

Data sheet No. 20385499 / 16.09.2022

Item	Qty	Description
1000	1	Vertical CNC-machining center FZ 15 L 2000
1040	1	Condition: Completely refurbished Year of construction: 2004 According to described below scope of delivery
1060	1	Column moving machining centre with fixed table Suitable for dry-machining with optimized chip drop Guideways with long-term-grease lubrication
1080	1	Machine enclosure with loading door, electrically interlocked, 2200 mm high above floor, incl. machine lamp service friendly with removable side walls vertical bellows
2000	1	Machining area recognition M61 / M62 for shuttle machining 2 x 600 mm, incl. fixed centre divider, start and receipt push buttons, mounted on both sides
2020	1	Fixed table with chip pan Clamping surface 2280 x 450 mm ² with 3 T-slots 2 x 18 H12, 1 x 18 H8
2040	1	Travel: X-axis 2000 mm Y-axis 400 mm Z-axis 425 mm with variable tool changing level
2060	1	Main Spindle drive with AC-motor 9,5 KW at 100 % 14,0 KW at 15 % Spindle speed range: 20 - 12.000 rpm - max. 90 Nm Drilling capacity in steel Ø 36 mm (with insert drill) Tapping capacity M 24 Milling capacity in steel 250 cm ³ /min
2080	1	Automatic tool changer, guaranteed against chips Tool places 20 Tool shaft SK 40 DIN 69871/69872 Tool-Æ max. 65 mm Tool-Æ if adjacent places are free max. 150 mm Tool weight max. 2,5 kg (5,0 kg) Tool changing time approx. 0,9 s (depends on CNC) Chip-to-chip-time approx. 1,9 s (depends on CNC)
2100	1	AC-servo motors for x-, y- and z-axes digital direct drives with direct absolute encoder rapid traverse in all axes 40 m/min in all axes

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2120	1	<p>SIEMENS CNC-control 840D (MMC 100./ NCU 572.2, 6 measuring cycles, 1 canal) incl. 10,4" TFT colour LCD screen / full keyboard OP032S NC-memory 256 KB (max.200 programmes storage capacity) for ISO 66025 programmingdrilling 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 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, rigid tapping powermeter in screen</p>
2140	1	<p>CMS Powersafe Software package for selective shutdown of installed consumers such as axis motors, drives, spindles, coolant-pumps and auxiliary equipment during production breaks. Definable point in time at which the machine goes demand-oriented automatically into it's Power Safe mode.</p>
2160	1	<p>Working hours and piece counter in the screen</p>
2180	1	<p>Thermocontrol (deactivated with use of measuring systems e.g. spindle probe, stationary 3D probe or laser control) (not for DZ 08 and machines X > 2000)</p>
2200	1	<p>Cabinet cooler as a door mounting unit with sealed cabinet cooler</p>
2220	1	<p>Wash gun</p>

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- 2240 1 **Exhaust fan with air cleaner**
exhaust capacity 800 m³/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.
- 2260 1 **Coolant equipment with chip conveyor (scratch band) Typ 300S-2/200**
discharge height 1.050 mm, discharge to the left,
tank capacity 200 l, pump capacity 200 l/min. at 1,5 bar
- 2280 1 **Coolant equipment HL 450 / FKA 900**
(also for sludge generating materials, e.g. grey cast iron, GGG, Al with Si >= 12%)
tank capacity 900 l
low pressure 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
full stream purification via compact paper bond filter HL 450,
with coolant purification 50 µm nominal
twin filter in the high pressure circuit for
the protection of the machine
- 2300 1 **Hydraulic connection for 210 bar**
with 2 connecting couplings "A + B" and
hydraulic installation up to outside of
machine bed, electrical control for clamping
ON - OFF via push button at control panel
- 2320 1 **Hydraulic unit**
maker HEILMEIER & WEINLEIN
pressure: 210 bar, supply capacity: 6,0 l/min.
incl. valves for supply of 2 clamping device
and 2 pressure switch for clamping control
- 2340 1 Package m-functions
m72/m73 and m74/m75: m-function pairs for ON/OFF function
m76/m78 m-functions to control a peripheral equipment with external
setback
(blocking of the machine course)
- 2360 1 **Machine colour**
Two-components-structure varnish - 2 colours
light grey acc. to NCS S1502-B
basalt grey acc. to RAL 7012
- 2370 1 **Warranty**
CMS-full-service-Warranty
6 months after commissioning
for NC-control and machine
excluded wear parts.

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2380 1 **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