

Complete machine description

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| 1 | 1 | Complete refurbished
vertical CNC-machining centre model DZ 18 W
Year of construction: 2004, weight: 8.000 kg | |
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Machine-No. 212-38

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 ³ /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⁻¹ - 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	SK A 40 DIN 69871 + 72
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)



Pos.	Qty.	Article Description	Price / €
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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 Y axis
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 572.5, 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



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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

Machine enclosure with full enclosed workspace with sliding doors, electrically interlocked, 2400 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 400 l, pump capacity max. 150 l/min. at 2,0 bar
incl. tub flushing

For machining with high chip volume or additional flushing options

and the resultant big coolant flow
we recommend, to calm down the coolant and to
decrease the cleaning cycles at the chip conveyor and
the coolant pipes, coolant equipment with a tank capacity of 900 l.

Installation elements

Coolant equipment

tank capacity 1400 l,
pump capacity 200 l/min. at 3,0 bar
(the pump in the chip conveyor becomes the lift pump)
pump capacity 35 l/min. at 30 bar
high pressure circuit with coolant filtration 60 µm nominal
incl. bed flushing system
(This filtration method will not eliminate increasing cast iron slurry from the
coolant equipment.)

2 x Machine preparation

for through tool coolant system including:

- Sealing system in the DIN 69871 Form A40 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

(Subject: required high pressure equipment)

Fixture washing

with nozzles installed on the swivel centre divider
separate controlled with m-functions for washing the working area
and the loading station



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NC-rotary-table package complete installed consisting of:

- 2 x NC-rotary-table, type AWU 160 P
- 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, indexing 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

CHIRON standard fixture for rotary table

with pneumatic actuated counter bearing

bridge size 620 mm

existing of:

- base plate (instead of the adaptor plate from the rotary table package)
detachable to workpiece changer
- counter bearing with pneumatic clamping
- 2 x 4-core hydraulic turning supply, rotary table side
- 2 x 4-core hydraulic turning supply, counter bearing side
- 2 chucks with 4 hydraulic-supply, rotary table side
- 2 chucks with 4 hydraulic-supply, counter bearing side
- 2 x center height 210 mm over the base plate

Adaption of the Center divider to center height 210 mm

Fully enclosed working area

Automatic loading door of total enclosure

opening and closing,

incl. walk switch

Mechanical and electrical preparation

for the installation of a suction unit (by the customer)
with connection \varnothing 200 mm on the top of the machine.

Pneumatic and hydraulic-connections



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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

pressure: 210 bar
supply capacity: 6 l/min.
incl. valves for supply of 2 clamping devices
and 2 pressure switches for clamping control

8 **Hydraulic unit – extension**

for further clamping cycles
1 additional clamping cycle (double acting)

4 **Further hydraulic connection**

inclusive connection couplings, max. 210 bar,
for central hydraulic- and pneumatic connection
(there are max. 20 lines hydraulic/pneumatic in sum possible)

Lager memory at the hydraulic unit

CHIRON Variable Clamping Logic

For the definition of different clamping and releasing sequences,
for a maximum of 10 functions with a maximum of 8 steps.
Considering of time delay and monitoring of clamping circuits
e.g. through pressure switches or airsensing.
The storing of the configuration and reloading,
allows fast changeover.

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



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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°

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.

