

Machine Tool



High performance multipurpose
machining centres

breton

Driven by Innovation

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High performance multipurpose machining centres

Breton multipurpose machining centres are specially conceived for high speed, top performance and unbeatable versatility.

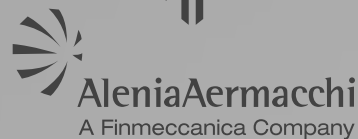
The mobile bridge gantry design, **Metalquartz®** structures and integrated customized technical solutions are the main features of these machines.

High dynamics from the Direct Drive technology and high chip removal, excellent surface finish and outstanding machining accuracy are a byword for efficiency, quality and productivity.

Whatever the requirements, even the most demanding ones, Breton's full range of machines meets them easily in the major industrial sectors such as aerospace, energy, automotive, mold and die and general mechanics.

The Breton logo is displayed in white lowercase letters on a red rectangular background.

WORKING WITH THE BEST



WORKING WITH THE BEST

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		XCEEDER 900			XCEEDER 1200				XCEEDER 1400							
Interpolated axes		5			5				5							
“X” Stroke	mm in	900 35.4			1.200 47.2				1.700 66.9							
“Y” Stroke	mm in	900 35.4			1.000 39.4				1.600 63							
“Z” Stroke	mm in	600 23.6			700 27.6				1.000 39.4							
Table dimension	mm in	800 31.5			1.100 43.3				1.400 55.1							
Table loading capacity	kg lb	1.000 2,200			1.500 3,306				1.500 3,306							
“X” - “Y” Axes rapid feedrate	m/min ipm	60 2,362			60 2,362				50 1,968							
“Z” Axis rapid feedrate	m/min ipm	40 1,575			40 1,575				40 1,575							
“A” Axis rotation		-30° ÷ +110°			-30° ÷ +120°				± 120°							
“C” Axis rotation		continuous			continuous				continuous							
“A” Axis rapid feedrate	rpm	50			30				30							
“C” Axis rapid feedrate	rpm	100			60				60							
Spindle power S6(40%) / S1	kW HP	40/40 53/53	or	41/37 55/50	or	55/40 73/53	85/74.6 114/100	or	41/37 55/50	or	40/40 53/53	85/74.6 114/100	or	41/37 55/50	or	40/40 53/53
Spindle torque S6(40%) / S1	Nm ft-lb	137/100 101/73.7	or	89/64 66/47	or	22/16 16.2/11.8	480/300 354/221	or	89/64 66/47	or	137/100 101/73.7	480/300 354/221	or	89/64 66/47	or	137/100 101/73.7
Spindle speed	rpm	18.000	or	28.000	or	40.000	14.000	or	28.000	or	18.000	14.000	or	28.000	or	18.000
DIN 69893-1 milling tool taper		HSK-A63			HSK-A63				HSK-A100							



High speed vertical machining centre, with 5 axes, for milling operations on small and medium size parts. Xceeder is available also in the MICRON version to reach even higher accuracies.

Range of materials: Superalloys, Titanium, Steel, Alluminum and composites.



XCEEDER



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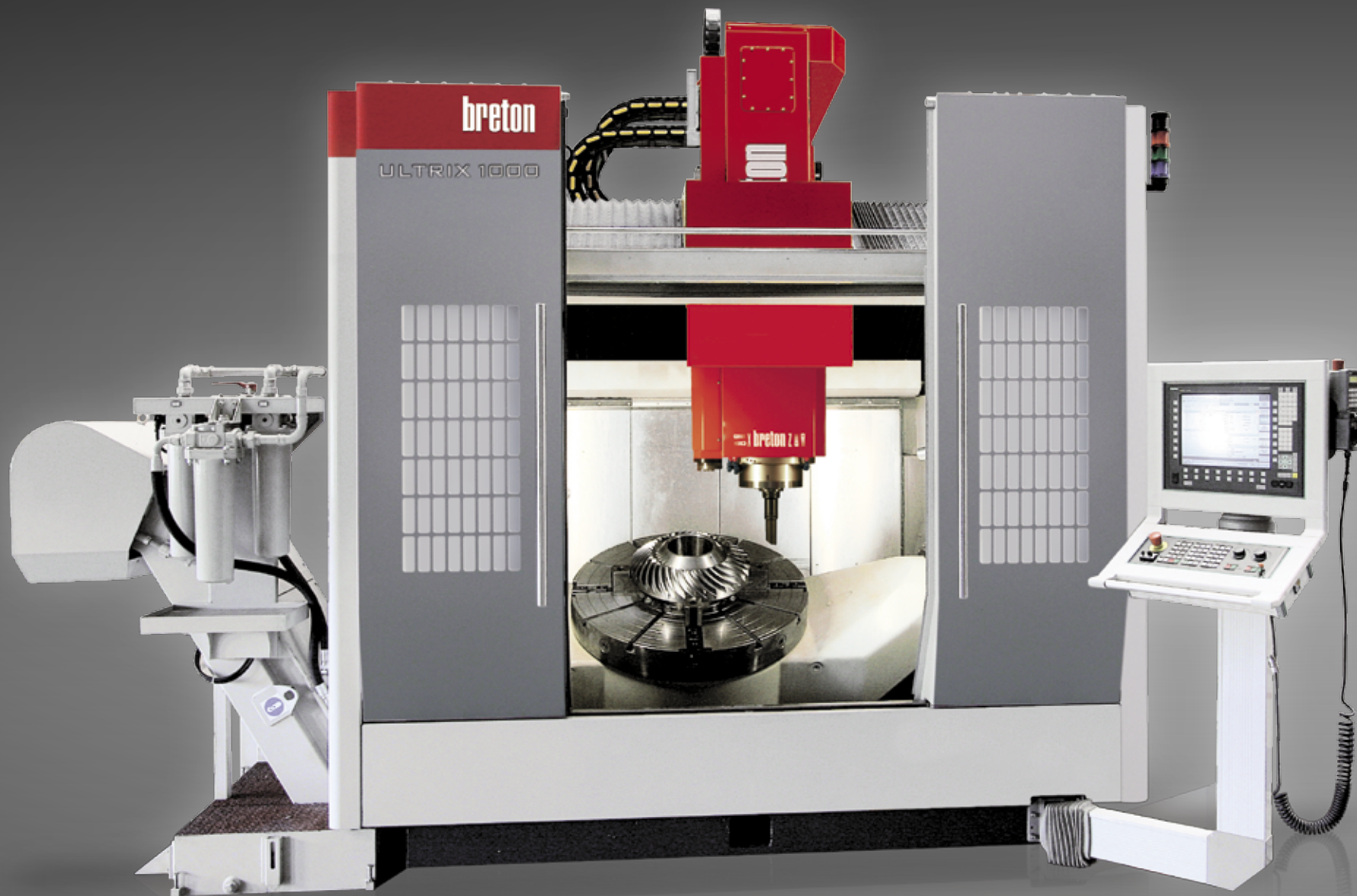
		ULTRIX 800	ULTRIX 1000	ULTRIX 1200
Interpolated axes		5	5	5
"X" Stroke	mm in	800 31.5	1,150 45.2	1,700 66.9
"Y" Stroke	mm in	900 35.4	1,000 39.4	1,600 63
"Z" Stroke	mm in	600 23.6	700 27.6	1,000 39.4
Turning table diameter	mm in	700 27.5	1,000 39.4	1,200 47.2
Max. turning diameter	mm in	800 31.5	1,000 39.4	1,200 47.2
"X" - "Y" Axes rapid feedrate	m/min ipm	60 2,362	60 2,362	50 1,968
"Z" Axis rapid feedrate	m/min ipm	40 1,575	40 1,575	40 1,575
"A" Axis rotation		-30° ÷ +110°	-30° ÷ +120°	± 120°
"C" Axis rotation		continuous	continuous	continuous
"A" Axis rapid feedrate	rpm	50	30	30
"C" Axis rapid feedrate	rpm	100	60	60
MILLING SPINDLE: Spindle power S6(40%) / S1	kW HP	40/40 53/53 or 41/37 55/50 or 55/40 73/53	85/74.6 114/100 or 41/37 55/50 or 40/40 53/53	85/74.6 114/100 or 41/37 55/50 or 40/40 53/53
Spindle torque S6(40%) / S1	Nm ft-lb	137/100 101/73.7 or 89/64 66/47 or 22/16 16.2/11.8	480/300 354/221 or 89/64 66/47 or 137/100 101/73.7	480/300 354/221 or 89/64 66/47 or 137/100 101/73.7
Spindle speed	rpm	18,000 or 28,000 or 40,000	14,000 or 28,000 or 18,000	14,000 or 28,000 or 18,000
TURNING SPINDLE: Spindle power S6(40%) / S1	kW HP	40/30 53/40	30/30 40/40	30/30 40/40
Spindle torque S6(40%) / S1	Nm ft-lb	1,525/1,000 1,124/737	2,700/2,000 1,991/1,475	2,700/2,000 1,991/1,475
Spindle speed range S6(40%) / S1	rpm	1,000/800	500/400	500/400
DIN 69893-1 milling tool taper		HSK-A63	HSK-A63 or HSK-A100	HSK-A63 or HSK-A100
Milling turning tool taper		Capto C6	Capto C8	Capto C8



High speed multipurpose vertical machining centre, with 4 or 5 axes, offering the widest range of machining options such as milling, horizontal and vertical turning and grinding of small and medium size parts. Range of materials: Superalloys, Titanium, Steel, Aluminum and composites.



ULTRIX



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		MAXIMA 1600 K 30/60/80						MAXIMA 2000 K 30/60/80							
Interpolated axes		6						6							
“X” Stroke	mm in	3.000 - 6.000 - 8.000 118 - 236.2 - 315						3.000 - 6.000 - 8.000 118 - 236.2 - 315							
“Y” Stroke	mm in	2.500/3.500 98.4/137.8						3.500 137.8							
“Z” Stroke	mm in	1.300 - 1.700 51.1 - 66.9						1.300 - 1.700 51.1 - 66.9							
“X” Axis rapid feedrate	m/min ipm	60 2,360						60 2,360							
“Y” Axis rapid feedrate	m/min ipm	60 2,360						60 2,360							
“Z” Axis rapid feedrate	m/min ipm	40 1,575						40 1,575							
“A” Axis rotation		0° ÷ +135°						0° ÷ +135°							
“C” Axis rotation		continuous						continuous							
“A” Axis rapid feedrate	rpm	50						50							
“C” Axis rapid feedrate	rpm	100						100							
MILLING SPINDLE: Spindle power S6(40%) / S1	kW HP	85/74.6 114/100	or	40/40 53/53	or	41/37 55/50	or	90/80* 121/107*	85/74.6 114/100	or	40/40 53/53	or	41/37 55/50	or	90/80* 121/107*
Spindle torque S6(40%) / S1	Nm ft-lb	480/300 354/221	or	137/100 101/74	or	89/64 66/47	or	1.300/1.000* 959/738*	480/300 354/221	or	137/100 101/74	or	89/64 66/47	or	1.300/1.000* 959/738*
Spindle speed	rpm	14.000	or	18.000	or	28.000	or	4.000*	14.000	or	18.000	or	28.000	or	4.000*
TURNING SPINDLE: Turning table diameter	mm in	1.600 63						2.000 78.7							
Maximum swiveling diameter	mm in	2.000 78.7						2.500 98.4							
Spindle power S6(40%) / S1	kW HP	88/68 118/91						116/100 156/134							
Spindle torque S6(40%) / S1	Nm ft-lb	8.400/6.500 6,196/4,794						24.600/20.000 18,145/14,752							
Spindle speed range S6(40%) / S1	rpm	350/300						248/230							
DIN 69893-1 milling tool taper		HSK-A63 or HSK-A100						HSK-A63 or HSK-A100							
Milling turning tool taper		Capto C8						Capto C8							

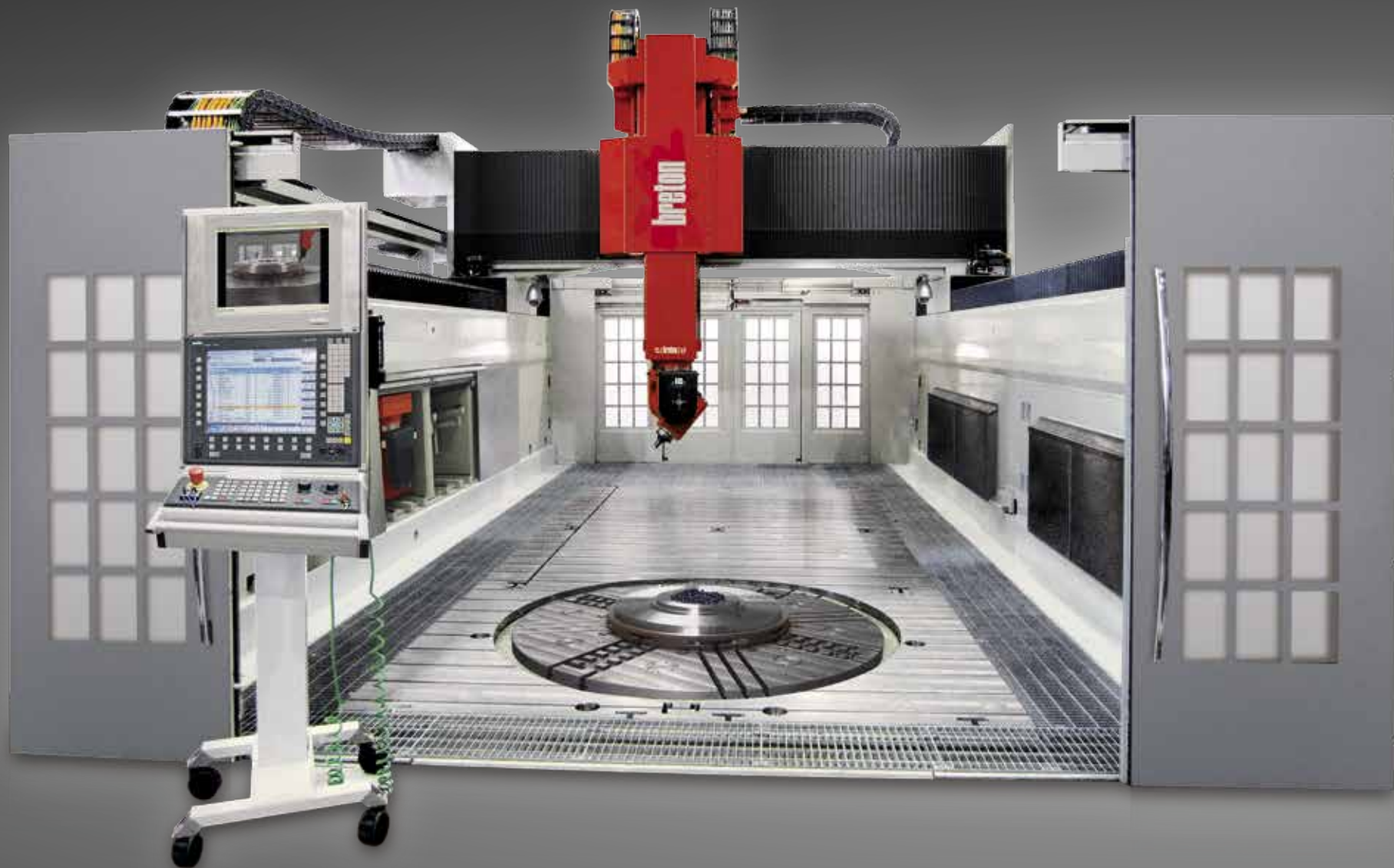
* 3 axes version



High speed multipurpose vertical machining centre, with 6 axes, offering the widest range of machining options such as milling, vertical turning and grinding of medium and big size parts. Range of materials: Superalloys, Titanium, Steel, Aluminum and composites.



MAXIMA



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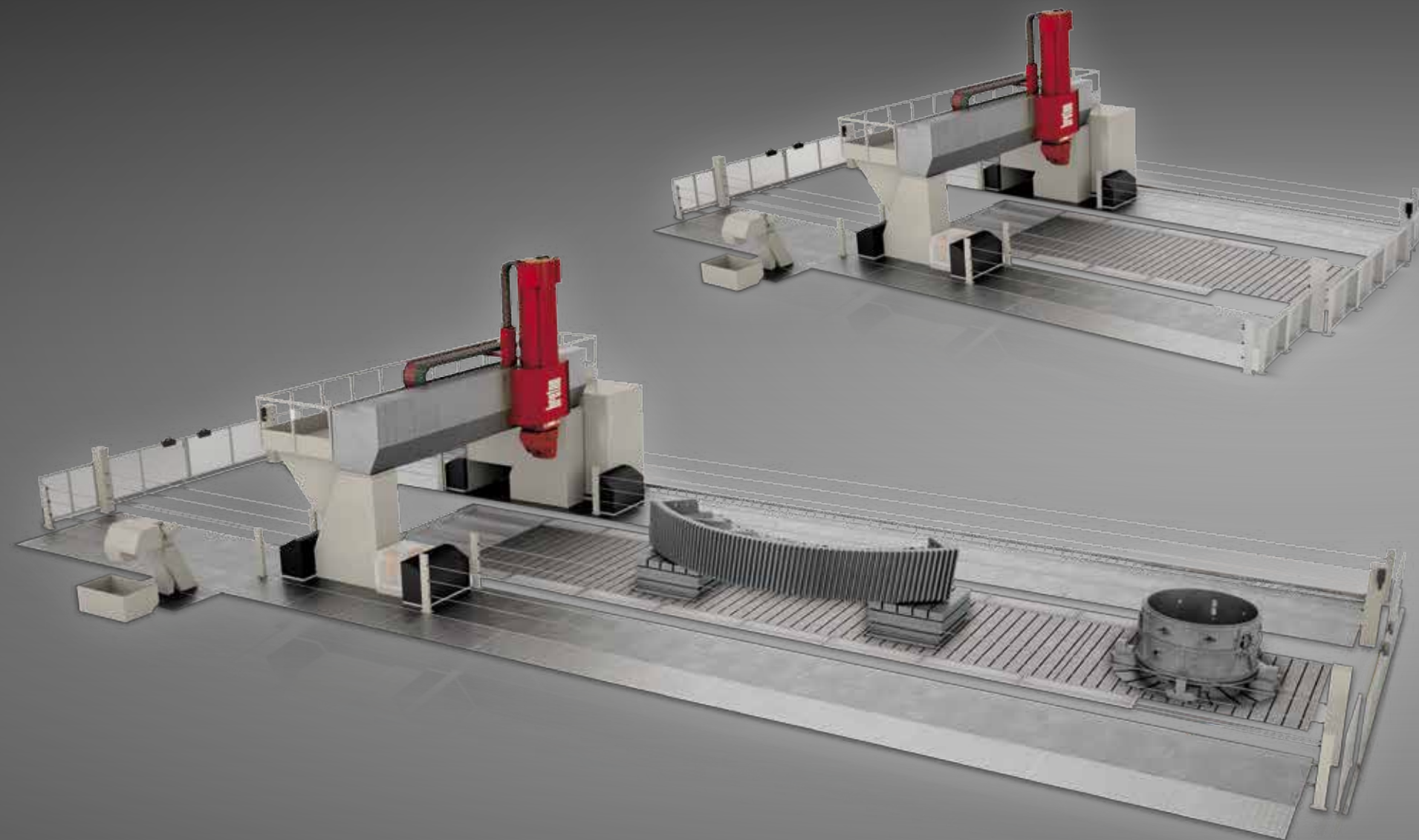
		TITAN 1500 K 40/60/80/100/120			TITAN 1700 K 40/60/80/100/120		
Interpolated axes		5			5		
"X" axis travel	mm in	4.000 - 6.000 - 8.000 - 10.000 - 12.000 157.5 - 236.2 - 315 - 393.7 - 472.4			4.000 - 6.000 - 8.000 - 10.000 - 12.000 157.5 - 236.2 - 315 - 393.7 - 472.4		
"Y" axis travel	mm in	4.500 177.2			4.000 157.5		
"Z" axis travel	mm in	1.500 59			1.700 66,9		
"X" axis rapid feedrate	m/min ipm	40 1,574			40 1,574		
"Y" axis rapid feedrate	m/min ipm	40 1,575			40 1,575		
"Z" axis rapid feedrate	m/min ipm	30 1,181			30 1,181		
"B" axis rotation		± 180°			± 180°		
"C" axis rotation		± 200°			± 200°		
"B" axis rapid feedrate	rpm	20			20		
"C" axis rapid feedrate	rpm	20			20		
Distance between columns	mm in	3.700 145.7			3.200 125.9		
Spindle power S6(40%) / S1	kW HP	96/80 128/107	or	85/75 113/100	96/80 128/107	or	85/75 113/100
Spindle torque S6(40%) / S1	Nm ft-lb	2.006/1.270 1,479.5/936.7	or	480/300 354.0/221.2	2.006/1.270 1,479.5/936.7	or	480/300 354.0/221.2
Spindle speed range	rpm	4.000	or	14.000	4.000	or	14.000
DIN 69893-1 milling tool taper		HSK-A100	or	ISO50	HSK-A100	or	ISO50



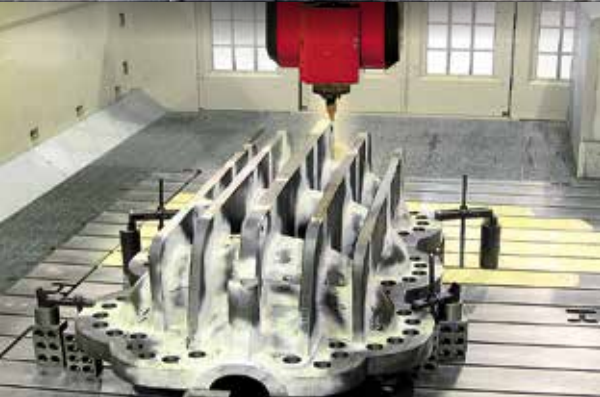
High power vertical machining centre, for 5 axes for milling of medium and very large parts. Range of materials: Superalloys, titanium, steel and aluminium.



TITAN



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High performance vertical machining centre, with 5 axes,
for milling of medium and very large parts.
Range of materials: Superalloys, Steel and Aluminium.

		FLYMILL 1000/2T DD HD K 30/45/60/80			FLYMILL 1300/2T DD HD K 30/45/60/80		
Interpolated axes		5			5		
"X" Stroke	mm in	3.000 - 4.500 - 6.000 - 8.000 118 - 177 - 236.2 - 315			3.000 - 4.500 - 6.000 - 8.000 118 - 177 - 236.2 - 315		
"Y" Stroke	mm in	2.500 - 3.500 98.4 - 137.8			2.500 - 3.500 98.4 - 137.8		
"Z" Stroke	mm in	1.000 39.4			1.300 51.1		
"X" Axis rapid feedrate	m/min ipm	60 2,360			60 2,360		
"Y" Axis rapid feedrate	m/min ipm	60 2,360			60 2,360		
"Z" Axis rapid feedrate	m/min ipm	40 1,575			40 1,575		
"A" Axis rotation		-105° ÷ +120°			-105° ÷ +120°		
"C" Axis rotation		continuous			continuous		
"A" Axis rapid feedrate	rpm	50			50		
"C" Axis rapid feedrate	rpm	100			100		
Spindle power S6(40%) / S1	kW HP	90/80* 121/107*	or	85/75 114/100	90/80* 121/107*	or	85/75 114/100
Spindle torque S6(40%) / S1	Nm ft-lb	1.300/1.000* 959/738*	or	480/300 354/221	1.300/1.000* 959/738*	or	480/300 354/221
Spindle speed	rpm	4.000*	or	14.000	4.000*	or	14.000
DIN 69893-1 milling tool taper		HSK-A100			HSK-A100		

* 3 axes version

FLYMILL HEAVY DUTY



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		FLYMILL 1000/DD K 20/30/45/60/80	FLYMILL 1300/DD K 20/30/45/60/80	FLYMILL 1600/DD K 30/45/60/80	FLYMILL 2000/DD K 45/60/80
Interpolated axes		3 - 5	5	5	5
"X" Stroke	mm in	2.000 - 3.000 - 4.500 - 6.000 - 8.000 78.7 - 118 - 177 - 236.2 - 315	2.000 - 3.000 - 4.500 - 6.000 - 8.000 78.7 - 118 - 177 - 236.2 - 315	3.000 - 4.500 - 6.000 - 8.000 118 - 177 - 236.2 - 315	4.500 - 6.000 - 8.000 177 - 236.2 - 315
"Y" Stroke	mm in	2.500 - 4.000 98.4 - 157.5	2.500 - 4.000 98.4 - 157.5	4.000 157.5	3.500 137.8
"Z" Stroke	mm in	1.000 39.4	1.300 51.1	1.600 63	2.000 78.7
"X" - "Y" Axes rapid feedrate	m/min ipm	60 2,360	60 2,360	60 2,360	60 2,360
"Z" Axis rapid feedrate	m/min ipm	40 1,575	40 1,575	40 1,575	40 1,575
"A" Axis rotation		-105° ÷ +120°	-105° ÷ +120°	-105° ÷ +120°	-105° ÷ +120°
"C" Axis rotation		continuous	continuous	continuous	continuous
"A" Axis rapid feedrate	rpm	50	50	50	50
"C" Axis rapid feedrate	rpm	100	100	100	100
Spindle power S6(40%) / S1	kW HP	40/40 53/53 or 41/37 55/50	40/40 53/53 or 41/37 55/50	40/40 53/53 or 41/37 55/50	40/40 53/53 or 41/37 55/50
Spindle torque S6(40%) / S1	Nm ft-lb	137/100 101/73.7 or 89/64 66/47	137/100 101/73.7 or 89/64 66/47	137/100 101/73.7 or 89/64 66/47	137/100 101/73.7 or 89/64 66/47
Spindle speed	rpm	18.000 or 28.000	18.000 or 28.000	18.000 or 28.000	18.000 or 28.000
DIN 69893-1 milling tool taper		HSK-A63	HSK-A63	HSK-A63	HSK-A63



High speed vertical machining centre, with 5 axes, for milling of medium and very large parts.
Range of materials: Steel, Aluminium, Composites and Resins.



FLYMILL



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High speed vertical machining centre, with 5 axes,
for milling of medium and big size parts.
Range of materials:
Steel, Aluminium, Composites and Resins.

		MATRIX 1000 K 25/40/60	MATRIX 1000 K 25/40/60 DYNAMIC	MATRIX 1300 K 30/40/60/80 DYNAMIC
Interpolated axes		5	5	5
“X” Stroke	mm in	2.500 - 4.000 - 6.000 98.4 - 157.5 - 236.2	2.500 - 4.000 - 6.000 98.4 - 157.5 - 236.2	3.000 - 4.000 - 6.000 - 8.000 118.1 - 157.5 - 236.2 - 315
“Y” Stroke	mm in	2.200 - 3.000 86.6 - 118.1	2.200 - 3.000 86.6 - 118.1	3.000 - 4.000 118.1 - 157.5
“Z” Stroke	mm in	1.000 39.3	1.000 39.3	1.300 51.2
“X” - “Y” Axis rapid feedrate	m/min ipm	40 1,575	60 2,360	60 1,180
“Z” Axis rapid feedrate	m/min ipm	20 787	40 1,575	40 787
“A” Axis rotation		± 105°	-105° ÷ +120°	-105° ÷ +120°
“C” Axis rotation		± 220°	continuous	continuous
“A” Axis rapid feedrate	rpm	12	50	50
“C” Axis rapid feedrate	rpm	19	100	100
Spindle power S6(40%) / S1	kW HP	28/20 37/26 or 41/37 55/50	41/37 55/50 or 40/40 53/53 or 96/70 129/94	41/37 55/50 or 40/40 53/53 or 96/70 129/94
Spindle torque S6(40%) / S1	Nm ft-lb	55/38 40.5/28 or 89/64 66/47	89/64 66/47 or 137/100 127/73 or 94/67 69/49	89/64 66/47 or 137/100 127/73 or 94/67 69/49
Spindle speed	rpm	28.000 or 28.000	28.000 or 18.000 or 28.000	28.000 or 18.000 or 28.000
DIN 69893-1 milling tool taper		HSK-A63	HSK-A63	HSK-A63

MATRIX 1000-1300



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Metalquartz®

High speed vertical machining centre, with 5 axes,
for milling of medium size parts.
Range of materials: Steel finishing, Aluminium, Composites and Resins.

		MATRIX 800/2T K 25			
Interpolated axes		5			
"X" Stroke	mm in	2.500 98.4			
"Y" Stroke	mm in	2.000 78.7			
"Z" Stroke	mm in	800 31.5			
"X" - "Y" Axis rapid feedrate	m/min ipm	40 1,575			
"Z" Axis rapid feedrate	m/min ipm	20 787			
"A" Axis rotation		± 105°			
"C" Axis rotation		continuous or ± 220°			
"A" Axis rapid feedrate	rpm	12			
"C" Axis rapid feedrate	rpm	19			
Spindle power S6(40%) / S1	kW HP	41/37 55/50	or	22/20 29/27	or 55/40 73/53
Spindle torque S6(40%) / S1	Nm ft-lb	89/64 66/47	or	60/48 44/35	or 22/16 16.2/11.8
Spindle speed	rpm	28.000	or	28.000	or 40.000
DIN 69893-1 milling tool taper		HSK-A63			

MATRIX 800



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		EAGLE 1000/2T K 20/30/45/60/80/105			EAGLE 1500/2T K 20/30/45/60/80/105			EAGLE 2000/2T K 30/45/60/80/105			EAGLE 2500/2T K 30/45/60/80/105		
Interpolated axes		5			5			5			5		
"X" Stroke	mm in	2.000 - 3.000 - 4.500 6.000 - 8.000 - 10.500 78.7 - 118 - 177 236.2 - 315 - 413.4			2.000 - 3.000 - 4.500 6.000 - 8.000 - 10.500 78.7 - 118 - 177 236.2 - 315 - 413.4			3.000 - 4.500 6.000 - 8.000 - 10.500 118 - 177 236.2 - 315 - 413.4			3.000 - 4.500 6.000 - 8.000 - 10.500 118 - 177 236.2 - 315 - 413.4		
"Y" Stroke	mm in	2.500 - 4.000 98.4 - 157.5			2.500 - 4.000 98.4 - 157.5			4.000 157.5			5.000 196.8		
"Z" Stroke	mm in	1.000 39.4			1.500 59			2.000 78.7			2.500 98.4		
"X" - "Y" Axes rapid feedrate	m/min ipm	85 3,347			85 3,347			70 2,756			70 2,756		
"Z" Axis rapid feedrate	m/min ipm	40 1,575			40 1,575			40 1,575			40 1,575		
"A" Axis rotation		± 115°			± 115°			± 115°			± 115°		
"C" Axis rotation		± 270°			± 270°			± 270°			± 270°		
"A" Axis rapid feedrate	rpm	12			12			12			12		
"C" Axis rapid feedrate	rpm	18			18			18			18		
Spindle power S6(40%) / S1	kW HP	31/25 42/34	or	41/37 55/50	31/25 42/34	or	41/37 55/50	31/25 42/34	or	41/37 55/50	31/25 42/34	or	41/37 55/50
Spindle torque S6(40%) / S1	Nm ft-lb	65/52 48/38	or	89/64 66/47	65/52 48/38	or	89/64 66/47	65/52 48/38	or	89/64 66/47	65/52 48/38	or	89/64 66/47
Spindle speed	rpm	16.000	or	28.000	16.000	or	28.000	16.000	or	28.000	16.000	or	28.000
DIN 69893-1 milling tool taper		HSK-A63			HSK-A63			HSK-A63			HSK-A63		

High speed vertical machining centre, with 5 axes, for milling, trimming, routing & drilling of medium and very big size parts.
Range of materials: Light Alloys, Composites and Resins.



EAGLE



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High speed vertical machining centre, with 5 axes, for milling, trimming, routing & drilling of medium and big size parts.
Range of materials: Composites and Resins.

		RAPTOR 1200/2T	
Interpolated axes		5	
"X" Stroke	mm in	2.800 110.2	
"Y" Stroke	mm in	4.000 157.5	
"Z" Stroke	mm in	1.200 47.2	
"X" - "Y" Axes rapid feedrate	m/min ipm	80 3,150	
"Z" Axis rapid feedrate	m/min ipm	40 1,575	
"A" Axis rotation		0° ÷ +115°	
"C" Axis rotation		± 270°	
"A" Axis rapid feedrate	rpm	20	
"C" Axis rapid feedrate	rpm	20	
Spindle power S6(40%) / S1	kW HP	31/25 42/34	or 22/20 29/27
Spindle torque S6(40%) / S1	Nm ft-lb	65/52 48/38	or 60/48 44/35
Spindle speed	rpm	16.000	or 28.000
DIN 69893-1 milling tool taper		HSK-A63	

RAPTOR



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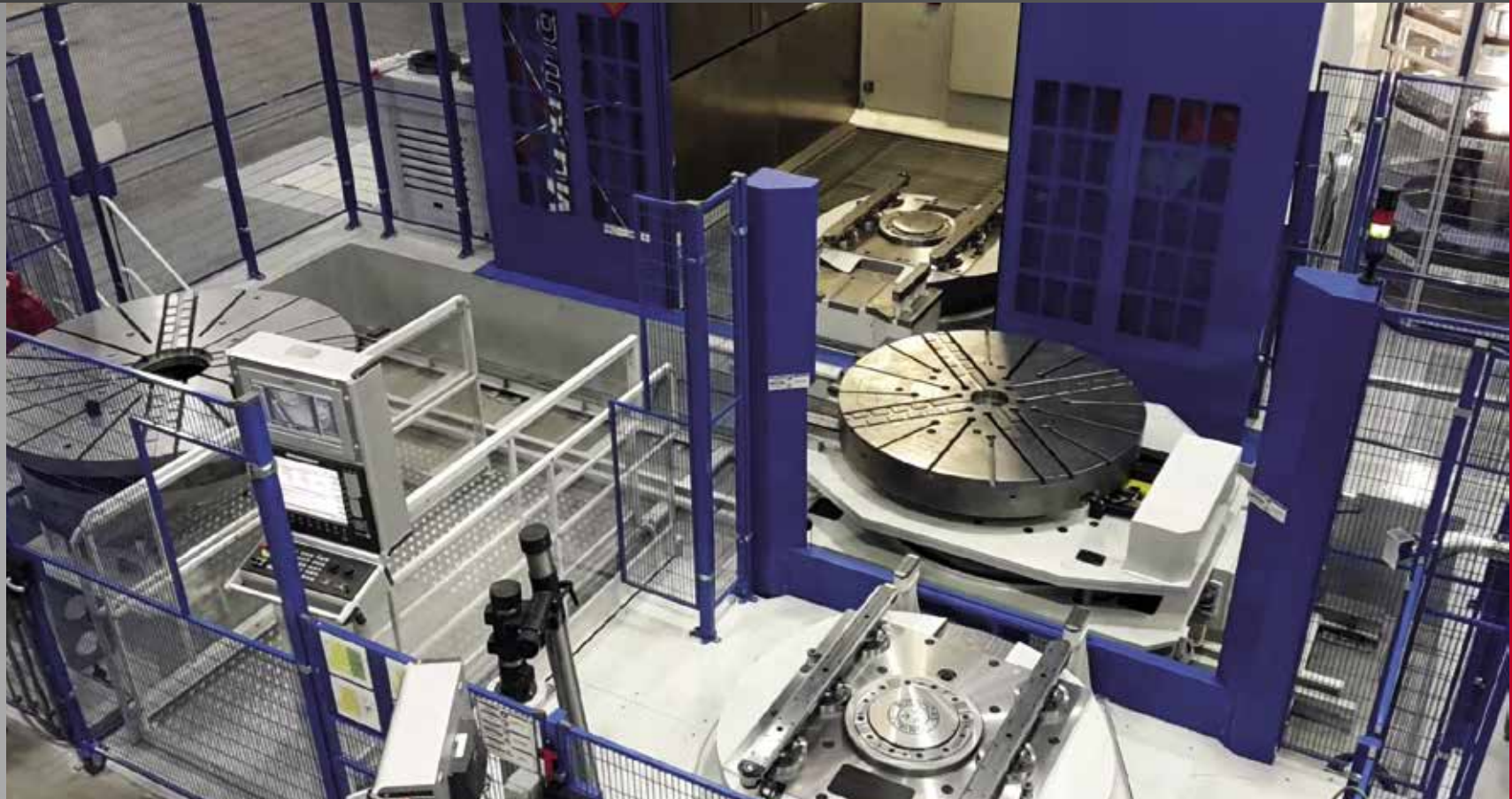


Wide possibility of automation for Breton machining centers:

To automate the production processes means obviously to increase productivity. Using high-capacity tool-stores, automated systems for pallet change and storage (FMS) and automatic plants for piece loading, offloading and handling, grants a production maximization.

That's why a minor need for the operator's direct intervention as well as a dramatic reduction of idle times and a precise and accurate cycle scheduling are guaranteed. In a word, greater efficiency.

AUTOMATION



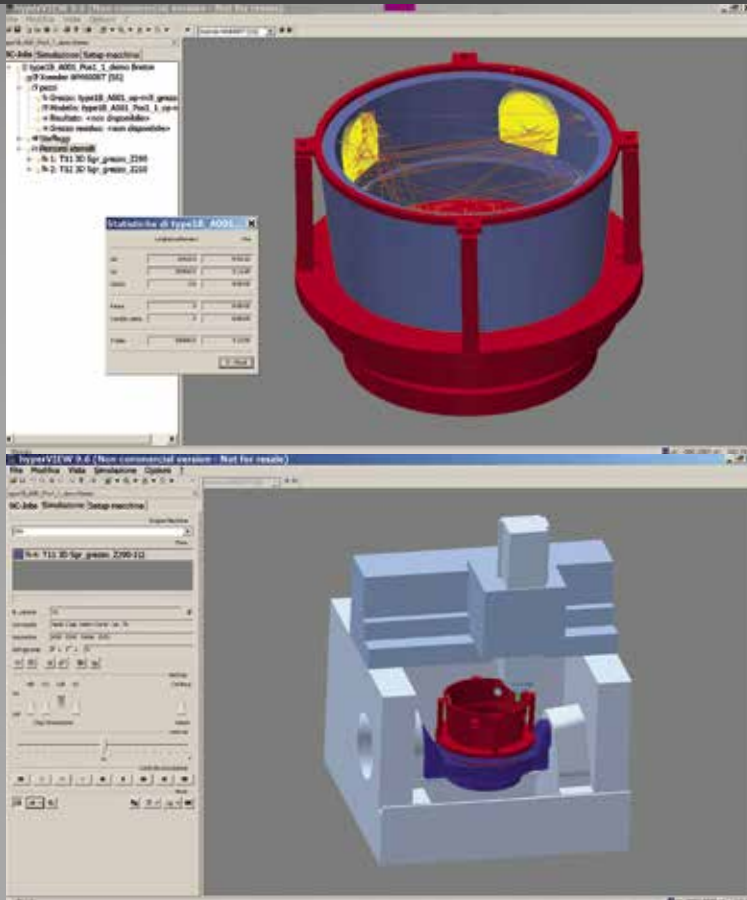
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AUTOMATION



TURN-KEY SOLUTIONS



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Breton can supply customers with a complete technological package and qualified technical assistance:

- machining technologies
- selection of the right tools and fixturing system
- 3D simulations and analysis of production cycle
- complete programming
- prototype production

- specific bespoke software
- processes certification
- training of customer staff
- production start-up

Driven by Innovation



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TURN-KEY SOLUTIONS



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From the 3D model to the final certified component.

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