


Complete machine description

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| 1 | 1 | Completely refurbished
vertical CNC-machining centre model FZ 15 KW
Year of construction: 2002, weight: 9.600 kg |  |
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Machine-No. 132-10

Scope of delivery:

Column moving machining centre

with machine bed in mineral cast technique
and workpiece swivel table
Suitable for dry-machining with optimized chip drop
Guideways with long-term-grease lubrication

Drilling capacity in 60 pc.	Ø 36 mm
Tapping capacity	M 24
Milling capacity in steel	250 cm ³ /min

Main Spindle drive with AC-motor

7,5 KW at 100 %
15,0 KW at 10 %
Spindle speed range: 20 - 12.000 rpm - max.95 Nm

Travel:

X-axis	550 mm
Y-axis	400 mm
Z-axis	360 mm with variable tool changing level

Automatic tool changer

Tool places	48
Tool shaft	HSK A63 DIN 69893
Tool-Ø	max. 82 mm
Tool-Ø	
if adjacent places are free	max. 125 mm
Tool length	max. 250 mm
Tool weight	max. 5,0 kg (10,0 kg at reduced chain speed)
Tool changing time	approx. 0,9 s (depends on CNC)
Chip-to-chip-time	approx. 2,4 s (depends on CNC)

Workpiece swivel table 0/180° degrees

with middle partition of sheet steel
clamping surface 2 x 660 mm x 400 mm²
with thread and locating hole grid M16 x ø 15 H7 x 50 mm
workpiece swivel time appr. 2,4 s depends on the weight, self-regulating by self-learning speed control
table loading capacity per side 0 – max. 300 kg
max. 100 kg weight difference between both table sides

AC-servo motors for x-, y- and z-axes

digital direct drives with indirect absolute path measuring system
rapid traverse in all axes 60 m/min.
acceleration: 0,5 g in X-axis
1,0 g in Y-axis
1,2 g in Z-axis

Remark:

With normal conditions the machine does not have to be anchored to the floor.
(For slippery floors we recommend anchoring.)

FANUC 18 i - 3-axes continuous path control

9.5" LCD monochrom screen
memory capacity 512 KB (max. expansion to 1,5 MB)
drilling cycles G81-G89
absolute path measuring system
M- and T-functions
circular interpolation (360 degrees)
re-start into program
makro B sub-routines
look ahead
simultaneous programming
automatic corner override
99 tool offsets
cutter radius - contour compensation
6 zero shifts G54-G59
metric/inch switch
3 D-interpolation/helical interpolation
S-analogue
rigid tapping
orientated spindle stop
Slot for PCMCIA memory card
Interface RS 232C on the side at the control panel
software-limitswitch
NC-diagnosis
machine diagnosis

Pos.	Qty.	Article Description	Price / €
		FANUC Tool lifetime control with: tool place organization sister tool organization	
		Working hours and piece counter in the screen	
		Socket 230 V at control panel	
		Cabinet cooler as a door mounting unit	
		Machine enclosure with loading door, electrically interlocked, 2200 mm high above floor, incl. machine lamp service friendly with removable side walls vertical bellows	
		Coolant Unit with Chip conveyor (scratch band) discharge height 1050 mm, lateral discharge tank capacity 100 ltr, pump capacity 150 ltr/min at 2,0 bar	
		Mini-operating panel with start and receipt push buttons, for pallet recognition M61/M62	
		Installation elements	
		Wash gun	
		Thermocontrol	
		Coolant equipment tank capacity 900 ltr., pump capacity 200 ltr/min at 2,0 bar (the pump in the chip conveyor becomes the lift pump) pump capacity 20 ltr/min at 30 bar coolant filtration for high pressure and flood coolant with vacuum rotation filter VRF 300, filtration 50 µm nominal	
		70 bar high pressure pump flow rate 20 l/min at 30 bar - 11 l/min at 70 bar with vario pressure control valve for 8 programmable pressure stages pre-defined pressure steps (20, 30, 40, 50, 55, 60, 65, 70 bar) instead of standard high pressure pump	

Pos.	Qty.	Article Description	Price / €
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Work space washing

with nozzles installed inside the Machine enclosure and washing of centre divider

Fixture washing

with nozzles installed on the swivel centre divider separate controlled with m-functions for washing the working area and the loading station
(Subject: Coolant equipment with tank capacity 900 l)

Machine preparation

for through tool coolant system including:

- Sealing system in the DIN 69893 HSK A63* collet
- coolant distributor installed at the main spindle drive
- Coolant leakage sensor
- Implemented mud flap in the high pressure piping and flow control switch
- Solenoid valve, controlled via machine program

* At HSK A63 we recommend for tool holders the use of our patented coolant tube with sieve.

Advantages: Decrease of the clogging in the internal coolant channel.

Automatic loading door of total enclosure

opening and closing, actuating to closing via two-hand push buttons

NC-rotary-table package complete installed consisting of:

- 2 x NC-rotary-table, type AWU 160 P, Fabr. Chiron-Peiseler
- 4th and 5th NC-axes, complete
- 2 adapter-plates for center height 200 mm
- central pneumatic supply without control

Technical description for NC-rotary-table:

center height 165 mm, repetition accuracy $\pm 15''$,
load moment of inertia (without turning supply) 1,9 kgm²
face plate dia. 160 mm, with center bore dia. 50 +0.012,
fixture pin dia. 16 h7, 4 fixture bores M10,
incl. pneumatic clamping

Pos.	Qty.	Article Description	Price / €
2		<p>CHIRON standard fixture for rotary table with hydraulic actuated counter bearing bridge size 580 mm existing of:</p> <ul style="list-style-type: none">- adaptor plate (instead of the adapter plate on the rotary package) mountable and demountable on the work piece changing device- counter bearing with pneumatic clamping- flange plate incl. connecting coupling, on side of the rotary table- flange plate incl. connecting coupling, on side of the counter bearing- 2 x 2-core energy supply- centre height 165 mm over base plate <p>Fully enclosed working area</p> <p>Central hydraulic and pneumatic supply prepared for max. 20 connections, 6 connections are installed including connecting couplings, 4 for hydraulic, max. 210 bar and 2 for pneumatic without control. Installation up to the outside of machine bed, with electrical control for clamping ON - OFF via push button at control panel</p> <p>Hydraulic unit continuous duty at switch cycles less than 30 seconds pressure: 210 bar, output: 4,3 ltr/min incl. valves for supply of 2 clamping circuits and 2 pressure switches for electric clamping control</p> <p>Cutting tools The cutting tools have to be balanced according to DIN ISO 1940, class G 2,5, in two levels, with max. operating speed</p> <p>Machine colour Two-components-structure varnish - 2 colours light grey acc. to NCS S1502-B basalt grey acc. to RAL 7012</p> <p>Main circuit total power supply 400 / 230V \pm 10 %, 50 cycles N/PE, neutral conductor, load possible, pressure supply 6 bar, \pm 1 bar at all procedures, room temperature max 40°</p>	

Information Export

We point out that the CNC-machining centres are subject to controls. For the export from the European Union an export license is necessary.

Information Machine safety

The machine is designed and built in accordance with the European machine guideline, according placing the product on the first time onto the market.

Other safety features due to special company rules and specifications can be considered. The actual cost will be invoiced.

Information Coolant lubrication

The machine is designed for standard water soluble coolant and fully enclosed at the standard version. The machine must be equipped with fume extraction.

The machine contents different plastics, varnish, resin and glue, which are selected carefully for using coolant and cutting oil.

The use of aggressive coolant and additive could cause major damages and machine stops.

Contact in any case your coolant supplier before machine set-up and installation.

