

INNOVATIVE FAÇADES

HALFEN Products and their Application



**Solutions and Concepts for
Façade Applications**

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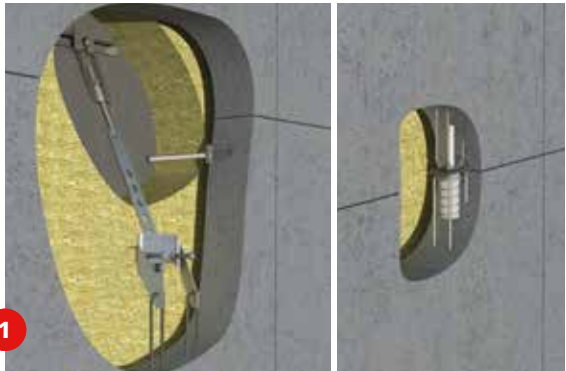
EXPLORE THE HALFEN FAÇADE HOUSE!
Unfold the page to see more!

Title picture: ©tomjasny.com

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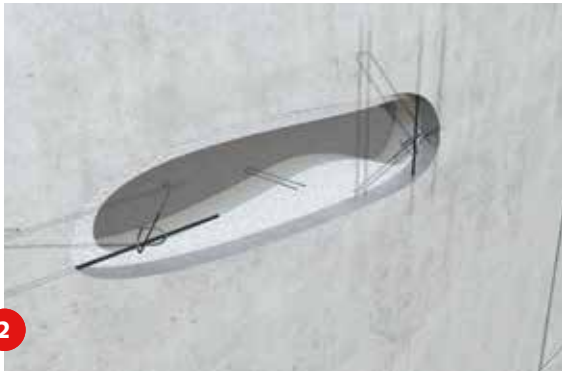
From elegant natural stone façades to modern concrete façades:
THE HALFEN FAÇADE HOUSE

Welcome to the HALFEN Façade house! Our virtual building has five different types of façades.
More than 30 HALFEN products are used behind the various façades.
Take a look behind the façades with us and discover possible applications for your projects!



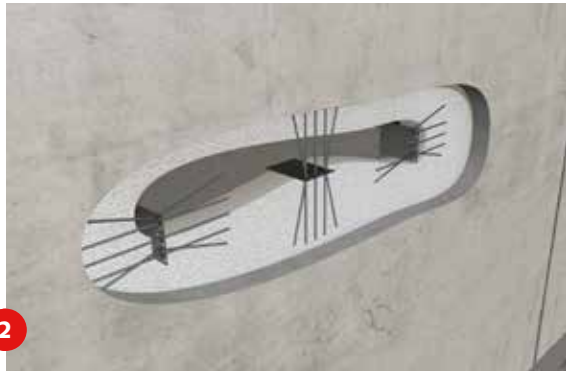
FPA Façade panel anchor
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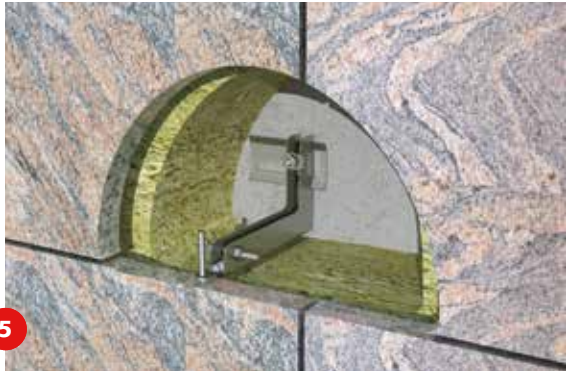
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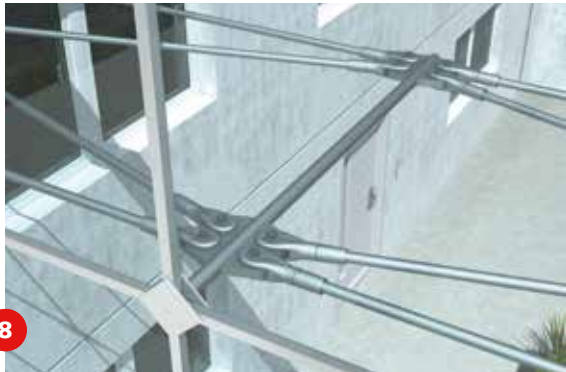
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Style, reliability, quality THE MODERN FAÇADE ...

...allows a multitude of styles. Design has virtually no limits. The resulting combination of shapes and materials gives each building its unique appeal. The façade is the first impression of a building. At the same time, **it is more than just an "outer skin"** that needs to satisfy aesthetic demands.

The façade envelopes the building, it provides protection against all types of weather and has a lasting effect on the building's climate. Façades not only have to fulfil multiple roles, the **demands on quality** for modern façades have also increased. In addition to increased insulation thicknesses with the lowest possible thermal bridges, anchoring solutions are also expected to be invisible, even for large building components.

Whether concrete or sandwich façades, brickwork cladding, natural stone façades or in combination with modern tension rod systems; the **possibilities for façade design** are almost unlimited. But they all have something in common: Each type of facade requires a specific anchoring solution and a **high degree of expertise** in production, planning and dimensioning. HALFEN supports architects, planners and façade specialists in the realization of their projects. Our extensive product range and comprehensive support are unprecedented even by international standards.

Plan your building projects with HALFEN quality products for façades! Solutions for other connections in construction and industry are also available. Profit from comprehensive HALFEN support!



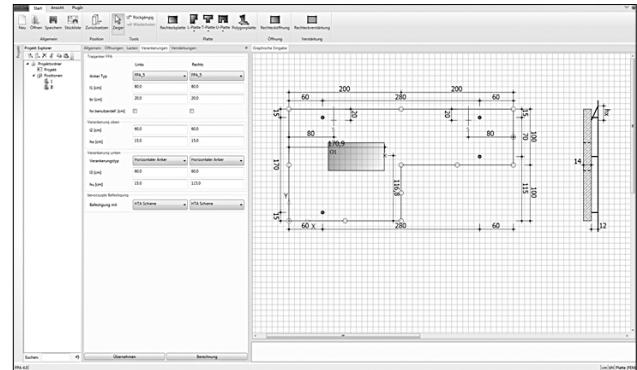
© tomasny.com



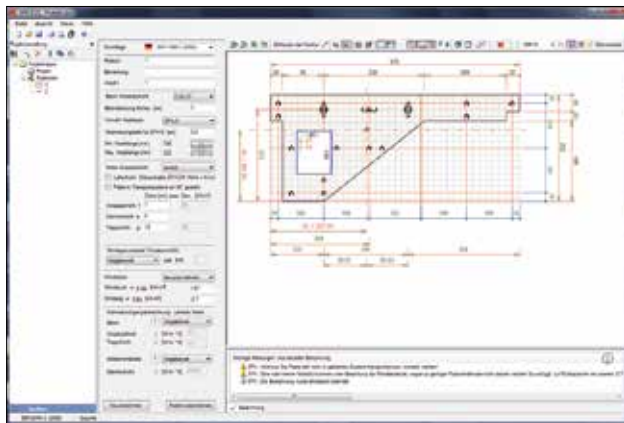
Project specific support and complimentary calculation software: **HALFEN, YOUR PARTNER FOR PROJECT PLANNING**

Planning a façade including all required anchor fixings for correct installation is often complex and difficult. HALFEN therefore supports planners and architects with dedicated software solutions for various installation systems to ensure reliable and economical calculation. This allows you to benefit from our many years of experience.

Here are examples of two commonly used HALFEN Calculation programs. The design software for the FPA (façade panel anchor) and the SPA (sandwich panel anchor). Both calculation programs are based on finite element analysis.



Planning software; FPA Façade slab anchor



Planning software; SPA Sandwich panel anchor

Planning software; FPA Façade slab anchor

Here too, the integrated finite element analysis provides a reliable calculation of complex panel shapes. Other features of the software are e.g.:

- Calculation of asymmetrical panel shapes and anchor layout is possible
- All accessories integrated (horizontal anchors, suction restraints, fixing elements)
- Preset basic panel shapes (U, L, T etc.)
- Integrated tool to determine the wind load
- Assumption of pin loads

Planning software; SPA Sandwich panel anchor

The integrated finite element analysis also allows complex panel shapes to be reliably calculated. Numerous other functions make the software even more efficient.

- Precise calculation of the horizontal loads on all load support anchors and pins
- Free positioning of the load anchors by the user is possible
- Verifiable printout with load data for all anchor and pin positions
- Includes a tool to determine wind load



**Further tools can be found
online at www.halfen.com**

Catalogues | CAD-Drawings
Videos | Tender texts
installation instructions

SUSPENDED CONCRETE FAÇADES



PRINSES ELISABETH CHILDREN'S HOSPITAL

Location: Ghent, Belgium

Category:
Concrete façades

HALFEN Products:
FPA Façades panel anchors

Modern and functional:

THE SUSPENDED CONCRETE FAÇADE

Architects appreciate the modern appearance and the diverse designs that are made possible with suspended concrete façades. All over the world this type of façade is used to make buildings special; to stand out.

It is not only the aesthetics of this type of façade that influence planners and clients but also the economic advantages and building physical characteristics.

ANCHORING SYSTEM FOR CONCRETE FAÇADE PANELS

HALFEN recommends the FPA Façade panel anchor for easy and quick anchoring of suspended concrete façade panels to a main concrete support layer. Together with horizontal anchors DS Spacer bolts and HFV Dowel restraints, this system provides a proven and reliable fixing method.



HALFEN FPA and DS Façade panel anchors and spacer bolts



QUALITY FEATURES:

- › FPA is available in load groups from 5.0 kN to 56.0 kN
- › Extensive product range with a wide selection of accessories
- › Freely adjustable in all directions
- › Easy and fast installation
- › Verifiable calculation software
- › Upper parts available in 6 variants
- › DS Spacer bolts are available in different lengths and diameters

HALFEN HFV Dowel restraints



QUALITY FEATURES:

- › Available in various types
- › Available in load categories 2.5 kN and 5.0 kN

HALFEN WPA-B and WPA-A Top fixing dowels

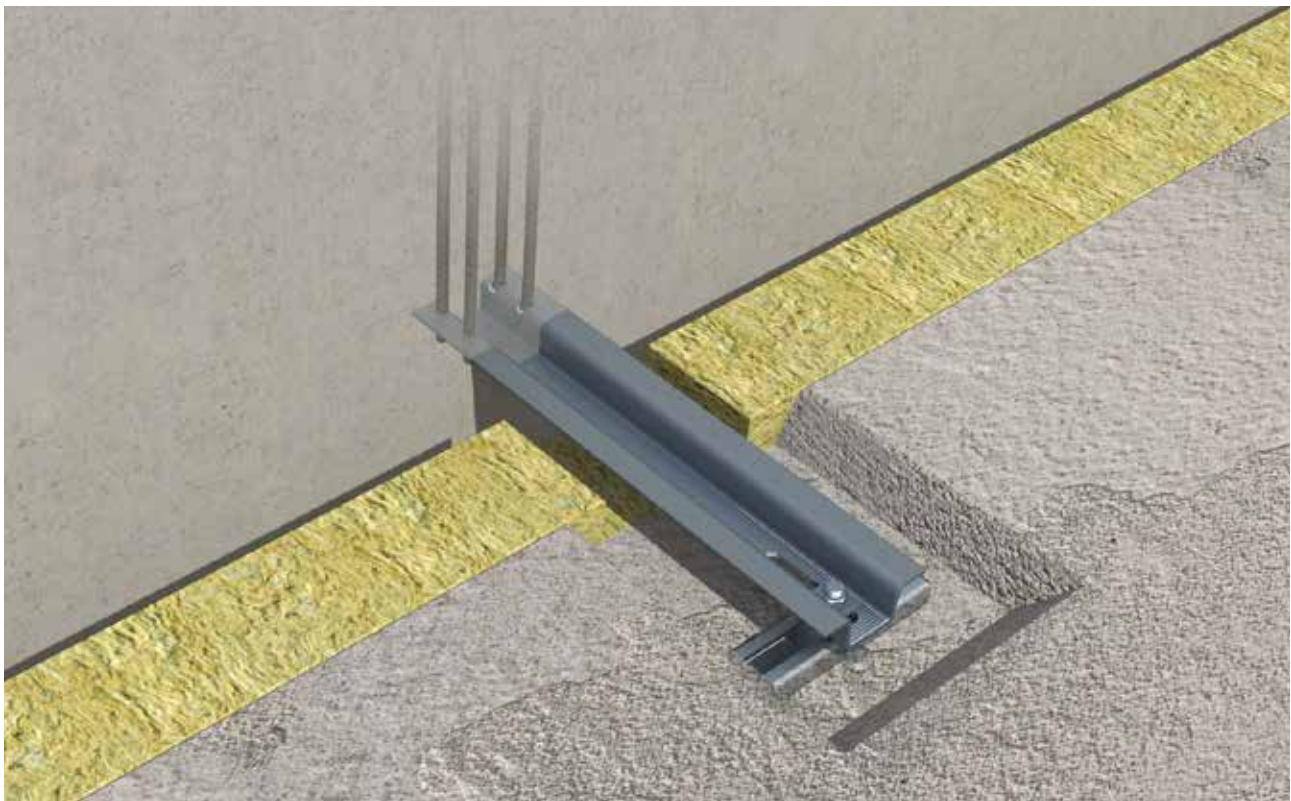
L-Shape concrete façade elements, which because of their shape, cannot be fixed "from above" can be installed using the WPA-A and WPA-B Top fixing dowels. The flexible sleeve and the elastomeric support plate on the WPA-B ensure the supports are constraint free.



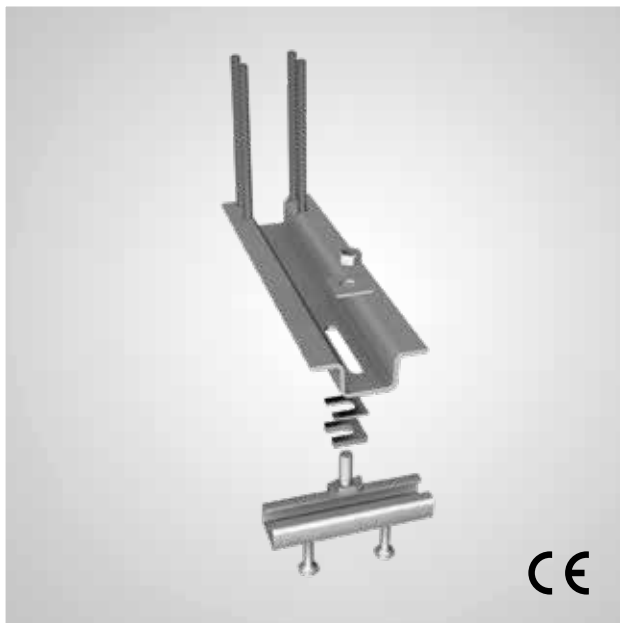
QUALITY FEATURES:

- › **Fixings for L-slabs**
- › **Aesthetic building edgings**
- › **Reliable installation**
- › **Three-dimension adjustability**





HALFEN BRA **Parapet corbel**



The HALFEN Parapet corbel ensures fast and reliable fixing when installing parapet elements to balconies or reinforced concrete slabs.

Use two corbels for each parapet element to ensure even load distribution. The corbels can be horizontally adjusted in two directions when they are fixed to previously cast-in HALFEN Channels. Vertical adjustment is with shims placed underneath the corbels. Suitable fixing accessories are also available from HALFEN. For easier vertical adjusting the parapet corbels are also available with adjustment screws.

QUALITY FEATURES:

- > 8 different sizes of profile ensure economical application
- > High degree of pre-assembly
- > Bending-stiffness, ensured connection without additional brackets
- > Fast installation, easy adjustment
- > Verifiable calculation software
- > Type tested
- > Suitable for different insulation thicknesses
- > High corrosion protection due to stainless steel design
- > Adjustable in all directions

CONCRETE SANDWICH PANEL FAÇADES

OCEAN

Office and residential complex

Location: Bremerhaven, Germany

Category:

Concrete Sandwich panel façade,
reinforcement technology

HALFEN Products:

SPA Sandwich panel anchors
HIT Insulated connections

Economical solution:

CONCRETE SANDWICH PANEL FAÇADES

Sandwich panel façades combine the support layer and the facing layer in a single building element. Their advantage is fast on-site installation and the integrated thermal insulation layer.

Due to the high economic efficiency these systems are often selected for industrial and commercial building projects.

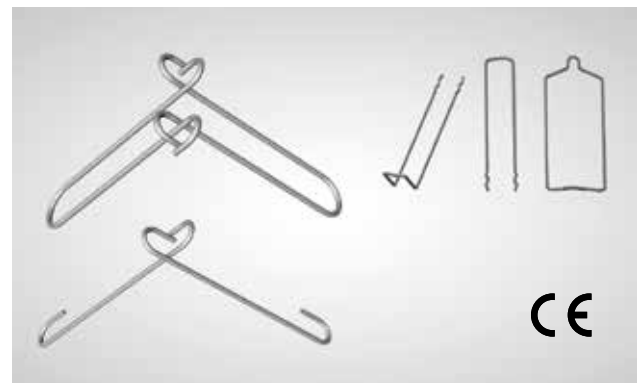
Two systems – The choice is yours: HALFEN offers two different systems to connect facing layers in sandwich panel elements to their support layer: the FA Flat anchor and the SPA Sandwich panel anchor. The optimized thermal conductivity ensures up-to-date thermal insulation requirements. In both systems (FA and SPA), the support anchors assume the function of transferring the dead weight of the facing layer and proportionate horizontal forces from wind and temperature influences to the support layer.

HALFEN SPA

Sandwich panel anchor

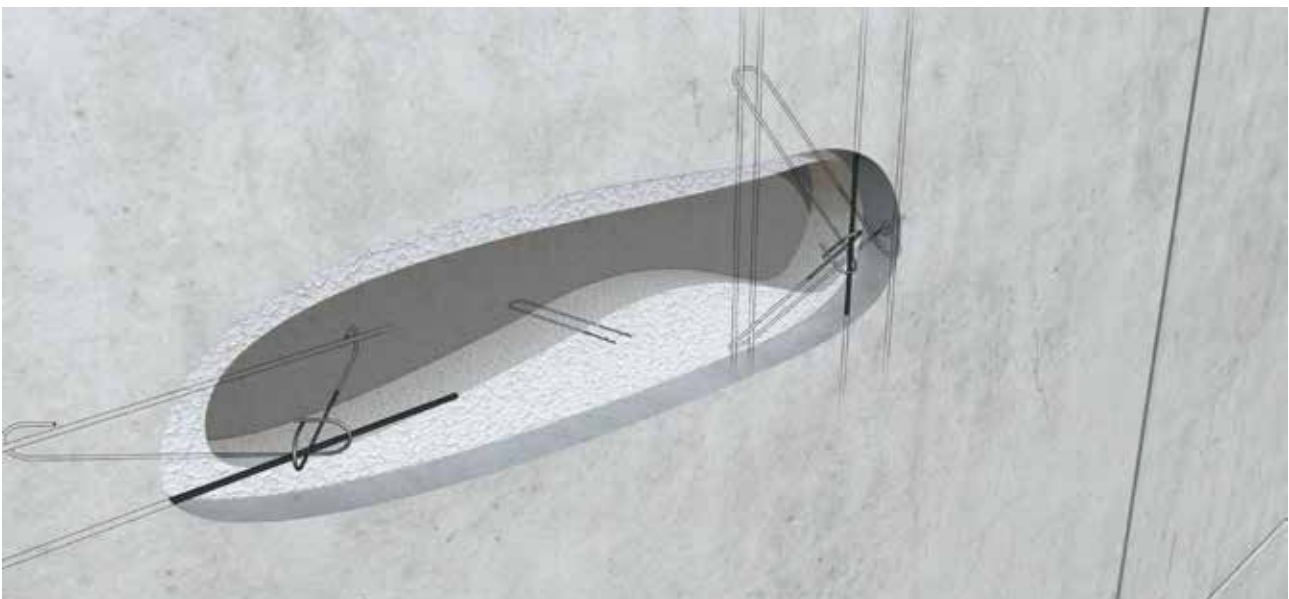
Two SPA Sandwich panel support anchors are usually sufficient when using the SPA system; these are installed symmetrically to the centre axis in each load direction. A further SPA Sandwich panel support anchor must be arranged as a horizontal anchor perpendicular to the main load bearing direction to account for loads from planned or unplanned eccentricity during transport and installation.

In the remaining area of the panel, approved pins ensure horizontal forces are transferred and warping of the facing layer is prevented. When appropriately positioned, constraint forces caused by thermal expansion and warping in the facing layer can be minimized by the design of the SPA Sandwich panel anchors.



QUALITY FEATURES:

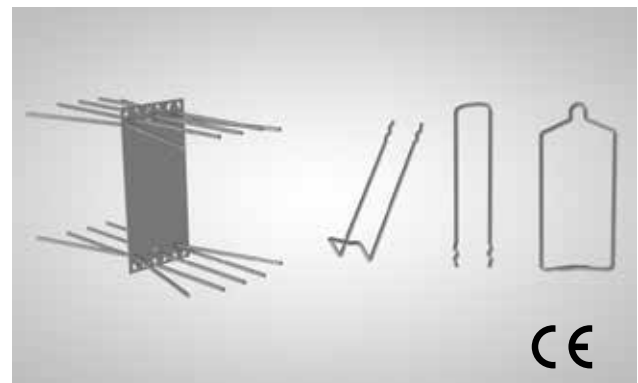
- › Easy and quick assembly at the precast plant
- › Technical mature system
- › Economical, even with very thick insulation layers
- › CE marking according to EN 1090
- › Building authority approved
- › Easy planning with the HALFEN software





HALFEN FA Flat anchor

If two flat anchors are used, the anchors should be symmetrical to the centre of gravity axis in each direction. A further flat anchor must be positioned as a horizontal anchor perpendicular to the main load bearing direction. Also with this system, when appropriately positioned, constraint forces caused by thermal expansion and warping in the facing layer can be minimized by the design of the Sandwich panel anchors.

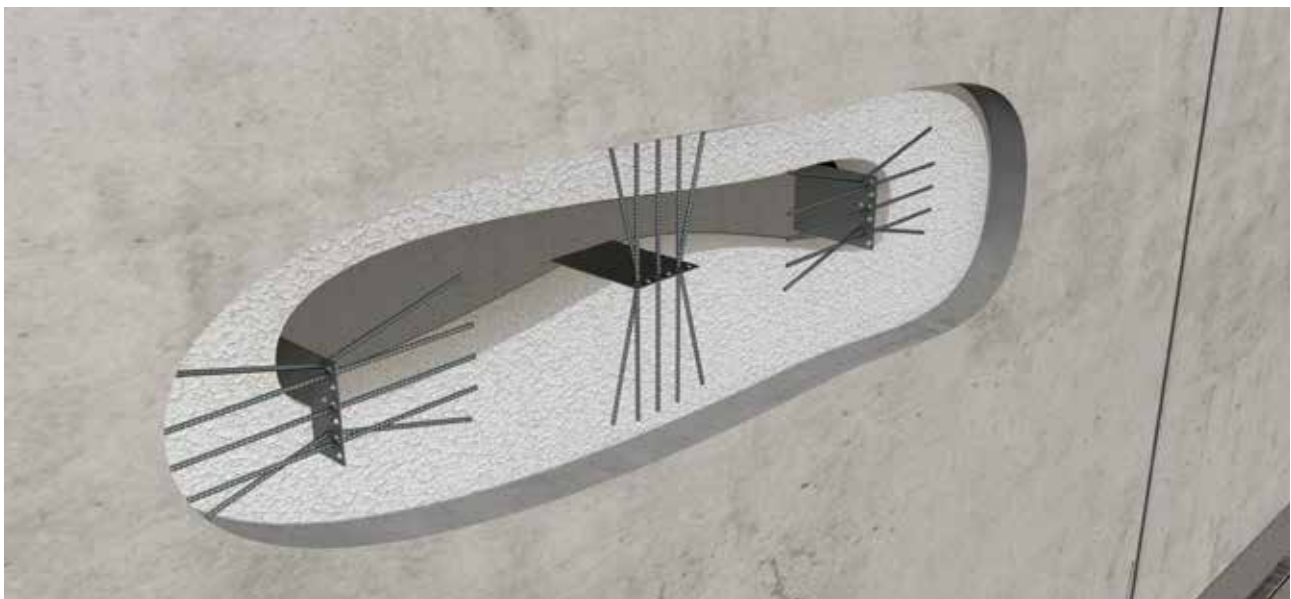


QUALITY FEATURES:

- > For higher loads
- > CE marking according to EN 1090
- > Building authority approved
- > Easy planning using HALFEN Software

High flexibility:

Both systems can also be combined with each other. This ensures optimum results.



HALFEN HVL

Precast connections



Quick and efficient assembly is a decisive factor to ensure cost-effectiveness when building with precast concrete elements. This is where cost-efficient and time-efficient high quality connections are important. The HALFEN HVL system components are manufactured to the highest standards to meet these criteria. In combination with previously cast-in HALFEN HTA-CE Channels you can install, for example, standard wall elements or sandwich panel elements to columns.

QUALITY FEATURES:

- › **Fast on-site installation**
- › **Precise adjustment**
- › **All components are hidden after final installation**



BRICKWORK CLADDING



SHAKESPEARE THEATER

Location: Gdańsk, Poland

Category:
Brickwork cladding

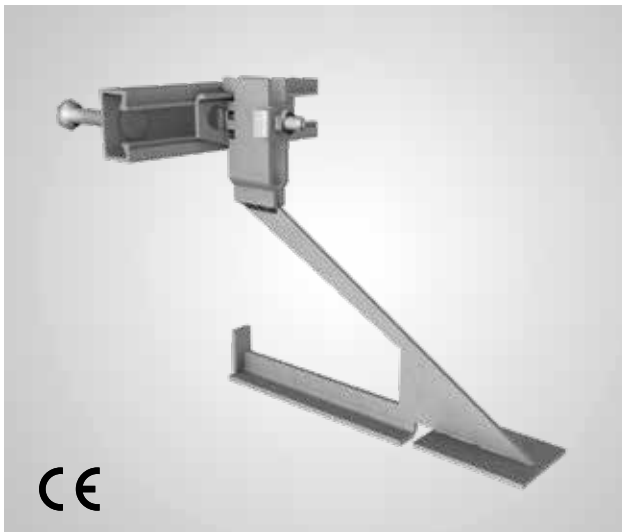
HALFEN Products:
Brickwork support brackets
LSA Cavity wall ties

Contemporary brickwork with HALFEN: **BRICKWORK CLADDING**

Brickwork claddings are visually attractive, economical, and durable, offering lasting protection against noise, heat or cold and other effects of weather. This makes brickwork façades more in demand than ever for new buildings and renovation projects.

HALFEN Anchoring solutions ensure durable, reliable brickwork structures. The brackets absorb the dead weight as well as the wind loads from the brickwork and scaffolding.

HALFEN HK5 **Brickwork support brackets**



The HK5 Bracket can be fixed to the main load structure using anchor channels or dowels. They transfer the dead load of the brickwork reliability into the main structure. The HK5 Bracket allows the façade height of brickwork to be increased. A wide range of bracket types make this method of support both economical and efficient.

With its new innovative design, heat transfer through the bracket is reduced to a minimum. Less insulation is required therefore saving costs.

QUALITY FEATURES:

- › Building authority approved
- › CE marking
- › Three load categories: 4.0 kN, 8.0 kN and 12.0 kN
- › ±20 mm height adjustment
- › Individual and efficient solutions for any installation situation
- › Very low thermal conductivity



HALFEN HTA-ES

Cast-in channels for fixing lintels in brickwork façades support system

Loads above large openings above windows must be supported using lintels. Precast lintel elements are high-quality alternatives to visible angles. These can be securely anchored to the HK5-S Console using a HTA-ES Cast-in channel. HALFEN T-bolts are used here to ensure efficient installation.



QUALITY FEATURES:

- › Adjustable fixing
- › Efficient, cost effective installation
- › Boltable connection; no welding required
- › Building authority approved
- › Invisible window lintel



HALFEN FSW

Precast support angle

The precast lintel bracket is also used to install lintels. The brackets are cast-in to the concrete at both ends of the lintel; this allows the lintel to be supported on the brickwork to the left and right of the opening. The advantage; no brackets are required to support the lintel and fewer expansion joints are required!



QUALITY FEATURES:

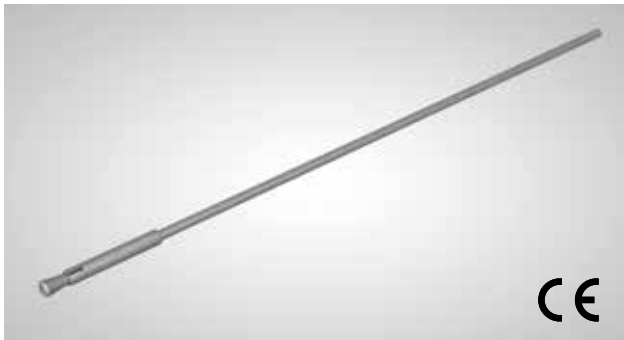
- › Does not require using consoles
- › Especially economical
- › Invisible window lintels



HALFEN LSA

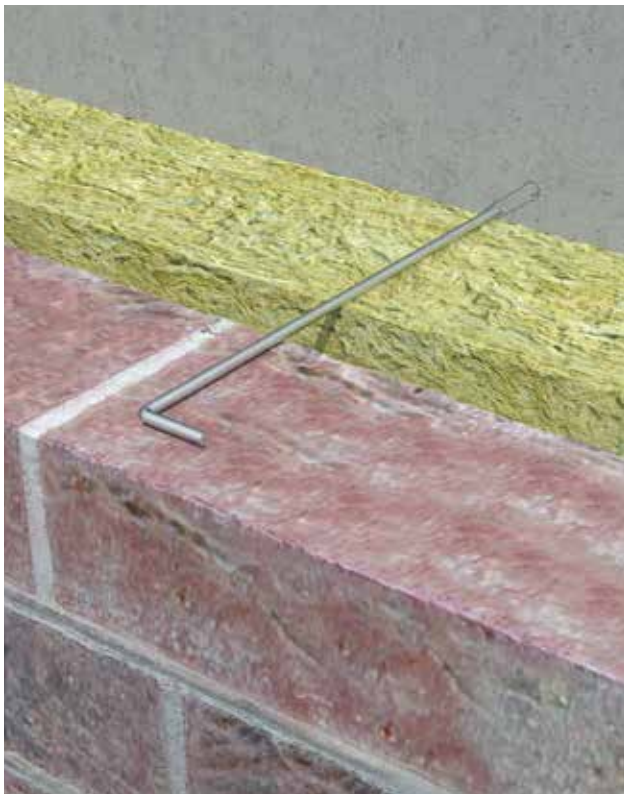
Brick ties

Brick tie anchors are used to reliably transfer wind loads acting on the brickwork cladding into the main structure. These tension/compression elements are securely anchored in both the supporting structure and the brickwork cladding. The HEA Brick tie anchor (see below) is particularly user-friendly and quick to install.



QUALITY FEATURES:

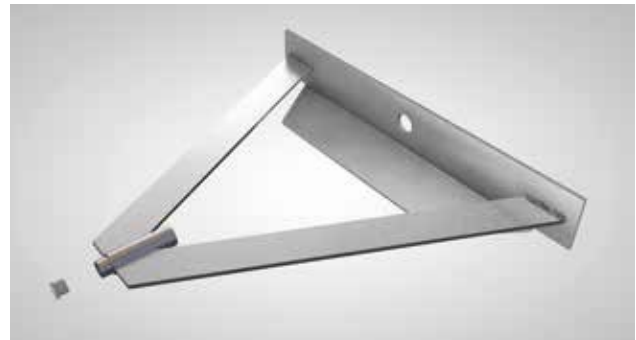
- › Building authority approved
- › CE marking
- › Easy and quick installation
- › Large projections possible
- › Stainless steel; therefore no corrosion



HALFEN HGA

Scaffold anchors

HGA-Q Scaffold anchors are suitable for anchoring scaffolding to ETICS façades and in suspended brickwork and concrete panel façades. The eyebolt is unscrewed and removed when the scaffolding anchor is not in use. The body of the scaffold anchor remains fixed in the façades and is invisible when not in use.



QUALITY FEATURES:

- › Quick installation using dowels
- › Verification according to DIN 4420-3 and DIN 4426
- › Connection elements are invisible in the finished façade
- › Corrosion protection; elements made of stainless steel



NATURAL STONE FAÇADES

EUROPA OVERHOEKS Residential building

Location: Amsterdam, Netherlands

Category:
Natural stone façades

HALFEN Products:
Body Anchors
UMA Support anchors



HALFEN REFERENCES!

Go to www.halfen.com for further reference projects, in which our products were used.
Scan the code!

Timeless beauty and durability: **NATURAL STONE FAÇADES**

Façades in representative buildings usually include high quality, durable natural stone or artificial stone blocks. Using HALFEN Natural stone anchor systems ensure the finished façade retains its high value.

The high demands for safe, reliable and sustainable façades are also met; for example, large projection for large insulation thicknesses and for durable, crack free façades.

HALFEN **Body Anchors**



HALFEN Body anchors are three-dimensional adjustable fixings made of stainless steel for façade elements made of natural or artificial stone. They are fixed to the main support structure using HALFEN Channels or approved HALFEN Dowels.

QUALITY FEATURES:

- › **Stainless steel natural stone anchor**
- › **Three-dimensional adjustable for the perfect façade**
- › **Quick installation using dowels or HALFEN Channels**
- › **For cantilevers of 30 to 300 mm**
- › **Maximal (vertical) loads of 1.300 N**



HALFEN UMA and UHA **Support anchor and restraint tie**

Grout-in anchors are a traditional method for fixing natural or artificial stone façade elements to the main brickwork or concrete support structure. The UMA Support anchor is suitable for transferring dead and wind loads. The UHA Restraint tie is used to transfer wind loads.



QUALITY FEATURES:

- › Type tested and LGA certified
- › Stainless steel, natural stone anchor
- › Three-dimensional adjustability
- › Round cross section allows application in both vertical and horizontal joints
- › Also suitable for use in brickwork



HALFEN SUK **Stainless steel support structure**

The SUK (Stainless steel support structure) consists of vertical channels installed between the inner and outer shell of a building to which the natural stone anchors are fixed. This means that the natural stone anchors do not have to be fixed directly to the load bearing wall and therefore the number of thermal bridges is reduced.



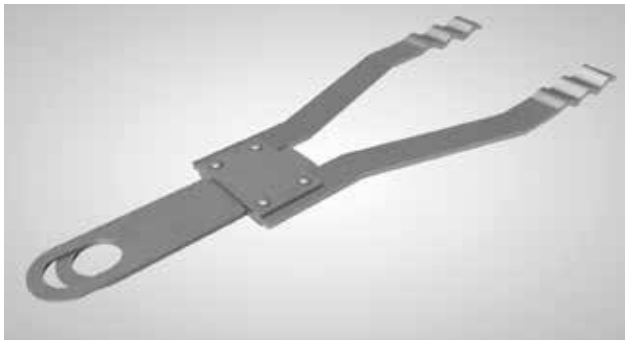
QUALITY FEATURES:

- › All components are made of stainless steel
- › Three-dimensional adjustability
- › Fast construction progress due to pre-assembly of the auxiliary support
- › Very large spacings possible
- › Bridging non-bearing substructures



HALFEN GE-HB and HGA-F Permanent scaffold anchor

GE-HB and HGA-F Scaffold anchors are suitable for anchoring scaffolding in the horizontal joint in suspended natural stone façade elements. After all work is completed the main body of the anchors remains invisible in the façade for later use.



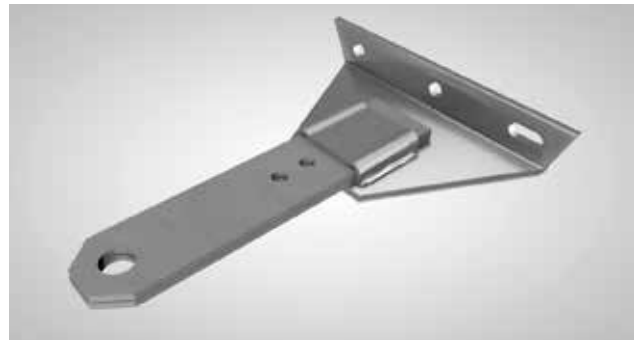
QUALITY FEATURES:

- › The scaffold anchor is grouted in (no dowel)
- › Also suitable for use in brickwork
- › Verified according to DIN 4420-3 and DIN 4426
- › Installed elements are invisible in the finished façade
- › Corrosion protection: Stainless steel body



The difference between the two anchor types:

The GE-HB is grouted in while the HGA-F is installed using dowels.



QUALITY FEATURES:

- › Effective installation using dowels
- › Verified according to DIN 4420-3 and DIN 4426
- › Installed elements are invisible in the finished façade
- › Corrosion protection: Stainless steel body



FAÇADES WITH A TENSION ROD SYSTEM

CIVIL JUSTICE CENTRE **Civil Justice Centre**

Location: Manchester, England

Category:
Tension rod systems, anchoring technology

HALFEN Products:
DETAN Tension rod system
HTA HALFEN Cast-in channels

Modern aesthetics with a distinct design: **FAÇADES WITH TENSION ROD SYSTEMS**

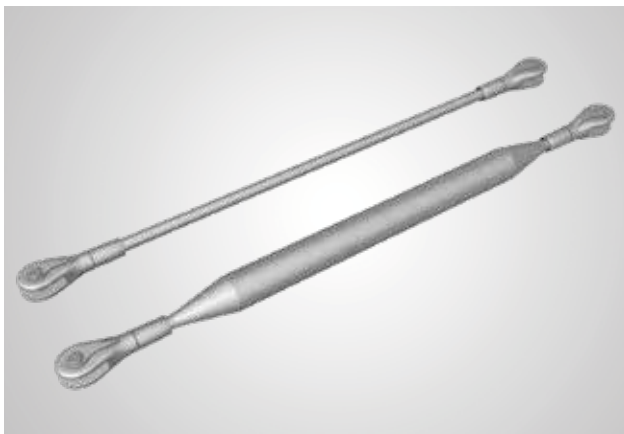
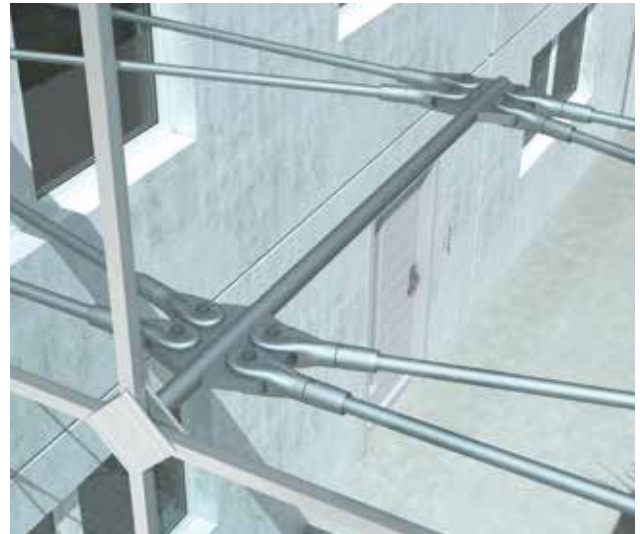
Modern architecture strives to be both practical and functional and also to create exceptional buildings. With the DETAN Rod system HALFEN provides an innovative product solution which meets the following requirements; maximum aesthetics, technological reliability, and quality.

This technical, mature system is easy to install and can be used for filigree load-bearing structures as well as in lightweight construction projects.

DETAN SYSTEM COMPONENTS

The DETAN Tension and compression rod system are a perfect match, both structurally and aesthetically. The DETAN Tension rod system can be used for all types of bracing, tensioning and suspension projects; there is no limit of possible applications

The system components are supplemented by a wide range of accessories such as anchor discs and cross couplers. This allows a wide range of design details to be realized.



QUALITY FEATURES:

Tension and compression rods

- › Project specific configuration for system diameters and system lengths
- › High steel load bearing capacity
- › Large selection of diameters
- › Available in hot dip-galvanized and in stainless steel
- › Hot dip-galvanized, brushed thread
- › Sealing set for maximum corrosion protection

Forks

- › Connection set consisting of counter-nuts, bolts, circlips safety clips, sealing sets, left/right-thread
- › High quality hot-dip galvanized or stainless steel fork and counter-nuts
- › Excellent, durable corrosion protection
- › High mechanical resistance
- › Pre-installed seal plugs on the screw thread
- › Thread colour coding:
Yellow = Right-hand thread,
Blue = Left-hand thread

CROSS BRACINGS

with the DETAN Tension rod system

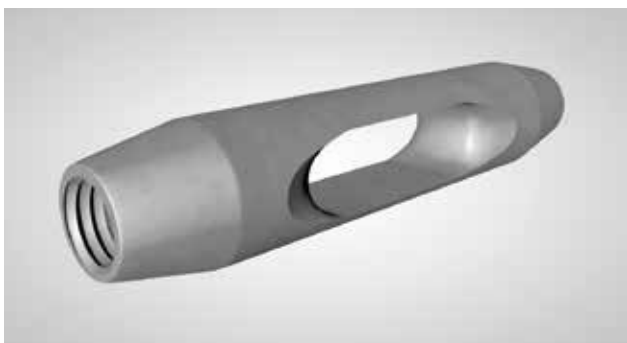
Create visually appealing projects with the anchor disc or the cross coupler. Whether for wind bracing or bracing in roof structures, DETAN bracing products can be used in a wide range of applications. The application possibilities for the DETAN system are numerous. DETAN can also be used as tension elements in glass façades or glass elevators projects. Horizontal and vertical bracing in truss framework elements is also possible.



QUALITY FEATURES:

Anchor disc

- › Individually, designed anchor discs with a minimal installation angle of 40°
- › Combines static requirements, individual design and architectural demands
- › Anchor discs made of standard steel or stainless steel are available on request
- › Up to 8 tension rods possible

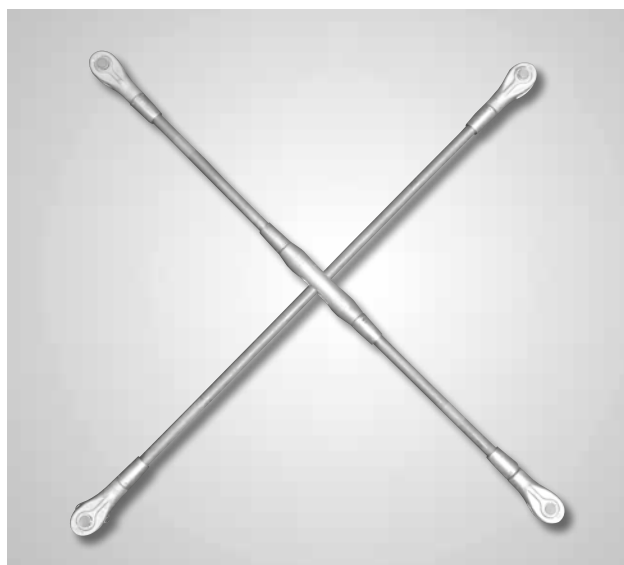


Cross coupler

- › Economical alternative to anchor discs with a minimum angle of 40°
- › Allows contactless crossing of tension rods in the same plane
- › Cross couplers in standard steel or stainless steel are available on request



Cross bracing with an anchor disc



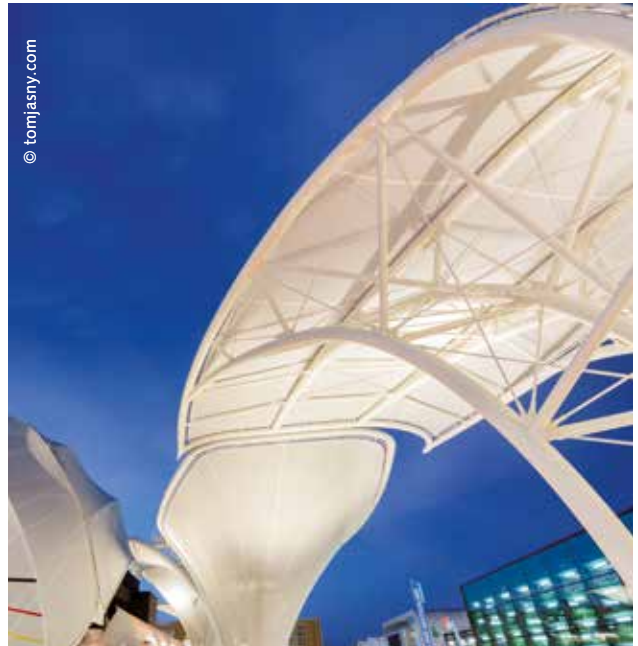
Cross bracing with a cross coupler

DETAN Tension rod system: REFERENCES



Student residence, Grønneviksøren, Bergen, Norway

Open and modern: The filigree DETAN Tension rods emphasize the open design of the building. HALFEN Anchor discs were selected for the bracings in this project.



EXPO 2015, World Expo, Milan, Italy

The HALFEN Tension and compression rod system used in the German pavilion meets the highest aesthetic, technology and quality standards. The project combines modern design and functionality and blends in harmoniously with the overall architectural concept.



Vilssteg pedestrian bridge, Marklkofen, Germany

The DETAN Tension rod system was used in this steel bridge. The rod system and the single pylon give the bridge a filigree appearance. Using extension couplers in this project allowed up to 30m long tension rods.



Yale University Cancer Hospital, New Haven, USA

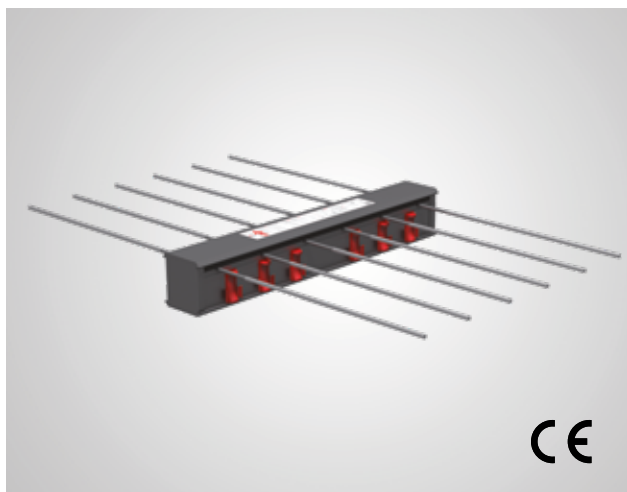
The splayed suspension for this canopy was realized using the DETAN Tension rod system. The extension couplers and the allowable adjustment lengths ensured a high degree of flexibility in the planning and execution of the steel structure.

FURTHER PRODUCT SOLUTIONS FOR BUILDING AND FAÇADES

For successful completion of your construction project, you need products you can depend on; products you can rely on. That's why professionals all over the world have, for decades, chosen HALFEN. Manufactured from high-quality materials in our regularly inspected production plants our products are the result of continuous optimization and development.

We offer a wide range of product solutions for your building projects.

Go for quality you can depend on
Quality "MADE BY HALFEN".



HIT-MVX symmetrical insulation element for cantilevered balconies

HALFEN HIT Insulated connections **Thermally insulating connections for balconies and building elements**

HIT Insulation connections are an innovative range of products for thermal separation of balcony, parapet and console elements.

- › **Insulation material thickness:** HIT-HP 80 mm, HIT-SP 120 mm
- › **Insulation material:** non-flammable mineral wool
- › **Fire protection classification** REI 120



HEK the practical solution for quick and economical connection of prefabricated concrete elements

HALFEN HEK **Precast elements connections**

The HEK Precast element connection is an innovative and versatile solution for quick and easy connection of reinforced concrete precast elements; to each other as well as to concrete building components already in-situ. The advantage of the system is the efficient assembly. The connection can be subject to load immediately after installation. There is no delay waiting for the connection to dry. This ensures faster construction.

- › **Transfer of tension and shear loads**
- › **Reliable, fast on-site installation thanks to a simple screw connection**
- › **Realization of all installation situations with one type of precast connector**

HALFEN HGB **Banister and handrail fixing**

HALFEN HGB Cast-in channels are used for fixing handrails to the thin end faces of balcony slabs. This installation method is accepted by today's building professionals as the best solution for this application.

- › **Adjustable anchorage**
- › **Can also be used in thin slab faces as low as 100 mm thick**
- › **Bolts instead of welding or using dowels**
- › **Reduction of construction time by effective pre-planning**
- › **All connected elements can be subsequently adjusted or if necessary easily replaced.**

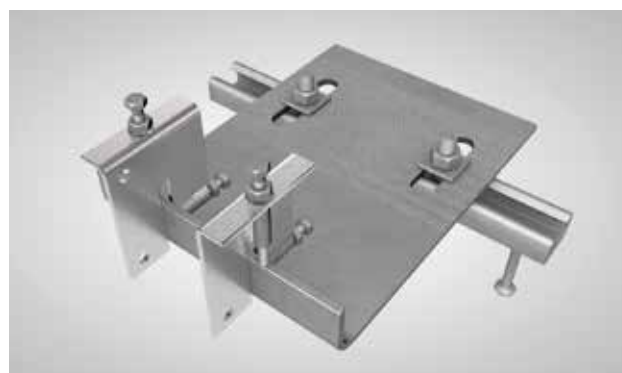


The HALFEN **HGB** Cast-in channel can be easily, reliably and statically securely cast into minimal thickness concrete slabs; minimum thickness 10 cm.

HALFEN HCW **Curtain Wall System**

A curtain wall façade is generally made of preassembled glass and metal framed modules. A single module usually consists of vertical and horizontal, load-bearing, metal elements with a glass infill. The modules are anchored to the supporting structure of the building to form the façade. This is where using HALFEN Cast-in channels and appropriate connection brackets prove their worth. The channels are cast into the front face or the top edge of the concrete slab in the load supporting structure. The façade modules are fitted using the brackets and HALFEN T-bolts to the cast-in channels. The brackets are freely adjustable to provide fast and cost-effective installation of the façade modules.

- › **Fast and reliable fixing with instant full load capacity**
- › **Installation requires no special tools and no power supply**
- › **Easy adjusting in up to three directions**
- › **High load capacity**
- › **Minimal edge spacing**



HCW HALFEN Cast-in channels and adjustable brackets for reliable and fast installation; can be subjected to load immediate. Easy to adjust, high load capacity. Suitable for curtain walls façades.



FIND OUT MORE ABOUT OUR EXTENSIVE PRODUCT RANGE!

You can find out more about our product solutions for Reinforcing and Anchoring technology, Transport anchor systems and Framing technology online at **www.halfen.com**.

Or contact our **Technical Support Team** for project specific enquiries
All contact details can be found on our website!

HALFEN

Your partner for BIM

HALFEN product and detailing plans created by our engineers for your projects are also provided as BIM (Building Information Modeling) CAD files to generate a 3D model of your building. Using BIM software for the design, construction process and maintenance of a building makes it much easier for architects, builders and suppliers to coordinate all aspects of a project. All information relevant to a building is made available in one place. Problems between various building disciplines can be quickly checked. All involved parties are able to cooperate more effectively resulting in real time and cost saving.



HALFEN provides CAD files for your BIM projects:



with the HALFEN PARTcommunity, the **CAD-Portal**

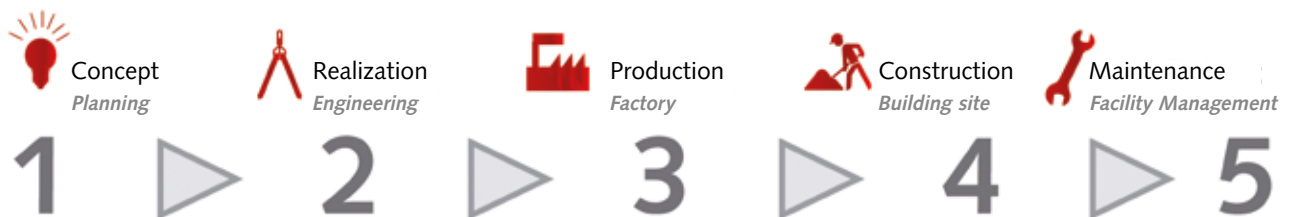
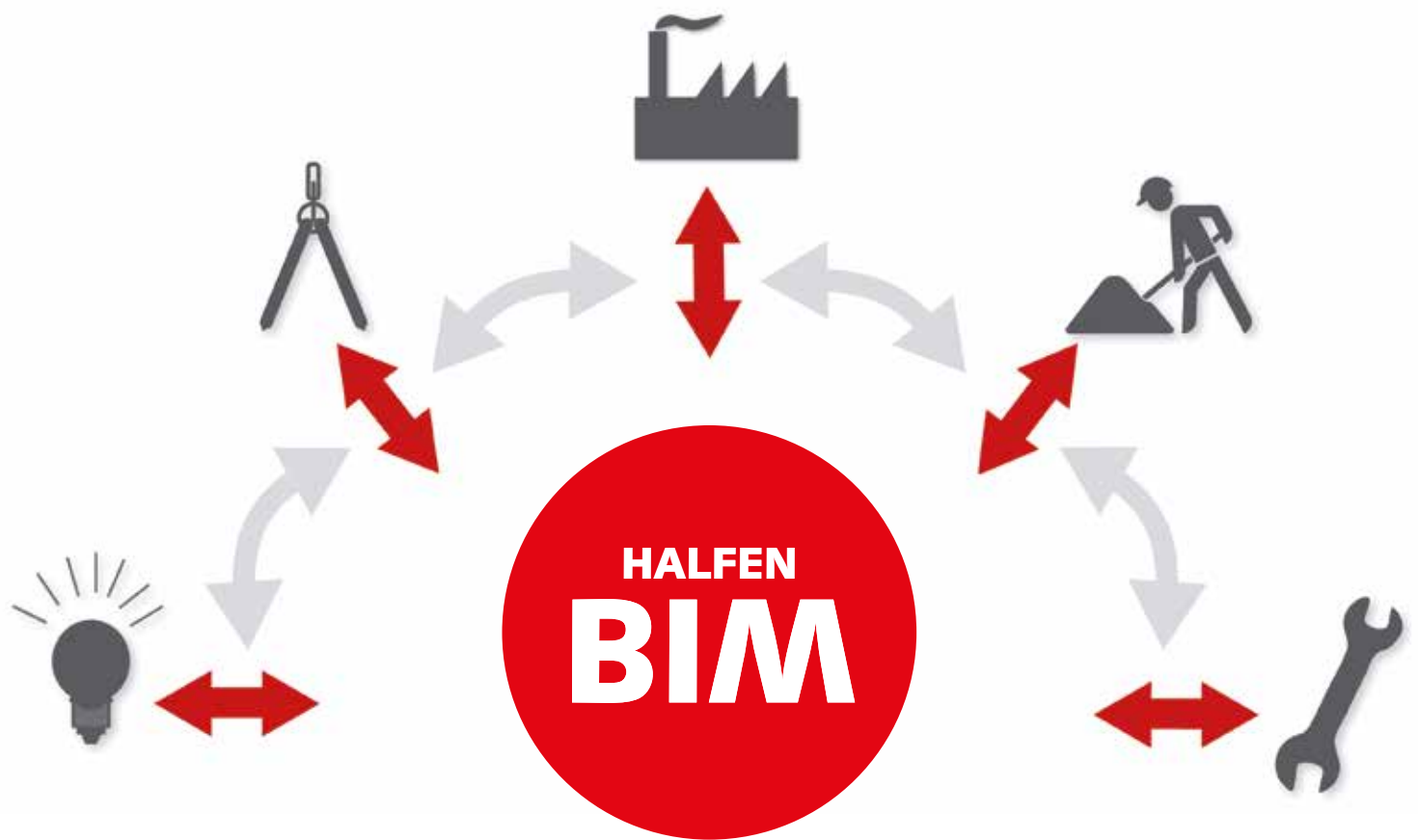


with the TEKLA® Software building component libraries



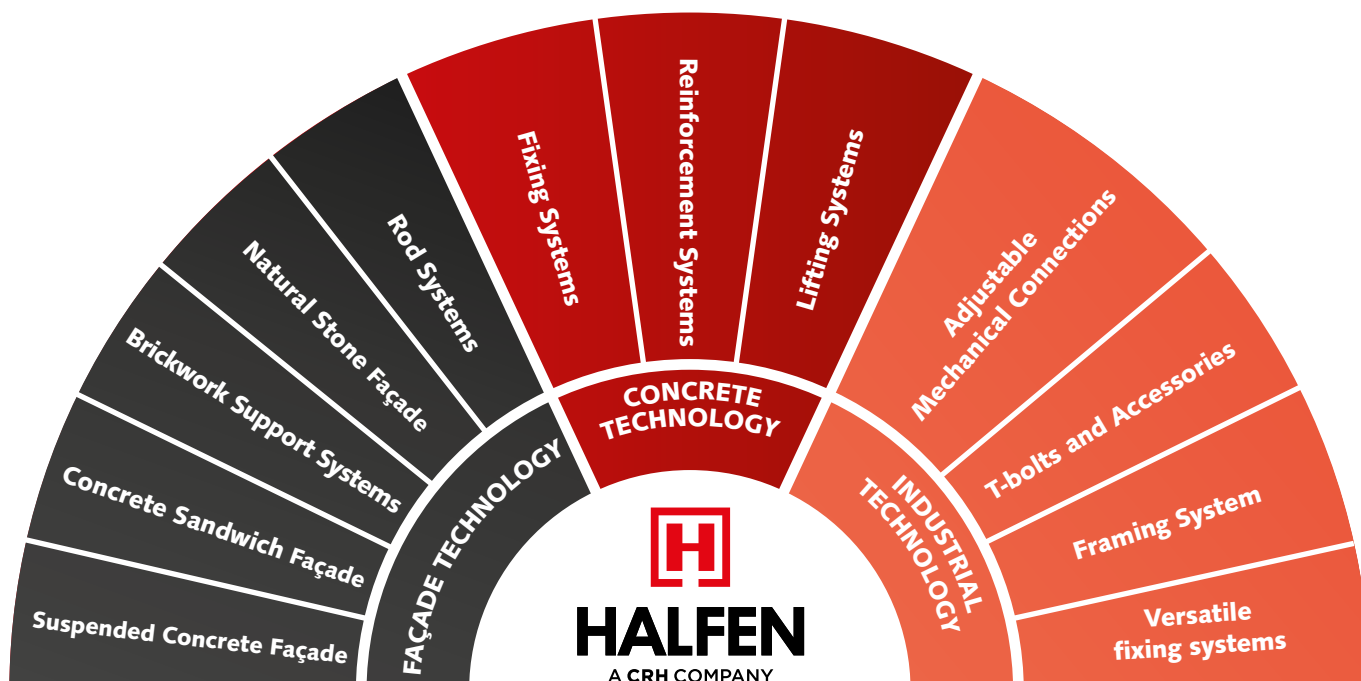
VISIT THE **HALFEN CAD-PORTAL:**

numerous, versatile and complimentary 2D and 3D files available for download!



YOUR **BENEFITS** WITH **BIM**:

- Only one database for the entire project
- All required information is immediately available
 - Simple file and data transfer
- Cost efficiency through optimal planning
 - More efficient planning



FAÇADE TECHNOLOGY

SUSPENDED CONCRETE FAÇADE

- › FPA Precast panel anchor
- › DS / HFV / SPV / WDI / ULZ Horizontal anchors
- › LD Adjustable restraint
- › BRA Parapet corbels
- › WPA Top fixing dowels

CONCRETE SANDWICH FAÇADE

- › SP-SPA Sandwich panel anchor
- › SP-FA Flat anchor

BRICKWORK SUPPORT SYSTEMS

- › HK5 / FK5 / KM Brickwork support
- › HW / KW / KWL Bracket
- › HK5-S / FSW / HSL Ties for precast lintel
- › LSA / HEA / HPV Cavity wall tie
- › HGA Scaffold anchor
- › ML / BL Wall ties

NATURAL STONE FAÇADE

- › DT / BA / DH Body anchors
- › UMA / UHA Grout-in anchors
- › SUK / UKB Sub-structure system

ROD SYSTEMS

- › DETAN-S Rod systems steel
- › DETAN-E Rod systems stainless steel
- › DETAN Compression rod systems

CONCRETE TECHNOLOGY

FIXING SYSTEMS

- › HTA / HZA HALFEN Cast-in Channels
- › HGB Balustrade fixing
- › HCW Curtain wall system
- › HTU Profiled sheets fixing channel
- › HKW Corner guard
- › DEMU T-FIXX® Fixing anchor / Bolt anchor
- › HLX Lift-Box
- › HB Mechanical anchor bolt systems
- › HB Chemical anchor bolt systems

REINFORCEMENT SYSTEMS

Physical structural products

- › HIT Balcony connection
- › HBB / HTT / HTF / HTPL Impact sound insulation units

Reinforcement connections

- › HBS-05 Screw connection
- › HUC Universal connection
- › MBT Reinforcement coupler
- › HEK Precast coupler
- › HLB Loop Box
- › HBT Rebend connection
- › HCC / HAB Column shoe
- › HSD Shear dowel
- › HBJ Betojuster

Reinforcement technology

- › HSC Stud Connector
- › HDB Anchor rail

LIFTING SYSTEMS

Quick coupling systems

- › DEHA KKT Spherical head lifting system
- › FRIMEDA TPA Lifting anchor system

Threaded lifting systems

- › HD Anchor system
- › DEHA HA Socket anchor system

INDUSTRIAL TECHNOLOGY

ADJUSTABLE MECHANICAL CONNECTIONS

- › HM / HL / HZM Mounting channel

T-BOLTS AND ACCESSORIES

- › HS / HSR / HZS HALFEN T-bolts
- › GWP Locking plate

FRAMING SYSTEM

- › POWERCLICK System 63
- › POWERCLICK System 41 + 22
- › HVT Frame connector
- › KON Cantilever
- › HRS Pipe clamp
- › HRG, HCS Pipe supports
- › RUK Pipe base
- › AHS Lift-off safety device

VERSATILE FIXING SYSTEMS

- › HFX HALFIX Versatile positioning system
- › HVG VERSOGRID Installation grid

HALFEN INTERNATIONAL

Serving the world from the heart of Europe

You can rely on **"MADE BY HALFEN"** quality in over 60 countries around the world.





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