

Designed by

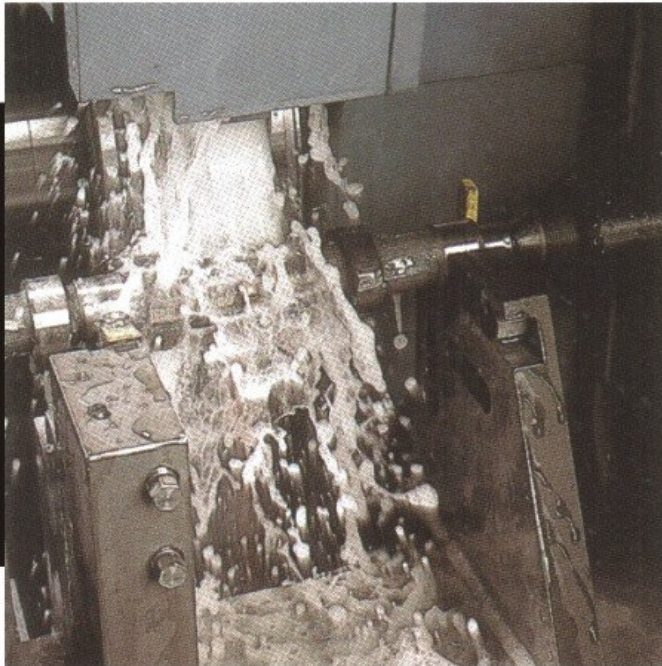
JTEKT

Manufactured by

MG Micromatic
Grinding
TECHNOLOGIES LTD.

Productive CBN Cam Grinder

GC20M-25S



TOYODA

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TOYODA MICROMATIC MACHINERY INDIA LIMITED

Environmentally-friendly

▶ 50-percent reduction in coolant supply amount

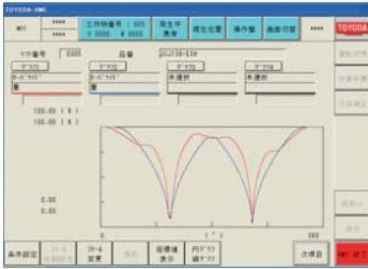
4EcoloG grinding
Cuts the supply amount in half by supplying an effective coolant fluid and adopting a new coolant nozzle.



- Advantages of EcoloG grinding
- Coolant splashing prevention
 - Reduction of coolant spindle power consumption
 - Downsizing of coolant tank

Simple & Reliable Operation

▶ The intelligent-oriented functions simplify the job and ensure higher accuracy



Setup of automatic work spindle rotation speed

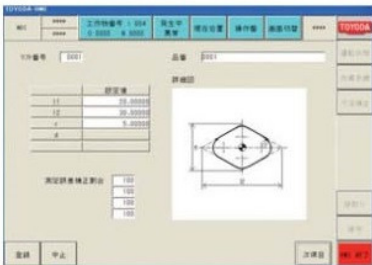
=Various functions ensure accuracy become standard accessories.
Functions to ensure accuracy such as the F.B. error data smoothing function, the cam lift data smoothing function, the measurement error compensation function and the cam processing analysis function become standard accessories.

▶ Simplified changeover

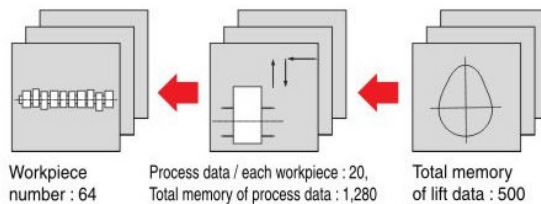


MENU

=Geometric configuration also done with automatic programming
Automatic programming of conical and triangular geometric profiles made possible by simple data entry.



Example of diamond shape input



▶ Reliable design limiting coolant dispersal by fixing covers to problem areas

We positioned the workhead and wheelhead to the outside of the cover, due to both these parts being covered in electric components such as motors and pressure switches.



Workhead been placed in outside of the cover

▶ Enhanced function to monitor the state of the machine



High Visibility skeleton cover
Monitoring of wheelhead motion is possible from outside of the cover.

Lean & Agile

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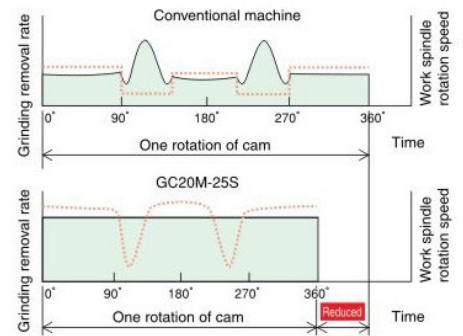
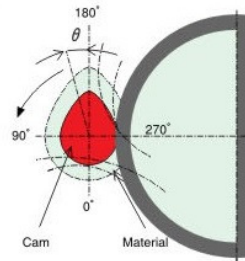
Superior performance has been condensed to compact body C-X controlled-cam-profiling mechanism. Leading the times with innovative HMI (Human_Machine_Interface) technology.



Firmly high-speed and high-accuracy

Realizes high-speed machining of the material being difficult to machine

Keep the grinding removal amount per one rotation of the cam by adoption of work spindle stepless speed control to the best level. Therefore, the leveling of grinding resistance can be done and improvement of profile accuracy and shortening of cycle time can be done at same time.



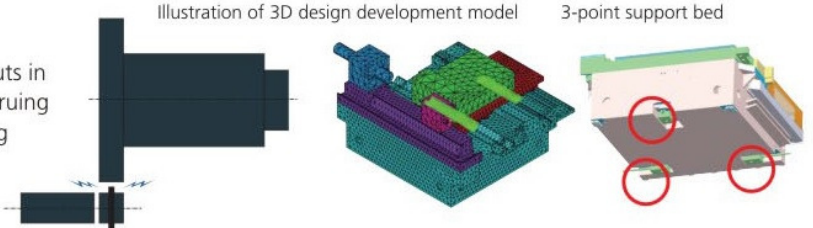
※Grinding removal rate = Grinding removal efficiency per angle unit

3-point support bed

By adopting the 3-point support system, changes in the bed support rigidity caused by changes in the ground surface is minimal, making long-term, stable grinding accuracy possible.

Direct detection type truing system

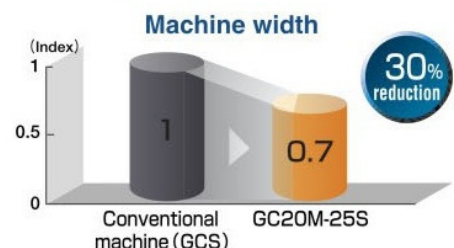
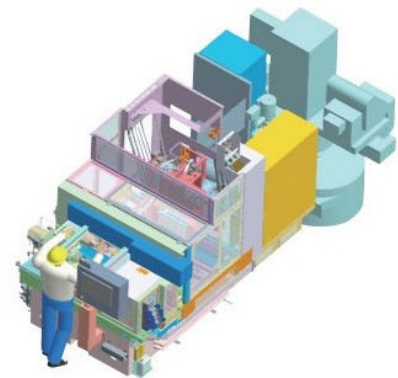
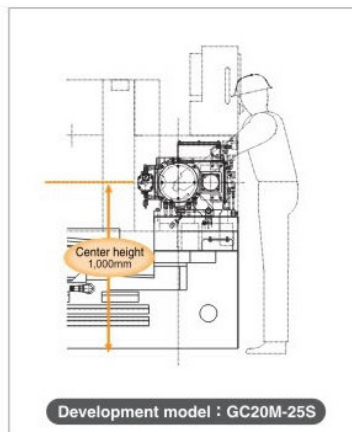
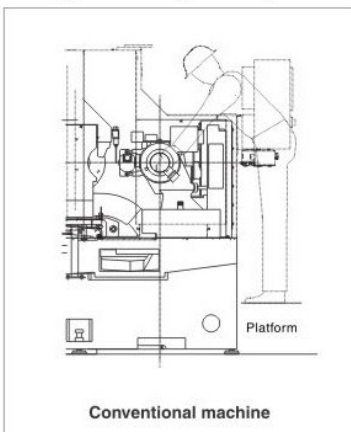
The diamond roll is in direct contact with the wheel. It cuts in from this position at a constant amount, stabilizing the truing amount and the sharpness per truing, as well as reducing truing time.



Compact

Min. machine space increasing productivity of line

4Wheel head traverse mechanism
4The center height of 1,000 mm makes wheel replacement, loading/unloading of workpiece a breeze



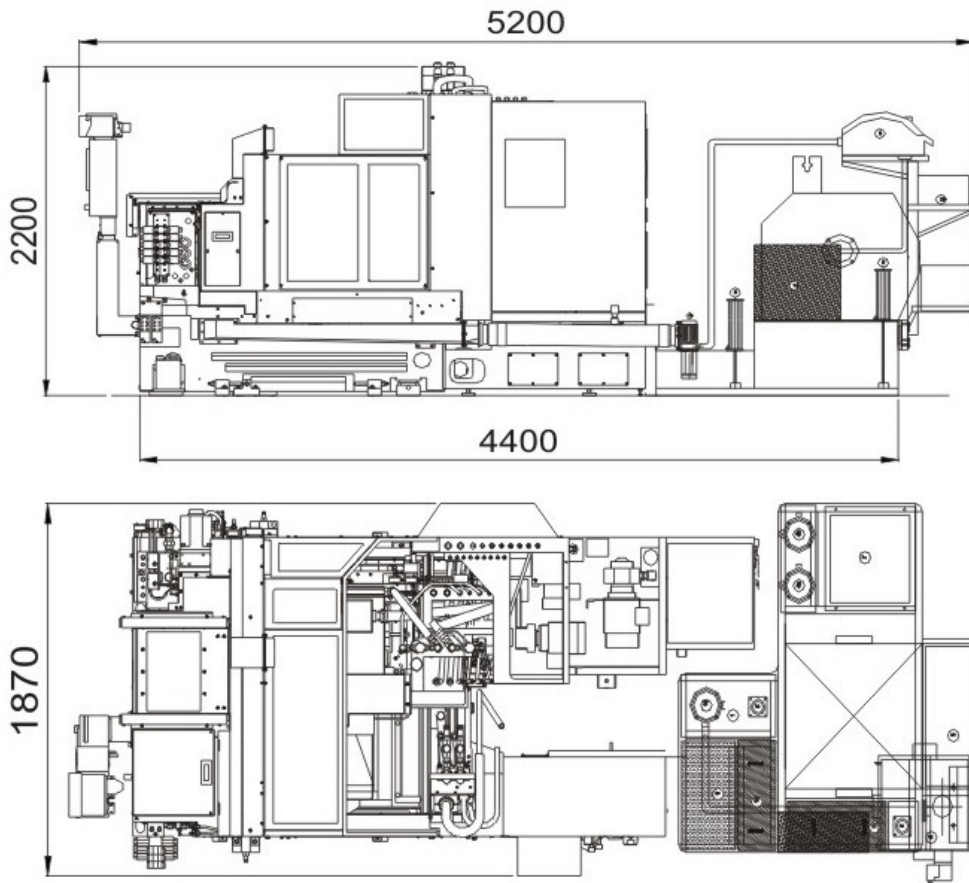
Machine Specifications

Item	Unit	GC20M-25S
Swing over table	mm	φ 200
Distance between centers	mm	250
Center height	mm	1,000
Grinding diameter	mm	φ10—φ 200
CBN wheel	OD	mm φ 350
	Maximum width	mm 20
	Surface speed	m/s 120 [80]
Wheelhead	Hydrostatic slideway, Ball screw drive	
	Rapid feedrate	m/mim φ30
	Minimum input increment	mm φ0.0001
Wheelhead traverse	V-slideway, Ball screw drive	
	Rapid feedrate	m/mim 20
	Minimum input increment	mm 0.0001
Workhead	Live spindle	
	Center	MT NO.4
	Maximum spindle speed	min-1 250
	Maximum input increment	° 0.0001

Item	Unit	GC20M-25S
Footstock	Hydraulic	
	Center	MT No.4
	Hydraulic Stroke	mm 60
Drive motor	Wheel spindle	kW 22[15]
	Wheelhead feed	kW 5.5
	Wheelhead traverse feed	kW 4.5
	Spindle	kW 4.5
	Truing roll	kW 0.75 (2P)
Power supply voltage	V 200	
	Spindle bearing lubricant	L 70
	Tank capacity	
Tank capacity	Hydraulic oil	L 25
	Lubricating oil	L 40
Machine weight	kg	10,500

[] : option

The specification may be restrained according to the accessories and the tooling of customer.



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