SPECIFICATIONS

Work Area	Units	VTC1612	VTC1616	VTC2020	VTC2525
Turning Table Diameter	in (mm)	Ø 63 (Ø 1,600)		Ø 78.7 (Ø 2,000)	Ø 98.4 (Ø 2,500)
Maximum Turning Height Capacity	in (mm)	47.2 (1,200)	78.8 (2,000)	78.7 (2,000)	98.4 (2,500)
Maximum Swing Diameter	in (mm)	Ø 78.7 (Ø 2,000)		Ø 94.5 (Ø 2,400)	Ø 118.1 (Ø 3,000)
Distance from Table to Ram's Surface	in (mm)	55.1 (1,400)	70.9 (1,800)	86.6 (2,200)	106.3 (2,700)
X-axis Travel	in (mm)	-31.8 to 46.4 (-810 to 1,180)		-39.7 to 54.3 (-1,010 to 1,380)	-49.6 to 66.1 (-1,260 to 1,680)
Z-axis Travel	in (mm)	41.3 (1,050)		49.2 (1,250)	59.0 (1,500)
W-axis Travel	in (mm)	31.5 (800)	43.3 (1,100)	59.0 (1,500)	74.8 (1,900)
Turning Table					
Turning Table Speed	RPM	260		200	140
Turning Table Motor (30 min / cont.)	hp (kW)	60 / 49 (45 / 37)			100 / 80 (75 / 60)
Turning Table Output Torque	ft-lb (Nm)	14,796 (20,063)		19,162 (26,000)	38,722 (52,000)
Turning Table Loading Capacity	lb (kg)	30,864 (14,000)		39,600 (18,000)	48,500 (22,000)
Spindle					
Milling Spindle Speed	RPM	1,600			
Milling Spindle Motor (30 min / cont.)	hp (kW)	20 / 15 (15 / 11)			
Milling Spindle Output Torque	ft-lb (Nm)	224 (304)			
Taper	—	BT50			
Ram Cross Section	in^2 (mm^2)	8.9 (226)			
Feeds					
X-axis Rapid Feed Rate	ipm (m/min)	472.4 (12)			393.7 (10)
Z-axis Rapid Feed Rate	ipm (m/min)	315 (8)			
X- and Z-axis Cutting Feed Rate	ipm (m/min)	78.7 (2)			
W-axis Feed Rate	ipm (m/min)	78.7 (2)			
Accuracy					
Positioning Accuracy (X, Z axes)	in (mm)	± 0.00059 (± 0.015)		± 0.00078 (± 0.020)	
Repeatability (all axes)	in (mm)	± 0.00031 (± 0.008)		± 0.00039 (± 0.010)	
Automatic Tool Change					
Magazine Capacity	pockets	2 heads + 12 BBT50			
Tool Storage Capacity	—	16 (Opt. 24, 32)			
Tool Change Time (tool-to-tool)	sec	12			
Dimensions					
Machine Length	in (mm)	262 (6,650)		281 (7,150)	302 (7,680)
Machine Width	in (mm)	196 (4,975)		207 (5,270)	219 (5,570)
Machine Height	in (mm)	218 (5,540)	218 (5,540)	234 (5,940)	263 (6,670)
Machine Weight	lb (kg)	61,729 (28,000)	74,800 (34,000)	92,594 (42,000)	97,003 (44,000)
Control		Fanuc 0i-TD			

Specifications subject to change without notice

TOYODA

VTC SERIES Vertical Turning Center

www.toyoda.com

JTEKT Toyoda Americas Corporation
Corporate Headquarters
316 W. University Drive
Arlington Heights, IL 60004
Tel: (847) 253-0340
Fax: (847) 253-0540
E-mail: info@toyoda.com

Toyoda Northeast Tech Center
577 Hartford Turnpike, Suite B
Shrewsbury, MA 01545

Toyoda West Coast Tech Center
700 S. Richfield Road
Placentia, CA 92870

Remanufactured Products Division &
Great Lakes Tech Center
51300 W. Pontiac Trail
Wixom, MI 48393

Toyoda Americas Mexico
Ave. Gonzalitos 460 Sur Local 27
Col. San Jeronimo
Monterrey, N.L.
C.P. 64640
Tel: 01152(81) 81231116

Toyoda Americas Brasil
Av. Vitória Rossi Martini, 141
Distrito Industrial Domingos Giomi
Indaiatuba - SP, Brasil 13347-613
Tel: 5519 40425450

2018A300-CP

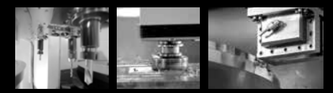
WELE: A Toyoda Strategic Alliance Company

Toyoda and WELE are key components of JTEKT Corporation's worldwide machine tool offering. As 40% owner of WELE Mechatronics in Taiwan, JTEKT ships vertical machining centers, bridge- and gantry-type mills, and other products from WELE throughout the world. Toyoda Machinery USA, together with the WELE factories, design and build quality machine tools fit for most applications.



Your local distributor is:

TOYODA



VTC SERIES

Vertical Turning Center

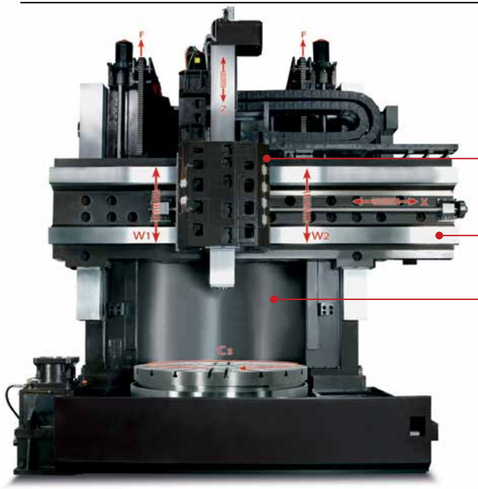
JTEKT Koyo TOYODA

WELE a TOYODA Strategic Alliance Company

VTC SERIES

The VTC Series combines milling and turning capabilities on a single machine for unmatched large-part operations.

Built For RELIABILITY



Hydraulic Counterbalance on the W Axis

The VTC Series features a dual-driven, W-axis cross rail. The cross rail is counterbalanced with hydraulic cylinders for smooth and precise positioning.

Heavy-Duty Guideways

The W, X, and Z axes are equipped with large, box guideways for highly accurate and stable cutting.

High-Grade Cast Iron Construction

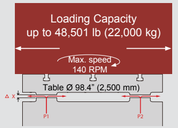
Our casting technology offers a higher density than traditional cast iron, giving our FEM-analyzed bed and column greater tensile strength and maximum dampening capabilities.

Handscraped for Precision

The VTC Series is handscraped on all 66 metal-to-metal contact surfaces to ensure geometric accuracy for machining longevity.

Backlash Elimination Mechanism

Gear driven by a two-speed transmission, the turning table features a WELE-designed backlash eliminator that allows for turning up to 260 RPM and C-axis indexing to .001 degrees.



Twin Hydraulic Supply Unit

Dual hydraulic supply systems feed alternating pressure pads in the table to ensure safe and accurate operation. In the event of power failure, this technology also prevents damage to the table's bearings.

Hydrostatic Turning Table

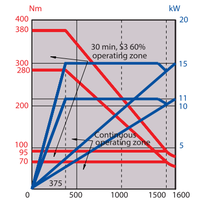
The VTC Series features a hydrostatic turning table with a fully programmable C axis. This design eliminates metal-to-metal contact in the axial load, allowing for smooth and accurate metal removal on the heaviest of milling and turning workpieces.

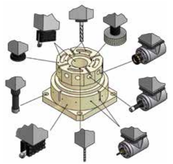
Built For POWER

Powerful Spindle & High-Torque Turning Table

The vertical turning centers feature a powerful, live spindle for milling and turning operations, and a gear-driven table for heavy applications.

Milling Spindle, α12i 11/15kW



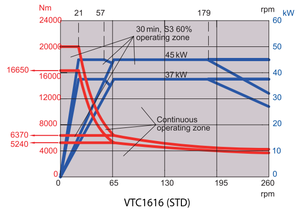


Turning Table

Model		Power (30 min / cont.)	Speed RPM	Torque ft-lb (Nm)
VTC1616	Standard	60 / 49 hp (45 / 37 kW)	260	14,796 (20,063)
	Optional	100 / 80 hp (75 / 60 kW)	200	21,389 (29,000)
VTC2525	Standard	100 / 80 hp (75 / 60 kW)	140	38,722 (52,507)
	Optional	134 hp (100 kW)	124	71,275 (96,636)

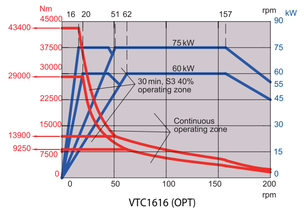
Turning Table

Speed up to 260 rpm with gear-driven of Fanuc α40HVi-6000 spindle motor (37/45 kW)



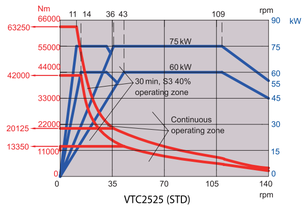
VTC1616 (STD)

Speed up to 200 rpm with gear-driven of Fanuc α60HVi-4500 spindle motor (60/75 kW)



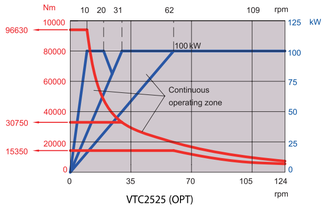
VTC1616 (OPT)

Speed up to 200 rpm with gear-driven of Fanuc α60HVi-4500 spindle motor (60/75 kW)



VTC2525 (STD)

Speed up to 124 rpm with gear-driven of Fanuc α100HVi-4000 spindle motor (100 kW)



VTC2525 (OPT)

Built For FLEXIBILITY

Configurable Tool Changer

The flexible, puzzle-type tool changer allows for the custom configuration of tools and headstocks. Headstock and tool changes are automatic in the vertical orientation.

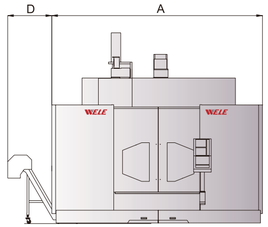
Automatic exchange for multi-head attachment.

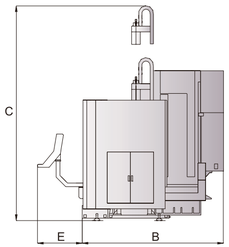
Curvic Couplings on the Headstock

The headstock has a curvic coupling design to ensure rigidity and accuracy during heavy machining. It utilizes a four-point hydraulic clamping mechanism to further secure the headstock.

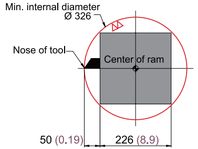
Angular Head *Grinding Wheel* *Turning Tool Holder*

Machine Dimensions and Space Requirements





Unit: mm (in)



Model	Unit	A	B	C	D	E
VTC1612	in (mm)	217 (5,500)	150 (3,805)	204 (5,175)	45 (1,150)	46 (1,170)
VTC1616	in (mm)			217 (5,525)		
VTC2020	in (mm)	236 (6,000)	161 (4,100)	233 (5,940)		
VTC2525	in (mm)	257 (6,530)	173 (4,400)	266 (6,765)		

Specifications subject to change without notice