

Data sheet I MILL 2000 no. 418-62

| Pos. | Qty. | Description | Price |
|------|---------|--|-------|
| 100 | 1,00 ST | Completely refurbished vertical machining centre CHIRON MILL 2000 Nr. 418-62 Year of construction: 2008, weight: 11.600 kg | |
| 200 | 1,00 ST | According to described below scope of delivery | |
| 300 | 1,00 ST | Machine enclosure bolted on, with loading door, electrically interlocked, 2.500 mm high above floor, incl. machine lamp | |
| 400 | 1,00 ST | Column moving machining centre with fix table Machine base with integrated chip output to the left Linear-guideways with long-term-grease lubrication Drilling capacity in steel 60 \varnothing 42 mm (with insert drill) Tapping capacity M 30 Milling capacity in steel 60 600 cm ³ /min. | |
| 500 | 1,00 ST | Travel: X-axis 2000 mm Y-axis 480 mm (or rather 610/820 at option Y 630/840 mm) Z-axis horizontal spindle 715 mm / vertical spindle 630 mm | |
| 600 | 1,00 ST | NC swivel head package - 12.000 rpm Motor spindle for swivel head, grease lubrication 12,5 kW at 100 % ED 34,0 kW at 10 % ED, watercooled 20 - 12.000 rpm, 140 Nm acceleration and deceleration 0 - 12.000 rpm 0,9 sec. each tool clamping with disk springs, hydraulic knock out, tool shaft for HSK-A 63 DIN 69893 tool magazine prepared for tool holders according to HSK-A 63 DIN 69893 NC swivel axis \pm 100 ° - 30 rpm, lowest increment 0,001° - repetition accuracy \pm 10" with direct measuring system - driving torque 280 Nm - with hydraulic clamping system, max. torque through clamping 1400 Nm | |

Remark:

With normal conditions the machine does not have to be anchored to the floor. (For slippery floors we recommend anchoring.)

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| 700 | 1,00 ST | Table version with 3 humps for mounting of turning spindle "left" and NC-indexing device with vice right and 1 hump in the middle for support | |
| 800 | 1,00 ST | Automatic tool changer, protected against chips 165 toolplaces with dynamical background magazine, space-saving shelf-design, mounted at the back of the machine. During the operation movement of the machine the tool hand-over from the background is simultaneously to the tool magazine of the basic machine. With tool operating times shorter than 15 s the chip-to-chip-time may increase. Max. tool dia. 75 mm if all magazine pos. are occupied Max. tool dia. 160 mm if adjacent places are free Toll length max. 200 mm at 110 places max. 320 mm at 55 places Max. tool weight 4,0 kg Tool change time approx. 1,5 s (depends on CNC) Chip-to-chip-time approx. 4,0 s (depends on CNC) including drip pans below the toolplaces to collect dripping coolant. including Siemens Tool lifetime control with: - tool place organization - sister tool organization - work field organisation via 4-digit program-no. in the screen (just at machine with more than one work field) | |
| 900 | 1,00 ST | Load and unload station for tools for the exchange of cutting tools at the background magazine during machining | |
| 1000 | 1,00 ST | 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. | |
| 1100 | 1,00 ST | SIEMENS CNC-control 840D (PCU 50 / NCU 572.5, 6 measurement cycles, 1 canal) incl. 10,4" TFT colour screen full keyboard OP010S control panel logic Windows XP NC-memory 256 KB (max.200 programmes storage capacity) | |

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| | | for ISO 66025 programming hard disk with approx. 2 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 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) 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 look ahead function and dynamic pilot control | |

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| 1200 | 1,00 ST | <p>CHIRON Powersafe</p> <p>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.</p> <p>Definable point in time at which the machine starts demand-oriented automatically with a variable warmup programm to recovery the production readiness.</p> | |
| 1300 | 1,00 ST | <p>CHIRON Maintenance Management in the screen</p> <p>display of the pending maintenance:</p> <ul style="list-style-type: none"> - advance warning = "prepare maintenance" - warning = "carry out maintenance" - machine stop = "catch up on maintenance" <p>Abridged instructions for the pending maintenance with graphic illustration on CD-ROM.</p> <p>Password protected confirmation of the performed maintenance through the maintenance staff.</p> | |
| 1400 | 1,00 ST | <p>Working hours and piece counter</p> <p>in the screen</p> | |
| 1500 | 1,00 ST | <p>Socket 230 V</p> <p>at control panel</p> | |
| 1600 | 1,00 ST | <p>Cabinet cooler as a door mounting unit</p> | |
| 1700 | 1,00 ST | <p>Thermodrive indirect path measuring system</p> | |
| 1800 | 1,00 ST | <p>Installation elements</p> | |
| 1900 | 1,00 ST | <p>5-axes-machining</p> <p>for the machining of three-dimensional curved or tilted surfaces with 3 linear and 2 additional axes (TRAORI).</p> <ul style="list-style-type: none"> - 5-axes-transformation with tool orientation and tool center point management. The machining task is programmed completely in Cartesian coordinates with Cartesian position and orientation. The movements of all 5 axes resultant from that are computed internally with the 5-axes-transformation. - 5-axes-tool-offset. The length of the tool is automatically computed and compensated in the movements of the axes. - Oriented tool withdrawal. With the interruption of Machining (e. g. tool breakage), the tool can be withdrawn orientated and defined. | |

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| 2000 | 1,00 ST | <p>Production package with high pressure pump PF 50 / FKA 900 consisting of:</p> <ul style="list-style-type: none"> - Chip conveyor (scratch band) instead of coolant equipment with chip container discharge height 1.050 mm, discharge to the left, tank capacity 150 l, lift pump with 300 l/min. at 1,3 bar, - 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 20 l/min at 30 bar high pressure circuit with filtration via paper bond filter PF50, filtration 50 μm nominal. twin filter in the high pressure circuit for the protection of the machine. incl. bed flushing system (with Y480 mm or 500 mm) (This filtration method will not eliminate increasing cast iron slurry from the coolant equipment.) - 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 flow control switch solenoid valve, controlled via machine program <p>* At HSK we recommend for tool holders the use of our patented coolant tube with sieve. Advantage: Decrease of the clogging in the internal coolant channel.</p> | |
| 2100 | 1,00 ST | <p>70 bar high pressure pump flow rate 20 l/min at 30 bar - 11 l/min at 70 bar with vario pressure control valve for 8 programmable pressure stages pre-defined pressure steps (20, 30, 40, 50, 55, 60, 65, 70 bar) instead of standard high pressure pump</p> | |

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| 2200 | 1,00 ST | Wash gun for MILL 2000 | |
| 2300 | 1,00 ST | Automatic central grease lubrication | |
| 2400 | 2,00 ST | Suction points for customer specific installation Ø 200 mm right and left at the top of the machine enclosure and electrical preparation in cabinet | |
| 2500 | 1,00 ST | Loading door of total enclosure opening and closing automatic incl. thrust shaft switch | |
| 2600 | 1,00 ST | Technology package for turning from bar with flange inkl. ABS-receiver Lathe spindle water-cooled motor spindle, installed horizontal, with hollow shaft as opening for bars up to ø 65 mm 14,1 kW at 100 %, 42,5 kW at 5 % spindle speed range 15 - 4.500 rpm - 90 Nm with direct measuring system and hydraulic clamping 800 Nm collet chuck with integrated hydraulic actuation without clamping collet chuck with adapter flange incl. ABS-receiver (mechanical clamping, delivery from Komet) Adapter plate to increase the center height for clamp-Ø 150 mm | |
| 2700 | 1,00 ST | NC-feeding unit as bar feeder rapid traverse 60 m/min, stroke max. 1.550 mm, depending on fixture incl. interface NC axis, ready for plug-in | |
| 2800 | 1,00 ST | NC-turning unit with clamping vice for the machining of the 6th side, installed on NC-feeding unit, hub per chuck 16 mm max., clamp-Ø 150 mm incl. interface NC axis, incl. hydraulic unit extension for clamping / unclamp clamping block and rotary table clamping incl. hydraulic connection incl. pneumatic connection, uncontrolled, for air purge. Technical description for NC-turning unit: indexing accuracy ±15", max. spindle rotation speed 45 rpm, with hydraulic clamping, controlled via NC-program | |

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| 2900 | 1,00 ST | Tailstock Contact pressure controlled via current consumption Standard pin with MK 3-receiver, changeable, center height adjusted. Mounting bracket for measuring stand, screwed on back NC-indexing device Model as tailstock. | |
| 3000 | 1,00 ST | Suction connection from behind | |
| 3100 | 1,00 ST | Stationary 3D Probe System type TS 27 R, maker RENISHAW, with adapter plate and air blow for the measuring stylus, for tool breakage control (in one working area), for automatic tool length measurement (at FZ), for automatic temperature compensation, including process-orientated measuring, software for measuring cycles, strategy program and tool holder with dowel pin \varnothing 8 mm. Precondition for Fanuc: - High speed skip and macro common variables | |
| 3200 | 1,00 ST | Measuring in JOG for workpiece-measurement (e.g. determination of the zero point) during tipping mode (for Siemens 840 D) Precondition: spindle probe | |
| 3300 | 1,00 ST | In C-Axis angle measurement system RCN 226 (absolute measuring system) | |
| 3400 | 1,00 ST | Additional equipment for bar and extrusion machining system | |
| 3500 | 1,00 ST | Glass scales overpressured X, Y, Z = 2000 x 500 x 550 mm at NC-swivel head Y, Z = 480 x 715 / 630 mm | |
| 3600 | 1,00 ST | Safety glazing in the front doors | |
| 3700 | 1,00 ST | Extensions for the Sinumerik 840 D | |
| 3800 | 1,00 ST | Ethernet connection RJ45 at electrical cabinet instead in control panel | |

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| 3900 | 1,00 ST | Socket for portable mini-hand wheel without emergency stop button, at control panel | |
| 4000 | 1,00 ST | Signal lamp on control panel for 3 signals Signal "red" = failure Signal "white" = machine loaded Signal "green" = machine is running | |
| 4100 | 1,00 ST | Pneumatic- and Hydraulic Connections | |
| 4200 | 1,00 ST | Hydraulic unit for continuous duty pressure: 170 bar , flow rate: 11,3 l/min. incl. valves for supply and pressure stage for clamping of swivel head and automatic knock out of tool External cooling: pump power: 20 ltr./min at 4 bar | |
| 4300 | 1,00 ST | SINDNC Option to send and receive NC-programs in a network. The client-software (e. g. UNIX, Novell, Windows NT) and the wiring to the network is not included. Precondition: PCU 50 | |
| 4400 | 1,00 ST | 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 | |
| 4500 | 1,00 ST | Machine colour Two-components-structure varnish - 2 colours light grey acc. to NCS S1502-B basalt grey acc. to RAL 7012 | |
| 4600 | 1,00 ST | - Documentation - | |
| 4700 | 1,00 ST | Documentation acc. to CE of the first delivery into market 1 x safety regulations in a folder in English 1 x complete documentation on a USB as PDF Language of the operating manuals and safety in English | |

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| 4800 | | 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° | |

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