BUILDING WITH PRECAST CONCRETE ELEMENTS:
HALFEN products and their application

Solutions and possibilities for cost effective building
ON THE SAFE SIDE:

When quality and performance make all the difference!

Building with precast elements has numerous benefits: starting with the higher quality through production in the controlled environment of a precast plant through to the time saved at the construction site. **Connection technology** also plays a fundamental role. Whether in transit or during installation the inserts mounting parts must remain safe to handle and be dependable. Just as important as reliable connections is the **reinforcement technology** in the precast concrete elements.

We at HALFEN know the extent of our **responsibility** in the reinforcement and connection technology industry. We are aware that **quality and performance** are decisive. This not only involves the construction project itself. It is also about ensuring the safety of all concerned on the construction site, and the subsequent occupants and visitors to the building. We incorporate all the acquired knowledge into the further development of our products.

This brochure illustrates **our product portfolio for the precast industry**. The standard HALFEN Channel can be found here and also many more other advanced products, specially developed and designed for reinforcement and connection of prefabricated columns, walls, façades, balconies, stairs and panel elements. We provide **practical solutions**, from the tried and tested standard solutions to project-specific custom products. Our dedicated and highly skilled engineers are continually working to improve and further develop **HALFEN** products.

The following pages illustrate numerous areas of applications where our products can be used. Go for quality you can rely on. **Quality “Made by HALFEN”**.
## Contents

### INTRODUCTION
- The HALFEN office building  Page 4
- The HALFEN industrial building  Page 6
- HALFEN - Your partner for BIM  Page 8

### HALFEN PRODUCTS AND THEIR APPLICATION

<table>
<thead>
<tr>
<th>Section</th>
<th>Products/Services</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FAÇADES</strong></td>
<td>Concrete façade</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Brick face façades</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Sandwich panel façades</td>
<td>14</td>
</tr>
<tr>
<td><strong>WALLS</strong></td>
<td>Adjusting and connecting wall elements</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Connecting precast wall elements</td>
<td>19</td>
</tr>
<tr>
<td><strong>STAIRS</strong></td>
<td>Impact sound insulation</td>
<td>20</td>
</tr>
<tr>
<td><strong>SLABS</strong></td>
<td>Insulating balcony/slab connections</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Balustrade fixings</td>
<td>22</td>
</tr>
<tr>
<td><strong>COLUMNS</strong></td>
<td>Erecting columns</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Corner guards and reinforcement</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>Adjusting columns</td>
<td>28</td>
</tr>
<tr>
<td><strong>BEAMS</strong></td>
<td>Shear load reinforcement</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Trapezoidal sheet fixing</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Shear dowel system</td>
<td>31</td>
</tr>
<tr>
<td><strong>MASONRY</strong></td>
<td>Connection to masonry</td>
<td>32</td>
</tr>
<tr>
<td><strong>UNIVERSAL</strong></td>
<td>Connection of precast elements</td>
<td>33</td>
</tr>
<tr>
<td><strong>TUNNEL</strong></td>
<td>Installation in tubbing segments</td>
<td>34</td>
</tr>
<tr>
<td><strong>TRANSPORT ANCHOR</strong></td>
<td>Solutions for every situation</td>
<td>36</td>
</tr>
<tr>
<td><strong>ABOUT HALFEN</strong></td>
<td>Quality that connects</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>HALFEN international</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>References</td>
<td>42</td>
</tr>
</tbody>
</table>
AN INTRODUCTION TO OUR PORTFOLIO
for the precast industry.

The precast concrete show house illustrates various examples of how HALFEN products can be used; from suspended concrete façade elements to impact sound insulation in stairs. The HALFEN office building shows only some of the possible applications for our products: Whether for civil engineering or in residential and commercial projects; HALFEN products are regularly also selected here.
1. BRA PARAPET CORBEL
2. HLB LOOP BOX
3. HIT-MVX ES INSULATED CONNECTION
   HGB BALUSTRADE FIXING
4. HBJ-W BETOJUSTER
   T-FIXX® SLEEVE ANCHOR
5. HCC COLUMN SHOE
   HAB ANCHOR BOLT
   HDB-F PUNCHING SHEAR REINFORCEMENT
6. HFV ANCHOR PIN
   DS SPACER BOLT
7. FPA FAÇADES PANEL ANCHOR
8. HIT-MVX OU/OD INSULATED CONNECTION
9. ISI IMPACT SOUND INSULATION
10. FSW PRECAST LINTEL BRACKET
11. HTA-ES CAST-IN CHANNEL FOR PRECAST LINTELS
KKT SPHERICAL HEAD LOCK COVERING
HBJ-S BETOJUSTER
HKW CORNER GUARD
HBS-05 SCREW CONNECTION
HSC STUD CONNECTOR
HDB-S SHEAR REINFORCEMENT
HUC UNIVERSAL CONNECTION
HTU CAST-IN CHANNEL
KKT SPHERICAL HEAD TRANSPORT ANCHOR
HSD SHEAR DOWEL SYSTEM
HMS BRICK TIE CHANNEL
ML BRICK TIE
SPA SANDWICH PANEL ANCHOR
MVA SLEEVE SANDWICH PANEL ANCHOR
FA FLAT ANCHOR
HEK PRECAST CONNECTOR
HVL PRECAST COUPLER

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WHAT’S BEHIND THE CONCRETE:
Where to find HALFEN products!

Planning and building modern, large commercial and manufacturing buildings without prefabricated concrete products is unimaginable. In the virtual production facility shown below, several of our products and their application are illustrated. These include reinforcement connections, transport and lifting anchors, and products used in the production of sandwich panel façades. HALFEN can also deliver the right solution for connections to brickwork and to steel structures. And this is only a fraction of possible applications for our products. Contact HALFEN for more detailed information about further areas of application.
HALFEN –
Your partner for BIM

All HALFEN products for the precast construction are available as BIM (Building Information Modeling) enabled CAD files suitable for generating 3D model of your project. BIM software for planning, realising and building maintenance significantly simplifies collaboration between architects, clients and contractors. All relevant information for a construction project is available on a single platform. Areas of possible conflicts between various trades can be quickly checked and easily solved. All parties involved in the process are able to react appropriately, saving time and costs.

HALFEN provides CAD files for your BIM applications:

HALFEN PARTcommunity: the **CAD-Portal**

**VISIT THE HALFEN CAD PORTAL:**
Free, international and versatile with numerous 2D and 3D downloadable files!
YOUR BENEFITS WITH BIM:

- Only one data base for the whole project
- All Information is instantly available
  - Simple exchange of data
- Cost efficient through optimal planning
  - Accelerated planning
FAÇADE
Prefect anchorage with HALFEN: THE CONCRETE FAÇADE

Simple elegance and sophisticated shapes: concrete façades provide architects and planners with numerous opportunities. The FPA façades panel anchors provide quick and easy anchoring of façade panels in all applications. Used in combination with horizontal anchorings such as dowel restraints and spacer bolts, the FPA façade panel anchors provide a reliable installation system for suspended concrete façades.

HALFEN FPA
Façade panel anchor

QUALITY CHARACTERISTICS:
› suitable for loads from 5.0–56 kN
› approved by German building authority
› adjustable in all directions
› simple and quick installation

HALFEN HFV and DS
Anchor pin and spacer bolt

QUALITY CHARACTERISTICS:
› available in various types
› HFV is available in two load ratings: 2.5 and 5.0 kN
› spacer bolt available in several lengths and diameters
Reliable fixings with the PARAPET CORBEL

HALFEN BRA Parapet corbel
The HALFEN Parapet corbel ensures a quick and reliable installation when fastening parapet elements to balconies or concrete slabs. The parapet corbel is fixed to a previously cast-in HALFEN Channel

QUALITY CHARACTERISTICS:
› cost effective application with 8 different profile sizes
› suitable for different insulation thicknesses
› high corrosion protection with stainless steel
› quick installation – easy adjusting!

HALFEN HKZ Restraint tie
The HKZ Restraint tie is used in combination with cast-in channels to securely fix precast elements. The restraint tie transfers tensile or compression loads.

QUALITY CHARACTERISTICS:
› efficient transfer of static loads through interlocking serration in bracket and counterplate
› three-dimensional adjustability if installed to HALFEN Cast-in channels
› galvanized or stainless steel

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Aesthetically appealing brickwork cladding remains among the most popular types of façade solutions. Precast technology can also be used to great effect here: for example, in a precast lintel above a window for efficient distribution of loads into the brickwork. HALFEN has two reliable products for use in this application: the HTA-ES Cast-in channel and the FSW Precast lintel bracket.

**HALFEN HTA-ES**
Cast-in channel for precast lintels

**HALFEN FSW**
Precast lintel bracket

**QUALITY CHARACTERISTICS:**
- cast-in HALFEN Channels
- provides adjustable anchorage
- quick, cost effective installation
- bolts instead of welding
- approved by German building authority

**QUALITY CHARACTERISTICS:**
- transfer of load from the lintel into the brickwork cladding
- simplified design of the precast lintel
- invisible lintel over window openings
Cost-effective solution: THE SANDWICH PANEL FAÇADE

Sandwich panel façades combine the load bearing structure elements facing in one element. The benefits are quick installation and the already integrated thermal insulation. Because of the high level of efficiency they are very often used in industrial and commercial projects.

HALFEN has two different systems to connect the facing layer of sandwich panel façades to the load supporting layer: the MVA Sleeve anchor, or the FA Flat anchor and the SPA Sandwich panel anchor. The anchors have an optimised thermal conductivity to ensure up-to-date thermal insulation.

**HALFEN SPA**
Sandwich panel anchor

**HALFEN MVA and FA**
Sleeve anchor and flat anchor

**QUALITY CHARACTERISTICS:**
- easy and quick installation in the precast plant
- technically mature system
- approved by German building authority
- easy planning with HALFEN software

**QUALITY CHARACTERISTICS:**
- for high loads
- CE marking according to EN 1090
- approved by German building authority
- easy planning with HALFEN software

**Maximum versatility:**
The two systems can also be combined to achieve the best possible result
Construction of a production building using a sandwich panel façade

RELIABLE FIXING
of wall elements to columns

Quick installation is one of the decisive factors for the cost effectiveness of building with precast concrete products. Cost and time-efficient connections are what counts here, with quality you can depend on! For example: using the HVL-System in combination with a HALFEN HTA-CE Cast-in channel ensures sandwich elements are securely fixed to columns.

HALFEN HVL
Precast element connections

QUALITY CHARACTERISTICS:
› quick on-site installation
› precise adjustment
› all components are covered after final installation

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HALFEN VIDEOS ONLINE!
Go to www.halfen.com for further product videos.
Scan the QR Code to go directly to a video and see the Betojuster in use.
Connect and adjust with HALFEN products
TIME EFFICIENT INSTALLATION OF WALLS

Optimal preparation is decisive for efficient installation of prefabricated wall elements. The quicker and more precisely walls can be adjusted and connected together, or fixed to a column, the shorter the time required for on-site installation will be. This has a positive effect on the economic viability of a project. HALFEN provides you with the required tried and tested products.

DEMU T-FIXX®
Sleeve anchor
The multi-use fixing has various applications, such as in the fixing of balcony railings or steel ladders and stairs.

HALFEN HBJ-W
Betojuster
The Betojuster is used for safe, precise and damage free adjustment of walls. The column is aligned with millimetre accuracy with little effort.

QUALITY CHARACTERISTICS:
› optimized range of products in various lengths and diameters
› especially suitable for close to edge fixings and in thin concrete elements
› corrosion protection: galvanized or in stainless steel
› European Technical Approval (ETA)

QUALITY CHARACTERISTICS:
› easy adjusting without a crane
› bolts – no special tools required
› adjustment range up to 35 mm
HALFEN HTA
The Original HALFEN Channel
HALFEN Channels are used in various applications. For example, walls can be connected to columns using an on-site steel bracket. HALFEN Cast-in channels provide the basis here. Precast elements are securely connected and easily adjusted with this method.

QUALITY CHARACTERISTICS:
› ideal basis for installation friendly fixings
› no damage to the main reinforcement
› European Technical Approval (ETA)
› optimal planning and reliable dimensioning with the HALFEN software

VERSATILE APPLICATION:
Find out more about the original HALFEN Channel, on our Website at:
www.halfen.com
HALFEN HLB
Loop Box

For efficient connection of prefabricated concrete elements; flexible wire loops in the case spring into the correct position when the cover is opened. Laborious rebending of rebar elements is therefore not necessary.

QUALITY CHARACTERISTICS:
› sturdy steel case with pre-cut nail holes
› approved by German building authority

Precast wall with a HLB Loop Box on the construction site

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HBB bi-Trapez-Box®
HTF Impact Sound Insulation element
HTPL Perimeter joint insulation
HTF-B Impact Sound Insulation element
HGB Balustrade fixing
(see also page 22)
Impact Sound Insulation: FOR QUIET STAIRS

Unwanted noise can significantly affect the quality of life in residential buildings or the level of performance in office buildings. Especially the noise resulting from footfall in insufficiently insulated stairs is a particular problem. HALFEN HBB bi-Trapeze-box® and the HTF and HTT Impact sound insulation provide reliable solutions for this problem.

HALFEN HTF
Impact Sound Insulation element

HALFEN HTPL
Perimeter joint insulation

HALFEN HTF-B
Impact Sound Insulation element

HALFEN HBB
bi-Trapez-Box®

HALFEN HTT
Impact Sound Insulation element

QUALITY CHARACTERISTICS:

› max. versatility with boxes for three slab heights: 16 cm, 18 cm or 20 cm thick.
› easy and quick installation
› fire protection tested: F90
› optional also with type tested support element

QUALITY CHARACTERISTICS:

› adaptable for all stair widths – element widths of 100 cm and 120 cm available: Customizable to any width, with additional insulation and load strips
› perforated markings allow elements to be quickly trimmed to required size

QUALITY CHARACTERISTICS:

› good sound insulation properties over a wide range of bearing pressures
› General building test certificate for the bi-Trapez-bearing

QUALITY CHARACTERISTICS:

› for connections of precast stairs to in-situ concrete landings
› type tested planning reliability
› fire protection properties up to fire resistance class F120
› for stair widths of 90 cm to 200 cm
› available in three 3 different load ratings
Energy efficiency and fire protection: THE THERMAL INSULATED CONNECTION FOR BALCONIES AND SLABS

HIT ISO-elements are used to thermally insulate external concrete elements from the main building. The special advantage of the HIT ISO-elements is however in its two-part, robust construction. This simplifies installation and transport of the element slab considerably.

HALFEN HIT-MVX ES Insulated element for cantilevered balconies

HIT-MVX ES was specially developed for use in semi-precast elements. The new insulated connection with double-symmetrical CSB bearings can be fitted irrespective of the slab or balcony orientation. This ensures maximum installation reliability.

HALFEN HGB Balustrade fixings

The HALFEN HGB Balustrade fixing is the optimal solution for fixing all kinds of steel railings. Thanks to the cast-in channels the balustrades can be easily and quickly adjusted. HALFEN HGB is also suitable for fixing staircase banisters or crowd control railings in stadiums, and to fix temporary fall protection during construction.

QUALITY CHARACTERISTICS:

→ European technical approval (ETA)
→ insulation thickness: 80 mm or 120 mm
→ insulation material: non-flammable mineral wool
→ fire resistance rating REI 120 (F120)
→ max. reliable installation: double-symmetrical CSB bearings
→ Robust construction: no damage during installation or during transport

QUALITY CHARACTERISTICS:

→ approved by German building authority (DIBt Berlin)
→ no dowel, no welding
→ simple adjustment of balustrade
→ highest level of safety and strong bond with cast-in elements
→ quick installation reduces time for construction

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HALFEN HIT-MVX OU/OD
Insulated connection for connecting to beams

HIT-MVX OU/OD achieves a reliable and thermally insulated connection of slabs to beams or thin walls by using anchor heads instead of complex bent rebars. The anchor heads are characterized by the higher load capacity in relation to the very short anchorage length. A further benefit with using head bolts: installation in the precast plant and the transport of the slabs is much easier because of the compact design of this HIT.

QUALITY CHARACTERISTICS:
- extremely short anchorage
- high load capacity with compact dimensions
- ideal for offsets, thin walls or beams from 17.5 cm
- simple installation and shipping
- fire resistance rating REI 120 (F120)

DISCOVER THE HIT!
Supported or through slabs, parapets and corbels:
The HIT Insulated connection provides the right solution for every application
Further information can be found at www.halfen.com
They are, literally, the pillars of each building: columns. HALFEN products ensure that the columns safely and reliably fulfil their central function in the building structure. We also provide solutions that are particularly economical, in assembly and during erection.

**HALFEN HDB-F**

**Punching shear reinforcement**

The HALFEN HDB Punching shear reinforcement is designed to prevent shear punching around columns in slabs. The HDB-F Punching shear reinforcement is specially designed for use in semi-precast slabs.

**QUALITY CHARACTERISTICS:**

- removable shear rails and welded-on spacer
- time efficient installation in semi-precast slabs
- European Technical Approval (ETA)
- bolt diameters: 10-25 mm

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**HALFEN HCC AND HAB**

**Column shoe and anchor bolts**

Column shoes are cast into concrete columns at the precast factory. The columns are then erected, aligned and fixed with nuts to the on-site anchor bolts, which are previously cast into the concrete foundation slab. This ensures efficient installation and eliminates the need for auxiliary bracings.

**QUALITY CHARACTERISTICS:**

- system for cost effective erection of columns
- efficient solution for connection to foundations or for connecting columns
- simple adjustment
Go to www.halfen.com to see how the HCC Column shoe is installed and the column is erected.
Corner protection and reinforcement: COLUMNS IN A INDUSTRIAL BUILDING

Industrial buildings are usually constructed with precast concrete products because of the large heights and wide spans involved, and also because of the short on-site installation time. Precast columns are typical components for industrial building construction. HALFEN provides proven innovative product solutions for the production and installation of precast columns.

HALFEN HSC Stud Connector

QUALITY CHARACTERISTICS:
- approved by German building authority
- for tension reinforcement in corbels and frame nodes
- 100% anchorage with forged anchor heads
- time efficient installation and high application reliability with simple reinforcement layout

HALFEN HUC Universal Connection

QUALITY CHARACTERISTICS:
- HSC-B Steel connection for transfer of normal and shear loads and bending moments
- easy installation with bolt connection: no welding required
- higher durability by optional corrosion protection
- approved by German building authority

INSTALLATION AND ASSEMBLY

See the HUC Universal connection as it is used in the construction of the stadium in Erfurt, Germany. Simply scan the QR-Code and watch the video at www.halfen.com

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HALFEN HKW
Corner protection

The HKW Corner guard is used to protect the corners and edges of columns and walls in large buildings, garages or industrial buildings.

QUALITY CHARACTERISTICS:
› fits exactly to the formwork – no concrete seepage
› U-shaped reinforced anchor: optimal anchorage and simple installation of the corner reinforcement
› optimal corrosion protection: hot dip galvanized steel or stainless steel

HALFEN HBS-05
Screw connection

The HALFEN HBS-05 Screw connection is an optimal solution for all kinds of connections of reinforcement bars. All HBS-05 Screw couplers can be combined as necessary.

QUALITY CHARACTERISTICS:
› approved by German building authority
› very versatile due to wide product range
› no torque wrench required: visual control is enough
› HBS-05-Seismic: highest ductility: therefore suitable for earthquake zones
› meets the requirements of international standards

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HALFEN HBT
Rebend connection

HBT Rebend connection for economical connection of precast elements is available in 57 possible combinations of stirrup types and profile widths. Or as standard types for the most for the most common applications.

QUALITY CHARACTERISTICS:
› approved by German building authority
› sturdy steel case and steel lid keep its shape during concreting
› reduced casing height - ideal for precast concrete elements with minimal concrete cover
› standard lengths: 1.25 m and 0.80 m – further lengths on request

HALFEN HBJ-S
Betojuster

The Betojuster HBJ-S is used for accurate and damage free adjustment of columns. Installation is possible without any special tools: The column is aligned with millimetre accuracy by using bolts for adjustment.

QUALITY CHARACTERISTICS:
› optimal crane use: adjustment possible without using a crane
› damage free adjusting due to bolts
› minimal effort required
› adjustable up to 100 mm
FROM PLANT TO SITE:
Scan the QR-Code to go directly to a video and see the Betojuster in use. www.halfen.com
Beams, and girders
WHEN SHEAR LOADS PREVAIL

Beams and girders distribute and absorb shear forces. HALFEN also provides practical solutions here: for example the HDB-S Shear rail as shear reinforcement in the beam or the HTU fixing channel for fixing trapezoidal metal sheeting. HTU channels are cast into roof trusses or columns. The trapezoidal sheets are secured with self-drilling or setting screws to the HTU channel.

HALFEN HDB-S
Shear load reinforcement

QUALITY CHARACTERISTICS:
› bolt diameters 10-25 mm
› system elements with 2 or 3 double head anchors
› complete elements with 4-10 double head anchors
› spacers for 15-40 mm concrete cover available
› approved by German building authority

HALFEN HTU
Fixing channel

QUALITY CHARACTERISTICS:
› approved by German building authority
› simple installation, cost effective assembly
› no damage to the concrete
› loads possible in all directions
› hot dip galvanized steel oder stainless steel
HALFEN HSD
SHEAR DOWEL SYSTEM

HALFEN HSD-CRET heavy-duty shear dowels transfer shear loads in connection joints and prevent irregular settlement or offsets in connection joints. Depending on the type of system they allow longitudinal movement or both lateral and longitudinal movement. The HALFEN HSD-CRET Heavy-duty shear dowel is used for extremely large shear loads.

QUALITY CHARACTERISTICS:
- Time efficient due to simple formwork and installation
- System solution for fire protection
- HSD-CRET Heavy duty dowel – approved by German building authority

Fixed to the support surface of a column

HSD-CRET Sleeve with fixing magnets for fixation to steel formwork

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Tried and tested economical system for
CONNECTION TO BRICKWORK

HALFEN ML Brick ties are used for fixing brickwork, in-fill panels, partition walls or claddings to concrete walls or to precast columns. The HALFEN Brick ties are inserted into the channels at the recommended positions while brickwork is in progress. The ties are turned 90 degrees and pressed down into the mortar in the horizontal joint. The brick ties are able to slide vertically in the wall connector channels. This greatly reduces cracks in the brickwork.

HALFEN HMS
Brick tie channel

HALFEN ML
Brick ties

QUALITY CHARACTERISTICS:
› tried and tested fixing system
› cutouts in the anchors ensure otimal bond
› the brick ties are free to slide to avoid settlement cracks

› the wall channel has a Haropor® foam filling to reliably prevent concrete seepage
› corrosion protection: galvanized or stainless steel

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The innovation für dry, immediately loadable connections: HEK – THE PRECAST ELEMENT CONNECTION

The HEK Precast element coupler was developed especially for the requirements of the precast industry. The innovative system provides a dry, immediately loadable connection of precast concrete elements in a matter of minutes: no delays caused by waiting for connection grout to dry. The two precast elements are simply and reliably bolted together. No special tools or other auxiliary methods are required. The appropriate anchor can be chosen depending on the component: HEK can for example be used in combination with the DEMU T-FIXX®, the DEMU Bolt anchor or the DEMU Rod anchor. This provides numerous possible applications, whether in civil engineering or in residential and commercial projects.

QUALITY CHARACTERISTICS:

› solution for quick and cost efficient installation
› adjustable to account for inaccuracies during installation
› immediately loadable, dry connection of precast concrete elements
› universal use for numerous applications and connection situations

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HALFEN products in tunnel projects:
INSTALLATION IN TUBBING SEGMENTS

HALFEN Channels are the ideal base for installation friendly and adjustable fixtures in tunnels. For example, anchor channels are used for fixing pipes, cable ducts, or signalling equipment to the tubing elements in tunnels. The HTA-CS HALFEN Curved channels can be used in concrete pipes, for example, for utility shafts, curved walls, and sewage treatment plants.

HALFEN HTA-CS
Curved Solution

HALFEN HFK
Fixing cone

QUALITY CHARACTERISTICS:
› Ideal for installation friendly and adjustable fixing in tubbings
› corrosion protection stainless steel A4

QUALITY CHARACTERISTICS:
› For simple, quick and adjustable fixing of anchor channels in tubing elements
› Fixing and removal only from the top of the formwork
HALFEN has a suitable lifting anchor system for any application: Whether for pipes, thin sandwich panels, slender columns, or for use at low temperatures. With our transport anchor systems you benefit from the highest quality materials, quality production and guaranteed product reliability.

**DEHA KKT**
Spherical head anchor

**QUALITY CHARACTERISTICS:**
- load classes 1,3 - 45,0
- wide variety for all kinds of precast elements
- attached in seconds – safe, quick, simple
FRIMEDA TPA
Transport anchor

QUALITY CHARACTERISTICS:
› load classes 1,25-26,0
› numerous anchor types available
› tilting anchor to prevent concrete damage

DEHA HD
Sleeve anchor

QUALITY CHARACTERISTICS:
› load classes 1,3-25,0
› light weight, yet robust lifting anchor
› especially suitable for thin walls

DEHA KKT
HALFEN Spherical head lock cover

The HALFEN Spherical head lock covering is installed into precast concrete elements, which will subsequently be lifted again, for example: cover slabs or shaft covers.

QUALITY CHARACTERISTICS:
› load classes 1,3-5,0
› complete 6-part set
› stainless steel corrosion protection
› suitable for vehicle loads

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When it comes to product solutions for construction projects, you need products that are dependable, products you can rely on. That’s why for decades professionals have chosen HALFEN. Our products made from high quality materials in our regularly monitored factories are the result of continuous optimization and development. During this process we generate a wide spectrum of product solutions for your construction projects.

Go for quality you can depend on: Quality “MADE BY HALFEN”.

**HALFIX** – Variable positioning system for quick adaptation to new requirements.

**HTA** – The intelligent alternative to drilling and welding - for almost of any type of connection!

**HLX** – The Lift-Box: installation aid for elevator construction and maintenance work in shafts.

**HK5** – The latest generation of brickwork support brackets.
FAÇADE TECHNOLOGY

SUSPENDED CONCRETE FAÇADES
- Panels anchors for façades: FPA
- Horizontal anchors: DS, HKZ, UUZ, SPV, HVL, WDK, WDI, HFV
- Adjustable restraints: LD
- Parapet corbel: BRA
- Angle plate anchor: WPA

CONCRETE-SANDWICH FAÇADE
- Sandwich panel anchors: SP-SPA
- Sleeve sandwich panel anchors: SP-MVA
- Flat anchors: SP-FA

BRICKWORK SUPPORT SYSTEMS
- Brickwork support: HK5, KM
- Brackets: HW, KW, KWL
- Ties for precast lintel: HK5-S, FSW, HSL
- Cavity wall ties: LSA, HEA, HPV
- Scaffold anchor: HGA
- Wall ties: ML, BL

NATURAL STONE FAÇADE
- Body anchor: HRM, HRC, DT, BA, DH
- Grout-in anchors: UMA, UHA
- Sub-structure systems: SUK, UKB

ROD SYSTEMS
- DETAN Rod system: S-460
- DETAN Rod system stainless steel
- DETAN Compression rod system

CONCRETE TECHNOLOGY

FIXING SYSTEMS
- HALFEN Cast-in Channels: HTA, HZA
- Balustrade fixings: HGB
- Profiled sheets fixing channels: HTU
- Corner guards: HKW
- DEMU Fixing anchors: T-FIXX®, Bolt anchor
- Lift-Box: HLX
- Chemical anchor bolt systems
- Mechanical heavy duty anchor systems

REINFORCEMENT SYSTEMS
Physical structural products
- Balcony connection: HIT
- Impact sound insulation units: HBB, HTT, HTF, HTPL

Reinforcement connections
- Screw connections: HBS-05
- Universal connection: HUC
- Stud Connector: HSC
- Reinforcement coupler: MBT
- Precast Coupler: HCB
- Loop Box: HLB
- Rebend connections: HBT

Reinforcement technology
- Anchor rail: HDB
- Column shoe: HCC, HAB
- Betojuster: HBJ
- Shear dowel: HSD

LIFTING SYSTEMS
Quick coupling systems
- DEHA Spherical head lifting system: KKT
- FRIMEDA Lifting anchor system: TPA

Threaded lifting systems
- HD Anchor: HD
- Fixing anchors: HA

FRAMING SYSTEMS

VERSATILE BOLT CONNECTIONS AND FRAME CONSTRUCTION
- Framing channels: HM, HL, HZM, HZL
- Connecting parts: HVT
- Powerclick system HCS
- Cantilevers: KON
- Pipe clamps: HRS
- Pipe supports: HRG, HCS
- Pipe base: RUK
- Lift-off safety device: AHS

BOLTS AND ACCESSORIES
- HALFEN Bolts: HS, HSR, HZS
- Threaded plates: GWP
- Timber anchor: HNA, HSF

POWERCLICK FRAMING SYSTEM HCS
- System 63
- System 41 + 22

VERSATILE FIXING SYSTEM
- HALFEN: HFX
ALWAYS AT YOUR SERVICE

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www.halfen.com

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Serving the world from the heart of Europe

You can now rely on the "MADE BY HALFEN" quality in over 60 countries worldwide
KOPERNIKUS
Science centre
Location:
Warsaw, Poland
Category:
Reinforcement technology
HALFEN Product:
HBT Rebend connections
BMUB
(Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety)

Location:
Berlin, Germany

Category:
Concrete façade

HALFEN Product:
FPA Façade panel anchor
CITYLIFE MILANO
Residential Complex

Location:
Milan, Italy

Category:
Reinforcement technology

HALFEN Product:
HDB Shear bars
STORMEN
Kulturkvarteret

Location: Bodo, Norway

Category: Concrete façade, lifting anchor systems

HALFEN Produkte:
TPA Lifting anchor system
SPA Sandwich panel anchor
FPA Façade panel anchor
STADE JEAN-BOUIN

Location:
Paris, France

Category:
Concrete façades

HALFEN Product:
FPA Façade panel anchor
ROBINIGSTRASSE

Location:
Salzburg, Austria

Category:
Reinforcement technology

HALFEN Product:
HIT Insulated connections