

WN 13



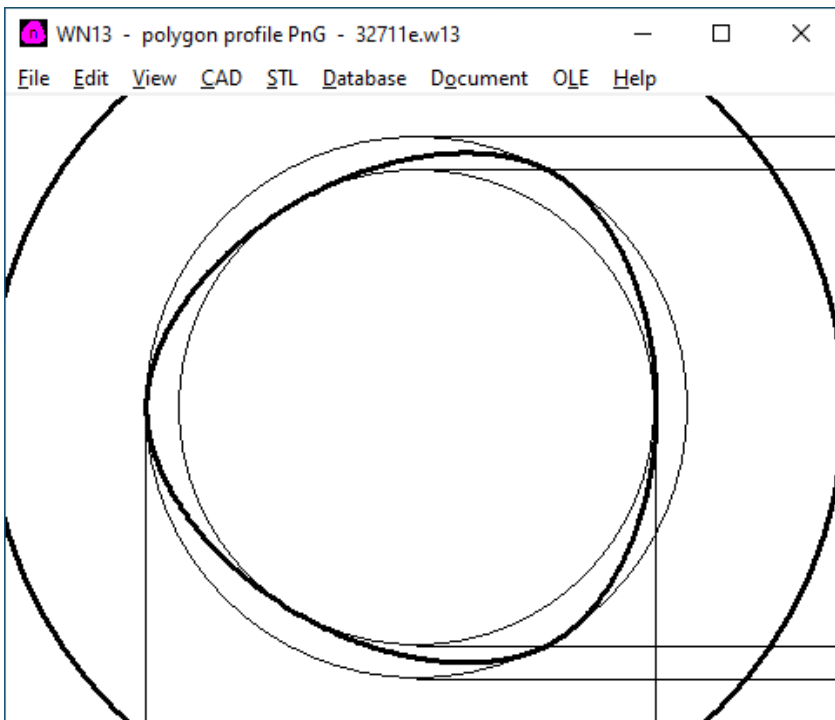
www.hexagon.de

Software for Polygon Profiles

PnG (incl. P3G)

for Windows

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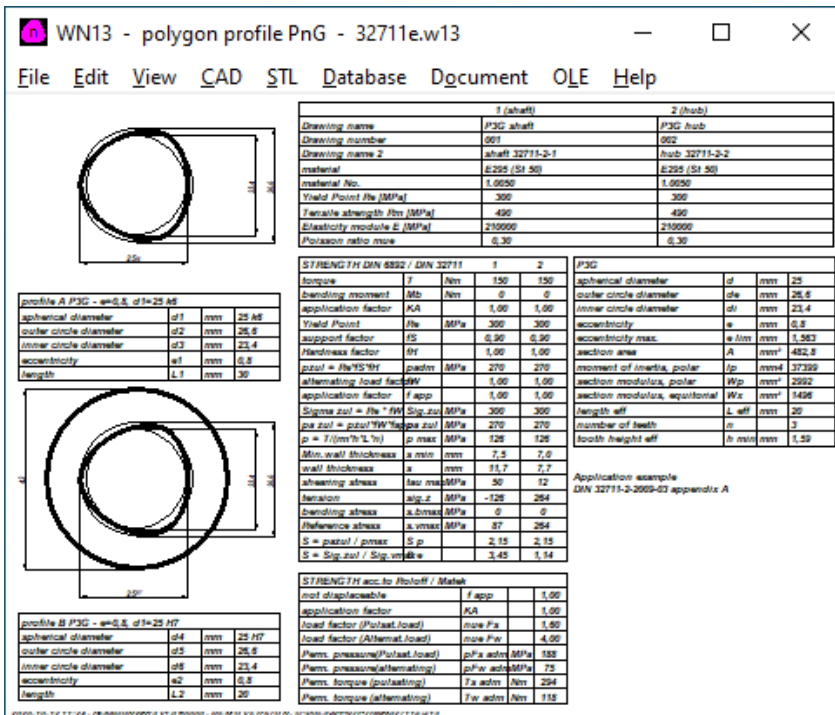


PnG Calculation

WN13 calculates dimensions and tolerances for PnG polygon trochoid profiles according to DIN 32711. You can define each size by input of nominal diameter, eccentricity and number of teeth (P2G, P3G, P4G, P5G, P6G).

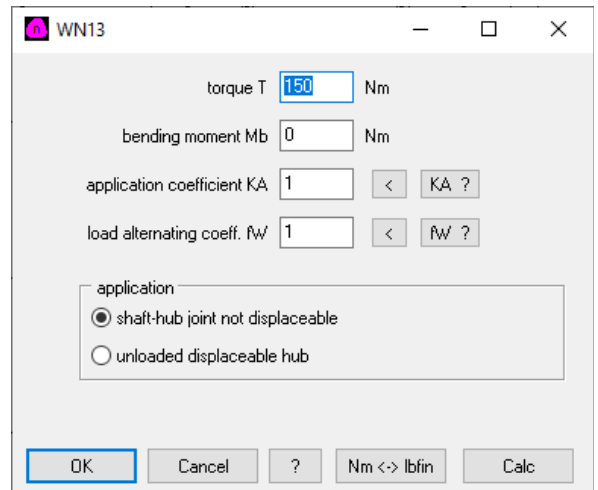
P3G sizes according to DIN 32711 (size 14 mm to 180 mm) can be selected from database. The database may be extended by the user.

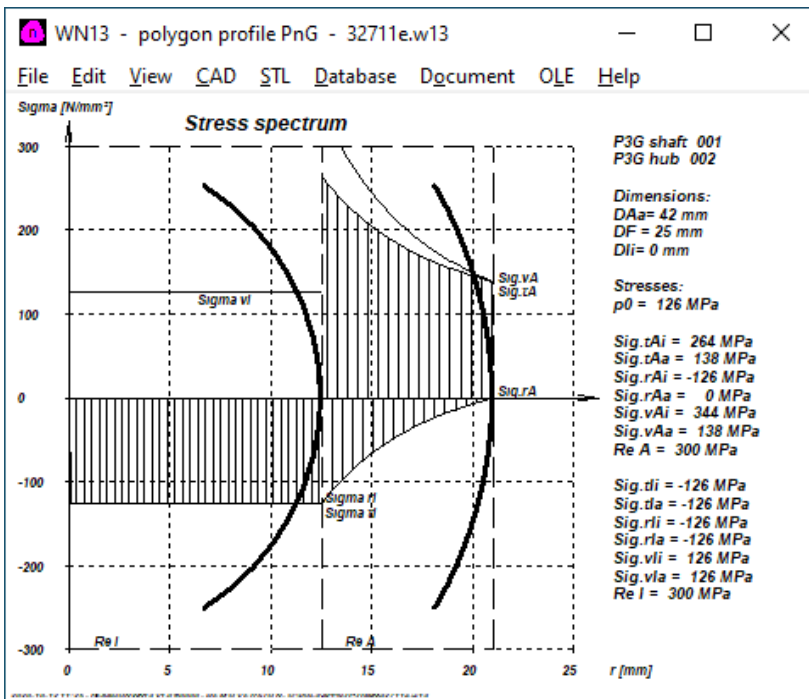
D1, D4	D2, D5	D3, D6	E1, E2	D6PRE	D7	R1	R2	IN
25	26,6	23,4	0,8	23	8	17,7	7,3	
28	29,8	26,2	0,9	35,8	10	19,85	8,15	
30	32	28	1	27,6	10	21,5	8,5	
32	34,24	29,76	1,12	39,4	10	23,28	8,72	
35	37,5	32,5	1,25	32,1	10	25,63	9,37	
40	42,8	37,2	1,4	36,8	13	29,1	10,9	
45	48,2	41,8	1,6	41,4	13	32,9	12,1	
50	53,6	46,4	1,8	46	16	36,7	13,3	
55	59	51	2	50,5	16	40,5	14,5	
60	64,5	55,5	2,25	55	16	44,63	15,37	
65	69,9	60,1	2,45	59,6	20	48,43	16,57	
70	75,6	64,4	2,8	63,9	20	53,2	16,8	
75	81,3	68,7	3,15	68,2	20	57,98	17,02	
80	86,7	73,3	3,35	72,8	20	61,78	18,22	
85	92,1	77,9	3,55	77,4	20	65,58	19,42	
90	98	82	4	81,5	20	71	19	
95	103,5	86,5	4,25	86	20	75,13	19,87	



Pre-Dimensioning

Enter torque, select material and application: WN13 calculates minimum size required for a PnG shaft-hub joint.





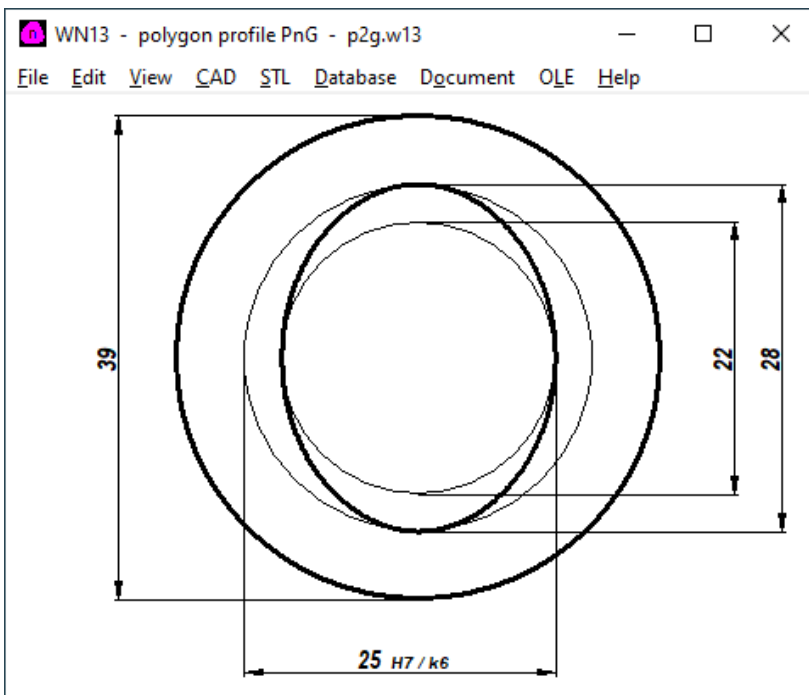
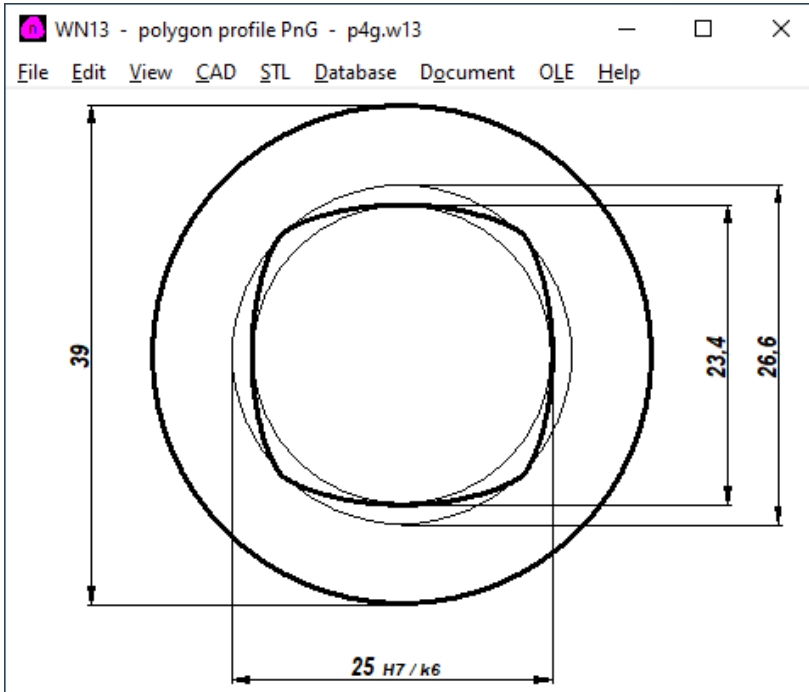
Strength Calculation

WN13 calculates compressive stress, torsional stress, bending stress, and equivalent stress according DIN 6892 (pressure) and DIN 7190 (stress spectrum). WN13 considers material, application factors and life expectation coefficients.

Material Database

Materials for shaft and hub can be selected from the integrated material database.

IDENT	MATERIAL	MAT_NR	NR	RM	RE	E_MODUL	AS
1.0050	E295 (St 50)	1.0050	1	490	295	210000	
1.0060	E335 (St 60)	1.0060	1	590	335	210000	
1.0070	E360 (St 70)	1.0070	1	690	360	210000	
1.0112	P235S	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	
1.0145	S275J0H (RoSt44-2)	1.0145	1	430	275	210000	
1.0226	DX 51 D (St 02 2)	1.0226	1	300	160	210000	
1.0301	C10	1.0301	7	650	390	210000	
1.0305	P235G1TH (St 35.8)	1.0305	3	350	230	210000	
1.0312	DC05	1.0312	1	300	160	210000	
1.0330	DC01 (St 2; St 12)	1.0330	1	330	280	210000	



Production Drawing

PnG dimension table together with PnG profile in an ISO 7200 drawing header may be printed directly, or exported to CAD via DXF-/IGES interface. Drawing name, date, users and modifications are described in WN13.

CAD Interface

WN13 generates a true scale PnG profile as DXF or IGES file to be used in CAD or CNC system. Resolution and tolerances can be configured.

STL Interface

WN13 generates a true scale 3D model of shaft and hub to be produced on any 3D printer.

User Interface

The dialogue windows of WN13 allow even the less experienced PC user to find his way around the program quickly. WN13 provides users with help text and auxiliary images. When the demo mode is selected, WN13 runs through a demo program in which an example calculation is performed.

System Requirements

WN13 is available as 32-bit app or as 64-bit app for Windows 7, 8, Windows 10.

Scope of Delivery

WN13 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.

Guarantee

HEXAGON gives a 24 month guarantee on full functionality of the software.