# Cylindrical gear modifications

## Configurations

- Combine modifications in profile and lead direction, combined and topological modifications
- Create K chart and lead diagram
- Define tolerances range based on AGMA 2000, using constant band width or import tolerance bands from GAMA ®
- Display each modification separately in 2D diagram, display resulting combination
- Show flank modifications in 3D, combining all modifications
- Gear 3D geometry includes modifications
- Tip chamfer, tip rounding in different sections
- Face chamfer, tip face chamfer
- Modifications manager using variants of sets of modifications

### **Root modifications**

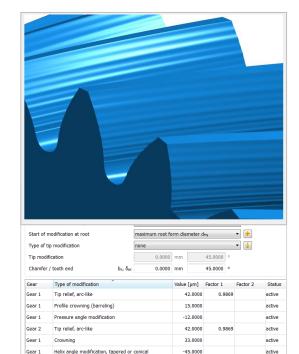
- Root with pre-machining and or final machining, independent root diameter tolerances
- Grinding notch, partial final machining of root
- Root geometry optimization for minimized root stresses

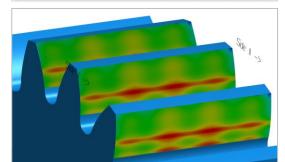
#### Manufacturing errors as modifications

- Flank waviness with wavelength, amplitude and angle
- Natural twist from generating grinding
- Profile and helix form and slope deviation

### Lead and profile modifications

- End relief (left and right end), flank line crowning (centrical, eccentrical)
- Helix angle modification
- Linear and progressive tip / root modification
- Profile crowning (barreling), also in combination with tip relief, roll length or diameter centered
- Pressure angle modification
- Tip chamfer or rounding
- Flank twist
- Triangular end relief (left and right end)
- Topological modification
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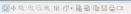
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Gear 2

Gear 1

End relief, arc-like II

End relief, arc-like I

