

**DOOSAN**



# PUMA VTR1012F/1216F series

Large vertical turning center with  
RAM head spindle

**PUMA VTR Fixed column series**

PUMA VTR1012F

PUMA VTR1216F

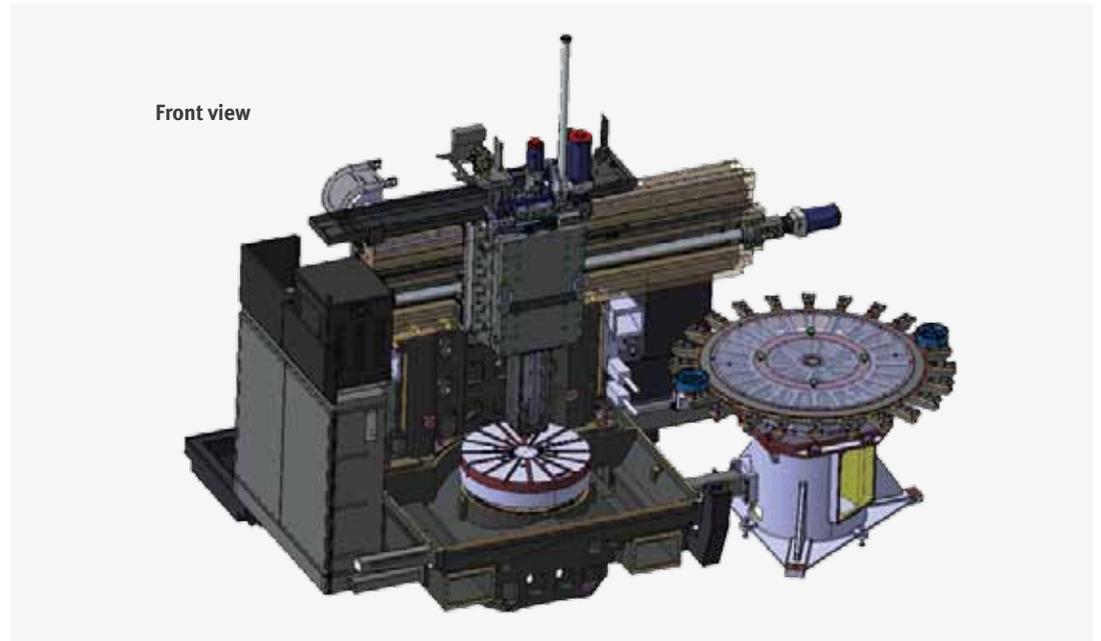
**MACHINE  
GREATNESS™**

## Basic Structure

The PUMA VTR Fixed Series having 40~55 inches of chuck size are ram type vertical turning center with fixed column structure for compact size. Designed with thermally-symmetric bed and column to ensure stabilized heavy-cutting performance for an extended time in wide machining area.

## Designed for short height with High Durability and Machining Stability

With high-rigidity wide column and box guideway structure and high-hardness Cr-Mo ram, the PUMA VTR Fixed 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.



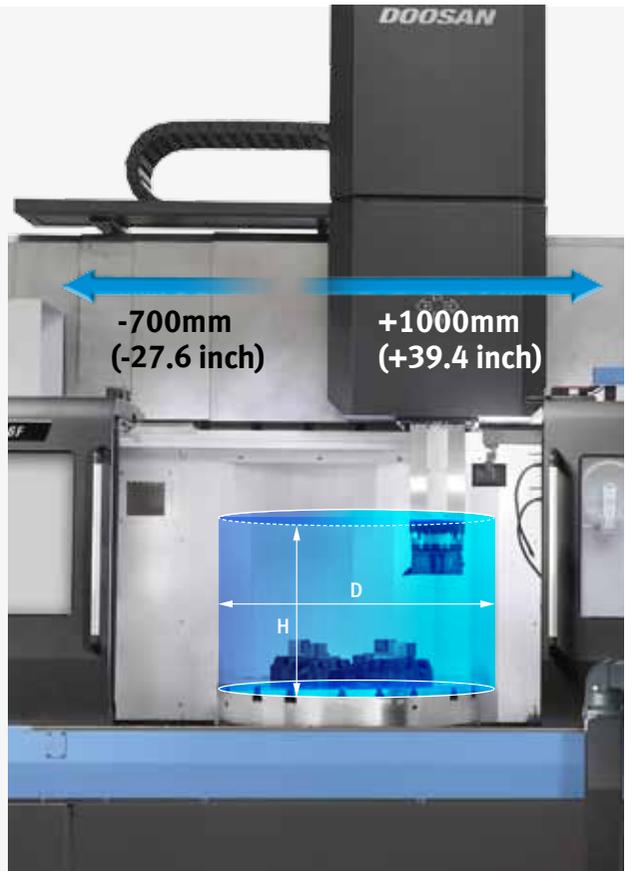
## Machining Area

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 VTR fixed column series offers Full X 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.

<b>Max. Machining diameter (D)</b>	
PUAM VTR1012F	
<b>Ø1250mm</b> (Ø47.2 inch)	
PUAM VTR1216F	
<b>Ø1600mm</b> (Ø63.0 inch)	
<b>Max. Machining height (H)</b>	
PUAM VTR1012F	PUAM VTR1216F
<b>750mm</b> (29.5 inch)	<b>950mm</b> (37.4 inch)
<b>Max. table load</b>	
PUAM VTR1012F	PUAM VTR1216F
<b>6000kg</b> (13227.5 lb)	<b>8000kg</b> (17636.7 lb)

A photograph of the PUMA VTR Fixed Series vertical turning center. The machine is shown from a side perspective, highlighting the large machining area. A blue double-headed arrow indicates the X-axis stroke, with labels "-700mm (-27.6 inch)" on the left and "+1000mm (+39.4 inch)" on the right. A blue cylindrical volume is overlaid on the machine, representing the machining area, with a diameter 'D' and height 'H' indicated by white arrows. The DOOSAN logo is visible on the top of the machine.

## 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.

#### Max spindle power /Torque

PUAM VTR1012F

**45/37<sup>kw</sup> 12354<sup>N.m</sup>**  
(60.3/49.6 Hp) (9117.3 ft-lb)

PUAM VTR1216F

**45/37<sup>kw</sup> 20557<sup>N.m</sup>**  
(60.3/49.6 Hp) (15171.1 ft-lb)

#### RAM spindle

RAM size

**260 x 260<sup>mm</sup>**  
(10.2 x 10.2 inch)

Tool clamp force

**8 ton**

#### 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%.



## Tool magazine

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

#### Tool positions

PUAMA VTR1012F/1216F

**12 / 24<sup>ea</sup>** option

#### Max. turning length

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

**500<sup>mm</sup> (19.7 inch)**  
(Turning tool)

#### Drive Type

**Servo motor**



## Major Specifications

### PUMA 1012F/1216F series



Item	Unit	PUMAVTR1012F	PUMAVTR1216F	
Capacity	Max machining dia.	mm (inch)	1250 (50.0)	1600 (63.0)
	Max machining height	mm (inch)	750 (29.5)	950 (37.4)
	Max table load	kg (lb)	6000 (13227.5)	8000 (17636.7)
Travel distance	X axis(left / right)	mm (inch)	-575 / +850 (-22.6 / +33.5)	-700 / +1000 (-27.6 / +39.4)
	Z axis	mm (inch)	700 (27.56)	900 (35.43)
Rapid traverse rate	X / Z axis	m/min (ipm)	12/10 (472.4/393.7)	
Main spindle	Chuck size	mm (inch)	1000(40)	1250 (49.2)
	Max spindle speed	r/min	600	400
	Max. spindle motor power (S3 25%/Cont)	kW (Hp)	45/37 (60.3/49.6)	45/37 (60.3/49.6)
	Max spindle torque	N·m (ft·lb)	12354 (9117.3)	20557 (15171.1)
Tool magazine	Max tool position	ea	12 {24}*	
Ram spindle	RAM size	mm (inch)	260 X 260 (10.2 X 10.2)	

\* { } Option

## Doosan Machine Tools

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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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**Fire Safety  
Precautions**

There is a high risk of fire when using non-water-soluble cutting fluids, processing flammable materials, neglecting use coolants and modifying the machine without the consent of the manufacturer. Please check the SAFETY GUIDANCE carefully before using the machine.

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