HALFEN FIXING TECHNOLOGY
lifts and elevators

With HALFEN to the very top:
product application
SAFETY
you can rely on!

Not content on just being good, but always striving to be better; we at HALFEN have continuously developed and optimized our anchoring, reinforcement and framing technology products. Success when using HALFEN products proves we are on the right track. When it comes to connections for the construction industry, one thing is especially important: Quality!

This applies especially to elevator construction; safe and adjustable fixtures in the lift shaft for installation and during maintenance are essential; and vital for personal safety. Good that you can rely on tried and tested HALFEN quality; our products for elevator construction ensure your projects stay safe!

This brochure illustrates applications of HALFEN Cast-in and framing channels as well as the HALFEN Lift-Box in elevator construction. We show how you can optimize planning your project with effective use of HALFEN Products!

PAGE

Contents

WHAT’S IN A LIFT SHAFT?

YOUR ADVANTAGES WITH HALFEN

CAST-IN CHANNELS AND BOLTS

FRAMING CHANNELS AND BOLTS

ATTACHMENT POINTS

HALFEN – YOUR BIM PARTNER

ABOUT HALFEN
Did you know?
Our products can be used in concrete, masonry and steel shafts.
WHAT’S IN A LIFT SHAFT?

Safe and reliable anchorage is essential for installation or maintenance work in lift shafts: Quality is also decisive. You won’t just find our product portfolio here, but also see typical applications of where our products are used in lift shafts.

HALFEN HLX-Lift-Box – Cast into the concrete slab at the top of a shaft

The attachment point is used to secure loads during initial installation and subsequent maintenance work

Cast-in channels and bolts

Cast-in channels to fix guide rails, doors and attachment points

Framing channels and bolts

Framing channels for welding or dowel and bolt fixing; for connection of steel components such as lift guide rails, handrails, guard rails, and control units.

© 2019 HALFEN · Application in elevator construction · www.halfen.com
From planning to the finished lift: 
YOUR ADVANTAGES WITH HALFEN

› Pre-planning with Cast-in channels for quick installation
› Quick, efficient installation reduces costs
› Dust free installation, no on-site drilling or doweling required
› Safety against fatigue related failure
› High quality products using high quality steel
Cast-in channels

- Efficient installation and adjustment
- Cost effective, economic solution
- Reliable quality
- Versatile application
- Reliable connection
OVERVIEW:

HALFEN Cast-in channels

With HALFEN Cast-in channels you can select the channel profile as required. Hot-rolled HALFEN Channel, either toothed or smooth, are suitable for dynamic loads, and cold-rolled channels are the right choice for pre-dominantly static loads and for lower demands. The HALFEN Software can dimension all channels for any situation in advance to facilitate planning and to shorten overall construction time and therefore reduce costs.

The solution for high loads: Hot-rolled Cast-in channels for guide rails

HALFEN Channels HTA-CE hot-rolled, smooth

HALFEN Channels HZA hot-rolled, toothed
Facilitates planning due to load distribution in all directions (3D load distribution)

HALFEN Bolts for Cast-in channels

A combination of channels and the tried and tested HALFEN Bolts provide maximum reliability

HALFEN HS Bolts
Suitable for all smooth framing channels. For loads in two directions.

HALFEN HZS Bolts
Suitable for toothed framing channels. Positive load transfer also in channel longitudinal direction.

What does HTA-CE involve?

HTA-CE signifies that the channel is CE marked. HALFEN as the manufacturer declares, that it is responsible for the conformity of the product with the (DoP – Declaration of performance), and that the specified performance and compliance with all relevant European legislation has been applied.
## HOT-ROLLED CAST-IN CHANNELS: KEY VALUES HTA-CE

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Attachment points</th>
<th>Guide rail fixing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profile</td>
<td>HTA-CE 55/42</td>
<td>NEW</td>
</tr>
<tr>
<td></td>
<td>HTA-CE 52/34</td>
<td></td>
</tr>
<tr>
<td>Material</td>
<td>Steel A4</td>
<td></td>
</tr>
<tr>
<td>Bolts</td>
<td>HS 50/30</td>
<td></td>
</tr>
<tr>
<td>Thread</td>
<td>M10 – M20</td>
<td></td>
</tr>
<tr>
<td>$N_{eq}[kN] / V_{eq}[kN]$</td>
<td>44.4/61.1</td>
<td></td>
</tr>
<tr>
<td>Suit. for fatigue related tension loads.</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Attachment points</th>
<th>Guide rail fixing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profile</td>
<td>HTA-CE 50/30P</td>
<td>NEW</td>
</tr>
<tr>
<td></td>
<td>HTA-CE 50/30</td>
<td></td>
</tr>
<tr>
<td>Material</td>
<td>Steel</td>
<td></td>
</tr>
<tr>
<td>Bolts</td>
<td>HS 50/30</td>
<td></td>
</tr>
<tr>
<td>Thread</td>
<td>M10 – M16</td>
<td></td>
</tr>
<tr>
<td>$N_{eq}[kN] / V_{eq}[kN]$</td>
<td>16.1/19.4</td>
<td></td>
</tr>
<tr>
<td>Suit. for fatigue related tension loads.</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Attachment points</th>
<th>Guide rail fixing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profile</td>
<td>HTA-CE 40/22P</td>
<td>NEW</td>
</tr>
<tr>
<td></td>
<td>HTA-CE 40/22</td>
<td></td>
</tr>
<tr>
<td>Material</td>
<td>Steel</td>
<td></td>
</tr>
<tr>
<td>Bolts</td>
<td>HS 40/22</td>
<td></td>
</tr>
<tr>
<td>Thread</td>
<td>M10 – M16</td>
<td></td>
</tr>
<tr>
<td>$N_{eq}[kN] / V_{eq}[kN]$</td>
<td>11.1/19.4</td>
<td></td>
</tr>
<tr>
<td>Suit. for fatigue related tension loads.</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

## THE HALFEN CHANNELS WITH EXTRA LOAD CAPACITY

### Features overview:
- CE marking with European Technical Assessment
- hot-rolled HALFEN Channels
- up to 45% higher load capacities
- suitable for dynamic loads
- high fire resistance
- planning with HALFEN Software
### HOT-ROLLED TOOTHED CAST-IN CHANNELS: KEY VALUES HZA

<table>
<thead>
<tr>
<th>Profile</th>
<th>Dimensions HALFEN HZA Channels</th>
<th>Suitable for fatigue related tension loads.</th>
</tr>
</thead>
<tbody>
<tr>
<td>HZA 64/44 DYNAGRIP</td>
<td><img src="image1" alt="Profile Image" /></td>
<td>✔️</td>
</tr>
<tr>
<td>HZA 53/34 DYNAGRIP</td>
<td><img src="image2" alt="Profile Image" /></td>
<td>✔️</td>
</tr>
<tr>
<td>HZA 38/23 DYNAGRIP</td>
<td><img src="image3" alt="Profile Image" /></td>
<td>✔️</td>
</tr>
<tr>
<td>HZA 29/20 DYNAGRIP</td>
<td><img src="image4" alt="Profile Image" /></td>
<td>✔️</td>
</tr>
</tbody>
</table>

**Material**
- Steel
- A4

**Bolts**
- HZ 64/44
- HZ 53/34
- HZ 38/23
- HZ 29/20

**Thread**
- M20 + M24
- M16 + M20
- M12 + M16
- M12

**N_{Rd} [kN] / V_{Rd} [kN]**
- 37.8 kN All load directions
- 30.8 kN All load directions
- 16.8 kN All load directions
- 11.2 kN All load directions

**Typical application in elevator construction**
Lift, guide rail fixing for loads in channel longitudinal direction.

### COLD-ROLLED CAST-IN CHANNELS: KEY VALUES

<table>
<thead>
<tr>
<th>Profile</th>
<th>Dimensions HALFEN HTA-CE Channels</th>
<th>Suitable for fatigue related tension loads.</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTA-CE 40/25</td>
<td><img src="image5" alt="Profile Image" /></td>
<td>✗</td>
</tr>
<tr>
<td>HTA-CE 38/17</td>
<td><img src="image6" alt="Profile Image" /></td>
<td>✗</td>
</tr>
<tr>
<td>HTA-CE 28/15</td>
<td><img src="image7" alt="Profile Image" /></td>
<td>✗</td>
</tr>
<tr>
<td>HZA 41/22</td>
<td><img src="image8" alt="Profile Image" /></td>
<td>✗</td>
</tr>
</tbody>
</table>

**Material**
- Steel
- A4

**Bolts**
- HS 40/22
- HS 38/17
- HS 28/15
- HZ 41/22

**Thread**
- M10 – M16
- M10 – M16
- M6 – M12
- M12 – M16

**N_{Rd} [kN] / V_{Rd} [kN]**
- 11.1
- 10.0
- 5.0
- 7.0 kN All load directions

**Typical application in elevator construction**
Typical application in elevator construction LML, guide rail fixing for loads in channel longitudinal direction.

---

All product variants can be found in our technical catalogue at [www.halfen.com](http://www.halfen.com)
FRAMING CHANNELS

- Free positioning and dimensioning
- Fine adjustment in seconds
- Cost reduction due to high level of standardization of the versatile bolt connections
**WIDE SELECTION OF CHANNELS:**
**Framing channels by HALFEN**

For fixing guard rails, doors and control units HALFEN has a wide range of framing channels, available for weld-on, bolt-on or for dowel fixing. On the following pages you will find a selection of our framing channels, which are especially suited for use in elevator construction.

For dynamic loads we provide the hot-rolled HALFEN Channel, either toothed or smooth, and the cold-rolled channels are the right choice for pre-dominantly static loads.

---

**The solution for very high loads and dynamic loads: Hot-rolled framing channels**

![Framing channels HM, hot-rolled, smooth](image)
For approved longitudinal loads of up to $F_{\text{app}}$ = up to 7.5 kN

![Framing channels HZM, hot-rolled, toothed](image)
For high longitudinal loads $F_{\text{app}}$ = up to 27 kN

**With holes or without holes for low loads: Cold-rolled framing channels**

![Framing channels HL, HM, cold-rolled, smooth](image)

![Framing channels HZL, HZM, cold-rolled, toothed](image)

**HALFEN Bolts for framing channels**

The framing channels used in combination with HALFEN Bolts provide a versatile bolt connection

**HALFEN HS Bolts**
Suitable for all smooth framing channels. For loads in two directions.

**HALFEN HSR Bolts**
Only for hot-rolled carbon steel framing channels. Nibbed non-slip bolt. For loads in all directions.

**HALFEN HZS Bolts**
Suitable for toothed framing channels. Positive load transfer also in channel longitudinal direction.

---

What does HTA-CE involve?

HTA-CE signifies that the channel is CE marked. HALFEN as the manufacturer declares, that it is responsible for the conformity of the product with the (DoP – Declaration of performance), and that the specified performance and compliance with all relevant European legislation has been applied.
### HOT-ROLLED FRAMING CHANNELS

#### HEAVY DUTY FRAMING SYSTEM

<table>
<thead>
<tr>
<th>Product</th>
<th>Article name</th>
</tr>
</thead>
<tbody>
<tr>
<td>HM 72/48</td>
<td>HS 72/48, HSR 72/48</td>
</tr>
<tr>
<td>HM 55/42</td>
<td>HS 50/30</td>
</tr>
<tr>
<td>HM 52/34</td>
<td>HS 50/30, HSR 50/30</td>
</tr>
<tr>
<td>HM 50/30</td>
<td>HSR 40/22, HS 40/22</td>
</tr>
<tr>
<td>HM 40/22</td>
<td></td>
</tr>
</tbody>
</table>

![Image of hot-rolled framing channels](image_url)

### HOT-ROLLED TOOTHED FRAMING CHANNELS – HEAVY DUTY FRAMING SYSTEM

<table>
<thead>
<tr>
<th>Product</th>
<th>Article name</th>
</tr>
</thead>
<tbody>
<tr>
<td>HZM 64/44</td>
<td>HZS 64/44</td>
</tr>
<tr>
<td>HZM 53/34</td>
<td>HZS 53/34</td>
</tr>
<tr>
<td>HZM 41/27</td>
<td>HZS 38/23</td>
</tr>
<tr>
<td>HZM 38/23</td>
<td>HZS 29/20, HS 28/15</td>
</tr>
<tr>
<td>HZM 29/20</td>
<td></td>
</tr>
</tbody>
</table>

![Image of hot-rolled toothed framing channels](image_url)

### MATERIALS AND FINISHES

- **FV** hot-dip galvanized or **WB** mill finished
- **A2** stainless steel 1.4307
- **A4** stainless steel 1.4571/1.4404
- **HZM / HZL** toothed profile
**COLD-ROLLED FRAMING CHANNELS**

### HEAVY DUTY FRAMING SYSTEM

<table>
<thead>
<tr>
<th>Product</th>
<th>HM 49/30</th>
<th>HM 40/25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article name</td>
<td>HS 50/30</td>
<td>HS 40/22, HSR 40/22</td>
</tr>
</tbody>
</table>

### LIGHT DUTY FRAMING SYSTEM

<table>
<thead>
<tr>
<th>Product</th>
<th>HM 38/17</th>
<th>HM 28/15, HL 28/15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article name</td>
<td>HS 38/17</td>
<td>HS 28/15</td>
</tr>
</tbody>
</table>

**Versatile application:**

**FRAMING CHANNELS IN ELEVATOR CONSTRUCTION**

HALFEN Framing channels are a flexible and adjustable solution for numerous types of fixing situations in elevator construction - for example: fixings directly to the lift car and for fixing the doors.
Attachment points

› For lift and fall protection equipment
› Effective fixing even at great heights
› Dependable HALFEN quality
HALFEN HLX LIFT-BOX

The HALFEN Lift-Box is an auxiliary aid for the installation and maintenance of lifts. It ensures a safe, temporary fixing point when working on the lift. It is set in the concrete as an anchor point on the shaft ceiling. Even heavy lift equipment can be temporarily attached.

Product Range

The HALFEN HLX Lift-Box is delivered to site as a complete pre-assembled unit.

HALFEN HLX Lift-Box with attachment point: Chain-link automatic release and self-locking or with wire cable loop

The most important features and benefits at a glance:

- High load capacity (1500 kg, 2000 kg, 4000 kg)
- CE marking in compliance with ETA European Technical Assessment
- Modern plastic design
- Execution with loop and chain-link
- Automatic release and self-locking chain-link
- Easy to fold back
- Protection against twisting
- Complete pre-assembled unit.
- Quick and easy to install
- Usable for minimum slab thickness of 150 mm due to small edge distances
- Detailed, multilingual installation and usage instructions
- CAD Data

Certificates

- European Technical Assessment ETA-17/0488
- CE marking in compliance with ETA

Technical Data

- Load classes 1500 kg, 2000 kg, 4000 kg

HALFEN PSA ATTACHMENT POINT

for personal fall protection equipment

The attachment point for personal fall protection (PSA) is complemented with an approved stainless steel DEMU T-FIXX®, Fixing anchor, an identification cap and an attachment hook. The suitability of the approved DEMU T-FIXX® Fixing anchor was proven in a DGUV test based on CEN/TS 16415.

HALFEN PSA ATTACHMENT POINT with attachment point: Identification cap and suitable securing hook

© 2019 HALFEN · Application in elevator construction · www.halfen.com
Building Information Modeling:
HALFEN – YOUR BIM PARTNER

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 can provide the CAD files for your BIM project:

VISIT THE HALFEN CAD-PORTAL:
free, international and versatile with numerous 2D and 3D downloadable files!
Easy to calculate – safe planning:

**HALFEN SOFTWARE FOR CAST-IN CHANNELS**

HALFEN Software is an easy-to-use, powerful tool for calculation and design of HALFEN Channels. The program is easy to use and intuitive, it provides all necessary calculations and verifications for channels for a specified load situation in a matter of seconds. Further tools, catalogues and installation instructions can be found online at www.halfen.com.

**HALFEN HTA-CE Software; input screen**

**Interactive 3D display**

**The result in a listbox**

**Further tools are available at www.halfen.com**

- Catalogues
- CAD drawings
- Installation instructions
- Videos
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 construction 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 the development process we generate a wide spectrum of product solutions for all types of construction projects.

Go for quality you can depend on; **Quality “MADE BY HALFEN”**.
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 / FSF / HSL Ties for precast lintel
- LSA / HEA / HFV 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 Rebind connection
- HCC / HAB Column shoe
- HSD Shear dowel
- HBJ Betoujister

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 VERSOGGRID Installation grid

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
ALWAYS AT YOUR SERVICE

Want to know more about HALFEN in a particular country?

An initial compilation of information can be found on our website. You can reach HALFEN, our global distribution companies and partners with just one address.

www.halfen.com
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.