

SCOPE OF DELIVERY

English translation based on the attached Polish source document. This translation preserves the technical parameters and quantities from the original.

Purchase of a factory-new 5-axis machining centre with a milling software module - 1 pc.

The subject of the order is the purchase of a new CNC centre together with a software module - 1 pc., with the following minimum technical parameters:

Assumed technical parameters

1) Main parameters

Number of axes	5
Minimum spindle speed	15,000 rpm
Minimum working feeds	14 m/min
Minimum rapid traverses	30 m/min
Taper	SK40
Tool magazine	min. 30 positions
Working table	min. diameter 400 mm; working range: 600 x 400 mm

2) Detailed parameters

Working travels

- X-axis travel: min. 600 mm
- Y-axis travel: min. 400 mm
- Z-axis travel: min. 400 mm

Tilting and rotary table

- Table surface: min. Ø 400 mm
- Maximum table load: min. 200 kg
- Minimum B-axis tilt range: +120 degrees / -35 degrees
- C-axis rotation: min. 360 degrees
- C-axis rotation type: continuous

Spindle and axis drives

- Tool taper: SK40
- Maximum speed: min. 15,000 rpm
- Drive type: direct drive
- Maximum torque at 2,000 rpm: min. 115 Nm
- Maximum spindle power: min. 20 kW

Working feeds and rapid traverse speeds

- Rapid traverse speed in X, Y and Z axes: min. 30 m/min
- Working feeds in X, Y and Z axes: min. 14 m/min
- Working feeds in B and C axes: min. 160 degrees/s

Tool magazine

- Number of tools in the magazine: min. 30
- Maximum tool diameter, all tools: min. 60 mm
- Tool-to-tool change time: max. 3.5 s

Additional options

- Through-tool coolant: 21 bar
- Belt chip conveyor
- Renishaw measuring probe set: workpiece probe and tool probe
- Additional compressed-air blow-off system for the machining area
- Module accelerating 3D contour machining
- Dynamic zero point tracking for 4- and 5-axis machining

Other

- Machine weight: min. 5,000 kg
- Fanuc or compatible control system. Compatible means based on G-code, i.e. the standardised command language for CNC devices.
- Min. 1 GB built-in memory
- USB and Ethernet ports
- Rigid tapping without a compensation holder

Equipment and tooling

- Oil mist extractor, 1,800 m3/h, HEPA frame, HEPA filter, drain and inlet hose with adapter and clamps, support frame, power cable adapted to the machine, including installation - 1 pc.
- Aluminium pyramid for mounting centric vices on 5-axis machines, 45-degree wall inclination, enabling the simultaneous installation of 3 vices with a length of 200 mm at 120-degree spacing, adapted to the machine table - 1 pc.
- Centric vice, length 200 mm, spacing 176 mm, jaw width 88 mm, precision steel, replaceable Grip-type upper pads, reversible jaws, self-centring capability - 3 pcs.
- Base for mounting a full soft jaw, fastened from below to the above vice, right jaw, width 128 mm - 3 pcs.
- Base for mounting a full soft jaw, fastened from below to the above vice, left jaw, width 128 mm - 3 pcs.
- Full soft jaw screwed to the base jaws, width 128 mm, fastening from below - 6 pcs.
- Zero-Point quick-clamping system mounting plate, max. diameter 420 mm, min. 4 pneumatic adapters, control valve with adapter cleaning system, pull studs included, adapted to the machine - 1 pc.
- Workpiece dovetail clamping fixture, dovetail size 38.1 mm, base diameter 116 mm, clamping height 70 mm, aluminium body, clamping width 50 mm, adapted to a 4-axis table - 3 pcs.

Shrink-fit and tool holders

- Shrink-fit holder 4.5 degrees SK40 69871, diameter 4 mm, length 80 mm, balancing 25.00, G2.5 ADB, clamping accuracy 0.003 mm - 8 pcs.
- Shrink-fit holder 4.5 degrees SK40 69871, diameter 3 mm, length 80 mm, balancing 25.00, G2.5 ADB, clamping accuracy 0.003 mm - 4 pcs.
- Shrink-fit holder 4.5 degrees SK40 69871, diameter 6 mm, length 80 mm, balancing 25.00, G2.5 ADB, clamping accuracy 0.003 mm - 12 pcs.
- Shrink-fit holder 4.5 degrees SK40 69871, diameter 8 mm, length 80 mm, balancing 25.00, G2.5 ADB, clamping accuracy 0.003 mm - 4 pcs.
- Shrink-fit holder 4.5 degrees SK40 69871, diameter 10 mm, length 80 mm, balancing 25.00, G2.5 ADB, clamping accuracy 0.003 mm - 10 pcs.
- Shrink-fit holder 4.5 degrees SK40 69871, diameter 12 mm, length 80 mm, balancing 25.00, G2.5 ADB, clamping accuracy 0.003 mm - 4 pcs.
- Shrink-fit holder 4.5 degrees SK40 69871, diameter 16 mm, length 80 mm, balancing 25.00, G2.5 ADB, clamping accuracy 0.003 mm - 4 pcs.
- Shortened BT40 pull stud, length 0.99 inch, M16, 45 degrees - 80 pcs.
- SK40-1/10-55 ER16 Mini holder, balancing 25.00, G2.5 ADB - 20 pcs.
- Precision ER16 collet set, 10 pcs., max. runout 0.005 mm - 1 set.

Additional requirements

- 24-month warranty for the device.
- Authorised service available in the country.
- Delivery time not longer than 10 weeks from the date of signing the contract with the Ordering Party.