



breton

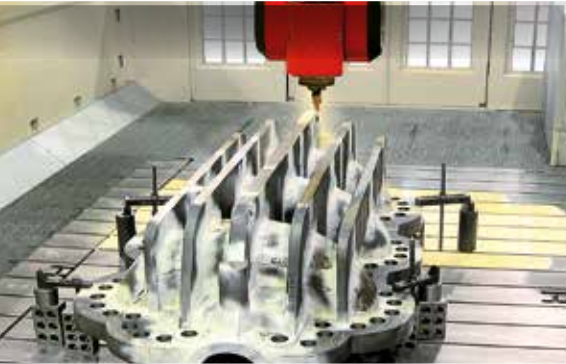
Machine Tools

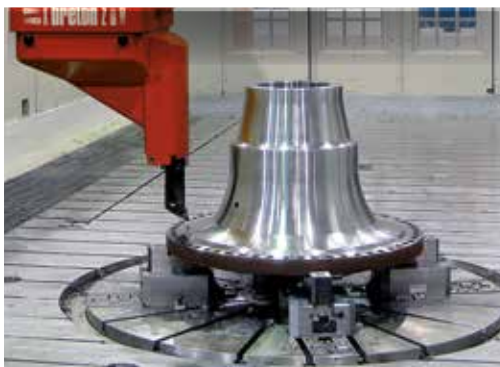
MACHINE RANGE



High performance vertical machining centres

Engineered on Your needs





VERTICAL MACHINING CENTRES

A comprehensive selection of solutions dedicated to precision engineering applications such as those of the **Aerospace, Mould&Dies and Automotive industries**. We design, manufacture and commission **high-speed machining centres with overhead-gantry architectures** to provide the optimum performances on any type of material ranging from the toughest superalloys to the lightest composites, across steel and light-alloys.

Thanks to **dedicated and specialized teams** we support you in the definition of **the most cost-efficient configurations**, we work to guarantee you the smoothest implementation of the new technologies and we assist you during the entire operational life of the equipment. Everything we do is specifically **focused to grant you the best return of your investment** and the following charts give you an overview of the applications where each "family" proves its best efficiency.

XCEEDER



HIGH DYNAMIC



DIRECT DRIVE



THERMOSTABLE



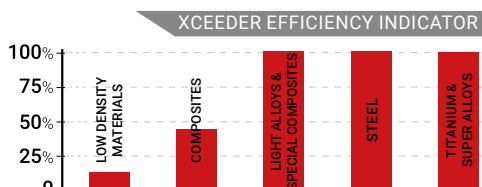
METALQUARTZ

Multipurpose 5-axis vertical machining centre, **trunnion table architecture**, for milling and high-precision grinding operations. Engineered to provide its **best efficiency on titanium, special alloys, steel and light alloys applications**.

Designed for high dynamics (jerk, acceleration and speed) avoiding the use of linear motors to allow a considerable energy saving and ensuring the necessary feed forces even for the heaviest operations.

The **monobloc structure is made of Metalquartz** to ensure the best rigidity and stability while providing the operator with the best ergonomics and operational comfort for an easy and safe access to the machine and the best workpiece visibility.

The Xceeder range includes three models: the biggest one can **machine parts up to Ø1600 mm**.



		XCEEDER 900	XCEEDER 1200	XCEEDER 1400
X stroke	mm	900	1.200	1.700
Y stroke	mm	900	1.000	1.700
Z stroke	mm	600	700	1.000
X / Y / Z Axes rapid feedrate	m/min	60 / 60 / 40		
A Axis rotation		-30° +110°	-30° +120°	± 120°
C Axis rotation		endless		
Spindle power S6 / S1	kW	40/40 - 41/37 - 55/40	85/75 - 41/37 - 40/40	
Spindle torque S6 / S1	Nm	137/100 - 89/62 - 22/16	480/300 - 89/62 - 137/100	
Spindle speed	rpm	18.000 - 28.000 - 40.000		
Milling tool taper		HSK-A63 - HSK-E40		HSK-A63 - HSK-A100 - HSK-E40
Rotary table power S6 / S1	kW	40/30	30/30	
Rotary table torque S6 / S1	Nm	1.525/1.000	2.700/2.000	2.700/2.000 - 5.000/3.500
Rotary table speed	rpm	100		

MATRIX



HIGH DYNAMIC



DIRECT DRIVE



THERMOSTABLE



METALQUARTZ



THERMAL SHIELDS

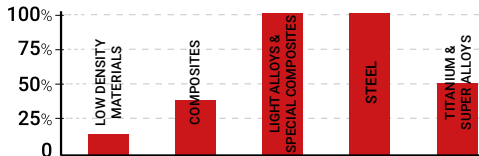
High-precision 5-axis overhead gantry machining centre particularly suitable for **roughing, semi-finishing and finishing operations on medium-large parts made of steel, light alloys or special composites.**

Designed for high accuracies and high dynamics (jerk, acceleration and speed) avoiding the use of linear motors to allow for a considerable energy saving and to ensure the necessary thrust even in the most demanding operations.

The robust and **thermo-symmetric gantry architecture** ensures the best rigidity and both structural and thermal stability while providing the operator with the best ergonomics and operational comfort for an easy part setup and a safe access to the machine.

Thanks to the patented **ThermalShield® technology** the machine guarantees the best accuracy even when installed within environments which are not stable in temperature.

MATRIX EFFICIENCY INDICATOR



		MATRIX 800	MATRIX 1000	MATRIX 1300/1500
X stroke	mm	2.500	2.500 - 4.000	3.000 - 8.000
Y stroke	mm	2.000	2.500	3.000 - 4.000
Z stroke	mm	800	1.000	1.300 - 1.500
X / Y / Z Axes rapid feedrate	m/min	40 / 40 / 20	50 / 50 / 40	60 / 60 / 40
A Axis rotation		±105°	±115° - -105° +120°	
C Axis rotation		±220° - endless		±305° - endless
Spindle power S6 / S1	kW	41/37 - 22/20	40/40 - 41/37 - 115/87 - 40/40	
Spindle torque S6 / S1	Nm	89/62 - 60/48	137/100 - 89/62 - 110/83 - 180/150	
Spindle speed	rpm	28.000	18.000 - 28.000 - 24.000 - 16.000	
Milling tool taper		HSK-A63	HSK-A63 - HSK-A100	

ULTRIX



HIGH DYNAMIC



DIRECT DRIVE



THERMOSTABLE



METALQUARTZ



TURNING

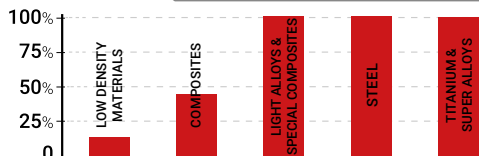
Multiasking 5-axis vertical machining centre, **trunnion table architecture and independent turning bar**, for milling, turning and high-precision grinding operations. Engineered to provide its **best efficiency on titanium, special alloys, steel and light alloys applications.**

Designed for high dynamics (jerk, acceleration and speed) avoiding the use of linear motors to allow a considerable energy saving and ensuring the necessary feed forces even for the heaviest operations.

The **monobloc structure is made of Metalquartz** to ensure the best rigidity and stability while providing the operator with the best ergonomics and operational comfort for an easy and safe access to the machine and the best workpiece visibility.

The Ultrix range includes three models: the biggest one can **machine parts up to Ø1600 mm.**

ULTRIX EFFICIENCY INDICATOR



		ULTRIX 900	ULTRIX 1200	ULTRIX 1400
X stroke	mm	900	1.150	1.700
Y stroke	mm	900	1.000	1.700
Z stroke	mm	600	700	1.000
X / Y / Z Axes rapid feedrate	m/min	60 / 60 / 40		
A Axis rotation		-30° +110°	-30° +120°	± 120°
C Axis rotation		endless		
Spindle power S6 / S1	kW	40/40 - 41/37 - 55/40	85/75 - 41/37 - 40/40	
Spindle torque S6 / S1	Nm	137/100 - 89/62 - 22/16	480/300 - 89/62 - 137/100	
Spindle speed	rpm	18.000 - 28.000 - 40.000	14.000 - 28.000 - 18.000	
Milling tool taper		HSK-A63	HSK-A63 - HSK-A100	
Rotary table power S6 / S1	kW	40/30	30/30	
Rotary table torque S6 / S1	Nm	1.525/1.000	2.700/2.000	2.700/2.000 - 5.000/3.500
Rotary table speed S6 / S1	rpm	1.000/800	500/400	450/350
Turning tool taper		Capto C6	Capto C8	Capto C8 - HSK-T100

FLYMILL - FLYMILL HD



HEAD CHANGE



DIRECT DRIVE



THERMOSTABLE



METALQUARTZ

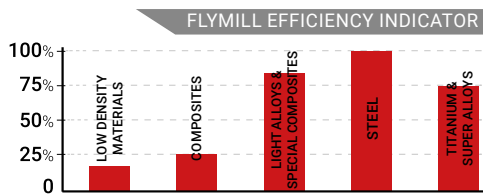


THERMAL SHIELDS

5-axis overhead gantry machining centre design to provide its best efficiency on machining operations for **large parts made of super alloys, stainless-steel and ferrous materials.**

Build to machine with high torque, it delivers the necessary machining thrust even in the most demanding operations while maintaining the best precision.

The **rock-solid structure made of Metalquartz** ensures the best rigidity and stability. The robust and **thermo-symmetric gantry architecture** grants the operator with the best ergonomics and operational comfort for an **easy part setup and a safe access** to the machine.



		FLYMILL 1000 - 1600	FLYMILL 2000/2500	FLYMILL 1000HD - 1600HD
X stroke	mm	3.000/30.000	4.500/30.000	3.000/30.000
Y stroke	mm	2.500 - 4.000	3.500	2.500 - 3.500
Z stroke	mm	1.000 - 1.300 - 1.600	2.000 - 2.500	1.000 - 1.300 - 1.600
X / Y / Z Axes rapid feedrate	m/min	60 / 60 / 40		
A Axis rotation		-105° +120°		
C Axis rotation		endless		
Spindle power S6 / S1	kW	40/40 - 115/87		90/80 - 85/75
Spindle torque S6 / S1	Nm	137/100 - 110/83		1.300/1.000 - 480/300
Spindle speed	rpm	18.000 - 24.000		4.000 - 14.000
Milling tool taper		HSK-A63	HSK-A63	HSK-A100

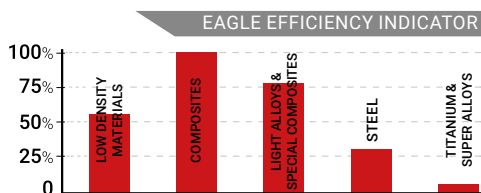
EAGLE

5-axis overhead gantry machining centre with provide the best efficiency on **medium-large size applications of light alloys, composites, resins and low density materials.**

The **wide range of available configurations** allows the Eagle series to machine other materials such as steel and stainless-steel laminates.

Extremely modular and with a vast array of available accessories, Eagle is easily configurable with the suitable axis travels and **the most efficient technological solutions for every application.**

Each single component has been carefully selected to **increase productivity while reducing machining times and cutting maintenance costs.**



		EAGLE 1000	EAGLE 1500	EAGLE 2000	EAGLE 2500
X stroke	mm	2.000/30.000	2.000/30.000	3.000/30.000	3.000/30.000
Y stroke	mm	2.500 - 4.000	2.500 - 4.000	3.000 - 4.000	3.000 - 4.000
Z stroke	mm	1.000	1.500	2.000	2.500
X / Y / Z Axes rapid feedrate	m/min	70 / 70 / 40			
A Axis rotation		± 115°			
C Axis rotation		± 270° - endless			
Spindle power S6 / S1	kW	31/25 - 41/37			
Spindle torque S6 / S1	Nm	65/52 - 89/62			
Spindle speed	rpm	16.000 - 28.000			
Milling tool taper		HSK-A63			

MAXIMA



HEAD CHANGE



DIRECT DRIVE



THERMOSTABLE



METALQUARTZ



THERMAL SHIELDS



TURNING

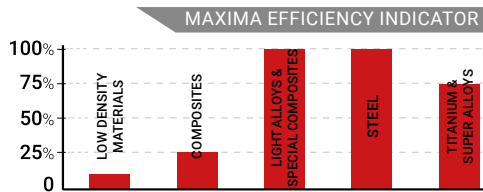
Multitasking vertical machining centre which combines at the best 5-axis **milling with high performance turning** on **medium-large parts** made of **super alloys, stainless-steel, ferrous materials and light alloys**.

Maxima is unique in its kind since it is **extremely versatile to perform multiple machining operations** on a virtually unlimited range of parts.

The **rock-solid structure made of Metalquartz** ensures the best rigidity and stability.

The robust and **thermo-symmetric gantry architecture** grants the best thermal stability while providing the operator with the best ergonomics and operational comfort for an easy part setup and a safe access to the machine.

Maxima can be equipped with **turning tables from Ø1.250 mm (direct drive) up to Ø3.500 mm (hydrostatic)**.



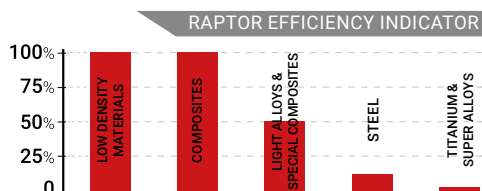
		MAXIMA 1300	MAXIMA 1600
X stroke	mm	3.000/30.000	
Y stroke	mm	2.500 - 3.500	
Z stroke	mm	1.300	1.600
X / Y / Z Axes rapid feedrate	m/min	60 / 60 / 40	
A Axis rotation		-105° +120°	
C Axis rotation		endless	
Spindle power S6 / S1	kW	85/75 - 40/40 - 41/37 - 90/80	
Spindle torque S6 / S1	Nm	480/300 - 137/100 - 89/62 - 1.300/1.000	
Spindle speed	rpm	14.000 - 18.000 - 28.000 - 4.000	
Milling tool taper		HSK-A63 - HSK-A100	
Turning table diameter*	mm	1.250 - 2.000 - 3.500	
Rotary table power	kW	76 - 50 - 50	
Rotary table torque	Nm	10.500 - 6.400 - 12.000	
Rotary table speed	rpm	350 - 250 - 75	
Turning tool taper		Capto C6 - HSK-T100	Capto C8 - HSK-T100

* Other turning table dimensions available.

RAPTOR

5-axis overhead gantry machining centre particularly suitable for high-speed operations, **from roughing to finishing**, on **medium-large parts** made of **light alloys, composites, resins and low-density materials**.

Raptor incorporates **the most robust structures of its category** and the highest quality components to ensure versatility, precision and **stability over time**. In addition to the wide range of accessories and solutions for dust and chip extraction, Raptor can be equipped with **spindles up to 28000 rpm and 40 Kw**.



		RAPTOR 1200	RAPTOR 2000
X stroke	mm	4.000	4.000
Y stroke	mm	2.800 - 5.500	8.000
Z stroke	mm	1.200	2.000
X / Y / Z Axes rapid feedrate	m/min	80 / 80 / 40	40 / 40 / 15
A Axis rotation		± 115°	± 105°
C Axis rotation		± 200°	
Spindle power S6 / S1	kW	31/25 - 41/37	
Spindle torque S6 / S1	Nm	65/52 - 89/62	
Spindle speed	rpm	16.000 - 28.000	
Milling tool taper		HSK-A63	



breton

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