



**hyperMILL**<sup>®</sup>

MILL-TURN Machining

**rollfeed**<sup>®</sup> **TURNING**  
by vandurit

Increased Efficiency  
for Turning

# Highly Efficient Turning

Turning faster than ever!

With Vandurit's innovative new rollFEED<sup>®</sup> upgrade kit for lathes and a fully matching *hyperMILL*<sup>®</sup> rollFEED<sup>®</sup> turning strategy, perfectly finished workpiece surfaces are produced in less time.

Additional advantages:

- Easy to program
- No unnecessary tool changes
- Reduced tool consumption
- Smaller range of tools needed



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Rollfeed  
Turning

# Innovative rollFEED® Process

In collaboration with Vandurit, OPEN MIND has developed an exclusive and perfectly matched CAM strategy for Vandurit's innovative new rollFEED® turning process.

## How the process works

This unique turning method is based on the tool's cutting edge rolling off the workpiece surface – off any shape. The horizontal swiveling of the B axis is simultaneously compensated for the X and Z axes to produce the cutting movement.

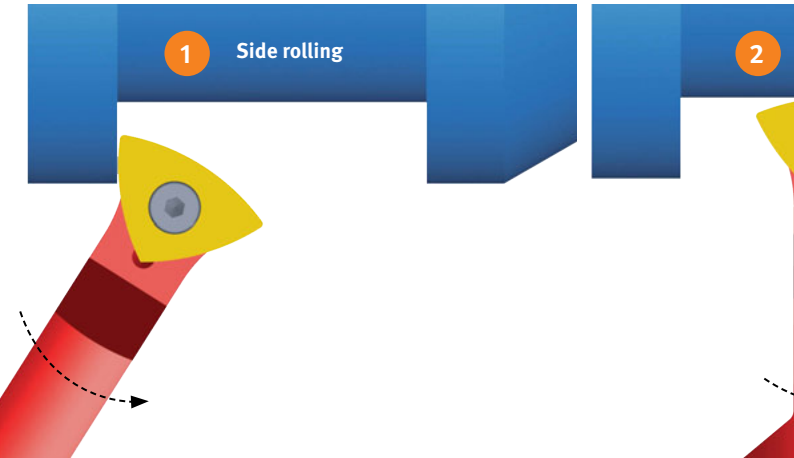
## Machining grooves with a single tool

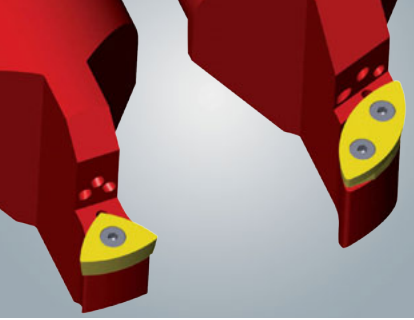
For the machining of grooves, the strategy automatically guides the tool from the first to the second plane surface via the cylinder face. This enables highly efficient machining with a single tool in a single movement, and thanks to the combination of roll and turn movements, even workpieces with large radii can be machined reliably.

## Process reliability in machining

The entire machining process is checked for collisions. The complete rollFEED® process including tool and tool system is considered kinematically and geometrically in programming as well as in simulation.

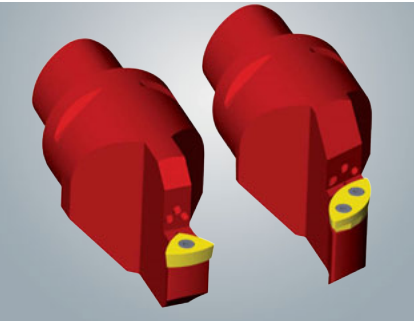
Groove machining in a single movement using a rollFEED® tool:





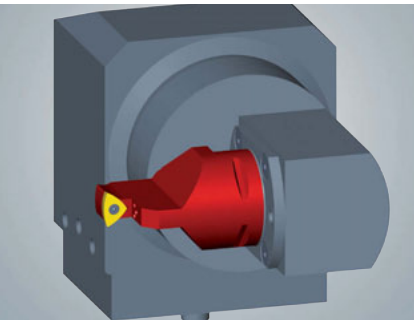
### rollFEED® cutting inserts

For turning jobs, only two rollFEED® geometries of reversible inserts are needed. These can be programmed using the rollFEED® strategy.



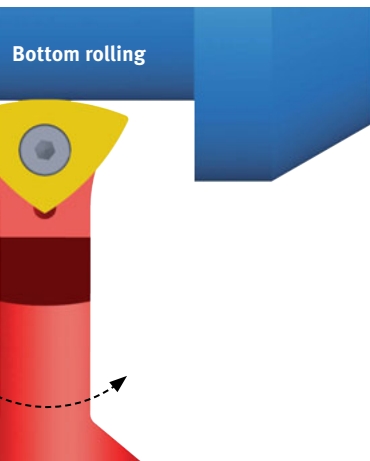
### rollFEED® tool system

The rollFEED® QuickChange tool system provides specially developed pockets for mounting the unique rollFEED® inserts.

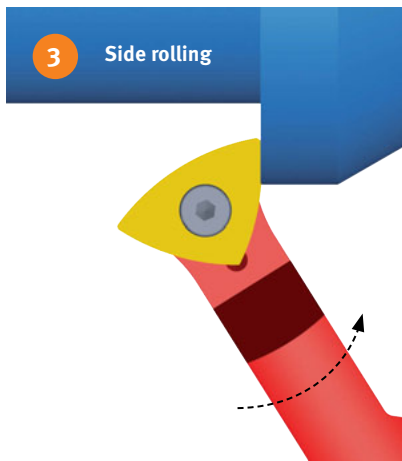


### rollFEED® drive unit

The rollFEED® drive unit is mounted as a third axis on the turning machine's turret, and it is used just like a driven tool. Some turn-mill machines already feature X, Z, and B axes, which means a third axis is available.



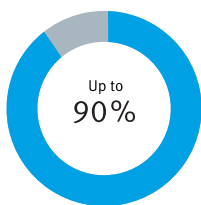
Bottom rolling



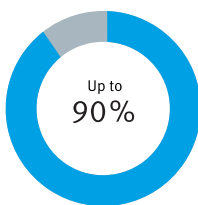
3

Side rolling

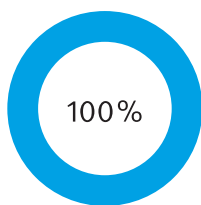
# Benefits



Time savings in  
steel, cast iron, and  
hard part machining



Reduction of tool  
diversity and tool  
consumption



Process  
reliability

## Advantages

- Highly efficient process
- Generate twist free surfaces on demand
- Easy to program
- Fewer tool changes
- Integrate undercuts into the roll-off movement
- Upgrades available for existing machines

## Application range

- Machining of any workpiece material
- Use any type of cutting material
- ID as well as OD machining
- Various applications:  
plane and cylindrical surfaces, convex and  
concave faces, grooves and inclinations.

# Contact



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**OPEN MIND is one of the world's most sought-after developers of powerful CAM solutions for machine and controller-independent programming.**

OPEN MIND designs optimized CAM solutions that include a high number of innovative features not available elsewhere to deliver significantly higher performance in both programming and machining. Strategies such as 2.5D, 3D as well as 5axis milling/mill turning, and machining operations like HSC and HPC are efficiently built into the *hyperMILL*® CAM system. *hyperMILL*® provides the maximum possible benefits to customers thanks to its full compatibility with all current CAD solutions and extensive programming automation.

OPEN MIND strives to be the best and most innovative CAM/CAD manufacturer in the world, helping it become one of the top five in the CAM/CAD industry according to the NC Market Analysis Report 2017 compiled by CIMdata. The CAM/CAD solutions of OPEN MIND fulfil the highest demands in the automotive, tool and mould manufacturing, production machining, medical, job shops, energy and aerospace industries. OPEN MIND is represented in all key markets in Asia, Europe and America, and is a Mensch und Maschine company.



We push machining to the limit