



The Reliable Partner

PUMA 1000 series



**Large-sized Big bore
Heavy Duty Turning
Center with upto
560mm spindle bore**

PUMA 1000 series

PUMA 1000A/MA

PUMA 1000B/MB

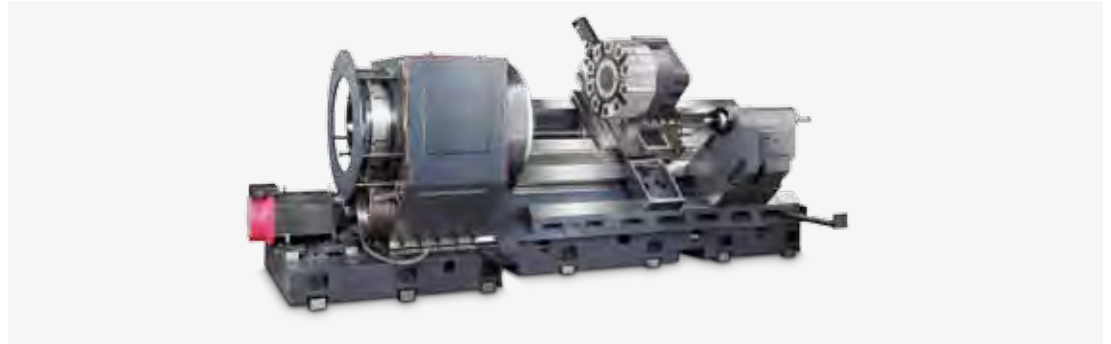
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Basic Structure

45° slant bed with hardened and ground boxways is made of Meehanite cast iron. The basic structure is designed to minimize deformation in any heavy duty machining.

Structural stability of slant bed and box guideway

PUMA 1000 series has been developed with more than tens years of accumulated engineering know-how in manufacturing large-sized PUMA turning center. Its rigid structural base is to guarantee the stability of heavy-duty cutting and easy chip drop.

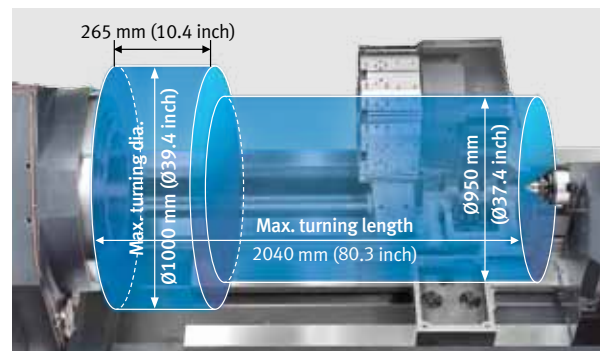


Machining area

PUMA 1000 series is ideally configured for big bore pipes used typically in the oil and gas industry, or for the production of a variety of large-machine parts.

Spacious working area to machine large-sized workpiece

PUMA 1000 series could be applied to big steel rollers, large diameter flanges, long shafts of ships etc, thanks to its big spindle through hole and large swing for big workpiece.



Max. turning diameter

Ø1000 mm (Ø39.4 inch)

Max. turning length*

2040 mm (80.3 inch)

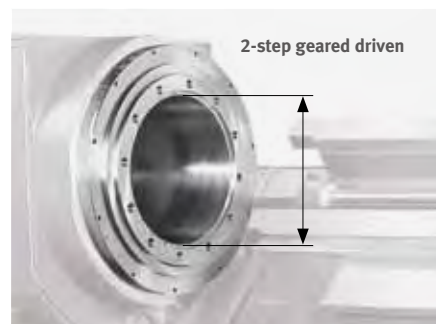
* : Max. turning length can be different depends on a chuck adopted.

Spindle

Strong motor power and max. Ø560 mm (Ø22.0 inch) of big spindle through hole (bore) allow working on shafts and other parts that are longer than the distance between centers, such as an oil drilling shaft.

Extra large diameter of spindle through hole (bore)

The PUMA 1000 series has a big spindle through hole upto Ø560 (Ø22")mm and powerful spindle of upto 75kW (100.1Hp) with 2-step gear box to ensure the strongest performance.



Max. spindle through hole diameter

PUMA 1000A/MA [1000B/MB]
Ø375 [Ø560] mm
(Ø14.8 [Ø22.0] inch)

Max. spindle power (30min/cont.)

75/60 kW (100.1/80.5 Hp)

Max. spindle speed

PUMA 1000A/MA [1000B/MB]
500 [300] r/min

Max. spindle torque

PUMA 1000A/MA [1000B/MB]
11011 [12040] N·m
(8122 [8881] ft-lb)

Tailstock

High rigidity of programmable tailstock is available as standard to provide stable support of long workpieces.

Programmable tailstock with Built-in dead center

The tailstock supported by hardened and ground boxed ways is structurally one-piece with the machine base, which ensures the best structural rigidity. Its built-in type dead center supports heavy workpieces while maintaining machining accuracy.



Tailstock travel

1900 mm (74.8 inch)

Quill travel / Quill spindle diameter

150 / \varnothing 180 mm
(5.9 / \varnothing 7.1 inch)

Turret

Servo-driven and its bigger thickness turret are adopted to ensure more faster & stable tool rotation and machining stability in heavy-duty cutting and milling.

Servo driven Turret

The turret rotation and indexing is driven by a powerful servo motor which provides accurate positioning, fast and stable tool change. Comparing to the PUMA 600/700/800 series, turret thickness of PUMA 1000series is increased twofold.



Turret indexing is possible with \varnothing 100 x L1000mm (\varnothing 3.94 x 39.4") sized long boring bar in its turret.

No. of tool station

PUMA 1000A/B

10 stations

PUMA 1000MA/MB

12 stations
(BMT85P)

Max. OD tool size

32 x 32 mm (1.3 x 1.3 inch)

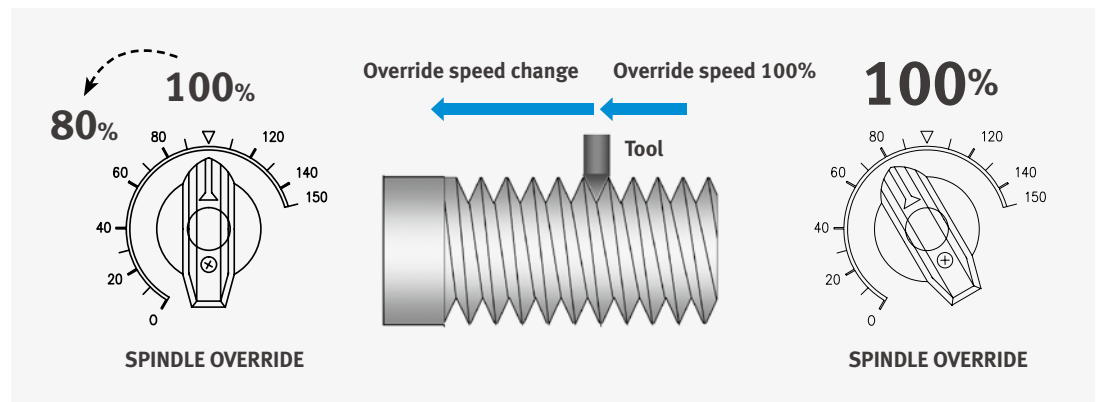
Max. boring bar size

\varnothing 80 mm (\varnothing 3.1 inch)

Stable threading performance

Arbitrary speed threading

This function allows users to control spindle speed in order to set it at an ideal machining condition to keep the best thread quality.



Major Specifications

PUMA 1000 series



Description		Unit	PUMA 1000A [MA]	PUMA 1000B [MB]
Capacity	Max. turning diameter	mm (inch)	Ø1000 (Ø39.4)	
	Max. turning length	mm (inch)	2040 (80.3)	
	Chuck size	inch	Ø32	Ø40
	Bar working diameter*	mm (inch)	Ø370 (Ø14.6)	Ø555 (Ø21.9)
Travels	Travel distance	X-axis	540 (21.3)	
		Z-axis	2130 (83.8)	
	Rapid traverse rate	X-axis	12 (472.4)	
		Z-axis	16 (630.0)	
Main spindle	Max. spindle speed	r/min	500	300
	Spindle motor power (30min/Cont.)	kW (Hp)	75/60 (100.5/80.5)	
	Max. spindle torque	N·m (ft·lb)	11011 (8122)	12040 (8881)
	Max. Spindle through hole diameter	mm (inch)	Ø375 (Ø14.8)	Ø560 (Ø22.0)
Turret**	No. of tool stations	ea	10 [BMT85P : 12]	
	Max. OD tool size	mm (inch)	32 x 32(1.3x1.3)	
	Max. boring bar size	mm (inch)	3000	
	Max. Rotary tool speed	r/min	Ø80 (Ø3.1)	
Machine Dimensions	Length	mm (inch)	6595 (259.6)	
	Width	mm (inch)	3210 (126.4)	
	Height	mm (inch)	2835 (111.6)	
	Weight	kg (lb)	21000 (46300)	23000 (50710)
NC system		-	DOOSAN FANUC i	

* Bar working diameter is a nominal size we can expect when doing the double chucking operation at both sides of the headstock and using spindle through hole.

** Tool holders for PUMA 600/700/800 series can also be used.



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* For more details, please contact Doosan Machine Tools.

* The specifications and information above-mentioned may be changed without prior notice.

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