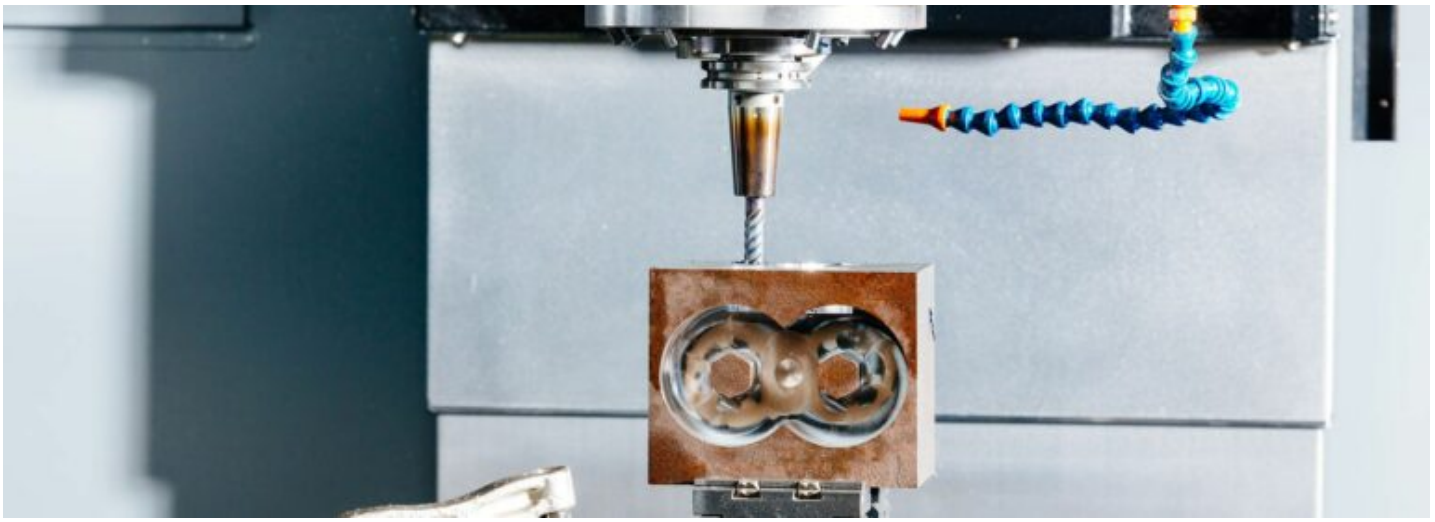
TROCHOIDAL MILLING – STANDARD WITH THE WINMAX-CONTROL

Higher cutting speed with lower load

Compared to conventional milling methods, trochoidal milling enables higher cutting speeds and deeper cuts while reducing the load on the tool and machine. Supported by the computing power of the modern CNC machining center, this concept enables manufacturers to perform complex milling operations with more speed and less effort. Trochoidal milling is a standard option in Hurco's WinMax control, with each data set accessible with just one click.



Pliening, Germany, April 2021: In trochoidal or wave milling, the traverse movement of the tool – unlike conventional milling – is not linear, but runs along a spiral path. The milling tool penetrates the workpiece until it is completely immersed and the cutting process takes place over the entire length of the tool. A special trochoidal milling cutter is used for this purpose, the diameter of which is smaller than the groove or contour to be machined. Through a combination of feed and rotary motion, the grooving angle can be kept constantly below 90 degrees. This reduces stresses on the tool and machine and enables higher milling speeds and shorter machining times.

Tool life extended

"With the trochoidal process, tool life can be extended by up to a factor of ten, and machining

times are reduced by 30 to 40 percent," reports Florian Kerkau, application engineer at Hurco. That's why trochoidal milling is a standard option in Hurco's WinMax control, where any data set can be called up with a click. The program sets the grooving point along with all other machining parameters. "Trochoidal milling is always the most economical solution when conventional milling requires multiple depth steps," explains Kerkau. Trochoidal milling is the process of choice when it comes to milling grooves and slots. Here, the aim is to remove a lot of material in the shortest possible time – exactly the right thing for trochoidal milling, which has a clear advantage over conventional milling techniques thanks to its much greater machining depth.

Watch the video



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