



Almac / THE RANGE OF TORNOS
MACHINING CENTERS

THINK PARTS THINK TORNOS



Almac CU 1007

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Ultra precise 3 to 5-axis
machining centre

THE SMALLEST OF THE BIGGEST



Requiring just 2.5 m² of floor space, the ALMAC CU 1007 machining centre is indeed worthy of its title, the smallest of the biggest.

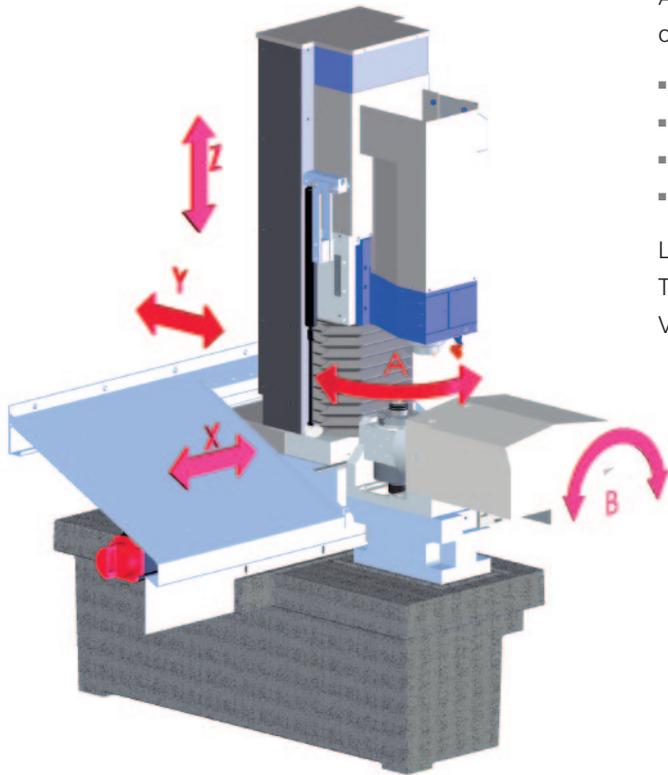
Three to five extremely precise axes dedicated to producing complex microtechnical components, with strict technological requirements... at an unbeatable price !

The design of the CU 1007 ensures great flexibility allowing it to cover a large range of machining fields: watchmaking, jewellery, the medical industry and electronics, etc.

Its versatility results from its modular design, its extremely easy to programme CNC control system, as well as its basic configuration : tool changer, 30'000 rpm motor spindle, and 1/10 µm incremental scales on the three axes.



HIGH PRECISION WITH 3 TO 5 AXES



A total of four versions are available depending on the complexity of the parts to be machined :

- 3-axis
- 4½-axis
- 5-axis (4 simultaneous)
- 5-axis (all simultaneous)

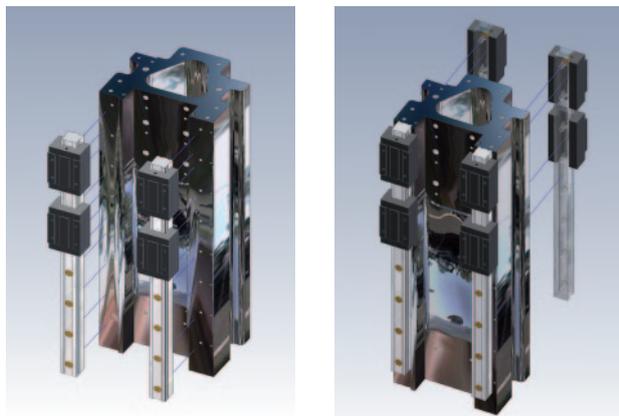
Longitudinal travel	X = 220 mm
Transversal travel	Y = 120 mm
Vertical travel	Z = 230 mm

Rigid and highly stable, thanks to the self-supporting cast iron in the mechanically welded housing, the ALMAC CU 1007 machining centre ensures an excellent finish for machined parts.

A total of four basic configurations which can be used with additional equipment, thus increasing its capacities, and also with a loading/unloading robot, as well as a mirrored version, making it a supple and flexible instrument.

The CU 1007 has X and Y slides on prestressed rails and a ballscrew. The vertical axis is formed by a solid cast iron prism upon which a rectangular sleeve moves, guided by four rails and moved by a ballscrew.

All drives are operated by brushless AC motors with digital servo.



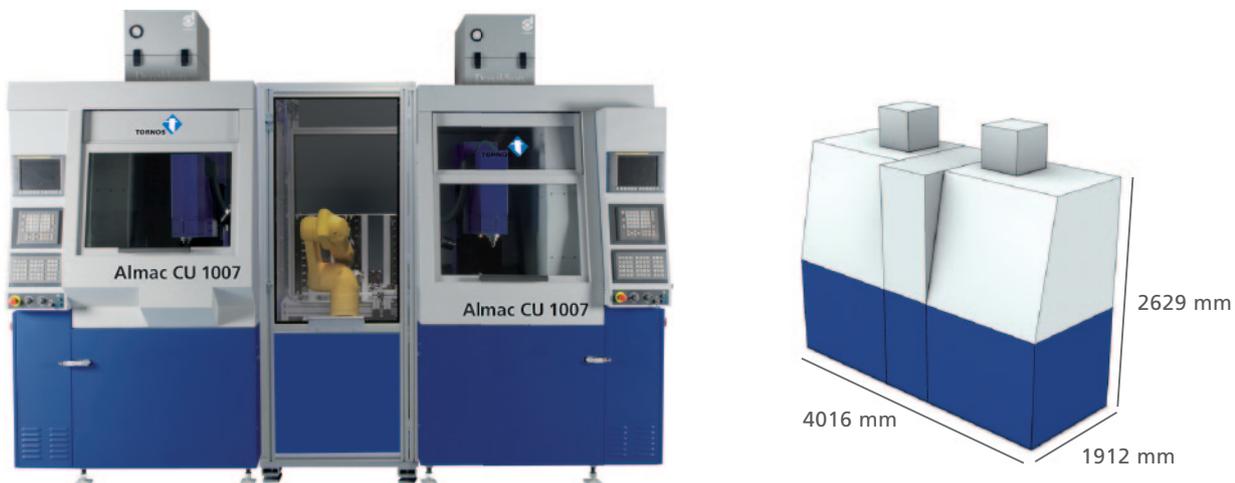
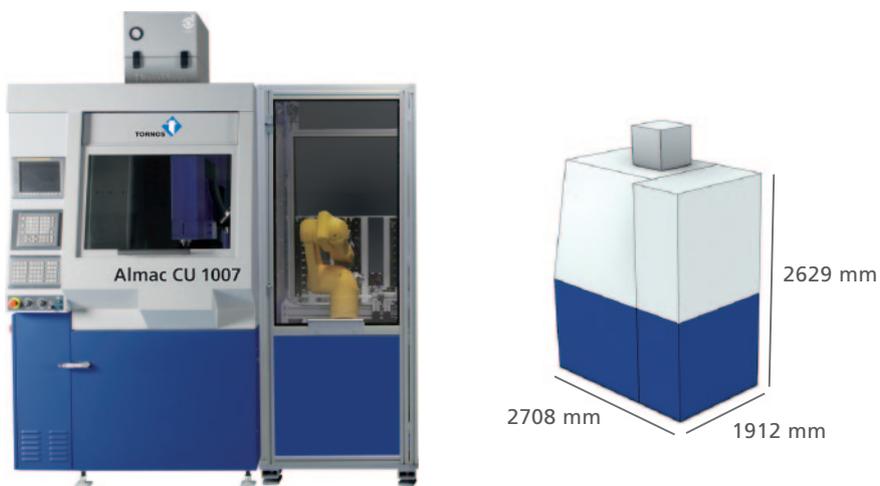
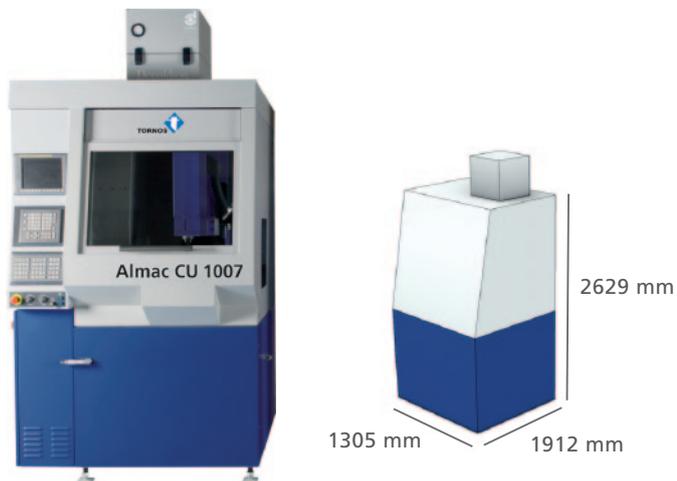
Four linear guide rails fixed on a prism
Feedrates : 16 m/min
Glass scales (1/10 µm)

PROGRESSIVE AND MODULAR

A completely customised solution, with integratable options and unbeatable modularity

The first and only machining tool that adapts and evolves to suit different production needs :

- Standard machine
- Machining centre + loading/unloading system
- Machining centre + loading/unloading system + a mirrored machining centre

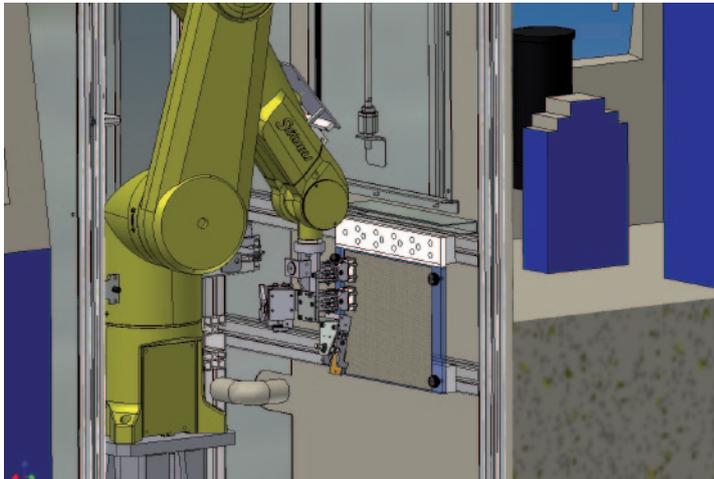


AUTOMATION OF OPERATIONS

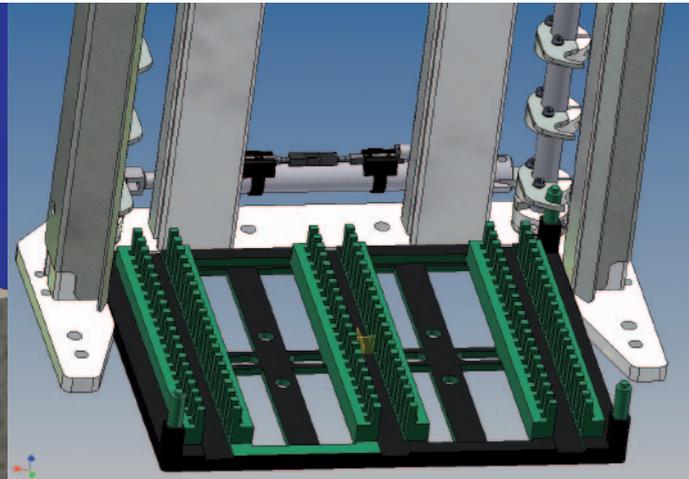
The integration of a 6-axis high performance robot offers the CU 1007 unbeatable autonomy of movement: loading, unloading, palletising, deburring, buffing, flipping and reloading the machining unit with a precision of ± 0.03 mm.



Robot Staubli TX60L



Gripping, intermediary stocking and repositioning with the required precision



Handling of 300 x 400 mm pallets.
Grinding available as an option



FANUC, ALMAC's preferred choice, the most evolved CNC programming system allowing the performance of your machine tools to be optimised, whilst simplifying the work of programmers.

- Optional :
 - 3, 4½ and 5-axis (4 simultaneous) Fancu Oi-MD
 - 5-axis (all simultaneous) Fancu 31

INTEGRATED TOOLS



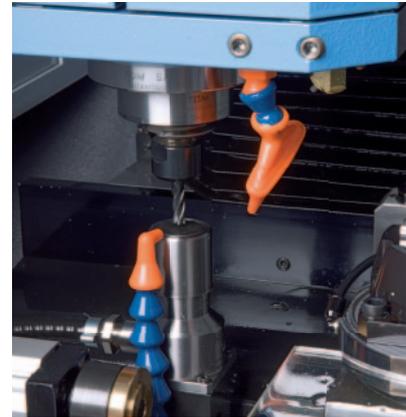
ISO 25 'Random' type 30 position tool changer (optional 64 position HSK 25-A)



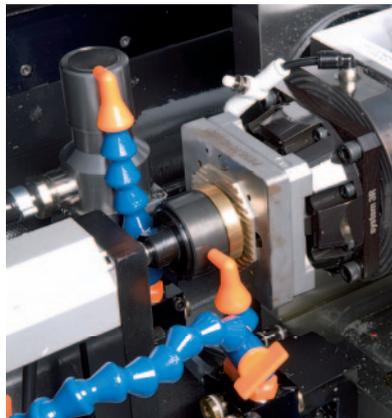
2-axis dividing head



3R gripper chuck



BLUM tools pre-setting system using the Z-Nano probe
 Repeatability $\pm 1 \mu\text{m}$
 Total travel 10 mm, force 3 to 35 N



4-axis dividing head with vertical/horizontal tilt

An uncompromising tool, in its basic form it integrates the essential tools for machining complex parts with the tolerances needed by users who require continuous production + the corresponding options for the more specific needs of each customer.

TECHNICAL SPECIFICATIONS

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Travel	X/Y/Z	280 / 120 / 230 mm
Feed rates	feed X/Y/Z	0 to 8000 mm / min
	rapid feed	16 m / min
	resolution	0.0001 mm
Drive system	motors	AC type
	servos	digital
	Ø ballscrew	20 x 4 mm
Dividing head	CNC, 4th and 5th axes	
	axis C rotation	50 min ⁻¹
	axis B rotation	50 min ⁻¹
	axis B tilting	-10° - + 100°
Motor spindle	lubricated air/oil	100 to 30'000 min ⁻¹ (45'000)
	mechanical power	2.0 / 3.0 kW (100 % / 125 % ED)
	tool holder type	ISO 25 / HSK 40-A / HSK 25-A
Tool changer	random type	30 / 64 positions (HSK 25-A)
Numerical control		FANUC Oi-MD / 31i
Coolant tank	capacity	100 l / 205 l
	flow	30 l / min
	filtration	35 µm / 28 µm
Thermostating	power	3000 W for Δt 1° C
Connections	installed power	10kVA
	voltage	3 x 400 V / 50 Hz
	pneumatic pressure	6 bar
Dimensions	L x D x H	1300 x 1980 x 2650 mm
Weight		2000 kg

SPECIAL FEATURES

- Ergonomic, rigidity and great flexibility of use

OPTIONS

- Additional HF 80'000 min⁻¹ spindle
- Cooling unit air / oil spray MECANEX
- Robotisation
- 2nd high flow coolant pump to clean the machining zone 60 l / min 4 bar

DYNAMIC CONTROL ACCORDING TO ISO 230-2

Subject to technical modifications

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Complies with current CE/CEM safety directives

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