

# ZAR2

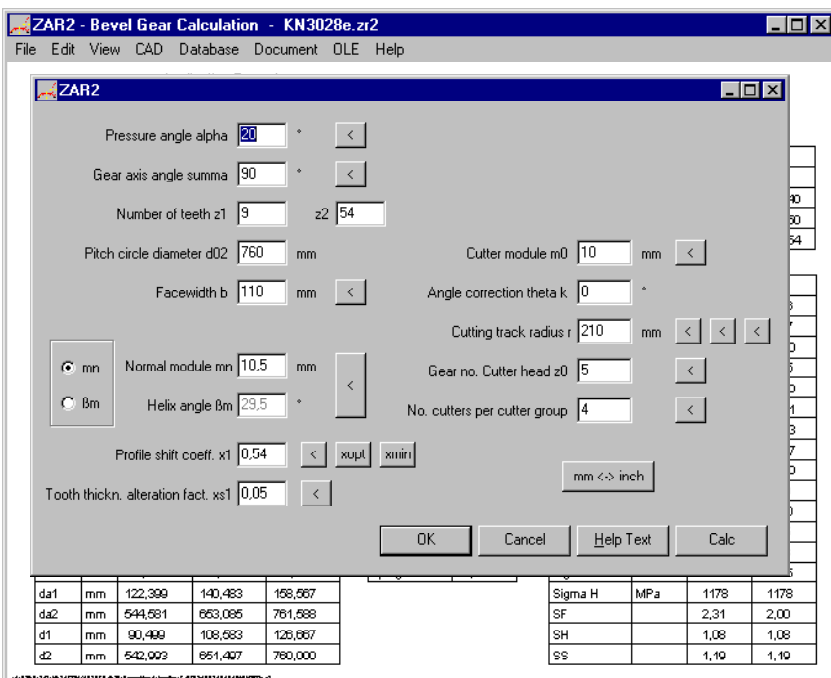
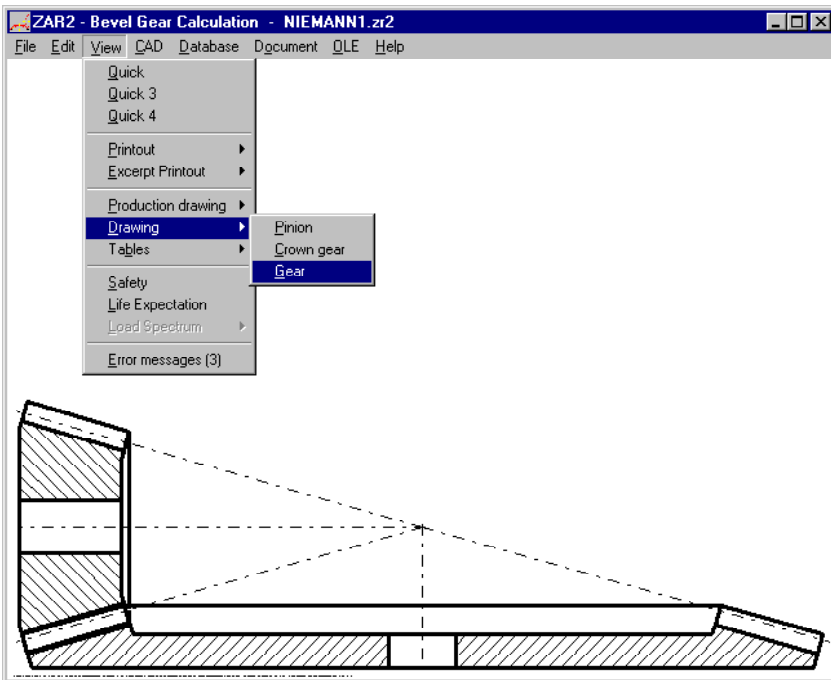


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## Spiral Bevel Gears Cyclo-Palloid to Klingelnberg

Software for Windows

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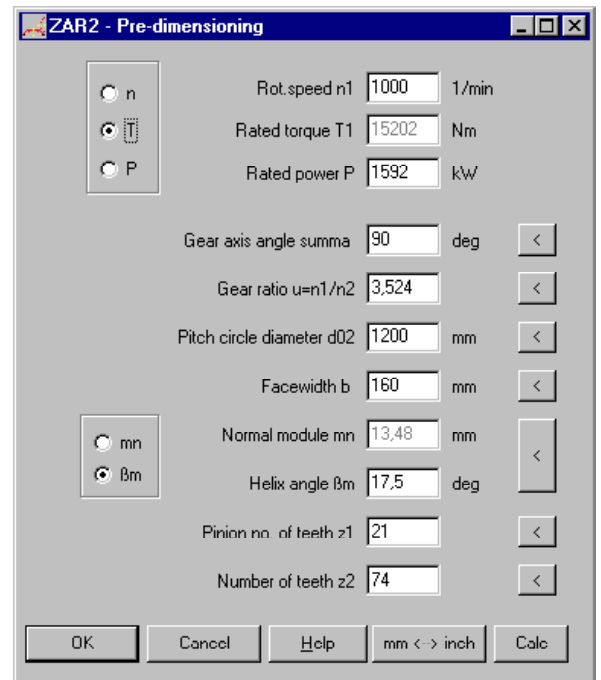


### Calculation Base

ZAR2 calculates all dimensions of spiral bevel gears with cyclo-palloid toothing with constant tooth height according to Klingelnberg. Load-bearing capacity with safety factors for tooth breakage, pitting and seizure calculates ZAR2 according to DIN 3991.

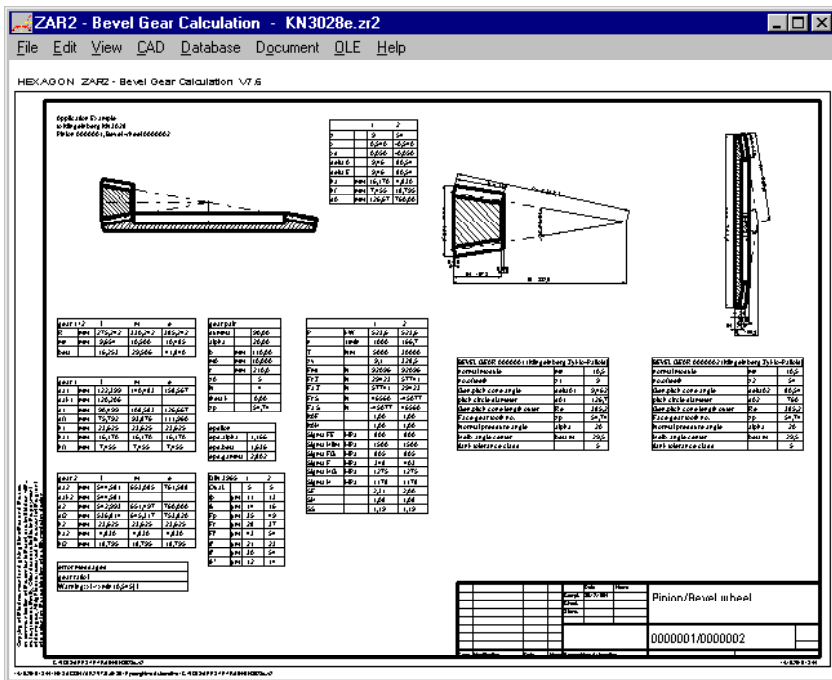
### Pre-dimensioning

In pre-dimensioning, ZAR2 makes recommendations for the size of the bevel gear, face width, module and number of teeth based on axis angle, gear ratio, pinion speed and torque.



### Material Data Base

Material properties can be loaded from the integrated gear material database. Database may be modified and extended by the user.



## Calculation

The pre-dimensioning results can be used in the geometry calculation. The normal module can be calculated from the cutter module or reverse. The program supports an angle correction if this is necessary, likewise the strength matching of pinion and bevel wheel via tooth thickness variation. ZAR2 calculates the minimum addendum modification for the pinion and the addendum modification factors for same specific sliding. All dimensions and contact ratios are calculated. ZAR2 determines the permissible deviations in accordance with DIN 3965 from the tooth flank tolerance class.

## Strength Calculation

The safety factors SF for tooth breakage, SH for pitting and Ss for seizure resistance are determined in the strength calculation according to DIN 3991. The individual factors can be modified.

## Diagrams

Safety factors and life expectation as function of input torque can be displayed as diagram.

## Tooth Forces

Axial and radial forces during push/pull operation are calculated. These values can be exported to the shaft calculation program WL1+.

## Load Spectrum

ZAR2 allows you to define and calculate a load spectrum, with output of a life expectancy diagram.

## CAD Interface

Drawings and diagrams can be exported to CAD via DXF or IGES interface.

## User Interface

The dialogue windows of ZAR2 allow even the less experienced PC user to find his way around the program quickly. ZAR2 provides users with a relevant help text wherever they are in the program. When the demo mode is selected, ZAR2 runs through a demo program in which an example calculation is performed. If error messages appear, users can get description and remedy suggestions.

## Units

ZAR2 can be switched between metric units (mm, N,MPa) and imperial units (inch, lbf, psi).

## System Requirements

ZAR2 is available as 32-bit app or as 64-bit app for Windows 7, 8, Windows 10.

## Scope of Delivery

Software with user manual (pdf), non-expiring license for unlimited time use with update rights.

## Guarantee

HEXAGON gives a 24 month guarantee on full functionality of the software. We provide help and support by email and hotline without extra charge. HEXAGON Software is continuously improved and updated. Registered users are regularly kept informed of updates and new editions.

