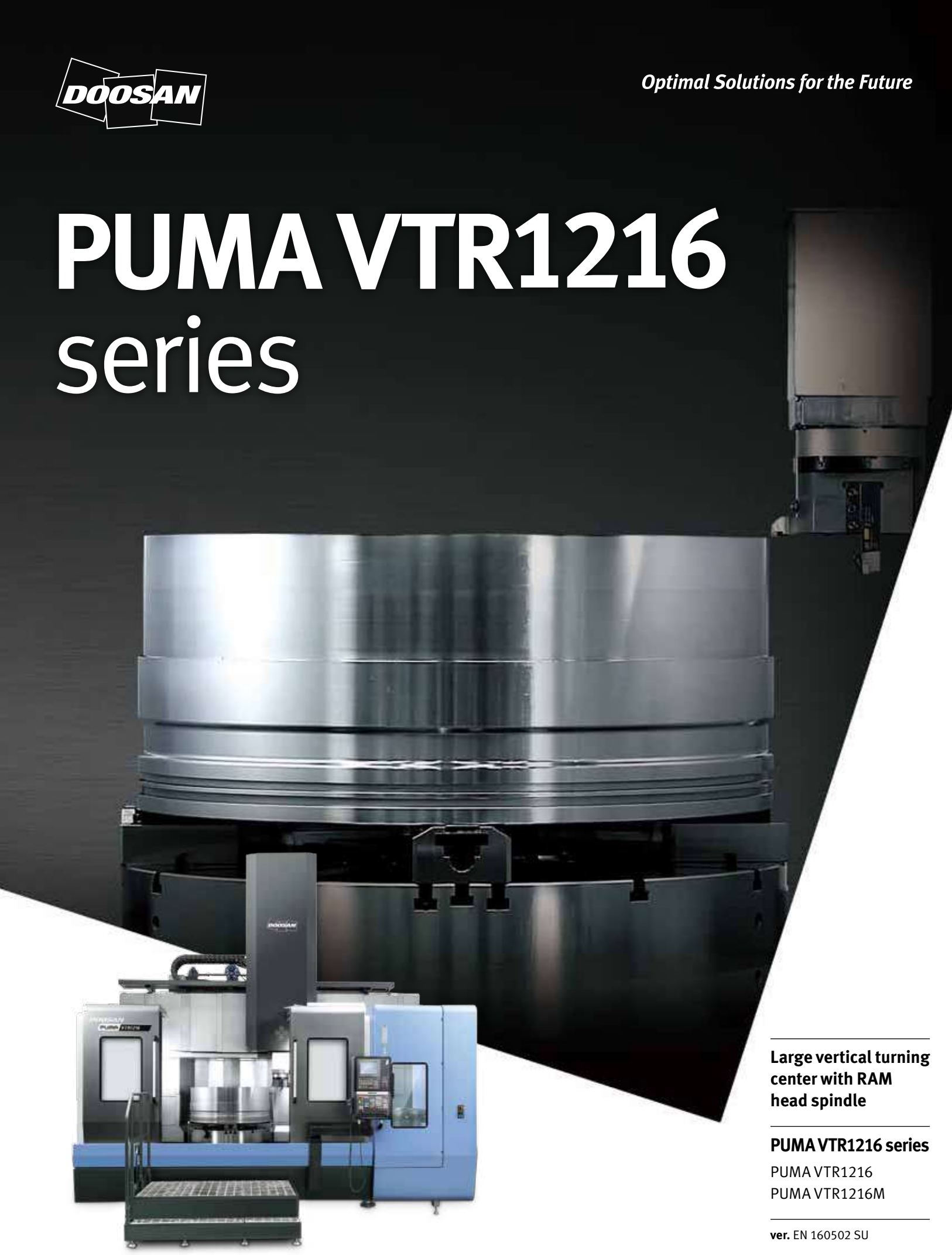
DOOSAN

Optimal Solutions for the Future

PUMA VTR1216 series



Large vertical turning center with RAM head spindle

PUMA VTR1216 series

PUMA VTR1216
PUMA VTR1216M

ver. EN 160502 SU

Basic Structure

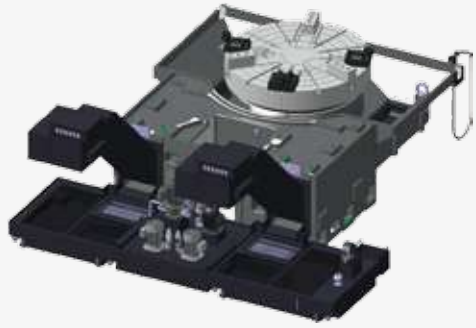
The PUMA VTR1216 Series having 50 ~ 55 inches of chuck size are ram type vertical turning center, designed with thermally-symmetric bed and column to ensure stabilized heavy-cutting performance for an extended time in wide machining area.

Designed for High Durability and Machining Stability

With high-rigidity wide column and box guideway structure and high-hardness Cr-Mo ram, the PUMA VTR1216 Series offers heavy cutting performance and high stiffness. Smooth chip disposal is realized with the all in one bed providing chip disposal process on both sides combined with dual chip conveyors.

Front view

Dual chip conveyor at rear side option



* Model variation
PUMA VTR1216
PUMA VTR1216M(Milling spindle)

Machining Area

The largest machining area of the class guarantees highest-level productivity allowing high flexibility when machining large works.

Wide machining area and large capacity

The PUMA VTR1216 Series offers Full X/Z axes stroke with the largest machining area of the same class, enabling, for example, simultaneous measuring and cutting of inner and outer surfaces with one time setting.

Max. Machining diameter (D)

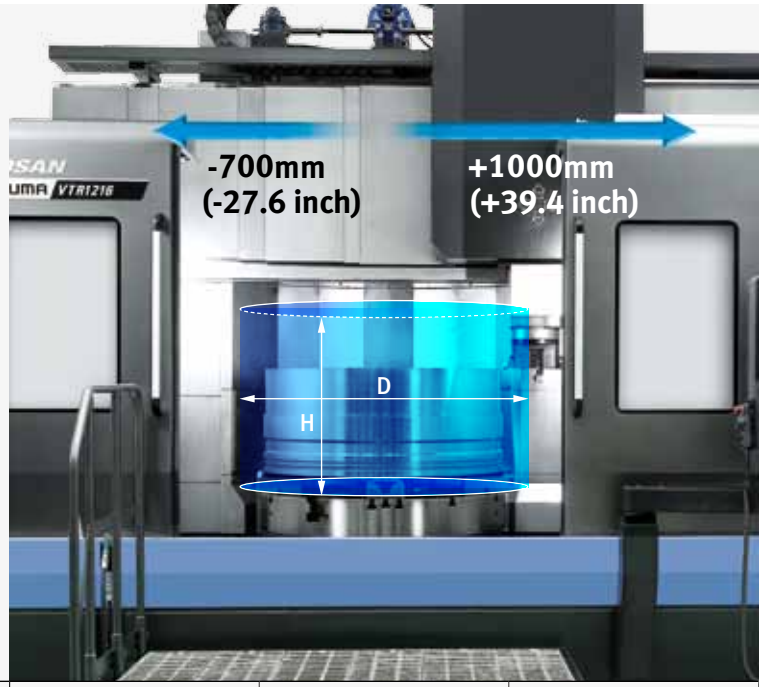
Ø1600mm
(Ø63.0 inch)

Max. Machining height (H)

1250mm
(49.2 inch)

Max. table load

8000kg
(1763.7 lb)



Item	Unit	X axis	Z axis	W axis
Travel	mm (inch)	-700 / +1000 (-27.6 / +39.4)	1200 (47.2)	800 (31.5)
Rapid traverse rate	m/min (ipm)	12 (472.4)	10 (393.7)	-

Spindle

Provided with a standard, large capacity cooler, the perfectly thermally-symmetric spindle offers heavy and precision machining performance on the basis of long-term thermal stability.

High Productivity Spindle with Rigid Structure

With ideal combination of large diameter thrust bearings and center-supported roll bearings, the spindle guarantees both heavy and precision machining. Servo-controlled and driven with twin helical gears, the C-axis table realizes stable milling, drilling and tapping capability.

RAM spindle / BT50-Big Plus

RAM size

260 x 260mm
(10.2 x 10.2 inch)

Tool clamp force

8ton

Chuck size

50inch (Ø1250mm)
(Ø49.2 inch)

55inch (Ø1400mm) option
(Ø55.1 inch)

RAM indexing

While 8 tons of tool holder clamping force supports heavy duty cutting, the differentiated ram indexing technology and quad holder reduce tool change time by 75%.

Item	Max. spindle rotation speed r/min	Max spindle motor power kW (Hp)	Max. spindle motor torque N·m (ft-lb)
Main spindle (chuck)	400	45 {70} (60.3 {93.9})	20557 {31997} (15171.1 {23613.8})
RAM spindle (Milling spindle)*	3000	18.5 (24.8)	674 (497.4)

* PUMA VTR1216M

{ } option

Tool magazine

Servo type tool magazine offers high speed and high accuracy for the tool selection.

Tool positions

PUMA VTR1216

12 / 24ea option

PUMA VTR1216M

15ea (Turning 7 / Milling 8)

33ea (Turning 12 / Milling 21) option

Max. turning length

The max. tool length is enlarged by 200mm for further enhancement of machining capacity.

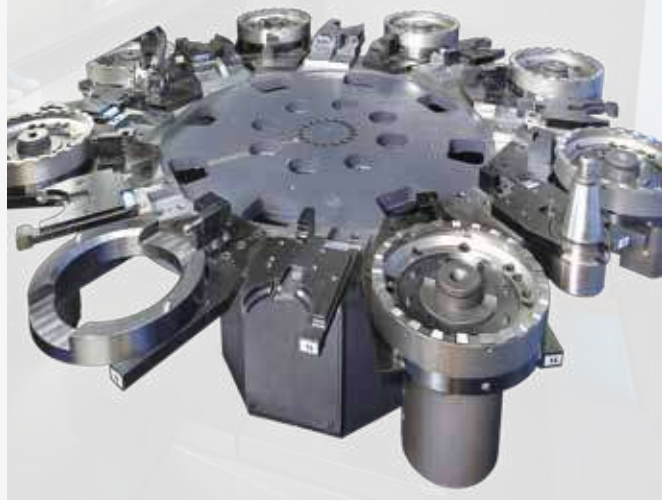
500mm (19.7 inch)
(Turning tool)

350mm* (13.8 inch*)
(Milling tool)

* PUMA VTR1216M

Drive Type

Servo motor



Tool magazine for PUMA VTR1216M

Major specifications

PUMA VTR1216 series

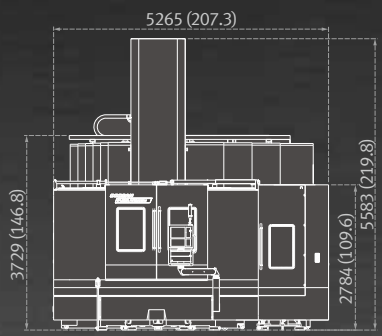
Item		Unit	PUMA VTR1216	PUMA VTR1216M
Capacity	Max machining dia.	mm (inch)	1600 (63.0)	
	Max machining height	mm (inch)	1250 (49.2)	
	Max table load	kg (lb)	8000 (1763.7)	
Travel distance	X axis(left / right)	mm (inch)	-700 / +1000 (-27.6 / +39.4)	
	Z / W axis	mm (inch)	1200 / 800 (47.2 / 31.5)	
	C axis	deg	-	360
Rapid traverse rate	X / Z axis	m/min (ipm)	12 / 10 (472.4 / 393.7)	
	C axis	deg/min	-	900
Main spindle	Chuck size	mm (inch)	1250 {1400}* (49.2 {55.1}*)	
	Max spindle speed	r/min	400	
	Max. spindle motor power	kW (Hp)	45 {70}* (60.3 {93.9}*)	
	Max spindle torque	N·m (ft-lb)	20557 {31997}* (15171.1 {23613.8}*)	
Tool magazine	Max tool position	ea	12 {24}*	15 {33}*
Ram spindle	RAM size	mm (inch)	260 X 260 (10.2 X 10.2)	
CNC system			DOOSAN-FANUC i	

*{ } Option

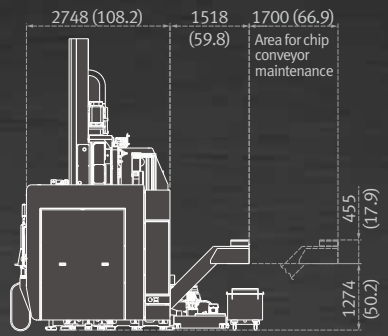
External dimensions

Unit : mm (inch)

Front view



Side view



Doosan Machine Tools

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* For more details, please contact Doosan Machine Tools.
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