

PRODUCT CATALOG

Ultra-precision technology to shape tomorrow

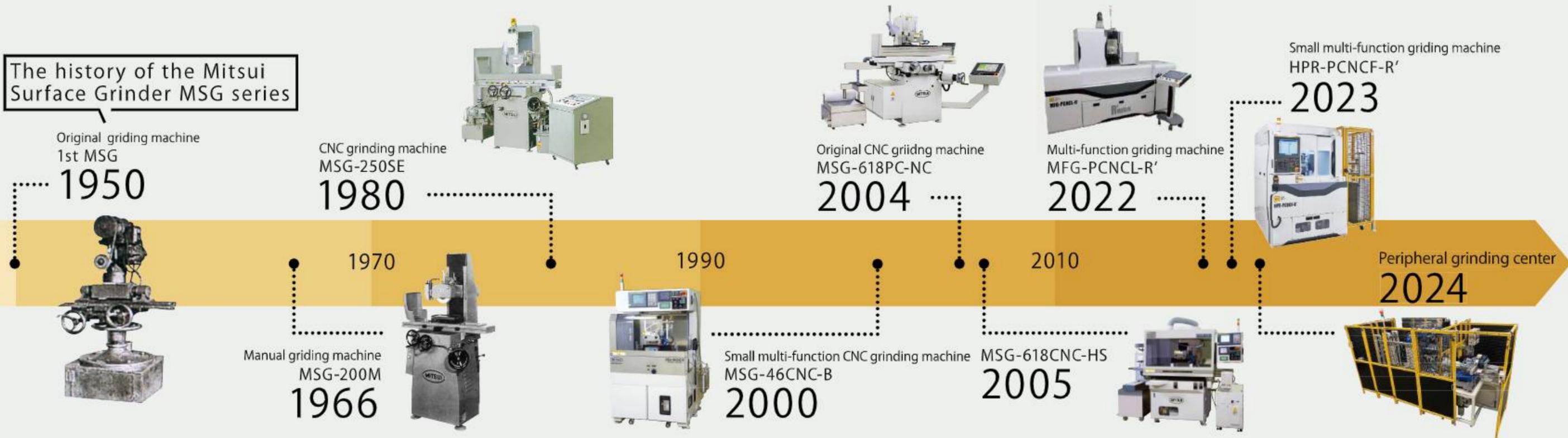


Ultra-precision technology to shape tomorrow

Save energy,
Save earth,
Save life.

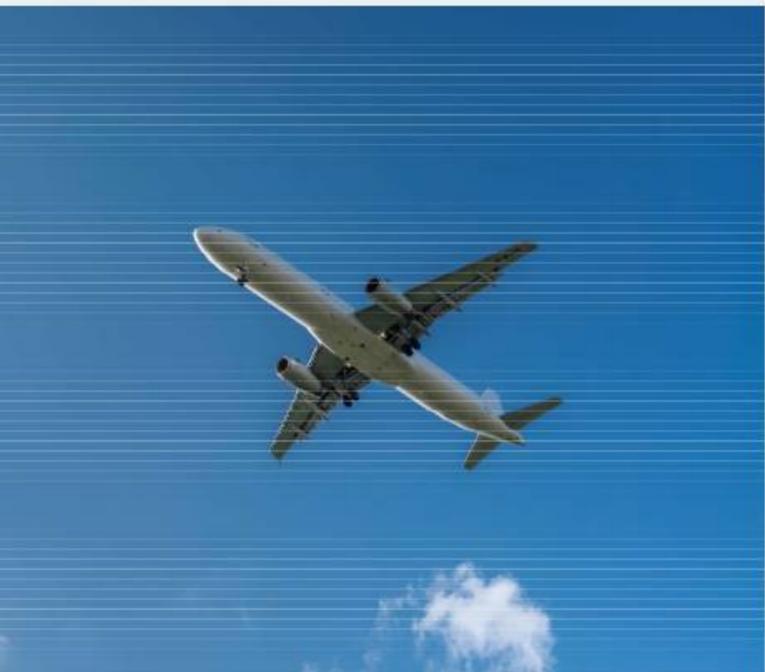
We care for the earth.
We contribute to the
development of a sustainable
society for the future through
resource and energy
conservation efforts.

The history of the Mitsui Surface Grinder MSG series



Machine Tools for Daily Life

The basis of "manufacturing" is flat, parallel, and right-angled surfaces, and the basic element that makes up these surfaces is the "straight line." Mitsui High-tec manufactures machines by focusing on these "straight lines."



Ultra-precision large surface grinding machine
MSG-135HG



Small multi-function NC grinding machine
HPR-PCNCF-R'



5-axes NC grinding machine
MSG-S500-R'



Peripheral grinding center



Commitment to manufacturing and technology

01 Precision processing

Our surface grinders have adopted a ball guide system for smooth movement. By pursuing high precision and rigidity in the components, we achieve surface roughness comparable to other guide systems. The high end models, featuring hand-scraped double V-guides, excel in straightness and rigidity, delivering superior surface and pitch accuracy.



【Processing example data】

◎Workpiece SKD-11 ◎Grinding wheel Diamond ◎Grinding speed 800m/min ◎Table speed 9m/min.
◎Feed speed 40mm/min. ◎Processing accuracy Rz 0.1 μ m

02 Commitment to the manufacturing line

To deliver "stable quality" to customers

A production line that produces submicron precision grinders. Grinrite stone surface plates have smaller thermal expansion than steel, superior mechanical properties, and are resistant to deterioration over time.



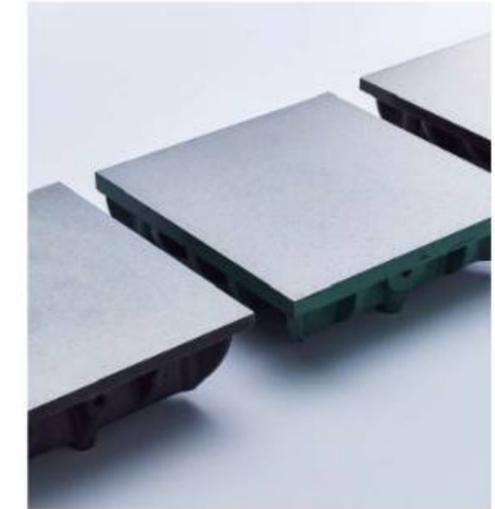
03 Hand scraping

High accuracy is realized (straightness: 2 μ m/100mm). Depressions with a depth of 1 μ m are carved evenly into the flat surface to create oil reservoirs for smooth sliding.



04 The three-sided surface plate

The only way to create a perfectly flat surface. Can only be achieved by human hands.



05 About Castings

Adoption of Meehanite metal made in Japan, which proves to be a perfect countermeasure against casting defects.

- Casting method with fewer defects based on many years of casting experience
- Mixed molten metal management ensures high quality
- Highly reproducible casting by highly skilled workers

※Meehanite metal refers to various cast Irons produced by the Meehanite method.



On-machine measurement system

Proposals for automation and operator saving for the future

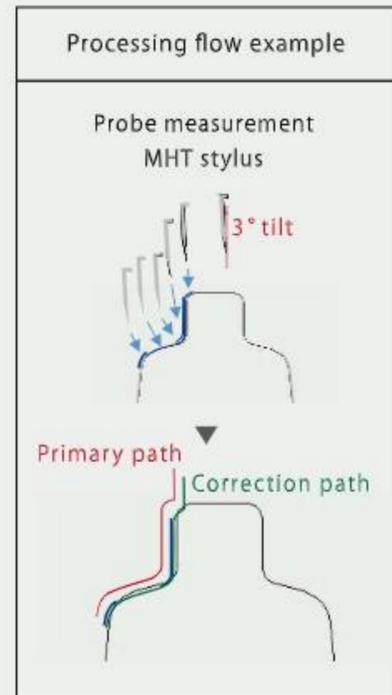
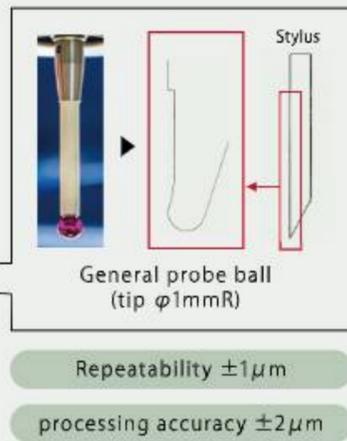
Touch probe measures the contour shape of the workpiece for automatic compensation grinding.



On-machine measurement system (contact probe method)

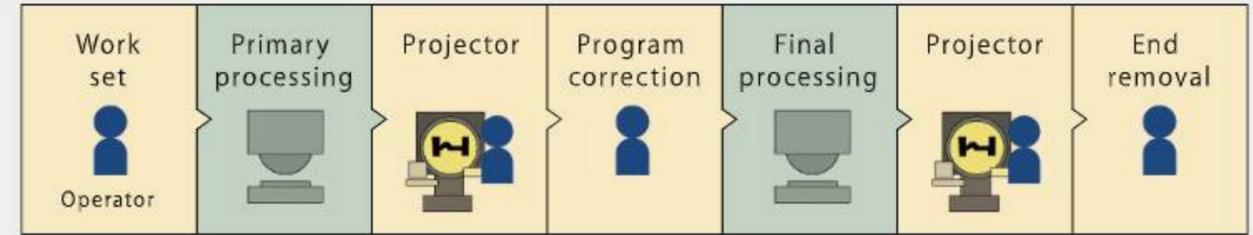
Automation/operator saving using technology cultivated in-house use equipment

"By using a stylus with a tip diameter of $\phi 25\mu\text{m}$, we were able to achieve automatic correction processing of fine shapes. Measurements can be performed while spraying water, suppressing thermal displacement during measurement, and achieving a shape accuracy of $\pm 2\mu\text{m}$ in automatic processing.



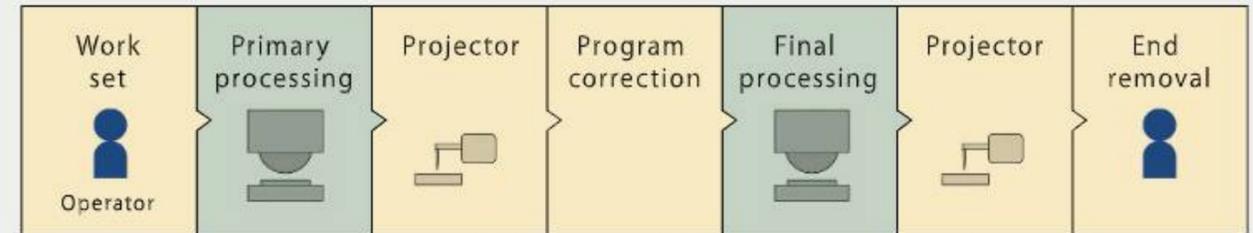
Skill-less, fully automated processing is now possible

● Before introduction (manual processing)



Improved labor productivity and labor saving

● After introducing a system (fully automatic)



Software information

Measurement software『MACS-Plus』

※Trademark registration application pending

This software provides automatic correction using an on-machine measurement system and features a scheduler that links with a robot for continuous processing of multiple workpieces.



Ⓞ Automatic correction processing function
Primary processing \Rightarrow on-machine measurement \Rightarrow correction processing \Rightarrow on-machine measurement

Ⓞ Schedule function
Registering pallet info without operator.



Ⓞ MACS-2D link function
NC and measurement programs from MACS-2D can be easily registered.

Ⓞ Operation management function
Monitors the machines and robots for optimal scheduling with minimal loss.

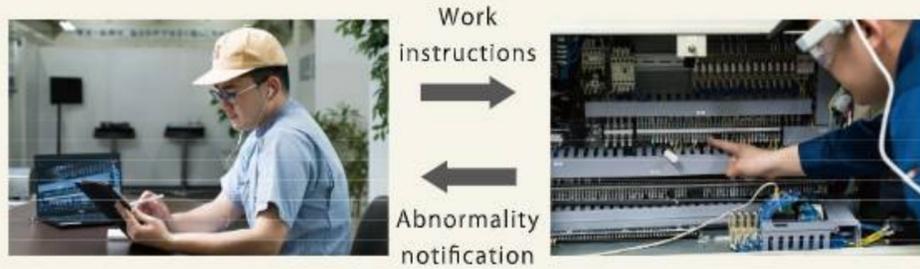
Customer support

Professional Service that doesn't interrupt the customer's workflow

We dispatch technicians for inspections, including part replacement and preventive maintenance, and offer remote support via video call too.

Remote support services

Provide real-time diagnostic support via free video chat using smartphones and tablets, even in case of abnormalities.



Overhaul business

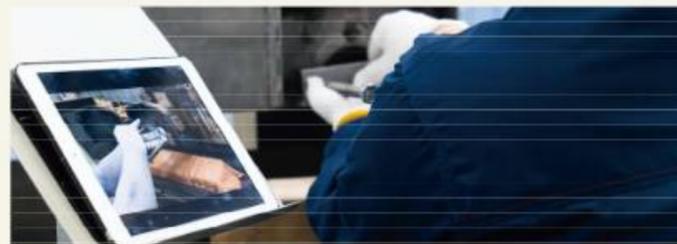
Refurbish old equipment to like-new condition at a low cost. Castings are naturally seasoned for precision and material restoration.



After-sales service

Video for spindle replacement

A spindle replacement video manual is provided to customers. Replacing it yourself minimizes machine downtime.



Parts replacement

- Main parts
- Screws• Gears• Rubber seal
 - Longitudinal feed hardened steel ways
 - Linear ball bearings
 - Spindle



MHT's unique services

Digital Pass



Content examples

- Grinding machine operation manual
- Maintenance methods
- Regular inspection methods
- Basics of processing with a grinding machine

We provide support services for customers using the cloud.
We publish content that is tailored to your problems.
Automatic translation function.

Mitsui Grinding School

In response to customer requests, we established the Mitsui Grinding School with its own curriculum to provide basic instruction. Since 1963, over 6,000 people have learned skills.



Sample	Training schedule
	Day 1: Theory, Balancing 6-sided grinding, right angle
	Day 2: R and angle forming Connecting R and angles
	Day 3: Semicircle grinding, deep groove, summary



Realized full automation of ultra-precise hexahedral finishing



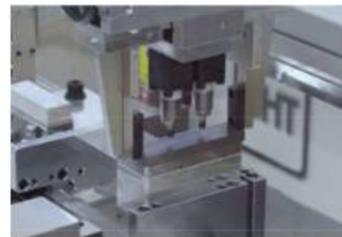
Peripheral grinding machine

We've automated the workpiece setting process, previously reliant on skilled craftsmen, and now fully automated ultra-precise hexahedral finishing for tooling parts.



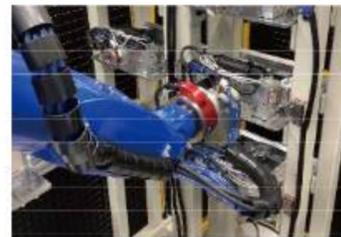
Work stocker

Can store up to 60 workpieces, allowing for continuous operation at night and on holidays



Pre-measurement

Measures the workpiece shape in advance and performs error prevention against erroneous input, etc.



Supports wide sizes

Selects appropriate hands and jigs for the workpiece size



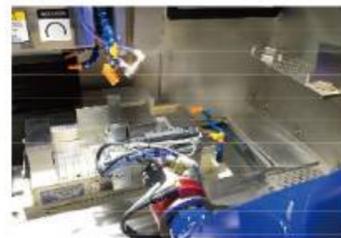
finishing processing

The multi-joint robot sets the workpiece on the surface grinder and automatically processes the outer 6 surfaces of the workpiece



On-machine

Automates measurement before and after processing using a touch probe installed on the surface grinder



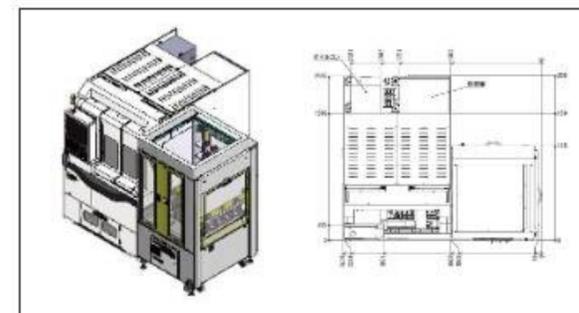
Automates setting

Using a force-sensor-equipped robot, we achieve highly accurate positioning.

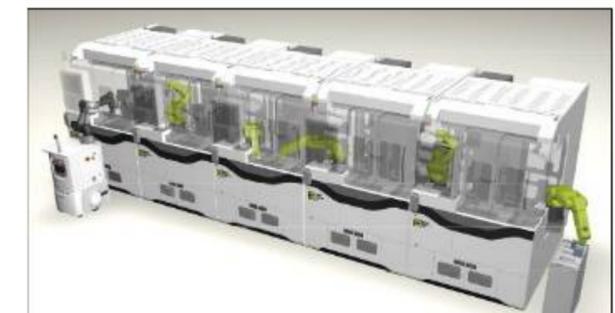
Realizes compact and high-precision machining



Small multi-function NC grinder HPR-PCNCF-R'



Compact size fits space-saving layouts, with models available featuring an automatic transport system.



We can connect machines together for multiple combined operations.

Specifications					
Capacity	Table Work Surface Size	300×200mm	Wheel	Size	OD205×W30×ID31.75mm
	Table Movement (Long×Cross)	320×230mm		Spindle Speed (Air Spindle, Inverter)	500-8000rpm
	Maximum Spindle Height	380mm	Motor	Spindle	2.2kW/2P
Table	Automatic Longitudinal Feed	1-30m/min	Floor space	W×L×H (Machine, Control Device)	1300×2000×2000mm
	Feed per Dial Revolution	0.1/1/10mm		Machine Weight	2500kg

*Body color is Ivory white.

*When exporting this item, written consent from Mitsui High-tec, Inc. and export permission from the Ministry of Economy, Trade and Industry are required.

Multi-sided machining is achieved with one chucking



5-axes CNC grinding machine MSG-S500-R'



A 5-axes grinding machine was developed by adding tilt and horizontal axes to the existing 3 axes, with simultaneous control of all axes.



Automation and operator savings were achieved by using an air sensor to automatically detect the grinding wheel position.



A dedicated CAM system allows for skill-free machining of multi-sided punches and special shapes.
[Sample] Design, manufacture and sale of cold forging dies Provided by KFD Co., Ltd.

Specifications					
Capacity	Table Work Surface Size	580×210mm	Wheel	Size	OD180×W13×ID31.75mm
	Table Movement (Long×Cross)	600×230mm		Spindle Speed (Air Spindle, Inverter)	MAX.2000rpm
	Maximum Spindle Height	420mm		Motor	Spindle
Table	Automatic Longitudinal Feed	0-30m/min	Floor Space	W×L×H (Machine, Control Device)	2400×3550×2100mm
	Feed per Dial Revolution	0.1/1/10mm		Machine Weight	4500kg

※Body color is ivory white. ※When exporting this item, written consent from Mitsui High-tec, Inc. and export permission from the Ministry of Economy, Trade and Industry are required.

Achieve a higher level of grinding accuracy



Ultra-precision large surface grinder MSG-135HG



The table slide section uses a special turcite material to achieve high-precision straightness and long life due to low friction.



Highly acclaimed as a grinder for regrinding stamping dies within our company and group companies

Specifications					
Capacity	Table Work Surface Size	1400×500mm	Wheel	Size	OD355×W50×ID127mm
	Table Movement (Long×Cross)	1440×550mm		Spindle Speed (Air Spindle, Inverter)	500-2000rpm
	Maximum Spindle Height	560mm		Motor	Spindle
Table	Automatic Longitudinal Feed	5-20m/min	Floor Space	W×L×H (Machine, Control Device)	3600×3700×2410mm
	Feed per Dial Revolution	25mm		Machine weight	10000kg

※Body color is ivory white.

ECO series (Hydraulic-free)

Ultra-precision surface grinding machine



MSG-250H1-ECO

MSG-200HMD-ECO

※Photo shows optional accessories

Specifications	MSG-200H1-ECO	MSG-250H1-ECO
Cross Feed	Manual	Manual
Vertical Feed	Manual	Manual
Longitudinal Feed	Servo motor	Servo Motor
Capacity	Table work surface size 380×200mm	480×200mm
Table	Table movement (Long×Cross) 380×200mm	500×250mm
	Maximum spindle height 450mm	400mm
	Feed per handle revolution 84mm/rev	90mm/rev
	Longitudinal feed rate 5~18m/min	5~15m/min
	Feed per handle revolution 3mm	6mm
	Feed per dial deviation 0.02mm	0.02mm
	Feed per micro deviation (DP) 0.001mm	0.002mm
	Feed per handle revolution 2mm	2mm
	Feed per dial deviation 0.005mm	0.005mm
	Feed per micro deviation (DP) 0.001mm	0.001mm
	Rapid feed (50Hz×60Hz)(DP) 370/440 mm/min	370/440 mm/min
	Size OD205×W20×ID31.75mm	OD205×W20×ID31.75mm
	Spindle speed (50Hz×60Hz) 2900/3460rpm	2900/3460rpm
	Spindle 1.0kW / 2P V3	1.0kW / 2P V3
	Table Servo motor 1.0kW	Servo Motor 1.0kW
	Rapid feed (DP) 6W/4P	6W/4P
	Power supply 3-phase 200/220V 50/60Hz	3-phase 200/220V 50/60Hz
	Permitted fluctuation ±10%	±10%
	Power requirement (including option accessories) 2kVA	2kVA
	Floor space W×L×H 1480×1180×1802mm	1900×1310×1750mm
	Weight Machine 853kg	1142kg

Specifications	MSG-200HMD-ECO	MSG-250HMD-ECO
Cross Feed	Servo motor	Induction motor
Vertical Feed	Stepping motor	Stepping motor
Longitudinal Feed	Servo motor	Servo motor
Capacity	Table work surface size 380×180mm	480×200mm
Table	Table movement (Long×Cross) 380×180mm	480×230mm
	Maximum spindle height 450mm	400mm
	Feed per handle revolution 84mm/rev	90mm/rev
	Longitudinal feed rate 5~18m/min	5~15m/min
	Feed per handle revolution 3mm	6mm
	Feed per dial deviation 0.02mm	0.02mm
	Feed per micro deviation (DP) 0.001mm	0.002mm
	Increment feed 0.5~6.0mm	0.5~6.0mm
	Continuous feed 50~75mm/min	0.1~1.5m/min
	Feed per handle revolution 2mm	2mm
	Feed per dial deviation 0.005mm	0.005mm
	Automatic down feed 0.001~0.002mm/(10 steps)	0.001~0.002mm/(10 steps)
	Total grinding Depth 0~99.999mm	0~99.999mm
	Rapid Feed (50Hz×60Hz) 240mm/min	240mm/min
	Size OD205×W20×ID31.75mm	OD205×W20×ID31.75mm
	Spindle speed (50Hz×60Hz) 2900/3460rpm	2900/3460rpm
	Spindle 1.0kW / 2P V3	1.3kW / 2P V3
	Table Servo motor 1.0kW	Servo motor 1.0kW
	Power supply machine 3-phase 200/220V 50/60Hz	3-phase 200/220V 50/60Hz
	Power supply Mag. chuck & Light Single phase 100V 50/60Hz	Single phase 100V 50/60Hz
	Permitted fluctuation ±10%	±10%
	Power requirement (including option accessories) 5kVA	5kVA
	Floor space W×L×H 1850×1310×1900mm	2300×1350×1750mm
	Weight Machine 1000kg	1250kg

PC-NC Series

CNC Ultra-Precision Surface Grinding Machine (PC-Control)



MSG-818PC-NC

MSG-525PC-NC

MSG-300PC-NCL

※Photo shows optional accessories

※Body color is ivory white

Specifications	MSG-818PC-NC	MSG-818PC-NCL
Capacity	Table work surface size 480×230mm	480×200mm
	Table movement (Cross feed) 230mm	230mm
	Table movement (Longitudinal feed) 500mm	500mm
	Maximum spindle height 400mm	400mm
	Automatic movement (Average Speed) 0-15m/min	0-30m/min
	Feed per handle revolution 88mm/rev	88mm/rev
	One short feed 5mm	0.01/0.1/1mm (Switchable)
	Min. feed 0.001mm	0.001/0.001/0.01mm (Switchable)
	Continuous feed speed 0-330mm/min	0-330mm/min
	Min. increment/ Min. resolution 0.001/0.0001mm	0.001/0.0001mm
	Head (Handle) One short feed 1mm	1mm
	Min. feed 0.001mm	0.001mm
	Continuous feed speed 0-330mm/min	0-330mm/min
	Min. increment/ Min. resolution 0.001/0.0001mm	0.001/0.0001mm
	Number of spark-outs Program dependent	Program dependent
	Size OD205×W20×ID31.75mm	OD205×W20×ID31.75mm
	Spindle speed (50Hz×60Hz) 500-4000rpm (Inverter)	500-4000rpm (Inverter)
	Control axis 3	3
	Simultaneous control axis 2	3
	Power supply 3-phase 200/220V 50Hz/60Hz	3-phase 200/220V 50Hz/60Hz
	Permitted fluctuation ±10%	±10%
	Power requirement 10kVA	10kVA
	Floor space W×L×H (including optional accessories) 2500×1600×1800mm	2500×2200×2250mm
	Weight Machine 1100kg	1400kg

※Full Closed Loop Control (Optional)

Specifications	MSG525PC-NC	MSG525PC-NC-L
Capacity	Table work surface size 550×250mm	550×250mm
	Table movement (Long×Cross) 600×280mm 250mm with Protective Cover	600×280mm (250mm with protective cover)
	Maximum spindle height 500mm	500mm
	Feed per handle revolution 190mm	190mm
	Longitudinal feed rate 0-22m/min	0-30m/min
	One short feed 0.5/5mm (switchable)	0.5/5mm (switchable)
	Min. feed 0.001/0.001mm (switchable)	0.001/0.001mm (switchable)
	Continuous feed speed 0-330mm/min	0-330mm/min
	Min. increment/ Min. resolution 0.001/0.0001mm	0.001/0.0001mm
	Head (Handle) One short feed 0.1mm/1mm (switchable)	0.1mm/1mm (switchable)
	Min. feed 0.001mm/0.001mm (switchable)	0.001mm/0.001mm (switchable)
	Continuous feed speed 0-330mm/min	0-330mm/min
	Min. increment/ Min. resolution 0.001/0.0001mm	0.001/0.0001mm
	Number of spark-outs Program dependent	Program dependent
	Size OD255×W25×ID50.8mm	OD255×W25×ID50.8mm
	Spindle speed (inverter DP) 500-4000rpm	500-4000rpm
	Control axis 3	3
	Simultaneous control axis 2	3
	Power supply 3-phase 200/220V 50/60Hz	3-phase 200/220V 50/60Hz
	Power requirement 15kVA	15kVA
	Floor space W×L×H 3000×2500×2200mm	3000×2500×2200mm
	Weight Machine 2300kg	2300kg

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46CNC Series

CNC ultra-precision small punch grinder (horizontal profile grinder)

Specifications	MSG-46CNC-B	MSG-46CNC-HS
Capacity	Table work surface size 190×100mm	200×100mm
	Table movement (Long×Cross) 320×120mm	320×120mm
	Maximum spindle height 230mm	230mm
	Table Speed 1-40m/min.	1-40m/min.
	Continuous speed (10-150%) 10-150mm/min.	10-150mm/min.
	Min. increment/ Min. Resolution 0.001/0.0001mm	0.001/0.0001mm
	Feed per dial revolution 0.01/0.1/1mm	0.01/0.1/1mm
	Feed per dial deviation 0.001/0.001/0.01mm	0.001/0.001/0.01mm
	Continuous Rate (0-100%) 0-500mm/min.	0-500mm/min.
	Min. increment/ Min. Resolution 0.001/0.0001mm	0.001/0.0001mm
	Speed (configurable) 0-500mm/min.	0-500mm/min.
	Automatic Continuous 0-500mm/min.	0-500mm/min.
	Step 0.001-1.3mm/rev.	0.001-1.3mm/rev.
	Feed per dial revolution 0.01/0.1/1mm	0.01/0.1/1mm
	Feed per dial deviation 0.001/0.001/0.01mm	0.001/0.001/0.01mm
	Continuous Rate (0-100%) 0-500mm/min.	0-500mm/min.
	Min. increment/ Min. Resolution 0.001/0.0001mm	0.001/0.0001mm
	Speed (configurable) 0-500mm/min.	0-500mm/min.
	Automatic Continuous 0-500mm/min.	0-500mm/min.
	Increment 0.001-1.3mm/rev.	0.001-1.3mm/rev.
	Number of spark-outs Program dependent	Program dependent



※Photo shows optional accessories.
※When exporting this item, written consent from Mitsui High-tec, Inc. and export permission from the Ministry of Economy, Trade and Industry are required.

Specifications	300PC-NC
Capacity	Table work surface size 610×300mm
	Table movement (Long×Cross) 740×350mm
	Maximum spindle height 620mm
	Longitudinal (in Auto Operation) 0-20m/min
	Feed per Revolution 0.021/0.01/0.1mm/switch
	Min. Feed 0.001/0.01/0.1mm/switch
	Continuous Feed Rate 0-300mm/min
	Min. increment 0.021mm
	Min. resolution 0.001mm
	Feed per Revolution 1mm
	Min. Feed 0.001mm
	Continuous Feed Rate 0-500mm/min
	Max. Rapid Speed 1000mm/min
	Min. increment 0.001mm
	Min. resolution 0.001mm
	Feed per Revolution 1mm
	Min. Feed 0.001mm
	Continuous Feed Rate 0-500mm/min
	Max. Rapid Speed 1000mm/min
	Min. increment 0.001mm
	Min. resolution 0.001mm
	Spindle speed (inverter) 500-8000rpm
	Size OD395×W30×ID16.2mm
	Spindle 3.7kW/4P
	Cross Feed 0.4kw
	Spindle 0.25kw (with brake)
	Table Contra type linear motor skew
	Longitudinal Linear guide + linear motor
	Cross Feed Linear guide + ball screw
	Vertical Feed Linear guide + ball screw
	NC System PC + motion control board
	Control System (Vertical) Full closed loop
	Control System (Cross) Full closed loop
	Control axis 3 axis
	Power Supply 3 phase 200/220V
	Permitted fluctuation ±10%
	Power requirement 18kVA
	Linear Motor Cooling Spindle Air Purge 20L/min
	Floor space W×L×H 3210×2740×2210mm
	Weight Machine 4400kg

Specifications	MFG-PCNCL-R
Capacity	Table work surface size 200×480mm
	Table movement (Long×Cross) 550×230mm
	Maximum spindle height 350mm
	Automatic Longitudinal Feed 0-40m/min
	Feed per dial revolution 0.1/1/10mm
	Feed per dial deviation 0.001/0.01/0.1mm
	Continuous feed (0-150%) 50-1000mm/min
	Feed per dial revolution 0.01/0.1/1mm
	Feed per dial deviation 0.001/0.001/0.01mm
	Continuous feed (10-150%) 0-1200mm/min
	Min. increment 0.001mm
	Head (Dial) Feed per dial revolution 0.01/0.1/1mm
	Feed per dial deviation 0.001/0.001/0.01mm
	Continuous feed (10-150%) 0-1200mm/min
	Min. increment 0.001mm
	Size OD180×W13×ID31.75mm
	Spindle Speed (Air Spindle, Inverter) 0-8000rpm
	NC System FANUC 16i-MB
	Power supply 3 phase 200/220V 50/60Hz
	Power requirement 14kVA
	Machine 2640×2390×2400mm
	Optional accessories 2640×3000×2400mm
	Weight Machine 3500kg

M series (Hand feed)

Precision forming grinding machine



※Photo shows optional accessories

Specifications		MSG-200M	MSG-250M
Capacity	Table work surface size	350×160mm	480×200mm
	Table movement (Long×Cross)	380×200mm	500×250mm
	Maximum spindle height	450mm	400mm
Table	Feed per handle revolution	100mm/rev	88mm/rev
	Feed per handle revolution	3mm	6mm
	Feed per dial deviation (OP)	0.001mm	0.002mm
Head	Feed per handle revolution	2mm	2mm
	Feed per dial deviation	0.005mm	0.005mm
	Feed per micro deviation (OP)	0.001mm	0.001mm
Wheel	Size	OD205×W20×ID31.75mm	OD205×W20×ID31.75mm
	Spindle speed (50Hz×60Hz)	2,900/3,460rpm	2,900/3,460rpm
Power	Power Supply	Machine 3-phase 200/220V 50/60Hz Mag. Chuck & Light Single phase 100V 50/60Hz	3-phase 200/220V 50/60Hz Single phase 100V 50/60Hz
	Permitted fluctuation	±10%	±10%
	Requirement (Including optional accessories)	1.5KVA	1.5KVA
Floor space	W×L×H	1480 x 1180 x 1800mm	1850 x 1310 x 1750mm
Weight		900kg	1100kg

HMD Series (Fully Automatic)

Ultra-precision surface grinding machine



MSG-300HMD

Specifications		MSG-300HMD	MSG-400HMD
Capacity	Cross Feed	Induction motor	Induction motor
	Vertical Feed	Stepping motor	Stepping motor
	Longitudinal Feed	Hydraulic drive	Hydraulic drive
Table	Table work surface size	610×305mm	800×400mm
	Table movement (Long×Cross)	740×350mm	900×440mm
	Maximum spindle height	620mm	590mm
Cross Feed	Table speed	0-22m/min	5-22m/min
	Feed per handle revolution	6mm	6mm
	Feed per dial deviation	0.02mm	0.02mm
Head	Increment feed	0.5-12mm	0.2-10mm
	Continuous feed	0.1-24m/min	0.2-3m/min
	Feed per handle revolution	2mm	2mm
Wheel	Feed per dial deviation	0.005mm	0.005mm
	One short feed	0.002mm-0.006mm (Per 2mm)	0.001mm-0.02mm
	Total grinding Depth	0-99.999mm	0-99.999mm
Power	Number of spindles	0-10 times	0-10 times
	Rapid Feed (50Hz×60Hz)	240mm/min.	180mm/min.
	Size	CC305×W32×ID76.2mm	CC305×W32×ID127mm
Power	Spindle Speed (50Hz×60Hz)	1430/1730rpm	1430/1730rpm
	Power Supply	Machine 3-phase 200/220V 50/60Hz Mag. chuck & Light Single phase 100V 50/60Hz	3-phase 200/220V 50/60Hz Single phase 100V 50/60Hz
	Permitted fluctuation	±10%	±10%
Floor space	W×L×H	2755 x 1931 x 1990mm	3600 x 2300 x 2095mm
Weight	Machine	2540kg	3800kg
	Hydraulic tank	60kg	150kg



MSG-250HMD

※Photo shows optional accessories

Specifications		MSG-300HMD	MSG-400HMD
Capacity	Cross Feed	Servo motor	Induction motor
	Vertical Feed	Stepping motor	Stepping motor
	Longitudinal Feed	Hydraulic drive	Hydraulic drive
Table	Table work surface size	350×160mm	480×200mm
	Table movement (Long×Cross)	360×200mm	480×200mm
	Maximum spindle height	450mm	400mm
Cross Feed	Table speed	5-30m/min.	5-20m/min.
	Feed per handle revolution	84mm/rev	90mm/rev
	Feed per dial deviation	3mm	6mm
Head	Feed per micro deviation (OP)	0.02mm	0.02mm
	Increment feed	0.5-6.0mm	0.5-6.0mm
	Continuous feed	0.1-0.5m/min.	0.1-1.5m/min.
Wheel	Feed per handle revolution	2mm	2mm
	Feed per dial deviation	0.005mm	0.005mm
	Automatic down feed	0.001-0.02mm (10 steps available)	0.001-0.02mm (10 steps available)
Power	Total grinding Depth	0-99.999mm	0-99.999mm
	Rapid Feed (50Hz×60Hz)	240m/min.	240m/min.
	Size	OD205×W20×ID31.75mm	OD205×W20×ID31.75mm
Power	Spindle Speed (50Hz×60Hz)	2,900/3,460rpm	2,900/3,460rpm
	Power Supply	Machine 3-phase 200/220V 50/60Hz Mag. chuck & light Single phase 100V 50/60Hz	3-phase 200/220V 50/60Hz Single phase 100V 50/60Hz
	Permitted fluctuation	±10%	±10%
Floor space	W×L×H	1480 x 1180 x 1750mm	2300 x 1350 x 1750mm
Weight	Machine	980kg	1250kg
	Hydraulic tank	100kg	100kg

H1 Series (Semi automatic)

Precision forming grinding machine

Specifications		MSG-200H1	MSG-250H1
Capacity	Cross Feed	Manual	Manual
	Vertical Feed	Manual	Manual
	Longitudinal Feed	Hydraulic drive	Hydraulic drive
Table	Table work surface size	350×160mm	480×200mm
	Table movement (Long×Cross)	380×200mm	500×250mm
	Maximum spindle height	450mm	400mm
Cross Feed	Feed per handle revolution	84mm/rev	90mm/rev
	Longitudinal feed rate	5-30m/min.	5-20m/min.
	Feed per handle revolution	3mm	6mm
Head	Feed per dial deviation	0.02mm	0.02mm
	Feed per micro deviation (OP)	0.001mm	0.002mm
	Feed per handle revolution	2mm	2mm
Wheel	Feed per dial deviation	0.005mm	0.005mm
	Feed per micro deviation (OP)	0.001mm	0.001mm
	Rapid Feed (50Hz×60Hz)(OP)	370/440mm/min.	370/440mm/min.
Motor	Size	OD205×W20×ID31.75mm	OD205×W20×ID31.75mm
	Spindle speed(50Hz×60Hz)	2,900/3,460rpm	2,900/3,460rpm
	Spindle	1.0kw/2P V-3	1.0kw/2P V-3
Power	Hydraulic pump	0.4kw/4P	0.4kw/4P
	Fast feed (OP)	60W/4P	60W/4P
	Power Supply	Machine 3-phase 200/220V 50/60Hz Mag. chuck & Light Single phase 100V 50/60Hz	3-phase 200/220V 50/60Hz Single phase 100V 50/60Hz
Floor space	Permitted fluctuation	±10%	±10%
	Power requirement (Including optional accessories)	2KVA	2KVA
	W×L×H	1480 x 1180 x 1850mm	1900 x 1310 x 1750mm
Weight		790kg	1140kg

HG Series

Ultra-precision surface grinding machine

Specifications		MSG-250HG	MSG-300HG	MSG-400HG
Capacity	Vertical Feed	Servo motor	Servo motor	Servo motor
	Cross Feed	Servo motor	Servo motor	Servo motor
	Longitudinal Feed	Hydraulic drive	Hydraulic drive	Hydraulic drive
Table	Table work surface size	480×200mm	610×305mm	800×400mm
	Table movement (Long×Cross)	480×220mm	740×350mm	900×425mm
	Maximum spindle height	400mm	620mm	590mm
Cross Feed	Feed per handle revolution	90mm/rev	85mm/rev	100mm/rev
	Table speed	5-20m/min.	10-22m/min	5-22m/min
	Feed per handle revolution	6mm	6mm	6mm
Head	Feed per dial deviation	0.02mm	0.02mm	0.02mm
	Feed per micro deviation (OP)	0.002mm	OP	OP
	Increment feed	0.5-6.0mm	0.5-12mm	0.2-12mm
Wheel	Continuous feed	0.1-1.5m/min.	0.1-2.4m/min	0.2-3m/min
	Feed per handle revolution	2mm/1mm(OP)	2mm	2mm
	Feed per dial deviation	0.005mm	0.005mm	0.005mm
Power	One short feed	0.0001/0.001/0.01mm	0.0001-0.0999mm	0.0001-0.01mm
	Automatic down feed	0.0001-0.0999mm	0.0001-0.0999mm	0.0001-0.0999mm
	Total grinding Depth	0-99.999mm	0-99.999mm	0-99.999mm
Motor	Rapid Feed (50Hz×60Hz)	120mm/min.	240mm/min	180mm/min
	Size	OD205×W20×ID31.75mm	OD305×W32×ID76.2mm	OD355×W32×ID127mm
	Spindle Speed (50Hz×60Hz)	3460rpm	1730rpm	1730rpm
Power	Inverter (OP)	500-4000rpm	500-2000rpm	500-2000rpm
	Spindle	1.5kw/2P V-3	3.7kW/4P	3.7kW/4P
	Hydraulic pump	0.75kw/4P	0.75kW/4P	2.2kW/4P
Floor space	Power supply for Machine	3-phase 200/220V 50/60Hz	3-phase 200/220V 50/60Hz	3-phase 200/220V 50/60Hz
	Power supply for Mag. chuck and light	Single phase 100V 50/60Hz	Single phase 100V 50/60Hz	Single phase 100V 50/60Hz
	Permitted fluctuation	±10%	±10%	±10%
Weight	Power requirement (Including optional accessories)	8KVA	12kVA	15kVA
	W×L×H	2325 x 1857 x 1750mm	2764 x 2244 x 1990mm	4140 x 2700 x 2095mm
	Machine	1350kg	2040kg	3800kg
	Hydraulic tank	100kg	60kg	150kg