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Authorised and notified according
to Article 29 of the Regulation (EU)
No 305/2011 of the European
Parliament and of the Council of 9
March 2011

MEMBER OF EOTA



European Technical Assessment ETA-20/0139 of 2020/03/13

I General Part

Technical Assessment Body issuing the ETA and designated according to Article 29 of the Regulation (EU) No 305/2011: ETA-Danmark A/S

Trade name of the construction product:

GFT 111 Urban

Product family to which the above construction product belongs:

Kit composed by subframe and fixings for fastening cladding and external wall elements, Type 3 with hidden subframe

Manufacturer:

GFT Fassaden AG
Schuppisstrasse 7
CH-9016 St.Gallen
Tel. + 41 71 282 40 00
Internet: www.gft-fassaden.swiss

Manufacturing plants:

GFT Fassaden AG
Schuppisstrasse 7
CH-9016 St.Gallen

This European Technical Assessment contains:

23 pages including 4 annexes which form an integral part of the document

This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of:

European Assessment Document (EAD) No. 090034-00-0404, Kit composed by subframe and fixings for fastening cladding and external wall elements

This version replaces:

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II SPECIFIC PART OF THE EUROPEAN TECHNICAL ASSESSMENT

1 Technical description of product and intended use

Technical description of the product

GFT 111 Urban is a façade fixing system composed by skin element fixings, fixings to the subframe and the subframe.

The kit is a type 3 with hidden subframe in accordance with the EAD.

The components identified in Table 1 have the geometrical characteristics defined in Annexes 1 to 2 and are factory produced by different suppliers.

Component		Name
Skin element fixing	Skin element fixing	GFT 111 Tragprofil
	Rivet between vertical profil and skin element fixing	GFT-Spezialniet SNA
	Self-drilling screw between vertical profil and skin element fixing	SD2-S-D7-4,8x22, RAL 9005
Subframe	Vertical Profile (L-section)	GFT 111 L-Profile
	Vertical Profile (Z-section)	GFT 111 Z-Profile
	Vertical Profile (Hat-section)	GFT 111 Hat-Profile

Table 1: Components used in GFT 111 Urban façade fixing system

- The skin element fixing GFT 111 Tragprofil are made of aluminium (EN AW 6060 T66).
- The self-drilling screw SD2-S-D7-4,8x22, RAL 9005 between vertical profile and skin element fixings are made of austenitic stainless steel 18/8 (A2 – T20 driving) and have dimensions 4,8 x 22 (EN 15481).
- The rivet GFT Spezialniet SNA between vertical profile and skin element fixings are made of Alu-Niro and have dimensions 5x12, K14.
- The vertical profiles in the shape of „L“, „Z“ or „Hat“ are made of aluminium (EN AW 6060 T66). Since all three profiles have the same material thickness ($t = 2$ mm) and quality, the L-profile can be regarded as the mechanically weakest case. As a result, only the L-profile was tested, and the results were transferred.

See Annex 4 for more information about the fasteners used in the GFT 111 Urban system.

2 Specification of the intended use in accordance with the applicable EAD

The skin element fixing kit GFT 111 Urban is intended

to be used for mechanical fastening of skin elements in façade with air space, ventilated or not, which can be fixed to supporting structure and the external wall in new or existing buildings.

The supporting structure is made of masonry (bricks or blocks), concrete (cast on site or as prefabricated panels), timber or metal frame. An insulation layer is usually fixed on the external wall.

The kit is a non-load-bearing construction element. It does not contribute to the stability of the structure on which it is installed, neither to ensure the airtightness of the building structure, but it can contribute to durability of the works by providing enhanced protection from the effect of weathering.

The façade fixing system is to be installed according to the manufacturers installation manual, using the specific kit components, manufactured by suppliers of the ETA holder, and carried out by appropriately qualified staff with supervision of the technical responsible of the site.

Maintenance of the assembled systems or kit components includes inspections on site, taking into account the following aspects:

- Any damage such as cracking or detachment due to permanent and irreversible deformation of the cladding elements.
- Corrosion or water accumulation at metallic components. Furthermore, necessary repairs should be done rapidly, using the same kit components and following the repair instructions given by ETA holder.

The provisions made in this European Technical Assessment are based on an assumed intended working life of the GFT 111 Urban of 25 years, provided that the conditions laid down for the installation, packaging, transport and storage as well as appropriate use, maintenance and repair are met.

The indications given on the working life cannot be interpreted as a guarantee given by the producer or Assessment Body but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

3 Performance of the product and references to the methods used for its assessment

Characteristic	Assessment of characteristic
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3.1 Safety in case of fire (BWR2)

Reaction to fire

Euroclass A1 since the parts of the system is classified as A1 in accordance with EN 13501-1, and the EC Delegated regulation 2016/364/EU.

3.2 Safety and accessibility in use (BWR4)

Wind load resistance

Wind load of the assembled system > **4200 Pa**

Resistance to vertical load of the whole assembled system

Q_w : **91 N**

R_v : **168 N**

Q_{ad} : **245 N**

Resistance to vertical load of skin element fixings

1 mm irreversible deformation:

$F_{c, 1mm}$: **894 N**

Failure load:

F_c : **2517 N**

Resistance to horizontal load of skin element fixings

1 mm irreversible deformation:

$F_{c, 1mm}$: **774 N**

Failure load:

F_c : **2418 N**

Resistance to pulsating load of skin element fixings

Failure load:

F_c : **1804 N**

Resistance of skin element fixings in case of inaccuracies of installation

No Performance Assessed

Pull-through resistance of fixings (from profiles)

No Performance Assessed

Pull-out resistance of fixings (from profiles)

$F_{C,screw}$: **2388 N**

$F_{C,rivet}$: **2937 N**

Inertia and resistance of profiles

Characteristic		GFT 111 Tragprofil	GFT 111 L-Profile	GFT 111 Z-Profile	GFT 111 Hat-Profile
Aluminium alloy	[-]	EN AW 6060 T66			
Density	[g/cm ³]	2,7			
Inertia	[cm ³]	24.7	1.08	2.59	3.96
Mass per unit	[kg/m]	1.156	0.510	0.605	1.058
Elasticity modulus	[GPa]	70			
Linear thermal expansion coefficient	[K ⁻¹]	23.1*10 ⁻⁶			

Resistance to vertical load of brackets

No Performance Assessed

Resistance to horizontal load of brackets

No Performance Assessed

Mechanical characteristics of subframe fixings

See additional information in Annex 4

Fixing	Failure load	
[N]	[kN]	
	Tensile strength	Shear strength
SD2-S-D7-4,8x22	8.1	> 3.6
GFT-Spezialniet SNA 5x12, K14	1.49	1.19

Characteristic	Assessment of characteristic
Corrosion	All aluminium components are made from EN AW 6060 T66. The screws are made from austenitic stainless steel 18/8 (A2 – T20 driving). The rivets are made from Alu-Niro. Therefore, the kits may be used in the following external atmosphere exposure: Rural environment, moderate industrial/urban environment, but excluding industrial and marine environment. The kits may be used in other external atmospheric conditions exposure, if the components are protected as specified in the standard EN 1999.

*) See additional information in section 3.9 – 3.10.

3.9 Methods of verification

The characteristic values of the GFT 111 Urban façade fixing system are based on the EAD 090034-00-0404; June 2016, type 3 with hidden subframe.

3.10 General aspects related to the fitness for use of the product

The European Technical Assessment is issued for the product based on agreed data/information, deposited with ETA-Danmark, which identifies the product that has been assessed and judged. Changes to the product or production process, which could result in this deposited data/information being incorrect, should be notified to ETA-Danmark before the changes are introduced. ETA-Danmark will decide if such changes affect the ETA and consequently the validity of the CE marking based on the ETA and if so whether further assessment or alterations to the ETA, shall be necessary.

GFT 111 Urban façade fixing system are manufactured in accordance with the provisions of this European Technical Assessment using the manufacturing processes as identified in the inspection of the plant by the notified inspection body and laid down in the technical documentation.

4 Attestation and verification of constancy of performance (AVCP)


4.1 AVCP system

According to the decision 2003/640/EC of the European Commission, as amended, the system(s) of assessment and verification of constancy of performance (see Annex V to Regulation (EU) No 305/2011) is 2+.

5 Technical details necessary for the implementation of the AVCP system, as foreseen in the applicable EAD

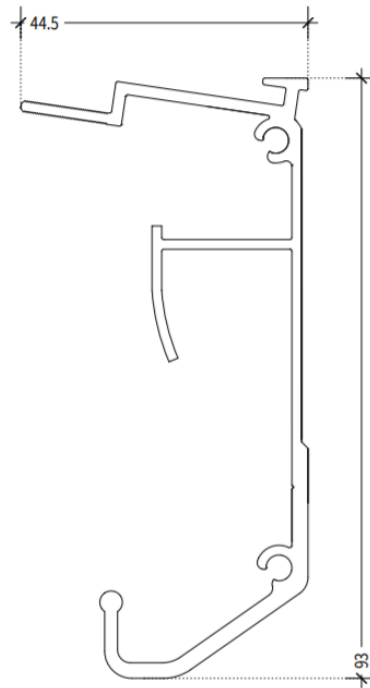
Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at ETA-Danmark prior to CE marking.

Issued in Copenhagen on 2020-03-13 by

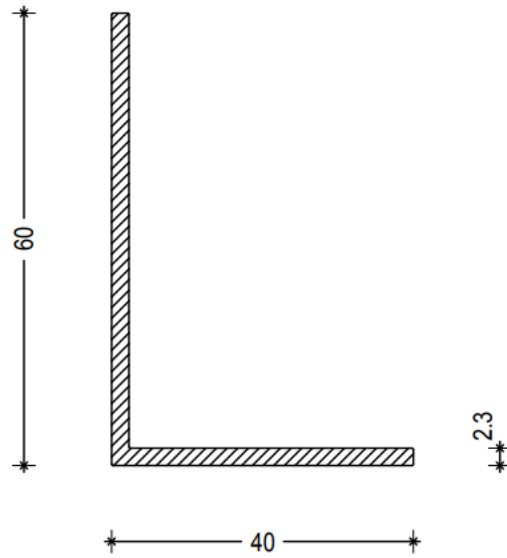


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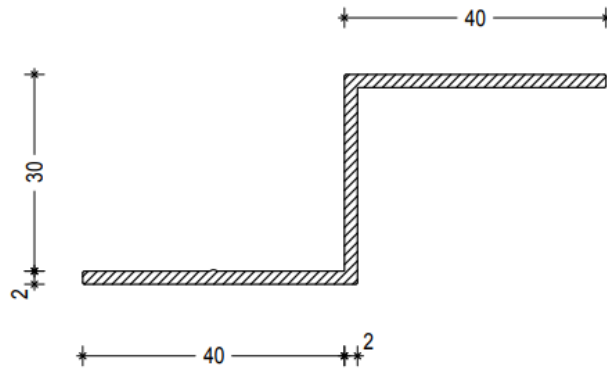
Annex 1
Geometrical Characteristics
GFT 111 Tragprofil 44.5/93 mm



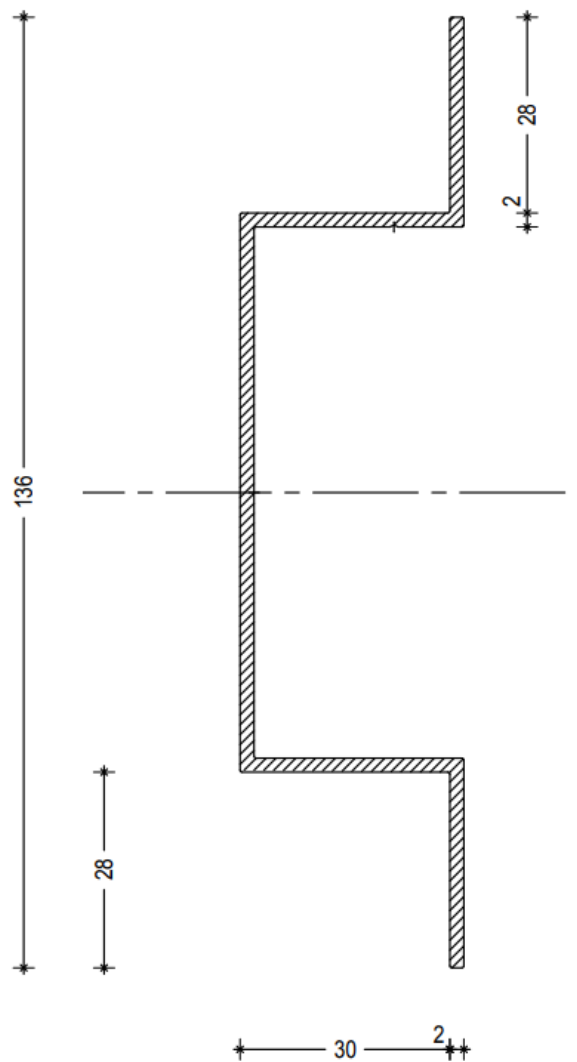
Annex 2
Geometrical Characteristics
GFT 111 Vertical Profiles L-section



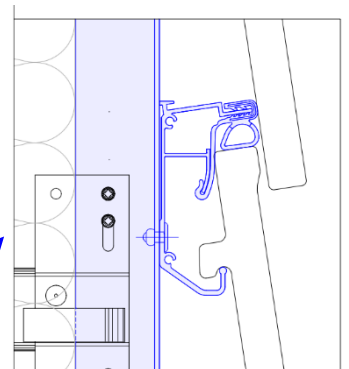
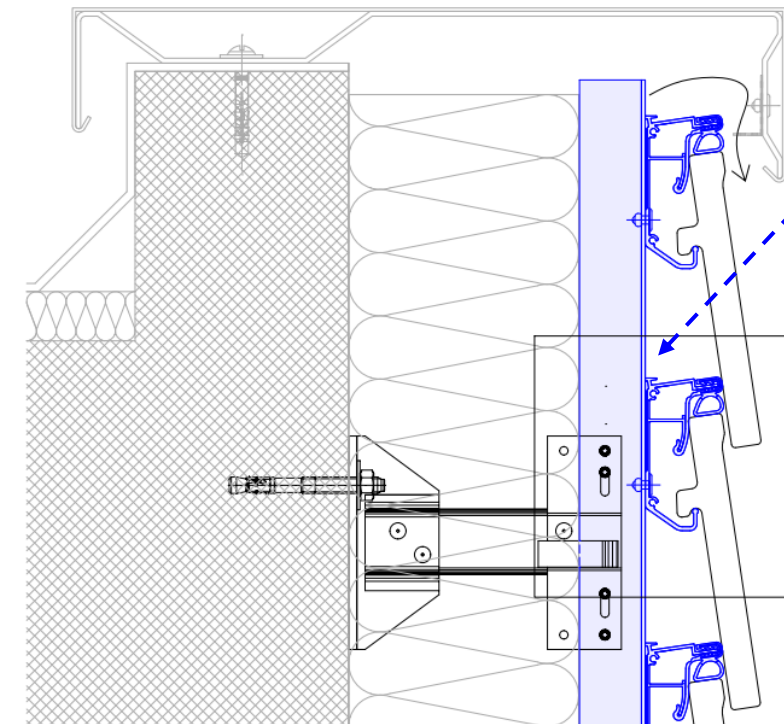
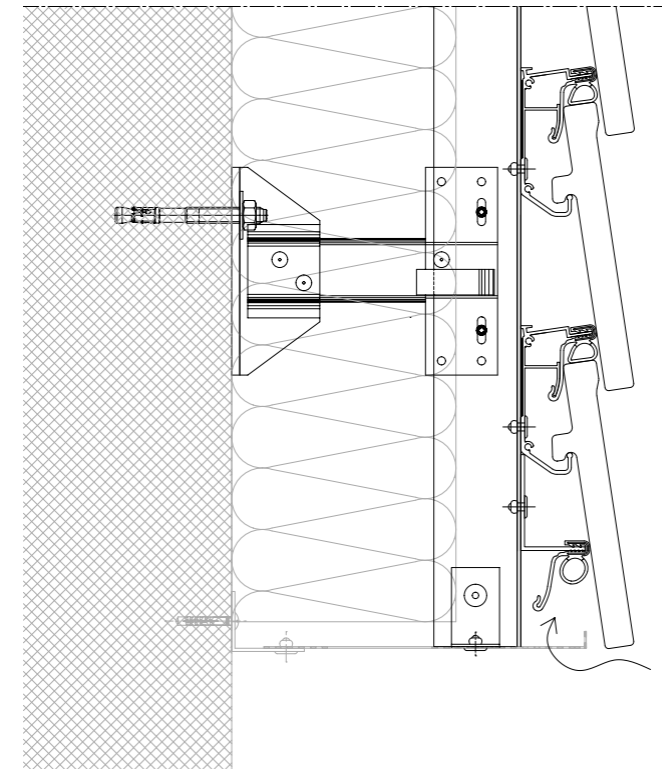
Annex 2
Geometrical Characteristics
GFT 111 Z-Profiles



Annex 2
Geometrical Characteristics
GFT 111 Hat-Profile

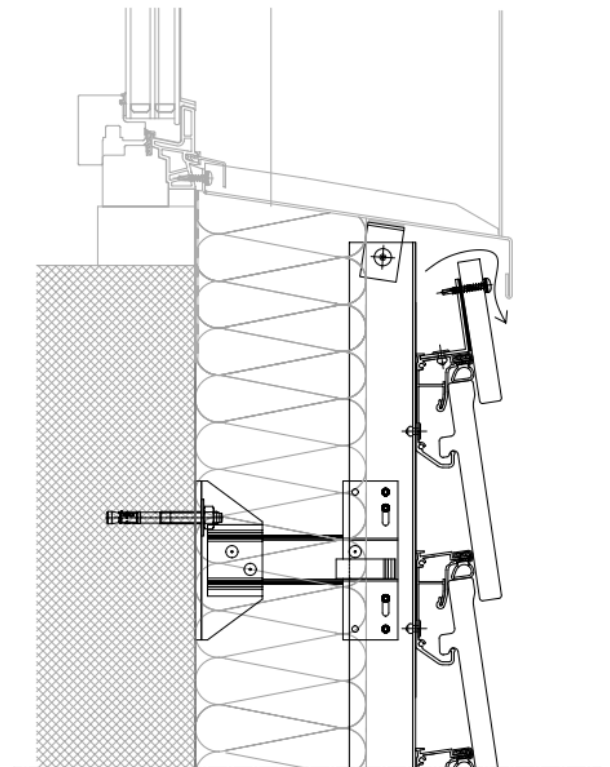
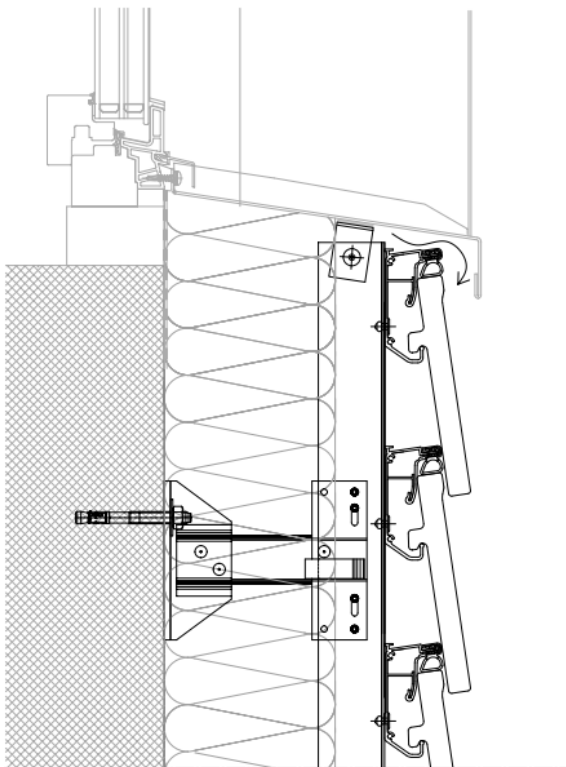
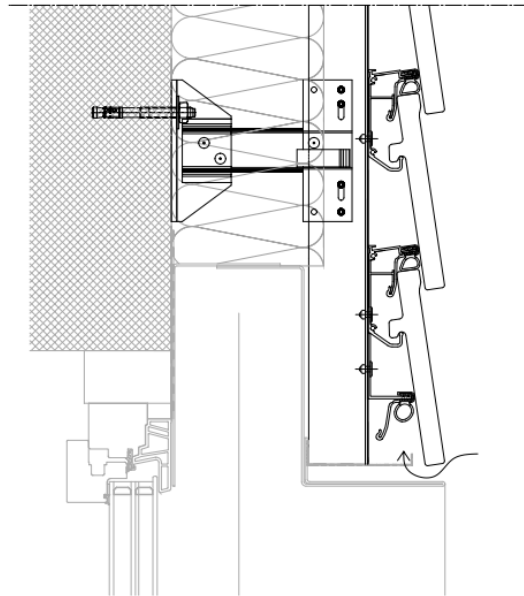


Annex 3
Cross section view
GFT 111 Urban façade fixing system



Annex 3

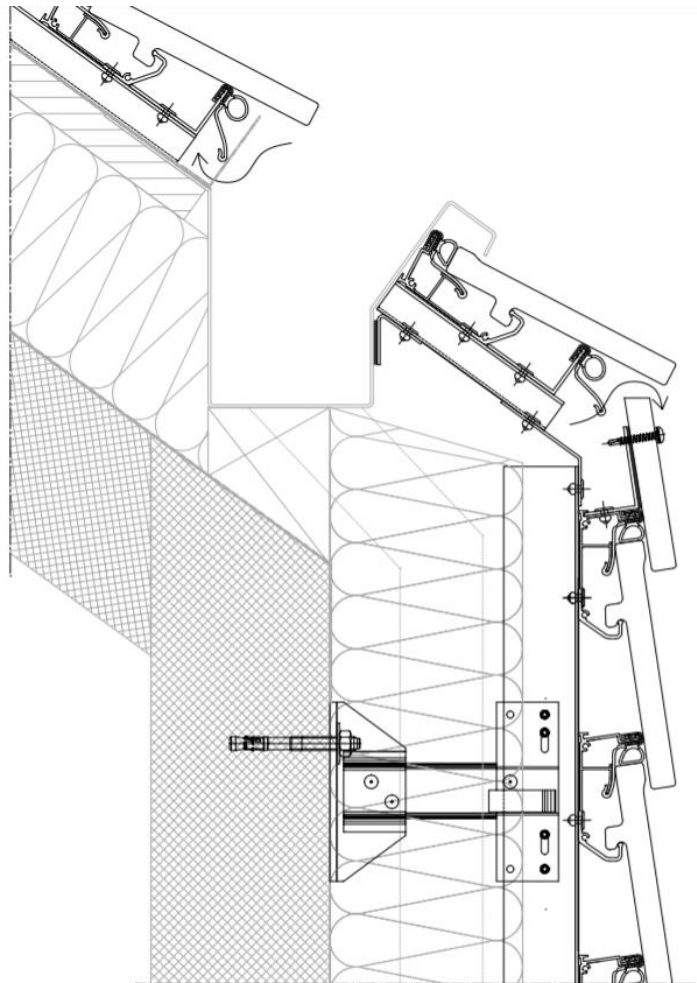
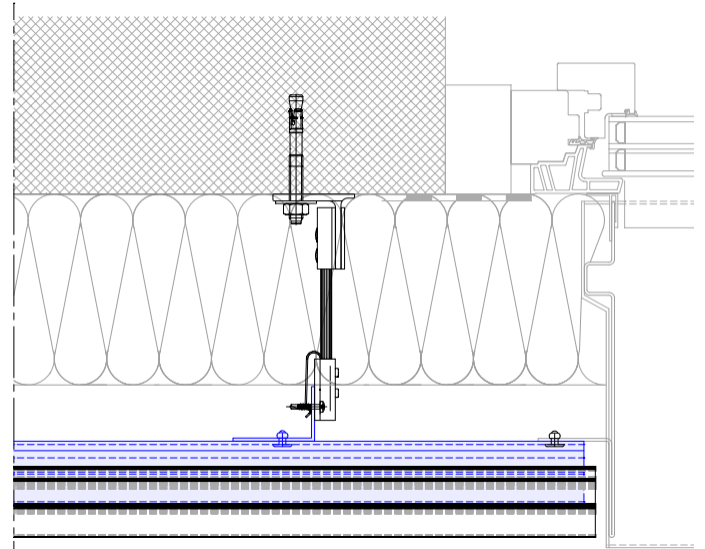
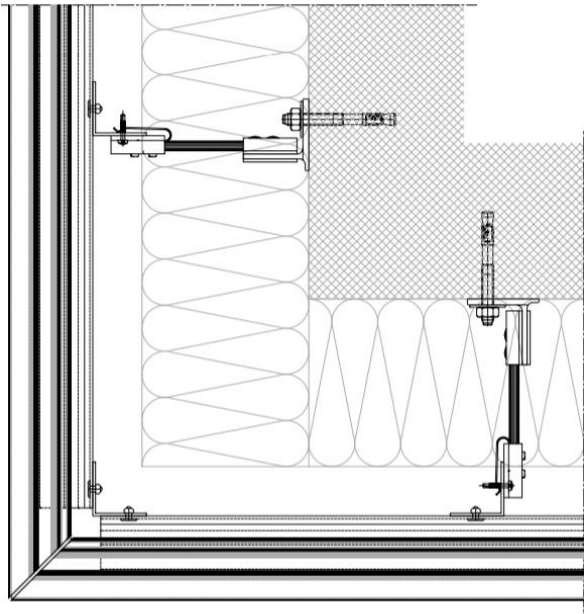
**Cross section view, window
GFT 111 Urban façade fixing system**



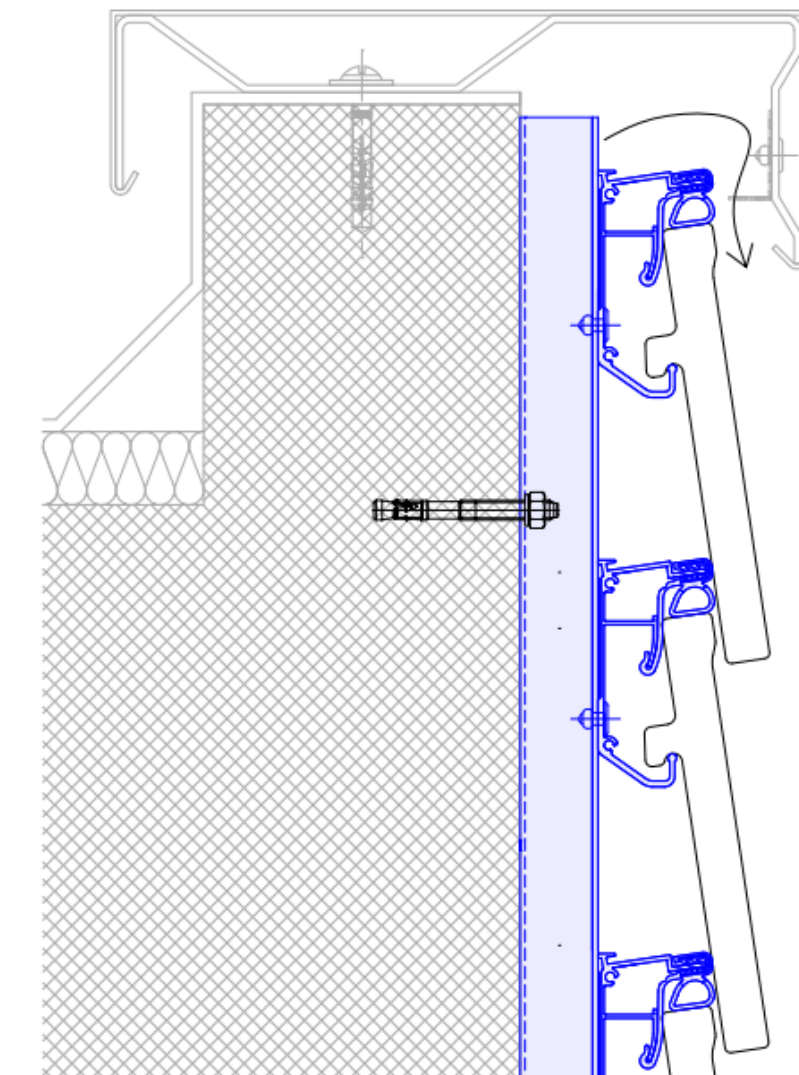
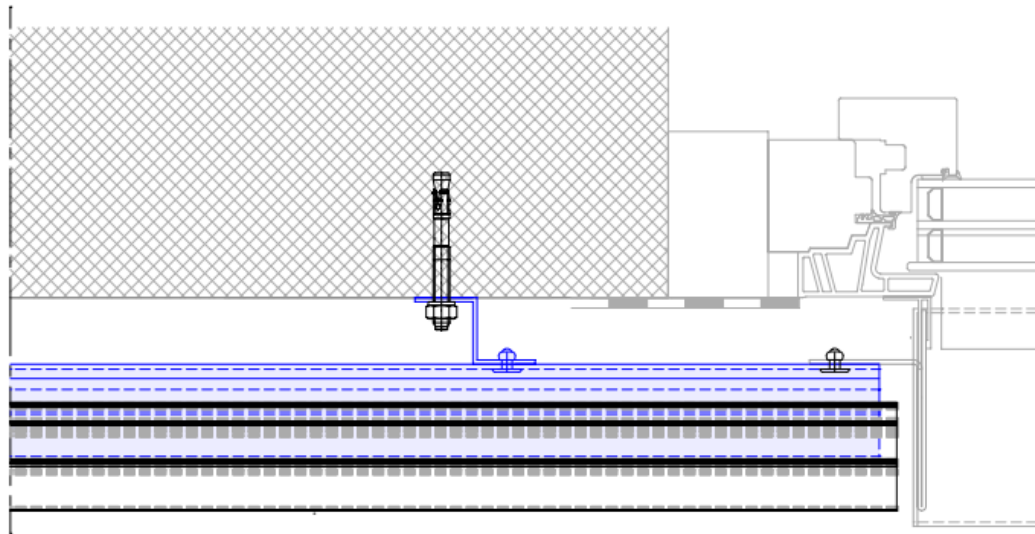
Annex 3

Cross section view

GFT 111 Urban façade fixing system

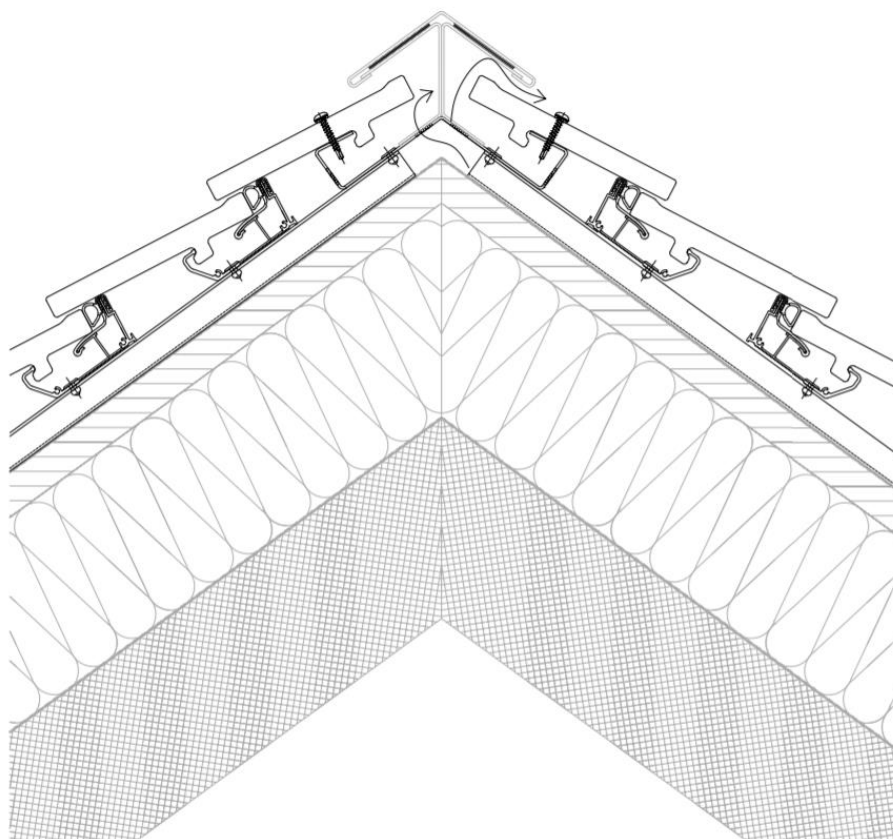
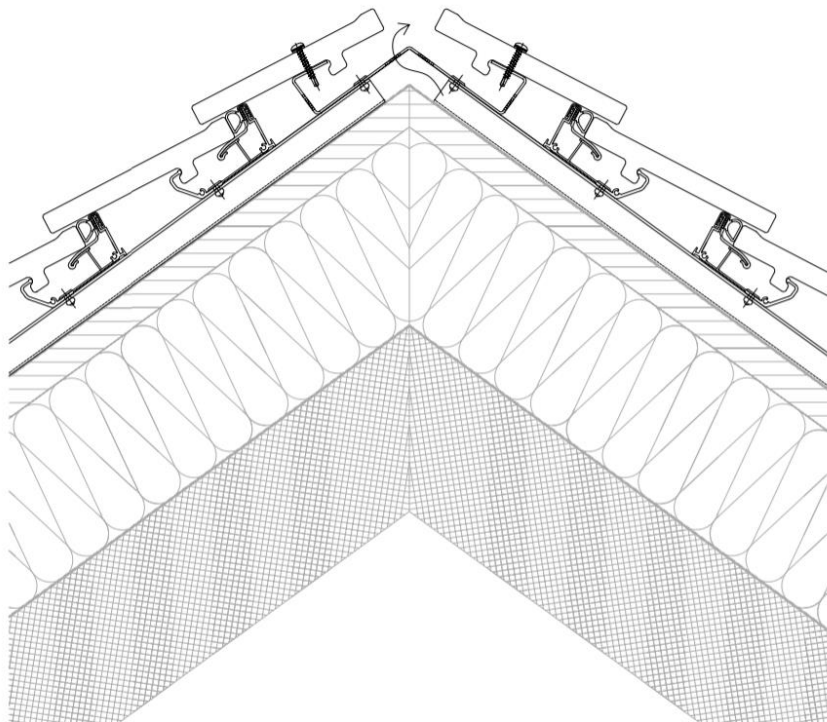


Annex 3
Cross section view
GFT 111 Urban façade fixing system



Annex 3

**Cross section view, roof ridge
GFT 111 Urban façade fixing system**



Annex 4

Mechanical characteristics of subframe fixings

The self-drilling screw SD2-S-D7-4,8x22, RAL 9005 is used to connect the skin element fixing to the subframe. The screw is shown in the following figure.

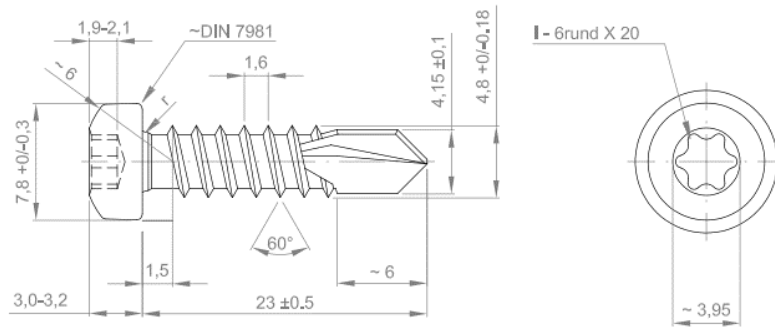


Figure 1: Self-drilling screw SD2-S-D7-4,8x22, RAL 9005

The rivet GFT-Spezialniet SNA 5x12, K14 is used to connect the skin element fixing to the subframe. The rivet is shown in the following figure.

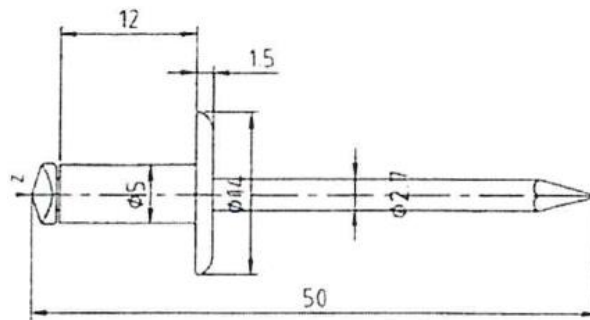


Figure 2: Rivet GFT-Spezialniet SNA 5x12, K14