

# Dontyne Systems

Gear Design | Analysis | Manufacture | Inspection

## GEAR DESIGN PRO

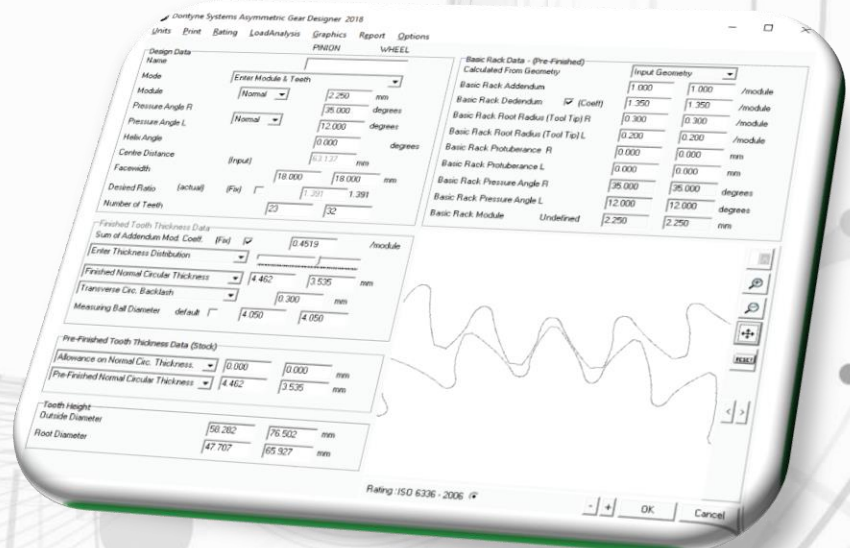
### Standard Features Include:

- Involute Internal and External Spur and Helical Gear Geometry
- ISO 6336 (Including 2008 Updates) and AGMA 2001 – D 04 Rating
- Tolerances to ISO 1328 and AGMA 2015
- Standardized Tooth Proportions or Calculate for Maximum Contact Ratio
- Plots and Export of Gears in 2D and 3D, Including Micro-Geometry
- DXF Output of Transverse Tooth Profile
- Co-ordinates Output of Tooth Profile
- Measurement Over Balls and Chordal Span Including Contact Height
- Gear Sizing
- Flash Temperature Calculations
- Graphical Plot of Specific Sliding
- Plot of Theoretical Path of Contact
- Material Database (Including User Defined)
- SN Fatigue Curve Plots

### NEW for v5.6 (2020):

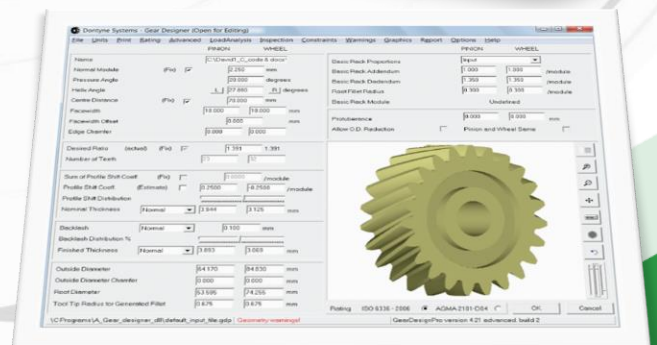
### Spur & Helical/Standard/GDP Spur & Helical ISO 6336 update 2019

- New factor fepsilon for form factor YF
- New factor fZCa for contact factors ZB and ZD
- Helix angle factor Ybeta changed from old standard
- Formulas 33 to 61 implemented for shaped fillets internal and external



### Advanced Features Include:

- Gear Optimization Through Design Search
- Custom Report Formatting
- Shaft Deflection Calculations
- Network/Floating License Installation



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**SPUR & HELICAL:** Internal and external gear geometry to standard tooth proportions or maximum contrast ratio. Includes plots, exports, micro-pitting, flash temperature, ratings to ISO and AGMA safety factors for given duty cycle, theoretical path of contact, material database and more. Advanced level has custom reporting and design space search.

**WORM:** Similar functionality to Spur & Helical for worm gears for DIN, ISO, and AGMA rating.

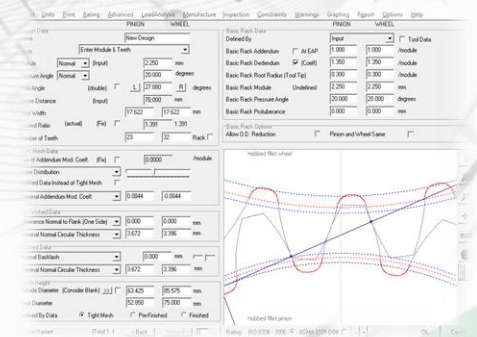
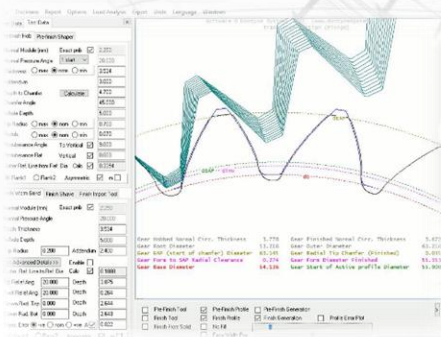
**BEVEL:** Rating to ISO and AGMA. Generic design so that gear is not specific to a machine process. Includes straight, logarithmic (equal angle), circular and involute bevels. Definition of micro modification, marking pattern and similar functions listed in Spur & Helical.

**PLANETARY:** Involute Spur & Helical gear geometry of single or double planet arrangement. Includes assembly and interference checks, speed and torque, tolerances, cumulative damage and safety factors to ISO, plots, exports, phasing, assembly checks and more.

**ASYMMETRIC:** Capable of defining and evaluating asymmetric gear geometries.

**SPLINE:** Produce spline designs to ISO 4156, DIN 5480 and ANSI B92.1 1970. Allows addition and removal of teeth, overrides for customization, non-standard NPA, helix angle and tapered tooth. ANSI rating system.

**GDP LITE:** For Spur & Helical designs only, generate a working gear design quickly with limited inputs. A few simple inputs such as number of teeth, pitch, etc., will create a design including the definition of geometry, rating and tolerances of a working gear pair. This module does not support more advanced load and analysis functions with the Dontyne suite.



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