

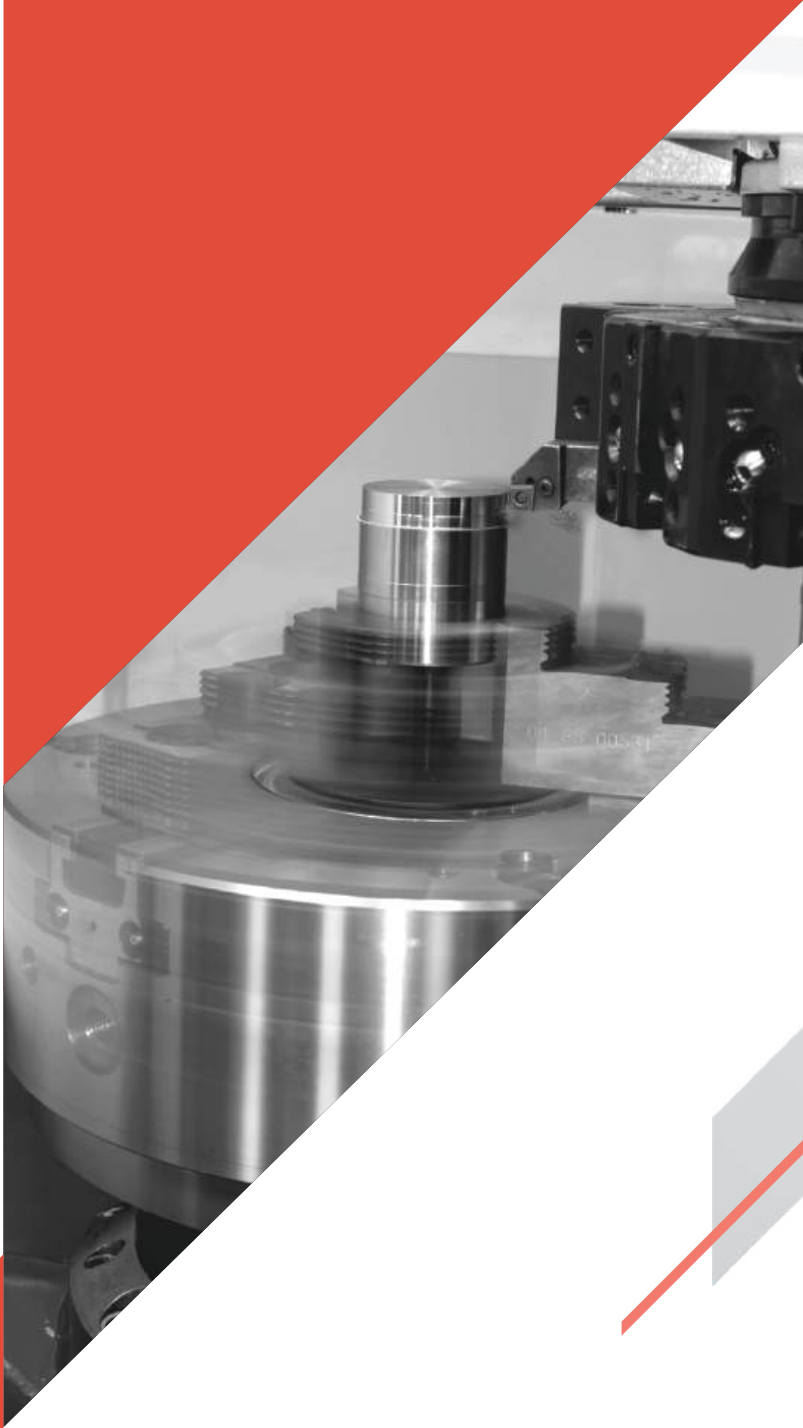
Sales and Services

INDIA		
NORTH		
Delhi T: +91 11 49849380 E: mmtdel@acemicromatic.com	Faridabad T: +91 129 4047000 E: mmtfbd@acemicromatic.com	Rudrapur T: +91 97201 06532 E: mmtukd@acemicromatic.com
Gurgaon T: +91 124 4745500 E: mmtgur@acemicromatic.com	Ludhiana T: +91 161 5018296 E: mmtplib@acemicromatic.com	Chandigarh T: +91 99141 91057 E: mmtchdsales@acemicromatic.com
Rohtak T: +91 98188 73444 E: mmttrksales@acemicromatic.com		
EAST		
Jamshedpur T: +91 657 2383750 E: mmtjam@acemicromatic.com	Kolkata T: +91 98301 10933 E: mmtcal@acemicromatic.com	
WEST		
Ahmedabad T: +91 99242 89892 E: mmtahm@acemicromatic.com	Pune - Chakan T: +91 98906 23205 E: mmtpunep@acemicromatic.com	Mumbai - Thane T: +91 22 25829062 E: mmtbom@acemicromatic.com
Aurangabad T: +91 240 2552309 E: mmtaur@acemicromatic.com	Pune - Chinchwad T: +91 20 40712111 E: mmtpunec@acemicromatic.com	Rajkot T: +91 28272 87003 E: mmtraj@acemicromatic.com
Indore T: +91 73899 39190 E: mmtindr@acemicromatic.com	Kolhapur T: +91 98906 23202 E: mmtkop@acemicromatic.com	
Nasik T: +91 22 26861976 E: mmtbom@acemicromatic.com	Mumbai T: +91 22 26867271 E: mmtbom@acemicromatic.com	
SOUTH		
Bangalore - Peenya T: +91 80 40200555 E: mmtblr@acemicromatic.com	Chennai - Sriperumbudur T: +91 44 26178001 / 03 E: mmtche@acemicromatic.com	Ranipet T: +91 98407 85521 E: mmtcpt@acemicromatic.com
Bangalore - Bommasandra T: +91 80 27834836 E: mmtbms@acemicromatic.com	Chennai - Tambaram T: +91 98407 85523 E: mmttbm@acemicromatic.com	Trichy T: +91 98432 65434 E: mmttry@acemicromatic.com
Belgaum T: +91 99800 02597 E: mmtbgm@acemicromatic.com	Coimbatore T: +91 422 4506183 E: mmtcbe@acemicromatic.com	
Chennai - Ambattur T: +91 44 26178001 / 03 E: mmtche@acemicromatic.com	Hyderabad T: +91 40 23070496 E: mmthyd@acemicromatic.com	
INTERNATIONAL		
Germany T: 083614460802 E: amisales@acemicromatic.com	China (Shanghai) T: +91 98436 60007 E: raguramachandranc@acemicromatic.com	

www.acemicromatic.net



VERTICAL TURNING CENTERS



Turning Center Division

Plot No 7 & 8, II Phase, Peenya Industrial Area, Bengaluru - 560 058, INDIA
Tel : +91-80-2218 6700, Fax : +91-80-2218 6723,
E-mail : info@acedesigners.co.in

Marketing & Service Division

3rd Phase, Plot No 240, 241, 11th Main Rd, Peenya Industrial Area,
Bengaluru - 560058, Tel : +91-80-4020 0555,
E-mail : salesmmt@acemicromatic.com



Follow us on:



Ace Designers



Ace Designers



@acedesignersblr



@acedesigners



Scan a QR Code
for a Website

VTL SERIES / MKD / MAY24 / REV05

Certified

ISO 9001 / ISO 14001

CII - GREEN COMPANY RATING SYSTEM - 2024-2027

RESPONSIBLE EXPORT ORGANIZATION



VTL-25 L/R



VTL-30 / 300 Series



VTL-40 / 400 Series



VTL-45 XL



VTL Turnmill Series

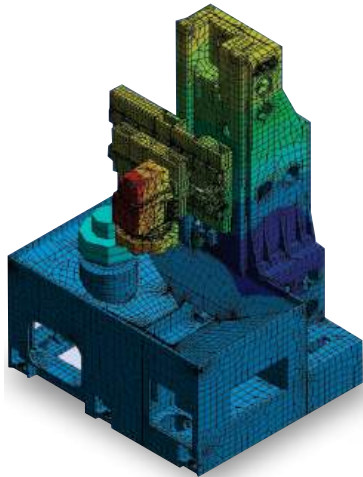


Machine with Rigid Structure

Ace Vertical turning center combine power, rigidity and versatility with increased capacity. Wide access to the chuck zone facilitates ease of loading and unloading of parts. **Linear motion / Hardened ground box-type** guideways on X & Z axes ensure better positioning and repeatability.

This machine is ideal for turning heavy, large diameter components like fly wheels, brake drums, big size gears, etc. The machine is conducive for easy loading and unloading of heavy components. This machine occupies smaller floor space than a horizontal turning machine that can turn comparable sized parts.

Structural Design Optimised For Accurate Machining



Column

- The structure is optimized using FEM technique.
- Virtual prototyping helped in arriving robust design maximizing tool point stiffness, minimizing vibration and improving power utilization.
- Bed & Column castings are grade 25 cast iron. The structure is heavily ribbed box type construction to provide high rigidity at different cutting conditions and are thermally seasoned.

Heavy Duty Spindle



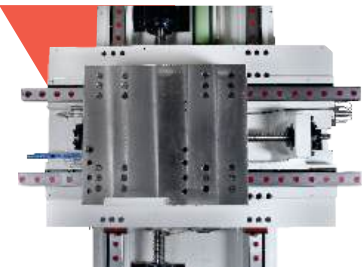
The cartridge type spindle is assembled and tested in a controlled clean room environment. The bearing configuration gives very high stiffness to the spindle assembly in both axial and radial directions. The bearings are grease lubricated for life. A high torque spindle motor provides power for heavy stock removal.

All spindles are assembled and tested in a controlled clean room environment. After assembly the spindles are subject to stringent testing on an electronically controlled, automatic testing rigs.

Temperature of the spindle assembly is monitored and recorded automatically with a pre-set running rhythm. This rhythmic evaluation ensures thermal stabilization of the entire assembly with the bearings. This guarantees performance and enhanced bearing longevity.

Axes

"The X and Z axes feature large-diameter, precision-ground ball screws supported at each end by precision-class ball screw support bearings. The ball screws are pre-tensioned to minimize the effects of thermal expansion. **Heavy-duty linear motion guides** and **Hardened ground box-type guides** are widely spaced to ensure stability. Both the ball screws and LM / HGBT guides are protected with telescopic covers. Automatic metered lubrication is provided for both the LM / HGBT guides and ball screws."



Linear Motion



Hardened ground box-type

Turret

Bi-directional tool turret indexes in either direction for shortest indexing time. It is completely enclosed & robust in mechanism with oil bath lubrication. Three piece, Hirth coupling allows the tool disc to be indexed without lifting. It ensures repeatability, positioning accuracy and rigidity.

"A hydraulic counterbalance is used to prevent vertical drop."

Overload Tripping Clutch



**Standard - BTP Turret
Optional - HTP Turret**

Overload trip clutch is provided on both axes to minimise the damage caused in the event of accident. Hydraulic counterbalance is provided for z axis to counter the effect of gravity on slide unit thus ensuring the maximum availability of motor torque for cutting. It also helps to prevent the fall of slide in case of Z axis clutch trip. **for VTL-25 is optional**

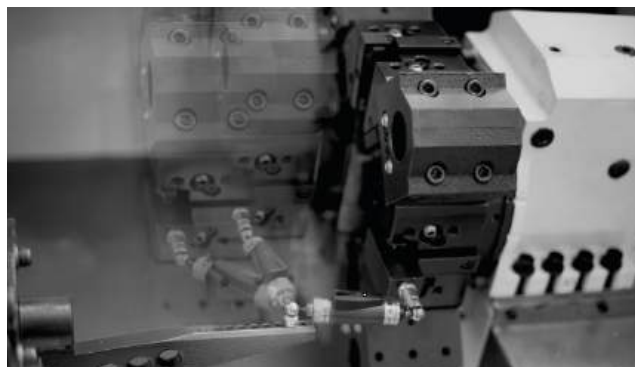
Spindle Testing

All spindle units undergo stringent testing in a controlled environment, including thermal stabilisation to ensure guaranteed performance. Temperature of spindle on running condition is monitored to ensure optimal bearing longevity by stabilising it thermally.



Machine Testing & Calibration

Apart from stage wise inspection, all machines after final assembly, are tested as per stringent quality standards including ball bar testing and LASER calibration. These tests precisely tracks the movement of axes through a series of synchronized movements and helps in ensuring desired linear positioning and repeatability of every machine.



Ball Bar Testing



Laser Calibration

VTL SERIES | VERTICAL TURNING CENTERS



VTL SERIES | VERTICAL TURNING CENTERS

Easy Accessibility

"VTL offers easy accessibility for job loading with its wide front door entry, making it effortless to handle and position heavy components."

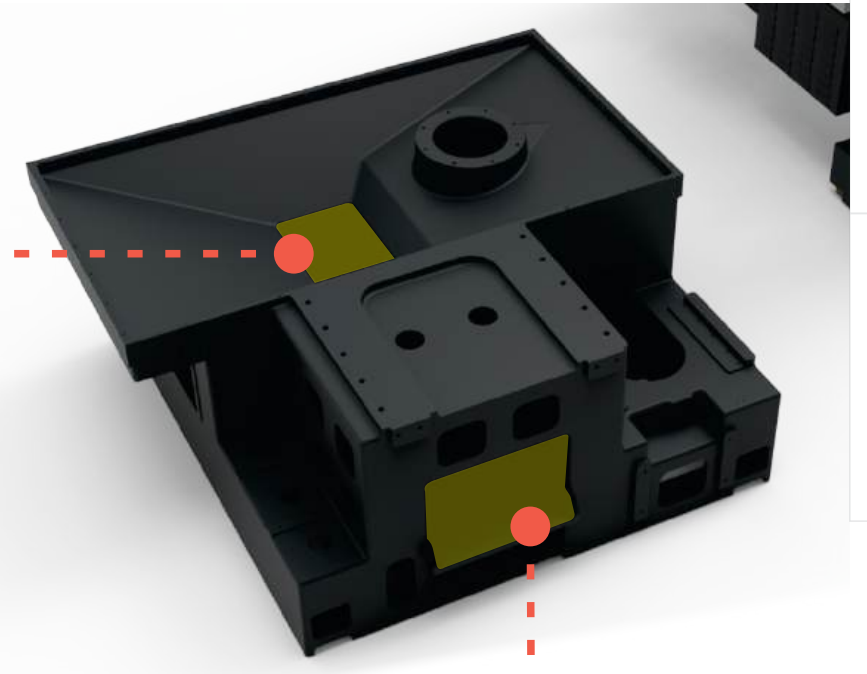


Efficient Chip Disposal

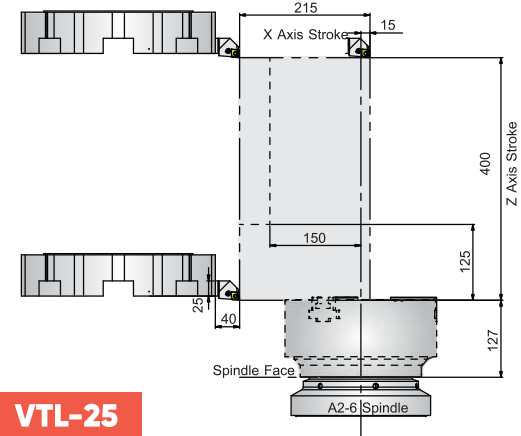
"Efficient chip evacuation in the VTL is ensured through strategically placed chip conveyors and coolant systems, which effectively remove chips from the cutting area, maintaining a clean and productive work environment."

Chip Evacuation Area

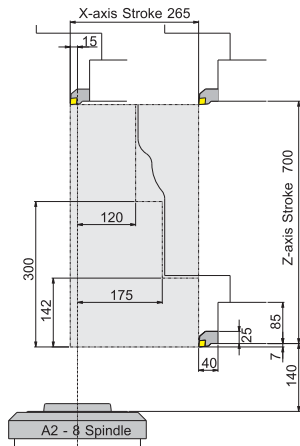
Chip Conveyor Mounting Area



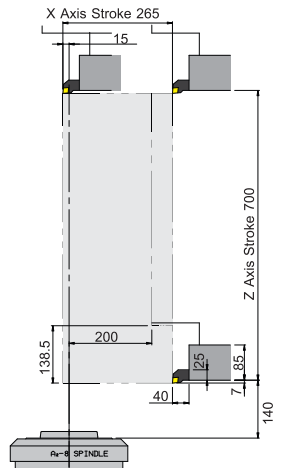
Machining Range



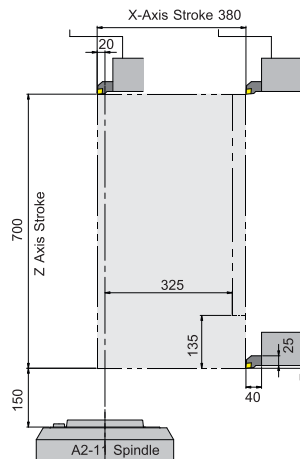
VTL-25



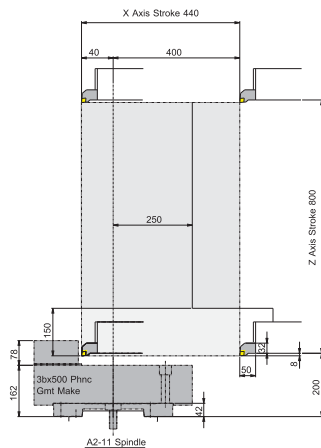
VTL-30



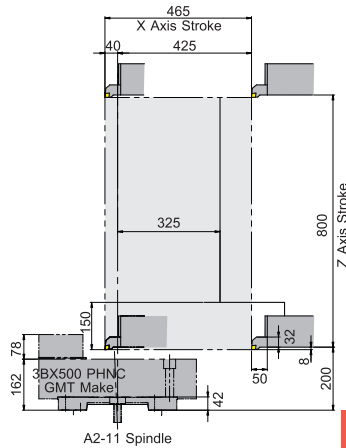
VTL-300 XL



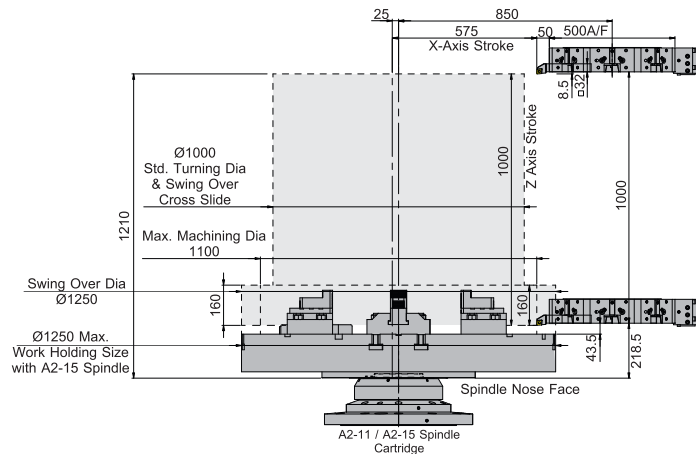
VTL-30 Plus



VTL-40

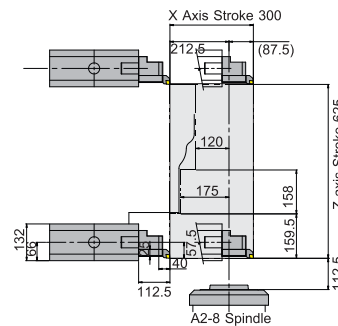


VTL-400 XL/LM

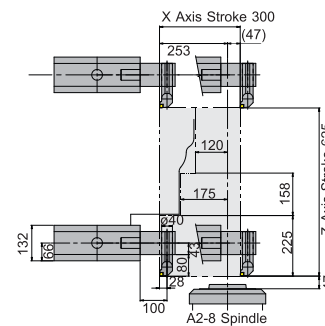


VTL-45 XL

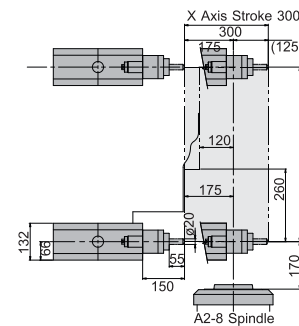
VTL-30 M



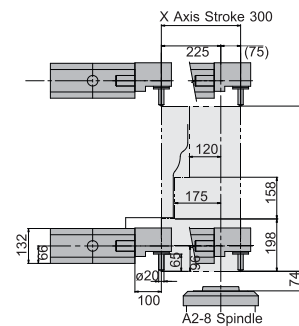
Left Hand Tool Holder-Axial (from C2)



Boring Bar Holder

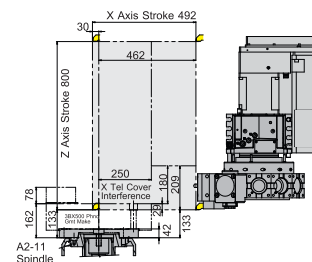


Rotary Tool Holder Axial (used As Radial)

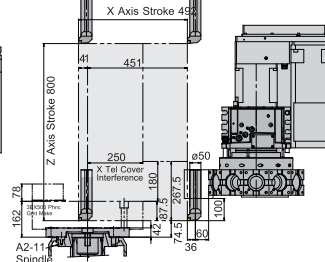


X Rotary Tool Holder Radial (Used As axial)

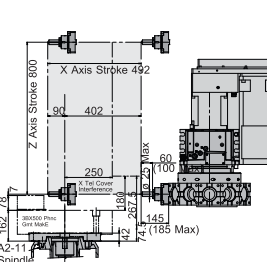
VTL-40 M



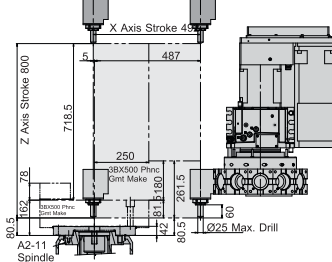
Right Hand Tool Holder Axial



Boring Bar Holder



Rotary Tool Holder Axial



X-Rotary Tool Holder Radial

Standard Features

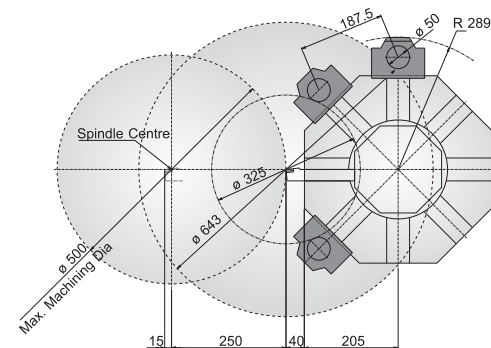
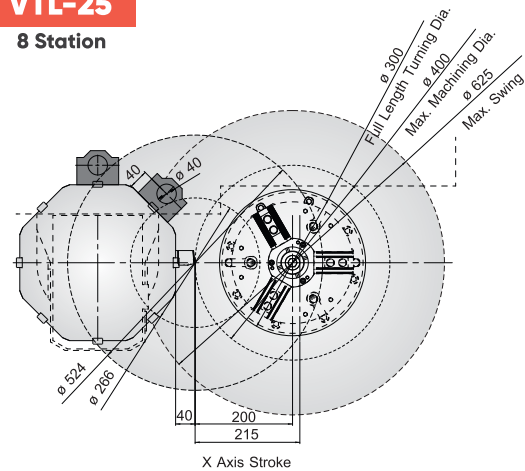
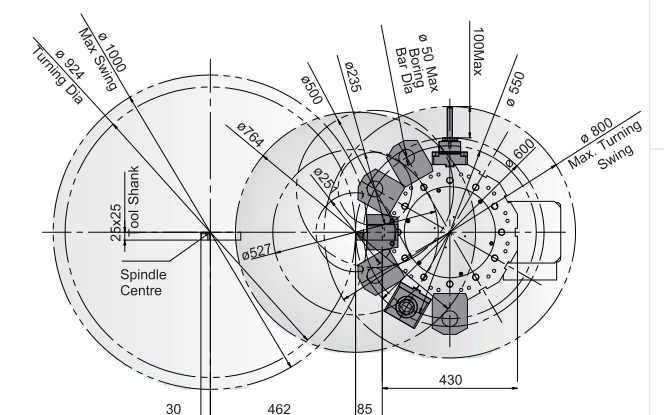
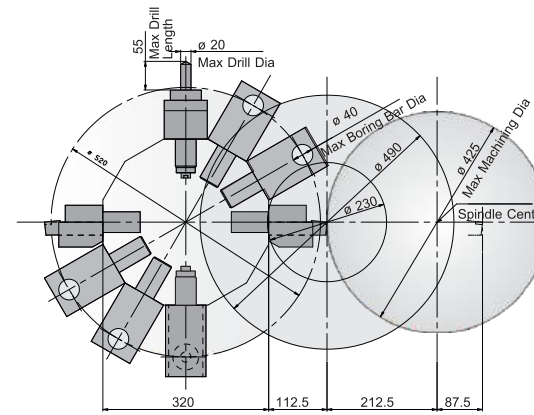
- Cartridge type spindle
- AC spindle drives and axes drives
- High speed bi-directoral tool Turret
- Heavy duty LM Guideways or Hardened & Ground Box Guideways
- Automatic centralised oil lubrication
- Built-in lighting system
- Hydraulic counter balance system for Z axis
- Torque enhancement by Star-delta
- Overload trip clutches for feed axes
- Basic hydraulic system
- Coolant system with rear chip tray
- OD turning tool blocks
- Boring bar holders
- Facing tool holders
- Set of sleeves for boring bars

Optional Features

- Fully tooled up solutions to meet customer needs
- Chip conveyor at rear / side
- A wide variety of power operated work-holding (chucks, collets, fixtures, etc) and tooling
- 12 station Turret
- Auto door
- ZF Gearbox

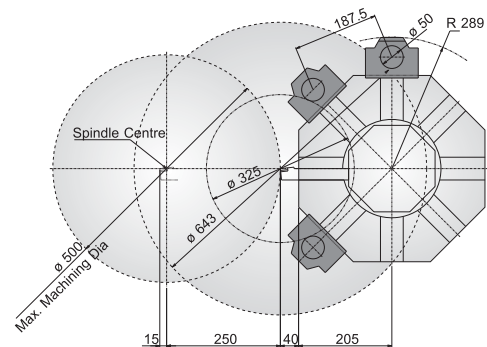
VTL-300 XL

VTL-30
8 Station

**VTL-30M****VTL-40 M**

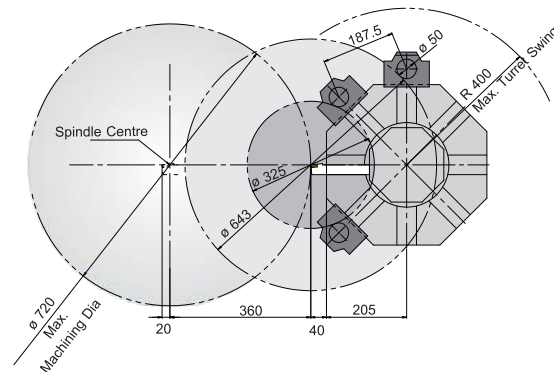
VTL-300 XL

8 Station



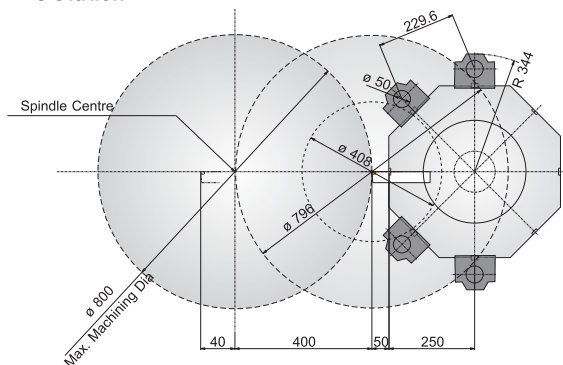
VTL-30 Plus

8 Station



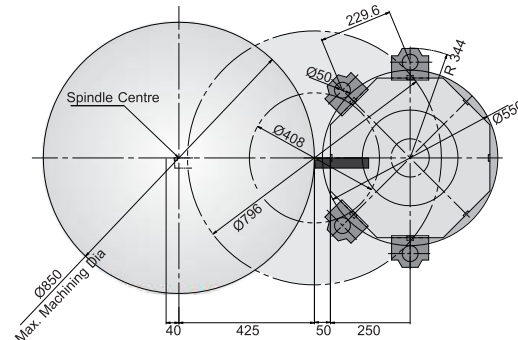
VTL-40

8 Station



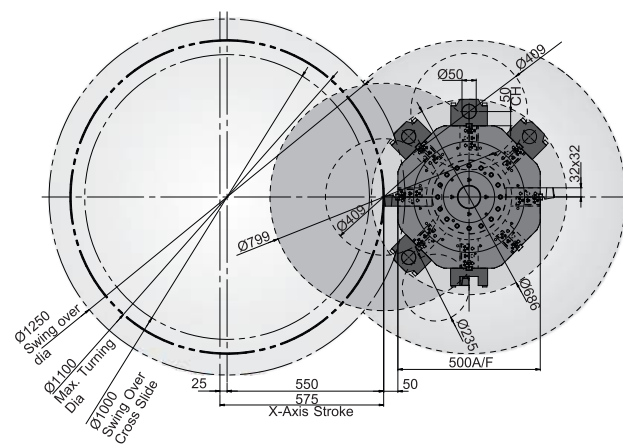
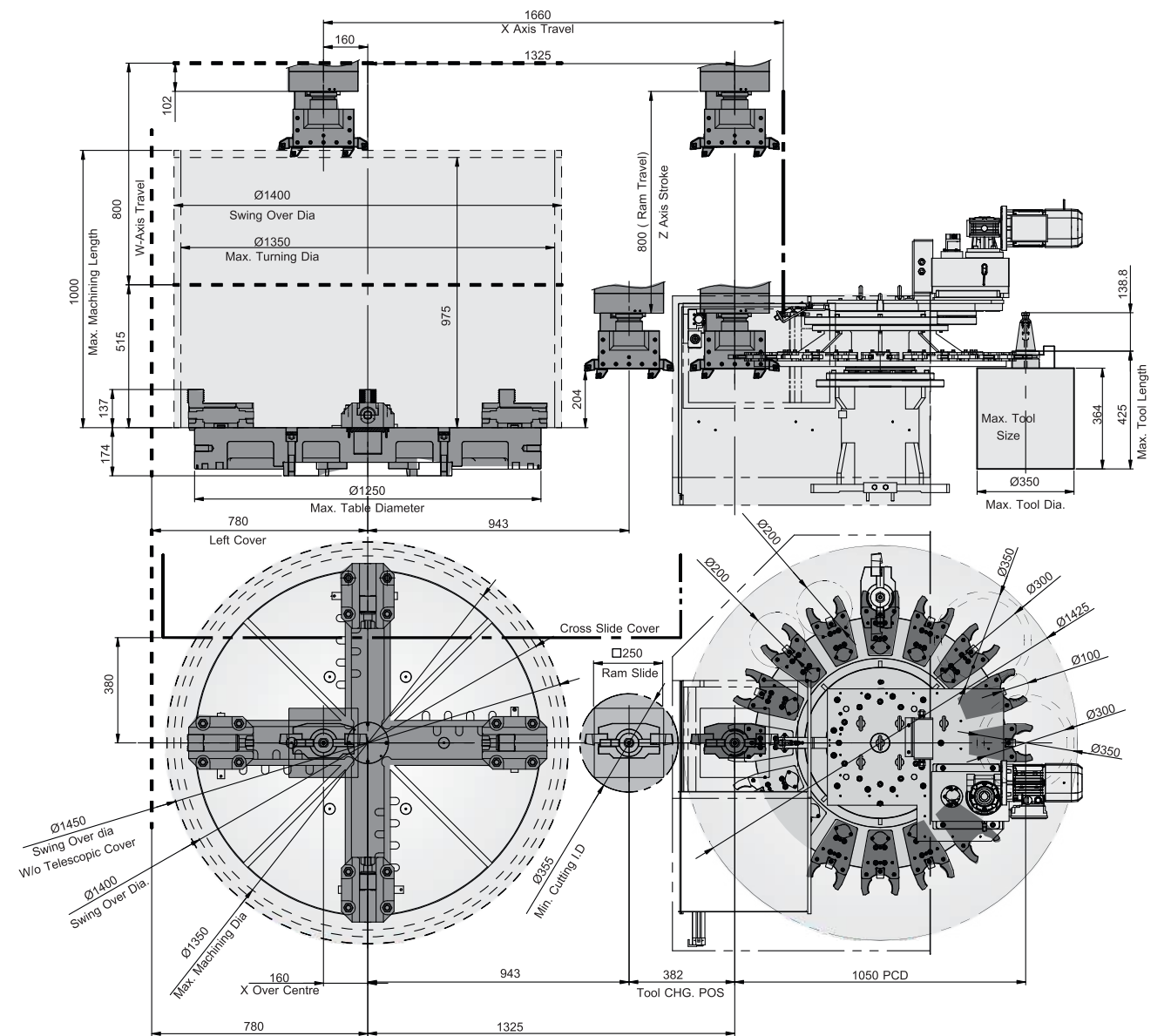
VTL-400 XL/LM

8 Station



VTL-45 XL

8 Station

**VTL-50M**

Power Torque Diagram

VTL SERIES | VERTICAL TURNING CENTERS

VTL SERIES | VERTICAL TURNING CENTERS

VTL SERIES

BASIC INFO

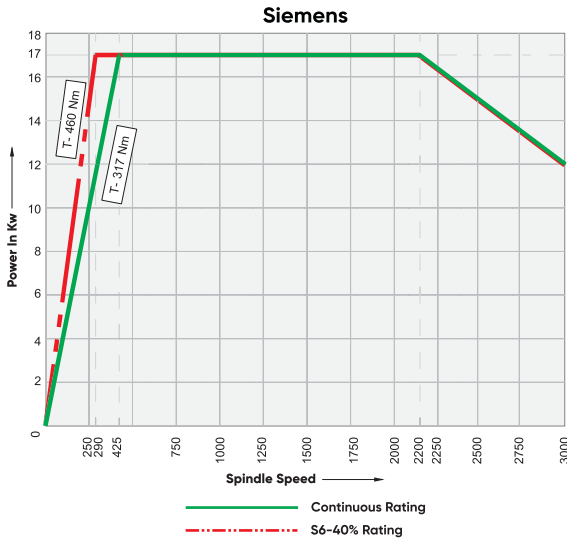
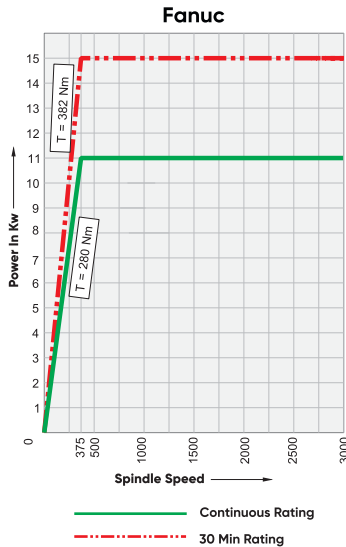
DRAWINGS

FEATURES

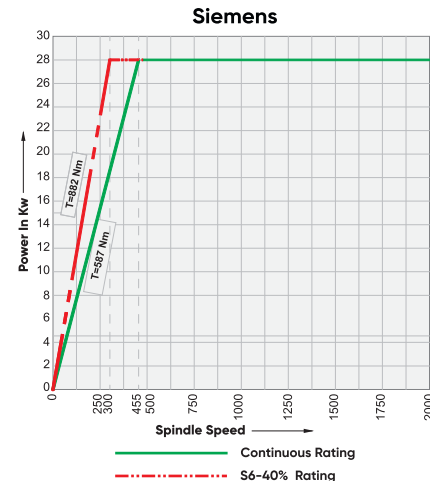
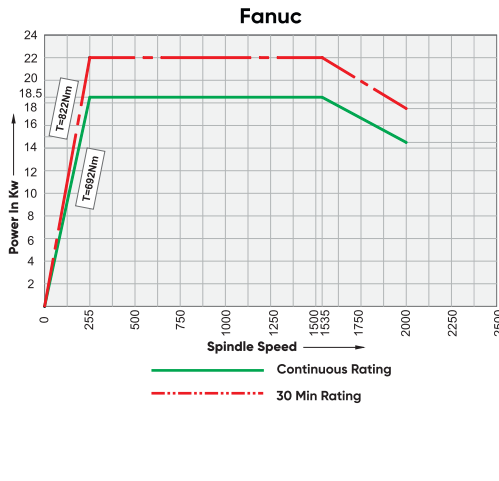
APPLICATIONS

SPECIFICATIONS

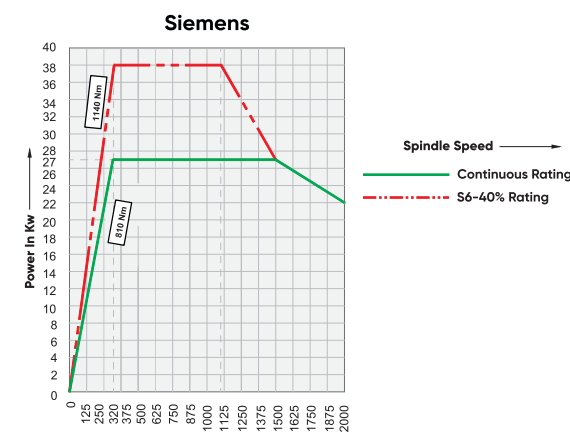
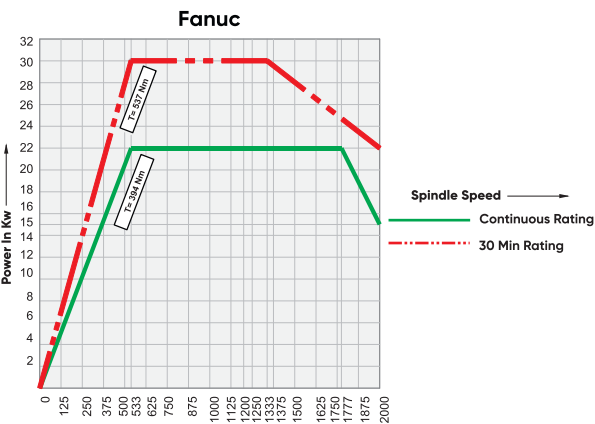
VTL-25



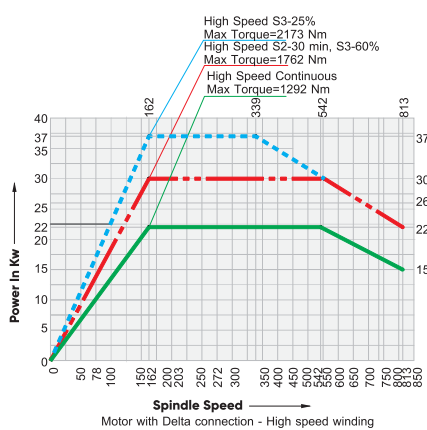
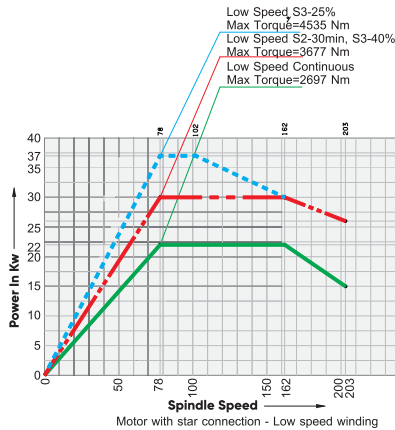
VTL-30 / VTL-30 Plus / VTL 300 XL



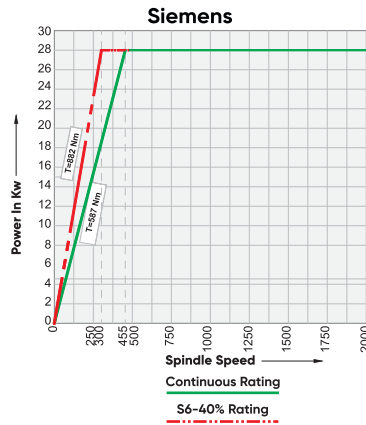
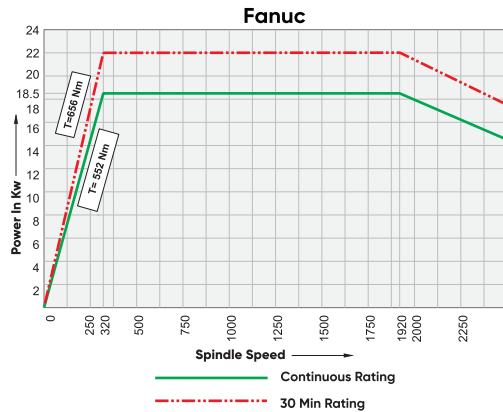
VTL-40 / VTL-400 XL / LM



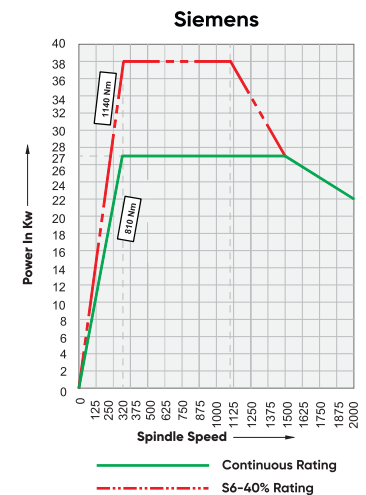
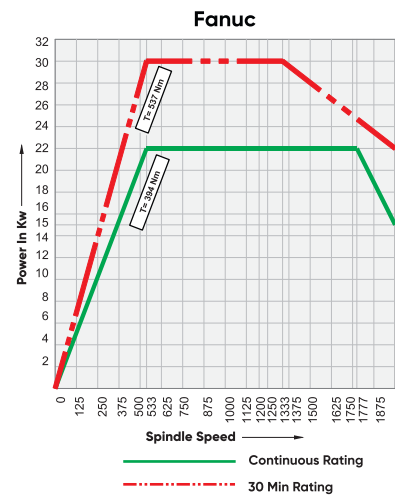
VTL-45 XL



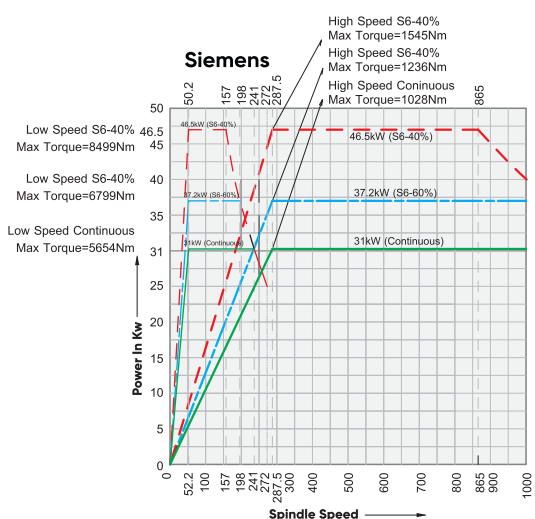
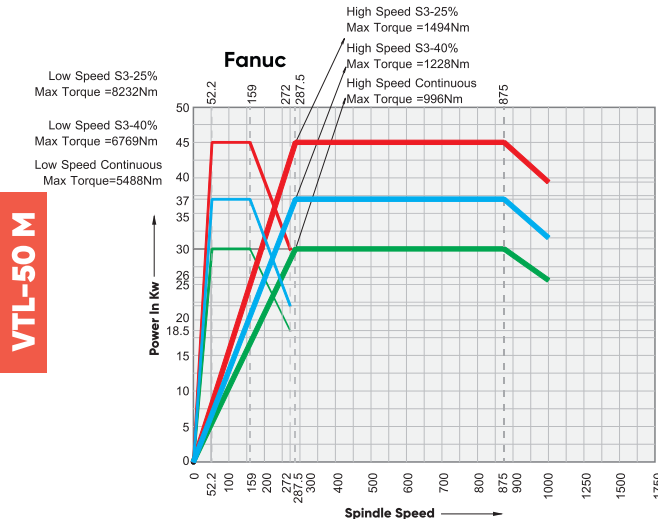
VTL-30 M



VTL-40 M



VTL-50 M



VTL SERIES

BASIC INFO

DRAWINGS

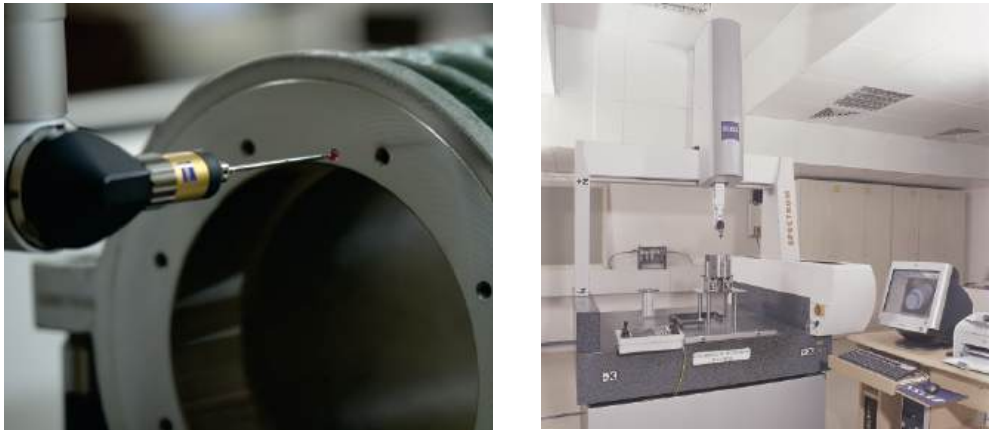
FEATURES

APPLICATIONS

SPECIFICATIONS

Quality Assurance

Passionately ensuring quality is one of our core values. We have established a system of quality in line with the ISO 9001-14001 standards. Ensuring quality at every stage of machine building is achieved as a result of deploying key strategies and systematic processes.



Quality Assurance of Components and Sub Systems

- All Critical components are manufactured inhouse or by group companies.
- 100% percent inspection of all critical components is performed with the help of test rigs and precision co-ordinate measuring machines (CMM).
- Regular quality audits are conducted at suppliers facilities.

Quality Assurance during Assembly

- Series of geometrical tests at different stages are conducted, as per industry standards.

Final Product Quality Assurance

- Cutting and load tests to ensure performance at its maximum capacity
- CNC parameters of the machines are tuned using specialized software
- Continuous sequence running test for 8 hours
- Ball bar testing
- Laser Calibration

Applications



VTL SERIES

BASIC INFO

DRAWINGS

FEATURES

APPLICATIONS

SPECIFICATIONS

VTL SERIES

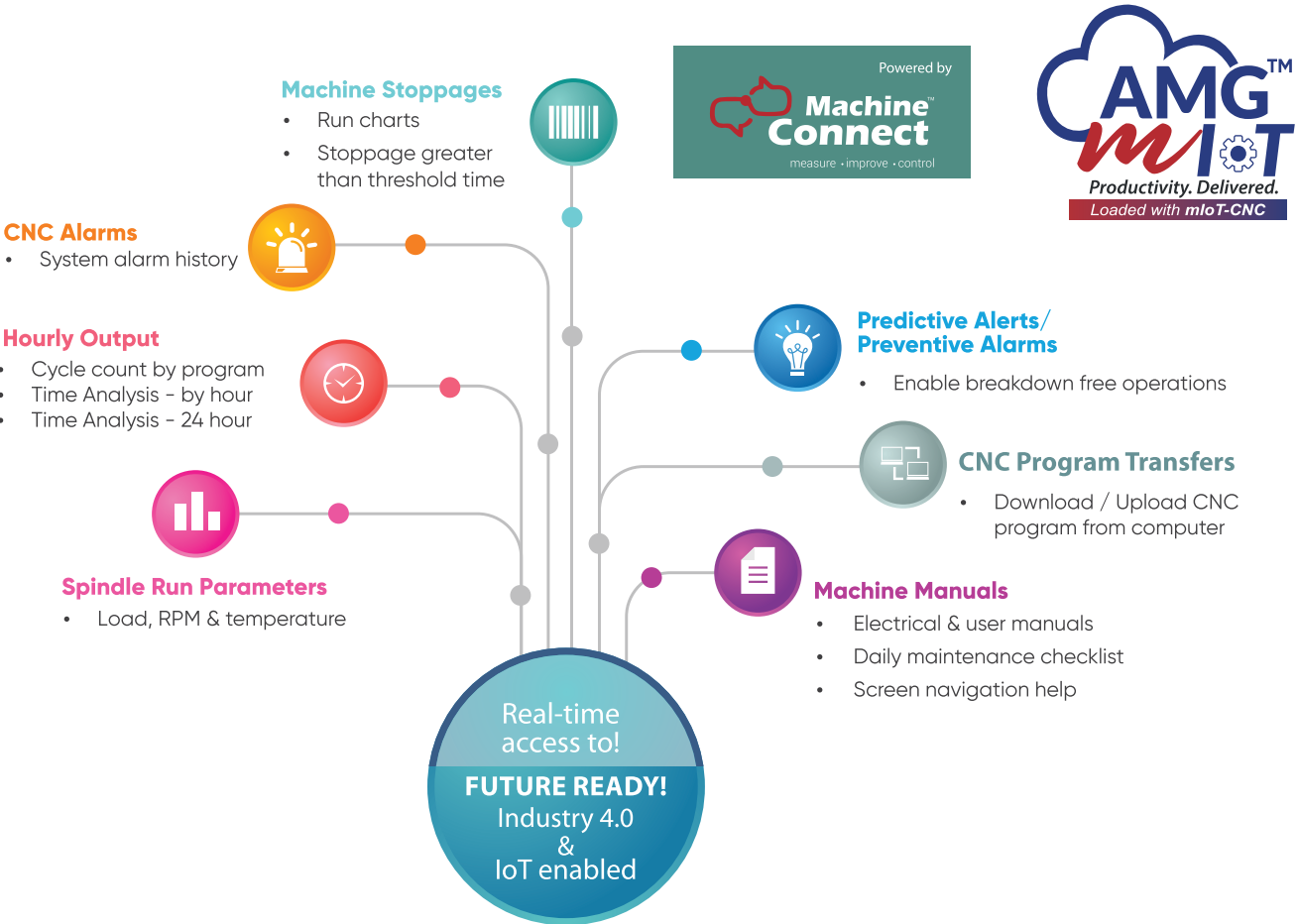
BASIC INFO

DRAWINGS

FEATURES

APPLICATIONS

SPECIFICATIONS



Specifications

VTL SERIES

BASIC INFO

DRAWINGS

FEATURES

APPLICATIONS

SPECIFICATIONS

Control System		Fanuc / Siemens	Fanuc / Siemens	Fanuc / Siemens	Fanuc / Siemens
Capacity	Units	VTL 25	VTL 30 700	VTL 300 XL	VTL 30 M
Swing Over Bed	mm	625	800	800	800
Swing Over Carriage	mm	300	240	400	240
Max Turning Dia ²	mm	400	500	500	425
Max Turning Length ¹	mm	400	700	700	625
Standard Chuck Size Dia		Ref. Quote	Ref. Quote	Ref. Quote	Ref. Quote
Spindle					
Spindle Nose		A2-6	A2-8	A2-8	A2-8
Max Spindle Speed ³	rpm	3000	2500	2500	2500
Bore Through Spindle	mm	47	47	47	47
Spindle Motor Power - Fanuc (Continuos / 30 min / S3-25% Rating)	kW	11 / 15	18.5 / 22	18.5 / 22	18.5 / 22
Spindle Motor Power - Siemens (Continuos / S6-40%)	kW	17 / 17	28 / 28	28 / 28	28 / 28
Full Power Range - Fanuc / Siemens		385-3000 512-2200	320-1920 570-2500	320-1920 455-2000	320-1920 455-2000
Axis					
X Axis Stroke	mm	215	265	265	300
Z Axis Stroke	mm	400	700	700	625
W Axis Stroke	mm	NA	NA	NA	NA
X & Z Axes Guideways		LM	LM	HGBT	LM
X & Z Axes Rapid Traverse rate	m/min	20	20	20	15 / 20
Tooling					
Turret Type		Electro Mechanical	Electro Mechanical	BTP-125	Radial Servo
No. of Stations	mm	8	8 (12)	8 (12)	12
Max Boring bar Dia	mm	Ø40	Ø50 (Ø40)	Ø50	40
OD Turning tool	mm	25x25	25x25	25x25	25x25
Rotary Tool Motor Power	kW	NA	NA	NA	4.5
Live Tool Speed	rpm	NA	NA	NA	3000
Coolant System					
Coolant Tank Capacity	L(ltr)	350	200	200	200
Hydraulic System					
Hydraulic Pump Capacity	Lpm	14	14	14	14
Hydraulic Power Pack Tank Capacity	L(ltr)	45	45	45	45
Over all Dimensions (L×W×H)	mm	1600x1910 x2530	1840x3355 x2615	3350x1860 x3009	1840x2210 x2950
Over all Weight	Kg	~4500	~7000	~7000	~7000

1 Refer machining range diagram
3 With appropriate work holding
2 Refer Interference diagram
() Values mentioned in bracket are optional

Note : Specifications are correct at the time of printing. We are continuously working on our product development. The information and specifications published in the catalog are subject to modification.

Fanuc / Siemens	Fanuc / Siemens	Fanuc / Siemens	Fanuc / Siemens	Fanuc / Siemens	Fanuc / Siemens
VTL 30 Plus	VTL 40	VTL 40 M	VTL 400 XL/LM	VTL 45 XL	VTL 50 M
1000	1000	1000	1000 / 1100	1250	1400
650	500	500	650	1000	760
720	800	920	850	1100	1350
700	800	800	800	800	1000
Ref. Quote	Ref. Quote	Ref. Quote	Ref. Quote	Ref. Quote	1250
A2-11	A2-11	A2-11	A2-11	A2-11	A2-15
2000	2000	2000	2000	1600	1000**
65	65	65	65	65	110
18.5 / 22	22 / 30	22 / 30	22 / 30	22 / 30 / 37	30 / 37 / 45 (with Gear Box)
28 / 28	27 / 38	27 / 38	27 / 38	31/44	31 / 37.2 / 46.5
260-1535 455-2000	535-1777 320-1500	535-1775 320-1500	535-1777 320-1500	300-1000 108-515	52 - 159 & 287 - 875 52 - 241 & 287 - 1000
380	440	500	465	580	1500
700	800	800	800	1000	800 (Ram Axis)
NA	NA	NA	NA	NA	800 (200x4)
LM	LM	LM	HGBT / LM	HGBT	Integral HGBT
20	20	20	20	20	10
Electro Mechanical	Electro Mechanical	Radial Servo	BTP-160	BTP-160	Milling Spindle BT-50
8 (12)	8	12	8 (12)	8 (12)	UATC - 16
50 (40)	50	50	50	50	50
25x25	32x32	25x25	32x32	32x32	32x32
NA	NA	5	NA	NA	11/15/18.5
NA	NA	3000	NA	NA	2400
200	200	200	200	250	350
14	14	14	14	14	20
45	45	45	45	45	45
2210x3230 x2950	2210x2620 x3250	2210x3290 x3250	2510x3255 x3410	2900x3350 x4100	3770x4325x5000
~10,000	~10,000	~9500	~11,000	~13,000	~25,500

VTL SERIES

BASIC INFO

DRAWINGS

FEATURES

APPLICATIONS

SPECIFICATIONS