



ETA-Danmark A/S
Göteborg Plads 1
DK-2150 Nordhavn
Tel. +45 72 24 59 00
Internet www.etadanmark.dk

Authorized 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-24/0678 of 2024/08/20

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:

Cladding kit type URBAN U/L

Product family to which the
above construction product
belongs:

Kits for external wall claddings mechanically fixed

Manufacturer:

Zürcher Ziegeleien AG
Eichwatt 1
CH-8105 Regensdorf
Tel. +41 58 219 09 09
Internet www.zz-ag.ch

Manufacturing plant:

Zürcher Ziegeleien AG
Wahlenstrasse 80
CH-4242 Laufen

This European Technical
Assessment contains:

19 pages including 5 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:

EAD 090062-01-0404 – Kits for external wall claddings
mechanically fixed

This version replaces:

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II SPECIFIC PART OF THE EUROPEAN TECHNICAL ASSESSMENT

1 Technical description of product

The cladding kit type UBRAN U/L, consist of cladding elements that are fixed at the top edge of the tile to the Urban Omega profile and the Urban U/L using a drilling point fastener made from stainless-steel A4.

A distinction is made between Urban U and Urban L tiles in terms of their cross-section form (see Fig. 1). Both tiles are moulded tiles in accordance with EN 1304:2005, with a corresponding declaration of performance (DoP).

The two types of tiles differ by the shape and depth of the upper and lower edge formation, which is significantly deeper in the Urban U. The dimensions in terms of width and height as well as the positioning of the holes for screw fastening with the respective horizontal substructure are identical (see Fig. 1).

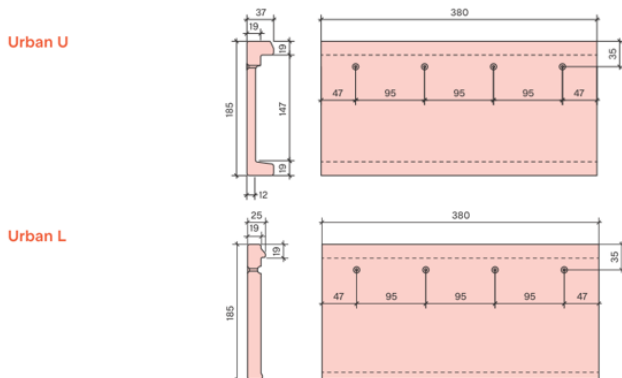


Figure 1: URBAN U and URBAN L tiles.

The kit consists of the following elements:

Supporting and fixing base (see Fig. 2): URBAN Omega profiles are used as a horizontal support and fixing base for the URBAN U/L cladding tiles. The URBAN Omega profiles are 3 m long extruded profiles made of EN AW-6060 T66 aluminium in accordance with EN 755-2.

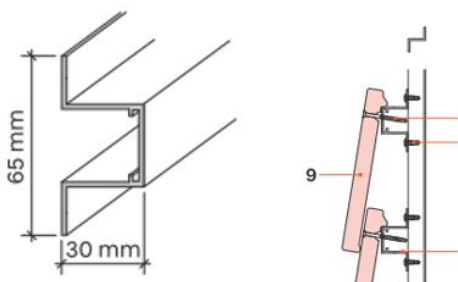


Figure 2: URBAN Omega profile (left) and it's installed configuration on the right.

Vertical aluminium substructure: The vertical aluminium subframe (see Fig. 3), URBAN Z profile, alloy EN AW-6060 T66 in accordance with EN 755-3.

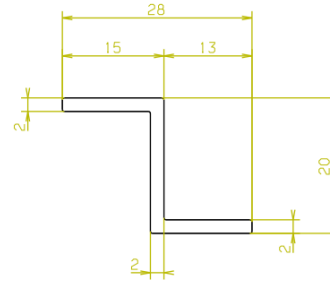


Figure 3: URBAN Z profile.

Screws for fixing the supporting and fixing base to the Z-profile: Urban self-tapping stainless-steel A4 screw 4.8 x 16 mm on vertical aluminium primary substructure or Urban self-tapping stainless-steel A4 screw 4.8x30 mm on vertical timber construction.

In the design variant with a wood substructure, the URBAN U/L tiles are fastened to horizontal wooden battens with a cross-section of 30/50 mm using the 4.2 x 48 URBAN mm self-tapping screw (see Annex 4). Regulated wooden battens made from softwood of strength class C24, sorting class S10 are used for this purpose. It is assumed that solid wood in accordance with EN 1912 [31] is used here, which means that it is a regulated construction product.

Cladding element: URBAN U/L cladding tile according to EN 1304. 100 % ceramic tiles.

The following components should be recognised as accessories:

- Vertical timber subframe profile
- Urban Z-profile as a vertical aluminium subframe
- Other accessories.

Cladding element:

URBAN U/L; 100 % ceramic tiles.

CE marked in accordance with EN 1304.

	Tile size [mm]	Horizontal subframe distance [mm]	Vertical subframe distance [mm]
URBAN U	380x185x37	81-142	Max c/c 630
URBAN L	380x185x25	81-142	680

Dimensions are specified in annex 1.

Always check the base layer before mounting battens and laths. Straightness requirements of the underlying

construction, vertical and horizontal, tolerance: +/- 3 mm, measured with a straight edge over 2 m.

The face to which the system is fixed should be flat, vertical and capable of supporting appropriate loads. In a soffit situation the engineer should specify the sub-structure and number of fixings required based on the weight of the system and any other requirements e.g., wind loads, etc.

2 Specification of the intended use(s) in accordance with the applicable European Assessment Document (hereinafter EAD)

The construction product cladding kit type UBRAN U/L is intended for use as fastening of external wall claddings, in ventilated facades.

The cladding kits are fixed to external vertical walls made of masonry (clay, concrete, or stone), concrete (cast on site or as prefabricated panels), timber or metal frame in new or existing buildings (retrofit).

The façade kit is assessed as a kit family E in accordance with EAD 090062-01-0404.

The verification and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of 25 years, when installed in the works.

The indications given as to the working life of the construction product cannot be interpreted as a guarantee neither given by the product manufacturer or his representative nor by the Technical Assessment Body issuing an ETA based on the EAD 090062-01-0404 but are regarded only as a means for expressing the expected economically reasonable working life of the product.

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

Characteristic	Assessment of characteristic
3.2 Safety in case of fire (BWR 2)	
Reaction to fire	The metal parts and the clay/natural slate tiles of the cladding kit type UBRAN U/L are classified as Euroclass A1 in accordance with EN 13501-1 and Delegated Regulation 2016/364
Façade fire performance	No performance assessed
Propensity to undergo continuous smoldering	Not relevant
3.3 Hygiene, health and the environment (BWR 3)	
Watertightness of joints (protection against driving rain)	No performance assessed
Water absorption (for non-ventilated facades)	Not relevant
Water vapour permeability (for non-ventilated facades)	Not relevant
Drainability	Drainable , See illustrations in annex 2
Content, emission and/or release of dangerous substances*	No performance assessed
3.4 Safety and accessibility in use (BWR 4)	
Wind load resistance	<p>The average bearing capacity under wind suction load, corrected by the excess strength of the tiles results in Urban U on an aluminium substructure: $Q = 4,76 \text{ kN/m}^2$ max. spacing 630 mm Urban U on a wooden substructure: $Q = 5,12 \text{ kN/m}^2$ max. spacing 630 mm Urban L on an aluminium substructure: $Q = 6,2 \text{ kN/m}^2$ max. spacing 680 mm Urban L on a wooden substructure / $Q = 5,2 \text{ kN/m}^2$ max. spacing 680 mm</p> <p>The wind load tests were carried out using a vertical wooden substructure with a support profile spacing of 0.68 m (Urban L) and 630 mm (Urban U). The test results apply to the load-bearing capacity of the bricks in conjunction with the aluminium profiles and their maximum support width.</p> <p>The screw connection between the aluminium profiles and the vertical wooden support battens, with 2 screws per connection point, is covered by the tests. The screw connection with the optional vertical aluminium substructure must be verified on a project-specific basis.</p>

Characteristic	Assessment of characteristic								
	Maximum wind loads in tests:								
	<table border="1"> <thead> <tr> <th>Designation</th> <th>Corrected load at first failure F in [kN/m²]</th> </tr> </thead> <tbody> <tr> <td>Urban U on aluminium substructure</td> <td>5.0</td> </tr> <tr> <td>Urban U on aluminium substructure</td> <td>7.8</td> </tr> <tr> <td>Urban U on aluminium substructure</td> <td>6.6</td> </tr> </tbody> </table>	Designation	Corrected load at first failure F in [kN/m ²]	Urban U on aluminium substructure	5.0	Urban U on aluminium substructure	7.8	Urban U on aluminium substructure	6.6
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Urban L on wooden substructure	6.6								
Urban L on wooden substructure	No failure, max. load 9.4								
Resistance to horizontal point load	The wind load figures can also be applied for wind pressure.								
Impact resistance	No performance assessed								
Mechanical Resistance	No performance assessed								
Bending strength	Average bending strength:								
Resistance of grooves	Urban U: 2.000 N								
Resistance at dowel holes	Urban L: 4.400 N								
Resistance to long-term or permanent dead load	Not relevant								
Pull-through resistance	Not relevant								
Pull-through resistance under shear load	Not relevant								
Axial tension resistance	Not relevant								
Shear load resistance	Not relevant								
Combined tension and shear load resistance	Not relevant								
	No performance assessed								

Characteristic	Assessment of characteristic
Resistance of slot	Not relevant
Resistance to vertical load	Not relevant
Pull-through resistance of fixings from profile	Not relevant
Resistance of punctual cladding fixings	Not relevant
Resistance of profiles	Not relevant
Subframe fixings, tension/pull-out resistance	Urban 4,8 x 16 mm screw in aluminium: 1,01 kN Urban 4,8 x 30 screw for timber: No performance assessed
Subframe fixings, shear load resistance	Urban 4,8 x 16 mm screw in aluminium: 2,13 kN Urban 4,8 x 30 screw for timber: No performance assessed
Brackets resistance	Not relevant
Resistance to seismic loads	No performance assessed
Out-of-plane fundamental vibration period	No performance assessed
Resistance to seismic loads	No performance assessed
Out-of-plane acceleration	No performance assessed
Resistance to seismic loads	No performance assessed
In-plane displacement	No performance assessed
3.5 Protection against noise (BWR 5)	
Airborne sound insulation	No performance assessed
3.6 Energy economy and heat retention (BWR 6)	
Thermal resistance	No performance assessed
3.7 Durability	
Hygrothermal behavior	Not relevant. The cladding element is not known to be or suspected of being sensitive to hygrothermal variation
Behavior after pulsating load	Not relevant. The cladding element is not known to be or suspected of being sensitive to pulsating loads
Freeze-thaw resistance	The cladding element has been tested in accordance with EN 539-2 showed no change after 150 freeze/thaw cycles.
Behavior after immersion in water	Not relevant. The cladding element is not known to be or suspected of being sensitive to water
Dimensional stability – by humidity	Not relevant. The cladding element is not known to be or suspected of being sensitive to humidity
Linear thermal expansion	Not relevant. The cladding element is not known to be or suspected of being sensitive to temperature
Chemical and biological resistance	Not relevant. The cladding kit is made from inorganic materials
UV radiation resistance	Not relevant. The cladding kit does not contain polyester or other plastics

Characteristic	Assessment of characteristic
Corrosion	<p>The durability rating of alloy AW 6060 & AW 5754 in accordance with EN 1999-1-1 is B</p> <p>Normally additional corrosion protection is not needed for atmospheric exposure in rural, industrial/urban and marine conditions according to table D.1 of EN 1999-1-1</p>
Accelerated ageing behavior of kit when the cladding element is made of thin metallic composite panels (TMCP)	Not relevant

See additional information in section 3.8-3.9.

*In addition to the specific clauses relating to dangerous substances contained in this European Technical Assessment, there may be other requirements applicable to the products falling within its scope (e.g., transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products Regulation, these requirements need also to be complied with, when and where they apply.

3.8 Methods of verification

The product is fully covered by EAD 090062-01-0404. According to the Regulation (EU) No 305/2011, assessed as a family E.

3.9 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.

The Cladding kit type URBAN U/L is 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 Assessment and verification of constancy of performance (hereinafter AVCP) system applied, with reference to its legal base.

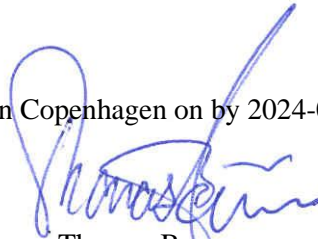
4.1 AVCP system

According to the decision 2003/640/EC of the European Commission, as amended by 2001/596/EC, 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 provided for in the applicable EAD.

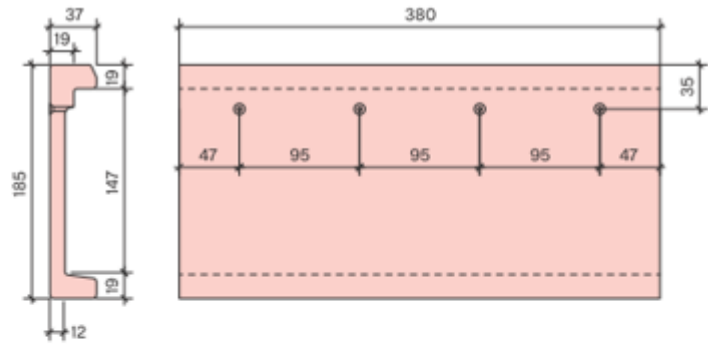
Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at ETA-Danmark.

Issued in Copenhagen on by 2024-08-20

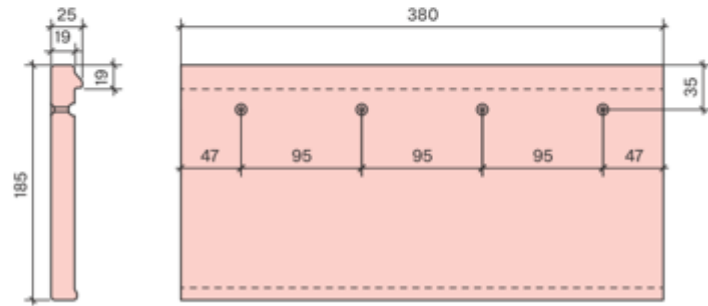


Thomas Bruun
Managing Director, ETA-Danmark

Urban U



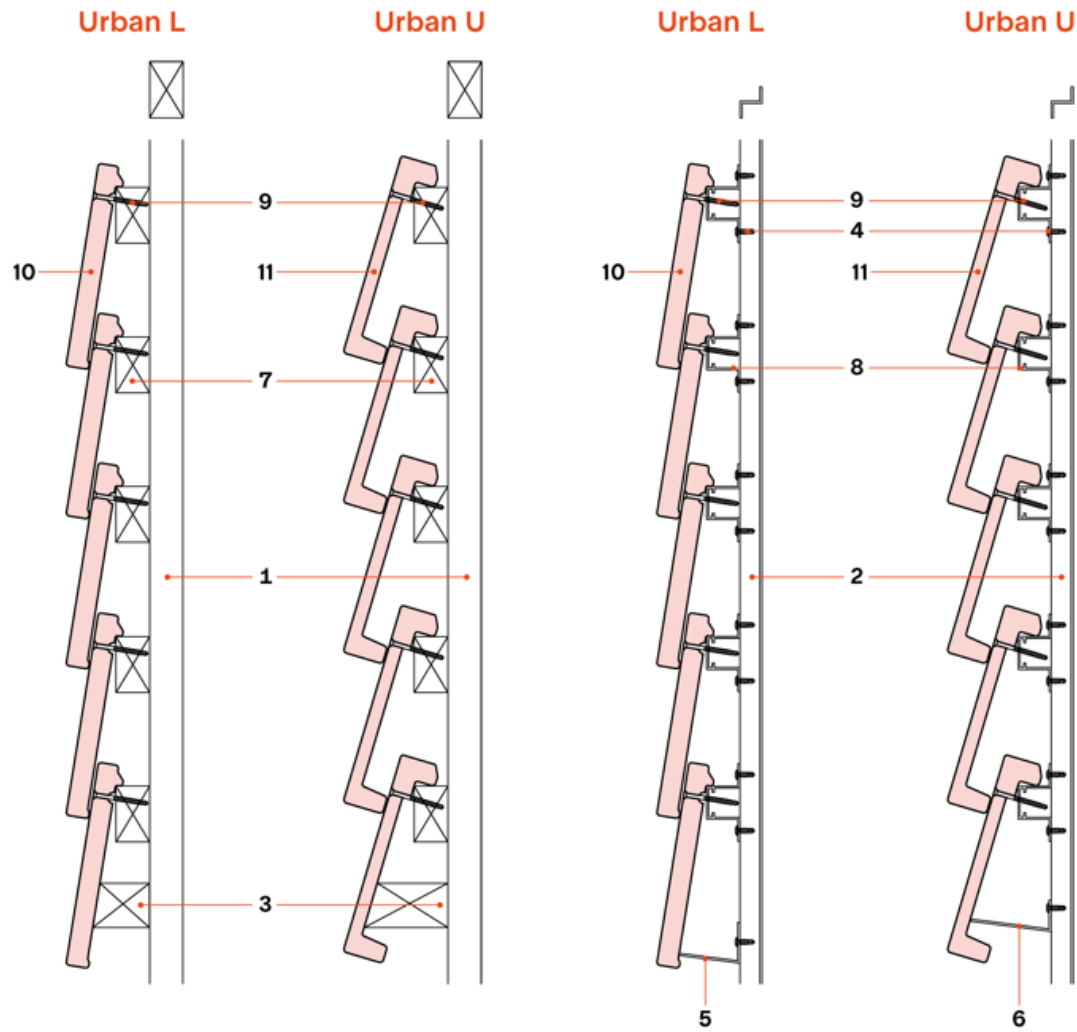
Urban L



Cladding kit type URBAN U/L

Cladding element

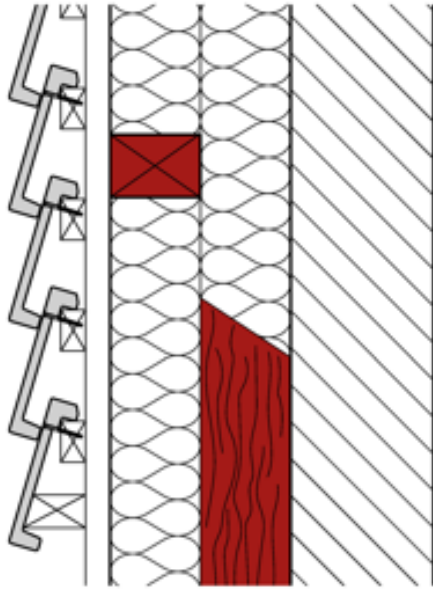
Annex 1



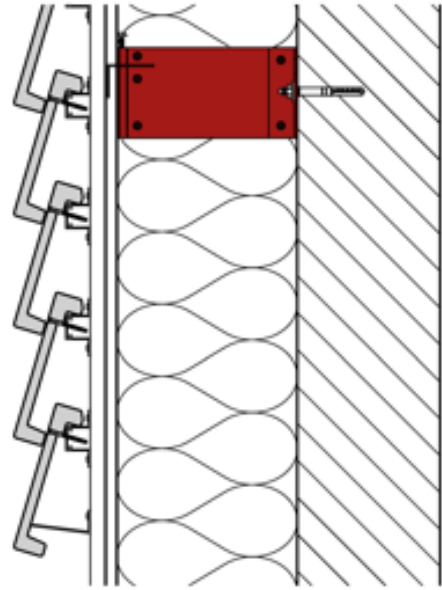
1	Rear ventilation battens / rear ventilation space / Counterbattens
2	Urban Z-profile / rear ventilation space
3	Beginner wooden batten
4	Urban self-drilling screw 4.8 x 16 mm
5	Urban Beginner profile 83 54/37 mm
6	Urban Beginner profile U 72/28 mm
7	Wooden support batten 30/50 mm
8	Urban Omega aluminium support batten 65/30 mm
9	Urban self-drilling screw 4.2 x 48 mm
10	Urban L cladding tile
11	Urban U cladding tile

Cladding kit type URBAN U/L	
Drainability	Annex 2

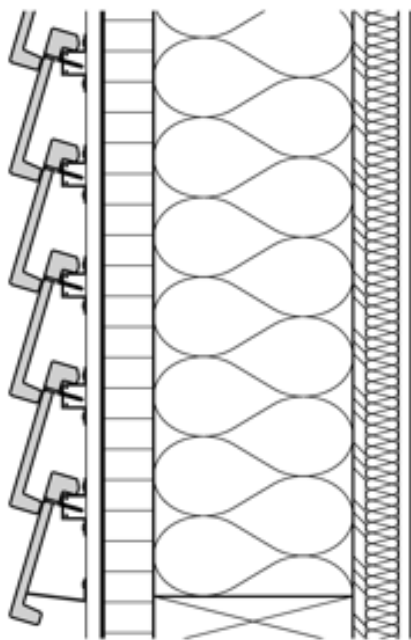
Wood / Wood



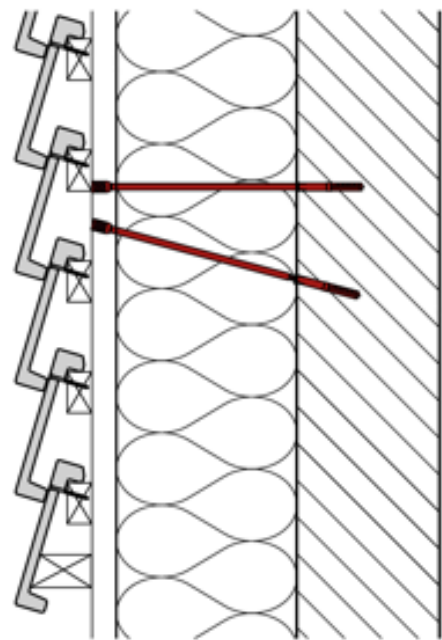
Metal / Metal



Timber frame construction



Wood / Spacer screws

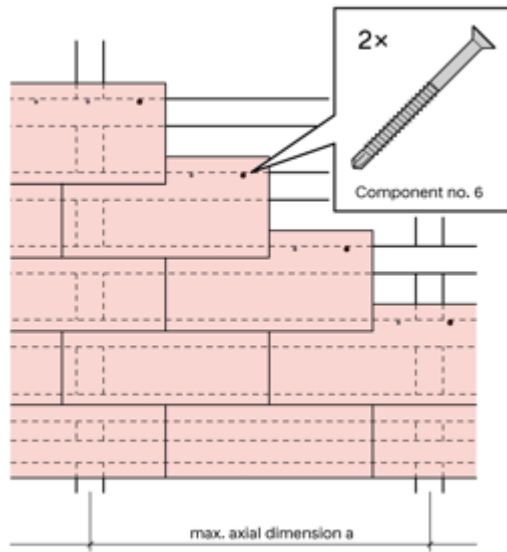


Cladding kit type URBAN U/L

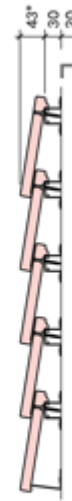
Installation examples

Annex 3

Urban L



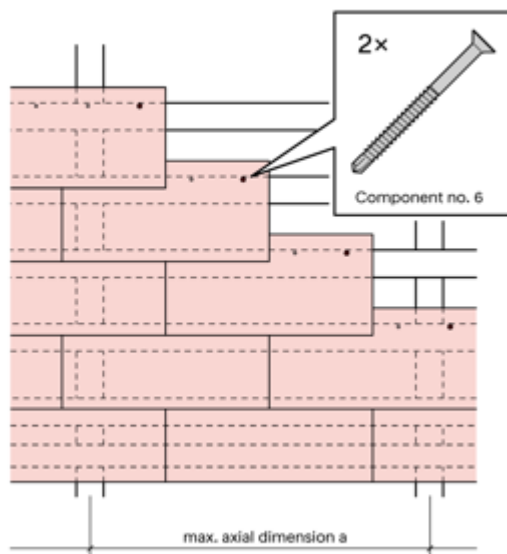
Substructure
wooden battens 30/50 mm
a = 680 mm



Substructure
Omega-profile
a = 680 mm

* Dimension depends on the batten spacing

Urban U



Substructure
30/50 mm
a = 630 mm



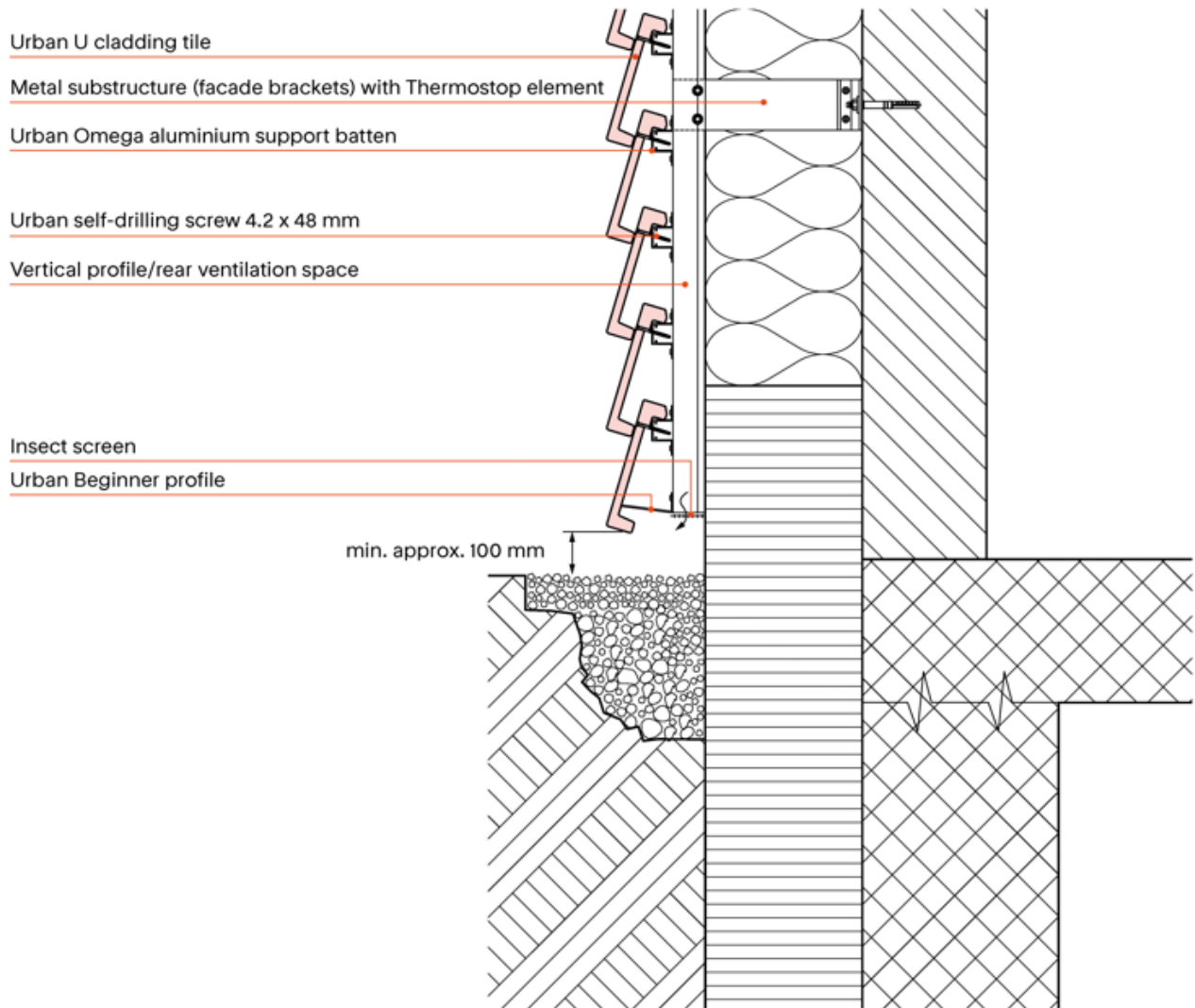
Substructure
Omega
a = 630 mm

* Dimension depends on the batten spacing

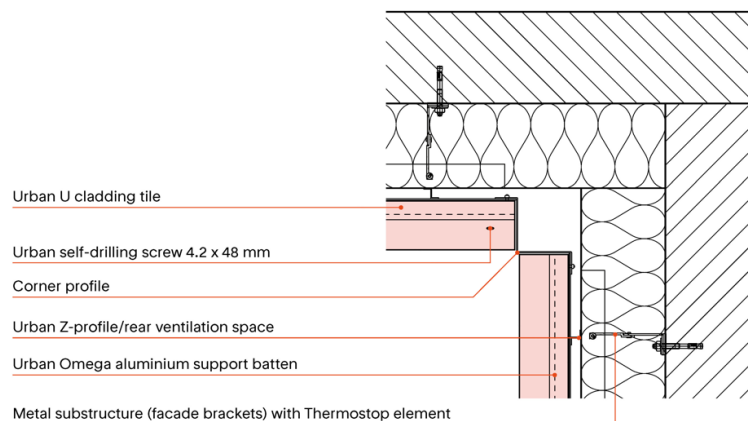
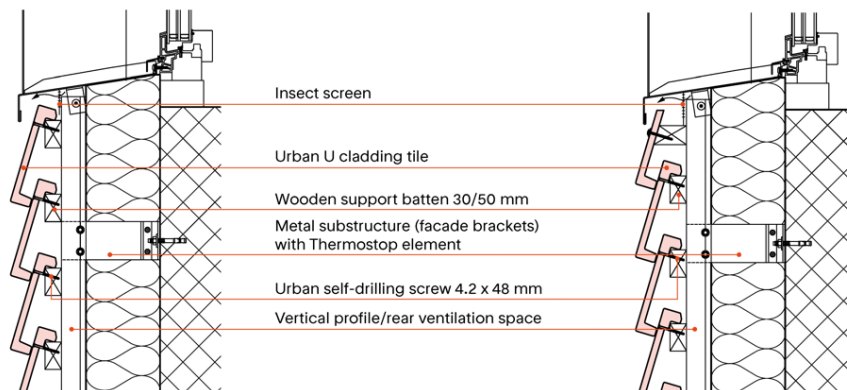
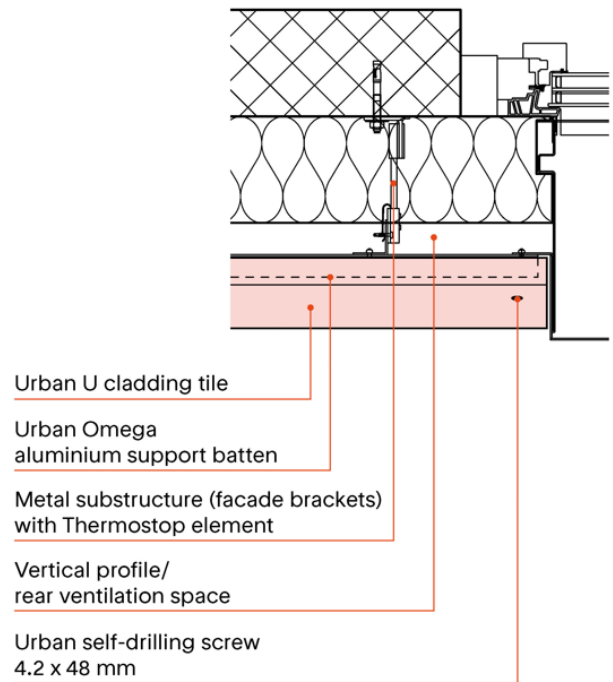
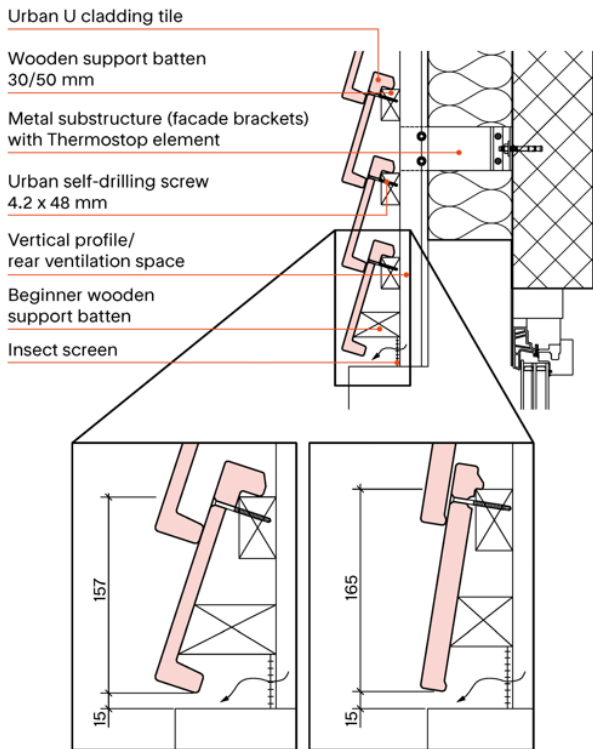
Cladding kit type URBAN U/L

Installation examples

Annex 3



Cladding kit type URBAN U/L	
Installation examples	Annex 3

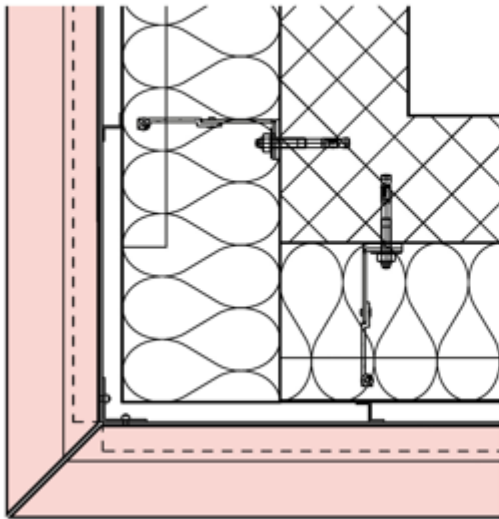


Cladding kit type URBAN U/L

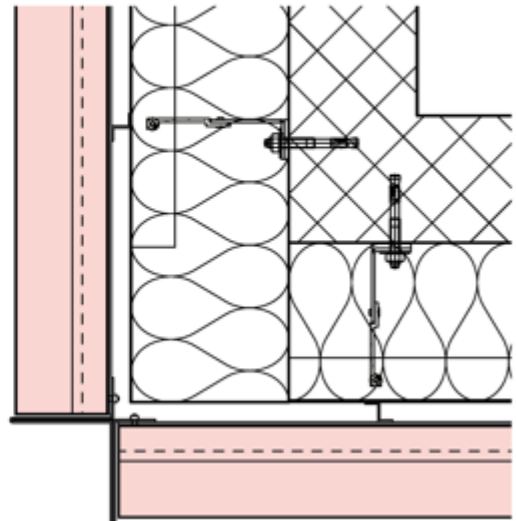
Installation examples

Annex 3

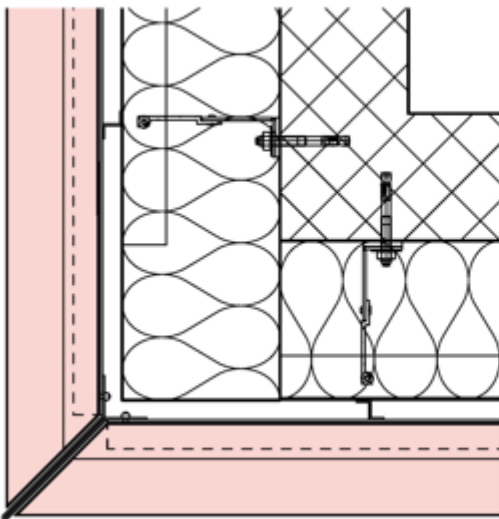
Bevel-cut tiles



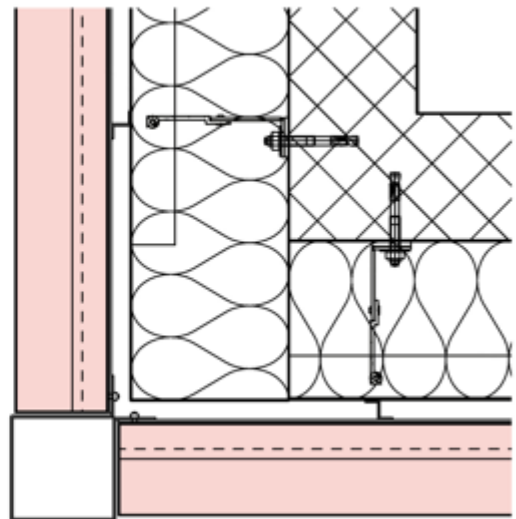
Cross-corner profile



Spacer profile



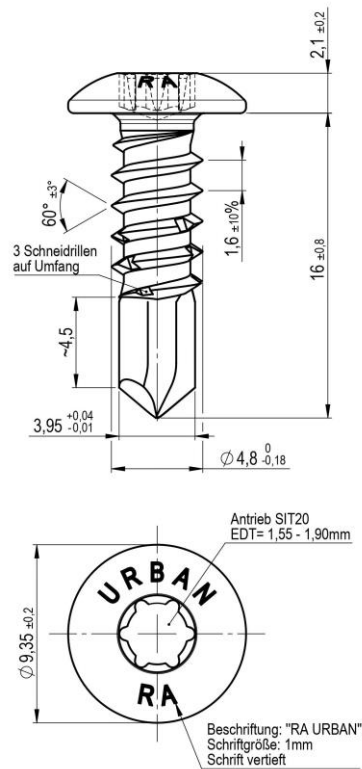
Cube corner profile



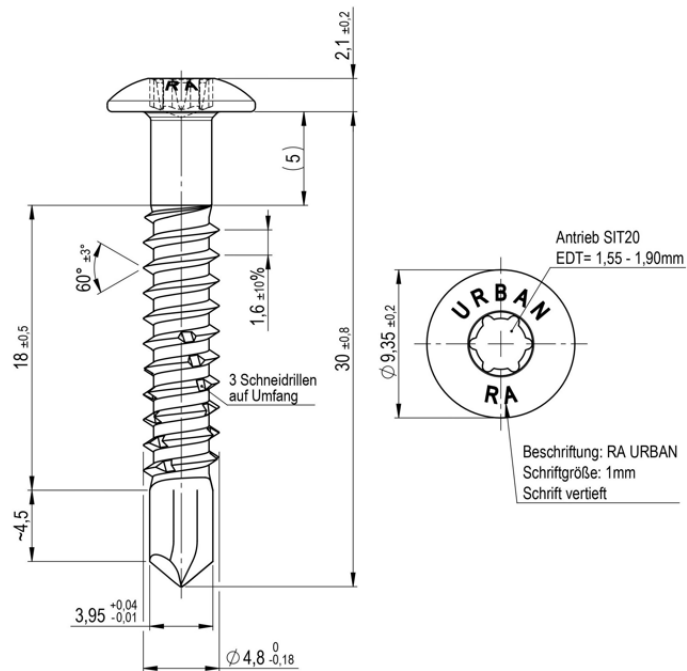
Cladding kit type URBAN U/L

Installation examples

Annex 3

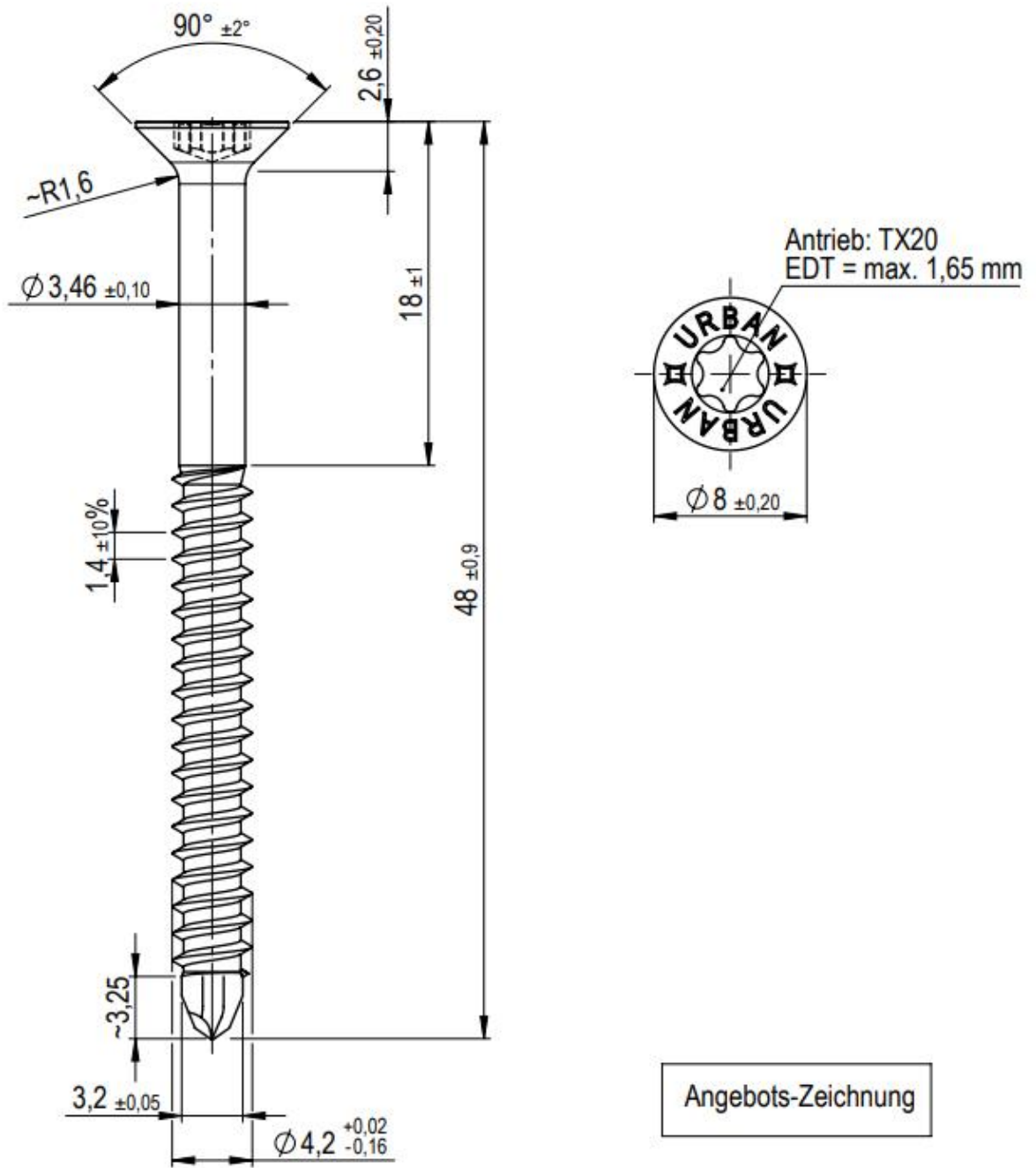


Urban 4.8 x 16 mm self-tapping screws made from stainless steel A4 for fixing the supporting and fixing base to the Z-profile



Urban 4.8 x 30 mm self-tapping screw made from stainless-steel A4 for fixing on vertical timber construction.

Cladding kit type URBAN U/L	
Fasteners	Annex 4



Urban 4.2 x 48 mm self-tapping screws made from stainless steel A4 for connecting the Urban cladding tile and the horizontal timber/aluminium subframe

Cladding kit type URBAN U/L	
Fasteners	Annex 4

Design

The design of the external wall claddings for ventilated facades using the Cladding kit type URBAN U/L should consider:

- It is assumed that the substrate wall meets the necessary requirements regarding the mechanical strength (resistance to static and dynamic loads) and the airtightness, as well as the relevant resistance regarding watertightness and water vapour.
- The verification of the designed system by means of calculation, taking into account the mechanical characteristic value of the kit components in order to resist the actions (dead loads, wind loads etc.) applying on the specific works. National safety factors and other national provisions must be followed.
- The selection and verification of the brackets which support the subframe vertical profiles considering compatible materials (e.g. aluminium alloy) and the mechanical resistance (vertical and horizontal resistance) according to the envisaged actions obtained from the mechanical calculation of the designed system.
- The selection and verification of the anchors between the brackets and the external walls (substrate), taking into account the substrate material and the minimum resistance required (pull-out and shear resistance) according to the envisaged actions obtained from the mechanical calculation of the designed system.
- The accommodation of the designed system movements to the substrate or structural movements.
- The execution of singular parts of the façade, some examples of construction details are indicated in annex 3.
- The corrosion protection of the designed system metallic components taking into account the category of corrosivity of the atmosphere of the works (e.g. according to ISO 9223).
- The drainability of the ventilated air space between the cladding elements and the insulation layer or the external wall accordingly.
- An insulation layer is usually fixed on the external wall and should be defined in accordance with an harmonized standard or an ETA and taking into account the section 3 of this ETA.
- Because the joints are not watertight, the first layer behind the ventilated air space (e.g. insulation layer) should be composed by materials with low water absorption.

Installation

Installation of the external wall claddings for ventilated facades using the Cladding kit type URBAN U/L should be carried out:

- According to the specifications of the manufacturer and using the components specified in this ETA.
- In accordance with the design and drawings prepared for the specific works. The manufacturer should ensure that the information on these provisions is given to those concerned.
- By appropriately qualified staff and under the supervision of the technical responsible of the specific works.

Maintenance and repair

Maintenance of the external wall claddings for ventilated facades using the cladding kit includes inspections on site, taking into account the following aspects:

- Regarding the cladding elements, the appearance of any damage such as cracking, detachment, delamination and mould presence due to permanent moisture or permanent irreversible deformation.
- Regarding metallic components: The presence of corrosion or presence of water accumulation.

When necessary, any repair to localized damaged areas must be carried out with the same components and following the repair instructions given by the manufacturer.

Cladding kit type URBAN U/L	
Design, installation, maintenance, and repair criteria	Annex 5