



**CTG3**

Three-Station Grinding Wheel Pack and  
Coolant Line Manifold Changer

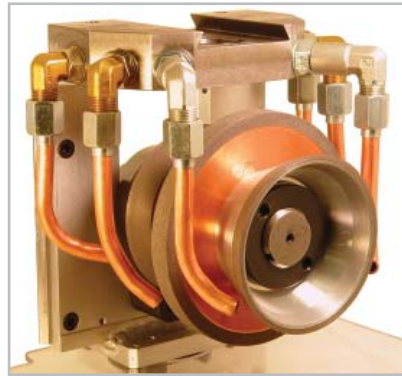
# Profitable solutions for cutting tools manufacturing

The Star CTG-3 is engineered to provide profitable solutions for the manufacturing of complex cutting tools. With NUMROTOplus® software and an automatic compact three-station grinding wheel pack and coolant line manifold changer, this machine exceeds industry expectations for accuracy, flexibility, reliability, maintainability, and stability.

**Accuracy** - The accuracy of the CTG-3 is highly predictable due to the integration of world-class machine components. A powerful, precision grinding spindle with HSK grinding wheel mounting locates the grinding wheel on the center of the B-axis pivot. The headstock is direct drive for ultimate positioning capability, variable RPM and low maintenance. All linear axes have glass scales that set the standard for machine tool accuracy.

**Flexibility** - NUMROTOplus® is a user-friendly, high-end application software package for producing a wide range of complex tools. The standard 2D simulation allows cross sectional visualization, while the optional 3D virtual grinding simulation with machine collision detection eliminates costly setup time. Innovative work holding and tool support options, programmable steady rests and tailstocks, plus a variety of custom designed tooling, enables the production of the highest quality precision cutting tools.

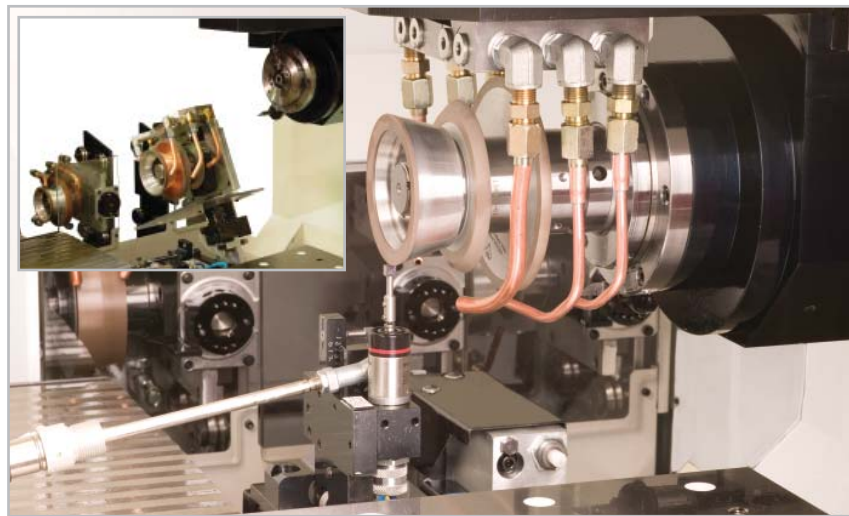
**Reliability/Maintainability** - The CTG-3 is designed and built to exacting processes that are unmatched in the industry. Air purge of scales, headstock, and grinding spindle eliminates any contaminants. Full disclosure of machine drawings, documentation, and a complete parts list is available on the machine's computer. Proven diagnostic systems for troubleshooting error messages and unlimited direct access/phone support are available for the operator.



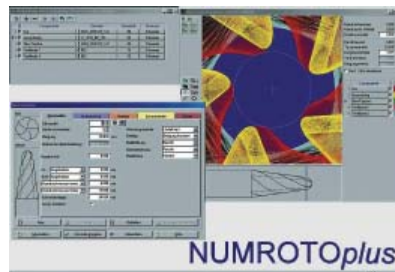
New cassette design enables flexibility in a compact space. Providing a profitable solution for grinding a broader range of complex tools with less down time.



Cassette Wheel Changer



Grinding Wheel Probe



Standard 2D simulation design in NUMROTOplus®



Complex tools designed in NUMROTOplus® 3D simulation software

**Stability** - The CTG-3 is engineered for both structural and thermal stability using some of the most advanced engineering tools available, including, 3D solid modeling and finite element analysis (FEA). For dynamic stability,

a dedicated closed-loop chiller controls heat build up within the grinding spindle and headstock. The CTG-3 is designed, built, serviced and supported to maximize uptime, throughput, and PROFITS!

## SPECIFICATIONS

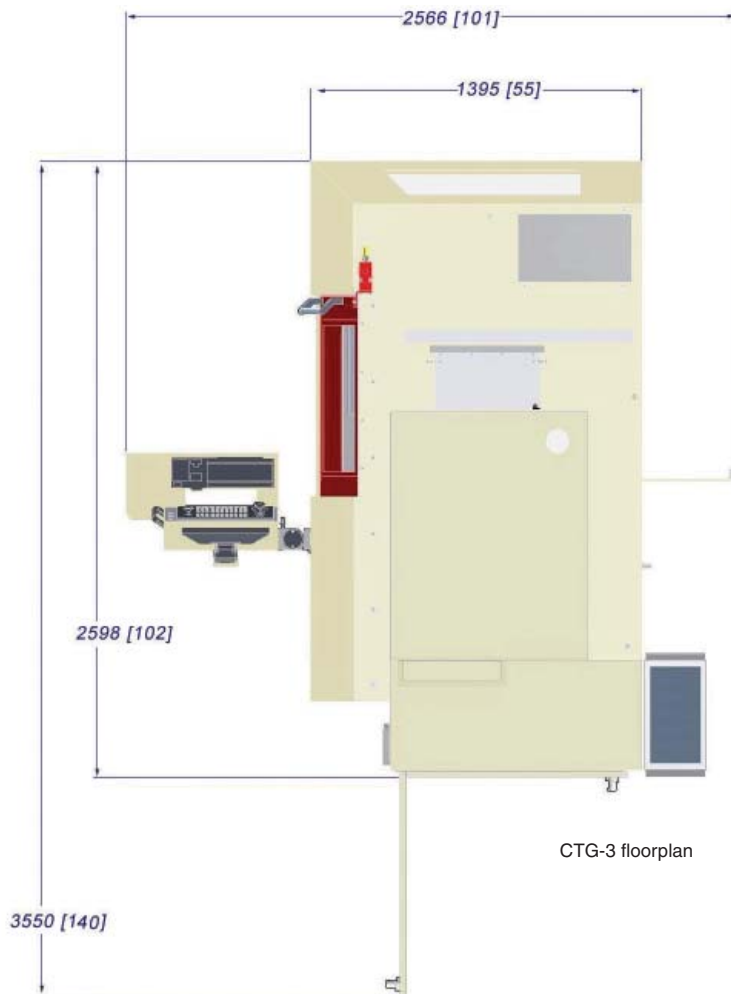
	Metric	English
Main Dimensions: Base machine (LxWxH)	2,598 x 1,395 x 2,430 mm	102 x 55 x 96 in
Total Weight: Base machine	4,082 kg	9,000 lbs
Maximum workpiece diameter	100 mm	4.00 in
Maximum workpiece length	530 mm	21.0 in
A - axis workhead spindle 360° rotation	1,000 rpm	1,000 rpm
B - axis grinding spindle swivel ±110°	75 dps	75 dps
X - horizontal slide travel	280 mm	11.02 in
X - axis travel speed	10.16 mpm	400 ipm
Y - vertical slide travel	220 mm	8.66 in
Y - axis travel speed	10.16 mpm	400 ipm
Z - horizontal slide travel	500 mm	19.7 in
Z - axis travel speed	15 mpm	600 ipm
Grinding spindle speed	10,000 rpm	10,000 rpm
Peak spindle horsepower	14 kw	19 hp
Maximum grinding wheel diameter	150 mm	6.00 in

### Standard Features

- NUM Axium five axis CNC controller with digital servo motors
- Three-station grinding wheel pack and coolant line manifold changer
- Direct drive grinding spindle
- HSK quick change wheel pack mounting system
- Adjustable headstock for tools up to 21" OAL
- Air purged headstock and grinding spindle
- Standalone closed-loop chiller for headstock and grinding spindle
- Glass scales on all linear axes
- Part probing on grinding spindle
- Grinding wheel probe
- Standard 2D NUMROTOplus® simulation
- PC interface with flat screen
- Pivoting operator console
- Ergonomic design for the operator
- Air conditioned electrical magnetic enclosure
- Vibration dampening leveling pads
- On-line maintenance and alignment procedures
- Full disclosure of machine drawings
- 12 month warranty
- Service response within 24 hours

### Optional Features

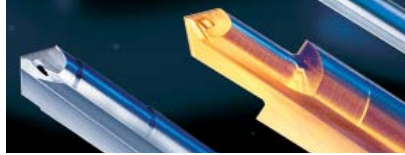
- Coolant and filtration options: 100 psi coolant delivery, coolant chillers, and mist collectors
- Auto loading
- Auto clamping headstock workholding
- Tailstocks and steady rest
- Additional NUMROTOplus® software:
  - 3D machine simulation & tool Verification software
  - Form cutter package
  - Complex endmills package and extension packages: wave grinder, multiple-helix, and saw cutter
  - Step drill package and extension packages: Hertel points, differential helix, Kennametal point, K-land on drill points, Klenk point, and gundrill



## System technology from one source



CNC Hob Sharpening Machines  
CNC Shaper Cutter Sharpening Machines  
CNC Broach Grinding Machines  
CNC Universal Tool Grinding Machines  
CNC Spline Grinding Machine



Gundrills  
Solid Carbide Drills and Reamers  
Pressure Coolant Drills and Reamers  
\*PCD\* Drills and Reamers



Gear Cutting Tools  
Form Relieved Milling Cutters  
Saw Blade Cutters  
Rack Cutters  
Multiple Thread Milling Cutters



Star Cutter Company  
Elk Rapids Engineering - Machine Tool Technology  
210 Industrial Park Drive  
PO Box 728  
Elk Rapids, MI 49629-0728  
Tel: 231 264 5661  
Fax: 261 264 5663  
e-mail: sales@starcutter.com

Star Cutter Company  
23461 Industrial Park Drive  
PO Box 376  
Farmington Hills MI 48335-2855  
USA  
Tel: 248 474 8200  
Fax: 248 474 9518  
e-mail: sales@starcutter.com



Star Cutter Company, Farmington Hills, Michigan