

BRIDGE

Bridge Type High Performance
Milling Machine



FIDIA 

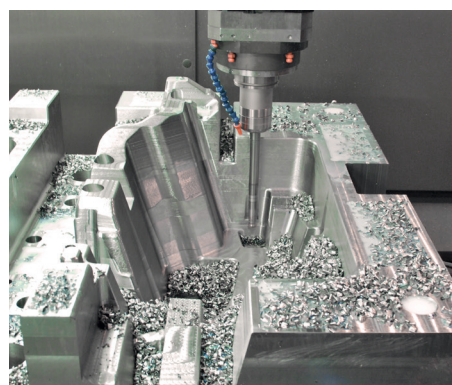
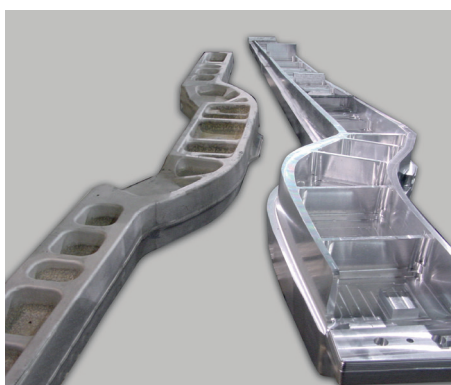


BRIDGE

BRIDGE by Fidia is a 5-axis machine with a fixed gantry structure and moving table. A solution that combines great robustness with excellent precision.

The high-quality cast iron structures, FEM-optimized, ensure rigidity, allowing both roughing operations and high-quality surface finishing. The wide space between the columns facilitates the mounting of equipment and complex parts, making **BRIDGE** extremely versatile.

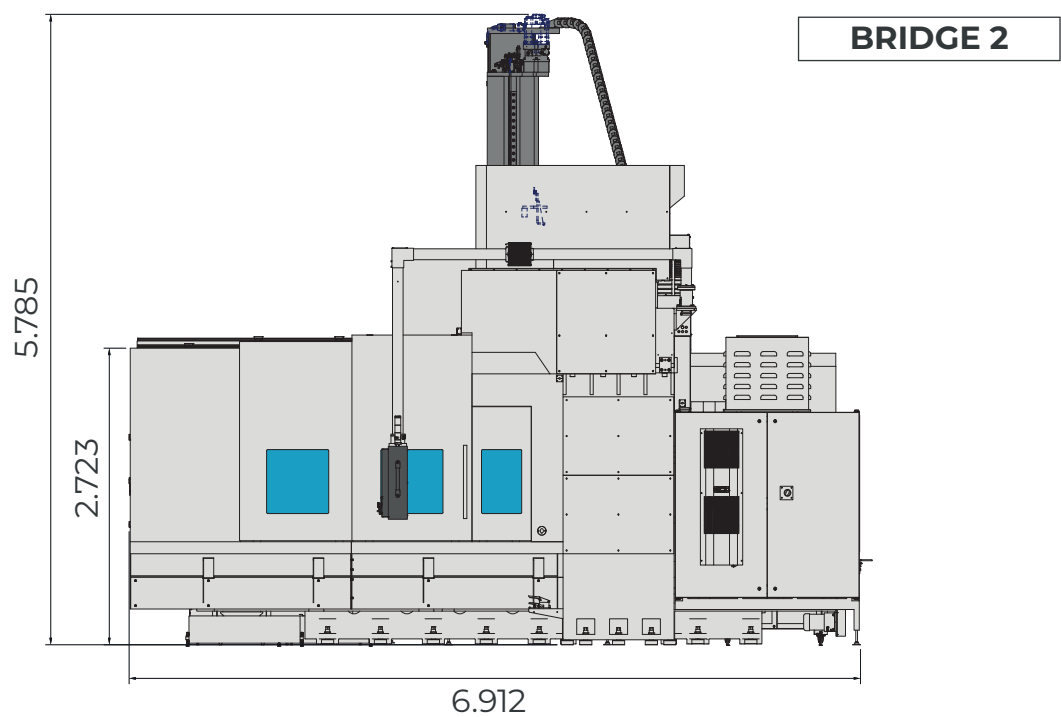
Thanks to the bi-rotary head and a selected range of accessories, integrated measuring systems, tool magazine with up to 60 positions, and a high-pressure cooling system, **BRIDGE** adapts to every production need, offering great flexibility in applications for molds, models, prototypes, and structural parts in the aerospace sector.



Layout

Three sizes

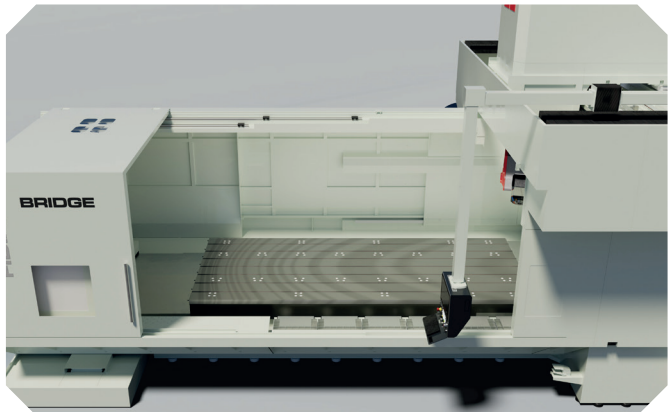
The **BRIDGE** series is available in three axis travel configurations and two spindle options for the FIDIA 5-axis bi-rotary head.



Axis Travel	BRIDGE 2	BRIDGE 3	BRIDGE 4
X (mm)	2.200 (86")	3.200 (177")	4.200 (244")
Y (mm)	1.750 (118")	2.250 (118")	2.250 (118")
Z (mm)	1.000 (49")	1.000 (49")	1.000 (49")
Table			
Table size (XY mm)	2.000 x 1.600	3.000 x 1.600	4.000 x 1.700
Max load (kg)	6.000	8.000	12.000

Easy Access

Access to the work area is facilitated by large front and side doors with polycarbonate windows, allowing not only continuous visual control of the machining process but also easy loading of heavy and bulky parts, while maintaining high safety standards.



Structure

Rigidity and stability for uncompromising machining

BRIDGE adopts a solid gantry structure with a moving table, designed to ensure maximum rigidity and precision even in the most demanding machining operations.

The base is reinforced with dense ribbing and provides excellent support for the worktable, ensuring resistance to high loads and cutting forces.

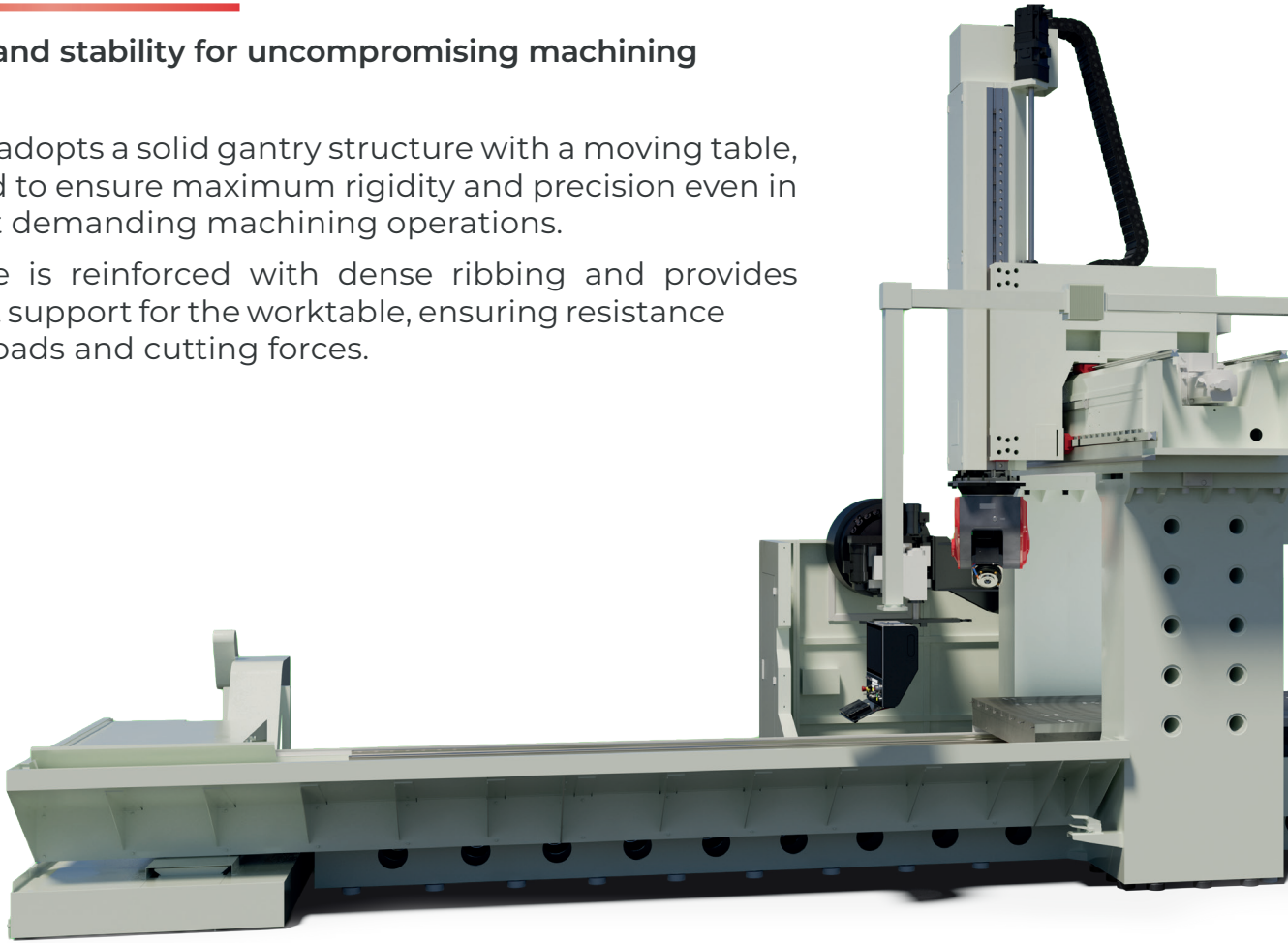
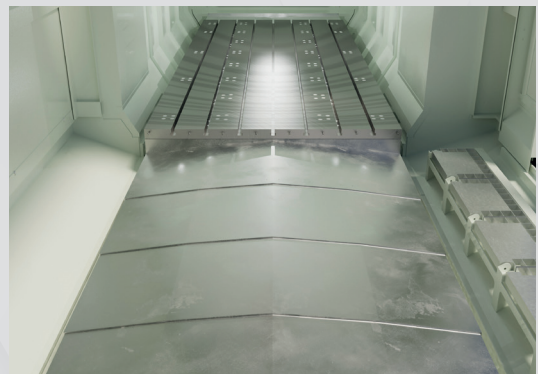
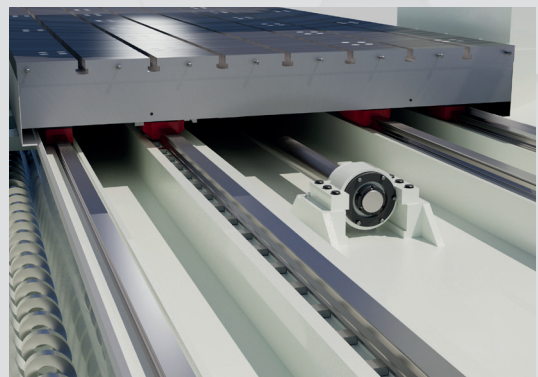


Table and machining capacity

The X-axis moving table is equipped with T-slots for part clamping. The table movement is supported along the entire stroke, eliminating overhangs and deviations during machining.

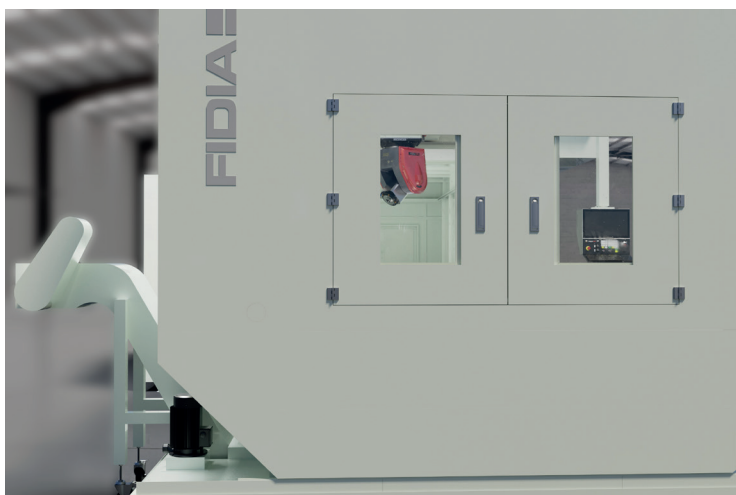
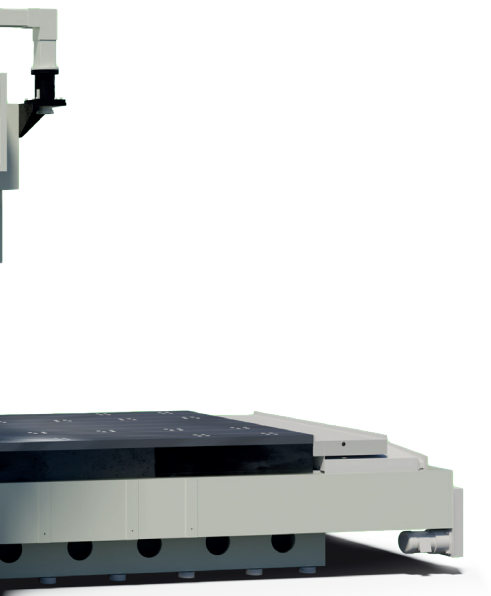
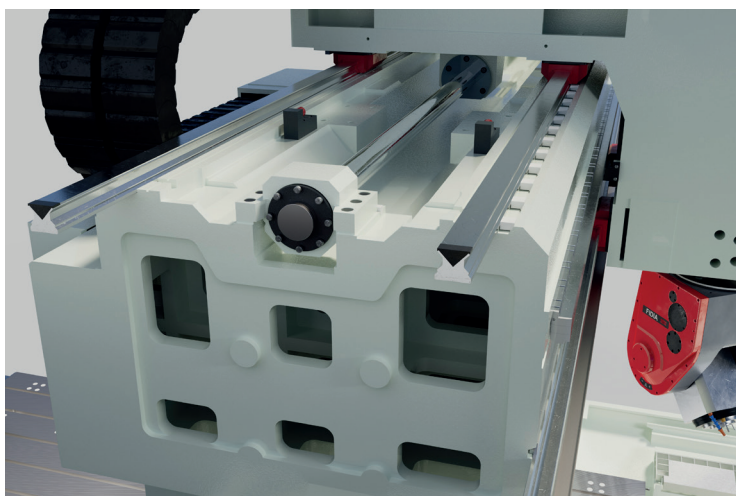
Precision roller guides and a C3-class ball screw, directly coupled to the axis brushless motor, ensure high dynamics, precision, and repeatability.

The kinematics are protected by stainless steel covers, shielding the system from dust, chips, and coolant contamination, ensuring long life and operational reliability.



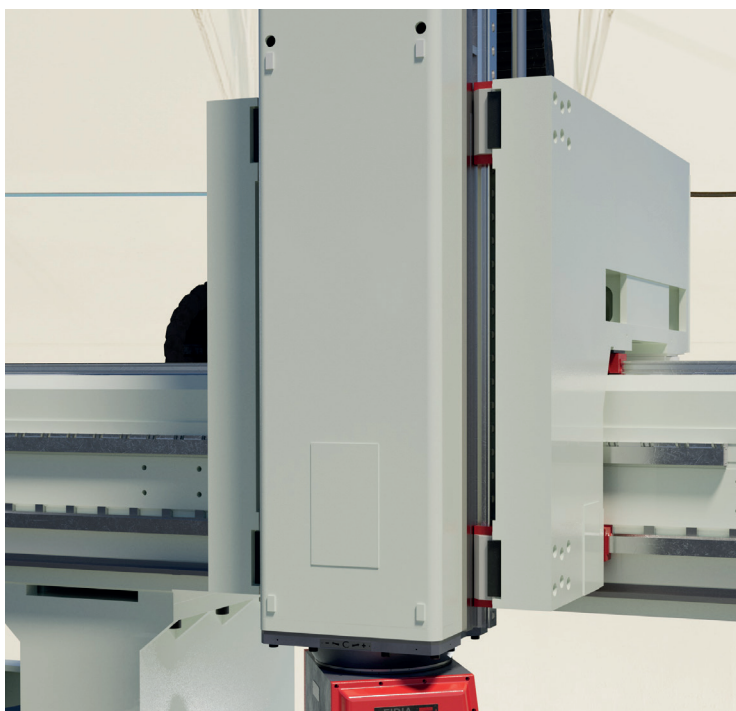
Y, Z: stability and precision

The Y-axis consists of a carriage supported by 3 roller guides positioned on both sides of the robust crossbeam, ensuring perfect orthogonality of the sliding planes.



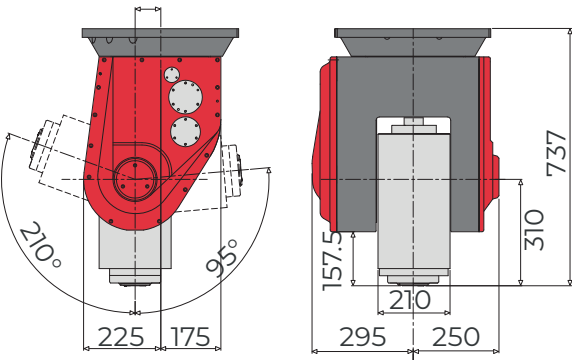
RAM

A key role is played by the vertical RAM, characterized by a generous section, driven by two ball screws with tandem brushless motors. This configuration minimizes deformation and ensures consistently precise machining.



Bi-Rotary Head M5A

For All Applications



The **M5A** head maximizes performance in high-speed milling across various applications.

Its compact and asymmetric structure facilitates machining in hard-to-reach areas.

The **M5A** head is made of cast iron, ensuring robustness and thermal stability, and is particularly suitable for machining steel, cast iron, and aluminum.

M5A - Bi-rotary fork head		
	M5A/55-24	M5A/65-15
A-axis travel	-95° / +110°	
C-axis travel	±360°	
Max Spindle Speed	24.000 1/min	15.000 1/min
Max Continuous Power	55 kW	65kW
Max. torque	89 Nm	124 Nm
Tool Holder	HSK-A63	HSK-A100



New F19 Numerical Control

New **F19** numerical control ACL enhanced.

A CNC that combines high quality with compact design while benefiting from all Fidia technology, including the new ACL (Adaptive Control Logic).



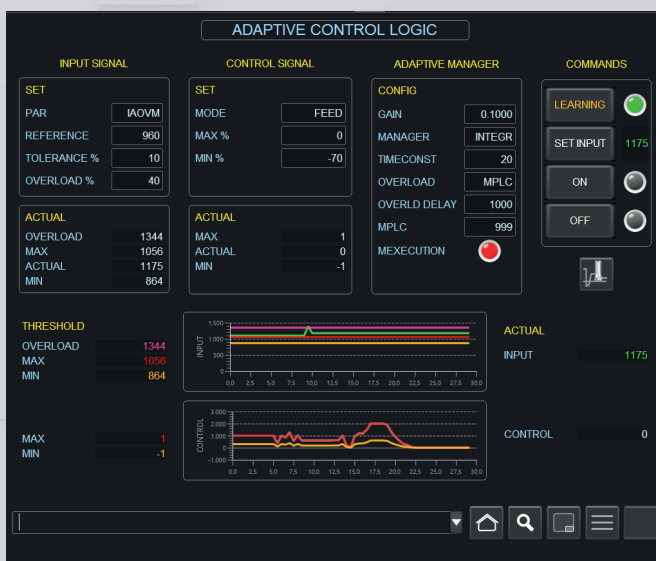
Versatile and Compact

Designed to be extremely compact and versatile, it features a physical keyboard and a newly designed keypad that enhance usability and ergonomics, along with an 18.5" wide full HD P-CAP multi-touch screen.

This product is designed to equip the Fidia range but is also ideal for retrofitting existing machines or as a CNC for OEM machine builders seeking a product with excellent value for money.



Energy-efficient design




Superior Performance


The ACL logic (Adaptive Control Logic) enables superior performance, increasing machine efficiency by over 30% during roughing and optimizing tool life.

Standard features include CRS (Chattering Reduction System) and the ability to use ACL logic for controlling non-standard production variables via CPM (Custom Parameters Management).




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