

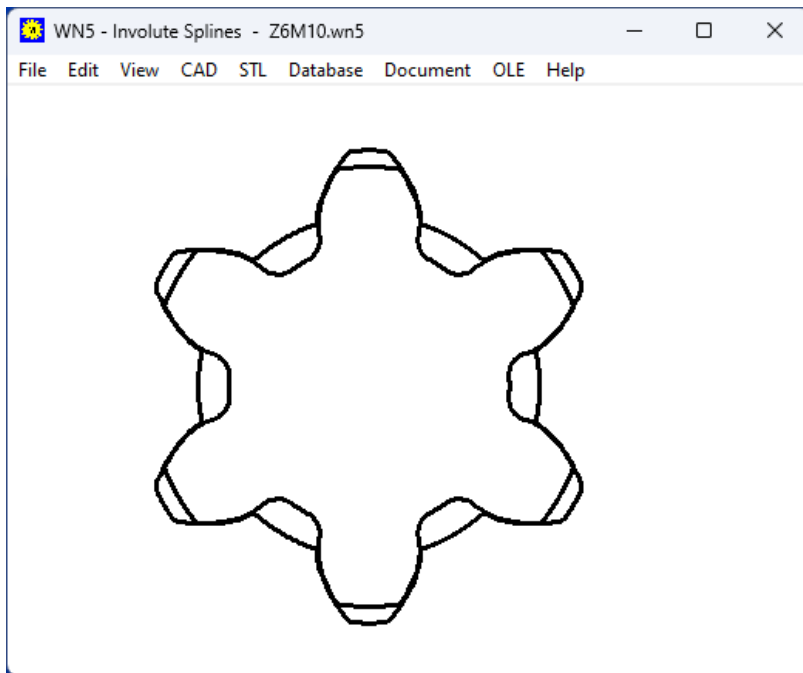
WN5



Software for Calculation of Involute Splines according to ISO 4156 and ANSI B92.2M

for Windows

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Calculation

WN5 calculates dimensions, tolerances, dimension over/between pins, stress and life expectation for external and internal involute splines according to ISO 4156 and ANSI B92.2M. Basically, WN5 uses metric units. Imperial units inch, psi, lb-in, can be configured as well. WN5 calculates the fit types „Flat Root Side Fit“ and „Fillet Root Side Fit“. Pressure angle can be 30°, 37.5° or 45°.

Flank Clearance, Tolerances

WN5 calculates tolerances for diameters, space width and tooth thickness according to ISO 4156 and ANSI B92.2M from fit class and spline tolerance class. When entering centerline runout of internal and external spline, WN5 calculates required effective clearance.

Measurement

WN5 calculates dimension over/between pins, span measurement and tooth thickness. Pin diameter and number of teeth measured may be modified by the user.

WN5 Dimensions

Calculation method: ISO 4156

Pressure angle alpha: 30°

Module m: 10 mm

Fit type: Flat Root Side Fit

Number of teeth N: 6 d = 60 mm

Facewidth shaft bE: 24 mm

Facewidth hub bI: 24 mm

effective facewidth b: 24 mm

Hub Outside diameter DD: 92,41 mm

Shaft inside diameter Din: 0 mm

Buttons: OK, Cancel, ?, mm <-> inch, Calc

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D = 60 mm

Fit Class:

- H / d (es = 100 µm)
- H / e (es = 60 µm)
- H / f (es = 30 µm)
- H / h (es = 0 µm)
- H / js (es = -128 µm)
- H / k (es = -256 µm)

Spline Tolerance Class:

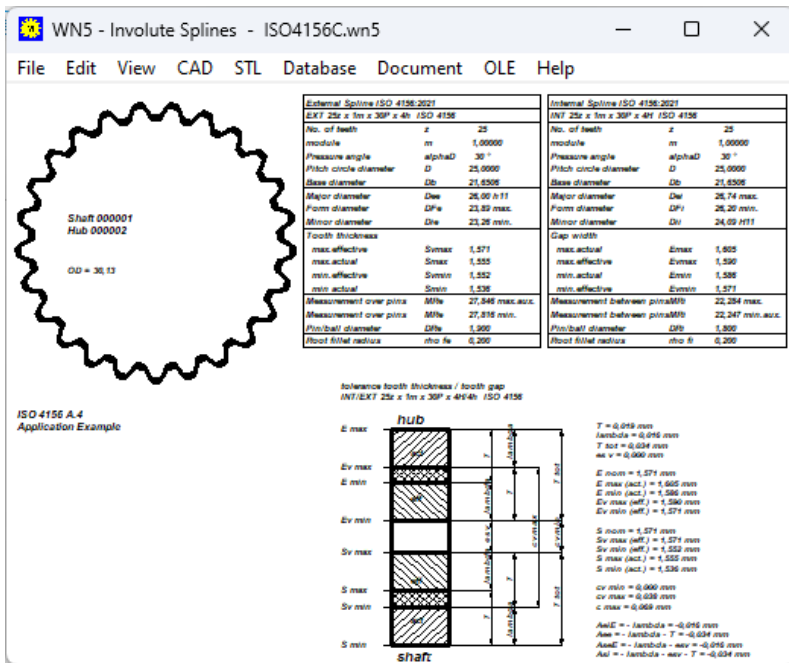
- 4
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Centerline runout (diametral) of external part COe: 0,01 mm

Centerline runout (diametral) of internal part COi: 0,02 mm

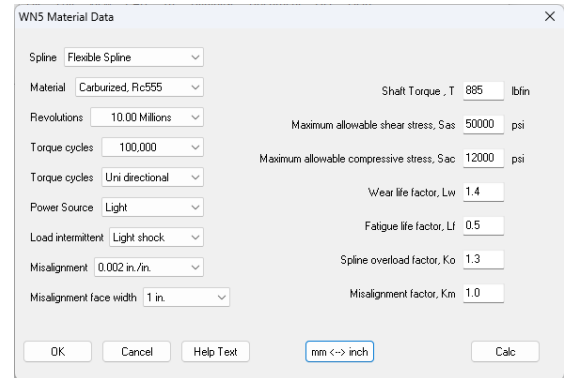
Number of points for involute polycurve: 20

Buttons: OK, Cancel, ?, mm <-> inch, Calc



Stress Calculation

WN5 calculates compressive stress, spline teeth shear stress, hoop stress, bending stress, torsional stress, and equivalent stress according to SAE Design Guide for Involute Splines. Material, application factors and life expectation coefficients can be entered directly, or calculated by WN5.

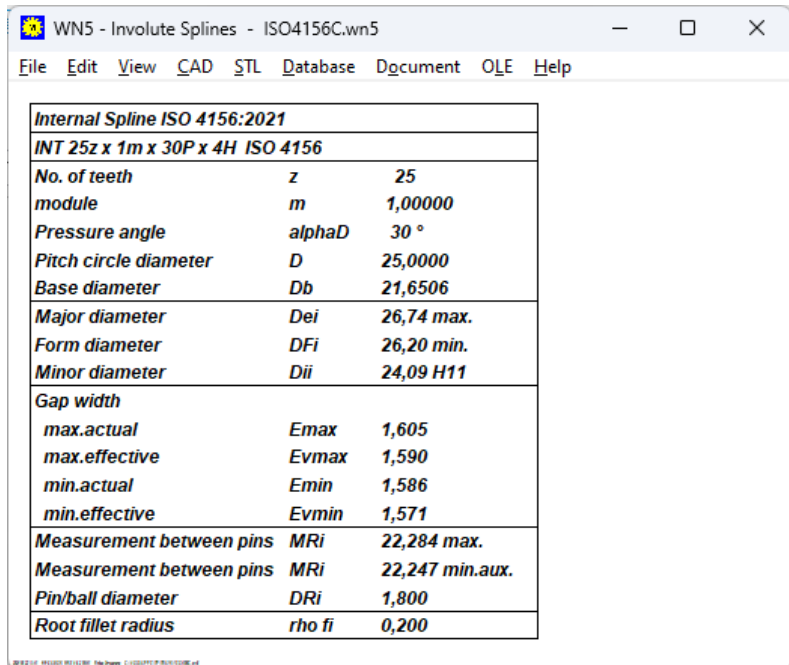
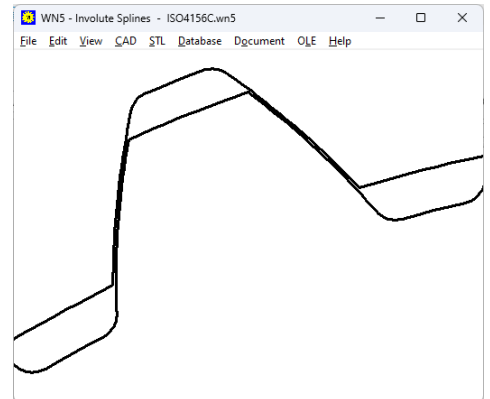


Production Drawing

Drawing tables with spline dimension data according to ANSI B92.2M or ISO 4156 together with a spline draft may be printed, or loaded into CAD with DXF-/ IGES interface.

Profile drawing

WN5 generates true-scale drawings of internal and external involute spline as DXF/IGES files for CAD Import.



System Requirements

WN5 is available as 32-bit app or as 64-bit app for Windows 11, Windows 10, Windows 7.

Scope of Delivery

Program 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

