Deutsches Institut für Bautechnik

DIBt

Zulassungsstelle für Bauprodukte und Bauarten (Certification authority for construction products and construction elements)

Bautechnisches Prüfamt (Structural Testing Authority)

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Allgemeine bauaufsichtliche Zulassung

General Technical Approval

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Approval number:

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Period of validity

from 2 May 2013

to 2 May 2018

Applicant:

Wienerberger GmbH

Oldenburger Allee 26

30659 Hanover, Germany

Object of approval:

Façade cladding system "Argeton TAMPA"

This document is to certify that the object of approval specified above has received the General Technical Approval for Germany.

(Translation of the German original not verified by Deutsches Institut für Bautechnik).

Deutsches Institut für Bautechnik

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I GENERAL PROVISIONS

1. This General Technical Approval certifies that the usability and/or applicability of the object of approval in the meaning of the building regulations of the German Länder (Landesbauordnungen) has been proven.
2. Should this General Technical Approval, pursuant to the applicable regional regulations corresponding to § 17 section 5 of the Model Building Code (Musterbauordnung), make special requirements concerning the expertise and experience of persons entrusted with the production of construction products and construction elements, it should be taken into account that proof of such expertise and experience may also be furnished by way of providing equivalent certificates from other member states of the European Union. This shall, where applicable, also include equivalent certificates furnished pursuant to the Agreement on the European Economic Area or other bilateral agreements.
3. This General Technical Approval does not replace permissions, agreements and certificates which may be required by law for the execution of building projects.
4. This General Technical Approval is granted without prejudice to the rights of third parties, in particular private property rights.
5. Without prejudice to more extensive regulations detailed under “Special regulations”, manufacturers and distributors of the object of approval must make available copies of the General Technical Approval to the user and/or applier of the object of approval and point out that the General Technical Approval must be available at the point of use. Upon request, copies of the General Technical Approval must be made available to the authorities involved.
6. The General Technical Approval may only be copied in full. Publication of excerpts shall require the permission of Deutsche Institut für Bautechnik. Texts and drawings in advertising material must not contradict the General Technical Approval. Translations of the General Technical Approval must contain the warning “Vom Deutschen Institut für Bautechnik nicht geprüfte Übersetzung der deutschen Originalfassung” (Translation of the German original not verified by Deutsches Institut für Bautechnik).
7. The General Technical Approval may be revoked. Regulations of the General Technical Approval may subsequently be supplemented and changed, in particular, if required because of new technical findings.

II SPECIAL REGULATIONS

1 Object of approval and area of application

This General Technical Approval covers a rear-ventilated external façade cladding system called “Argeton TAMPA” and consisting of extruded hollow brick tiles (hereinafter “Argeton TAMPA façade tiles”) and their attachment to an aluminium sub-structure.

Each “Argeton TAMPA façade tile” must be attached either by four clips on vertical aluminium profiles (fixing system V-UK) or by four aluminium clamps on horizontal aluminium profiles (fixing system H-UK). Aluminium joint-profiles must be installed in the vertical joints between the façade tiles.

“Argeton TAMPA façade tiles” and the aluminium clips, clamps, carrier rails and joint-profiles are non-combustible.

The permissible building height for use with the rear-ventilated "Argeton TAMPA" wall cladding may be determined from the structural stability survey (Standsicherheitsnachweis), unless applicable fire protection regulations of the Länder define smaller heights.

The sub-structure and its anchoring in the building are not covered by this General Technical Approval.

Any thermal insulation must consist of non-combustible mineral rock wool tiles in accordance with DIN EN 13162[1] and mounted independently of the sub-structure directly on the building.

2 Regulations concerning the construction products

2.1 General

The object of approval and its parts must comply with the Special Regulations and the Annexes to this General Technical Approval, as well as with the specifications deposited with Deutsches Institut für Bautechnik.

2.2 Characteristics and composition

2.2.1 "Argeton TAMPA façade tiles"

"Argeton TAMPA façade tiles" are extruded hollow brick tiles (according to DIN EN 1304); they may have different colours, engobes, and glazes, smooth or rough surfaces.

All "Argeton TAMPA façade tiles" must have a nominal thickness of 30 mm and a weight per unit area (average) of 42 kg/m^2. The length of the façade tiles must not exceed 1500 mm and the nominal height must be between 150 mm and 400 mm.

The cross-sectional dimensions and other dimensions of the "Argeton TAMPA façade tiles" must correspond to the specifications listed in Annexes 1.1 to 1.12.

In the course of the three-point bending test pursuant to Annex 5, the "Argeton TAMPA façade tiles" must exhibit a minimum flexural strength of 12 N/mm^2. The tiles must be frost-resistant in accordance with the testing requirements of DIN EN 539-2, testing procedure B or E.

2.2.2 Means of attachment

2.2.2.1 Attachment system V-UK

The attachment system V-UK as detailed in Annexes 2.1 to 2.7 must comprise the following components:

- Top clip, middle clip and bottom clip, each of which has a width of 20 mm or 40 mm and consists of aluminium EN AW 6063 T66 according to DIN EN 755;
- Blind rivets: aluminium-stainless steel blind rivet Gesipa 5 × 10 K11 according to DIBt approval Z-14.1-4, Annex 2.3.

2.2.2.2 Attachment system H-UK

The attachment system H-UK as detailed in Annexes 3.1 to 3.9 must comprise the following components:

- Top clamp, middle clamp and bottom clamp, each of which has a width of 20 mm or 40 mm and consists of aluminium EN AW 6063 T66 according to DIN EN 755;

1 As regards fire performance, the regulations of Building Rules List B (Bauregelliste B) Part 1. No 1.5.1 must be observed.

- Horizontal carrier rail, type 35/25 and/or 45/25, made of aluminium EN AW 6063 T66 according to DIN EN 755;
- Self-tapping screw Mage Topex Piasta 7540-48 E4 according to DIBt approval Z-14.1-537, Annex 3.1.3.

2.2.2.3 Alternatively to the aluminium blind rivets GESIPA 5 × 10 × K 11 and/or the self-tapping screw Mage Topex Piasta 7540-48 E4, mentioned above, other means of attachment may be used, as long as such means are regulated products (e. g. pursuant to DIBt approval no. Z-14.1-537 or Z-14.1-4). Section 3.2 must be observed.

2.2.3 Vertical carrier rails on the sub-structure

The vertical rails for the attachment system V-UK and/or attachment system H-UK must be made of aluminium EN AW 6063 T66 according to DIN EN 755 and meet the following minimum requirements:

- Thickness ≥ 2 mm
- 0.2 % proof stress f_o ≥ 200 N/mm^2
- Tensile strength f_u ≥ 245 N/mm^2

For the attachment system V-UK, the carrier rails (T-profiles) must have a minimum width of 110 mm (when using 20 mm wide clips) and/or a minimum width of 160 mm (when using 40 mm wide clips) at the vertical butt joints. At lateral wall sections other types of rails may be used (such as L-profiles).

2.2.4 Joint-profiles

The joint-profiles to be placed in the vertical joints between the “Argeton TAMPA façade tiles” must be made of aluminium and have a cross-section as detailed in Annex 4.

2.2.5 Rear-ventilated external wall cladding system “Argeton TAMPA”

The rear-ventilated external wall cladding system “Argeton TAMPA” must consist of the products pursuant to sections 2.2.1 to 2.2.4, with an attachment system compliant either with the regulations of section 2.2.2.1 (V-UK) or of section 2.2.2.2 (H-UK).

2.3 Production, packaging, transport, storage and labelling

2.3.1 Production

The construction products mentioned in sections 2.2.1 to 2.2.4 must be factory-made.

2.3.2 Packaging, transport, storage

The construction products mentioned in section 2.2 must be stored according to the manufacturers’ specifications and protected against damage.

2.3.3 Labelling

The construction products mentioned in sections 2.2.1 and 2.2.2 and/or their packaging, instruction leaflets or delivery notes must be labelled by the manufacturer with the compliance mark (Ü-Zeichen) as prescribed in the compliance mark regulations (Übereinstimmungszeichen-Verordnungen) of the Länder. Such labelling shall be subject to fulfilment of the conditions detailed in section 2.4.

2.4 Proof of compliance

2.4.1 General

2.4.1.1 Proof of compliance by certificate

Proof of compliance of the "Argeton TAMPA façade tiles" mentioned in section 2.2.1 with the regulations of this General Technical Approval must be furnished for each manufacturing plant by way of a compliance certificate which must be based on internal production monitoring and regular external inspections, including an initial inspection of the construction product in accordance with the following regulations.

The manufacturer of "Argeton TAMPA façade tiles" must appoint a certification authority and an inspection authority (including product inspections), both of which must be accredited for this particular task, with the issuance of the compliance certificate and performance of the external inspections including the required product inspections.

The manufacturer must declare the issuance of a compliance certificate by labelling the construction products with the mark of conformity (Ü-Zeichen) with reference to their designated use.

The certification body must submit a copy of the compliance certificate to Deutsches Institut für Bautechnik for its information.

Additionally, a copy of the initial inspection report must be submitted to Deutsches Institut für Bautechnik for its information.

2.4.1.2 Proof of compliance by manufacturer's note and initial inspection

The proof of compliance with the regulations of this General Technical Approval of the clips, clamps and carrier rails mentioned in section 2.2.2 must be furnished for each manufacturing plant by way of a declaration of compliance by the manufacturer on the basis of internal product monitoring and an initial inspection of the construction products by an inspection authority (including product inspections) which must be accredited for this particular task.

The manufacturer must declare compliance by labelling the construction products with the mark of conformity (Ü-Zeichen) with reference to their designated use.

A copy of the initial inspection report must be submitted to Deutsches Institut für Bautechnik for its information.

2.4.2 Internal production monitoring

Every manufacturing plant must set up and carry out an internal production monitoring. Internal production monitoring refers to a continuous production monitoring by the manufacturer to ensure that the products made by it comply with the regulations of this General Technical Approval.

The internal production monitoring must at least include the measures mentioned in Annex 5.

The results of the internal production monitoring must be recorded and analysed. Such records must contain at least the following data:

- Name of construction product and/or the raw material and the components;
- Type of monitoring or inspection;
- Date of production and inspection of the construction product and/or of the raw material or the components;

- Result of the inspections and monitoring and, if applicable, comparison with the requirements;
- Signature of the person responsible for the internal production monitoring.

These records must be kept for at least five years and submitted to the inspection authority charged with the external inspections. The records must be submitted to Deutsches Institut für Bautechnik and to the competent supreme construction supervisory board upon request.

If an inspection produces an unsatisfactory result, the manufacturer must immediately take all measures necessary to rectify the fault. Construction products which do not comply with the requirements must be handled in such a way as to make sure that no mix-up with compliant products may occur. The respective inspection must be repeated immediately upon rectification of the fault – provided it is technically possible and necessary to furnish evidence for the correction of the fault.

2.4.3 External inspections

The internal production monitoring in every manufacturing plant must be verified by regular external inspections at least twice a year. An initial inspection of the "Argeton TAMPA façade tiles" must be conducted as part of such external inspections. It is also permissible to take samples for sampling inspections. In each case, the respective accredited inspection authority shall be responsible for sampling and inspections.

The inspections listed in Annex 5 must be conducted on the "Argeton TAMPA façade tiles".

The results of certifying process and external inspections must be kept on file for at least five years. Upon request, certification authority and/or inspection authority must submit such results to Deutsches Institut für Bautechnik and to the competent supreme construction supervision authority.

2.4.4 Initial inspection by an accredited inspection authority

During the initial inspection of clips, clamps and carrier rails, the dimensions and material characteristics, as detailed in section 2.2.2 and in the respective Annexes, must be inspected.

3 Regulations for design and calculations

3.1 General

Only products as listed in section 2.2 may be used for the "Argeton TAMPA" façade cladding system.

The 20 mm wide clips and/or clamps may only be used for the attachment of façade tiles with a maximum length of 1.0 m. The 40 mm wide clips and/or clamps may only be used only for the attachment of façade tiles with a maximum length of 1.50 m.

Joints between vertical carrier rails may be covered by façade tiles, as long as the regulations detailed under section 3.2 are adhered to.

3.2 Proof of stability

In the course of the approval procedure, proof of stability of the "Argeton TAMPA façade tiles" (described in section 2.2.1) and of the attachment to the carrier rails (as detailed in section 2.2.3) using the means of attachment detailed in section 2.2.2 was furnished for the scope of application mentioned in section 1.2 under conditions that comply with the regulations in section 4 and pursuant to the details listed in charts 1 to 4.

Permissible wind loads can be deduced from the Technical Construction Regulations (Technische Baubestimmungen)[2] established by the approval authority.

Chart 1: Maximum length of "Argeton TAMPA façade tiles" for use with attachment system V-UK with 20 mm wide clips in relation to the nominal height of the façade tiles and impacting wind loads

Wind load [kN/m²]	**0.75**	**1.00**	**1.25**	**1.50**	**1.75**	**2.00**	**2.50**	**3.00**
Nominal height [mm]	Maximum length of "Argeton TAMPA façade tiles" [m]							
150	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
175	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.91
187.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.85
200	1.0	1.0	1.0	1.0	1.0	1.0	0.96	0.80
212.5	1.0	1.0	1.0	1.0	1.0	1.0	0.90	0.75
225	1.0	1.0	1.0	1.0	1.0	1.0	0.85	0.71
237.5	1.0	1.0	1.0	1.0	1.0	1.0	0.81	0.67
243.5	1.0	1.0	1.0	1.0	1.0	0.99	0.79	0.66
250	1.0	1.0	1.0	1.0	1.0	0.96	0.77	0.64
275	1.0	1.0	1.0	1.0	1.0	0.87	0.70	0.58
300	1.0	1.0	1.0	1.0	0.91	0.80	0.64	0.53
400	1.0	1.0	0.96	0.80	0.69	0.60	0.48	0.40

Chart 2: Maximum length of "Argeton TAMPA façade tiles" for use with attachment system V-UK with 40 mm wide clips in relation to the nominal height of the façade tiles and impacting wind loads

Wind load [kN/m²]	**0.75**	**1.00**	**1.25**	**1.50**	**1.75**	**2.00**	**2.50**	**3.00**
Nominal height [mm]	Maximum length of "Argeton TAMPA façade tiles" [m]							
150	1.50	1.50	1.50	1.50	1.50	1.45	1.30	1.18
175	1.50	1.50	1.50	1.50	1.50	1.45	1.30	1.18
187.5	1.50	1.50	1.50	1.50	1.50	1.45	1.30	1.18
200	1.50	1.50	1.50	1.50	1.50	1.45	1.30	1.18
212.5	1.50	1.50	1.50	1.50	1.50	1.45	1.30	1.18
225	1.50	1.50	1.50	1.50	1.50	1.45	1.30	1.13
237.5	1.50	1.50	1.50	1.50	1.50	1.45	1.28	1.07
243.5	1.50	1.50	1.50	1.50	1.50	1.45	1.25	1.04
250	1.50	1.50	1.50	1.50	1.50	1.45	1.22	1.01
275	1.50	1.50	1.50	1.50	1.50	1.38	1.11	0.92
300	1.50	1.50	1.50	1.50	1.45	1.27	1.01	0.84
400	1.50	1.50	1.50	1.27	1.09	0.95	0.76	0.63

[2] See www.dibt.de, section "Fields of activity" → "Construction Products Lists / Technical constructions regulations"

Chart 3: Maximum length of “Argeton TAMPA façade tiles” for use with attachment system H-UK with 20 mm wide clips in relation to the nominal height of the façade tiles and impacting wind loads

Wind load [kN/m²]	**0.75**	**1.00**	**1.25**	**1.50**	**1.75**	**2.00**	**2.50**	**3.00**
Nominal height [mm]	Maximum length of “Argeton TAMPA façade tiles” [m]							
150	1.0	1.0	1.0	1.0	1.0	1.0	0.88	0.73
175	1.0	1.0	1.0	1.0	1.0	0.94	0.75	0.63
187.5	1.0	1.0	1.0	1.0	1.0	0.88	0.70	0.59
200	1.0	1.0	1.0	1.0	0.94	0.83	0.66	0.55
212.5	1.0	1.0	1.0	1.0	0.89	0.78	0.62	0.52
225	1.0	1.0	1.0	0.98	0.84	0.73	0.59	0.49
237.5	1.0	1.0	1.0	0.93	0.79	0.69	0.56	0.46
243.5	1.0	1.0	1.0	0.90	0.77	0.68	0.54	0.45
250	1.0	1.0	1.0	0.88	0.75	0.66	0.53	0.44
275	1.0	1.0	0.96	0.80	0.69	0.60	0.48	0.40
300	1.0	1.0	0.88	0.73	0.63	0.55	0.44	0.37
400	1.0	0.83	0.66	0.55	0.47	0.41	0.33	0.28

Chart 4: Maximum length of “Argeton TAMPA façade tiles” for use with attachment system H-UK with 40 mm wide clips in relation to the nominal height of the façade tiles and impacting wind loads

Wind load [kN/m²]	**0.75**	**1.00**	**1.25**	**1.50**	**1.75**	**2.00**	**2.50**	**3.00**
Nominal height [mm]	Maximum length of “Argeton TAMPA façade tiles” [m]							
150	1.50	1.50	1.50	1.50	1.50	1.50	1.33	1.11
175	1.50	1.50	1.50	1.50	1.50	1.43	1.14	0.95
187.5	1.50	1.50	1.50	1.50	1.50	1.33	1.07	0.89
200	1.50	1.50	1.50	1.50	1.43	1.25	1.00	0.83
212.5	1.50	1.50	1.50	1.50	1.34	1.18	0.94	0.78
225	1.50	1.50	1.50	1.48	1.27	1.11	0.89	0.74
237.5	1.50	1.50	1.50	1.40	1.20	1.05	0.84	0.70
243.5	1.50	1.50	1.50	1.37	1.17	1.03	0.82	0.68
250	1.50	1.50	1.50	1.33	1.14	1.00	0.80	0.67
275	1.50	1.50	1.45	1.21	1.04	0.91	0.73	0.61
300	1.50	1.50	1.33	1.11	0.95	0.83	0.67	0.56
400	1.50	1.25	1.00	0.83	0.71	0.63	0.50	0.42

As regards proof of stability of the fasteners (rivets and screws) detailed in section 2.2.2, the regulations of the respective General Technical Approvals must be adhered to.

Proof of stability of the aluminium sub-structure and its anchorage on the building must be furnished for every building pursuant to the Technical Construction Regulations (Technische Baubestimmungen). Independently of the requirement just mentioned, the following regulations must be adhered to:

For the attachment system H-UK:

- The supporting width of the horizontal carrier rails (carrier rails) must be limited to $l_s \leq 1.20$ m (for 35/25-type profiles) and/or to $l_s \leq 1.40$ m (for 45/25-type profiles).
- The sag of the horizontal carrier rails must not exceed $f = l_s/200$.
- The length of the cantilever arm of the horizontal carrier rails must not exceed 0.35 m.

For the attachment systems H-UK and V-UK: If joints between the vertical carrier rails are covered by façade tiles, the following general conditions must be met (see Annexes 2.2 and 3.2):

- The length of the individual vertical carrier rails must not exceed 3 m.
- The vertical distance between two neighbouring fixed points must not exceed 3 m.
- In areas where tiles cover butt joints between carrier rails, an assembling jig must be used to make sure that there is a gap of 3 mm between the lower edge of the horizontal arm of the retaining clamp and top edge of the façade tile.

3.3 Thermal protection and protection against climate-induced moisture

DIN 4108-2 shall apply as regards proof of thermal protection. When calculating the thermal resistance (R-value) of the external wall structure pursuant to DIN EN ISO 6946, the air layer (rear-ventilation gap) and the “Argeton TAMPA façade tiles” must not be taken into account. For the insulating material used, the design value for thermal conductivity must be determined pursuant to DIN V4108-43[3]: 2007-06, Chart 2, Category I. A design value of Category II shall apply for insulating boards, for which a limit (λ_{limit}) has been determined in the context of a proof of compliance procedure based on a General Technical Approval.

Thermal bridges must be taken into account, which are caused by a penetration of the thermal insulation layer or a reduction of its thickness by the sub-structure and its anchoring elements.

DIN 4108-3 shall apply for proof of protection from climate-induced moisture.

3.4 Fire prevention

“Argeton TAMPA façade tiles”, clips, clamps, carrier rails and joint profiles are non-combustible.

3.5 Noise protection

DIN 4109, including supplement 1 to DIN 4109, shall apply for proof of noise protection (protection against external noise).

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[3] DIN V 4108-4:2007-06: Thermal Insulation and Energy Economy in Buildings - Part 4: Hygrothermal Design Values (Wärmeschutz und Energie-Einsparung in Gebäuden – Teil 4: Wärme- und feuchteschutztechnische Bemessungswerte)

4 Regulations for installation and assembly

4.1 General

The external wall cladding system must be installed in accordance with the following regulations and with due regard to the planning specifications (see section 3). It must be technically tension-free.

Damaged façade tiles must not be used.

Each “Argeton TAMPA façade tile” must be fastened at four points. Depending on the position of the tiles within the façade, bottom clips or clamps (e. g. at the lower edge of the tiles above the base of the building and above openings), middle clips or clamps (at tile butt joints across the surface) and/or top clips or clamps (e. g. at the upper edge to the roof and under window sills) must be used.

Aluminium joint profiles (pursuant to section 2.2.4) must be placed in the vertical joints between façade tiles.

4.2 Installation of “Argeton TAMPA façade tiles” using the attachment system V-UK

Each “Argeton TAMPA façade tile” must be fastened on vertical carrier rails (as detailed in section 2.2.3) in accordance with the instructions from Annexes 2.1 to 2.7 using four clips (as detailed in section 2.2.2).

The clips must be fastened on the vertical rails with blind rivets, as detailed in section 2.2.2.

4.3 Installation of “Argeton TAMPA façade tiles” using the attachment system H-UK

In compliance with the details listed in Annexes 3.1 to 3.9, each “Argeton TAMPA façade tile” must be fastened with four clamps (as detailed in section 2.2.2), which must be flush-fitted to the horizontal carrier rails (as detailed in section 2.2.2).

The horizontal carrier rails must be fastened on the vertical carrier rails of the sub-structure with screws as detailed in section 2.2.2.

Butt joints between the horizontal rails may be connected using connecting rails, provided that this does not inhibit the horizontal expansion of the rails.

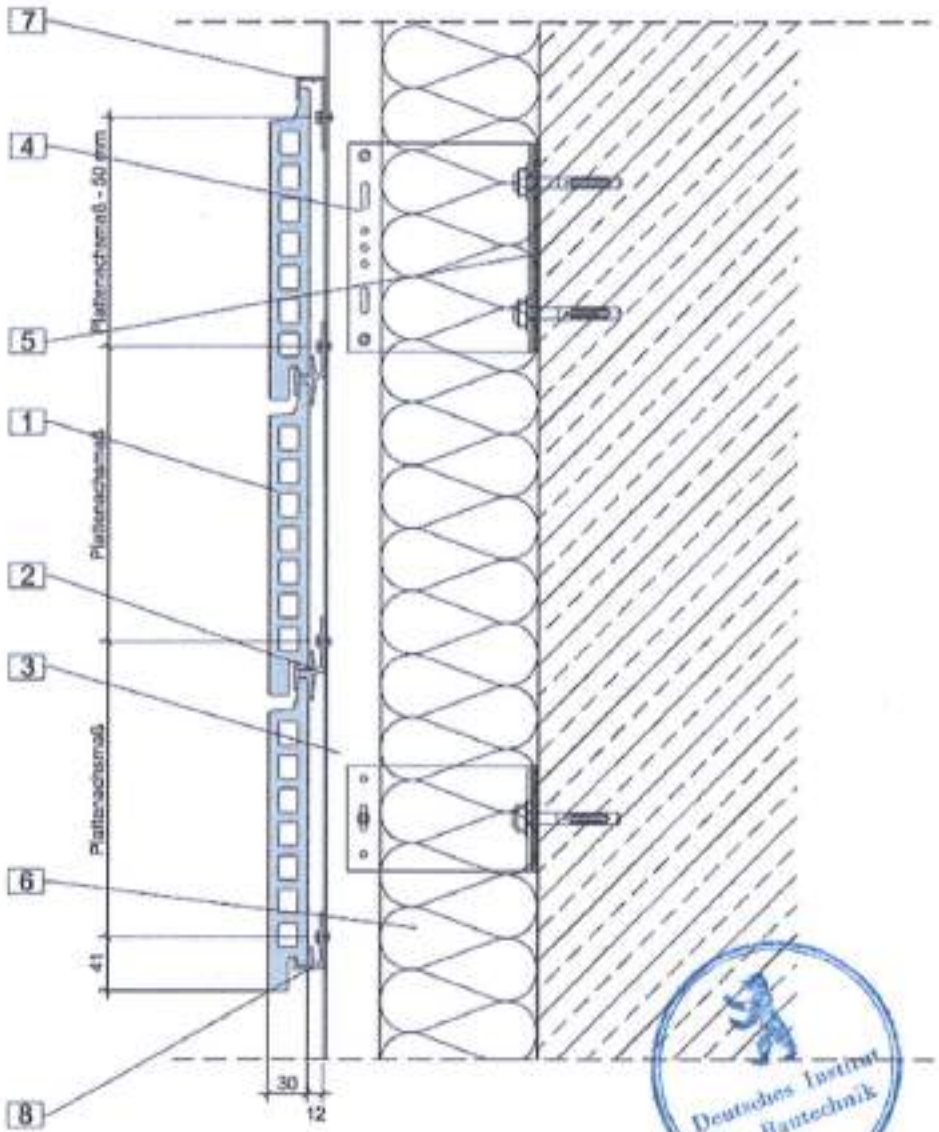
Generally, the clamps must be placed at a distance of approx. $1/5^{th}$ of the length of the tile from the edge of the tile. However, the following minimum distances to the edge must be obeyed: The distance between clamp and lateral edges of the tile must be at least 100 mm (using 20 mm wide clamps) and/or at least 200 mm (using 40 mm wide clamps). Distance here refers to the clearance from the lateral edge of the clamp to the lateral edge of the tile. When using short tiles of less than 400 mm, the distance from the edge may be reduced to 50 mm at the maximum.

Authenticated

Manfred Klein
Head of department

Argeton TAMPA façade cladding system

V-UK attachment system – overview



1. ArGeTon tile
2. Middle clip
3. Vertical aluminium carrier rail
4. Aluminium cleat
5. Thermal separation
6. Insulation
7. Top clip
8. Bottom clip

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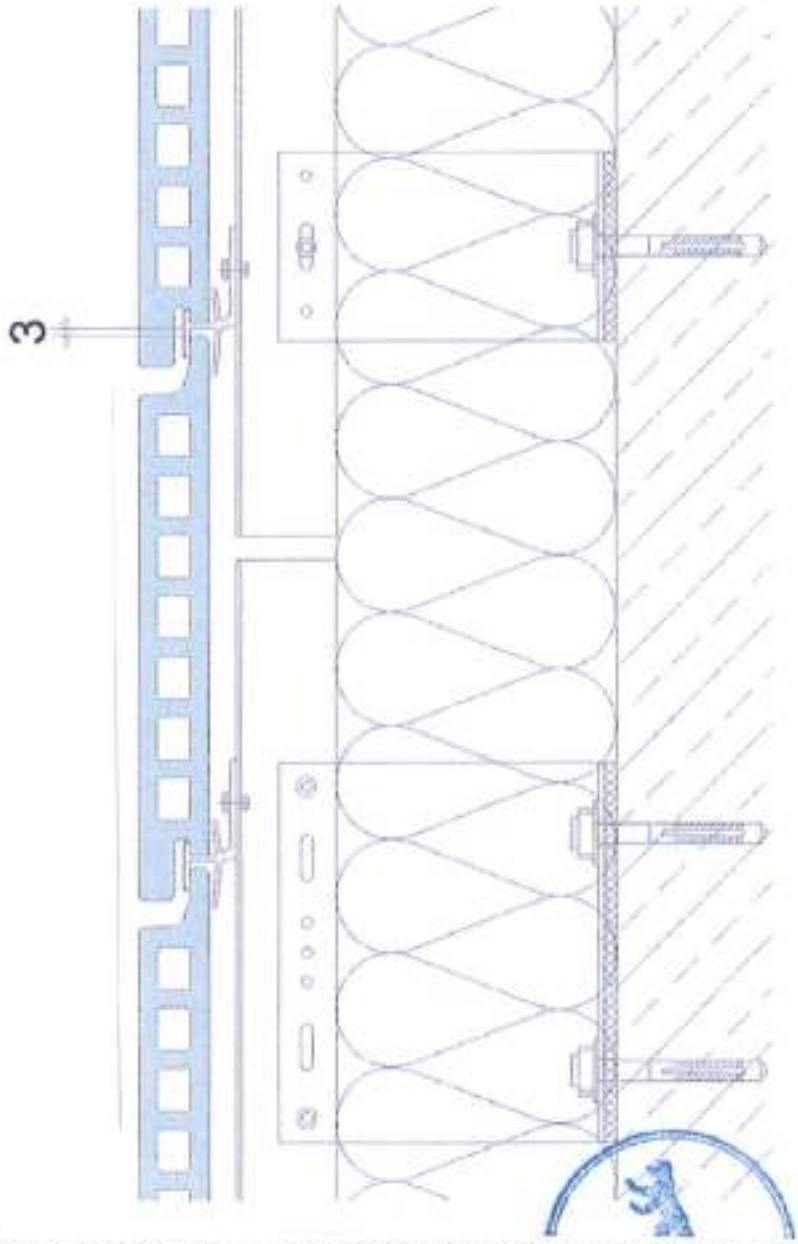
Argeton TAMPA façade cladding system

V-UK attachment system – vertical cross-section carrier rail butt joint

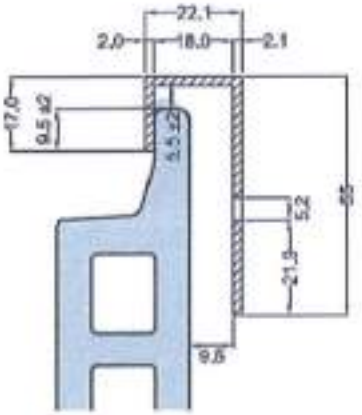


A gap of 3 mm between the upper tile mortise and the clip must be maintained in areas of vertical carrier rail butt joints. To guarantee the correct width of the gap an assembling jig must be used.

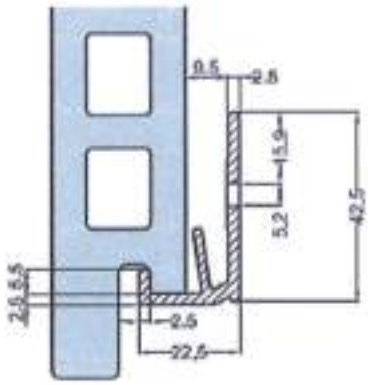
The length of the vertical rails is to be limited to 3 m.

The vertical distance between two neighbouring fixed points must not exceed 3 m.

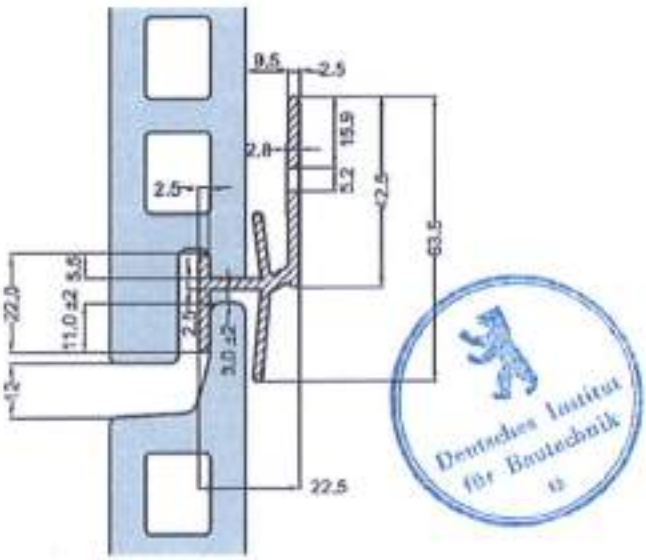
Argeton TAMPA façade cladding system
V-UK attachment system – clips



Top clip



Bottom clip



Middle clip

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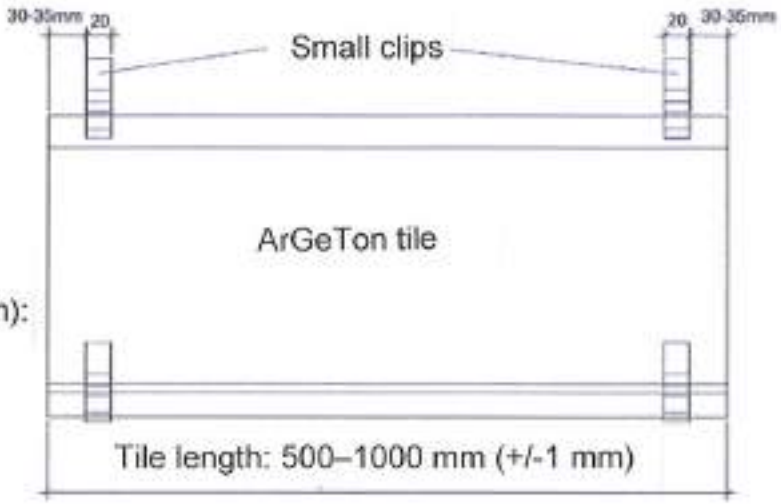
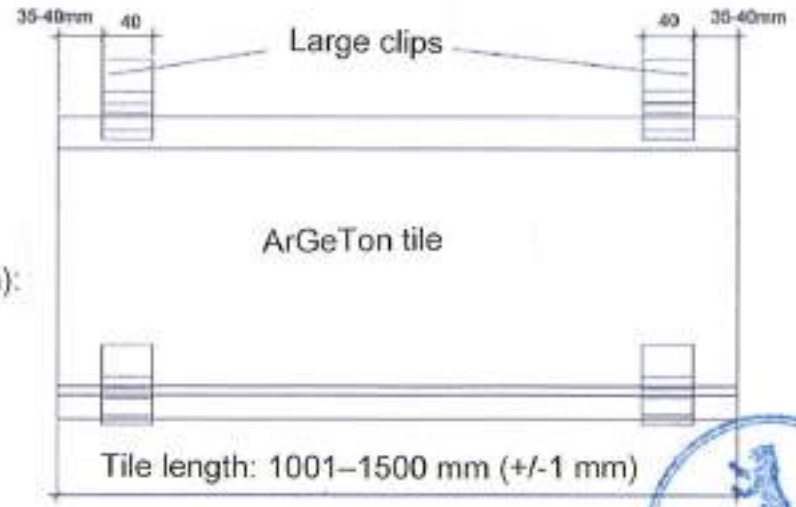
Argeton TAMPA façade cladding system
V-UK attachment system – clips – distances from edge

Small clips (clip width = 20 mm):



Large clips (clip width = 40 mm):



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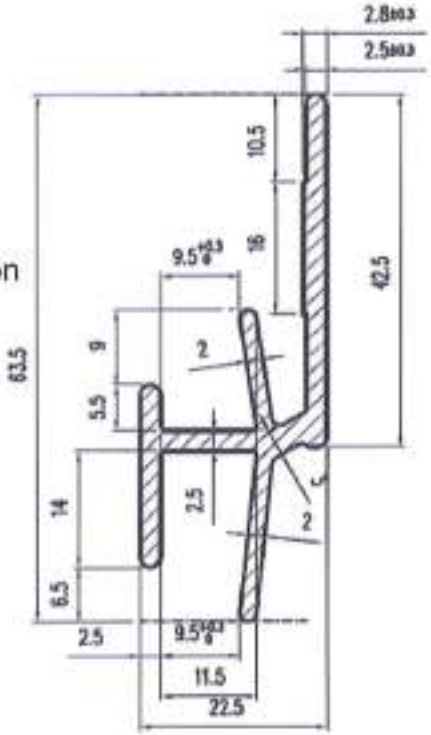
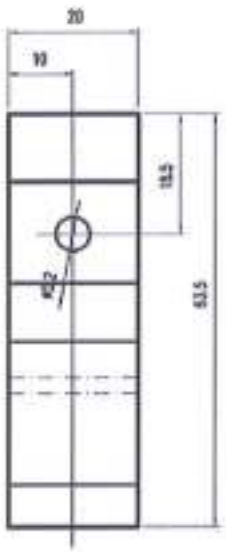
Argeton TAMPA façade cladding system
V-UK attachment system – middle clips

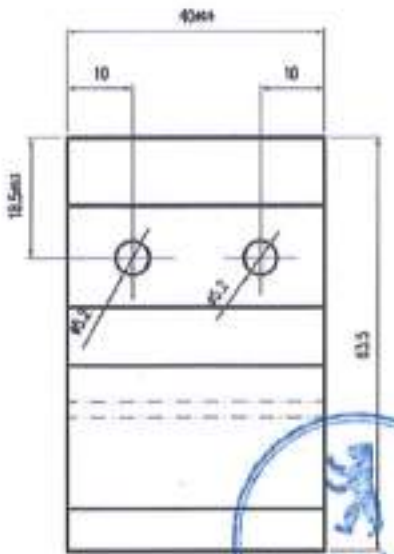
Installation position



Middle clip (clip width = 20 [mm])

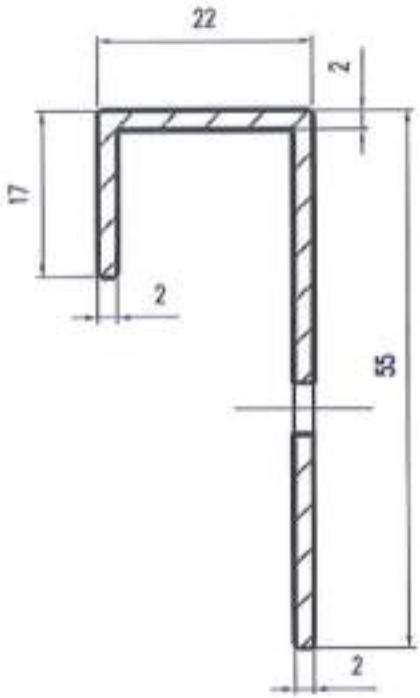


Middle clip (clip width = 40 [mm])

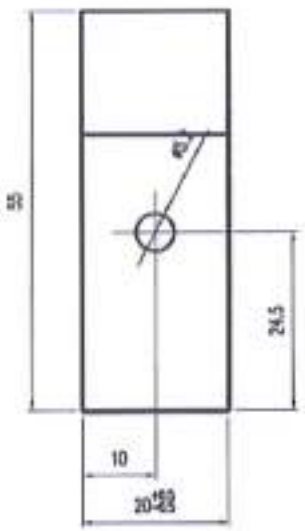


Argeton TAMPA façade cladding system
V-UK attachment system – top clips

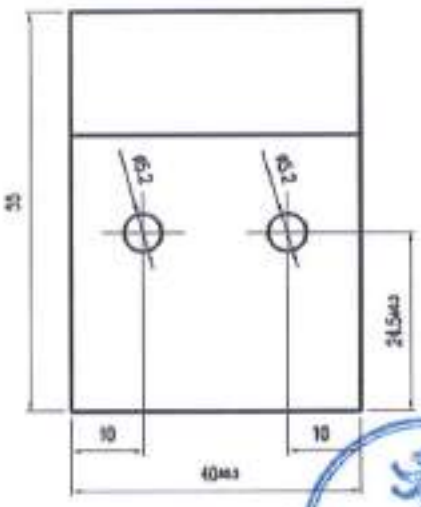
Installation position



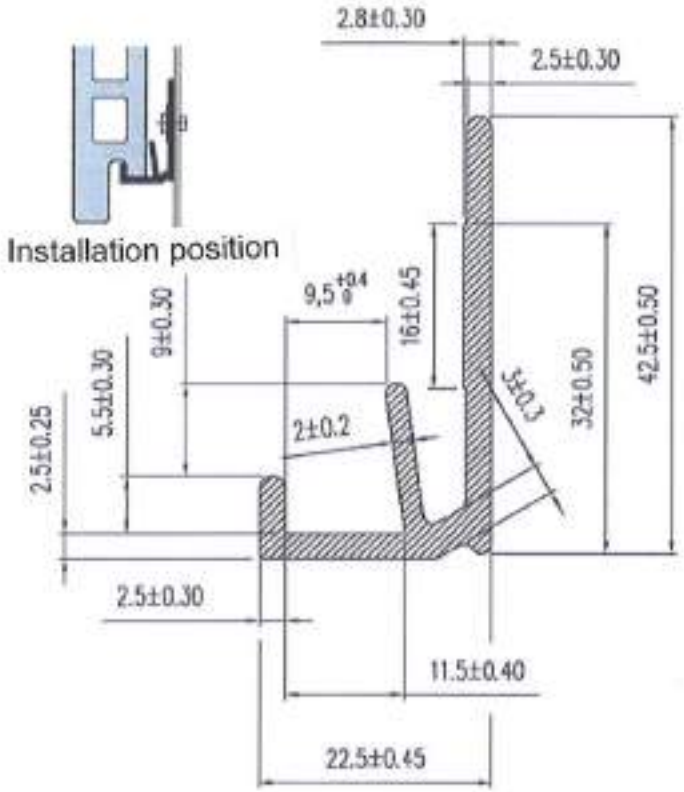
Top clip (clip width = 20 [mm])



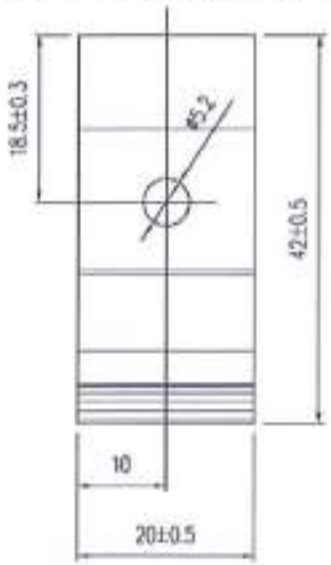
Top clip (clip width = 40 [mm])



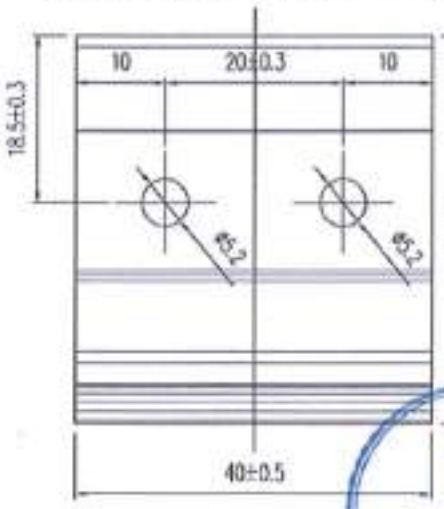
Argeton TAMPA façade cladding system
V-UK attachment system – bottom clips



Bottom clip (clip width = 20 [mm])



Bottom clip (clip width = 40 [mm])



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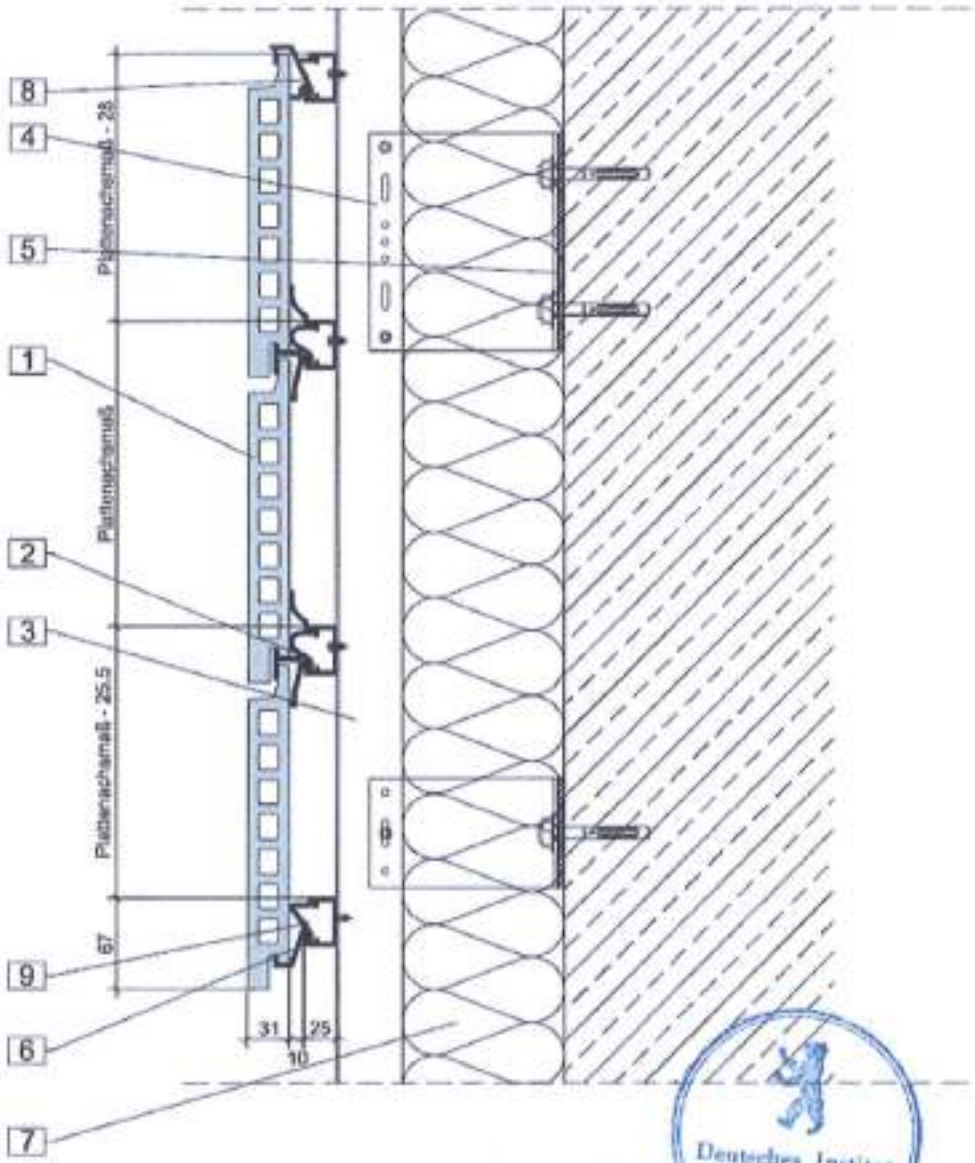
Argeton TAMPA façade cladding system
H-UK attachment system – overview



1. ArGeTon tile
2. Middle clip
3. Vertical aluminium carrier rail
4. Aluminium cleat
5. Thermal separation
6. Horizontal carrier rail
7. Insulation
8. Top clamp
9. Bottom clamp

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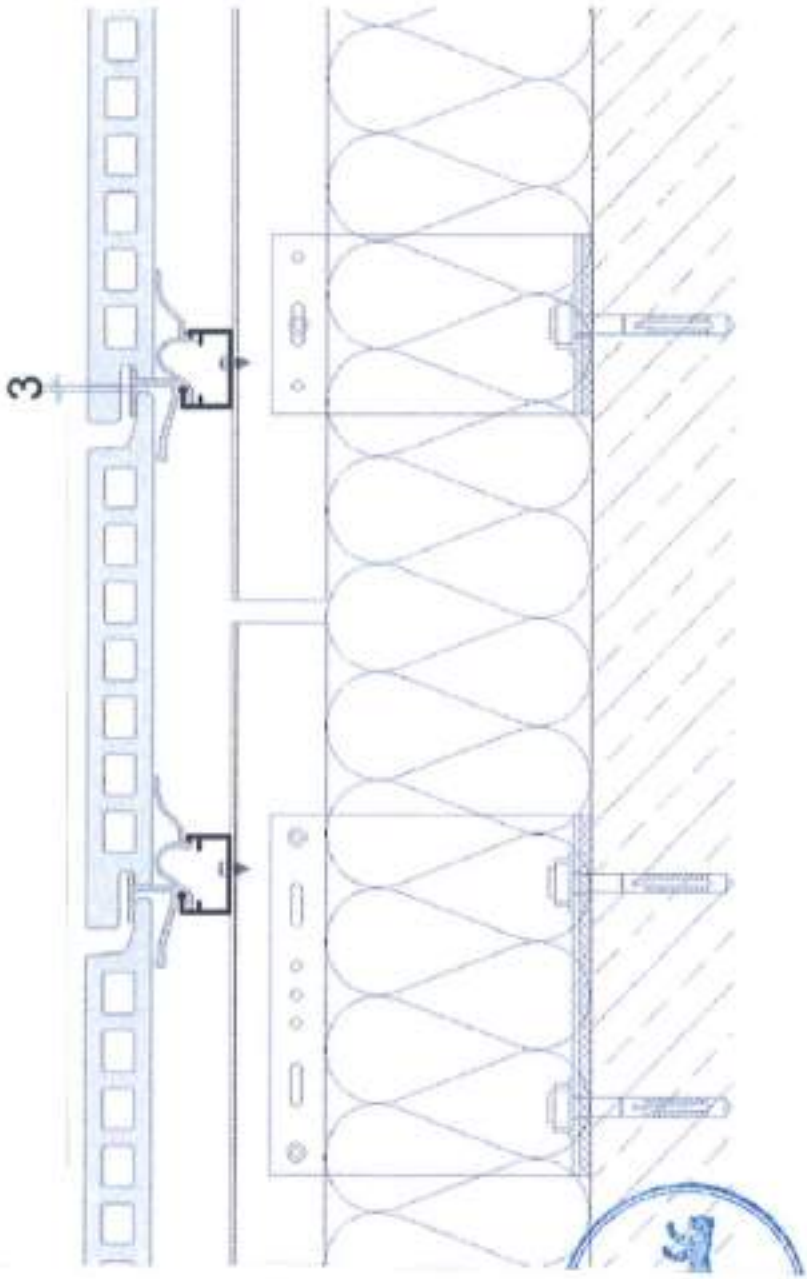
Argeton TAMPA façade cladding system
H-UK attachment system – carrier rail butt joint

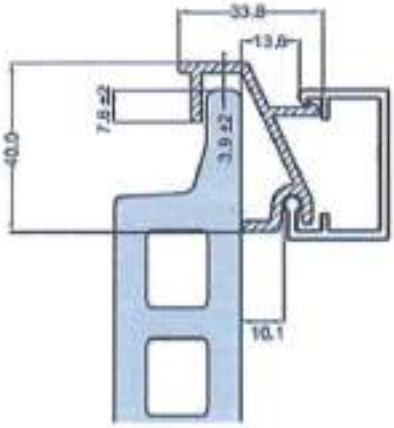


A gap of 3 mm between the upper tile mortise and the clamp must be maintained in areas of vertical carrier rail butt joints. To guarantee the correct width of the gap an assembling jig must be used.

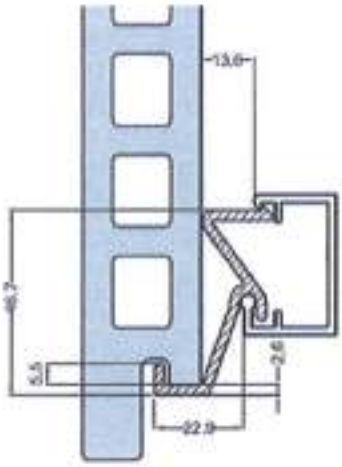
The length of the vertical rails is to be limited to 3 m.

The vertical distance between two neighbouring fixed points must not exceed 3 m.

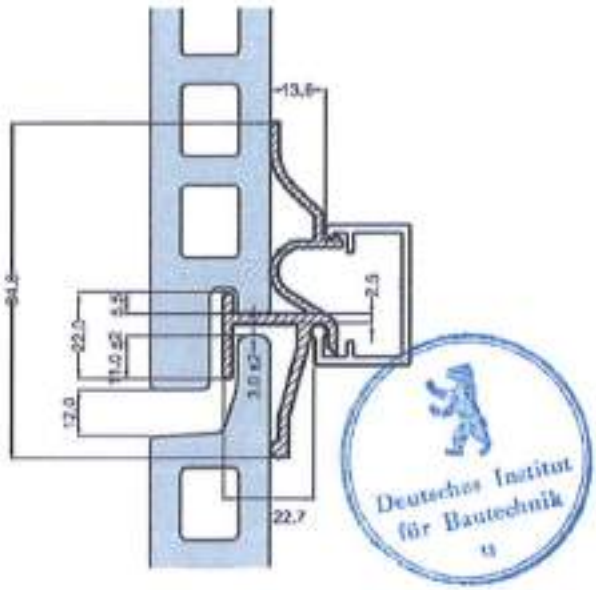
Argeton TAMPA façade cladding system
H-UK attachment system – clamps



Top clamp



Bottom clamp



Middle clamp

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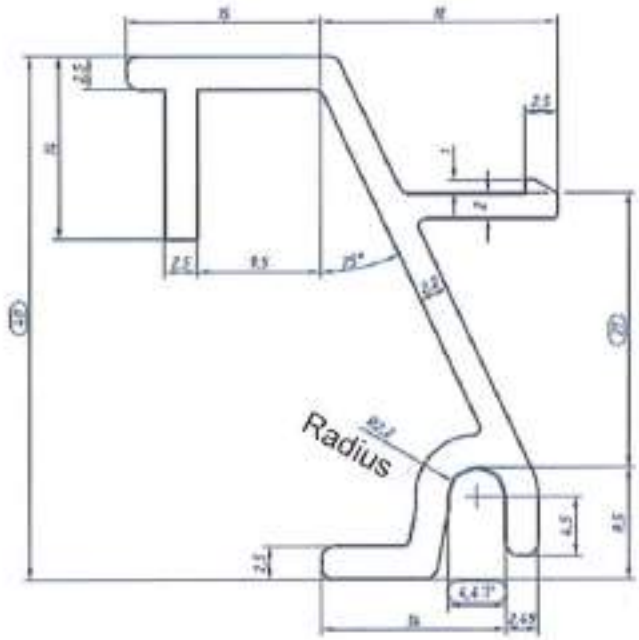
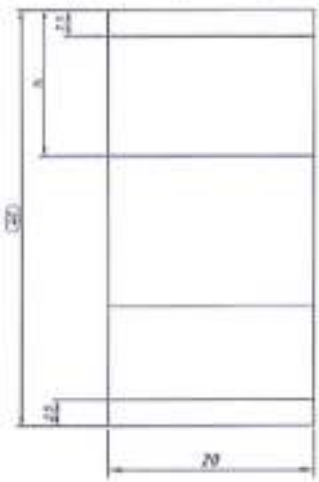
Argeton TAMPA façade cladding system
H-UK attachment system – top clamp

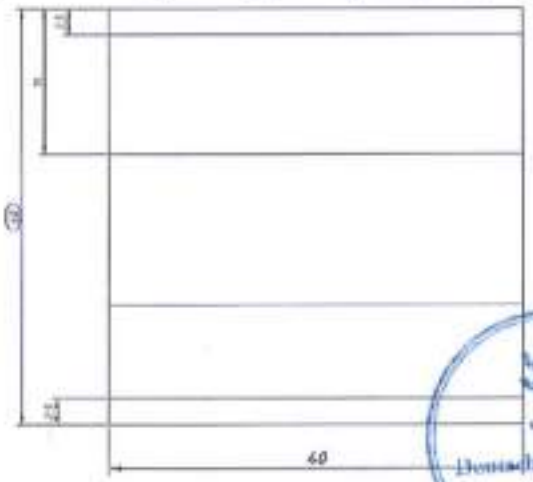
Installation position



Top clamp (clamp width = 20 [mm])

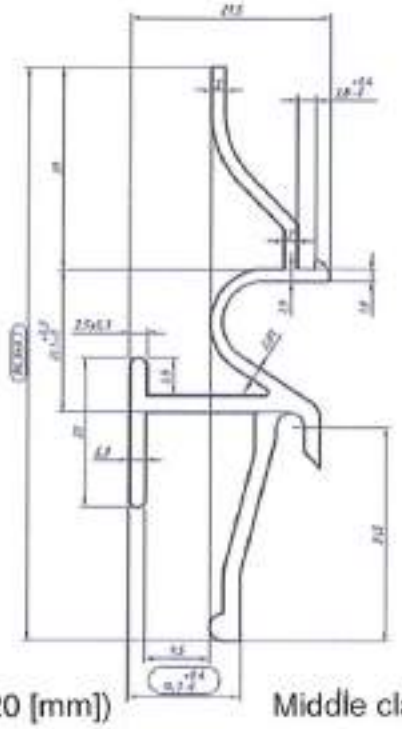


Top clamp (clamp width = 40 [mm])

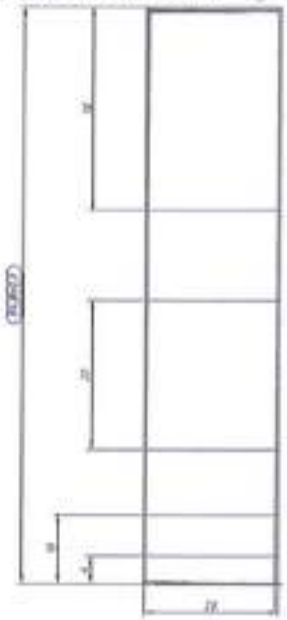


Argeton TAMPA façade cladding system
H-UK attachment system – middle clamp

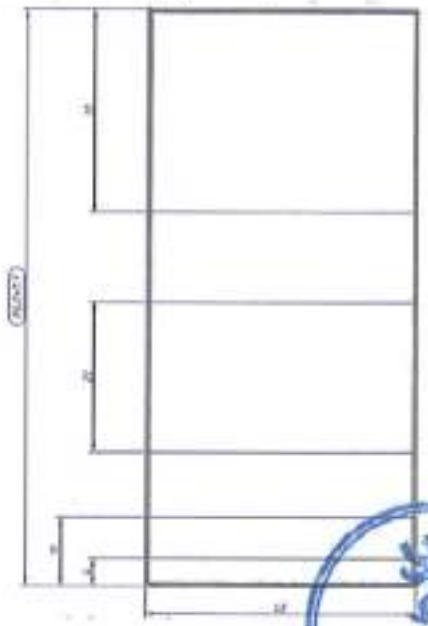
Installation position



Middle clamp (clamp width = 20 [mm])



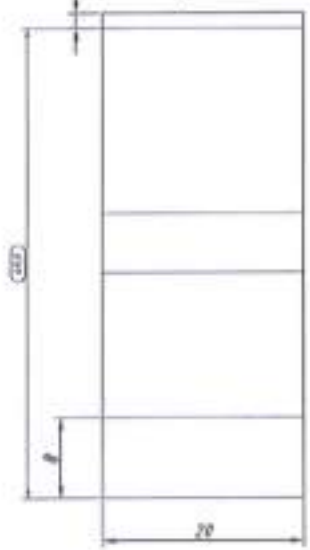
Middle clamp (clamp width = 40 [mm])



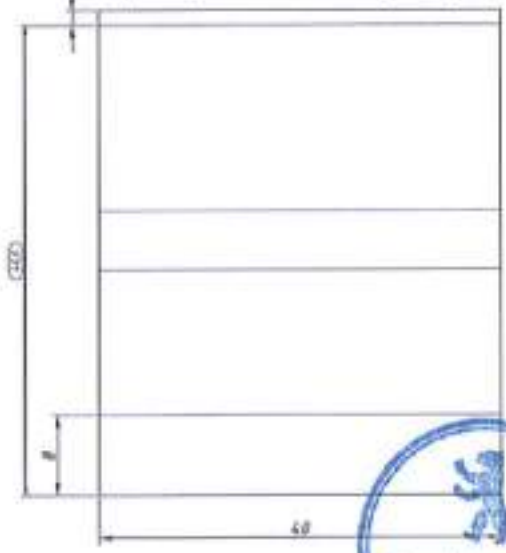
Argeton TAMPA façade cladding system
H-UK attachment system – bottom clamp

Installation position

Bottom clamp
(clamp width = 20 [mm])



Bottom clamp
(clamp width = 40 [mm])



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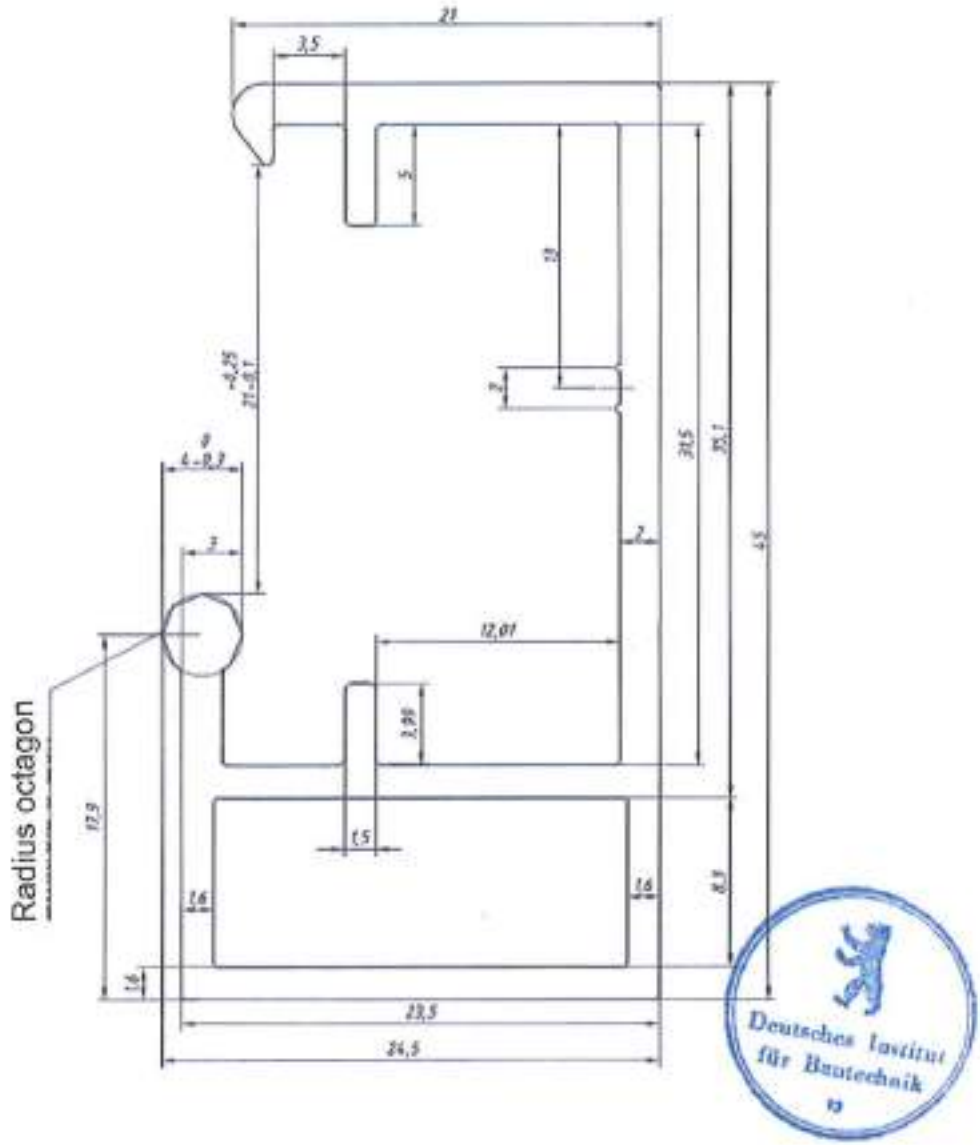
Argeton TAMPA façade cladding system
H-UK attachment system – horizontal carrier rail 45/25

Installation position



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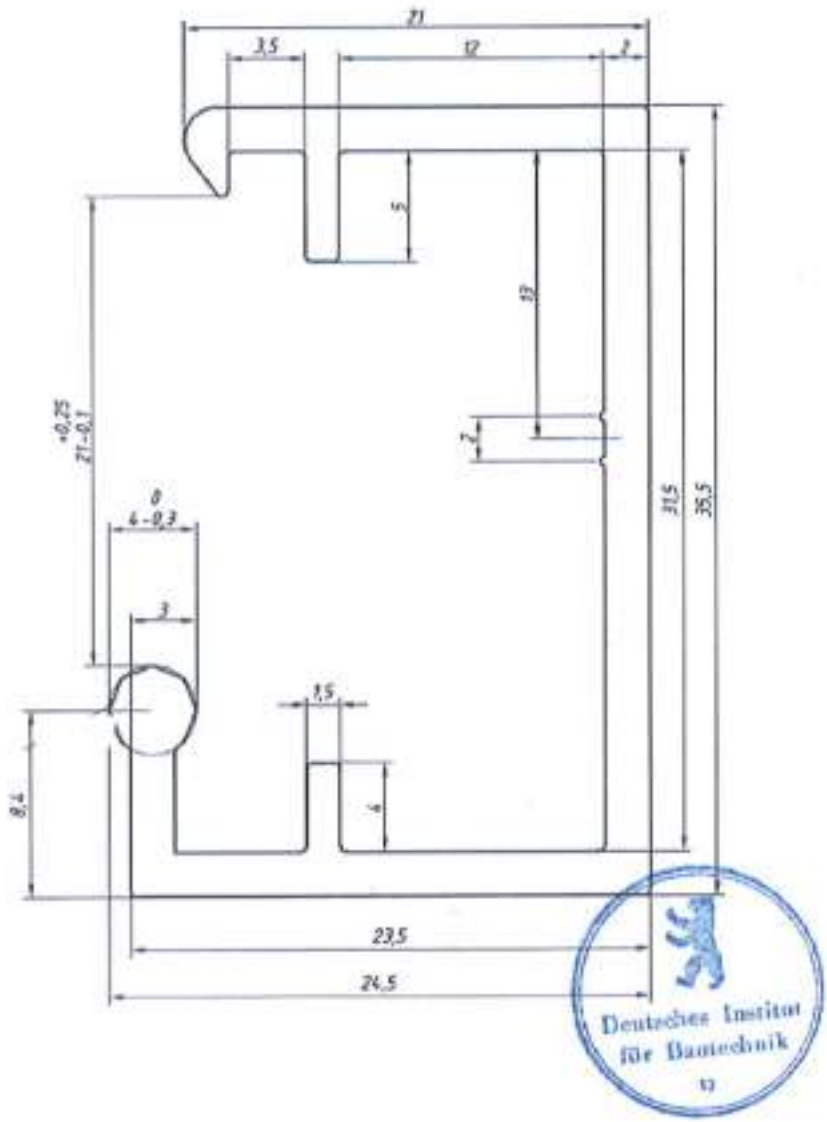
Argeton TAMPA façade cladding system

H-UK attachment system – horizontal carrier rail 35/25

Installation position



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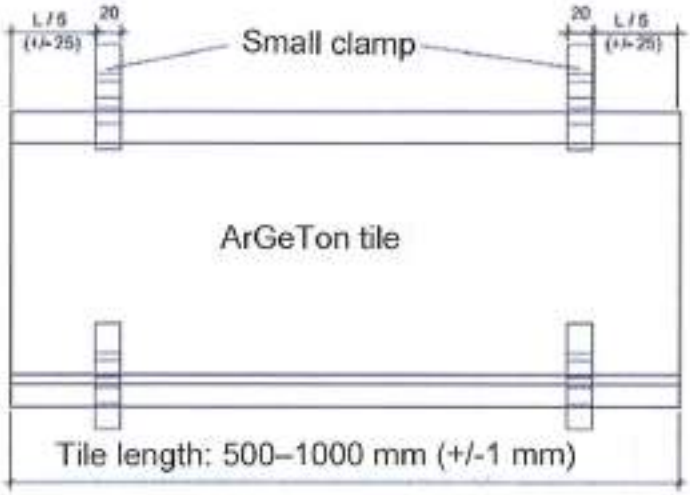
Argeton TAMPA façade cladding system

H-UK attachment system – clamp distances from edge

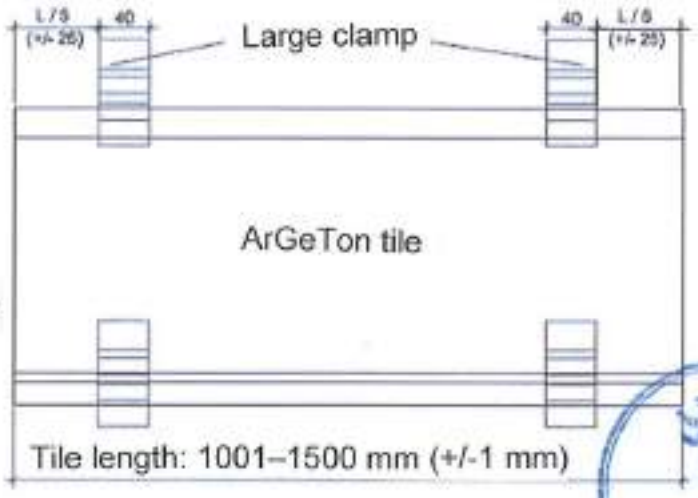
Minimum distance from edge = 100 mm

Small clamp
(clamp width = 20 mm)



Minimum distance from edge = 200 mm

Large clamp
(clamp width = 40 mm):



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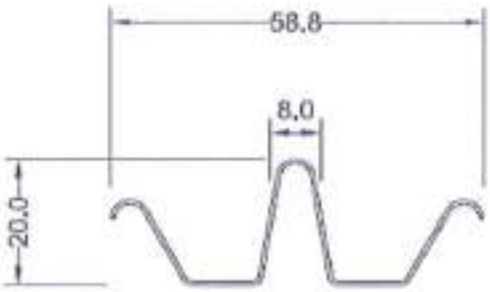
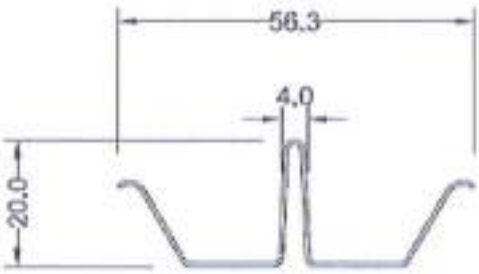
Argeton TAMPA façade cladding system
Aluminium joint profiles

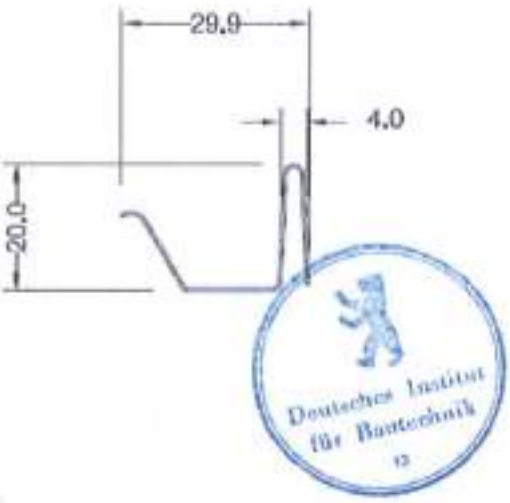
Joint profile for 8 mm joint



Joint profile for 4 mm joint



Abutment joint profile



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General Technical Approval (Allgemeine bauaufsichtliche Zulassung)
No. Z-33.1-1032 of May 2, 2013

Argeton TAMPA façade cladding system
Internal production monitoring
Scope, manner and frequency of the internal production monitoring

Construction product	Type of inspection	Test standard / test method	Requirement	Frequency
Argeton TAMPA façade tiles	smoothness	DIN EN 1024	DIN EN 1304	at least once a working day
	tile length	DIN EN 1024	see Annexes 1.1 to 1.12	
	tile width	DIN EN 1024		
	dimensions of tile mortise, cross-sectional dimensions			
	tile thickness			
	weight per unit area		see section 2.2.1	once monthly / per batch
	flexural load-bearing capacity	Three-point bending test*	see below*	see below*
	frost-resistance	DIN EN 539-2, methods B or E	DIN EN 1304	twice a year
clip, clamp, horizontal, vertical carrier rails, joint profiles	dimensions and material properties		see sections 2.2.2 to 2.2.4 and the respective Annexes	every shipment or acceptance test certificate 3.1 pursuant to DIN EN 10204

* Flexural strength testing

The flexural strength of all tile formats must be determined in the course of a three-point bending test performed on 10 samples per batch. The load must be applied with a load increase of 0.05 kN/s on the visible face.

Requirements: flexural strength ≥ 12 N/mm²