SMALL MACHINE. GREAT PERFORMANCE.
CONCEPT MILL 55
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This compact milling machine is well suited for CNC training and has almost all the features of an industrial machine: optional with 8-station tool changer with swivel arm and pick-up system, NC indexing device as fourth axis, minimum quantity lubrication and latest state-of-the-art control technology.

1 MAIN DRIVE
- Infinitely variable main drive
- Three-phase asynchronous motor

2 WORK AREA
- Full cover of work area
- Large safety glass window in door
- All-round protection against chips

3 MACHINE BASE
- With removable drawer
- Space for PC tower

4 TOOL CHANGER
- 8 stations
- Swivel arm with pick-up system

5 SWIVEL TABLE
- Extensible drawer for PC keyboard
- Arranged ergonomically

6 MACHINE DESIGN
- Stable, gray cast-iron construction

Bracket
Piston rod
The unique concept of the interchangeable control can be fitted to all Concept machines. In doing so, the user is trained on all CNC industry controls that are common on the market. The result: All CNC technicians can be applied more flexibly. And this is a decisive plus: for qualified employees as well as for the business.

[The interchangeable control]

Optional it is possible to equip the machine with the latest software of the interchangeable control, with which control specific and machine keyboards of the WinNC can be displayed on a 16:9 Full-HD screen – Easy2control. The different panels for machine, control and quick access can be switched via tabs. The buttons and rotary knobs can either be operated by using the mouse or in case a Full HD touchscreen is used directly on the keys and switches on the monitor. To operate the software on the Concept machine a license dongle and a small machine control panel - „Easy2operate“ – is required.

[Easy2control: New operating concept]
**Technical data**

### Work area
- Travel in X longitudinal: 190 mm (7.48")
- Travel in Y latitudinal: 140 mm (5.51")
- Travel in Z vertical: 260 mm (10.24")
- Effective Z-stroke: 120 / *190 mm (4.7 / 7.5")
- Distance spindle nose - table: 77 – 337 mm (3.03 x 13.26")

### Table
- Clamping area (L x W): 420 x 125 mm (16.54 x 4.92")
- Max. table load: 10 kg
- 2 T-slots DIN 650: 11 mm (0.43")
- T-slot spacing: 90 mm (3.54")

### Milling spindle
- Bearing type: roller bearing
- Tool change (Option)
  - No. of tool stations: 8
  - Max. tool weight: 1 kg
  - Max. tool diameter: 40 / *60 mm (1.6 / 2.4")
  - Motion speed tool swivel arm: 10 m/min (0.39 ipm)
  - Tool clamping: automatic

### Milling spindle drive
- Motor power 3 phase asynchronous motor: 0.75 kW
- Speed range: 150 – 3500 rpm
- Max. torque: 3.7 Nm (2.72 ft/lbs)
- Speed with optional engraving spindle: 14000 min⁻¹

### Feed drive
- 3 phase step motor in X / Y / Z axis
  - 0.5 µm / 0.5 µm / 0.5 µm with resolution
- Rapid motion speed and feed rate X / Y / Z
  - 0 – 2 m / min (0 – 78.74 ipm)
- Average positioning variation in
  - 8 µm / 8 µm / 8 µm
- VDI/DGQ 3441 in X / Y / Z
- Feed power X / Y / Z [N]⁺: 800 / 800 / 1000

### Lubrication system
- Guideways: Oil lubrication
- Main spindle bearing service life: Grease lubrication

### Dimensions
- Dimensions W x D x H: 960 x 1000 x 980 mm (37.76 x 39.33 x 38.55")
- Total weight: 220 kg

### Electrical connection
- Voltage supply (adjustable): 1/N/PE [V] 115 / 230
- Admissible voltage fluctuation: +5 / -10 %
- Frequency: 50 / 60 Hz
- Connection value: 0.85 kVA
- Maximum pre-fusing of machine: 12 A
  - * without toolchanger

### EMCO WinNC-controls
- Sinumerik Operate 840D sl / 828D
- Fanuc Series 31i
- Heidenhain TNC 640
- Heidenhain TNC 426/430
- Fagor 8055
- CAMConceopt

### Machine layout

### Power

### Torque diagram