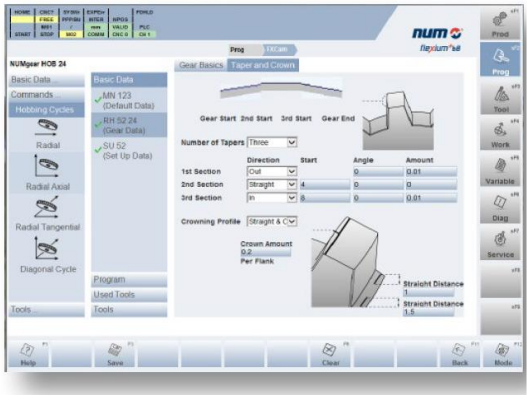
NUMgear – Perfection in Gear Machining



NUMgear on NUM's current control system Flexium+ is one of the leading industrial solutions for the production of gears in the world. NUMgear is fully integrated in the controller. With NUMgear, gears can be produced - after a few hours of training - by just entering the tool, workpiece and process data with first-class precision of up to DIN 1 for continuous generating grinding and up to DIN 3 for gear hobbing.

As a leading manufacturer of modern, high-performance CNC controllers, NUM offers the complete technology software for the production of gears on hobbing machines, generating grinding machines and honing machines.

- NUMgear is fully integrated into the modern Flexium+ control system and provides an interactive user interface for the input of machine, workpiece and tool data as well as for the definition of the machining processes.
- Input fields are illustrated by graphics.
- Several processing steps can be easily combined.
- Once the data are entered, machining is started by the simple push of a button.
- In a central overview, the relevant production data are displayed during automated machining.
- The integrated tool management allows to record the machining and wear condition of various tools.
- For automatic loading, an extremely fast measuring system ensures that tool and workpiece are mounted in the correct position.

NUMgear is precise

- DIN 1 for generating grinding.
- DIN 3 for hobbing.
- Combinations of different flank modifications – and profile modifications in case of grinding – are already a reality today.
- Beveled flanks and crowns – spherical, eccentric, or limited to certain flank areas – can be combined simply by entering the corresponding values in the NUMgear workpiece data.

NUMgear is versatile

The required CNC cycles are included in the technology software NUMgear.

- Radially/axially the tool moves radially to depth and then cuts parallel to the tool axis. With this method, spur-toothed and helical cylindrical gears, axes and splines can be machined.
- Radially the tool cuts only by infeed without axial movement. Worm gears are thus milled.
- Radially/tangentially the tool moves to the radial retraction perpendicular to the radius and thus cuts worm gear shafts.
- Diagonally it is another method for spur-toothed and helical cylindrical gears and splines.
- For each workpiece, several different gears can be defined and produced in one operating cycle.
- The tool can be shifted continuously or incrementally in order to utilize the entire width.
- Cooling, clamping and other functions can be controlled with the machine functions.