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Woodruff Key Joints

for Windows
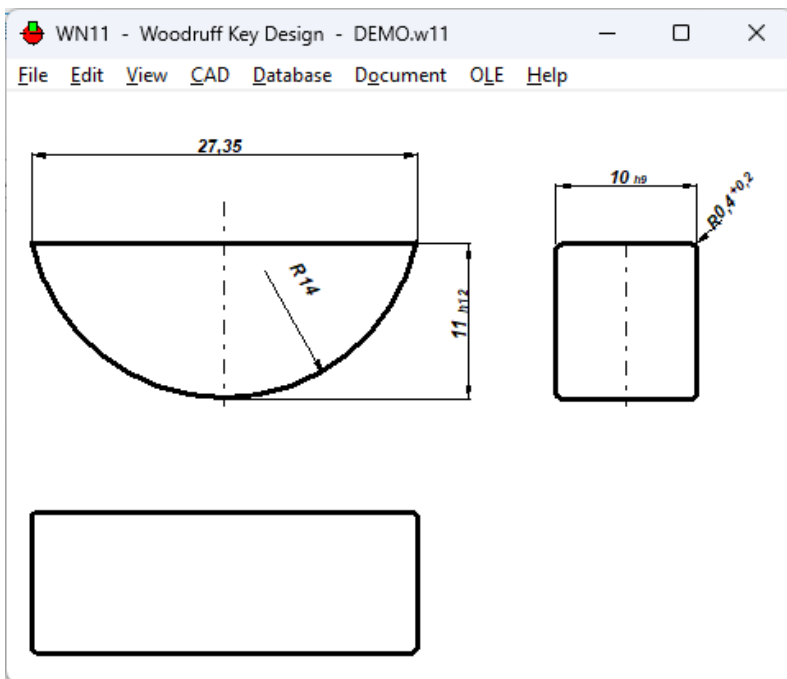
Woodruff Key Design
WN11 Software calculates load bearing capacity of Woodruff key joints according to DIN 6892. This standard is specified for parallel keys, but can also be used for Woodruff keys, if load-bearing length and load-bearing height are replaced by load-bearing areas of shaft groove, hub groove and Woodruff key. Dimensions of the Woodruff key according to DIN 6888 as well as material properties for Woodruff key, shaft and hub can be loaded from the integrated database. As a result, WN11 generates printout, tables and drawings of Woodruff key, shaft and hub.

WN11 - Pre-Dimensioning
In Pre-Dimensioning, you can calculate shaft diameter from torque and material data, then select suitable Woodruff key from database.

WN11 - Calculation
For recalculation according to DIN 6892, additionally enter peak torque Tmax, load distribution factor, friction factor (for press fits), additional bending moment, load alternating factor and load peak frequency factors. Support factors fS and hardness factors fH are loaded from material database. WN11 calculates safety factors for permissible pressure by maximum and equivalent torque on Woodruff key, shaft and hub.
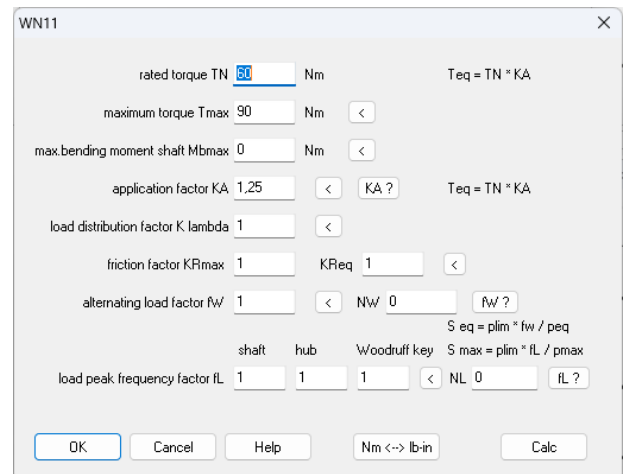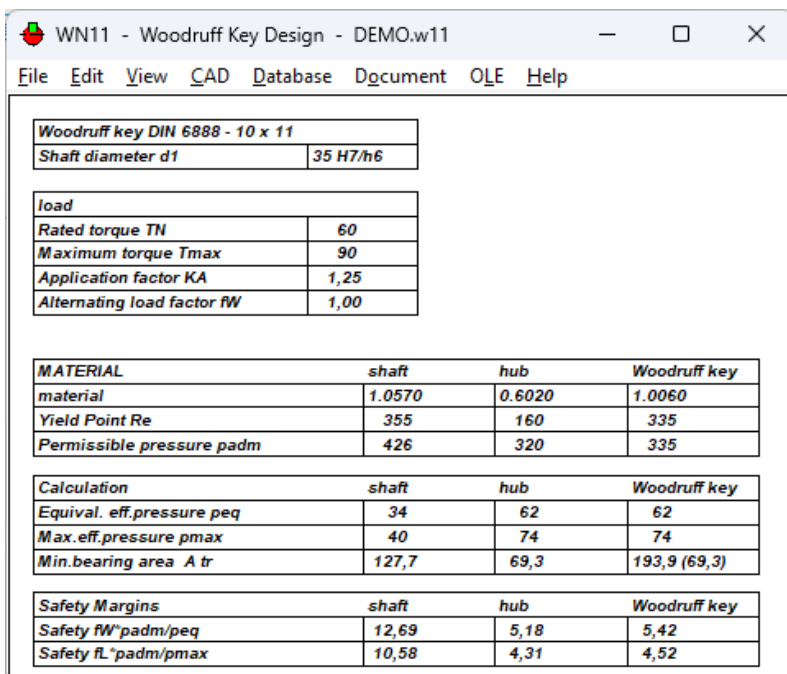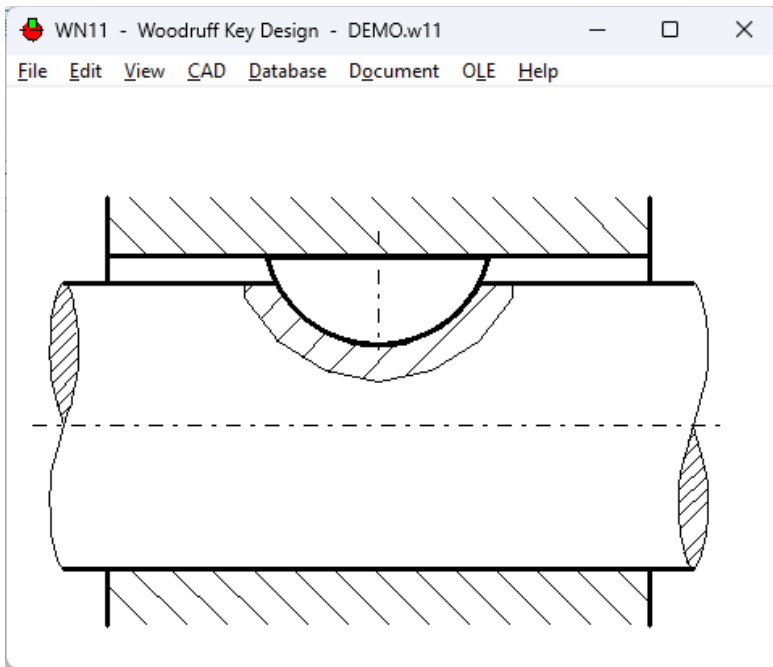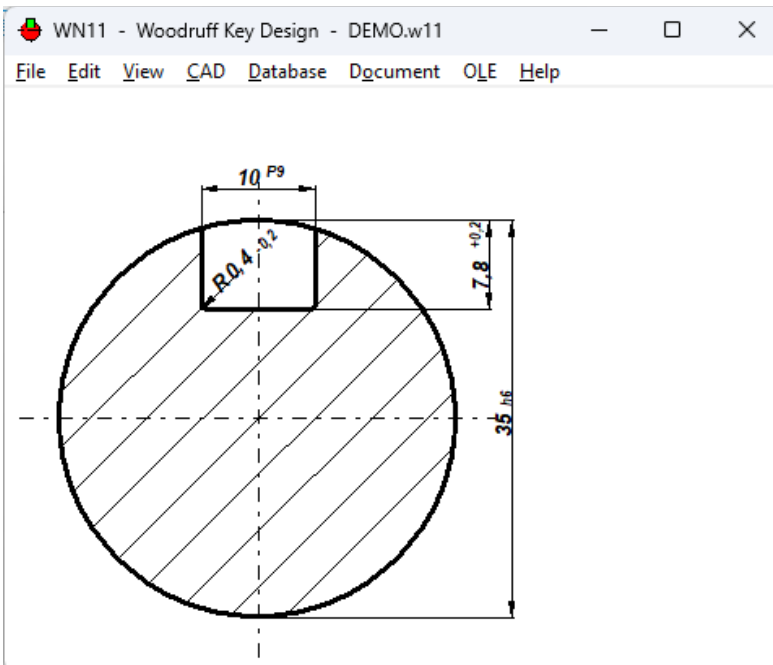
D_VON	D_BIS	B	H	D2	R1	T1A	T1B	T
3	4	1	1,4	4	0,2	1	1	
4	6	1,5	2,6	7	0,2	2	2	
6	8	2	2,6	7	0,2	1,8	1,8	
6	8	2	3,7	10	0,2	2,9	2,9	
8	10	2,5	3,7	10	0,2	2,9	2,9	
8	10	3	3,7	10	0,2	2,5	2,8	
8	10	3	5	13	0,2	3,8	4,1	
8	10	3	5	13	0,2	3,8	4,1	
8	10	3	6,5	16	0,2	5,3	5,6	
10	12	4	5	13	0,2	3,5	4,1	
10	12	4	6,5	16	0,2	5	5,6	
10	12	4	7,5	19	0,2	6	6,6	
12	17	5	6,5	16	0,2	4,5	5,4	
12	17	5	7,5	19	0,2	5,5	6,4	
12	17	5	9	22	0,2	7	7,9	
17	22	6	7,5	19	0,4	5,1	6	
17	22	6	9	22	0,4	6,6	7,5	
17	22	6	10	25	0,4	7,6	8,5	
17	22	6	11	28	0,4	8,6	9,5	

WN11 - Woodruff Key Database
WN11 includes a database with dimensions of Woodruff keys according to DIN 6888. Database may be extended and modified by the user.

WN11 - Material Database
Material properties for shaft, hub and Woodruff key may be selected from material database.

WN11 - Text Printout
Calculation results may be printed on screen, printer, text file, or exported into an Excel worksheet.

WN11 - CAD Interface
True-scale drawing of the Woodruff key and profile drawings of shaft groove and hub groove can be exported to CAD via DXF or IGES interface.

User Interface
The dialogue windows of WN11 allow even the less experienced PC user to find his way around the program quickly. WN11 provides users with a help text wherever they are in the program. When the demo mode is selected, WN11 runs through a demo program in which an example calculation is performed. WN11 contains auxiliary pictures with geometrical signs and formulas used by the program.

System Requirements
WN11 is available as 32-bit app or as 64-bit app for Windows 11, Windows 10, Windows 7.

Scope of Delivery
WN11 Software with user manual (pdf), example applications and help images, non-expiring license for unlimited time use with update rights.

Software Maintenance
HEXAGON Software is continuously improved and updated. Registered users are regularly kept informed of updates and new editions.