

Pos.	Qty.	Article Description	Price / €
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## Complete machine description

- 1 1 **Vertical CNC-machining centre model FZ 08 KW**  
**Completely refurbished pre-owned machine**  
**Year of construction: 2001, weight: 2.200 kg**

**Machine-No. 204-87**

Scope of delivery:

**Column moving machining centre with workpiece swivel table**

### Main spindle drive with AC-motor

2,2 kW	at 100%
7,4 kW	at 25%
Spindle speed range:	20 – 15.000 rpm – 23 Nm

Drilling capacity in steel 60	Ø 16 mm
Tapping capacity	M 12
Milling capacity in steel 60	30 cm <sup>3</sup> /min.

### Travel:

X-axis	300 mm
Y-axis	250 mm
Z-axis	250 mm

### Automatic tool changer

No. of tools	23
Tool shaft	HSK 32 DIN 69893
Max. tool dia. (50mm if free neighbor placers)	max. 40 mm
Tool length	160 mm
Max. tool weight	max. 0,7 kg
Tool change time	appr. 0,8 s (depends on CNC)
Chip-to-chip-time	appr. 2,2 s (depends on CNC)

### Workpiece swivel table 0/180 degrees

with centre divider made of sheet metal  
clamping surface 2 x 550 mm x 300 mm  
with thread and locating hole grid M16 x ø 15 H7 x 50 mm  
workpiece swivel time appr. 2,0 s weight-dependent, self-regulating  
through self-learning speed-control  
table loading capacity per side 100 kg,  
max. 50 kg weight difference between the two table sides



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### AC-servo-motors

feed drives for X-, Y- and Z-axes,  
indirect absolut path measuring system  
rapid traverse in X- and Y-axes 40 m/min,  
acceleration 0,7 g.  
rapid traverse in Z-axes 60 m/min,  
acceleration 1,0 g.

### Remark:

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

### FANUC 21 i - 3-axes continuous path control

9.5" LCD monochrom screen  
memory capacity 32 KB  
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  
32 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  
Interface RS 232C  
software-limitswitch  
NC-diagnosis with help function  
machine diagnosis

### Thermocontrol

**Working hours and piece counter**  
in the screen

**Socket 230 V**  
at control panel



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### Machine enclosure

bolted on, with loading door, electrically interlocked,  
2.000 mm high above floor, incl. machine lamp

### Installation elements

### Wash gun

### Machine preparation

for through tool coolant system including

- Sealing system in the HSK-A 32 collet
- coolant distributor installed at the main spindle drive
- Coolant leakage sensor
- Implemented mud flap in the high pressure piping
- Solenoid valve, controlled via machine program

### Chip conveyor (scratch band)

discharge height 495 mm with coolant equipment,  
tank capacity 150 l, pump capacity 100 l/min at 1,3 bar

### High pressure pump

used together with the standard coolant unit or  
the chip conveyor as Inline-pump

Pump pressure	max. 150 bar
Pump capacity	max. 6 l/min.
Vario valve	20, 30, 50, 70, 90, 110, 130, 150 bar
Partical coolant cleaning system	60 µ via twin filter
Flow monitor	

### 1 NC Rotary table package, completely installed consisting of:

- NC rotary table, type AWU P 100  
mountable to the workpiece swivel table
- interface 4th NC-axis  
lowest increment 0.001°
- pneumatic supply, without control

Technical description NC rotary table  
indexing accuracy  $\pm 30''$

max. spindle speed 80 rpm

spindle pneumatic clamped, center height 125 mm

face plate dia. 100 mm, center bore dia. 50+0,012,

through bore dia 35 mm, location pin dia. 10 h7,

4 bolt holes M8



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### Suction point

for customer specific installation  
Ø 150 mm on top of the machine enclosure  
and electrical preparation in cabinet

### Hydraulic connection for 210 bar

with rotation distributor 6-fold and  
4 connecting couplings for hydraulic,  
2 connecting couplings for pneumatic,  
without control, hydraulic installation,  
up to the outside machine bed, with electrical control  
for clamping ON - OFF via push button at control panel

### Hydraulic unit

pressure: 210 bar  
supply capacity: 1,7 l/min.  
with electrical control and external power supply  
incl. valves for supply of 2 clamping devices  
and 2 pressure switches for clamping control

### Two-hand-push-buttons

for clamping ON - OFF, instead of button in operating panel

### Documentation

Operating manuals, programming and operating manuals 1-fold  
on a USB-Stick.  
Please refer to the manufacturer's instructions for each component.

### Machine colour

Two-components-structure varnish - 3 colours  
light grey acc. to NCS S1502-B  
blue acc. to NCS S2050-R80B  
basalt grey acc. to RAL 7012

### Main circuit

total power supply 400 / 230V ± 10 %, 50 cycles N/PE,  
neutral conductor, load possible, pressure supply  
6 bar, ± 1 bar at all procedures,  
room temperature max 40°

### 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.



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### 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.

