



# Air Ventilated Facade System

**HI-MACS<sup>®</sup>**  
Natural Acrylic Stone<sup>™</sup>

# UV Resistance

- Based on the research and test results at current time, LG Hausys suggests 14 colours for facade application.
- These 14 colours perform in colour difference of delta E3 or Delta E4 for external use.

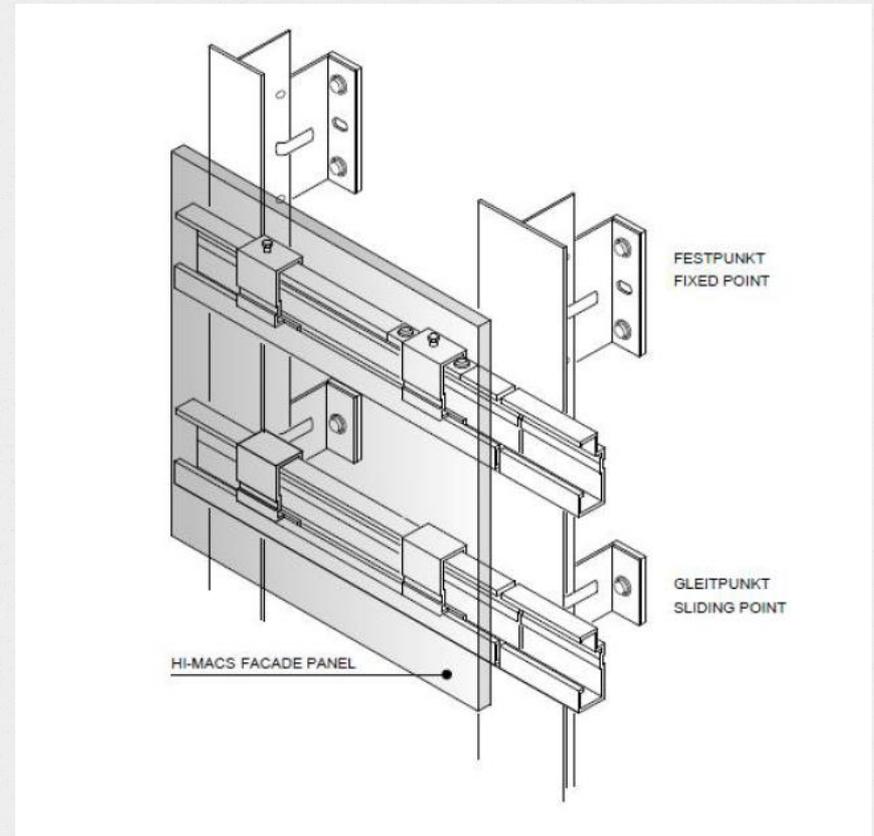
Delta E3	
S02	Almond
S09	Cream
S28 / S728	Alpine White
G34	Arctic White
G38	Sea Oat Quartz
G48	Beach Sand
Delta E4	
G02	Grey Sand
G04	White Quartz
G05	White Granite
G30	Ivory Quartz
S302	Opal
S33	Nordic White
S34	Diamond White
S29	Ivory White



# Sub-construction System

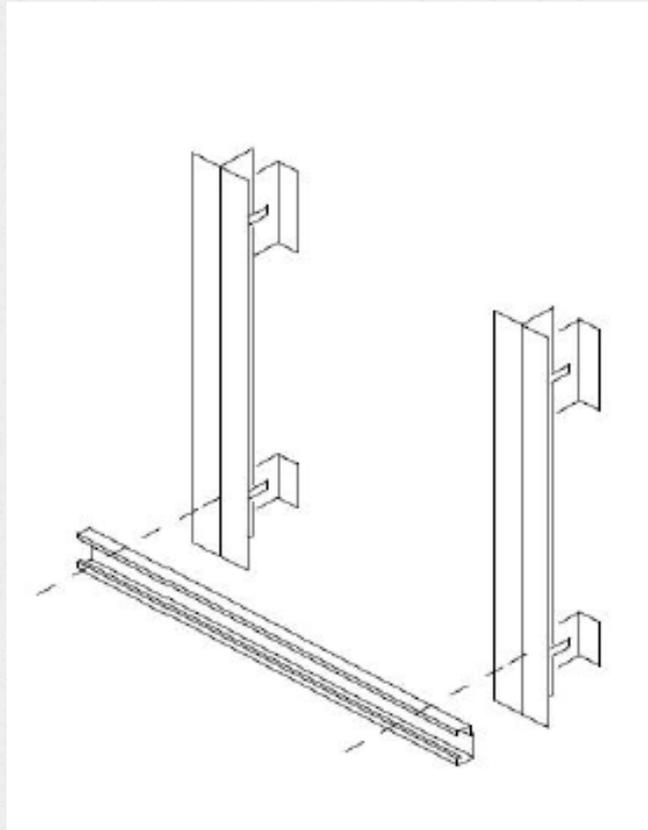
BWM

Through the way panels are anchored to the wall professionally, the cross-section here opposite demonstrates the construction method of a ventilated rainscreen.

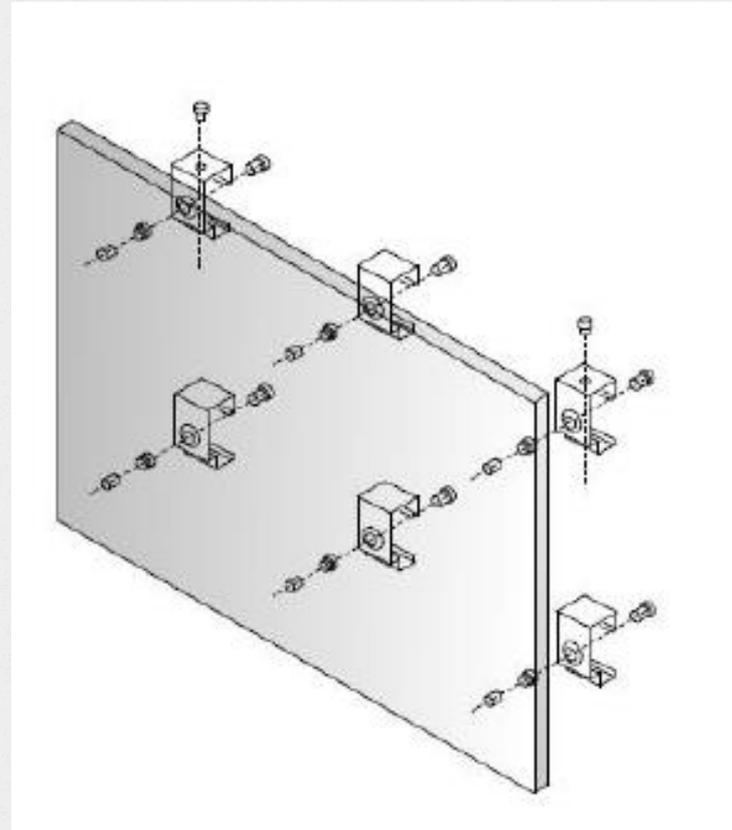


# Sub-contruction System

Step 1

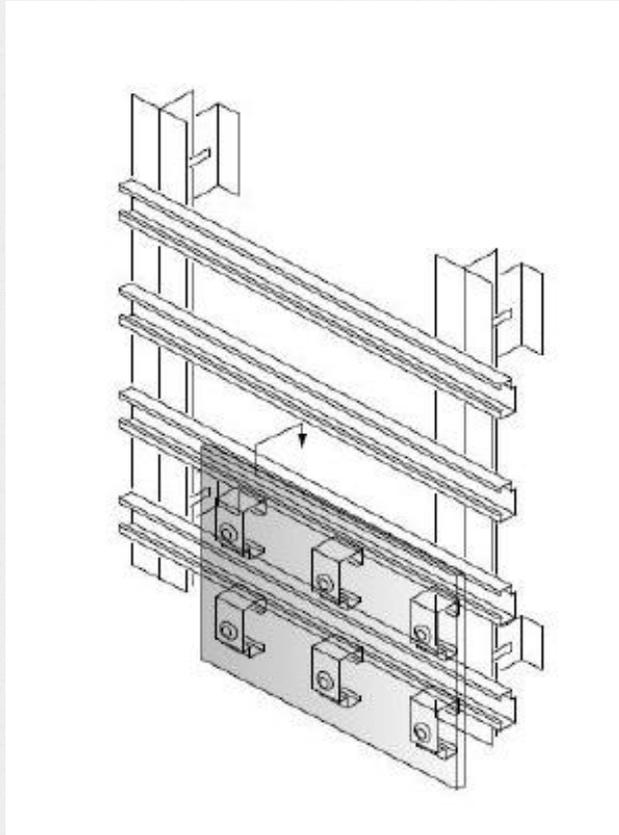


Step 2

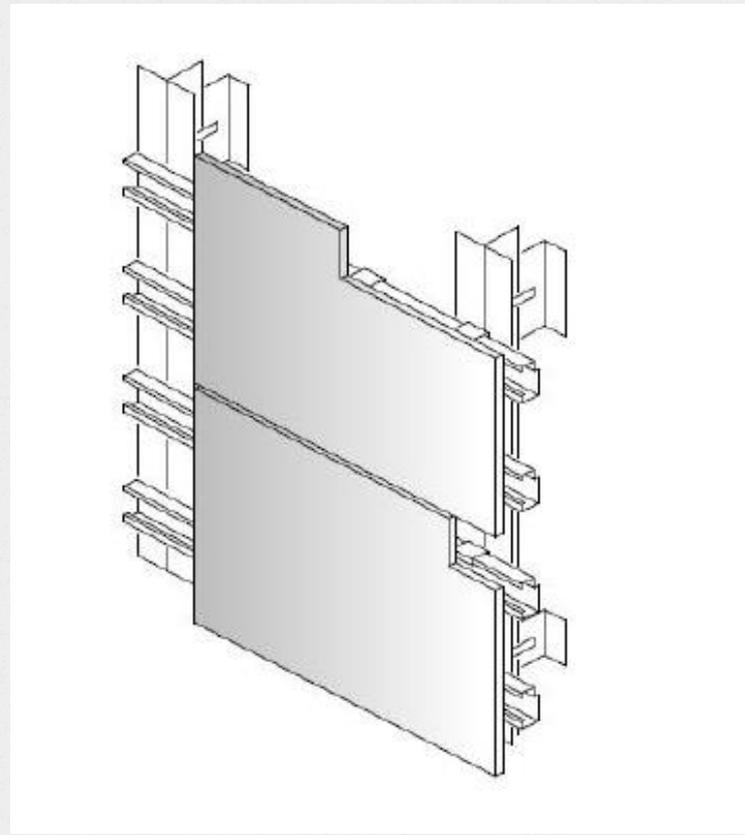


# Sub-contruction System

Step 3

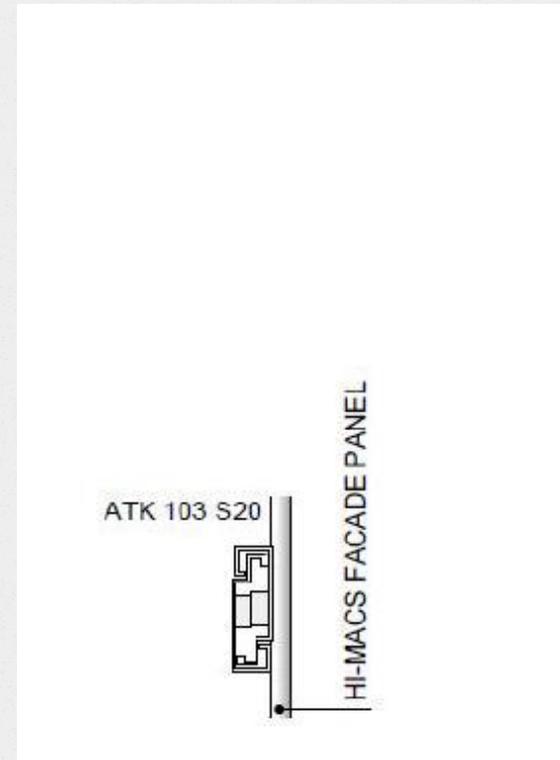
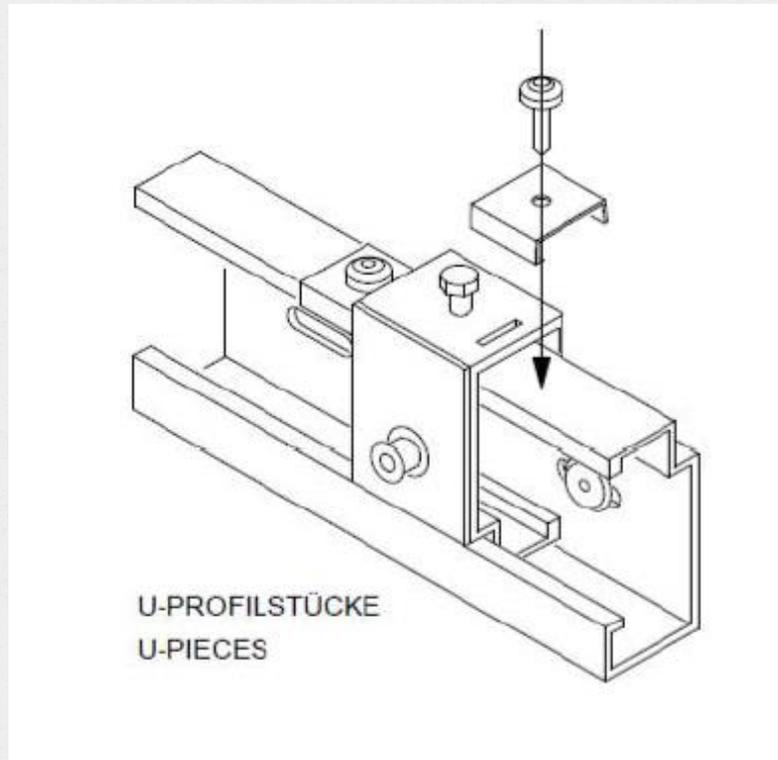


Step 4



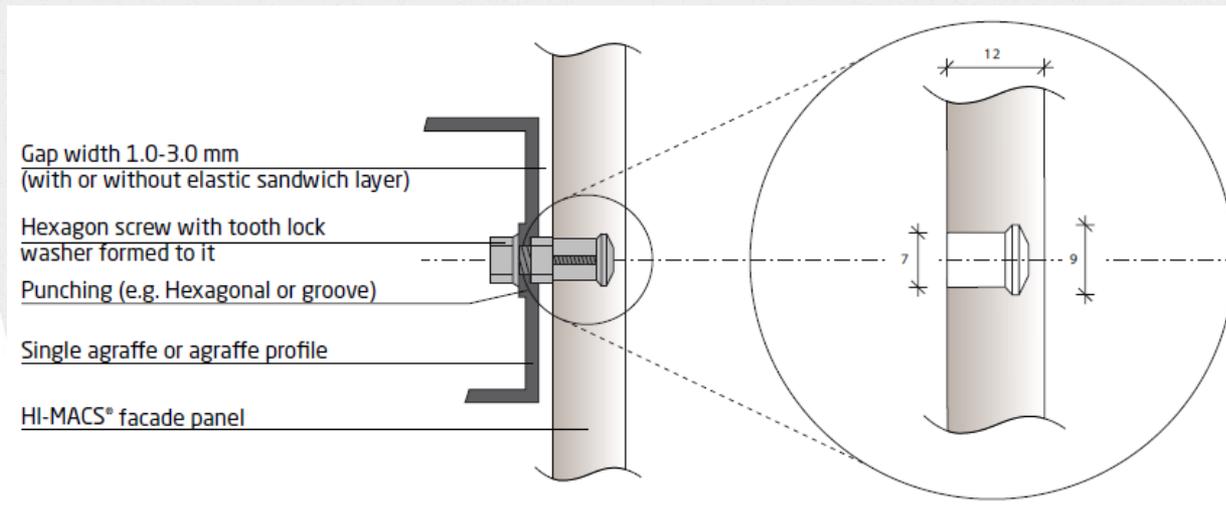
# Installation Steps – Clasp Fixing Details

## Clasp Restaint System

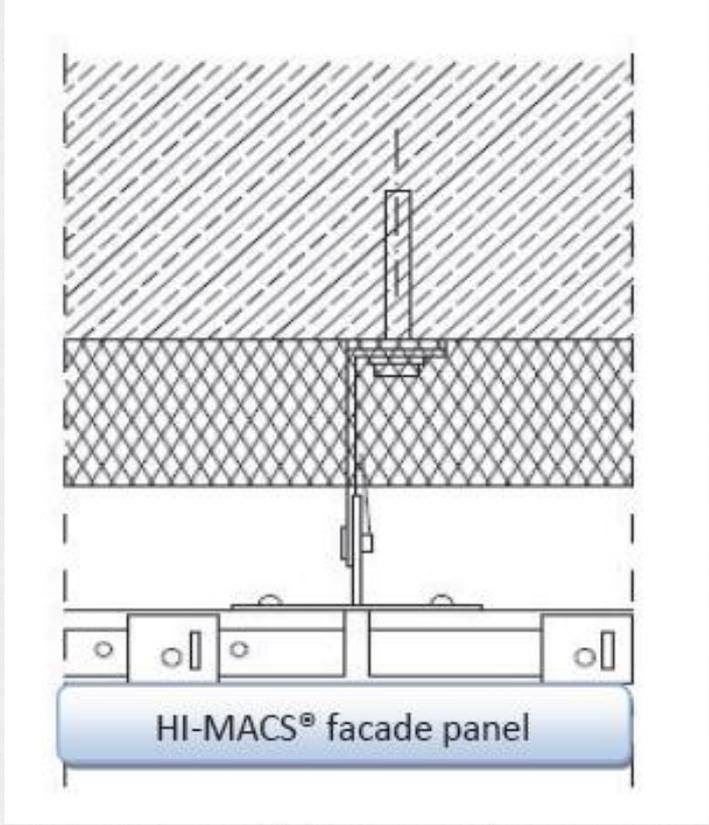
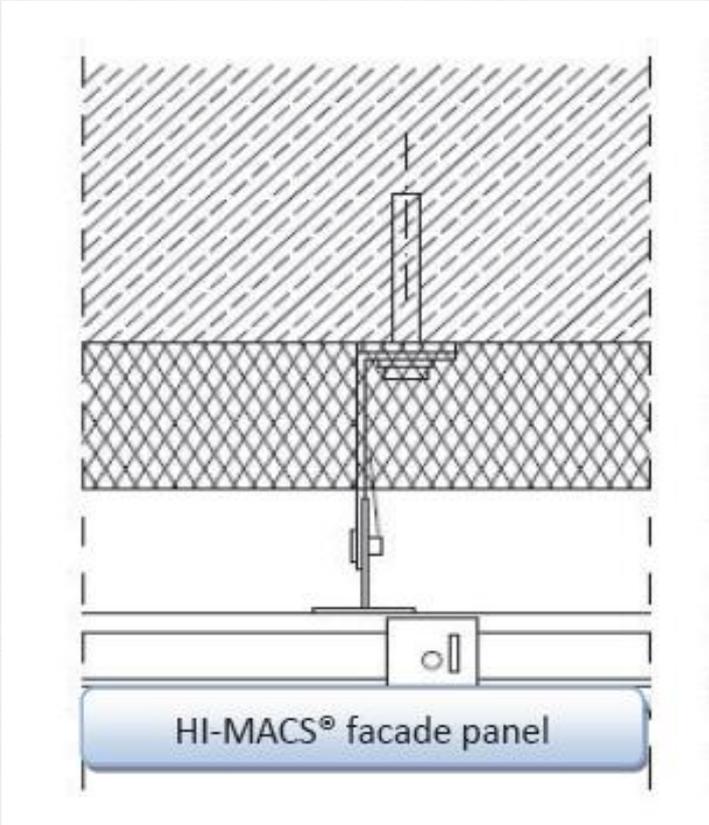


# Invisible Undercut Anchor

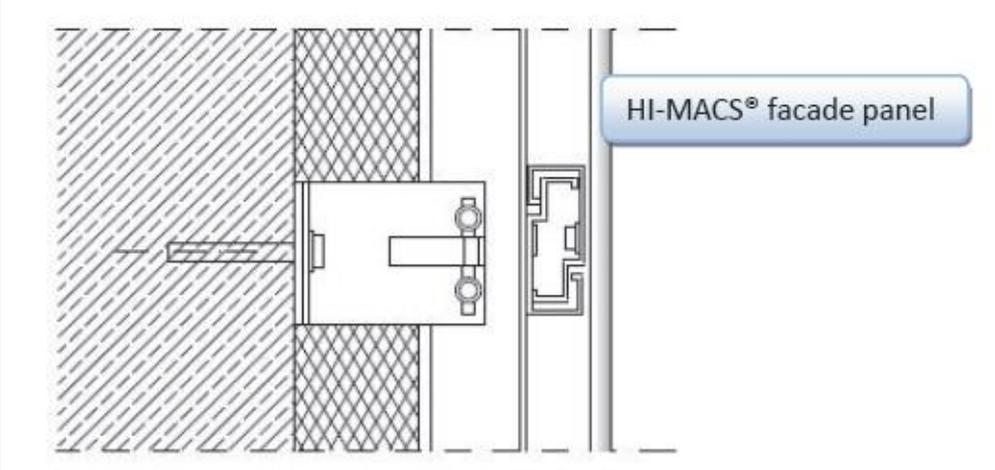
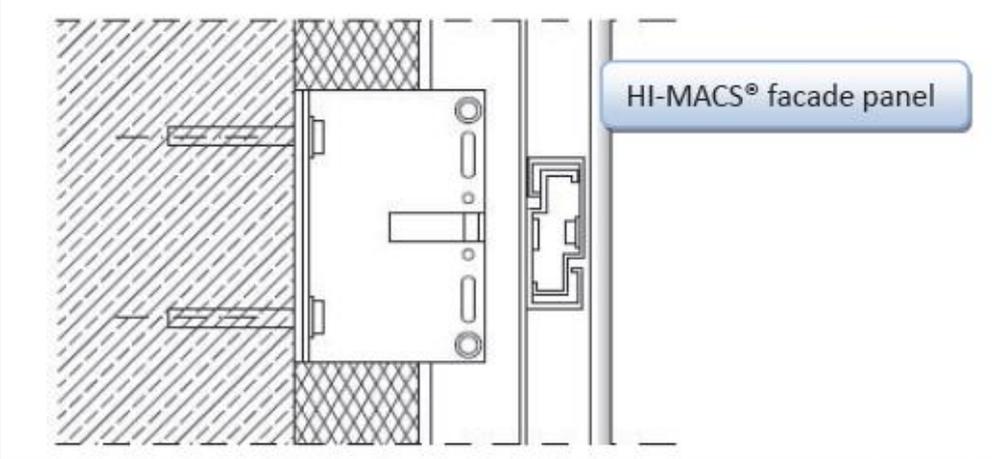
HI-MACS® panels are mounted — invisibly from the outside — to the aluminium substructure. We recommend using an invisible undercut anchor which is offered by Keil attachment technology.



# Horizontal Section

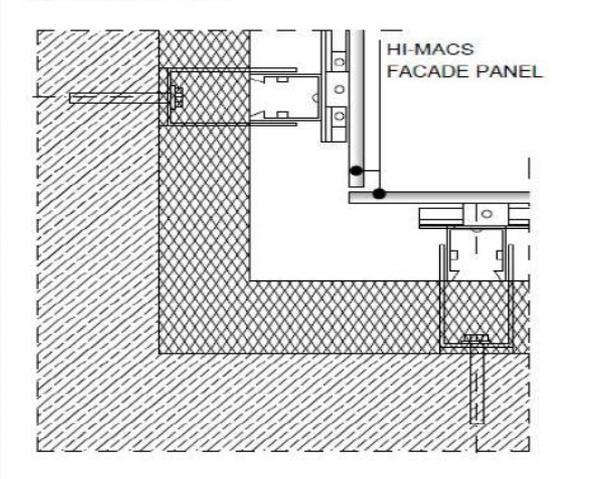


# Vertical Section

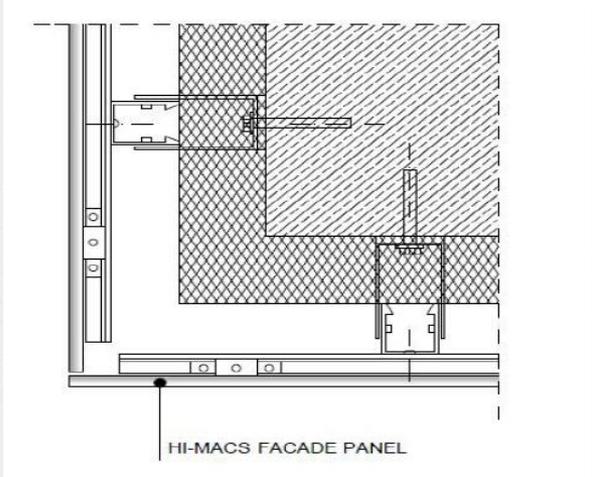


# Facade Corners

Internal corner

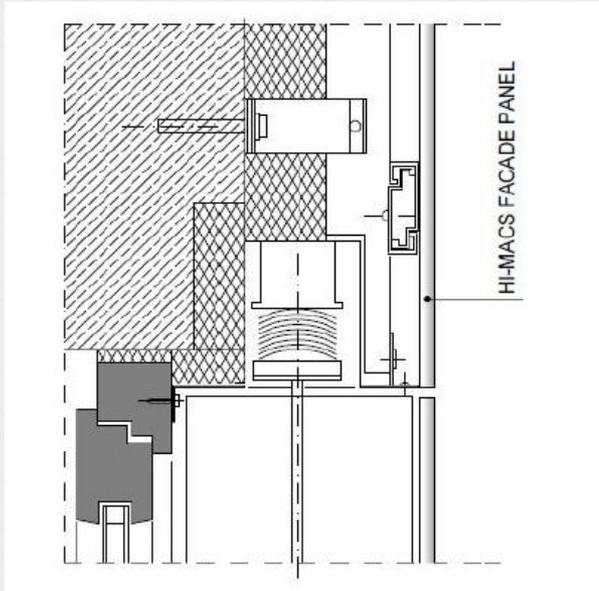


External corner

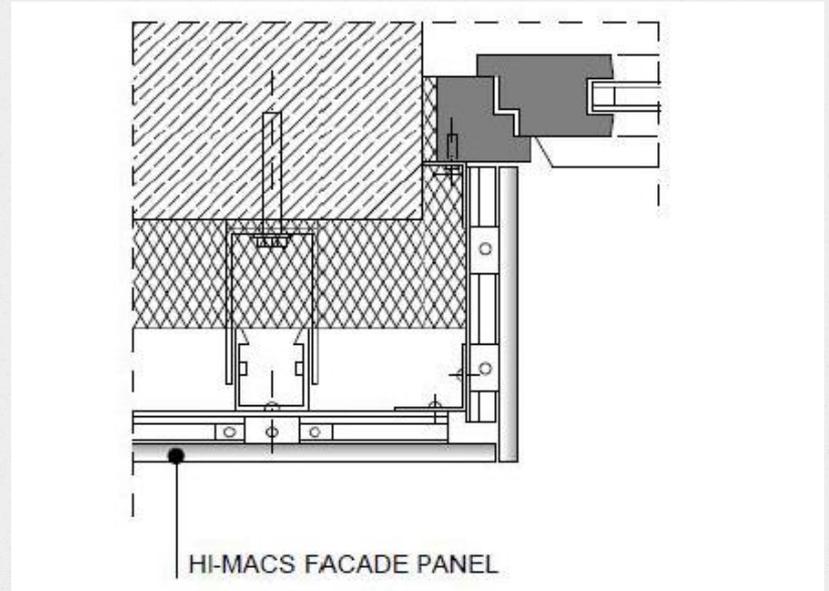


# Windows

Roller-blind box

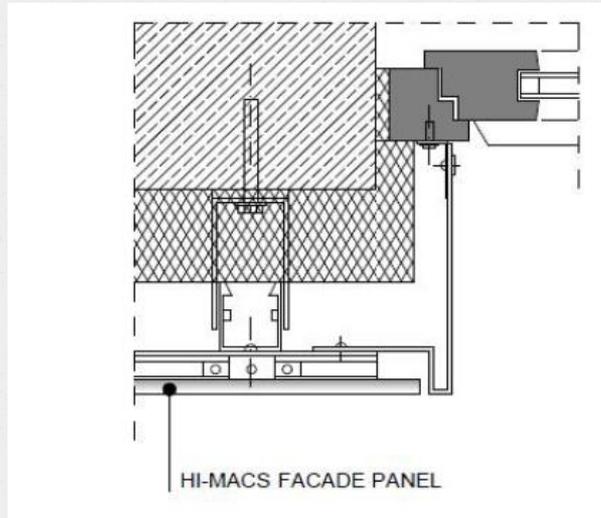


Window embrasure with facade panel

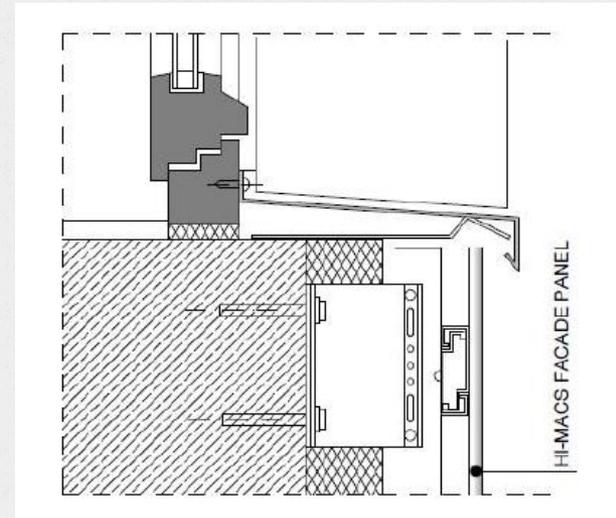


# Windows

Window embrasure made of metal

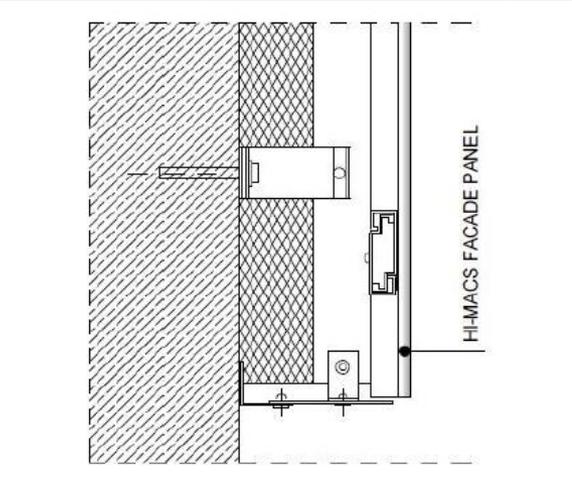


Window sill

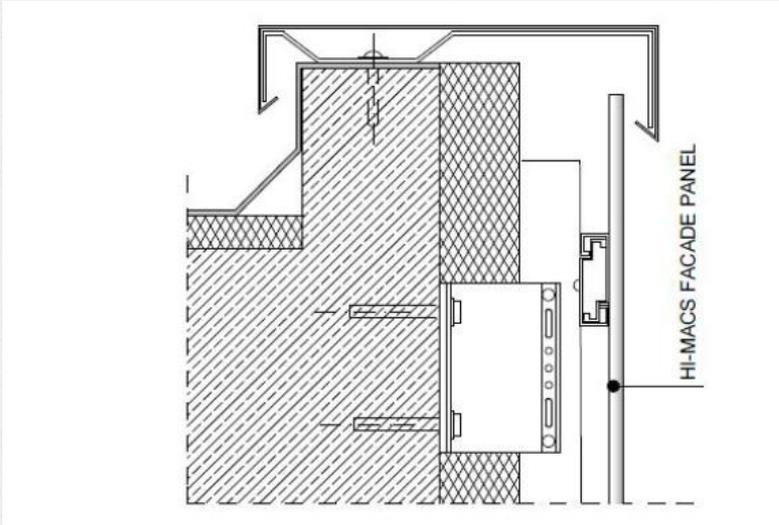


# Others

Bottom closing (bottom end)



Attic connection (top end)





# Seams Fabrication

# Seams Design

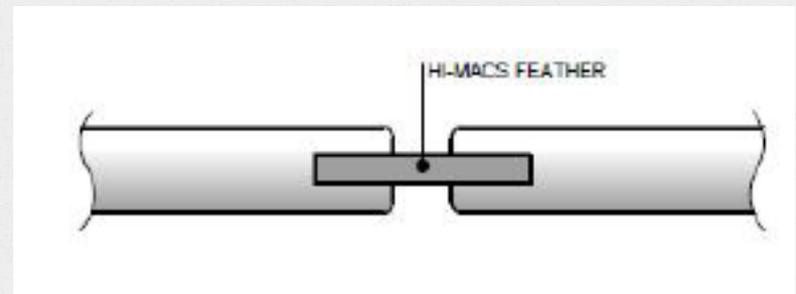
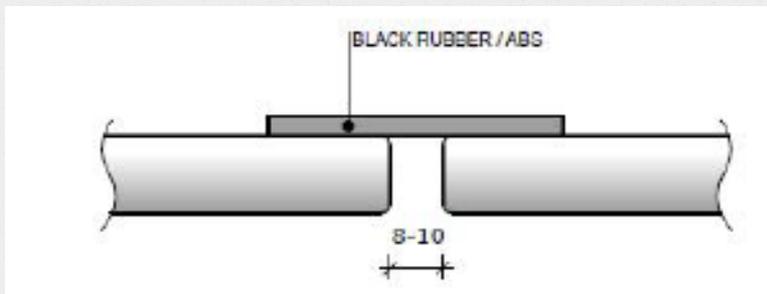
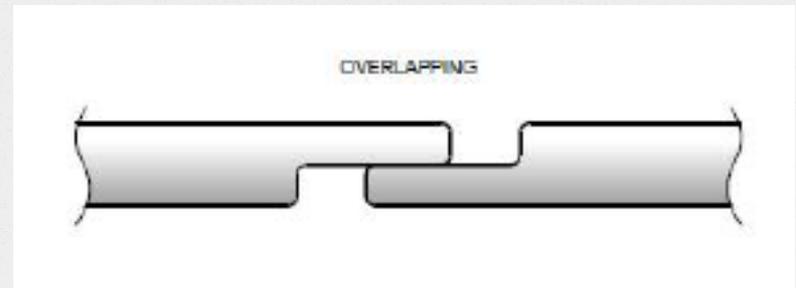
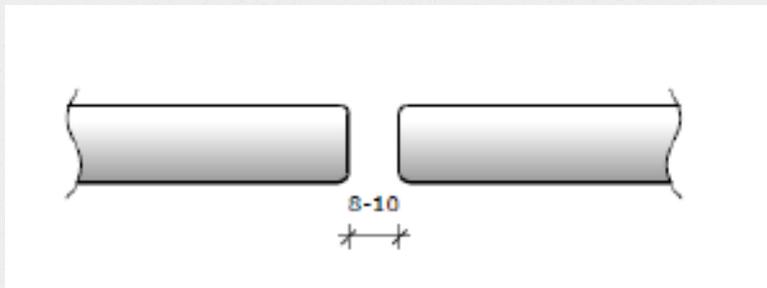
- Seams between different panels of HI-MACS® can be structured or designed in different ways.
- To allow optimal dilatation of each panel, we strongly recommend a shadow line of 8 to 10 mm between each single facade panel.
- But also other seam design can be chosen.



# Seam Design

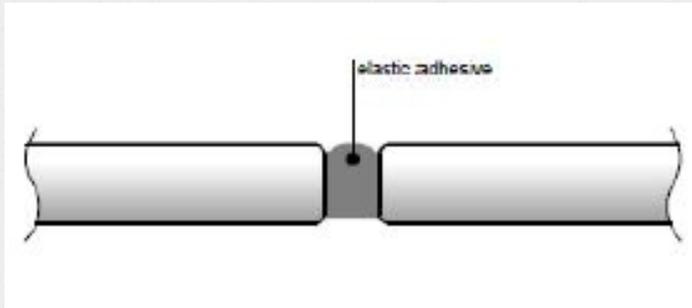
Open seam with/without backside protection

Seam overlapping direct trimmer to HI-MACS facade panel or with HI-MACS® feather

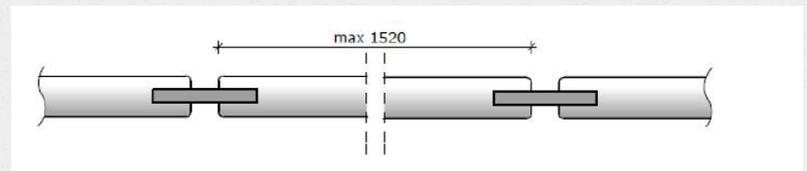


# Seam Design

Close seam with permanent elastic and weather resistant adhesive

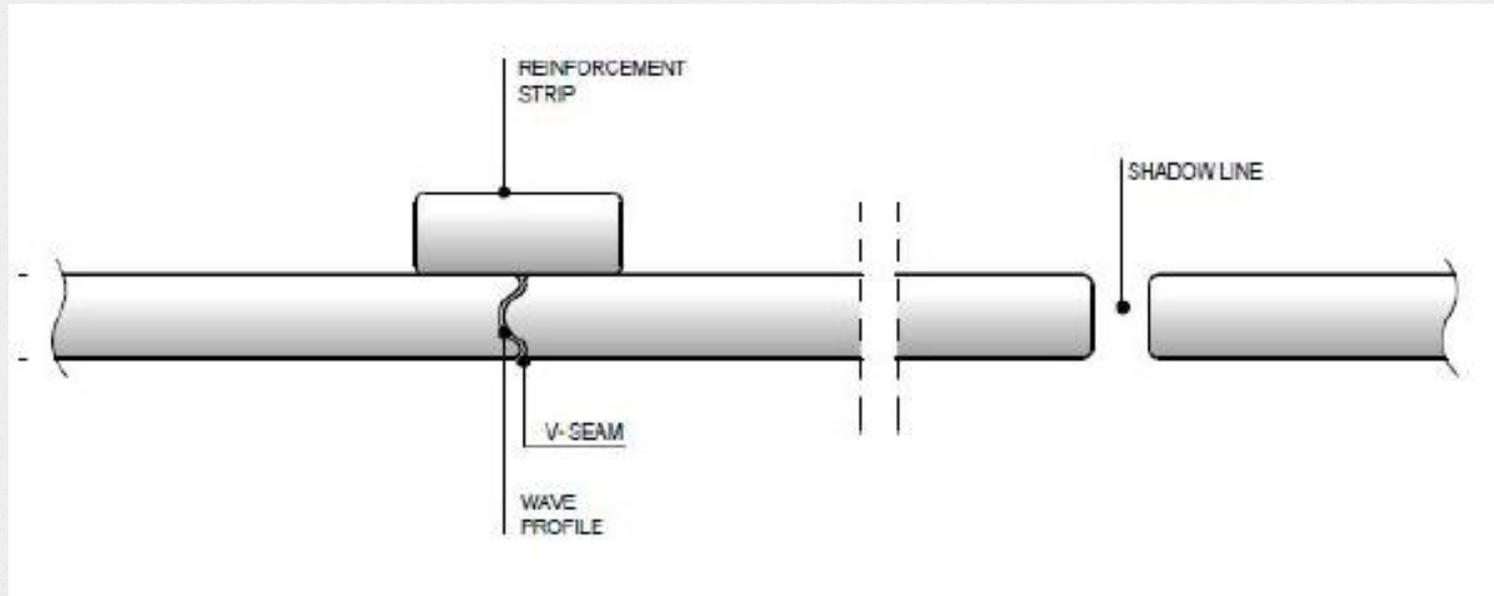


HI-MACS® facade panel size expansion from 760 mm up to max. 1520 mm and with feather seam for panel left and right



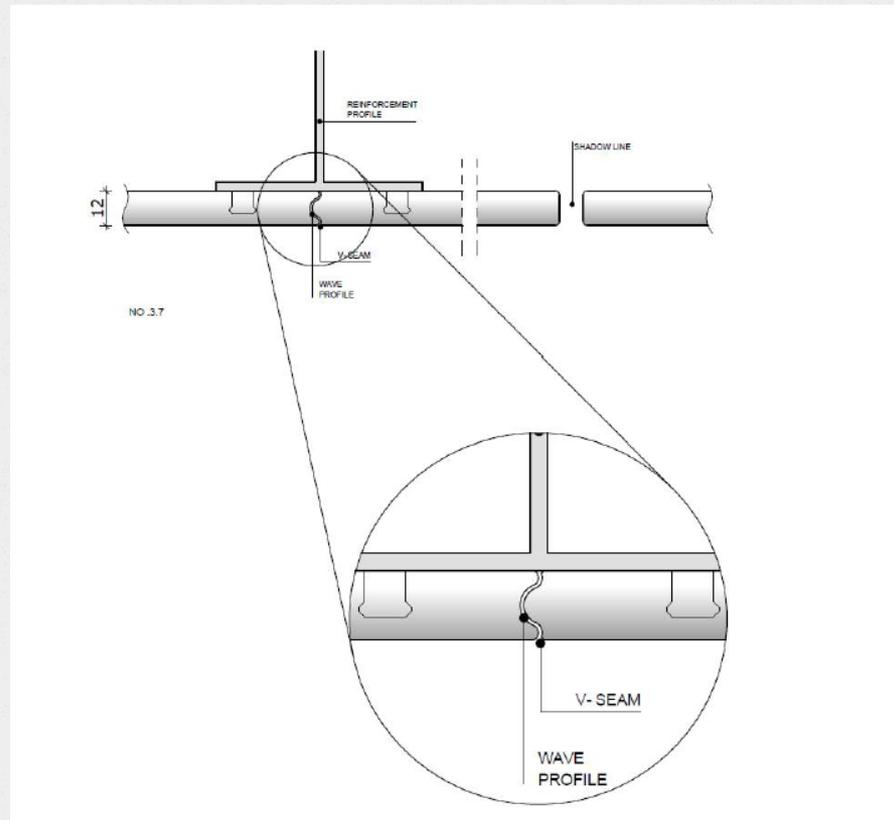
# Seam Design

Double panel reinforcement support strip in HI-MACS®



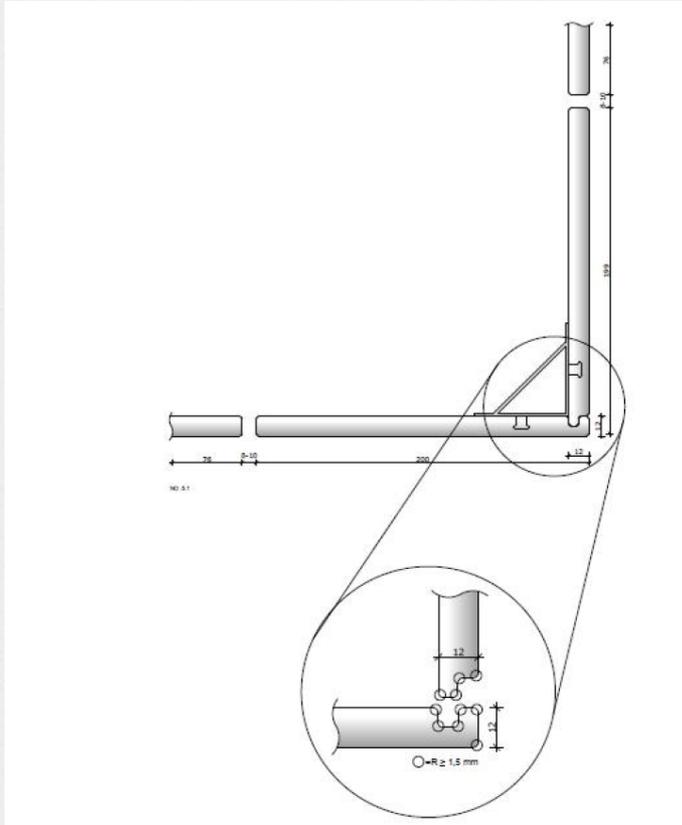
# Seam Design

HI-MACS® double panel reinforcement support strip with aluminium T-profile



# Seam Design

## External Corner



# ETA Certificate

Deutsches Institut für Bautechnik  
Zulassungsstelle für Bauprodukte und Bauarten  
Bautechnisches Prüfamt

Eine vom Bund und den Ländern  
gemeinsam getragene Anstalt des  
öffentlichen Rechts

Kolonnenstraße 30 B  
D-10829 Berlin  
Tel.: +49 30 78730-0  
Fax: +49 30 78730-320  
E-Mail: [dibt@dibt.de](mailto:dibt@dibt.de)  
[www.dibt.de](http://www.dibt.de)

Deutsches  
Institut  
für  
Bautechnik

**DIBt**



Mitglied der EOTA  
Member of EOTA

## European Technical Approval ETA-12/0583

English translation prepared by DIBt - Original version in German language

Handelsbezeichnung  
*Trade name*

KEIL Hinterschnittanker KH für Fassadenplatten HI-MACS(R)  
Typ: Alpine White  
KEIL undercut anchor KH for facade panels HI-MACS(R)  
type: Alpine White

Zulassungsinhaber  
*Holder of approval*

LG Hausys Europe GmbH  
Lyoner Straße 15  
60528 Frankfurt/Main  
DEUTSCHLAND

Zulassungsgegenstand  
und Verwendungszweck  
*Generic type and use  
of construction product*

Spezialanker zur rückseitigen Befestigung von Fassadenplatten aus  
Massivplattenmaterial aus natürlichem Acrylstein  
Special anchor for the rear fixing of facade panels made of natural  
acrylic stone

Geltungsdauer:  
*Validity:*

vom  
from  
bis  
to

11 January 2013  
11 January 2018

Herstellwerk  
*Manufacturing plant*

Herstellwerk 1

Diese Zulassung umfasst  
*This Approval contains*

14 Seiten einschließlich 5 Anhänge  
*14 pages including 5 annexes*



Europäische Organisation für Technische Zulassungen  
European Organisation for Technical Approvals

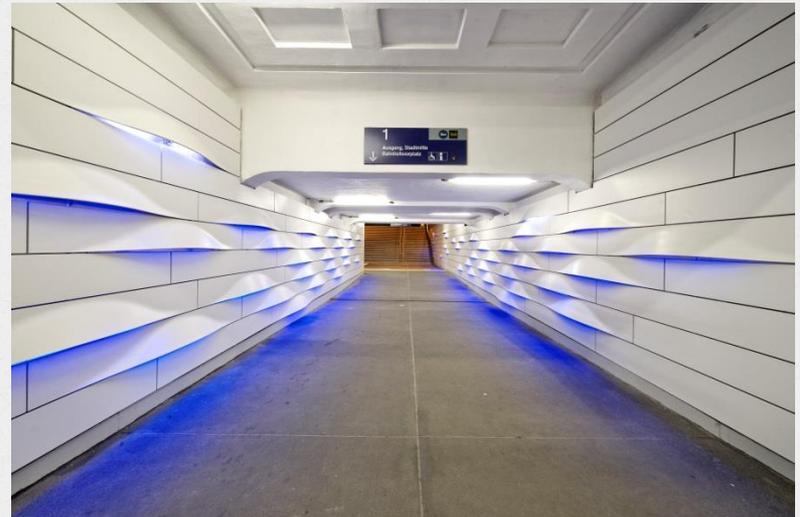


# Façade References

# Gmünd Train Station

Gmünd, Germany

The HI-MACS® panels are mounted on a bracket using a stainless steel undercut anchor, hinged reversibly in the aluminium substructure. Horizontal and vertical joints compensate for temperature changes and guarantee adequate ventilation of the wall.





Gmünd Train Station. Design: Preiswerk marek architekten. Engineering: 5d Engineering. Photographed by Uwe Röder.



Gmünd Train Station. Design: Preiswerk marek architekten. Engineering: 5d Engineering. Photographed by Uwe Röder.

# ICE-LOFT

Hamburg, Germany

To echo the smooth, dazzling white surfaces of the historical buildings, the architects chose brilliant white light reflecting panels made of «Alpine White» HI-MACS®, giving the dynamic shapes of the surface a certain depth effect.





CE-LOFT. Design: Köhler Architekten. Fabrication: Peter Knapp Dach und Fassadentechnik, Abalit Elementos moldeados, Peter Grube. Photographed by Nikolaus Herrmann Röder.

# NAM Office Complex

Amsterdam, The Netherlands

The architectural firm Kwint Architecten designed a reception room which receives visitors in a continuous flow between the outside and the inside, using a HI-MACS® wall which links the two areas and eventually leads to the reception desk. The interior partition is finished and backlit to create un bas-relief which echoes the identity of the brand.





# Bénéteau Headquarters

Givrand, France

In addition to the æsthetic effect with a motif that is inspired by fishing nets, reproducing the Bénéteau logo and recreating a wave, the perforation of the material, which is over 50%, provides the required level of transparency whilst regulating heat from radiation.





Location: Givrand, France - Design: PAD Architectes for BERI 21 - Fabrication: LCCA, France - Photos: Mathieu Ducros - Material: HI-MACS® S28



Location: Givrand, France - Design: PAD Architectes for BERI 21 - Fabrication: LCCA, France - Photos: Mathieu Ducros - Material: HI-MACS® S28

# Villa Wiese

Berlin, Germany

Architect and builder Volker Wiese has realized his personal home design dream with a Bauhaus style residence with exterior HI-MACS® cladding that secures privacy from the outside but encloses a delightful garden with-in a multi-façade, two wing design. For the keen nature lover that Wiese is, using acrylic stone for the exterior wall cladding was an obvious choice as all the materials used in this energy efficient structure are sustainable.





Location: Berlin, Germany - Architects: Dipl.-Ing. Volker Wiese, Berlin - Kaden Klingbeil Architekten, Berlin - Fabricator: Kiebitzberg GmbH & Co.KG supplied by Kloefer Surfaces - Material: HI-MACS® S728 Alpine White - Photographer: Dirk Wilhelmy



Location: Berlin, Germany - Architects: Dipl.-Ing. Volker Wiese, Berlin - Kaden Klingbeil Architekten, Berlin - Fabricator: Kiebitzberg GmbH & Co.KG supplied by Kloepper Surfaces - Material: HI-MACS® S728 Alpine White - Photographer: Dirk Wilhelmy



Zara, Westfield Shopping Mall  
London, UK



# Schönhäuser Tor

Berlin, Germany

The special highlight can only be seen at night: the entire gate is fitted with an LED technology which is invisible during the day. Graphic patterns or letters can be projected on the HI-MACS® surface, turning the straight installation into a dynamic stage for lighting design.



