

THE NEXT Thermal Break System

THE NEXT

THERMAL BREAK SYSTEM

THE NEXT Thermal Break System

01 - A	GULF EXTRUSIONS	03
02 - B	QUALITY STANDARD & CERTIFICATIONS	04 - 09
03 - C	INTRODUCTION TO THE SYSTEM	10
04 - D	PROFILES	11 - 19

GULF EXTRUSIONS

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

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

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

Gulf Extrusions six presses and highly skilled workforce can 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 20,000 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, but it has also made its presence felt globally throughout the GCC countries, Indian subcontinent, South East Asia, Australia, Africa, Europe and Canada.

Our commitment and utmost priority are 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:

Powder Coated Finish:

Anodizing Finish:

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

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

- 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



OHSAS

- OHSAS 18001



- SASO



- ESMA



Health & Safety 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
- RoSPA's member



CHEMICAL COMPOSITIONS

ALLOY 6005A

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

ALLOY 6060

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

ALLOY 6063

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

ALLOY 6082

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

ALLOY 6061

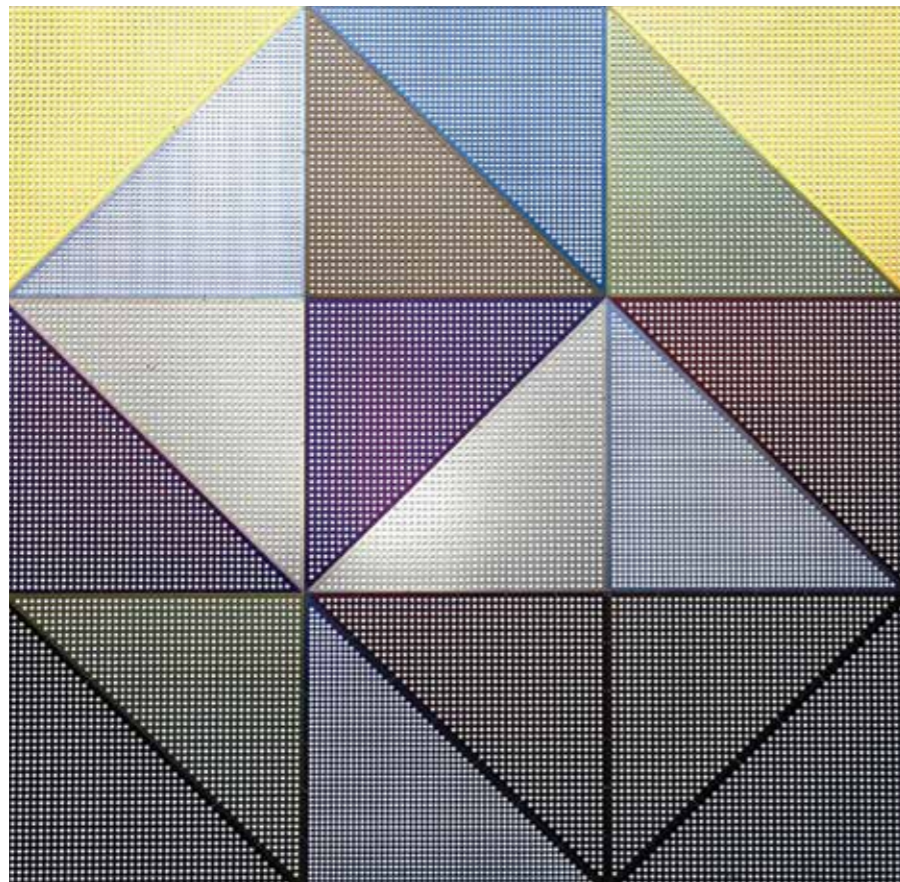
Element	Minimum	Maximum
Si	0.40	0.80
Fe	-	0.70
Cu	0.15	0.40
Mn	-	0.15
Mg	0.8	1.20
Cr	0.04	0.35
Zn	-	0.25
Ti	-	0.15
Other Each	-	0.05
Other Total	-	0.15
Aluminium	Remainder	

ANODIZING

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

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

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

**Authorization to use the quality sign**

This is to certify that

GULF EXTRUSIONS CO. LLC

P.O. BOX 5598
AE – Dubai

Licence number: 2000

is authorized to use the quality sign which is shown above, according to the regulations for the use of the quality label for ARCHITECTURAL ANODIZING as described in the current edition of the Specifications for the QUALANOD quality label for sulfuric acid-based anodizing of aluminium (Edition 01.07.2010).

Date of issue of the licence: 10.03.2000
Period of validity of the licence: until 31.12.2017

Zurich, 15 November 2016

QUALANOD

José Arenas
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

- Degreasing
- Washing
- Etching
- Washing
- Chromatising
- Double washing in dematerialized water

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

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

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

Authorization to use the quality sign

This is to certify that

GULF EXTRUSIONS CO. LLC

P.O. BOX 5598
AE – Dubai

Licence number: 1901

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

Date of issue of the licence: 15.03.2000
Period of validity of the licence: until 31.12.2017

Zurich, 15 November 2016

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

INTRODUCTION TO THE SYSTEM

The Next Thermal Break System is designed for heavy-duty use according to the American National Standard. The results have been impressive and apply to energy conservation, sound reduction, water & dust proofing.

The Next Thermal Break with 24 up to 40mm glass-fiber reinforced polyamide insulation has the sought after properties of high thermal resistance, rigidity hardness and strength.

The System consists of a single frame and sash profile that will be used on all four sides, with snap on track-clips. The 32 to 34mm polyamide strips are introduced into the frame and sash profiles and then externally crimped using special tooling.

The Next Features:

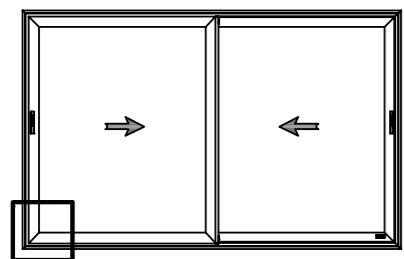
- Maximum Sash dimension 2.0-meter width and 3.5-meter height.
- Maximum Sash weight 230kg
- Water tightness (300 pa- 600 pa)
- *Air permeability (600pa)
- Resistance to wind load (2000pa)
- Burglar resistance WK2 in according with Din ENV1627
- Thermal resistance performance UW 1.7W/m²k, and also the same for door 2.0meter width and 2.2-meter height.

The System covers two and three rails for the application of four, six and more panels including profiles for the top and fixed bottom lights. Special lids have been designed to cover the frame tracks at the area where the sliding shutter is fixed.

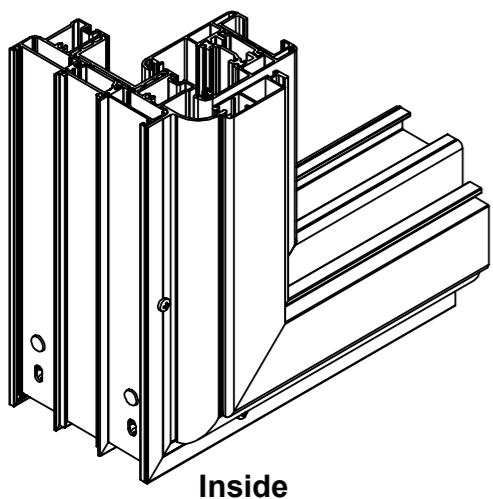
In order to meet the needs of today's architects, window and door systems must be provided in a variety of colors. This system has the special advantage of permitting subsequent application of all presently known surfaces suitable for use with aluminium either before or after the thermal break strips have been assembled.

For better performance of the system, alignment cleats for the frame and shutter are used. Durable weather sealing is a must at all joints. Specially designed EPDM gaskets are made available with the system to enhance the performance and create a smooth assembly. Other accessories such as roller & flush handle come as part of the system.

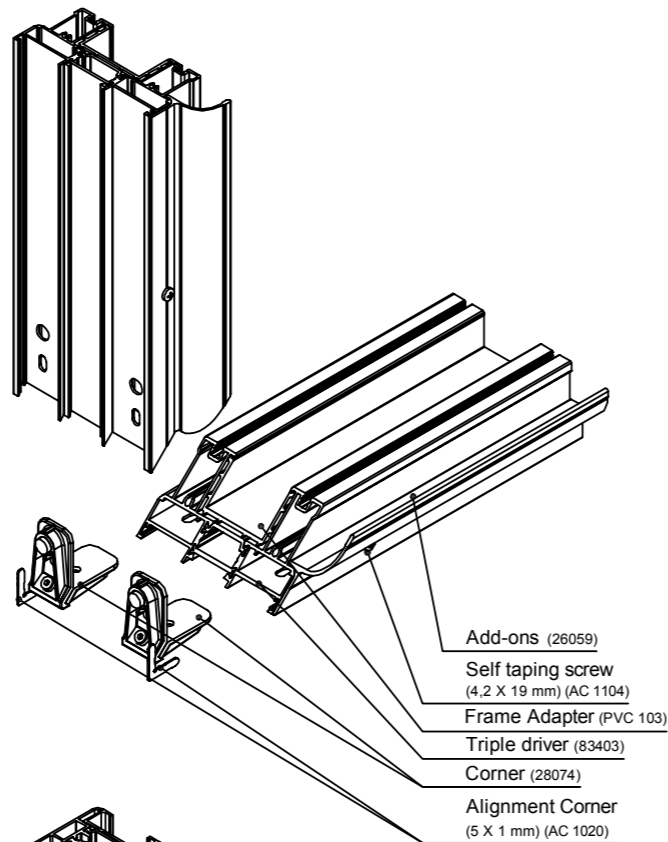




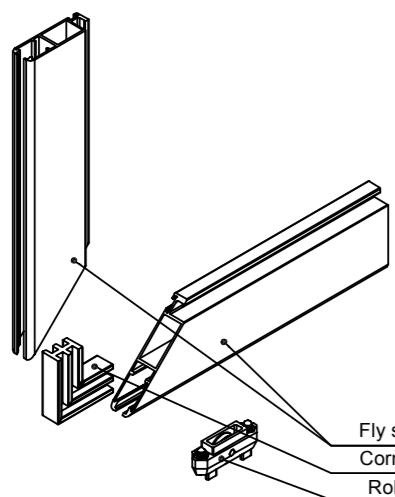
Outside



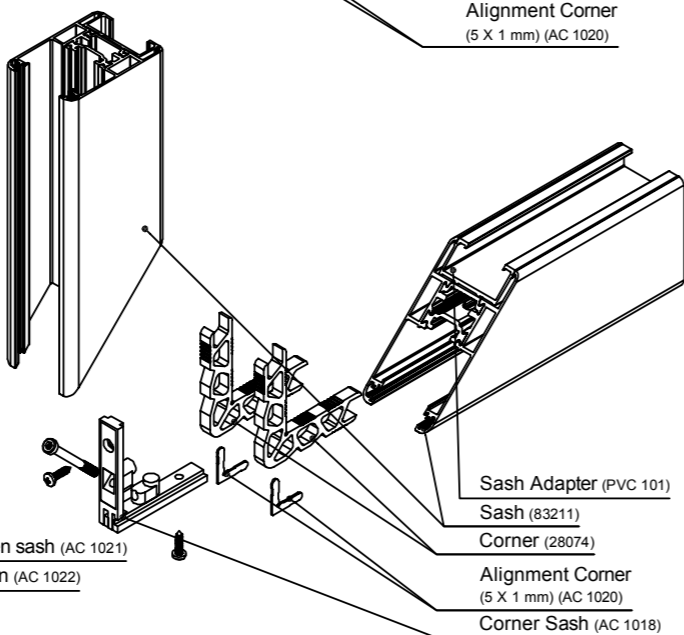
Inside



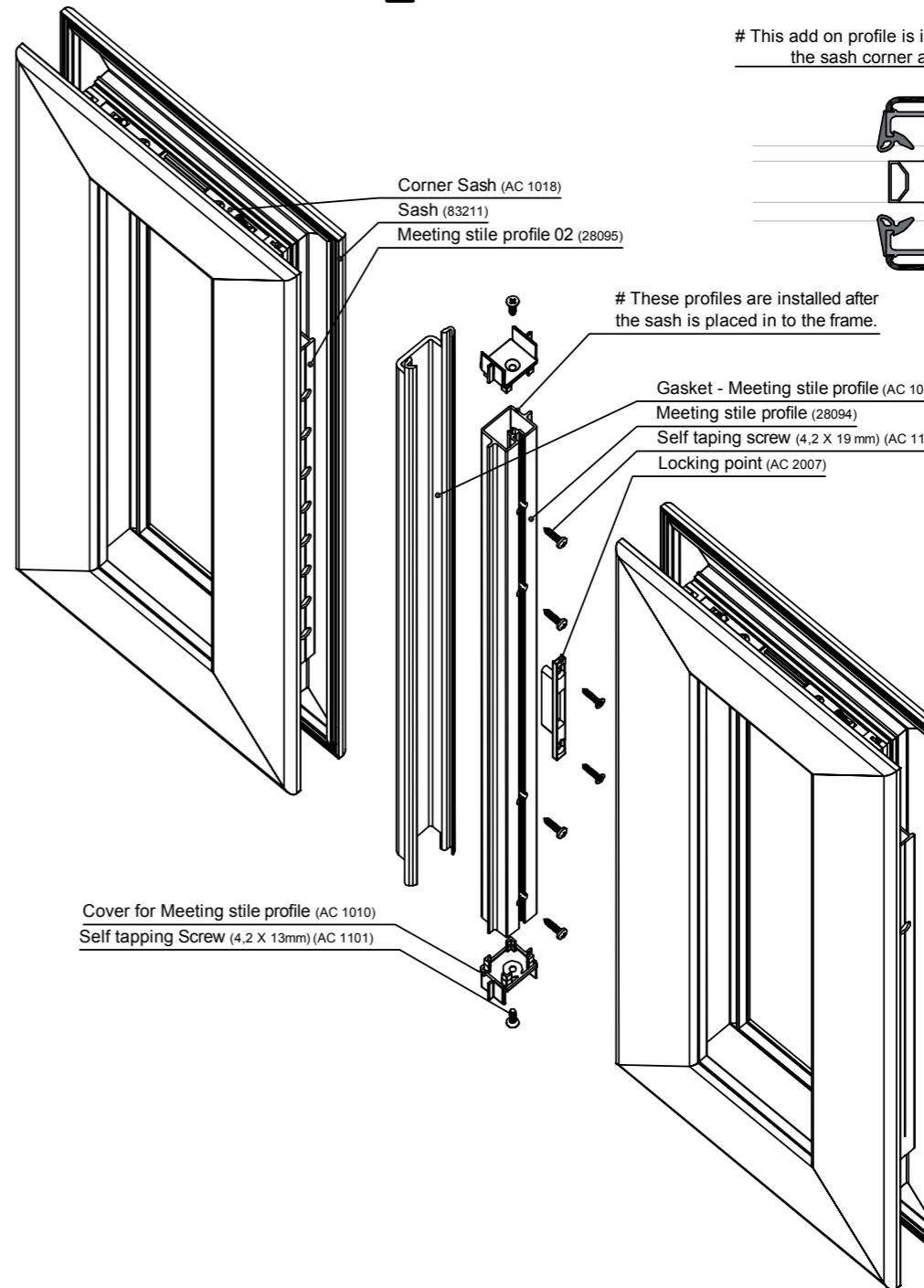
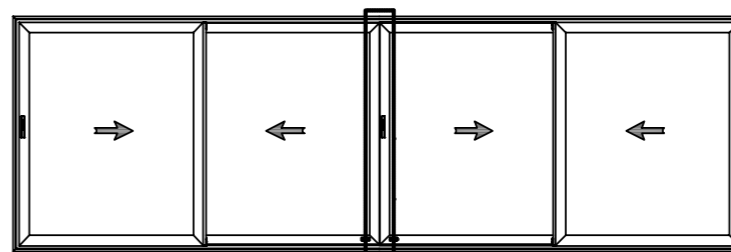
- Add-ons (26059)
- Self tapping screw (4,2 X 19 mm) (AC 1104)
- Frame Adapter (PVC 103)
- Triple driver (83403)
- Corner (28074)
- Alignment Corner (5 X 1 mm) (AC 1020)



- Fly screen (28101)
- Corner for Fly screen sash (AC 1021)
- Roller for Fly screen (AC 1022)



- Sash Adapter (PVC 101)
- Sash (83211)
- Corner (28074)
- Alignment Corner (5 X 1 mm) (AC 1020)
- Corner Sash (AC 1018)



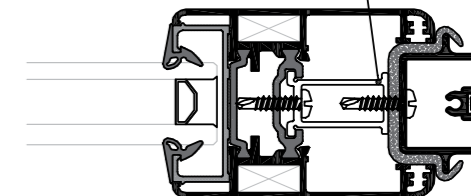
- Corner Sash (AC 1018)
- Sash (83211)
- Meeting stile profile 02 (28095)

These profiles are installed after the sash is placed in to the frame.

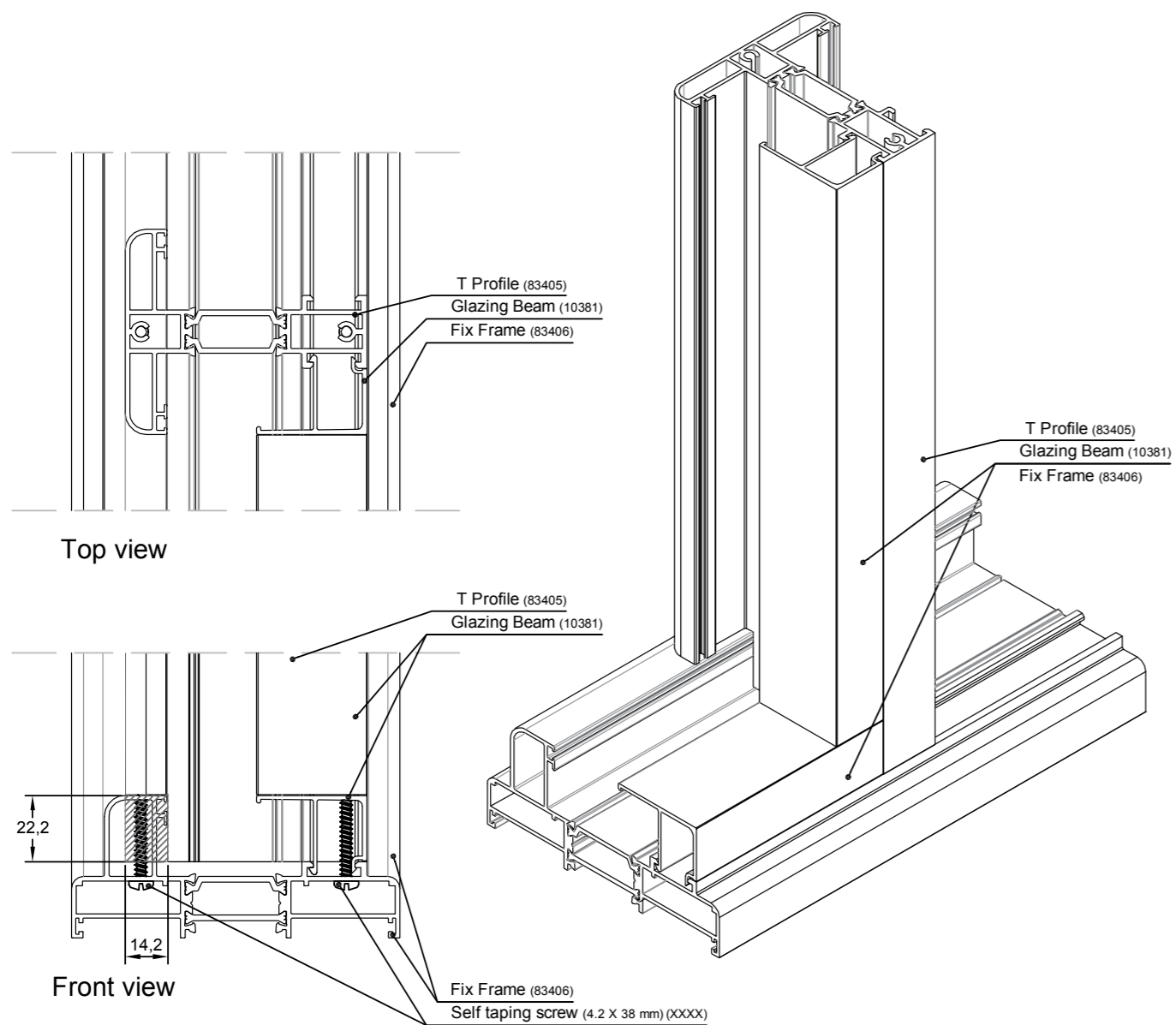
- Gasket - Meeting stile profile (AC 103)
- Meeting stile profile (28094)
- Self tapping screw (4,2 X 19 mm) (AC 1104)
- Locking point (AC 2007)

- Cover for Meeting stile profile (AC 1010)
- Self tapping Screw (4,2 X 13mm) (AC 1101)

This add on profile is installed before the sash corner are assembled.



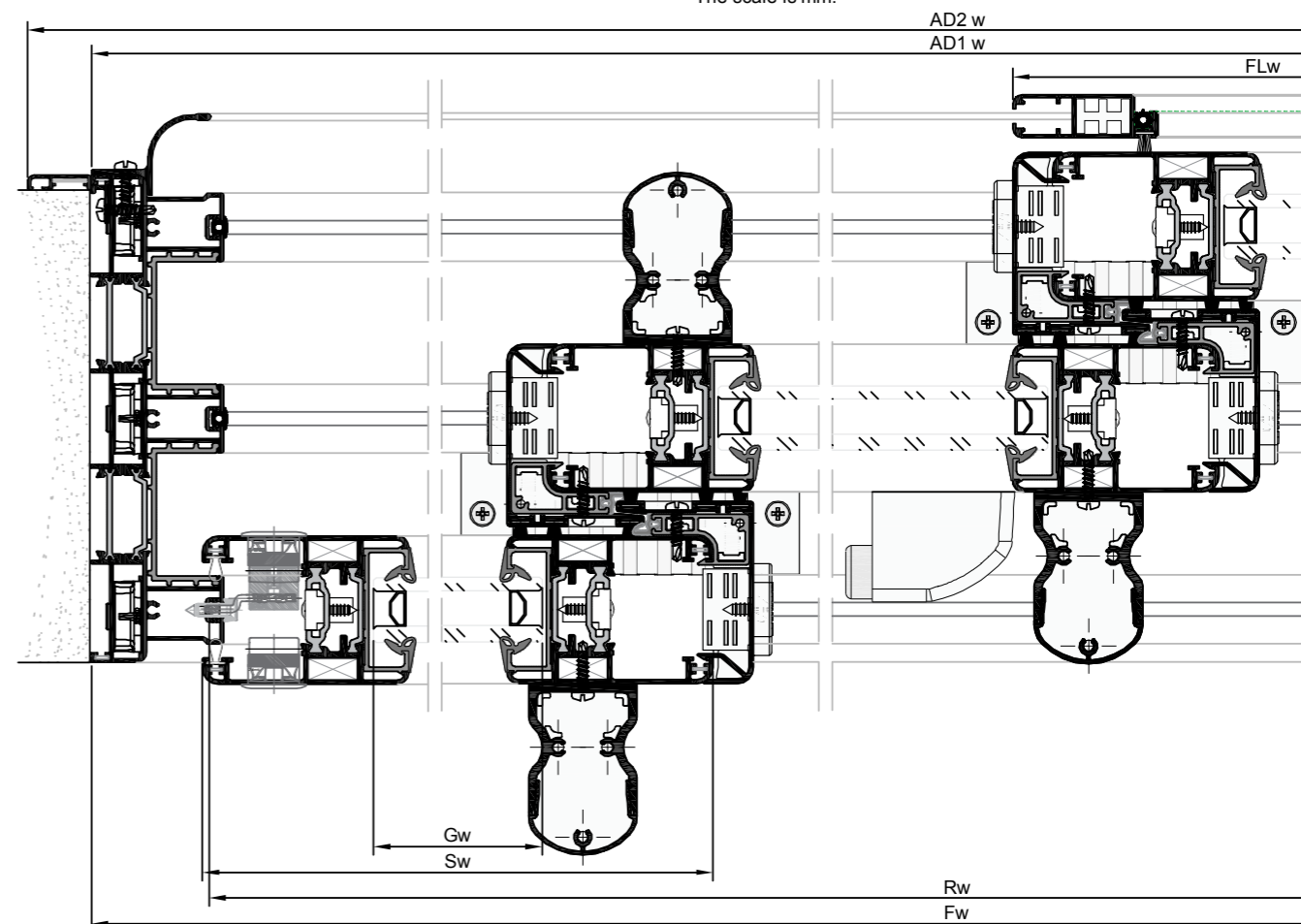
Scale: 1:2



Scale: 1:2

Cutting table			
Profile Name	Code	Symbol	Quantity / Cutting
Double driver	83401		2 $\triangle Fw$
			2 $\triangle Fh$
Sash	83211		6 $\triangle Sw = \frac{Fw - 40,6}{3}$
			6 $\triangle Sh = Fh - 82,4$
Interlock	26030		4 $\square INh = Sh - 6$
Add-on Profile (Fly screen rail)	26059		2 $\triangle AD1w = Fw$
			2 $\triangle AD1h = Fh$
Add-on Profile (Wall cover)	26060		2 $\triangle AD2w = Fw + 47,8$ 2 $\triangle AD2h = Fh + 47,8$
Fly screen	28101		2 $\triangle FLw = Sw + 15$ 2 $\triangle FLh = Sh$
Handle	26040		3 $\square HAh = Sh - 159$
Handle cover	26041		3 $\square HCh = Sh - 159$
Rail guide	26029		3 $\square Rw = Fw - 90$
Glazing	-		3 $\square Gw = Sw - 127$ $\square Gh = Sh - 127$

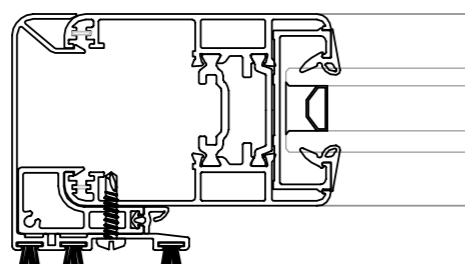
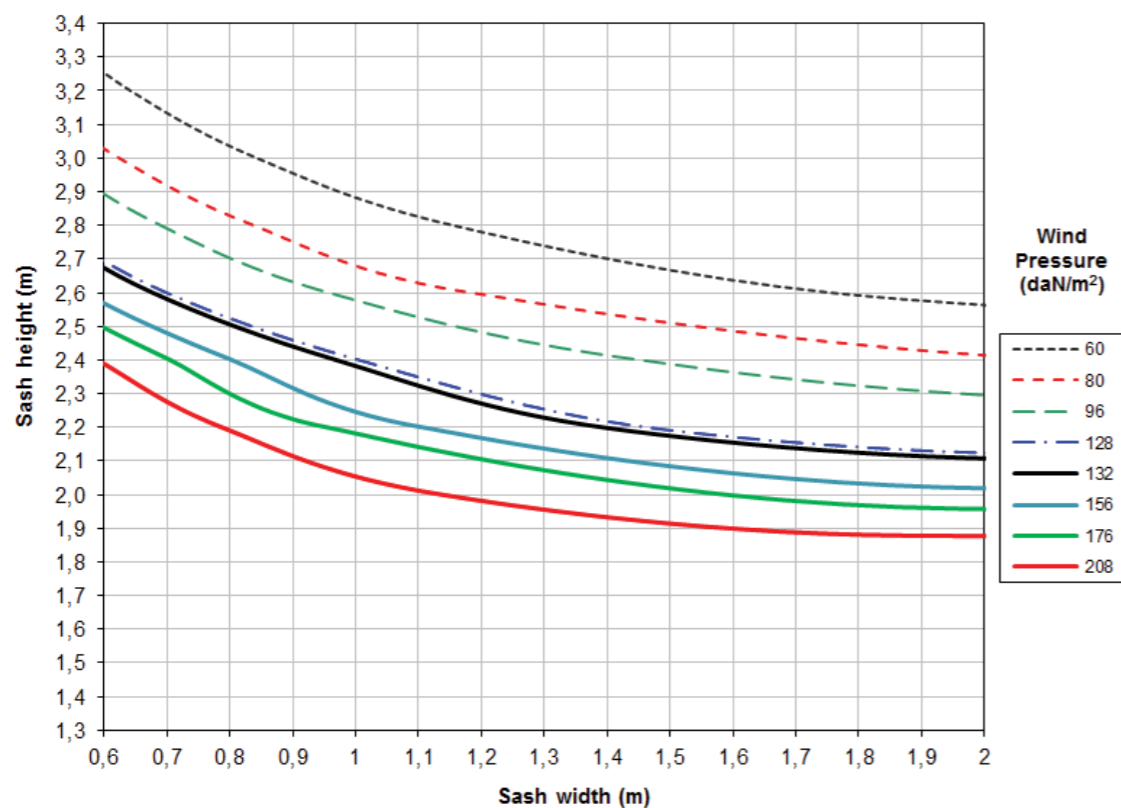
The scale is mm.



New sliding graphs 20170911

Static loads Calculation

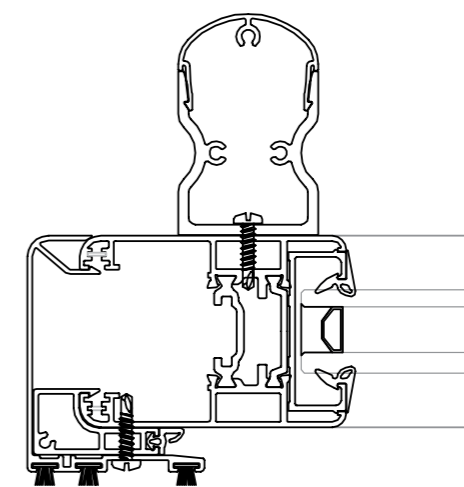
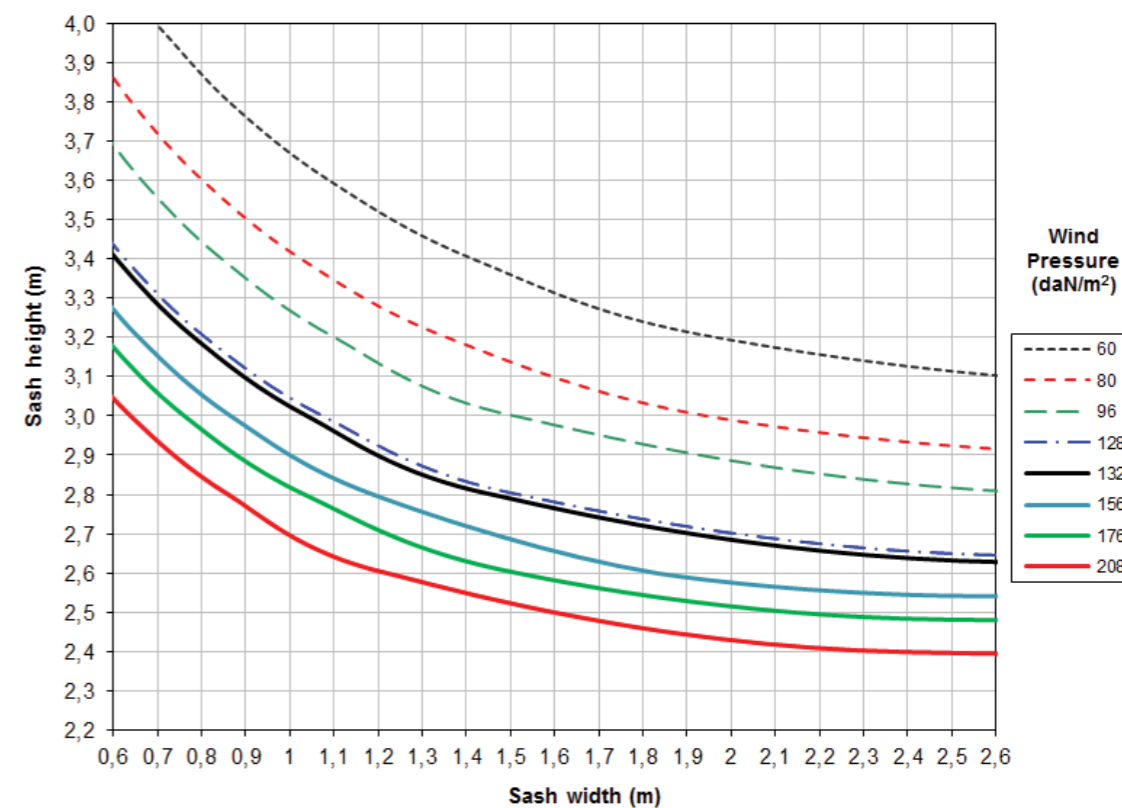
83211 + 26030



New sliding graphs 20170911

Static loads Calculation

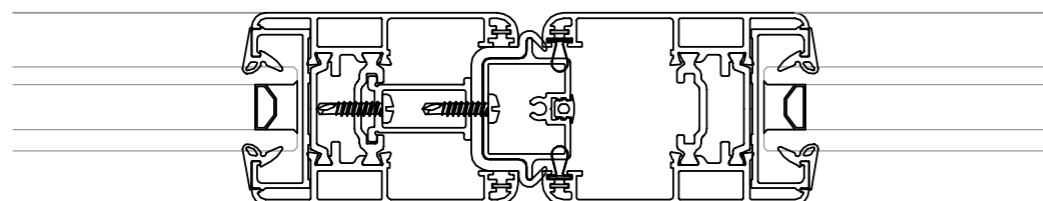
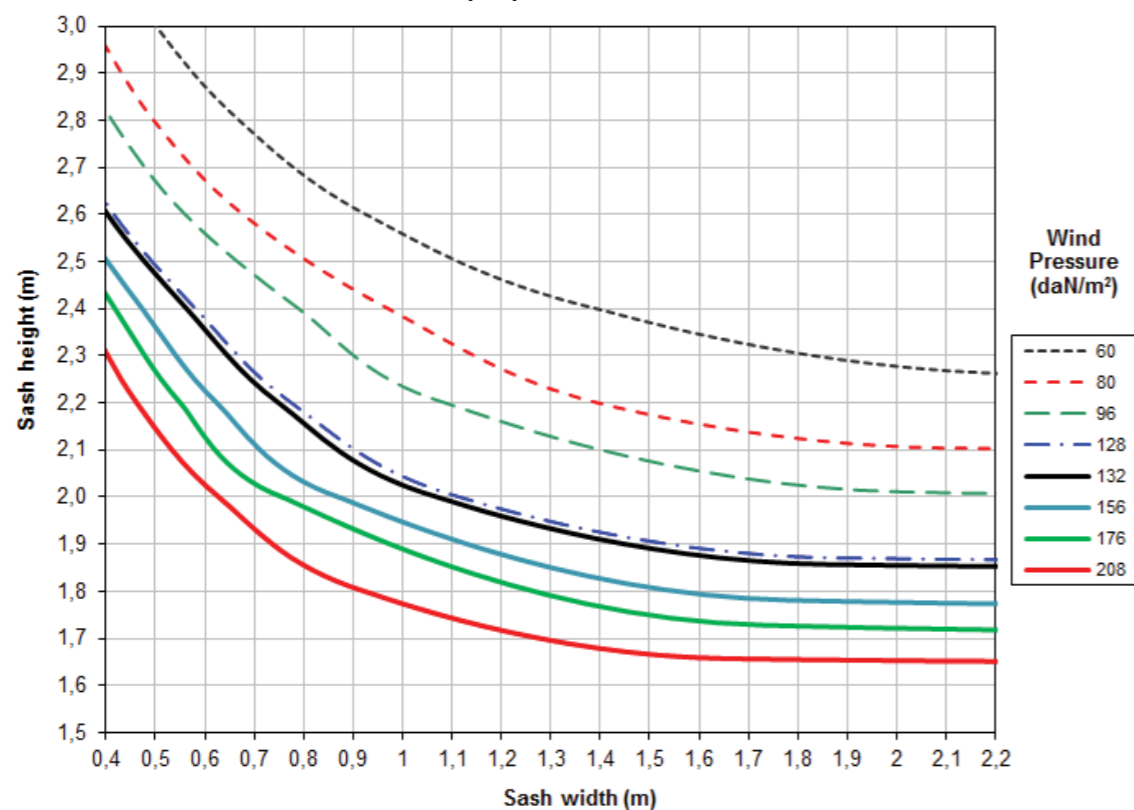
83211 + 26030 + 26040



New sliding graphs 20170911

Static loads Calculation

83211 (x2) + 26030 + 26040



Static loads Calculation

83211(x2) + 26040(x2) + 28094 + 28095

