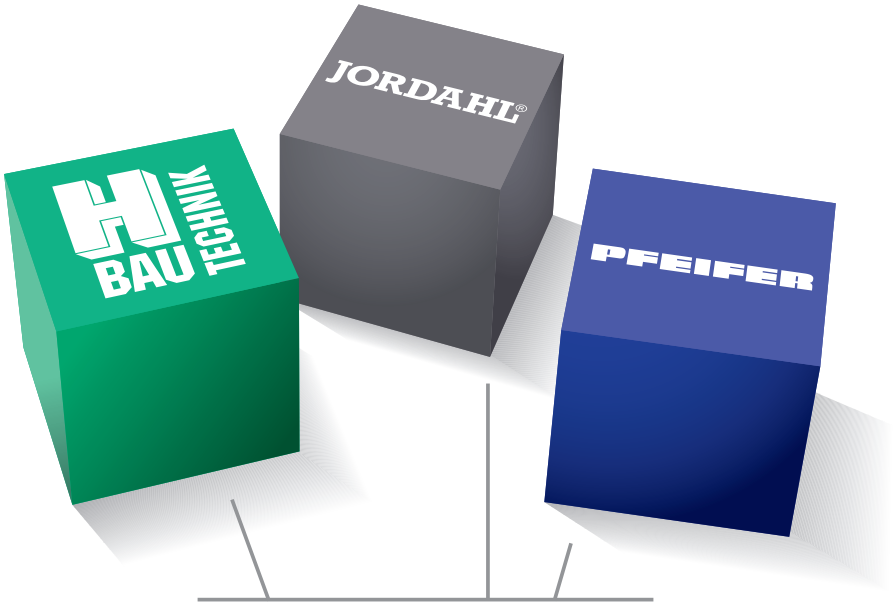
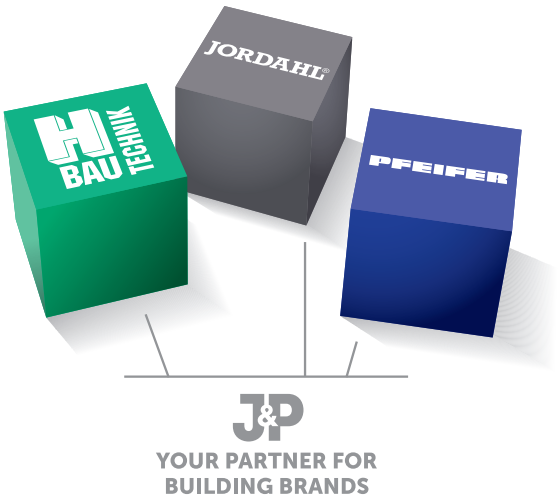


J&P

YOUR PARTNER FOR
BUILDING BRANDS

PRODUCT RANGE

Solutions for your construction project requirements from H-BAU, JORDAHL and PFEIFER.



About H-BAU

For over 35 years H-BAU Technik GmbH has been setting the standards in construction technology in accordance with the company motto "for better solutions". Whether it is sealing, reinforcement, sound insulation, formwork or thermal insulation, the company provides innovative solutions for the highest quality demands. The many years of experience, practically-oriented developments and a versatile product range together provide the basis for H-BAU's continuing success.

As a construction specialist with extensive know-how H-BAU is your professional and reliable partner for the sealing of construction joints, prevention of thermal bridges, reinforcement and connection of reinforced concrete elements and impact noise reduction in buildings as well as the manufacturing of formworks for reinforced concrete supports. With an innovative, quick-connection system, H-BAU also provides the optimum solution for connecting prefabricated concrete elements and utilities such as electrical power, water and wastewater.

The simultaneous high quality and user-friendliness of the products provide assurance across the range.

Eastgate, Berlin

About JORDAHL

For more than 100 years JORDAHL has developed and produced high-quality and innovative products in Germany in the fastening, reinforcing, connecting and mounting technologies sectors as well as façade connection systems. With its competent service and products "made in Germany", the company is in demand everywhere as a reliable partner for the execution of small, large and prestigious construction projects. Designers and users throughout the world trust the products that are "anchored in quality". Perhaps you already knew that.

But did you also know that you can obtain individual solutions for your very specific construction project from JORDAHL regardless of whether you want to realise puristic glass façades, stylish faced brickwork or other architectural visions? JORDAHL also provides an extensive product range for the connection of prefabricated concrete elements such as concrete slabs, supports and beams for the most diverse requirements and applications. JORDAHL® punching shear reinforcement is also suitable for ultra-modern flat ceilings and foundations.

JORDAHL has the appropriate solution for every construction-related problem. And when we say for every problem we mean it.

J&P – Your Sales Partner for Strong Building Brands.

We know what our customers need and that is not only first-class products but efficient and reliable solutions for all requirements, excellent service and advice on site. And, preferably everything from a single source.

As a partner, therefore, J&P is at your side and offers you a personal contact in your area as well as a comprehensive product portfolio of high-quality, proven and innovative branded articles – both nationally and internationally.

We sell products from the building brands H-BAU, JORDAHL and PFEIFER. Brands that have something important in common: they all represent outstanding German-made quality and outstanding service.

The building brands from J&P:

- **H-BAU**
- **JORDAHL**
- **PFEIFER**

Has your die already been cast in favour of a product solution from H-BAU, JORDAHL or PFEIFER? Then take a look inside our brochure right away.

About PFEIFER

Marina Bay Sands, Singapore

PFEIFER Seil- und Hebetechnik GmbH can look back on a success story that stretches back more than 430 years. Under the motto "We put technology to use", the traditional company from Memmingen, Germany, offers not only quality products of the highest reliability, but also comprehensive advisory services and first-class customer service.

As one of the market leaders in the building technology sector, the company ensures maximum safety in the precast concrete industry with technically mature standard products. The static load-bearing products have been developed with many years of experience in the industry, have detailed technical instructions as well as approvals and therefore make use risk-free for customers with regard to building legislation. PFEIFER actively participates in the shaping of tomorrow's building regulations through its involvement in international standards committees. Industrial mass production with partly automated processes and highly developed production methods guarantees process reliability with high repeatability for the parts, which are usually produced in their millions.

PFEIFER offers perfect solutions for the various requirements of the construction industry.


Supertrees, Singapore

Product Overview

Here you can find all relevant areas of application and the pertinent J&P product solutions at a glance.

- Products of H-BAU
- Products of JORDAHL
- Products of PFEIFER

Sandtorkai, Hamburg, Germany, reliable sealing using H-BAU PENTAFLEX® Sealing System

SEALING TECHNOLOGY

H-BAU PENTAFLEX®
SEALING SYSTEM

H-BAU KUNEX®
JOINT TAPES

H-BAU PLURAFLEX®
INJECTION HOSES

H-BAU SWELLFLEX®
WATERSTOP TAPES

H-BAU SURFACE
SEALING

H-BAU PENTAFLEX®
Sealing System

PENTAFLEX® is a joint sealing system for producing watertight concrete structures (white tank). The PENTAFLEX® elements are completely provided with a special coating and have been designed for structures with premium utilisation. They seal joints in the wall/foot or wall/ceiling area, joints in the wall/wall or floor/floor area and joints in cast-in-situ concrete and component wall constructions reliably.

Advantages:
- Impervious up to 5.0 bar (according to general appraisal certificate 2.0 bar)
- Quick, secure sealing of all construction and control joints – also after subsiding of the shrinking process in concrete
- Best possible safety for planning and execution
- Resistant against all organic effluents

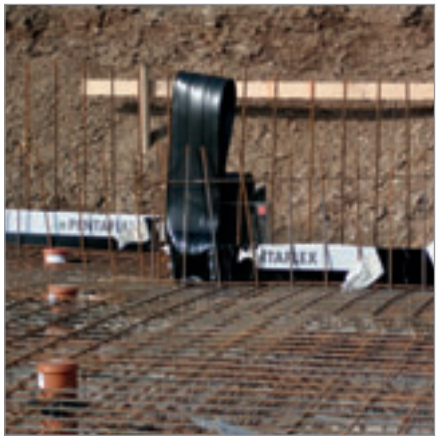
Product range:
- PENTAFLEX KB®: joint sheet
- PENTAFLEX KB® Plus: joint sheet and equipotential bonding conductor
- PENTAFLEX® ABS: shuttering element
- PENTAFLEX® FTS: prefabricated break-off element
- PENTAFLEX® OBS: cast-in-situ break-off element
- PENTAFLEX® DFA: expansion joint connection
- PENTAFLEX® pipe lead-through
- PENTAFLEX® pump sump
- PENTAFLEX® sound insulation joint

Approval:
General appraisal certificate

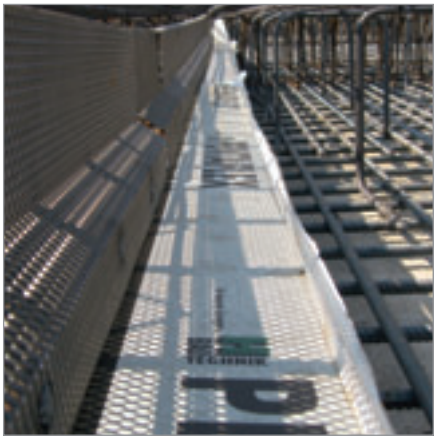
Material/designs:
KB, FTS/OBS: galvanised sheet steel with special coating.
ABS: shuttering element made from expanded metal with reinforced steel construction, sealed by PENTAFLEX KB® joint sheet.
Pipe lead-through: made from PP or PVC with coated water stop.
Pump sump: made from PE with coated water stop.

Delivery lengths/load groups:
PENTAFLEX® elements are available in different dimensions and delivery lengths.

Examples of applications:



PENTAFLEX KB® joint sheet, DFA expansion joint connection and floor lead-throughs



PENTAFLEX® ABS shuttering element with toothed profile

Sealing with PENTAFLEX® sealing system

Further product recommendations:
H-BAU PLURAFLEX® injection hoses

H-BAU KUNEX®
Joint Tapes

Construction and expansion joints in concrete are sealed securely by using KUNEX® joint tapes from H-BAU. KUNEX® joint tapes guarantee a very good mechanical connection with the concrete and therefore form a reliable sealing. The joint tapes are manufactured of thermoplastic PVC-P in the highest quality. Sealing tubes are used to seal dummy joints. Object-specific joint tape constructions are used to form watertight connections to existing buildings.

Advantages:
- Suitable for the use in structures corresponding to watertight structure guidelines
- Flexibility thanks to a wide standard product range and joint tape constructions as per customer request
- Tested and proven thousandfold

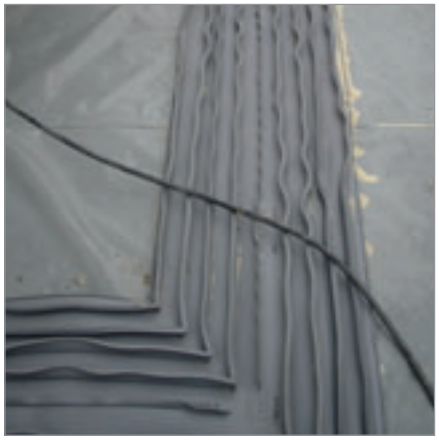
Product range:
- KUNEX® construction joint tape internal and external
- KUNEX® expansion joint tape internal and external
- KUNEX® clamp waterstop
- KUNEX® waterstop-corner joint
- KUNEX® star tube
- KUNEX® joint masking and closing tape
- KUNEX® silo construction joint
- KUNEX® welded constructions

Approval:
General appraisal certificate

Material/designs:
Standard PVC-P raw material available as works standard with general appraisal certificate and DIN-Strips:
- DIN standard (DIN 18541) bitumen-compatible (BC) or non-bitumen-compatible (NB)
- Works standard bitumen-compatible (BC) or non-bitumen-compatible (NB)

Delivery lengths/load groups:
KUNEX® joint tapes are available in different dimensions and delivery lengths.

Examples of applications:



Sealing of a construction joint with KUNEX® construction joint tape

Sealing of an expansion joint with KUNEX® expansions joint tape

Sealing of a construction joint with KUNEX® waterstop-corner joint

Further product recommendations:
H-BAU PENTAFLEX® sealing system

H-BAU PLURAFLEX® Injection Hoses

PLURAFLEX® injection hoses are a jointing system that supplements the PENTAFLEX® sealing system from H-BAU. The injection hoses are used in civil engineering and engineering construction when special requirements for methodical sealing of construction joints appear. Particularly in the construction of tunnels, it is the optimum solution for the first sinking under pressure.

Advantages:
- Can be repeatedly compressed
- Proven in civil engineering, engineering and tunnel construction
- Proven in use

Product range:
- PLURAFLEX® C11: single-wall injection hose for low-viscosity injection material can be uniquely compressed
- PLURAFLEX® P11: double-wall injection hose for injection pastes and cement as well as low-viscosity injection material can be repeatedly compressed
- PLURAFLEX® P19: double-wall injection hose for Portland cement, injection pastes and cement as well as low-viscosity injection material can be repeatedly compressed

Approval:
General appraisal certificate

Material/designs:
PVC injection hose: smooth surface that prevents an undesired bond between the injection hose and concrete. Injection also possible after many years because the smooth surface prevents fusion or sintering in the system.

Delivery lengths/load groups:
C11: 100 m roll; max. recommended assembly lengths 10 m.
P11: 100 m roll; max. recommended assembly lengths 15 m.
P19: 100 m roll; max. recommended assembly lengths 20 m.

Examples of applications:

Tunnel sealing with PLURAFLEX® injection hose

Tunnel sealing with PLURAFLEX® injection hose

Joint sealing with PLURAFLEX® injection hose

Further product recommendations:
H-BAU PENTAFLEX® sealing system

H-BAU SWELLFLEX® Waterstop Tapes

SWELLFLEX® waterstop tapes are a reliable supplement to conventional joint sealing systems. They seal joints in concrete constructions that are continuously or partially exposed to pressurised water. During concreting of the component, the expansion tapes are completely encompassed by the fresh concrete. They expand with water contact and build up a pressure that seals the construction joint.

Advantages:
- Proven in civil engineering and engineering construction
- Expanding and shrinking process often indefinitely reversible
- Easy to handle
- Comprehensive product range

Product range:
- SWELLFLEX® BS: natural sodium bentonite waterstop tape
- SWELLFLEX® BT: natural sodium bentonite waterstop tape with patented rain-protection coating for processing independent of the weather
- SWELLFLEX® RB: rubber water-stop tape

Approval:
General appraisal certificate

Material/designs:
BS and BT: sealing tape based on bentonite and butyl rubber.
RB: extruded rubber composite, consisting of butyl rubber, water source resins, polyethylenes and silicones.

Delivery lengths/load groups:
SWELLFLEX® waterstop tape available in different dimensions and delivery lengths.

Examples of applications:

Sealing of a construction joint with SWELLFLEX® BT

Fastening of SWELLFLEX® swelling tape with a metal channel

Further product recommendations:
H-BAU PENTAFLEX® sealing system

H-BAU Surface Sealing

SWELLPROOF and SWELLFLEX® are geotextile, water-activated seals for special application on external surfaces which have to be sealed. The sealing stripes offer new and unique possibilities due to the use of bentonite as a clay sealing strip (SWEELPROOF) or source-modified polymers (SWELLFLEX®).

Advantages:
- Also for sealing concrete building components with large surface areas which get into contact with the ground
- Innovative, efficient, safe
- Environmentally friendly and rot-proof

Product range:
- SWELLPROOF DS: hiqh-quality bentonite surface sealing
- SWELLPROOF CS: in addition to DS, root-proof and impervious to radon
- SWELLFLEX® EasySeal: expanding agent sealing sheet with low mass per area
- SWELLFLEX® SilverSeal: in addition to EasySeal, laminated PE film

Material/designs:
DS: consisting of PE-3-D composite and standard bentonite sealing mat (GTD/GCL).
CS: in addition to DS, with PE coating and radon sealing.
EasySeal: fleece with expanding agent, polymers.
SilverSeal: in addition to EasySeal, with PE film.

Delivery lengths/load groups:
DS and CS: 30 m roll, available in widths 1.20/1.80/3.60 m.
EasySeal and SilverSeal: 50 m roll, available in widths 0.33/2.00 m.

Examples of applications:

Tunnel exterior sealing with SWELLPROOF

Surface sealing with SWELLPROOF DS

Surface sealing with SWELLPROOF bentonite sealing mat

Canary Wharf, London, UK, efficient fastening of facade elements with JORDAHL® anchor channels

FASTENING/ FIXING SYSTEMS

JORDAHL® ANCHOR CHANNELS

JORDAHL® RAILING FASTENING CHANNELS JGB

JORDAHL® T-BOLTS

JORDAHL® PROFILED METAL SHEET CHANNELS JTB

PFEIFER DB-ANCHOR FOR PERMANENT FIXING

PFEIFER SOCKET DOWELS/POLYAMIDE SOCKETS

JORDAHL®
Anchor Channels JTA W

The hot-rolled anchor channels JTA W together with the appropriate JORDAHL® T-bolts and JORDAHL® accessories create a versatile and proven connection system. They are cast into concrete and transfer high loads reliably in reinforced and non-reinforced concrete structural components and absorb tensile and transverse pull loads at right angles to the axis of the channel.

Advantages:
- Quick, efficient and versatile fastening of high loads
- Simple compensation of building tolerances
- No damage to the components by drilling
- Reduced construction time through the use of simple hand tools
- Small edge spacings possible
- Simple, individual options for the application and reusability of the fastening
- Resistant to fatigue, seismic activities, explosions
- Optimised geometry with strengthened channel lips for high tightening torques
- Approved for installation in components with fire safety requirements

Customised solutions:
Curved anchor channels, anchor channel pairs, anchor channel corner pieces. Production of special profiles on request.

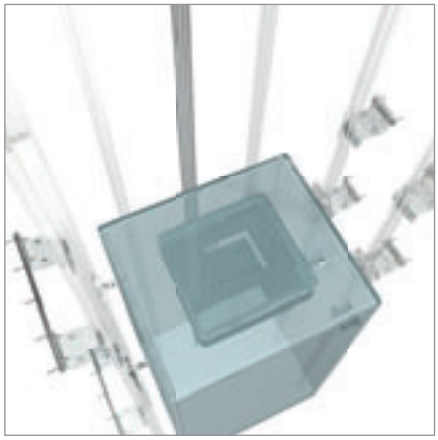
Approval:
European Technical Approval ETA-09/0338

Material/designs:
With effective corrosion protection. Available in hot-dip galvanised steel or stainless steel (A4). Standard filling of polyethylene (PE) or polystyrene (PS).

Delivery lengths/load groups:
Available in five different types of cross-section. Can be delivered in any length up to 6 metres. Static load-bearing capacity up to 51.5 kN service load (72.2 kN design resistance).

Software:
Intuitive software: JORDAHL® EXPERT for the selection of the optimum anchor channels taking into consideration edge spacing, load distribution, reinforcement and thickness of components. Free download from www.jordahl.de.

Examples of applications:



Fastening of lift guide channels

Fastening of façade elements (curtain wall)

Fastening of pipe and media ducts below bridges

Further product recommendations:
JORDAHL® mounting channels and T-bolts

Toothed JORDAHL® Anchor Channels JXA W

Together with JORDAHL® toothed T-bolts and JORDAHL® accessories, the hot-rolled toothed JORDAHL® anchor channels provide a secure, form-fitting connection along the longitudinal axis of the channel. They can absorb static and dynamic tensile loads, shear loads and longitudinal tension.

Advantages:
- Quick, efficient and versatile fastening of high loads
- Simple compensation of building tolerances
- No damage to the components by drilling
- Reduced construction time using simple hand tools
- Small edge spacings possible
- Simple, individual options for the application and reusability of the fastening
- Resistant to fatigue, seismic activities, explosions
- Optimised geometry with strengthened channel lips for high tightening torques
- Approved for installation in components with fire safety requirements
- Flexible planning due to universal load capacity in all directions

Customised solutions:
Curved anchor channels, anchor channel pairs, anchor channels with ribbed anchors JXA-PC. Production of special profiles on request.

Approval:
General Technical Approval Z.21.4-1690

Material/designs:
With effective corrosion protection. Available in hot-dip galvanised steel or stainless steel (A4). Standard filling of polyethylene (PE) or polystyrene (PS).

Delivery lengths/load groups:
Can be delivered in any length up to 6 metres. Static load-bearing capacity up to 27 kN service load (37.8 kN design resistance).

Examples of applications:

Fastening of loads in longitudinal direction

Fastening of façade elements

For safety-relevant buildings such as power plants

Further product recommendations:
Toothed JORDAHL® T-bolts

JORDAHL®
Anchor Channels JTA K

Together with the appropriate JORDAHL® hammer-head and hook-head T-bolts and JORDAHL® accessories, the cold-formed JORDAHL® anchor channels form a versatile and proven fastening system. They absorb static tensile and shear loads vertical to the channel axis.

Advantages:
- Quick, efficient and versatile fastening of static loads
- Simple compensation of building tolerances
- No damage to the components by drilling
- Reduced construction time through the use of simple hand tools
- Small edge spacings possible
- Simple, individual options for application and reusability of the fastening
- Approved for installation in components with fire safety requirements

Customised solutions:
Curved anchor channels, anchor channel pairs, anchor channel corner-pieces. Production of special profiles on request.

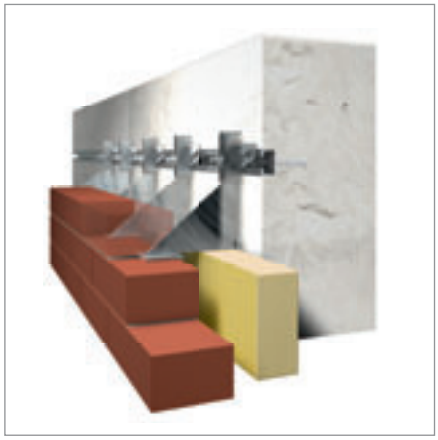
Approval:
European Technical Approval ETA-09/0338

Material/designs:
With effective corrosion protection. Available in hot-dip galvanised steel or stainless steel (A4). Standard filling of polyethylene (PE) or polystyrene (PS).

Delivery lengths/load groups:
Available in six different types of cross-section. Can be delivered in any length up to 6 metres. Static load-carrying capacity up to 40 kN service load (55.6 kN design resistance).

Software:
Intuitive software: JORDAHL® EXPERT for the selection of the optimum anchor channels taking into consideration edge spacing, load distribution, reinforcement and thickness of components. Free download from www.jordahl.de.

Examples of applications:



For the secure fastening of brickwork support brackets

Fastening of cable-support systems

In e.g. sports arenas for fastening stadium seating

Further product recommendations:
JORDAHL® brickwork support brackets JVA+ for fastening to JORDAHL® anchor channels JTA

Toothed JORDAHL® Anchor Channels JZA K

Cold-formed toothed anchor channels JZA K together with the appropriate toothed T-bolts create a safe, form-fitting and slip-resistent connection. They can absorb loads in all directions.

Advantages:
- Quick, efficient and versatile fastening of static loads
- Simple compensation of construction tolerances
- No damage to the components by drilling
- Reduced construction time through the use of simple hand tools
- Small edge spacings possible
- Simple, individual options for application and reusability of the fastening
- Flexible planning due to universal load-capacity in all directions

Customised solutions:
Curved anchor channels, anchor channel pairs, anchor channel corner-pieces. Production of special profiles on request.

Approval:
General Technical Approval Z-21.4-741

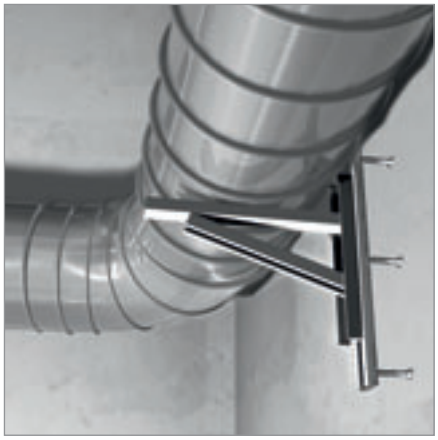
Material/designs:
With effective corrosion protection. Available in hot-dip galvanised steel or stainless steel (A4). Standard filling of polyethylene (PE) or polystyrene (PS).

Delivery lengths/load groups:
Can be delivered in any length up to 6 metres. Static load-bearing capacities of up to 5 kN service load (7 kN design resistance).

Examples of applications:

Fastening attachment parts to concrete supports

Fastening lighting and signalling systems e.g. in road tunnels

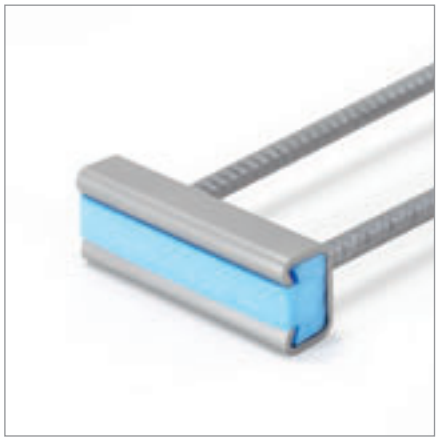


Fastening pipes and media carriers

Further product recommendations:
Toothed JORDAHL® T-bolts

JORDAHL®
Railing Fastening Channels JGB

JORDAHL® railing fastening channels ensure safe and quick fastening of railing posts on the front face of concrete slabs. The system consists of short pieces of anchor channel directly set into the concrete balcony slab and the associated JORDAHL® T-bolts.



Advantages:
- Hot-rolled or cold-formed short piece of anchor channels with extra-long anchors
- Simple installation and perfect adjustment of the railing connections
- For concrete slabs up to 10 cm thick
- Versatile solution for railing connections with one or two bolts
- No damage to the components by drilling
- Simple, individual options for application and reusability of the fastening elements
- Good integration in heavily reinforced components

Approval:
General Technical Approval Z-21.4-1913

Material/designs:
With effective corrosion protection. Available in hot-dip galvanised steel for interior applications or stainless steel (A4) for exterior applications. Standard filling of polyethylene (PE).

Delivery lengths/load groups:
Can be delivered in lengths of 100-250 mm.

Software:
Intuitive software: for the selection of the most suitable short pieces of anchor channel, for economic planning and automatic verifiable calculation.
Free download from www.jordahl.de.

Examples of applications:

For use in balcony slabs with straight steel reinforcement

For corner formation as relevant anchor channel corner piece (not illustrated)

For use in narrow parapets or upstands with angled reinforcement steel welded on

Further product recommendations:
JORDAHL® T-bolts

JORDAHL® T-bolts

The special, perfectly matching T-bolts for the JORDAHL range of channels ensure safe fastening of attachment parts. JORDAHL® T-bolts guarantee a form-fitting connection for each type of channel, including nuts.

Advantages:
- Strong connection through the use of high bolt-tightening torques
- Shaft marked with notch to indicate correct alignment of T-bolts
- JORDAHL® Hook-head T-bolts: together with the JORDAHL® anchor channels JTA W ensure safe transmission of tensile and shear loads
- JORDAHL® Hammer-head T-bolts: guarantee form-fitting connections, e.g. with the JORDAHL® anchor channels JTA K
- JORDAHL® Toothed T-bolts: together with the toothed JORDAHL® anchor channels JXA provide absorption of loads in all directions
- JORDAHL® Double-notch toothed T-bolts: for load transmission with hot-rolled channels and static loading in all directions

Material/designs:
Available in electro zinc plated steel (strength classes 4.6/8.8), hot-dip galvanised steel (strength classes 4.6/8.8) and stainless steel A4 (strength classes 50/70).

Delivery lengths/load groups:
Can be delivered in lengths of 15 to 300 mm.
Available in thread sizes from 10 to 30 mm; including suitable nut.

Examples of applications:

JORDAHL® Hammer-head T-bolts, e.g. for anchor channels JTA K

JORDAHL® Toothed T-bolts, e.g. for toothed anchor channels JXA and JZA

JORDAHL® Double-notch toothed T-bolts, e.g. for anchor channels JTA W

Further product recommendations:
JORDAHL® anchor channels, JORDAHL® railing fastenings JGB, JORDAHL® mounting channels

JORDAHL® Profiled Metal Sheet Channels JTB

JORDAHL® profiled metal sheet channels are the optimum solution for attaching trapezoidal sheet metal to reinforced concrete components without damaging load-bearing components. The system consists of the channel types JTB-AR and JTB-uni.

Advantages:
- Slimline anchors that easily adapt to the reinforcement
- Quick installation in one step
- Flush with the surface and directly concreted into the load-bearing component
- Suitable for installation in all usual building situations
- Guaranteed load-bearing capacity through approval
- Type JTB-AR: for easy installation and an easier fit in existing reinforcement cages
- Type JTB-uni: for quick installation, also for heavily reinforced components. Lowest storage space requirement, they can be stacked on top of each other.

Approval:
General Technical Approval
Z-21.4-161

Material/designs:
Available in stainless steel (A4).
Standard filling: polystyrene (PS).

Delivery lengths/load groups:
Available as profile 60/24/3 and profile 60/22/6. Approved for a permitted load of 5.0 kN per anchor (7.0 kN design resistance).

Examples of applications:

Minimal space requirement since stackable (type JTB-uni)

Fastening of profiled metal sheets to wall and roof

Installation of multi-layered, insulated profiled metal sheet wall

Further product recommendations:
JORDAHL® end anchors

PFEIFER DB-Anchor for Permanent Fixing

PFEIFER DB-Anchors are fixed at the formwork prior to concreting and then set in the concrete when it is poured. Once the concrete is hardened, any kind of fixing can be implemented by simply screwing in. The scope of supply includes waved anchors or base anchors plus PFEIFER Sign Clips.

Advantages:
- Base anchor suitable for the thinnest elements
- High carrying capacities
- No complex drilling
- Wide range of applications
- Safe, economical, fast
- CE marking

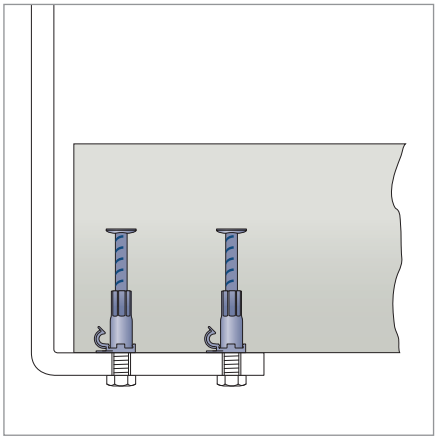
Approval:
European Technical Approval ETA-11/0288, the anchors can be used without restriction in all European member states.

Material/versions:
High-grade precision steel tube, zinc-plated or stainless steel, swaged on with reinforcing steel bar B500B, forged-on or with waved bar, plain. Sign Clip: plastic.

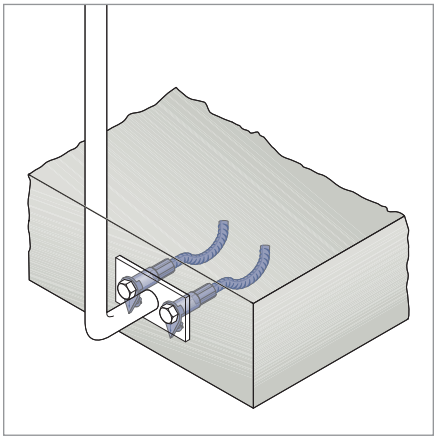
Delivery lengths/load groups:
Base and waved anchors each available in Rd 12, Rd 16, Rd 20, Rd 24 and Rd 30.

Software:
The original PFEIFER Software Suite is available for download free of charge from www.pfeifer.de in German, English, Polish, Czech, Danish, French and Spanish.

Examples of applications:



Railing fastening with base anchors – on the underside in a balcony slab



Railing fastening with waved anchor – at the front in a balcony slab

Schwarzer Steg, Plauen, Germany

Further product recommendations:
PFEIFER VS® Systems, PFEIFER Thread System

PFEIFER Socket Dowels/ Polyamide Sockets

Fixings that do not require approval can be implemented inexpensively with PFEIFER Socket Dowels in various common thread sizes. PFEIFER Polyamide Sockets are particularly suitable for low-load fixings and are not susceptible to corrosion.

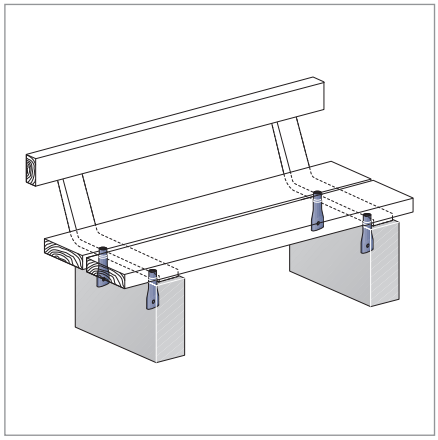
Advantages:
Wide range of products and applications:
- Socket Dowel with cross hole: for front-sided installation in precast units with central pull – also available with nailing plate for wooden formwork
- Socket Dowels with crimped end for high load capacity – also available with nailing plate for wooden formwork
- Nailing Plate: for simple fastening of socket dowels to wooden and plastic formwork
- Polyamide Sockets: for fastening to precast units with high corrosion protection requirements
- Nail Plug: for fixing polyamide sockets to wooden formwork
- Fixing Screws: for the fast, simple fixing of Polyamide Sockets

Material/versions:
Socket Dowels: made of high-grade steel. Available in plain and zinc-plated finishes.
Polyamide Sockets: Ultramid.

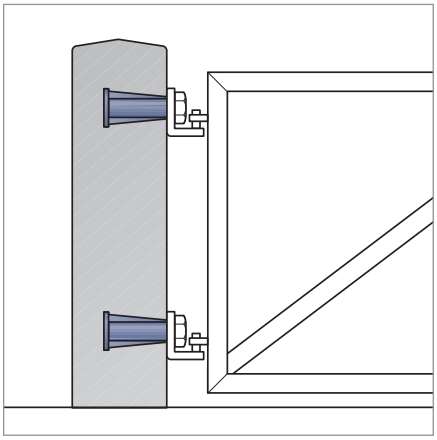
Delivery lengths/load groups:
Available in thread sizes from M6 to M30 and in different versions.

Accessories:
- PFEIFER Nailing Plate
- PFEIFER Cover Cap

Examples of applications:



Constructive fastening with Socket Dowels



Fastening points not requiring building authority approval in the exterior area with Polyamide Sockets

Further product recommendations:
PFEIFER Thread System, PFEIFER VS® System, PFEIFER PH Reinforcement Continuity System

REINFORCE-MENT SYSTEMS

H-BAU FERBOX® REVERSE BENDING CONNECTORS

H-BAU FIBERNOX® V-ROD GLASS-FIBRE REINFORCEMENT ROD

H-BAU STAINLESS STEEL REINFORCEMENT

H-BAU GRIPRIP® MASONRY REINFORCEMENT

H-BAU REINFORCEMENT ACCESSORIES

JORDAHL® PUNCHING SHEAR REINFORCEMENT JDA

JORDAHL® PUNCHING SHEAR REINFORCEMENT JDA-FT-KLICK

JORDAHL® SHEAR REINFORCEMENTS JDA-S

PFEIFER PH REINFORCEMENT CONTINUITY SYSTEM

PFEIFER VS® SYSTEM^{3D}

H-BAU FERBOX®
Reverse Bending Connectors

FERBOX® rebar connections are prefabricated reverse bending connectors for easy and positive locking connection of reinforced concrete components at various phases of construction. In this way walls, ceiling, trusses, stairs are subsequently and reliably connected together. For more than 30 years, H-BAU has produced and distributed single and double-row reverse bending connectors in numerous standard and special types with retaining boxes in different designs.

Advantages:
- Practical and easy-to-assemble reverse bending connectors
- Wide variety of types
- Cover made from dimensionally stable plastic – safe, quick and easy to remove
- Uniform standard of quality ensured through continuous self-monitoring and external monitoring

Product range:
- FERBOX® type E: single row connector
- FERBOX® type B: double row connector
- FERBOX® type BQ: double row connector, shear key in transverse direction
- FERBOX® type BL: double row connector, shear key in longitudinal direction
- FERBOX® type D: double row connector for dimensions ≥ 240 mm
- FERBOX® type F: double row connector for prefabricated walls

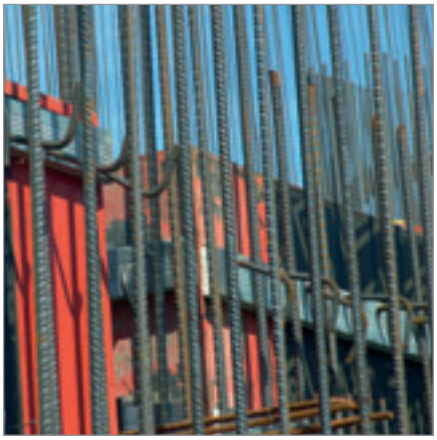
Approval:
Type tested according to EC2

Material/designs:
Retaining box made from steel sheet profile, reinforcement bars (ø 6 – 16 mm) made from B500B, cover made from plastic.

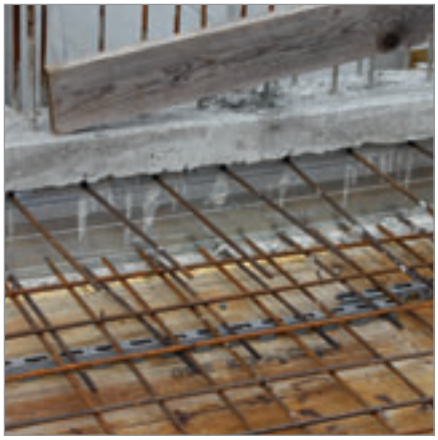
Delivery lengths/load groups:
FERBOX® Standard type: element length 1.25 m, various single and double-row stirrups for frequently occurring applications.
FERBOX® Special type: element length and dimension according to customer request, 14 special stirrups.

Examples of applications:

FERBOX® rebending connection type D with reversed reinforcing beams



FERBOX® rebending connection type E mounted on formwork



FERBOX® rebending connection type B set in concrete on wall; for connection to a ceiling

Further product recommendations:
H-BAU reinforcement accessories

H-BAU FIBERNOX® V-ROD Glass-fibre Reinforcement Rod

The FIBERNOX® V-ROD reinforcement rods consist of environmentally sustainable fibre reinforced material. The glass-fibre reinforcement is distinguished by corrosion and alkali resistance, by a high tensile strength at a light weight and by a great adherence in the concrete. FIBERNOX® V-ROD is an effective alternative to rust-proof or electro-plated reinforcement steel.

Product description:
- Corrosion and alkali resistant
- In comparison to steel reinforced concrete: considerably higher durability of building structures which are exposed to aggressive environmental conditions
- High tensile strength at a light weight
- Permeable for magnetic fields and radio-frequencies
- Dimensionally stable and very good connection with concrete
- Certified in Canada by CAN CSA S807-10

Material/designs:
Made of fibre reinforced material, consisting of glass-fibre lacings with synthetic resin and a special surface finish for best possible connection. Straight or bent bars are available.

Delivery lengths/load groups:
Standard Delivery length 5,90 m. Available in diameters of Ø 10, 12, 16, 20, 22, 25 und 32 mm.

Examples of applications:

Bridge reinforcement with FIBERNOX® V-ROD

Harbour fixation with FIBERNOX® V-ROD

Column reinforcement with FIBERNOX® V-ROD

Further product recommendations:
H-BAU reinforcement accessories

H-BAU Stainless Steel Reinforcement

The H-BAU stainless steel reinforcement RIPINOX® and STAIFIX® is designed for the areas in reinforced concrete with the highest requirements for the durability of the reinforcement. It is used in constructions where increased protection against external influences or a filigrane geometry of the components is required, e.g. in the event of a corrosive environment or little concrete covering. H-BAU also provides the optimum solution for renovating and reinforcing masonry.

Advantages:
- Suitable for critical areas in reinforced concrete construction, e.g. bridge construction, for facade concrete slabs, for supporting walls or in swimming pools
- Straight or curved reinforcement beam available
- No risk of corrosion
- RIPONIX®: can be welded and is not magnetic
- STAIFIX®: high tensile strength and resistant to fatigue

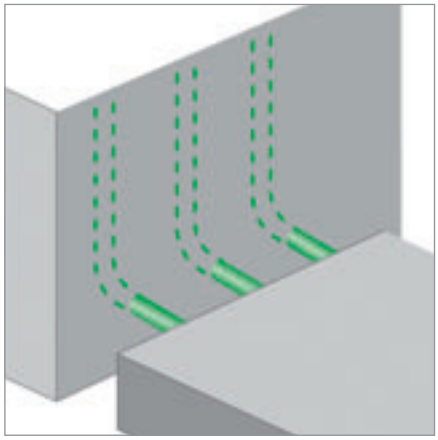
Product range:
- RIPINOX®: non-corrosive reinforced ribbed concrete
- STAIFIX®: high-strength and corrosion-resistant steel
- STAIFIX® accessories:
  - nuts
  - couplings
  - turnbuckles
  - anchor plates

Customised solutions:
Depending on the requirements of the customer, special designs can be curved and produced in accordance with drawings and material list.

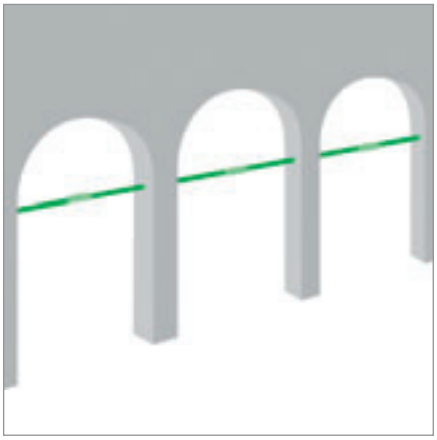
Approval:
RIPONIX®: building-authority approved

Material/designs:
RIPINOX®: non-corrosive reinforced ribbed concrete, tool steel no. 1.4571.
STAIFIX®: non-corrosive stainless steel, tool steel no. 1.4429, smooth or ribbed version.
Other materials (e.g. tool steel no. 1.4362, 1.4462) on request.

Examples of applications:



RIPINOX® stainless steel reinforcement



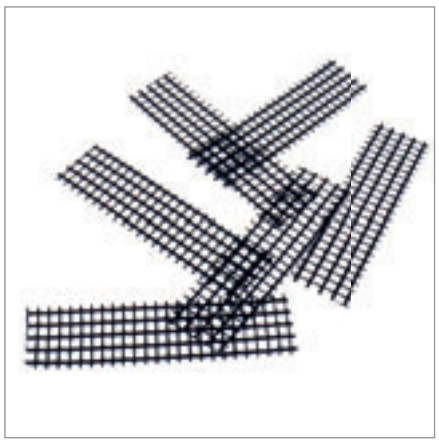
STAIFIX® anchor stress steel

STAIFIX® accessories

Further product recommendations:
H-BAU reinforcement accessories

H-BAU GRIPRIP®
Masonry Reinforcement

GRIPRIP® is used as butt joint anchoring or as constructional masonry reinforcement and serves to prevent cracks. The combination of high-quality aramide fibre and the form of mesh ensures an optimum division of force in the wall joints.



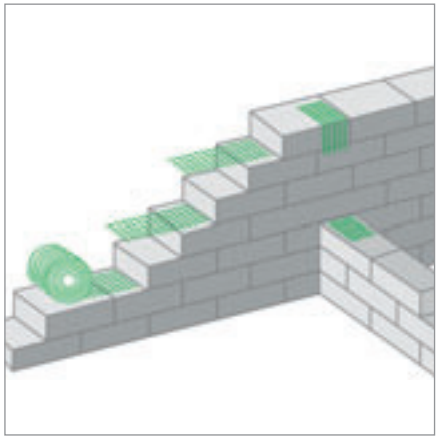
Advantages:
- Can be used in every mortar, also in lightweight mortars
- No corrosion problems of the bed joints in the masonry
- Substantially reduced risk of injury; no protruding or bent flat-steel masonry connectors during the construction period

Product range:
- GRIPRIP® type A: constructional masonry reinforcement to prevent cracks
- GRIPRIP® type S: masonry connectors for butt joint anchoring

Material/designs:
Mesh made from aramide fibres (polyamide fibre with excellent durability, excellent fatigue characteristics, high strength and breaking strain).

Delivery lengths/load groups:
Type A: 100 m roll, available in widths 85/150/170/200/240/300/340 mm.
Type S: length 300 mm,
width 85 mm.
Other dimensions on request.

Examples of applications:



GRIPRIP® masonry reinforcement

GRIPRIP® type S with masonry to be connected

Masonry with GRIPRIP® type S

H-BAU Reinforcement Accessories

Reinforcement accessories are necessary to secure concrete ceilings and required for the reinforcement layer as well as to ensure the construction of the upper and lower reinforcement layer. From reinforcement spacers made from fibre reinforced concrete, steel or plastic through to tying wires and spring clip fixing ties – H-BAU provides a comprehensive range of accessories for reinforcement on the construction site or at the prefabrication factory.

Advantages:
- Reinforced concrete spacers tested in accordance with the DBV (German Concrete and Construction Technology Association) leaflet for compressive resistance, water penetration depth and frost/thaw change
- Special spacers for vertical or horizontal installation
- Spacers are available for different requirements on the concrete surface

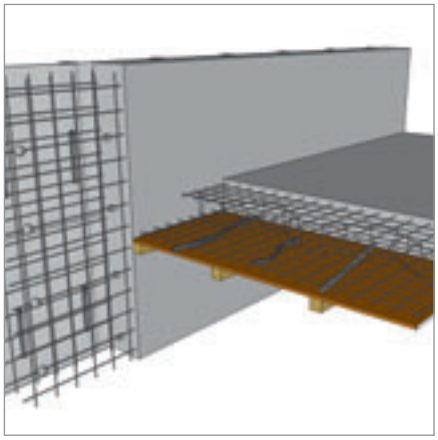
Material/designs:
Steel accessories: spacers and tying wire made from steel wire, annealed wire or stainless steel.
Concrete spacers: spacers made from fibre or cast concrete.
Plastic spacers: spacers made from extruded PVC and injected polyolefins.

Product range:
- Steel accessories
  - Wire snake spacers: spacers between the upper and lower reinforcement layer
  - Spring clip fixing ties: for quick, easy binding of reinforced concrete
  - Tying and double tie wires: for binding reinforced concrete
- Concrete spacers
  - Single and surface spacers: to maintain the concrete ceiling required in the reinforced concrete components for horizontal and vertical reinforcement layers
- Plastic spacers
  - Single and surface spacers: to maintain the concrete ceiling required in the reinforced concrete components for horizontal and vertical reinforcement layers

Examples of applications:

Steel snake spacers between two reinforcement layers

Fibre concrete spacers with vertical and horizontal reinforcement



Sample configuration of various reinforcement accessories

JORDAHL® Punching Shear Reinforcement JDA

JORDAHL® punching shear reinforcement JDA are used for the transmission of high shear forces in flat floor applications with reduced requirements for formwork and reinforcement and for optimum use of space. They can also be used for foundations and consist of double-headed anchors connected by a strip.

Advantages:
- In comparison to floor slabs without punching shear reinforcement, punching shear resistance and load-carrying capacity can be increased by 90%
- Reduced requirements for formwork
- Installation possible from the top and bottom
- Can be used for flat ceilings from a thickness of 18 cm
- Quick and simple installation
- Lower construction height of the ceiling due to higher load-carrying capacity than conventional reinforcement technology
- Level ceiling underface
- Can be used for all support positions and support forms

Customised solutions:
Versatile fabrication possible depending on static requirements.

Approval:
General Technical Approval Z-15.1-214
European Technical Approval
ETA-13/0136

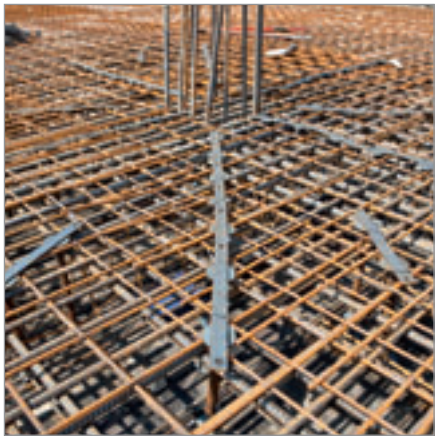
Material/designs:
Double-headed anchor: made of BSt 500 S; strip: made of structural steel.

Software:
Intuitive software that for example takes into consideration supports, reinforcements and recesses and provides an automatic verifiable calculation.
Free download from www.jordahl.de.

Examples of applications:

JDA-Q mounting aid can be used for improved stability

Star-shaped configuration around a support



Installation in ceiling and foundation slabs

Further product recommendations:
Design version JORDAHL® JDA-FT-Klick

JORDAHL® Punching Shear Reinforcement JDA-FT-Klick

The design versions of the JORDAHL® punching shear reinforcement JDA-FT-Klick have been specially developed for use in element ceilings (pre-cast concrete components). Here, the JDA elements are unmounted, i.e. anchor, mounting strips and distance pieces are supplied as a construction kit.

Advantages:
- Easy click-on mounting
- No collision of the flexural reinforcement with the JDA elements during installation
- Clear allocation due to colour marking
- Ceiling elements can be transported after concreting – no reworking required
- Accessories: universally adaptable distance pieces AH-FT made from synthetic material or FBA made from fibre-reinforced concrete

Approval:
General Technical Approval Z-15.1-214

JORDAHL® Shear Reinforcement JDA-S

JORDAHL® shear reinforcement JDA-S ensure optimum load transmission with low deformation in the area of the highly loaded, linearly mounted support. They consist of double-headed anchors connected by a strip.

Advantages:
- Quick and simple installation in highly reinforced areas
- Low deformation due to good anchoring of the ending
- Flexible fabrication depending on static requirements

Customised solutions:
Individual solutions according to planning specifications.

Approval:
General Technical Approval Z-15.1-268

Further product recommendations:
JORDAHL® spacers made from plastic or fibre-reinforced concrete

PFEIFER PH Reinforcement Continuity System

The system encompasses female and male bars for the most diverse reinforcement layout requirements and offers a customer-orientated solution for permanent connections. Reinforcement joints can be realised by simply screwing together the female and male bars.

Advantages:
- Flexible planning, fast construction
- Overlap joint can be ordered without specification of sizes
- Load-bearing connection of the male and female bars with continuity reinforcement through overlapping joints
- Transmission of the full bar force without reduction
- Joints are possible without longitudinal offset in one section
- Simple implementation of time-staggered concreting phases
- Reduction connections for reducing the diameter in a joint or in end anchorages are additionally available

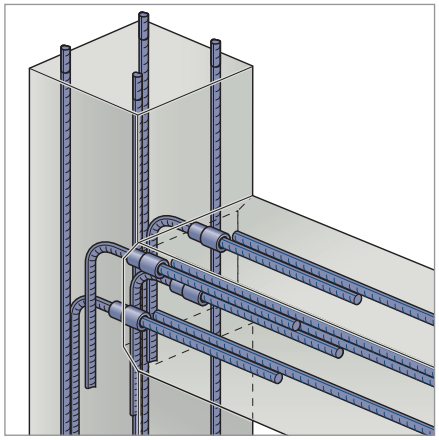
Approval:
German Institute of Construction Technology general technical approval no. Z-1.5-226

Material/versions:
Reinforcing steel bar B500B

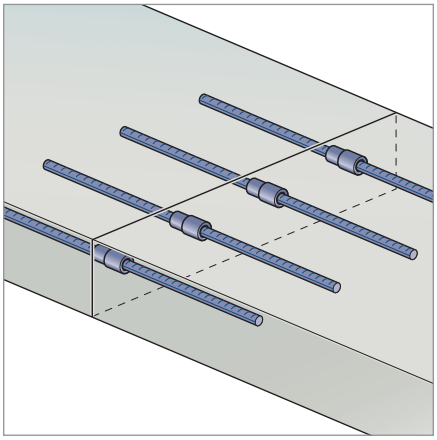
Delivery lengths/load groups:
Lengths from 400 - 3,600 mm available as standard in bar diameters from 8 - 40 mm; custom lengths on request.

Accessories:
- PFEIFER Torque Wrenches

Examples of applications:



Connection of a beam to a precast concrete column



Use of the PH Reinforcement Continuity System at a concreting joint

Connection of a precast concrete column to a cast-in-situ joist

Further product recommendations:
PFEIFER VS® System, PFEIFER Column Shoe System

PFEIFER VS® System^{3D}

The new VS® ISI System^{3D} offers a completely new dimension of VS® wire rope loop connections. The VS® ISI System^{3D} combines all the advantages of previous rail systems in a single product and offers further new developments for all connections of walls to one another or of walls to columns. The product range is rounded off by the approved box systems and a wide range of products for structural applications.

Advantages:
- Ensure maximum load capacities even with thin walls
- Optimum profile for optimum connection
- Symmetrical box and rail profiles – non-directional installation
- Practice-orientated grouting system
- Minimum consumption of mortar
- Symmetrical arrangement of the loops in the VS® ISI System^{3D} offers undreamt-of increases in efficiency and implementation safety

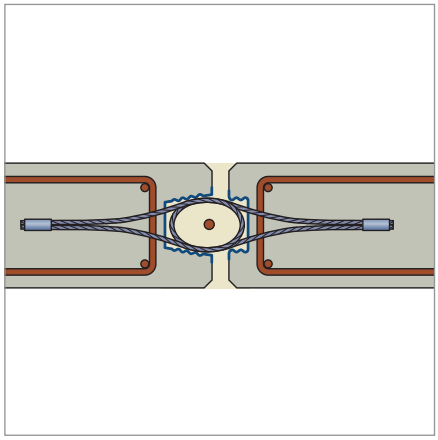
Approval:
German Institute of Construction Technology general technical approval

Material/versions:
Rails and boxes are made of zinc-plated sheet steel. High-strength zinc-plated steel ropes. Covers with robust tape.

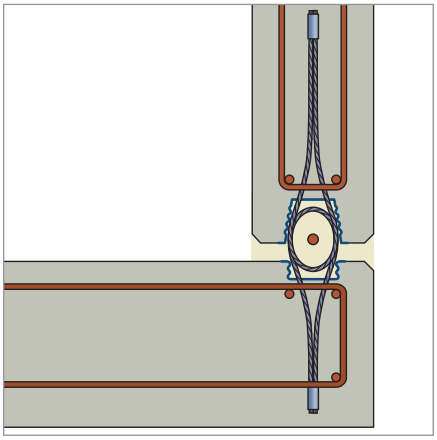
Delivery lengths/load groups:
Rail profiles and boxes can be ordered in different versions and also as empty profiles.

Software:
The original PFEIFER Software Suite is available for download free of charge from www.pfeifer.de in German, English, Polish, Czech, Danish, French and Spanish.

Examples of applications:



Butt joints with the PFEIFER VS® ISI System^{3D}



Wall/column splice with the PFEIFER VS® ISI System^{3D}

Supertrees, Singapore

Further product recommendations:
PFEIFER PH Reinforcement Continuity System, PFEIFER Column Shoe System

Mainbow, Frankfurt am Main, Germany, versatile façade design with JORDAHL® Brickwork Support Brackets JVA+

FACADE CONNECTION SYSTEMS

JORDAHL® BRICKWORK SUPPORT SYSTEM JVA+

JORDAHL® GROUT-IN BRACKETS JMK+

JORDAHL®
Brickwork Support System JVA+

Facades can be durably and economically fastened with the JORDAHL® brickwork support brackets JVA+. They absorb loads of the facade brickwork and transfer them into the bearing structure using correctly installed anchor channels or dowels. Together with the load-bearing inner wall, a two-shell construction is formed that exhibits excellent structural characteristics.

Advantages:
- For creative facade design, also for high buildings
- Easy compensation of building tolerances due to height-adjustable bracket head
- Comprehensive JORDAHL® service and advice
- Economical installation to concreted JORDAHL® anchor channels
- JVA+ N/ NA/ NU: for bracing closed wall surfaces (can be used with intermediate angle bracket)
- JVA+ P/ PAR: for normal wall areas/ edges
- JVA+ F/ FAR: for bracing visible/ invisible building openings/ exterior corners
- JVA+ E/ EA: for ends, e.g. interior corners
- JVA+ NFT/ NAFT: for openings that are braced with prefabricated lintels
- Comprehensive accessories

Customised solutions:
Facade brackets can be adapted individually to structural conditions.

Approval:
General Technical Approval Z-21.8-1868 for bracket head and high-strength material
Type Approval TP-12-009

Delivery lengths/load groups:
All facade brackets are available in different load classes (3.5, 7.0, 10.5).

Material/designs:
High material efficiency through the use of stainless steel of corrosion resistance class III.

Software:
Intuitive software is available for the selection of the optimum brickwork support brackets. It provides maximum planning security.
Free download from www.jordahl.de.

Examples of applications:

JVA+P brickwork support bracket with vertical web plate for level bracing

Efficient thermal insulation thanks to twin-shell construction

Creative and sophisticated façade design from façade facing

Further product recommendations:
Suitable JORDAHL® accessories (angle brackets, scaffolding anchor/eyebolts, cavity wall ties, roll-layer bracket, suspension loops, prefabricated part holder and much more) as well as JORDAHL® anchor channels

JORDAHL®
Grout-in Brackets JMK+

JORDAHL® grout-in brackets are available in different designs for the sustainable attachment of facade brickwork on existing buildings. The brackets are installed using expanding concrete – into sufficiently deep supporting pockets previously drilled into the bearing brickwork.

Advantages:
- Efficient system for energetic, appropriate renovation of old facades
- Quick, economical installation
- Safe support to a bricklaying height of several metres (up to two storeys)
- Facilitates high loads even if the substructure offers little load-bearing capacity
- Available as corner design and with intermediate angle bracket
- JMK+ N/ NA/ NU: for bracing closed wall surfaces
- JMK+ P/ PAR: for normal wall areas/edges
- JMK+ F/ FAR: for bracing visible/ invisible building openings/ exterior corners
- JMK+ E/ EA: for ends, e.g. interior corners
- JMK+ NFT/ NAFT: for openings that are braced with prefabricated lintels
- Comprehensive accessories

Customised solutions:
Grout-in brackets can be adapted individually to structural conditions.

Material/designs:
High material efficiency through the use of stainless steel of corrosion resistance class III.

Delivery lengths/load groups:
All grout-in brackets are available in different load classes (3.5 and 7.0).

Software:
Intuitive design software is available for the selection of the optimum grout-in brackets.
Free download from www.jordahl.de.

Examples of applications:

JMK+P grout-in brackets with vertical web plate

Efficient thermal insulation thanks to twin-shell construction

Refurbishment of existing buildings in accordance with the latest energy-saving regulations

Further product recommendations:
Suitable JORDAHL® accessories (intermediate angles, cavity wall ties, roll-layer bracket, suspension loops, prefabricated part holder and much more)

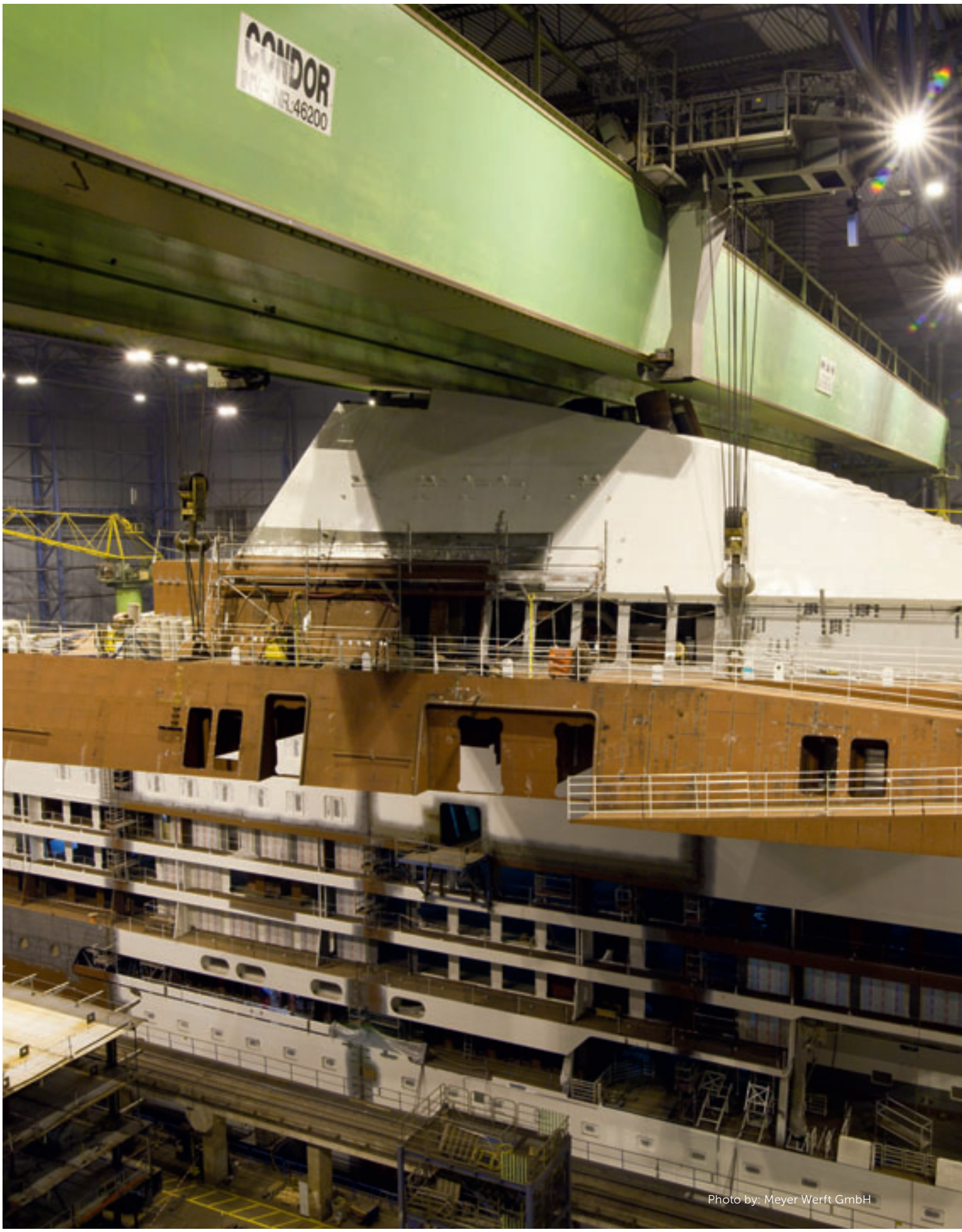


Photo by: Meyer Werft GmbH

Meyer Werft, Papenburg, Germany, secure fastening of components using JORDAHL® mounting channels

MOUNTING TECHNOLOGY

JORDAHL® MOUNTING CHANNELS JM W

TOOTHED JORDAHL® MOUNTING CHANNELS JXM W

JORDAHL®
Mounting Channels JM W

JORDAHL® mounting channels JM W, together with the appropriate hook-head T-bolts and JORDAHL® accessories, create a versatile channel-bolt connection that can be adapted to new support and fastening requirements. They can absorb tensile and shear loads vertical to the channel axis.

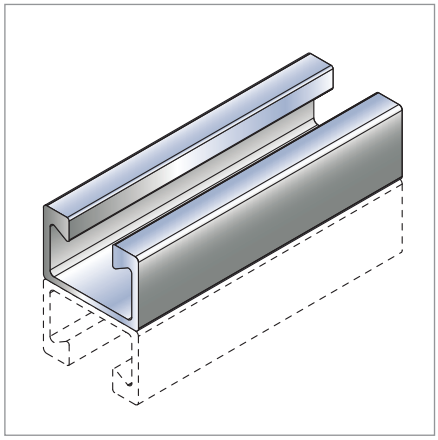
Advantages:
- Can be directly welded on and bolted to framework constructions
- Quick replacement, retrofitting, moving of construction components
- Free positioning and variable adjustment of attachment parts
- Compensation of constructional tolerances; standard grid sizes can be changed
- For variable bolt distances in the longitudinal direction of the channel
- Right-angled profile edges for good weldability
- Free from internal stress, high ductility, dynamically loadable
- Optimised geometry with strengthened channel lips and large contact areas for high tightening torques

Customised solutions:
Curved mounting channels, double profiles, cold-formed (slotted) framing channels.

Material/designs:
With effective corrosion protection. Available made from hot-dip galvanised steel, stainless steel (A4) and mill finish steel.

Delivery lengths/load groups:
Available in five sizes of channel, lengths from 100 to 6000 mm. They possess high bearing capacity. Suitable for permitted static loads up to 40 kN (FKM), breaking loads up to 100 kN.

Examples of applications:



Double profiles e.g. for framework constructions

Welded-on mounting channel with customised colour coating

Economic fastening of components, e.g. in railway vehicle construction

Further product recommendations:
JORDAHL® hook-head T-bolts, JORDAHL® double-toothed T-bolts, JORDAHL® locking plates

Toothed JORDAHL® Mounting Channels JXM W

The toothed JORDAHL® mounting channels JXM W, together with the appropriate toothed T-bolts and JORDAHL® accessories, create a versatile channel-bolt connection that can be adapted to new support and fastening requirements. They can absorb loads in all directions.

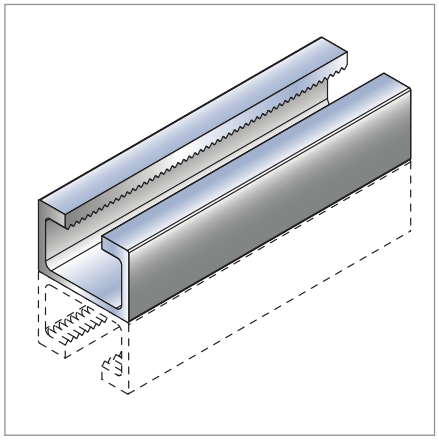
Advantages:
- Can be directly welded on and bolted to framework constructions
- Quick replacement, retrofitting, moving of construction components
- Free positioning and variable adjustment of attachment parts
- Compensation of constructional tolerances; standard grid sizes can be changed
- For variable bolt distances in the longitudinal direction of the channel
- Right-angled profile edges for good weldability
- Free from internal stress, high ductility, dynamically loadable
- Optimised geometry with strengthened channel lips and large contact areas for high tightening torques
- Versatile planning due to universal load-capacity in all directions

Customised solutions:
Curved mounting channels, double profiles, cold-formed toothed framing channels.

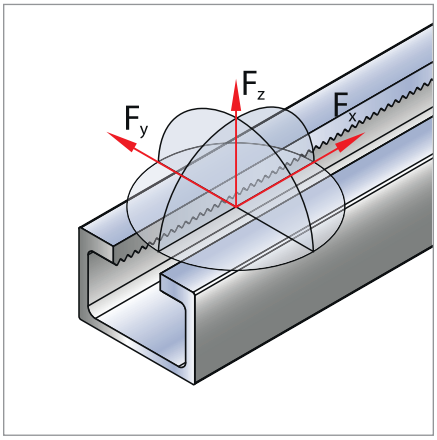
Material/designs:
With effective corrosion protection. Available made from hot-dip galvanised steel, stainless steel (A4) and mill finish steel.

Delivery lengths/load groups:
Four sizes of toothed channels for economical construction, available in lengths up to 6000 mm. High load-bearing capacity for loads up to 34 kN (FKM), break-load design up to 85 kN.

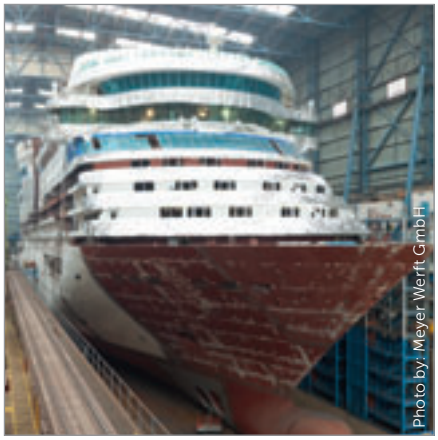
Examples of applications:



Double profiles e.g. for framework constructions



Universal load capacity in all directions



Toothed mounting channels for a variety of uses, e.g. in shipbuilding

Further product recommendations:
JORDAHL® T-bolts

Stair in residential building, acoustically decoupled using H-BAU impact sound insulation elements

SOUND INSULATION

H-BAU IMPACT NOISE INSULATION ELEMENTS

H-BAU Impact Noise Insulation Elements

By using H-BAU impact noise insulation elements, flights of stairs and landings are reliably detached from impact sound. They serve as elementary attributes in housing construction and are required for execution corresponding to increased sound insulation in accordance with DIN 4109. The product range provides a suitable solution for every installation situation of reinforced concrete stairs and landings.

Advantages:
- Type tested
- Sound insulation tested
- High reduction in impact sound
- Conforms to the requirements of increased sound insulation in accordance with DIN 4109
- Wide variety of types
- Elements available for linear and punctual connection

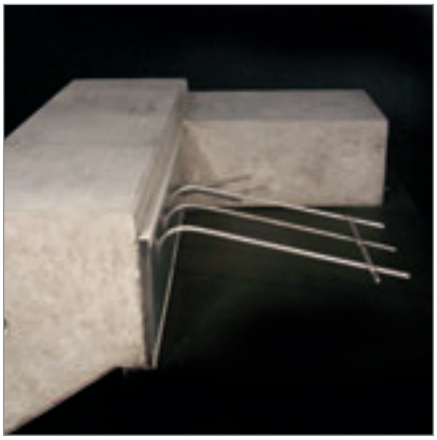
Product range:
- Schall-ISOBOX® TSB: for stair landings
- Schall-ISOSTEP® HTV: for straight flights of stairs
- Schall-ISODORN HQW: for spiral flights of stairs
- Schall-ISOTRITT® Z and ZB: for prefabricated staircases
- Sound insulation plate TSP: to avoid sound bridging problems

Material/designs:
TSB and HQW: sound box made from CFC and halogen-free, polyurethane integral foam with EPDM elastomer bearing, bearing element made from galvanised steel (HQW).
HTV: damping element with framework made from B500B NR and integrated EPDM elastomer bearings.

Z and ZB: body made from polypropylene foam with integrated SD rib bearings.
TSP: roll goods made from polyethylene.

Examples of applications:

Spiral staircase with ISODORN HQW sound insulation



Model of a prefabricated staircase with ISOSTEP® HTV sound insulation

SHUTTERING TECHNOLOGY

H-BAU RAPIDOBAT® SHUTTERING TUBES

H-BAU SHUTTERING ELEMENTS

H-BAU SHUTTERING ACCESSORIES

H-BAU RAPIDOBAT® Shuttering Tubes

With RAPIDOBAT® shuttering tubes, H-BAU provides a system of column formwork for easy and economic manufacturing of round and rectangular columns. The shuttering tubes consist of multi-layered, very stable webs of paper and cardboard. In addition, the shuttering tubes could be specially refined depending on the demands placed on the exposed concrete and requirements of the architect. Various versions are available.

Advantages:
- Integrated ripcord for easy striking
- Material can be recycled
- Dimensionally stable, also in driving rain
- Suitable capitals and bases available

Product range:
- RAPIDOBAT® Cretcon HD: for the highest demands on the concrete surface
- RAPIDOBAT® lined: for a very smooth concrete surface
- RAPIDOBAT® unlined: slight spiral attribute possible
- RAPIDOBAT® square and rectangular: for rectangular columns with a very smooth concrete surface

Customised solutions:
On request, manufacture of creative and challenging special forms – from conical shaped pillars to ellipses and L-columns.

Material/designs:
Shuttering tubes made from multi-layered, very stable paper and cardboard webs that can be recycled with water-impermeable inner and outer web.

Delivery lengths/load groups:
Stock length up to 7.00 m.
Standard dimensions:
- Round ø 150 – 1200 mm.
- Rectangular 175/240 – 400/500 mm.
- Square 200/200 – 500/500 mm.

Other lengths and dimensions on request.

Examples of applications:

RAPIDOBAT® shuttering tubes on the building site

RAPIDOBAT® lined; on the left already removed

RAPIDOBAT® special design

H-BAU Shuttering Elements

Whether permanent shuttering for construction joints or formwork elements for slab edges – H-BAU shuttering elements always provide an optimum solution and are available in various versions for different applications. The suitable shuttering elements are assembled on the construction site and attached to the reinforcement. The H-BAU formwork elements Warmbord and Schalbord form simple and effective floor-edge shutterings.

Advantages:
- High stability
- Shuttering elements in toothed profile for transmission of high shear forces
- Fast and simple shuttering of floor edges
- Economical shuttering of concreting steps

Product range:
- Warmbord: permanent formwork for concrete ceilings and thermal insulation in one
- Schalbord: quick, inexpensive slab-edge shuttering
- Shuttering elements A and AX: permanent formwork for construction joints

Material/designs:
Warmbord: made from styrofoam, thermal conduction group 035.
Schalbord: made from cement-bound wood fibre board.
Shuttering element A and AX: made from expanded metal, available as raw or toothed joint in accordance with EC2 and in a steel-reinforced design (AX) for high demands.

Delivery lengths/load groups:
Warmbord: length 1000 mm, height 160 – 250 mm, thickness 60/80/100 mm.
Schalbord: length 2500 mm, height 160 – 300 mm, thickness 12 mm.
Shuttering element A and AX: length 2400 mm, height 80 – 1000 mm.

Examples of applications:

A-V shuttering element according to EC2

AX-R shuttering element for rough joints

Schalbord slab-edge shuttering

Further product recommendations:
H-BAU PENTAFLEX® ABS shuttering elements

H-BAU Shuttering Accessories

Shuttering accessories are used in the production of cast-in-situ concrete components. They are required to maintain the width of the wall as well as to tie the formwork. H-BAU has a comprehensive range of products, including formwork spacers for exposed concrete or WU components, fixing technology as well as base plates and various plastic profiles.

Advantages:
- Proven in use
- High-quality materials
- Varied proofed

Product range:
- Formwork anchors
  - Anchor bars in various designs
  - Nuts and load distribution plates
  - Water stops and cones
  - Assembly and attachment anchors
- Formwork spacers
  - Fibre concrete formwork spacers, WU-approved
  - Tie points and distance tubes
  - Various accessories
- Prefabrication plant
  - Spacers for the production of double walls
  - Assembly dowel for attaching prefabricated walls

Material/designs:
Anchors: made from steel and galvanised steel, with unilateral or rolled thread.
Anchor accessories: made from galvanised steel, cast iron or plastic.
Formwork spacers: made from fibre concrete.
Tie points and distance tubes: made from plastic.
Various accessories: made from fibre concrete or plastic.
Spacers: made from steel, GRP or plastic.

Examples of applications:

Accessory: formwork anchors

Accessory: spacers and tie points

Use of anchors and formwork accessories on building site

Further product recommendations:
H-BAU RAPIDOBAT® shuttering tubes

LIFTING ANCHOR SYSTEMS

H-BAU DOUBLE-WALL TRANSPORT ANCHOR KE

PFEIFER THREAD SYSTEM

PFEIFER WK SYSTEM

PFEIFER BS ANCHOR SYSTEM

PFEIFER SAS MANHOLE LIFTING SYSTEM

PFEIFER SUPER ANCHOR SYSTEM

H-BAU Double-Wall Transport Anchor KE

The double-wall transport anchor KE ensures safe erecting, relocating and transporting of element walls in prefabrication plants and on construction sites. The choosen material and the proven design significantly increase the flexibility.

Advantages:
- High degree of safety and economy
- Graduated load capacities for efficient planning
- Fast and easy installation for trouble-free production flow
- Position can be planned independent of the formwork girders
- CE marking

Product range:
- Transport anchor type KE III: for common slab dimensions, with GS mark for the best possible safety
- Transport anchor type KE IV: for slabs with special requirements

Material/designs:
Made from smooth, high-ductile round steel with precise timber element made from high-quality laminated veneer lumber.

Delivery lengths/load groups:
Load capacity up to 65.0 kN (depending on type and form of tension).

Examples of applications:

Moving an element wall using KE transport anchor

Installed KE transport anchor

Element walls with KE transport anchors

Further product recommendations:
H-BAU shuttering accessories

PFEIFER Thread System

The well-known PFEIFER Thread System, which has been successful for many years, consists of threaded anchors, lifting devices and a comprehensive range of accessories. It ranks among the market-leading transport anchor systems for precast concrete units and stands for universal and economical use in the lifting and transport of all kinds of precast elements with a high degree of safety.

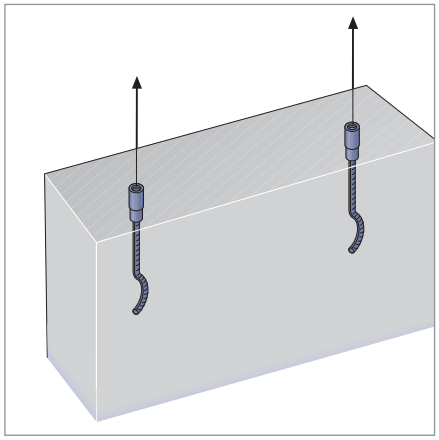
Advantages:
- High degree of safety and economy
- Already safely used more than 45 million times
- Robust PFEIFER round threads for safe application
- Original PFEIFER colour coding for handling without mix-ups
- Understandable instructions for installation and use
- Extensive range of products that perfectly meet the highest requirements for the transport of thin-walled precast elements
- CE marking

Material/designs:
Anchors: sockets made of high-grade precision zinc-plated steel tube, or made of stainless steel.
Welded to flat steel bar or swaged onto reinforcing steel bar B500AB.
Lifting device: made of highly flexible, zinc-plated all-steel wire rope or steel.

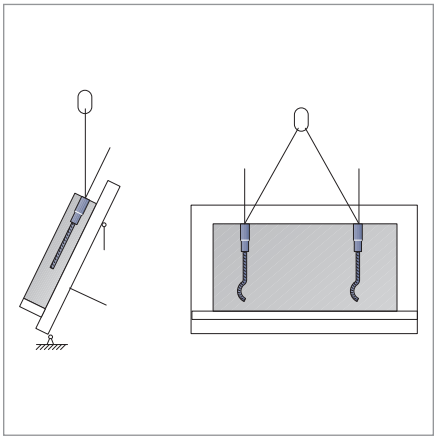
Delivery lengths/load groups:
Available in thread sizes from Rd 12 to Rd 60 with permissible resistances of 500 kg - 20,000 kg and in different versions.

Accessories:
- Magnetic Disc
- Fixing Bolts with and without head
- Fixing Screws
- Data Clips

Examples of applications:



Lifting anchors installed at the front side for transport



Precast wall panel on a tilting table with suitably installed thread system anchors

Transport of parts of the Meggle Food Tower in Wasserburg

Further product recommendations:
PFEIFER VS® System, PFEIFER DB-Anchor

PFEIFER WK System

The PFEIFER WK System consists of PFEIFER WK or DR Anchors, WK moulding inserts and WK Quicklift as lifting devices. The consistent systems are particularly suitable for lifting operations in which fast attachment is decisive.

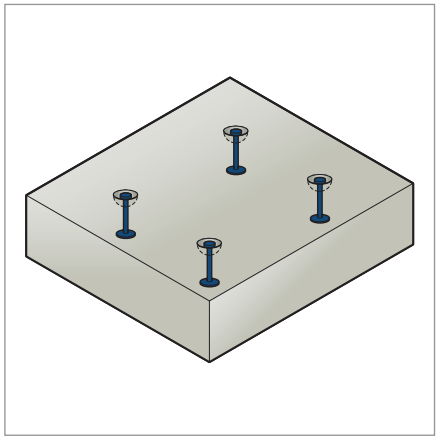
Advantages:
- Wide range of applications
- Fast, safe attachment with the PFEIFER Quicklift
- Continuous product monitoring
- Shorter anchor lengths of the WK Anchors, since existing reinforcements can also be used
- WK Anchor: short design, hence suitable for use in columns and beams (bar-shaped components with longitudinal and stirrup reinforcements)
- WK Anchor: secure load application possible despite the shortness of the anchor
- DR Anchor: suitable for the transport of pipes and slabs

Material/versions:
WK Anchor: made of reinforcing steel bar B500B.
DR Anchor: made of forged steel, plain or stainless steel.
WK Quicklift: available in tempered cast steel or round steel.

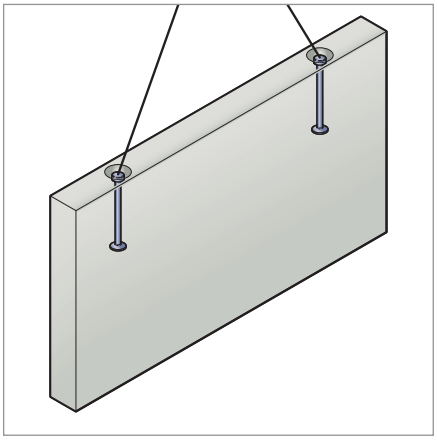
Delivery lengths/load groups:
Choice of 7 different sizes with load capacities of between 1.3 and 20 tonnes.

Accessories:
- WK Moulding Insert

Examples of applications:



Top-side installation of DR Anchors in floor elements



Front-side installation of DR Anchors in wall elements

PFEIFER Quicklift hooked into a cast-in DR Anchor

Further product recommendations:
PFEIFER Thread System, PFEIFER PH Reinforcement Continuity System

PFEIFER BS Anchor System

PFEIFER BS Anchors are lifting anchors for precast concrete elements in which a rope projecting beyond the surface is not a hindrance or can be cut off after use. Further system components are BS hooks, bent loops and moulding inserts.

Advantages:
- Standard heavy-duty anchor
- Direct attachment to the suspension hook without expensive lifting devices
- Inexpensive alternative for the transport of precast elements
- Original PFEIFER colour coding for handling without mix-ups
- Wide range of applications
- BS Anchor: for projecting or, with some anchor types, recessed installation
- BS Bent Loops: for lifting and transporting concrete floors

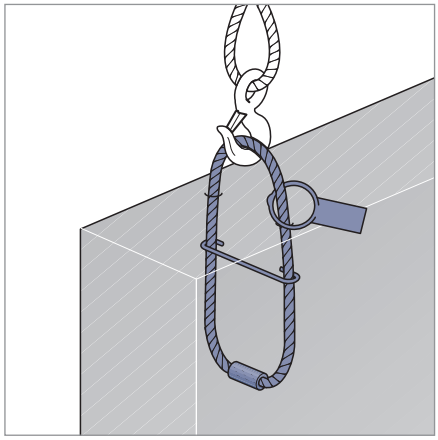
Special solutions:
Possible for up to 180 tonnes on request.

Material/versions:
Flexible, high-strength round strand rope, galvanised with swaged aluminium connection.

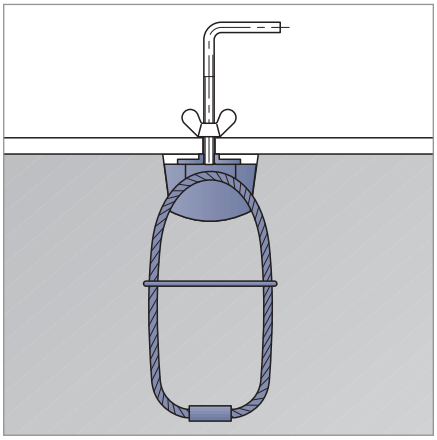
Delivery lengths/load groups:
14 carrying capacity stages available.

Accessories:
- BS Hook
- BS Moulding Insert for recessed installation

Examples of applications:



BS Anchor installed in a heavy wall panel



Deepened installation of a BS Anchor

Raker beams with PFEIFER BS Anchors ready for transport

Further product recommendations:
PFEIFER Thread System, PFEIFER WK System

PFEIFER SAS Manhole Lifting System

The PFEIFER SAS Manhole Lifting Systems, consisting of PFEIFER SAS lifting anchor, PFEIFER SAS Lifting Loop and PFEIFER SAS Data Clip, are used for lifting and moving pipe and manhole items.

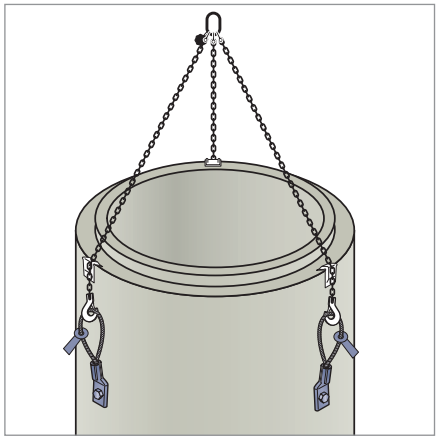
Advantages:
- Efficient and flexible transport of manholes
- Attachment bolt cannot be lost
- Optimum range of products for all practically relevant applications
- Original PFEIFER colour coding for handling without mix-ups

Material/versions:
Consisting of high-grade precision steel tube, flexible steel wire rope, high-strength screws and flat material.

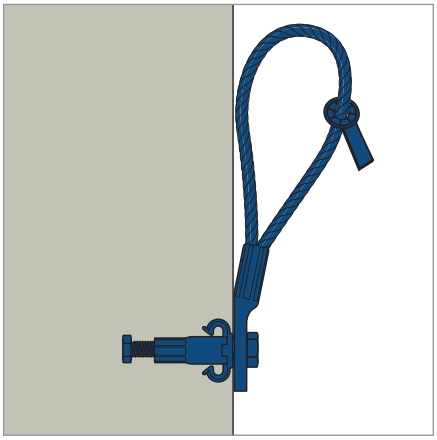
Delivery lengths/load groups:
Available in 4 sizes and 2 versions.

Accessories:
- Fixing bolts
- Fixing screws

Examples of applications:



Transport of a manhole with the PFEIFER SAS Manhole Lifting System



Installed anchor with SAS loop

Stored manhole elements prior to transport

Further product recommendations:
PFEIFER WK System

PFEIFER Super Anchor System

The PFEIFER Super Anchor Systems consist of Super Lifters for safe attachment, Super Anchors and suitable formwork accessories. The optimised and safe transport anchor systems are ideally suited to thin-walled and heavy precast concrete elements.

Advantages:

- Reduced sleeve diameter facilitates installation of the anchors in the thinnest components and threading into narrow reinforcing cages
- Optimal anchorage with low gap effect through the use of the millionfold-proven waves
- Significantly increased carrying capacity through the use of high-strength, ductile steel
- Up to 45% lower wall thicknesses with comparable load stages
- Only 3 sizes – simplified materials management and lower stock-keeping costs
- Use of a particularly insensitive special thread rules out mistakes and ensures a long and secure service life of the PFEIFER Super Lifters

Material/versions:
Anchors: zinc-plated steel threaded socket, reinforcing steel bar B500B. Hook: special-quality structural steel, high-strength threaded steel bolts, painted.

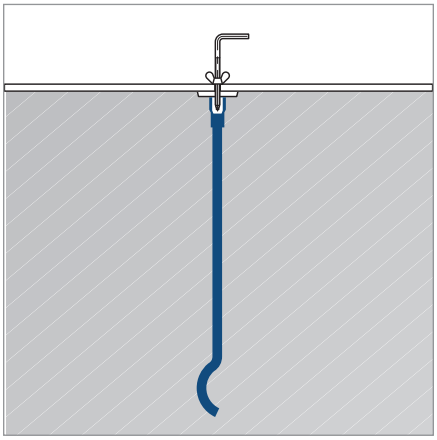
Delivery lengths/load groups:
Super Anchor available in 3 sizes for loads ranging from 55 to 220 kN.

Accessories:

- Fixing Bolts
- Fixing Screws

Examples of applications:

Detail of Super Anchor with lifting device including special auxiliary reinforcement



Fixing of a Super Anchor to formwork

Transport of a thin-walled room module element with the PFEIFER Super Anchor System

Further product recommendations:
PFEIFER Thread System, PFEIFER VS® System

National Stadium, Warsaw, Poland: secure connections with JORDAHL® double shear connectors

CONNECTION SYSTEMS

H-BAU HED & JSD+ SHEAR DOWELS

H-BAU UNICON® FAST CONNECTION SYSTEM

JORDAHL® DOUBLE SHEAR CONNECTORS JDSD

PFEIFER BEARING SYSTEMS

PFEIFER COLUMN SHOE SYSTEM/
WALL SHOE SYSTEM

PFEIFER SANDWICH ANCHOR SYSTEM/
PFEIFER DELTA ANCHOR SYSTEM

PFEIFER BEB CONCRETE EARTHING BRIDGE

H-BAU HED & JSD+ Shear Dowels

Shear dowels from H-BAU are used when shear forces between concrete components need to be safely transmitted across construction and expansion joints. They are suitable for thinner components and low loads (HED) as well as for constructions which have to transmit high shear forces (JSD+).

Advantages:
- High-quality stainless steel design and permanent protection against corrosion
- R90 with fire protection sleeve
- Special sliding sleeves to accommodate lateral displacement of the slabs available

Product range:
- Shear dowels HED: displacing the components along the longitudinal axis of the beam up to a joint width of 40 mm, as well as transmitting vertical and horizontal loads (e.g. wind loads)
- High-performance dowels JSD+: especially for transmitting high shear forces for uni-axial or bi-axial displacement

Material/designs:
HED: available in various grades of steel ex-stock; e.g. S355 galvanised, V4A corrosion protection cat.III. Sliding sleeves made from plastic or stainless steel.
JSD+: made from stainless steel with permanent protection against corrosion.

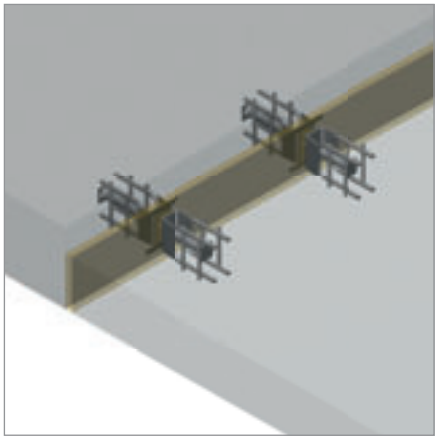
Delivery lengths/load groups:
HED: length 300 and 500 mm, available with ø 20/22/25/30 mm.
JSD+: length depending on diameter, available with ø 20/22/24/27/30/37/42 mm.

Software:
Dimensioning program JSD+ Design for quick, easy and effective measurement of the dowel system for expanding joints transmitting shear forces. Free download from www.h-bau.de.

Examples of applications:

Slab dowelling with HED shear dowels

Installed sliding sleeve for HED shear dowel



Shear force transmission with high-performance dowels JSD+

H-BAU UNICON®
Fast Connection System

UNICON® is an innovative fast connection system from H-BAU. It allows a positive locking connection of building elements as well as plugging of media in precast constructions just by putting the components together. With this modular system, prefabrication of the elements can be effected up to 100% at the prefabrication plant. It ensures a higher quality level of the construction parts and saves money at the same time. Various connecting elements are available.

Advantages:
- Revolutionary, universal fast connection system for producing precast components
- Simple plug-in assembly on the construction site
- Prefabrication of components at the prefabrication plant
- Integration of media connections
- Non-destructive dismantling

Product range:
- POWERCON®: load connector
- POWERCON® Multi: load connector with option to adjust
- POWERCLIP: connector for floor/wall connection
- AQUACON®: water system connector
- SANICON: ventilation and sewage system connector
- ENERCON®: power and ductwork system connector

Material/designs:
POWERCON® and POWERCON® Multi: made from galvanised cast steel.
AQUACON®: water plug made from dezincification-free brass with 3-fold o-ring seal and 1/2" internal thread connection.
SANICON: made from GRP plastic.
ENERCON®: 7-pole connector, VDE approved in accordance with EIF.
BASECON: made from GRP plastic.

Examples of applications:

Connection of fully prefabricated parts using POWERCON®

Connection of fully prefabricated parts using POWERCON®

Prefabricated wooden wall with POWERCON® and ENERCON® connectors

JORDAHL® Double Shear Connectors JDSD

JORDAHL® double shear connectors are the universal solution for transverse force transmission across constructional joints and provide extensive capabilities in longitudinal and transverse direction. They are used for connecting concrete slabs, supports, beams, prefabricated parts, in-situ concrete, parapets etc.

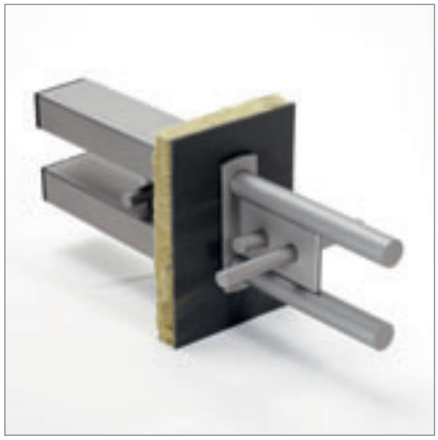
Advantages:
- Flexurally stiff construction ensures high load-bearing capacity
- No explosive effect in the concrete
- Optimised pressure distribution due to integrated transverse dowels
- Easy and quick installation with optimum anti-twist protection – also with strong mechanical influences during concreting
- Uniform transmission of forces
- High-precision production enables maximum freedom of movement for uniform transmission of forces at both dowels
- No twisting due to the two connected dowels
- Double shear connectors JDSD: for longitudinal movement
- Double shear connectors JDSDQ: for longitudinal and transverse movement
- Effective corrosion protection

Approval:
German Technical Approval
Z-15.7-237

Material/designs:
Available in stainless steel, corrosion resistance class III or IV. Consistent at high exposure to corrosion, e.g. chloride/sea water.

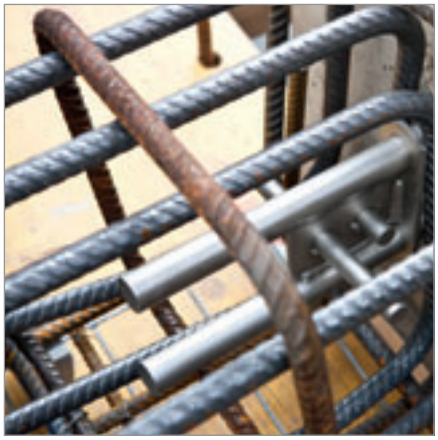
Software:
Intuitive software is available for the selection of the optimum double shear connectors. It provides maximum planning security.
Free download from www.jordahl.de.

Examples of applications:



JDSD Q for transmitting high forces in longitudinal and transverse directions with fire protection sleeve

JDSD double shear connectors allow the transmission of transverse forces when connecting large concrete slabs

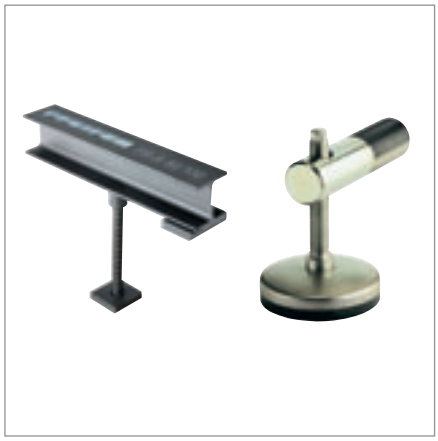


Double shear connectors enable reinforcement to be laid easily

Further product recommendations:
JORDAHL® fire protection collars for fire protection requirements

PFEIFER Bearing Systems

The PFEIFER Bearing Systems are used for the inexpensive, fast support of TT plates, trough plates, joists and staircases. They encompass the innovative PFEIFER steel bearings and the height-adjustable PFEIFER Vario Sonic Staircase Bearing.



Advantages:
- Secure bearing on simple rectangular joists
- Direct bearing with low load eccentricity
- Bearing ledges and dowels for securing the position are no longer required
- Stairs under load are height-adjustable – usable without crane and braces
- Reduction of crane and assembly times
- Outstanding footstep sound insulation
- Saving of construction costs and time through delegation of the detailed planning in advance to PFEIFER
- Prefabrication of the precast elements under controlled conditions
- The sticking-on of neoprene bearings can be avoided

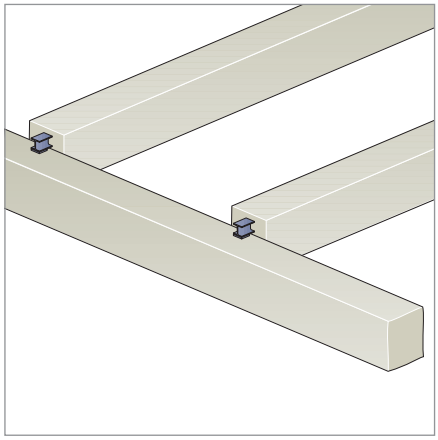
Approval:
Type-tested and German Institute of Construction Technology (DIBT) general technical approval

Material/versions:
Steel Bearings: rolled steel S 355, reinforcing steel bar B500B, high grade precision steel tube.
Staircase Bearings: socket made of galvanised precision steel tube, transversal force bolt made of high-strength galvanised steel, neoprene bearing, foam box, plastic data clip.

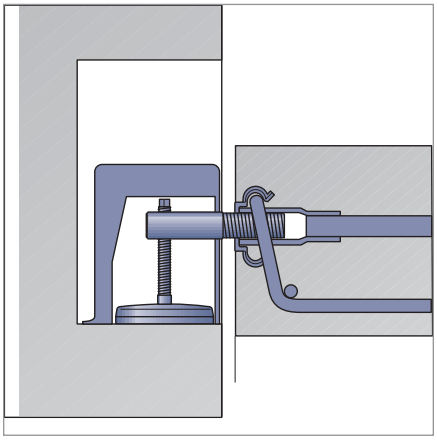
Delivery lengths/load groups:
Steel bearing available in PS-A 65, PS-A 80/100, PS-A 130 and PS-A 160. Staircase bearing available in SL-H 150, VS 150, SL-HS 150, SL-WS 150 and SLE.

Software:
The original PFEIFER Software Suite is available for download free of charge from www.pfeifer.de in German, English, Polish, Czech, Danish, French and Spanish for the steel bearing.

Examples of applications:



Support of secondary joists with PFEIFER Steel Bearings



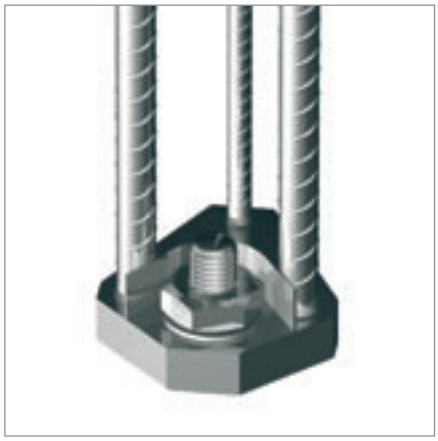
Detail of installation of PFEIFER Staircase Bearing

Transport of a TT plate with PFEIFER Steel Bearings

Further product recommendations:
PFEIFER Column Shoe System, PFEIFER VS® System

PFEIFER Column Shoe System/ Wall Shoe System

The PFEIFFER Column Shoe and Wall Shoe Systems have been developed for the fast, load-bearing connection of columns and walls to one another or to foundations. They offer a high standard of safety through industrial prefabrication of the connecting elements.



Advantages:

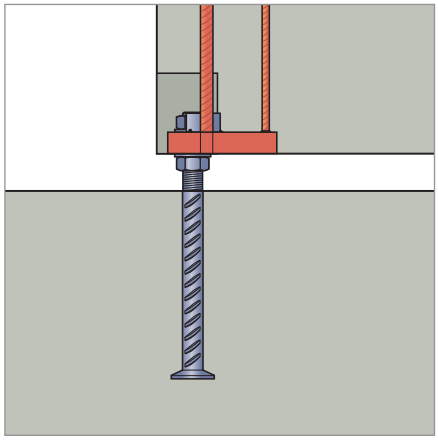
- Secure, quick and simple connection of concrete elements through bolting together
- Fast delivery through the use of standardised components
- Maximum flexibility through manufacturable male bars – specification of the lengths before delivery is possible
- Increased installation tolerances
- PSF type-approved Column Shoe for the load-bearing, rigid connection of prefabricated columns to the foundations – no diagonal bracings during the assembly period
- Wall Shoes as connecting elements within reinforced wall structures transmit straight pull and transverse shear pull

Material/versions:
Column Shoe: made of reinforcing steel bar B500B and structural steel.
Wall Shoe: made of reinforcing steel bar B500B and steel profile.

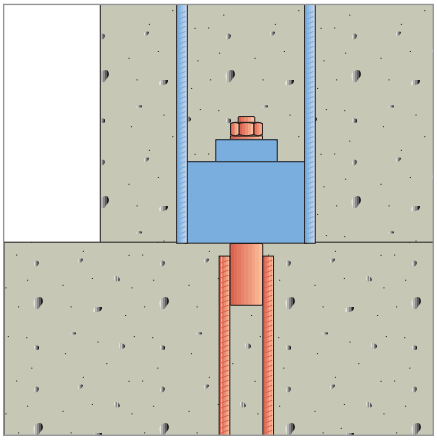
Delivery lengths/load groups:
Column Shoe: available in the sizes PSF16 – PSF36.
Wall Shoe: available in the sizes PWS120 - PWS900.

Software:
The original PFEIFER Software Suite is available for download free of charge from www.pfeifer.de in German, English, Polish, Czech, Danish, French and Spanish.

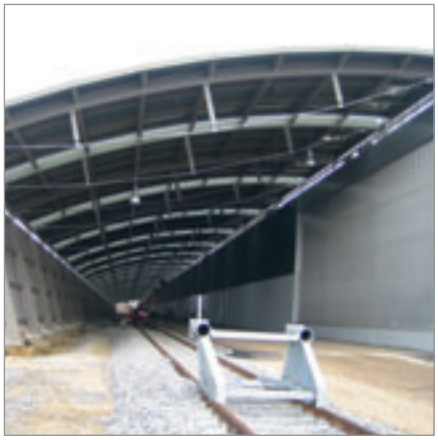
Examples of applications:



Column/foundation joint with the PFEIFER Column Shoe System



Wall/foundation joint with the PFEIFER Wall Shoe System



Installation of PFEIFER Column Shoes into the inclined columns of the new AUDI goods traffic centre in Ingolstadt

Further product recommendations:
PFEIFER Steel Bearings, PFEIFER PH Reinforcement Continuity Systems

PFEIFER Sandwich Anchor System/ PFEIFER Delta Anchor System

The Sandwich Anchor/Delta Anchor Systems are intended for the connection of facing layer to load bearing layer through the insulating layer. They consist of bearing anchors, torsion or retaining anchors and anchor pins.

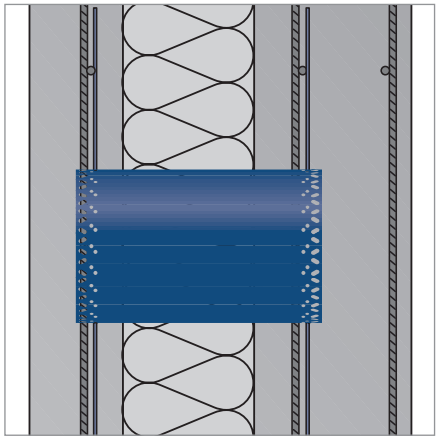
Advantages:
- Insulating layers up to about 20 cm can be realised
- Fast and simple installation of the anchors and the insulation
- Dimensioning alone via the dead weight of the facing layer; loads due to wind pressure, wind suction and temperature are already accounted for in the type static calculation
- Extensive and rounded-off product range
- Reliable delivery by certified company
- Type approval

Material/versions:
All system components made of high-quality corrosion-resistant stainless steel.

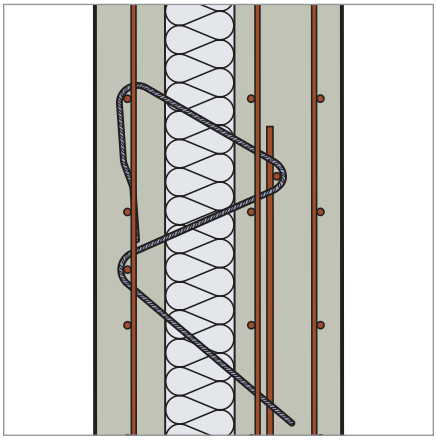
Delivery lengths/load groups:
Available in two material qualities for insulating layer thicknesses of up to 200 mm.

Software:
The original PFEIFER software suite is available for download free of charge from www.pfeifer.de in German, English, Polish, Czech, Danish, French and Spanish.

Examples of applications:



PFEIFER Cylinder Anchor as load-bearing anchor between facing and load-bearing layer of a sandwich element



PFEIFER Delta Anchor as load-bearing anchor between facing and load-bearing layer of a sandwich element

New building: eLab – ZSW laboratory for battery technology

Further product recommendations:
PFEIFER Thread System, PFEIFER VS® System

PFEIFER BEB Concrete Earthing Bridges

PFEIFER BEB Concrete Earthing Bridges are used in traffic engineering and have been specially developed for the earthing of concrete elements near to high-voltage electrical systems.

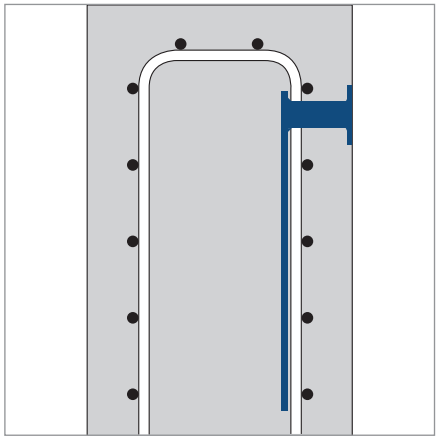
Advantages:
- The adequately dimensioned cross-sections enable an immediate potential equalisation through the lowest possible resistance
- Special implementation in easily weldable reinforcing steel
- No corrosion thanks to discs made of non-rusting material
- Easily attached to the formwork using stainless steel nails
- Inexpensive solution
- Less risk of theft thanks to earthing connector with rope
- Modular system with variable end fixings and connecting elements

Approval:
Approved by the Federal Railways Office and the DB Netz AG

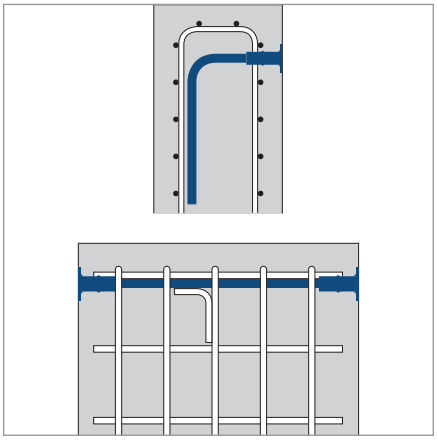
Material/versions:
Sockets/cable lugs: copper-plated steel or zinc-plated copper.
Discs: made of stainless steel.
Cable: copper or steel.

Delivery lengths/load groups:
Various sizes and versions available, divided into BEB 1 to BEB 26.

Examples of applications:



Installation of PFEIFER BEB1 Earthing Bridge



Installation of PFEIFER BEB2 and BEB3 Earthing Bridge

Simple welding of the individual BEB components

Further product recommendations:
PFEIFER WK System, PFEIFER PH Reinforcement Continuity System

THERMAL INSULATION ELEMENTS

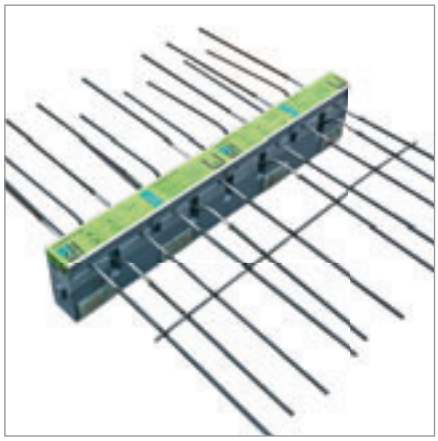
H-BAU ISOPRO® THERMAL INSULATION ELEMENTS

H-BAU ISOMAXX® THERMAL INSULATION ELEMENTS

H-BAU ISOMUR® WALL BASE ELEMENTS

H-BAU ISOPRO®
Thermal Insulation Elements

The thermal insulation elements ISOPRO® from H-BAU reliably establish positive locking connections of external components made from concrete with internal components. With an insulation thickness of 80 mm, ISOPRO® solves thermal insulation and structural weak points in the shell of the building.



Advantages:
- Easy, quick, efficient
- Reduces heating costs
- Elimination of thermal bridges and damage caused by mould and moisture
- Stainless steel for reliable exclusion of corrosion problems and to reduce thermal flow in the framework to a minimum

Product range:
- ISOPRO® IP and IPT: for cantilevered slabs
- ISOPRO® IPQ and IPQQ: for supported components
- ISOPRO® IPTD: for continuous slabs
- ISOPRO® IPQS and IPQQS: for point connection of supported components

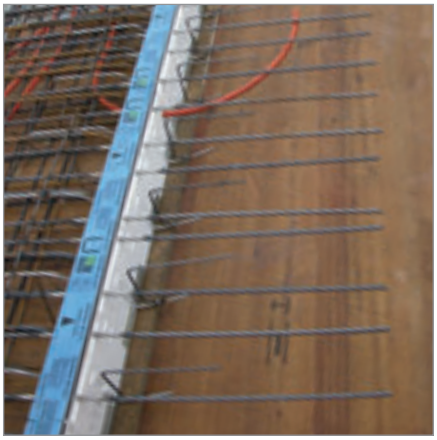
Approval:
Building-authority approved Z-15.7-243 and Z-15.7-244, type-tested according to EC2.

Material/designs:
80 mm insulation body: made from NEOPOR® with λ = 0.031 W/mK.
Reinforcement beams: made from B500B and B500NR.
Thrust bearing: made from special, high-strength concrete.

Software:
Dimensioning program ISOPRO®
Design for quick, easy and effective measurement of the balcony connections.
Free download from www.h-bau.de.

Examples of applications:

ISOPRO® elements fully mounted in the ceiling



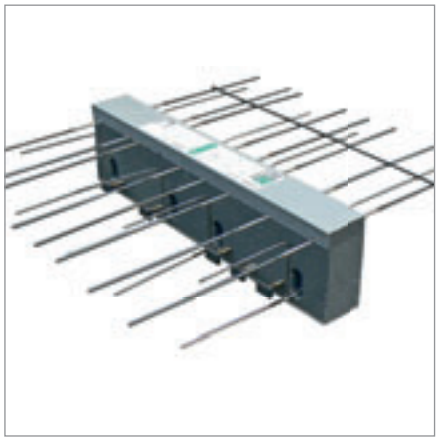
ISOPRO® elements during reinforcement work

Prefabricated balcony connected using ISOPRO® elements

Further product recommendations:
H-BAU ISOMAXX® thermal insulation elements

H-BAU ISOMAXX®
Thermal Insulation Elements

ISOMAXX® is the further development of the well-known ISOPRO® balcony insulation elements from H-BAU. The thermal insulation elements ISOMAXX® reliably establish positive locking connections of external components made from concrete with internal components. With an insulation thickness of 120 mm and the excellent insulation characteristic, the elements are well suited for application in buildings with especially high demands on the thermal insulation.



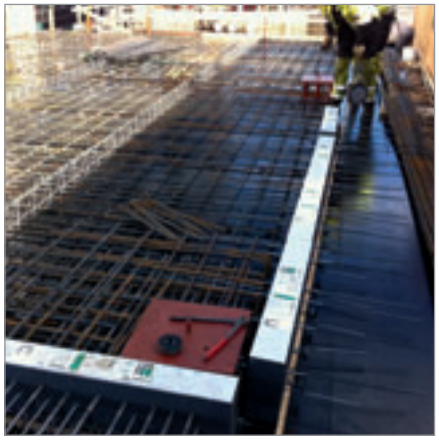
Advantages:
- Excellent insulation characteristics
- Reduces heating costs
- Elimination of thermal bridges and damage caused by mould and moisture
- Stainless steel for reliable exclusion of corrosion problems and to reduce thermal flow in the framework to a minimum
- Improved sound insulation

Product range:
- ISOMAXX® IM and IMT: for cantilevered slabs
- ISOMAXX® IMQ and IMTQQ: for supported components
- ISOMAXX® IMTD: for continuous slabs
- ISOMAXX® IMTQS and IMTQQS: for point connection of supported components

Approval:
Building-authority approved Z-15.7-243 and Z-15.7-244, type-tested according to EC2 and sound insulation tested.

Material/designs:
120 mm insulation body: made from NEOPOR® with λ = 0.031 W/mK.
Reinforcement beams: made from B500B and B500B NR.
Thrust bearing: made from special, high-strenght concrete.

Examples of applications:



ISOMAXX® elements being fitted on the building site

ISOMAXX® special elements

Prefabricated concrete parts connected using ISOMAXX® elements

Further product recommendations:
H-BAU ISOPRO® thermal insulation elements

H-BAU ISOMUR®
Wall Base Elements

Thermal bridges frequently present a typical weak point in the area of the wall foot above the basement ceiling. The wall foot elements ISOMUR® solve the problem of the thermal bridge at the base of the wall. They close the gaps in the interrupted thermal insulation between the insulation above the basement ceiling and the external wall and minimize heat loss through the base of the building.

Advantages:
- Healthy and comfortable climate
- Minimised heat loss and, thereby, a saving in heating costs
- Prevents mildew and condensation forming
- Various applications
- Made from non-absorbent material
- High pressure resistance

Approval:
Building-authority approved Z-17.1-811.

Material/designs:
ISOMUR® wall base element made from styrofoam with an integrated support structure made from high-strength lightweight concrete.

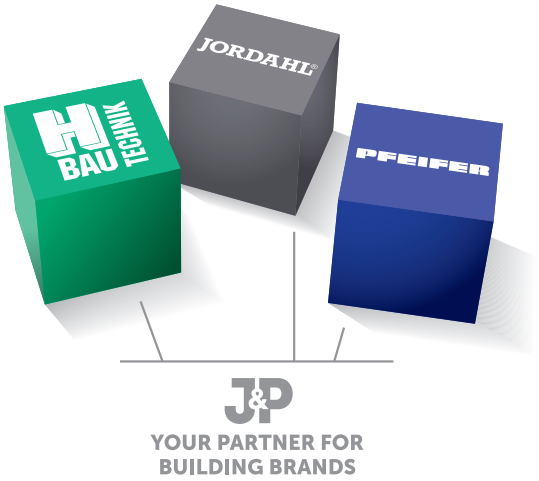
Delivery lengths/load groups:
Length 60 cm, widths available: 11.5/15/17.5/20/24/30 cm.
Brick compressive strength class (SFK) 20.

Examples of applications:

ISOMUR® wall base elements in combination with facing brickwork

Positioning of ISOMUR® elements on the building site

ISOMUR® wall base elements in combination with KS masonry



J&P-Bautechnik
Vertriebs GmbH
Nobelstr. 51
D-12057 Berlin
berlin@jp-bautechnik.de
www.jp-bautechnik.de

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