

Complete machine description

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| 1 | 1 | Completely refurbished
vertical CNC-machining centre model DZ 15 KW
Year of construction: 2007, weight: 11.500 kg | |
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Machine-No. 188-28

Scope of delivery:

Column moving machining centre
 with machine bed in concrete
 and integrated workpiece swivel table
 Suitable for dry-machining with optimized chip drop

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

Main spindle drive with AC-motor

9,5 kW at 100 %
 14,0 kW at 15 %
 Spindle speed range: 20 - 12.000 min⁻¹ - 90 Nm

Travel:

X-axis	630 mm
Y-axis	400 mm
Z-axis	360 mm

(plus distance from spindle nose to table surface, according to data sheet)

Spindle distance in X-axis 320 mm

Automatic tool changer

No. of tools	2 x 24
Tool shaft	HSK A 63 DIN 69893
Max. tool dia.	78 mm if all magazine pos. are occupied
Max. tool dia.	125 mm if adjacent places are free
Max. tool length	250 mm
Max. tool weight	5,0 kg
Chip-to-chip-time appr.	2,4 s (depends on CNC)



Integrated Workpiece swivel table IWW 0/180 degrees

for optimal chip drop, with center divider
workpiece swivel time appr. 3,5 s weight-dependent, self-regulating
through self-learning speed-control
table loading capacity per side 0 - max. 180 kg,
max. 120 kg weight difference between the two table sides.
Per table side integrates:

- NC-rotary-table, type **AWU 160 P** with pneumatic clamping
accuracy $\pm 15''$, face plate dia. 160 mm,
with center bore dia. $50 +0.012$ mm, fixture pin dia. 16 h7,
4 fixture bores M10
- CHIRON standard fixture for rotary table
Bridge size 800 mm
counter bearing with pneumatic clamping
flange plate incl. connecting couplings and quick-locator,
on side of the rotary table and counter bearing.
2 x 2-core energy supply pneumatic or hydraulic
swing radius 225 mm
- 4th or 5th NC-axes, complete
- pneumatic supply without control

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.)

SIEMENS CNC-control 840D

(PCU 50 / NCU 572.5, 6 measuring circuit, 1 channel)
incl. 10,4" TFT colour LCD screen / full keyboard OP010S
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



Pos.	Qty.	Article Description	Price / €
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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 (1 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

Rigid tapping

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.



CHIRON maintenance management on the screen

display of the pending maintenance:
advance warning = "prepare maintenance"
warning = "carry out maintenance"
machine stop = "catch up on maintenance"

Brief instructions for the pending maintenance with graphic illustration on USB data-carrier.
Password protected confirmation of the maintenance work carried out by the maintenance staff.

Operating hours and piece counter

on 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

Signal lamp on control panel for 3 signals

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

Machine enclosure with full enclosed workspace

with sliding doors, electrically interlocked,
2200 mm high above floor, incl. machine lamp
service friendly with removable side walls
workspace enclosure with stainless steel covers



Pos.	Qty.	Article Description	Price / €
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Chip conveyor (scratch band) small version

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

(In case of steel machining and other materials with long chips
we recommend the use of a screw conveyor)

Mini-operating panel

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

2 x 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 2 flow control switches
- Solenoid valve, controlled via machine program

We recommend for tool holders 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: required high pressure equipment)

Installation elements

For installation in an oil pan the installation directly on the sheet metal is not allowed. For out of it resulting problems there is no warranty.

Wash gun

with 1 connection and quick coupling each in loading- and working area

Coolant equipment HL 450 / 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

coolant filtration for high pressure and flood coolant

with hydrostatic paper bond filter HL 450, filtration 50 μ m nominal



twin filter in the high pressure circuit for the protection of the machine.
incl. bed flushing system and
Fixture washing
with nozzles controlled with m-functions
for washing the working area

CHIRON Lasercontrol Single F500

für Werkzeugbruchkontrolle,
Sender-Empfängerabstand ≤ 1000 mm,
min. Werkzeugdurchmesser > 1 mm,
inkl. Prüfdorn mit Werkzeughalter,
Sender und Empfänger,
Schmutzblende mit Verschluss

Automatic grease lubrication

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. 200 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

Hydraulikaggregat

für Dauerbetrieb
Druck: 200 bar
einschl. Wegeventilen zur Ansteuerung von 2 Spannkreisen
einschl. 2 Druckschalter zur elektrischen Spanndruckkontrolle

Hydraulic unit – extension

2 further clamping cycles
2 connections on central hydraulic- and pneumatic connection
(in sum are max. 20 lines for hydraulic/pneumatic possible)

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.



Cutting tools

The cutting tools have to be balanced according to DIN 69 888, class G 6,3, in two levels, with max. operating speed

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 - 2 colours
light grey acc. to NCS S1502-B
basalt grey acc. to RAL 7012

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.

