

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

- 1 1 **Vertical CNC-machining centre model FZ 18 W**
Completely refurbished pre-owned machine
Year of construction: 2001, weight: 9.100 kg

Machine-No. 158-51

Scope of delivery:

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 AC-motor

10,0 kW at 100 %

18,0 kW at 25 %

Spindle speed range: 20 - 12.000 min⁻¹ - 140 Nm

| | |
|-------------------------------|-----------------------------|
| Drilling capacity in steel 60 | ø 42 mm (with insert drill) |
| Tapping capacity | M 30 |
| Milling capacity in steel 60 | 500 cm ³ /min. |

Travel:

X-axis 630 mm

Y-axis 400 mm

Z-axis 630 mm (with variable tool change level)

Automatic tool changer, protected against chips

Investment casting gripper

Tool places 20

Tool shaft HSK A 63 DIN 69893

Tool-ø max. 65 mm

Tool-ø

if adjacent places are free max. 180 mm

Max. tool weight max. 4,0 kg (8 kg on 4 places)

Tool change 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 sheet metal

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

table loading capacity per side 0 - max. 400 kg

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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

SIEMENS CNC-control 840D

(MMC 100.2 / NCU 572.2, 10 measuring circuits, 1 channel)
incl. 10,4" TFT colour LCD screen / full keyboard OP032S
NC-memory 256 KB
(max. 200 programmes storage capacity)
for ISO 66025 programming
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
polar coordinates
tool offsets for geometry, wear
tool radius correction for intersection computing
crossingradius
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)
orientated spindlestop
drip feed function through V24 interface
dimension metric or inch
software limitswitch
NC-diagnosis
machine-diagnosis
absolute indirect path measurement systems
powermeter in screen
rigid tapping
look ahead function

CMS Powersafe

Softwarepaket zum gezielten Abschalten von installierten Verbrauchern wie z. B. Achsmotoren, Antrieben, Spindeln, KM-Pumpen und Nebenaggregaten in Produktionspausen. Definierbarer Zeitpunkt an dem die Maschine bedarfsorientiert automatisch in den Powersafe Modus wechselt.

Working hours and piece counter

in the screen

Socket 230 V

at control panel

Cabinet cooler as a door mounting unit

Machine enclosure

with sliding doors, electrically interlocked, 2400 mm high above floor, incl. machine lamp service friendly with removable side walls vertical bellows

Chip conveyor (scratch belt)

discharge height 1050 mm tank capacity 150 l, lifting pump max. 300 l/min at 1,3 bar

Mini-operating panel

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

Installation elements

Coolant tank TPF 350 / FKA 900

(also for sludge generating materials, i.e. grey cast iron, GGG, Al with Si \geq 12%) tank capacity 900 l

low pressure pump capacity from 100 l/min at 2.4 bar up to 250 l/min at 2.3 bar high pressure pump capacity 30 l/min at 30 bar

Full stream purification via drum paper bond filter TPF 350 S, with coolant purification 50 μ m nominal twin filter in the high pressure circuit for the protection of the machine

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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
- 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)

70 bar high pressure pump

in connection with standard coolant equipment or chip conveyor

pump pressure 20, 30, 50, 70 bar

(>=30.000 min-1 max. 70 bar)

with vario pressure control via NC-program

pump capacity max. 6 l/min

Vario ventil (20, 30, 50, 70 bar)

Coolant cleaning via 60 µm double-switch filter

2-spindle 2-axes rotary table

type AWU 160-2 / AWU 200, brand: Peiseler

acc. drawing 66.1.83031

Peiseler twin pot rotary (B-axis)

type AWU 160

face plate ø 180 mm, centre face ø 140 H6

spindle distance 320 mm

prepared for hydraulic face plate clamping

repetition accuracy out of worm gear drive ± 15 sec. of arc

max. tangential torque transmitted through worm gear drive

for rotary milling 220 Nm

when the face plate is clamped (60 bar) 800 Nm

max. tilting moment 1200 Nm

including 2-wire oil-distributor

Tilting unit AWU 200 (A-axis)

tilting 90 degree + 15 degree per side overload

prepared to assemble of a Peiseler double-part-table AWU 160

repetition accuracy out of worm gear drive ± 10 sec. of arc

prepared for hydraulic clamping and 6-fold distributor

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| | | Counter bearing with hydraulic clamping bush and common base plate | |
| | | 2 axis motor covered with sheet metal cover, complete installed | |
| | | 4th and 5th axis or rather 6 th And 7 th axis | |
| | | overpressure connection | |
| | | Fully enclosed work space | |
| | | Central grease lubrication | |
| | | Screw conveyor implemented in machine base | |
| | | Central hydraulic and pneumatic supply with 10-wire rotary distributor incl. connection couplings, 8 connections for hydraulic, max. 210 bar and 2 for pneumatic without control | |
| | | Hydraulic unit HEILMEIER & WEINLEIN pressure: 210 bar, flow rate: 6 l/min incl. valves for supply of 2 clamping devices and 2 pressure switches for clamping control | |
| | | Extension hydraulic unit for clamping of 2-spindle 2-axes rotary table 1 second pressure stage, 2 additional clamping circuits through 5th and 6th core of the central oil distributor for both table sides, the pneumatic supply without control is then designed as pendulum supply | |
| | | 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 | |
| | | Documentation Operating manuals, programming and operating manuals 1-fold on a USB-Stick. Please refer to the manufacturer's instructions for each component. | |

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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 \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.