



HIGH SPEED BRIDGE TYPE VERTICAL MACHINING CENTER



LBM-2000

EMC/CE/ISO CERTIFIED

HSC

A PROFESSIONAL CNC MACHINES MANUFACTURER

# THE NEWEST EUMACH BRIDGE TYPE VERTICAL MACH IN RIGIDITY, ACCURACY, SPEED AND HEAVY CUTTING

### • Large workpiece load & traverse capacity

2200mm x 1750mm x 650mm traverse, 1750mm twin column distance, 2100mm x 1600mm size with up to 6000kg workpiece load

### Rigid double column bridge type construction

The twin column & bridge is made of one piece Meehanite highest quality casting to ensure its rigidity and reduce vibrations during high speed heavy cutting

### Wide choice of spindles with full power range

Various built-in motor spindle from Standard 18000 RPM, HSK-A63, 78Nm 35kw (S1) up to HSK-A80/100, BT#50 12000 / 10000 RPM 285Nm

## • Advanced latest CNC digital controls

Fanuc 18 i / 31i Heidenhain i TNC-530, Siemens 840D, Selca S4045D/PD





door opening for easy work piece loading & unloading

# INING CENTER NOT ONLY WITH FURTHER INNOVATIONS BUT ALSO FOR TRUE DIE / MOLD EVOLUTION.



#### • THE RIGHT CONTROL IN THE RIGHT POSITION

A swivel control panel located in right side of machine, easily move to the most suitable position to make the operator's job more straight-forward and enhances safety and productivity.

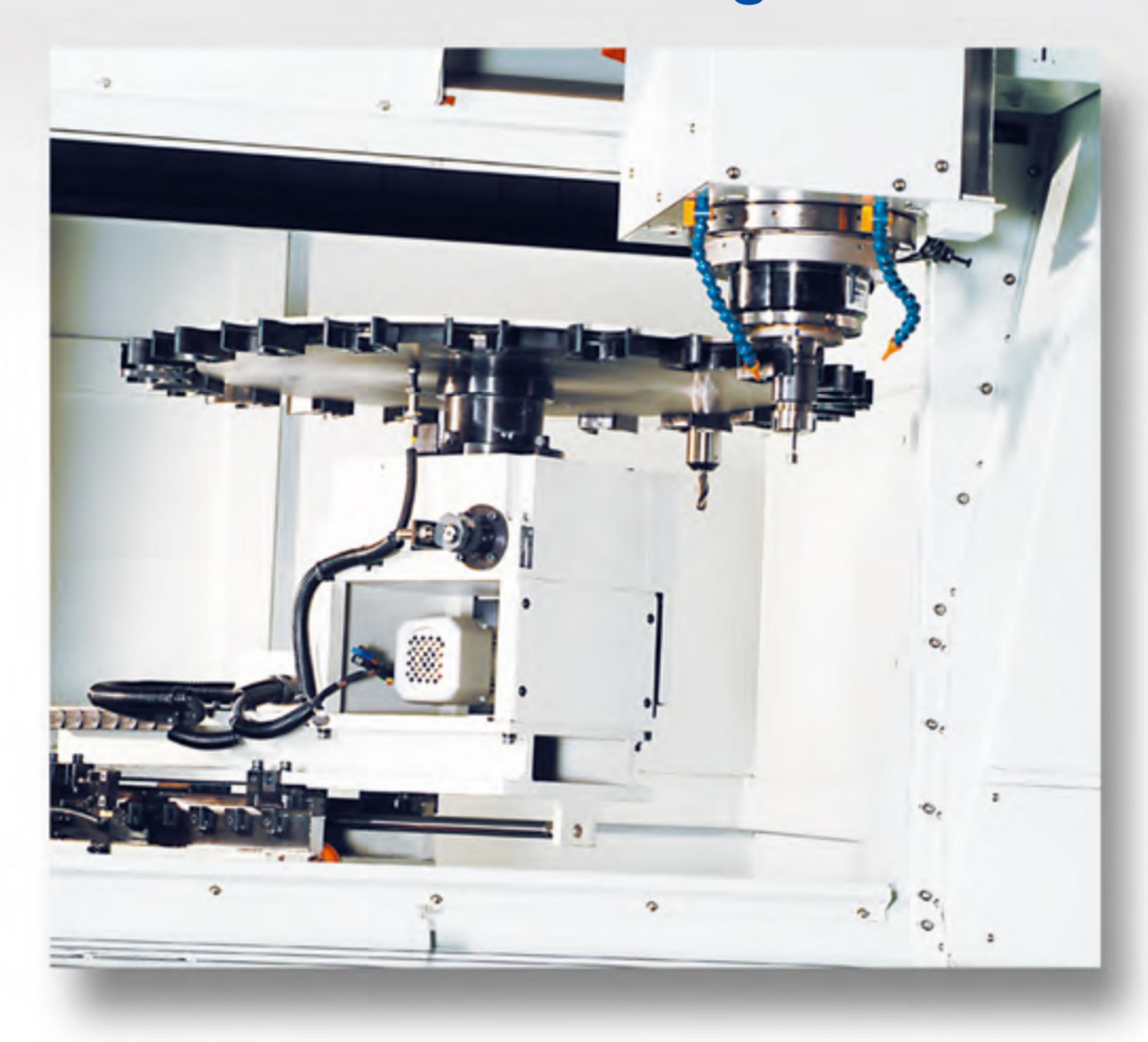
## RIGID OVERALL MACHINE DESIGN & SUPERIOR

## Super wide & high rigid one piece castings twin columns



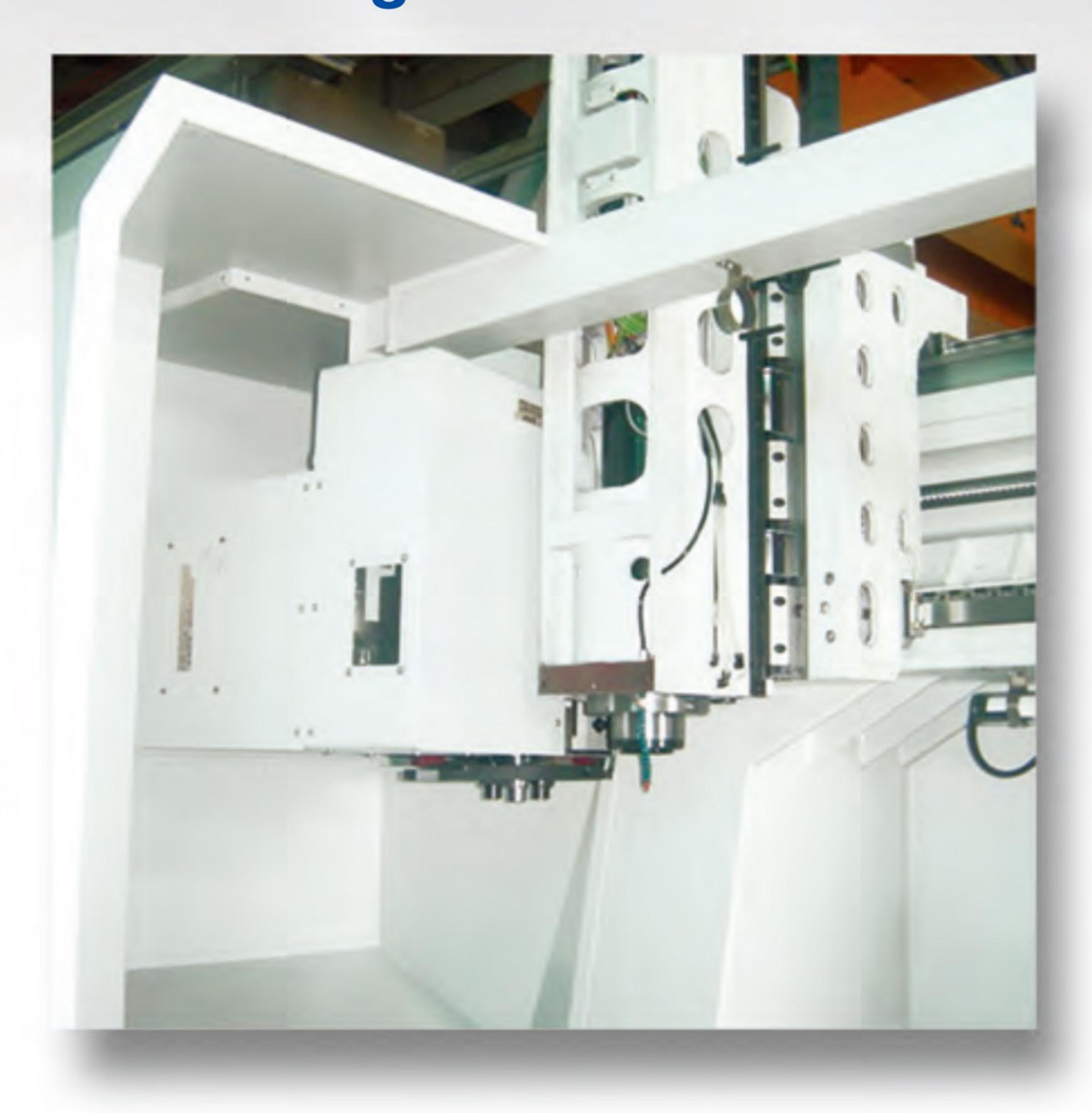
## FEATURES:

#### • Automatic tool changer



A disk type 16 stations automatic tool changer provides as standard

### 0 32 Swing Arm Atc



Double swing arm with 32 stations automatic tool changer provides as optional.

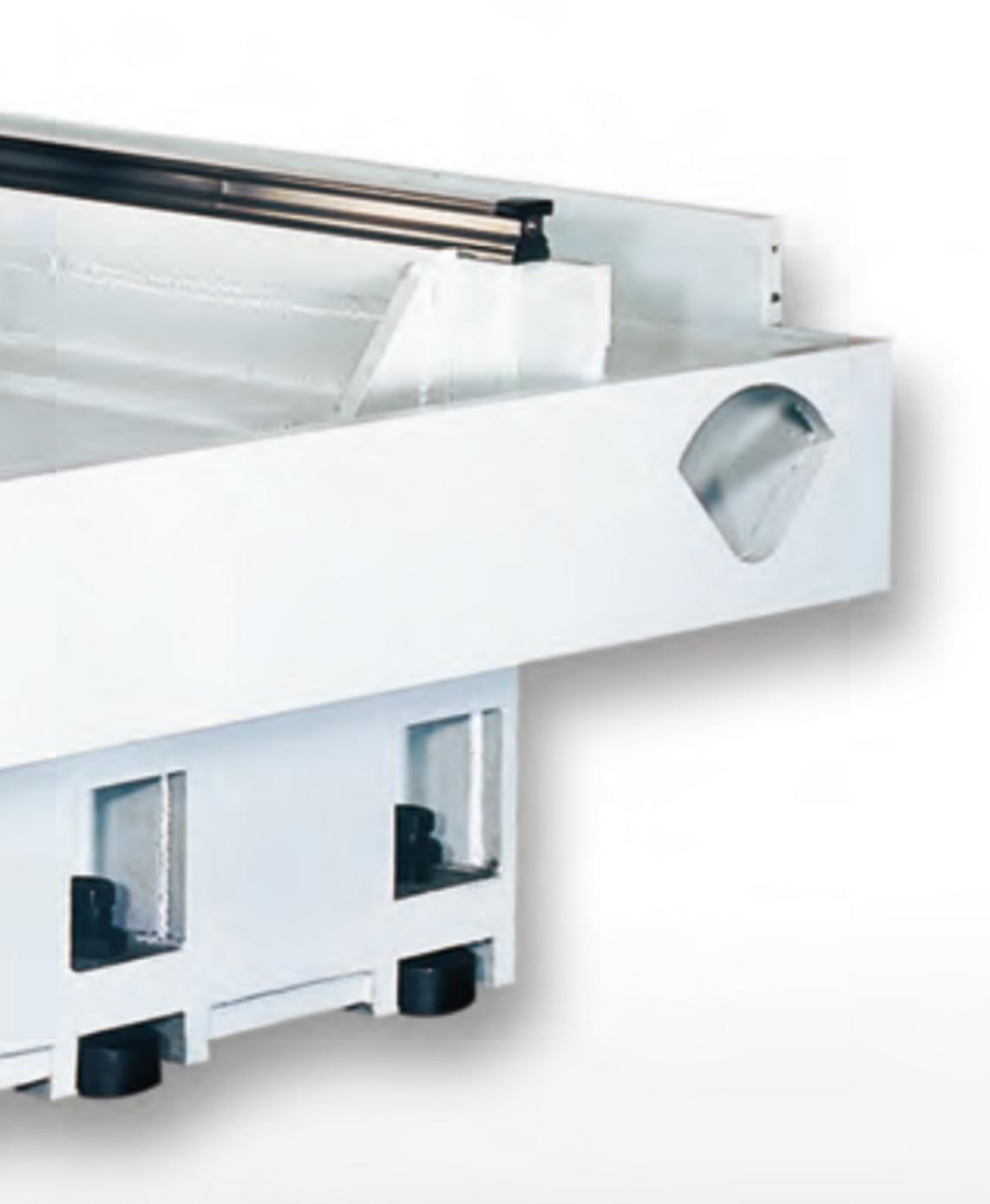


### • Roller guideways & ballscrews

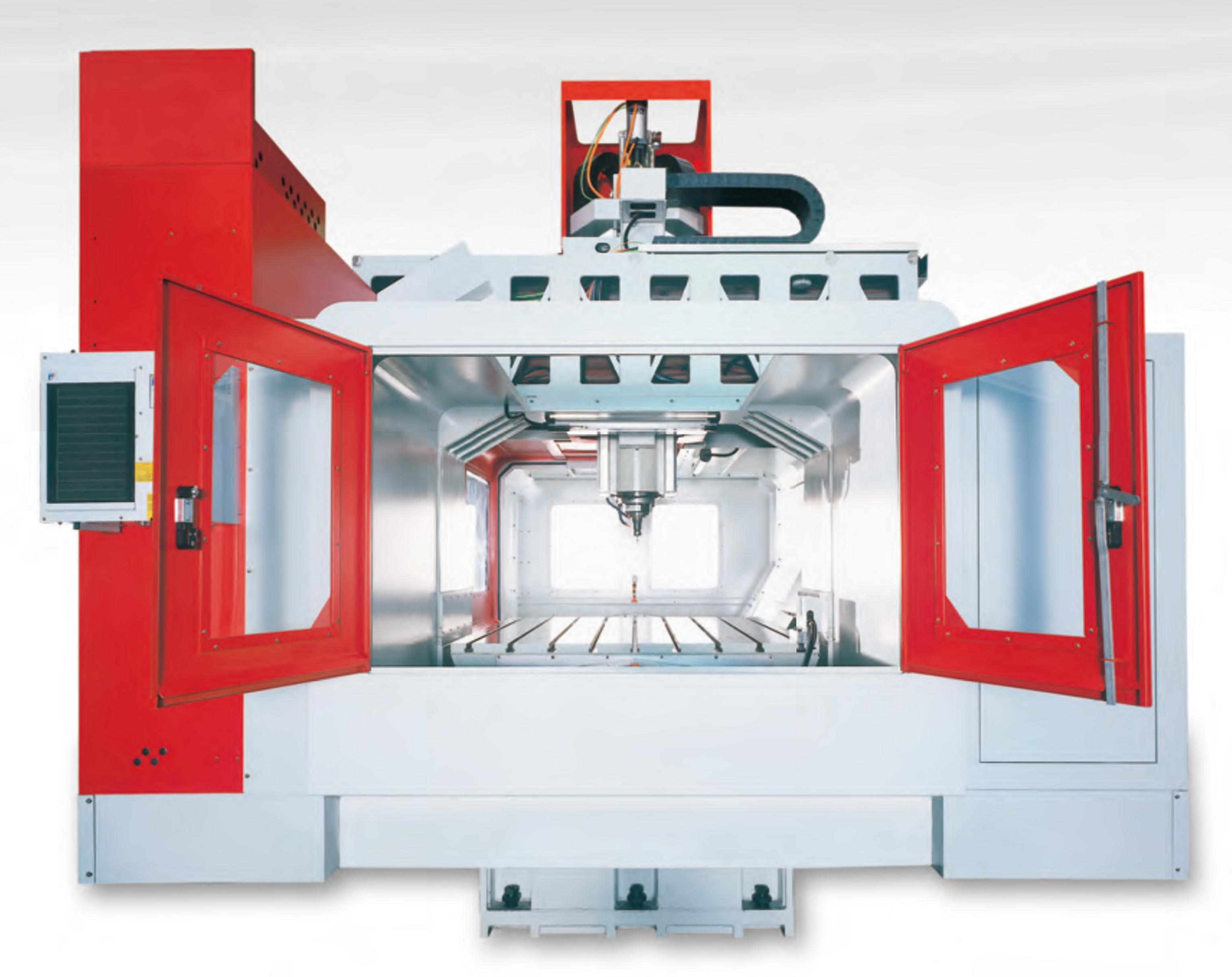
The high rigid & heavy duty roller type linear motion guideways on 3 axes to provide low starting inertia, low friction and high acceleration, rates optimizing servo drive and ensure machine response immediately & precisely for high speed cutting requirements, especially in rapid positioning and contouring cutting.

Note:Both roller guideway blocks & ballscrew nuts have

been oil-air specially cooled, greatly draws heat at high speed transmission.



# USER - FRIENDLY & ERGONOMIC GUARDING DESIGN:



Totally cover rear side with very wide opening twin doors for convenient clean & service.

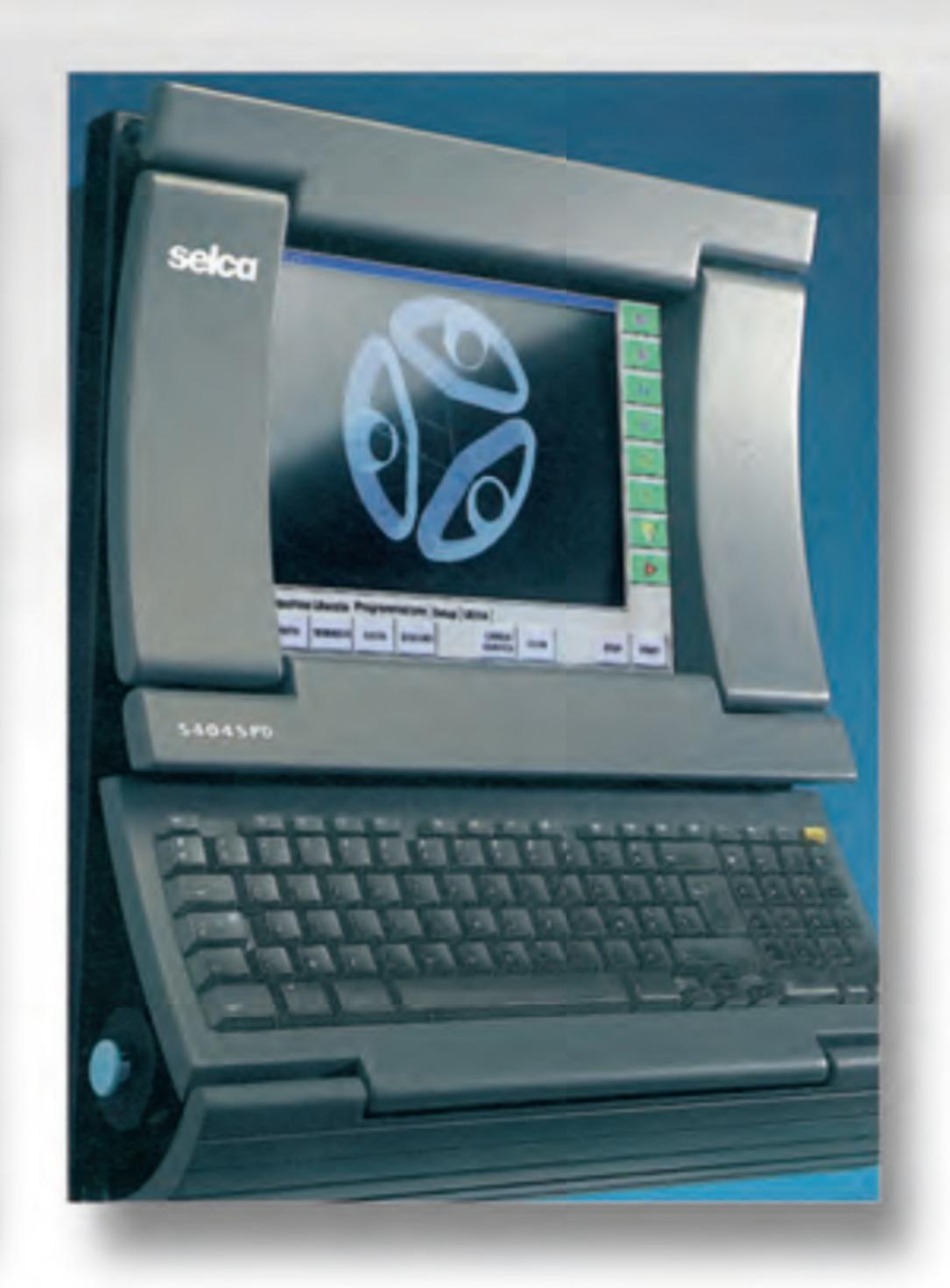


Full cover for all electrics water cooler, transformers, pneumatics etc. for a clean environment & convenient after service.

## THE LATEST DIGITAL CNC CONTROL:









#### Fanuc 18i

- 1. 8.4" color LCD
- 1280m or opt.
   2560m memory
- 3. Hpcc & 600 blocks
- 4. NURBS
- 5. HRV Serro control
- 6. 128MB ATA card (data server) & ethernet

#### Heidenhain i TNC-530

- 1. 15" TFT color
- 2. 6GB memory
- 3. 3.6ms or 0.5ms block processing
- 4. 256 blocks look ahead
- 5. Ethernet

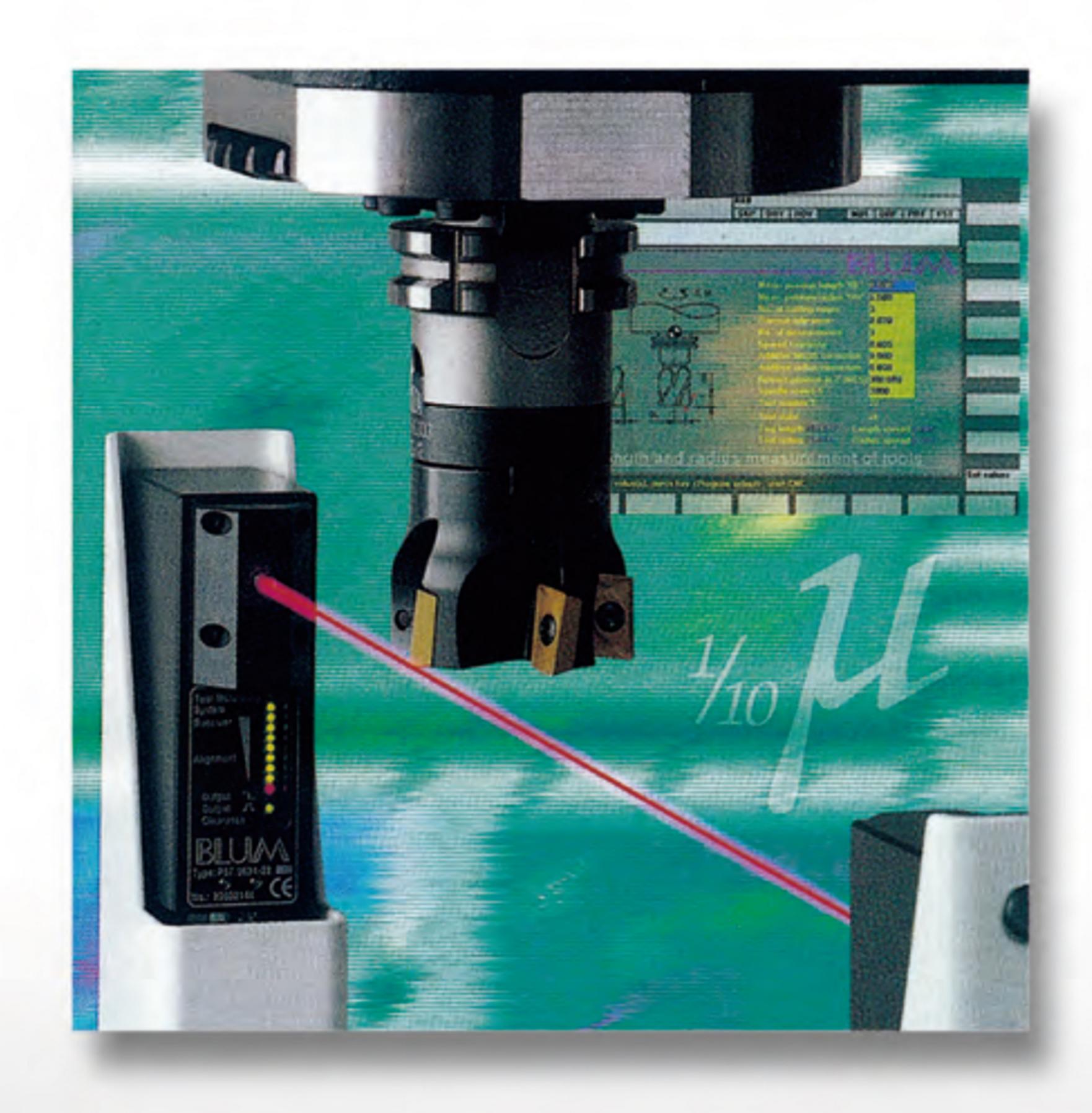
#### Selca 4045PD

- 1. 12" TFT color touch screen
- 2. 6GB hard disk
- 3. Twin cpu (motorola for real time management,PC pentium for operator interface)
- 4. Standard 300 or optional 1000 blocks / sec up to 3000 blocks / sec
- 5. Opt. CD / ROM / Joystick / Ethernet
- 6. 3.5" floppy disk

#### Siemens 840D

- 1. 10.4" TFT COLOR
- 2. 4.2GB hard disk
- 3. 1ms block processing
- 4. 300 blocks look ahead
- 5. Ethernet

## OPTIONAL ACCESSORIES:



1. TOOL LASER MEASUREMENT



- 2. AXIS LINEAR GLASS SCALES
- 3. CNC ROTARY TABLE
- 4. WORKPIECE PROBE
- 5. COOLANT THRU SPINDLE DEVICE
- 6. 10000 RPM BT / CAT#50 TAPER MOTOR SPINDLE HSK-A80 / 100 12000 RPM MOTOR SPINDLE
- 7. 32 SWING ARM ATC

# HIGH SPEED BRIDGE TYPE VERTICAL MACHINING CENTER:

Y AXIS  Z AXIS  650mm head left & right  Z AXIS  650mm head up & down  DISTANCE:  BETWEEN 2 COLUMNS  SPINDLE TO TABLE TOP  254mm ~ 904mm (NOTE)  SPINDLE: see page 5  MOTOR  S1: 35KW / 78 Nm  TAPER  HSK-A63 (BT#40 )  SPEED  18000RPM (14000RPM, 20000RPM)  FEEDRATE:  CUTTING  UP TO 20 M/min  RAPID X / Y / Z  24 / 30 / 30 M/min  MINIMUM SETTING  AUTOMATIC TOOL CHANGER:  NO. OF TOOLS  Carousel armless 16 ( swing arm 32 )  MAX. TOOL DIA. / LENGTH  MAX. TOOL WEIGHT  7 kgs  COOLANT & LUBRICATION:  COOLANT TANK VOLUME  PNEUMATIC REQUIRED  7 kgf / cm²  LUBRICATION TANK  4 Liters  ACCURACY:  POSITIONING  ± 0.005mm / 300mm  REPEATABILITY  0.003mm	MODEL	LBM-2000	
T-SLOT 22mm×9×180mm  MAXIMUM LOADING 6000 kgs  TRAVEL:  X AXIS 2200mm table in & out  Y AXIS 1750mm head left & right  Z AXIS 650mm head up & down  DISTANCE:  BETWEEN 2 COLUMNS 1750mm  SPINDLE TO TABLE TOP 254mm ~ 904mm (NOTE)  SPINDLE: see page 5  MOTOR S1 : 35KW / 78 Nm  TAPER HSK-A63 (BT#40)  SPEED 18000RPM (14000RPM, 20000RPM)  FEEDRATE:  CUTTING UP TO 20 M/min  MINIMUM SETTING 0.001mm  AUTOMATIC TOOL CHANGER:  NO. OF TOOLS carousel armiess 16 ( swing arm 32 )  MAX. TOOL DIA. / LENGTH 80mm / 250mm  MAX. TOOL WEIGHT 7 kgs  COOLANT & LUBRICATION:  COOLANT TANK VOLUME 300 Liters  PNEUMATIC REQUIRED 7kgf / cm²  LUBRICATION TANK 4 Liters  ACCURACY:  POSITIONING ± 0.005mm / 300mm  REPEATABILITY 0.003mm  ROUNDNESS 0.01mm / 300mm DIA.	TABLE:		
MAXIMUM LOADING         6000 kgs           TRAVEL:         X AXIS         2200mm table in & out           Y AXIS         1750mm head left & right           Z AXIS         650mm head up & down           DISTANCE:           BETWEEN 2 COLUMNS           PINDLE TOP           SPINDLE: see page 5           MOTOR         \$1:35KW / 78 Nm           TAPER           HSK-A63 (BT#40)           SPEED           18000RPM (14000RPM, 20000RPM)           FEEDRATE:           CUTTING           UP TO 20 M/min           NO.07 TO 20 M/min           MINIMUM SETTING           AUTOMATIC TOOL CHANGER:           NO.07 TOOLS           Carousel armless 16 (swing arm 32)           MAX. TOOL DIA. / LENGTH           NO. OF TOOLS           CAROUS ARCOURS           NO. OF TOOLS           COOLANT & LUBRICATION:           COOLANT & LUBRICATION:           COOLANT & LUBRICATION:           COOLANT (AUTOME)           NO.05 TOOLS	OVERALL SIZE	2100mm×1600mm	
TRAVEL:  X AXIS  2200mm table in & out  Y AXIS  1750mm head left & right  Z AXIS  650mm head up & down  DISTANCE:  BETWEEN 2 COLUMNS  1750mm  SPINDLE TO TABLE TOP  254mm ~ 904mm (NOTE)  SPINDLE: see page 5  MOTOR  S1: 35KW / 78 Nm  TAPER  HSK-A63 (BT#40)  SPEED  18000RPM (14000RPM, 20000RPM)  FEEDRATE:  CUTTING  UP TO 20 M/min  RAPID X / Y / Z  24 / 30 / 30 M/min  MINIMUM SETTING  O.001mm  AUTOMATIC TOOL CHANGER:  NO. OF TOOLS  carousel armless 16 ( swing arm 32 )  MAX. TOOL DIA. / LENGTH  MAX. TOOL WEIGHT  7 kgs  COOLANT & LUBRICATION:  COOLANT TANK VOLUME  PNEUMATIC REQUIRED  LUBRICATION TANK  4 Liters  ACCURACY:  POSITIONING  E2000 NOTEM (300mm)  REPEATABILITY  0.003mm  ROUNDNESS  0.01mm / 300mm DIA.	T-SLOT	$22\text{mm} \times 9 \times 180\text{mm}$	
X AXIS       2200mm table in & out         Y AXIS       1750mm head left & right         Z AXIS       650mm head up & down         DISTANCE:         BETWEEN 2 COLUMNS         SPINDLE TO TABLE TOP       254mm ~ 904mm (NOTE)         SPINDLE: see page 5         MOTOR       \$1:35KW / 78 Nm         TAPER       HSK-A63 (BT#40 )         SPEED       18000RPM (14000RPM, 20000RPM)         FEEDRATE:         CUTTING       UP TO 20 M/min         RAPID X / Y / Z         AVY / Z       24 / 30 / 30 M/min         MINIMUM SETTING       0.001mm         AUTOMATIC TOOL CHANGER:         NO. OF TOOLS       carousel armless 16 ( swing arm 32 )         MAX. TOOL DIA. / LENGTH       80mm / 250mm         MAX. TOOL WEIGHT       7 kgs         COOLANT & LUBRICATION:         COOLANT TANK VOLUME       300 Liters         PNEUMATIC REQUIRED       7 kgf / cm²         LUBRICATION TANK       4 Liters         ACCURACY:         POSITIONING       ± 0.005mm / 300mm         REPEATABILITY       0.003mm         ROUNDNESS	MAXIMUM LOADING	6000 kgs	
Y AXIS  Z AXIS  650mm head left & right  Z AXIS  650mm head up & down  DISTANCE:  BETWEEN 2 COLUMNS  SPINDLE TO TABLE TOP  254mm ~ 904mm (NOTE)  SPINDLE: see page 5  MOTOR  S1: 35KW / 78 Nm  TAPER  HSK-A63 (BT#40 )  SPEED  18000RPM (14000RPM, 20000RPM)  FEEDRATE:  CUTTING  UP TO 20 M/min  ANIIMUM SETTING  UP TO 20 M/min  MINIMUM SETTING  0.001mm  AUTOMATIC TOOL CHANGER:  NO. OF TOOLS  carousel armless 16 ( swing arm 32 )  MAX. TOOL DIA. / LENGTH  MAX. TOOL WEIGHT  7 kgs  COOLANT & LUBRICATION:  COOLANT TANK VOLUME  PNEUMATIC REQUIRED  7 kgf / cm²  LUBRICATION TANK  4 Liters  ACCURACY:  POSITIONING  \$ ± 0.005mm / 300mm  REPEATABILITY  0.003mm  ROUNDNESS  0.01mm / 300mm DIA.	TRAVEL:		
Z AXIS   650mm head up & down	X AXIS	2200mm table in & out	
DISTANCE:           BETWEEN 2 COLUMNS         1750mm           SPINDLE TO TABLE TOP         254mm ~ 904mm (NOTE)           SPINDLE: see page 5         MOTOR           MOTOR         \$1:35KW / 78 Nm           TAPER         HSK-A63 (BT#40 )           SPEED         18000RPM (14000RPM, 20000RPM)           FEEDRATE:           CUTTING           UP TO 20 M/min           RAPID X / Y / Z           24 / 30 / 30 M/min           MINIMUM SETTING           0.001mm           AUTOMATIC TOOL CHANGER:           NO. OF TOOLS         Carousel armless 16 (swing arm 32)           MAX. TOOL DIA. / LENGTH         80mm / 250mm           MAX. TOOL WEIGHT         7 kgs           COOLANT & LUBRICATION:           COOLANT TANK VOLUME         300 Liters           PNEUMATIC REQUIRED         7kgf / cm²           LUBRICATION TANK         4 Liters           ACCURACY:           POSITIONING         ± 0.005mm / 300mm           REPEATABILITY         0.003mm           ROUNDNESS         0.01mm / 300mm DIA.	YAXIS	1750mm head left & right	
## SPINDLE TO TABLE TOP    SPINDLE: see page 5	ZAXIS	650mm head up & down	
SPINDLE: see page 5         S1:35KW / 78 Nm           MOTOR         S1:35KW / 78 Nm           TAPER         HSK-A63 (BT#40)           SPEED         18000RPM (14000RPM, 20000RPM)           FEEDRATE:           CUTTING         UP TO 20 M/min           RAPID X / Y / Z         24 / 30 / 30 M/min           MINIMUM SETTING         0.001mm           AUTOMATIC TOOL CHANGER:           NO. OF TOOLS         carousel armless 16 (swing arm 32)           MAX. TOOL DIA. / LENGTH         80mm / 250mm           MAX. TOOL WEIGHT         7 kgs           COOLANT & LUBRICATION:           COOLANT TANK VOLUME         300 Liters           PNEUMATIC REQUIRED         7kgf / cm²           LUBRICATION TANK         4 Liters           ACCURACY:         POSITIONING         ± 0.005mm / 300mm           REPEATABILITY         0.003mm           ROUNDNESS         0.01mm / 300mm DIA.	DISTANCE:		
SPINDLE: see page 5           MOTOR         \$1:35KW / 78 Nm           TAPER         HSK-A63 (BT#40 )           SPEED         18000RPM (14000RPM, 20000RPM )           FEEDRATE:           CUTTING           RAPID X / Y / Z         24 / 30 / 30 M/min           MINIMUM SETTING         0.001mm           AUTOMATIC TOOL CHANGER:           NO. OF TOOLS         carousel armless 16 (swing arm 32 )           MAX. TOOL DIA. / LENGTH         80mm / 250mm           MAX. TOOL WEIGHT         7 kgs           COOLANT & LUBRICATION:           COOLANT TANK VOLUME         300 Liters           PNEUMATIC REQUIRED         7kgf / cm²           LUBRICATION TANK         4 Liters           ACCURACY:         POSITIONING         ± 0.005mm / 300mm           REPEATABILITY         0.003mm           ROUNDNESS         0.01mm / 300mm DIA.	BETWEEN 2 COLUMNS	1750mm	
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TAPER	SPINDLE: see page 5		
SPEED         18000RPM ( 14000RPM, 20000RPM )           FEEDRATE:           CUTTING         UP TO 20 M/min           RAPID X / Y / Z         24 / 30 / 30 M/min           MINIMUM SETTING         0.001mm           AUTOMATIC TOOL CHANGER:           NO. OF TOOLS         carousel armless 16 ( swing arm 32 )           MAX. TOOL DIA. / LENGTH         80mm / 250mm           MAX. TOOL WEIGHT         7 kgs           COOLANT & LUBRICATION:           COOLANT TANK VOLUME         300 Liters           PNEUMATIC REQUIRED         7kgf / cm²           LUBRICATION TANK         4 Liters           ACCURACY:         POSITIONING         ± 0.005mm / 300mm           REPEATABILITY         0.003mm           ROUNDNESS         0.01mm / 300mm DIA.	MOTOR	S1:35KW/78 Nm	
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RAPID X / Y / Z         24 / 30 / 30 M/min           MINIMUM SETTING         0.001mm           AUTOMATIC TOOL CHANGER:	FEEDRATE:		
MINIMUM SETTING  AUTOMATIC TOOL CHANGER:  NO. OF TOOLS  Carousel armless 16 ( swing arm 32 )  MAX. TOOL DIA. / LENGTH  MAX. TOOL WEIGHT  COOLANT & LUBRICATION:  COOLANT TANK VOLUME  PNEUMATIC REQUIRED  LUBRICATION TANK  ACCURACY:  POSITIONING  REPEATABILITY  0.003mm  ROUNDNESS  0.01mm / 300mm DIA.	CUTTING	UP TO 20 M/min	
AUTOMATIC TOOL CHANGER:  NO. OF TOOLS  carousel armless 16 ( swing arm 32 )  MAX. TOOL DIA. / LENGTH  80mm / 250mm  7 kgs  COOLANT & LUBRICATION:  COOLANT TANK VOLUME  900 Liters  PNEUMATIC REQUIRED  7kgf / cm²  LUBRICATION TANK  4 Liters  ACCURACY:  POSITIONING  \$\pmathrm{\p	RAPID X / Y / Z	24 / 30 / 30 M/min	
NO. OF TOOLS  carousel armless 16 ( swing arm 32 )  MAX. TOOL DIA. / LENGTH  80mm / 250mm  7 kgs  COOLANT & LUBRICATION:  COOLANT TANK VOLUME  900 Liters  PNEUMATIC REQUIRED  100 Liters  ACCURACY:  POSITIONING  REPEATABILITY  100 Liters  100 Lite	MINIMUM SETTING	0.001mm	
MAX. TOOL DIA. / LENGTH  MAX. TOOL WEIGHT  7 kgs  COOLANT & LUBRICATION:  COOLANT TANK VOLUME  900 Liters  PNEUMATIC REQUIRED  100 Liters  7 kgf / cm²  LUBRICATION TANK  4 Liters  ACCURACY:  POSITIONING  100 LITERS  100 LI	AUTOMATIC TOOL CHANGER:		
MAX. TOOL WEIGHT         7 kgs           COOLANT & LUBRICATION:         300 Liters           COOLANT TANK VOLUME         300 Liters           PNEUMATIC REQUIRED         7kgf / cm²           LUBRICATION TANK         4 Liters           ACCURACY:         + 0.005mm / 300mm           POSITIONING         + 0.005mm / 300mm           REPEATABILITY         0.003mm           ROUNDNESS         0.01mm / 300mm DIA.	NO. OF TOOLS	carousel armless 16 ( swing arm 32 )	
COOLANT & LUBRICATION:  COOLANT TANK VOLUME  PNEUMATIC REQUIRED  Tkgf / cm²  LUBRICATION TANK  4 Liters  ACCURACY:  POSITIONING  EPEATABILITY  ROUNDNESS  0.01mm / 300mm DIA.	MAX. TOOL DIA. / LENGTH	80mm / 250mm	
COOLANT TANK VOLUME  PNEUMATIC REQUIRED  7kgf / cm²  LUBRICATION TANK  4 Liters  ACCURACY:  POSITIONING  **EPEATABILITY*  **O.003mm*  ROUNDNESS  **O.01mm / 300mm DIA.**	MAX. TOOL WEIGHT	7 kgs	
PNEUMATIC REQUIRED  7kgf / cm²  LUBRICATION TANK  4 Liters  ACCURACY:  POSITIONING  ± 0.005mm / 300mm  REPEATABILITY  0.003mm  ROUNDNESS  0.01mm / 300mm DIA.	COOLANT & LUBRICATION:		
LUBRICATION TANK  4 Liters  ACCURACY:  POSITIONING  ± 0.005mm / 300mm  REPEATABILITY  0.003mm  ROUNDNESS  0.01mm / 300mm DIA.	COOLANT TANK VOLUME	300 Liters	
ACCURACY:  POSITIONING ± 0.005mm / 300mm  REPEATABILITY 0.003mm  ROUNDNESS 0.01mm / 300mm DIA.	PNEUMATIC REQUIRED	7kgf / cm <sup>2</sup>	
POSITIONING ± 0.005mm / 300mm  REPEATABILITY 0.003mm  ROUNDNESS 0.01mm / 300mm DIA.	LUBRICATION TANK	4 Liters	
REPEATABILITY 0.003mm ROUNDNESS 0.01mm / 300mm DIA.	ACCURACY:		
ROUNDNESS 0.01mm / 300mm DIA.	POSITIONING	± 0.005mm / 300mm	
	REPEATABILITY	0.003mm	
MACHINE NET WEIGHT 20000 kgs	ROUNDNESS	0.01mm / 300mm DIA.	
	MACHINE NET WEIGHT	20000 kgs	

) options

Note: DISTANCE WILL BE SLIGHTLY DIFFERENT WHEN USING OPTIONAL SPINDLES.

- STANDARD ACCESSORIES
- FULL GUARD WITH ROOF
- ARMLESS ATC
- **6** COOLANT SYSTEM
- 4 SPINDLE AIR BLAST
- 6 AUTO. LUBRICATION

- WORKING LAMP
- ALARM LIGHT
- **10** LEVELLING PADS & BOLTS
- ADJUSTING TOOLS & BOX
- 18000RPM MOTOR SPINDLE & WATER COOLER