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02 CONCEALED CONNECTORS

TOPLINE KONSTRULINE DCSTATIK

CONCEALED CONNECTORS

(Invisible connectors)

TOP UV CONCEALED CONNECTORS

- Invisible dovetail connection
- Safety catch
- Optimised hole pattern
- For loading in 4 load directions
- Quick assembly of secondary beams
- Conical dovetail guide pulls together
- Milling radii

up to 72 kN

Basics of statics **from page 68** / Products & statics **from page 66**

CONCEALED CONNECTORS TOP OV

„Simple and ingenious“
More flexibility in connection technology

- **In the factory:** Simply mill out the connection form or attach and mount on the secondary beam with a maximum of 4 tensile and 2 pressure screws.
- **On the building site:** Insert the secondary beam in the recess of the main beam or only place it down. Turn 2 pressure screws into the main beam/support.

up to 27 kN

Basics of statics **from page 84** / Products & statics **from page 82**

BEAM HANGER

- Connection to timber, concrete and masonry
- Type alu combi without holes for rod dowels. By drilling through the secondary beam and connector, you receive a connection with a perfect fit.
- Type alu SD 12 and SD 16 with assembly fix tab.

up to 258 kN

Basics of statics **from page 90** / Products & statics **from page 88**

INTEGRAL CONNECTORS

- GH integral connectors type M, 2- and 4-row with assembly fix tab for concealed connections with connections between the main/secondary beam and connections to the columns.
  For both versions, the secondary beam with pre-fitted rod dowel is suspended in the assembly fix tab.
- 2-row integral connectors with embossed reinforcement studs. This gives you the necessary accuracy of fit and the same slot width as with a 4-row integral connector.
- 4-row integral connections with even higher load-bearing capacities!

up to 58 kN

Basics of statics **from page 90** / Products & statics **from page 88**

CONCEALED CONNECTORS

2 ASSORTMENT

							Basics Statics & Diagrams from page	Products & Statics from page
TOP UV CONNECTORS TIMBER/TIMBER		CE	Al Aluminium	NKL 2			65	66
TOP UVB CONNECTORS TIMBER/CONCRETE		CE	Al Aluminium	NKL 2			65 / 68	78
TOP OV CONNECTORS		CE	Al Aluminium	NKL 2			65 / 84	82
BEAM HANGER TYPE ALU COMBI		CE	Al Aluminium	NKL 2			65 / 90	88
BEAM HANGER TYPE ALU COMBI SD 12		CE	Al Aluminium	NKL 2			65 / 90	88
BEAM HANGER TYPE ALU COMBI SD 16		CE	Al Aluminium	NKL 2			65 / 90	88
INTEGRAL CONNECTOR 2-ROW TYPE M		CE	250 GD Z275	NKL 2			65 / 90	88
INTEGRAL CONNECTOR 4-ROW TYPE M		CE	250 GD Z275	NKL 2			65 / 90	88
INTEGRAL CONNECTOR ANGLED CONNECTION			250 GD Z275	NKL 2				102

CE symbol

Steel with indication of the steel quality and galvanisation

Aluminium

Timber/timber connection

Timber/concrete-connection

Usage class 1
Moisture content in the building materials that corresponds to a temperature of 20° C and a relative humidity of the ambient air that only exceeds a value of 65% for a few weeks per year, e.g. in the case of buildings that are closed on all sides and heated. Comment: In UC 1, the average moisture content of most softwoods does not exceed 12 %.

Usage class 2
Moisture content in the building materials that corresponds to a temperature of 20° C and a relative humidity of the ambient air that only exceeds a value of 85% for a few weeks per year, e.g. in the case of open buildings covered by a roof. Comment: In UC 2, the average moisture content of most softwoods does not exceed 20 %.

Usage class 3
Includes climatic conditions that lead to higher moisture contents than in UC 2, e.g. structures that are exposed to the weather without protection. Eurocode 5 / DIN EN 1995-1-1 section 2.3.1.3

TOP UV CONNECTORS

2

1. For invisible connections in timber/timber and timber/concrete
2. Optimised hole pattern in 5 different sizes
3. Dovetail guide with conical guide
4. From timber cross-sections 45 mm x 100 mm
5. Time-saving quick assembly

ADVANTAGES

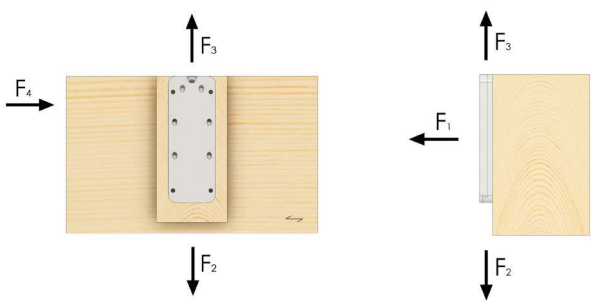
- Invisible dovetail connection
- Connection of secondary beams made of timber to timber, concrete
- For loading in up to 4 load directions
- With safety catch in all connection variants
- Quick assembly of secondary beams
- Connectors pull together with the large conical gliding surfaces
- The connection can be removed again as required
- The load capacity is determined by the number of screws on the main beam and the screw length on the secondary beam

APPLICATIONS

- Right-angled
- Titled at right angles - upwards +90° / downwards -30°
- Angled connections - to the left +45° / to the right -45°
- Bar connections
- Column connections, with and without shadow joint
- Connections over the intermediate layer
- Connections possible directly to the timber board materials such as OSB

LOAD DIRECTIONS

- F_2 for pressure (in push-in direction, Z-axis)
- F_3 for lifting (opposite to push-in direction, Z-axis)
- F_4 2-axis (angled installation, Y-axis)
- F_1 for pull-out (X-axis)



TOP UV CONNECTORS

APPLICATIONS 2

Application:
Timber-timber/steel/concrete connection
Construction beech and other materials according to the approval

Materials: Al Aluminium

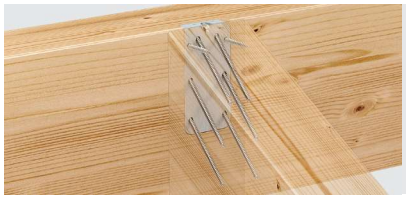
Material thicknesses:
16 / 24 mm

90° connection

HT / NT

Intermediate layer with OSB

HT / NT



Points downwards

HT / NT

Points upwards

HT / NT

Angled connection

HT / NT

Angled connection

HT / NT

Flush column connection

HT / NT

Column connection inlaid

HT / NT

Concrete connection butt

HT / NT

Concrete connection inlaid

HT / NT

For use in usage classes

NKL 1 NKL 2

Connecting element
Timber - timber
Main beam: GH screws Ø 5.0 x 50 / 60 / 70 mm
Secondary beam: UV VG Ø 6.0 x 100 / 120 / 140 / 160 / 200 mm
UV 20: GHS Drive Ø 4.0 mm

Timber - concrete/ steel
Main beam: Dowel or bolt M10 or Ø 10 with countersunk head
Secondary beam: UV VG Ø 6.0 x 100 / 120 / 140 / 160 / 200 mm