

# HANDRAIL

4-2016-V.0

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# HANDRAIL

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# 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 60,000 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 18,000 profile designs. These extrusions cover numerous industries ranging from architectural to transportation, engineering to structural sections, components for household items, HVAC and customized products.

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

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

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

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

### **INTERNATIONAL STANDARD COMPLIANCE**

#### Extrusions Dimensions Tolerances:

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

#### Powder Coated Finish:

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

#### Anodizing Finish:

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



### **PRODUCT QUALITY CERTIFICATES**



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

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



#### Qualanod (European Anodizers Association):

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



- SASO



- ESMA



#### Health & Safety:

- OHSAS 18001 (Certification for occupational health & safety management)



#### Management:

- ISO 9001 (Quality Management System)



- ISO/TS 16949:2009 (Management System)



#### Environment:

- ISO 14001 (Environment Management System)



#### Membership in International Organization:

- AAC member (Aluminium Anodizers Council - USA)
- AEC member (Aluminum Extruders Council - USA)
- DIN EN 15088



## CHEMICAL COMPOSITIONS

### ALLOY 6005A

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

### ALLOY 6060

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

### ALLOY 6063

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

### ALLOY 6082

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

### ALLOY 6061

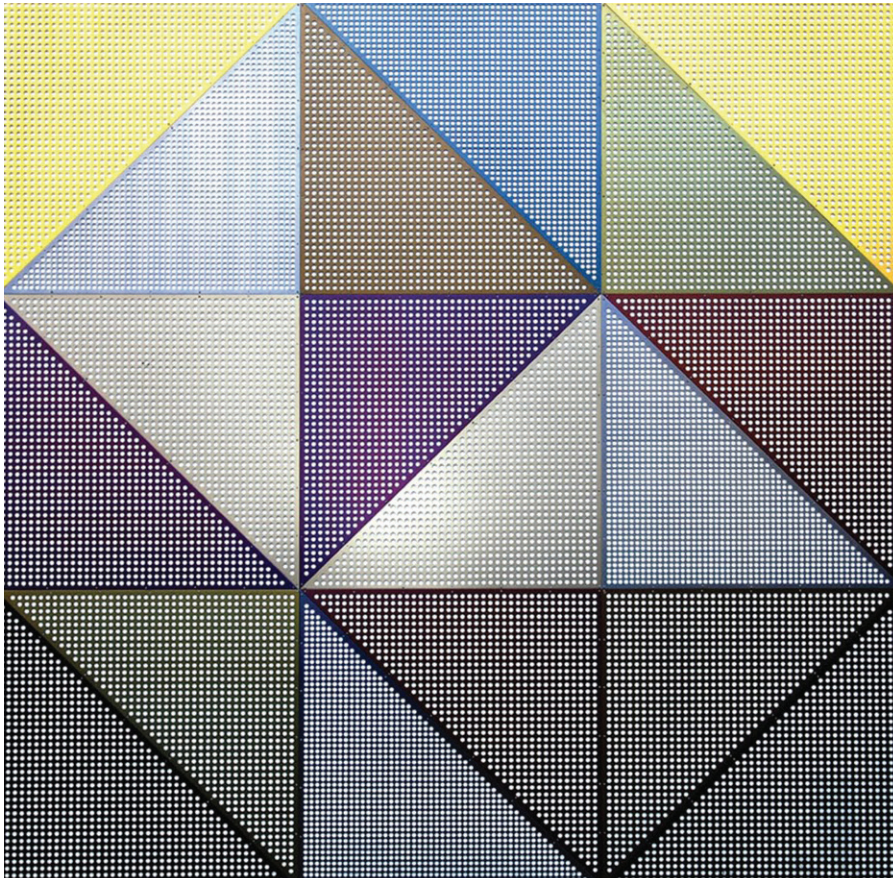
Element	Minimum	Maximum
Si	0.40	0.80
Fe	-	0.70
Cu	0.15	0.40
Mn	-	0.15
Mg	0.8	1.20
Cr	0.04	0.35
Zn	-	0.25
Ti	-	0.15
Other Each	-	0.05
Other Total	-	0.15
Aluminium	Remainder	

**ANODIZING**

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

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

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





**Authorization to use the quality sign**



This is to certify that

**GULF EXTRUSIONS CO. LLC**

P.O. BOX 5598  
AE – Dubai

**Licence number: 2000**

is authorized to use the quality sign which is shown above according to the REGULATIONS FOR 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 31.12.2016

Zurich, 12 November 2015

**QUALANOD**

Thomas Becker  
President

**CERTIFICATION BODY**

Josef Schoppig  
AC-Fiduciaire SA



Mailing address:  
QUALANOD, P.O. Box 1507, CH-8027 Zurich  
Domicile:  
QUALANOD c/o AC-Fiduciaire SA, Tödistrasse 47, CH-8002 Zurich

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

**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

# INTRODUCTION TO THE SYSTEM

Gulf Extrusions handrail series provides the perfect contemporary, structurally comprehensive solution for balconies, walkways, internal stairs, decking areas, garden decks and patios. Our handrail series are made to comply with current building regulations and are suitable for both internal and external installations.

## Sections:

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

## Features:

Gulf Extrusions glazed handrail series features an aluminium shoe channel and glass infill with the added option of attaching a top aluminium extruded rail. A wide range of different sizes compliant to building safety regulations, which can be customized with clear, laminated or frosted glass. Gulf Extrusions also provides regular aluminium section railings which are available in a wide range of anodized, powder coated, wood finish or pvdf finish options.

## Applications:

The wide geometric designs fits well to outdoor garden areas, patios, decking areas and balconies as well as internal stairs and walkways. Gulf Extrusions hand rail ranges are fully customizable with the choice of frosted and clear glass as well as the satin or mirror finish for posts. The glazed systems comes with the option to add an aluminium handrail cap with a surface finish tailored made for your property.



فحص المواد

Materials Testing

www.bodycote.com

www.middleeast.bodycote.com

## Confirmation of Testing Compliance

### CLADDING TECHNOLOGY DIVISION

Ref. AFBT Report No: DLR0448 Date: June 2008

AFBT COTC No: WQ 07 23352 / C595

**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

**System:**

System Development  
SIDE HINGED WINDOW

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

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

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

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

Signed:

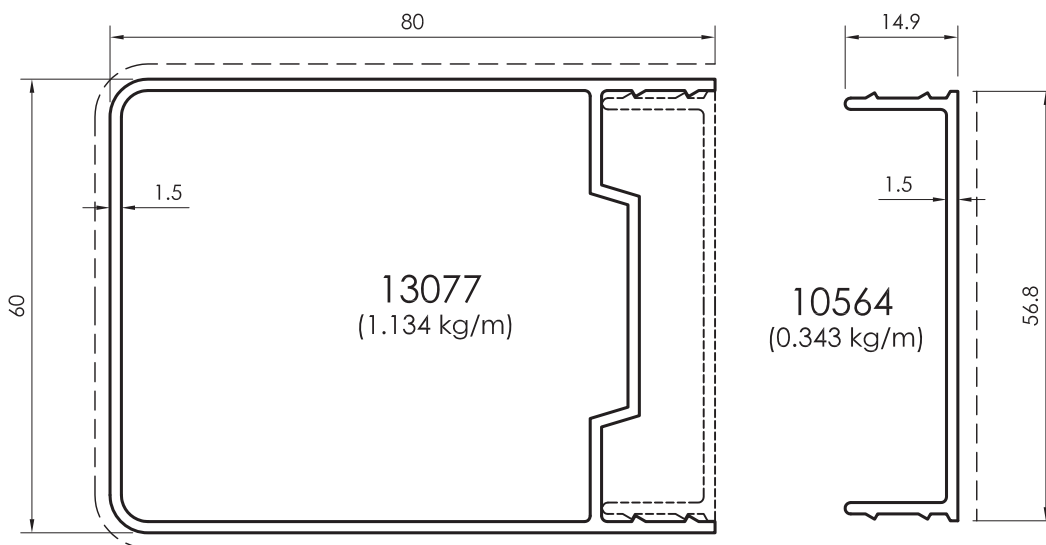
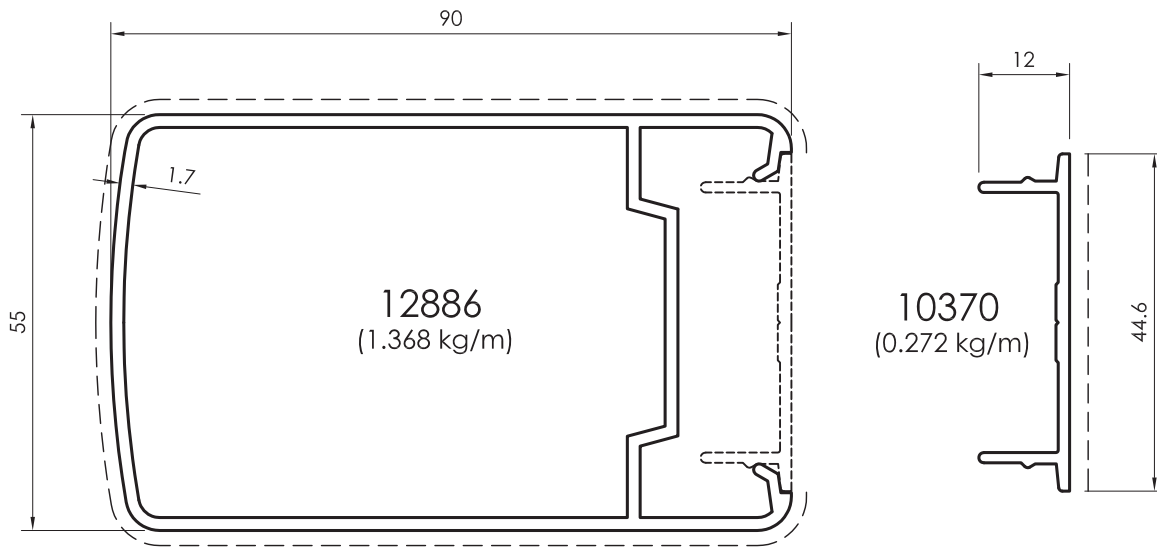
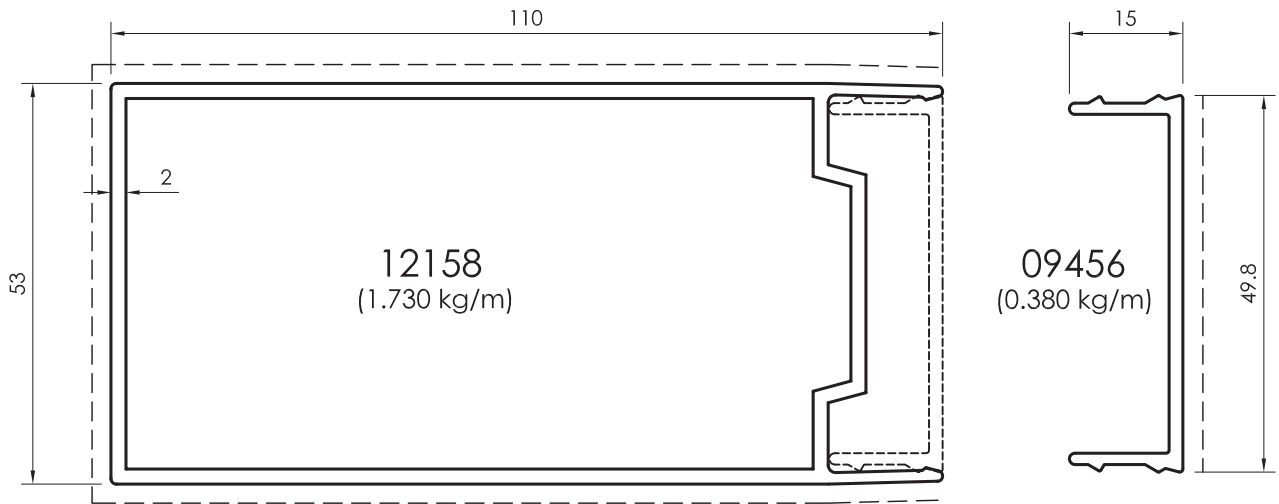
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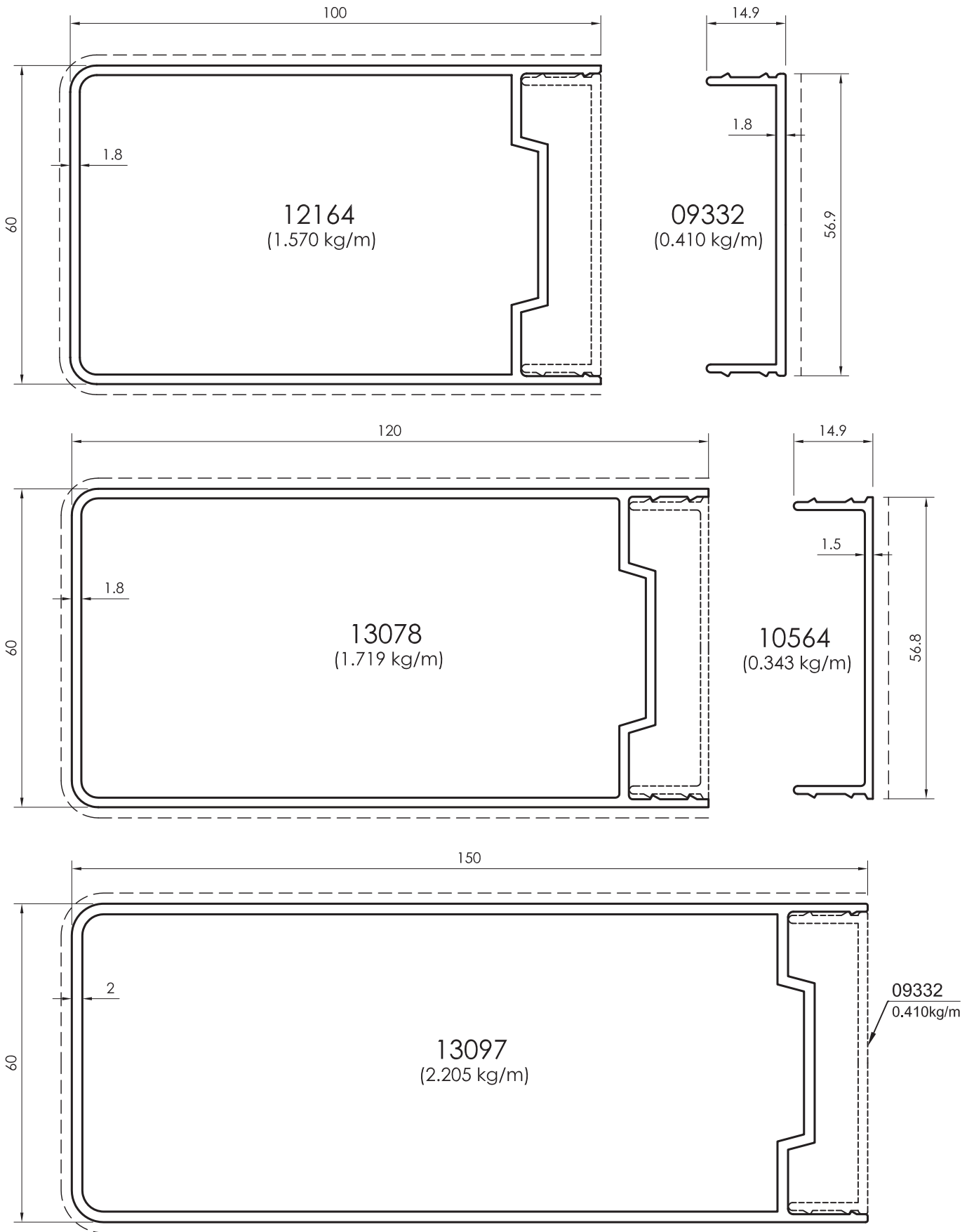
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Cladding Manager

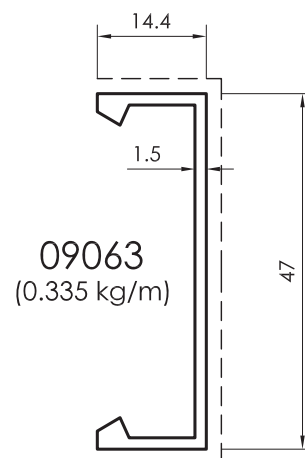
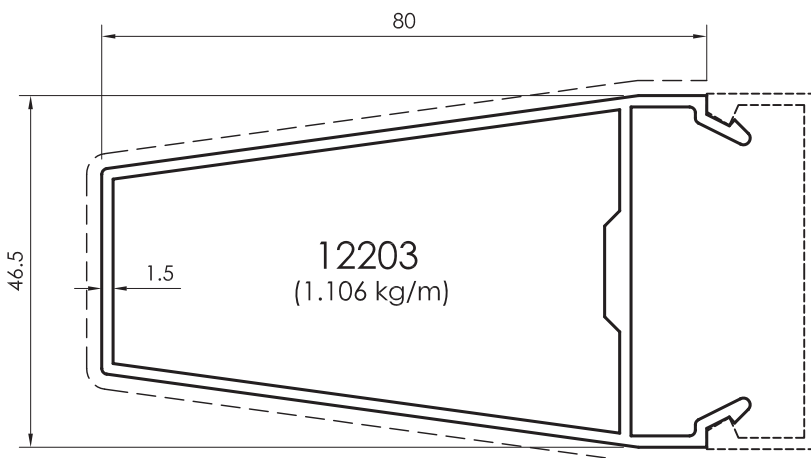
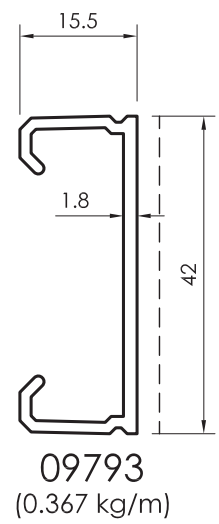
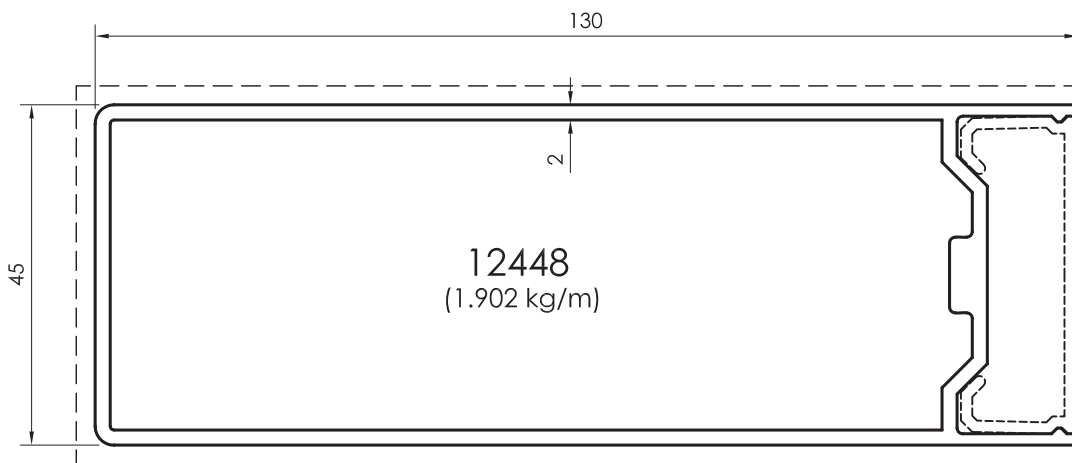
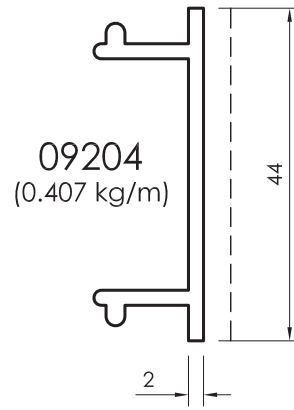
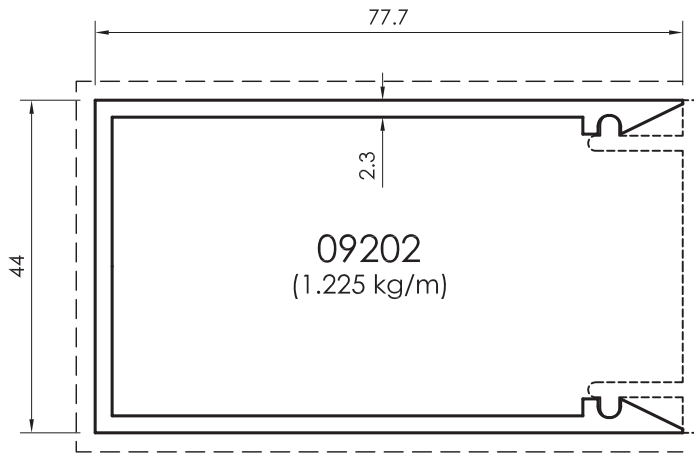


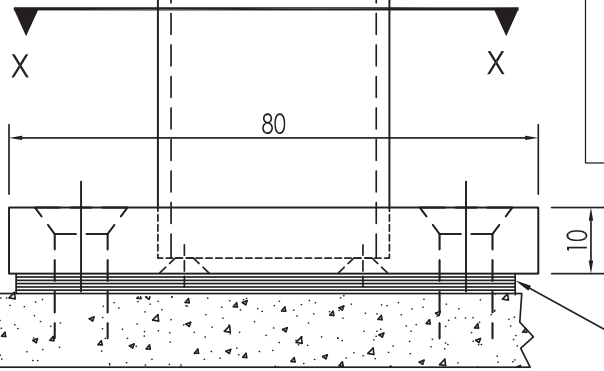
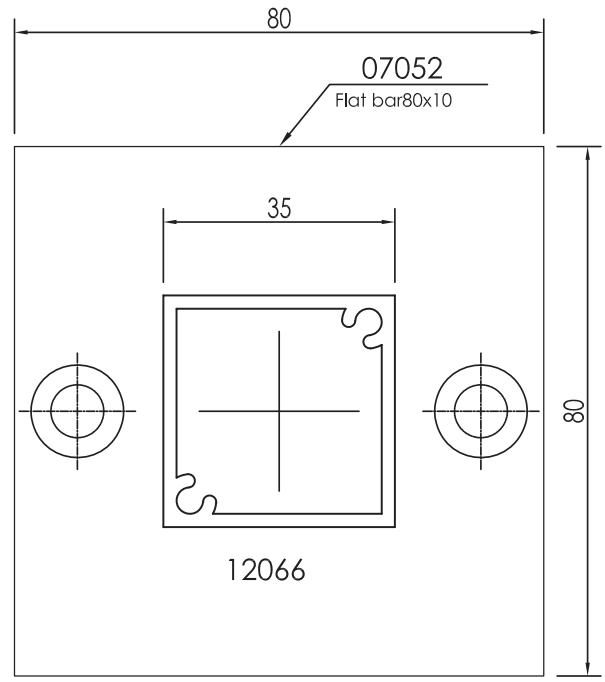
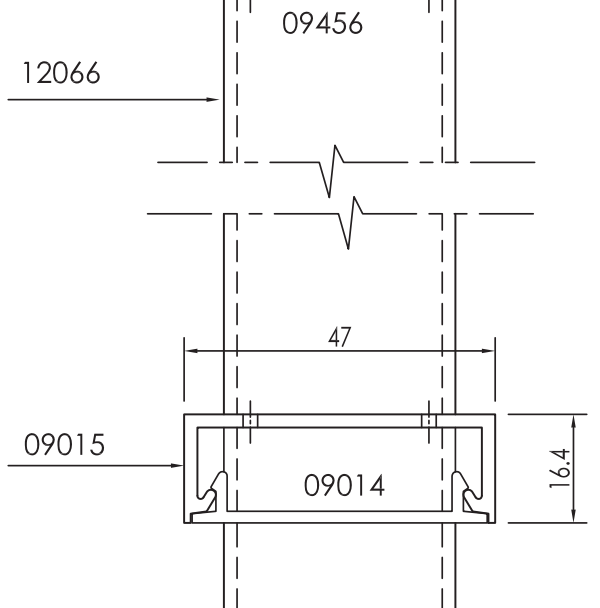
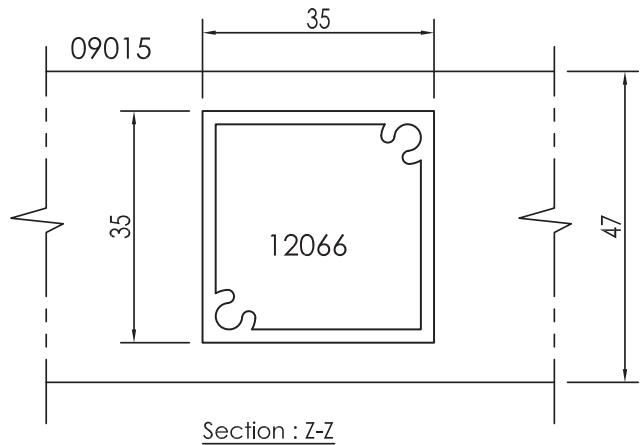
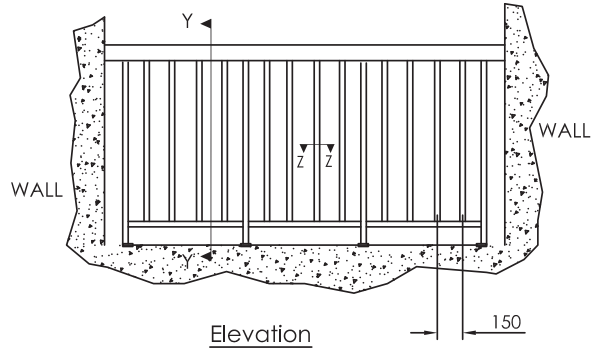
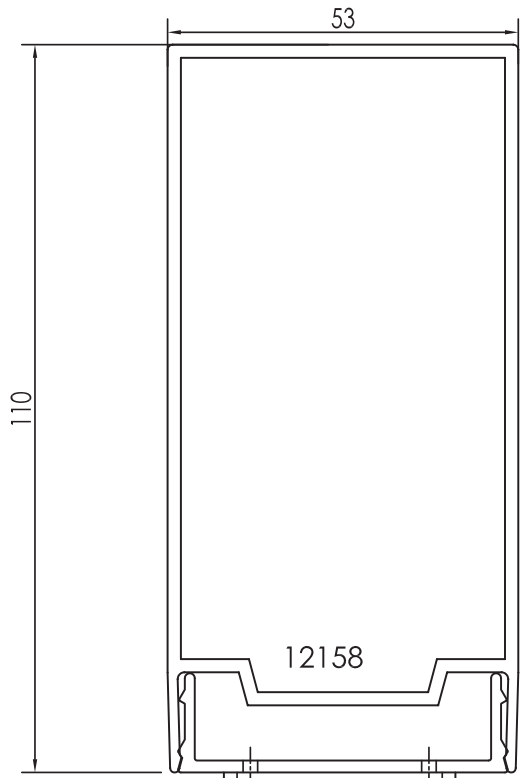
# PROFILES



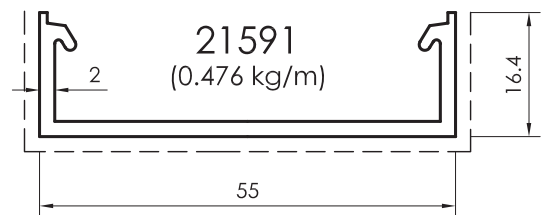
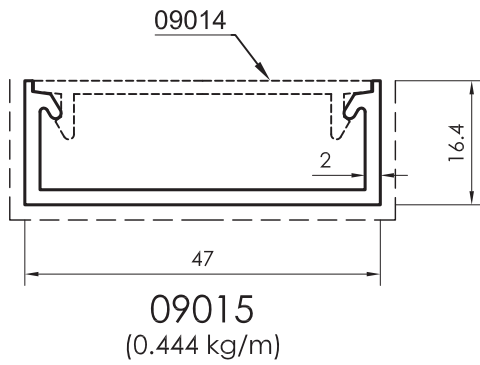
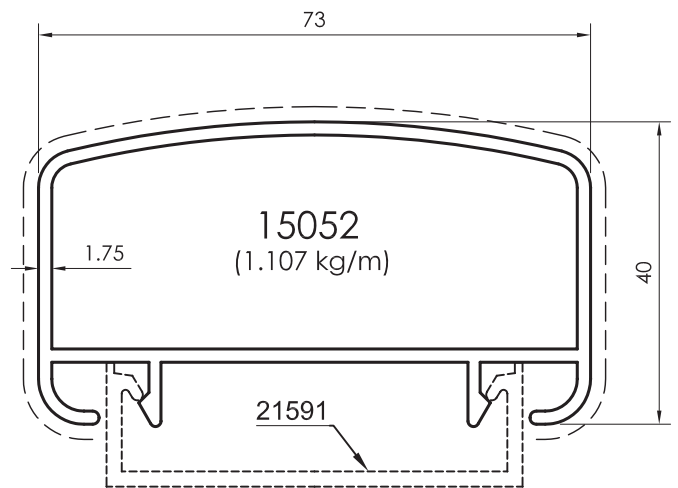
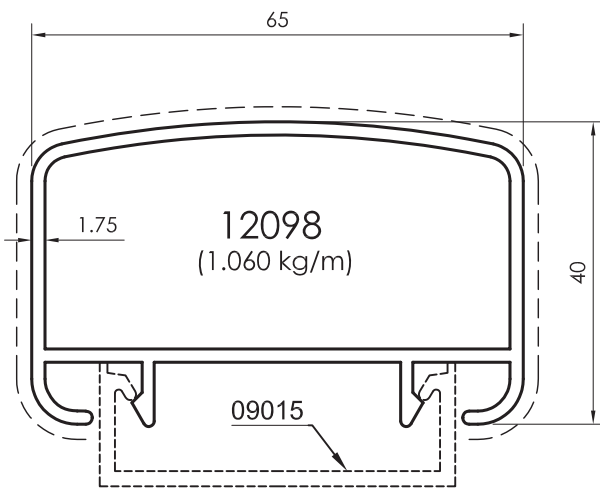
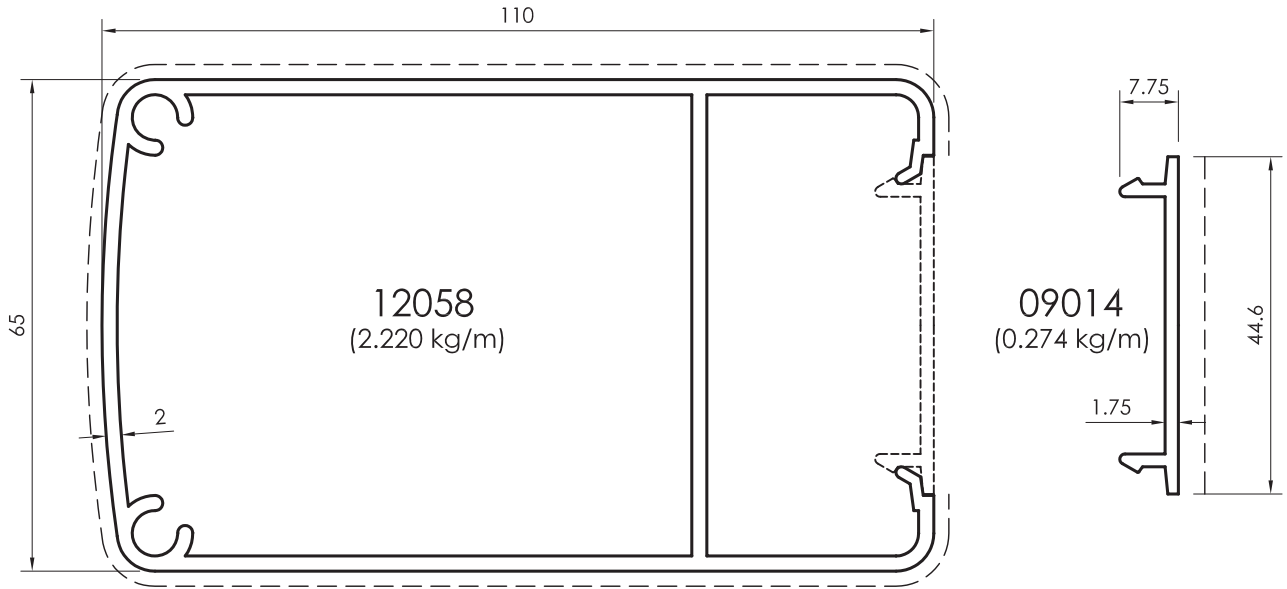


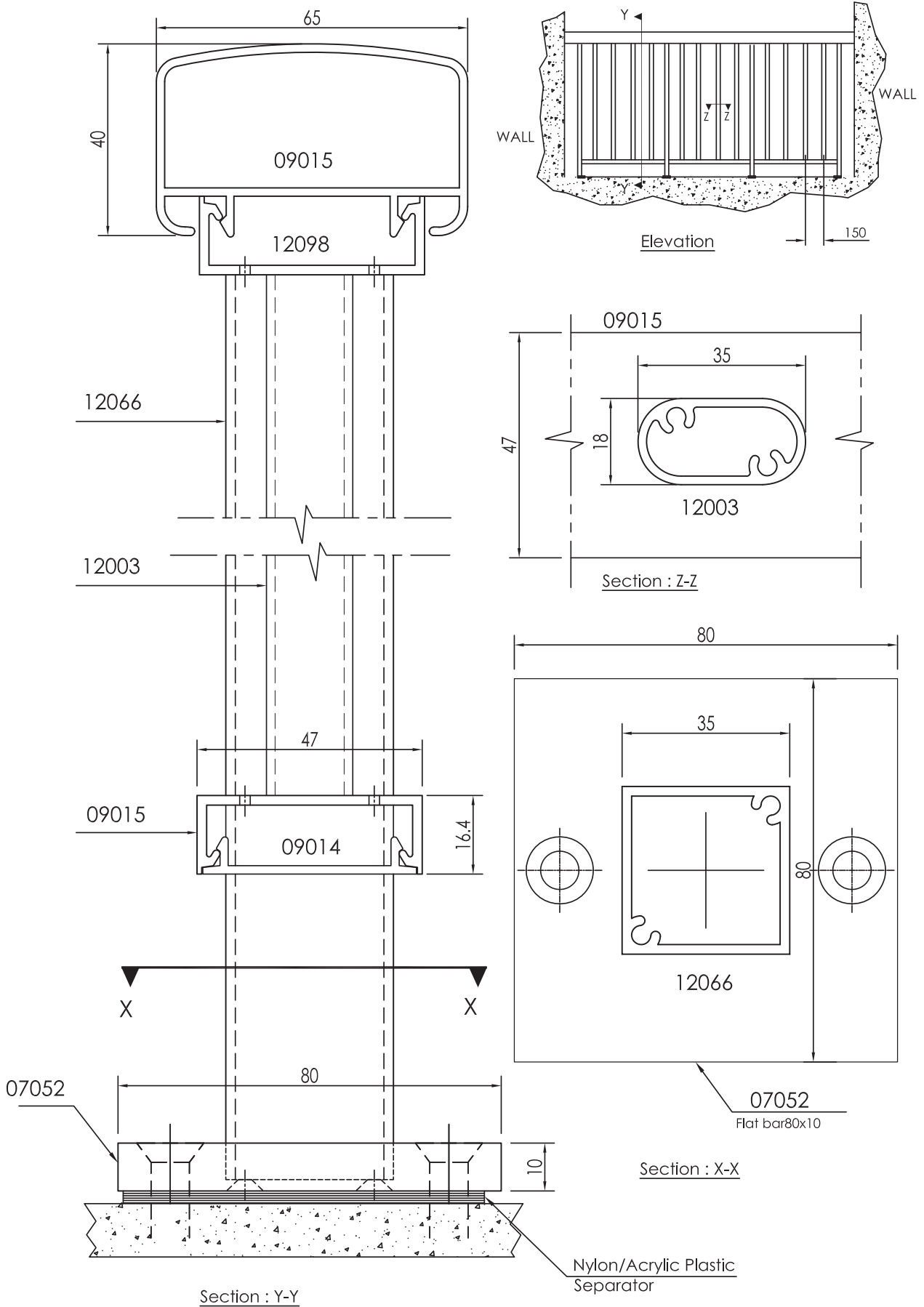


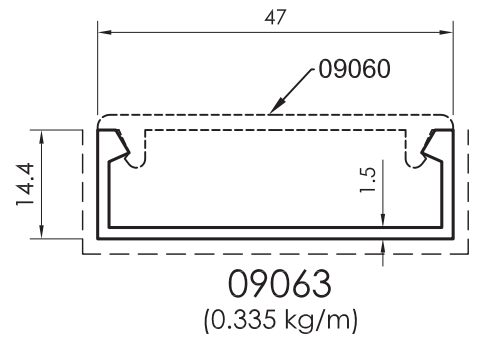
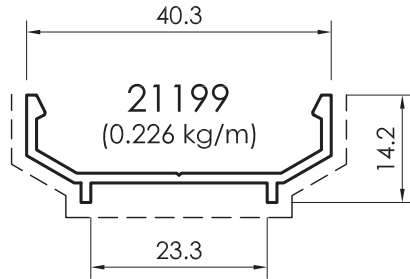
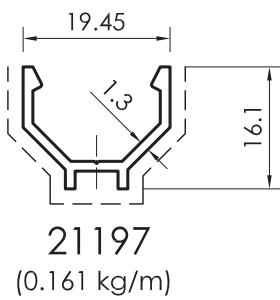
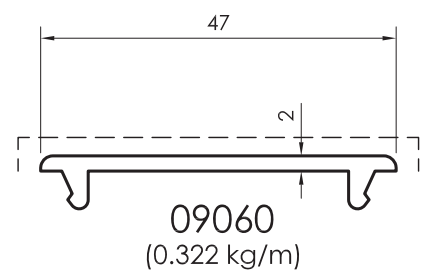
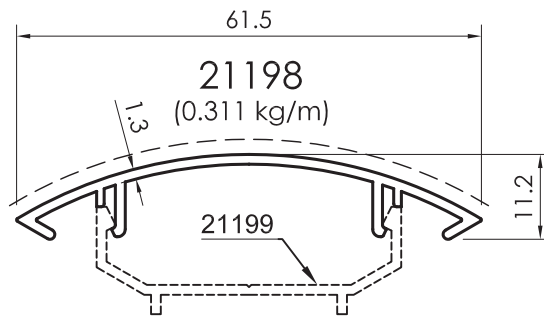
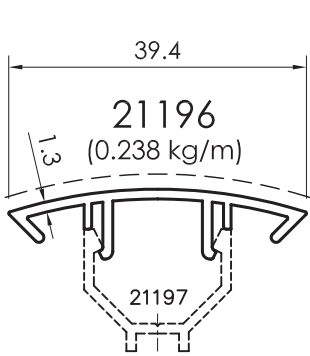
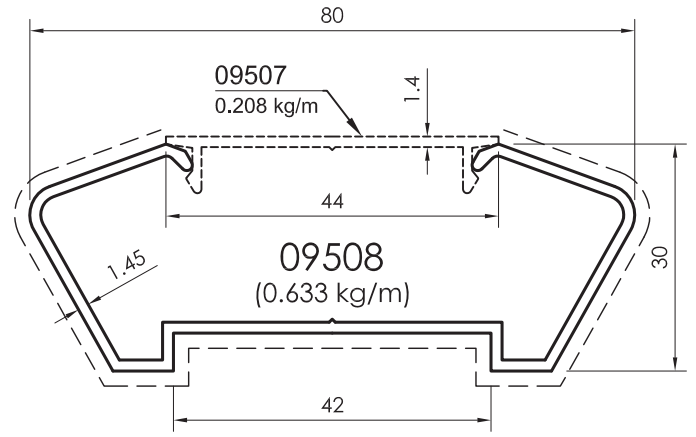
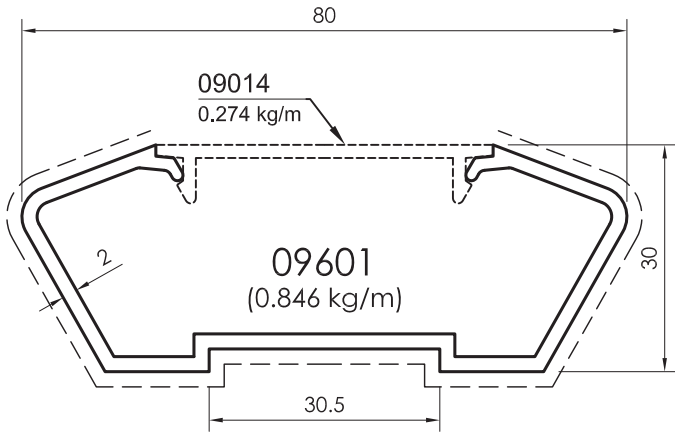
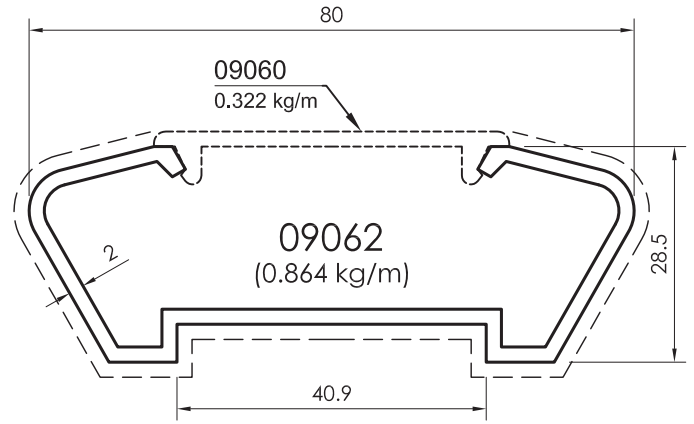
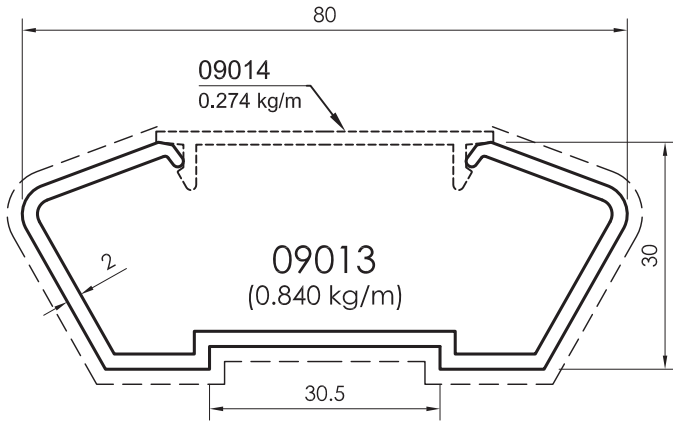


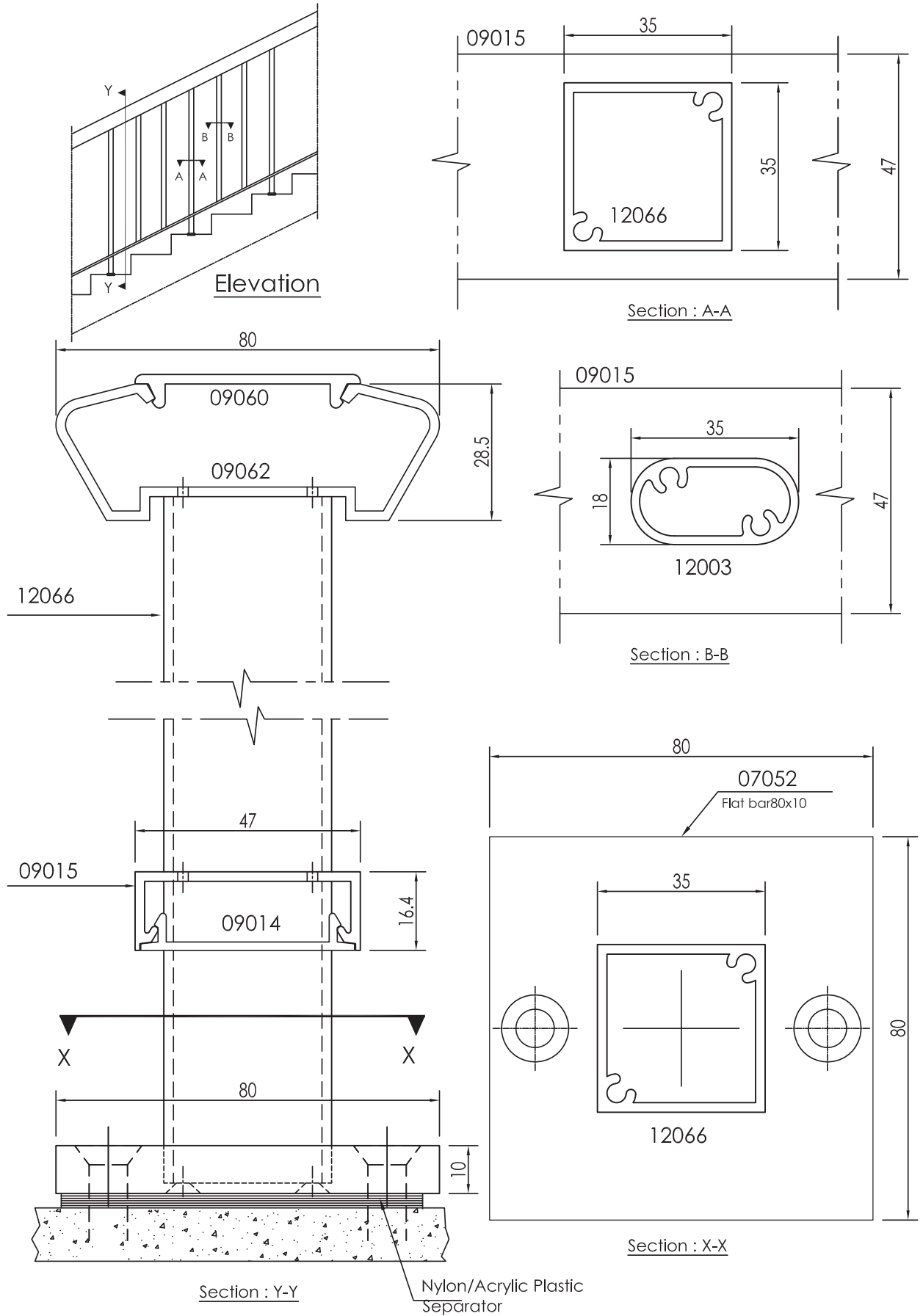


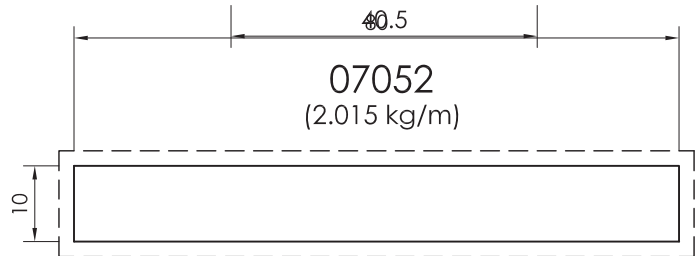
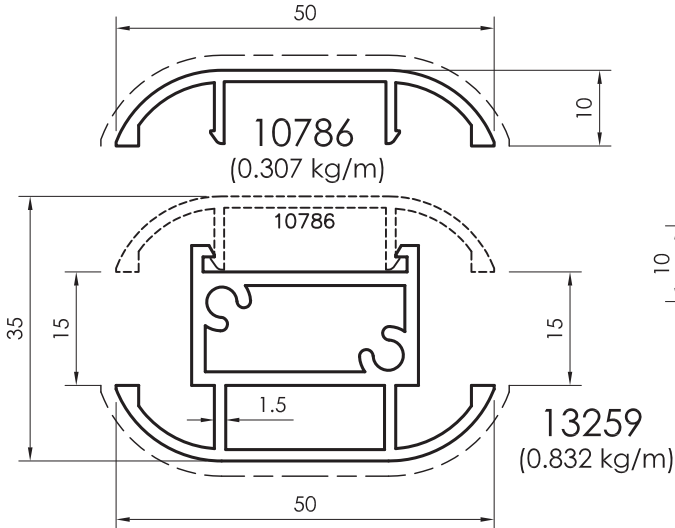
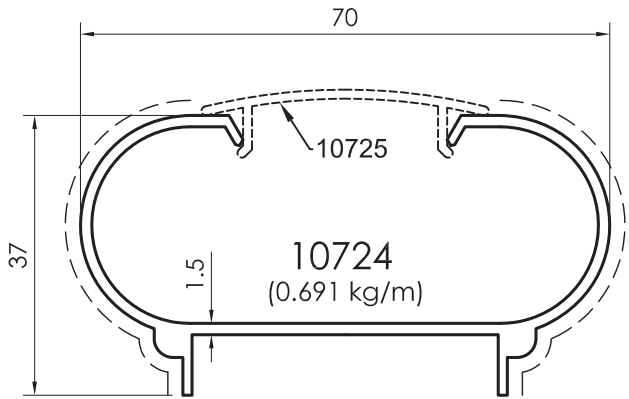
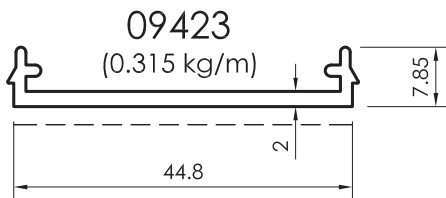
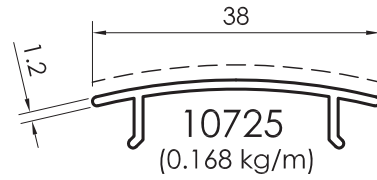
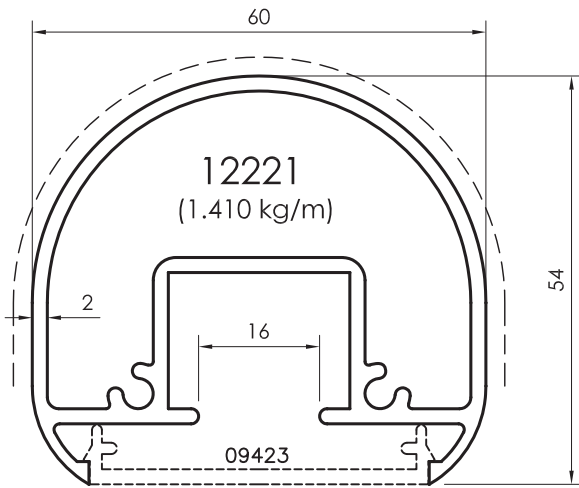
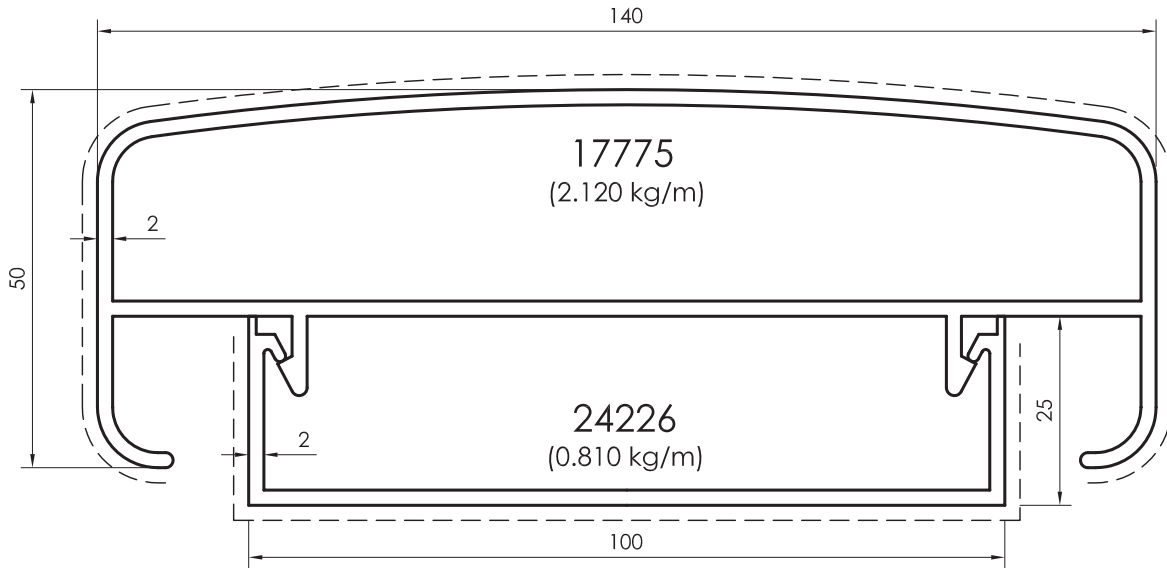
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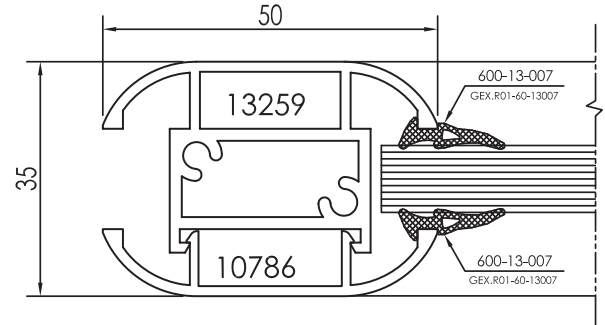
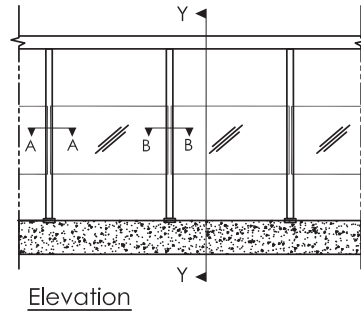
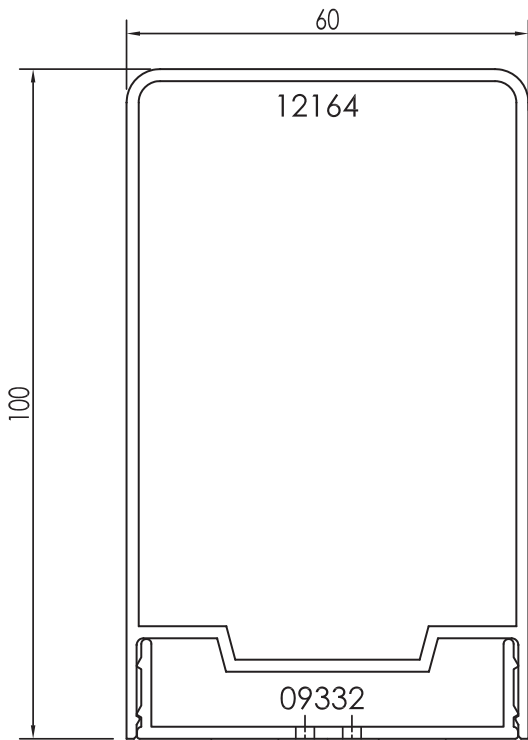




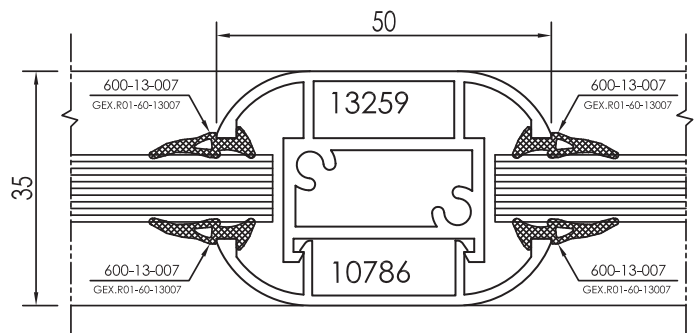




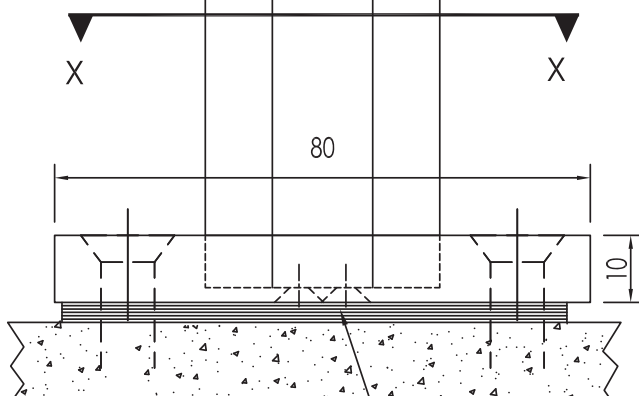
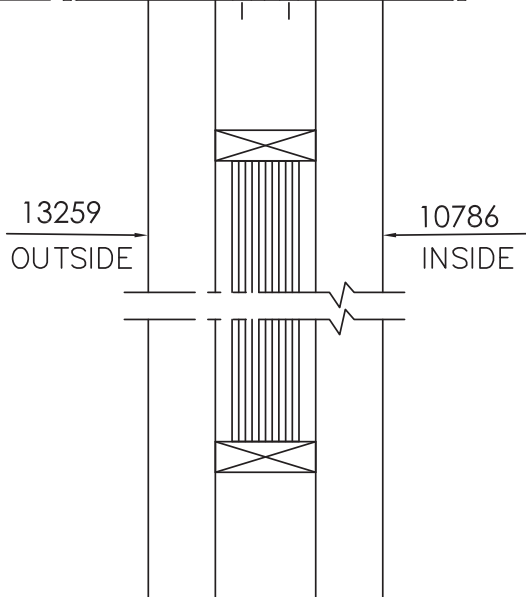




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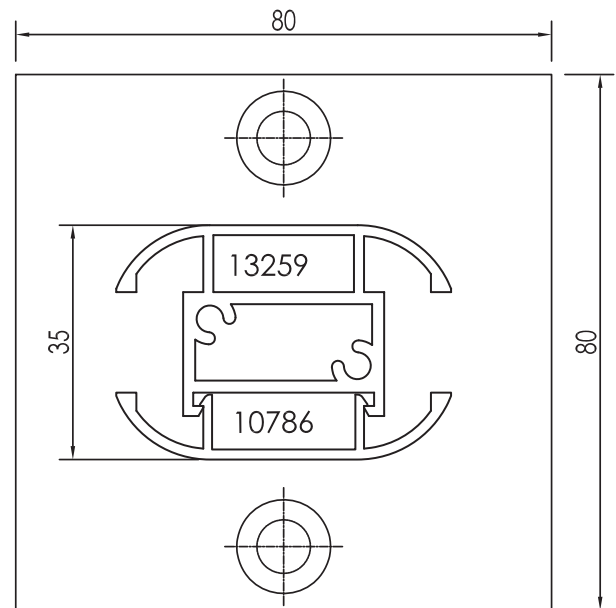


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Section : Y-Y

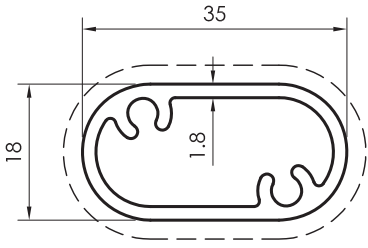
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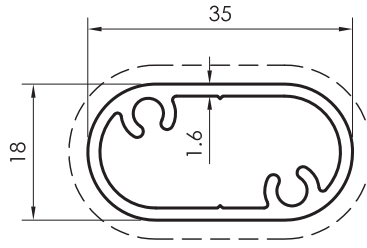
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Flat bar 80x10

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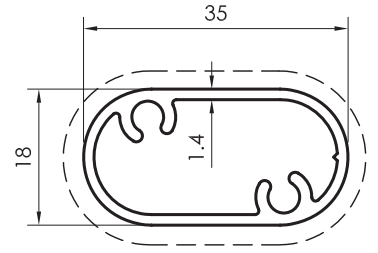




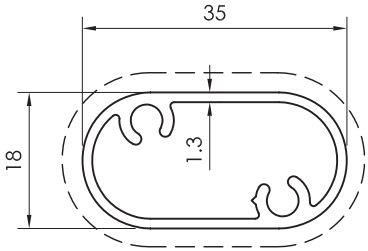
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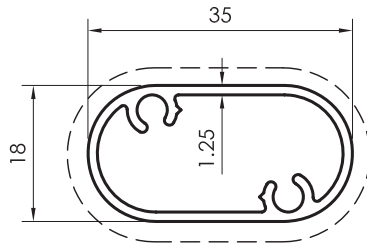
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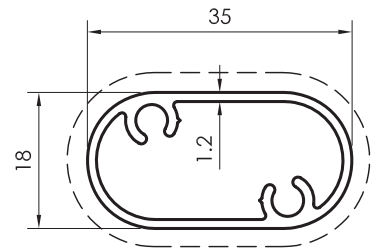
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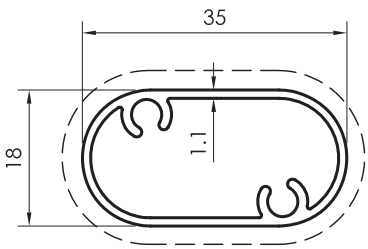
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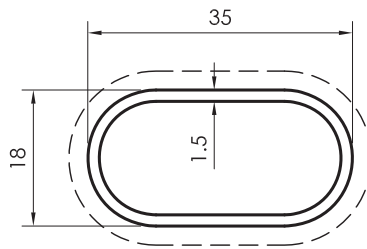
**13653**  
(0.360 kg/m)



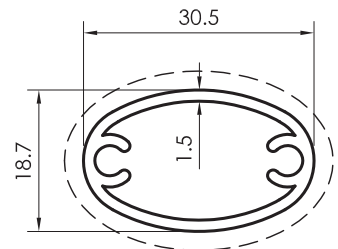
**13855**  
(0.368 kg/m)



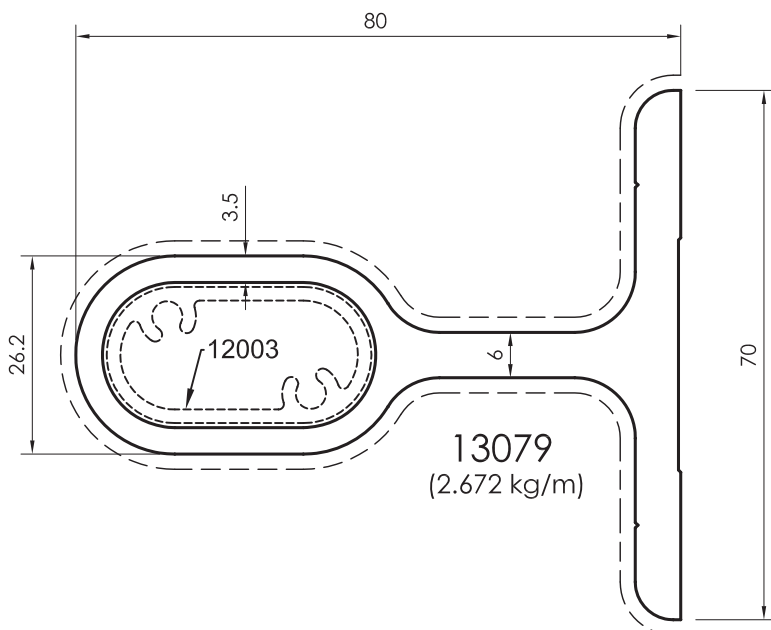
**14476**  
(0.330 kg/m)

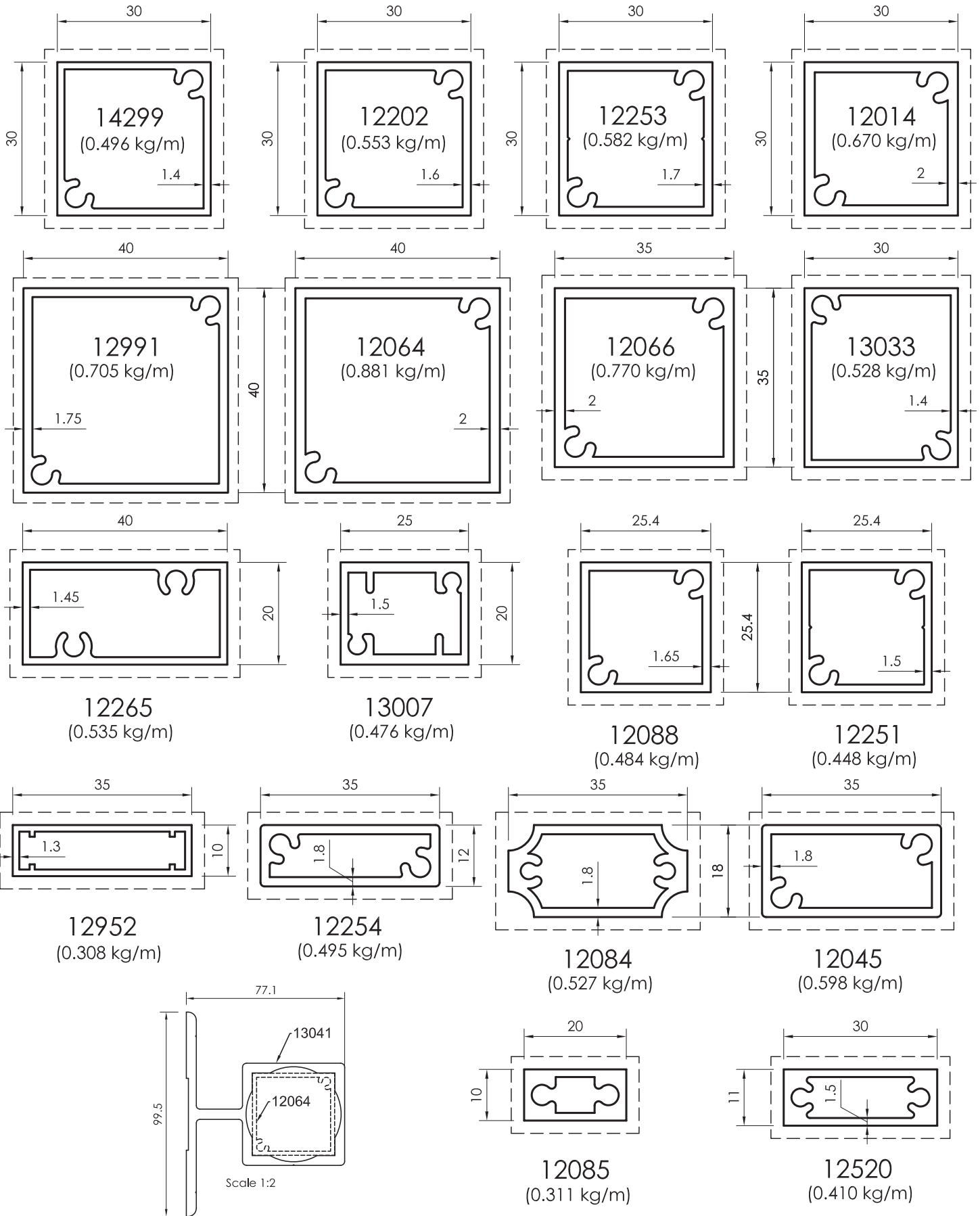


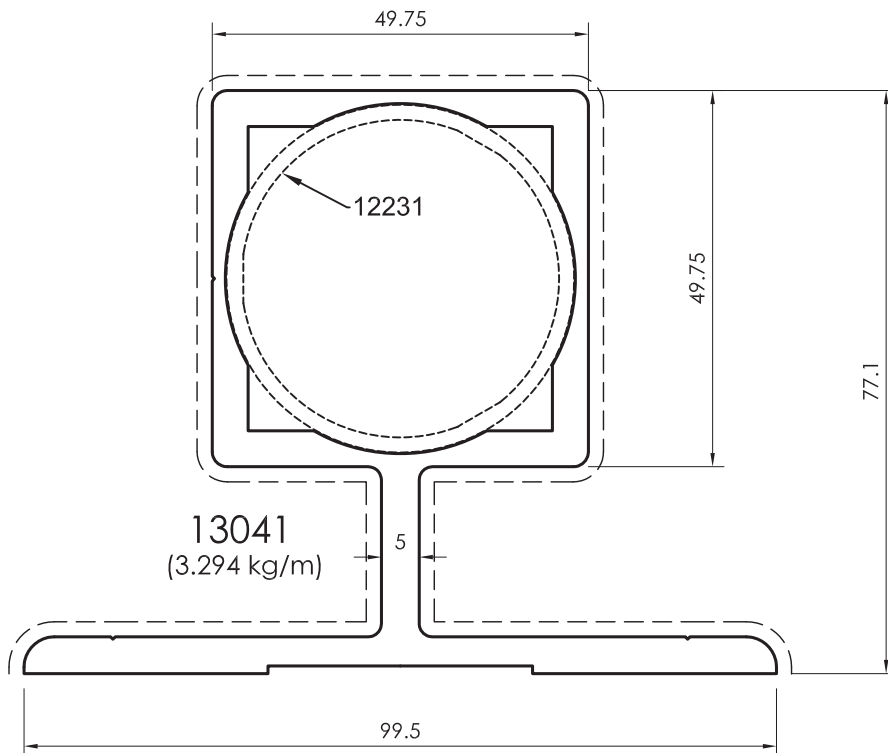
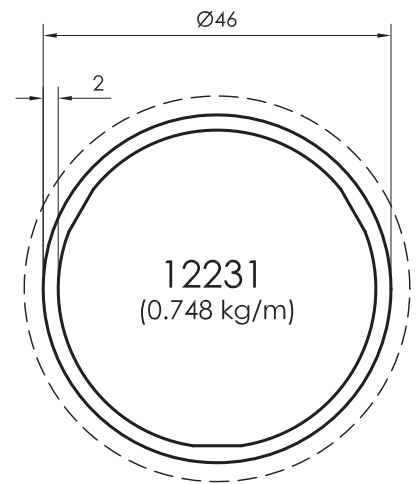
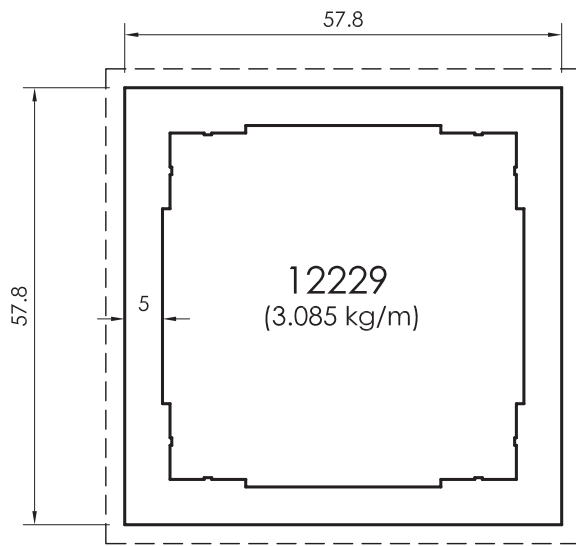
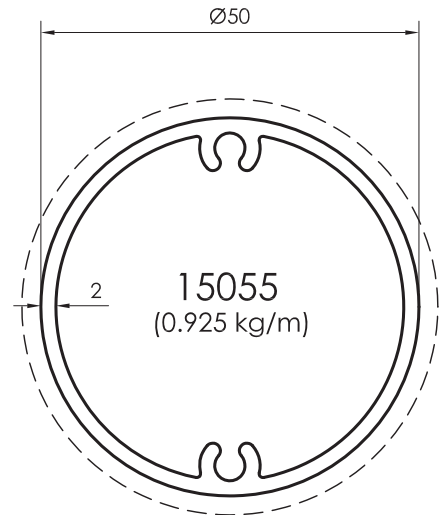
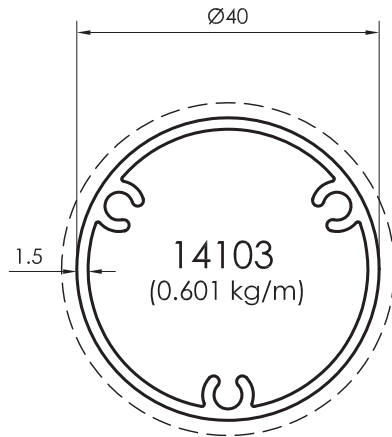
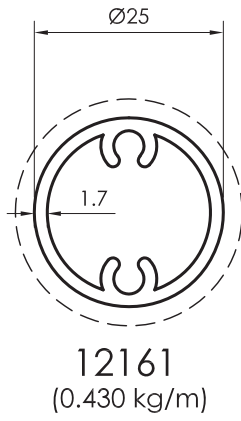
**12127**  
(0.354 kg/m)

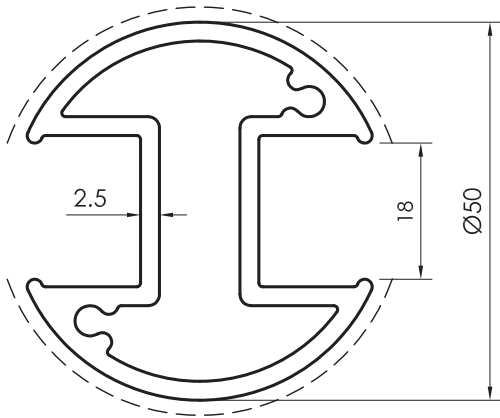


**12494**  
(0.370 kg/m)

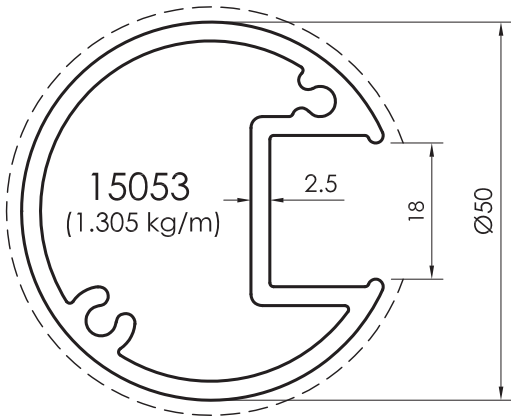




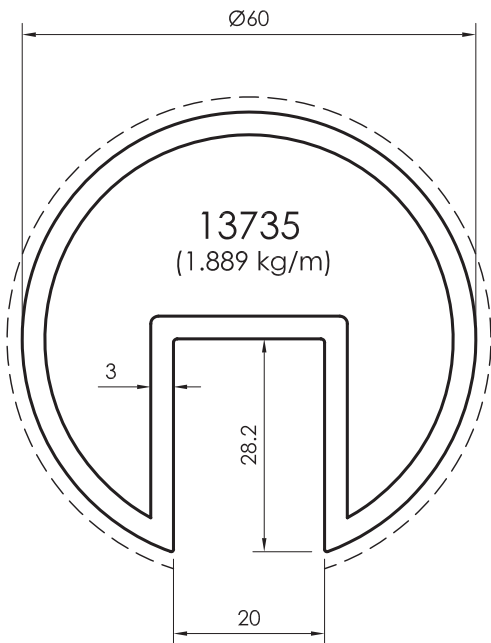




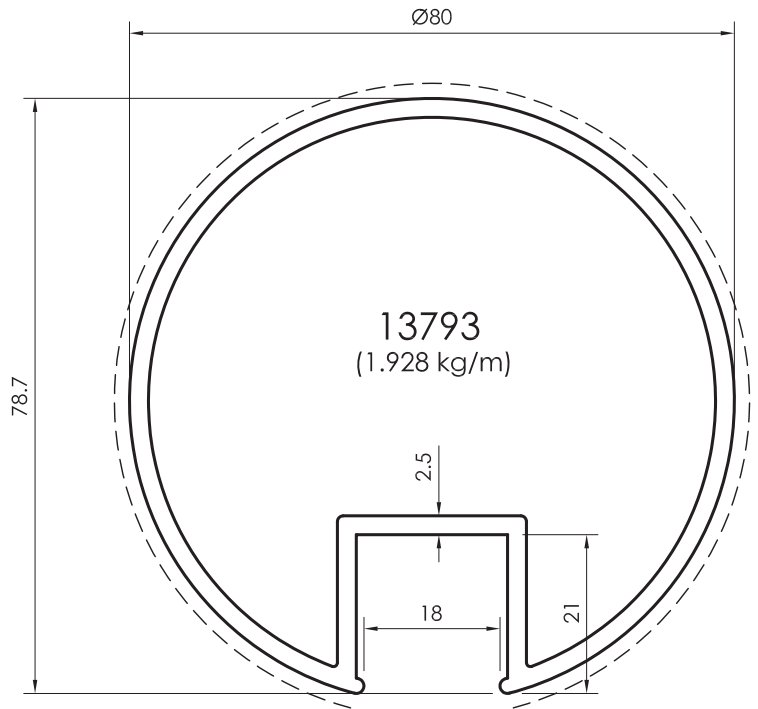
15054  
(1.459 kg/m)



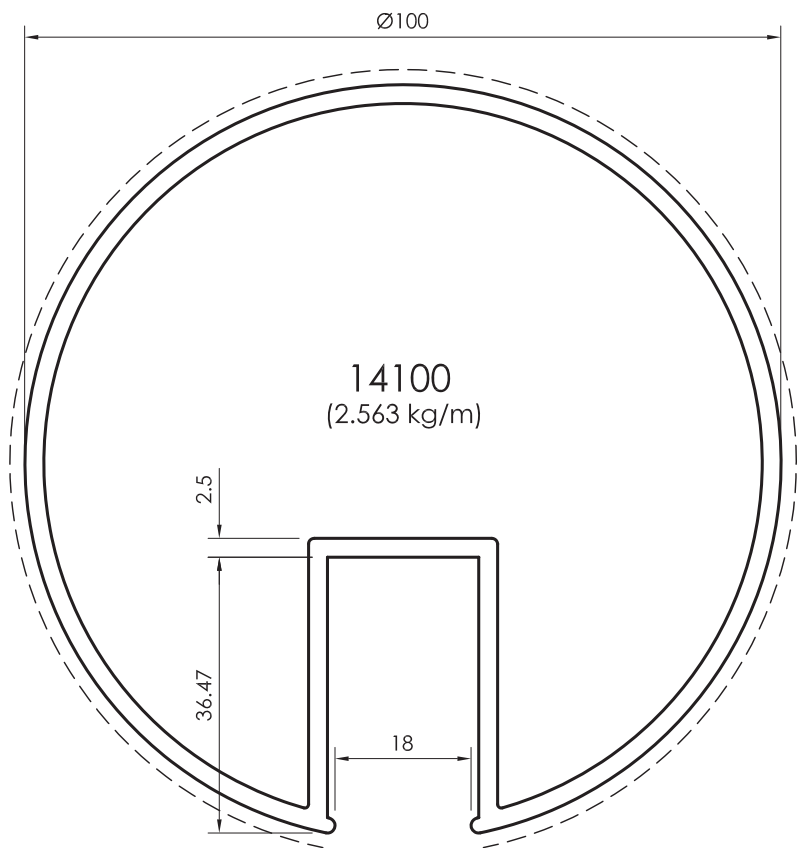
15053  
(1.305 kg/m)



13735  
(1.889 kg/m)



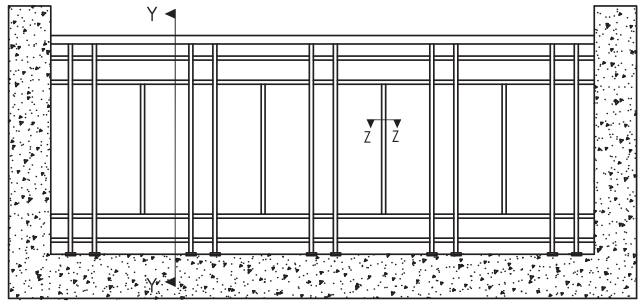
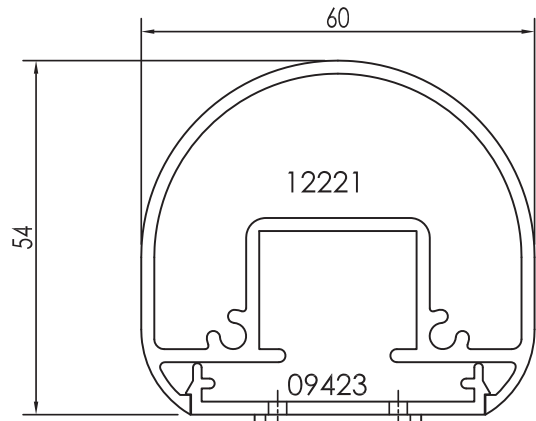
13793  
(1.928 kg/m)



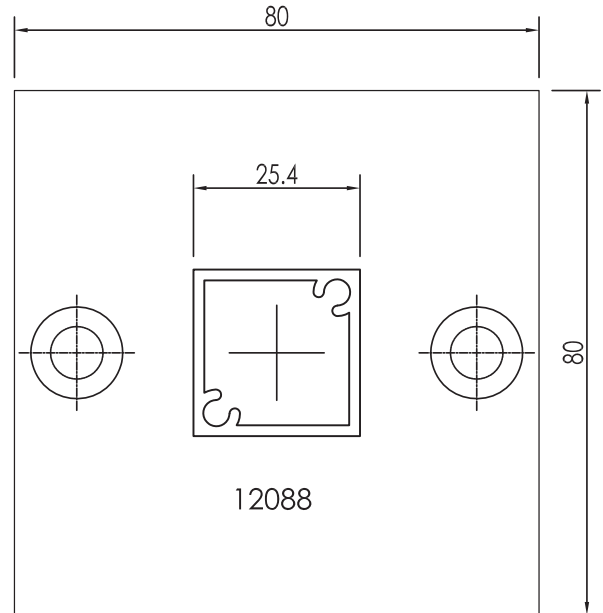
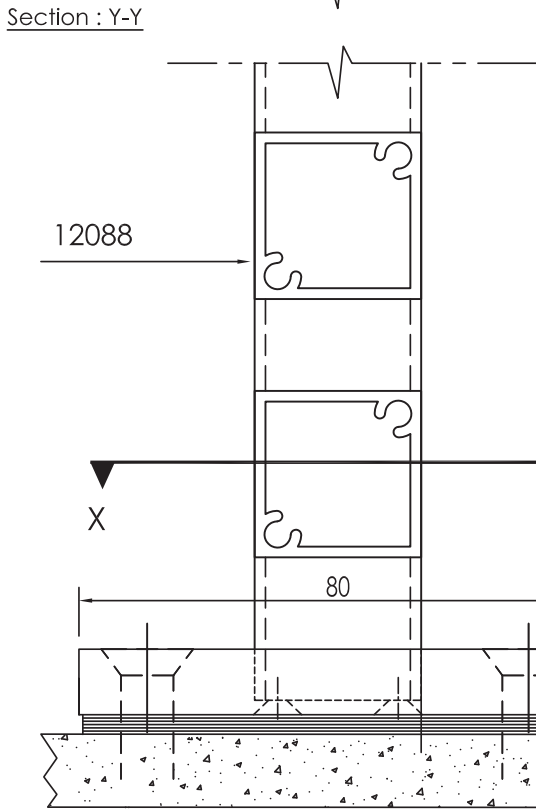
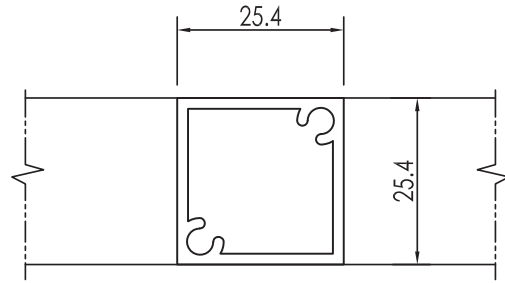
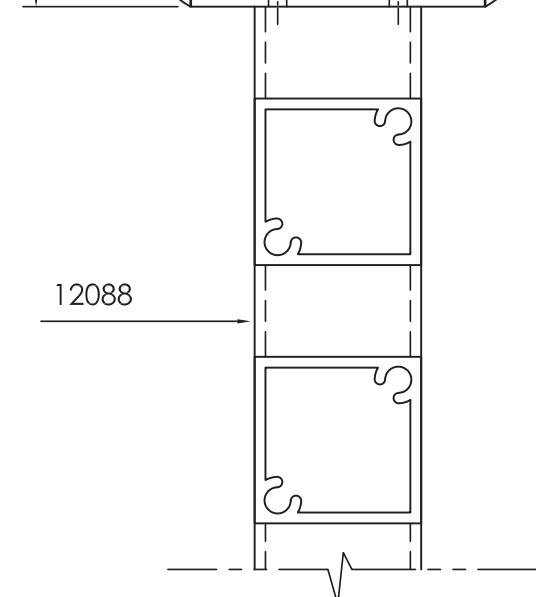
14100  
(2.563 kg/m)



# ASSEMBLY DRAWINGS

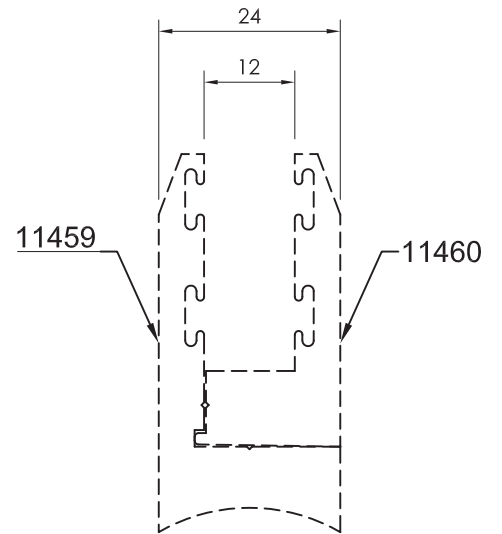
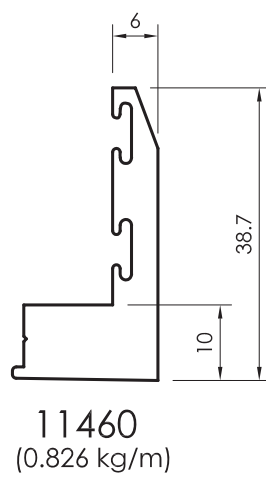
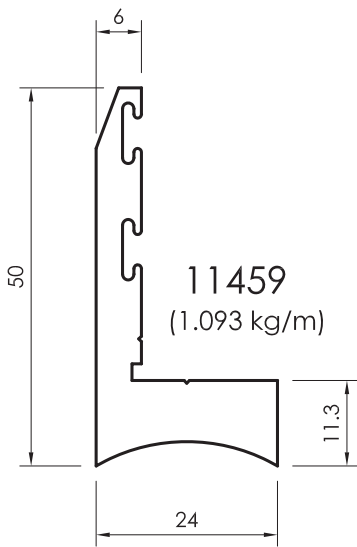
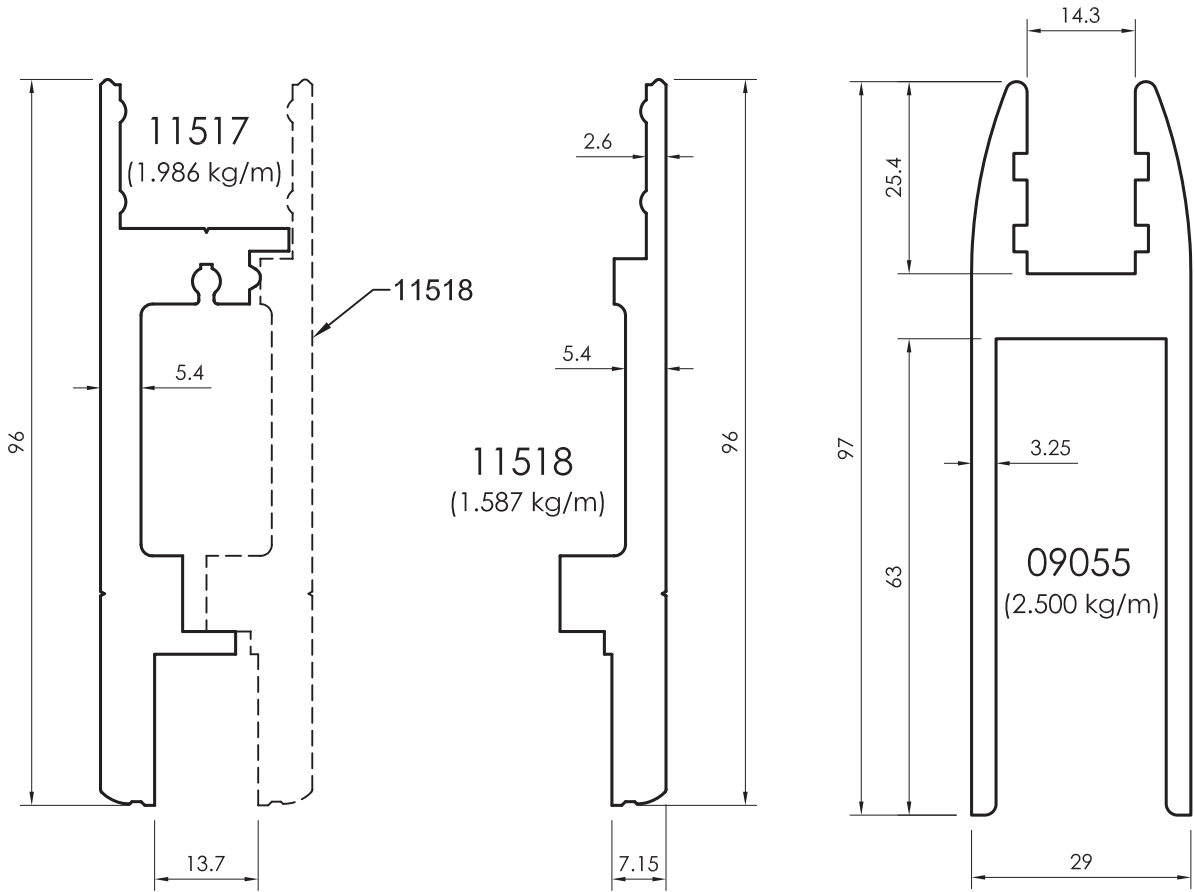


Elevation

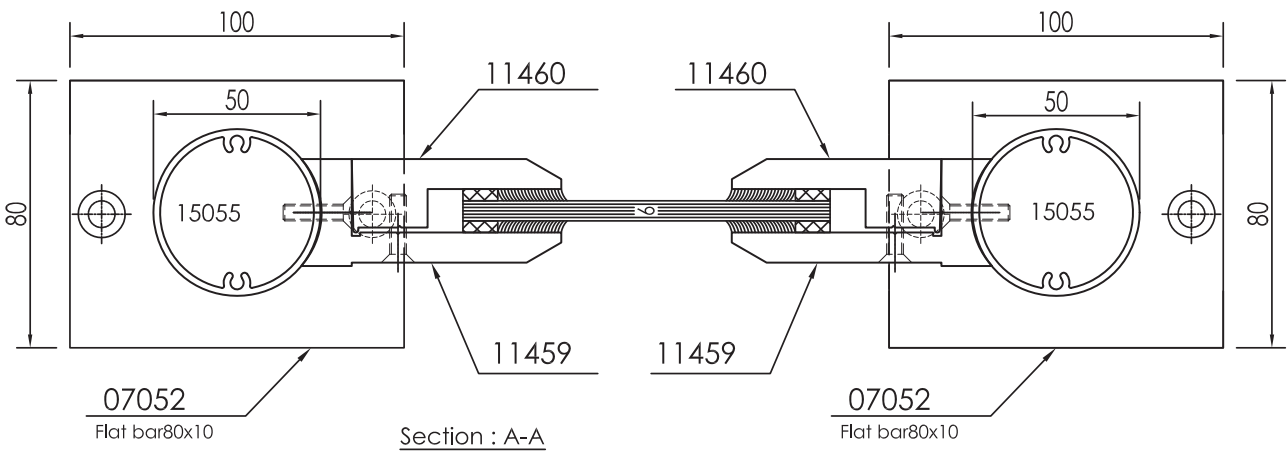
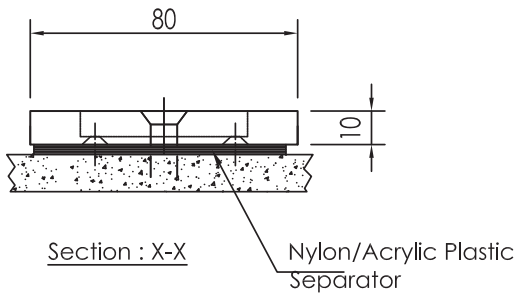
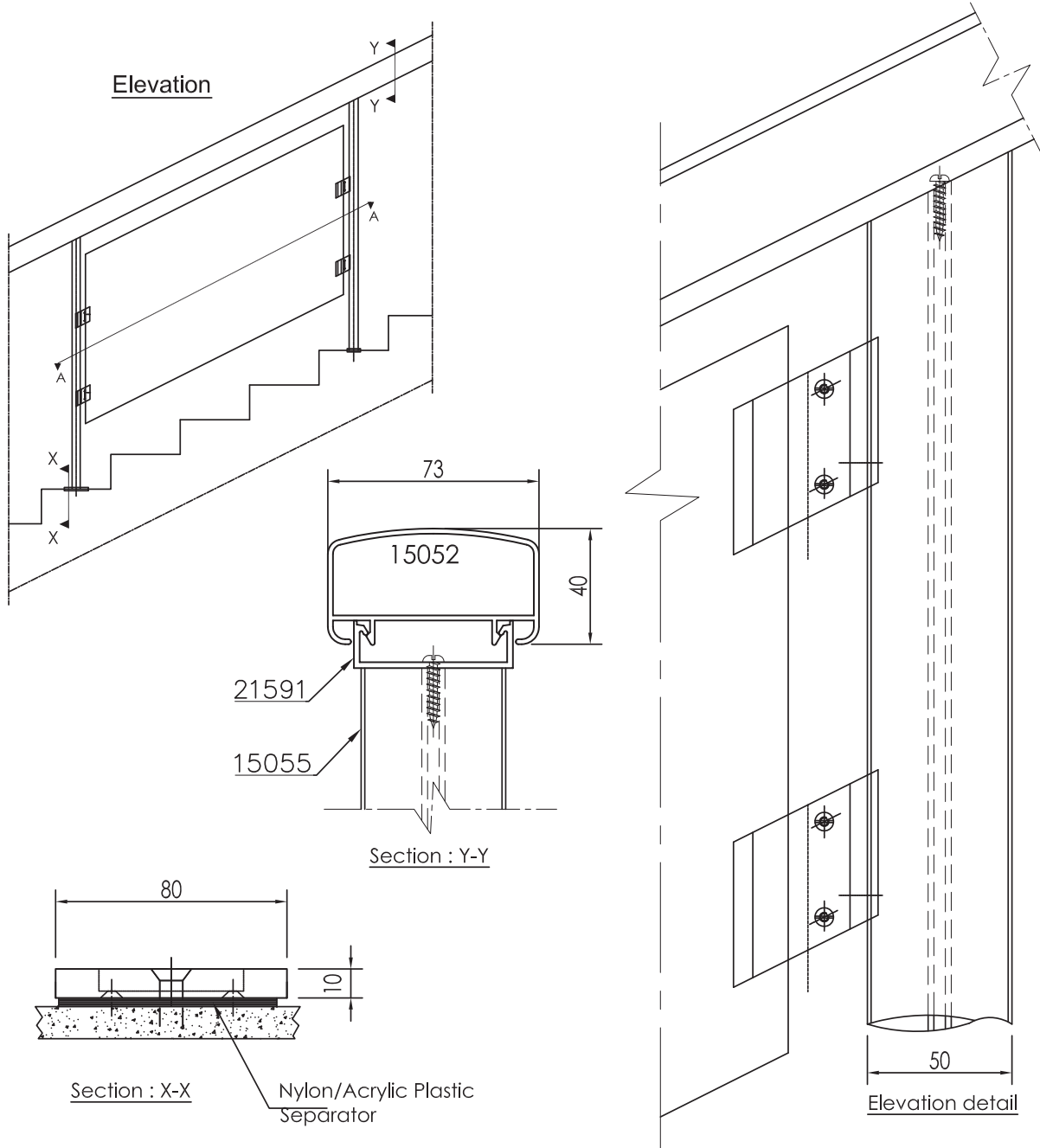


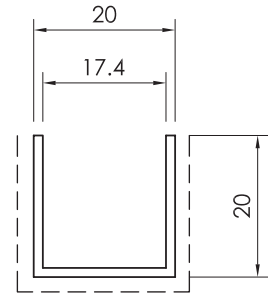
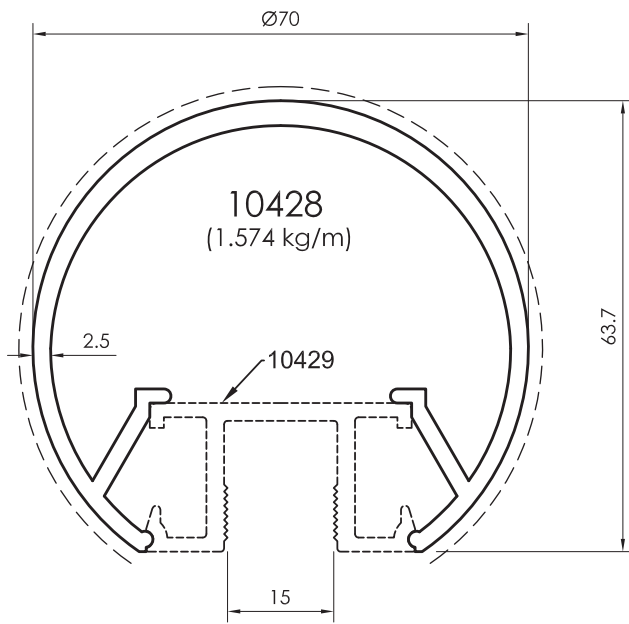
Section : X-X

07052  
Flat bar 80x10

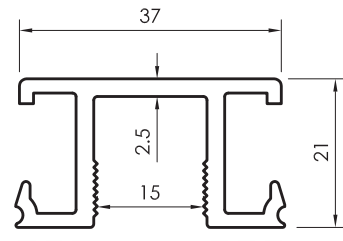




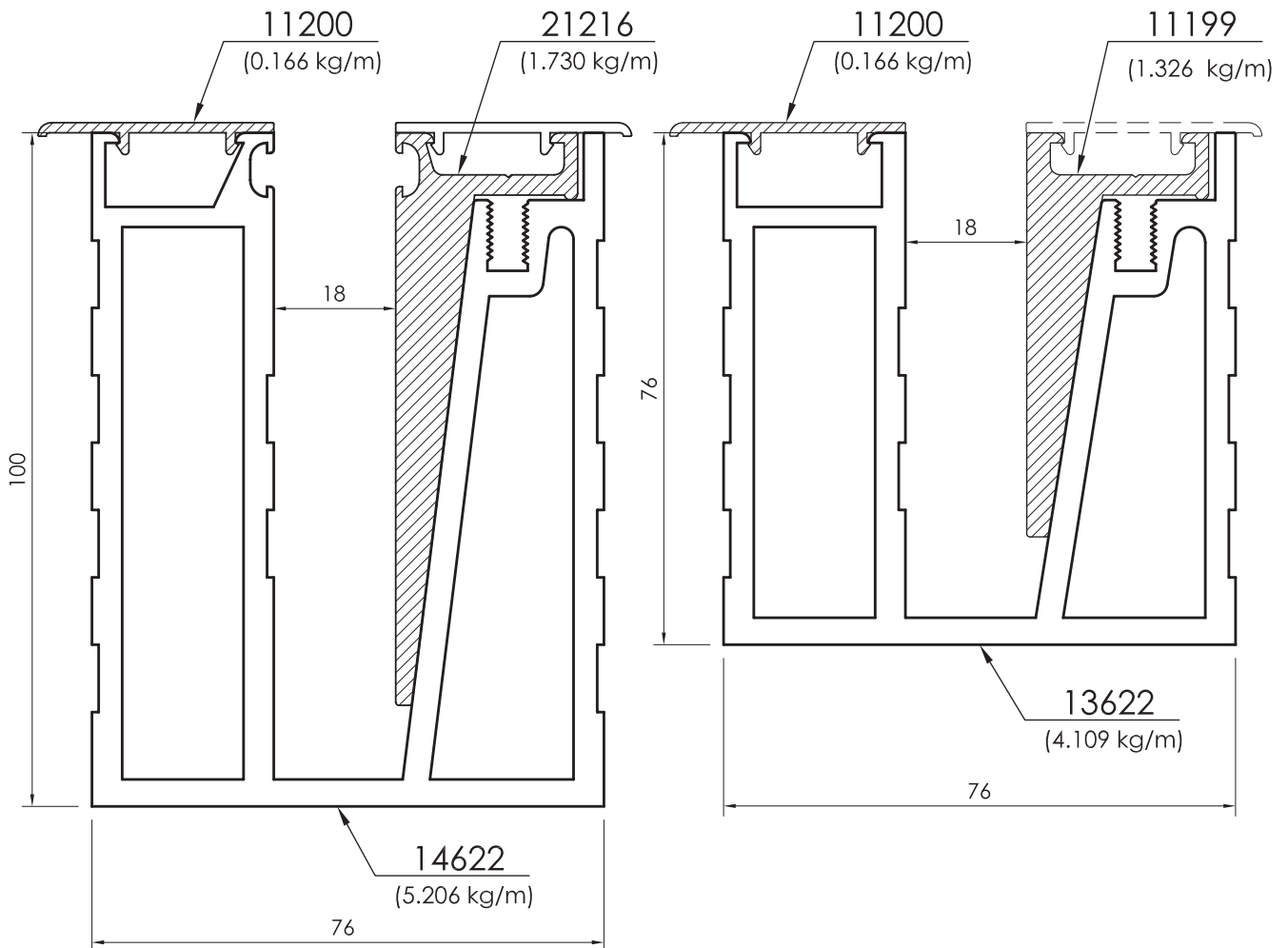


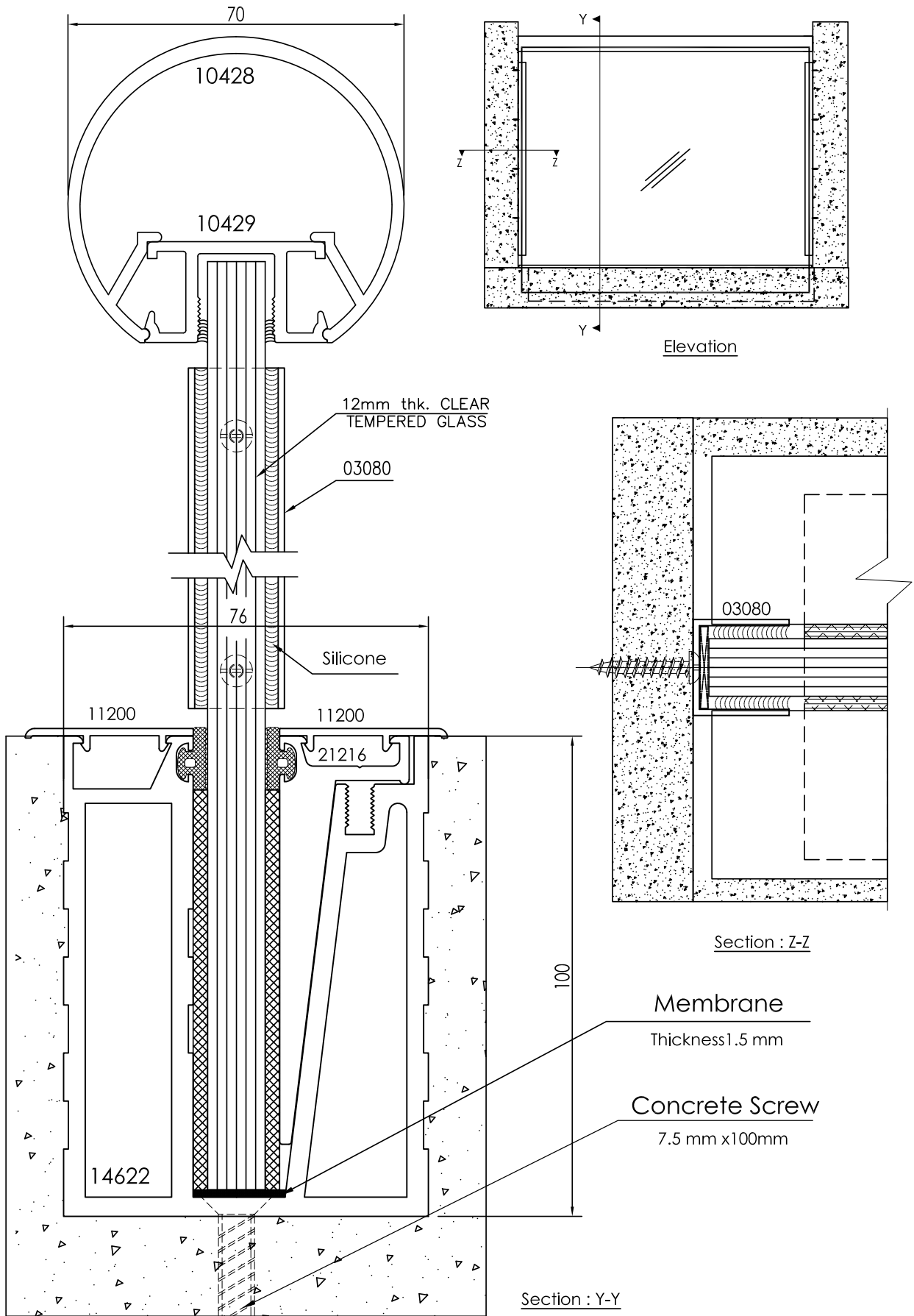


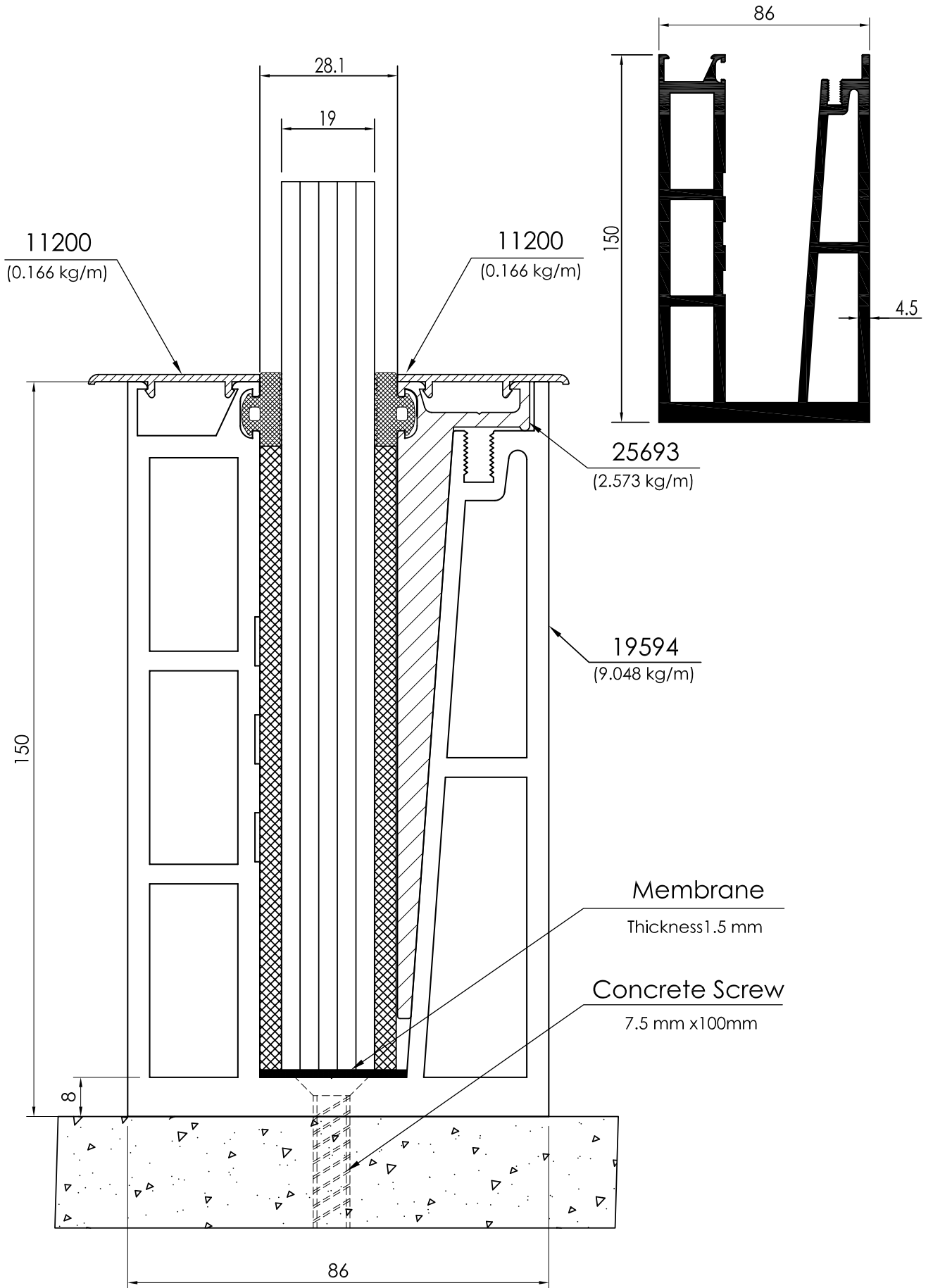
03080  
(0.201 kg/m)



10429  
(0.633 kg/m)

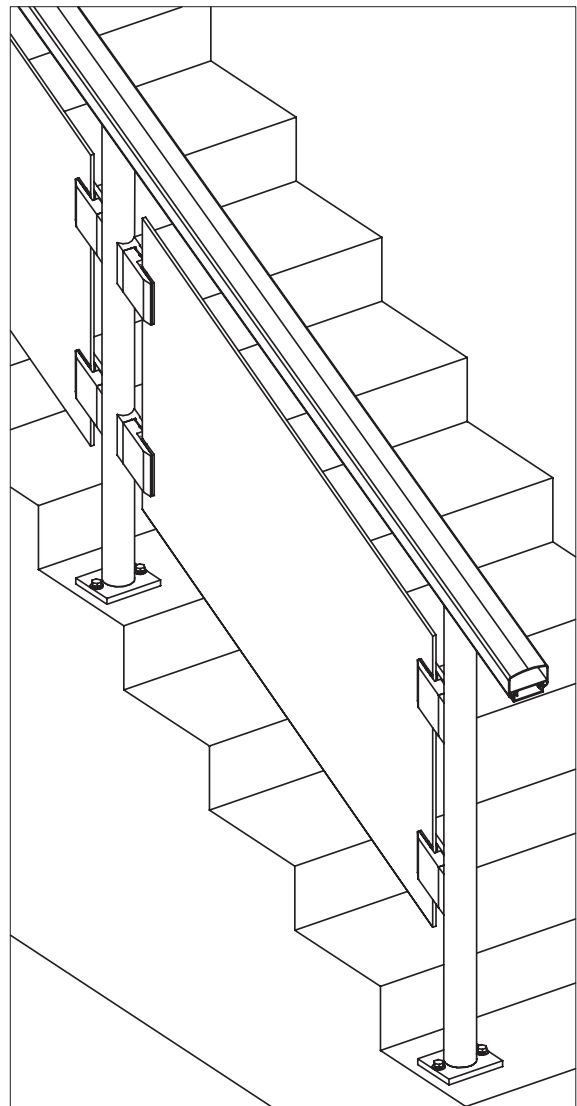
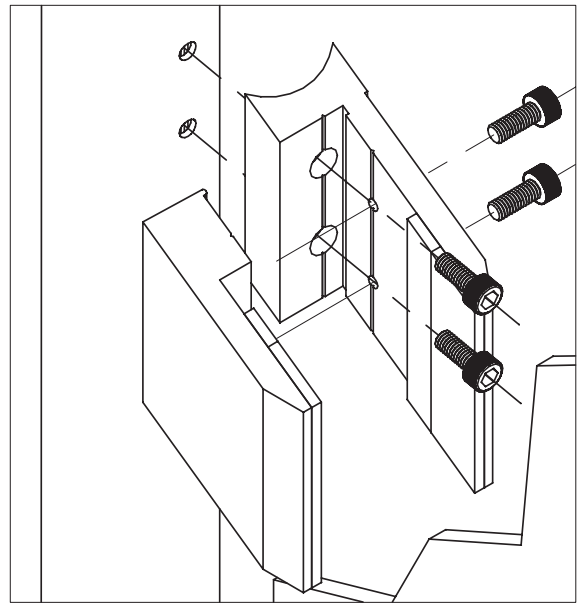
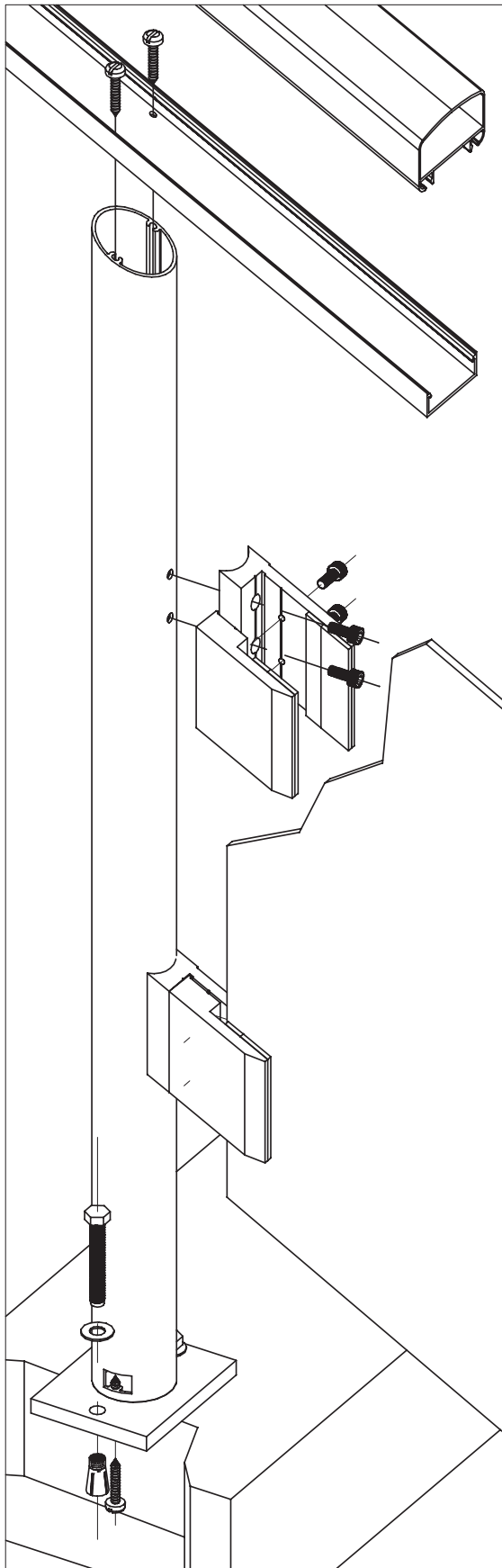


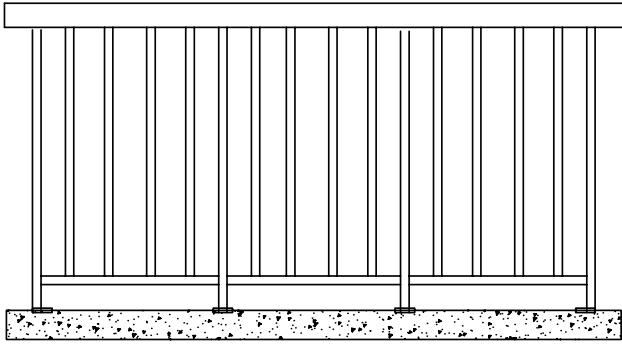




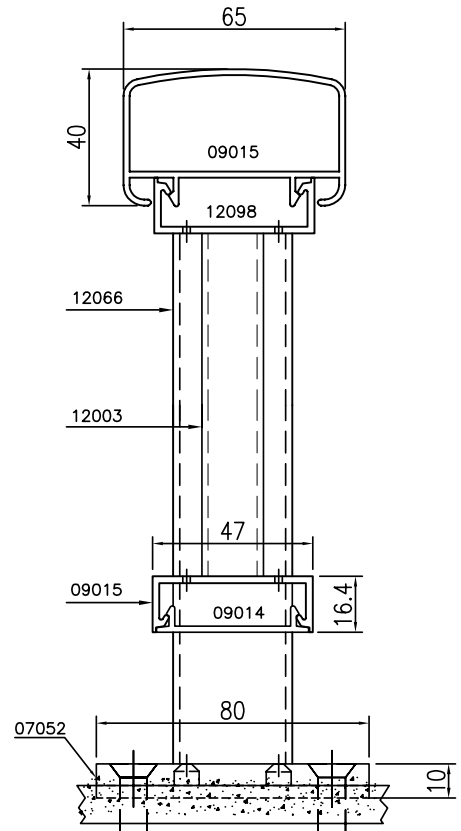
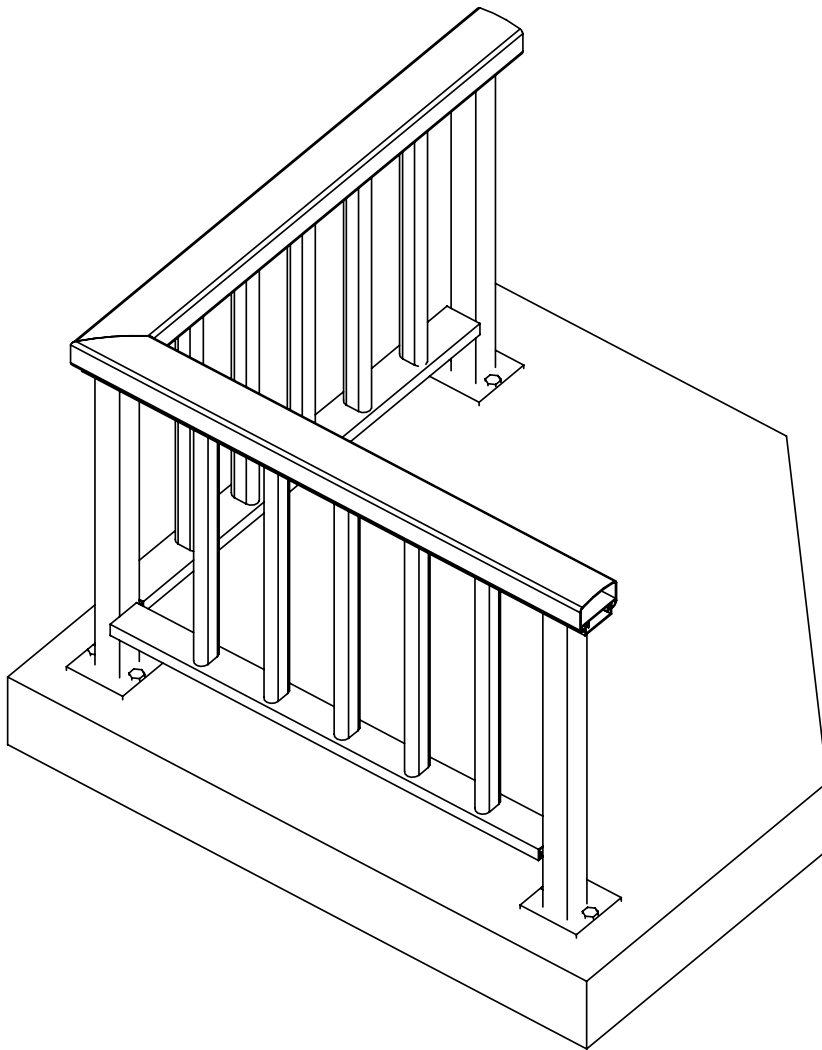
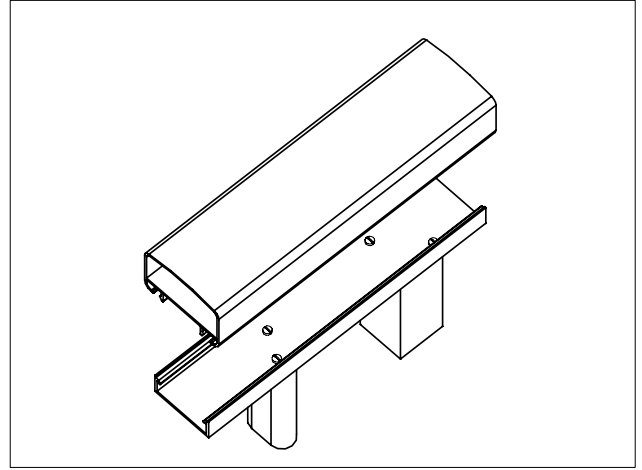


# 3D SECTIONS

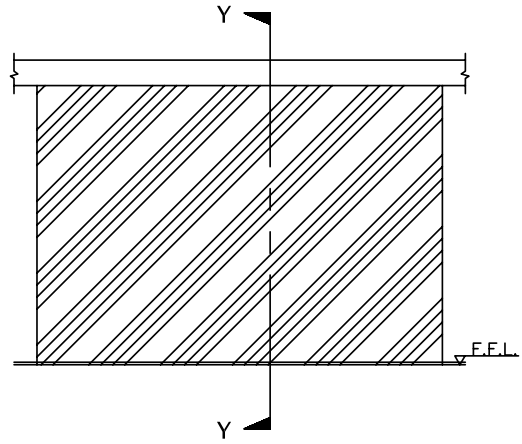
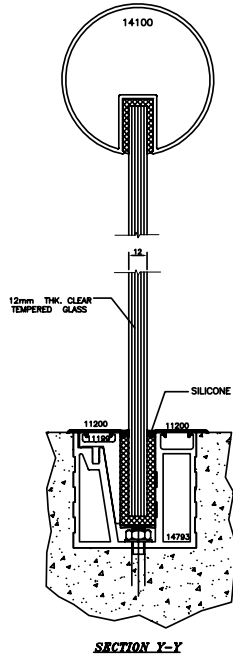




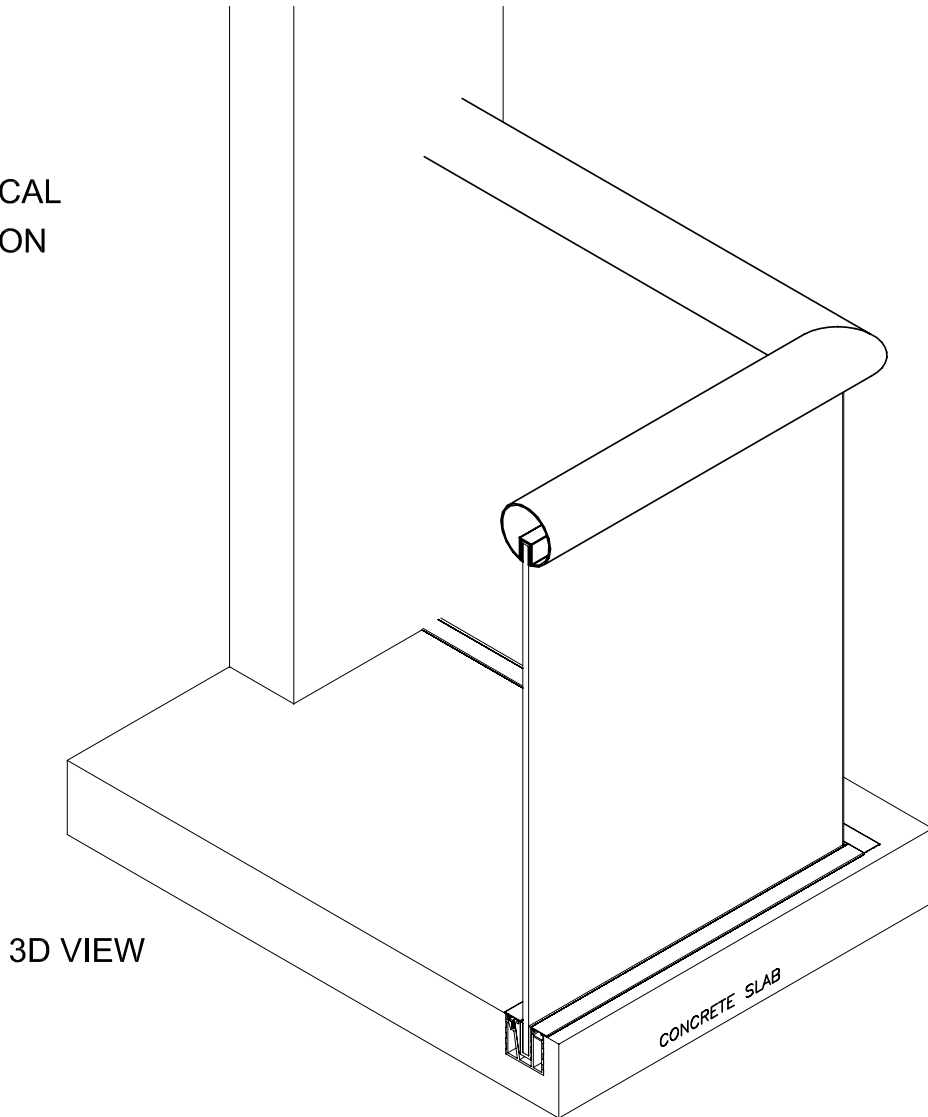
Elevation

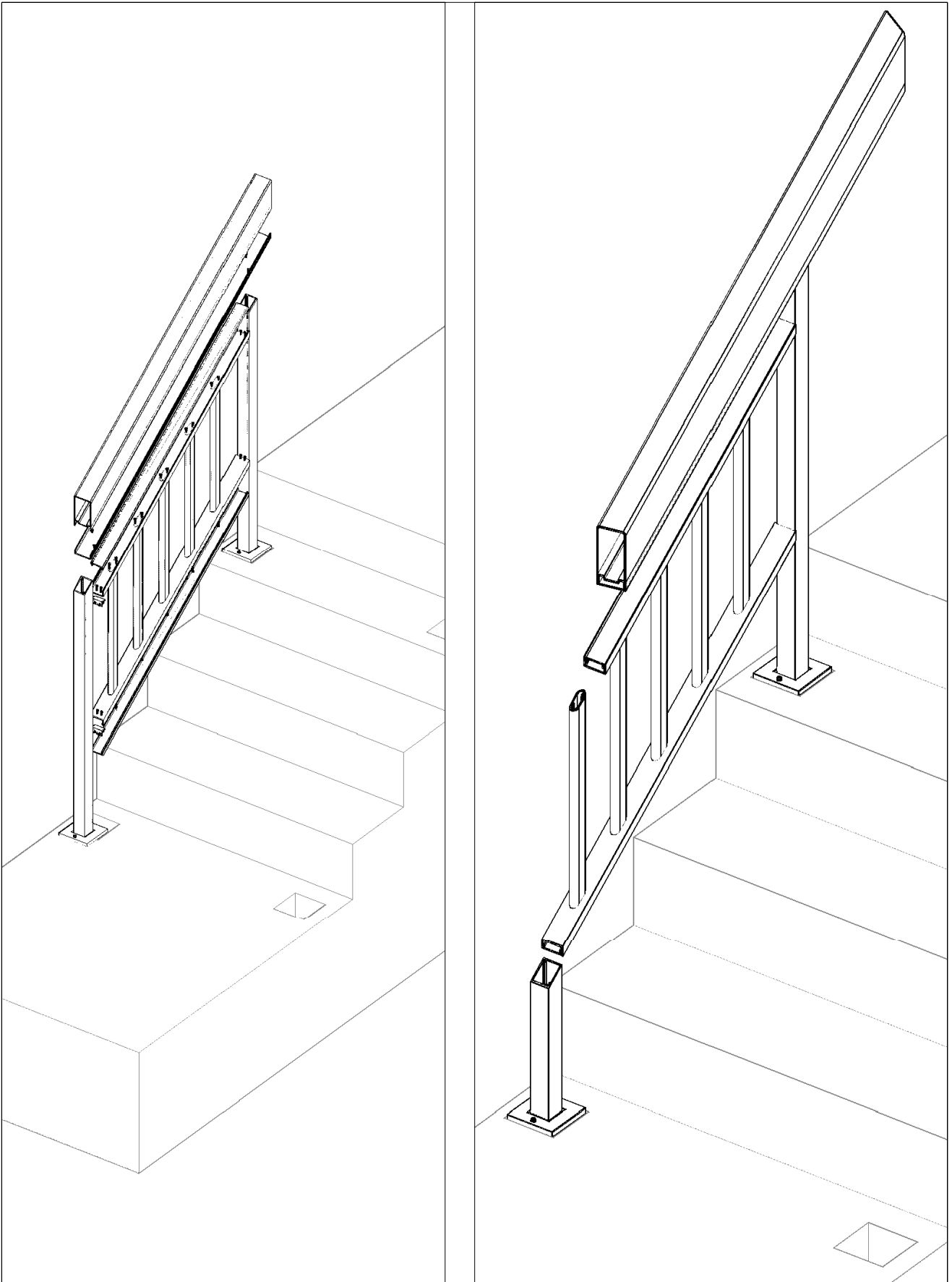






VERTICAL SECTION







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