CNC gantry-type machining center
PSD-Mill CNC

Technical Datasheet
• Extremely robust and solid base frame provides great rigidity, stability and vibration-free work even with heavy duty cutting
• Rigid frame construction consisting of a massive machine bed, two movable uprights and a strong crossbeam, ensures excellent positioning stability and extremely high cutting efficiency

Optional configuration:
- 32-tool magazine
- 40-tool magazine
- 60-tool magazine
- 80-tool magazine
- 120-tool magazine
- Angle milling head BT 50/90° with a max. Speed of 3500 r/min, 5° angular increment
- Angle milling head BT 50/90° with a max. Speed of 3500 r/min, angular increment of 1° to 5°
- Additional Vertical milling head BT 50/Ø300 mm, max. Speed 3500 r/min.
- Additional Vertical milling head BT 50/Ø500 mm, max. Speed 3500 r/min
- Automatic head change system for additional milling heads AHC 1-fold
- Automatic head change system for additional milling heads AHC 2-fold
- Automatic head change system for additional milling heads 5 times (including V/H tool changer for 40-station tool magazine + enlarged hydraulic unit of Y-axis travel (500 mm) + 18i-MB Control) (GIFU fire)
- Automatic head change system for additional milling heads 5 times (including V/H tool changer for 60-station tool magazine + enlarged hydraulic unit of Y-axis travel (500 mm) + 18i-MB Control) (GIFU fire)
- Automatic head change system for additional milling heads 5 times (including V/H tool changer for 80-station tool magazine + enlarged hydraulic unit of Y-axis travel (500 mm) + 18i-MB Control) (GIFU fire)
- Automatic head change system for additional milling heads 5 times (including V/H tool changer for 120-station tool magazine + enlarged hydraulic unit of Y-axis travel (500 mm) + 18i-MB Control) (GIFU fire)
- Automatic head change system for additional milling heads 5 times (including V/H tool changer for 200-station tool magazine + enlarged hydraulic unit of Y-axis travel (500 mm) + 18i-MB Control) (GIFU fire)
- Automatic head change system for additional milling heads 5 times (including V/H tool changer for 300-station tool magazine + enlarged hydraulic unit of Y-axis travel (500 mm) + 18i-MB Control) (GIFU fire)
- Renishaw TS27R tool measurement
- Renishaw NC4F tool measurement
- Renishaw measuring head OMP60
- Coolant supply bar through the spindle, pressure 20th
- Cabinet air conditioner
- Coolant cooling system
- More powerful spindle motor 37 kW (30 min.) + ZF2K-300 gear unit
- Spindle (Direct Driven) 10,000 rev/min
- Spindle (Belt type) 10,000 rev/min
- Extended travel in Z-axis up to 1100 mm
- Extended travel in Z-axis up to 1400 mm
- Automatic head change system for additional milling heads 5 times (including V/H tool changer for 60-station tool magazine + enlarged hydraulic unit of Y-axis travel (500 mm) + 18i-MB Control) (GIFU fire)
- Automatic head change system for additional milling heads 5 times (including V/H tool changer for 80-station tool magazine + enlarged hydraulic unit of Y-axis travel (500 mm) + 18i-MB Control) (GIFU fire)
- Automatic head change system for additional milling heads 5 times (including V/H tool changer for 120-station tool magazine + enlarged hydraulic unit of Y-axis travel (500 mm) + 18i-MB Control) (GIFU fire)
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- Renishaw TS27R tool measurement
- Renishaw NC4F tool measurement
- Renishaw measuring head OMP60
- Coolant supply bar through the spindle, pressure 20th
- Cabinet air conditioner
- Coolant cooling system
- More powerful spindle motor 37 kW (30 min.) + ZF2K-300 gear unit
- Spindle (Direct Driven) 10,000 rev/min
- Spindle (Belt type) 10,000 rev/min
- Extended travel in Z-axis up to 1100 mm
- Extended travel in Z-axis up to 1400 mm
- Automatic head change system for additional milling heads 5 times (including V/H tool changer for 60-station tool magazine + enlarged hydraulic unit of Y-axis travel (500 mm) + 18i-MB Control) (GIFU fire)
- Automatic head change system for additional milling heads 5 times (including V/H tool changer for 80-station tool magazine + enlarged hydraulic unit of Y-axis travel (500 mm) + 18i-MB Control) (GIFU fire)
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- Automatic head change system for additional milling heads 5 times (including V/H tool changer for 300-station tool magazine + enlarged hydraulic unit of Y-axis travel (500 mm) + 18i-MB Control) (GIFU fire)

Technical specifications:

<table>
<thead>
<tr>
<th>Control</th>
<th>Fanuc 18i-MB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance between columns mm 2450 (95&quot;)</td>
<td>2850 (111&quot;)</td>
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<tr>
<td>Max. table load kg/m² 2500 (550 lbs/ft²)</td>
<td></td>
</tr>
<tr>
<td>Table dimensions (Width x Length) m 2x6 to 2x36 (78&quot;x20&quot; - 118&quot;)</td>
<td>2.2x6 to 2.2x36 (85&quot;x20&quot; - 118&quot;)</td>
</tr>
<tr>
<td>T-slots mm 28x400 (1.1x15.7&quot;)</td>
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</tr>
<tr>
<td>Travels X-axis m from 6m to 36m in 1m increments (20' to 118' in 40&quot;)</td>
<td></td>
</tr>
<tr>
<td>Y-axis mm 2400 (93&quot;)</td>
<td>2800 (109&quot;)</td>
</tr>
<tr>
<td>Z-axis 1100; option: 1400 (43&quot;; option: 54&quot;)</td>
<td></td>
</tr>
<tr>
<td>W-axis (optional) mm 1000 (optional 1500 to 2500) (39&quot;; option: 59&quot;, 98&quot;)</td>
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<tr>
<td>Distance spindle-table mm 820–1920; option: 2220 (32-75&quot;; option: 86&quot;)</td>
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<tr>
<td>Distance spindle-rack mm 427 (16.5&quot;)</td>
<td>473 (18.5&quot;)</td>
</tr>
<tr>
<td>Spindle taper BT 50</td>
<td></td>
</tr>
<tr>
<td>Spindle speed rpm 6000</td>
<td></td>
</tr>
</tbody>
</table>

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www.kaast.de

PSD-Mill CNC
## Standard configuration:

- CNC FANUC 18i MB
- Tool magazine, 32-way, max. Ø200 mm, max. L 400 mm
- Motor spindle (Belt type) with ZF2K gear (ratio 1:4) 6000 r / min
- Work spindle and transmission oil cooling
- Cabinet air conditioning
- 2 screw conveyor, 1 chip conveyor chain
- Foot actuated tool change
- Coolant supply all around the spindle
- Automatic lubrication
- Coolant system
- Thread cutting function (without compensating chuck)
- Portable handwheel for manual operation
- Work light
- Signal and warning lights
- Spindle blow out function
- Compressed air gun
- Coolant spray gun
- Auxiliary tool
- Linear glass scale for X-axis
- Manual

### Technical specifications PSD – Mill CNC

<table>
<thead>
<tr>
<th>Item-No.</th>
<th>20.6–36</th>
<th>22.6–36</th>
<th>26.6–36</th>
<th>30.6–36</th>
<th>36.6–36</th>
<th>42.6–36</th>
<th>46.6–36</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spindle motor power</td>
<td>kW</td>
<td>22/26; option: 30/37 (30/35 Hp; option: 40/50 Hp)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work feed</td>
<td>mm/ min</td>
<td>5–8000 (0.2-312''/min)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rapid feed in X-/Y-/Z-axis</td>
<td>m/min</td>
<td>10/12/12 (390/468/468''/min)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Positioning accuracy</td>
<td>mm</td>
<td>±0.005/300 (0.0002''/12&quot;)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Repeatability</td>
<td>mm</td>
<td>±0.003/300 (0.00015''/12&quot;)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Tool magazine</td>
<td>Number of tool pockets</td>
<td>pc</td>
<td>24</td>
<td></td>
<td></td>
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<tr>
<td>Tool diameter by adjacent places</td>
<td>mm</td>
<td>Ø 220 (8.5&quot;)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Tool diameter by fully loaded</td>
<td>mm</td>
<td>Ø 125 (4.85&quot;)</td>
<td></td>
<td></td>
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<tr>
<td>Max. tool length</td>
<td>mm</td>
<td>400 (15.5&quot;)</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Max. tool weight</td>
<td>kg</td>
<td>20 (optional 35) (43lbs; option: 75 lbs)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions (Length)</td>
<td>mm</td>
<td>from 11060 to 41060 (step 1000 mm) (from 36' to 135')</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td>mm</td>
<td>5100x5120 (201x202&quot;)</td>
<td>5500x5120 (217x202&quot;)</td>
<td>5900x5120 (232x202&quot;)</td>
<td>6300x5120 (248x202&quot;)</td>
<td>6900x5120 (272x202&quot;)</td>
<td>7500x5120 (295x202&quot;)</td>
</tr>
</tbody>
</table>

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**PSD-Mill CNC**

**Optimal Rigidity**

**A** Mobile ATC system

**B** X travel by gear-rack syn-servo control

**C** Column and Slider one piece casting

**D** Cross-Rail box-in-box one piece casting

**E** Mobile control room

Table height based on customer specified

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**PSD-Mill CNC**

**Rigidity Capability**

High efficiency spindle
P4 level precision ball bearing oil chilled to reduce thermal deformation.

Two speed ZF 2K 250 gearbox
Full enclosure, high performance.

**Machine travel layout**

**PSD-Mill W**

W type sliding double columns machining center

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Moving Cross-rail

W travel

A
W travel free-position syn-servo control

B
Free position ATC system

C
X travel by gear-rack syn-servo control

D
Cross-Rail one piece casting

E
Three linear guide ways column

F
High rigidity enclosure frame RAM

Table height based on customer specified

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