

Geiger Fertigungstechnologie GmbH	<b>Description MIKRON Multistep XS</b>	
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### General notes:

Type of machine:	MIKRON Multistep XS
Machine number:	KU 0165M
Year of construction:	2007
No. of modules:	4
	1 loading module
	3 processing modules
No. of spindles:	6
Coolant tank:	Knoll, type VRF450/2100 / 200733493
Extraction	Electrostatic / LTA

### Control system

Control system:	Bosch Rexroth MTX
All axes controlled with one control system	
CNC and PLC on one module	
all interfaces on-board (sercos 16Mbaud; Profibus DP, Ethernet)	
5/6-axis transformation	
3D tool path correction	
Look-ahead for up to 1000 sets	
Unlimited parts program size	
Remote diagnosis	
Programming in ISO code	
Programming and simulation using EdgeCAM software	

### Safety system

Interlocking switches on all doors to the working area
Category 3 safety circuit for the machine

### Connection loads

Voltage 3 AC:	400 V
Frequency:	50Hz
Current:	60 A
Power:	40 kVA
Compressed air, min.:	6 bar
Weight per processing module, approx.	4.5 t
Weight per loading module, approx.	2.5 t
Machine dimensions L x W x H approx.	9,300 x 3,400 x 3,500

### Loading system parallel to primary time

Manual
With 3-axes handling
With robot

### Parts feed paternoster / stacking magazine

### Workpiece

Diameter:	140 mm
Length:	180 mm
Weight:	21 kg

### Workpiece clamping

EROWA clamping system, pneumatic actuation	6 bar
Repetition accuracy during change	+/-2 µm
Clamping force, approx.	10 kN (self-locking)

### Workpiece transport

Workpiece change chip-to-chip time, approx.	6s
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**Tool changer**

External pre-installable tool discs with position coding	Ø 290 mm
Tools (2 discs with 12 positions) / Processing module	22
Weight of tool disc	5 kg
Max. tool weight	2.5 kg
Max. free tool length	186 mm
Max. tool diameter	63 mm
Max. tool diameter with free position	105 mm
Shortest chip-to-chip time	>=1s
Max. weight of tools on disc	15 kg
Positioning time per tool step	250ms
Tool holder acc. to DIN 69893	HSK 40-A

**Axis**

Travel	X	572 mm
	Y1/Y2	322 mm
	Z	265 mm
Speed	X	40 m/min
	Y1/Y2	32 m/min
	Z	25 m/min
Acceleration	X	8 m/s <sup>2</sup>
	Y1/Y2	8 m/s <sup>2</sup>
	Z	4 m/s <sup>2</sup>
Feed force	X	1100 N
	Y1/Y2	1100 N
	Z	2500 N
Rotational speed	B-axis	100 rpm
	C-axis	500 rpm
Acceleration	B-axis	52 [rad/s <sup>2</sup> ]
	C-axis	90 [rad/s <sup>2</sup> ]
Torque	B-axis, clamped	1000 Nm
	B-axis, not clamped	287 Nm
	C-axis clamped	300 Nm
	C-axis, not clamped	187 Nm

**Working spindle**

Tool mount	HSK 40-A
Outer diameter	108 mm
Rotational speed	15,000 rpm
Torque (S6 45% duty cycle)	85 Nm
Output (S6 45% duty cycle)	18 kW
Internal coolant feed up to	120 bar
Spindle distance	200 mm

**Errors excepted**

**Price on request**