



Tool Grinding Technologies Inc.

V2 ADVANCED Maxima



Second Generation
5 Axes CNC Tool Grinding
from TGT India.

V2 ADVANCED *Maxima*

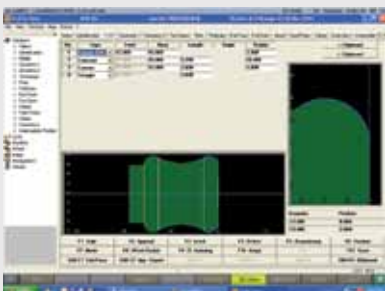


- V2 ADVANCED *Maxima* is a 5 axes twin spindle high precision tool grinding machine. This machine is optimized for grinding diameter range from 2mm to 20mm solid carbide tools.
- The machine kinematics and selection of features are well balanced to achieve high precision & excellent surface finish on the tools produced.
- “Direct drive torque motor” for the tool swiveling axis delivers high level of absolute accuracy with zero backlash.
- Highly balanced spindle ensures cutting edge stability while grinding precision end mills/form tools.
- Electrical elements are designed to reduce the electromagnetic interference & reduced emissions to make the machine environment friendly.

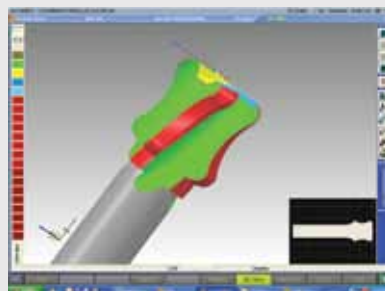
V2 ADVANCED *Maxima*



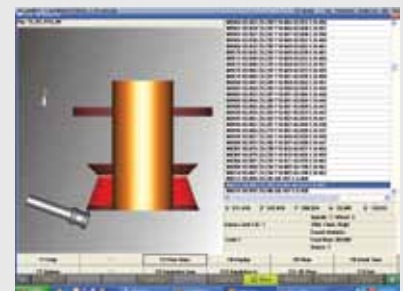
- . Types of tools manufactured & reground include end mills, ball nose, CR end mill, drill & step drill, form tools, gundrill, inserts, thread mill, taps, form radial cutter etc.
- . User friendly MTS –AG software to manufacture/regrind tools. Profile simulation, 3D simulation guides the operator to design the proper tool.
- . “Collission check” feature will help to decide the tool length , collet system etc to ensure trouble free running of the machine.
- . ISO programming with the help of user parameter is also possible.



MTS SCREEN



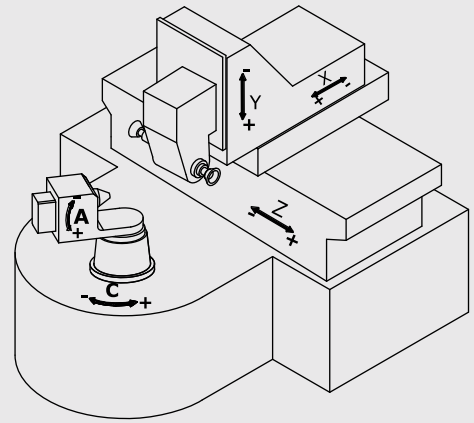
3D SIMULATION



PROFILE SIMULATION

Machine axes configuration

- Roller type LM guide used on this machine will enhance rigidity.
- Optional linear scale & rotary encoder make this machine more accurate.
- Torque motor helps to achieve high level of form accuracy.



Advantage of elevated axis design

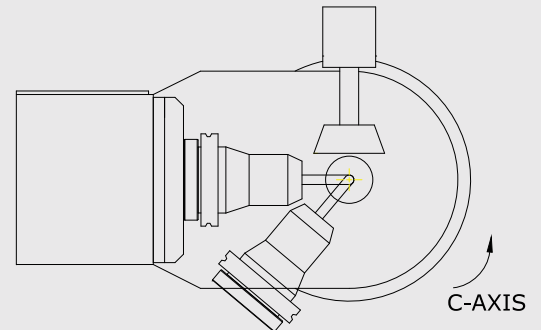
All the 3 linear axes are isolated from the coolant area. Additionally bellows will protect the ball screws and lm guide ways from coolant splash/carbide sludge.

This will enhance the life of the machine & its performance interms of retaining the precision over a long time.



Optimized axis movement for high performance & accuracy

- The ball nose cutter is very closely held to the 'C' axis center which makes wheel movement very small interms of X, Y, Z axis.
- This improves the quality of profile/radius generated. This also optimizes the cycle time by the way of short movements.



- **V2 ADVANCED *Maxima*** is equipped with highly efficient spindle motor of 10 HP continuous power to allow bigger diameter solid carbide tools to be ground with less number of passes.
- Low run out and highly repeatable tool clamping system.
- The taper type spindle system for wheel mounting will ensure very low run out which minimizes the wheel wear and hence enhances it's life.

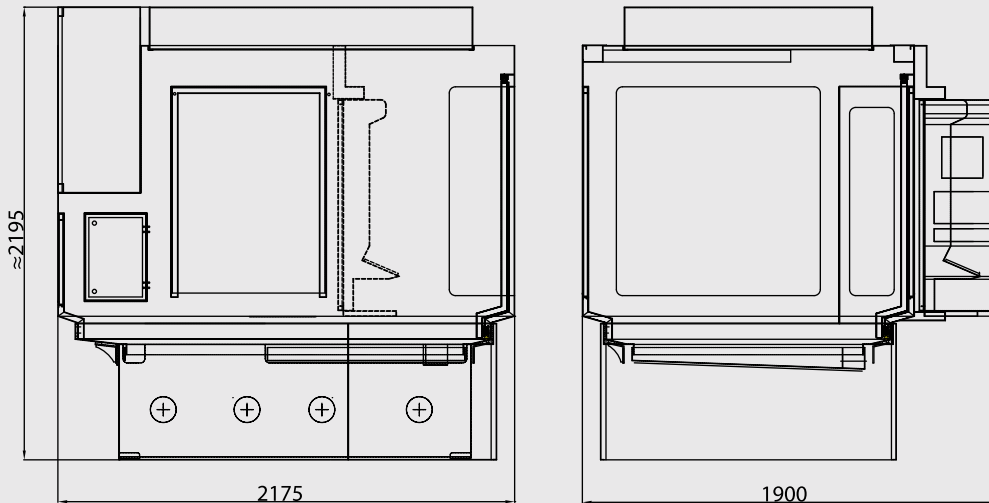




C-AXIS DIRECT DRIVE TORQUE MOTOR

“Direct drive torque motor” for ‘C’ axis – swivel axis delivers high level of absolute accuracy with zero backlash.

TECHNICAL SPECIFICATIONS



LINEAR AXES

Max.Stroke X-axis (longitudinal slide)	- 300 mm
Max.Stroke Y-axis (vertical slide)	- 300 mm
Max.Stroke Z-axis (cross slide)	- 680 mm
Maximum traverse speed	- 15 m/min
Control resolution	- 0.0001 mm

ROTARY AXES

Work Head Rotation A-axis	- 0-360°
Maximum Tool Swivel C-axis	-185° to 135°
Control resolution	- 0.0001°
Maximum traverse speed C-axis	- 10 rpm

MAXIMUM TOOL DIMENSIONS

Max.Tool dia. (Solid Carbide)	-32 mm (optimized range 2 to 20)
Max. Cutter Diameter	- 200 mm
Max. Peripheral grinding *	- 270 mm
Max.Tool length for end grinding*	- 250 mm
Min. diameter of the tool	-2 mm #

WORK HEAD (A-axis)

Work spindle taper	- ISO 50
Centre height	- 155mm
Maximum rotation speed	- 40 rpm

OTHER DATA

Electrical Power	- 30kVA
Probing System	- Renishaw
Coolant System	- External
Approximate Weight	- 3950 Kgs.

* Distance from the ISO gauge plane

Schaublin collet system is recommended for manufacturing tools below 6 mm diameter.

For More Information about this machine, Please feel free to contact us.

Tool Grinding Technologies Inc.

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