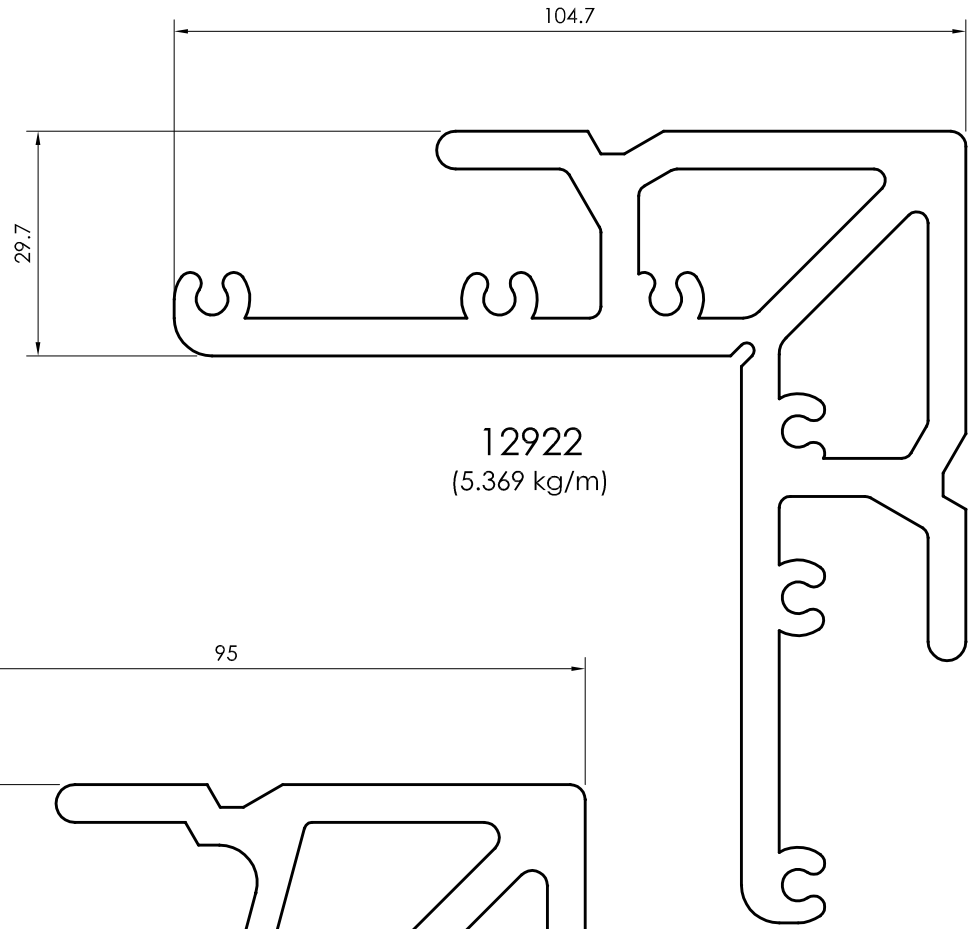


11547
(0.340 kg/m)

FOR SHEET 1.0MM & 2.0MM

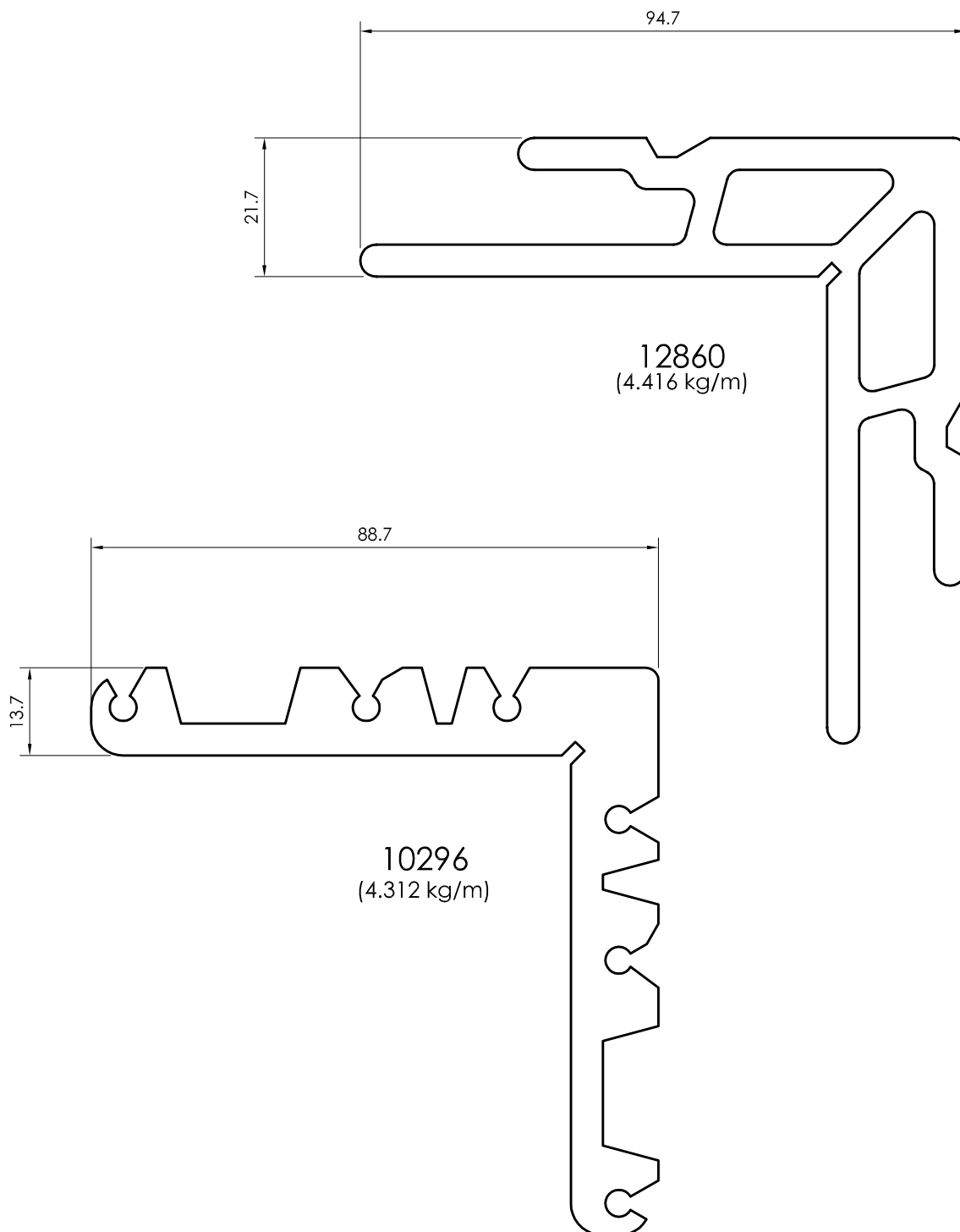
All dimensions in mm
Visible area_____

Corner Cleat Profiles



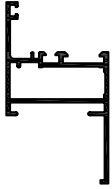
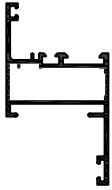
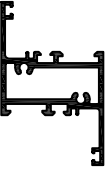
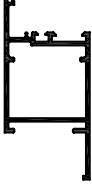
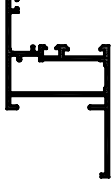
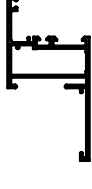
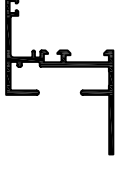
All dimensions in mm
----- Visible area

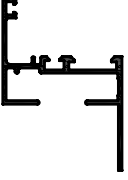
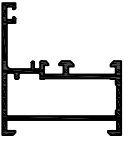
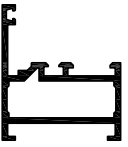
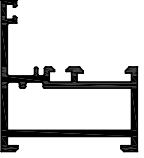
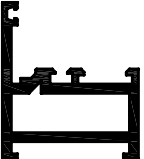
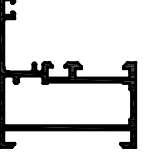
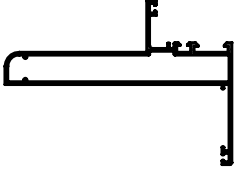
Corner Cleat Profiles

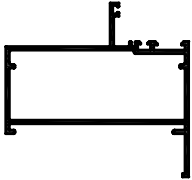
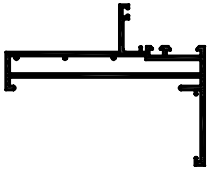
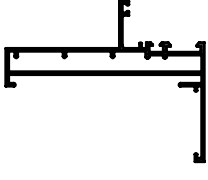
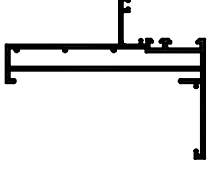
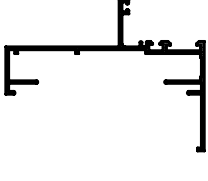
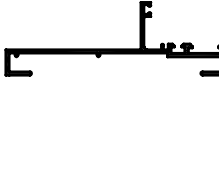
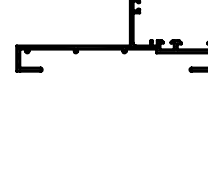


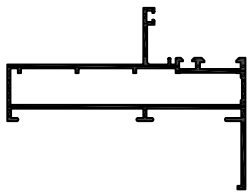
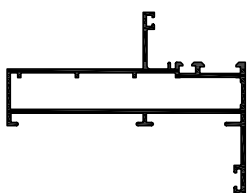
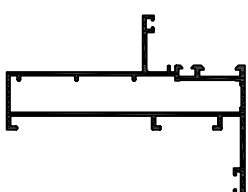
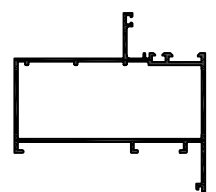
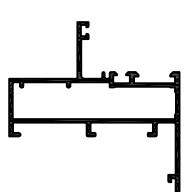
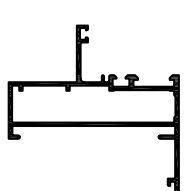
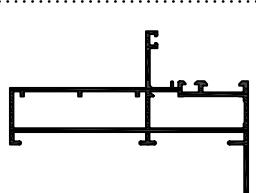
All dimensions in mm
Visible area_____

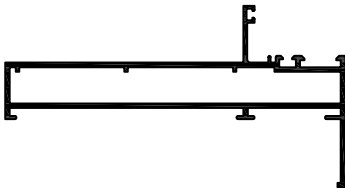
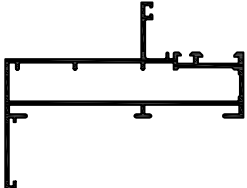
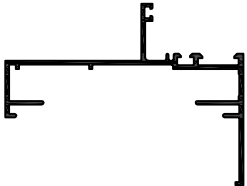
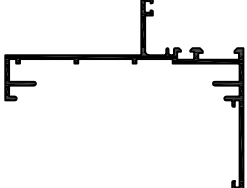
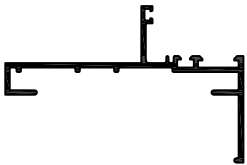
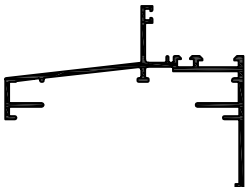
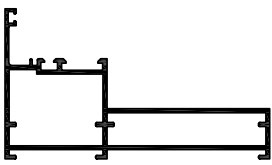
PROFILE LIST

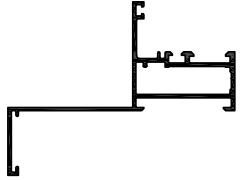
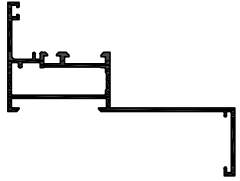
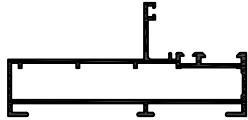
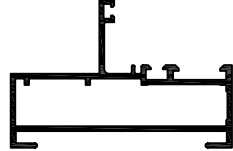
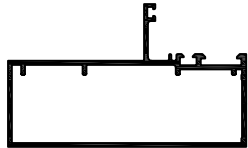
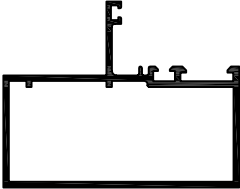
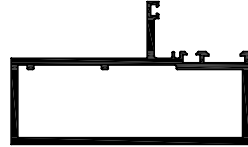
Profile Reference	Profile Section	Page	Weight KG/M	IX cm ⁴	IY cm ⁴	WX cm ³	WY cm ³
12984		14	0.998	10.872	11.581	2.481	4.976
13709		14	1.025	12.298	11.924	2.875	5.012
14509		14	1.275	9.952	12.731	2.764	5.658
15976		15	1.466	31.571	18.086	6.050	7.932
16683		14	0.918	9.719	10.585	2.193	4.565
16400		15	1.071	16.471	12.649	3.259	5.129
11527		15	0.847	5.600	9.831	1.597	9.831

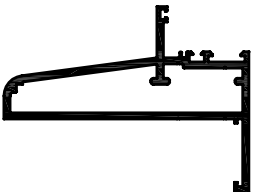
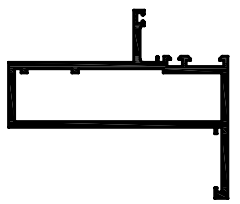
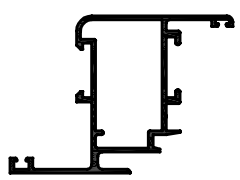
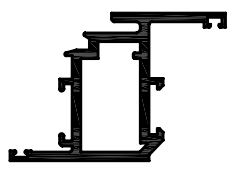
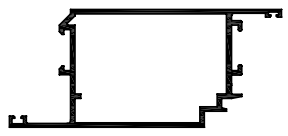
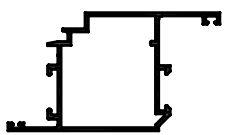
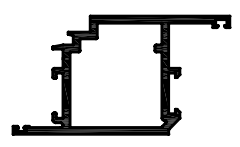
Profile Reference	Profile Section	Page	Weight KG/M	IX cm ⁴	IY cm ⁴	WX cm ³	WY cm ³
21098		15	0.661	4.336	7.660	1.220	3.336
12983		16	0.828	4.693	8.562	1.530	3.338
12936		16	1.036	5.880	10.427	1.856	4.055
14956		16	1.013	5.538	10.171	1.746	3.975
17020		46	1.421	7.445	13.626	2.295	5.296
16682		16	0.780	4.400	8.092	1.433	3.190
15041		30	1.555	15.859	85.651	3.213	11.838

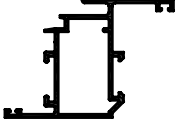
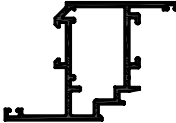
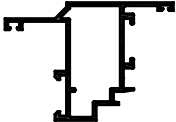
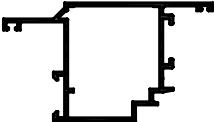
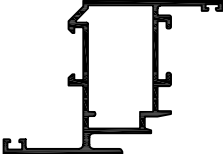
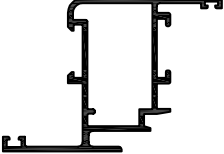
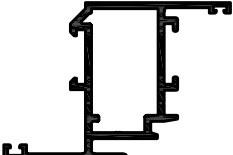
Profile Reference	Profile Section	Page	Weight KG/M	IX cm ⁴	IY cm ⁴	WX cm ³	WY cm ³
15977		20	2.114	42.372	110.822	8.091	18.898
17614		21	1.908	16.372	84.348	3.280	13.534
17613		21	1.533	13.905	67.467	2.775	10.764
16399		28	1.654	14.566	73.637	2.914	11.769
23192		28	1.187	10.858	60.900	2.338	9.676
22923		29	1.154	7.351	66.362	1.696	9.363
22922		27	1.091	6.049	50.432	1.531	8.038

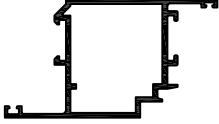
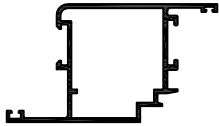
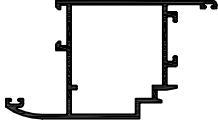
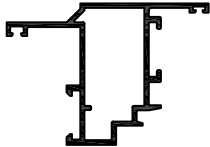
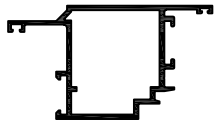
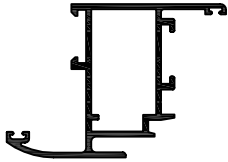
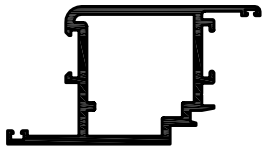
Profile Reference	Profile Section	Page	Weight KG/M	IX cm ⁴	IY cm ⁴	WX cm ³	WY cm ³
13155		23	1.598	12.787	69.693	2.903	11.489
13710		23	1.628	14.245	71.464	3.284	11.640
14355		22	1.630	14.384	71.659	3.289	11.641
14353		20	2.036	48.587	104.341	8.505	17.458
14354		17	1.363	13.549	31.585	3.129	7.323
13841		17	1.315	13.189	31.529	3.043	7.272
12985		22	1.671	12.858	69.694	2.914	11.488

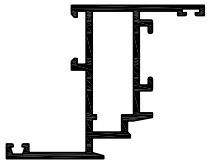






Profile Reference	Profile Section	Page	Weight KG/M	IX cm ⁴	IY cm ⁴	WX cm ³	WY cm ³
13468		30	2.371	15.875	211.153	3.622	24.724
14682		27	1.665	14.758	78.360	3.229	14.345
10462		25	1.319	11.747	67.388	2.529	10.797
11476		25	1.286	14.522	64.548	2.848	9.965
11396		26	1.281	7.522	59.510	1.936	9.530
11753		26	1.352	11.309	63.779	2.476	9.882
13889		29	1.930	18.877	102.985	4.160	14.992


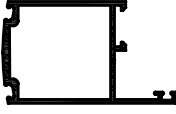

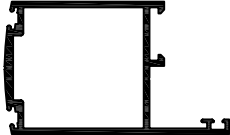
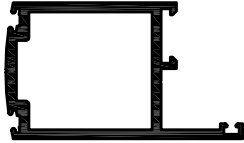
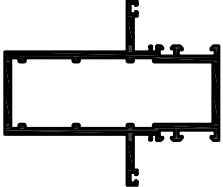
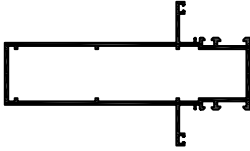
Profile Reference	Profile Section	Page	Weight KG/M	IX cm ⁴	IY cm ⁴	WX cm ³	WY cm ³
14507		19	1.176	10.590	42.734	2.691	7.541
14506		19	1.176	10.590	49.930	2.691	8.170
13906		24	1.470	7.279	60.019	2.195	10.759
13907		18	1.156	6.061	25.300	1.878	6.610
13677		24	1.670	20.180	75.606	5.106	13.745
13900		18	1.438	17.414	38.477	4.436	9.424
14950		47	2.553	28.914	113.511	7.098	20.978

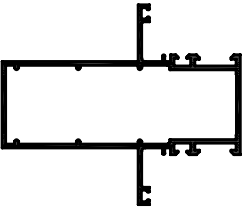
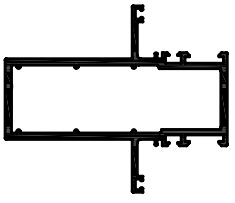
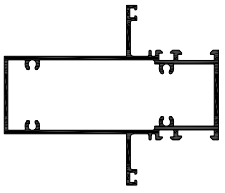
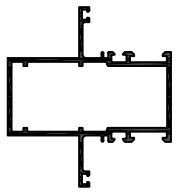
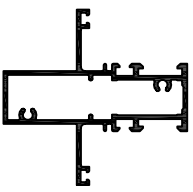
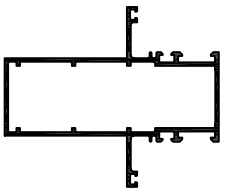

Profile Reference	Profile Section	Page	Weight KG/M	IX cm ⁴	IY cm ⁴	WX cm ³	WY cm ³
15075		45	3.061	34.097	166.010	7.046	23.233
17002		47	2.671	34.132	125.136	7.029	20.883
14494		38	0.946	9.560	12.829	2.550	4.928
17003		46	1.774	15.906	23.025	4.152	8.740
14775		39	1.757	68.224	28.00	11.128	10.594
16678		39	1.118	23.845	16.700	5.001	6.349
15064		46	2.090	40.143	30.379	8.295	11.536


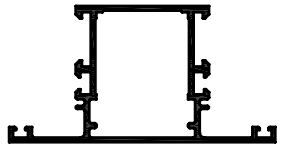
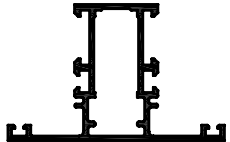
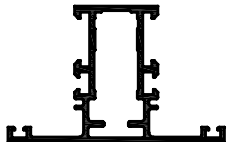
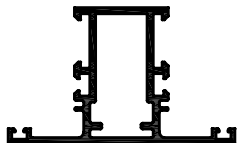
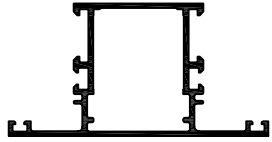
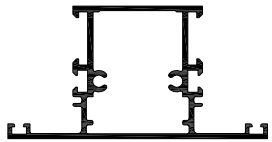
Profile Reference	Profile Section	Page	Weight KG/M	IX cm ⁴	IY cm ⁴	WX cm ³	WY cm ³
16686		37	0.982	11.536	13.284	0.305	5.078
15978		37	1.333	13.808	18.004	3.543	6.823
16685		40	0.967	10.141	11.391	2.677	3.707
15925		40	1.099	22.482	14.692	4.781	4.855
12986		37	1.114	15.167	11.063	5.832	2.936
13627		38	1.121	15.372	11.161	5.870	2.973
14957		37	1.296	12.375	17.188	3.262	6.568


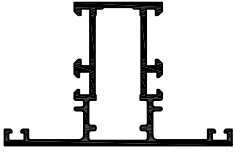
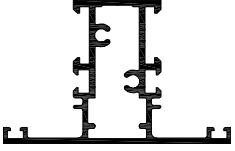
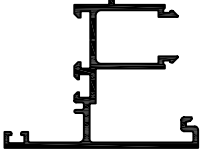
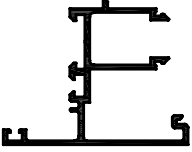
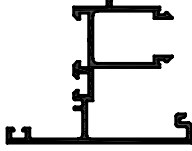
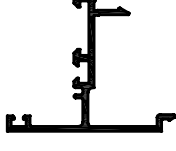
Profile Reference	Profile Section	Page	Weight KG/M	IX cm ⁴	IY cm ⁴	WX cm ³	WY cm ³
13126		39	1.474	21.431	28.671	19.672	26.073
13628		39	1.306	19.672	26.073	7.368	5.502
14658		43	1.308	19.447	26.499	7.321	5.648
13789		40	1.089	11.018	12.799	2.907	4.153
13163		40	1.477	28.724	19.503	5.981	6.557
14659		43	1.159	15.571	11.715	5.920	3.129
15078		46	2.054	38.301	29.656	7.962	11.373

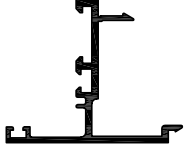
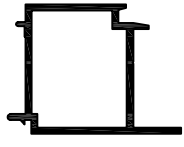





Profile Reference	Profile Section	Page	Weight KG/M	IX cm ⁴	IY cm ⁴	WX cm ³	WY cm ³
12937		38	1.160	15.014	8.159	5.530	2.371
13406		41	1.974	26.086	156.943	10.839	19.694
13006		42	1.682	21.014	80.947	8.634	12.469
14701		43	1.686	22.983	79.226	9.003	12.082
14954		45	2.654	120.140	31.789	18.175	13.111
16401		42	1.580	76.034	19.963	11.756	8.199
15981		41	1.940	110.658	24.752	15.791	10.225


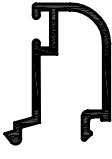
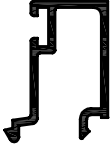
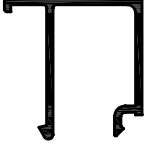


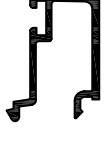
Profile Reference	Profile Section	Page	Weight KG/M	IX cm ⁴	IY cm ⁴	WX cm ³	WY cm ³
16398		44	1.552	77.720	19.522	11.668	8.103
16397		44	1.184	23.182	13.219	4.933	5.377
13466		44	1.715	21.922	82.713	9.097	12.696
13237		44	1.291	14.606	24.197	5.932	5.267
14953		45	1.811	33.283	20.226	7.041	8.240
14951		48	2.955	43.802	122.865	9.690	22.217
13467		31	2.538	35.699	220.190	8.113	26.681


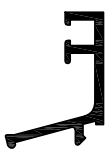
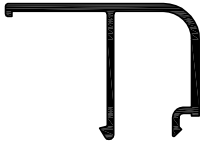
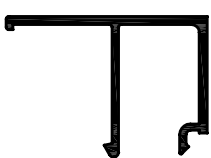

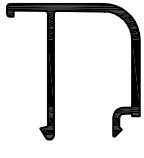

Profile Reference	Profile Section	Page	Weight KG/M	IX cm ⁴	IY cm ⁴	WX cm ³	WY cm ³
16687		31	1.728	26.700	70.739	6.068	12.354
17004		48	2.742	36.662	114.291	8.327	20.843
14691		32	2.033	29.434	84.697	6.689	14.857
13901		33	1.704	26.043	40.869	5.919	9.873
13842		33	1.396	10.450	25.551	2.914	6.547
13133		32	1.911	28.750	78.444	6.534	13.795
13449		34	1.616	19.019	61.472	7.355	10.245


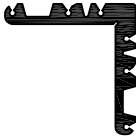


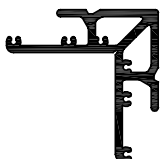
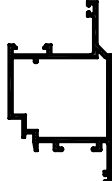
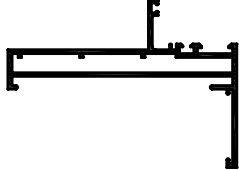
Profile Reference	Profile Section	Page	Weight KG/M	IX cm ⁴	IY cm ⁴	WX cm ³	WY cm ³
15980		34	1.857	22.477	85.502	8.761	13.154
16684		35	1.145	19.658	12.265	4.467	4.569
16681		36	0.971	8.735	9.507	2.439	3.484
15635		36	1.073	9.382	10.266	2.620	3.689
15979		35	1.268	12.100	12.199	3.226	4.389
13005		35	1.200	12.817	20.450	4.743	4.648
14690		35	1.311	13.001	21.211	4.867	4.821

Profile Reference	Profile Section	Page	Weight KG/M	IX cm ⁴	IY cm ⁴	WX cm ³	WY cm ³
13119		33	1.235	10.394	11.555	2.887	4.165
12987		36	1.029	10.007	9.316	3.613	2.602
14689		36	1.153	10.677	9.469	4.010	2.645
10463		49	0.933	9.642	7.145	3.262	2.172
21100		49	0.802	6.311	8.218	1.933	2.818
23193		49	0.820	8.498	6.575	2.895	1.999
21663		49	0.629	3.192	5.787	1.115	1.983v

Profile Reference	Profile Section	Page	Weight KG/M	IX cm ⁴	IY cm ⁴	WX cm ³	WY cm ³
10692		49	0.706	6.286	3.496	2.110	1.245
13142		49	0.788	6.051	5.661	2.940	2.017
11174		44	0.400	3.896	0.625	1.469	0.345
21285		43	0.252	1.999	0.013	0.822	0.032
09029		49	0.450	6.240	2.435	1.772	1.309
10765		49	0.473	4.360	1.179	2.007	0.641
09888		49	0.175	0.009	0.208	0.038	0.211


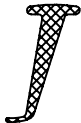





Profile Reference	Profile Section	Page	Weight KG/M	IX cm ⁴	IY cm ⁴	WX cm ³	WY cm ³
10077		41	0.288	1.586	0.024	0.721	0.080
23194		50	0.249	0.643	0.332	0.452	0.291
23195		50	0.258	0.699	0.355	0.467	0.312
22927		50	0.269	0.787	0.677	0.472	0.440
22928		50	0.226	0.697	0.219	0.503	0.164
10371		50	0.298	0.840	0.746	0.495	0.471
10377		50	0.282	0.742	0.385	0.488	0.327


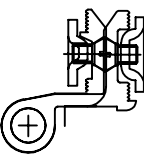
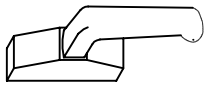
Profile Reference	Profile Section	Page	Weight KG/M	IX cm ⁴	IY cm ⁴	WX cm ³	WY cm ³
10464		50	0.271	0.812	0.254	0.598	0.186
11321		50	0.251	0.696	0.241	0.497	0.170
11547		50	0.340	0.9941	1.483	0.522	0.165
10381		50	0.353	0.972	1.566	0.531	0.636
11729		50	0.242	0.632	0.233	0.436	0.167
11730		50	0.286	0.796	0.697	0.487	0.453
21231		43	0.279	0.822	0.714	0.541	0.394

Profile Reference	Profile Section	Page	Weight KG/M	IX cm ⁴	IY cm ⁴	WX cm ³	WY cm ³
21232		43	0.241	0.634	0.339	0.469	0.316
10296		52	4.312	—	—	—	—
12860		52	4.416	—	—	—	—
12865		51	4.739	—	—	—	—
12922		51	5.369	—	—	—	—
18718		40	1.311	26.513	17.469	5.595	5.844
18719		29	1.979	16.752	108.510	3.357	15.646

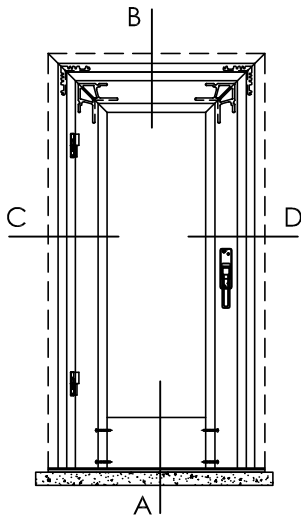
ACCESSORIES

Gasket / Accessories Reference	Section	Description	Unit
GE-G-002		FRONT GLAZING GASKET USED WITH THE FRAME & SASH PROFILE	Linear Meter
GE-G-003		GLAZING BEAD GASKET	Linear Meter
GE-G-005		GLAZING BEAD GASKET	Linear Meter
GE-G-011		GLAZING BEAD GASKET	Linear Meter
GE-G-012		INNER GASKET (FIXED ON TO THE SASH PROFILE)	Linear Meter
GE-G-013		OUTER CONTACT GASKET (WHERE SASH & FRAME ARE IN THE SAME PLANE) (INSERTED IN THE FRAME)	Linear Meter
GE-G-017		CENTRAL GASKET (FIXED ON TO THE FRAME PROFILE)	Linear Meter

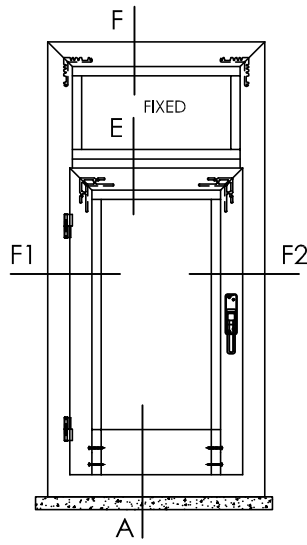
Gasket / Accessories Reference	Section	Description	Unit
GE-G-018		CENTRAL GASKET (FIXED ON TO THE FRAME PROFILE)	Linear Meter
GE-G-025		TO BE USED (ON TO THE BOTTOM DOOR)	Linear Meter
BRUSH - 4MM		4.0 MM NORMAL BRUSH FOR SWING DOOR	Linear Meter
SCR-60		B 4.8 X 60 - DIN 7981 - A2 FOR DOOR BOTTOM FRAME	Piece
SCR-45		B 4.2 X 45 - DIN 7981 - A2 FOR THE PROFILE	Piece
SCR-32		B 4.2 X 32 - DIN 7981 - A2 FOR THRESHOLD PROFILE	Piece
SUC-45		DRAINAGE VALVE	Piece

Gasket / Accessories Reference	Section	Description	Unit
SUP-45		DEFLECTOR	Piece
HI-45		HINGE	Piece
HA-45		HANDLE	Piece

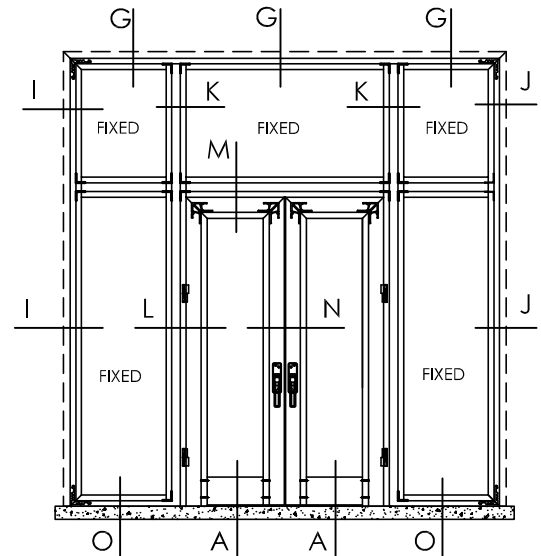
ASSEMBLY DRAWINGS



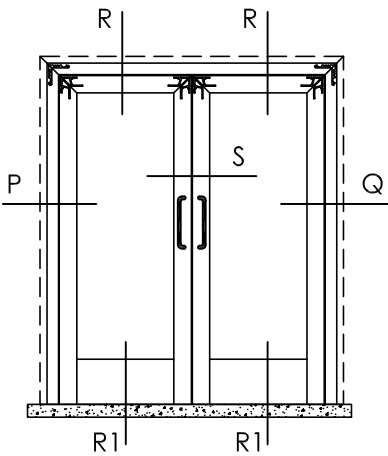
SINGLE LEAF HINGED DOOR
OUTWARD OPENING



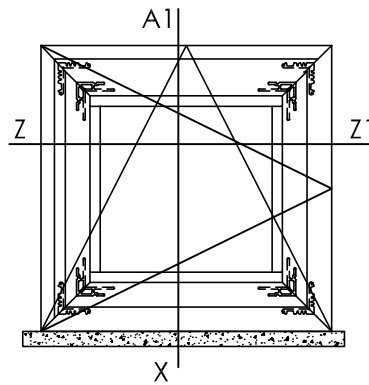
SINGLE LEAF HINGED DOOR
WITH TOP FIXED PANEL
INWARD OPENING



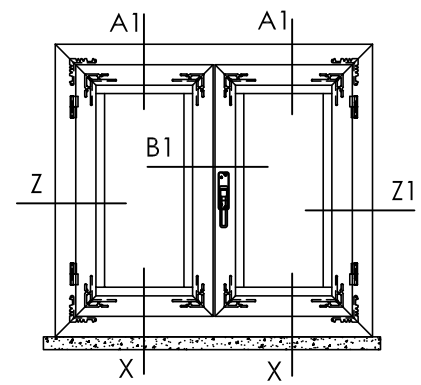
DOUBLE LEAF HINGED DOOR
WITH TOP & SIDE FIXED PANEL
OUTWARD OPENING



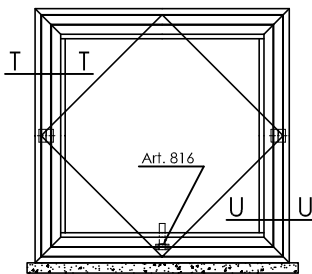
DOUBLE LEAF HINGED
SWING DOOR



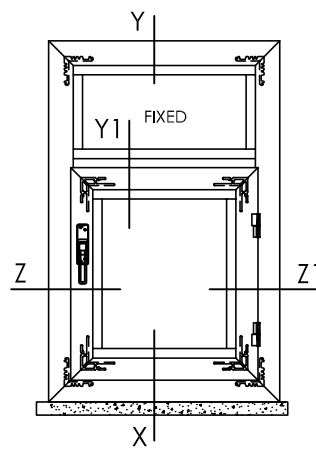
SINGLE LEAF CASEMENT WINDOW
TURN & TILT



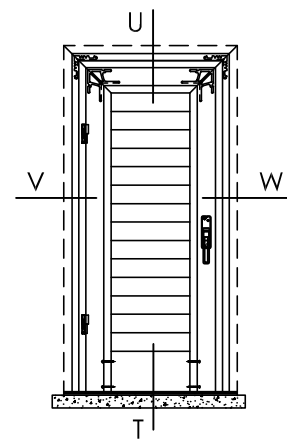
DOUBLE LEAF CASEMENT WINDOW
INWARD OPENING



PIVOT WINDOW



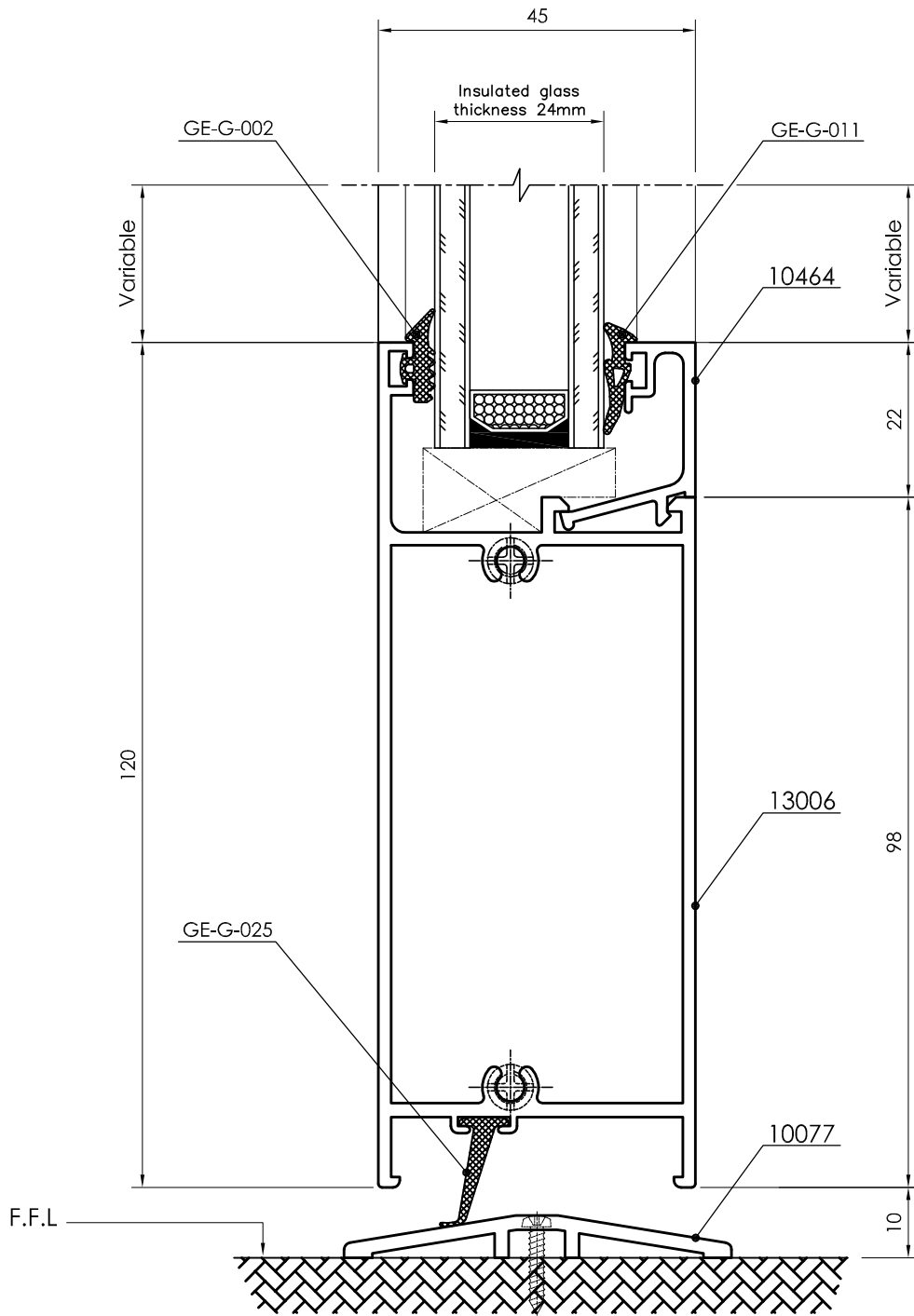
SINGLE LEAF CASEMENT WINDOW
WITH TOP FIXED PANEL
OUTWARD OPENING



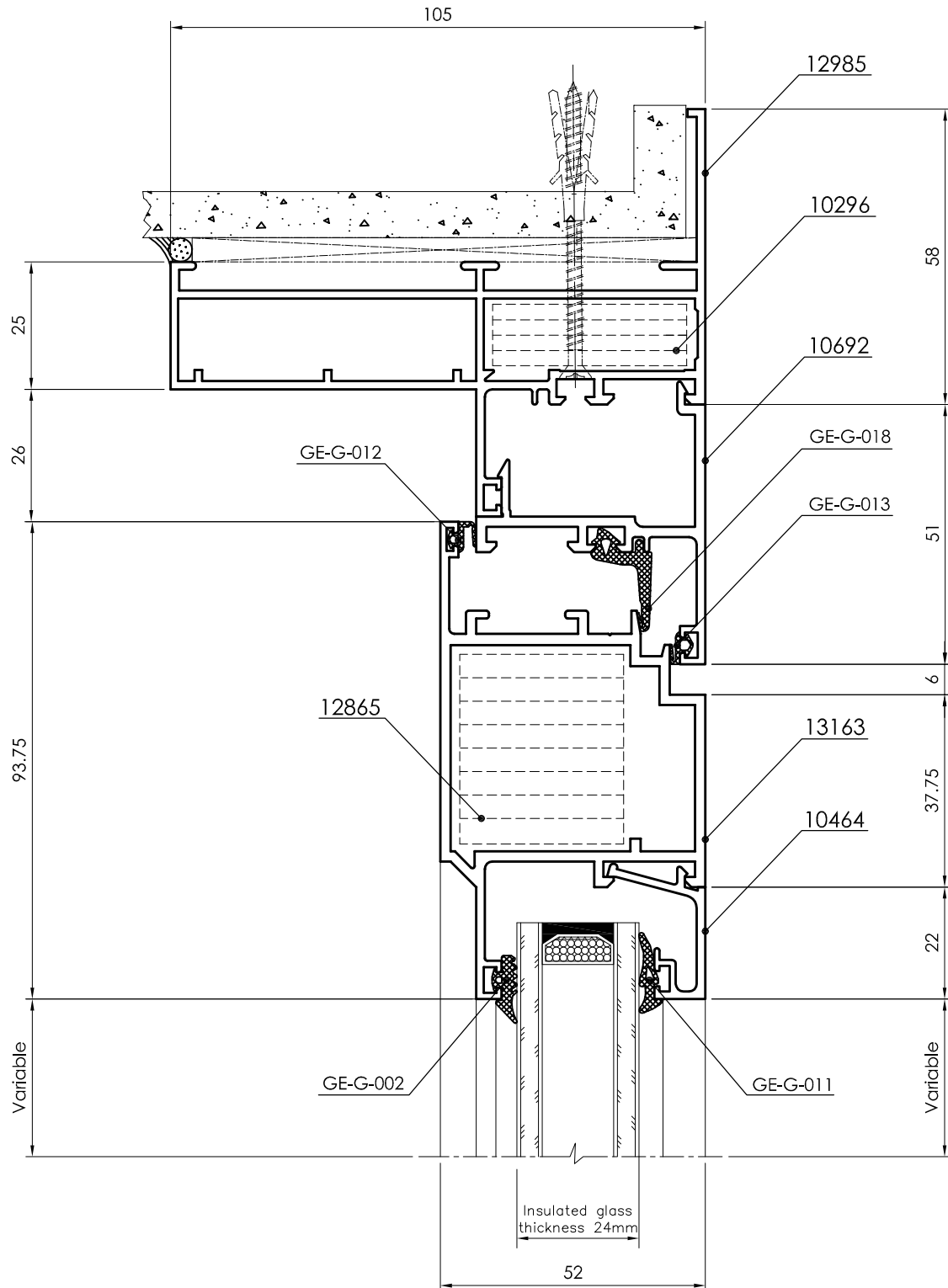
SINGLE LEAF HINGED LOUVER DOOR
OUTWARD OPENING

Bottom Door Section

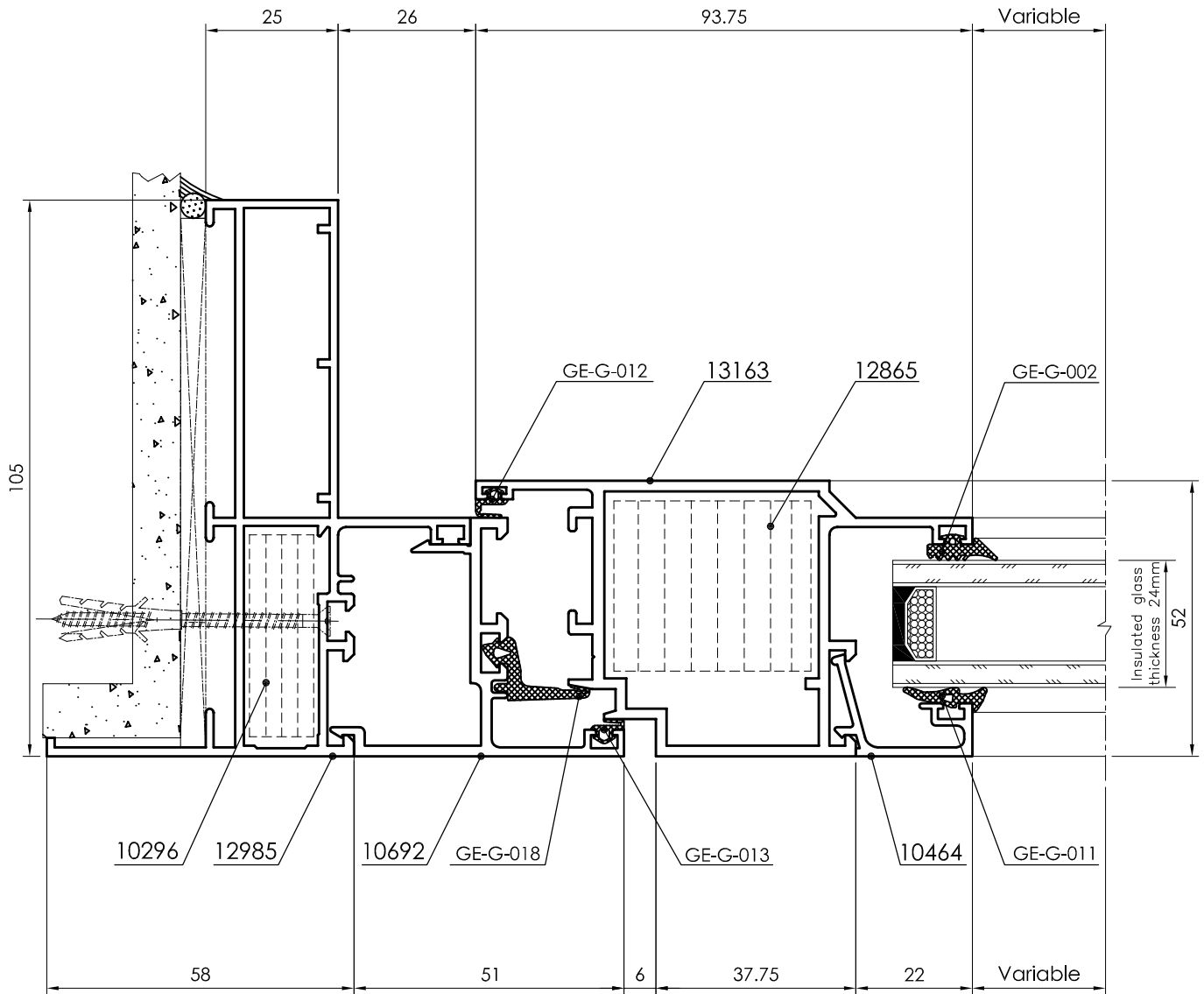
Detail - A



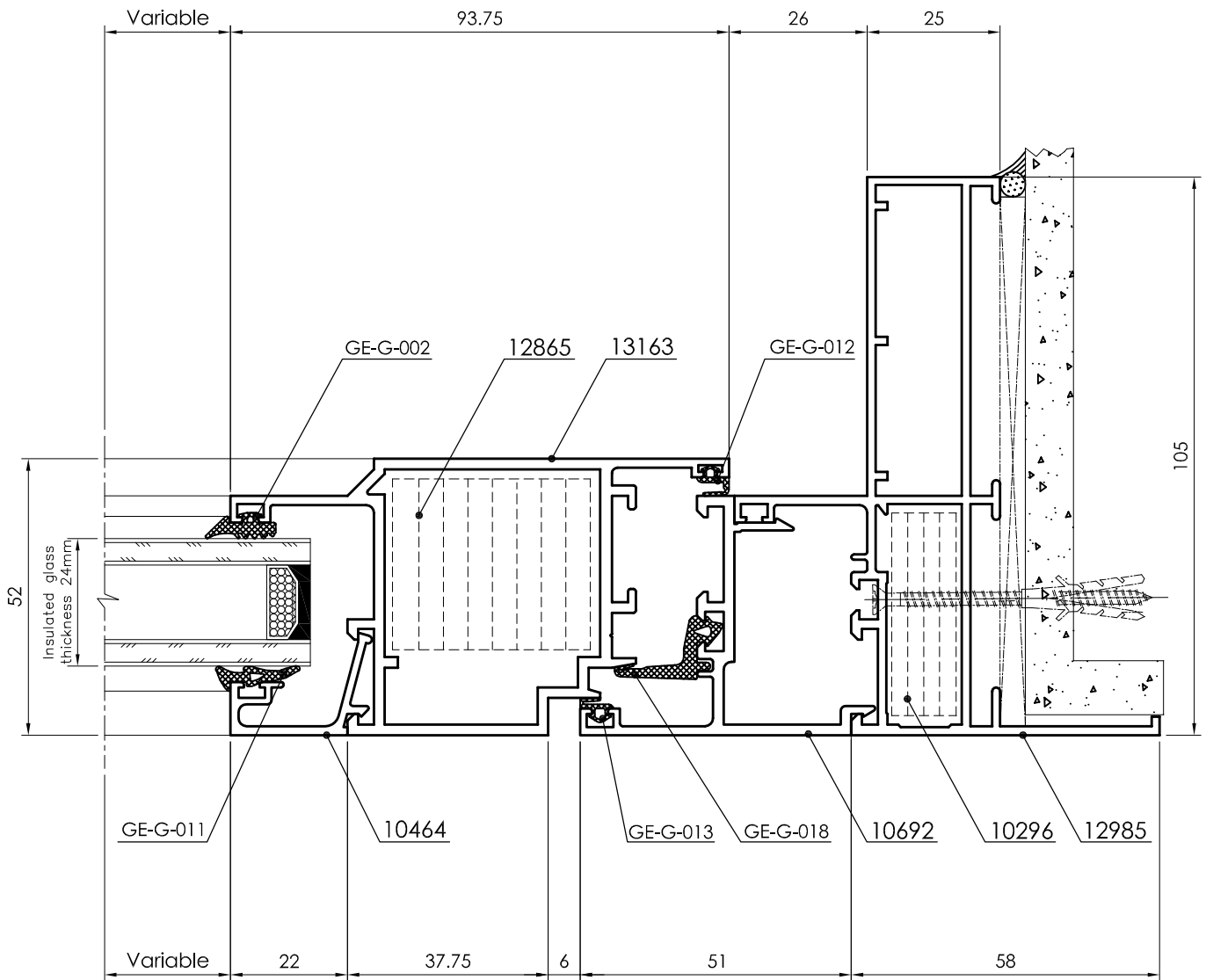
Top Door Section - OUTward Opening
Detail - B



Left Side Door Section - Outward Opening
Detail - C

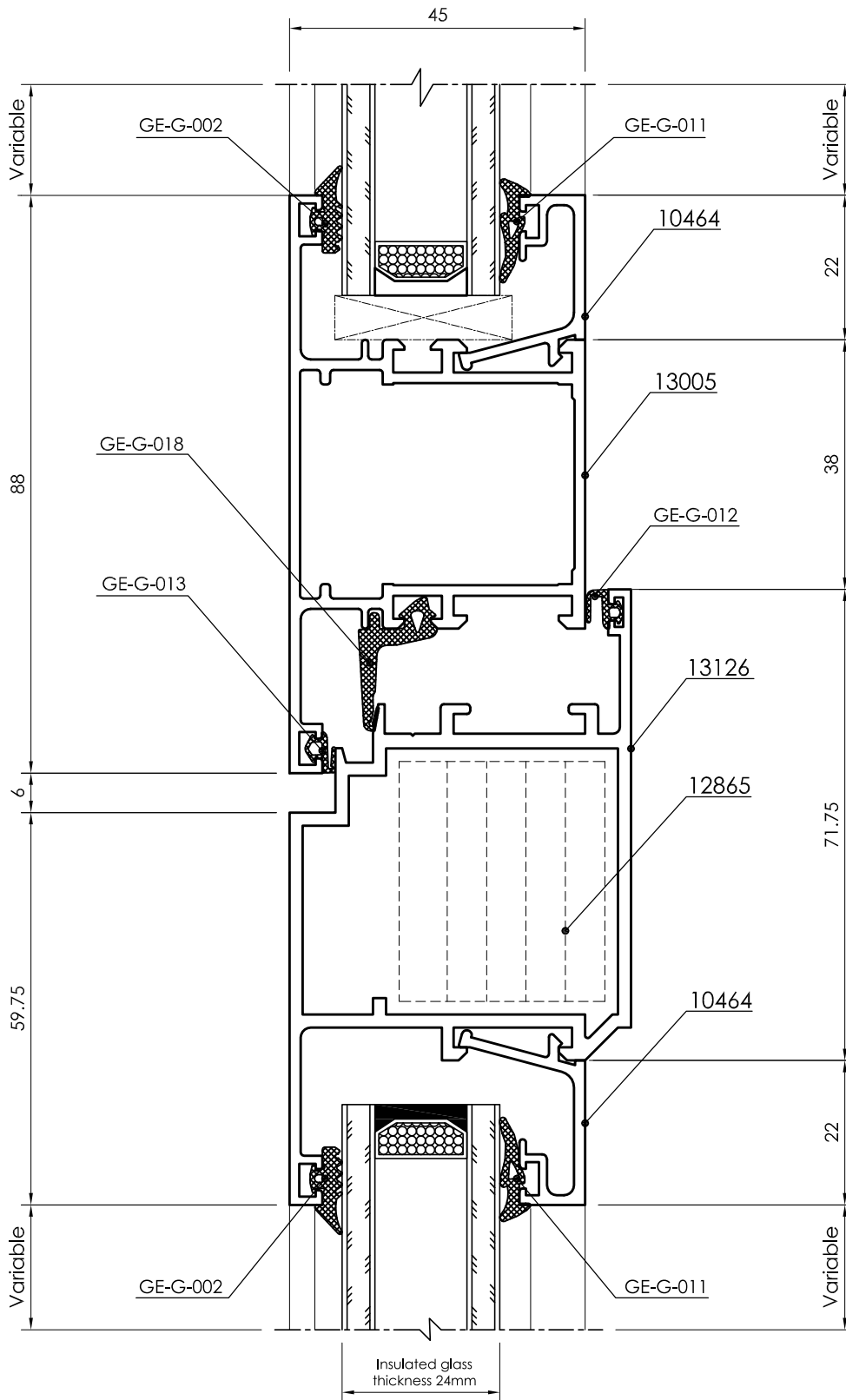


Right Side Door Section - Outward Opening
Detail - D

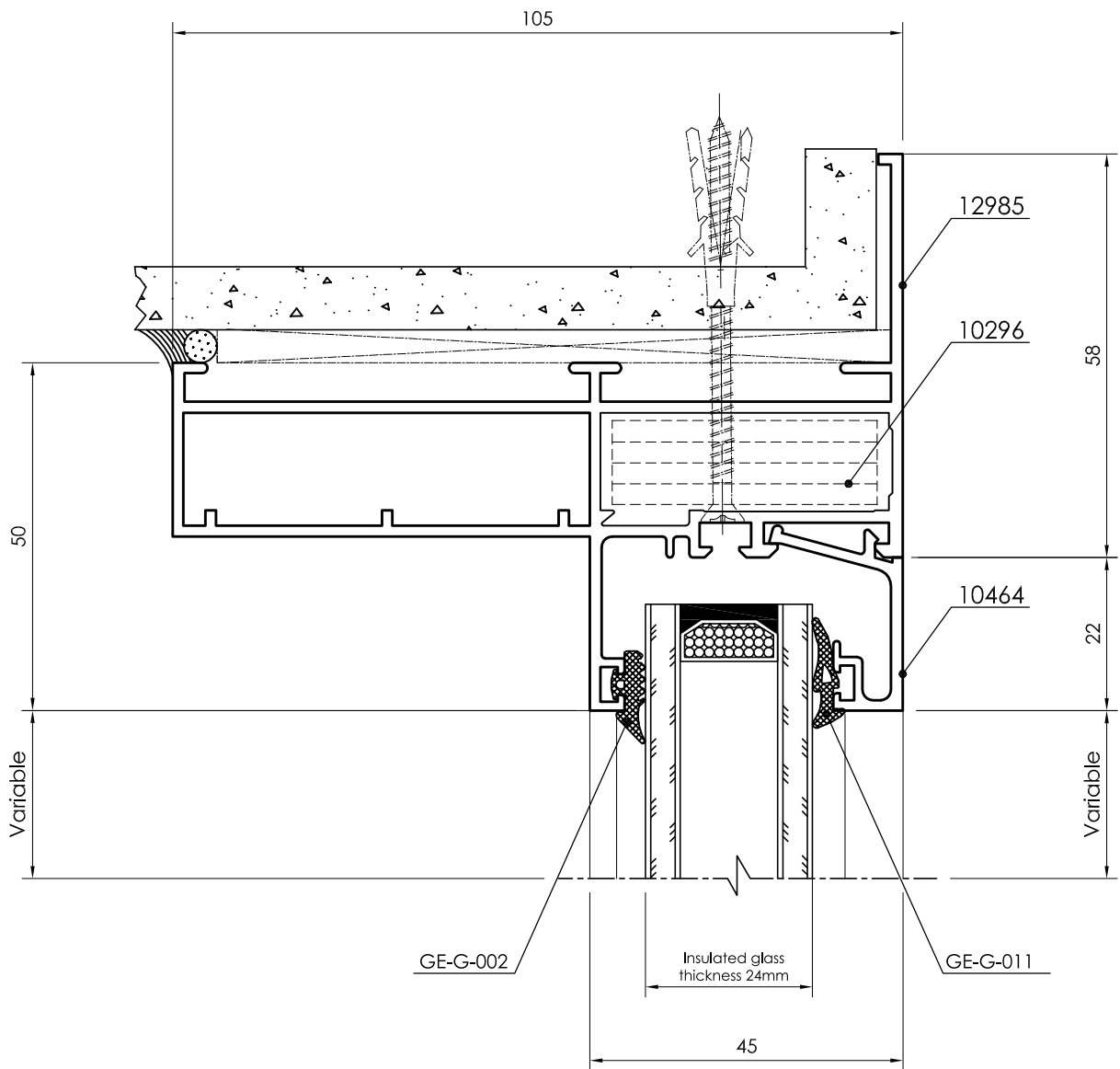


Top Fixed / Opening Door Section

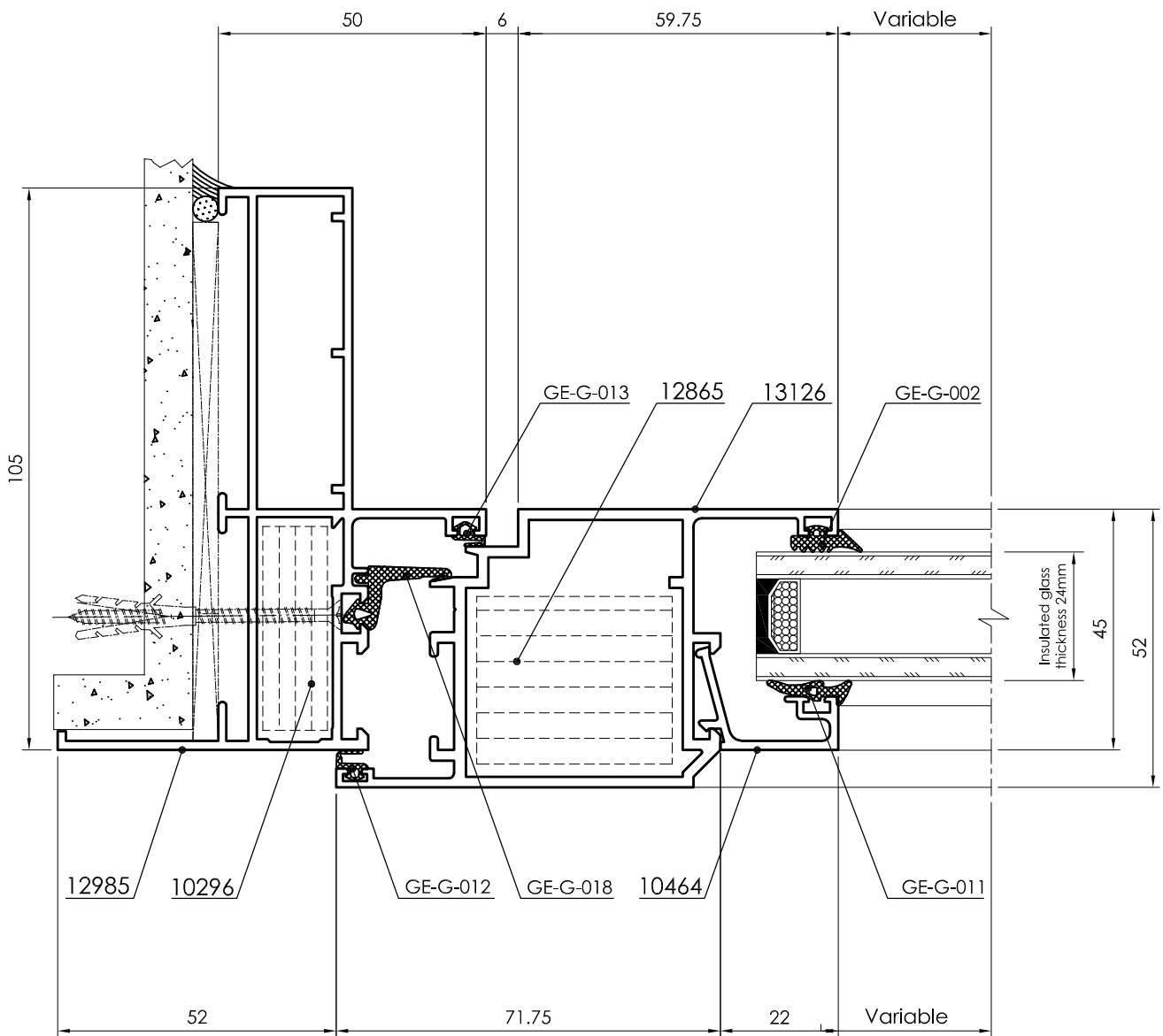
Detail - E



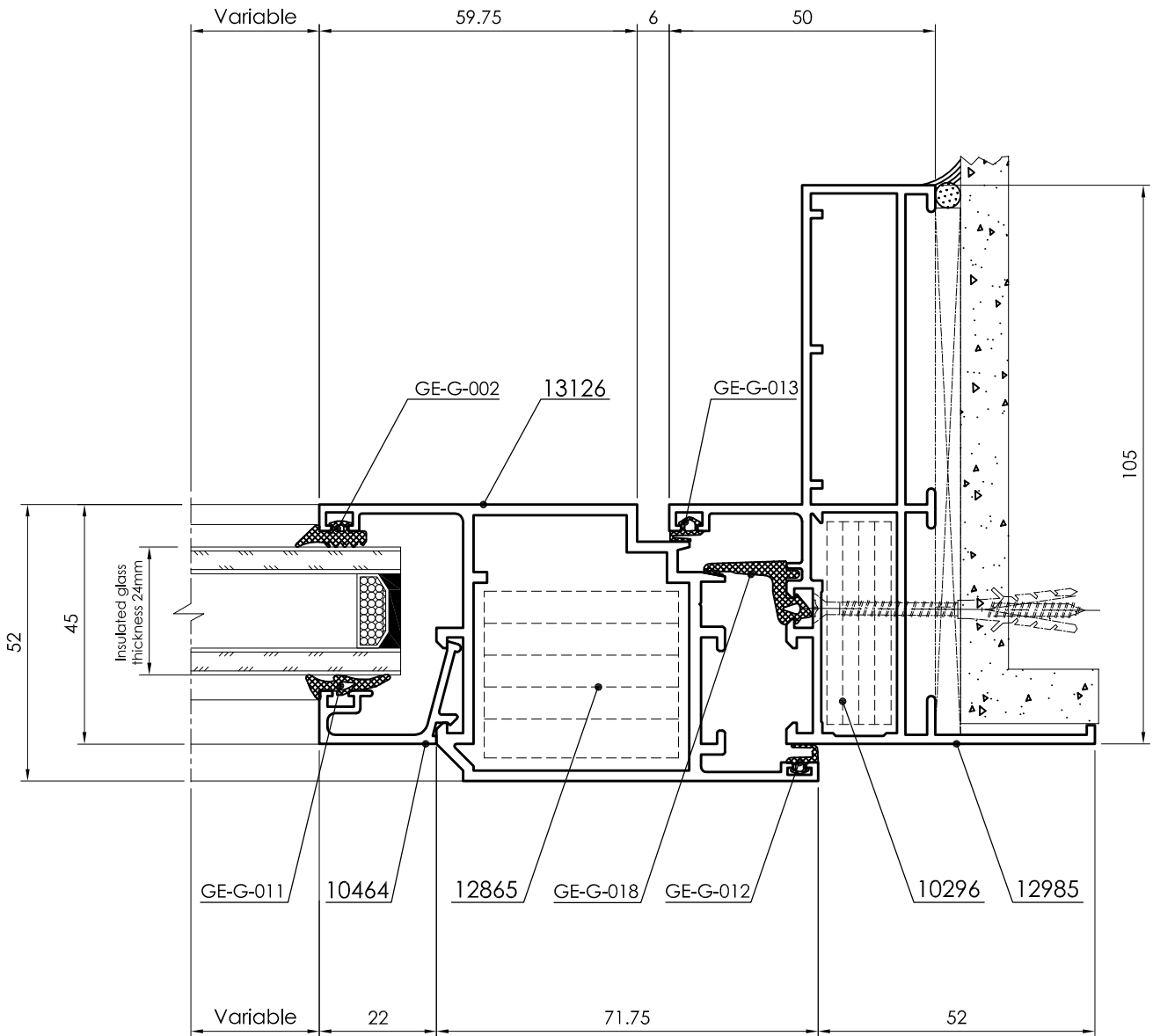
Top Fixed Door Section
Detail - F



Left Side Door Section - Inward Opening
Detail - F1

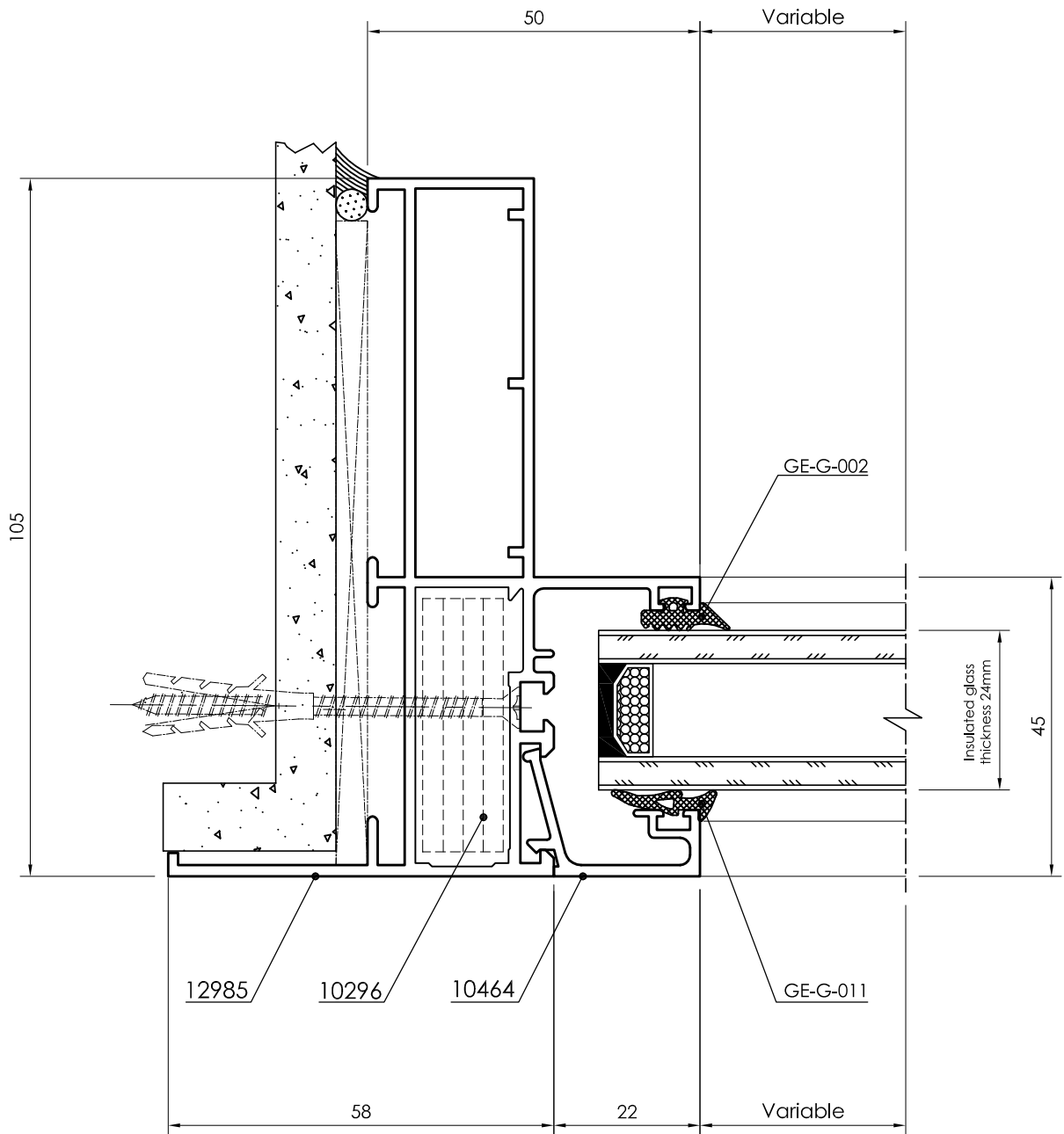


Right Side Door Section - Inward Opening
 Detail - F2

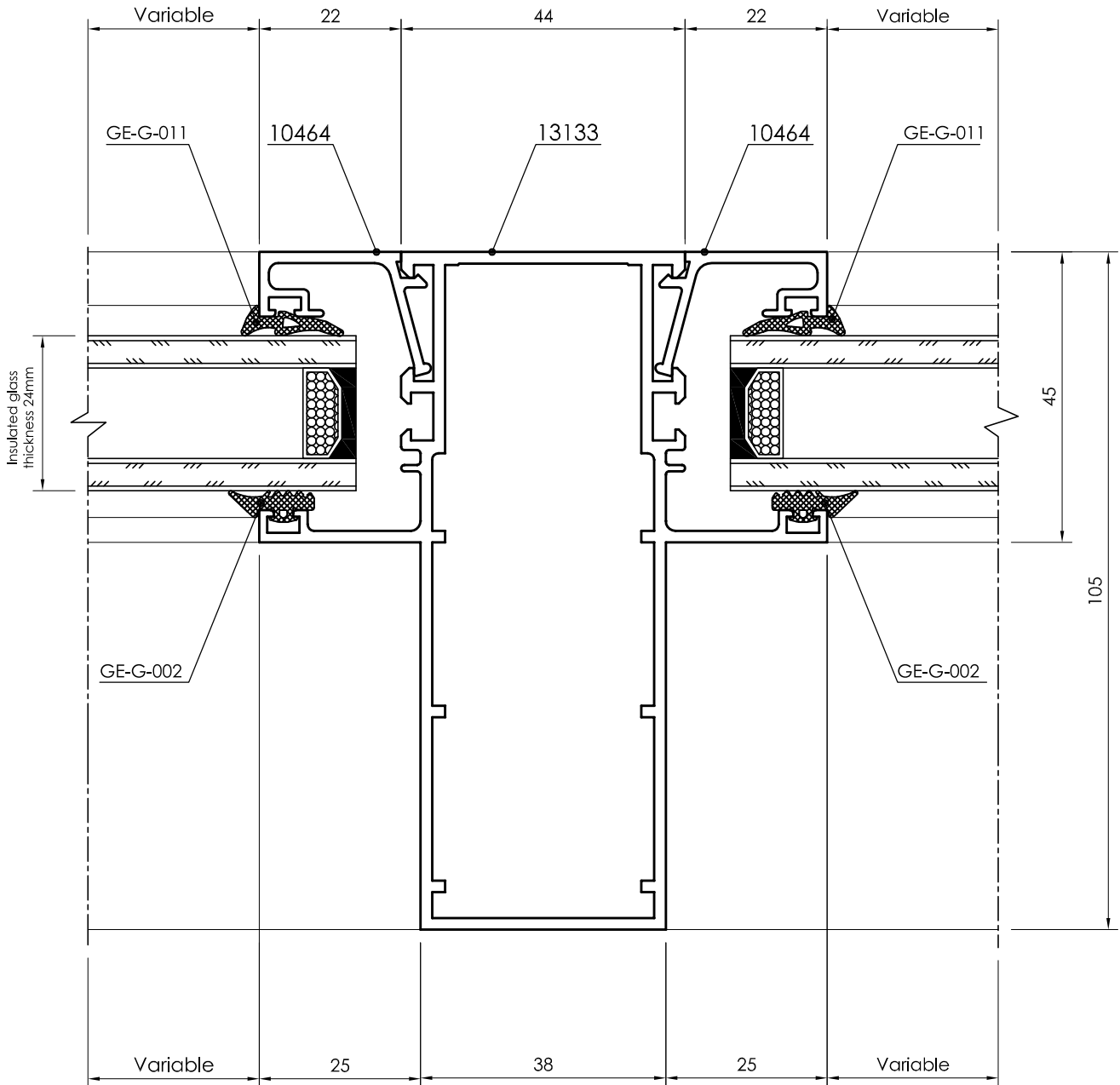


Left Fixed Door Section

Detail - I

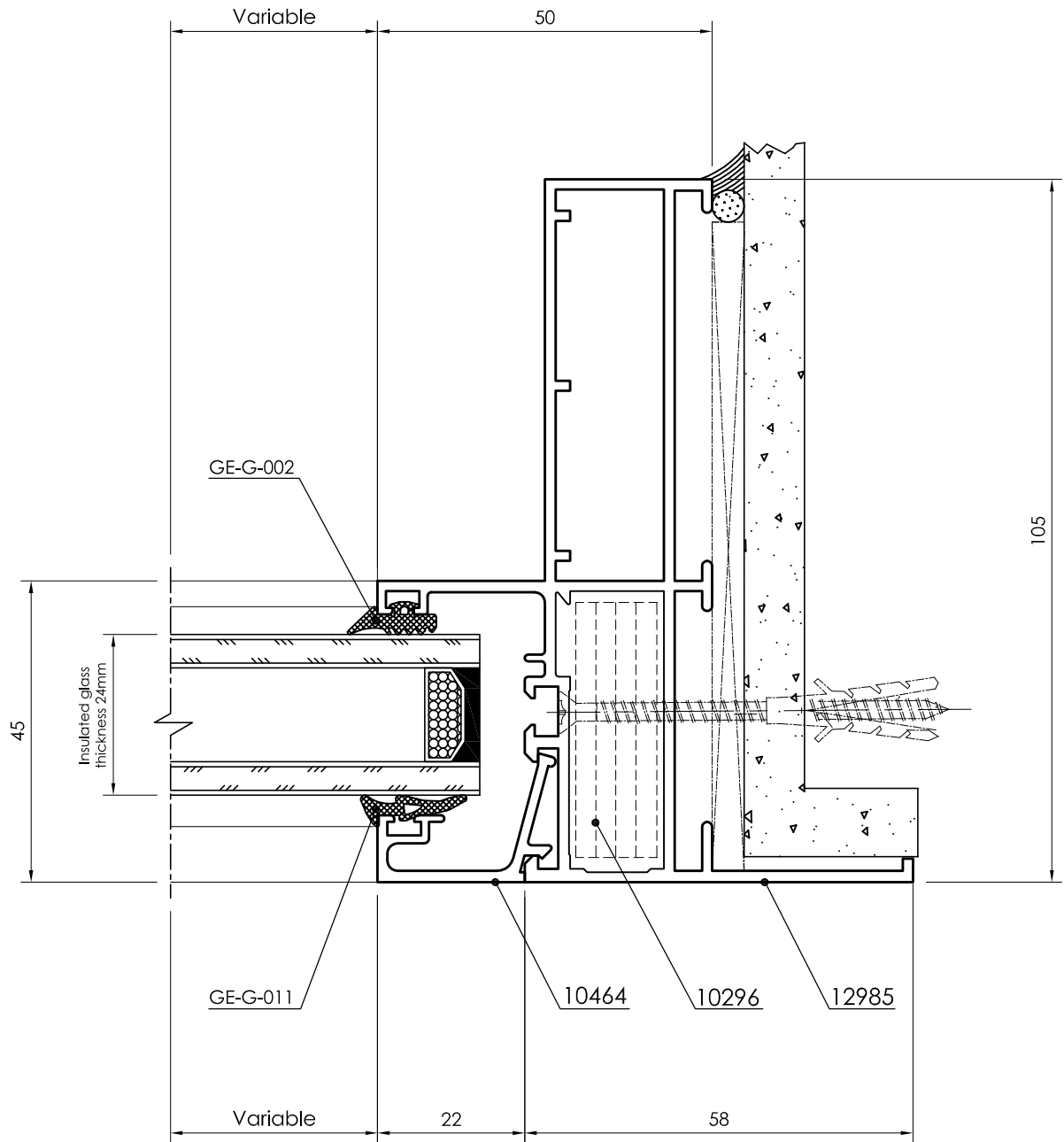


Mullion Top Fixed Section
Detail - K

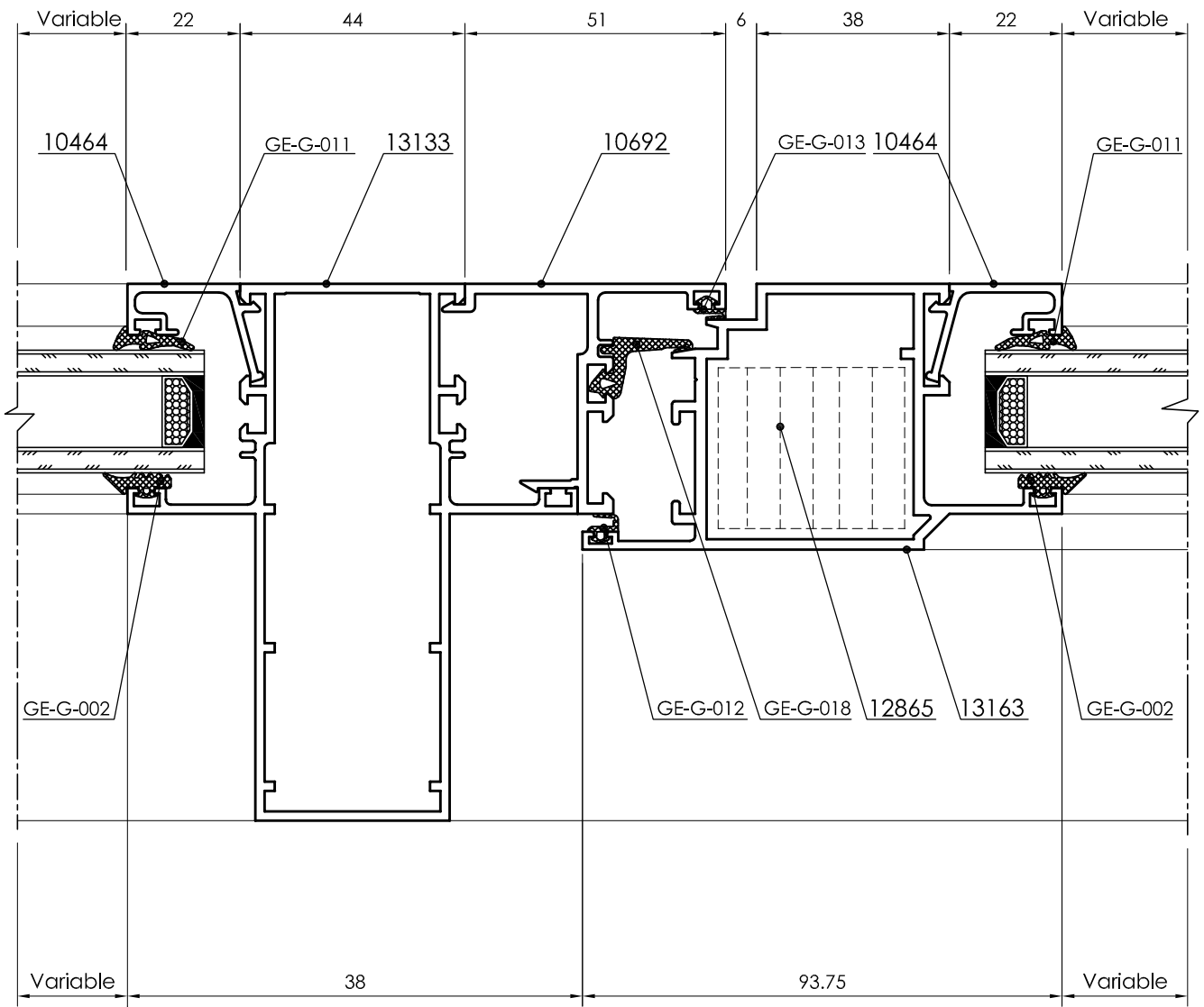


Right Fixed Door Section

Detail - J

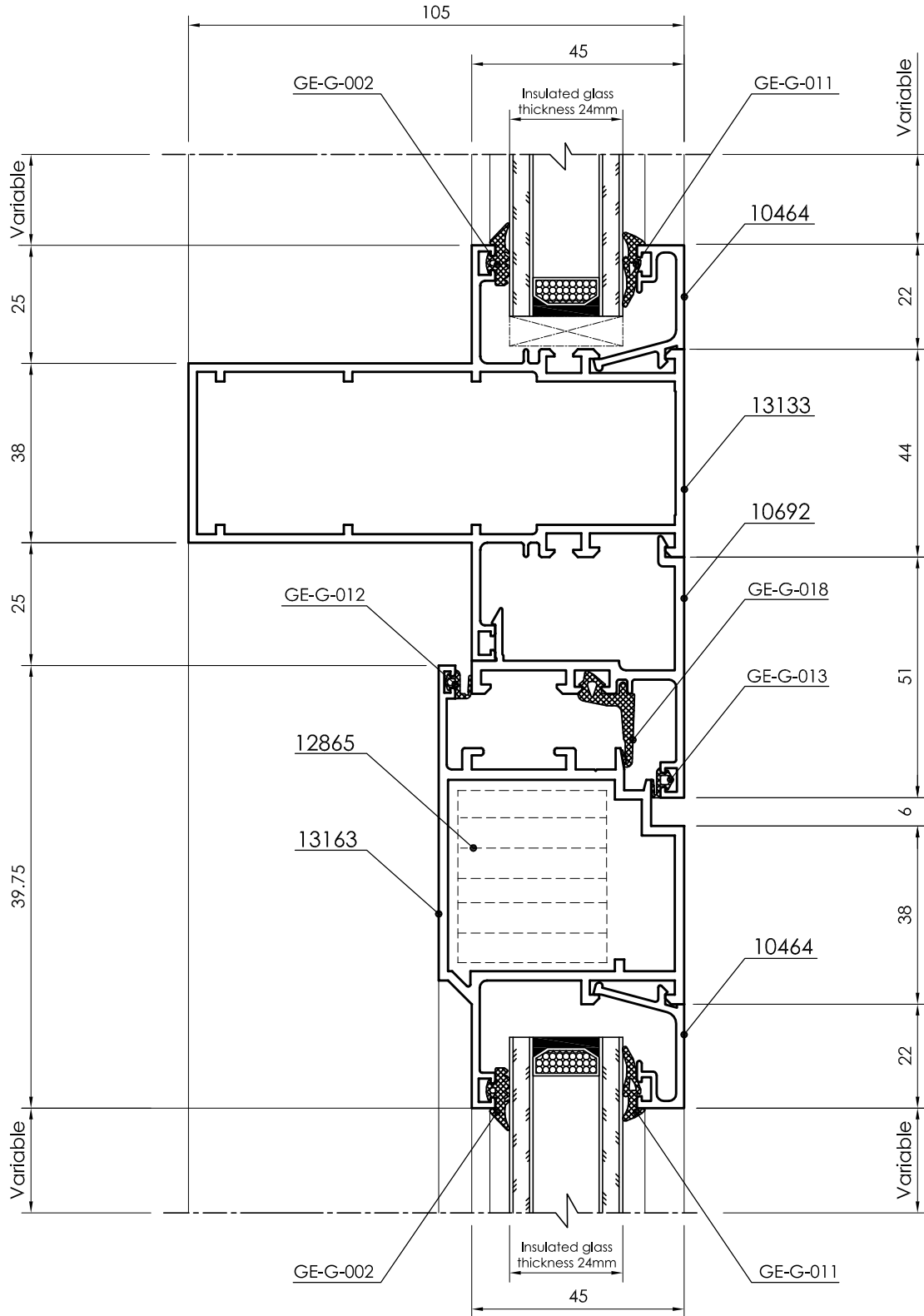


Mullion Fixed Section & Open Door - Outward Opening
Detail - L

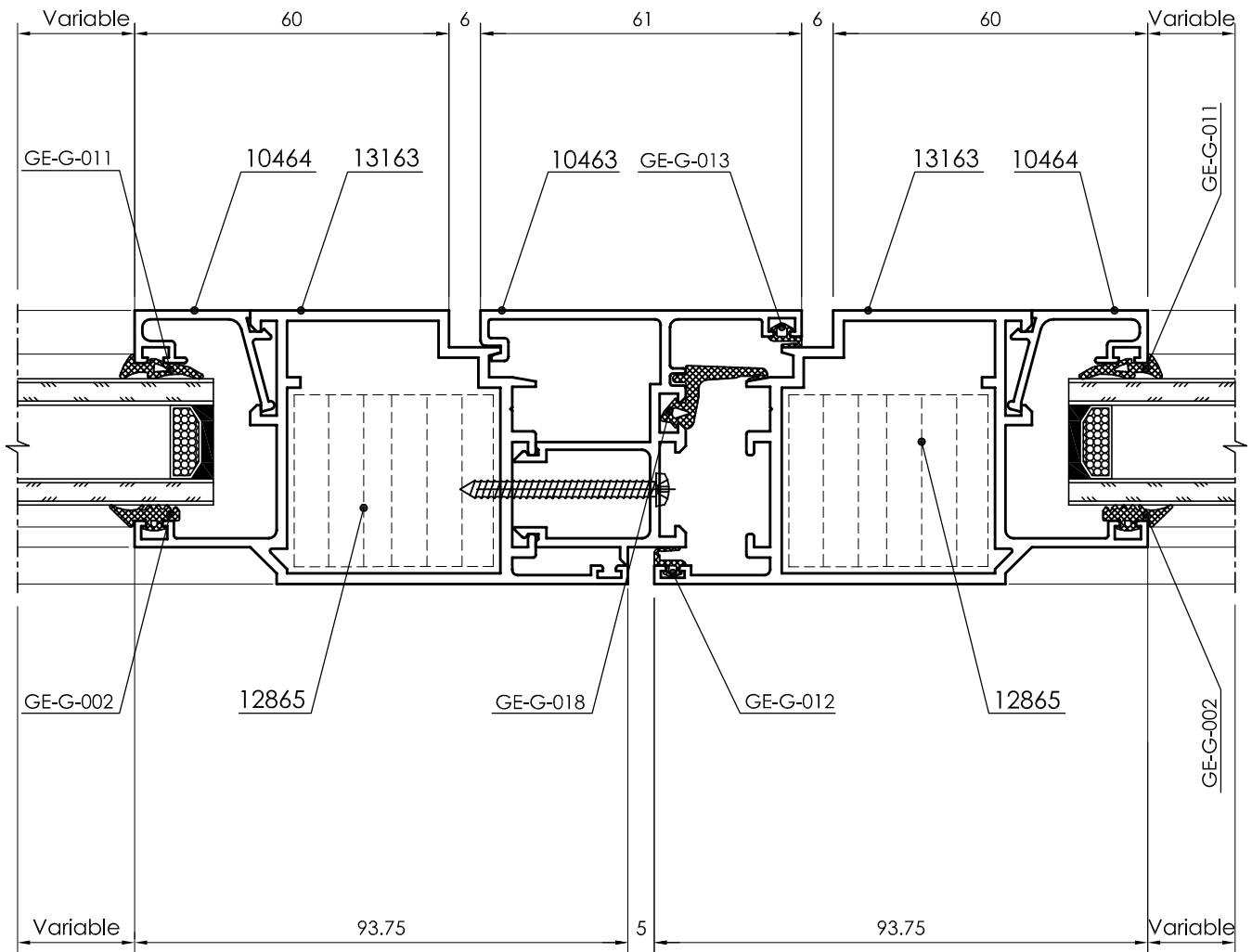


Transom Fixed Section & Door - Outward Opening

Detail - M

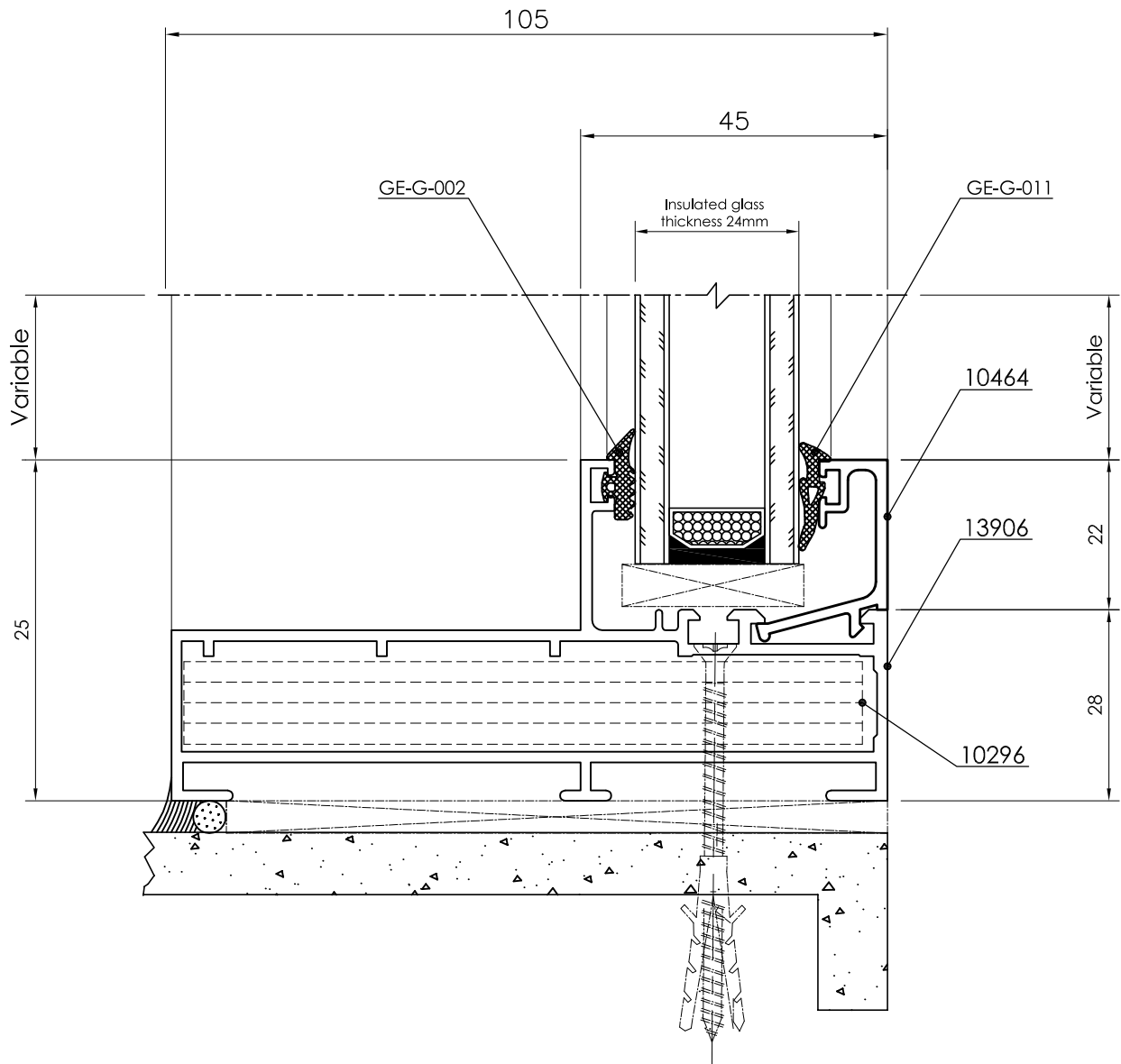


Double Leaf Door Section - Inward Opening
Detail - N

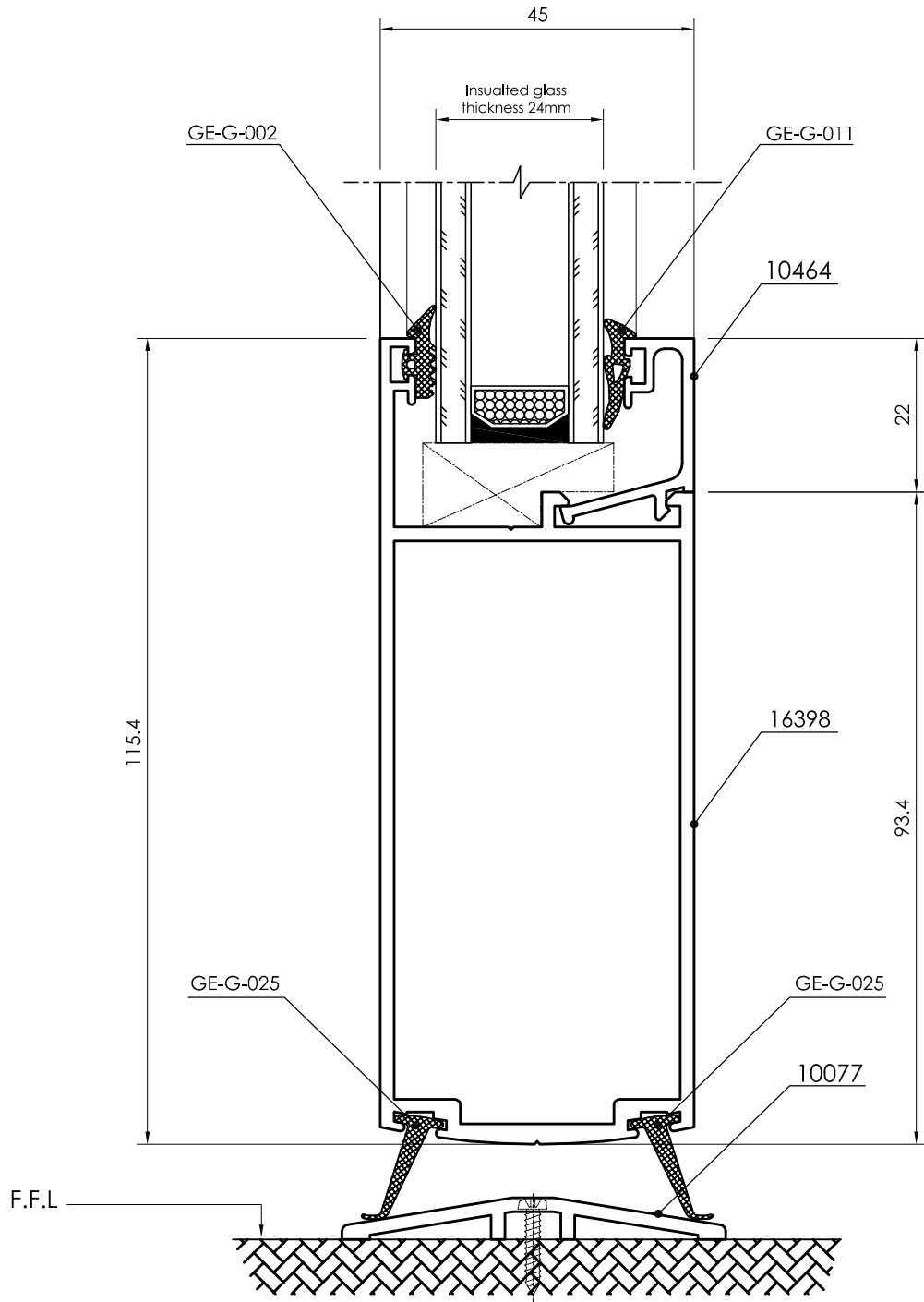


Bottom Fixed Section

Detail - O

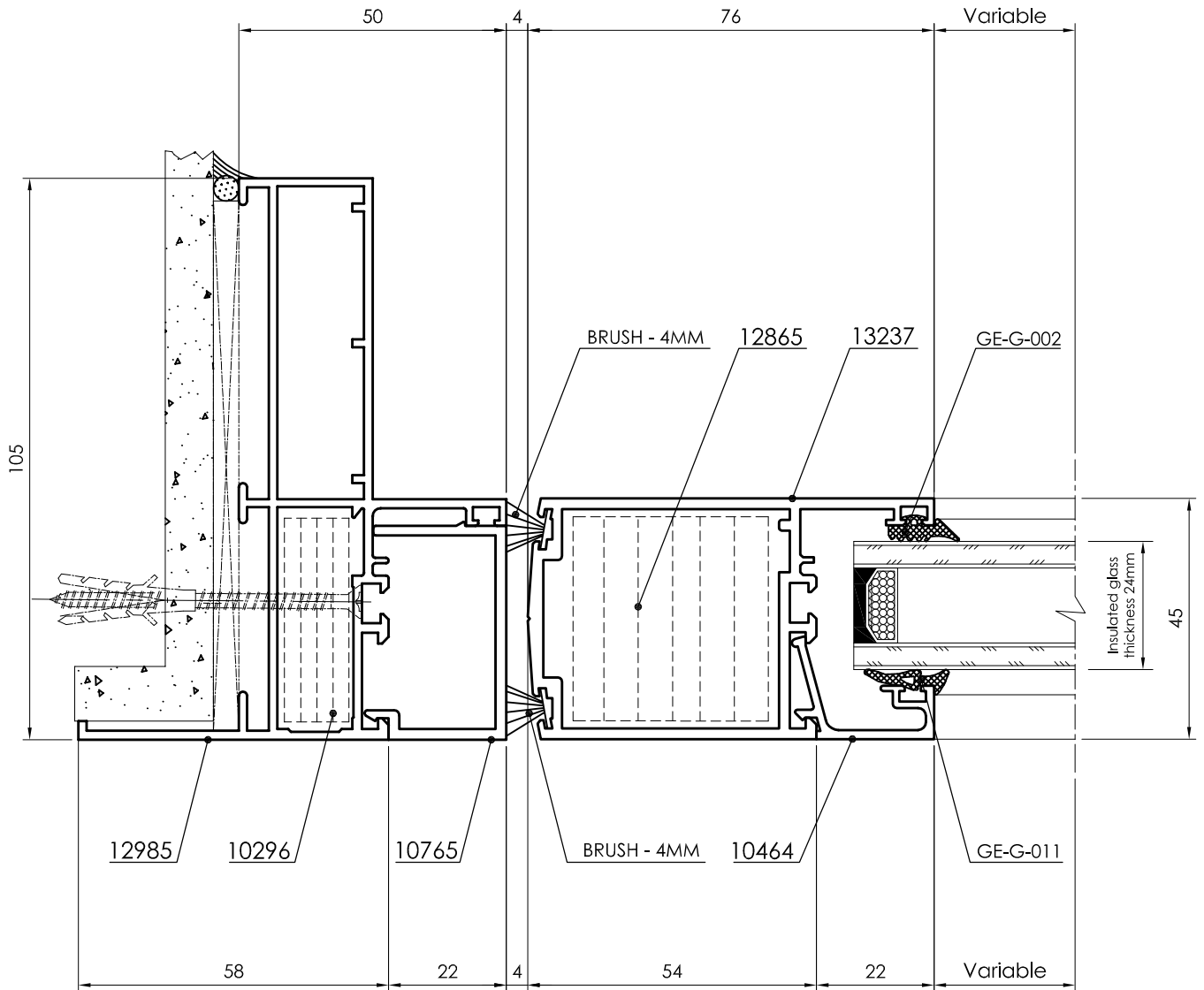


Bottom Swing Door Section
Detail - R1

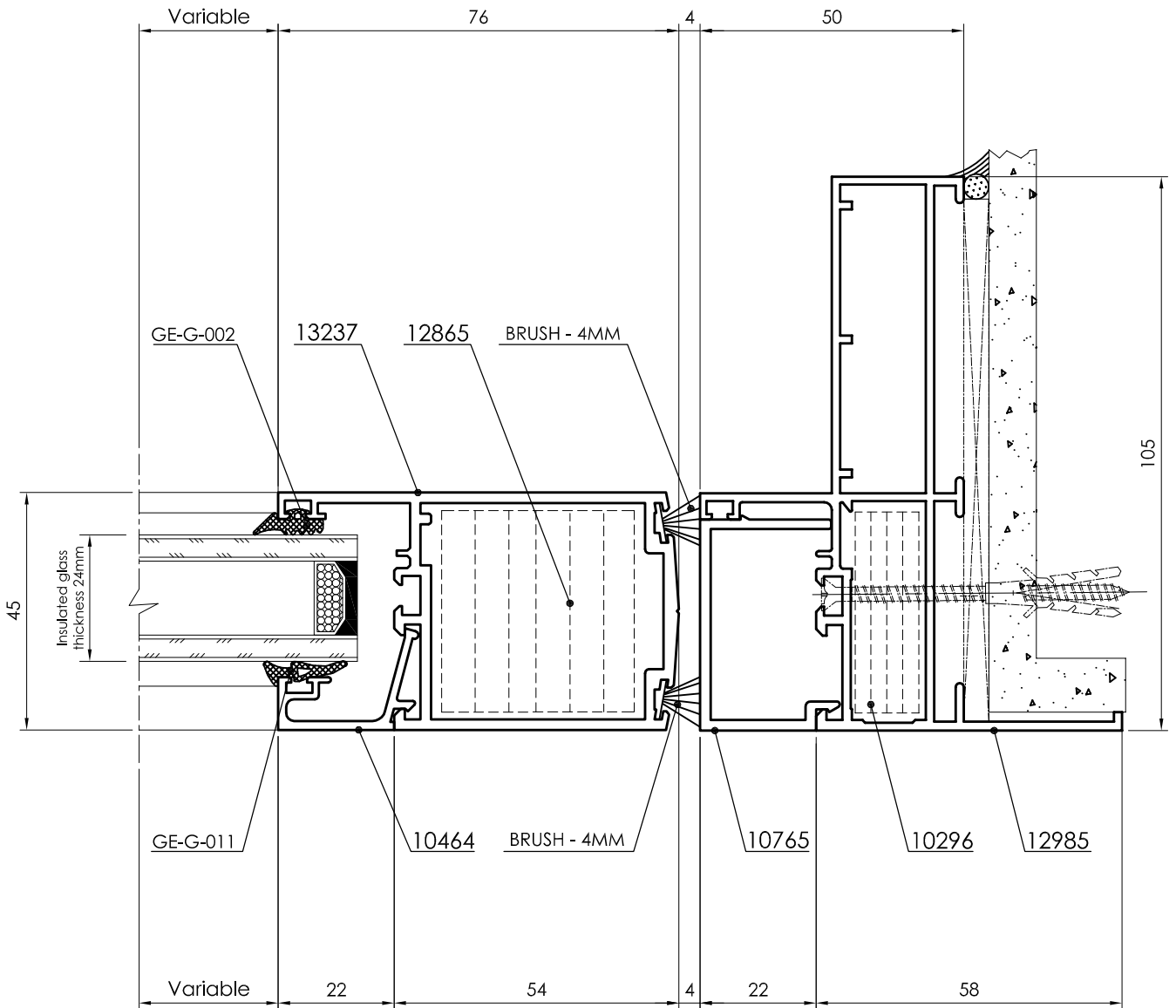


Left Swing Door Section

Detail - P

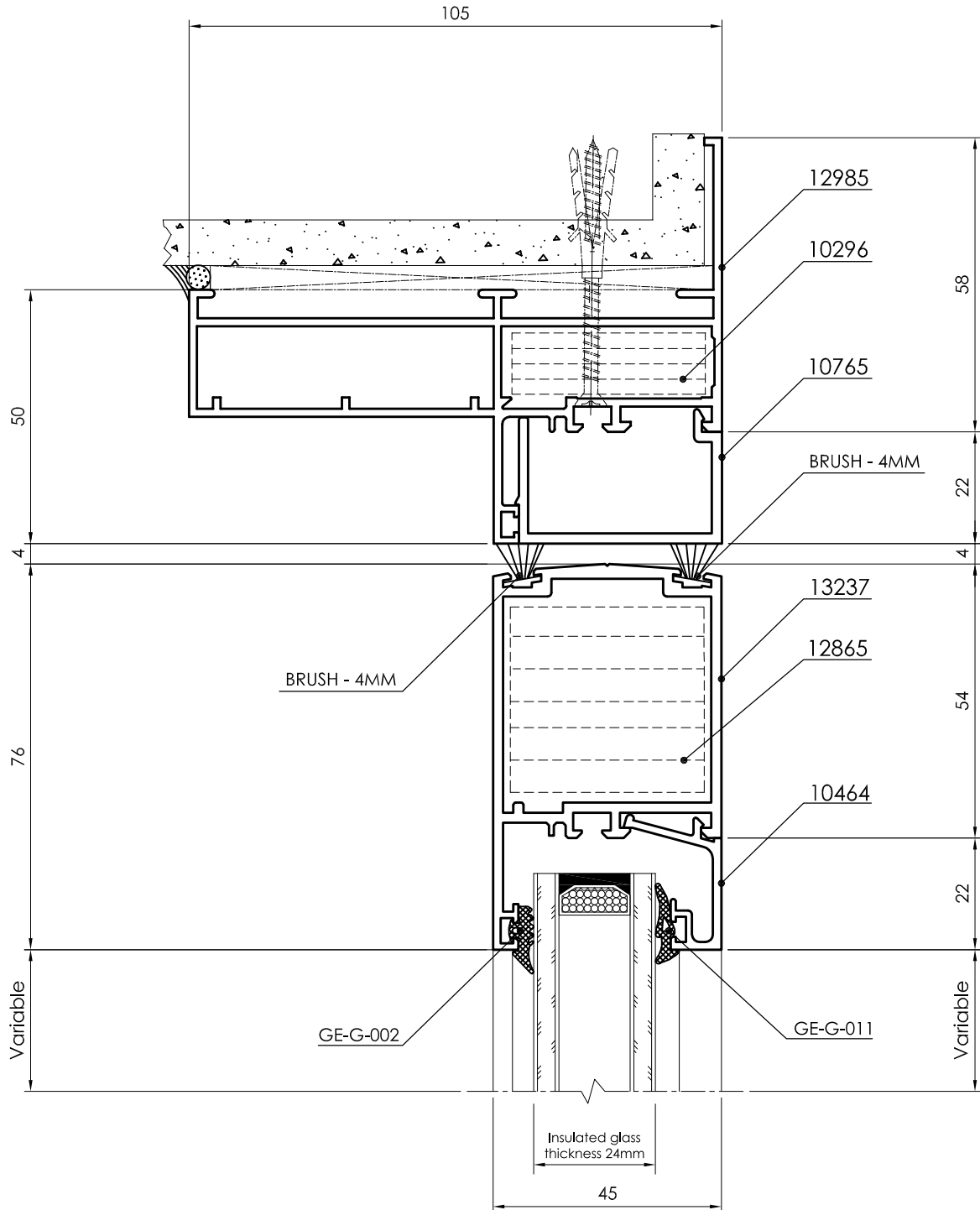


Right Swing Door Section
Detail - Q

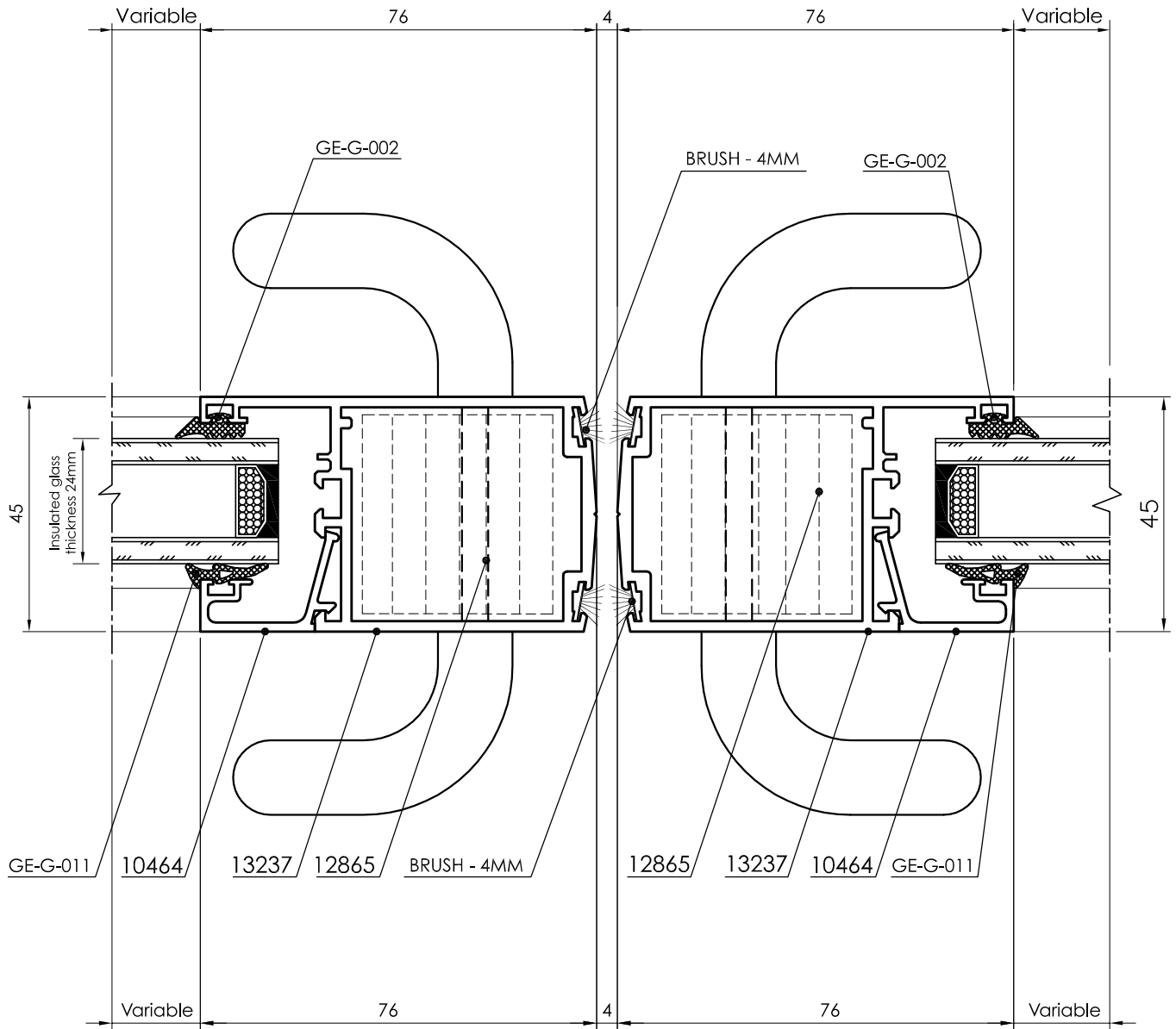


Top Swing Door Section

Detail - R

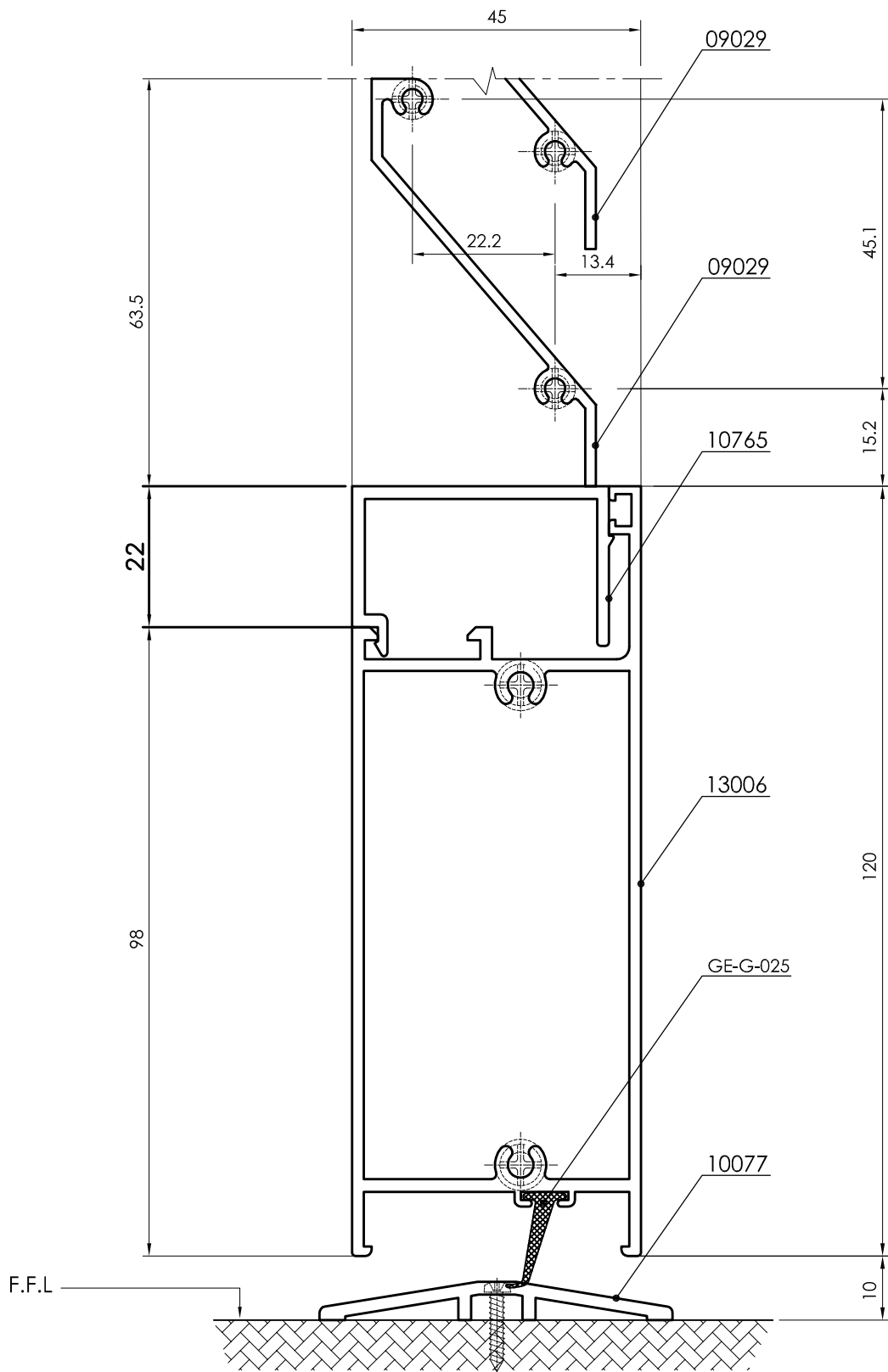


Double Leaf Swing Door Section
Detail - S



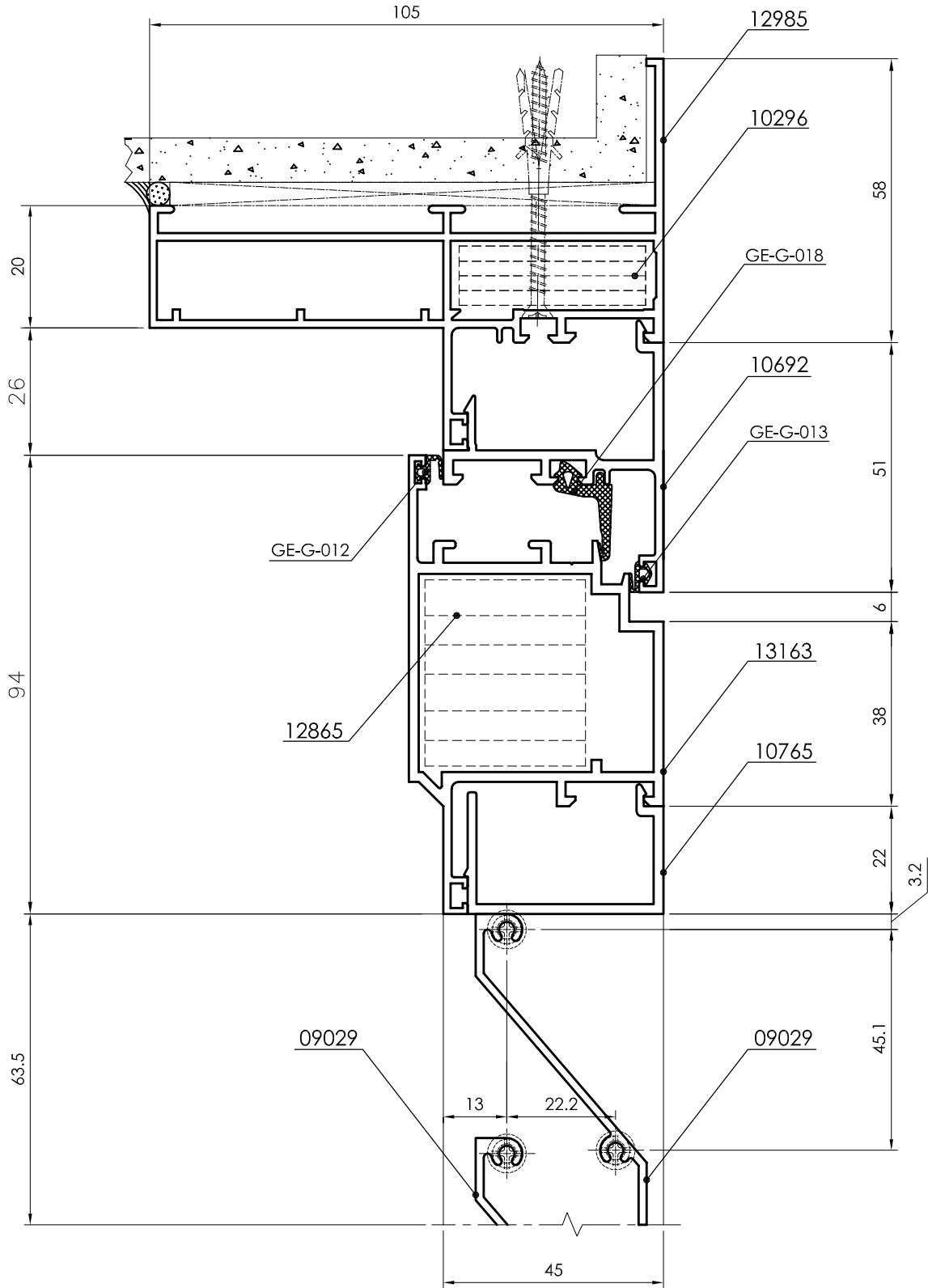
Bottom Louver Door Section

Detail - T



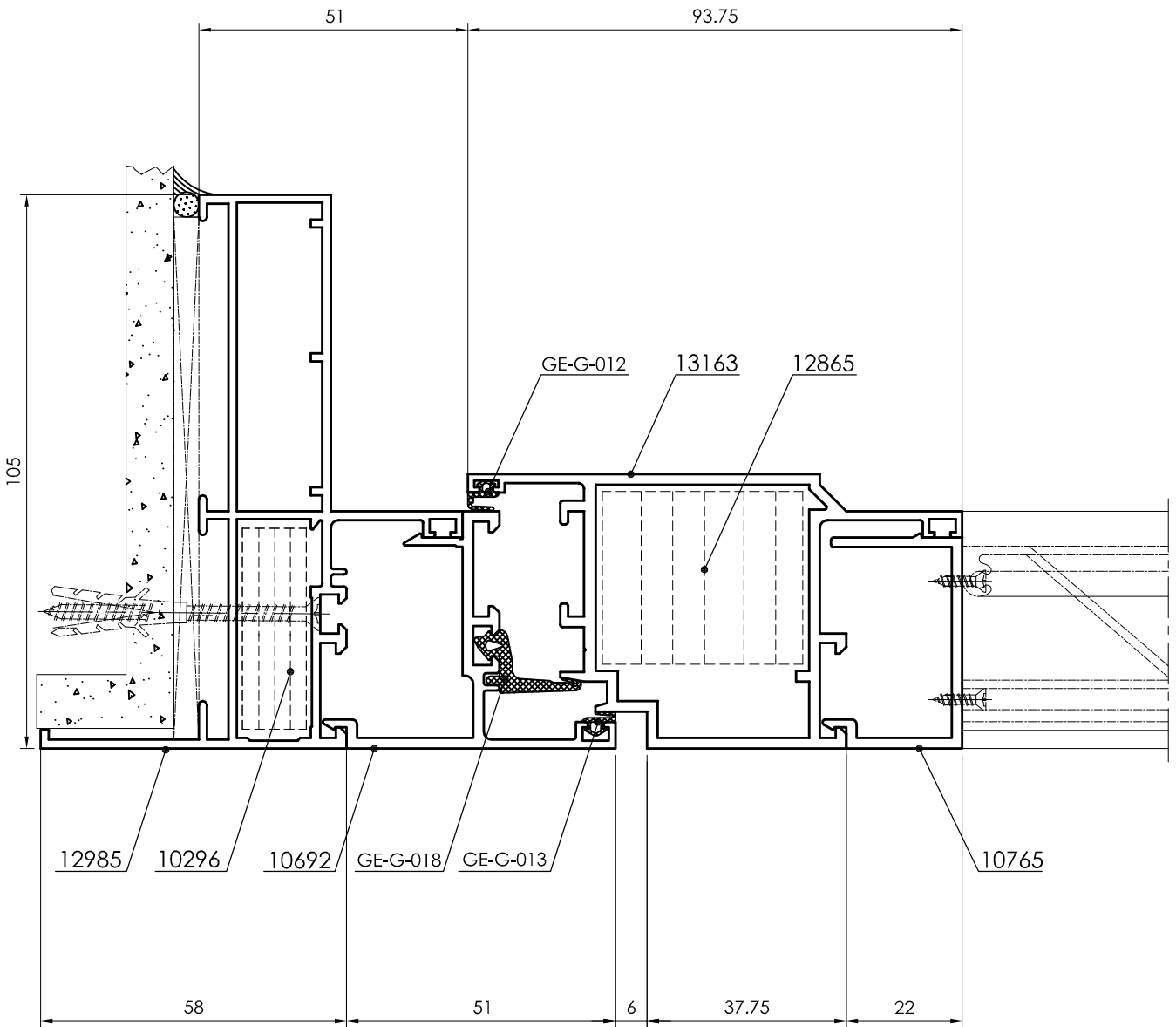
Top Louver Door Section

Detail - U



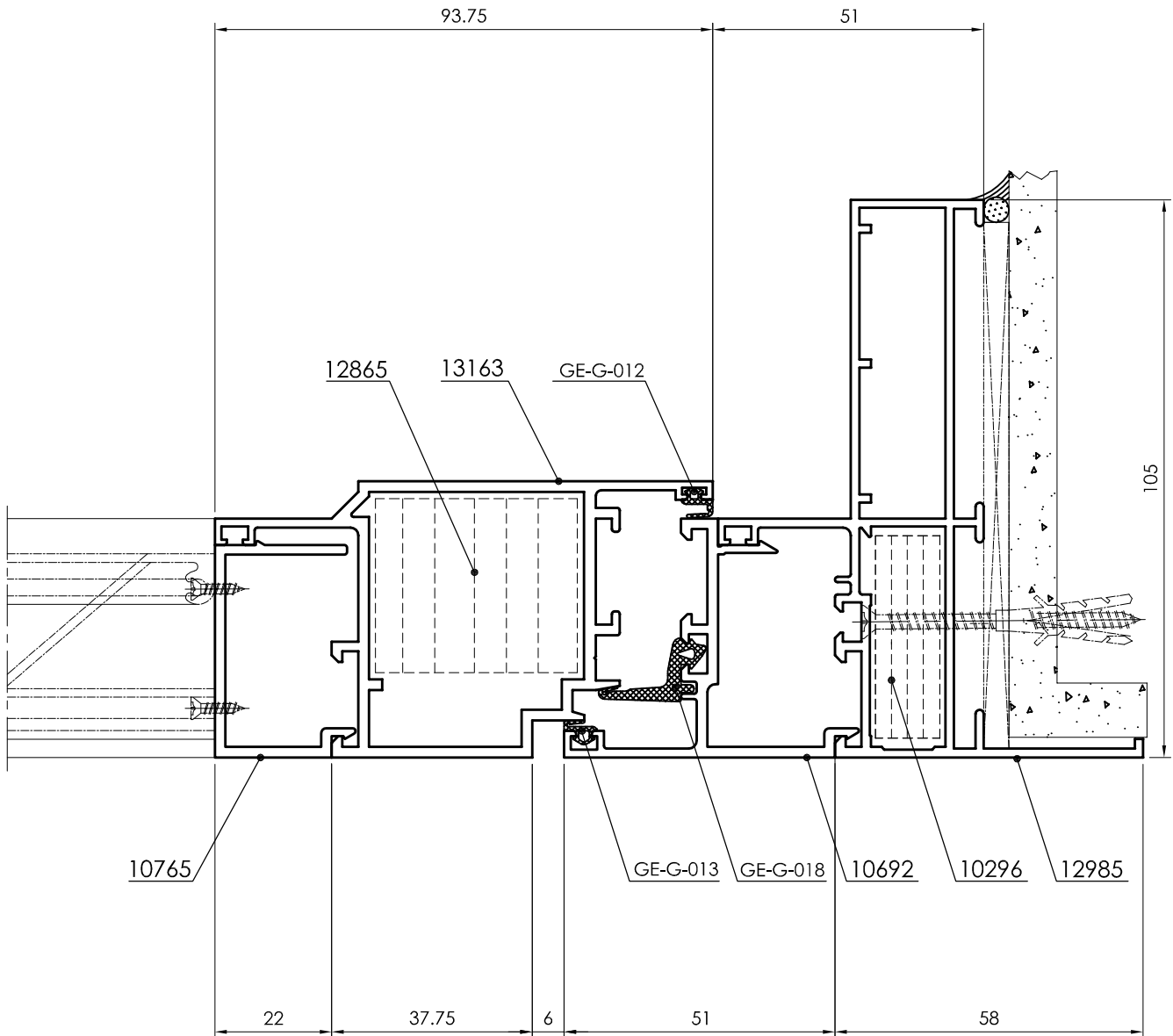
Left Louver Door Section

Detail - V



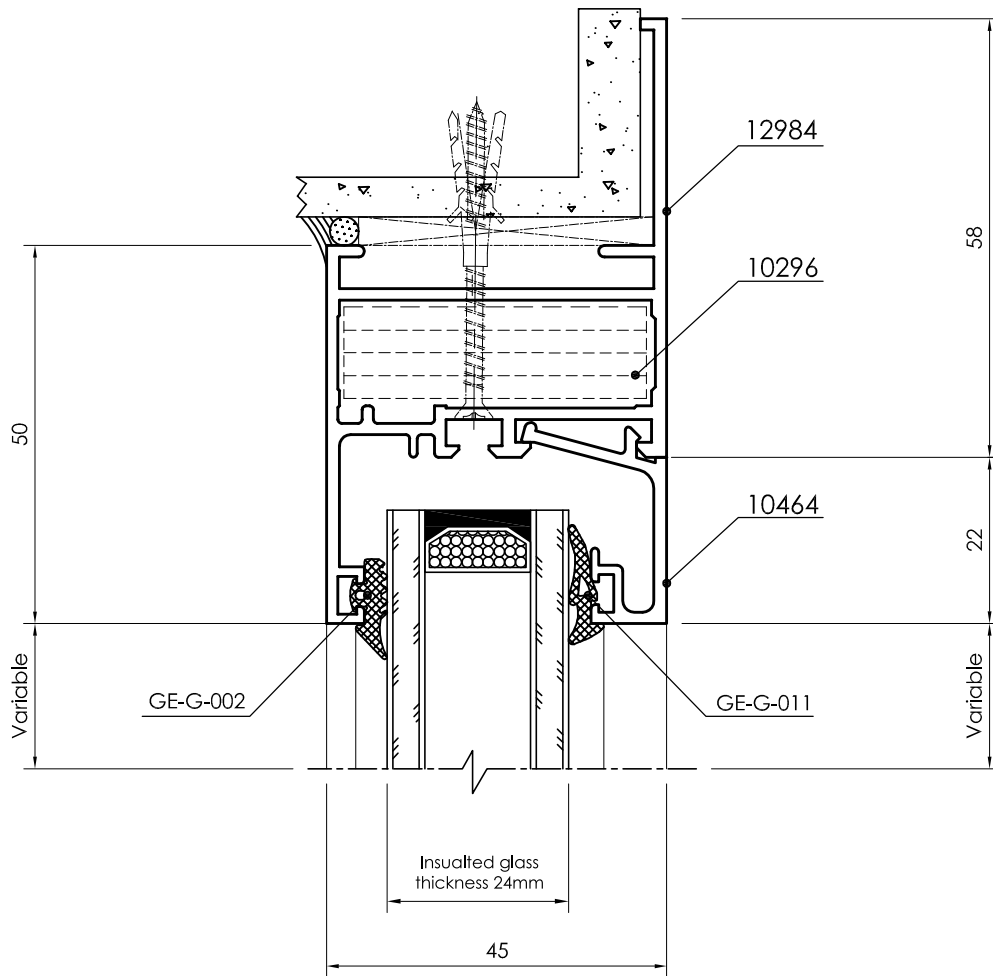
Right Louver Door Section

Detail - W

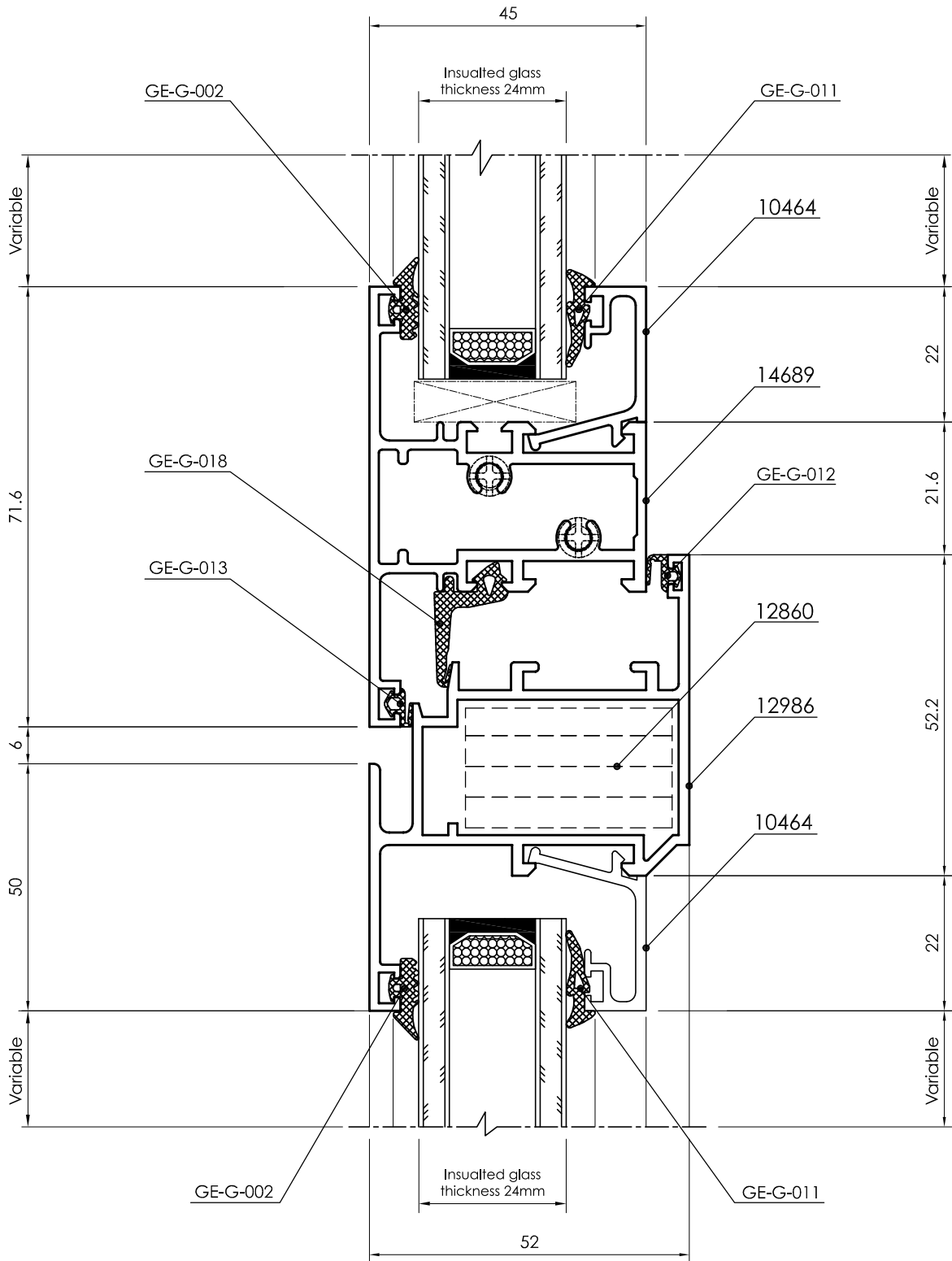


Top Fixed Window Section

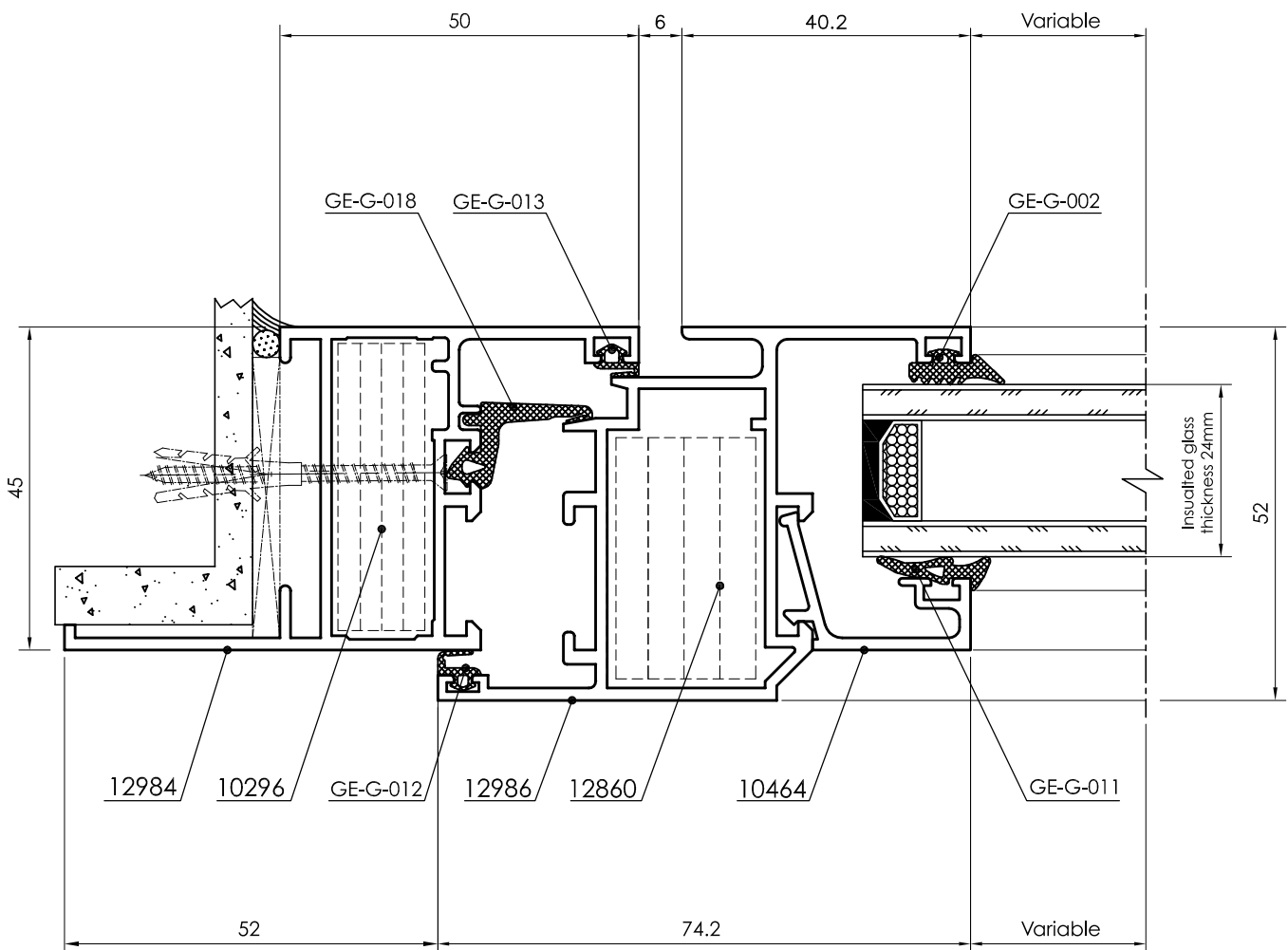
Detail - Y



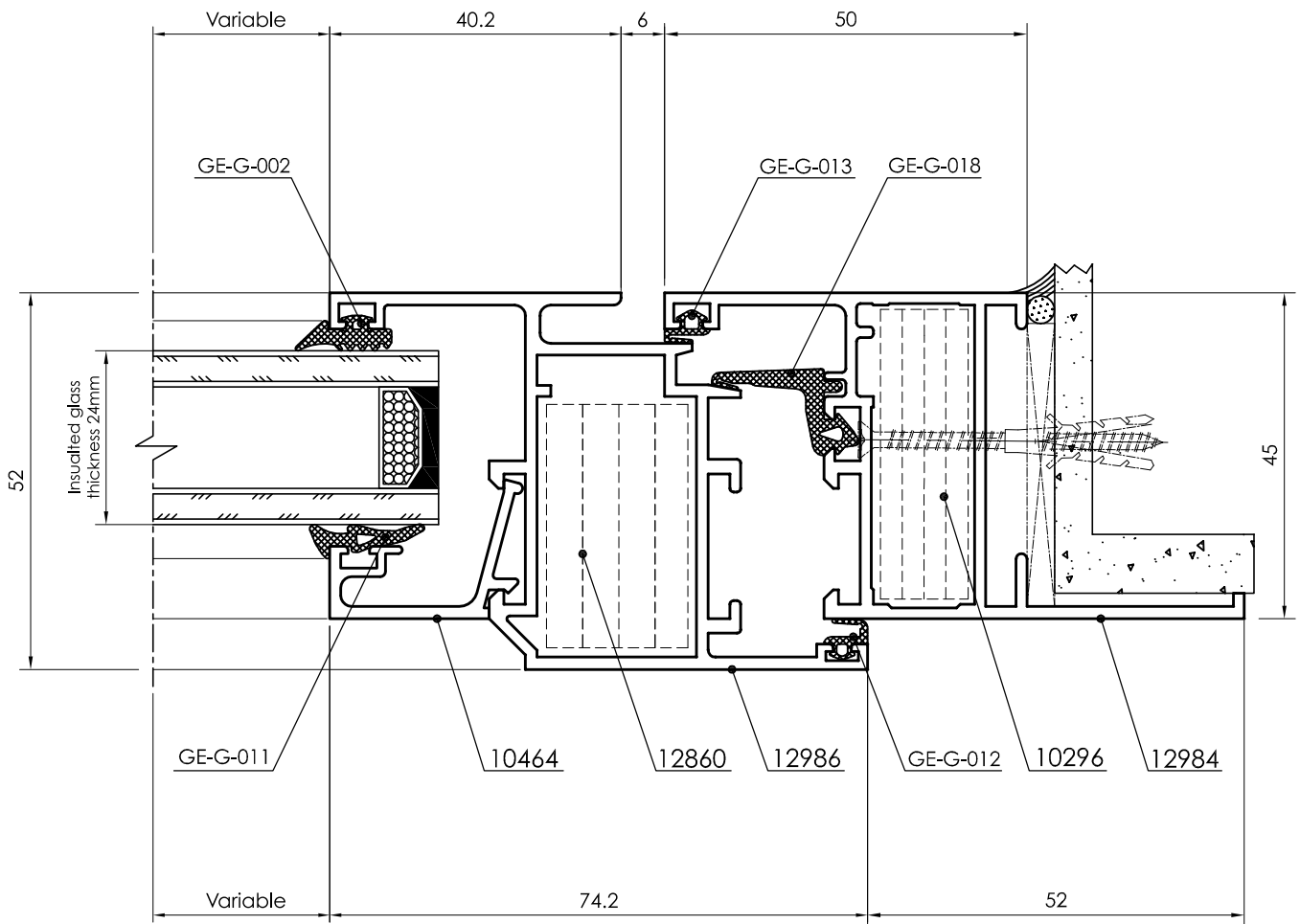
Top & Fixed Window Section - Inward Opening
Detail - Y1



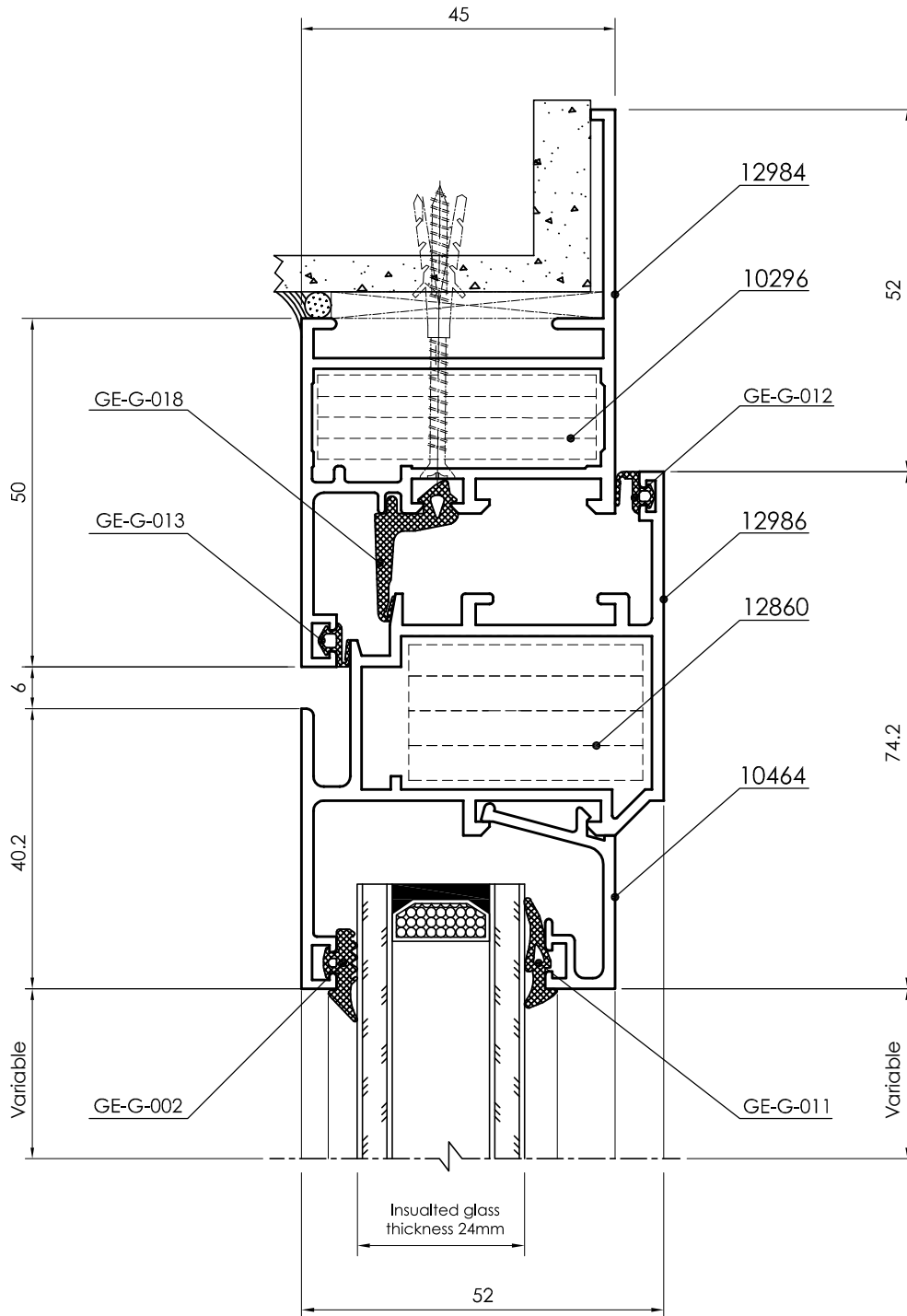
Left Side Window Section - Inward Opening
Detail - Z



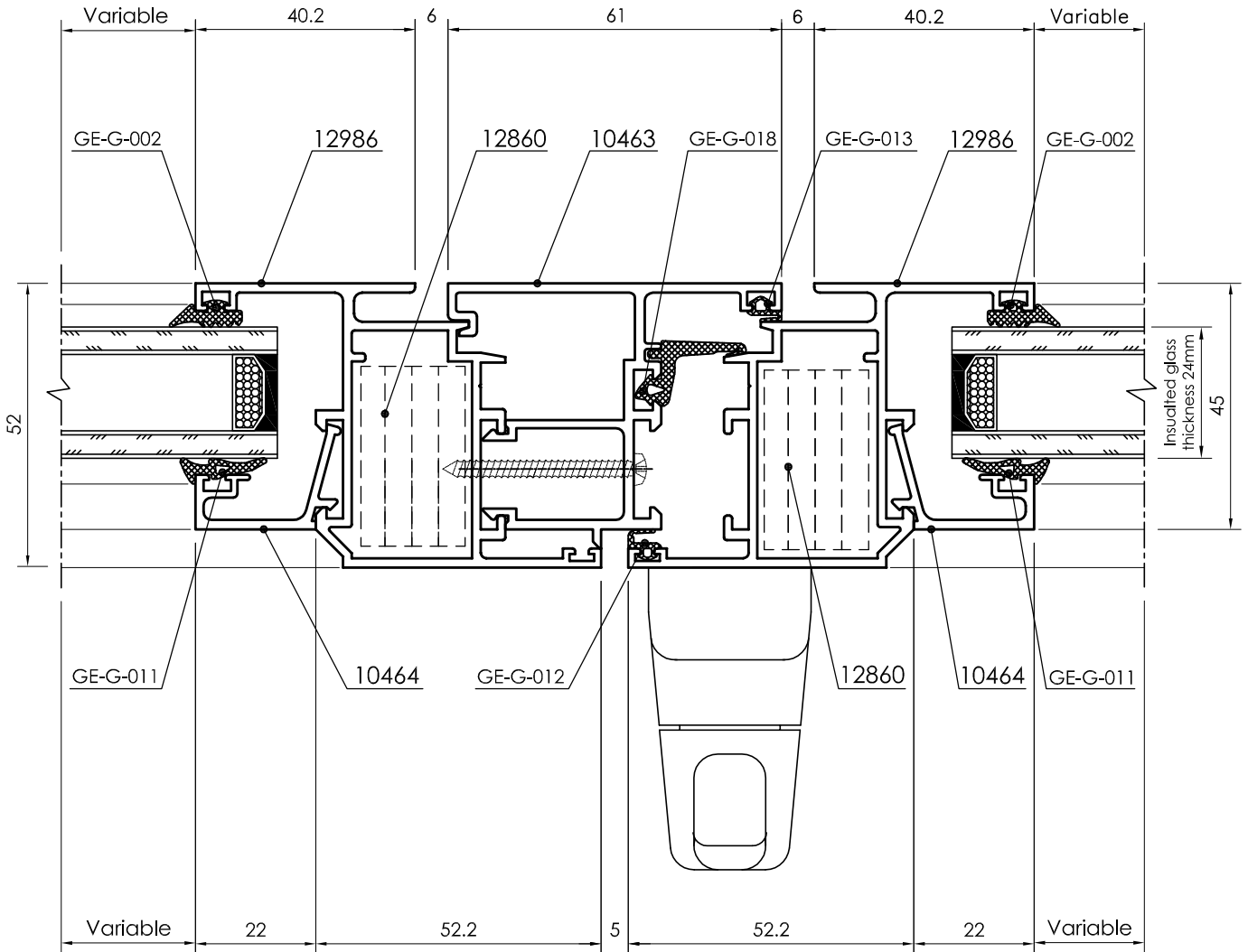
Right Side Window Section - Inward Opening
Detail - Z1

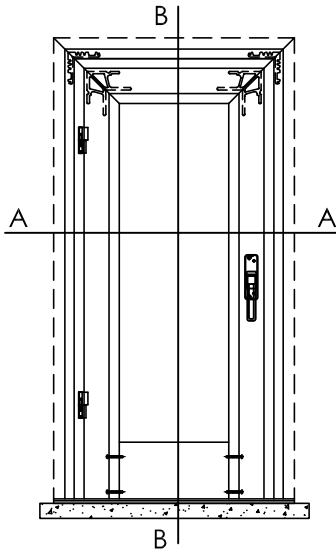


Top Window Section - Inward Opening
Detail - A1



Double Leaf Window Section - Inward Opening
Detail - B1

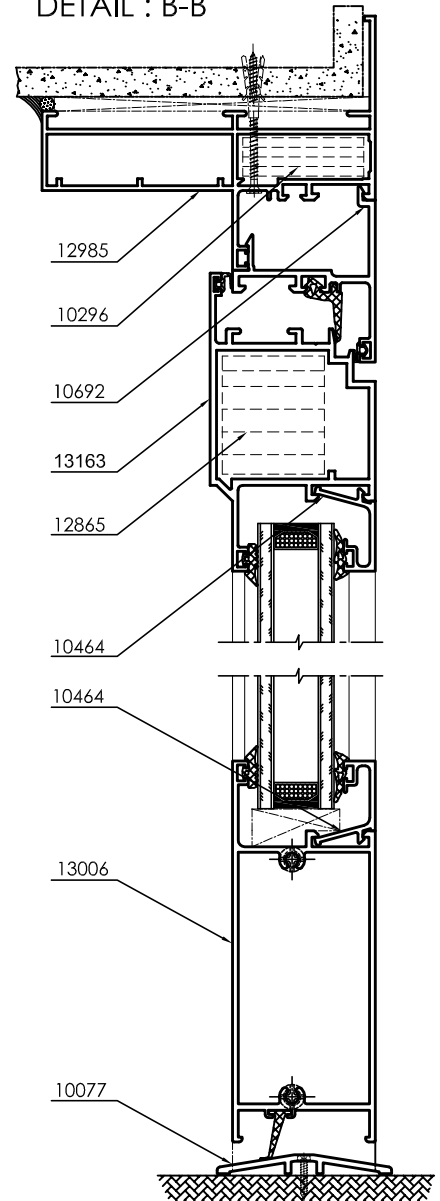




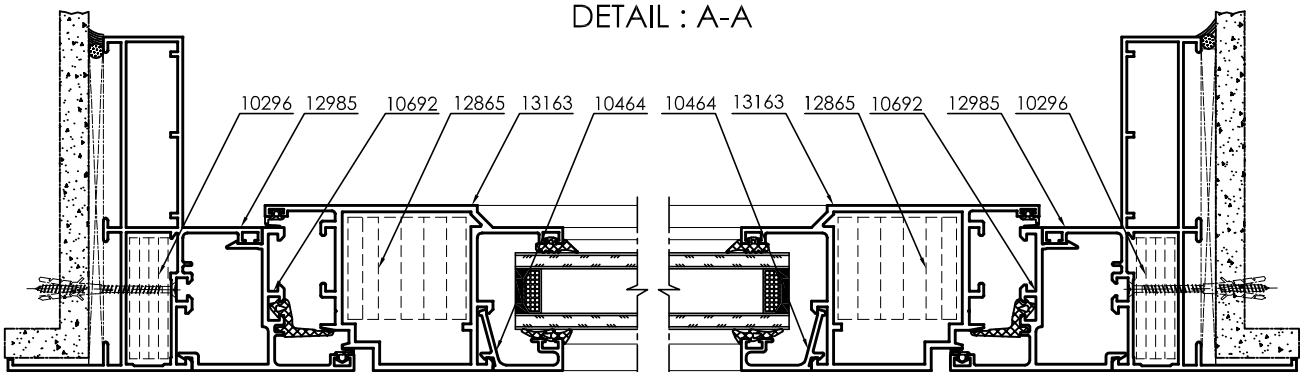
SINGLE LEAF HINGED DOOR
(OUTWARD OPENING)

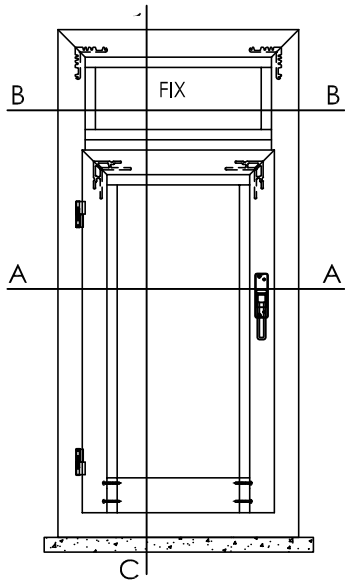
PROFILES		
Description	Shape	Section No.
Frame		12985
Sash		13163
Door bottom		13006
Reverse		10692
Glazing Bead		10464
Threshold		10077
Corner Cleat		12865
Corner Cleat		10296

DETAIL : B-B



DETAIL : A-A

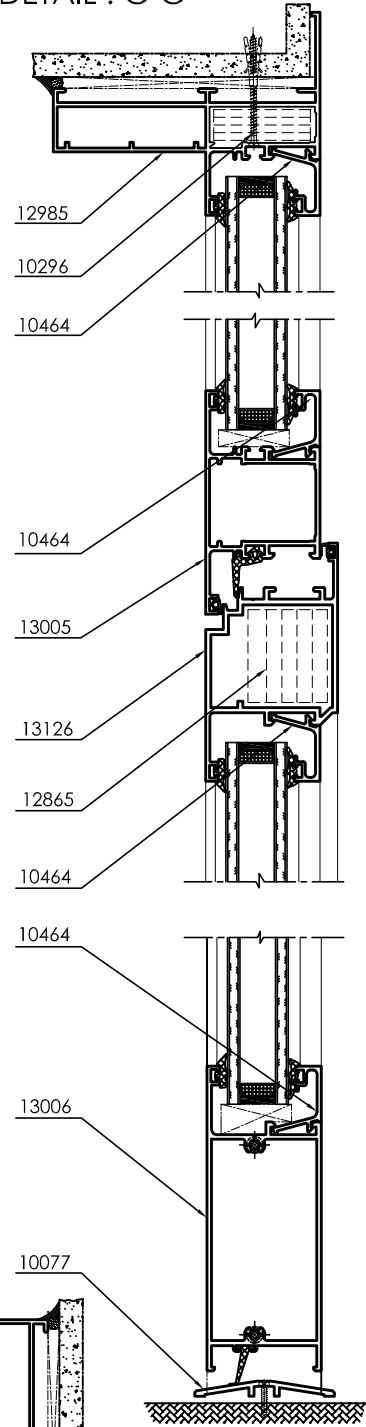




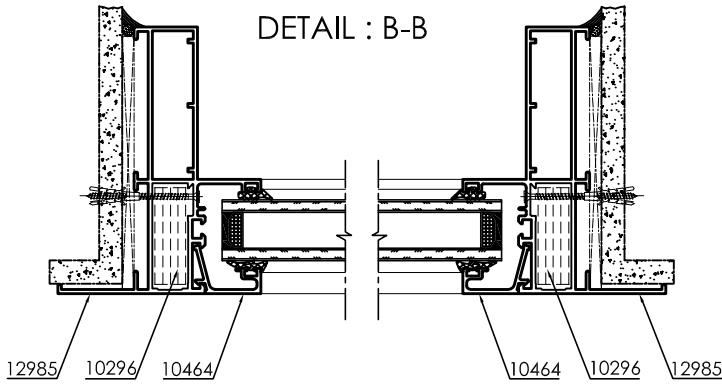
SINGLE LEAF HINGED DOOR
WITH TOP FIXED GLASS
(INWARD OPENING)

PROFILES		
Description	Shape	Section No.
Frame		12985
Sash		13126
Door bottom		13006
T-section		13005
Glazing Bead		10464
Threshold		10077
Corner Cleat		12865
Corner Cleat		10296

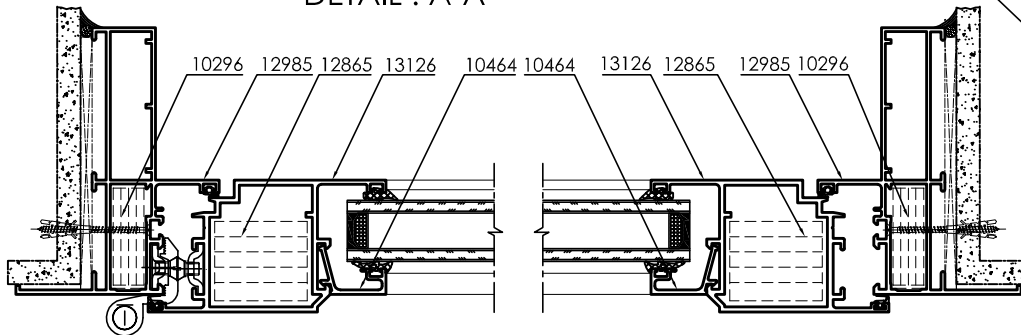
DETAIL : C-C

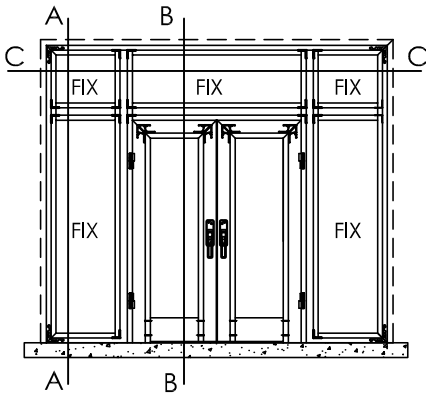


DETAIL : B-B



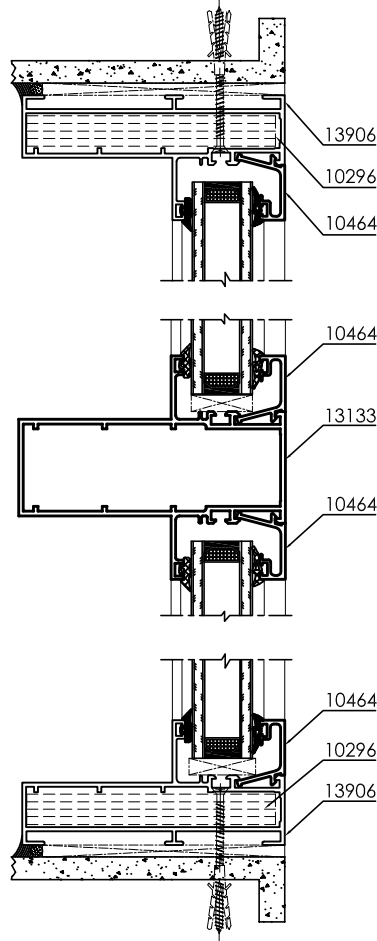
DETAIL : A-A



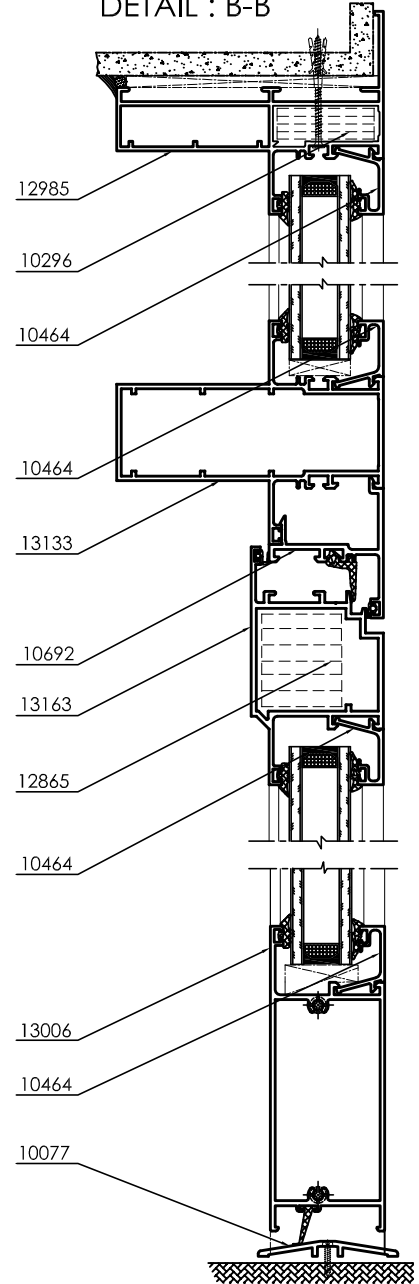


DOUBLE LEAF HINGED DOOR
WITH TOP & SIDE FIXED
(OUTWARD OPENING)

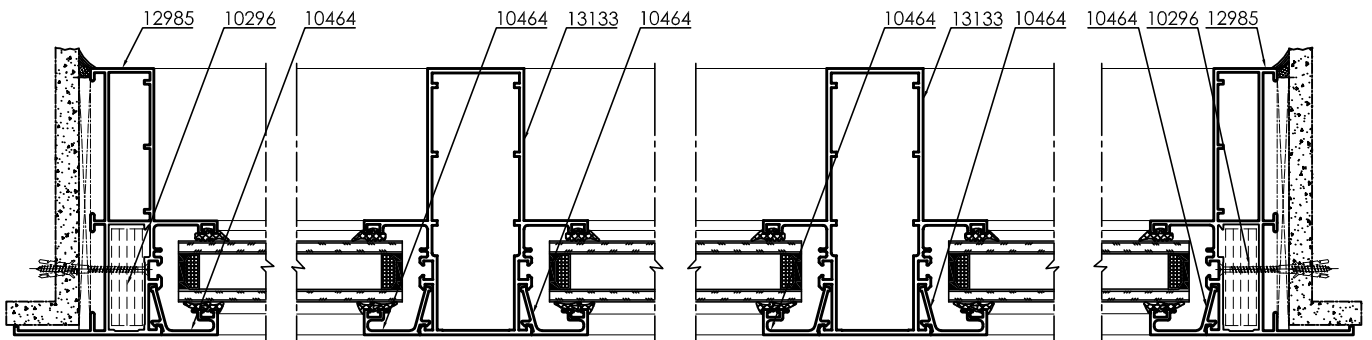
DETAIL : A-A



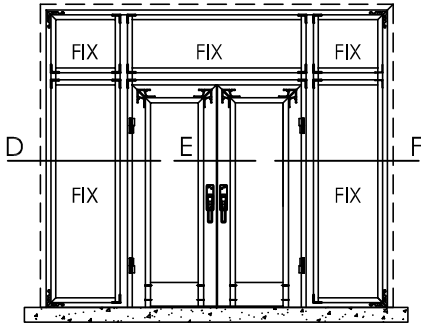
DETAIL : B-B



DETAIL : C-C

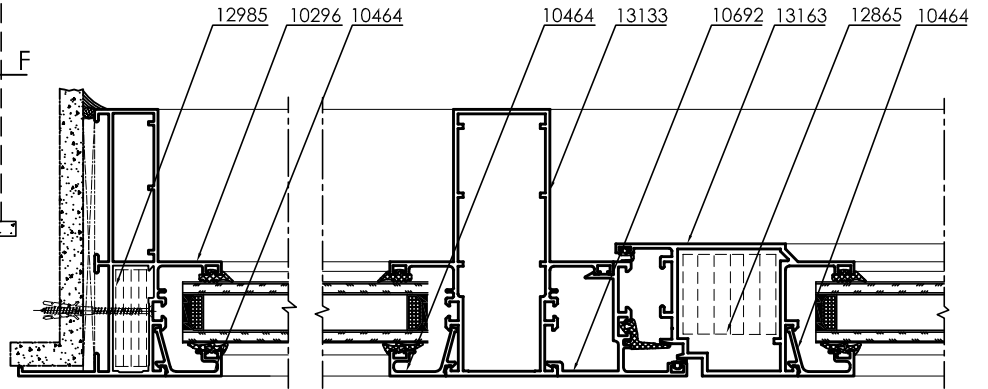


PROFILES		
Description	Shape	Section No.
Frame		12985
FrameW/o Architrave		13906
Sash		13163
Door bottom		13006
T-section		13133
Glazing Bead		10464
Threshold		10077
Reverse		10692
Corner Cleat		12865
Corner Cleat		10296



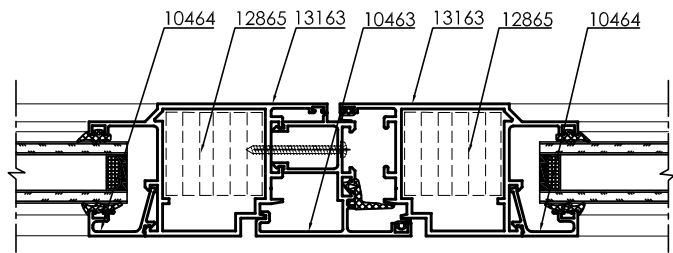
DOUBLE LEAF HINGED DOOR
WITH TOP & SIDE FIXED
(OUTWARD OPENING)

DETAIL : D

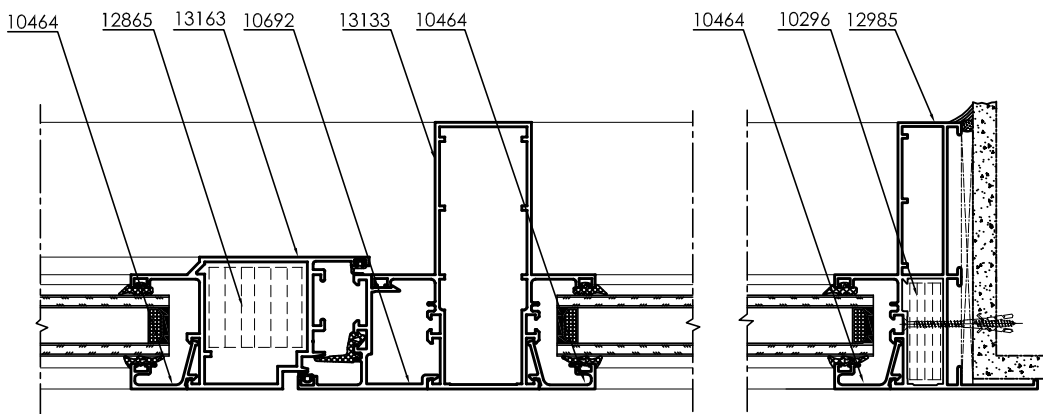


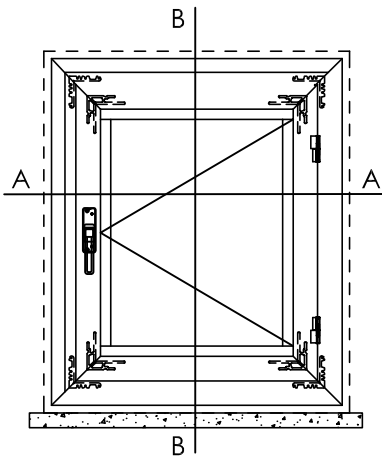
PROFILES		
Description	Shape	Section No.
Frame		12985
Sash		13163
T-section		13133
Reverse		10692
Interlock		10463
Glazing Bead		10464
Corner Cleat		12865
Corner Cleat		10296

DETAIL : E



DETAIL : F

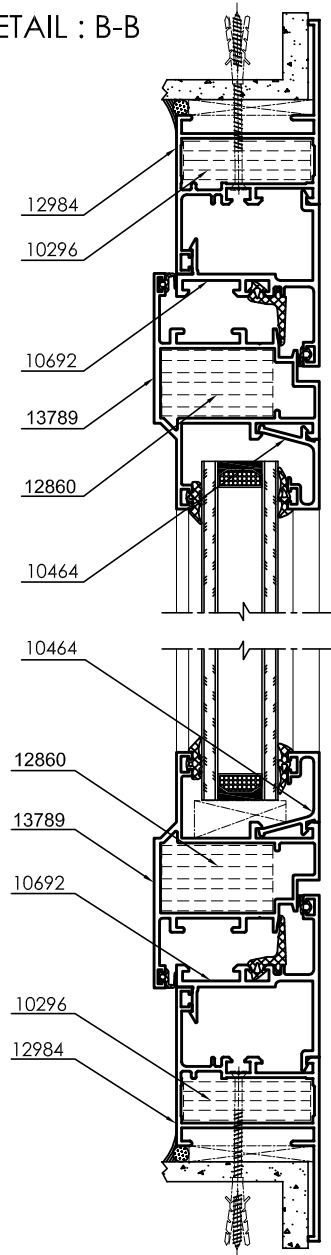




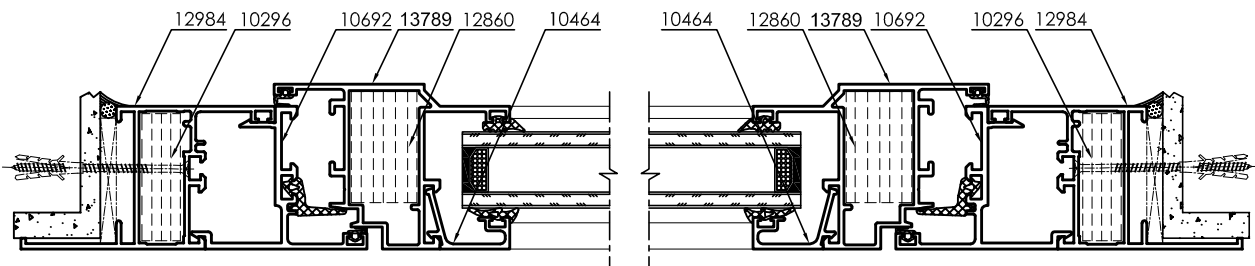
SINGLE LEAF CASEMENT WINDOW
(OUTWARD OPENING)

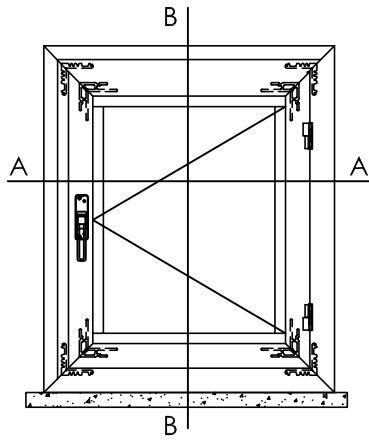
PROFILES		
Description	Shape	Section No.
Frame		12984
Sash		13789
Reverse		10692
Glazing Bead		10464
Corner Cleat		12860
Corner Cleat		10296

DETAIL : B-B



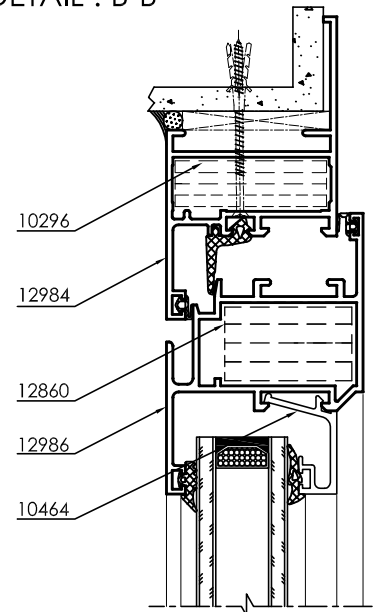
DETAIL : A-A



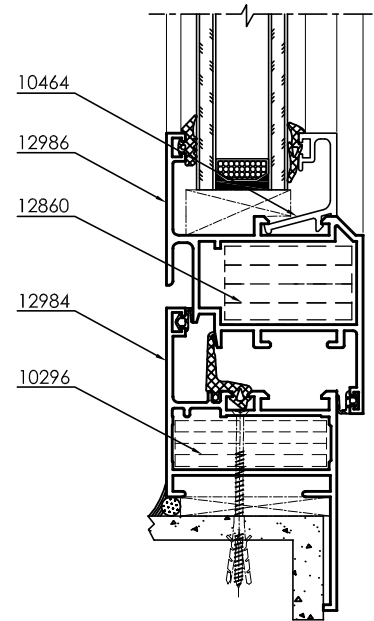


SINGLE LEAF CASEMENT WINDOW
(INWARD OPENING)

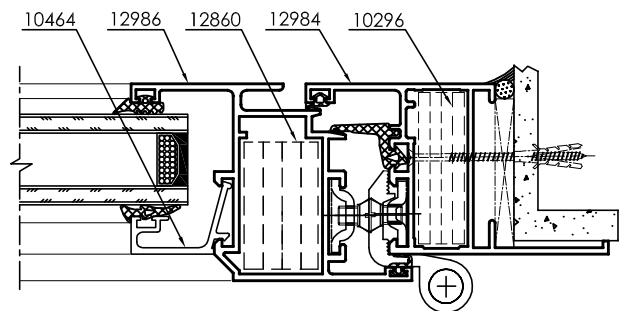
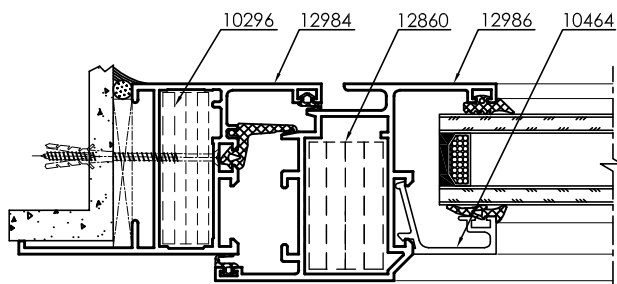
DETAIL : B-B

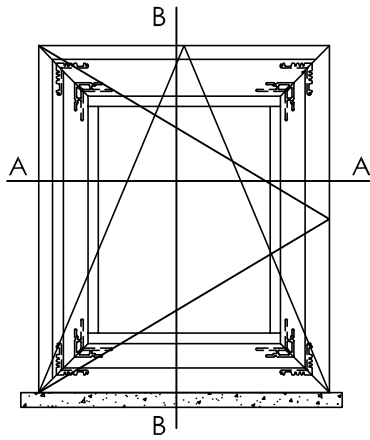


PROFILES		
Description	Shape	Section No.
Frame		12984
Sash		12986
Glazing Bead		10464
Corner Cleat		12860
Corner Cleat		10296



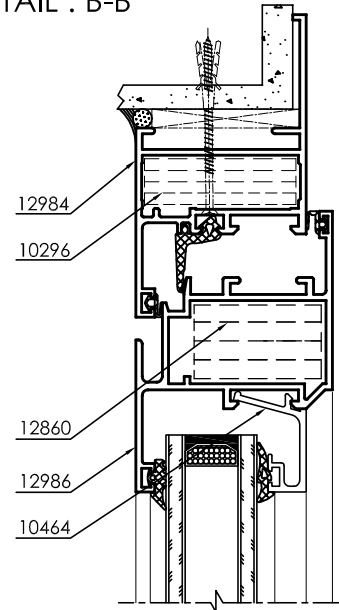
DETAIL : A-A



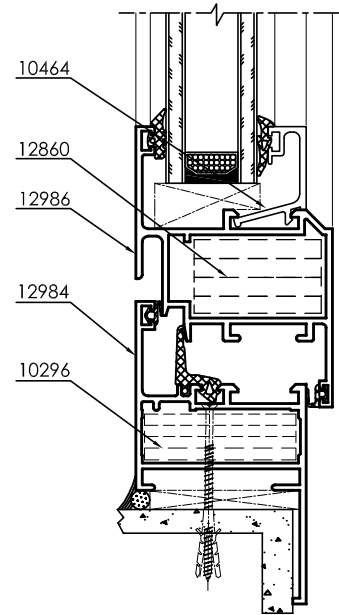


SINGLE LEAF CASEMENT WINDOW
(TURN & TILT)

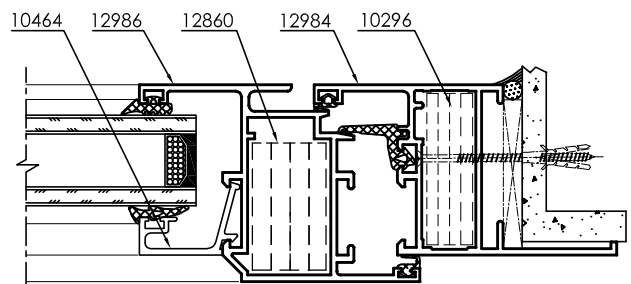
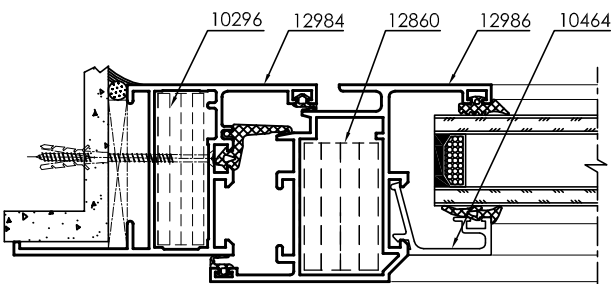
DETAIL : B-B

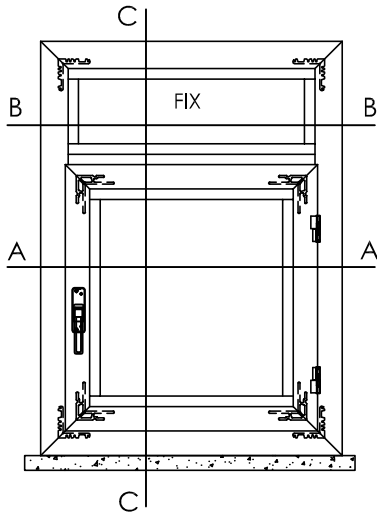


PROFILES		
Description	Shape	Section No.
Frame		12984
Sash		12986
Glazing Bead		10464
Corner Cleat		12860
Corner Cleat		10296



DETAIL : A-A

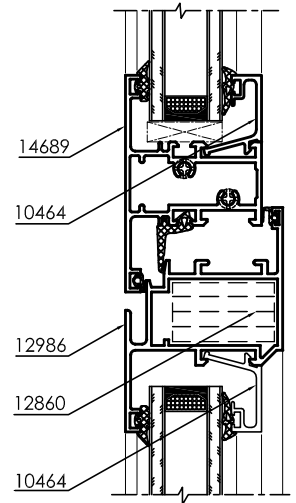
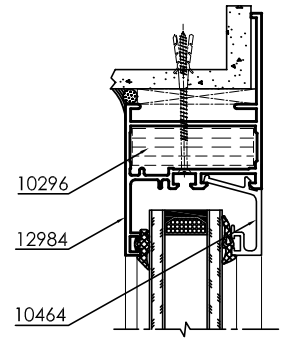




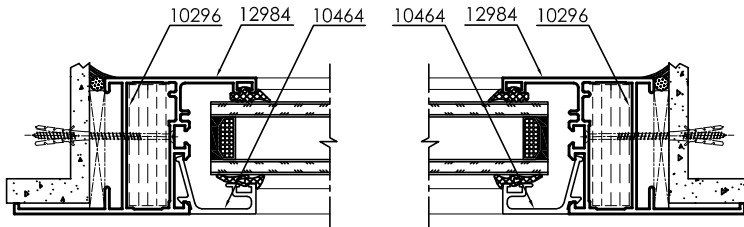
SINGLE LEAF CASEMENT WINDOW
WITH TOP FIXED GLASS
(INWARD OPENING)

PROFILES		
Description	Shape	Section No.
Frame		12984
Sash		12986
T-Section		14689
Glazing Bead		10464
Corner Cleat		12860
Corner Cleat		10296

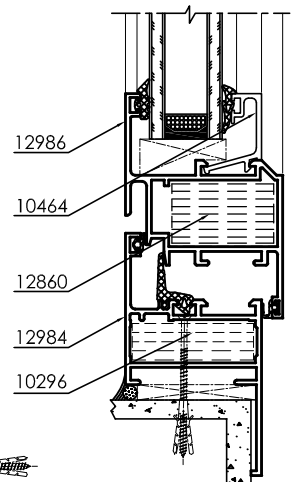
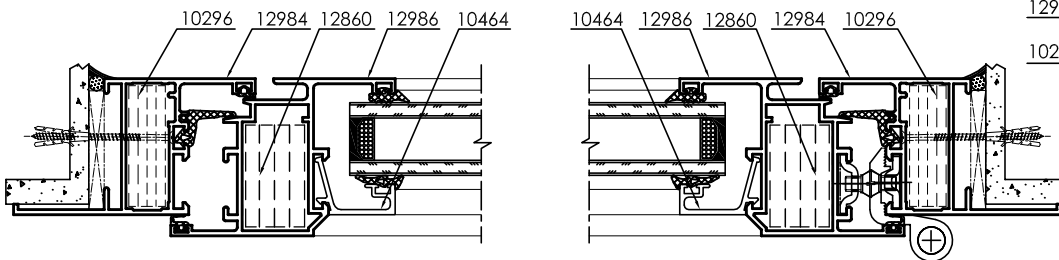
DETAIL : C-C

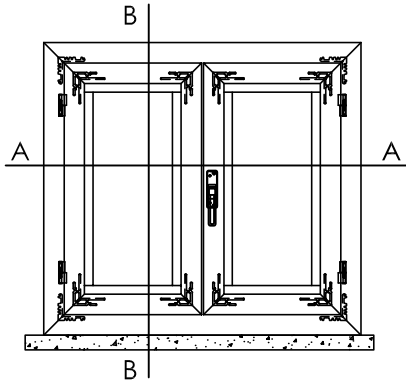


DETAIL : B-B



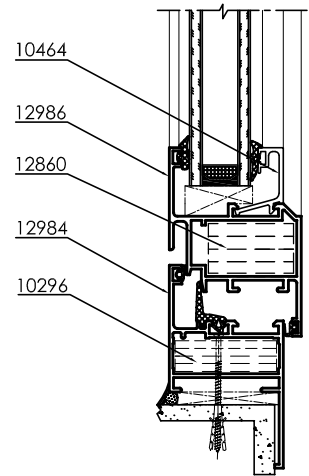
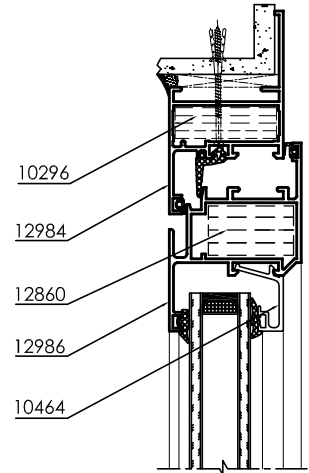
DETAIL : A-A





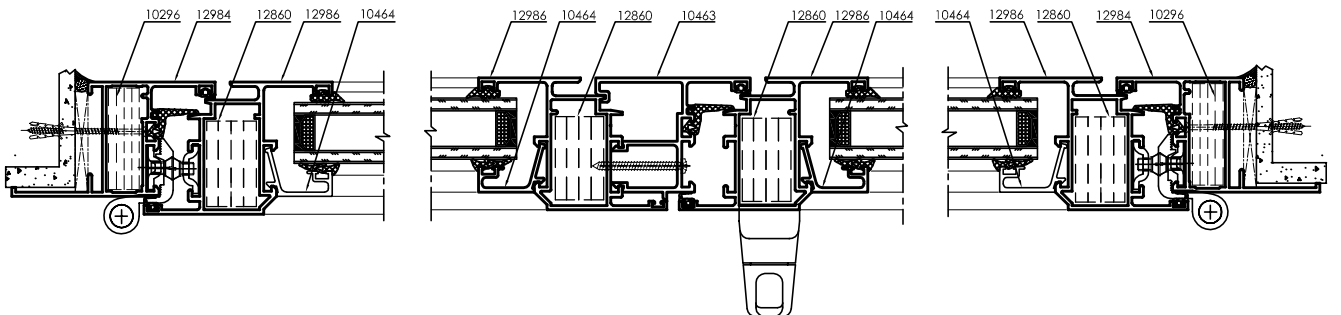
DOUBLE LEAF CASEMENT WINDOW
(INWARD OPENING)

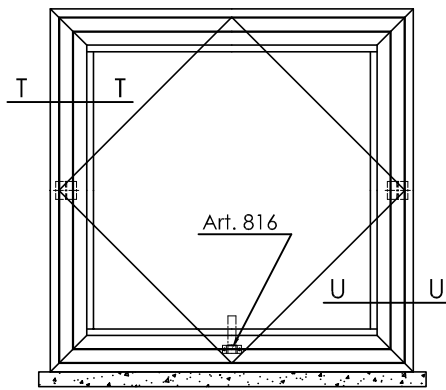
DETAIL : B-B



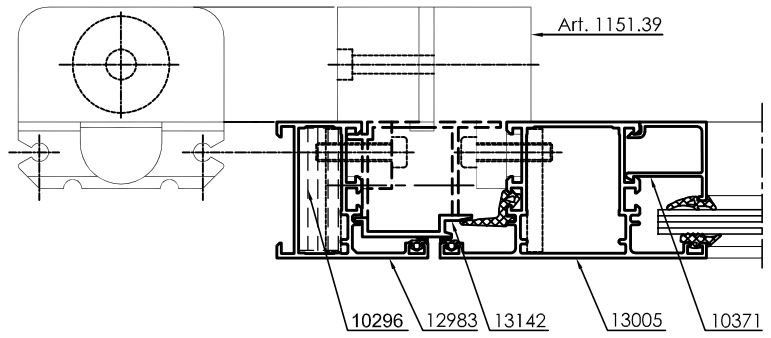
PROFILES		
Description	Shape	Section No.
Frame		12984
Sash		12986
Interlock		10463
Glazing Bead		10464
Corner Joint		12860
Corner Joint		10296

DETAIL : A-A

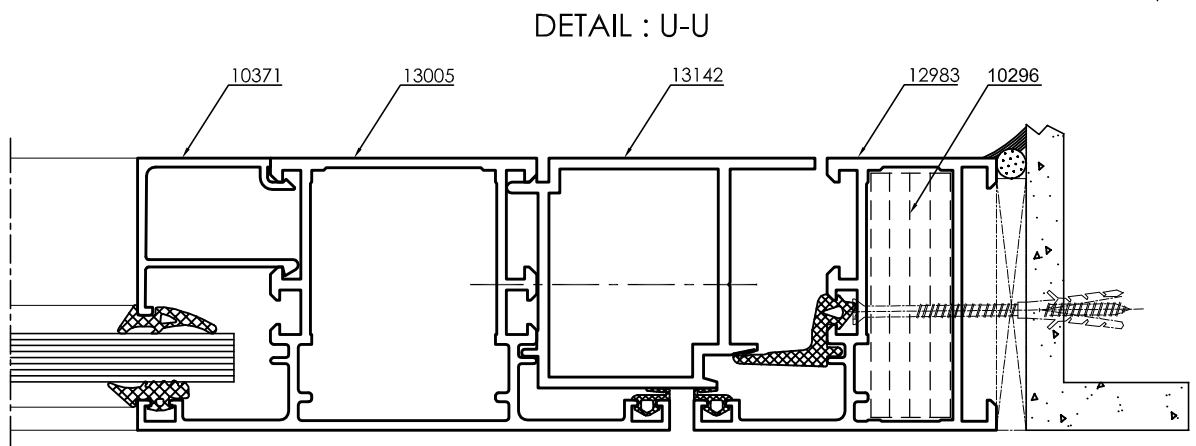
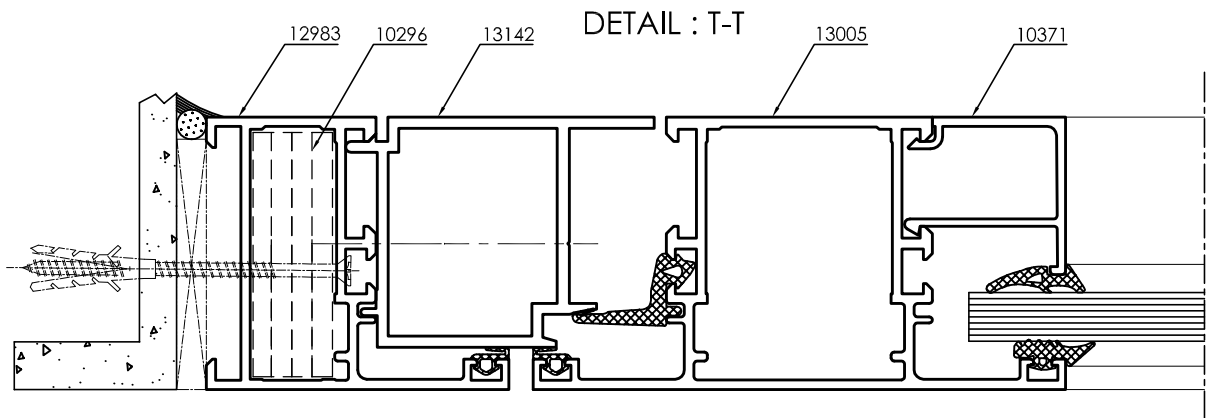


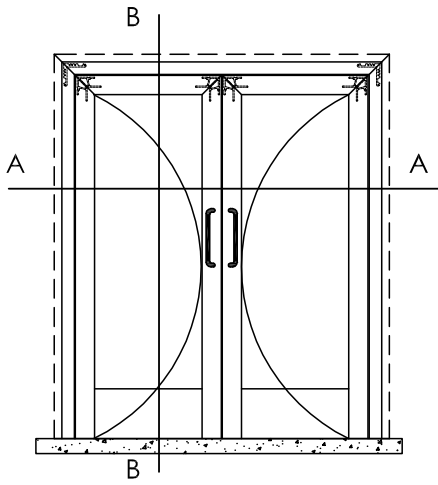


PIVOT WINDOW



PROFILES		
Description	Shape	Section No.
Frame		12983
For pivot window		13142
T-Section		13005
Glazing Bead		10371
Corner Cleat		10296

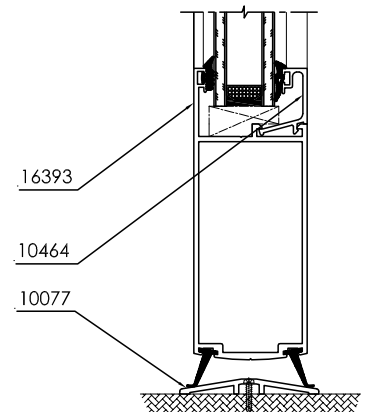
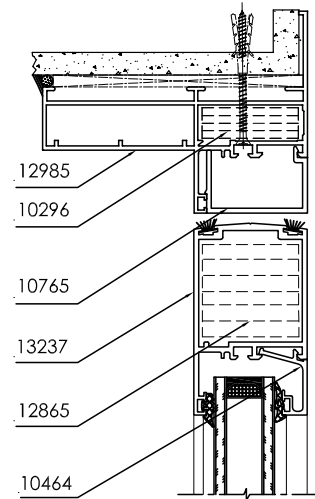




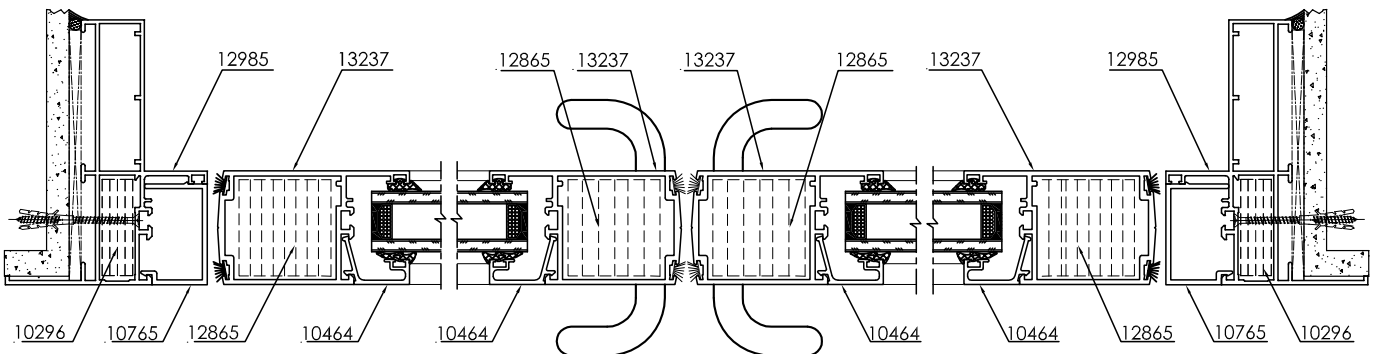
DOUBLE LEAF HINGED SWING DOOR

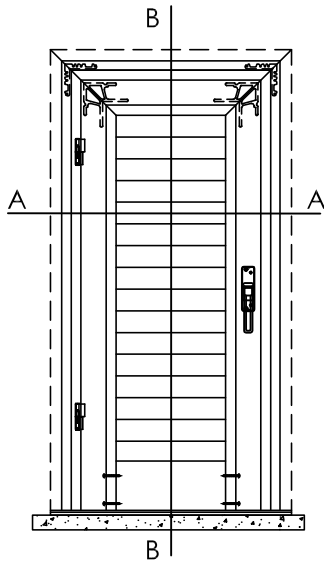
PROFILES		
Description	Shape	Section No.
Frame		12985
Swing door		13237
Bottom Swing door		16393
Used with the swing		10765
Glazing Bead		10464
Threshold		10077
Corner Cleat		12865
Corner Cleat		10296

DETAIL : B-B



DETAIL : A-A

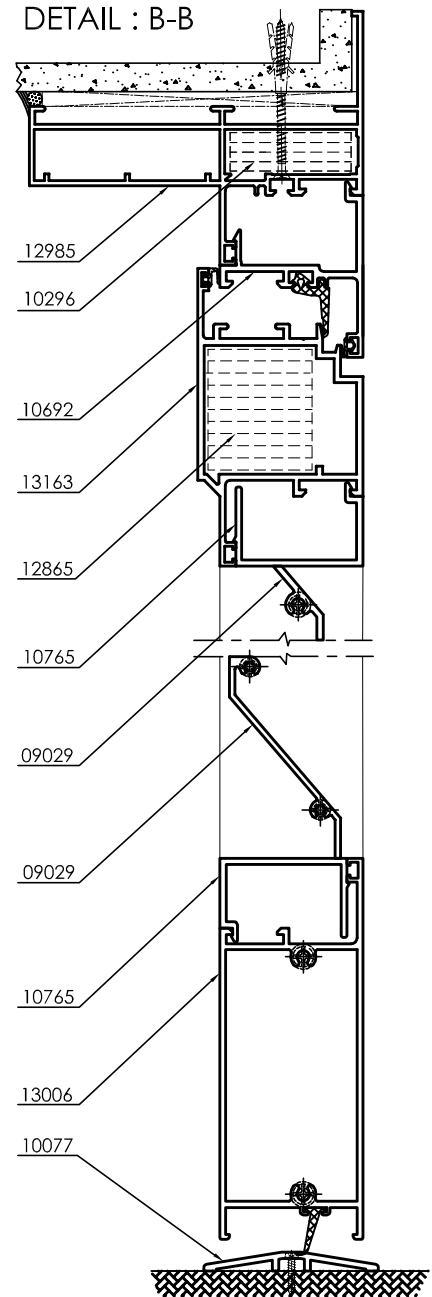




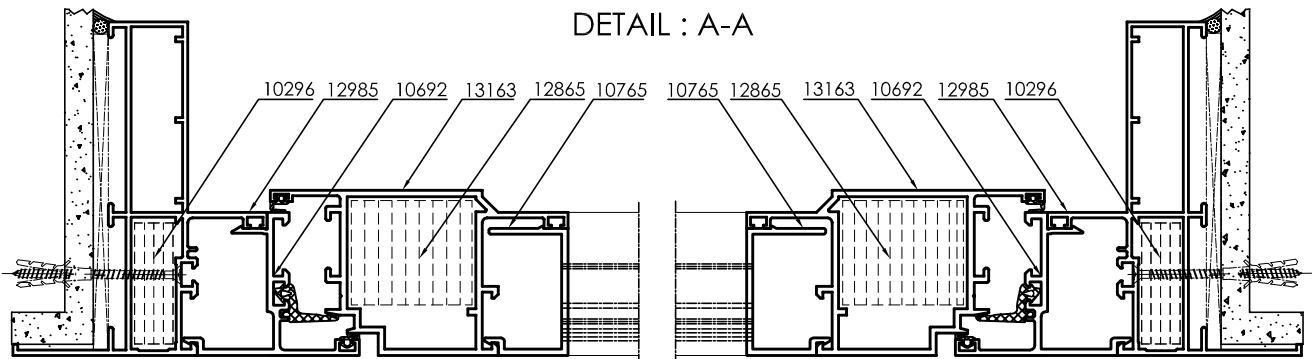
SINGLE LEAF HINGED LOUVER
(OUTWARD OPENING)

PROFILES		
Description	Shape	Section No.
Frame		12985
Door bottom		13006
Sash		13163
Used with the louver		10765
louver		09029
Threshold		10077
Reverse		10692
Corner Cleat		12865
Corner Cleat		10296

DETAIL : B-B

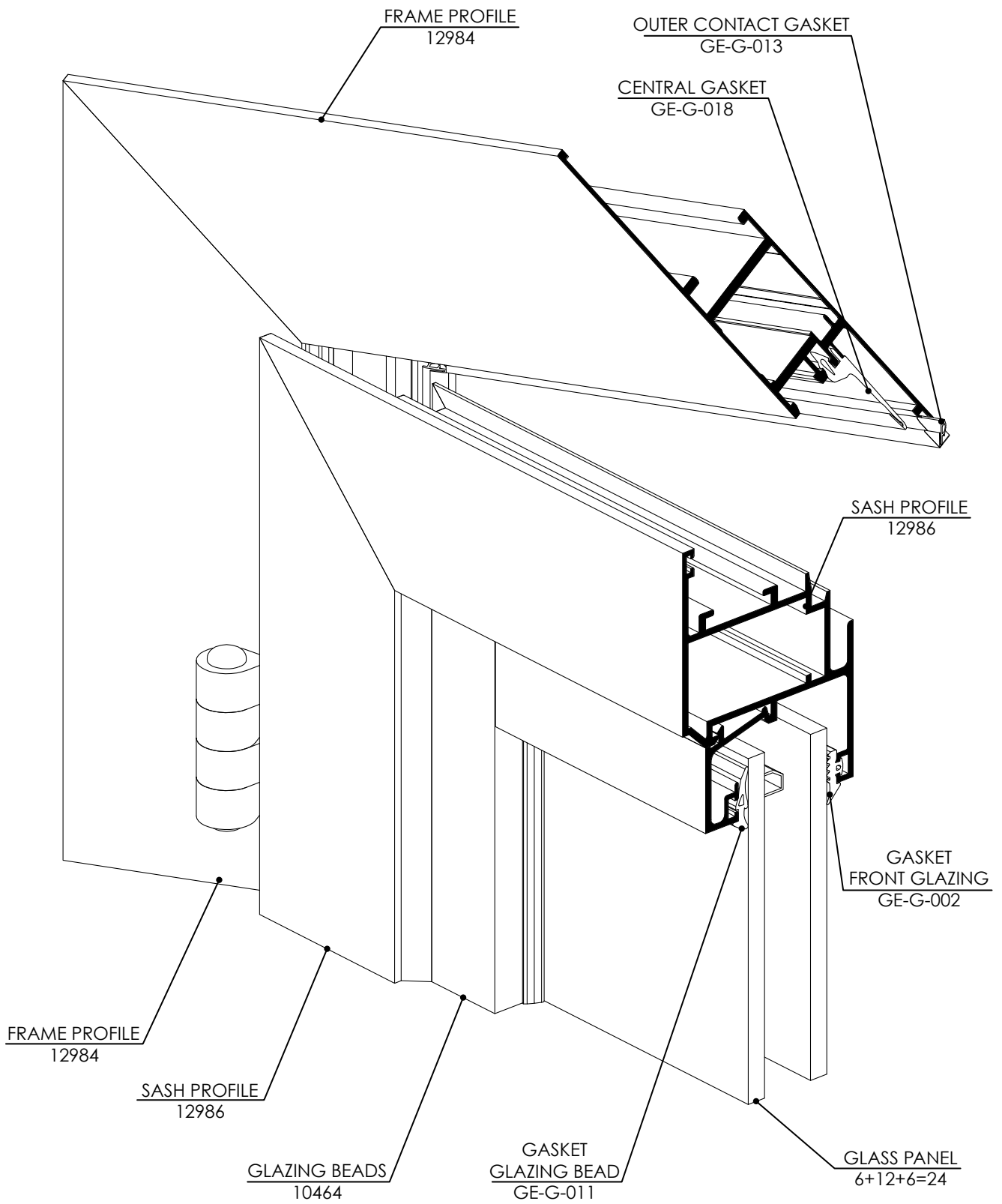


DETAIL : A-A

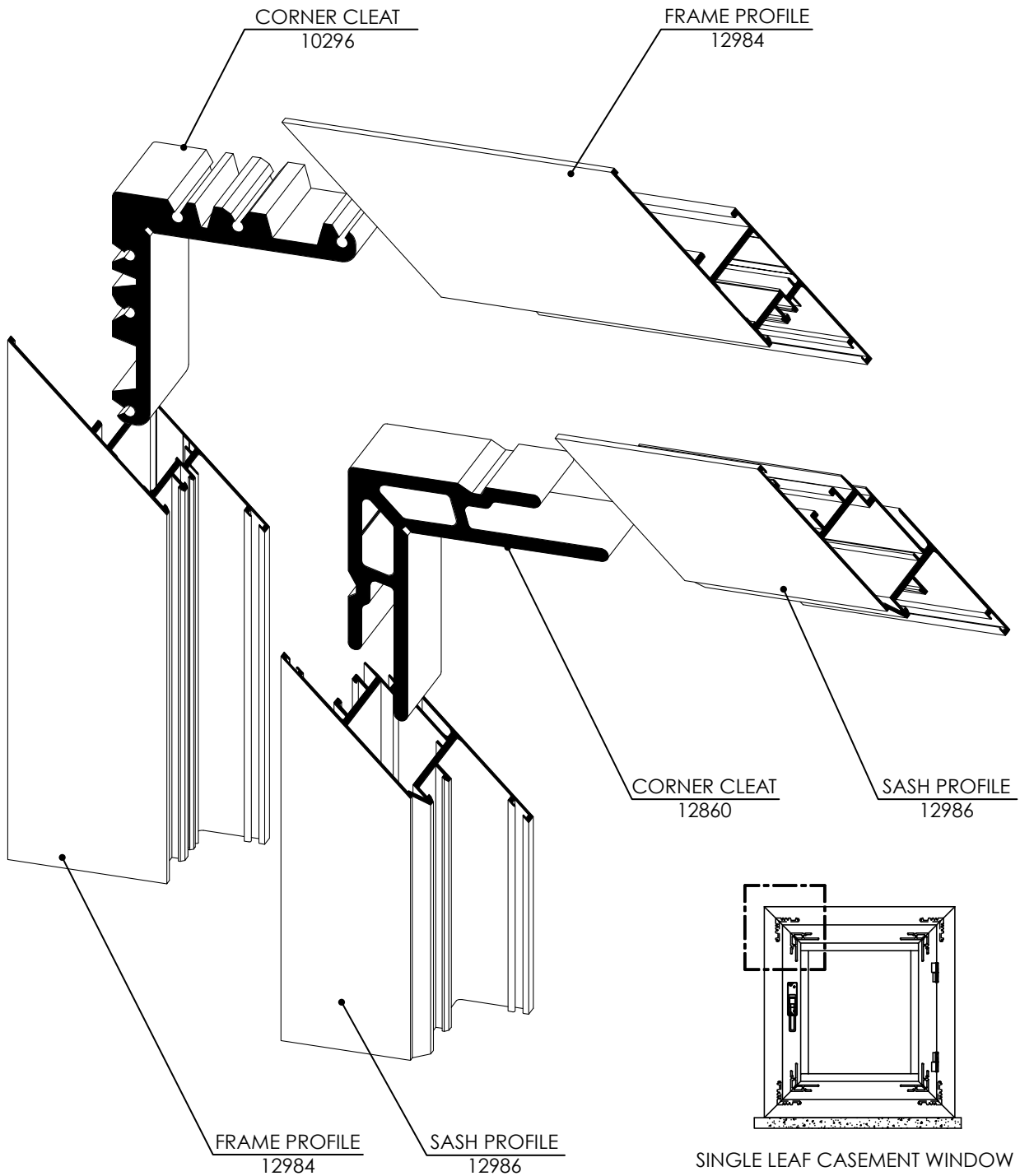


3D SECTIONS

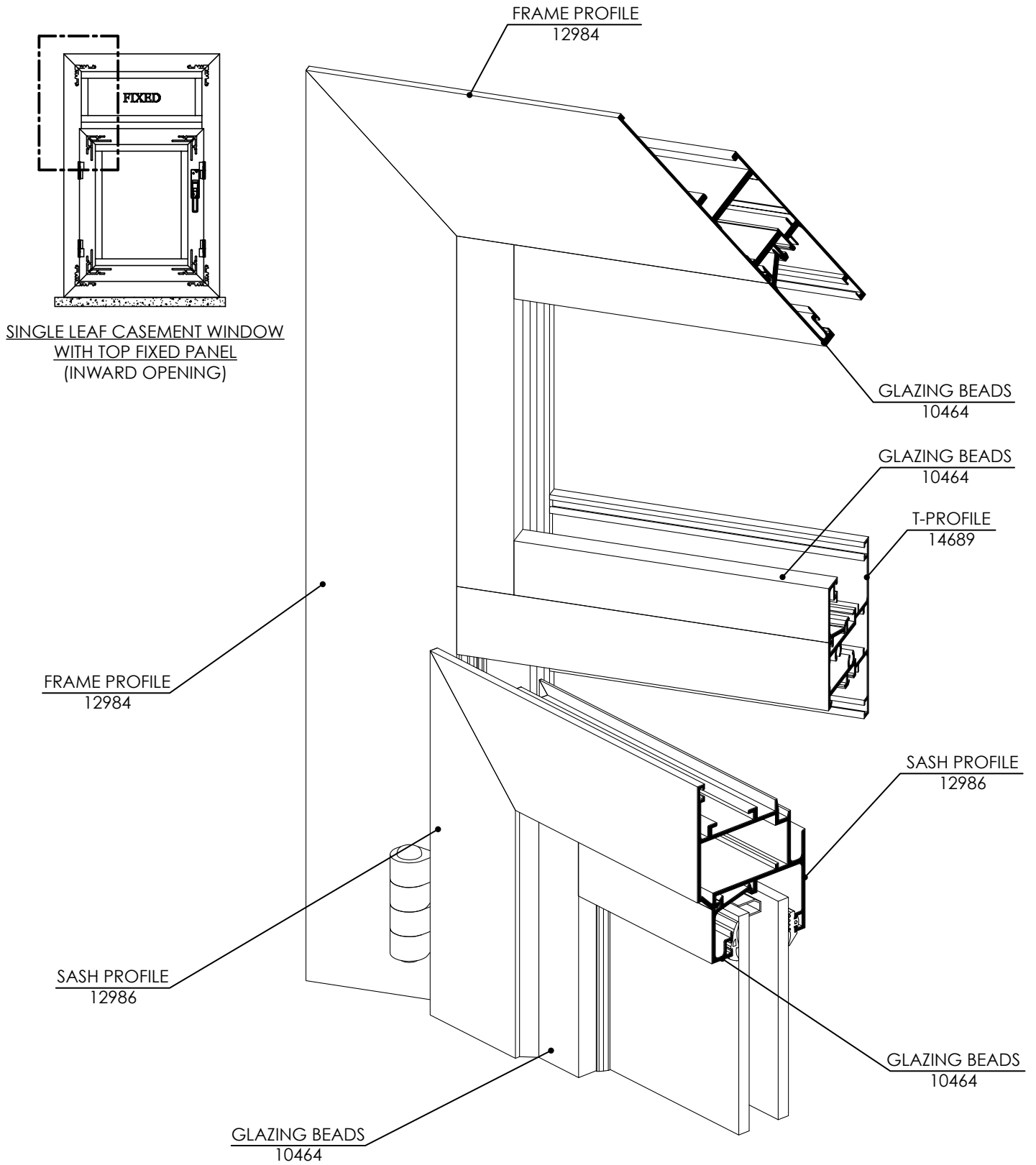
Frame and Sash



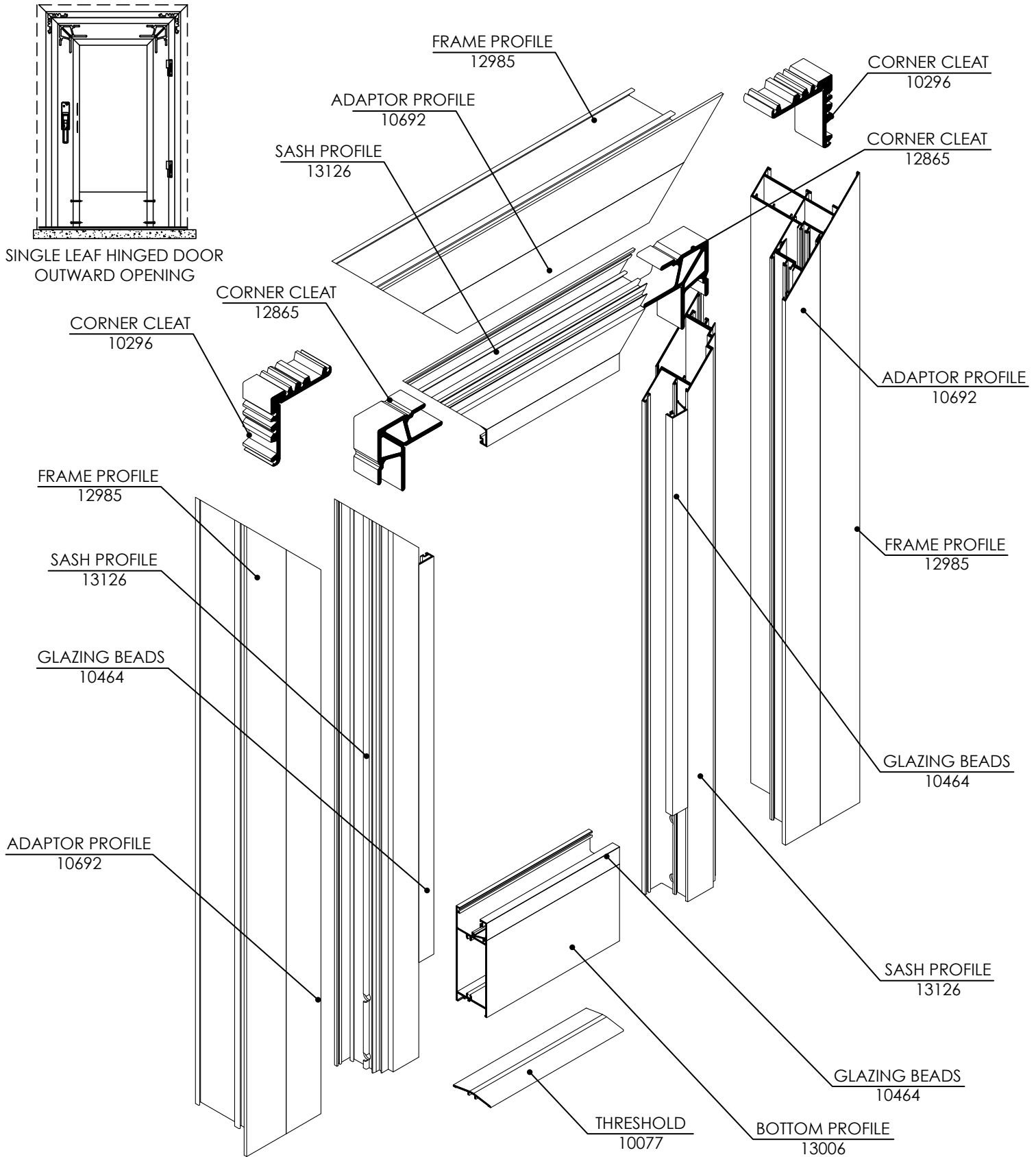
Frame and Sash



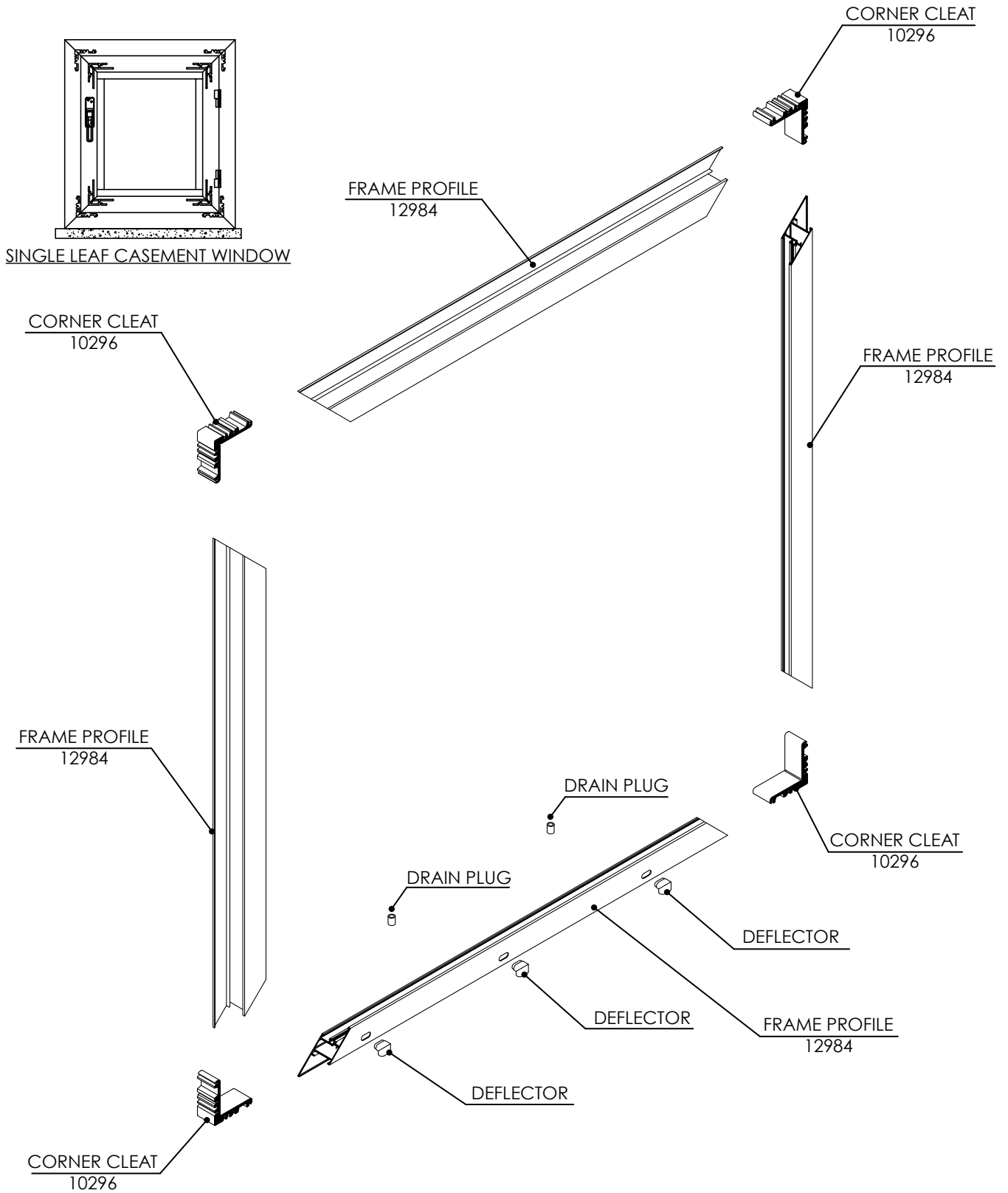
3D Models



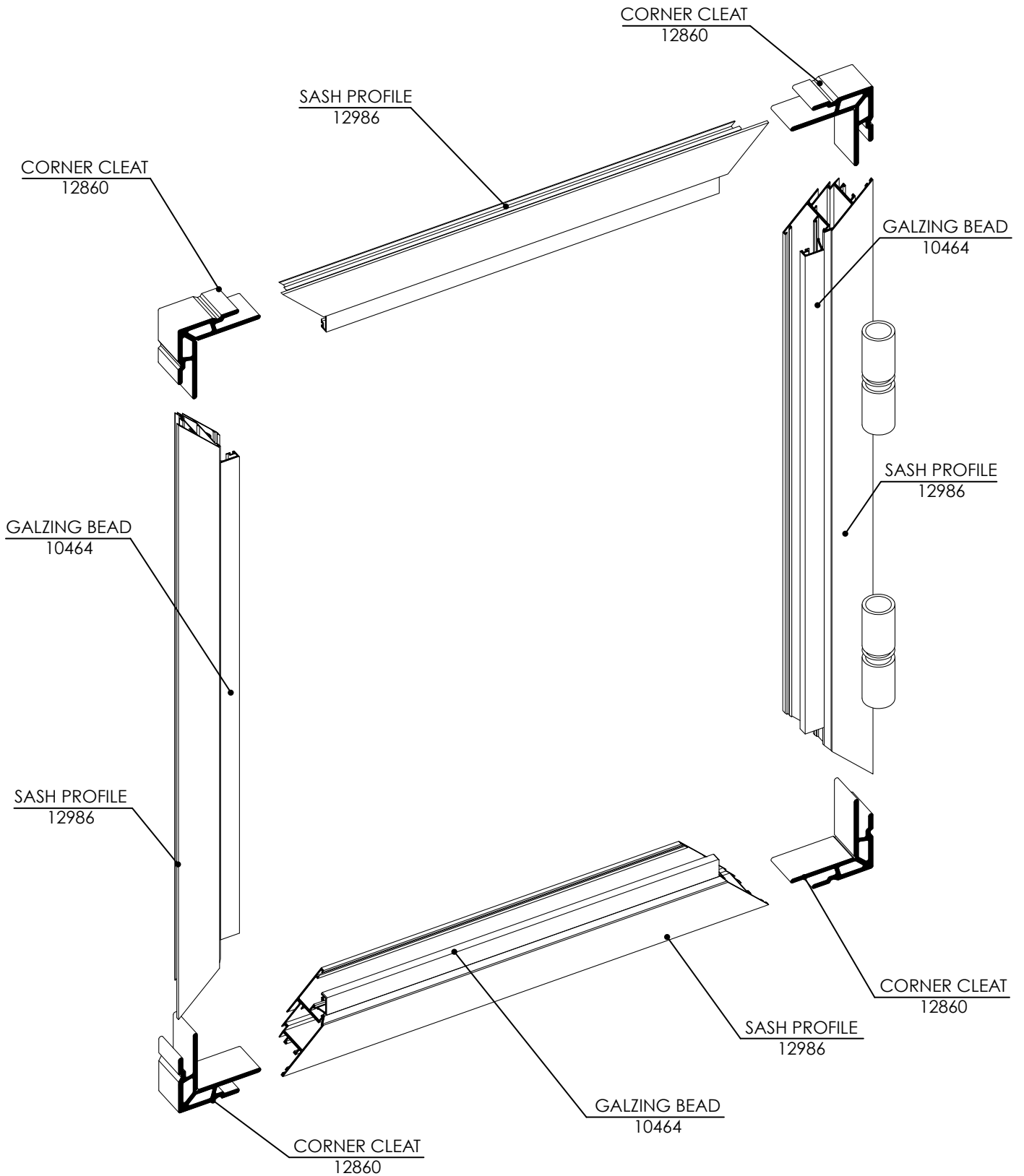
3D Models



Frame 3D Assembly Drawings



Sash 3D Assembly Drawings



All rights reserved.

No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means electronic, mechanical, photocopying, recording or otherwise, without prior permission of Gulf Extrusions.

