



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 |
|---|----|



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 ² |
| | Y1/Y2 | 8 m/s ² |
| | Z | 4 m/s ² |
| 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 ²] |
| | C-axis | 90 [rad/s ²] |
| 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