

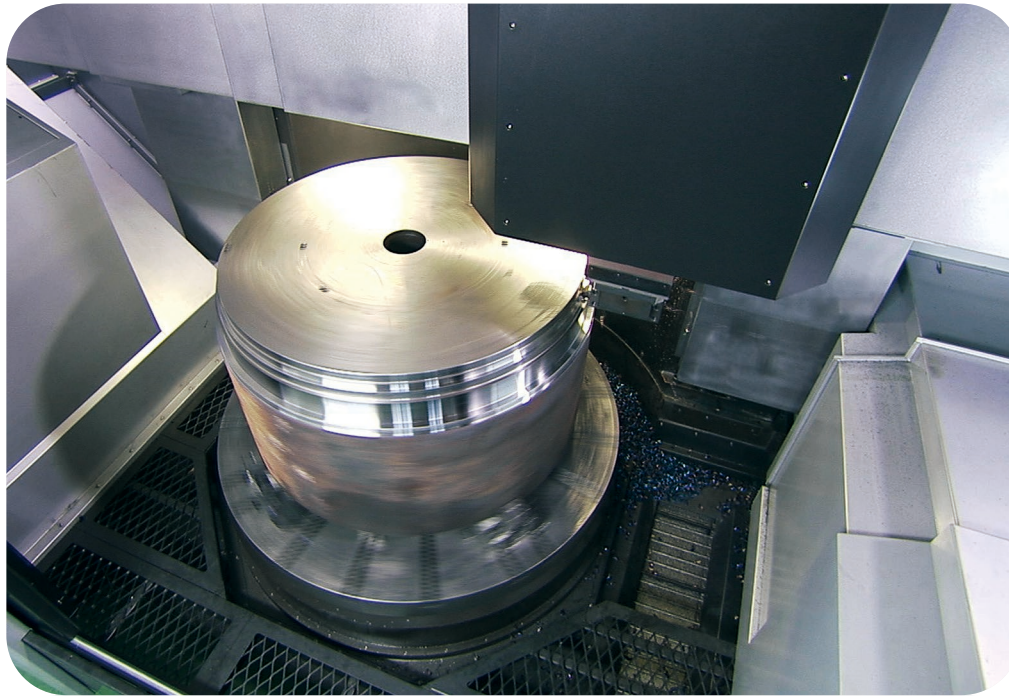


JTEKT

WELE
a TOYODA Strategic Alliance Company

VTC Series Vertical Turning Centers





Machine Overview

Specifications

Bearing Design

Puzzle ATC

Flexibility

Toyota Machinery USA

VTC Series Vertical Turning & Machining Centers

Designed and built at the WELE factories, Taiwan, a TOYODA Strategic Alliance Company

- Rigid Meehanite cast iron construction with large Box Ways and hydraulic clamping (W axis)
- Wele designed hydrostatic turning table, up to 48,500 lbs Max table load(25 series)
- Optional 125 HP with over 71,000 ft/lbs of torque (25 series)
- Wele designed “Curvic” coupling for Turning & Milling Heads
- 60 HP 260 RPM Geared Driven Turning(16 series)
- 100 HP 140 RPM Geared Driven Turning(25 series)
- 20 HP 1600 RPM Geared Head Milling



VTC Series Vertical Turning & Machining Centers

Designed and built at the WELE factories, Taiwan, a TOYODA Strategic Alliance Company

- Wele designed “Puzzle Type” versatile Automatic Tool Changer
- Large Work Envelopes
- Automatic Head Change
- Automatic Tool Change
- Fanuc 0i TB CNC
- Full splash enclosure
- Large Tapered Roller Bearings
(Supports Radial Load)



VTC Machine Overview

Dual W Axis Ballscrews
With Hydraulic Counter Balance

Robust Ram (Z axis)
With Hydraulic Counter Balance

Large Box Ways
For Cutting Rigidity

Heavy Duty Crossrail
39,683 lbs. of Clamping Force

Cast Iron Construction
Hand Scraped for Geometric Precision

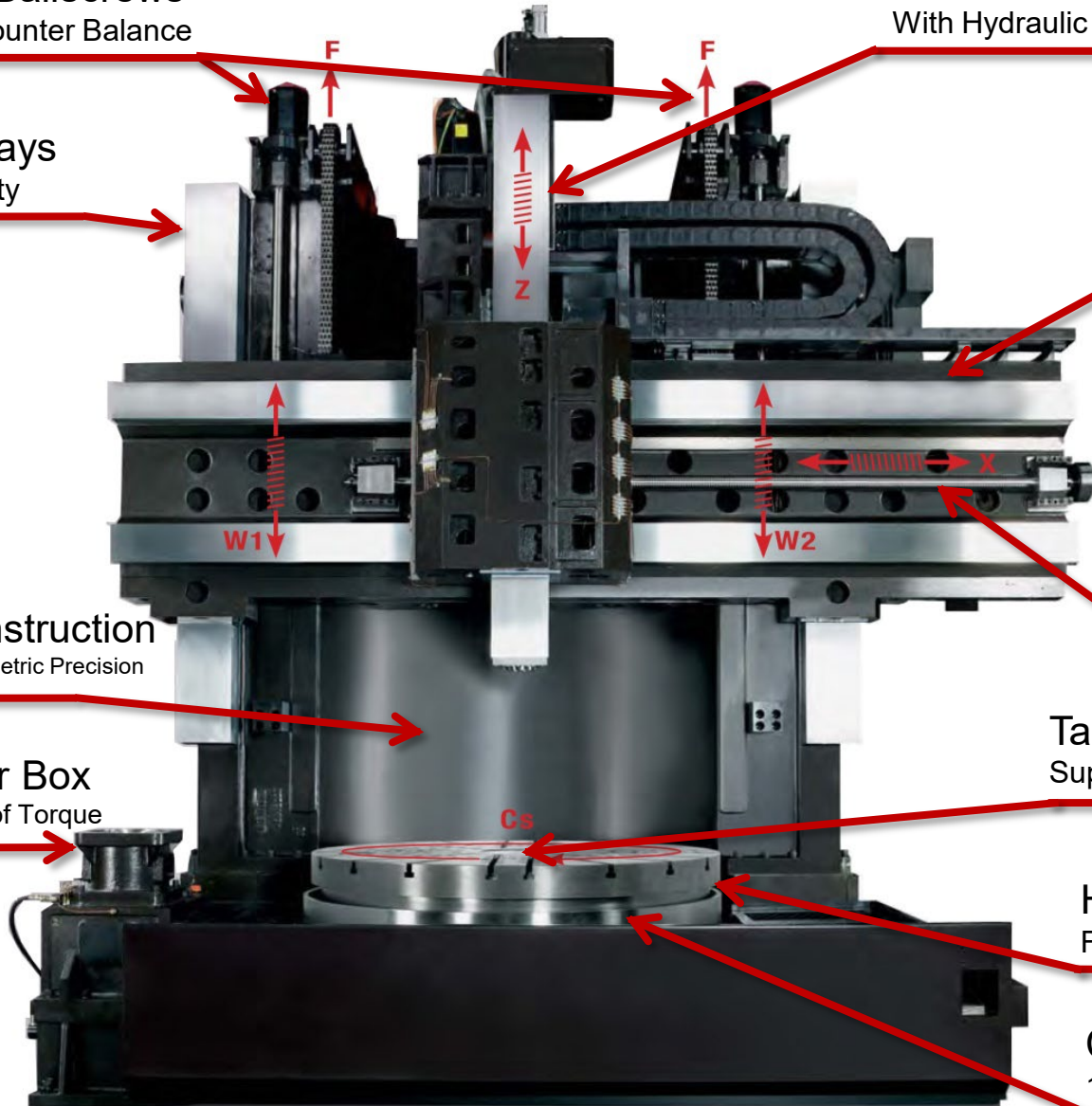
Large Ballscrews
For Cutting Rigidity

2 Speed Gear Box
Up to 71,270 ft. lbs of Torque

Tapered Roller Bearings
Supports Radial Load

Hydrostatic Bearing
For smooth, accurate turning

C Axis Indexing
12 pos. Hydraulic Clamping





Machine Overview

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Puzzle ATC

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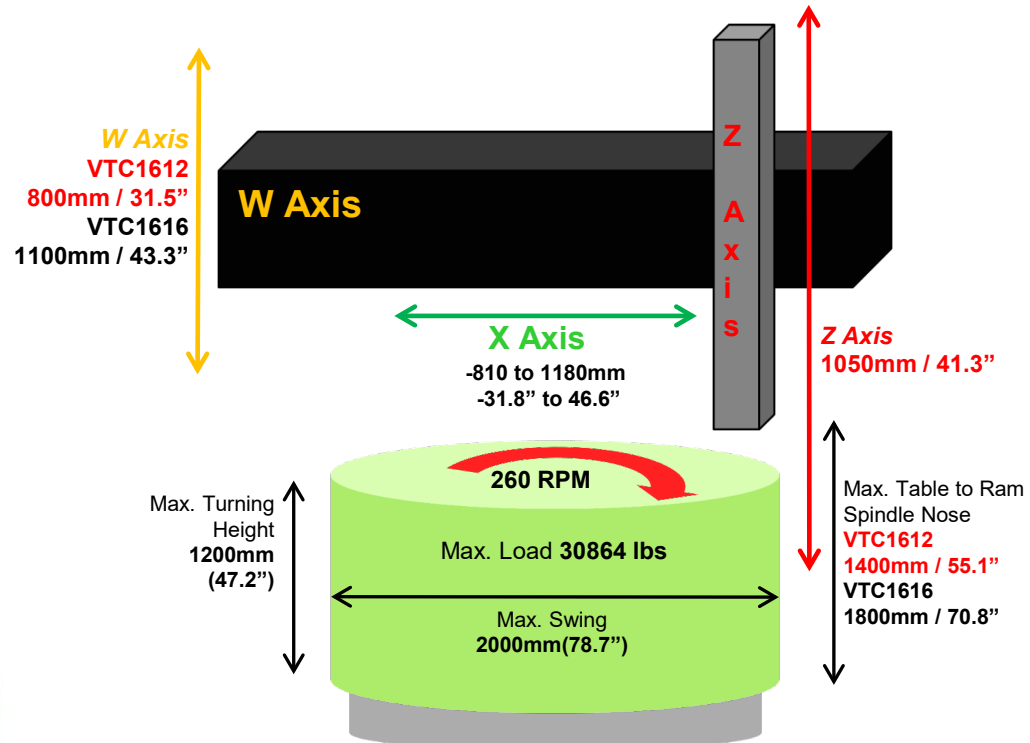
Toyota Machinery USA

VTC Series Specifications

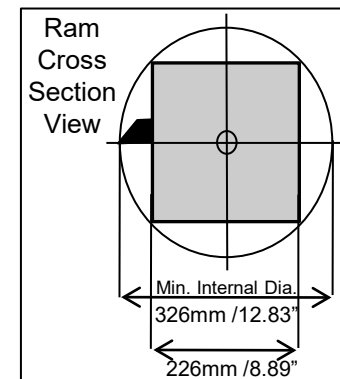
Turning Table Sizes:

VTC1612 1600mm / 63" diameter

VTC1616 1600mm / 63" diameter



VTC1612 & VTC1616

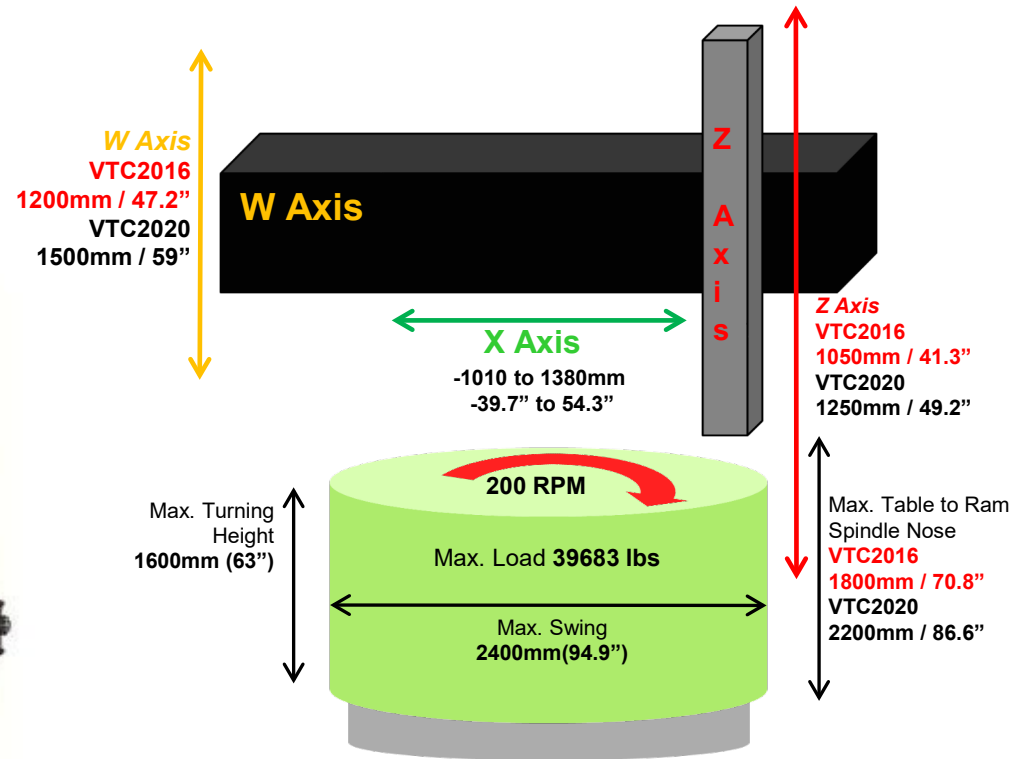


VTC Series Specifications

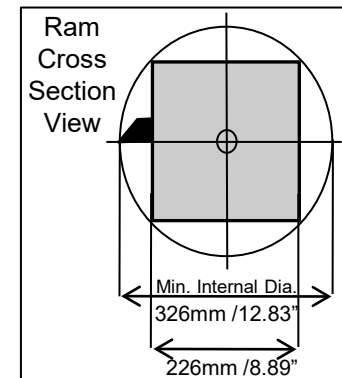
Turning Table Sizes:

VTC2016 2000mm / 78.7" diameter

VTC2020 2000mm / 78.7" diameter



VTC2016 & VTC2020

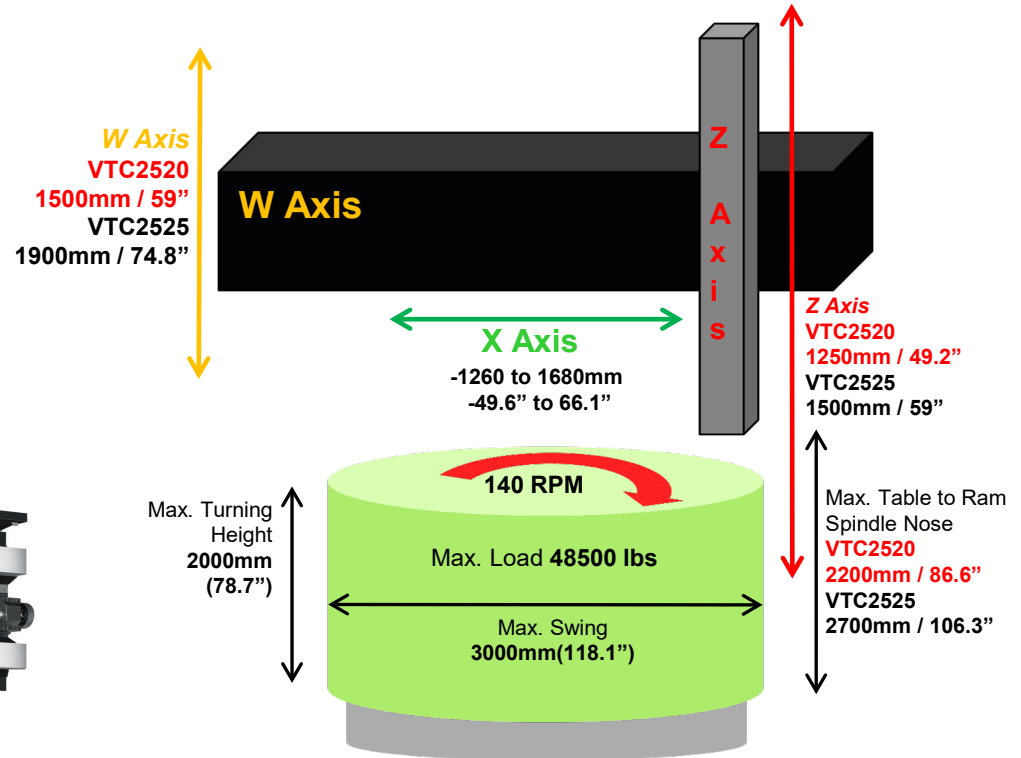
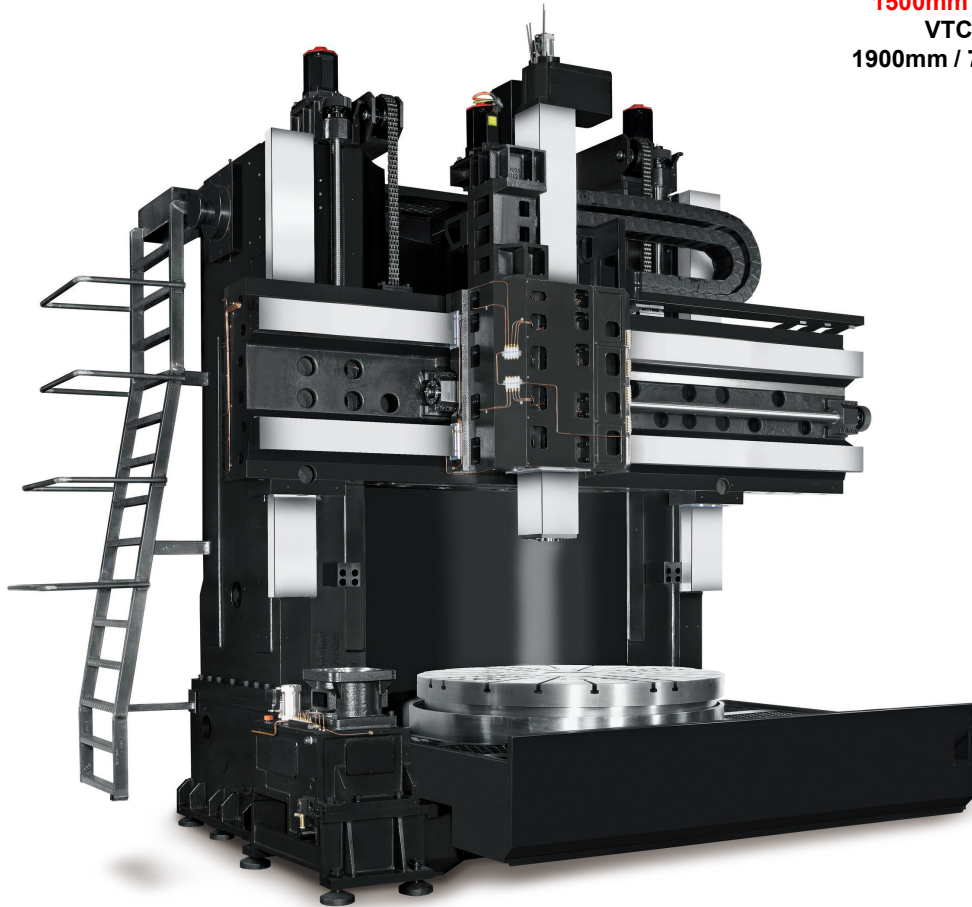


VTC Series Specifications

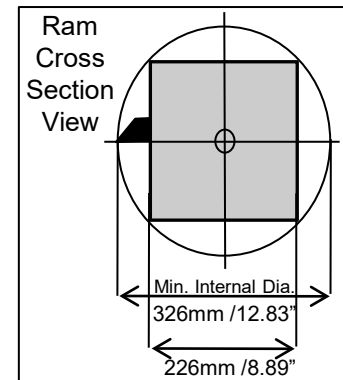
Turning Table Sizes:

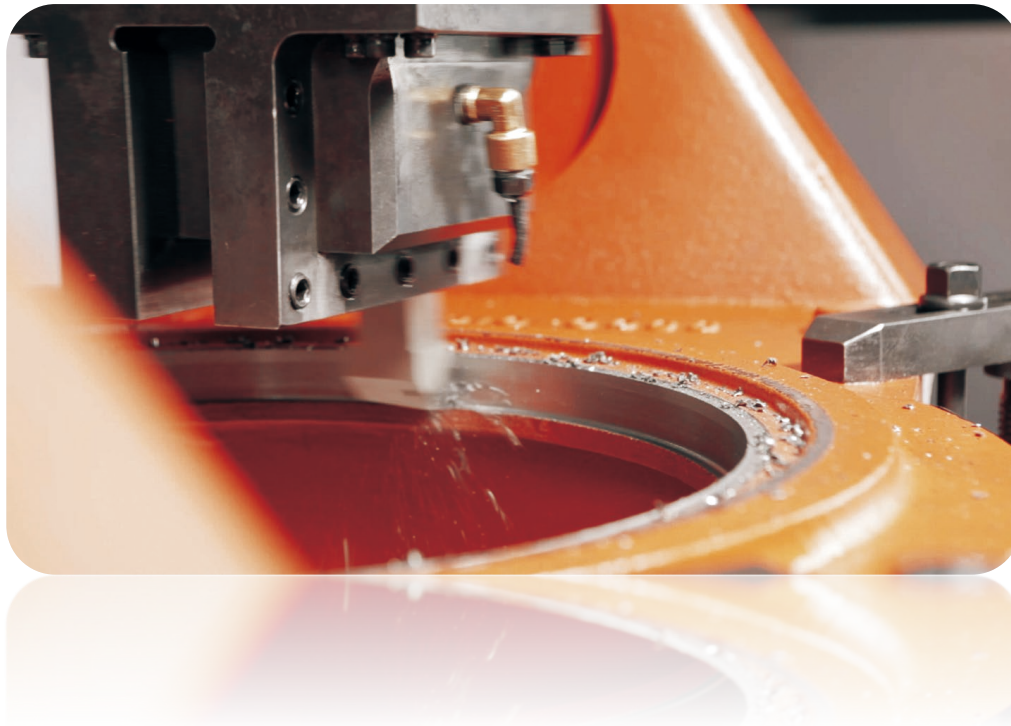
VTC2520 2500mm / 98.4" diameter

VTC2525 2500mm / 98.4" diameter



VTC2520 & VTC2525





Machine Overview

Specifications

Bearing Design

Puzzle ATC

Flexibility

Toyota Machinery USA

Hydrostatic Turning Table – Better Performance by Design

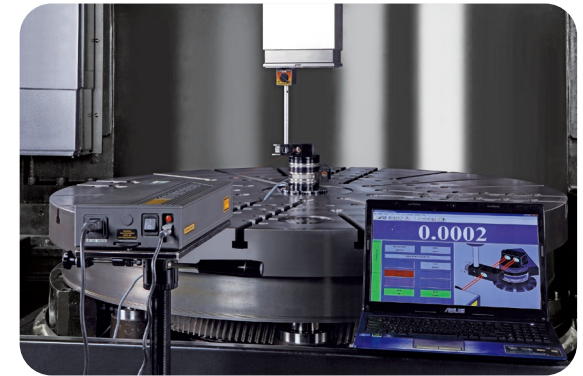
Designed and built by WELE, No Metal to Metal Contact for long life and superior performance



Hydrostatic Bearing

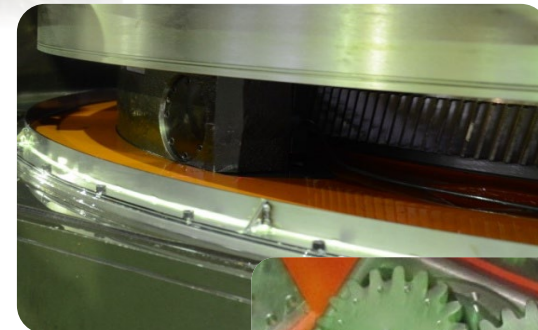


Radial Bearings



Indexing Position Accuracy Inspection

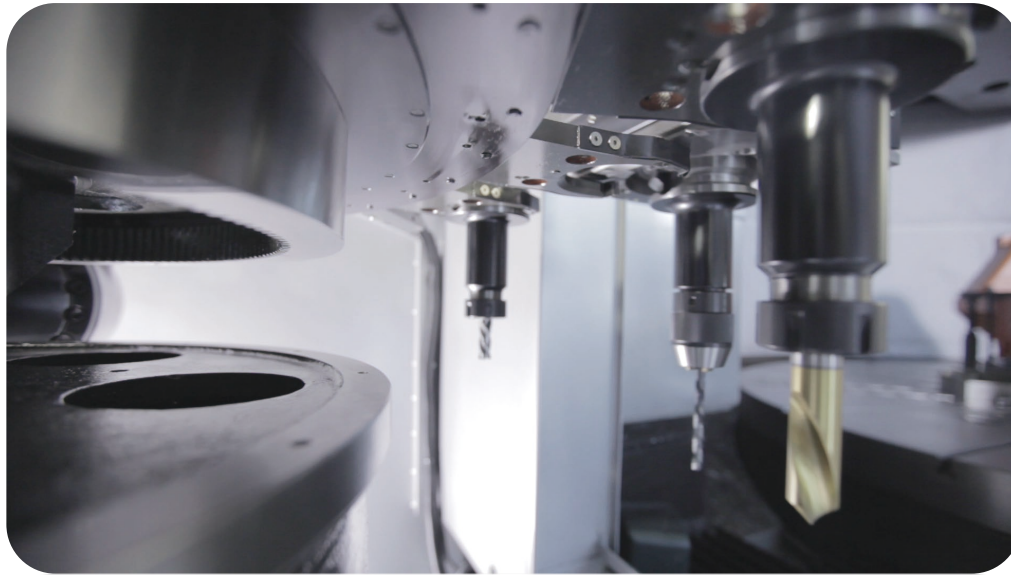
Dual hydraulic supply systems feed alternating pressure pads to ensure safe, accurate operation. Gear driven by a two speed transmission, the VTC turning table features a Wele design backlash eliminator that allows for smooth turning up to 260 RPM and C axis indexing to .001 degrees.



Gear Drive



Backlash Eliminator



Machine Overview

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Bearing Design

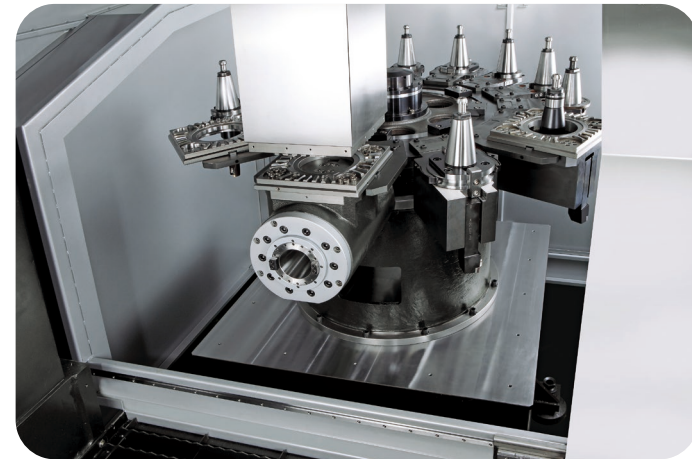
Puzzle ATC

Flexibility

Toyoda Machinery USA

Standard Automatic Tool Changer is Configured to Your Requirements

The flexible “Puzzle” type ATC can be configured to suit your needs, and easily reconfigured in the future

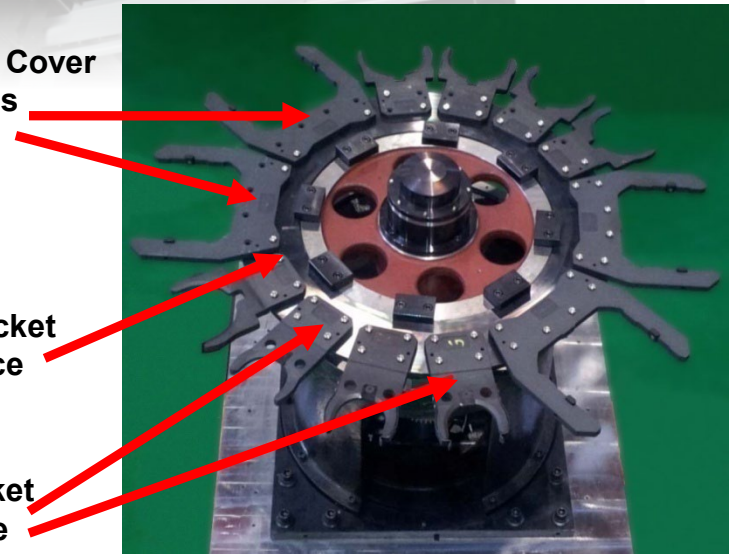


You choose any combination of turning and milling heads or holders. 16 (std.), 24, or 32 space ATCs are available

**Holder for Heads/ Cover
Occupies 2 spaces
Each**

**Turning Tool Pocket
Occupies 1 Space**

**Milling Tool Pocket
Occupies 1 Space**



Example Shown: 1 Cover, 3 Heads, 5 Turning, 3 Milling Pockets

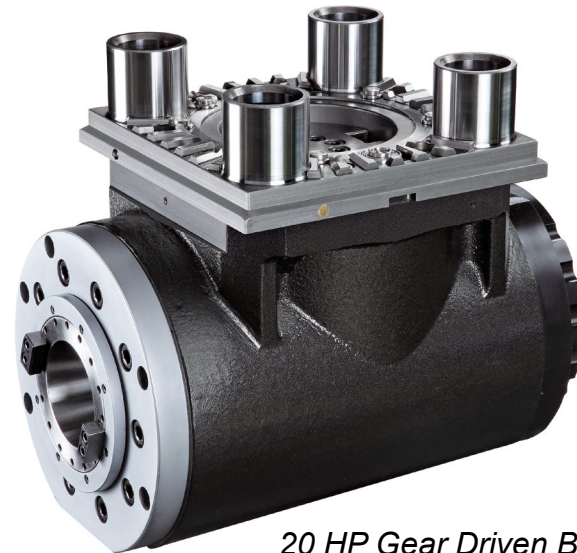


Heavy Turning Head / BT#50 90 Deg. Milling Head with Unique Curvic Coupling

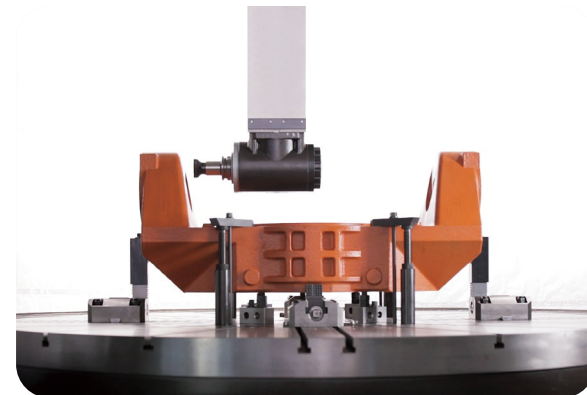
The WELE design "Curvic" type coupling insures accurate and rigid use of head attachments



32mm Shank Tool Holder



20 HP Gear Driven BT#50 Milling



Hand Scraped Metal to Metal Mounting Surfaces Ensure Geometric Precision

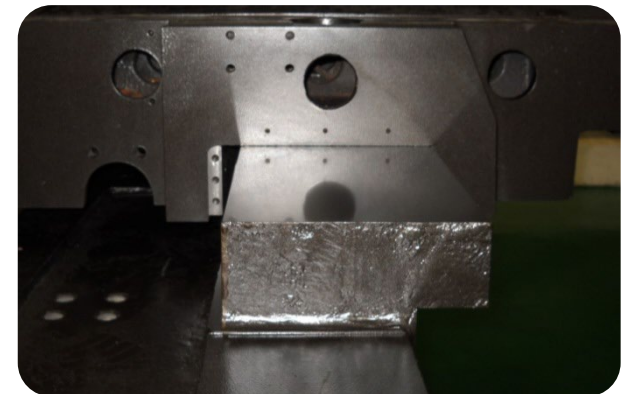
WELE craftsmanship is employed in the construction of each machine for geometric precision of the machine frame, so mounted components perform better and last longer.



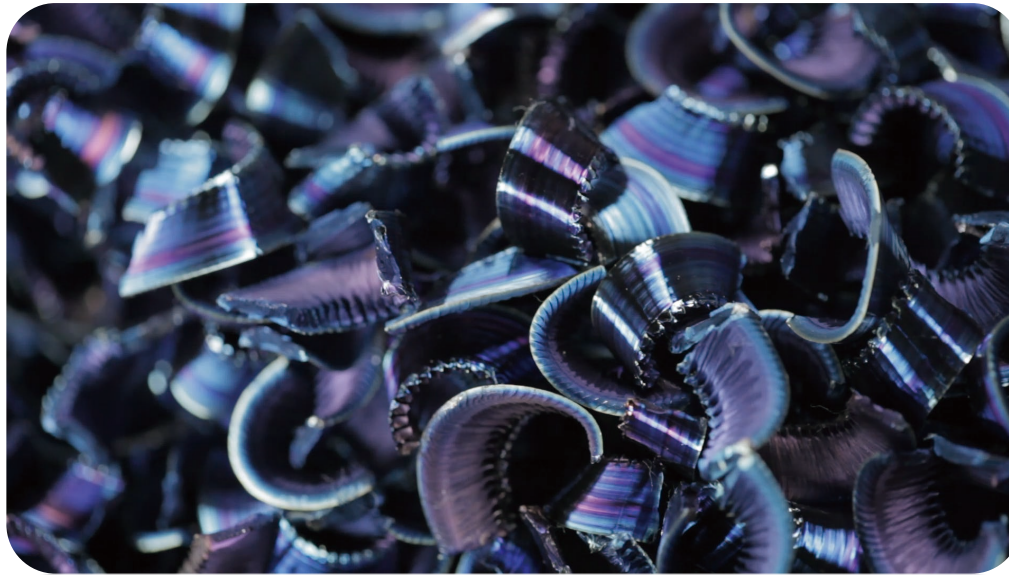
Hand Scraped Surface



Underside of Column



Large Box Ways are Hardened and Ground



Machine Overview

Specifications

Bearing Design

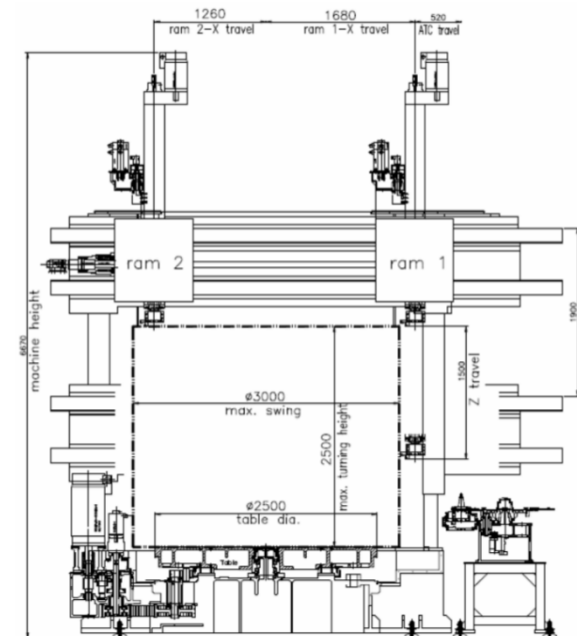
Puzzle ATC

Flexibility

Toyoda Machinery USA

A Range of Models and Possible Configurations for Large Part Machining

The VTC series can be configured to meet the needs of complex work piece configurations



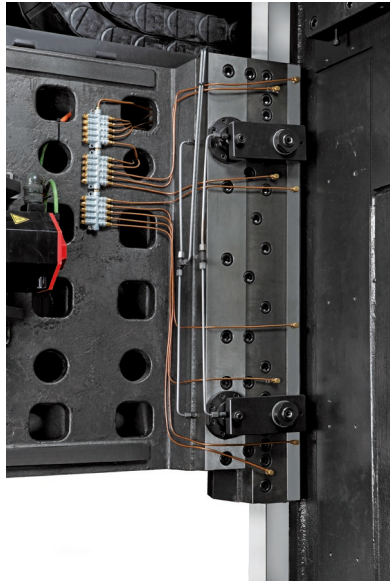
Twin Ram Version of VTC2525

Standard Full Enclosure

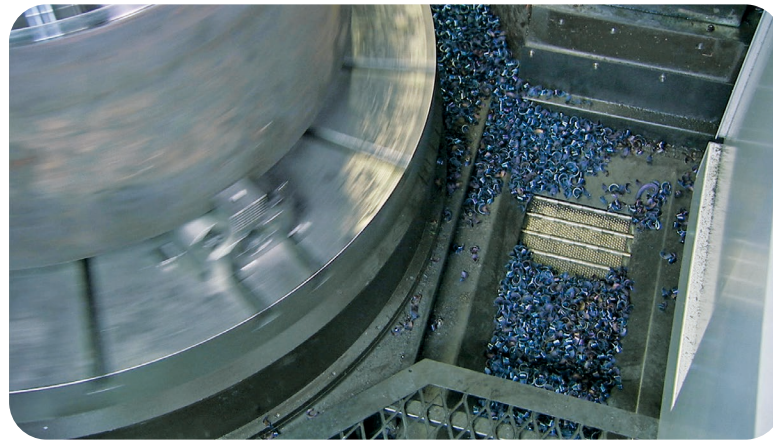


Well Equipped to Meet Your Needs

Options include: Glass Scale feedback, Auto Tool Length Measurement,



Hydraulic Clamping For W axis



Efficient Chip Removal with Lift-Up Chip Conveyor



4 Pcs. Manual Chuck Jaws



Operator Ergonomics & Powerful FANUC 0iTB CNC



Machine Overview

Specifications

Bearing Design

Puzzle ATC

Flexibility

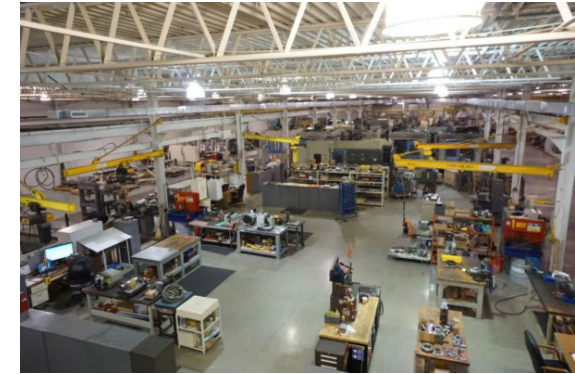
**Toyoda Machinery
USA**

JTEKT Rebuild, Retool & Retrofit Services



Total lifecycle support for machine tools that operate well into 30+ years

- Full mechanical rebuild of entire CNC machines, or individual sub-assemblies:
 - Spindles, B-Axis Tables, Gearboxes, Ballscrews, Boxways, Guideways, Workhead & Tailstocks, Many More, Just Ask
- Factory-certified technicians & OEM drawings allow for warranted rebuilds
- CNC Control Retrofits for FANUC & Toyopuc GC/MC Series Controls
- Engineered Retools for new production applications with runoff facilities & climate-controlled QC lab with Zeiss Prismo CMM, Adcole Inspection, Jenoptik Waveline Roughness & Counter measurement, and other unique capabilities
- In-field evaluation services and machine health checks available at request
- Looking to Upgrade? [Ask about Buyback/Trade-In of your aged Toyota](#)
- Looking for a Machine that's already Rebuilt? [Check our Rebuilt Toyota Inventory](#)



75,000 sq ft facility just outside Detroit (Wixom, MI)

FA630 Before



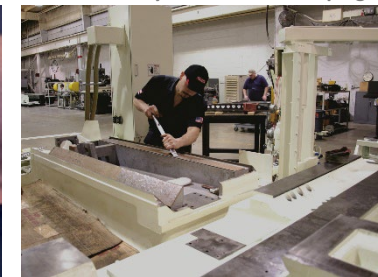
FA630 After



FANUC or Toyoda control retrofits



JTEKT Factory-trained Handscrapping



FULLY SUPPORTED FROM OUR FACTORY TO YOURS

JTEKT

Jtekt Corporation
Nagoya, Japan

- Ownership of TOYODA and KOYO Brands
- 40% Ownership of Wele Mechatronics
 - Japanese Manufacturing Concepts
 - Japanese Quality Assurance Methods
- Financial Stability

WELE

Wele Mechatronics, LTD
Taiwan
A Toyoda Strategic
Alliance Company

- 20+ yrs. Experience Building Precision Machinery
 - Innovative Design and Engineering
- 5 Factories, Each Specialized by Product Type
- Worldwide Manufacturing Facilities of TOYODA brand
Vertical Machining Centers

TOYODA

Toyoda Machinery USA

- North American Importer of All Toyoda and Wele Machinery
 - Over 30 Years of Engineering Expertise
 - Factory Direct Service and Technical Training
 - Large Spare Parts Inventory
 - Sales Support

TOYODA

**LOCAL TOYODA
DISTRIBUTOR**

- Sales
- Installation
- Factory Trained Service
 - Market Knowledge
 - Client Relationships

Proven Technology

Our own experience with high-volume production helps us design and build machine tools that perform under pressure. We continually refine processes, build reliable machines and test them in our own factories. So when you decide to buy a Toyoda machining center, grinder, or make use of our services for your business, you can be confident that you are investing in proven technology.

Customer Support

Toyoda works closely with its nation-wide dealer network to keep local servicemen on call should you ever need them. In addition, our own factory-trained service engineers are stationed across the US, Canada and Mexico. And our extensive spare parts inventory (\$20 million) ensures that virtually any replacement part will be shipped to you in 24 hours.

THE TOYODA DIFFERENCE

Corporate Headquarters

The 100,000 square foot plant in Arlington Heights, Illinois (just northwest of Chicago) is the Toyoda Machinery USA headquarters, providing a range of horizontal machining centers, factory automation systems, and the widest array of production cylindrical grinders in the industry.



Repair, Rebuild & Remanufacture Division

Toyoda's Repair, Rebuild, and Remanufacturing division, located just outside of Detroit, Michigan, specializes in serving the needs of automotive OEMs and other high-volume parts suppliers.

