

## Kunzmann BA 1000



**KUNZMANN**<sup>®</sup>  
FRÄSMASCHINEN

Compact, high performance vertical machining center with rapid tool changer suited for the versatility of job-based series production.

Excellent accessibility and a high level of ergonomics designed for production of single parts.

### Unique features:

- Sophisticated ripped cast iron construction in C-frame and column saddle design with linear roller profile guideways in the X-/Y-axis and a flat guideways in the Z-axis
- High Z-travel, useful when using a 4th axis or with tall workpieces
- Fast tool changer reduces the unproductive times
- Oversized ballscrews in all axes
- Main spindle coolant system perform highest milling precision and surface quality
- Ergonomically designed machine with large front doors and direct access to working area
- Efficient chip disposal with slat band conveyor and trough chip bath rinsing
- Movable operating panel makes it easier to configure the machine

### Control:

#### HEIDENHAIN TNC 640 CONTOURING CONTROL

Modern CNC-high performance control for 3-D-processing of complex workpieces with a fast block processing time.

The control provides a hard disk as well as USB/Fast-Ethernet-Interfaces for a fast program management.

Extensive functions for graphics and simultaneous possibilities.

#### Especially Heidenhain TNC 640:

- Programming with Heidenhain conversational, DIN/ISO-Code
- Making of angular boring holes automatically / machining of cylindrical contours (option)
- DXF-Converter (option), load directly and convert DXF-files

#### SIEMENS 840 D sl ShopMill COUNTOURING CONTROL

Modern CNC-high performance control for 3-D-processing of complex workpieces with a fast block processing time.

The control provides a memory card as well as USB/Fast-Ethernet-Interfaces for a fast program management.

Extensive functions for graphics and simultaneous possibilities.

#### Especially Siemens 840 D sl:

- ShopMill user interface - Wide range of programming possibilities in the DIN/ISO code

## BA 1000 \_ Technical Data

TECHNICAL DATA		BA 1000	STANDARD EQUIPMENT:
<b>Working range</b>	longitudinal X-axis cross Y-axis vertical Z-axis	1020 mm 620 mm 610 mm	<ul style="list-style-type: none"> <li>▶ Elaborately ribbed cast-iron construction</li> <li>▶ Linear roller guideways in X- and Y-axis</li> <li>▶ Flat guideway in Z-axis (hardened)</li> <li>▶ Ground ballscrews</li> </ul>
<b>Main spindle drive</b>	A.C. motor Power rating at 100% duty cycle Power rating at 40% duty cycle	10,0 kW 14,0 kW	<ul style="list-style-type: none"> <li>▶ Hydr./mech. tool clamping</li> <li>▶ Spindle blow-out system</li> <li>▶ Spindle oil-cooling system</li> <li>▶ 32-pocket tool changer</li> <li>▶ Autom. central lubrication</li> </ul>
<b>Spindle speed range</b>	infinitely variable with option in-line spindle	1 – 8000 rpm 12000 / 16000 rpm	<ul style="list-style-type: none"> <li>▶ Clamping table</li> <li>▶ Full-protection cabin</li> <li>▶ Chip bath rinsing</li> <li>▶ Slat band conveyor including 500 litres. coolant system</li> <li>▶ Coolant tube incl. pistol</li> <li>▶ Leveling elements</li> <li>▶ Contouring control Heidenhain iTNC 530</li> </ul>
<b>Torque</b>	100% duty cycle 40% duty cycle	130 Nm 190 Nm	
<b>Feed drives</b>	AC-drives	digital	
<b>Feed rate</b>	X-, Y- and Z-axis	15 m/min	
<b>Rapid traverse</b>	X-, Y- and Z-axis	30 / 30 / 24 m/min	
<b>Tool taper</b>		ISO 40 DIN 69871/72	<b>OPTIONS:</b>
<b>Tool changer</b>	positions	32	<ul style="list-style-type: none"> <li>▶ Coolant supply through spindle at 25 bar or 40 bar</li> <li>▶ Chip conveyor ConSep 2000 II including coolant cleaning system</li> <li>▶ Distance-coded linear measuring systems</li> <li>▶ Electronic handwheel</li> <li>▶ In-line spindle n = 12,000 rpm or 16,000 rpm</li> <li>▶ Autom. sliding doors</li> <li>▶ Touch probe systems</li> <li>▶ Autom. tool measurement / laser tool control system</li> <li>▶ CNC dividing units – 4th/5th-axis</li> <li>▶ Contouring control Siemens 840 D with ShopMill</li> </ul>
<b>Tool change time</b>		3 sec.	
<b>Chip-to-chip-time</b>		8 sec.	
<b>Clamping table</b>	clamping surface T-slots load ability	1200 x 610 mm 6 T-Nuten 18 H 8 850 kg	
<b>Operating voltage</b>		400 Volt, 50 Hz	<b>BA 1000-810 Z VARIO:</b>
<b>Power consumption</b>		35 kVA	<ul style="list-style-type: none"> <li>▶ Extended Z-axis travel up to totally 810 mm</li> <li>▶ Linear roller guideway in Z-axis</li> <li>▶ Pneumatic counter-balance in Z-axis</li> </ul>
<b>Weight</b>		ca. 6.800 kg	