

# ZAR1W



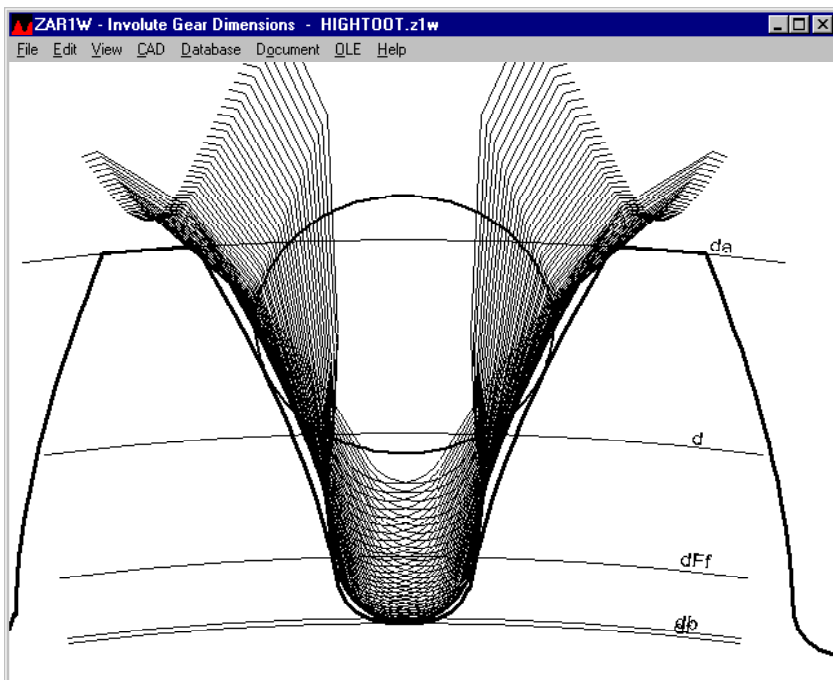
www.hexagon.de

## Spur and Helical Gears

### Dimensions, Tolerance, Tooth Profile

Software for Windows

© Copyright 2014-2018 by HEXAGON Software, Kirchheim, Berlin, Neidlingen



### Application

ZAR1W calculates dimensions and tolerances of externally and internally toothed spur and helical gear wheels .

ZAR1W generates a true-scale drawing of the involute profile, ready to be used with CAD, CNC, profile projector, wire-cutting system, 3D plotter. Input data are pressure angle, helix angle, number of teeth, normal module or normal pitch and profile shift coefficient.

### Calculation Base

ZAR1W calculates dimensions and profile of involute gears or involute splines. Tooth profile can be displayed on screen, printed, or exported to CAD..

### Tooth Thickness Tolerance

You can select tolerance field according to DIN 3967, or directly input tolerances Asne and Asni. ZAR1W calculates generated profile shift factors (xemin and xemax) and measurement dimensions (tooth thickness, dimensions over/between pins/balls and span width).

### Tooth Flank Tolerances

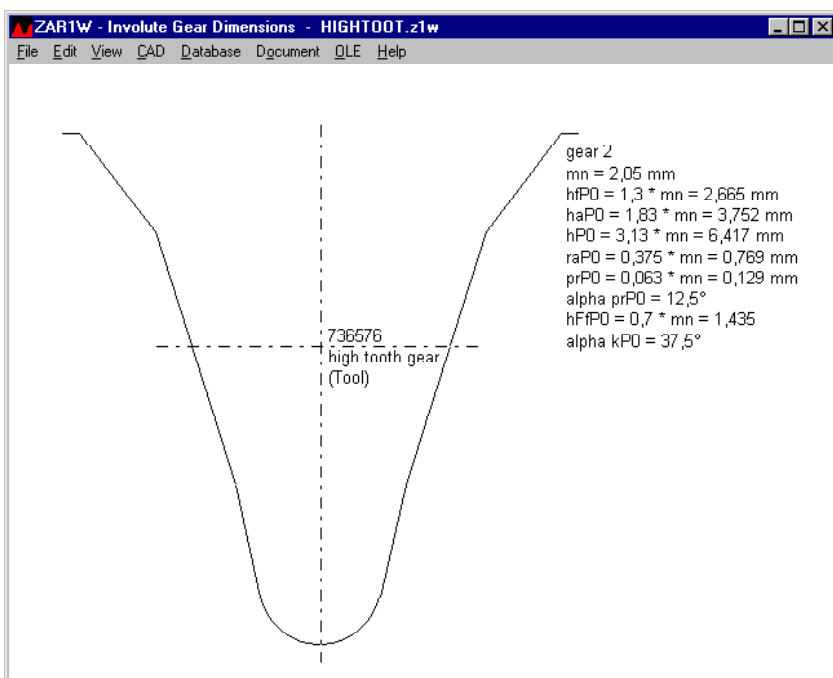
ZAR1W calculates tooth flank tolerances and permissible errors according to ISO 1328-1:2013, or to DIN 3961:1978.

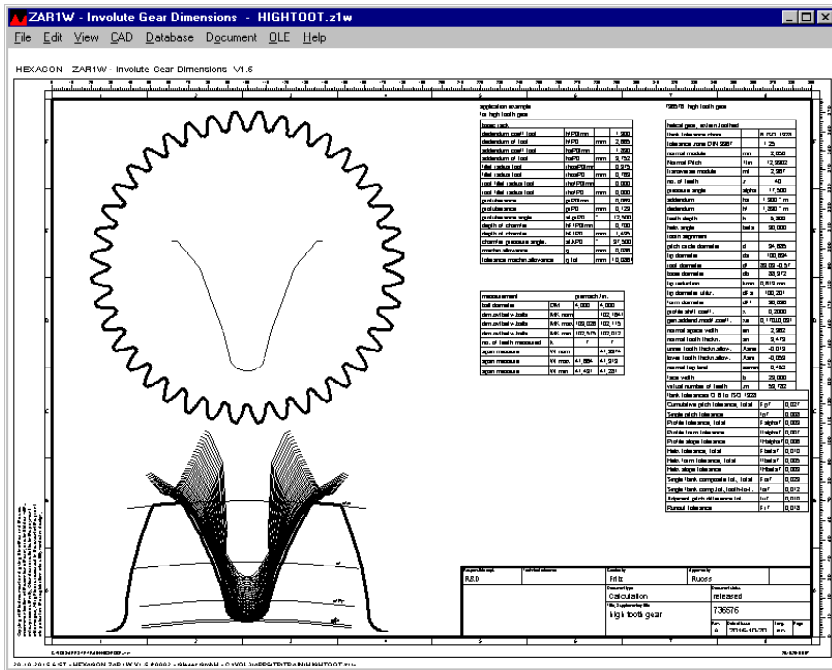
### Measuring Dimensions

ZAR1W calculates span measurement, dimensions over or between balls or pins. Number of teeth measured and pin/ball diameter can be modified.

### Reference Profile (Rack Profile)

Addendum and dedendum coefficients can be entered or selected from database. ZAR1W handles also tool profiles with protuberance and chamfer (tooth tip breakage).





## Calculation Results

ZAR1W offers various possibilities: tables with tooth data, measuring dimensions and tolerances, drawings of gear wheel, tooth gap and reference profile, Quick views with tables and drawings on one page, production drawings A3 and A4, production sheet.

## Tooth Profile

Drawings of tooth gap, gear wheel and reference profile can be printed, or generated as true-scale CAD drawing.

## Production Drawing

A production drawing with ISO 7200 data field can be printed or exported to CAD as DXF or IGES file.

## Quick View

Quick View displays tables with all dimensions of the involute profile. Quick3 additional with drawings of tooth profile, tooth gap and reference profile. Quick4 views all drawings and tables in an A3 drawing frame with ISO 7200 data field.

## CAD Interface

A true-scale drawing of the calculated gear profile can be used in CAD or CNC. Profile shift or tooth thickness (min/max/mean tolerance) and resolution of involute and tooth root fillet can be configured. ZAR1W generates true-scale drawings and tables as DXF or IGES file.

## HEXAGON Help System

As with all HEXAGON programs ZAR1W can provide you with help text and auxiliary picture for each input dialogue window. Help texts and auxiliary pictures can be modified and extended by the user as required. When error messages appear you can have a description and remedy suggestion displayed.

## Units

ZAR1W can be switched between metric units (mm) and imperial units (inch).

## Export Formats

DXF, IGES, STL, HTML, TXT, DBF, Excel, Z1W.

## Import Formats

TXT, DBF, Excel, Z1W.

## System Requirements

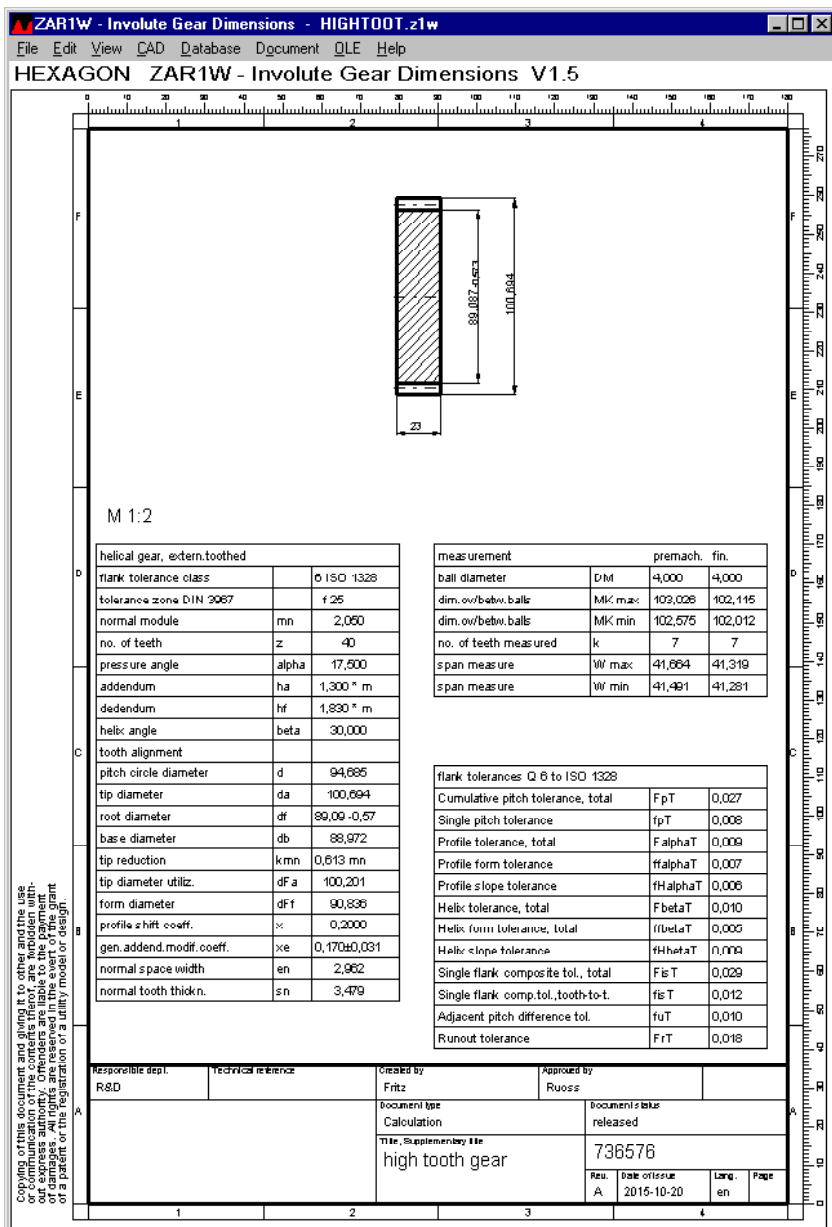
ZAR1W is available as 32-bit app or as 64-bit app for Windows 7, 8, Windows 10.

## 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.



Copying of this document and giving it to other and the use or communication of the contents thereof, are forbidden without the written consent of HEXAGON. All rights are reserved in the event of the grant of a patent or the registration of a utility model or design.