

Data sheet No. 20385347 / 15.09.2022

Item	Qty	Description
1000	1	Vertical CNC-machining center CHIRON FZ 12 KS
1040	1	Zustand: Komplett überholt Baujahr: 2009 Entsprechend nachfolgend beschriebenem Umfang
1060	1	Drilling capacity in steel Ø 18 mm Tapping capacity M 16 Milling capacity in steel 80 cm ³ /min COLUMN MOVING MACHINING CENTRE with fixed table and machine bed in mineral cast technique Guideways with long-term-grease lubrication
1080	1	Machine enclosure with full enclosed workspace with loading doors, electrically interlocked, including replaceable safety windows, workspace enclosure with stainless steel covers. 2140 mm high above floor, including machine lamp
1100	1	NC swivel head swivel range -10° / +100° rapid traverse 52 rpm lowest increment 0,001° with direct measuring system ± 5"
1120	1	Fixed table with chip pan clamping surface 820 mm x 440 mm with 3 T-slots 2 x 18 H12, 1 x 18 H 8 table loading capacity max. 500 kg
1140	1	Travel: X-axis 550 mm Y-axis 360 mm Z-axis 360 mm (plus distance from spindle nose to table surface, according to data sheet)
1160	1	Digital main drive with water-cooled motor spindle with air purge and monitoring of the tool clamping 24 kW at 100 % 36 kW at 25 % spindle speed range up to 12.000 rpm; 29 Nm acceleration from 0 to 12.000 rpm or deceleration in 0,6 seconds
1180	1	Automatic tool change 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

Data sheet No. 20385347 / 15.09.2022

Max. tool dia. max. 60 mm if all magazine pos. are occupied
 Max. tool dia. for adjacent place
 with max. dia 40 mm max. 100 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. 2,4 s (depends on CNC)

1200 1 **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 1,2 g, Z-axis 1,5 g

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

1220 1 **SIEMENS CNC-control 840D**
 (PCU 50 / NCU 572.5)
 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
 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

Data sheet No. 20385347 / 15.09.2022

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

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| 1240 | 1 | <p>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 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.</p> |
| 1260 | 1 | <p>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.
 Password protected confirmation of the performed maintenance through the maintenance staff.</p> |
| 1280 | 1 | <p>Working hours and piece counter
 in the screen</p> |
| 1300 | 1 | <p>Socket 230 V
 at control panel</p> |
| 1320 | 1 | <p>Socket for portable mini-hand wheel
 without emergency stop button,
 at control panel</p> |
| 1340 | 1 | <p>Cabinet cooler as a door mounting unit</p> |

Data sheet No. 20385347 / 15.09.2022

- 1350 1 **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.
- 1360 1 **Signal lamp on machine enclosure for 3 signals**
 Signal "red" = failure
 Signal "white" = load machine
 Signal "green" = machine is running
- 1380 1 **Oil-free air service unit**
 with automatic condensate separator,
 pressure control of the air supply
 and micro filter 0,01 µm for air purge
- 1400 1 Kühlmittelpaket
- 1420 1 **Späneförderer mit erhöhtem Auswurf**
 Auswurfhöhe 1050 mm anstatt 490 mm,
 Behälterinhalt 130 l anstatt 100 l bei Auswurf nach links
 (nur bei Baureihe 15 / 18 möglich)
 Behälterinhalt 230 l anstatt 100 l bei Auswurf nach hinten
- 1440 1 **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 µm 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

Data sheet No. 20385347 / 15.09.2022

- 1460 1 **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)
- 1470 1 **Machine colour**
 two-components-structure varnish - 3 colours
 window grey acc. to RAL 7040
 grey white acc. to RAL 9002
 basalt grey acc. to RAL 7012
- 1480 1 **Options coolant**
- 1500 1 **Wash gun**
- 1520 1 **Automatic central oil lubrication**
- 1540 1 - Optionen Absaugung / Löschen -
- 1560 1 **Absauganschluss**
 für kundenseitige Absaugung des Arbeitsraumes, mit Anschluss Ø 200 mm oben an der Maschine und elektrischer Vorbereitung im Schaltschrank
- 1580 1 - Optionen Messen / Werkzeugbruchkontrol
- 1600 1 **Probe for automatic measuring in the machine Renishaw - probe - package OMP 40-2LS**
 for part measuring and automatic machine compensation,
 - probe with optical contact modul and tool taper suitable for machine spindle
 - tracing pin 58 mm with ruby ball dia. 4 mm
 - infrared sensor OMI-2C
 - process oriented measuring
 - software for measuring cycles and strategy program

Data sheet No. 20385347 / 15.09.2022

Remark:

For the carrying out of machine compensations with probe a suitable reference surface at the machine or at the fixture or an optional gauge block (VCS12100800) are necessary.

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| 1620 | 1 | <p>CHIRON Lasercontrol 65
 min. tool Ø 0,5 mm,
 max. tool Ø 88 mm,
 for tool breakage control (in one working area),
 for automatic tool measurement,
 for automatic temperature compensation, in 2 axes,
 including process-orientated measuring,
 software for measuring cycles
 and strategy program,
 and test mandrel with tool holder</p> |
| 1640 | 1 | <p>Machine options for bar machining</p> |
| 1660 | 1 | <p>Technologiepaket Fräsbearbeitung von der Stange
 Rundtischpaket komplett installiert bestehend aus:</p> <ul style="list-style-type: none"> - NC-Rundtisch, Type AWU 160, - 4. NC-Achse, steckerfertig, kleinstes Inkrement 0,001° - Hydraulikaggregaterweiterung für Rundtischklemmung inkl. Hydraulikanschluss <p>Technische Beschreibung NC-Rundtisch
 Teilgenauigkeit ± 15", max. Spindeldrehzahl 45 min⁻¹,
 Spindel mit hydr. Klemmung,
 Planscheiben-Ø 180 mm, vorbereitet für Spannfutteraufnahme,
 vorn und hinten, Durchlass max. Ø 100 mm</p> <p>Automatische Zangenspannung für Spannzangen
 Spannbereich bis max. Ø 100 mm mit hydraulischer Betätigung,
 Hydraulikaggregaterweiterung für separates Spannen / Lösen
 der Spannfutter inkl. Hydraulikanschluss,
 Ansteuerung über Taste AUF/ZU im Kommandopult und m-Funktion über
 NC-Programm</p> <p>NC-Schlitten für Stangenvorschub
 Geschwindigkeit 60 m/min,
 Hub max. 440 mm, abhängig von der Spannvorrichtung</p> <p>NC-Wender mit hydraulisch betätigtem Spannstock HZS 110-Z,
 Hub 2 x 4 mm
 zur Bearbeitung der 6. Seite, aufgebaut auf NC-Schlitten,
 inkl. Hydraulikaggregaterweiterung für Spannen / Lösen
 Spannstock und Hydraulikanschluß
 Technische Beschreibung NC-Wender:
 Teilgenauigkeit ±30", max. Spindeldrehzahl 80 min⁻¹,
 mit pneumatischer Klemmung</p> <p>Hydraulikaggregat für Dauerbetrieb
 bei Schaltzyklen kleiner als 30 Sekunden
 Druck: 210 bar, Förderleistung: 4,3 l/min</p> |

Data sheet No. 20385347 / 15.09.2022

Maschinentisch in Höckerausführung anstelle von Starttisch

Kabinendurchbruch links für Stangenzuführung

Bemerkung:

Die Maschine ist kundenseitig nach dem Ausrichten am Boden zu verankern.

Bei Stangenlänge > 800mm ist ein Stangenlader (Option) mit hydrodynamischer Lagerung erforderlich

Zusätzlich erforderlich: Vorrichtungsspülung, Abfuhr der Fertigteile

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| 1680 | 1 | <p>Finish part Gutter
With part chute and controlled flushing.</p> |
| 1700 | 1 | <p>Options of SIEMENS 840D</p> |
| 1720 | 1 | <p>SIEMENS Tool lifetime control with:
- tool place organization
- sister tool organization</p> |
| 1740 | 1 | <p>MCIS DNC
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</p> |
| 1760 | 1 | <p>Electric interface for loader with Profibus
for automatic loading system,
with DP/DP-coupler (slave) in the electrical cabinet,
according to documentation of CHIRON loader interface
(See Intranet / technical documentation:
Document with ID 7355),
consisting of: circuit diagram, signal description and functional diagram,
interface tested according to CHIRON-description,
incl. selection possibility on the control panel "with loader",

Deviation from the standard interface and set up will be charged according to time and material used.
Waiting periods during set up will also be charged.

Note: The machine has to be anchored for robot loading or linkage. Anchoring the machine to the floor can be carried out by CHIRON and will be invoiced according to the extent of the work involved.</p> |
| 1780 | 1 | <p>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</p> |