

HTT-500

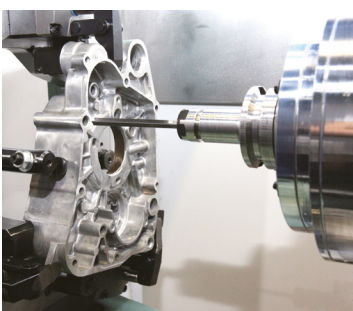
TYPICAL WORKPIECES

Parts with complex angles or multi-face machining, such as

- housings
- turbine components
- aerospace parts
- medical devices

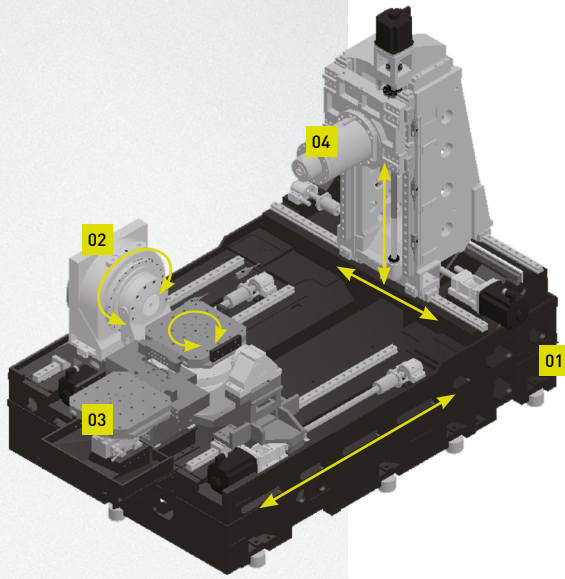
HORIZONTAL 5-AXIS MACHINING CENTER FOR COMPLETE MACHINING OF COMPLEX PARTS

The HTT-500 is a high-precision 5-axis horizontal machining center designed for efficient complete machining of complex workpieces in a single setup. Specifically developed for flexible small-batch and one-off production, the HTT-500 features a thermally stable structure, short changeover times, and extensive automation options—ideal for the aerospace, tooling, and medical industries.



KEY ADVANTAGES

- Direct-drive motors on the orthogonal rotary axes ensure highly precise motion with zero mechanical backlash
- Automatic pallet changer allows setup during machining time, reducing downtime
- Short chip-to-chip time of just 4.5 seconds – ideal for automated serial production



01 Rigid and FEA-Optimized Machine Structure

The robust machine frame with honeycomb column structure, differentiated x-axis guide layout, and finite element analysis (FEA) ensures high rigidity, low vibration, and dynamic stability.

02 Direct-Drive Tilting Rotary Table

The A/B axes with direct-drive motors deliver backlash-free multi-axis motion (+20° to -120° / 360°) for high-precision contour machining.

03 Optional: Automated Pallet Handling

While one workpiece is being machined, the next can already be prepared on the second pallet – the automatic pallet change takes just 14 seconds. This is complemented by a fast tool changer and a flexible tool magazine with up to 120 stations.

04 Spindle Technology & Thermal Compensation

Built-in 15,000 rpm spindle with oil-air lubrication, optionally available as 20,000 rpm. Integrated thermal compensation and spindle cooling ensure stable accuracy—even during long production cycles.

		HTT-500
WORKING RANGE	AXES Number	5
	X-Axis	800 mm
	Y-Axis	800 mm
	Z-Axis	830 mm
MAX. PART SIZE	X/Y/Z	Ø700/500 mm
FEED RATE	Acceleration (X/Y/Z)	8/8/8 m/s ²
	Max. Speed (X/Y/Z)	60/60/60 m/min
	Rotation of A-Axis: 180°	0.5 s
	Rotation of B-Axis: 180°	0.5 s
SPINDLES (FANUC)	Rotational speed	15,000; 20,000 rpm
	Power (S1/S6-25%)	15/30 [25/22] kW
	Torque (S1/S6-25%)	95/210 [83.2/100] Nm
SPINDLES	Tool Holder	BBT-40 HSK-A63
	Tool Capacity	60/90/120 pcs.
	Max. Tool Diameter	170 mm
	Tool Length	550 mm
	Tool Weight	12 kg
	Chip-to-Chip Time at 1.800 rpm	4.5 s
MACHINE TABLE	Table Size	500x500 mm
	Max. Table Load	500 kg
	Automatic pallet changer – Changeover time	14 s
DIMENSION	Weight	15,000 kg
	Dimensions (L/W/H)	3,557/6,377/3,177 mm
CONNECTED POWER	Operating voltage	3,380 V
	Total connected power	45 kVA
NC CONTROL		Siemens
LUBRICATION		CL, MQL