

Dovetail Connection HSC+

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Basic Documentation – Overview

In addition to the individual program manuals, you will find basic explanations on the operation of the programs on our homepage www.friilo.com in the Campus-download-section.

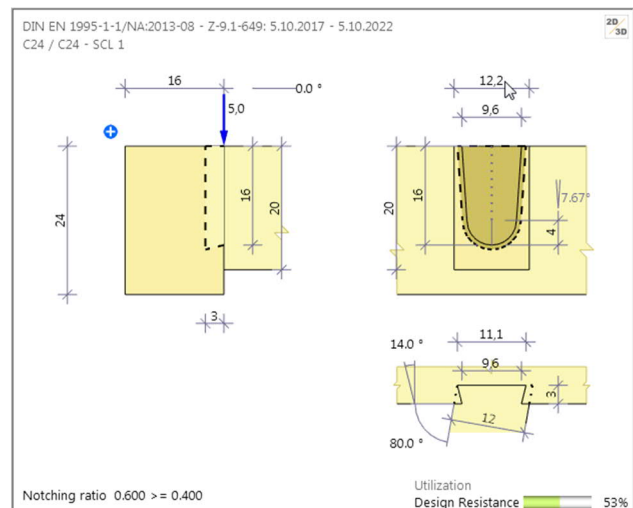
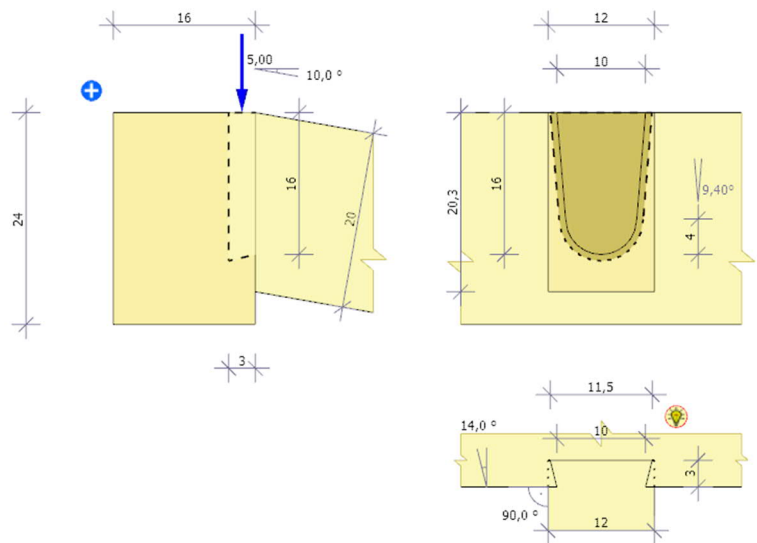
Application options

The program HSC+ is used to design dovetail joints of timber girders in accordance with general building inspectorate approval with an inclined or angulated secondary girder connection. One or two-sided connections can be selected.

Standards

- DIN EN 1995-1-1 in Verbindung mit Z-9.1-649 vom VERBAND HIGH-TECH-ABBUND im Zimmereihandwerk e.V.
- DIN EN 1995-1-1 in conjunction with Z-9.1-649 from „VERBAND HIGH-TECH-ABBUND im Zimmereihandwerk e.V.“ (carpentry association).

The program allows the design according to the new approval of 5 October 2017



Basic Parameters

Here you select the [standard](#), the approval as well as the material and the service class.

Properties	
Basic Parameters	
System	
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Code	
Code	🇩🇪 DIN EN 1995:20
Admission	Z-9.1-649:2017
Material	
Timber	Softwood
Material code	EN 338:2016
Strength class	C24
Environment	
Service class	1
Remarks	
To system	
To results	

System

main beam width b_H and height h_H

Connection one- or twosided connection

secondary beam width b_N und height h_N , the slope δ or the connection angle φ ,
 Nach aktueller Zulassung dürfen entweder schräge oder geneigte Anschlüsse ausgeführt werden.
 According to current approval, either inclined or angulated connections may be made.

Tenon width b_Z , height h_Z , length l_Z , milling angle β , radius r_Z and tenon cone angle γ

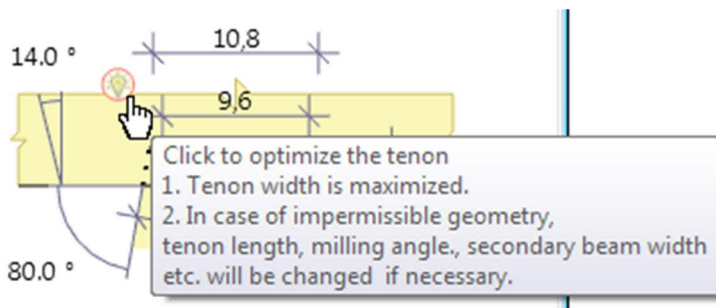
Properties	
Basic Parameters	
System	
Loads	
Output	

Systemgraphic

Values that contradict the boundary conditions of the approval are marked in red.

Optimize with a mouse click

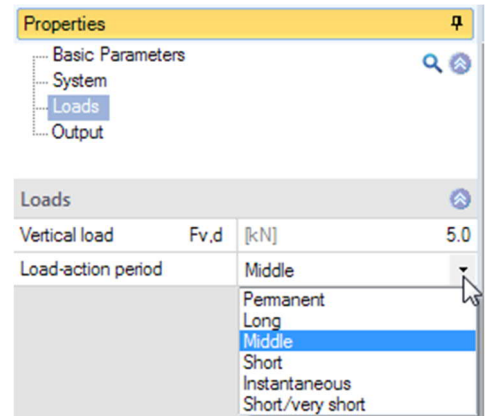
The icon of the light bulb in the graphic indicates possible improvements or necessary corrections of the geometry - just move the mouse over the light bulb to show a tooltip. By clicking these corrections are made.



Beam geometry			
Width main beam	b_H	[cm]	16.0
Height main beam	h_H	[cm]	24.0
Connection		One-sided	
Width secondary beam	b_N	[cm]	12.0
Height of secondary beam	h_N	[cm]	20.0
Slope secondary beam	δ	[°]	0.0
Connecting angle secondary beam	φ	[°]	80.0
Tenon			
Tenon width	b_Z	[cm]	9.6
Tenon height	h_Z	[cm]	16.0
Tenon length	l_Z	[cm]	3.0
Milling angle	β	[°]	14.0
Tenon radius	r_Z	[cm]	4.0
Tenon cone angle	γ	[°]	7.7

Loads

Vertical load	Design value of the connection force F_{vd}
Load action period	permanent, long, middle, short, instantaneous, short/very short

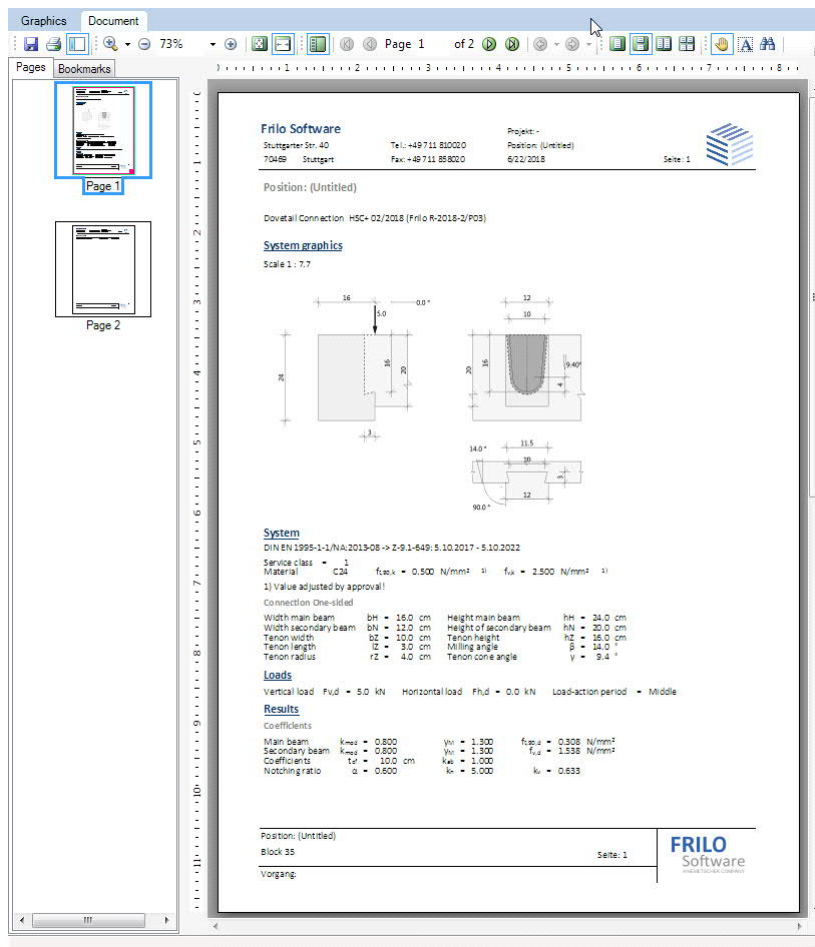


Output

The output contains all input values, results and intermediate values of the calculation after approval.

With advices Essential information on the boundary conditions of the approval is issued. Full approval is available from VERBAND HIGH-TECH-ABBUND im Zimmereihandwerk e.V.

See also [Output and printing](#)



Literatur

Z-9.1-649 vom 5. Oktober 2017 - VERBAND HIGH-TECH-ABBUND im Zimmereihandwerk e.V.