

Pos.	Qty.	Article Description	Price / €																								
1	1	<p>Completely refurbished vertical CNC-machining centre model FZ 08 KSM Year of construction: 2003, weight: 3.400 kg</p> <p>Machine-No. 225-34</p> <p>Scope of delivery:</p> <p>Column moving machining centre with fixed table Guideways with long-term-grease lubrication</p> <p>Digital maine drive with spindle 7,0 kW at 100 % 9,0 kW at 25 % - watercooled Spindle speed range up to 30.000 rpm – 6,5 Nm</p> <p>Travel:</p> <table> <tr> <td>X-axis</td> <td>450 mm</td> </tr> <tr> <td>Y-axis</td> <td>270 mm</td> </tr> <tr> <td>Z-axis</td> <td>280 mm</td> </tr> </table> <p>Automatic tool changer</p> <table> <tr> <td>No. of tools</td> <td>40</td> </tr> <tr> <td>Tool shaft</td> <td>HSK-A 40 DIN 69893</td> </tr> <tr> <td>Max. tool dia.</td> <td>max. 50 mm</td> </tr> <tr> <td>Max. tool dia.</td> <td>max. 100 mm if adjacent places are free</td> </tr> <tr> <td>Tool length</td> <td>max. 160 mm</td> </tr> <tr> <td>Max. tool weight</td> <td>max. 1,2 kg (max. magazine loading 20 kg)</td> </tr> <tr> <td>Tool change time</td> <td>appr. 0,8 s (depends on control)</td> </tr> <tr> <td>Chip-to-chip-time</td> <td>appr. 2,7 s (depends on control)</td> </tr> <tr> <td>Chip-to-chip-time at 90°</td> <td>appr. 3,0 s (depends on control)</td> </tr> </table> <p>Digital feed drives for X-, Y- and Z-axis with digital direct drives and indirect absolut path measuring system rapid traverse in X- and Y-axes and Z-axis 75 m/min, acceleration: 1,0 g in X-axis 1,5 g in Y-axis 2,0 g in Z-axis</p> <p>Remark: With normal conditions the machine does not have to be anchored to the floor. (For slippery floors we recommend anchoring.)</p>	X-axis	450 mm	Y-axis	270 mm	Z-axis	280 mm	No. of tools	40	Tool shaft	HSK-A 40 DIN 69893	Max. tool dia.	max. 50 mm	Max. tool dia.	max. 100 mm if adjacent places are free	Tool length	max. 160 mm	Max. tool weight	max. 1,2 kg (max. magazine loading 20 kg)	Tool change time	appr. 0,8 s (depends on control)	Chip-to-chip-time	appr. 2,7 s (depends on control)	Chip-to-chip-time at 90°	appr. 3,0 s (depends on control)	
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		<p>SIEMENS CNC-control 840D (PCU 50 / NCU 573.4, 6 Messkreise, 1 Kanal) incl. 10,4" TFT colour LCD screen / full keyboard OP010S control panel logic Windows NT NC-memory 256 KB (max.200 programmes storage capacity) for ISO 66025 programming hard disk with approx. 2 GB for free disposal power meter in screen screen switch off look ahead function Bellshape-acceleration ramp software limit switch access authorization over key switch for tool correction, NC-program changes and machine parameters orientated spindle stop rigid tapping re-start into program Subroutines, parameter programming simultaneous programming support through cycles</p> <p>drilling cycles G81-G89 drilling and milling cycles M- and T- functions tool offsets for geometry, wear 4 zero offsets G54-G57 30 zero shifts programmable with G-functions tool radius correction for intersection computing crossing radius contour programming dimension metric or inch mirror function polar coordinates circular interpolation (360 degrees) 3D and helical interpolation</p> <p>drip feed function through V24 interface Universal interface RS 232C (2x V24) at control panel Ethernet connection RJ45 in control panel</p> <p>NC-diagnosis machine-diagnosis</p>	

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		<p>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.</p> <p>Thermodrive with indirect path measuring system</p> <p>Working hours and piece counter in the screen</p> <p>Socket 230 V at control panel</p> <p>Socket for portable mini-handwheel without emergency stop button, at control panel</p> <p>Machine enclosure with full enclosed workspace with loading doors, electrically interlocked, 2070 mm high above floor, including machine lamp</p> <p>Cabinet cooler as a door mounting unit</p> <p>Installation elements</p> <p>Wash gun</p> <p>Machine preparation for through tool coolant system including</p> <ul style="list-style-type: none"> - 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 <p>Chip conveyor (scratch band) discharge height 490 mm tank capacity 110 l, pump capacity 110 l/min at 1,9 bar</p>	

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High pressure pump

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

Pump pressure max. 70 bar (till 30.000 min-1)

Pump capacity max. 6 l/min.

Vario valve 20, 30, 50, 70 bar

Partical coolant cleaning system 60 µ via twin filter

Flow monitor

Coolant equipment

tank capacity 500 l,

pump capacity 100 l/min at 1,8 bar

(only in combination with chip conveyor, the pump in the chip conveyor becomes the lift pump)

coolant filtration via paperbondfilter

Machine options for bar machining

Technology package for turning from the bar

NC-feeding unit as bar feeder

Rapid traverse 60 m/min,

stroke max. 460 mm, depend on fixture

NC-turning unit with clamping vice KSP100

for the machining of the 6th side

installed on NC-feeding unit

Technical description of NC-turning unit:

- indexing accuracy $\pm 30''$

- max. spindle speed 80 rpm

with pneumatic clamping

feed unit as bar feeder, electrically controlled via NC-program

pneumatic connection group

Chiron Lasercontrol Single F500

für Werkzeugbruchkontrolle,

min. Werkzeugdurchmesser >.1.mm,

inkl. Sender und Empfänger,

Schmutzblende mit Verschluss

Switch for end of bar

mounted outside of the machine enclosure

Opening at machine enclosure on left hand side

additionally necessary:

fixture washing

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Part removal handling

via pneumatic gripper
to transport the work pieces
outside of the machine

NC Rotary table package, completely installed consisting of:

- NC rotary table, type AWU P 100
mountable to the workpiece swivel table
- interface 4th + 5th NC-axis, ready for plug-in
lowest increment 0.001°
- pneumatic supply, without control

Technical description NC rotary table
indexing accuracy ± 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

Automatic collet chuck for collets

maker SCHAUBLIN Type W25, with pneumatic actuation,
complete installed.
Incl. spanner to the collet chuck change.
Control via button OPEN/CLOSED in control panel.

Glass scales

overpressured in all axes
X, Y, Z = 450 x 270 x 280 mm
(Thermodrive in Basic machine is cancelled)

Signal lamp for 3 signals

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

Suction point

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

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Renishaw - probe - package RLP40Q

for part measuring and automatic machine compensation, probe with radio module and tool taper suitable for machine spindle tracing pin 58 mm with ruby ball dia. 4 mm receiver RMI-Q with integrated interface bracket for radio receiver process oriented measuring software for measuring cycles and strategy program

Remarks:

In order to carry out machine compensations with probe a suitable reference surface at the machine or at the fixture or an optional gauge block are necessary.

Flushing of the window at the loading door

Pressure Amplification

to clamp the collet chuck

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 ± 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.

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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.