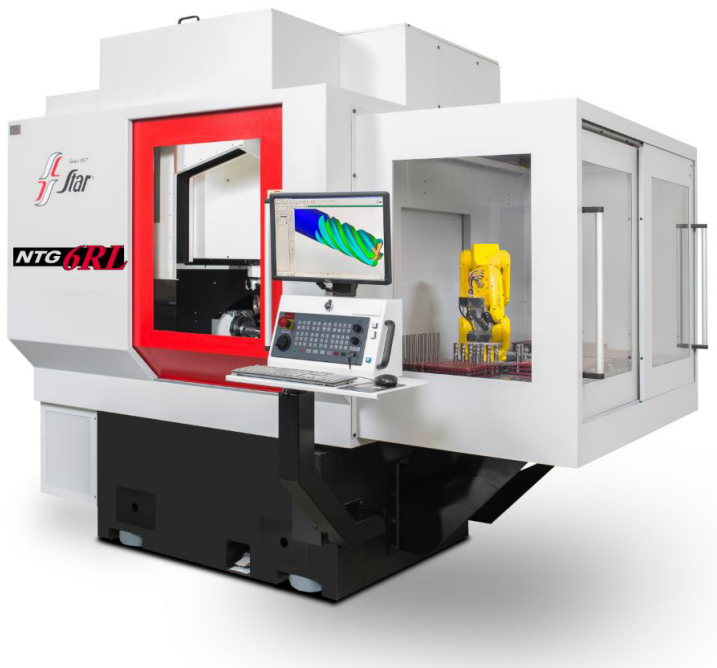




Star NTG 6RL Tool and Cutter Grinder

Engineered to manufacture complex cutting tools, the new Star NTG is a five axis, CNC controlled cutter grinder for manufacturing, sharpening and reconditioning a wide variety of cutting tools. Made in the USA and equipped with a six-station wheel pack changer, the NTG is built for high productivity and precision.



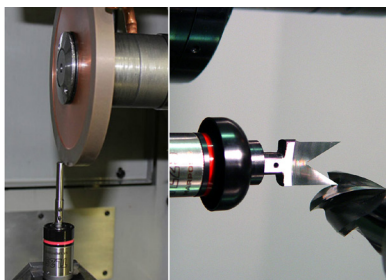
Pictured: NTG-6RL with Robot for Part Loading Automation

Features

- 5-Axis machine featuring NUM Control
- NUMROTO Software
- Mineral cast base and column
- Full linear motor and direct drive rotary technology
- 13 HP HSK direct drive grinding spindle
- Linear glass scales for positioning
- Fluting capability up to 8 inches
- Precision work-holding solutions
- 22" user interface display

Options

- Integrated 6-Axis robot for part loading automation
- Engineered tailstocks and steady rests
- Onboard wheel dressing
- Grinding wheel auto-sticking capabilities for unmanned operations
- 38 HP HSK direct drive synchronous grinding spindle
- In process measurement
- Auto load 3-38 mm with one gripper assembly



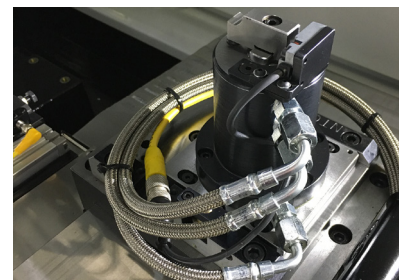
Wheel/Part Probing

Various probe designs available covering a wide range of geometries and applications.



6-Station Wheel Changer

Provides the ability to hold multi-wheel arbors and automatically change wheelpacks and coolant manifolds in one step. Accommodates wheels up to 6 inches.



Hydraulic Pop Up Steady Rest

An innovative hydraulic steady rest that pops up during the grinding cycle then moves out of the way for auto-loading.

NTG Tooling Applications and Machine Specifications

Tooling Applications

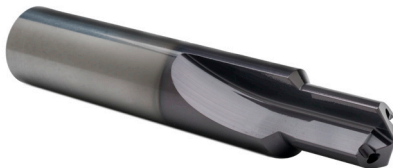
The Star NTG features quick change tooling to accommodate a broad range of tools including:



6 Flute Helical End Mill



4 Step Drill

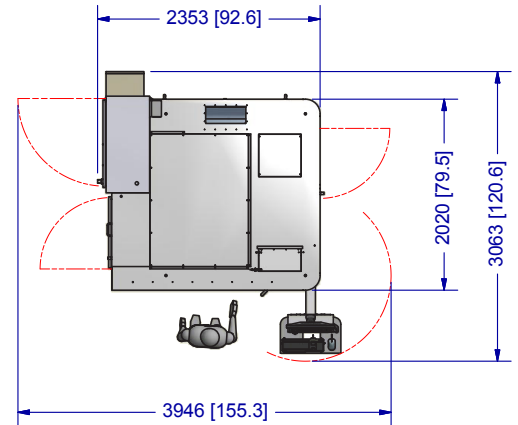
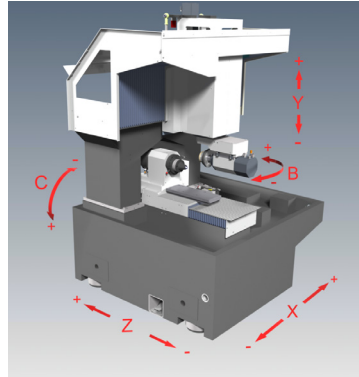


2 Flute Single Step Drill



2 Flute ISO Porting Tool

Machine Dimensions and Specifications



	Metric	Inch
Base Machine Dimensions (L x W x H)	2353 x 2020 x 2539 mm	92.6 x 79.5 x 99.9 in
Total Weight: Base Machine	4,500 kg	10,000 lbs
Maximum Workpiece Diameter	100 mm	4 inches
Maximum Workpiece Length	*200 mm	*8 inches
C - Axis Headstock Spindle 360° Rotation	1,000 rpm	1,000 rpm
B - Axis Grinding Spindle Swivel +/- 120°	12 rpm	12 rpm
X - Axis Horizontal Travel	800 mm	31.5 inches
X - Axis Travel Speed	50 m/min	2,000 inches/min
Y - Axis Vertical Travel	220 mm	8.66 inches
Y - Axis Travel Speed	50 m/min	2,000 inches/min
Z - Axis Horizontal Travel	530 mm	20.9 inches
Z - Axis Travel Speed	50 m/min	2,000 inches/min
Grinding Spindle Speed	10,000 rpm	10,000 rpm
Continuous Spindle Horsepower	10 kw	13 hp
Peak Spindle Horsepower	25 kw	33 hp
Maximum Grinding Wheel Diameter	150 mm	6 inches
Smallest Programmable Movement - Linear	0.00254 mm	0.0001 inches
Linear Axis Glass Scale Feedback Resolution	0.00001 mm	0.0000004 inches
Smallest Programmable Movement - Rotary	0.0001 deg	0.0001 deg
Rotary Axis Feedback Resolution: A-axis	0.000068 deg	0.000068 deg
Rotary Axis Feedback Resolution: B-axis	0.0000006 deg	0.0000006 deg

* Dependent upon grinding operation being performed



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