



**Bolero 4**  
4 axis machining center



CNC machining center for milling and drilling of components made of aluminum, PVC, light alloys and steel

### STANDARD CHARACTERISTICS

#### Structure

- heavily ribbed electro-welded steel basement with upright bridge type gantry assembly
- thanks to its strength and stability, it guarantees high quality machining and long lasting reliability

#### Working area

- 8 pneumatic clamps with automatic movement controlled by CN
- left and right stops



#### Safety

- protection cabin for the operator group
- photoelectric barriers to protect working area
- perimeter protection
- complies with CE safety regulations as standard



#### Control panel

- OSAI control equipped with HICAM 2 operator interface to upload and run machining programs; list machining and visualization of workpiece lead time
- operator interface on PC-Windows
- wifi and teleassistance
- Meets Industry 4.0's requirements



#### Electrospindle group

Compact electrospindle equipped with:

- high precision ceramic bearings lubricated for life
- ISO30 electrospindle taper that guarantees a strong tool-spindle coupling
- inverter for correct tool speed selection
- air cooling to guarantee reliability and performance
- automatic tool changer for maximum flexibility in machining operations
- micro-droplet tool lubrication with pure oil

#### Electrical cabinet

- IP 55 protection
- air conditioning

#### Axes (x-y-z)

- axis movements are controlled by brushless motors through precision ball screws
- movement on linear guides with automatic grease lubrication

#### General specifications



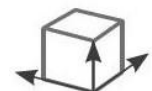
270 mm



9,5 in S6 (8 in S1) kW



5.400 / 5.800 kg

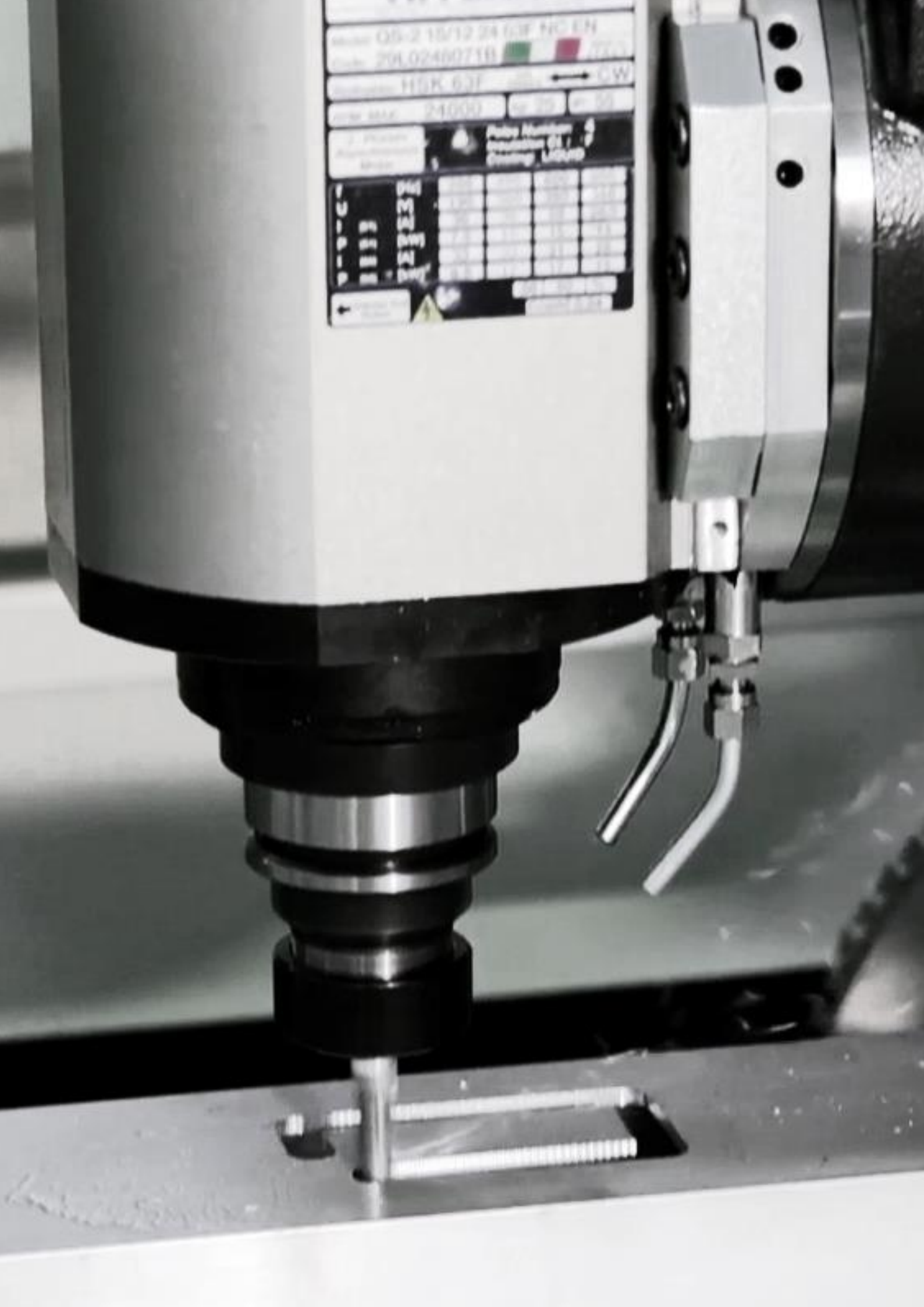


10.950x4.100x2.950 mm

Model: QD-2 10/1 224 1/2" 1/2" EN  
S/N: 208.02400718  
Production: HSK 63F → CW  
Power Max: 24000 W  
Speed: 0-20000 RPM  
Pressure: 10 bar  
Filter: 0.5 μm  
Pulse Number: 4  
Resolution: 0.1 μm  
Timing: 100 μs

Parameter	Value
Max. Depth	100 mm
Max. Diameter	12 mm
Max. Length	100 mm
Max. Feed	100 mm/min
Max. Spindle Speed	20000 RPM
Max. Torque	240 Nm
Max. Power	24000 W
Max. Pressure	10 bar
Max. Flow	100 l/min
Max. Temperature	50 °C
Max. Humidity	95% RH
Max. Vibration	0.1 mm/s
Max. Noise	70 dB(A)
Max. Weight	10 kg
Max. Dimensions	100 x 100 x 100 mm
Max. Accuracy	±0.01 mm
Max. Repeatability	±0.005 mm
Max. Cycle Time	100 s
Max. Setup Time	10 min
Max. Maintenance	10 min
Max. Service Life	10 years

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## TECHNICAL DATA

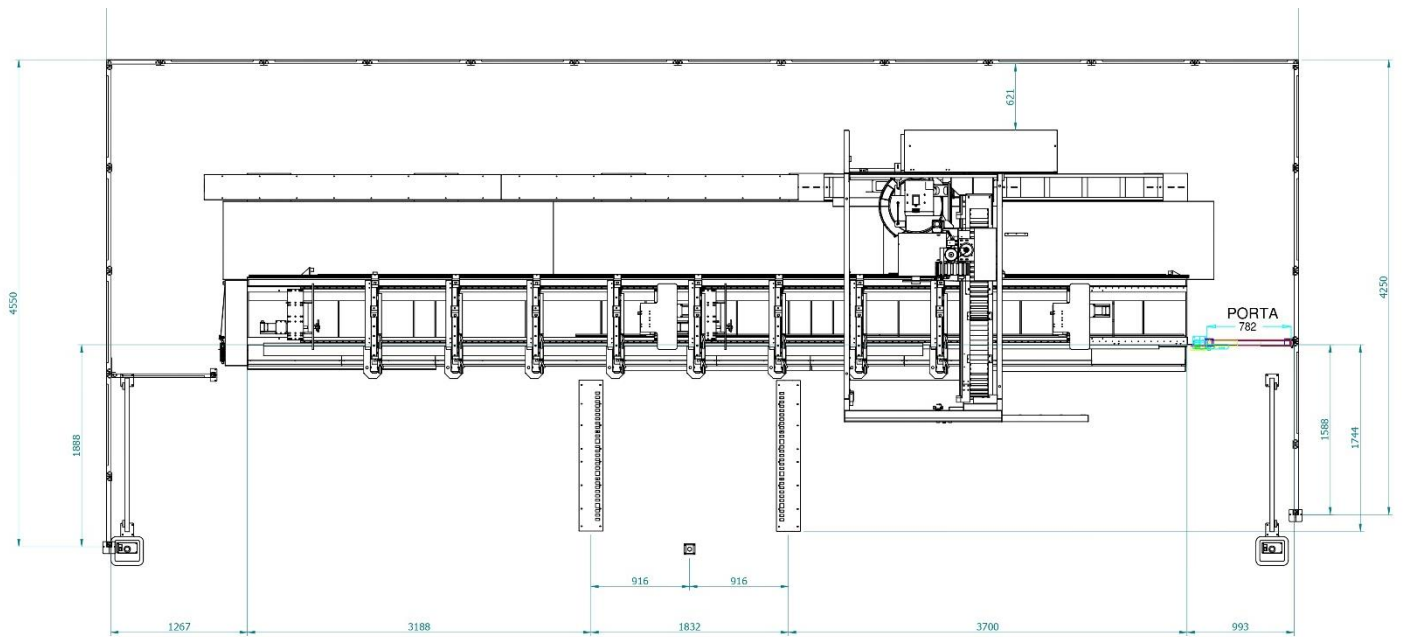
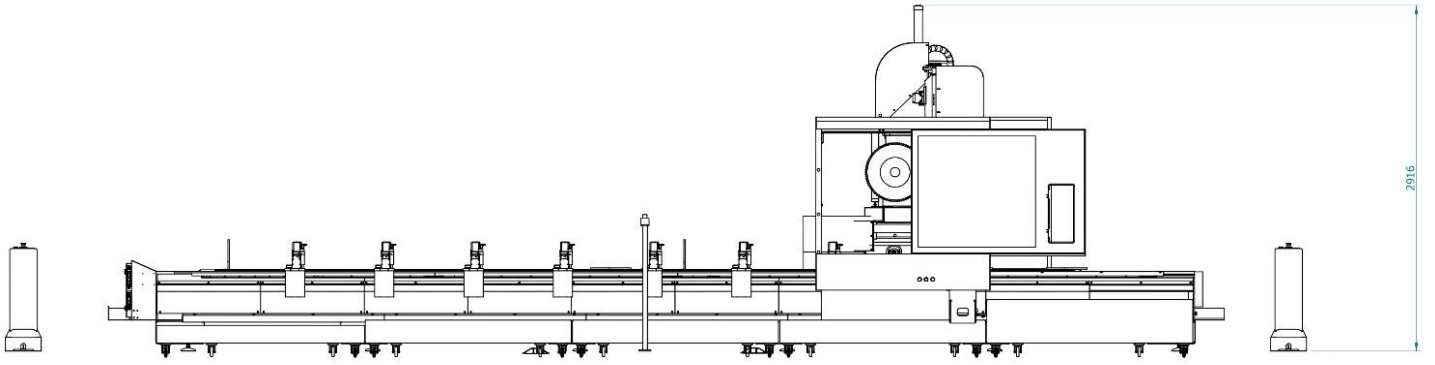
Orthogonal axes (x-y-z)		Pivoting axis (a)	
X axis		A axis pivoting angles	+/- 120°
Stroke	7.000 / 9.400 mm	A axis speed	6,1 m/min
Speed	100 m/min	A axis acceleration	1,5 m/s <sup>2</sup>
Acceleration	4 m/s <sup>2</sup>		
Y axis			
Stroke	1.300 mm		
Speed	53 m/min		
Acceleration	2 m/s <sup>2</sup>		
Z axis			
Stroke	670 mm		
Speed	35 m/min		
Acceleration	1,3 m/s <sup>2</sup>		
		Power supply	
		Electric power (three phase)	400 V / 50 Hz
		Compressed air supply	7 Bar
		Machining tolerance	
		Positioning accuracy	± 0,2 mm
		Positioning repeatability	± 0,1 mm
Electrospindle group		Automatic tool change	
Electrospindle power	8,5 kW	Tool magazine	carousel
Electrospindle bearings lubrication	lifelong	Number of tools	12 positions
Electrospindle taper	ISO30	Blade diameter	500 mm
Rotation speed (with inverter)	1.000-24.000 g/min	Max. tool cone length + tool	160 mm
Table – spindle nose distance	250 mm	Max. weight tool cone + tool	10 kg
		Max. diam tool HSK63F	10 mm
		Collet cones	6

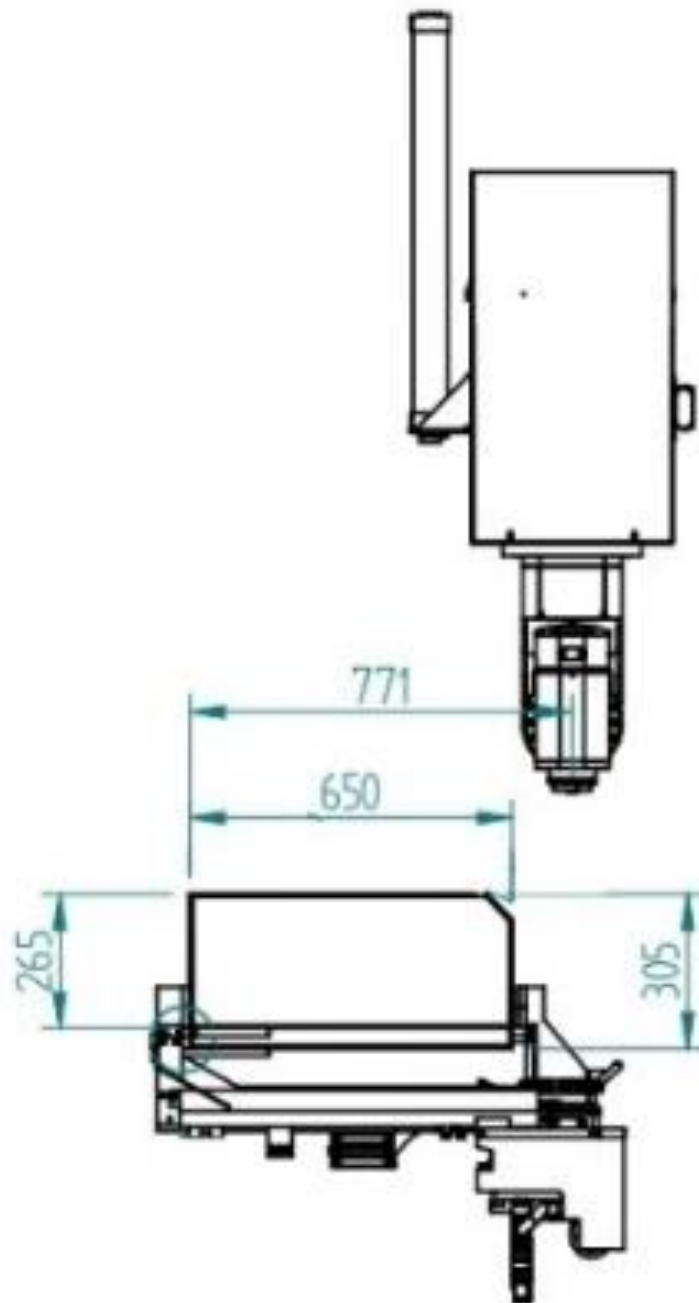


## Optionals

- Length extension 2,5 m
- Couple of extrq automatic clamps
- Motorized clamps (instead of automatic clamps)
- Couple of extra motorized clamps
- Right-hand stop for pendulum machining
- Double central stop
- Bar code reader
- Motorized belt conveyor
- Tool length measuring device
- Touch probe
- RTCP device to realign the operator group's axes
- USA-CANADA setup (UL-CSA standards)
- Autotransformer for special voltage
- HICAM 3 ADVANCE software license
- HICAM 3 ADVANCE additional software license
- Data import module in NCX format for HICAM 3
- CAMQUIX software license
- CAMQUIX additional software license
- Data import module in Text, XML or CSV formats
- CADXTRACT 3D file detection software
- CADXTRACT additional software license

# Machine layout







Gemma Group srl  
Via Dante Alighieri, 6  
47853 Coriano – Rimini – Italy  
Tel. +39 0541 905811  
[www.gemma-group.com](http://www.gemma-group.com)  
email: [info@gemma-group.com](mailto:info@gemma-group.com)