

**PHOENIX MACHINE TOOL LIMITED U.S.A.**

**Gantry Machining Center**

**MCU 2000**

*NEW IN 2003*



*First presentation  
EMO Milan*

- ✦ Big working space.
- ✦ Working spindle - max. speed 12 000 rpm; motion in axes X, Y, Z with travel 2 000 x 1 200 mm in horizontal direction and 800 mm in vertical direction.
- ✦ High precision and dynamics of axes X, Y, Z (rapid traverses  $30 \text{ m} \cdot \text{min}^{-1}$ ; acceleration  $5 \text{ m} \cdot \text{s}^{-2}$ ).
- ✦ Table load 12 000 kg.
- ✦ Chain tool magazine - 56 stations; machine may be equipped with two magazines - increase of capacity to 112 stations.
- ✦ Coolant through spindle - 20 bar.
- ✦ Central lubrication.
- ✦ Video system for cut point monitoring on control system panel.
- ✦ Wide opening of the doors - easy access to the working area.
- ✦ Front doors of guard are shifted by means of electrical drives and fitted with protective strips and safety glass.
- ✦ The machine satisfies fully requirements of safety standards valid in EU countries.

TECHNICAL DATA		MCU 2000
<b>TABLE</b>		
Table clamping surface	mm	2 250 x 1 475
T-slots (number x width x spacing)	mm	12 x 18 x 125
Max. weight on table	kg	12 000
<b>WORKING RANGE</b>		
Working travels X/Y/Z	mm	2 000/1 200/800
Gantry pass horizontal (without magazine)	mm	1 800
Gantry pass vertical	mm	1 280
Distance from spindle nose to table clamping surface	mm	200 – 1 000
<b>SPINDLE</b>		
Spindle taper	-	ISO 40
Spindle output	kW	40
Torque	Nm	100
Max. spindle speed	rpm	12 000
Speed change	-	continuous
Front bearing dia.	mm	90
<b>FEED RATE</b>		
Working feed rate X/Y/Z	mm.min <sup>-1</sup>	1 – 15 000
Rapid traverse X/Y/Z	m.min <sup>-1</sup>	30
Acceleration X/Y/Z	m.s <sup>-2</sup>	5
<b>CNC SYSTEM</b>		<b>ACCUPATH IV</b>
<b>TOOL MAGAZINE</b>		
Tool change mode	-	pick up
Magazine capacity	-	56 (112)*
Tool clamping taper	-	ISO 40
Max. tool dia.	mm	110
Max. tool dia. - adjacent stations empty	mm	160
Max. tool length	mm	300
Change time of adjacent tool	s	5
Air working pressure	MPa	0,6
Max. total machine input	kVA	120
Machine dimensions (L x W x H)	mm	5 400 x 5 800 x 4 500
Machine weight	kg	28 000

\* with two tool magazines

#### STANDARD MACHINE VERSION AND ACCESSORIES


- Working spindle - taper ISO 40
- CNC system - ACCUPATH IV
- Digital X, Y, Z feed drives and spindle drive
- Linear scales
- Temperature compensation of supporting frame
- Tool magazine - 56 stations
- Side loading of tool magazine
- Cooling unit for outer tool cooling with filtration
- Programmable cooling nozzle
- Central lubrication
- Chip conveyors
- Working space enclosure
- Working space lighting
- Operating manual

#### SPECIAL ACCESSORIES

- Coolant through spindle - 20 bar
- System of minimum machine lubrication
- Video system for cut point monitoring
- Electronic hand wheel HR 410
- Rotary table (4th controlled axis)
- Rotary and tilting table (4th and 5th controlled axis)
- 3D scanning probe
- Tool probe
- Lifting device

#### SPECIAL MACHINE VERSION ON CUSTOMER'S DEMAND

- Working spindle - taper ISO 50; HSK-A63
- Machine variants - travel in axis X: 3 000 mm; 4 000 mm
- Second tool magazine - 56 stations
- Other voltage than 3x240V; 50Hz

The machine conforms to 

Design and specifications are subject to change without notice.



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