

Machine specification

Base machine

Spindle speed range	
Spindle speed range programming	50 to 15.000 min.
Number of spindle speed rangers	1
Type of spindle tool holder	BT 50 (7/24 Taper)
Spindle bearing inner diameter	90 mm.
Spindle drive motor	AC30KW (30 min. rating)
Spindle tool holder	MAS403 P50T- type retention knob
Spindle speed override	setting range: 50 to 120%
Canceling function	M48, M49
Canceling display function	LED display
Spindle orientation	Spindle stops electrically and mechanically
Orientation finish display	LED display
Spindle load meter	% display

Travel

X-axis travel (longitudinal movement of table)	2100 mm.
Y-axis travel (vertical movement of spindle head)	1400 mm.
Z-axis travel (cross movement of column)	1700 mm.
Distance from pallet top to spindle center	Omn to 1400 mm.
Distance from table center to tool gauge line	300 mm. To 2000 mm.

Standard functions and equipment

YASDA MASCOT mini

YASDA self-diagnosis function, signal analysis function and maintenance screen, etc.

Tool management function by tool number max 600 groups

Production control function applicable

Operation condition and amount of machine done

Hydraulic power unit

Pump type variable discharge pump

Pump di scarge 48L/min.

Pump discharge pressure 9Mpa (90kg/cm²)

Motor output 7.5 kw

Reservoir tank capacity 120L

Leveling jack screw

Way protect cover

Slideways automatic lubrication unit

Pump type gear pump

Pump discharge 200 cc/min.

Tank capacity 6L

Auto power off system

Oil-air lubrication system for spindle bearing

Pump type pneumatic drive

Tank capacity	2.7 L
Operation panel	display section: LCD display Operation section: CRT/MDI panel
Spindle speed & tool number indicator	
Manual pendant operation panel box	handle (manual pulse generator)
Earth leakage breaker	available to high frequency
Inductosyn feedback	
Dissambling tool	

Optional functions and devices

The travel extension (corresponding to the large size work)

X travel extension 600 mm.	Total 2100 mm.
Y travel extension 400 mm.	Total 1400 mm.
Z travel extension 300 mm.	Total 1700 mm.
High speed spindle (15.000 min.)	
Type	SA50-15000-30
BIG PLUS system	
Spindle end surface in 1.5 mm forward from the taper gauge line.	
Automatic tool changer unit (ATC system III)	
Type of tool shank	MAS BT 50
Type of retention knob	MAS403 P50T-1
Method of tool selection	Random selection
Tool storage capacity	240
Maximum tool diameter	dia.300 mm.
Milling cutter	dia.200 mm.
T-type boring bar (the cutter direction is specified)	dia.400 mm.
Max tool dia. on full setting	dia 100 mm.
Distance between magazine pots	115 mm.
Maximum tool length	550 mm. (only no.1 magazine) 440 mm. (no.2, no.3, no.4 magazines)
Maximum tool weight	20 kg.
Tool number display	spindle tool/next tool
Tool holder cleaning device	air blow
Manual tool release device (pedal switch)	equipped
Special tool-pots for corresponding to BIG PLUS tools no.1 magazine (60 tools)	
ATC special switching function	
Weight of unit	approx 7.000 kg.

Number of pallets

Pallet working surface	total 5
Pallet surface configuration	1250x1250 mm.
Thickness of pallet	157-M16 tapped holes
Weight of pallet	175 mm.
Edge locator	1400 kg.
Pallet chucking device	equipped

Number of attached pallets	1
Preload stand (PLS)with automatic pallet changer (APC)	

Method pallet change	rotary shuttle
Number of pallet stands	5
Rotation table control	manual
The PLS no.1 and no.5 are for the large size work	
Automatic program search	applicable
Fixture control function	applicable
Operating condition display	applicable by MASCOT
Pallet random selection function	applicable
Auto power source off function	equipped
Display unit	equipped
Area sensor around the stands	equipped
Weight of unit	14.500 kg.
Spindle head oil cooling unit	2
Temperature controller	follow up base temperature type
Cooling capacity: MPSB-15-CE	5200 kw
MPSB-07-H-CE	3200 kw
	Freon gas R22

Refrigerant

Cutting oil unit (AA type)	
Fiat nozzle	6
Pump discharge	40L/min.
Pump pressure	0.3Mpa
Tank capacity	1200L
High pressure coolant unit (for spindle center through coolant)	
Pump pressure	3.5Mpa
Pump discharge	25L/min.
Motor output	3.7 kw
Spindle center through micron fog (M07)	Bluebe
Micron fog coolant (M37)	Bluebe
Oil skimmer device	equipped
Level switch of coolant tank	lower level 1, upper level 2
When the lower limit is detected, the machine becomes FEED HOLD condition.	
When the lower limit is detected, the message is displayed on the CRT display.	

Cutting oil temperature control unit

Oil cooling unit	
Reference temperature follow up type	5°
Cooling capacity	3720W
Refrigerant	Freon gas R22
Sheathed heater	2000W
Ambient temperature	should not exceed 40°C
Pump for pump up	
Pump discharge	50L/min.
Pump pressure	0.3Mpa
Tank capacity	110L
Chip conveyor	TS type

Screw conveyor	TWIN
Control	Auto/manual (CW/stop/CCW)
Automatic running interval	ON: 1 min/OFF: 2 min.
Hinge type chip conveyor and drum type filter	Auto/stop/jog (CW/CCW)
Height of swarf outlet	1504 mm.
Splash guard with automatic door and slide roof	
Door control	automatic and manual
Corresponding to the extended stroke of each axis	
Fluorescent lamp	1
Gyration light	
2 light system	

This is mounted on the splash guard, and APC operator side.
Blinking conditions are as follows.

Spare tool control system (YASDA)

Number of spare tool control	300 groups
Control number in one group: main tool	1 tool
Control number in one group: spare tool	7 tool
Tool life control system (YASDA)	600 tools
Tool life pre-alarm (number of tool)	max 99 hours and 59 min. Max 9999 times
Setting unit of tool life pre-alarm	1 min. or once
Life factor	0.5 to 1.5 in 0.1 increment
Stored tooling content confirmation system (YASDA)	
Stored tooling content confirmation control	400 groups
Part program number	400 pieces
Number of main tool used	total 2000
Auto-measuring system	MP7
Repeated measuring function	max 5 times
Calibration for compensation	applicable
Repeatability of touch probe	0.001 mm.
Total measuring accuracy (under the conditions of no dust)	0.008 mm.
N/C memory used	150 m.
N/C custom macro common variable used	43
N/C registered program used	29
Automatic tool length/radius compensation system & tool breakage sensing system(YASDA)	
Repeated inspecting function	max 5 times
Repeatability of touch sensor	0.001 mm.
Total measuring accuracy (under the conditions of no dust)	0.008 mm.
Compensation range when tool length compensation and tool breakage Sensing are simultaneously performed	5 mm.
Range of cutter compensation	2.5 mm.
N/C memory used	50 m.
N/C custom macro common variable used	31
N/C registered program used	19