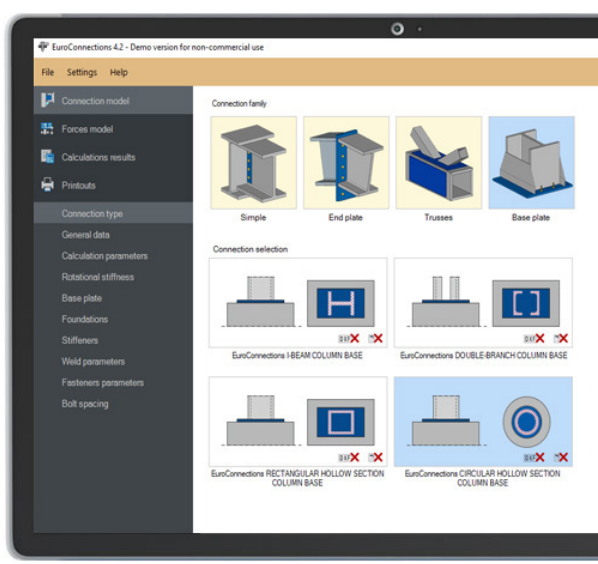


EuroConnections

A collection of programs for steel connections design.



Design and verify the capacity of typical uniplanar frames & lattice connections in steel structures according to PN-EN 1993-1-8:2006 standard. Welded or bolted connections in various joints types.

Possibility to create a model for a rigid, semi-rigid or nominally pinned joint. Various additional connection components can be used, depending on specific connection type: side plate, fin plate, flange cover plate, landing cleat, end plate, base plate, stiffener plate, haunch, shear nib, gusset plate, etc.

The program operates in a standalone mode, or as a design module for steel connections calculations in ArCADia-RAMA program.

The program creates a bill of materials for connectors and other components used in connection.

The program creates an advanced and dynamic sketch of the designed connection model, which can also be saved to an editable file in the DXF format.

Reports with verification result in RTF or PDF format can be created in four different detailed levels with the option of customizing their scope by the user.

The following types of connections are supported:

SIMPLE group:

- BEAM-TO-GIRDER simple connection +DXF
- BEAM-TO-COLUMN simple connection +DXF
- BEAM SPLICE connection +DXF

END PLATE group:

- BEAM-TO-COLUMN END PLATE connection +DXF
- BEAM-TO-BEAM END PLATE connection +DXF

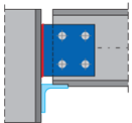
TRUSSES group:

- TRUSS GUSSET PLATE connection +DXF
- WEDLED TUBULAR TRUSS node +DXF

BASE PLATE group:

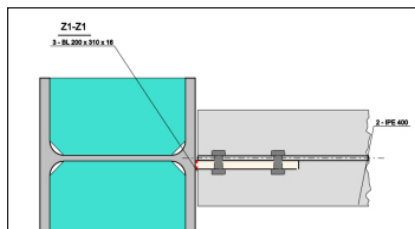
- I-BEAM COLUMN BASE +DXF
- DOUBLE-BRANCH COLUMN BASE +DXF
- RECTANGULAR HOLLOW SECTION COLUMN BASE +DXF
- CIRCULAR HOLLOW SECTION COLUMN BASE +DXF

BEAM-TO-COLUMN simple connection



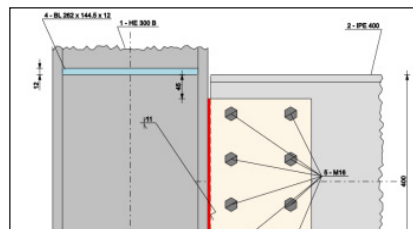
EuroConnections BEAM-TO-COLUMN simple connection with fin plates, covers plates and transverse column web stiffeners, welded or bolted, verification for sets of uniplanar internal forces, or the full bearing capacity of members.

The algorithm for verification of a connection in which both main members are connected via a beam web fin plates (side plates) and possibly beam flanges cover plates. The connection is one-sided (for one beam from one side of the column), with various possible configurations.



General:

- advanced and dynamic sketch of the designed connection model in an editable the DXF format, which includes bill of materials
- cross-sections for the beam and column are I-beam sections,
- the V and M forces are acting about the stronger axis of inertia of the members (the orientation of the I-beam section is vertical)
- connection made using beam web fin plates and possibly beam flanges cover plates
- beam connected to column flange
- beam connected to the column also at an angle other than 90°



Fin plates:

- use of fin plates (side plates)
- fin plates are connected to the beam web and the column flange
- the use of fin plates can be single-sided (on one side of the beam web) or double-sided (on both sides of the beam web)
- when double-sided fin plates are used, they are symmetrical in relation to the beam web
- the beam-side plate connection can be realized using a fillet weld or with bolted connection
- the column-fin plate T-weld connection can be made using a butt weld or a fillet weld (welds only outer, or inner and outer, in relation to beam web)

Girder web stiffener:

- use of flange cover plates
- flange cover plates are used in pairs, both lower and upper at the same time, and cannot occur alone, without the presence of fin plate
- the beam flange-cover plate connection can be realized using a fillet weld or with bolted connection
- the column flange-cover plate T-weld connection can be made using a butt weld or a fillet weld (welds only outer, or inner and outer, in relation to beam section)
- when using flange cover plates it is possible to use the transverse column web stiffener

Landing cleat:

- the landing cleat is considered only for erection purposes - its load capacity is not verified in the calculations
- the use of the landing cleat excludes the possibility of using the flange cover plates, and vice versa