

## Complete machine description

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| 1 | 1 | <b>Complete refurbished<br/>vertical CNC-machining centre model DZ 18 W</b><br><b>Year of construction: 2006, weight: 8.000 kg</b> |  |
|---|---|--|--|

### Machine-No. 212-77

Scope of delivery:

Drilling capacity in steel	2 x Ø 36 mm (with insert drill)
Tapping capacity	2 x M 24
Milling capacity in steel	2 x 150 cm <sup>3</sup> /min

**Column moving machining centre with** workpiece swivel table  
 Suitable for dry-machining with optimized chip drop  
 Guideways with long-term-grease lubrication

### Main spindle drive with 2 AC-motors

12,0 kW at 100 %

28,0 kW at 15 %

Spindle speed range: 20 - 12.000 min<sup>-1</sup> - 180 Nm

### Travel:

X-axis	400 mm
Y-axis	400 mm
Z-axis	630 mm with variable tool change level

Spindle distance in X-axis 320 mm

### Automatic tool changer, protected against chips

No. of tools	2 x 12
Tool shaft	HSK A 63 DIN 69893
Max. tool dia.	65 mm
Max. tool dia.	180 mm if adjacent places are free
Max. tool weight	4,0 kg (8 kg on 2 places per spindle)
Tool changing time approx.	0,9 s (depends on CNC)
Chip-to-chip-time approx.	2,1 s (depends on CNC)



### **Workpiece swivel table 0/180 degrees**

with centre divider made of stainless steel  
clamping surface 2 x 940 mm x 470 mm  
with thread and locating hole grid M16 x ø 15 H7 x 50 mm  
workpiece swivel time appr. 3,7 s weight-dependent, self-regulating  
through self-learning speed-control  
table loading capacity per side 0 - max. 400 kg  
max. 120 kg difference in weight between both table sides

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

digital direct drives with indirect absolut path measuring system  
rapid traverse in all axes 60 m/min.  
acceleration: 0,5 g in X and Yaxis  
0,7 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.)

### **SIEMENS CNC-control 840D**

(PCU 50 / NCU 572.4, 6 measuring circuit, 1 channel)  
incl. 10,4" TFT colour LCD screen / full keyboard OP010S  
Windows XP  
NC-memory 256 KB  
(max. 200 programmes storage capacity)  
for ISO 66025 programming  
hard disk with approx.. 20 GB for free disposal  
drilling cycles G81-G89  
drilling and milling cycles  
M- and T- functions  
circular interpolation (360 degrees)  
re-start into program  
subroutines, parameter programming  
simultaneous programming  
contour programming with cycle support  
support through cycles  
polar coordinates  
tool offsets for geometry, wear  
tool radius correction for intersection computing  
crossing radius  
4 zero offsets G54-G57  
30 zero shifts programmable with G-functions  
3D and helical interpolation  
screen switch off  
mirror function



scaling function  
insert of chamfer and radius  
Universal interface RS 232C (2 x V24)  
USB-interface at control panel  
Ethernet connection RJ45 in control panel  
orientated spindle stop  
drip feed function through V24 interface  
dimension metric or inch  
software limit switch, NC-diagnosis  
machine-diagnosis  
absolute indirect path measurement systems  
power meter in screen

### **CHIRON Powersafe**

Software package for selective shutdown of installed consumers like axis motors, drives, spindles, seal air, airsensing and ancillary equipment in production breaks or during programmable points in time using a shift calendar. Definable point in time at which the machine starts demand-oriented automatically with a variable warmup program to recovery the production readiness.

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

### **Socket 230 V** at control panel

### **Socket for portable mini-hand wheel** without EMERGENCY-STOP button, at control panel

### **Electrical cabinet cooler mounted to the door**

### **Wash gun** with 1 connection and quick coupling each in loading- and working area

### **Signal lamp on machine enclosure for 3 signals**

Signal "red" = failure  
Signal "white" = load machine  
Signal "green" = machine is running

### **Machine enclosure with full enclosed workspace**

with sliding doors, electrically interlocked,  
2270 mm high above floor, incl. machine lamp  
service friendly with removable side walls  
vertical bellows



### Mini-operating panel

with start and receipt push buttons, for pallet recognition M61/M62

### Chip conveyor (scratch band) small version

with lateral discharge, discharge height 1.050 mm,  
tank capacity 150 l, pump capacity max. 300 l/min. at 1,3 bar

### Screw conveyor

#### Coolant equipment PF 50 / KFA 900

(for cast iron slurry, Al with Si  $\geq$  12%)

tank capacity 900 l,

pump capacity from 100 l/min at 2,1 bar

up to 250 l/min at 1,8 bar

high pressure pump capacity 35 l/min at 30 bar

high pressure circuit with filtration via paper bond filter,  
filtration 50  $\mu$ m nominal.

twin filter in the high pressure circuit for the protection of the machine.

incl. bed flushing system and

#### Fixture washing

with nozzles installed at the centre divider

controlled with m-functions for washing the working area

(This filtration method will not eliminate increasing cast iron slurry from the coolant equipment.)

#### Through tool coolant package with suction point

consisting of:

#### 2 x Machine preparation

for through tool coolant system including:

- sealing system in the DIN 69871 Form A40  
or 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 2 flow control switches
- solenoid valve, controlled via machine program
- \* HSK A63 tool holders for through tool coolant require  
the use of our patented coolant tube with sieve.  
Advantages: - Decrease of the clogging  
in the internal coolant channel.
- Reduction of the wear at the  
O-ring seal in the collet.

(Subject: requires high pressure equipment)



Pos.	Qty.	Article Description	Price / €
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## Fully enclosed workspace

### Suction point

for customer specific installation  
Ø 200 mm on top of the machine enclosure

### Tool lifetime control with:

- tool place organization
- sister tool organization
- field of work organization via 4-digit program no. in the screen (just at machines with more work fields)
- Geometrie monitoring at tool call

### Automatic loading door of total enclosure

opening and closing,  
incl. walk switch

### Pneumatic and hydraulic-connections

#### 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

#### Hydraulic unit

continuous duty  
at switch cycles less than 30 seconds  
pressure: 210 bar  
supply capacity: 4,3 l/min.  
incl. valves for supply of 2 clamping devices  
and 2 pressure switches for clamping control

#### Machine colour

Two-components-structure varnish - 2 colours  
light grey acc. to NCS S1502-B  
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.

### 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.

