

Vertical
machining center

MC 1040 V



- CNC vertical machining center is designed for machining of flat and box-type workpieces from all kinds of structural materials. Internal and external flat surfaces, round and irregular surfaces can be machined. The machine is determined for milling, drilling, finish boring, reaming and threading. The machine is equipped with digital drives and direct measuring with linear scales to achieve high accuracy during the machining of complex work pieces.



➤ MAIN FEATURES

- Robust castings from grey cast iron for high rigidity achievement
- **Wide working range at minimal floor plan**
- Preloaded linear roller guideways guarantee high precision positioning of working axes
- **Taper shank ISO 40 allows using of wide range of tooling**
- Direct measuring HEIDENHAIN for all axes guarantees dimensions stability and repeatable accuracy of work pieces
- **Laser calibration of a machine during assembly**
- Control system and drives HEIDENHAIN
- **Swivel control panel for comfortable machine control**
- Electrocomponents from reputable European producers
- **Zero loss grease lubrication of ball screws and linear roller guideways**
- Watter proof covers with doors with glass widows
- **Clamping table with five slots**
- Design of the machine meets all safety standards and norms
- **Wide range of optional equipment**



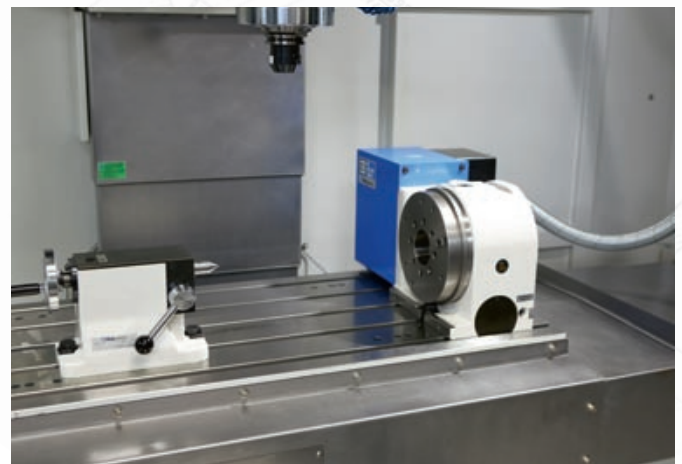
▲ Control system HEIDENHAIN TNC 640



▲ Built-in tool magazine for 24 tools

➤ SPECIAL EXECUTION

- External coolant filtration unit
- **NC rotary table as 4th axis or as 4th and 5th axes**
- Workpiece measurement touch probe HEIDENHAIN
- **Tool measurement touch probe HEIDENHAIN**
- Working space exhaust
- **ZF gear reducer on the spindle motor**



▲ NC rotary table as 4th axis or as 4th and 5th axes

> BASIC EXECUTION

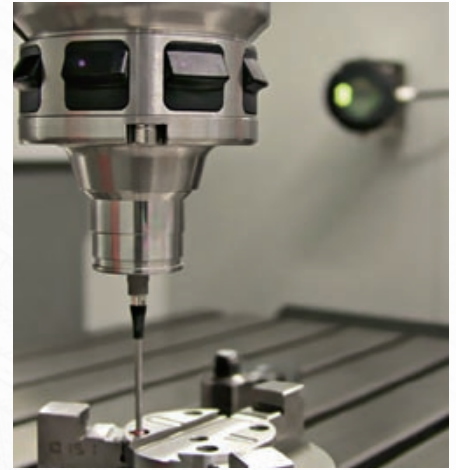
- Control system HEIDENHAIN TNC 640 with cycle programming
- **Programming editor for the creation of the programs with dialog programming support**
- Digital drives HEIDENHAIN
- **Linear measuring HEIDENHAIN for all three axes**
- Hand wheel HEIDENHAIN HR510
- **Spindle speed 12 000 min⁻¹**
- Built-in tool magazine for 24 tools
- **Spindle tube cooled by coolant**
- External cooling of the cutting tools
- **Through spindle cooling of cutting tools with pressure 20 bars**
- Blow-out of cutting tools by air
- **Chip conveyor left or right**
- Hand gun for manual wash
- **Hand gun for blow-out of the work piece**
- Preparation for the probes
- **Preparation for the 4th and 5th axes**
- Operating manual
- **CE execution**



^ Linear measuring HEIDENHAIN



^ Hand wheel HEIDENHAIN HR510



^ Workpiece measurement touch probe HEIDENHAIN



^ External cooling of the cutting tools



^ Chip conveyor left



^ Zero loss grease lubrication

TECHNICAL PARAMETERS

Machine type	Unit	MC 1040 V
Working area		
Table clamping surface	mm	1200×500
T slots number and width	mm	5×18×100
Max. workpiece weight	kg	850
Feeds		
X axis	mm	1040
Y axis	mm	540
Z axis	mm	600
Spindle height from table surface	mm	150–750
Spindle		
Taper shank		ISO 40
Spindle speed	min ⁻¹	12000
Max. spindle torque (S6 – 25 %)	Nm	140
Distance of spindle axis from column	mm	570
Spindle with ZF gear reducer - special execution		
1. step (1:4) spindle speed	min ⁻¹	20 ÷ 1600
torque	Nm	248
2. step (1:1) spindle speed	min ⁻¹	1600 ÷ 8000
torque	Nm	64
Spindle drive		
Main spindle motor (S1/S6 – 40 %)	kW	15/25
Feed speed		
Rapid traverse of X, Z, Y axes	m.min ⁻¹	30/30/25
Working feed	m.min ⁻¹	0,001 ÷ 10
Tool magazine		
Number of tools		24
Max. tool diameter at occupied surrounding magazine tool positions	mm	100
Max. tool diameter at free surrounding magazine tool positions	mm	150
Max. tool length	mm	250
Max. tool weight	kg	6
Positioning accuracy		
X, Y, Z axes positioning accuracy	mm	0,005
X, Y, Z axes repeatable accuracy	mm	± 0,0025
Other		
Coolant pump output	kW	0,75
Air pressure	MPa	0,6
Total machine input	kVA	46
Machine dimensions		
Height	mm	3100
Width	mm	3040
Length with chip conveyor	mm	4160
Machine weight (without equipment)	kg	5600
Control systems		
CNC control system		HEIDENHAIN TNC 640