PUMA VTR1012F/1216F series

Large vertical turning center with RAM head spindle

PUMA VTR Fixed column series
PUMA VTR1012F
PUMA VTR1216F
**Basic Structure**

The PUMA VTR Fixed Series having 40–55 inches of chuck size are ram type vertical turning center with fixed column structure for compact size. Designed with thermally-symmetric bed and column to ensure stabilized heavy-cutting performance for an extended time in wide machining area.

**Machining Area**

The largest machining area of the class guarantees highest-level productivity allowing high flexibility when machining large works.

**Designed for short height with High Durability and Machining Stability**

With high-rigidity wide column and box guideway structure and high-hardness Cr-Mo ram, the PUMA VTR Fixed Series offers heavy cutting performance and high stiffness. Smooth chip disposal is realized with the all in one bed providing chip disposal process on both sides combined with dual chip conveyors.

**Wide machining area and large capacity**

The PUMA VTR fixed column series offers Full X axes stroke with the largest machining area of the same class, enabling, for example, simultaneous measuring and cutting of inner and outer surfaces with one time setting.

<table>
<thead>
<tr>
<th>Model</th>
<th>Max. Machining Diameter (D)</th>
<th>Max. Machining Height (H)</th>
<th>Max. Table Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUAM VTR1012F</td>
<td>Ø1250 mm (Ø47.2 inch)</td>
<td>750 mm (29.5 inch)</td>
<td>6000 kg (13227.5 lb)</td>
</tr>
<tr>
<td>PUAM VTR1216F</td>
<td>Ø1600 mm (Ø63.0 inch)</td>
<td>950 mm (37.4 inch)</td>
<td>8000 kg (17636.7 lb)</td>
</tr>
</tbody>
</table>
Spindle

Provided with a standard, large capacity cooler, the perfectly thermally-symmetric spindle offers heavy and precision machining performance on the basis of long-term thermal stability.

High Productivity Spindle with Rigid Structure

With ideal combination of large diameter thrust bearings and center-supported roll bearings, the spindle guarantees both heavy and precision machining.

Max spindle power / Torque

<table>
<thead>
<tr>
<th>Spindle Type</th>
<th>Power (kw)</th>
<th>Torque (N.m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUAM VTR1012F</td>
<td>45/37</td>
<td>12354 (9117.3 ft-lb)</td>
</tr>
<tr>
<td>PUAM VTR1216F</td>
<td>45/37</td>
<td>20557 (15171.1 ft-lb)</td>
</tr>
</tbody>
</table>

RAM spindle

RAM size

260 x 260 mm
(10.2 x 10.2 inch)

Tool clamp force

8 ton

RAM indexing

While 8 tons of tool holder clamping force supports heavy duty cutting, the differentiated ram indexing technology and quad holder reduce tool change time by 75%.

Tool magazine

Servo type tool magazine offers high speed and high accuracy for the tool selection.

Tool positions

PUMA VTR1012F/1216F

12 / 24 ea

Max. turning length

The max. tool length is enlarged by 200 mm for further enhancement of machining capacity.

500 mm (19.7 inch)
(Turning tool)

Drive Type

Servo motor
## Major Specifications

### PUMA 1012F/1216F series

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>PUMA VTR1012F</th>
<th>PUMA VTR1216F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max machining dia.</td>
<td>mm (inch)</td>
<td>1250 (50.0)</td>
<td>1600 (63.0)</td>
</tr>
<tr>
<td>Max machining height</td>
<td>mm (inch)</td>
<td>750 (29.5)</td>
<td>950 (37.4)</td>
</tr>
<tr>
<td>Max table load</td>
<td>kg (lb)</td>
<td>6000 (13227.5)</td>
<td>8000 (17636.7)</td>
</tr>
<tr>
<td>X axis(left / right)</td>
<td>mm (inch)</td>
<td>-575 / +850</td>
<td>-700 / +1000</td>
</tr>
<tr>
<td>Z axis</td>
<td>mm (inch)</td>
<td>700 (27.56)</td>
<td>900 (35.43)</td>
</tr>
<tr>
<td>X / Z axis</td>
<td>m/min (ipm)</td>
<td>12/10 (472.4 / 393.7)</td>
<td></td>
</tr>
<tr>
<td>Chuck size</td>
<td>mm (inch)</td>
<td>1000 (40)</td>
<td>1250 (49.2)</td>
</tr>
<tr>
<td>Max spindle speed</td>
<td>r/min</td>
<td>600</td>
<td>400</td>
</tr>
<tr>
<td>Max. spindle motor power</td>
<td>kW (Hp)</td>
<td>45/37 (60.3/49.6)</td>
<td>45/37 (60.3/49.6)</td>
</tr>
<tr>
<td>Max spindle torque</td>
<td>N·m (ft-lb)</td>
<td>12354 (9117.3)</td>
<td>20557 (15171.1)</td>
</tr>
<tr>
<td>Tool magazine</td>
<td>ea</td>
<td>12 (24)*</td>
<td></td>
</tr>
<tr>
<td>RAM size</td>
<td>mm (inch)</td>
<td>260 x 260 (10.2 X 10.2)</td>
<td></td>
</tr>
</tbody>
</table>

* ( ) Option

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⚠️ **Fire Safety Precautions**

There is a high risk of fire when using non-water-soluble cutting fluids, processing flammable materials, neglecting use coolants and modifying the machine without the consent of the manufacturer. Please check the SAFETY GUIDANCE carefully before using the machine.

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