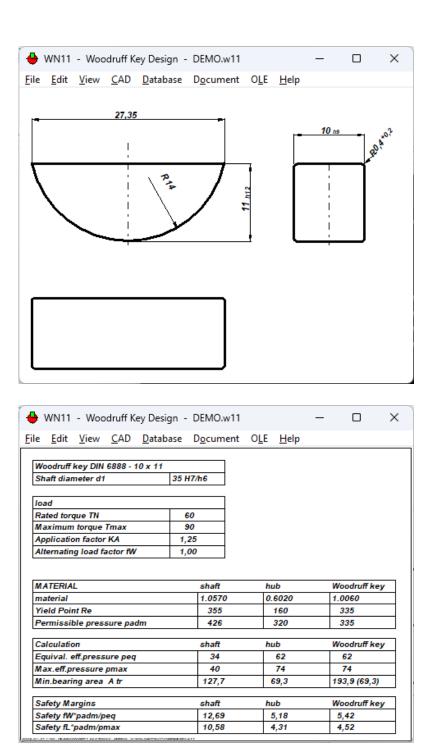
W N 1 1



Woodruff Key Joints

for Windows

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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 loadbearing 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.

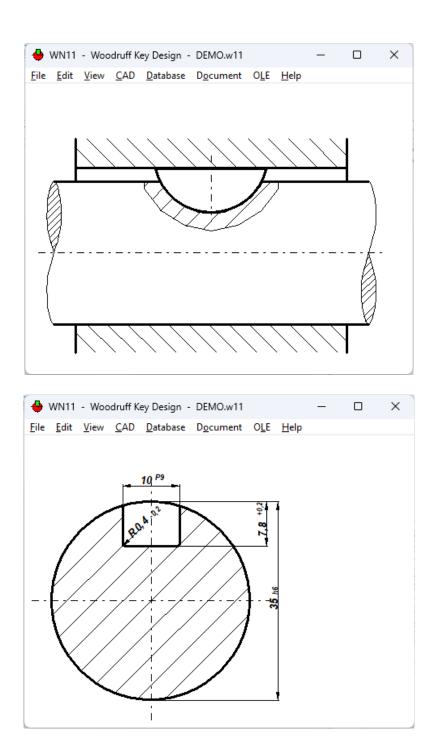
WN11 - Pre-Dimensioning

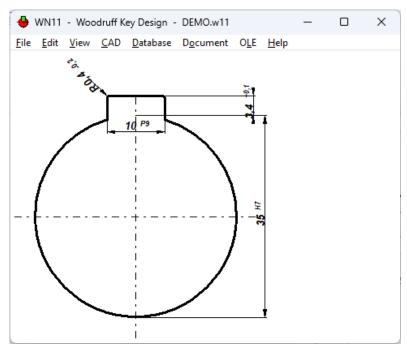
In Pre-Dimensioning, you can calculate shaft diameter from torque and material data, then select suitable Woodruff key from database.

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.

WN11					×
rated torque TN	60	Nm		Teq = TN × KA	
maximum torque Tmax	90	Nm	<		
max.bending moment shaft Mbmax	0	Nm	<		
application factor KA	1,25	<	KA?	Teq = TN × KA	
load distribution factor K lambda	1	<			
friction factor KRmax	1	KReq	1	<	
alternating load factor fW	1		N₩ 0	fw?	
	shaft	hub	Woodruff key	S eq = plim * fw / peq S max = plim * fL / pmax	
load peak frequency factor fL	1	1	1		
OK Cancel	Help		Nm <> lb-in	Calc	





M	•	•	►I	Search	Search Nex	t 1 /25	ОК	Cancel	
D VON	D_BIS	3	в	н	D2		TIA	T1B	IT
	3	4	1	1,4	4	0,2	1	1	T
1	4	6	1,5	2,6	7	0,2	2	2	
1	6	8	2	2,6	7	0,2	1,8	1,8	
1	6	8	2	3,7	10	0,2	2,9	2,9	
1	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	
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.

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ile <u>V</u> iew	<u>H</u> elp						
M	↓ ▶)	H Se	arch Sear	ch Next 159	/972 0	IK Can	cel
IDENT	MATERIAL	MAT_NR	NB	BM	RE	E_MODUL	A5
1.0060	E335 (St 60)	1.0060	1	590	335	210000	
1.0070	E360 (St 70)	1.0070	1	690	360	210000	
1.0112	P2355	1.0112	1	360	235	210000	
1.0114	S235J0	1.0114	1	360	235	210000	
1.0116	S235J2G3	1.0116	1	360	235	210000	
1.0117	S235J2	1.0117	1	360	235	210000	
1.0130	P265S	1.0130	1	400	265	210000	
1.0143	S275J0	1.0143	1	430	275	210000	
1.0144	S275J2G3 (St 44-3)	1.0144	1	430	275	210000	
1.0145	Fe 430 D 2	1.0145	1	430	275	210000	

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.