

Pos.	Qty.	Article Description	Price / €
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## Complete machine description I FZ 15 SM Nr. 333-05

- |   |   |   |  |
|---|---|---|--|
| 1 | 1 | <b>Vertical CNC-machining centre model FZ 15 SM</b><br><b>Show room machine</b><br><b>Year of construction: 2014, weight: 9.200 kg</b><br><br><b>Machine-No. 333-05</b> |  |
|---|---|---|--|



Machine image similar.  
The equipment of the sample photo isn't binding.



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Scope of delivery:

1040 1 **COLUMN MOVING MACHINING CENTRE**  
according to the following items

1060 1 **Machine base** in mineral cast technique

**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

### Fixed table with chip pan

clamping surface: 1060 mm x 430 mm<sup>2</sup>  
with 3 T-slots 2 x 18 H12, 1 x 18 H 8  
Locating bushing  $\varnothing$  15 H7  
table loading capacity max. 500 kg

**minimum distance** spindle nose - table surface 240 mm

### Travel:

X-axis 730 mm  
Y-axis 400 mm  
Z-axis 425 mm

### Processing medium coolant

1080 1 **Bed flushing system**

1120 1 **Main drive with AC-motor**  
with air purge and monitoring of the tool clamping  
17,0 kW at 100 %  
37,0 kW at 10 %  
spindle speed range up to 12.000 rpm  
torque max. 180 Nm

Drilling capacity  $\varnothing$  42 mm  
Tapping capacity M 30  
Milling capacity 500 cm<sup>3</sup>/min  
in steel E335



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|------|---|---|--|
| 1140 | 1 | <p><b>Machine preparation</b><br/>           for through tool coolant system including:<br/>           Sealing system in the DIN 69871 Form A40<br/>           or DIN 69893 HSK A63* collet<br/>           coolant distributor installed at the main spindle drive<br/>           Coolant leakage sensor<br/>           Implemented mud flap in the high pressure piping<br/>           and flow control switch<br/>           Solenoid valve, controlled via machine program</p> <p>* HSK A63 tool holders for through tool coolant require<br/>           the use of our patented coolant tube with sieve.<br/>           Advantage: Decrease of the clogging in the internal<br/>           coolant channel.</p> |  |
| 1160 | 1 | <p><b>Automatic tool changer, protected against chips</b><br/>           No. of tools 20<br/>           Tool shaft HSK-A 63 DIN 69893<br/>           Max. tool dia. 65 mm if all magazine pos. are occupied<br/>           Max. tool dia. 175 mm if adjacent places are free<br/>           Max. tool weight 2.5 kg (5,0 kg at 2 places)<br/>           Tool change time approx. 0,9 s (depends on CNC)<br/>           Chip to chip time approx. 1,9 s (depends on CNC)</p>   |  |
| 1180 | 1 | <p><b>Feed drives for X-, Y- and Z-axes</b><br/>           digital direct drives with indirect absolut path measuring system<br/>           Rapid speed 75 - 75 - 75 m/min<br/>           Acceleration 1,0 - 1,0 - 1,0 g</p>  |  |
| 1200 | 1 | <p><b>Direct path measuring system X-axis</b><br/>           overpressured</p>  |  |
| 1220 | 1 | <p><b>Direct path measuring system Y-axis</b><br/>           overpressured</p>  |  |
| 1240 | 1 | <p><b>Direct path measuring system Z-axis</b><br/>           overpressured</p>  |  |
| 1260 | 1 | <p><b>Automatic central oil lubrication</b></p>   |  |



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1280	1	<p><b>SIEMENS CNC-control 840D solution line</b>            (PCU 50.3 / NCU 720.3, 6 measurement cycles, 1 canal)            incl. 10,4" TFT colour LCD screen            full keyboard / control panel OP010S            control panel logic Windows XP            NC-memory 3 MB (max. 1 MB for free disposal)            (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            dimension metric or inch            software limit switch            NC-diagnosis            machine-diagnosis            absolute indirect path measurement systems            power meter in screen            Working hours and piece counter in the screen            look ahead function</p>	
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1320	1	<p><b>CHIRON maintenance management in the screen</b>  display of the pending maintenance:  advance warning = "prepare maintenance"  warning = "carry out maintenance"  machine stop = "catch up on maintenance"</p> <p>Abridged instructions for the pending maintenance with graphic illustration on CD-ROM.  Password protected confirmation of the performed maintenance through the maintenance staff.</p>	
1340	1	<p><b>Working hours and piece counter</b>  in the screen</p>	
1360	1	<p><b>Service socket at control panel</b>  (description see "main circuit")</p>	
1380	1	<p><b>Socket for portable mini-hand wheel</b>  without emergency stop button, at control panel</p>	
1400	1	<p><b>Cabinet cooler as a door mounting unit</b></p>	
1420	1	<p><b>Signal lamp for 3 signals</b>  Signal "red" = failure  Signal "white" = load machine  Signal "green" = machine is running</p>	
1440	1	<p><b>Wash gun</b></p>	
1460	1	<p><b>Oil-free air service unit</b>  with automatic condensate separator,  pressure control of the air supply  and micro filter 0,01 µm for air purge</p>	
1500	1	<p><b>Optional extra equipment</b></p>	
1520	1	<p><b>Coolant Package</b></p>	
1530	1	<p><b>Chip conveyor (scraper belt)</b>  tank capacity 60 l  pump capacity 110 l/min at 1.3 bar  coolant purification through slotted filter box  Chip conveyor discharge height 490 mm  Chip conveyor discharge to rear</p>	



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1600	1	<p><b>Coolant equipment KF 150 / FKA 500</b>            (also for sludge generating materials, e.g. grey cast iron, GGG, Al with Si <math>\geq</math> 12%)            tank capacity 500 l</p> <p>low pressure pump capacity from 40 l/min. at 3.2 bar            up to 120 l/min at 3.2 bar</p> <p>energy-efficient, frequency-regulated high pressure pump            capacity 43 l/min at 20 bar up to 37 l/min at 70 bar</p> <p>Vario pressure relief valve for            8 programmable pressure stages            pre-defined pressure stages            (20, 30, 40, 50, 55, 60, 65, 70 bar)</p> <p>full stream purification via compact paper bond filter KF 150,            with coolant purification 50 <math>\mu</math>m nominal            twin filter in the high pressure circuit for            the protection of the machine</p>	
1630	1	<p><b>Fixture washing</b>            incl. coolant supply</p>	
1660	1	<p><b>Option exhaust</b></p>	
1680	1	<p><b>Suction point</b>            for customer specific installation  <math>\varnothing</math> 175 mm on top of the machine enclosure            and electrical preperation in cabinet</p>	
1740	1	<p><b>Options pneumatic / hydraulics</b></p>	
1780	2	<p><b>Hydraulic connection for 200 bar</b>            with 2 connecting couplings A+B and            hydraulic installation up to outside of machine bed,            incl. valve for supply of 1 double acting clamping device            with pressure switch for clamping control and            electrical control for clamping ON - OFF</p>	
1800	1	<p><b>Hydraulic unit</b>            continuous duty            pressure: 200 bar</p>	
1820	1	<p><b>Electrical main shut-off</b>            for pneumatic supply</p>	



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1940	1	<b>Option machine operation</b>	
1960	1	<b>Automatic loading door of total enclosure</b> opening and closing, actuating via push button at control panel	
1980	1	<b>Walk switch</b>	
2000	1	<b>MCIS DNC</b> 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.	
2040	1	<b>Variable clamping logic CHIRON</b> For the definition of different locking and unlocking sequences, for max. 10 functions with max. 8 steps. Considering of time delay and monitoring of clamping circuits e.g. through pressure switches or airsensing. Storing and reloading the configuration allows fast changeover	
2060	1	<b>CHIRON Powersave</b> 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 points in time at which the machine starts demand- oriented automatically with a variable warmup program to recovery the production readiness	
2080	1	<b>Rigid tapping</b>	



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2100 1 **Option automation**

2200 1 **Electric interface for loader with "Profibus"**  
 for loading through side for automatic loading system,  
 with DP/DP-coupler (slave) in the electrical cabinet,  
 according to documentation of CHIRON loader interface,  
 consisting of: circuit diagram, signal description and  
 functional diagram,  
 interface tested according to Chiron-description,  
 incl. key-operated switch and indicator lamp in the control panel "with  
 loader",

Deviation from the standard interface and set up will be  
 charged according to effort.

Waiting periods during set up will also be charged.

Recommended options:

- Automatic doors
- tool life control
- tool breakage control
- fixture washing- chip conveyor, if not included in basic machine
- air sensing
- automatic central lubrication

Note:

The machine has to be anchored with robot loading or  
 linkage. Anchoring the machine to the ground can be made  
 by Chiron if wanted. This outlay will be charged according  
 to effort.

2400 1 **Others**

2480 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.

### Documentation (standard offer)

1 x safety regulations in a folder

1 x complete documentation on a USB as PDF





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### Machine colour

two-components-structure varnish - 3 colours  
light grey acc. to NCS S1502-B  
blue acc. to NCS S2050-R80B  
basalt grey acc. to RAL 7012

### Main circuit

pressure supply 6 bar +1 bar / -0,5 bar at all procedures  
room temperature 10 up to max 40 degrees Celsius  
Neutral conductor resistant  
Protective conductor existing  
Frequency 50 Hz  
Power outlet type VDE-SCHUKO  
Supply voltage machine 3x400 volt  $\pm$  10%  
Power outlet voltage 230 volt  $\pm$  10%

CMS-GmbH

