

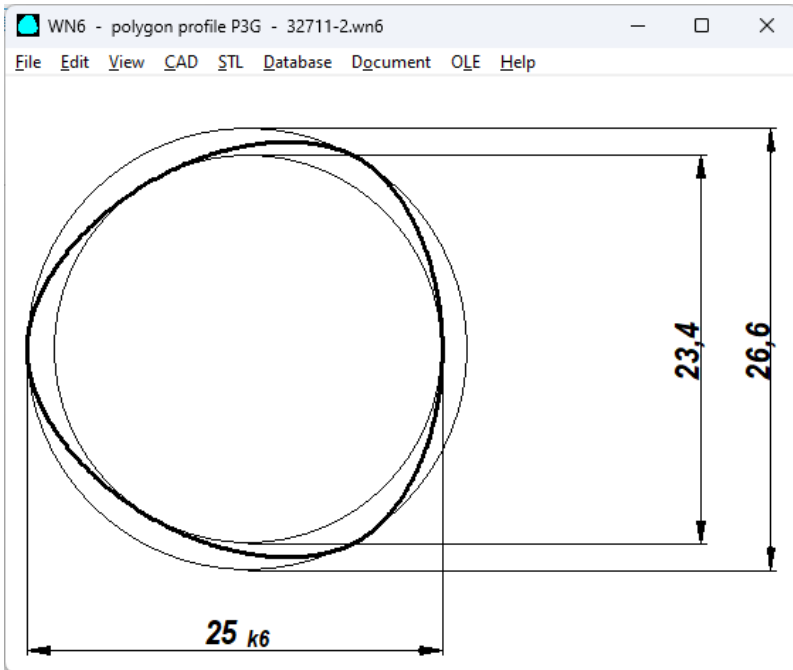
# WN 6



## Software for Polygon Profiles P3G according to DIN 32711

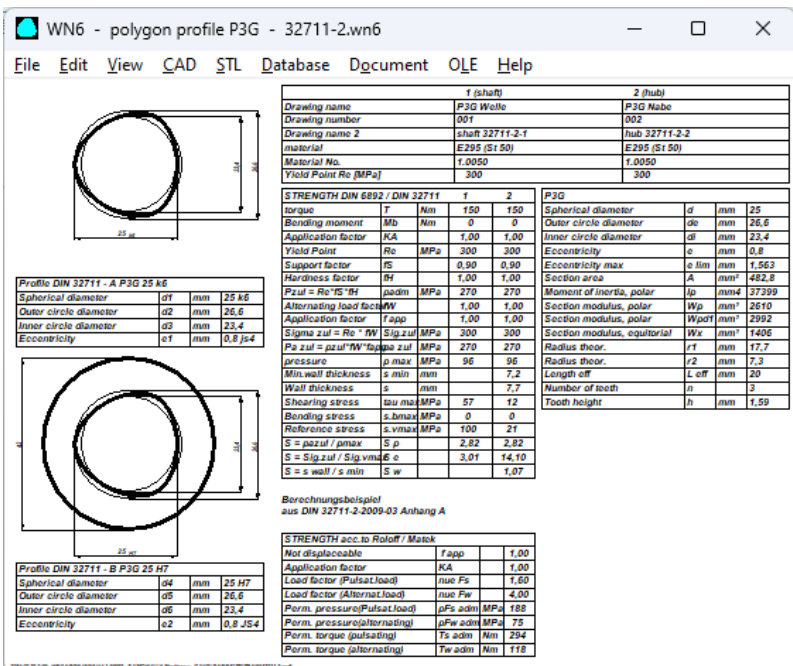
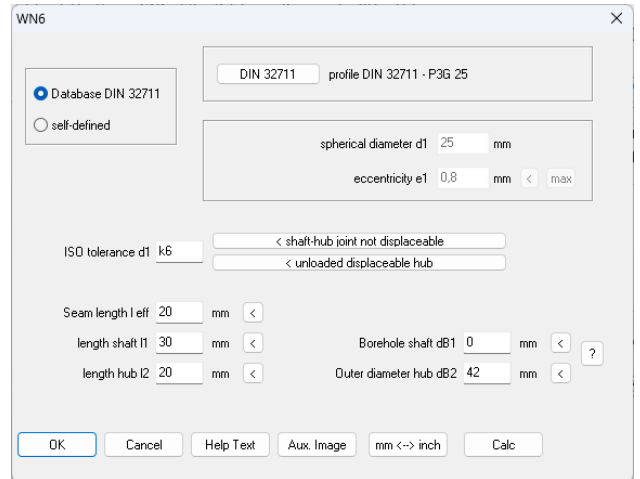
for Windows

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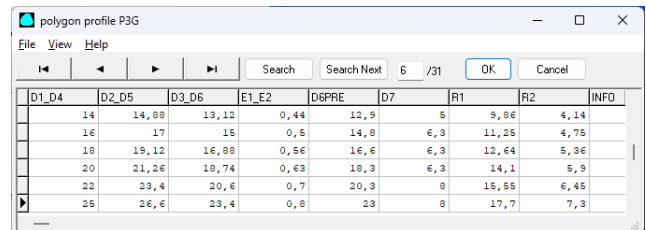
### P3G Calculation

WN6 calculates dimensions, tolerances, stress and safety factors for P3G polygon profiles according to DIN 32711. You can also define special sizes by input of nominal diameter and eccentricity. WN6 calculates ISO tolerances.



### Database

P3G sizes according to DIN 32711 (size 14 mm to 100 mm) can be selected from database. The database may be extended by the user.



### Pre-Dimensioning

Enter torque, select material and application: WN6 calculates minimum size required for a P3G shaft-hub joint.

WN6 - polygon profile P3G - din32711.wn6

File Edit View CAD STL Database Document OLE Help

STRENGTH DIN 6892 / DIN 32711		1	2
material		16MnCr5	C 45 (Ck45)
torque	T	Nm	250
Bending moment	Mb	Nm	0
Application factor	KA		1,20
Yield Point	Re	MPa	600
Support factor	fS		1,20
Hardness factor	fH		1,00
$P_{zul} = Re \cdot fS \cdot fH$	padm	MPa	1080
$\Sigma_{zul} = Re \cdot fW$	Sig.zul	MPa	396
$P_{a\ zul} = p_{zul} \cdot fW \cdot fapp$	pa zul	MPa	713
pressure	p max	MPa	57
$S = p_{zul} / p_{max}$	S p		12,59
$S = \Sigma_{zul} / \Sigma_{vmax}$	S e		8,02
$S = s_{wall} / s_{min}$	S w		0,00

Profile DIN 32711 - A P3G 40 g6			
Spherical diameter	d1	mm	40 g6
Outer circle diameter	d2	mm	42,8
Inner circle diameter	d3	mm	37,2
Eccentricity	e1	mm	1,4 js4

Profile DIN 32711 - B P3G 40 H7			
Spherical diameter	d4	mm	40 H7
Outer circle diameter	d5	mm	42,8
Inner circle diameter	d6	mm	37,2
Eccentricity	e2	mm	1,4 JS4

Warning: dB2 = 0 !

## Strength Calculation

WN6 calculates compressive stress, torsional stress, bending stress, and equivalent stress according to DIN 32711 and DIN 6892. Material, application factors and life expectation coefficients are considered in the calculation.

## Material Database

Materials for shaft and hub can be selected from the integrated material database with 900 steel and noniron materials.

## Production Drawing

P3G dimension table together with P3G 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 WN6.

## CAD Interface

WN6 generates a true scale P3G profile as DXF or IGES file to be used in CAD or CNC system. Resolution and tolerances can be configured.

WN6 - polygon profile P3G - 32711-2.wn6

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Profile DIN 32711 - B P3G 25 H7			
Spherical diameter	d4	mm	25 H7
Outer circle diameter	d5	mm	26,6
Inner circle diameter	d6	mm	23,4
Drill diameter	d6pre	mm	23 H8
Grinding disk diameter	d7	mm	8 max
Eccentricity	e2	mm	0,8 JS4
length	L2	mm	20

Fit Dim.	Max.Dim.	Min.Dim.
25 H 7	25,021	25,000
23 H 8	23,033	23,000
0,8 JS 4	0,802	0,799

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WN6 - polygon profile P3G

CAD Drawing Element

Line

Polyline

resolution polyline 360

spherical diameter d1/d4 25 mm

shaft (k6)

hub (H7)

OK Cancel Help mm <-> inch

## User Interface

The dialogue windows of WN6 allow even the less experienced PC user to find his way around the program quickly. WN6 provides users with a help text wherever they are in the program. When the demo mode is selected, WN6 runs through a demo program in which an example calculation is performed. WN6 contains auxiliary pictures with geometrical signs and formulas used by the program.

## System Requirements

WN6 is available as 32-bit app or as 64-bit app for Windows 11, Windows 10, Windows 7.

## Scope of Delivery

WN6 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.