Our main mission is to develop and manufacture portal milling machines with an excellent proportion of QUALITY – OUTPUT – RELIABILITY – PRICE. An important part of our services comprises a well-elaborated system of the warranty and after-warranty service.

A wide selection of the TRIMILL machines contains vertical and horizontal portal milling machines, which are distinguished by high rigidity and accuracy and are intended for machining of pressing tools, moulds and precise workpieces in the single-piece production:

- Machine travels from (X, Y, Z) 1.100/1.000/700 mm to 13.500/4.500/1.500 mm
- Three-, five- and multi-axis design

Partnership with our customers is based on following pillars:

- Proficiency, experience, professionalism
- Customized solutions
- Development of new solutions
- Top service and immediate availability of spare parts

Figures and facts

- 9,300 m² of the production area and more than 170 specialists in development, design, assembly and technology
- Since 2000, when our family company was established, we have been operating in the markets all over the world
- 400 portal machining centres at 180 satisfied customers in 25 countries of the world

Our customers

- Tool factories
- Forging shops
- Automotive industry
- Aviation industry
- Energy industry

The most frequently machined materials on our machines

- Tool steel
- Aluminium alloys
- Cast iron
- Structural materials
TRIMILL PRINCIPLE: BOX-IN-BOX

“BOX-IN-BOX” is a unique system with closed construction of the cross-beam and cross-slide with internally positioned and guided ram unit (axes Y and Z).

THE ADVANTAGES OF TRIMILL PRINCIPLE:
- Consistent milling results thanks to stable thermo-symmetrical arrangement on linear guideways
- Always 4 guides of the cross and vertical support for the machine, preventing the occurrence of the so-called “banana effect” which deforms/bends the vertical support of the machine
- Increased rigidity of the machine in the X axis by +60%, in the Y axis by +30% and in the Z axis by +90%
TRIMILL  VU 3021

1 5-axis portal milling machine with rotary table, Heidenhain TNC 640 HSCI CNC control system and 19” colour display.

2 T30U fork milling head.

3 Optional 6-axis machine configuration, T30C fork milling head (B and C rotary axis).

4 Machine rotary table for workpiece clamping (C-axis).

---

<table>
<thead>
<tr>
<th>Model</th>
<th>X</th>
<th>Y</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>VU 2216</td>
<td>2.200</td>
<td>1.600</td>
<td>1.200</td>
</tr>
<tr>
<td>VU 3016</td>
<td>3.000</td>
<td>1.600</td>
<td>1.200</td>
</tr>
<tr>
<td>VU 3021</td>
<td>3.000</td>
<td>2.100</td>
<td>1.200</td>
</tr>
</tbody>
</table>
TRIMILL HEADS

F2U positioning

25 kW, 194 Nm, 10,000 rpm, HSK-A100
B-axis (milling head): -2/+92°
B-axis clamping torque: 17,200 Nm
Positioning step: 0.001°

T30C continuous

40 kW, 248 Nm, 12,000 rpm, HSK-A100
B-axis (milling head): +/-100°
B-axis (milling head): +/-240°
B-axis clamping torque: 8,000 Nm
C-axis clamping torque: 8,000 Nm

T30U continuous B-axis

40 kW, 248 Nm, 12,000 rpm, HSK-A100
B-axis (milling head): -50/+95°
B-axis (milling head): +/-240°
B-axis clamping torque: 17,200 Nm

F4U / F5U continuous/positioning B-axis

40 kW, 350 Nm, 10,000 rpm, HSK-A100
B-axis (milling head): -50/+95°
B-axis (milling head): +/-240°
F4U - continuous B-axis
F5U - positioning B-axis (step 0.001°)
B-axis clamping torque: 17,200 Nm

* F4U/F5U milling heads optional only for VU 3525
**TRIMILL HEADS**

**T21U**
continuous B-axis

42 kW, 67 Nm, 24,000 rpm, HSK-A63
B-axis (milling head): ±100°
B-axis locking torque: 4,000 Nm

**T21C**
continuous

42 kW, 67 Nm, 24,000 rpm, HSK-A63
B-axis (milling head): ±100°
B-axis locking torque: 4,000 Nm
C-axis locking torque: 4,000 Nm
1. Very compact VU 3525 machine with a large working area and minimal floor space occupied
2. Automatic tool magazine for 32/50 tools
3. The machine is intended for 5-side roughing and finishing during single clamping
4. Optional T30C fork milling head for continuous milling

---

**Dimensions:**

<table>
<thead>
<tr>
<th>X</th>
<th>Y</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.500</td>
<td>2.500</td>
<td>1.500</td>
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</tbody>
</table>

*VU 3525*
## STANDARD MACHINE PARAMETERS

<table>
<thead>
<tr>
<th></th>
<th>VU 2216</th>
<th>VU 3016</th>
<th>VU 3021</th>
<th>VU 3525</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Travels</strong></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>X-axis (mm)</td>
<td>2.200</td>
<td>3.000</td>
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<td>3.500</td>
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<tr>
<td>Y-axis (mm)</td>
<td>1.600</td>
<td>1.600</td>
<td>2.100</td>
<td>2.500</td>
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<tr>
<td>Z-axis (mm)</td>
<td>1.200</td>
<td>1.200</td>
<td>1.200</td>
<td>1.500</td>
</tr>
<tr>
<td>Feed rate (mm/min)</td>
<td>40.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Machine rotary table</strong> (mm)</td>
<td>1.800 x 1.800</td>
<td>1.800 x 1.800</td>
<td>2.300 x 2.300</td>
<td>2.300 x 2.300</td>
</tr>
<tr>
<td><strong>Workpiece weight</strong> (kg)</td>
<td>26.000</td>
<td>26.000</td>
<td>25.000</td>
<td>25.000</td>
</tr>
<tr>
<td><strong>Acceleration</strong> (m/s²)</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td><strong>Machine dimensions</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length (mm)</td>
<td>6.525</td>
<td>7.275</td>
<td>8.230</td>
<td>8.065</td>
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<tr>
<td>Width (mm)</td>
<td>4.870</td>
<td>5.295</td>
<td>5.795</td>
<td>7.005</td>
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<tr>
<td>Height (mm)</td>
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<td>5.160</td>
<td>5.160</td>
<td>6.245</td>
</tr>
<tr>
<td>Approx. machine weight (kg)</td>
<td>69.700</td>
<td>72.700</td>
<td>75.200</td>
<td>91.600</td>
</tr>
</tbody>
</table>
Solutions for large and small companies.
Always tailor-made.
### STANDARD MACHINE COMPONENTS

<table>
<thead>
<tr>
<th>STANDARD COMPONENTS</th>
<th>MANUFACTURER</th>
</tr>
</thead>
<tbody>
<tr>
<td>High-Frequency Electric Spindle</td>
<td>Weiss - Germany, Fischer - Switzerland</td>
</tr>
<tr>
<td>Control System</td>
<td>Heidenhain, Siemens - Germany</td>
</tr>
<tr>
<td>Electric Motors</td>
<td>Siemens - Germany</td>
</tr>
<tr>
<td>Measuring Systems</td>
<td>Heidenhain</td>
</tr>
<tr>
<td>Racks &amp; Pinions</td>
<td>Schneeberger - Germany</td>
</tr>
<tr>
<td>Linear Guides</td>
<td>THK - Japan, Schneeberger - Germany, INA - Germany</td>
</tr>
<tr>
<td>Rotary table</td>
<td>Fibro - Germany</td>
</tr>
<tr>
<td>Electric Cabinet</td>
<td>Rittal - Germany</td>
</tr>
<tr>
<td>Cooling Unit</td>
<td>Eurocold - Italy</td>
</tr>
</tbody>
</table>

### OPTIONAL EQUIPMENT (SELECTION)

- TRIMILL Inform
- TRIMILL Teleservis

**Machine active thermal stabilisation**

- ATC 32/50 tool magazine
- Tool cooling by internal + external liquid
- Workpiece probe
- Tool probe
- Micro-lubrication by oil mist – internal, external
- Video system with display and 2 controllable colour cameras

**TRIMILL – Kinematics**

- HR 550 – wireless manual controller
- Electrically controlled machine top covers
- Extraction of oil mist and cooling emulsion