## Technical Data

### K5 Impression

**Fields of application**
- dry machining

**Machinable materials**
- plastics, wax, zirconium oxide, composites, CoCr, model plaster

**Indications**
- crowns, bridges, fully anatomical crowns and bridges, inlays, onlays, abutments, telescope crowns, models, model casts, bite splints, implant bars, veneers, surgical guides, dentures, etc.

### Basic system

**Construction**
- machine bed of massive aluminium cast

**No. of axes**
- 5

**x/y/z pos. range**
- 165.5 x 108 x 93 mm

**Drives**
- precise ball screw spindles for the 3 linear axes
- motor resolution < 1 μm
- ground steel precision guide rails
- 4 mm lead

**Repetition accuracy linear axes**
- ± 0,003 mm

**Axis measurement**
- measurement of axes with calibration specimen
- automatic axis compensation for exact results

**Housing**
- complete encapsulation of working chamber
- automatic safety interlock at the front cover during the machining process

**Working chamber illumination**
- yes, with status indication

**Dimensions (W/D/H)**
- approx. 450 x 530 x 630 mm

**Weight**
- approx. 91 kg

### Rotary axes

**Features**
- **A axis**: Harmonic Drive® free from backlash for highest true running accuracy, rotation range of 360°
- **B axis**: pivoting via ball screw spindle, rotation range of up to ± 35°

**Fixing device**
- round universal blanks with a thickness of 10 to 40 mm and a diameter of 98.5 mm with step; optionally: three-fold block holder

**Exchange of workpieces**
- manual exchange

### Controller

**Features**
- **type CNC G12T**:
  - synchronic interpolation of 5 axes
  - great smoothness of running and highly accurate
  - high processing speed due to exponential acceleration ramps
  - lookahead feature for continuous velocity along the path
  - 4 digital inputs, 4 digital outputs
  - 5 motor end phases
  - four quadrant controller
  - no fan necessary for cooling

### Spindle

**Features**
- **synchronous spindle SFK 300P**
  - nominal power under constant load (S1): 300 Watt
  - maximum power output (Pmax): 500 W
  - rotational speed range up to 60,000 RPM
  - 4-fold hybrid ceramic ball bearings
  - hybrid ceramic ball bearings
  - radial deviation at internal cone of the precision shaft < 3 μm
  - sealing air prevents entering of foreign substances in the bearing area
  - cone cleaning

**Collet chuck**
- pneumatically for tools with 3 mm shank diameter and max. 40 mm total length
## Technical Data

### Tool change

<table>
<thead>
<tr>
<th>Features</th>
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<tbody>
<tr>
<td>• automatic tool change station for 16 tools</td>
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<td>• haptic tool length detection and tool breakage monitoring</td>
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<tr>
<td>• diamond-coated tools can be used</td>
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<tr>
<td>• monitoring of compressed air supply</td>
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### Air extraction

<table>
<thead>
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<tr>
<td>• opening at the housing side for air extraction</td>
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<td>• underpressure sensor for monitoring the air extraction</td>
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<td>• 24 Volt switching output</td>
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### Other

<table>
<thead>
<tr>
<th>Peripheral equipment</th>
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<tr>
<td>• dental suction unit with fine filter</td>
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<tr>
<td>• switching unit PSW 02-T</td>
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<tr>
<td>• tool set starter edition</td>
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<tr>
<td>• three-fold block holder</td>
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<table>
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<th>Special feature</th>
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<tr>
<td>• drawer for workpieces and milling tools with integrated administrated tool board as well as for operating and maintenance tools</td>
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<td>• certification according to ANSI/UL 61010-1 for exports to the USA and Canada</td>
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### Connection requirements

<table>
<thead>
<tr>
<th>Compressed air supply</th>
<th>6 bar · 40 l/min – 8 bar · 50 l/min</th>
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<tbody>
<tr>
<td>Power supply</td>
<td>100 – 240 V · 50/60 Hz</td>
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