REVZERO
MEDICAL DEVICE CONTRACT MANUFACTURING

Distal Radius Plate Manufacturing

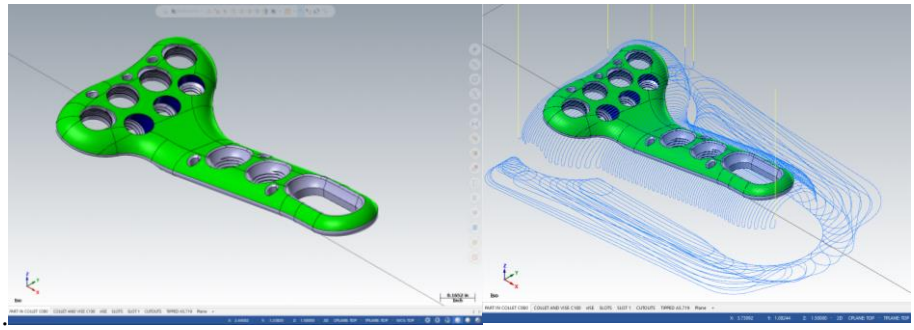
with a Willemin 508MT2 Linear

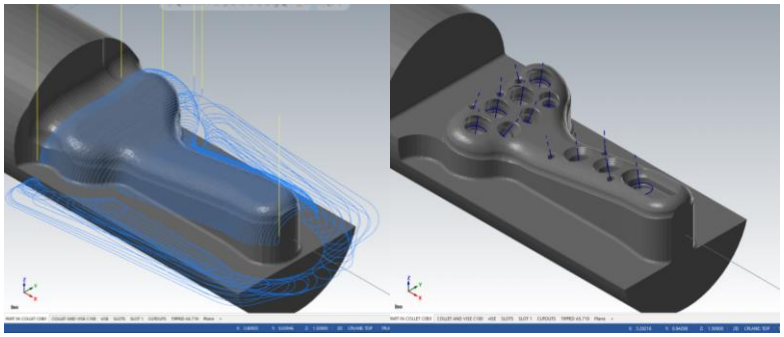
by RevZero, Inc.

Advanced mill-turn machines **produce complex parts in one unattended operation**. Automated bar-feeders, integrated pick-off vises, and ejection chutes work together for continuous production in a single seamless operation.

Secondary benefits include higher quality levels (Cpk), better surface finish, faster throughput, longer tool life, lower scrap, elimination of WIP, and significant improvements in performance metrics (OEE and TAU).

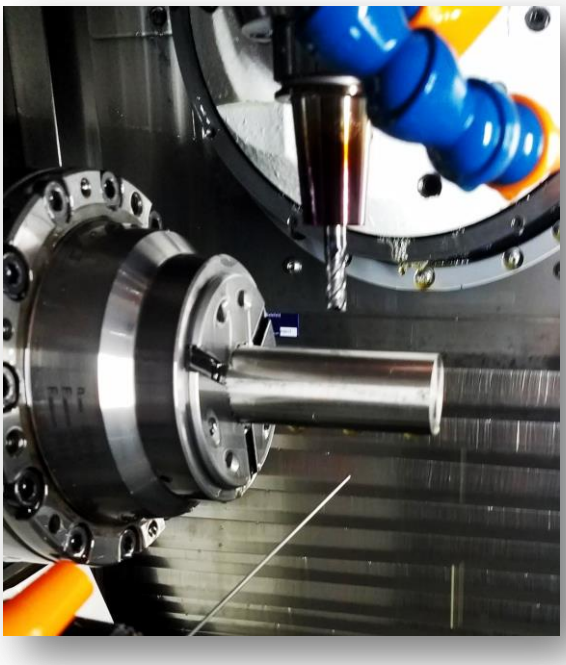
We begin with a CAD file and generate a CNC program using Mastercam 2018 for mill-turn machines to generate the machine code for tool paths, in-process inspections, tool checks, and other production variables.



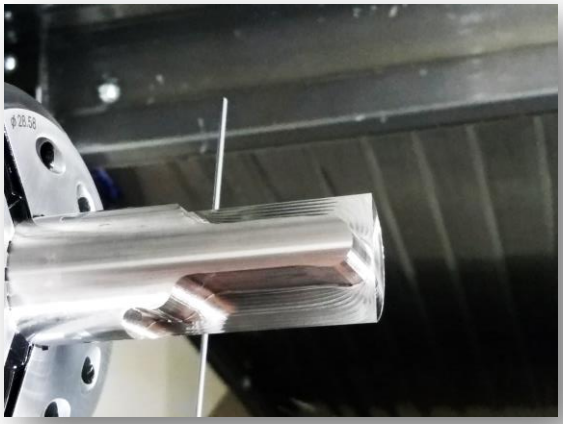


Loading from bar stock allows for continuous production and avoids material prep time and cost plus it allows the machine to access the part from all sides for turning and milling operations.

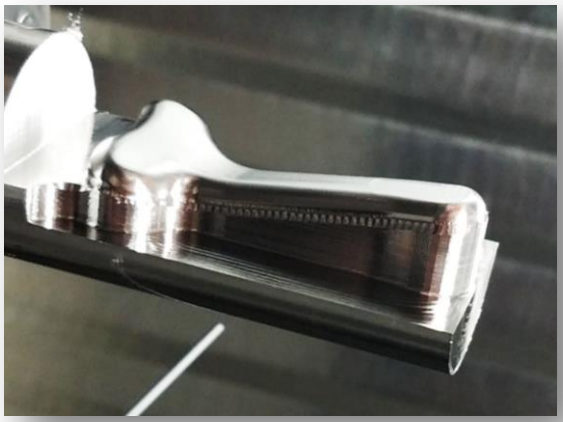
The high-capacity bar loader can supply material for several days of machining before being refilled.



Roughing the initial profile in the bar occurs quickly with a dynamic milling operation.



Multiple high-speed passes, using small step-over distances, create the proper profile and surface finish of the top and side surfaces.



Helical interpolation and thread milling operations produce various holes for screws, bearings, and k-wires. The 30k RPM spindle and B-axis head produce off-axis features with precision.

The stock is rotated to machine the underside without losing positional accuracy, and without human intervention. Synchronous 5-axis moves seamlessly blend the top, side, and bottom surface transitions.

Finishing the underside involves intermittent support from the integrated vise, as necessary.

When surfacing, milling, and deburring operations are complete, the finished part is automatically separated and ejected by the pivoting vise into an oil-filled basket.

Machining of the next piece begins immediately and repeats with laser tool-break detection ensuring steady and continuous operation. Thermal compensation for all drives allows for minimal variation over long runs and fire suppression systems facilitate safe unattended operation.

After machining, the plates pass through our Lean Finishing Department for; Vibratory Barrel Finishing, Bead Blasting or Surface Texturing, Citric and/or Nitric Passivation, Laser Marking, Bearing Installation, Retention and Torque Testing, EP or Anodizing (as required), Final Inspection, Documentation, and Packaging.