

5-AXIS VERTICAL MACHINING CENTER EMCO MOD.UMILL 750 CNC UNIT SIEMENS 840DSL



TECHNICAL FEATURES

Equipped with a front table support, the Umill 750 - our new universal and vertical CNC machining center - is capable of milling parts featuring an edge size of 530 x 530 x 417 mm and a weight of up to 400 kg using highly precise and highly efficient, simultaneous 5-axis machining. Its compact design in cast iron and welded steel, optimised by FEM analysis, with direct drives in X-Y-Z and standard linear scales among its features, guarantees the maximum in rigidity and thermosymmetry and the highest precision and an excellent surface quality of the workpiece. With its important technological and architectural innovations, the new Umill 750 creates optimum conditions for high-quality production.

TOOL CHANGER

The tool changer of the Umill 750 is a drum magazine for 40 tools. A tool magazine with 60/90 tool stations is available as option. The tools are managed according to the variable tool station coding principle (random), which means that tools are always deposited in the first free magazine station for time reasons. Other tool changer sizes are available upon request.

DIRECT DRIVES

The direct drives in X-, Y- and Z-axis allow to reach high performances in acceleration (6 m/s^2) and in rapid motion speeds (50 m/min). In addition, this ensures maximum precision and high dynamics.

SWIVEL-ROTARY TABLE

The swivel-rotary table has a large clamping area of 750 x 600 mm (29.5 x 23.6") and can bear loads of up to 400 kg (881.8 lb) thanks to the front table support. This makes it possible to simply machine workpieces with an edge size of 530 x 530 x 417 mm (20.8 x 20.8 x 16.4"). The special shape of the table allows the

spindle nose to move closer to the table center. Furthermore, it is prepared for the installation of a rotary coupling with 4 ways through the table plate.

TRAVEL RANGE

With a travel range of +/- 100°, the B-axis provides a larger work area than most products from other manufacturers. The C-axis can be infinitely rotated by 360°.

INTEGRATION INTO THE CONTROL

EMCONNECT offers options for situation-dependent operation. Apps can also be used in parallel with the control system. With optimal integration into the NC control system, EMCONNECT complements the NC control with powerful functions for modern control generations (SIEMENS, HEIDENHAIN). The familiar vision of the machine NC control is maintained at all times.

AN INNOVATIVE CONCEPT

These powerful apps may be used independently from the control, while in the background the machine is busy in the production process. With only one click, you can change at any moment between numerical control and EMCONNECT. This is possible with the help of an innovative and ergonomic control panel, equipped with a modern 22" multi-touch display, an industrial PC with associated keyboard and HMI hotkeys.

CONTROL PANEL AS CENTRAL PLATFORM

With EMCONNECT, the machine control panel becomes a central platform with access to all necessary applications, data and documents. Remote Support, Web Browser and Remote Desktop offer a wide range of connection options, even outside the direct production environment. The optional OPC UA interface allows data exchange with the IT system environment and interaction with other machines for shop floor . automation. In this way, EMCONNECT makes an important contribution to highly efficient machine operation

INNOVATIVE ONLINE SERVICES

With EMCONNECT Digital Services, all interested users have online access to the current status and evaluations of the machine. Automatic notification in the event of malfunctions or machine stoppages and extended diagnostic options for remote maintenance reduce downtimes and machine downtime to a minimum. Integrated maintenance management supports predictive maintenance based on machine utilisation. Thanks to the continuous development of online services, new functions are always available.

EMCONNECT HIGHLIGHTS AND FUNCTIONS

/ Fully networked

Remote access to office computers, web browsers and online services with all applications and users connected

/ Structured

Clear monitoring of the machine state and the production data

/ Customized

Open platform for modular integration of customer-specific applications

/ Compatible

Interface for seamless integration into the operating environment

/ User-friendly

Intuitive and production-optimized touch operation

/ Future-proof

Continuous extensions as well as easy updates and upgrades

TECHNICAL CHARACTERISTICS

TRAVEL AND TOLERANCES

• X axis travel	mm.	750 + 50
• Y axis travel	mm.	610
• Z axis travel	mm.	500
• distance spindle nose - table (min. - max. / motor spindle)	mm.	150-650
• swivel range B-axis	degree	+/- 100°
• range of rotation C-axis (rotary table)	degree	+0/-360°
• positioning accuracy P according to VDI 3441	micron	10
• positioning repeatability Ps according to VDI 3441	micron	4
• positioning accuracy B-axis (tilting)	sec.	+/- 5
• positioning accuracy C-axis (table)	sec.	+/- 5

FEEDS

• rapid feed X/Y/Z axis	mt/min	50
• max. rotational speed B-axis	rpm	50
• max. rotational speed C-axis	rpm	100
• max. feed force X axis	N	5000
• max. feed force Y axis	N	5000
• max. feed force Z axis	N	5000
• max. acceleration X-Y-Z axis	m/sec ²	6

TILTING TABLE

• clamping area	mm.	750x600
• table-floor distance	mm.	805
• number of T slots	n°	7
• pitch of T slots	mm.	75
• width of T slots	mm.	14
• max. workpiece weight (equally distributed)	Kg.	400

SPINDLE

• spindle rotation system	type	electrospindle
• spindle speed	rpm	15000
• max torque	Nm	100
• spindle motor	KW	26

TECNOLOGY - MACHINE TOOLS - CUSTOMER CARE SERVICE

www.olidali.com - info@olidali.com

www.skio.net - info@skio.net

- | | | |
|----------------|----|----|
| ● spindle nose | BT | 40 |
|----------------|----|----|

TOOL MAGAZINE

- | | | |
|---|------|--------|
| ● number of tools in ATC | n° | 40 |
| ● tool change system (with tool change arm) | type | random |
| ● time tool changing (tool to tool) | sec. | 5,4 |
| ● max tool diameter | mm. | 80 |
| ● max tool diameter (without adjacent tool) | mm. | 125 |
| ● max tool length | mm. | 250 |
| ● max tool weight | Kg. | 8 |
| ● total tool weight supported by the magazine | Kg. | 160 |

GENERAL DATA

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|-----------------------|------------|-----------|
| ● coolant tank | Liters | 250 |
| ● flow cooling system | Liters/min | 40 |
| ● air pressure | bar | 6 |
| ● height machine | mm. | 3060 |
| ● floor space | mm. | 2850x3680 |
| ● weight machine | Kg. | 9000 |

STANDARD ACCESSORIES

- CNC Unit SIEMENS SINUMERIK 840DSL
- EMCONNECT communication software
- Tool magazine with tool change arm Random 40 postions
- Chip conveyor chaine type
- RENISHAW electronic probe
- Coolant system
- Coolant through spindle high pressure
- Sliding door safety interlock
- Auto lubrication system
- Pneumatic system
- Tilting rotary table in continuous 4th- and 5th-axis CNC-controlled by the machine
- B-axis tilting device
- C-axis milling table
- Integrated motorized spindle, 15,000 rpm
- Spindle oil cooling system
- Work lamp
- Operator and maintenance manuals
- CNC manuals
- Year of installation 2020