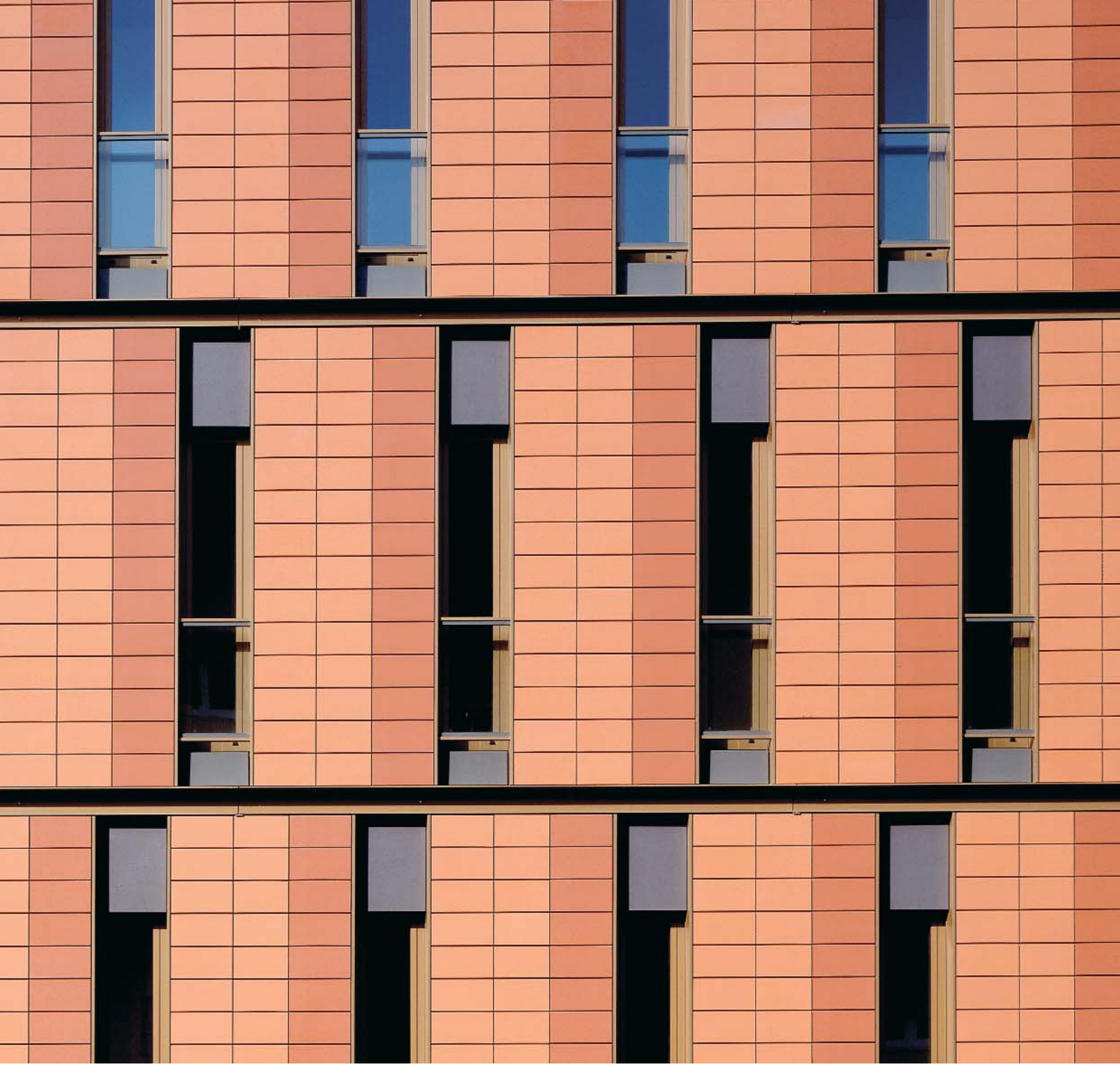


ALPHATON®

MOEDING ZIEGELFASSADE
CLAY-TILE FAÇADE

a ventilated and heat-insulated rainscreen cladding

ALPHATON®-Clay-tile façade

In the early 80's the architect, Professor Thomas Herzog , became interested in the concept of a curtain wall ceramic façade and developed it in cooperation with the "Dachziegelwerk Möding" into a system.

This system was the impetus for the Argeton façade that was produced at 20 years and has been used on thousands of square meters of façade.

With the acquisition by Girnghuber GmbH in 2001 the decision was made to no longer use the product name Argeton, and an autonomous company, Moeding Keramik Fassaden GmbH, was founded.

Argeton became ALPHATON®.

Over the last few years a new façade system has been developed to maturity. ALPHATON® Gen.06 is the result of this successive development work.

As a leader in innovation we are proud to note that the term "MOEDING ALPHATON® façade" is considered to be the stamp of quality in the segment of curtained, back-ventilated tile
façades.

Quality

Quality assurance for façade tile involves continuous in-house monitoring, as well as regular external monitoring performed by test institutes in accordance with the specifications of the certification authority, "Güteschutz-Ziegel für das Land Bayern e.V.", (the Bavarian quality association for brick).

Moeding Keramikfassaden Germany
Z 33.1 - 531
GÜTESCHUTZ ZIEGEL BAYERN

Function

The curtain wall, back-ventilated and thermally insulated façade – the ideal construction principle for exterior walls

Separation of structural/technical functions and assignment of these functions to the various wall construction layers offer the following advantages:

- Significantly reduced heat loss
- Reliable thermal protection in summer
- Effective protection against weather and focused drain-off of moisture
- Simple planning and installation

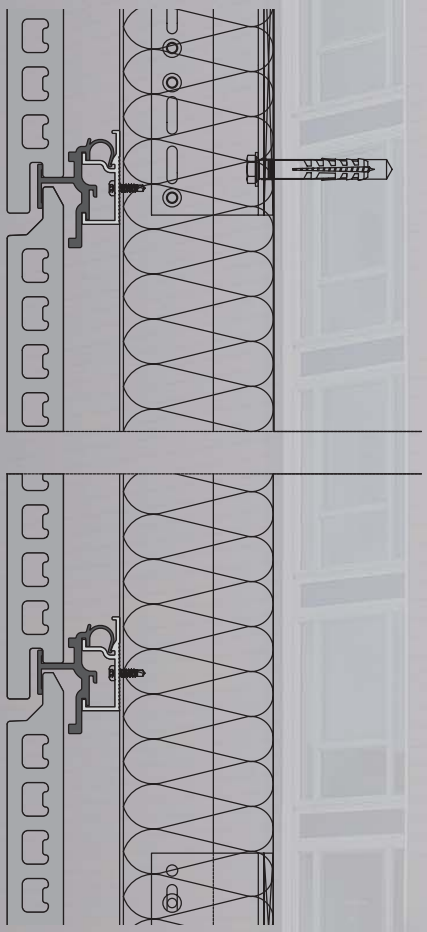
MOEDING façade systems offer the following advantages thanks to optimal material characteristics:

- Resistance to all types of aggressive environmental influences
- It patinates beautifully
- Long service life and high profitability
- Universal application in new buildings and for renovating older buildings
- A high level of architectural design quality

The curtain wall, back-ventilated façade in modern wall construction

Monolithic wall construction only satisfies the structural/physical requirements for modern designs or older buildings with some restrictions. This is not the case with the curtain wall, back-ventilated façade, as here there is consistent separation of the various functions, which are each assigned to specific components. Each function is consistently optimized in this manner:

- The bearing wall handles the static loads.
- Thermal insulation is properly arranged in terms of structural/physical requirements.
- The subconstruction for façade cladding dissipates its inherent weight as well as the occurring wind loads. Steam-forming living space moisture that is diffused to the exterior, and building moisture in the case of new buildings, as well as penetrating façade water, are safely dissipated through the back-ventilation.
- Finally, façade cladding serves as weather protection for insulation and subconstruction
and most particularly it serves as a design element.



Consistent function separation in wall construction

Innenhafen Duisburg, Pier 1, D
Architects: Reichel + Stauth, Braunschweig, D

Innenhafen Duisburg, Pier 1, D

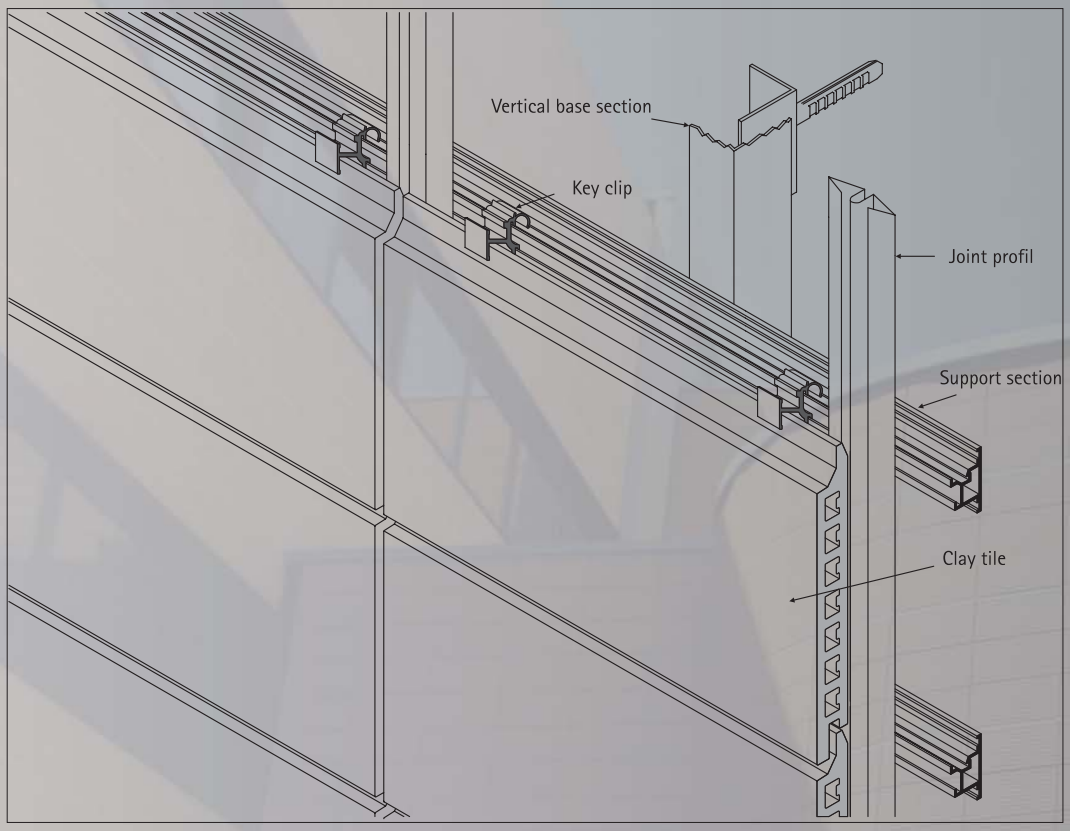
Architects: Reichel + Stauth, Braunschweig, D

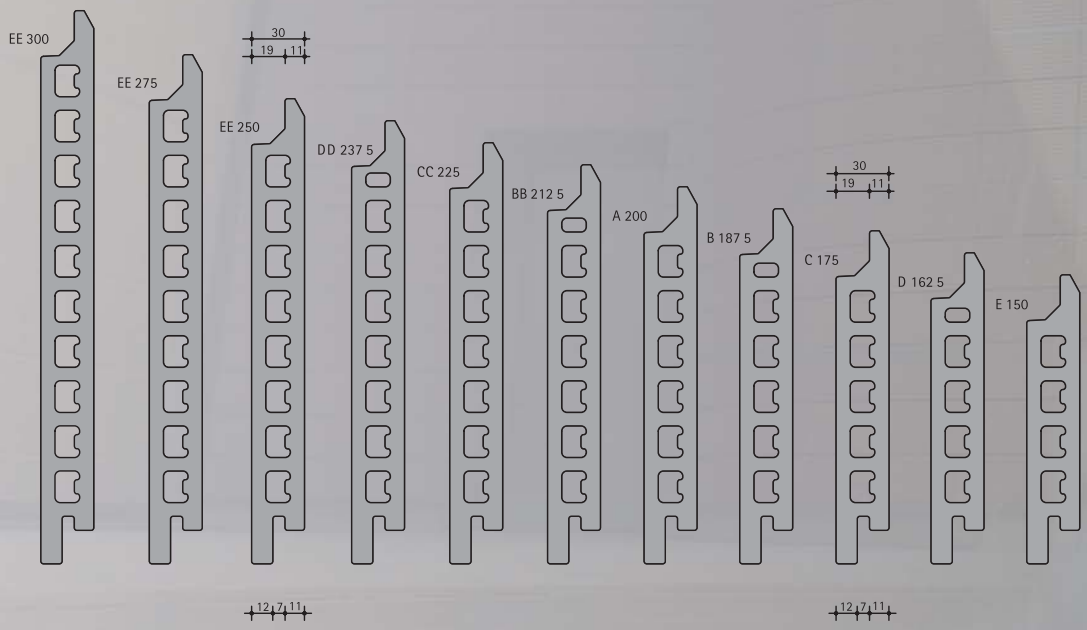
Colour: oxide red antique
Surface: standard

Apartment house development, Philosophenweg (NF1), Duisburg Innenhafen, D

Architects: Sir Norman Foster and Partners, London, GB

Colour: iron grey
Surface: standard





ALPHATON® tile is available in lengths to 900 mm.
We offer our customers large format tile to 3000 mm in length as LONGOTON® tile.

ALPHATON® façade system

The ALPHATON® façade system consists of four simple, basic components:

- Tile
- Tile holder
- Horizontal bearing profile
- Joint profile

ALPHATON® tile

Extruded MOEDING ALPHATON® tile is produced from predominately local clays and is completely colored.
Due to the extremely high firing temperatures and the long firing period the best strength values are achieved.

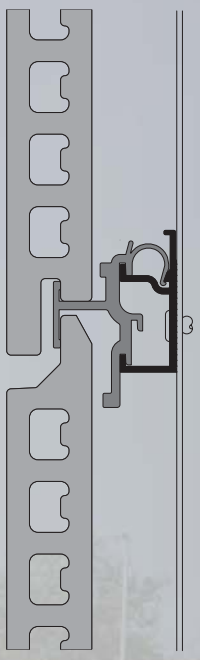
The tile is double-shell and 30 mm thick. The ultimate load of ALPHATON® tile is thus increased many times over the ultimate load of single shell tile.
The design of the tile holder contributes to stability of the entire façade construction. The tile holders are formed so that frontal forces are transmitted over the entire tile thickness and are dissipated in the subconstruction. The specifications in this regard are the object impact tests, as well as CWCT certification, which is generally valid, and is already part of the UK standard.

ALPHATON® tile holders

The tile is anchored by concealed aluminum tile holders. The holders encompass the head and base ridges and are clicked into place on the bearing profiles with a screwdriver. A metallic click signals the fitter that the unit is securely locked in place. The tile holders are designed for use both on the closed bearing profile and on the open bearing profile. The holder ensures that the constructive 10 mm air gap between tile and bearing profile is maintained. The M-holder is used in the façade surface. Appropriate U-holders or O-holders are available for the lower or upper edge. Special soffit holders are available for anchoring on soffits.

ELVOX office building, Padua, I
Architects: Prisma Engineering s.r.l., Padua, I

ALPHATON® bearing profiles



open bearing profile

Gen.06 - 75

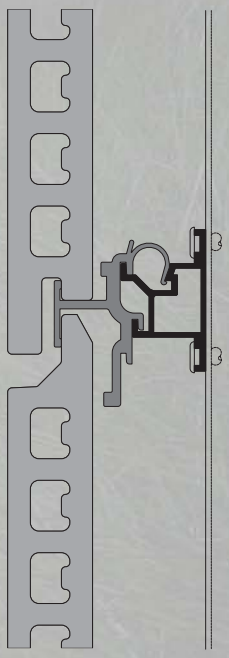
The horizontal bearing profiles are anchored with hollow rivets or self-tapping stainless steel screws on standard vertical profiles. The Gen.06 - 75 open bearing profile is used in cases where the architecture does not permit bearing profile spans in excess of 0.75 m.
In this case the total structure of the facade is 60 mm. Depending on the foundation and object related static verifications, the Gen.06 - 75 open bearing profile can also be spanned up to 900 mm.

If greater spans must be bridged then the Gen.06 - 150 closed bearing profile is used.
The maximum possible span with this profile is 1500 mm. The total structure of the façade in this case is 70 mm.

The bearing profile is always arranged in front of the thermal insulation, which is thus securely held in place.

The back-ventilation gap always remains functional.

The permissible projection of the ends of the horizontal bearing profile over the vertical profile makes the construction of soffits and building corners particularly economical



closed bearing profile

Gen.06 - 150

ALPHATON® joint profile

Resilient aluminum joint profiles in the vertical joints prevent the tile from clattering in wind, prevent penetration of pounding rain, and particularly prevent lateral offset of the tile, and thus ensure a completely precise joint pattern. Profiles are available for joint widths of 8 mm; or alternatively 4 mm for the horizontal format facade, or 12 mm for the vertical format façade. The possibility of damage due to constraining forces is excluded, thanks to non-positive attachment of the facade tile and the resultant play.

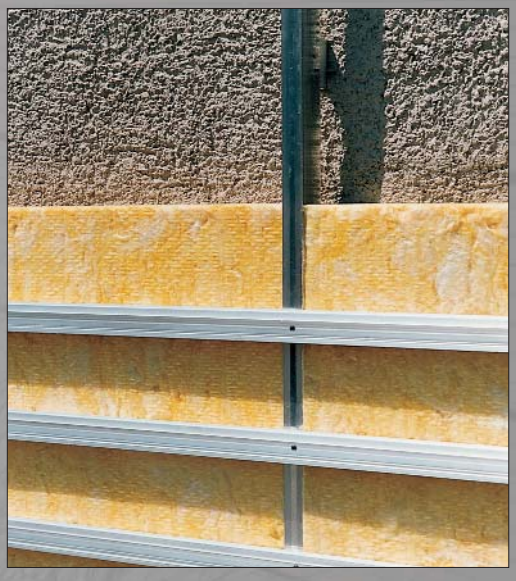
Joint profiles for mid joints and edge joints are available in all tile colors.

Vertical base profiles and wall angle holders

These are standard components. Their horizontal clearance relative to each other ranges to a maximum of 750/900 mm when using the Gen.06 - 75 open horizontal bearing profile; when using the Gen.06 - 150 closed horizontal bearing profile it is 1500 mm.

Thermal insulation

Select the thickness of the thermal insulation as desired. The insulation is anchored and fixed in place to prevent expansion, solely by the horizontal bearing profiles without additional insulation holders.



Thermal insulation

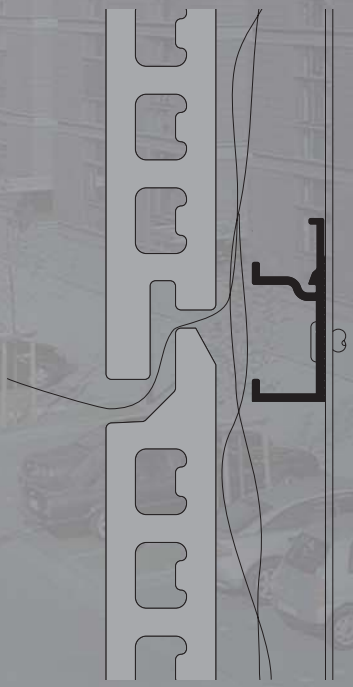
Business School, Rheine, D
Architects: Terhechte und Hoefker, Rheine, D

Back ventilation

Back ventilation is used to dissipate the moisture that diffuses through the building wall. This occurs via a 4 cm or 9 cm deep gap between facade tile and thermal insulation. This gap also offers thermal insulation in the summer,
since heat accumulation is avoided behind the façade. In addition there is a 10 mm air gap between facade tile and bearing profile (DIN 18 516, Part 1 specifies at least 5 mm) for safe capillary separation. This ensures that condensate on the rear of the facade tile can flow off without obstruction. Subconstruction and thermal insulation remain dry.

Venting

Venting cross sections are significantly larger than the specification in DIN 18 516, Part 1. The ALPHATON® facade tile has a 5 mm horizontal joint gap on every façade panel. This means that vent openings at the head and base of the facade are unnecessary. The joints also offer pressure equalization so that wind forces can be quickly dissipated.



Thermal insulation

Mineral fiber insulation is arranged between the base profiles or base battens and is prevented from expanding by the horizontal bearing profiles or tile batten. This ensures that the vent gap arranged in front of the bearing profiles cannot dam up and that the back-ventilation will function flawlessly.

Water flow

With the horizontal format façade water flow to the exterior of the façade is ensured by the run-off ridges and head ridges of the façade tile. With the vertical format water is dissipated through vertical hole patterns.

Noise insulation

The level of protection against air-borne noise offered by walls is significantly
improved with an ALPHATON® tile façade. For a 24 series solid sand-lime brick wall with noise insulation Rw = 55 db the improvement is 9 dB, and thus the computation value RwR = 62 dB, in accordance with DIN 4109 (test report available on request).

Fire protection

All components of the ALPHATON® façade tile on an aluminum subconstruction are inflammable (building material class A). Fire resistance class F 90 has been demonstrated for the construction. Fire propagation is reliably prevented by the horizontal bearing profiles that function as a fire barrier. The façade can be used in all Federal states and in other European countries, even for special structures, without limitation in height and without additional requirements.

Radar absorption

The ALPHATON® radar absorption façade achieves a reflection loss of 98 to 99.5%. In accordance with German air traffic control legislation the state-prescribed radar absorption must be realized for all facades, under all weather conditions, within a radius of 30 km from an airport.

ALPHATON® Gen.06 rapid

If desired ALPHATON® Gen.06 façade tile is also available as a "rapid". This system (patent pending) opens totally new possibilities in façade construction.

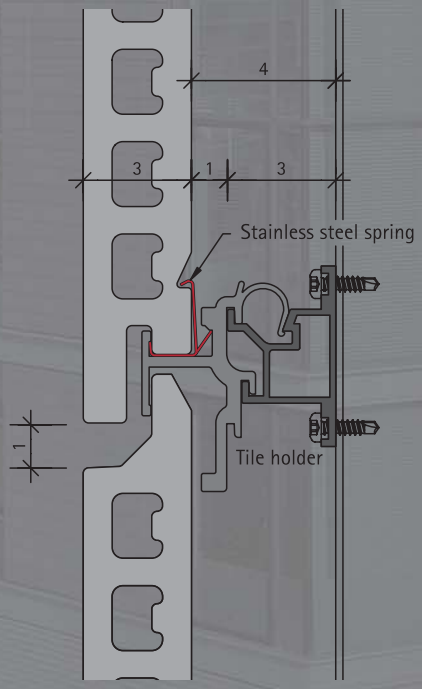
The tile holders are factory equipped with a stainless steel spring. This spring engages in a groove on the rear of the tile and thus prevents undesired removal of the tile.

Installation is totally different than previous methods: After fixing the horizontal bearing profiles in place all tile holders for the façade that will be installed are clipped in using a screwdriver. The tile itself is only installed after this initial step has been completed.

The tile panels are hooked into the previously mounted holders without the use of any tools whatsoever.
The tile holder's stainless steel spring engages in the groove and secures the tile as it is hooked in.

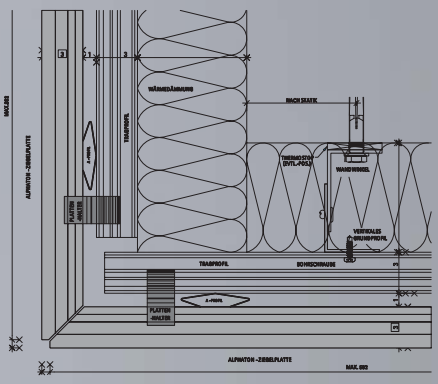
This means that there is no prescribed installation sequence. It is possible to start at the top scaffolding layer and work down.

This means that scaffolding can be dismantled story for story. Scaffolding costs are significantly reduced. Installation time is reduced because after all tile holders have been mounted only the tile remains to be installed.



Apartment house development, Philosophenweg (NF1), Duisburg Innenhafen, D
Architects: Sir Norman Foster and Partners, London, GB

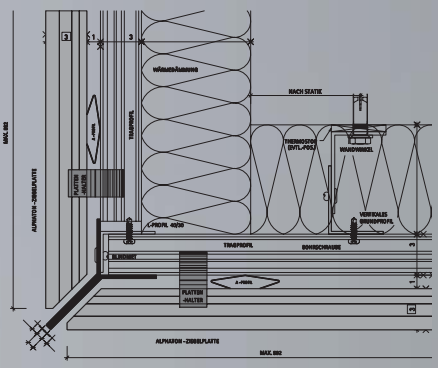
Outer corner tile Gen.06



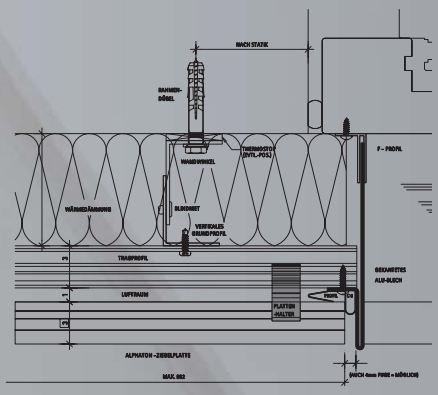
Cut-out of the detailbooklet

Please order the detailbooklet.

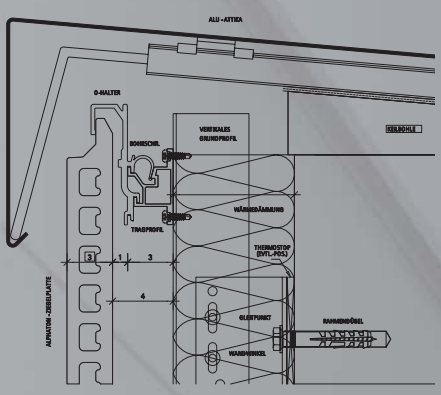
Outer corner metal Gen.06



Window jamb metal Gen.06



Gable end flat roof Gen.06



Planning and specification

FAn extensive collection of proven connection details with many recommendations for jointing, and a meaningful sample specification for the bid, are available as planning aids for ALPHATON® horizontal format and vertical format facades.

The so-called "Detail Booklet" provides planning aids and also shows very specific transitions from facade to other building materials, or structural components.

Excerpts from several detailed solutions are listed as on the opposite page.

It is important to look for solutions even in the planning phase. Our principle:

You plan; we ensure implementability.

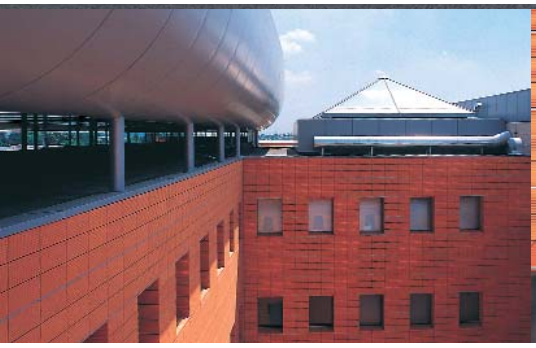
Service and consulting

At Moeding this means:

- Extensive planning aids
- Technical support in the planning and construction phase
- A strong outside and inside sales team
- Competent sales partners in more than 60 countries

We satisfy the desires of the planner

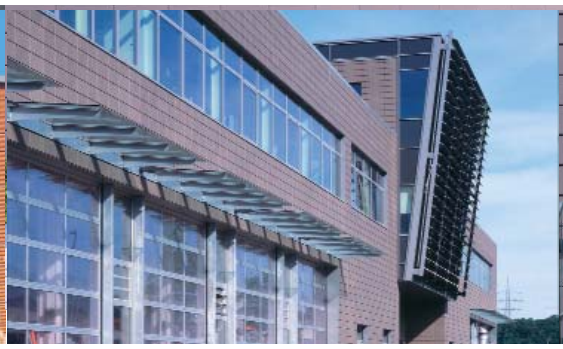
Busdepot Osnabrück, D
Architects: agn GmbH Paul Niederberghaus & Partner, Ibbenbühren, D



Elvox office building, Padua, I

Architects: Prisma Engineering s.r.l., Padua, I

Colour: naturrot, pastellrot
Surface: gerillt



Fire station, Hagen Hohenlimburg, D

Architects: Kamel Architekten und Ingenieure, Hagen, D

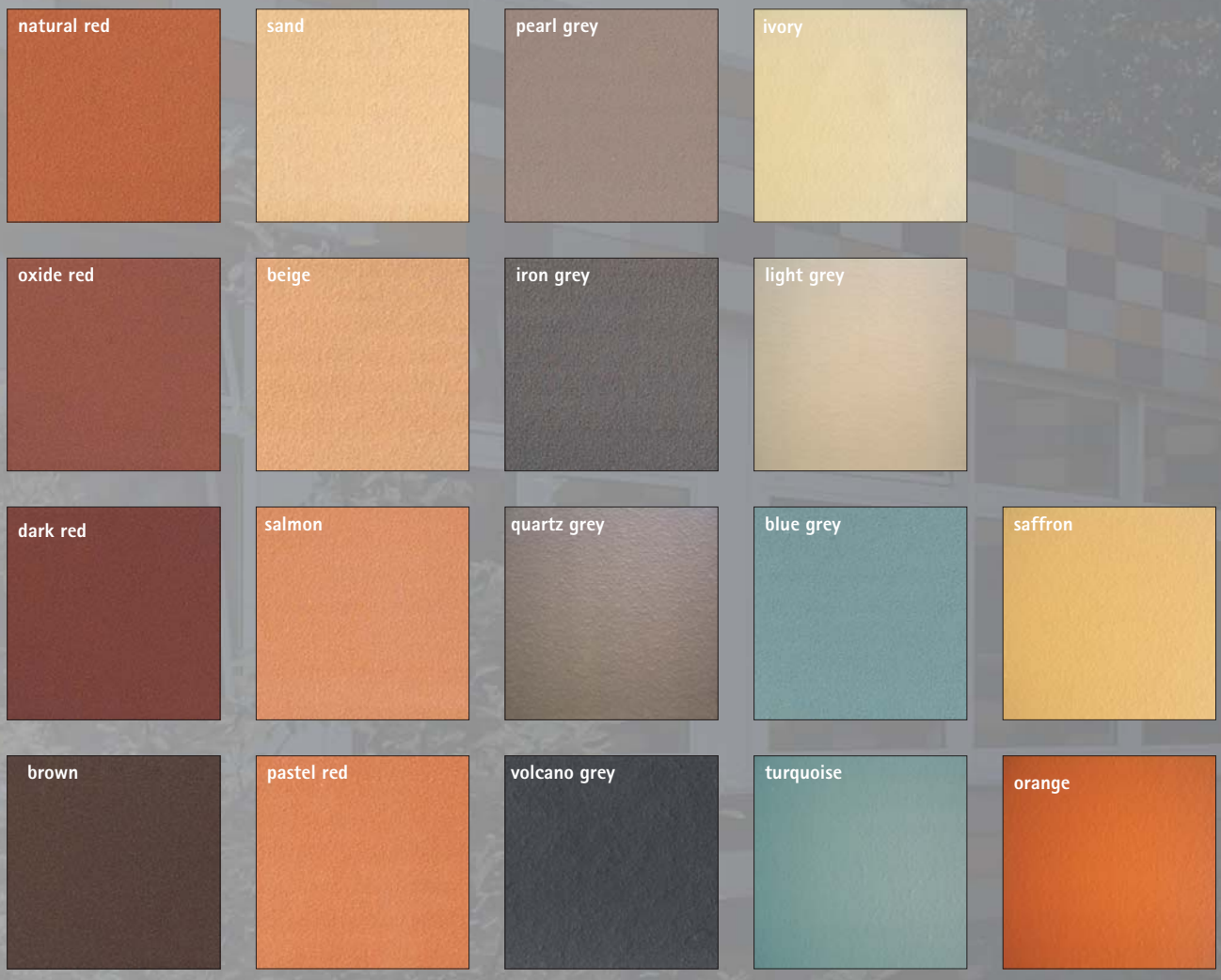
Colour: quarzgrau
Surface: standard

Materials and colors

Thanks to its ideal characteristics the traditional tile material fits new and historic architectural forms. It ages over decades with an elegant patina.

Facade tile is available in the 10 standard colors listed below.
Special colors are possible on request.

All colors are the inherent color of the ceramic body, which means that neither cuts nor surface damage can cause a visually disturbing, different-colored body to become visible.



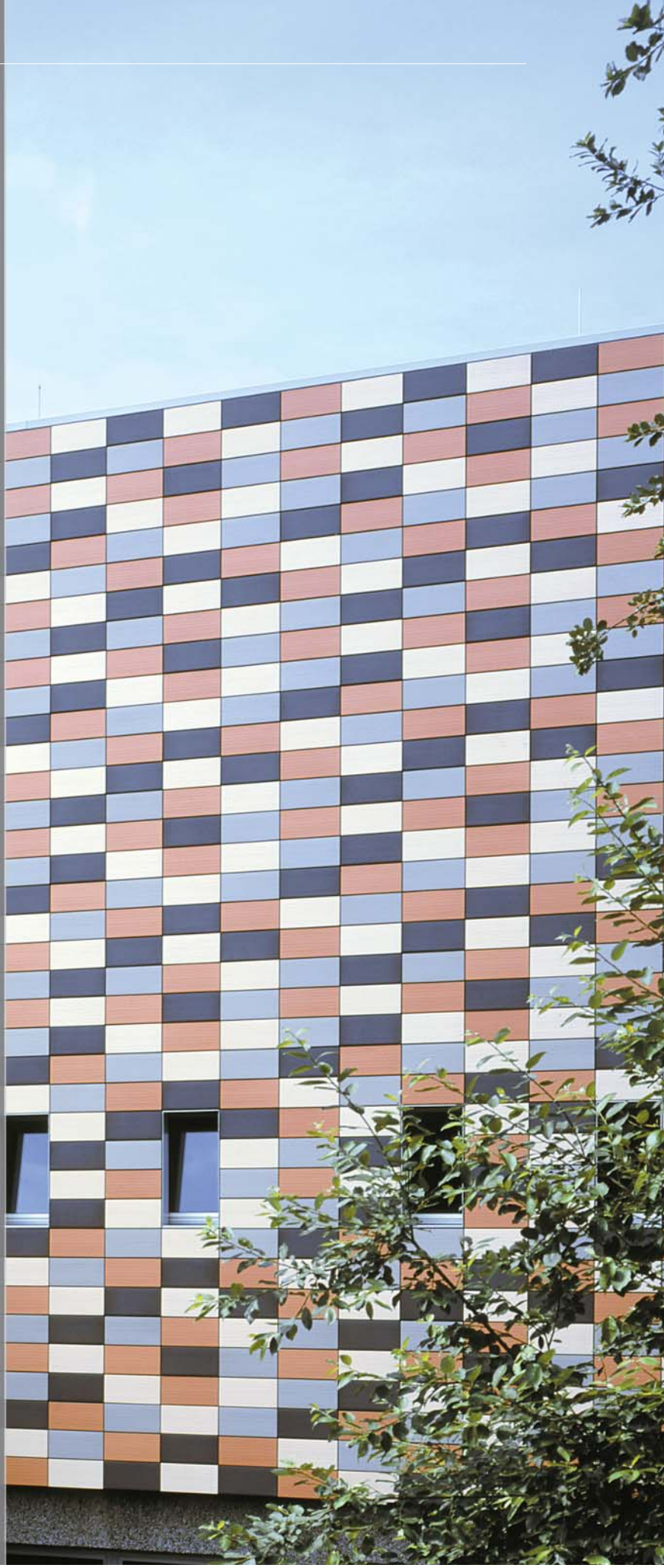
Surfaces

All colors are available in a smooth (sanded) or brushed surface with a light structured finish.

More pronounced designs are "Grooved", "Deep Groove", and "Waved" tile surfaces. Visually plastic impressions are produced in the interplay of light and shadow.

An additional example is the lamella tile; it is also available as a variant with a hole pattern for individual back lighting.

On special request we develop surface structures to satisfy particular architectural requirements.



Grammar school "Immanuel Kant" , Heiligenhaus, D
Architects: Ute Piroeth, Köln, D

Glazed surfaces

The ALPHATON® tile façade is also available with a glazed tile surface. Currently 9 color variants are available with glaze.

The brilliant gloss forms a particular attraction that has an effect on the entire façade; however it also attracts the attention of the observer with specific accents like bands, ornaments, or individual patterns.

The glazed tile can also be combined with all the ALPHATON® system components

- Brilliant color
- Dirt repellent
- Additional colors are possible

Shading and screening

The baguettes and lamellas of the ALPHATON® façade system offer additional design freedom, as well as function and benefits that are stylishly adapted to the architecture.

Use of MOEDING shading and screening elements ensures that the unity of the structural complex remains visibly intact.
Thus an unnecessary and disturbing mix of building materials can easily be avoided.

The baguettes and lamellas can be produced in different dimensions and wall thicknesses.

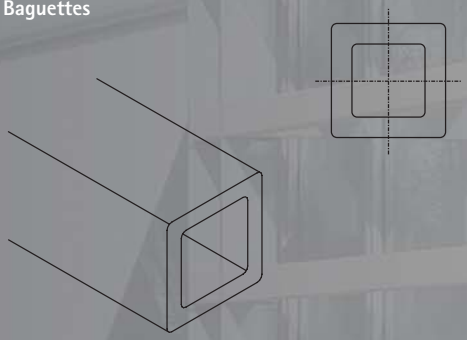
The formats are easily transferred to the façade grid and thus can be manufactured for a particular building.

Factory-finished components can be pre-fabricated from multiple baguettes.

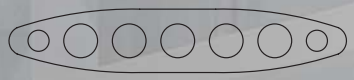
Baguettes are used as an additional design element for façade details.

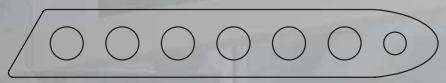
- Windows,
- Vents,
- Air conditioners,
- Passages,
- Exterior hallways,
- Stairways,
- Balcony railings,
- As a visual screen and/or light screen in front of glass.

Baguettes



Lamellas





Office building, Alter Markt, Magdeburg, D
Architects: ACM Architekten, Magdeburg, D

Office building City West,
Frankfurt, D

Architects: Kölling Architekten, Bad Vilbel, D

Colour: brown, oxide red, natural red, pastel red
Surface: standard

Clinical center Wolfsburg, D
New building Haus G and Magistrale

Architects: Koller Heitmann Schütz, Wolfsburg, D
Rauh Damm Stiller Partner, Hattingen, D

Colour: sand
Surface: poished

Putney Bridge, London, GB

Architects: Patel Taylor, London, GB

Colour: natural red patinated
Surface: standard

Detached house, Ealing, West-London, GB

Architects: Burd . Haward . Marston, London, GB

Colour: pearl grey
Surface: standard

Business School, Rheine, D

Architekten: Terhechte und Hoefker, Rheine, D

Colour: beige
Surface: grooved

MOEDING

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