

Continuous Beam - DLT+

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The operation of the individual beam types is already described in the respective documentation for the material-specific beam programs.

We therefore refer to the respective manuals here:

- Concrete [BTM+ Continuous Beam Concrete](#)
- Steel [STM+ Continuous Beam Steel](#)
- Timber [HTM+ Continuous Beam Timber](#)

Basic Documentation – Overview

In addition to the individual program manuals, you will find basic explanations on the operation of the programs in the document [Basic operating instructions-PLUS_eng.pdf](#).

Application options and single documentations

The DLT+ program calculates single and multi-span beams.

In contrast to the material-specific FRILO beam programs (BTM+, STM+, HTM+), DLT+ includes all these materials/beam types:

- Reinforced concrete slab
- Reinforced concrete beam
- Steel
- Wood

The material aluminum will follow in a next program version.
































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Standards

Depending on the material chosen

Reinforced concrete	Steel	Timber
<ul style="list-style-type: none">  DIN EN 1992:2012  DIN EN 1992:2013  DIN EN 1992:2015  NTC EN 1992:2018  ÖNORM EN 1992:2011  ÖNORM EN 1992:2018  BS EN 1992:2009  BS EN 1992:2015  PN EN 1992:2010  EN 1992:2010  EN 1992:2014 	<ul style="list-style-type: none">  DIN EN 1993:2010  DIN EN 1993:2015  ÖNORM EN 1993:2007  ÖNORM EN 1993:2017  BS EN 1993:2015  PN EN 1993:2010  EN 1993:2010 	<ul style="list-style-type: none">  DIN EN 1995:2010  DIN EN 1995:2013  ÖNORM EN 1995:2010  ÖNORM EN 1995:2015  ÖNORM EN 1995:2019  NTC EN 1995:2008  NTC EN 1995:2018  BS EN 1995:2012  BS EN 1995:2019  PN EN 1995:2010  EN 1995:2004  EN 1995:2008  EN 1995:2014

Loading

Standard and multiple span loads can be defined as uniform load, concentrated load, concentrated moment, trapezoidal load and triangular load.

Design

General

- For concrete, steel and timber, the program carries out the design or the stress analysis for the preselected cross-section dimensions.

Reinforced concrete

- Automatic calculation of the effective slab width
- Calculation of the deformations in state II for reinforced concrete cross-sections with standards based on the partial safety concept
- Crack width verification (limit diameter) and stress analysis
- Consideration of the durability requirements
- Calculation and consideration of the creep coefficient and the shrinkage strain in the serviceability analyses
- Verification of the shear joint for slabs and T-beams
- You can perform an analysis of the connection of the compression flange (shear joint analysis) for T-beams

Timber

- Optionally, shear deformations can be considered with timber beams
- Vibration analysis
- Hot design
- Stability analysis

Steel and timber

- Optimization of the dimensioning and design with steel and timber beams
- Stability analysis for steel girders

Interfaces to further programs

- Reinforced Concrete Column B5+
- Timber Column HO1+
- Single-span Steel Column STS+
- Reinforced Concrete Corbel B9+
- Reinforced Concrete Half Joint B10+
- Framework RSX
- Continuous Beam Concrete BTM+
- Continuous Beam Steel STM+
- Continuous Beam Timber HTM+
- Timber Compression TB-HHS
- Lateral Torsional Buckling Analysis BTII+

Data transfer

The analysis of steel beams for lateral torsional buckling and elastic-plastic analyses can be performed per data transfer to the program Lateral Torsional Buckling Analysis BTII+.

Additional options

- DLT-BEW: Reinforcement layout for reinforced concrete beams/slabs
- BTM-2: Biaxial effect of actions on reinforced concrete beams
- HTM-2: Biaxial effect of actions on timber beams
- STM-2: Biaxial effect of actions on steel beams

Output options

Document file formats

- PDF
- Word
- Printer

Output

- Brief
- Minimum
- User-defined