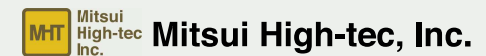


PRODUCT CATALOG

Ultra-precision technology to shape tomorrow



URL <https://www.mitsui-high-tec.com>



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- Domestic Group Companies
Kitakyushu: Mitsui Stamping Co., Ltd.
- Overseas Subsidiaries
Singapore, Malaysia, Tianjin, Shanghai, Guangdong, Hong Kong,
Taiwan, Thailand, Canada, Poland, Mexico, USA
- Overseas Offices
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Ultra-precision technology to shape tomorrow

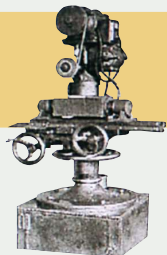
Save energy,
Save earth,
Save life.

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

Original grinding machine
1st MSG

1950



CNC grinding machine
MSG-250SE

1980



1970

Manual grinding machine
MSG-200M

1966



1990



Small multi-function CNC grinding machine
MSG-46CNC-B

2000

Original CNC grinding machine
MSG-618PC-NC

2004



Multi-function grinding machine
MFG-PCNCL-R'

2022



2010

MSG-618CNC-HS

2005



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

2023



Peripheral grinding center

2024



Machine Tools for Daily Life

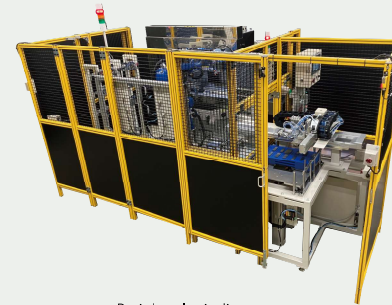
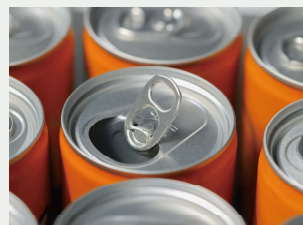
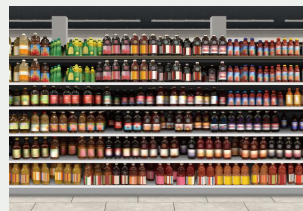
The basis of "manufacturing" is flat, parallel, and right-angled surfaces, and the basic element that makes up these surfaces is the "straight line."
Mitsui High-tec manufactures machines by focusing on these "straight lines."



Ultra-precision large surface grinding machine
MSG-135HG



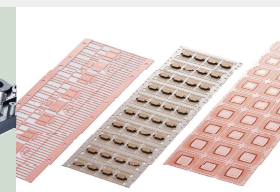
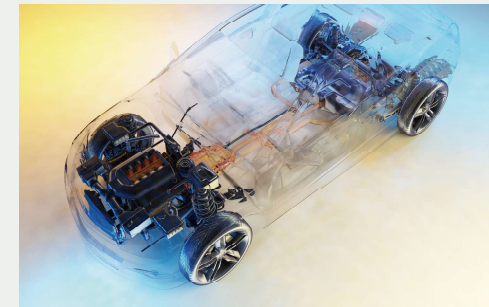
Small multi-function NC grinding machine
HPR-PCNCF-R'



Peripheral grinding center



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



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.



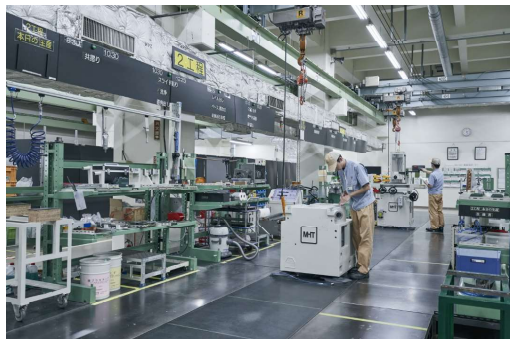
【Processing example data】

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

02 Commitment to the manufacturing line

To deliver "stable quality" to customers

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



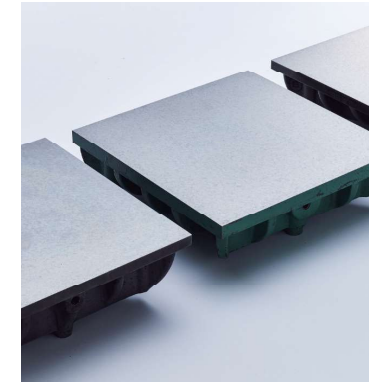
03 Hand scraping

High accuracy is realized (straightness: 2μm/100mm). Depressions with a depth of 1μm 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

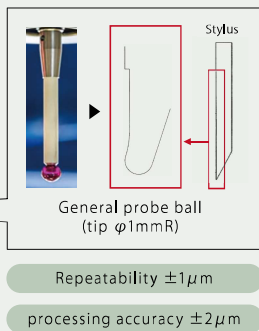
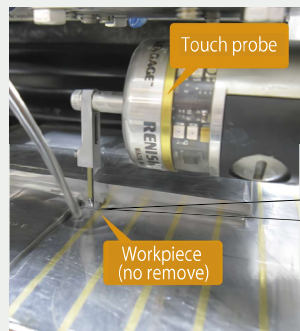
Touch probe measures the contour shape of the workpiece for automatic compensation grinding.



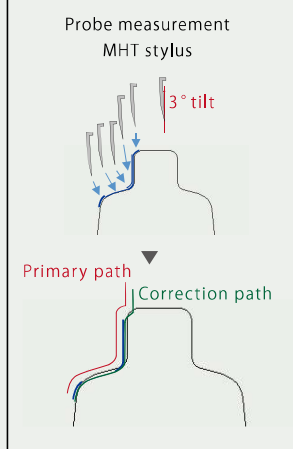
On-machine measurement system (contact probe method)

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.

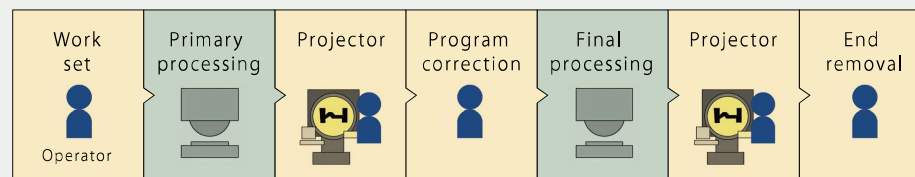


Processing flow example



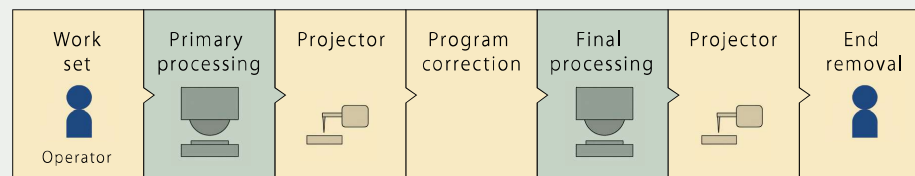
Skill-less, fully automated processing is now possible

● Before introduction (manual processing)



Improved labor productivity and labor saving

● After introducing an 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 ⇒ on-machine measurement ⇒ correction processing ⇒ 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.

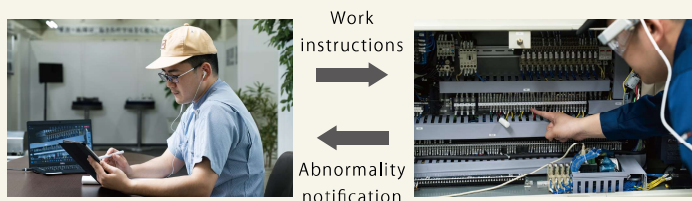
Customer support

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

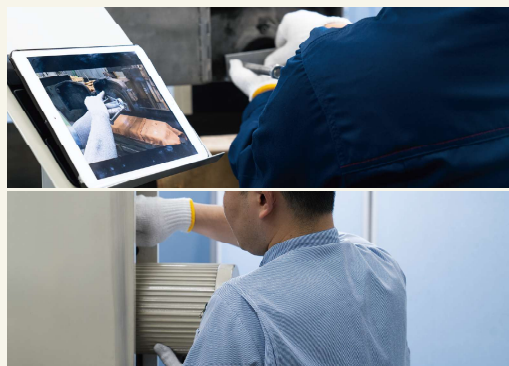
■ Video for spindle replacement

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

■ Parts replacement

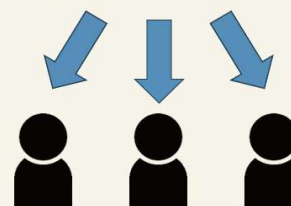
Main parts

- 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

Support
anytime, anywhere
if you have internet access!

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

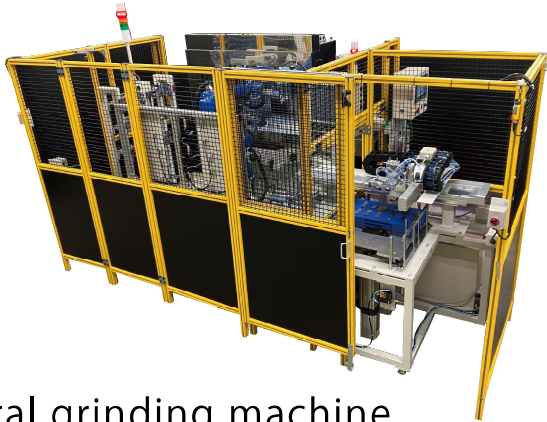


Training schedule

- 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

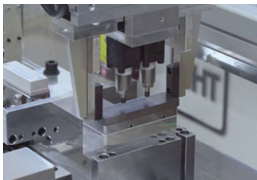


Peripheral grinding machine

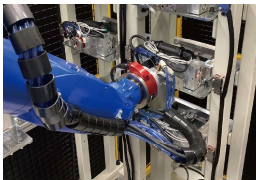
We've automated the workpiece setting process, previously reliant on skilled craftsmen, and now fully automated ultra-precise hexahedral finishing for tooling parts.



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.



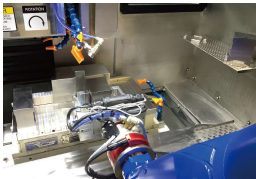
Supports wide sizes
Selects appropriate hands and jigs for the workpiece size



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

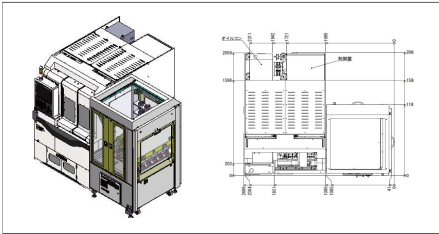


Automates setting
Using a force-sensor-equipped robot, we achieve highly accurate positioning.

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)
	Feed per Dial Revolution	0.1/1/10mm		Machine Weight	1300×2000×2000mm 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



Achieve a higher level of grinding accuracy

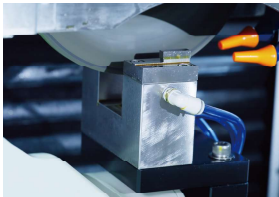


5-axes CNC grinding machine MSG-S500-R'

Ultra-precision large surface grinder MSG-135HG



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.



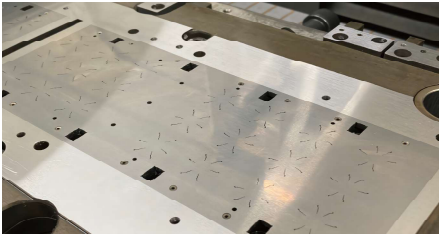
A dedicated CAM system allows for skill-free machining of multi-sided punches and special shapes.
 【Sample】 Design, manufacture and sale of cold forging dies Provided by KFD Co., Ltd.

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:20000rpm
	Maximum Spindle Height	420mm	Motor	Spindle	2.2kW/2P
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.



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	7.5kW/4P V-3
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

Specifications		MSG-200H1-ECO	MSG-250H1-ECO
Capacity	Cross Feed	Manual	Manual
	Vertical Feed	Manual	Manual
	Longitudinal Feed	Servo motor	Servo Motor
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	5~18mm/min	5~15mm/min
	Feed per dial 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 x 60Hz) (OP)	370/440 mm/min	370/440 mm/min
Motor	Size	OD205×W20×D31.75mm	OD205×W20×D31.75mm
	Spindle speed (50Hz x 60Hz)	2900/3460rpm	2900/3460rpm
	Spindle	1.0kW / 2P V3	1.0kW / 2P V3
Power	Table	Servo motor 1.0kW	Servo Motor 1.0kW
	Rapid feed (OP)	60W/4P	60W/4P
	Power supply	3-phase 200/220V 50/60Hz	3-phase 200/220V 50/60Hz
Floor space	Permitted fluctuation	±10%	±10%
	Power requirement (including option accessories)	2kVA	2kVA
	Weight	850kg	1140kg



MSG-200HMD-ECO

*Photo shows optional accessories

Specifications		MSG-200HMD-ECO	MSG-250HMD-ECO
Capacity	Cross Feed	Servo motor	Induction motor
	Vertical Feed	Stepping motor	Stepping motor
	Longitudinal Feed	Servo motor	Servo motor
Table	Table work surface size	350×160mm	480×200mm
	Table movement (Long×Cross)	380×180mm	480×230mm
	Maximum spindle height	450mm	400mm
Cross Feed	Feed per handle revolution	84mm/rev	90mm/rev
	Longitudinal feed rate	5~18mm/min	5~15mm/min
	Feed per dial deviation	3mm	6mm
Head	Feed per dial deviation	0.02mm	0.02mm
	Feed per micro deviation (OP)	0.001mm	0.002mm
	Increment feed	0.5~6.0mm	0.5~6.0mm
Wheel	Continuous feed	50~750mm/min	0.1~1.5m/min
	Feed per handle revolution	2mm	2mm
	Feed per dial deviation	0.005mm	0.005mm
Motor	Automatic down feed	0.001~0.002mm (10 steps)	0.001~0.002mm (10 steps)
	Total grinding Depth	0~99.99mm	0~99.99mm
	Rapid Feed (50Hz x 60Hz)	240mm/min	240mm/min
Power	Size	OD205×W20×D31.75mm	OD205×W20×D31.75mm
	Spindle speed (50Hz x 60Hz)	2900/3460rpm	2900/3460rpm
	Spindle	1.0kW / 2P V3	1.0kW / 2P V3
Floor space	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
Weight	Permitted fluctuation	±10%	±10%
	Power requirement (including option accessories)	5kVA	5kVA
	Machine	1850×1310×1900mm	2300×1350×1750mm

PC-NC Series

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



MSG-818PC-NC



MSG-525PC-NC



MSG-300PC-NCL

*Photo shows optional accessories

Specifications		MSG-818PC-NC	MSG-818PC-NCL
Capacity	Table work surface size	480×200mm	480×200mm
	Table movement (Cross feed)	230mm	230mm
	Table movement (Longitudinal feed)	500mm	500mm
Table	Maximum spindle height	400mm	400mm
	Automatic movement (Average Speed)	0-15mm/min	0-30mm/min
	Feed per handle revolution	88mm/rev	88mm/rev
Cross Feed	Cross feed (One short feed)	5mm	0.01/0.1mm (Switchable)
	Min. feed	0.0001mm	0.0001/0.001mm (Switchable)
	Continuous feed speed	0-330mm/min	0-330mm/min
Head	Min. increment/ Min. resolution	0.0001/0.00001mm	0.0001/0.00001mm
	One short feed	1mm	1mm
	Min. feed	0.0001mm	0.001mm
Wheel	Continuous feed speed	0-330mm/min	0-330mm/min
	Min. increment/ Min. resolution	0.0001/0.00001mm	0.0001/0.00001mm
	Number of spark outs	Program-dependent	Program-dependent
CNC	Size	OD205×W20×D31.75mm	OD205×W20×D31.75mm
	Spindle speed (50Hz x 60Hz)	500-4000rpm (Inverter)	500-4000rpm (Inverter)
	Control axis	3	3
Power	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	2500×1600×1800mm	2500×2200×2250mm
	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
Table	Longitudinal	Feed per handle revolution	100mm
	Feed rate	0-20mm/min	0-30mm/min
	Cross feed (One short feed)	0.5/5mm (switchable)	0.5/5mm (switchable)
Head	Min. feed	0.0001/0.001mm (switchable)	0.0001/0.001mm (switchable)
	Continuous feed speed	0-330mm/min	0-330mm/min
	Min. increment/ Min. resolution	0.0001/0.00001mm	0.0001/0.00001mm
Wheel	One short feed	0.1mm/1mm (switchable)	0.1mm/1mm (switchable)
	Min. feed	0.0001mm/0.001mm (switchable)	0.0001mm/0.001mm (switchable)
	Continuous feed speed	0-330mm/min	0-330mm/min
CNC	Min. increment/ Min. resolution	0.0001/0.00001mm	0.0001/0.00001mm
	Number of spark outs	Program-dependent	Program-dependent
	Size	OD255×W25×D50.8mm	OD255×W25×D50.8mm
Power	Spindle speed (Inverter OP)	500-4000rpm	500-4000rpm
	PC base	Control axis	3
	Simultaneous control axis	2	3
Floor space	Power supply	3-phase 200/220V 50/60Hz	3-phase 200/220V 50/60Hz
	Power requirement	15kVA	15kVA
	Machine	3000×2500×2200mm	3000×2500×2200mm

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

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	Table Speed	1-40m/min.	1-40m/min.
	Continuous speed (10~50%)	10~150mm/min.	10~150mm/min.
	Min. Increment/ Min Resolution	0.001/0.0001mm	0.001/0.0001mm
Cross Feed	Manual	Feed per dial revolution	0.01/0.1/1mm
	Continuous Rate (0~100%)	0.0001/0.001/0.01mm	0.0001/0.001/0.01mm
	Min. Increment/ Min Resolution	0.0001/0.0001mm	0.0001/0.0001mm
Head	Automatic	Speed (configurable)	0-500mm/min.
	Continuous	0-500mm/min.	0-500mm/min.
	Step	0.0001~1.3mm/rev.	0.0001~1.3mm/rev.
Manual	Feed per dial deviation	0.01/0.1/1mm	0.01/0.1/1mm
	Feed per dial deviation	0.0001/0.001/0.01mm	0.0001/0.001/0.01mm
	Continuous Rate (0~100%)	0-500mm/min.	0-500mm/min.
Wheel	Min. Increment/ Min Resolution	0.0001/0.0001mm	0.0001/0.0001mm
	Speed (configurable)	0-500mm/min.	0-500mm/min.
	Continuous	0-500mm/min.	0-500mm/min.
Increment	Increment	0.0001~1.3mm/rev.	0.0001~1.3mm/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		MSG-300PC-NCL
Capacity	Table work surface size	610×300mm
	Table movement (Long×Cross)	740×350mm
	Maximum spindle height	620mm
Table	Longitudinal (In Auto Operator)	0-20mm/min
	Feed per Revolution	0.1/1/10mm switch
	Min. Feed	0.001/0.01/0.1mm switch
Cross Feed	Continuous Feed Rate	0-3700mm/min
	Min. increment	0.001mm
	Min. resolution	0.0001mm
Head	Feed per Revolution	1mm
	Min. Feed	0.0001mm
	Continuous Feed Rate	0-500mm/min
Wheel	Max. Rapid Speed	1000mm/min
	Min. resolution	0.0001mm
	Min. resolution	0.0001mm
Motor	Feed per Revolution	1mm
	Min. Feed	0.0001mm
	Continuous Feed Rate	0-500mm/min
Guide Surface + Drive	Max. Rapid Speed	1000mm/min
	Min. increment	0.0001mm
	Min. resolution	0.0001mm
CNC	Spindle speed (Inverter)	500-2000rpm
	Size	OD305×W50×D76.2mm
	Spindle	3.7kW/4P
Power	Cross Feed	0.4kW
	Spindle	0.75kW (with brake)
	Table	Coreless type linear motor 3kw
Air Requirement	Longitudinal	Linear guide + linear motor
	Cross feed	Linear guide + ball screw
	Vertical Feed	Linear guide + ball screw
Floor space	NC System	PC + motion control board
	Control System (Vertical)	Full closed loop
	Control System (Cross)	Full closed loop
Weight	Control axis	3 axes
	Power Supply	3-phase 200/220V
	Permitted fluctuation	±10%
Weight	Power requirement	18kVA
	Linear Motor Cooling Spindle Air Purge	200L/min
	W×L×H	3210×2740×2210mm

Specifications		MFG-PCNCL-R*
Capacity	Table work surface size	200×480mm
	Table movement (Long×Cross)	550×230mm
	Maximum spindle height	350mm
Table	Automatic Longitudinal Feed	0-40mm/min
	Feed per dial revolution	0.1/1/10mm
	Feed per dial deviation	0.001/0.01/0.1mm
Cross Feed	Continuous feed (0~150%)	50~1000mm/min
	Feed per dial deviation	0.01/0.1/1mm
	Continuous feed (0~150%)	0.0001/0.001/0.01mm
Head	Min. increment	0-1000mm/min
	Min. increment	0.001mm
	Feed per dial deviation	0.01/0.1/1mm
Wheel	Feed per dial deviation	0.0001/0.001/0.01mm
	Continuous feed (0~150%)	0-1000mm/min
	Min. increment	0.0001mm
CNC	Size	OD180×W113×D131.75mm
	Spindle Speed (Air Spindle, Inverter)	0-8000rpm
	NC System	FANUC 16i-AMB
Power	Power supply	3-phase 200/220V 50/60Hz
	Power requirement	14kVA
	Machine	2640×2300×2400mm
Floor space	Optional accessories	2640×3000×2400mm
	Machine	3500kg

M series (Hand feed)

Precision forming grinding machine

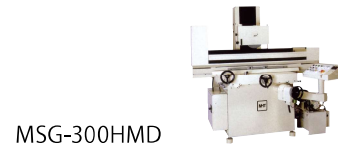


※Photo shows optional accessories

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	0.02mm	0.02mm
Cross Feed	Feed per micro deviation (OP)	0.001mm	0.002mm
	Feed per handle revolution	2mm	2mm
	Feed per dial deviation	0.005mm	0.005mm
Head	Feed per micro deviation (OP)	0.001mm	0.001mm
	Rapid Feed (50Hz×60Hz)(OP)	370/440mm/min.	370/440mm/min.
	Size	OD205×W20×ID31.75mm	OD205×W20×ID31.75mm
Wheel	Spindle speed (50Hz×60Hz)	2,900/3,460rpm	2,900/3,460rpm
	Power Supply	Machine 3-phase 200/220V 50/60Hz	Machine 3-phase 200/220V 50/60Hz
	Mag. Chuck & Light	Single phase 100V 50/60Hz	Single phase 100V 50/60Hz
Power	Permitted fluctuation	±10%	±10%
	Requirement (Including optional accessories)	1.5KVA	1.5KVA
	Floor space W×L×H	1480×1180×1800mm	1850×1310×1750mm
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	610×350mm	800×400mm
	Table movement (Long×Cross)	740×350mm	900×440mm
	Maximum spindle height	620mm	590mm
Table	Table speed	10-22m/min	5-22m/min
	Feed per handle revolution	6mm	6mm
	Feed per dial deviation	0.02mm	0.02mm
Cross Feed	Increment feed	0.5-12mm	0.2-10mm
	Continuous feed	0.1-2.4m/min	0.2-3m/min
	Feed per handle revolution	2mm	2mm
Head	Feed per dial deviation	0.005mm	0.005mm
	One short feed	0.002mm/0.009mm (Per 2mm)	0.001mm/0.009mm
	Total grinding Depth	0-99.999mm	0-99.999mm
Wheel	Number of spark outs	0-10 times	0-10 times
	Rapid Feed (50Hz×60Hz)	240mm/min.	180mm/min.
	Size	OD305×W32×ID76.2mm	OD305×W32×ID127mm
Power	Spindle Speed (50Hz×60Hz)	1430/1730rpm	1430/1730rpm
	Power Supply	Machine 3-phase 200/220V 50/60Hz	Machine 3-phase 200/220V 50/60Hz
	Mag. chuck & Light	Single phase 100V 50/60Hz	Single phase 100V 50/60Hz
Floor space	Permitted fluctuation	±10%	±10%
	Power requirement (optional accessories)	7KVA	7KVA
	W×L×H	2755×1931×1990mm	3600×2300×2095mm
Weight	Main unit	204kg	380kg
	Hydraulic tank	60kg	150kg



MSG-250HMD

※Photo shows optional accessories

Specifications		MSG-200HMD	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)	380×200mm	480×200mm
	Maximum spindle height	450mm	400mm
Table	Feed per handle revolution	84mm/rev	90mm/rev
	Table speed	5-30m/min.	5-20m/min.
	Feed per handle revolution	3mm	6mm
Cross Feed	Feed per dial deviation	0.02mm	0.02mm
	Feed per micro deviation(OP)	0.001mm	0.002mm
	Increment feed	0.5-6.0mm	0.5-6.0mm
Head	Continuous feed	0.1-0.5m/min.	0.1-1.5m/min.
	Feed per handle revolution	2mm	2mm
	Feed per dial deviation	0.005mm	0.005mm
Wheel	Automatic down feed	0.001-0.02mm (10 steps available)	0.001-0.02mm (10 steps available)
	Total grinding Depth	0-99.999mm	0-99.999mm
	Rapid Feed (50Hz×60Hz)	240mm/min.	240mm/min.
Power	Size	OD205×W20×ID31.75mm	OD205×W20×ID31.75mm
	Spindle Speed (50Hz×60Hz)	2,900/3,460rpm	2,900/3,460rpm
	Power Supply	Machine 3-phase 200/220V 50/60Hz	Machine 3-phase 200/220V 50/60Hz
Floor space	Mag. chuck & light	Single phase 100V 50/60Hz	Single phase 100V 50/60Hz
	Permitted fluctuation	±10%	±10%
	Power requirement (optional accessories)	5KVA	7KVA
Weight	W×L×H	1480×1180×1750mm	2300×1350×1750mm
	Machine	980kg	1250kg
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
Table	Feed per handle revolution	84mm/rev	90mm/rev
	Longitudinal feed rate	5-30m/min.	5-20m/min.
	Feed per handle revolution	3mm	6mm
Cross Feed	Feed per dial deviation	0.02mm	0.02mm
	Feed per micro deviation(OP)	0.001mm	0.002mm
	Feed per handle revolution	2mm	2mm
Head	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.
Wheel	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
Motor	Hydraulic pump	0.4kw/4P	0.4kw/4P
	Fast feed (OP)	60W/4P	60W/4P
Power	Power Supply	Machine 3-phase 200/220V 50/60Hz	Machine 3-phase 200/220V 50/60Hz
	Mag. chuck & Light	Single-phase 100V 50/60Hz	Single-phase 100V 50/60Hz
	Permitted fluctuation	±10%	±10%
Floor space	Power requirement (Including optional accessories)	2KVA	2KVA
	W×L×H	1480×1180×1850mm	1900×1310×1750mm
	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	610×350mm	800×400mm
	Table movement (Long×Cross)	480×220mm	740×350mm	900×425mm
	Maximum spindle height	400mm	400mm	590mm
Table	Feed per handle revolution	90mm/rev	85mm/rev	100mm/rev
	Table speed	5-20m/min.	10-22m/min	5-22m/min
Cross Feed	Feed per handle revolution	6mm	6mm	6mm
	Feed per dial deviation	0.02mm	0.02mm	0.02mm
	Feed per micro deviation (OP)	0.002mm	OP	OP
Head	Increment feed	0.5-6.0mm	0.5-12mm	0.2-12mm
	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
Wheel	Feed per dial deviation	0.005mm	0.005mm	0.005mm
	One short feed	0.0001/0.001/0.01mm	0.0001/0.001/0.01mm	0.0001/0.001/0.01mm
	Automatic down feed	0.0001-0.0999mm	0.0001-0.0999mm	0.0001-0.0999mm
Wheel	Total grinding Depth	0-99.999mm	0-99.999mm	0-99.999mm
	Rapid Feed (50Hz×60Hz)	120mm/min.	240mm/min	180mm/min
	Size	OD205×W32×ID31.75mm	OD305×W32×ID76.2mm	OD355×W32×ID127mm
Motor	Spindle Speed (50Hz×60Hz)	3460rpm	1730rpm	1730rpm
	Inverter (OP)	500-4000rpm	500-2000rpm	500-2000rpm
	Spindle	1.5kw/2P V-3	3.7kW/4P	3.7kW/4P
Power	Hydraulic pump	0.75kW/4P	0.75kW/4P	2.2kW/4P
	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
Floor space	Permitted fluctuation	±10%	±10%	±10%
	Power requirement (Including optional accessories)	8KVA	12KVA	15KVA
	W×L×H	2325×1857×1750mm	2764×2244×1990mm	4140×2700×2095mm
Weight	Machine	1350kg	2040kg	3800kg
	Hydraulic tank	100kg	60kg	150kg