



TARKUS

Toughness in Milling



TARKUS

High power & high torque for machining very tough materials

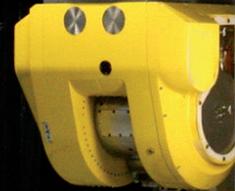
Tarkus is the horizontal/vertical milling centre, specifically conceived by Jobs to perform the 5-axis high-power and high-torque machining operations on very tough materials (titanium, inconel, stainless and special steel, alloy steel) for the aeronautic, high-precision general engineering fields, moulds and dies.

Tarkus meets the needs of modern subcontractors, often small and medium sized companies, who require increasingly compact machines, capable of heavy-duty machining with high-volume chip removal and able to provide high-quality machining and high performance, even with a truly competitive investment and hourly cost.



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Development concept



Tarkus is the result of the creation of an innovative, high-performance milling centre, a perfect addition to the tradition of Jobs products, whose features include:

- high-volume chip removal capability
- structural rigidity and high damping capability of vibrations
- high dynamics in terms of acceleration and speed
- axis strokes: X=3300 (4500), Y=2100, Z=1000 mm [X=130 (177), Y=83, Z=39 inch]
- constant accuracy on the whole operating volume
- 5 axis mechanically driven milling head (up to 42 kW and 1470 Nm [56 hp, 1083 lb*ft], 3000 or 6000 rpm), alternatively electrospindle 15000 or 27000 rpm
- high configurability and compactness
- production automation
- full machine enclosure
- reduced foundation requirements



Architecture and structure

Tarkus is also innovative thanks to its structural design, introducing the exclusive Dual Frame HV architecture with fixed gantry in X-axis (3300/4500 mm - 130/177 inch) and mobile gantry in Z-axis, which grants an almost constant rigidity on the whole operating volume.

This structural solution, combined with Jobs proprietary spindle head technology, has made it possible to create a sleeveless machine guaranteeing maximum performance in terms of rigidity and precision along the entire length of the Z-axis.

The particular architecture of Y-axis saddle, combined with the geometry of the specific heads, makes it possible to reach the part to be machined in depth without risking collision with the crossbeam.



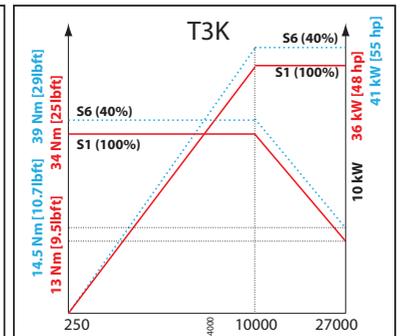
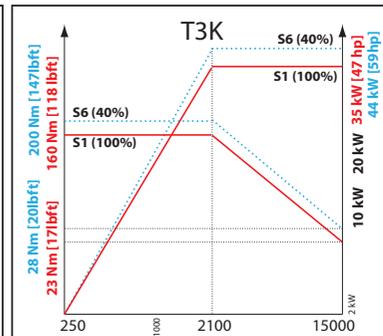
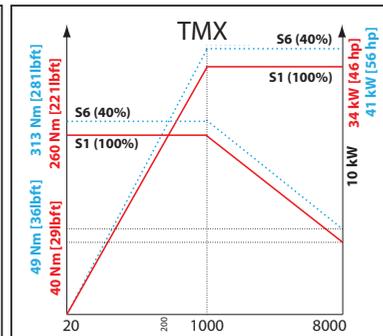
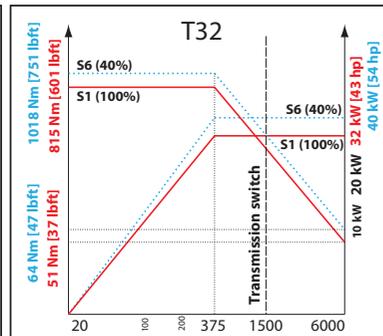
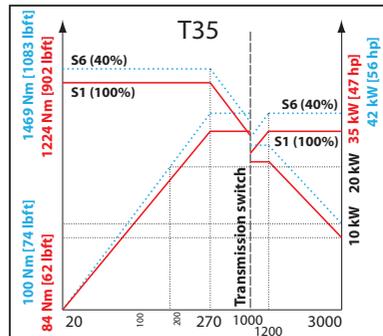
T35/T32 milling head



TMX milling head



T3K milling head



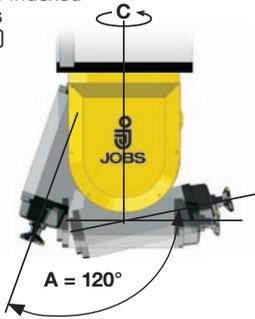
T35/T32 milling head

Tarkus can be equipped with four different milling heads, based on the application sector where the machine will be used. The newly-designed main head version, called T35, featuring a spindle offset from the C-axis, is especially suitable for aerospace industry machining and milling super tough materials such as Inconel and titanium. In addition to this heavy-duty head, head T32 is available, designed for machining less demanding materials. It boasts a high removal capacity.

C axis T35: ∞ continuous indexed
 C axis T32: ∞ continuous
 A axis: $120^\circ (+110^\circ/-10^\circ)$

T35: 3000 rpm
 HSK-A-100
 T32: 6000 rpm
 HSK-A-100

up to 42 kW (56 hp)
 up to 1470 Nm
 (1083 lb*ft)



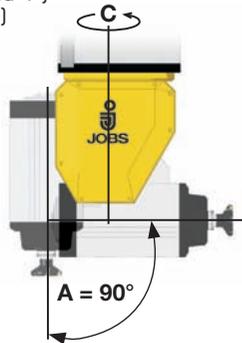
TMX milling head

The TMX head, also equipped with offset, is especially suited for use in precision general engineering. The solidness of this indexed head means it can also be used for the most sensitive boring operations, thanks to the presence of two Hirth rings one on each of the fork shoulders.

C axis: $\pm 180^\circ$ (indexed 1°)
 A axis: $90^\circ (0^\circ/+90^\circ)$

8000 rpm
 HSK-A-100

41 kW (55 hp)
 313 Nm (231 lb*ft)



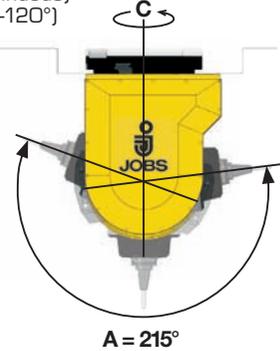
T3K milling head

The T3K head is available for machining dies or sculptured surfaces in general, with two choices of electrospindles equipped with power up to 44 kW (59 hp) and speed up to 27000 rpm.

C axis: $\pm 200^\circ$ (continuous)
 A axis: $215^\circ (+95^\circ/-120^\circ)$

15000 rpm
 HSK-A-100
 or
 27000 rpm
 HSK-A-63

up to 44 kW
 (59 hp)
 up to 200 Nm
 (147 lb*ft)





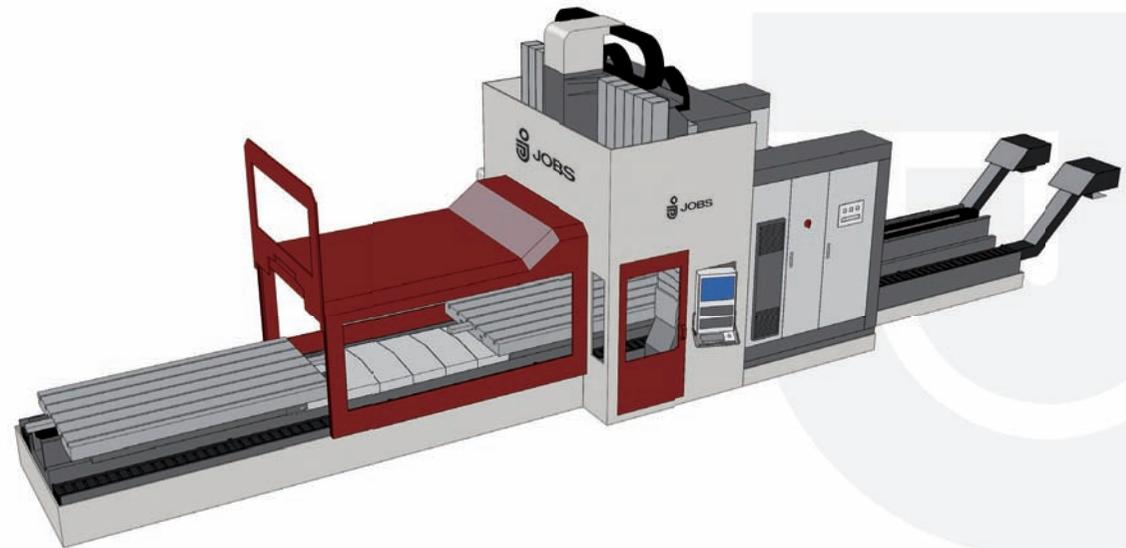
TARKUS

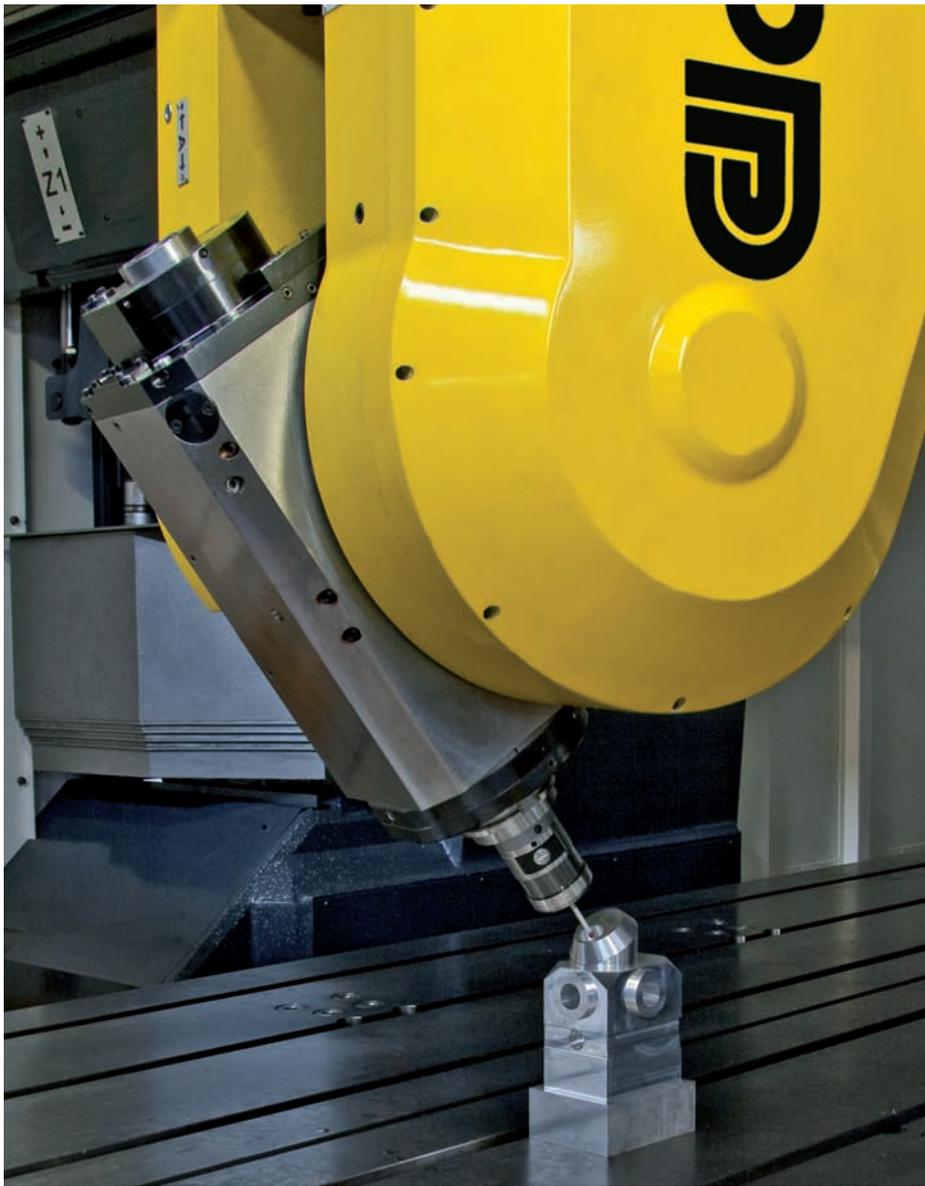
Automation



Tarkus can be equipped with a chain-type magazine that can hold 32 to 64 tools; other magazines are available with static configurations for up to 180 tools.

The table offering remarkable dimensional (up to 4000x1500 mm - 157x59 inch) and loading capabilities assures the highest ergonomics. The machine configuration with double pallet table enables pendular machining of two components with work piece change in masked time.





Options

These are some of the fittings designed by Jobs to meet various user manufacturing strategies:

Very high pressure cooling system:

- 70 bar (1015 psi) inside tool
- 15 bar (217 psi) outside tool, 80 l/min (21 gal/min)
- tank 1000 or 2000 l (264 or 528 gal)
- self-cleaning filter

Tool cooling, available options:

- Spray Mist
- Air blow
- Water coolant with filter and tank

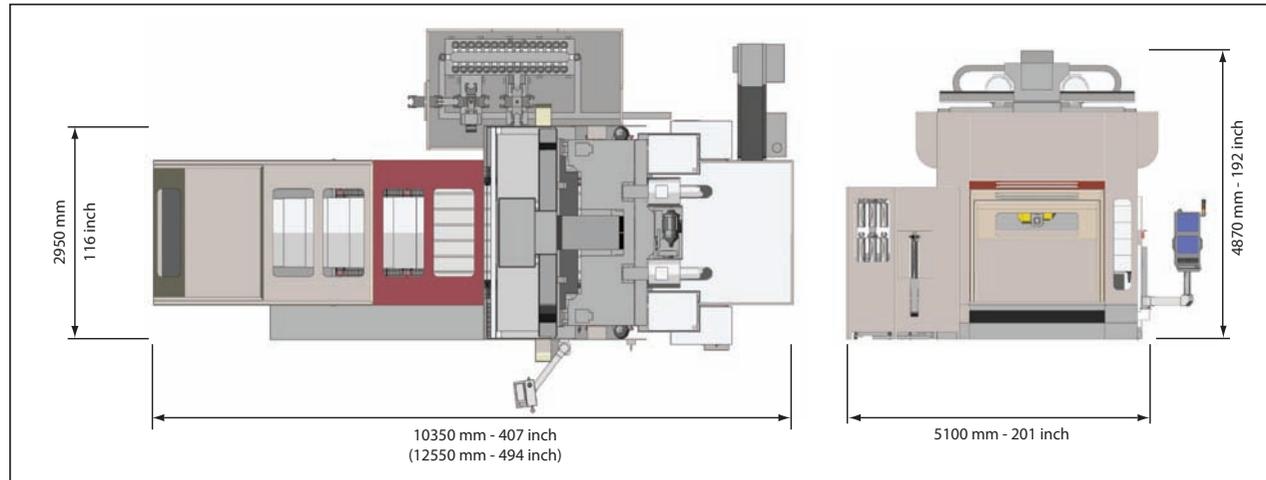
Remark: cooling is available inside and/or outside the tool for all options.



To effectively manage the production process in unmanned shifts, automated tool setting and checking, power monitoring, tool life and twin-tool managing software are available.

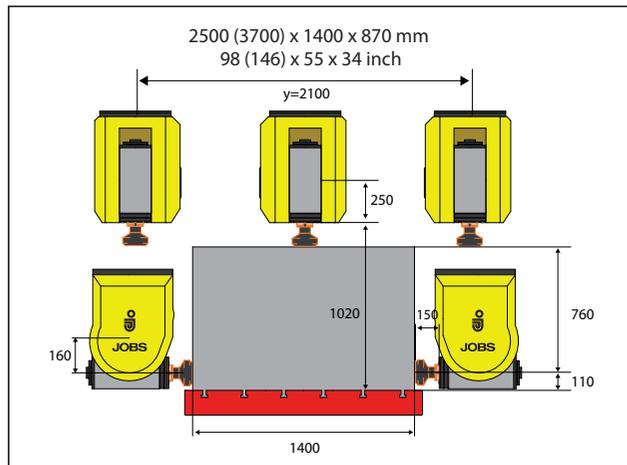


Layout

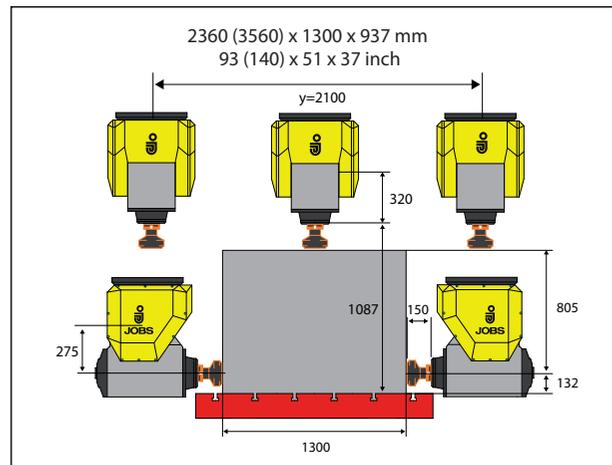


Working volumes: X 3300 (4500) mm [130 (177) inch] - 150 mm [5,9 inch] long tool

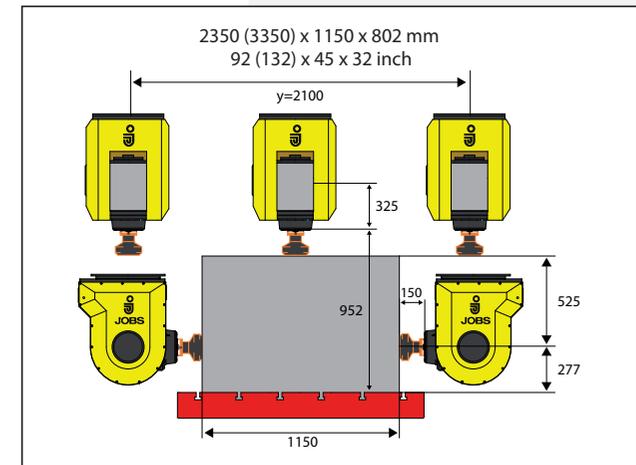
T35/T32 milling head



TMX milling head



T3K milling head



Technical data

AXIS STROKE		T35		T32 / TMX / T3K	
X axis (longitudinal)	mm (inch)	3300 (130)	4500 (177)	3300 (130)	4500 (177)
Y axis (transversal)	mm (inch)	2100 (83)		2100 (83)	
Distance between columns	mm (inch)	1950 (77)		1950 (77)	
Z axis (vertical)	mm (inch)	1000 (39)		1000 (39)	
AXIS SPEED					
X-Y-Z axes	mm/min (ipm)	20000 (787)		24000 (945)	
WORK AREA - base machine					
Worktable	mm (inch)	1500x3000 (59x118)	1500x4000 (59x157)	1500x3000 (59x118)	1500x4000 (59x157)
Max. worktable loading cap.	kg (lb)	10000 (22046)		10000 (22046)	
WORK AREA - with pallet system					
Pallet table	N°	2	2	2	2
Pallet table	mm (inch)	1500x3000 (59x118)	1500x4000 (59x157)	1500x3000 (59x118)	1500x4000 (59x157)
Max. pallet loading capacity	kg (lb)	5000 each (11023 each)		5000 each (11023 each)	

TOOL MAGAZINE		Chain Type
Positions	N°	32/48/64/96/ others HSK-A-100
Tool max. Ø (tool side-by-side)	mm (inch)	120 (4,7)
Tool max. Ø (alternate tool posit.)	mm (inch)	250 (9,8)
Tool max. length	mm (inch)	350 (13,7)
Tool max. weight	kg (lb)	20 (44)
GENERAL DATA		
Power supply	VAC	400/480 ±10%
Frequency	Hz	50 ±2%
Weight (basic machine)	kg (lb)	28500 (62832)

HEADS		T35	T32	TMX	T3K
C axis stroke	°	∞ continuous indexed	∞ continuous	±180 indexed 1°	±200 continuous
A axis stroke	°	+110/-10 continuous indexed	+110/-10 continuous	0/+90 indexed 1°	-120/+95 continuous
C axis speed	°/sec	48	60	30	60
A axis speed	°/sec	48	60	30	60
SPINDLES					
Spindle speed	rpm	3000	6000	8000	15000 27000
Max. power (S6)	kW (hp)	42 (56)	40 (54)	41 (55)	44 (59) 41 (55)
Max. torque (S6)	Nm (lb*ft)	1469 (1083)	1018 (751)	313 (231)	200 (147) 39 (29)
Tool taper	HSK-A	100	100	100	100 63

The images and the technical data are for general information only and subject to change without notice.

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