

# GEAR DESIGN SOLUTIONS

## **NEW** FOR RELEASE 5.6

- ▶ Curvic Couple design and TCA (New)
  - ▶ Honing simulation (New)
  - ▶ Update ISO 6336 to 2019
  - ▶ Skiving simulation for pre-finish and finish
  - ▶ Skiving simulation on 5-axis and dedicated machines
  - ▶ Automatic calculation of dressing tools from designed micro-geometry
  - ▶ Beveloid design with non-integer teeth
  - ▶ LTCA allows mixed material properties including PM and Plastics
  - ▶ Korean language option added to Machine Centre
- Plus many more...



# GEAR PRODUCTION SUITE

IDEAL PLATFORM FOR INTEGRATED GEAR DESIGN AND MANUFACTURE

Following on from our Release 5.5 in 2018, we are pleased to announce a new Sub Release for the Gear Production Suite. There are some important updates to Standards such as ISO 6336 for widespread use in our customer base, and some improvements to functionality in Beveloid design, LTCA for mixed materials, and machine simulations for Hobbing, Profile Grinding, and Skiving for use as pre-finishing process. We have introduced Honing to compliment the Skiving functionality, and a Curvic Couple design and LTCA for the aerospace industry. More detailed illustrations of these changes in PDF are available on the website.

**Customers can request an update via [support@dontynesystems.com](mailto:support@dontynesystems.com). For a live demo of the software contact us [info@dontynesystems.com](mailto:info@dontynesystems.com) and we will agree a suitable time for a webinar for you and your colleagues.**

## ► GENERAL OPERATION

**Manual licence check in/out for floating licences**

**Administrator added to licence system**

**Machine Centre and Inspection Centre modules as Stand Alone Installation (considers single component production ideal for integration to other systems)**

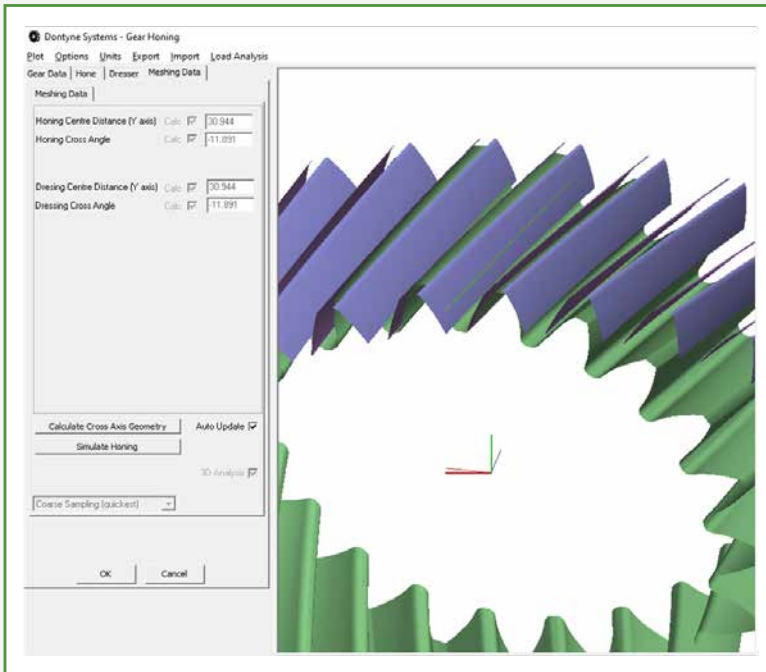
## ► GEAR DESIGN PRO

Spur & Helical / Standard / GDP Spur & Helical ISO 6336 update.

Main changes are :-

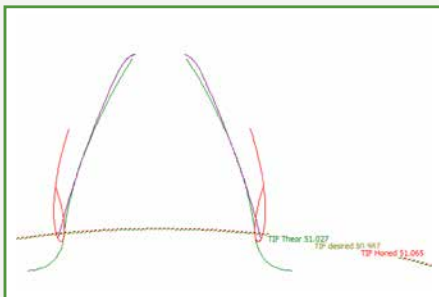
- **New factor  $f_{\epsilon}$  for Form factor  $Y_F$**
- **New factor  $f_{ZCa}$  for contact factors  $Z_B$  and  $Z_D$**
- **Helix angle factor  $Y_{\beta}$**
- **Formulas 33 to 61 implemented for shaped fillets internal and external**
- **Spur & Helical / Standard / Additional IGES output for cutting blanks**
- **Beveloid / Standard / Sectors with non-integer teeth**

## MACHINE CENTRE

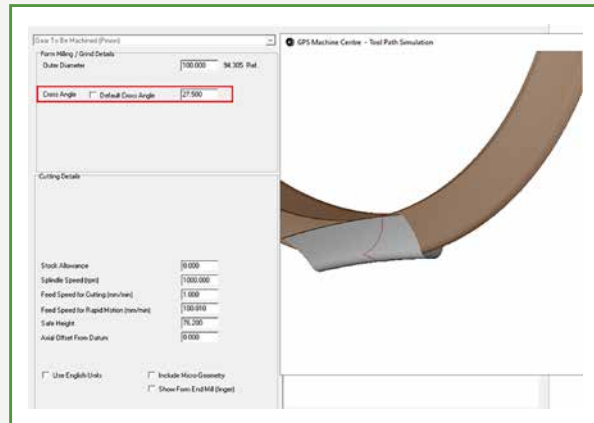


- Honing simulation **NEW**
- Skiving / Standard / Add definition of protuberance on tool for simulation as pre-finish process -with Validation
- Skiving / Standard / simulate by dedicated or 5-axis machine - with Validation
- Hob & Continuous Grind / Standard / Define tool from gear profile mod
- Profile Grind / Advanced / 3D Effects
- Additional Japanese language text
- Korean language text added

Left: 3D simulation of honing shows cutting region



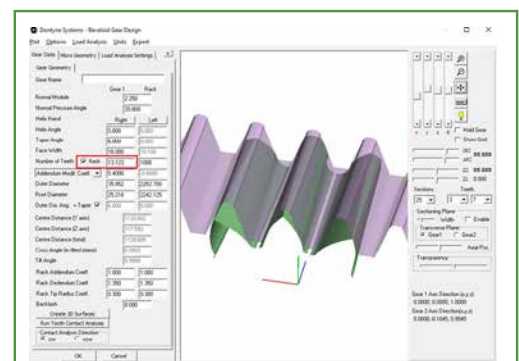
2D simulation of honing shows tool path



Cross Axis simulation for high accuracy simulation of profile/thread grinding

## LOAD ANALYSIS MODEL

- Spur & Helical / Standard / Input Surface modifications as per Advanced level
- 2DFE / Standard / Duty cycle
- 2DFE added to Beveloid
- Spur & Helical / Standard / Mixed material allows steel against other such as PM and plastic
- Bevel / Standard / Improved viewing for marking pattern
- Bevel / Standard / Backlash plotted in charts over full revolution

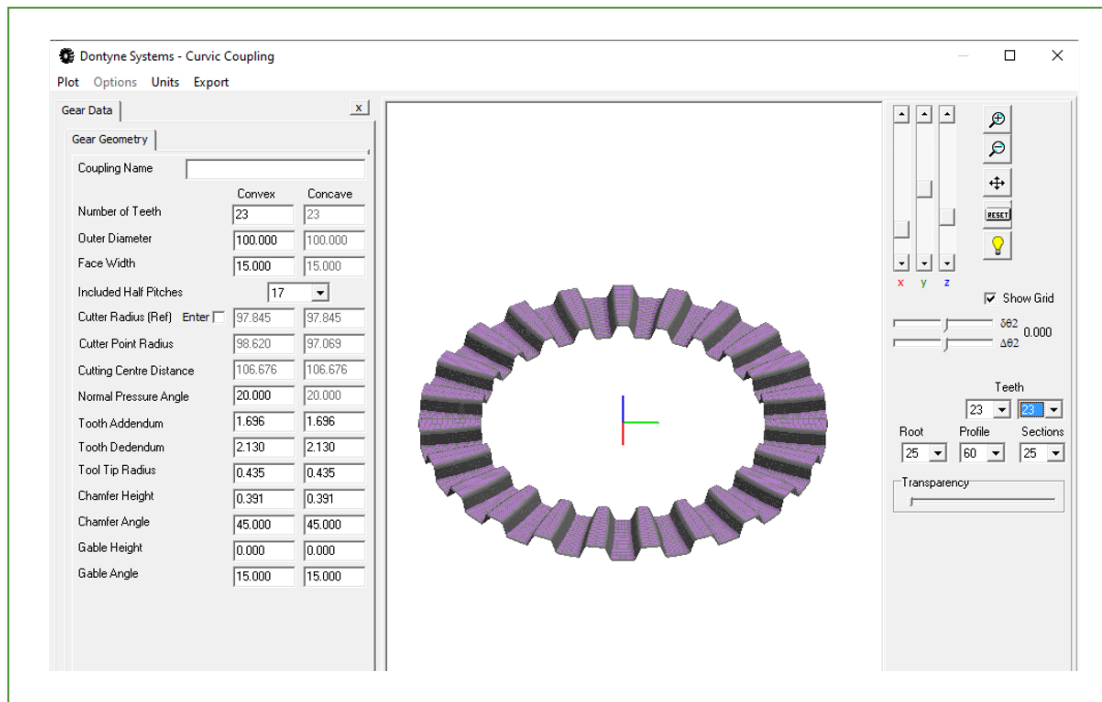


Beveloid has non-integer tooth number design and 2DFE analysis

## INSPECTION CENTRE

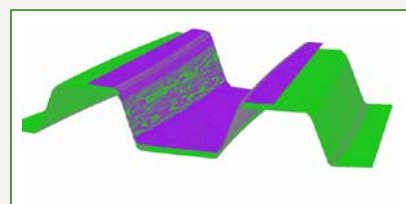
- Integration to inspection (Okuma Grinder)
- Inspection Centre Integration to Hexagon

## CONNECTIONS



Design of Curvic Couples linked to Inspection Centre can digitise inspection

- Curvic Couple design and TCA **NEW**
- Spline / Standard / ANSI B92.1b added
- Spline / Standard / Export surface as 2D IGES



Curvic Couple tooth contact analysis

**Dontyne**  
Systems

**NORTH AMERICA**  
RICH EASLEY  
+1 513 679 0313  
REASLEY@DONTYNESYSTEMS.COM

**EUROPE**  
MIKE FISH  
+44 191 206 4021  
MIKEF@DONTYNESYSTEMS.COM

DONTYNE SYSTEMS LIMITED IS A COMPANY REGISTERED IN ENGLAND AND WALES WITH COMPANY NUMBER 05973058  
REGISTERED OFFICE: OS4 WASHINGTON BUSINESS CENTRE, 2 TURBINE WAY, WASHINGTON, TYNE & WEAR, SR5 3NZ  
VAT REGISTRATION NUMBER: 902 9027 45