

Offer I CHIRON FZ 12 KS no. 251-73

Pos.	Qty.	Description	Price
100	1,00 ST	Partly refurbished vertical machining centre CHIRON FZ 12 KS no. 251-73 Year of construction: 2010, weight: 6.500 kg	
200	1,00 ST	According to described below scope of delivery	
300	1,00 ST	Column moving machining centre with machine bed in mineral cast technique and NC-swivel table	
400	1,00 ST	Machine enclosure with full enclosed working area with loading doors, electrically interlocked, including replaceable safety windows, workspace enclosure with stainless steel covers. 2140 mm high above floor, including machine lamp	
500	1,00 ST	2 axis rotary table type CASD 280 consisting of: Interface for 4th and 5th axis smallest increment 0,0001° Tilting axis tilting angle: $\pm 120^\circ$ repetition accuracy $\pm 5''$ with absolute, direct path measuring system ECN 225 drive through backlash-free, pretensioned precision gear very high overload capability max. transmittable torque 1.500 Nm spindle rev. 50 rpm rotary table faceplate dia. 280 mm with thread and locating hole grid M 16 x \varnothing 15H7 x 50 mm repetition accuracy $\pm 5''$ with absolute, direct path measuring system ECN 225 digital direct drives through torque motor max. transmittable torque 180 Nm with pneumatic clamping system max. torque if the table is clamped 800 Nm max. transport weight (workpiece weight): 320 kg spindle rev. 200 rpm	

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		clamping surfaces to the right and left of the rotary table faceplate with thread and locating hole grid M 16 x ø 15H7 x 50 mm	
		Counter bearing without drive total torque of tilting axis and counter bearing via clamping system 2.000 Nm	
		Central Pneumatic or Hydraulic Turning Supply 6-fold, integrated in A- and C-axis, with 6 O-ring connections in the center of the face plate Remark: power-actuated clamping fixtures on the faceplate require additional connections and clamping circuits.	
600	1,00 ST	Travel: X-axis 550 mm Y-axis 400 mm Z-axis 360 mm (plus distance from spindle nose to table surface, according to data sheet)	
700	1,00 ST	Digital main drive with spindle with air purge and monitoring of the tool clamping 24,0 kW at 100 % 36,0 kW at 25 % spindle speed range up to 24.000 rpm; 29 Nm Acceleration and deceleration from 0 – 24.000 rpm each 0,7 seconds Drilling capacity∅ 18 mm (with insert drill) Tapping capacity M 16 Milling capacity 80 cm ³ /min	

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Pos.	Qty.	Description	Price
800	1,00 ST	Automatic tool changer through robust, full enclosed pick up tool changer, with mechanical impact protection an cleaning of the tool taper through air blow No. of tools 64 Tool taper HSK-A 50 DIN 69893 Max. tool dia. max. 60 mm Tool length max. 250 mm Max. tool weight max. 3 kg Tool change time appr. 0,9 s (depends on CNC) Chip-to-chip-time appr. 2,2 s (depends on CNC)	
900	1,00 ST	Tool place for max. tool dia. up to 125 mm instead of max. tool dia 60 mm, for every large tool place the total number decreases at 1, tool dia. up to 100 for adjacent place with max. dia 40 mm tool dia. up to 125 for adjacent place with max. dia 25 mm in compliance with interference outline in the tool magazine. Max. tool weight max. 5 kg (for option of 48 and 64 tool places)	
1000	1,00 ST	AC-servo-motors feed drives for X-, Y- and Z-axes, digital direct drives with direct absolute path measuring system (glass scales) overpressured in all axes rapid traverse in X-, Y- and Z-axes 75 m/min, acceleration X-axis 1 g, Y-axis 1,5 g, Z-axis 2 g Remark: With normal conditions the machine does not have to be anchored to the floor. (For slippery floors we recommend anchoring.)	
1100	1,00 ST	Automatic central oil lubrication	
1200	1,00 ST	Turnable control panel with additional window at the machine enclosure, for good view into the working area during setup	
1300	1,00 ST	SIEMENS CNC-control 840D (PCU 50.3 / NCU 572.5, 6 measuring cycles, 1 canal) incl. 10,4" TFT colour LCD screen / full keyboard OP010S control panel logic Windows XP NC-memory 256 KB (max.200 programmes storage capacity) for ISO 66025 programming	

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Pos.	Qty.	Description	Price
		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 scaling function insert of chamfer and radius Universal interface RS 232C (1 x V24) at control panel 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 look ahead function	
1400	1,00 ST	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 programm to recovery the production readiness.	

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1500	1,00 ST	Spline Interpolation	
1600	1,00 ST	Measuring in JOG for workpiece-measurement (e.g. determination of the zero point) during tipping mode	
1700	1,00 ST	SIEMENS Tool lifetime control with: - tool place organization - sister tool organization - working field organisation via 4-digit program no. in the screen	
1800	1,00 ST	5-axes-machining for the machining of three-dimensional curved or tilted surfaces with 3 linear and 2 additional axes (TRAORI & CYCLE 800), incl. compressor CompCAD. - 5-axes-transformation with 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.	
1900	1,00 ST	Automatic Traori measuring cycle Automatic measuring and correction of the 5-axis machine kinematics, Including cycles and reference measuring ball	
2000	1,00 ST	CHIRON Maintenance Management in the screen display of the pending maintenance: advance warning = "prepare maintenance", warning = "carry out maintenance", machine stop = "catch up on maintenance". Abridged instructions for the pending maintenance with graphic illustration on CD-ROM. Confirmation of the performed maintenance through the maintenance staff by password.	
2100	1,00 ST	Working hours and piece counter in the screen	
2200	1,00 ST	Socket for portable mini-hand wheel without emergency stop button, at control panel	

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2300	1,00 ST	Cabinet cooler as a door mounting unit	
2400	1,00 ST	Socket 230 V at control panel	
2500	1,00 ST	Chip conveyor (scratch band) instead of standard coolant equipment discharge height 490 mm tank capacity 100 l, pump capacity 110 l/min at 1,3 bar coolant cleaning through slot filter box	
2600	1,00 ST	Coolant equipment KF 150 / KFA 500 (for cast iron slurry, Al with Si \geq 12%) tank capacity 500 l, pump capacity from 80 l/min at 3,0 bar up to 100 l/min at 1,8 bar high pressure pump capacity 20 l/min at 30 bar coolant filtration for high pressure and flood coolant with compact paper bond filter KF 150, filtration 50 μ m nominal. twin filter in the high pressure circuit for the protection of the machine. incl. Fixture washing with nozzles controlled with m-functions for washing the working area	
2700	1,00 ST	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	
2800	1,00 ST	Signal lamp for 3 signals Signal "red" = failure Signal "white" = machine loaded Signal "green" = machine is running	
2900	1,00 ST	Wash gun placed outside of the machine enclosure, incl. solenoid valve for coolant supply	

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3000	1,00 ST	Oil-free air service unit with automatic condensate separator, pressure control of the air supply and micro filter 0,01 µm for air purge	
3100	1,00 ST	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. The machine documents for approval contain a proposal for the appropriate execution of the oil pan.	
3200	1,00 ST	Work space washing with nozzles installed inside the Machine enclosure (Subject: Coolant equipment)	
3300	1,00 ST	CHIRON Lasercontrol 40 min. Werkzeugdurchmesser 0,5 mm, max. Werkzeugdurchmesser 40 mm, zur Werkzeugbruchkontrolle (in einem Arbeitsfeld), zur autom. Werkzeugvermessung, zur autom. Maschinenkompensation in 2 Achsen, mit prozessnahe Messen, Software für Messzyklen und Strategieprogramm, inkl. Prüfdorn mit Werkzeughalter	
3400	1,00 ST	Parts location air sensing with 1 switch, completely installed, including energy-efficient shutdown during machining. Remark: Maximum 3 nozzles per switch. Precondition: Processed faces or aluminium die casting (not on partition or ejector flags), no grey cast iron. At rotary table and standard fixture for rotary table are additional turning supplies necessary.	

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3500	1,00 ST	Machine preparation for through tool coolant system including: - Sealing system in the DIN 69893 HSK A50 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 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)	
3600	1,00 ST	Viewing window on the chain magazine	
3700	1,00 ST	Exhaust fan with air cleaner exhaust capacity 800 m ³ /h Smoke and gases that arise during the processing are not filtered by this unit. In this case we recommend the connection to a central exhaust fan.	
3800	1,00 ST	Pneumatic and hydraulic connections	
3900	1,00 ST	Pneumatic connection (A + B) for pneumatic clamping device electrically controlled pneumatic connection, for double acting; pressure control; pressure control switch with automatic pressure regulation. (in case of pressure change automatic pressure sensing)	
4000	1,00 ST	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	
4100	1,00 ST	- Documentation -	
4200	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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4300	1,00 ST	Machine colour two-components-structure varnish - 3 colours window grey acc. to RAL 7040 blue acc. to NCS S2050-R80B 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°	

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