WN3

Software for Parallel Key Joints according to DIN 6892

for Windows

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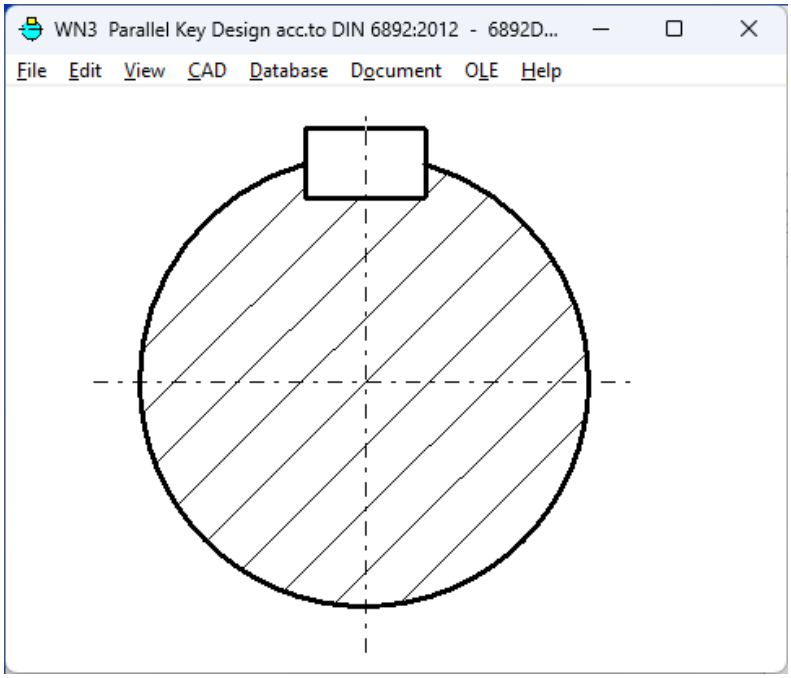
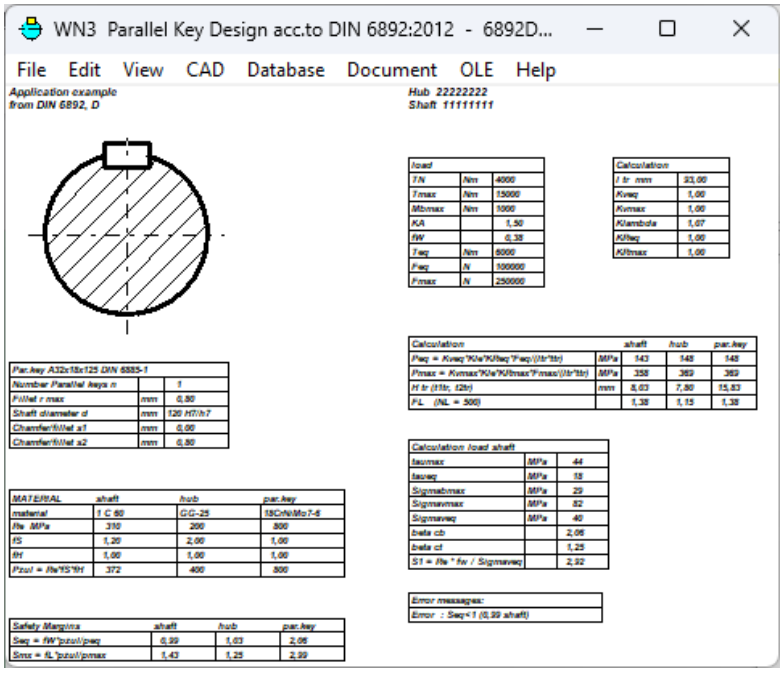
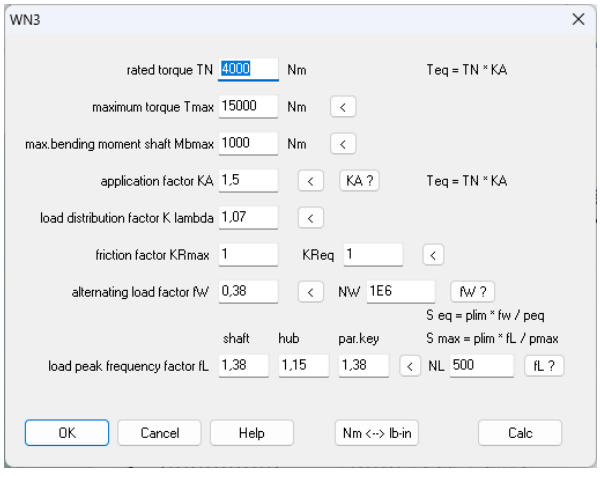


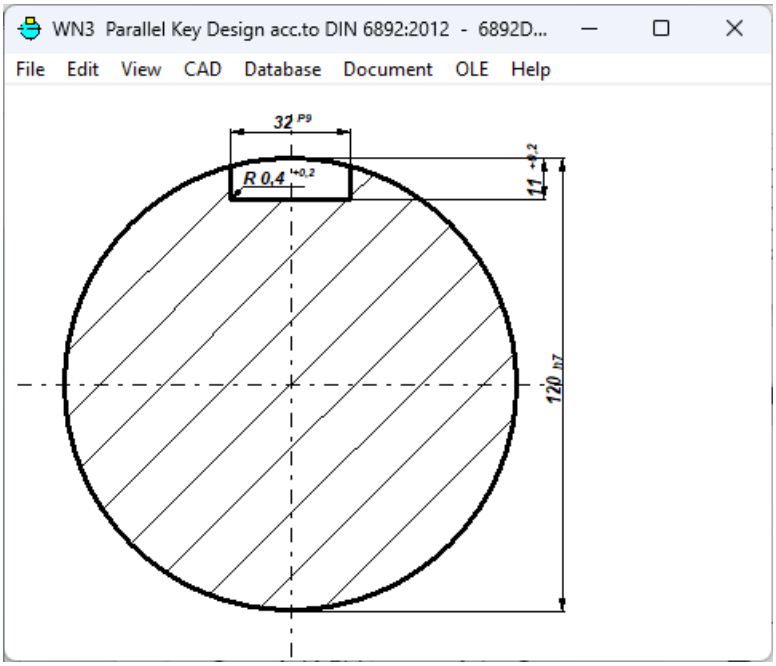


Parallel Key Joints - Calculation and Design
WN3 software calculates the load-bearing capacity of a parallel key joint in accordance with DIN 6892. The dimensions for the parallel key in accordance with DIN 6885 or ANSI B17.1, as well as material values for parallel key, shaft and hub can easily be taken from the integrated data base. As a result, WN issues text printout, tables and drawings of sliding key, shaft groove and hub groove.

Pre-Dimension
In pre-dimensioning, the shaft diameter can be calculated from nominal torque, yield point of the shaft and hub material and application factor, and then you can select an appropriate parallel key from the database.

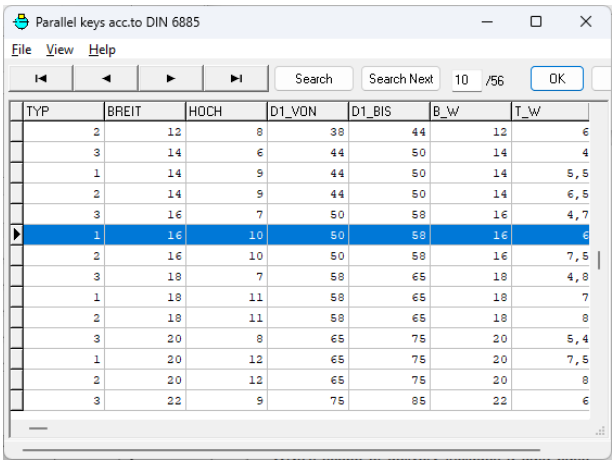
Strength Calculation
In recalculation, in accordance with DIN 6892, the following data are taken into account: maximum torque, load distribution factor, adhesive force factor (for press fits), additional bending moment, load aligment change factor and load peak frequency factor. The support factor and hardness influence factor for shaft, hub and sliding key are automatically selected from the data base by WN3. Safety argins against breakage due to maximum and equivalent torque for sliding key, shaft and hub are calculated.



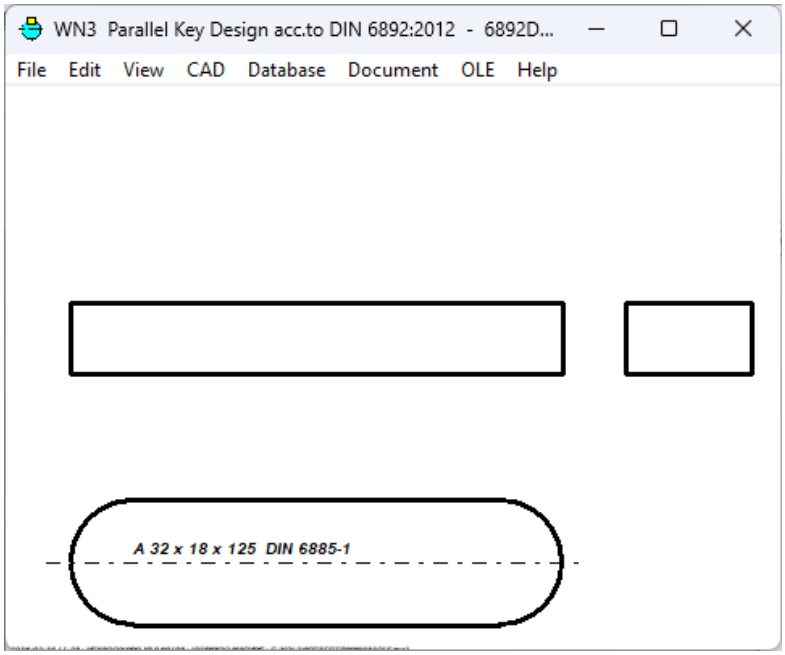


Parallel Key Data Base

WN3 s scope of delivery includes a data base containing all parallel key dimensions in accordance with DIN 6885 (pages 1, 2 and 3) and ANSI B17.1. The database can be extended by the user.

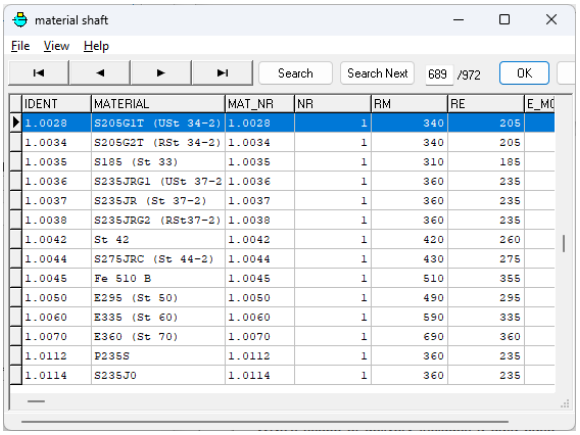


TYP	BREIT	HOCH	D1_VON	D1_BIS	B_W	T_W
2	12	8	38	44	12	6
3	14	6	44	50	14	4
1	14	9	44	50	14	5,5
2	14	9	44	50	14	6,5
3	16	7	50	58	16	4,7
1	16	10	50	58	16	6
2	16	10	50	58	16	7,5
3	18	7	58	65	18	4,8
1	18	11	58	65	18	7
2	18	11	58	65	18	8
3	20	8	65	75	20	5,4
1	20	12	65	75	20	7,5
2	20	12	65	75	20	8
3	22	9	75	85	22	6

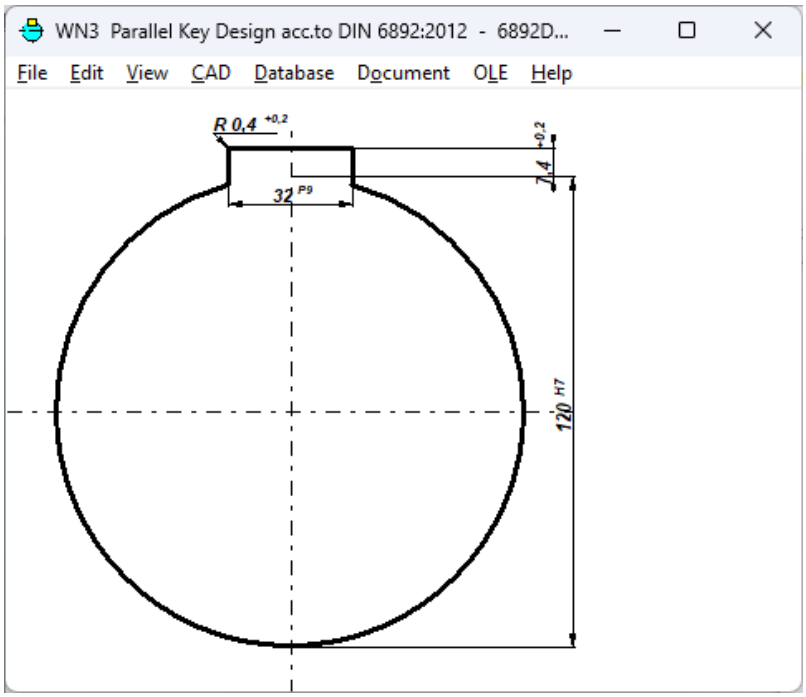


Material Data Base

The material for shaft, hub and parallel key can be selected from a database with more than 700 material entries (steel and non-iron metals).



IDENT	MATERIAL	MAT_NR	NR	RM	RE	E_M
1.0028	S205G1T (USt 34-2)	1.0028	1	340	205	
1.0034	S205G2T (RSt 34-2)	1.0034	1	340	205	
1.0035	S185 (St 33)	1.0035	1	310	185	
1.0036	S235JRG1 (USt 37-2	1.0036	1	360	235	
1.0037	S235JR (St 37-2)	1.0037	1	360	235	
1.0038	S235JRG2 (RSt37-2)	1.0038	1	360	235	
1.0042	St 42	1.0042	1	420	260	
1.0044	S275JRC (St 44-2)	1.0044	1	430	275	
1.0045	Fe 510 B	1.0045	1	510	355	
1.0050	E295 (St 50)	1.0050	1	490	295	
1.0060	E335 (St 60)	1.0060	1	590	335	
1.0070	E360 (St 70)	1.0070	1	690	360	
1.0112	P235S	1.0112	1	360	235	
1.0114	S235J0	1.0114	1	360	235	



HEXAGON Help System

Auxiliary text and images are available for all dialogue windows. If error messages occur, you can get description and remedy suggestion.

Interfaces

Drawings and tables can be saved as DXF or IGES file to be loaded with CAD programs. The OLE interface lets you import/export data from/ to Excel.

System Requirements

WN3 is available as 32-bit app or as 64-bit app for Windows 7, Windows 10 , Windows 11.

Scope of Delivery

WN3 program with user manual (pdf), calculation examples,declaration of conformity, non-expiring license for unlimited time use with update rights.

Guarantee

HEXAGON gives a 24 month guarantee on full functionality of the software. HEXAGON Software is continuously improved and updated. Registered users are regularly kept informed of updates and new editions.