FIVE REASONS FOR Y-AXIS PARTING

1. Straight cuts with great surface finish

2. Less vibration – less noise

3. You get more done in a day
   With more than six times higher blade stiffness, you can speed up the feed or use a longer overhang without losing stability.

4. No more bandsawing
   Y-axis blades allow parting off larger diameters than what’s earlier been possible.

5. It makes your machine better
   Reach the full potential of your multi-task machine or turning centre by utilizing the Y-axis.

Customer cases

<table>
<thead>
<tr>
<th>Component</th>
<th>Material</th>
<th>Diameter mm (inch)</th>
<th>Feed current method, mm/rev (in/rev)</th>
<th>Feed Y-axis parting, mm/rev (in/rev)</th>
<th>Productivity increase</th>
<th>Tool-life increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnetic valve</td>
<td>Stainless steel HB365</td>
<td>65 (2.6)</td>
<td>0.15 (0.006)</td>
<td>0.3 (0.012)</td>
<td>100%</td>
<td>70%</td>
</tr>
<tr>
<td>Bolt</td>
<td>316L stainless steel</td>
<td>60 (2.36)</td>
<td>0.15 (0.006)</td>
<td>0.3 (0.012)</td>
<td>100%</td>
<td>50%</td>
</tr>
<tr>
<td>Bearing roller</td>
<td>Bearing steel</td>
<td>40 (1.57)</td>
<td>0.12 (0.005)</td>
<td>0.3 (0.012)</td>
<td>150%</td>
<td>40%</td>
</tr>
<tr>
<td>Pump housing</td>
<td>Stainless steel HB365</td>
<td>55 (2.17)</td>
<td>0.12 (0.005)</td>
<td>0.3 (0.012)</td>
<td>200%</td>
<td>±5%</td>
</tr>
<tr>
<td>Aerospace blank</td>
<td>Inconel 718</td>
<td>180 (7.1)</td>
<td>Bandsaw 20 min</td>
<td>0.15 (0.006)</td>
<td>550%</td>
<td>Not evaluated</td>
</tr>
</tbody>
</table>

Machine tool development milestones

Y-axis turn-mill machines were introduced in the late 1990s to add live tooling to turning centres.

The Y-axis was added to move the live tool across the spindle face, creating a vertical dimension perpendicular to the Z- and X-axis plane.

The first live tools were limited to be driven only in the same two axes of motion as the turning tools, i.e. the X- and Z-axes.

The Y-axis is now a standard feature in nearly all multi-task machines and optional in many new turning centres.

What is Y-axis parting?

By rotating the insert pocket 90 degrees and feeding the tool along the Y-axis, you get a much more beneficial direction of the cutting force, resulting in reduced vibration and higher stability.

Almost incredulously simple.

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