

## Data sheet No. 20385356 / 15.08.2024

Item	Qty	Description
1000	1	<b>Vertical CNC-machining center FZ 15 W no. 147-66</b>
1040	1	<b>Year of construction:</b> 2003 <b>Condition:</b> completely overhauled
1060	1	<b>Machine enclosure</b> with sliding doors, electrically interlocked, 2200 mm high above floor, incl. machine lamp service friendly with removable side walls vertical bellows
1080	1	<b>Mini-operating panel</b> with start and receipt push buttons, for pallet recognition M61/M62
1100	1	<b>Workpiece swivel table 0/180 degrees</b> with centre divider made of sheet metal clamping surface 2 x 660 mm x 400 mm with thread and locating hole grid M16 x $\varnothing$ 15 H7 x 50 mm workpiece swivel time appr. 2,4 s weight-dependent, self-regulating through self-learning speed-control table loading capacity per side 0 - max. 300 kg, max. 100 kg weight difference between the two table sides
1120	1	<b>Travel:</b> X-axis 550 mm Y-axis 400 mm Z-axis 425 mm with adjustable tool change level (plus distance from spindle nose to table surface, according to data sheet)
1140	1	<b>Main Spindle drive with AC-motor</b> 9,5 KW at 100 % 14,0 KW at 15 % for mainspindle Spindle speed range: 20 - 10.500 rpm - max.90 Nm
1160	1	<b>Automatic tool changer, protected against chips</b> No. of tools 20 Tool shaft SK 40 DIN 69871 + 72 Max. tool dia. 65 mm if all magazine pos. are occupied Max. tool dia. 175 mm if adjacent places are free Max. tool weight 2,5 kg (5,0 kg at 4 places) Tool change time appr. 0,9 s (depends on CNC) Chip-to-chip-time appr. 2,1 s (depends on CNC)
1180	1	<b>AC-servo motors</b> for x-, y- and z-axes digital direct drives with indirect absolute path measuring system rapid traverse in all axes 40 m/min. with 0,5 g acceleration

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1200	1	<p><b>SIEMENS CNC-control 840D</b>  (PCU 20 / NCU 572.3)  incl. 10,4" TFT colour LCD screen / full keyboard OP010S  NC-memory 256 KB  (max.200 programmes storage capacity)  for ISO 66025 programming  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 (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</p>
1220	1	<p><b>CMS Powersafe</b>  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>
1240	1	<p><b>Working hours and piece counter</b>  in the screen</p>
1260	1	<p><b>Socket 230 V</b>  at control panel</p>

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- 1280 1 **Cabinet cooler as a door mounting unit**
  
- 1300 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.
  
- 1320 1 **Wash gun**  
with 1 connection and quick coupling each in loading- and working area
  
- 1340 1 **Automatic central grease lubrication**
  
- 1360 1 **Fully enclosed work space**  
(Standard at high speed plus package)
  
- 1380 1 **Coolant equipment with chip conveyor (scratch band)**  
discharge height 1.050 mm tank capacity 400 l  
pump capacity 150 l/min. at 2,0 bar
  
- 1400 1 **For machining with high chip volume or additional flushing options**  
and the resultant big coolant flow  
we recommend, to calm down the coolant and to decrease the cleaning cycles at the chip conveyor and the coolant pipes, coolant equipment with a tank capacity of 900 l.
  
- 1420 1 **Coolant equipment**  
tank capacity 900 l,  
pump capacity 200 l/min. at 2,0 bar  
(the pump in the chip conveyor becomes the lift pump)  
incl. bed flushing system
  
- 1440 1 **Package m-functions**  
m72/m73 2 m-function pairs for  
m74/m75 simple ON/OFF function  
m76 m-functions to control a  
m78 peripheral equipment with external setback  
(blocking of the machine course)
  
- 1460 1 **Slot sieve type W = 0,35**
  
- 1480 1 **Suction point**  
for customer specific installation  
Ø 200 mm on top of the machine enclosure  
and electrical preparation in cabinet
  
- 1520 1 **Two-components-structure varnish - 2 colours**  
light grey acc. to NCS S1502-B  
basalt grey acc. to RAL 7012

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| 1540 | 1 | <b>Cutting tools</b><br>The cutting tools have to be balanced according to DIN 69 888, class G 6, 3, in two levels, with max. operating speed   |
| 1560 | 1 | <b>Documentation acc. to CE of the first delivery into market</b><br>1 x safety regulations in a folder in English<br>1 x complete documentation on a USB as PDF<br>Language of the operating manuals and safety in English |