

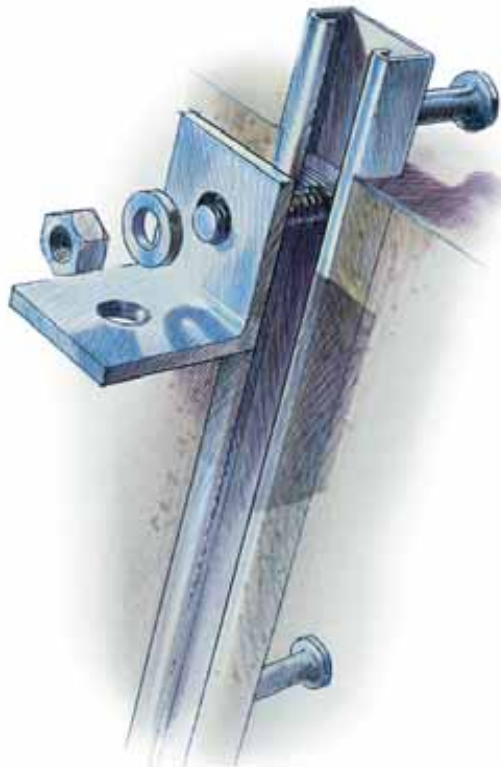
Technical principles

Application and planning

Anchor channels are the superior fixing system for transferring loads in reinforced concrete components

The safety advantages

- Fixing without damaging the body of the structure
- Verified safety through building Approval of the products
- High load capacity even in delicate or highly reinforced components
- Independent of shrinkage and creep of the concrete component
- Suitable for installation in the compression and tension zone of the component
- Suitable for components with fire prevention requirements



The JORDAHL® anchor channel range



- JORDAHL® anchor channels JTA for tension, oblique tension and transverse tension.
- JORDAHL® toothed channels JXA and JZA for accommodating loads in all directions.
- JORDAHL® anchor channels JRA for high static and dynamic loads.
- JORDAHL® loop channels JSA for constructional applications.
- JORDAHL® bolts as hook-head, hammerhead and toothed bolts.

Planning

Anchor channels should be planned in good time and incorporated into the reinforcement drawings or formwork drawings with specification of type, length and position.

Ideally, not only the current loads but also the loadings of future extensions are taken into account. There is a complete profile library available for CAD users.

The planning rules

The criteria for the installation are governed by the approval requirements. These define:

- Load bearing capacities
- Edge spacings
- Minimum dimensions of the components
- Area of application with regard to corrosion prevention
- Anchor channels permit extremely high loadings even close to the edge.

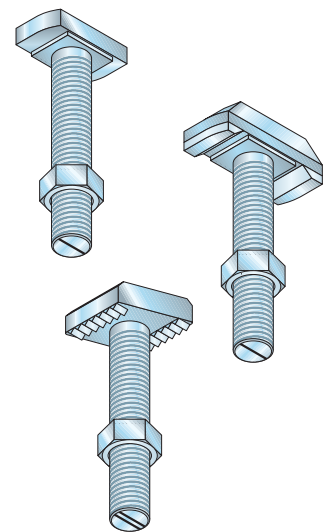
Installation advantages

- Problem-free application by simply nailing to the formwork
- Fast and easy installation of joining constructions
- Simple adjustment of the joining constructions
- Rapid compensation of structural tolerances
- Simple installation without electrical tools

It can be accessed at:

<http://www.jordahl.de>

Special applications
 Download
 Catalogues
 Approvals/Certificates
 Software/CAD-Library
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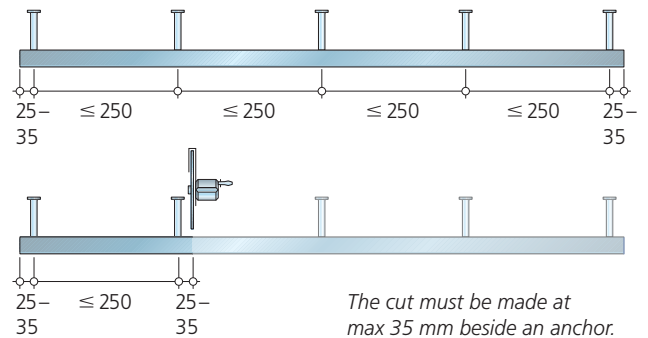


Installation



Prepare the channels

Anchor channels are supplied in all desired lengths. Lengths by the metre can also be cut to length on the building site. Each piece of channel must have at least two anchors.



Fixing to the formwork

JORDAHL® anchor channels are installed in accordance with a reinforcement drawing. In order to prevent displacement during the concreting operation, the channels are fixed to the formwork.

Fixing options:

- To **wooden formwork** by means of nails or stainless steel nails through the nail holes present in the back of the profile or by means of lateral bonding with polyolefin hot melt adhesives.
- To **steel formwork** by bolting on with JORDAHL® bolts or with magnets.



Compaction of the concrete

If anchor channels are installed on the upper side of the component, the anchor channel must be fixed with an auxiliary construction in order to prevent displacement or sinking.

Compaction of the concrete is carried out with appropriate means around the anchor channel. It is not sufficient to push it into the wet concrete afterwards.



Removal of the foam filling

Following the removal of the formwork, the fixing means needed for the installation are released. The filling can then be removed by means of a hammer or the like.

For protection against fresh concrete, JORDAHL® anchor channels are provided with a foam filler. This consists of polystyrene (PS) or polyethylene (PE).

Both types can easily be removed. If self-compacting concrete is used, we recommend only PS foam.

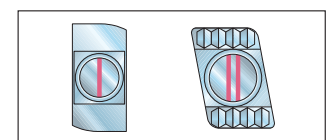


Bolt installation

JORDAHL® bolts can be introduced into the channel slot at any desired point and, following 90° rotation, can be fixed by tightening with the appropriate torque.

Following installation, the correct seating of the bolt in the anchor channel must be inspected. The slot must be transverse in relation to the channel direction.

Here, one notch means non-toothed bolts and two notches mean toothed bolts.



Materials and identification

Materials

JORDAHL® product	Steel		Stainless steel	
Profiles	S235JR = 1.0038 S275JR = 1.0044	EN 10025	1.4301/1.4541 (A2) ¹⁾ 1.4401/1.4404/1.4571 (A4) ²⁾ 1.4529/1.4547 ³⁾	EN 10088
Anchors	S235JR = 1.0038	EN 10025 EN 10263	1.4401/1.4404/1.4571 (A4) ²⁾ 1.4529/1.4547 ³⁾	EN 10088
Bolts	Strength class 4.6/8.8	EN ISO 898-1	A4-50; A4-70 ²⁾ FA-70 ³⁾	EN ISO 3506-1
Hexagon nuts	Strength class 8	EN 20898-2	A4-50; A4-70 ²⁾ 1.4529 ³⁾	EN ISO 3506-2
Washers	St	EN ISO 7089 EN ISO 7093-1	1.4401/1.4404/1.4571 (A4) ²⁾	EN 10088

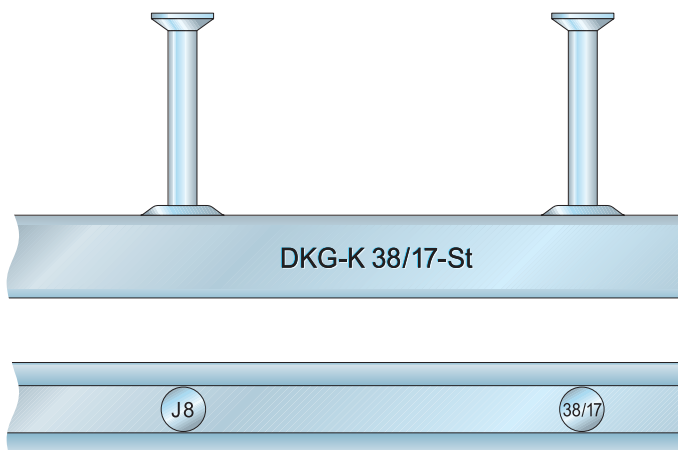
Comment: For stainless steel, the German Institute for Structural Engineering (DIBt) has defined application criteria for load and corrosion resistance in the approval No. Z-30.3-6.

- 1) Corrosion resistance class II according to Z-30.3-6: low to medium
- 2) Corrosion resistance class III according to Z-30.3-6: medium
- 3) Corrosion resistance class IV according to Z-30.3-6: high

Identification of the JORDAHL® anchor channels and bolts

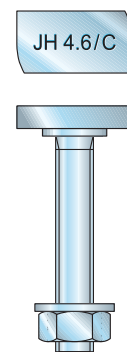
JORDAHL® anchor channels are permanently identified on the profile side and/or the inside with "DKG" or "JORDAHL®", type of profile and material specification.

For example:



JORDAHL® bolts are embossed on the bolt head with works symbol, type and strength class.

For example:



JORDAHL® anchor channels with round anchors are additionally embossed on the rivet head on the inside of the channel with profile designation or load class.

Areas of use depending on corrosion prevention

Corrosion protection for the constructional parts				
	Profile	Anchor	Bolt, nut, washer	Intended use
1	Mill Finish (wb)	Mill Finish (wb)	Without corrosion protection	Use only possible when all the fixing elements are protected, depending on the ambient conditions, by a minimum concrete covering to Eurocode EC 2.
2	Hot-dip galvanized (fv) (layer ≥ 50 µm)	Hot-dip galvanized (fv) (layer ≥ 50 µm)	Electro galvanized (gv) (layer ≥ 5 µm)	Concrete components in interior rooms, for example dwellings, offices, schools, hospitals, retail premises – with the exception of wet rooms.
3	Hot-dip galvanized (fv) (layer ≥ 50 µm)	Hot-dip galvanized (fv) (layer ≥ 50 µm)	Hot-dip galvanized (fv) (layer ≥ 40 µm)	Concrete components in interior rooms with normal atmospheric humidity (including kitchens, bathrooms and washrooms in dwellings) to Eurocode EC 2.
4	Stainless steel 1.4401/ 1.4404/1.4571	Stainless steel 1.4401/ 1.4404/1.4571 ¹⁾ Weld-on anchor rolled blank ²⁾	Stainless steel 1.4401/ 1.4404/1.4571 Strength class 50 and 70	Constructions in corrosion resistance class III/medium to Z-30.3-6, for example in wet rooms, in the open air, industrial atmosphere, close to the sea and inaccessible constructions.
5	Stainless steel 1.4529/1.4547 Stainless steel 1.4462 ³⁾	Stainless steel 1.4529 Stainless steel 1.4462 ³⁾	Stainless steel 1.4529 Strength class 50 and 70 Stainless steel 1.4462 ³⁾ Strength class 70	Constructions in corrosion resistance class IV/severe to Z-30.3-6 with high corrosion loading by chlorides and sulphur dioxide (including concentration of the pollutants, for example in the case of components in seawater and in road tunnels). Swimming baths → Table 10 of the general Building Approval Z-30.3-6.

1) **JORDAHL® stainless steel anchor channels with round anchors**

The anchor channel types JTA K 28/15 to W or K 50/30, JZA K 41/22, JXA W 29/20 and W 38/23 are produced as standard with stainless steel round anchors. These anchor channels are not subject to any restriction w.r.t. the concrete covering.

The anchor channel types JTA W 74/48, K 72/48 and W 53/34 can be produced with stainless steel round anchors or welded-on with mill finish (wb) I-anchors. The static and dynamic properties of the round anchors or welded-on I-anchors are equivalent.

2) **JORDAHL® stainless steel anchor channels with mill finish weld-on anchors**

With respect to the corrosion protection of the weld-on anchors, the following concrete covering *c* must be used as a basis:

W 53/34	K 72/48 W 74/48	
40	60	

3) Stainless steel 1.4462 is not approved to Z-30.3-6 for swimming bath atmospheres.