DATRON CNC milling solutions for
5-axis machining

Applications such as:
- Medical components
- Aerospace parts
- Rapid prototyping
- Tool and mold making
- Dental technology
- Micromechanics
- Graphite Electrodes
- Microdrilling
- Watch and jewelry industry
- Eyewear industry
- Steel engraving

Benefits:
- User-friendly Windows®-based control
- German engineered
- American support

DATRON C5 — made for complex, 5-axis work.

The DATRON C5 was developed specifically for precise, simultaneous 5-axis milling of small parts. It’s ability to machine titanium and steel (in addition to non-ferrous metals and abrasive materials) makes it ideally suited to applications in a variety of industries. The C5 accommodates parts up to 100 mm in diameter and is capable of producing highly-complex geometries. The low-vibration design delivers superior surface finishes while the rigid 48,000 RPM spindle, precision ball screws and linear scales provide industry leading accuracy. With a 22-station tool changer, integrated tool-length measurement and a footprint of only 1 m² the C5 is a machine tool unlike any other.

DATRON C5
5-axis Simultaneous Milling Machine

For Machining of Small Parts
Dynamic – Precise – Powerful

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**DATRON C5**

**Dynamic – Precise – Powerful**

Complex geometries, small parts, any material. The DATRON C5 gives you the agility to respond quickly to new opportunities. Productive and cost-effective!

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**48,000 rpm**

Max. milling performance with small tools. Dynamic HSC control system.

**Precision spindle** featuring HSK-E 25 tool holding system and concentricity better than 2 µm.

**Integrated zero-point clamping system** with ± 0.5 µm repeatability (optional).

**Linear position measuring system** with ± 5 µm absolute accuracy and 40 nm positioning accuracy.

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**Saves resources:**
Minimum-quantity cooling system uses as little as 30 ml/hour.

**Saves energy:**
Very low power consumption lowers operational costs.

**Saves money:**
Low-cost in purchase and operation.

**Saves space:**
Smallest footprint in the industry.

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**Working area**

<table>
<thead>
<tr>
<th>Working area</th>
<th>DATRON C5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traverse path (X x Y x Z)</td>
<td>153 mm x 100 mm x 100 mm</td>
</tr>
</tbody>
</table>

**Workpiece sizes** (Examples)

- **Cylindrical:** Diameter 60 mm, height 60 mm
- Diameter 100 mm, height 30 mm
- **Cubic:** (X x Y x Z): 96 mm x 75 mm x 20 mm

- 50 mm x 50 mm x 50 mm

**Tool length**

75 mm (from HSK face contact)

**Machine dimensions**

<table>
<thead>
<tr>
<th>Machine dimensions</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Machine construction</td>
<td>Solid cast steel frame, cast aluminium 4th/5th axis</td>
</tr>
<tr>
<td>Installation dimensions (W x D x H) without control PC pedestal</td>
<td>940 mm x 1190 mm x 1910 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>ca. 900 kg</td>
</tr>
<tr>
<td>Supply</td>
<td></td>
</tr>
<tr>
<td>Voltage</td>
<td>3 x 400 VAC/16A</td>
</tr>
<tr>
<td>Power input</td>
<td>4,000 VA (max. fuse 3 x 16 A)</td>
</tr>
<tr>
<td>Air connection</td>
<td>7-10 bar dry, clean, oil-free</td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>15 - 30 °C</td>
</tr>
<tr>
<td>Machine housing</td>
<td>Compact enclosure with easy access for convenient maintenance</td>
</tr>
<tr>
<td>USB interface</td>
<td>✔</td>
</tr>
<tr>
<td>Ethernet interface</td>
<td>✔</td>
</tr>
<tr>
<td>Convenient manual control panel</td>
<td>✔</td>
</tr>
<tr>
<td>Minimal quantity coolant system</td>
<td>✔</td>
</tr>
<tr>
<td>Built-in zero-point clamping system</td>
<td>✔</td>
</tr>
<tr>
<td>Linear positioning measuring system on all axes</td>
<td>✔ Resolution 40 nm</td>
</tr>
<tr>
<td>Tool changer</td>
<td>22 station with tool-length sensor</td>
</tr>
<tr>
<td>Machining spindle</td>
<td>1.8 kW, up to 48,000 rpm with HSK-E 25 tool holder</td>
</tr>
<tr>
<td>Repeatability</td>
<td>&lt; ± 2.5 µm</td>
</tr>
<tr>
<td>Absolute accuracy</td>
<td>± 5 µm</td>
</tr>
</tbody>
</table>

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**Range of motion: 4th/5th axis**

**Tool changer**

22 station with tool-length sensor

**Machining spindle**

1.8 kW, up to 48,000 rpm with HSK-E 25 tool holder

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**Item**

OA03010