



**JORDAHL®**  
anchored in quality



**Connection Systems**



**Shear Reinforcement Systems**



**Shear Connector Systems**



**Façade Connection Systems**

# Product Overview

# Anchor Channels JTA W and JXA W

for loads not predominantly static loads



simply, effectively and economically. JORDAHL® anchor channels JTA W absorb tensile and transverse pull loads at right angles to the axis of the channel. The JORDAHL® anchor channels JXA W are capable of absorbing loads in all directions, including along the channel axis.

## The Letter W means:

The profile is hot rolled from the red-hot block. These profiles are thus an optimal shape and particularly low stress. They are particularly suitable for non-static loads and where the pre-tension of the bolts for varying loads is important.

## Advantages

- Static load-bearing capacity for differing service loads of 8.0 to 40.0 kN
- Solid channel lip for high bolt preload through high tightening torque
- For dynamic and variable or mainly static loads
- Fatigue resistant up to the service load limit
- Verified against explosion and shock limit loads
- Secure anchoring without damaging the concrete or reinforcement
- Excellent fit in heavily reinforced concrete or filigree components



JTA W 53/34 with JB



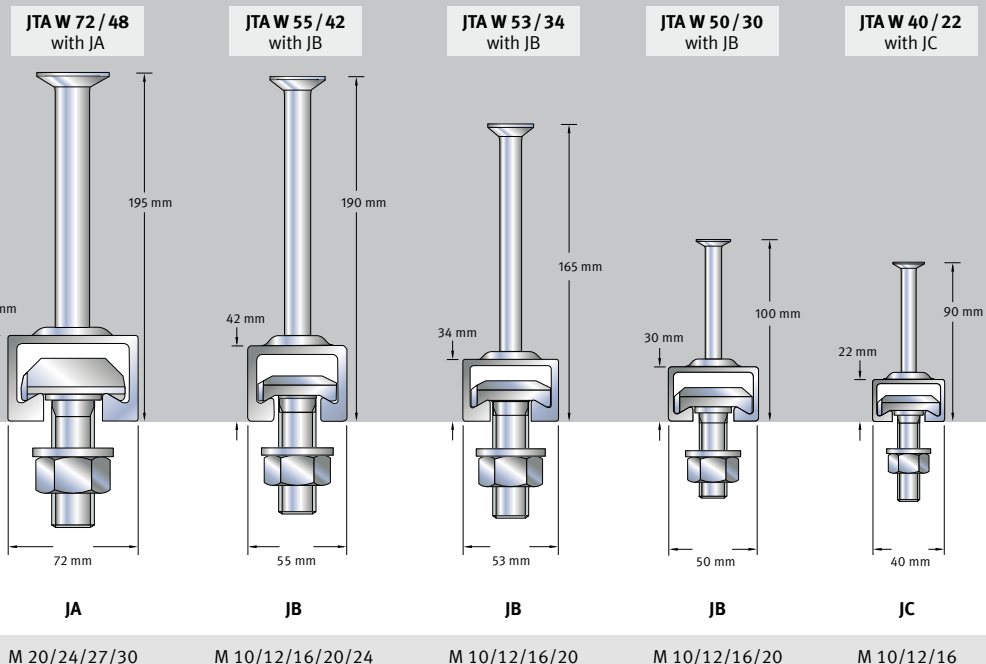
JXA W 53/34 with JXB

JORDAHL® anchor channels JTA W and JXA W together with the appropriate JORDAHL® bolts form a versatile and proven connection system. With the combination of other components in the JORDAHL® accessory program, practically any static and dynamic task of the connection system can be solved

Hot Rolled Anchor Channels for Tensile and Transverse Pull Loads



Hook Head Bolts



- Suitable for cracked and uncracked concrete
- Approved for installation in components with fire protection requirements
- Fast and efficient fastening on-site
- Assembly with simple tools (hammer and wrench)

JORDAHL® anchor channels JTA W have general building approval with approval number ETA-09/0338 and Z-21.4-151. JORDAHL® anchor channels JXA W have general building approval with approval number Z-21.4-1690.

### Material

JORDAHL® anchor channels JTA W and JXA W are made of steel or non-rusting steel and can be supplied as hot-dip galvanised or A4 stainless steel.

### Supplied Lengths

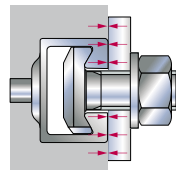
Anchor channels JTA W and JXA W are provided in nine different types of cross section. They are supplied in any length required up to 6 metres.

### JORDAHL® Bolts

The corresponding JORDAHL® bolts are produced in steel of strength class 4.6 or 8.8, or in stainless steel of strength class -50 or -70.

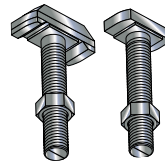
### JORDAHL® Bolts guarantee:

- Perfect coordination with the JORDAHL® range of channels
- Suitable materials for different levels of corrosion exposure
- Certified quality, accurate fit and high performance
- Reliable installation thanks to a marking notch



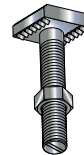
JORDAHL® W profiles ensure, in combination with the hook head bolts and washers, uniform support plate pressure and thus high pre-tensioning torque.

### JORDAHL® Hook Head and Hammer Head Bolts

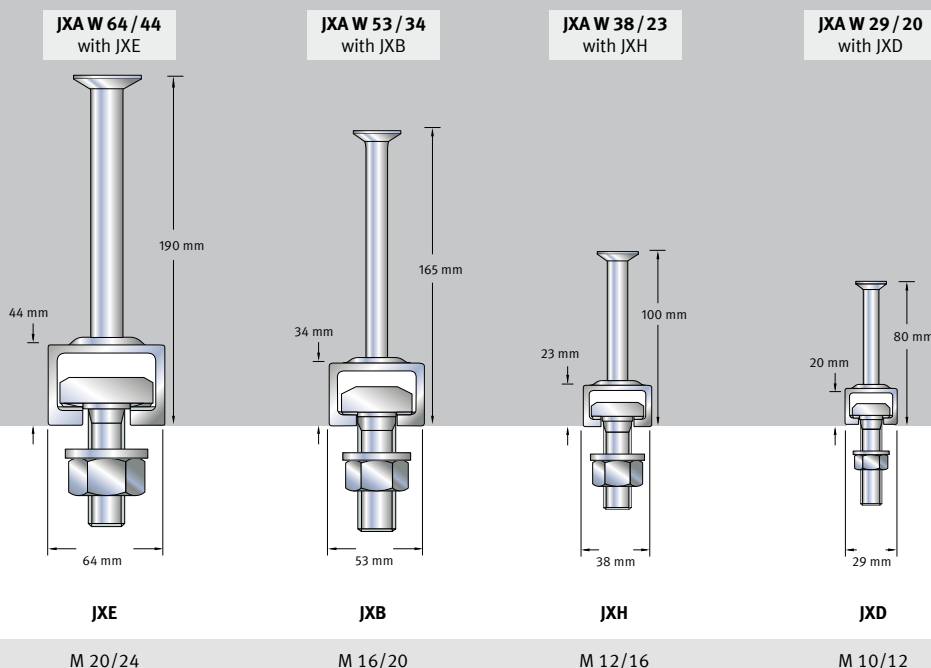


JORDAHL® anchor channels JTA can absorb forces from tensile and transverse pull loads in combination with hook head (JA, JB, JC) and hammer head bolts (JH, JD).

### JORDAHL® Toothed T-Bolts



JORDAHL® anchor channels JXA und JZA can be used for loads in all directions in combination with toothed T-bolts (JXB, JXH, JXD and JZS)



Hot Rolled, Ser-  
rated Anchor Chan-  
nels for Tensile,  
Transverse and  
Longitudinal Forces



Toothed T-bolts

# Anchor channels JTA K and JZA K



JORDAHL® anchor channels JTA K and JZA K together with the appropriate JORDAHL® bolts (see page 3) form a versatile connection system. By combining with further components from the JORDAHL® accessory program, static connection system problems can be solved simply and effectively.

JORDAHL® anchor channels JTA K absorb tensile and transverse pull loads at right angles to the axis of the channel. The JORDAHL® anchor channels JZA K are able to absorb loads in all directions.

## The letter K means:

The profile is constructed from cold steel strip using multi-stage profiling machines. It thus has round edges and constant metal thickness across the whole cross-section.

## Advantages

- Static load-bearing capacity for differing loads of 3.5 to 40.0 kN
- Lower weight than comparable conventional profiles for the same load category
- Secure anchoring without damaging the concrete or reinforcement
- Excellent fit in heavily reinforced concrete or filigree components  $\geq 10$  cm
- Fast and efficient fastening on-site, assembly using simple tools (hammer and wrench)

JORDAHL® anchor channels JTA K have general building approval with approval number ETA 09/0338 and Z-21.4-151.

JORDAHL® anchor channels JZA K have general building approval with approval number Z-21.4-741.

## Supplied lengths

Anchor channels JTA K and JZA K are provided in seven different types of cross section. They are supplied in any length required up to 6 metres.

## Material

JORDAHL® anchor channels JTA K and JZA K are made of steel or non-rusting steel and can be supplied as hot-dip galvanised or A4 stainless steel.

JTA K 72 / 48 with JA	JTA K 53 / 34 with JB	JTA K 50 / 30 with JB	JTA K 40 / 25 with JC	JTA K 38 / 17 with JH	JTA K 28 / 15 with JD	JZA K 41 / 22 with JZS
JA	JB	JB	JC	JH	JD	JZS
M 20/24/27/30	M 10/12/16/20	M 10/12/16/20	M 10/12/16	M 10/12/16	M 6/8/10/12	M 12/16



# Railing Fastening JGB

The JORDAHL® System JGB ensures safe and fast attachment of railing posts on the front face of balcony slabs. It comprises special short sections of anchor channels concreted directly in the balcony slab, and the appropriate JORDAHL® bolts (see page 3), washers and nuts. The JORDAHL® System JGB is supplied in various sizes and load classes. Various anchor designs are available:

- For use in balcony slabs with straight reinforcement rods
- For use in narrow parapets or upstands with welded angled reinforcement rods
- For use in corners with the appropriate anchor channel corner piece

Other designs can be produced on request.

## Advantages

- Suitable for slab thicknesses from 10 cm
- Suitable for different types of railing connections
- Verified for loading with individuals and load pairs
- Available in many lengths
- Corrosion-resistant due to stainless-steel construction
- Static verification with intuitive software



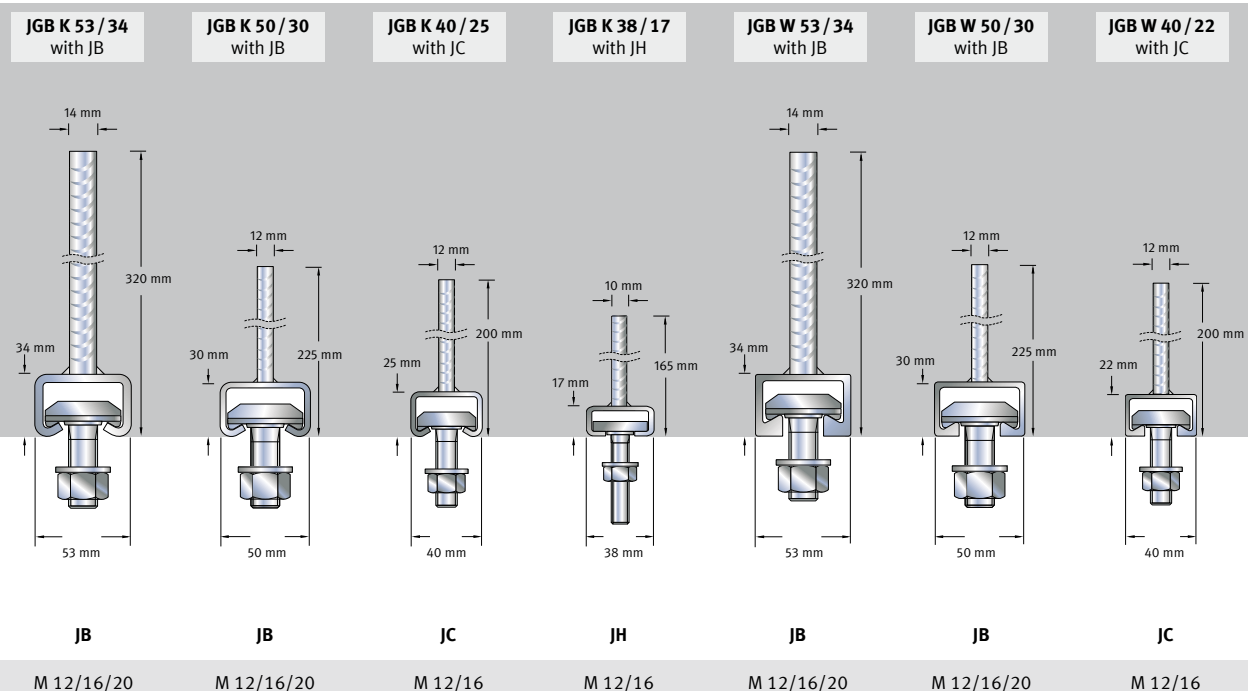
JORDAHL® railing fastening has general building approval with approval number Z-21.4-1913.

## Supplied lengths

JORDAHL® railing fastening JGB is supplied as standard in lengths of 100 mm, 120 mm, 150 mm, 200 mm, 220 mm and 250 mm. Special profiles can be manufactured on request.

## Material

For use in the open, the channel profiles and the corresponding fixing parts are made of A4 stainless steel. In indoor applications, the profiles are supplied hot-dip galvanised with a zinc coating of  $\geq 50 \mu\text{m}$ .



# Profiled metal sheet channels JTB



For fast and cost-saving attachment of trapezoidal sheet metals to reinforced concrete components without damaging the load-bearing components, JORDAHL® profiled metal sheet channels are the optimum solution. Profiled metal sheet channels JTB-AR and JTB-uni easily adapt themselves to the reinforcement with their slim anchor shapes. They are concreted flush directly into the load-bearing component.

## Advantages

- Fast assembly of trapezoidal sheet metals with self-drilling screws
- One-step assembly
- No damage to load-bearing components
- High safety reserves
- Guaranteed load-bearing capacity
- Corrosion resistance

JORDAHL® profiled metal sheet channels JTB have general building approval with approval number Z-21.4-161.

## Type JTB-AR

- Approved for a permitted load of 5.0 kN per anchor (7.0 kN design resistance) with centrally positioned loop anchors
- For easy assembly and an easier fit in existing reinforcement cages
- As profile 60/24/3
- As profile 60/22/6

## Type JTB-uni

- Approved for a permitted load of 5.0 kN per anchor pair (7.0 kN design resistance) with externally positioned, slim anchors with a roof-shaped anchor tip
- For particularly quick and easy assembly, fits effortlessly into almost any type of reinforcement.
- Also suitable for heavily reinforced components
- Storage space requirements are minimised as the anchors can be stacked directly on top of each other
- As profile 60/24/3
- As profile 60/22/6



JTB-AR



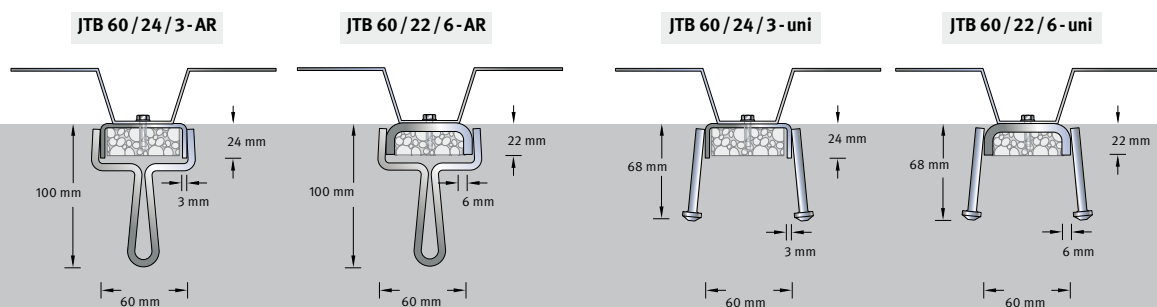
JTB-uni

## Material

JORDAHL® profiled metal sheet channels are manufactured from steel in accordance with DIN EN 10025 hot-dip galvanised or in A4 stainless steel.

## Supplied lengths

The supplied length is 3 metres.



# Mounting Channels JM / Slotted back channels JML

JORDAHL® plain back channels and slotted back channels together comprise a flexible, universal connection system with the corresponding JORDAHL® bolts (see page 3). By combining with further components from the JORDAHL® accessory program, almost any problem in connection systems can be solved simply and effectively.

The JM K cold profiles are supplied in 15 different types.

The JM W hot-rolled profiles excel particularly as plain back channels:

- Solid channel lips, large contact surfaces and high tightening torques
- Good weldability through right-angled profile edges and low internal stress
- Suitable materials for different levels of corrosion exposure

## Material

JORDAHL® plain back channels are made of steel or non-rusting steel and can be supplied as hot-dip galvanised or A4 stainless steel. Types JM W are hot-rolled from the full steel block (W-profiles) and types JM K are cold profiled from steel strip (K-profiles).

## Supplied lengths

The supplied lengths are 6 metres. Special lengths are manufactured on request.

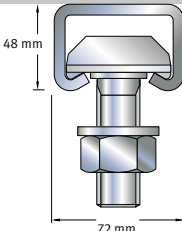
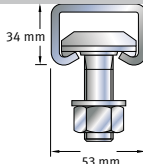
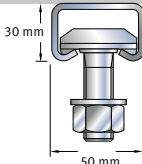
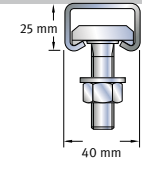
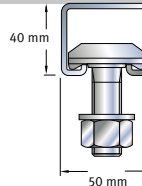
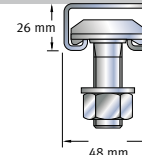
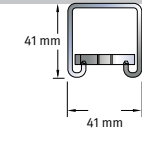
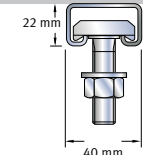


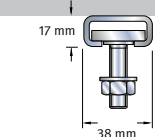
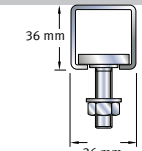
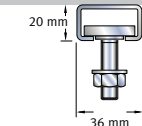
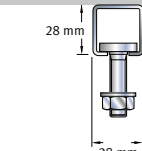
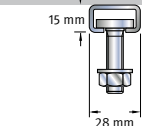
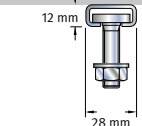
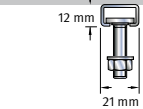
Mounting Channels JM



Slotted back channels JML

## Querschnittstypen JM K

<b>JM K 72 / 48</b> with JA	<b>JM K 53 / 34</b> with JB	<b>JM K 50 / 30</b> with JB	<b>JM K 40 / 25*</b> with JC	<b>JM K 50 / 40*</b> with JB	<b>JM K 48 / 26</b> with JB	<b>JM K 41 / 41*</b> with JAM	<b>JM K 40 / 22</b> with JC
							

<b>JM K 38 / 17</b> with JH	<b>JM K 36 / 36*</b> with JH	<b>JM K 36 / 20</b> with JH	<b>JM K 28 / 28*</b> with JD	<b>JM K 28 / 15*</b> with JD	<b>JM K 28 / 12</b> with JD	<b>JM K 21 / 12</b> with JG
						

\* Also available as slotted back channels

## Querschnittstypen JM W

JM W 72 / 48 with JA	JM W 55 / 42 with JB	JM W 53 / 34 with JB	JM W 50 / 30 with JB	JM W 40 / 22 with JC

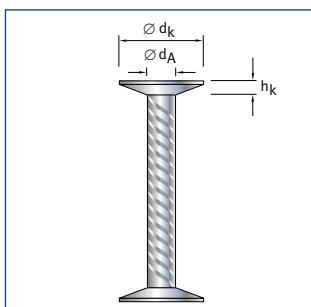
## Studrails JDA



For flat floors with low requirements in terms of formwork and reinforcement, and for optimum space usage, studrails are used to transfer high transverse forces with small load application surfaces. The punching shear resistance can thus be increased by 90 % in comparison to floor slabs without studrails. Implementation is approved from a floor height of 18 cm.

### Advantages

- Dimensioning consistent with the concept of partial safety factors in Europe
- Takes precise account of unsymmetrical load applications for all support positions
- Defined transition between studs and shear force load bearing capacity
- 1.9-times load-bearing capacity compared to floors without studrails
- Simplified arrangement of rails with a sequence of standard elements
- Low formwork requirement
- Fast and simple installation
- Installation possible from above and below
- Level slab underside
- Optimum use of space
- Short and flexible delivery times
- Intuitive and user-friendly software



Double-headed anchors

JORDAHL® studrail JDA has general building approval for static and dynamic loads with approval number Z-15.1-214 in accordance with DIN 1045-1: 2001-07

### Prefabricated ceilings

The design version JDA-FT-Klick has been developed for use in prefabricated ceilings: The JDA elements are supplied unassembled, i.e. anchors + mounting rails + spacers, in a set. This prevents any disruption of the automatic production sequence and there is no collision between the bending reinforcement and the formwork girders with complete JDA elements. On the construction site, the upper reinforcement layer can be laid in place without additional work and without interfering mounting rails.

### Cast-in concrete

JORDAHL® studrail can be concreted in simply and securely on-site in ceilings and foundation plates. The use of the JDA elements can be with rails aligned upwards or downwards as required.

### JORDAHL® shear reinforcement JDA-S

JORDAHL® shear reinforcement JDA-S ensures a significantly higher utilisation of the shear stresses with plates due to their optimum transmission of force. With comparable safe working load, less shear reinforcement is required compared to the verification according to DIN 1045. The advantageous installation of the shear reinforcement from above offers great ease of installation and presents the user with a clear overview for checking.

JORDAHL® shear reinforcement JDA-S has general building approval for static and dynamic loads with approval number Z-15.1-268 in accordance with DIN 1045-1: 2001-07.



JDA for prefabricated ceilings

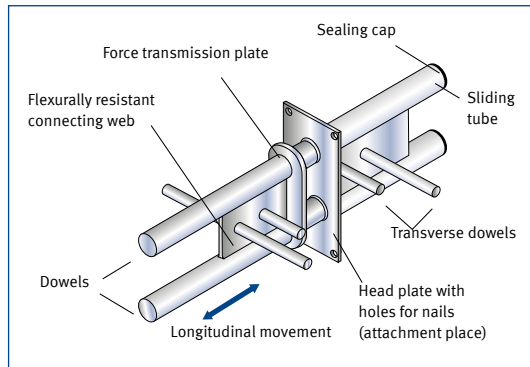


JDA for cast-in-place concrete

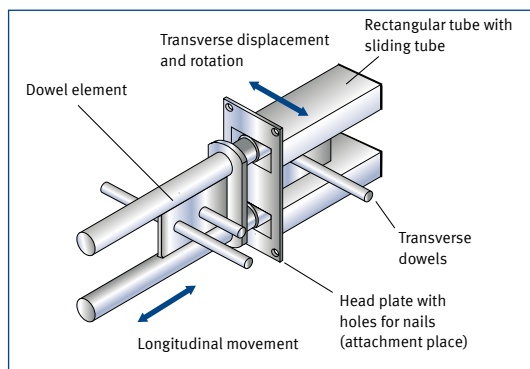


# Double shear connectors JDSD / JDSDQ

JORDAHL® double shear connectors JDSD and JDSDQ are heavy-duty due to their flexurally resistant design. They can only be deformed slightly, and thus have no explosive effect in concrete. The carefully chosen stainless steel materials guarantee a long service life.



JDSD



JDSDQ

## Advantages

- Design loads up to 995 kN
- Large gap widths of up to 60 mm permitted
- Optimised pressure distribution through integrated transverse connectors
- Can be moved longitudinally and transversely
- Simple, fast and accurate installation
- Floor heights from 16 cm permitted

JORDAHL® double shear connectors JDSD and JDSDQ have general building approval with approval number Z-15.7-237.

## Material

All double shear connectors are manufactured completely in stainless steel. This ensures the highest degree of resistance to corrosion.



## Fire protection collars

If special fire protection requirements are placed on components in accordance with DIN 4102 part 2, then you need to install JORDAHL® shear connectors with fire protection collars. The classification F 90 can only be achieved if the unprotected steel connector is enclosed in a fire protection collar in the gap.

The JORDAHL® fire protection collar consists of a material that foams up in the event of a fire and completely closes the gap. They are available in thicknesses of 20 mm and 30 mm:

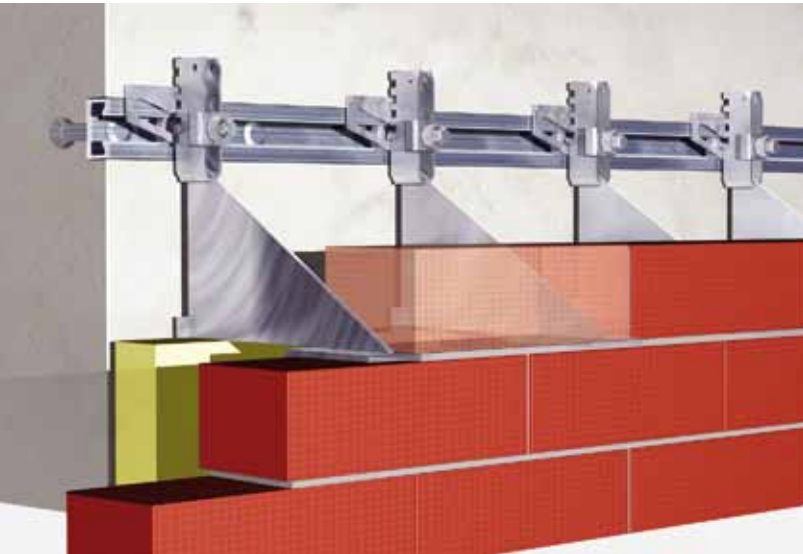
- JBRM 20 for gap widths up to 20 mm
- JBRM 30 for gap widths up to 30 mm

The fire protection collars can also be combined for larger gap widths.



JORDAHL® double shear connector JDSDQ with fire protection collar

## Brickwork Support System JVA+



Facing of façades provides creative design possibilities and creates unique architecture. At the same time, it protects the building from the influences of weather such as cold, snow, rain or heat, and also protects against noise and dirt. Facing block assemblies can be attached economically and with a long service life with JORDAHL® brickwork support brackets. They absorb the loads of the facing masonry and transfer them via professionally installed anchor channels or dowels to the load-bearing inner wall, which forms a two-shell outer wall with insulation and air layer.

### Advantages

- Vertically adjustable for simple compensation of building tolerances
- Available in different versions for different supporting scenarios, such as normal wall areas, corner areas, pillar areas or lintels
- Load classes 3.5, 7.0 and 10.5

### JORDAHL® Brickwork support system (extract)



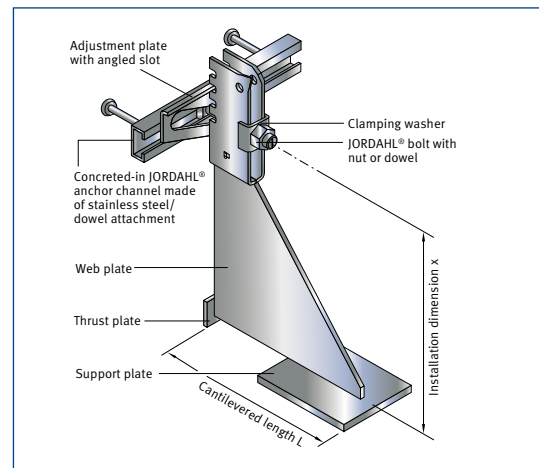
The bracket head of the JORDAHL® brickwork support bracket has been approved by the Deutsches Institut für Bautechnik (German Institute for Civil Engineering) with approval number Z-21.8-1868. Type approval no. TP 08/004 represents proof of the load-bearing capacity of the JORDAHL® brickwork support bracket.

### Overview

JORDAHL® brickwork support brackets are available in various lengths and dimensions – they can also be produced to special order on request.

### Material

JORDAHL® brickwork support brackets and accessories are made of stainless material of corrosion resistance class III.



### In-mortar brackets JMK+



JMK+ N

In-mortar brackets with intermediate angled brackets can be used in situations where facing masonry is to be subsequently added to an existing building. To do this, sufficiently deep mounting pockets are drilled into the load-bearing brickwork, and the brackets are then mortared into these pockets using group-III cement mortar (high-expansion concrete).

### Brick Tie Channels and Brick Ties



JMA

JORDAHL® wall connection channels and wall junction anchors ensure lasting and safe connection of masonry to adjacent components. With their low profile height, they are also suitable for installation in heavily reinforced concrete components.

#### Wall connection channel Kt 25/15-D

- Anchor can be bent out
- Ensures proper anchoring of components which have been stripped particularly early

JORDAHL® anchor channels JTA K 28/15 and JTA K 38/17 can also be used as wall connection channels.

#### Brick Ties

- Wall junction anchor JMA
- Transverse anchors JMA-Q, T-shaped
- Transverse anchors JMA-QE, L-shaped
- Thin-bed wall junction anchors JMA-D
- Connecting straps, smooth or serrated

### Air gap anchors



Anchor bolt

Air gap anchors secure facing masonry against folding and transmit the horizontal forces generated by wind onto the load-bearing components.

- Air gap anchors, L-shaped: for two-shell brickwork with or without thermal insulation. Folding is prevented by the wavy form.
- Anchor bolt: pre-assembled air gap anchor for retrospective facing of masonry walls made of full brick or concrete walls. Folding is prevented by the wavy form. Each packaging unit contains a tapping-in tool.

### Permanent scaffolding anchors



JGA+ Z

Permanent scaffolding anchors allow working scaffolding to be anchored on the finished structure without causing any damage to the facing shell. They are secured to the load-bearing structure with anchor bolts and guided through the facing shell. Scaffolding which is needed later on, but which would not be safe if it were free-standing, can be attached to the permanent scaffolding anchors. The permanent scaffolding anchor of type JGA+ Z serves to transmit forces acting at right angles to the outside wall. If loads occur parallel and perpendicular to the outside wall at the same time, then permanent scaffolding anchors of type JGA+ Q are used.



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