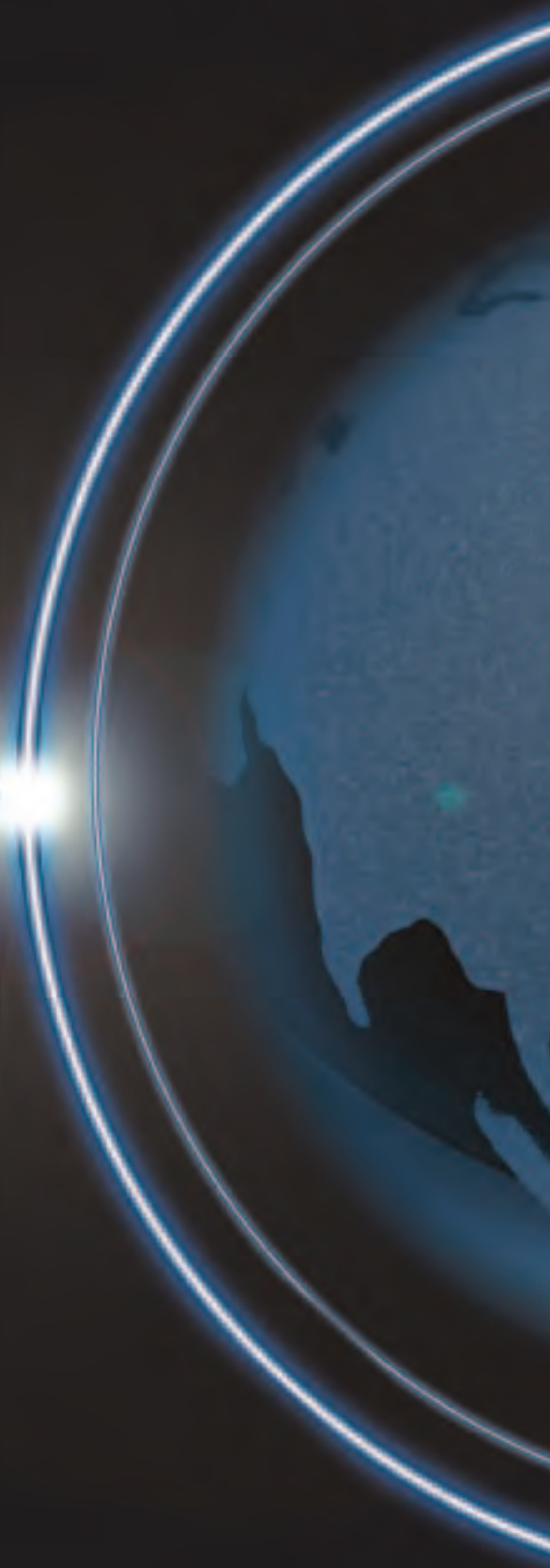
PC-NC Series

618PC-NC
818PC-NC
525PC-NC
300PC-NC



Mitsui High-tec Inc.

618PC-NC／818PC-NC Series

MSG-618PC-NC／818PC-NC made it possible to meet every customer's need by developing PC controlled NC grinding machines based on the best seller MSG-250M (all manual type) and mounting unique machining software.
The manual grinding function is kept as is and is widely used by experts and beginners.

Table belt driven type — 618PC-NC

Table linear motor driven type — 618PC-NCL

Mounting linear motor to table movement has enabled high-speed inversion in short strokes, cutting down the grinding time. Table high-speed positioning precision ±1μm has been achieved.

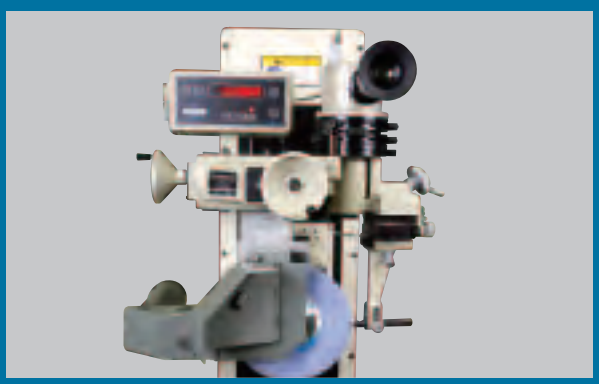
- Table speed：1-30m/min.
  (Previously 1-15m/min.)
- Control axis：3 axes
  (3 simultaneous axes available)

Table belt driven type
818PC-NC

Table linear motor driven type
818PC-NCL

- Table speed : 1-30m/min.
  (Previously 1-15m/min.)
- Control axis : 3 axes
  (3 simultaneous axes available)

Round Punch & Elliptical Punch can be done by NC Index device



Optidress E device can be mounted.

525PC-NC／300PC-NC Series

Table belt driven type — 525PC-NC

Table linear motor driven type — 525PC-NCL

Mounting linear motor to table movement has enabled high-speed inversion in short strokes, cutting down the grinding time. Table high-speed positioning precision ±1μm has been achieved.

- Table speed：1-30m/min.
  (Previously 1-15m/min.)
- Control axis：3 axes
  (3 simultaneous axes available)

Table linear motor driven type

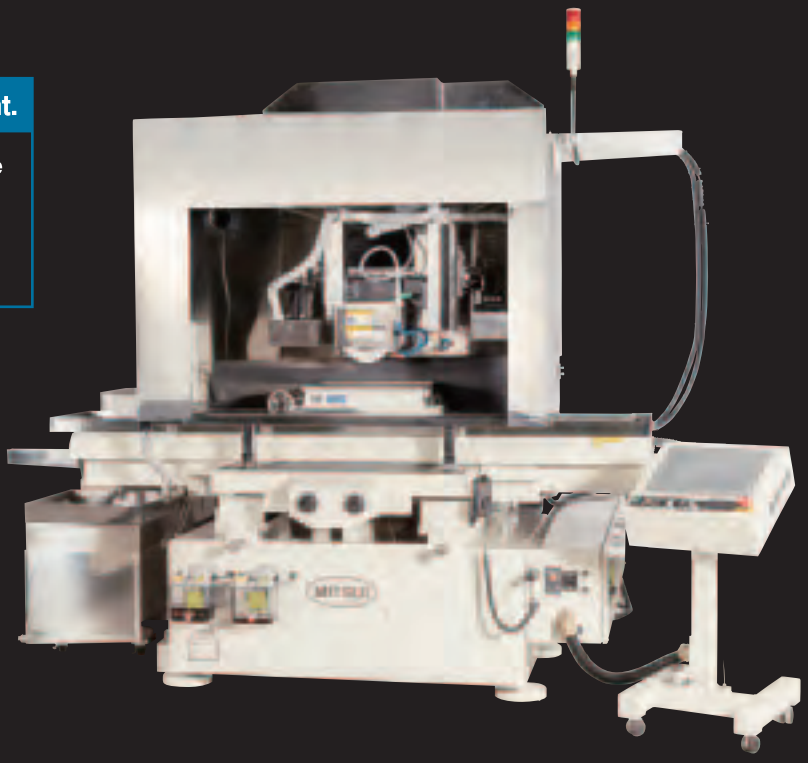
300PC-NC

“Linear motor driven + linear guide” is the standard feature for table movement.

The photo shows optional equipment.

- Semi Full Closed stainless steel enclosure
- Rotary dresser
- Magnet chuck
- Coolant Tank

- Table speed：1-30m/min.
  (Previously 1-15m/min.)
- Control axis：3 axes
  (3 simultaneous axes available)

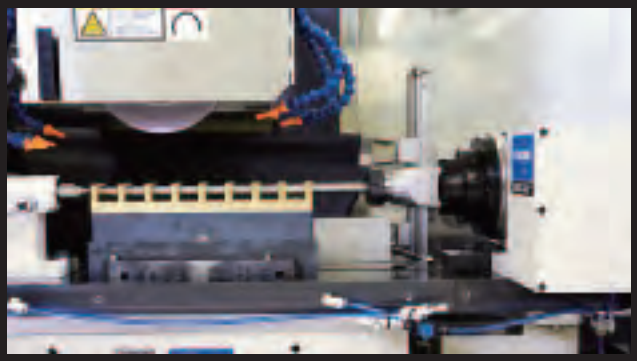


Introduction of various types of attachments

Double index device for 5-axis grinding

Onboard rotary dresser

CCD Camera measurement system



NC index device

PC-NC Series Machine specification list

618PC-NC

	Item		618PC-NC
Capability	Work surface size		480×150mm
	Cross feed travel		180mm
	Longitudinal travel		500mm
	Maximum table to spindle center		400mm
Table	Table speed in automatic operation (Average speed)		0~15m/min
	Revolution of hand wheel		88mm/rev
	Cross feed	Revolution of hand wheel	5mm
		Minimum graduations	0.001mm
		Continuous feed speed	0~330mm/min
	Minimum input increment ※Minimum command increment		0.0001/※0.0001mm
Spindle head	Vertical feed	Revolution of hand wheel	1mm
		Minimum graduations	0.001mm
		Continuous feed speed	0~330mm/min
	Minimum input increment ※Minimum command increment		0.0001/※0.0001mm
	The number of spark out		Depending on program

	Item		618PC-NC
Grinding wheel	OD × W × ID		205×20×31.75mm
	Spindle revolution (50Hz/60Hz)		2900/3460r.p.m
Motor	Spindle		1.0KW/2P
	Cross feed		MR-J2S 0.4KW
	Vertical feed		MR-J2S 0.75KW
	Longitudinal feed		MR-J2S 1.0KW
CNC	PC	Control axis	3
		Number of simultaneous control axes	2
Power supply	Required power supply		3-phase 200/220V
			50Hz/60Hz
	Allowable fluctuation		±10%
	Required power (including the optional electrical magnetic chuck attached)		11KVA
Floor space	W × L × H Including main unit, control box and coolant tank		2550×1600×1800mm
Total weight	Approx.1100kg		

●Full closed loop controlled system (option)

300PC-NC

		300PC-NC
Capability	Travel for cross & longitudinal feed	350×740mm
	Maximum table to spindle center	620mm
	Work surface size (Back/force x right/left)	300×610mm
Longitudinal feed	Table speed (automatic operation)	0-20m/min
	Revolution of hand wheel	0.1/1/10mm
	Minimum graduations	0.001/0.01/0.1mm switching
	Continuous feed speed	0-3000mm/min
	Minimum input increment	0.001mm
	Minimum command increment	0.0001mm
Cross feed	Revolution of hand wheel	1mm
	Minimum graduations	0.0001mm
	Continuous feed speed	0-500mm/min
	Highest instant speed	1000mm/min
	Minimum input increment	0.0001mm
	Minimum command increment	0.0001mm
Vertical feed	Revolution of hand wheel	1mm
	Minimum graduations	0.0001mm
	Continuous feed speed	0-500mm/min
	Highest instant speed	1000mm/min
	Minimum input increment	0.0001mm
	Minimum command increment	0.0001mm

		300PC-NC
Grinding wheel	Spindle revolution	500-4000rpm
	OD × W × ID	φ255×19×50.8mm
	Spindle motor	3.7kw/4P
Motor	Cross feed	0.4kw
	Vertical feed	0.75kw (w/brake system)
	Longitudinal feed	Linear motor 3kw (coreless type)
Guide & drive system	Longitudinal feed	Linear motion guide & linear motor
	Cross feed	Linear motion guide & precision ball screw
	Vertical feed	Linear motion guide & precision ball screw
CNC	NC device	PC + motion control board
	Controlled system (Vertical)	Full closed loop
	Cross feed	Full closed loop
	3 axes	2 axes
Power supply	Required power supply	3-phase 200/220V
	Allowable fluctuation	±10%
	Required power	18KVA
Air supply	Linear motor cooling, spindle air purge	200L/min
Floor space	W × L × H	3210×2740×2210mm
Total weight		Approx.4400kg

818PC-NC

	Item		818PC-NC
Capability	Work surface size		480×150mm
	Cross feed travel		180mm
	Longitudinal travel		500mm
	Maximum table to spindle center		400mm
Table	Table speed in automatic operation (Average speed)		0~15m/min
	Revolution of hand wheel		88mm/rev
	Cross feed	Revolution of hand wheel	5mm
		Minimum graduations	0.001mm
		Continuous feed speed	0~330mm/min
	Minimum input increment ※Minimum command increment		0.0001/※0.0001mm
Spindle head	Vertical feed	Revolution of hand wheel	1mm
		Minimum graduations	0.001mm
		Continuous feed speed	0~330mm/min
	Minimum input increment ※Minimum command increment		0.0001/※0.0001mm
	The number of spark out		Depending on program

	Item		818PC-NC
Grinding wheel	OD × W × ID		205×20×31.75mm
	Spindle revolution (50Hz/60Hz)		2900/3460r.p.m
Motor	Spindle		1.0KW/2P
	Cross feed		MR-J2S 0.4KW
	Vertical feed		MR-J2S 0.75KW
	Longitudinal feed		MR-J2S 1.0KW
CNC	PC	Control axis	3
		Number of simultaneous control axes	2
Power supply	Required power supply		3-phase 200/220V
			50Hz/60Hz
	Allowable fluctuation		±10%
	Required power (including the optional electrical magnetic chuck attached)		11KVA
Floor space	W × L × H Including main unit, control box and coolant tank		2550×1600×1800mm
Total weight	Approx.1100kg		

●Full closed loop controlled system (option)

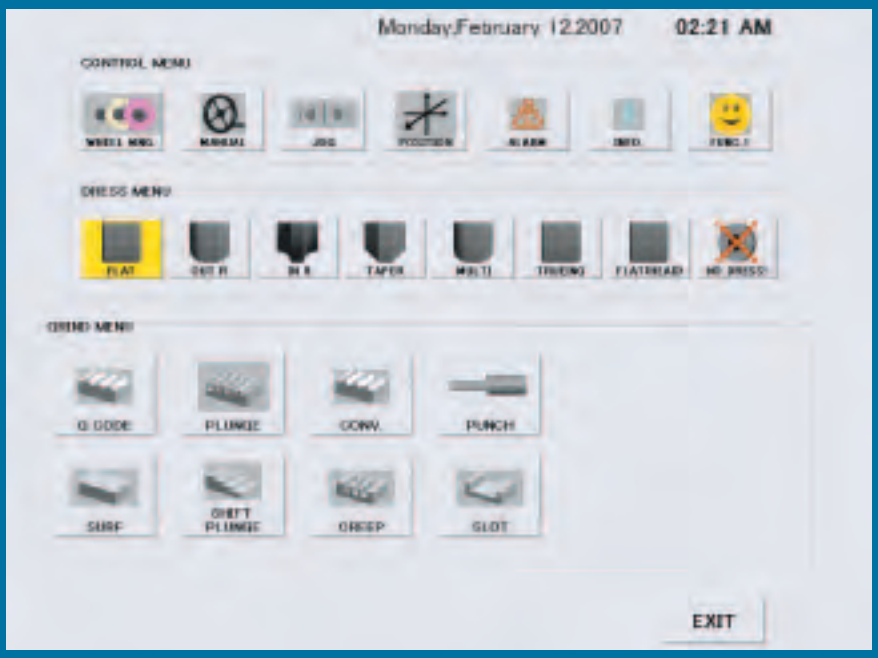
525PC-NC

	Specifications		525PC-NC
Capability	Work surface size		550×250mm
	Travel for cross & longitudinal feed		600 x 280mm (250mm when a tight cover is mounted)
	Maximum table to spindle center		500mm
Table	Longitudinal travel	Revolution of hand wheel	100mm
		Table speed	0~20m/min
	Cross feed	Revolution of hand wheel	0.5/5mm (switching)
		Minimum graduations	0.0001/0.001mm (switching)
		Continuous feed rate	0~330mm/min
	Minimum input increment ※Minimum command increment		0.0001/0.0001mm
Spindle	Vertical feed	Revolution of hand wheel	0.1/1mm (switching)
		Minimum graduations	0.0001/0.001mm (switching)
		Continuous feed rate	0~330mm/min
	Minimum input increment ※Minimum command increment		0.0001/0.0001mm
	The number of spark out		Depending on program
Grinding wheel	OD × W × ID		φ255×19×50.8mm
	Spindle revolution Inverter (OP)		500-4000rpm
Motor	Spindle		2.2kw/2p
	Cross feed		0.5kw
	Vertical feed		0.8kw
	Longitudinal feed		2.9kw
CNC	PC base	Control axis	3
		Number of simultaneous control axes	2
Power supply	Required power supply		3-phase 200/220V 50/60Hz
	Required power		15KVA
Floor space	W × L × H		3000×2500×2200mm
Total weight	Main unit		2300kg

Introduction of grinding software

Various machining software and dressing software are included as standard equipment featuring simple operation.
Our unique software is highly customizable.

Menu screen

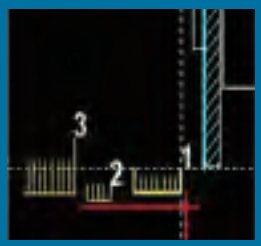


Grinding menu

G code

Flat surface grinding

Slot grinding



Shift plunge grinding setting screen

The position of the grinding wheel and the setting data are always drawn on the monitor that allows you to easily check the operation. It is effective to reduce operation mistakes of an operator.

Dressing screen

You can shape various grinding stones such as concave and convex ones by combining 3-point dressers and rotary dressers. You can input shapes of up to 100 steps in a dialog mode.

Dressing menu

Flat dress

IN-R dress

OUT-R dress

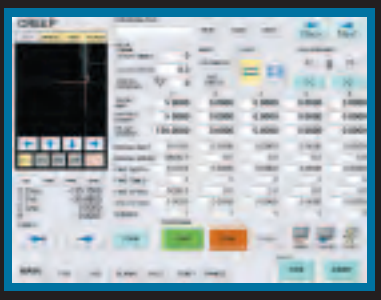
Angle dress

Truing

Multiform dress

Shift plunge grinding

Conversation grinding



Creep-feed grinding

Function to save machining conditions

You can save machining conditions on each dialog screen in a file format. You can implement standardization by saving conditions according to the material and grinding wheel of the grinding work. You can also edit setup files on your PC.

System protection function

The system drive of the PC is locked and will not be damaged by the power failure and sudden shutdown. You can also install an optional anti-virus software.

Introduction of accessories

OPTION 1

3 point dresser (The standard is flat dress only.)

You can always have it ready on the table and easily form sintered grinding wheel using the dressing software on your PC

- IN R dress
- OUT R dress
- Angle dress

Slot grinding by 3 point dressed grinding wheel

OPTION 2

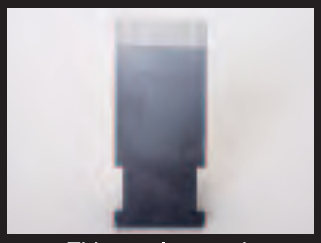
V-R Dresser

You can modify tip of radius for V shaped diamond & CBN wheel in an easy operation by interlocking with the dressing software in MACS (Mitsui Auto Cam System).

OPTION 3

Universal twin rotary dresser

The angle changeable double-side rotary dresser by Mitsui's own design allows you to form thin grinding stone



Thinner slot punch

OPTION 4

NC index device

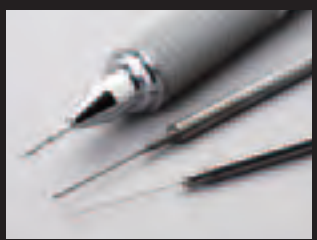
Mounting the device on the magnet chuck enables round pin and elliptic punch grinding.

Elliptic punch grinding sample

OPTION 5

Centerless grinding device

Mounting the device on the magnet chuck allows round pin (cylindrical) grinding.

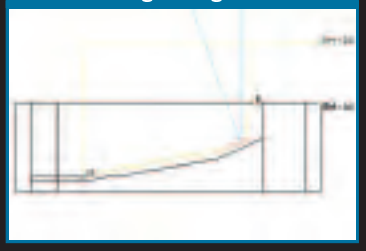


Small diameter round pin cylindrical grinding

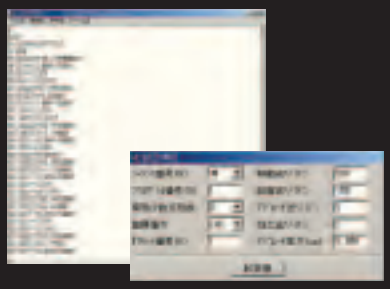
OPTION 6

MACS-2D

Contour grinding function

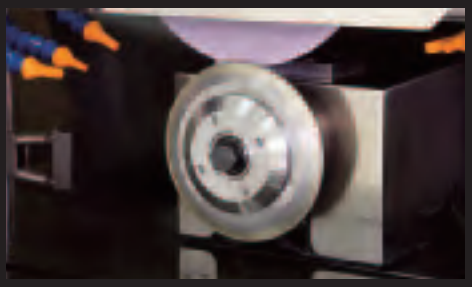


NC conversion



OPTION 7

Onboard rotary dresser



Vertical Rotary Dresser V-125P

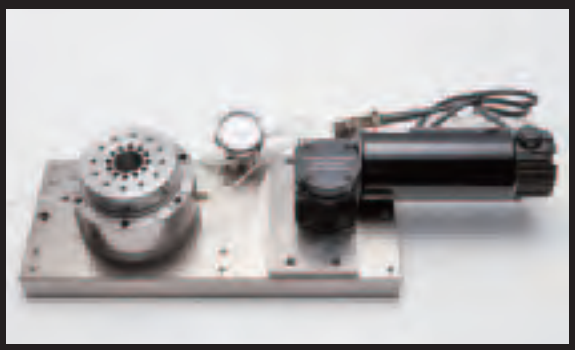
OPTION 8

Onboard auto balancer

It allows balancing the onboard grinding wheel and improves surface accuracy.

Flange corresponding to the balancer

OPTION 9



Air bearing rotary table

It is mounted on the table and allows cylindrical grinding that has never been done by a flat-surface grinding machine.

OPTION 10

CCD Camera measurement system

Shapes up to ±1μm can be measured by an onboard CCD camera.

Customer service
〈Mitsui NC School〉

We set up "Mitsui NC School" with its unique curriculum in response to requests from customers who purchased our NC flat-surface grinding machines. "Mitsui NC School" provides basic courses for NC programming, programming using CAD, and grinding process training. We also set up the same type of school in Shanghai, China and received a high evaluation from our customers.

CUSTOMIZE

We can also provide a customized machine to meet our customer's requests.

We will take our customers' products and machining processes into account and have meetings with them to help them develop their customized machines.

Mitsui High-tec, Inc.
URL http://www.mitsui-high-tec.com/

Mitsui High-tec, Inc. has acquired the certification of the environmental management system ISO14001:2004 in the headquarters and domestic plants.

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●**Overseas Business Office**
Beijing, Milano, Hsinchu, Stuttgart, Casablanca, Chicago, the Philippines

●**Show room**
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The information described in this catalog is as of October, 2012.