

CNC TURNING LATHE

VT-15L VT-17L VT-18L

HIGH PRECISION

- ▶ 6 or 8-inch chuck
- ▶ Live VDI-30 turret
- ▶ Rigid box ways



VIPER



*Perform
Hard Turning
On A Small
Footprint*

VT-SERIES

15L

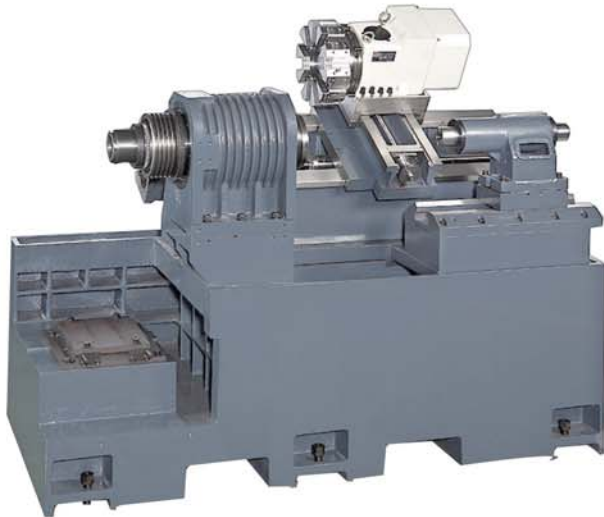
17L

18L

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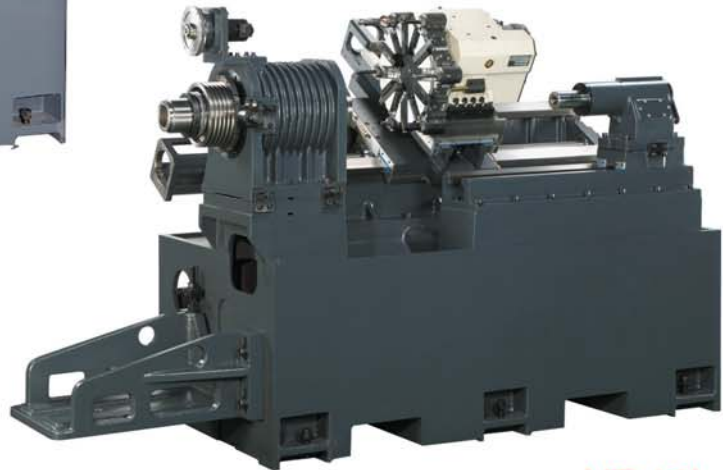
High Precision

Turning Centers For Micro-Finishing and Hard-Turning



VT-15L / VT-17L

Z-Axis ways are box-type design and the X-Axis ways feature a box-type layout.



VT-18L

SOLID CONSTRUCTION

Rigid, one-piece Meehanite cast-iron-bed. Viper turning center construction provides the ultimate in machine tool accuracy and reliability.

A 30° slant bed design for our **VT-15L**, **VT-17L** and **VT-18L** gives Viper its exceptional cutting stability facilitating optimal chip removal. Cutting reaction forces are minimized resulting in a high degree of precision. Both X and Y axes on Viper turning centers are supported by oversized hardened and ground box type ways which facilitates exceptionally fast

cutting rates of 787 ipm (20 M/min.) on the X-Axis and 787 ipm (20 M/min.) on the Z-Axis.

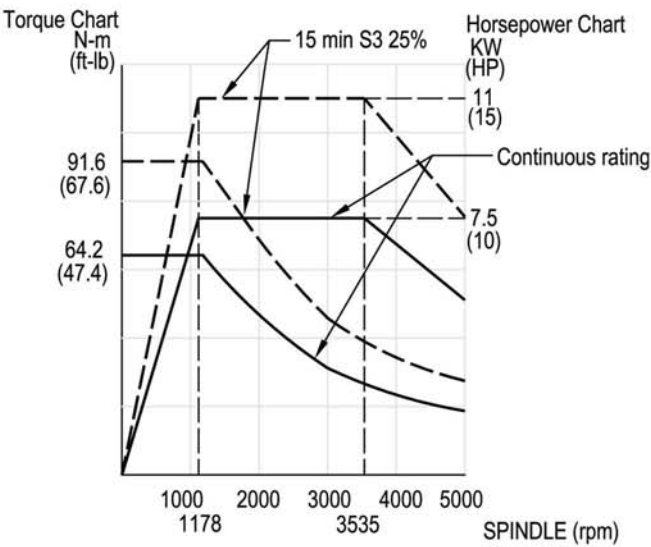
PERFORMANCE FEATURES

- 6000 rpm for Micro-Finishing
- High Speed Servo Turret*
- 20 hp Spindle Motor*
- VDI-30 Live Turret*

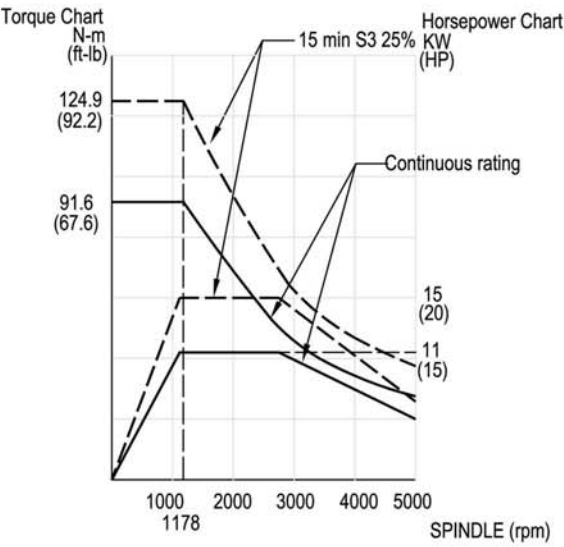
(*) Optional accessory.

TORQUE CHARTS

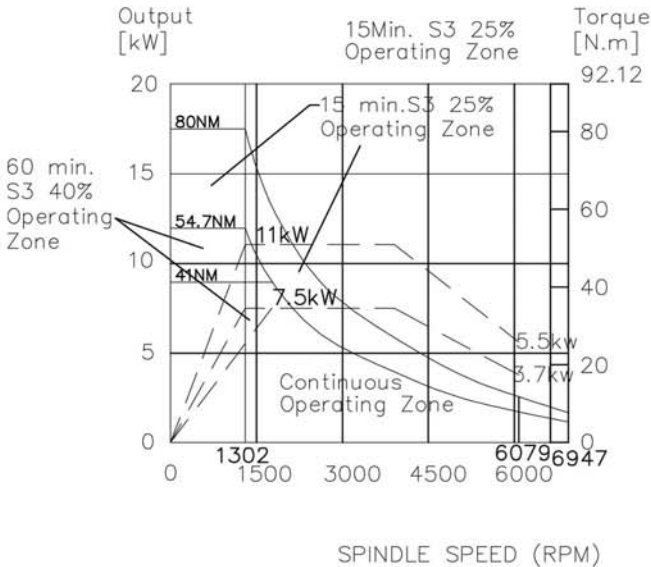
VT-15/17 Torque Chart



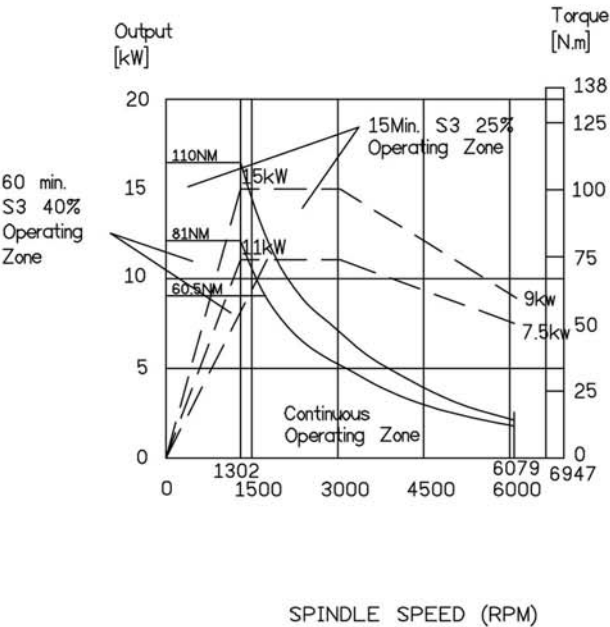
VT-15/17 Torque Chart (Option)



VT-18 Torque Chart



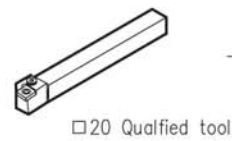
VT-18 Torque Chart (Option)



TURRET TOOLING

Static Block Tool

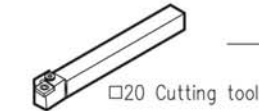
O.D. and face work



Direct mounting on turret



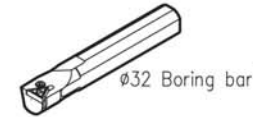
Face and I.D. work



Tool holder for face work



I.D. Cutting



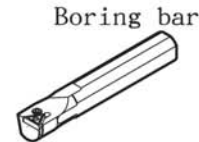
Boring bar holder (U-Drill)



Boring bar holder



Boring bar sleeve



- (φ25)
- (φ20)
- (φ16)
- (φ12)
- (φ10)
- (φ8)



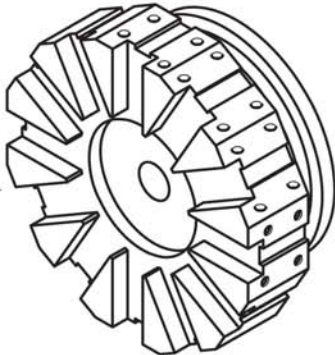
Boring bar sleeve

- (φ16)
- (φ12)
- (φ10)
- (φ8)



Drill socket

- (MT2)
- (MT3)



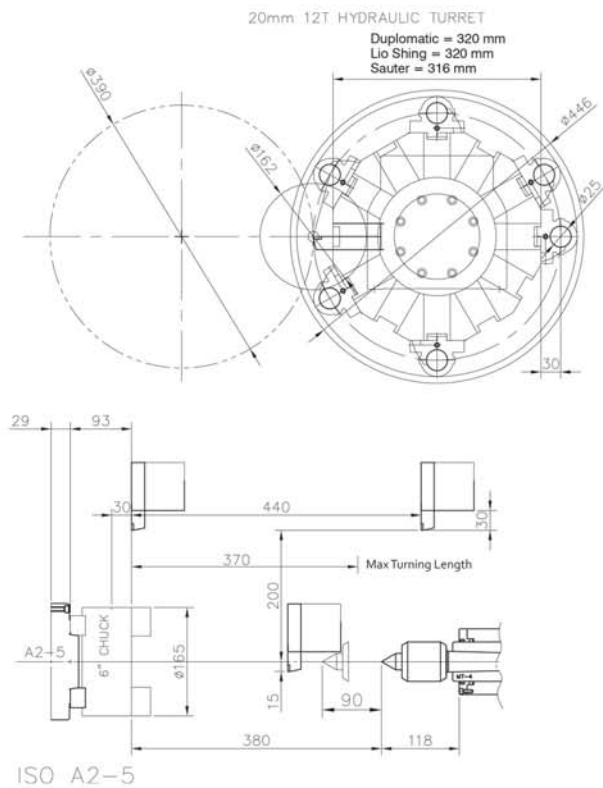
Turret head

Units = mm

TURRET INTERFERENCE DRAWING

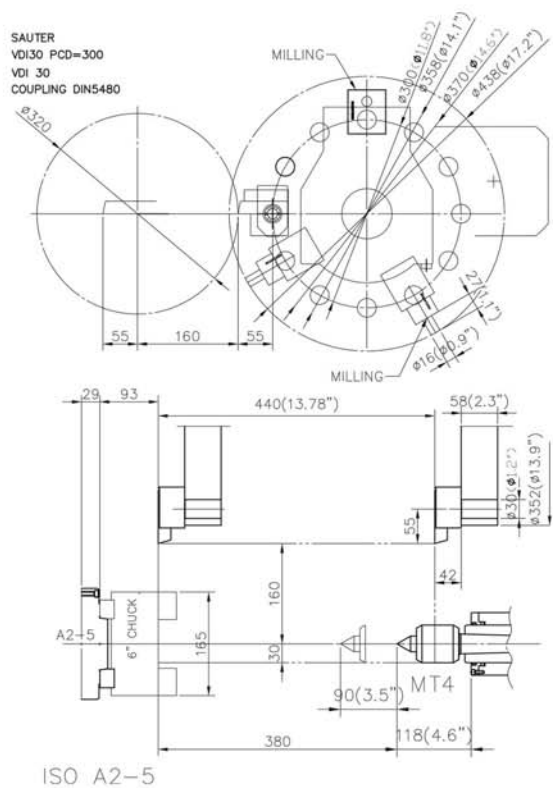
VT-15L

Static Block Tool



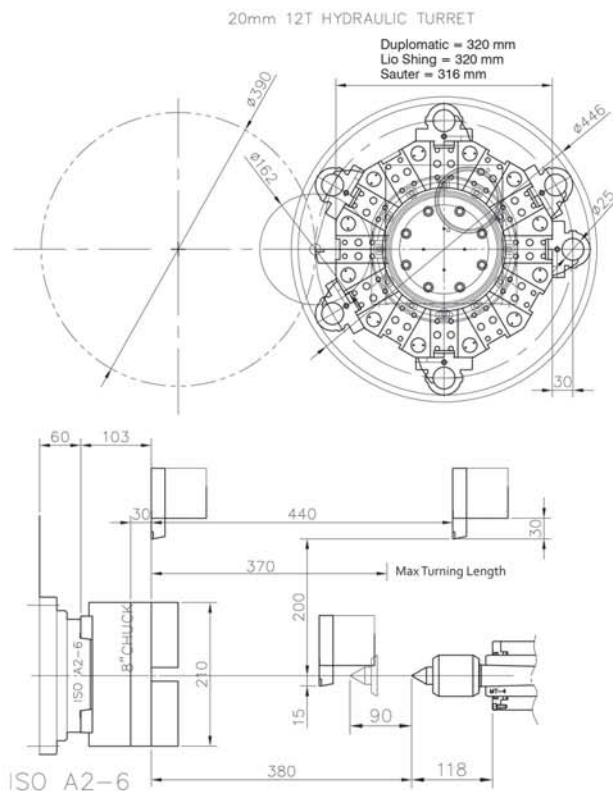
VT-15L

Live VDI 30



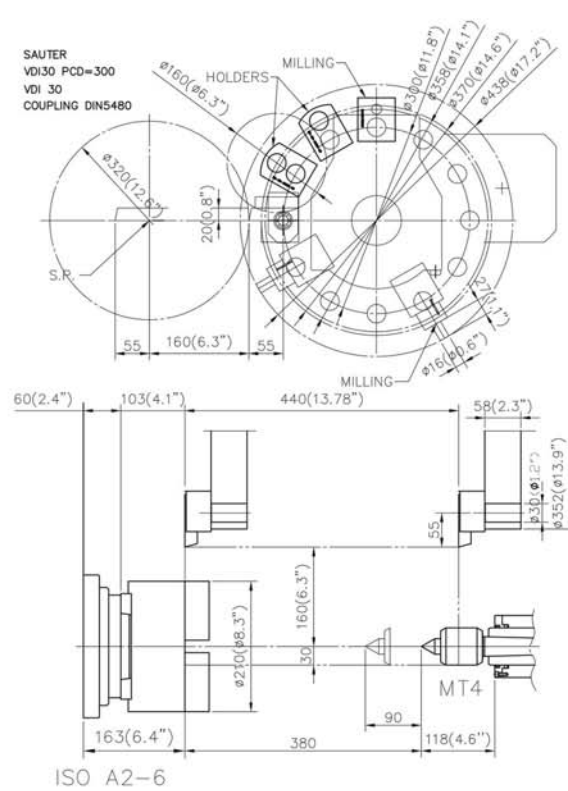
VT-17L

Static Block Tool



VT-17L

Live VDI 30

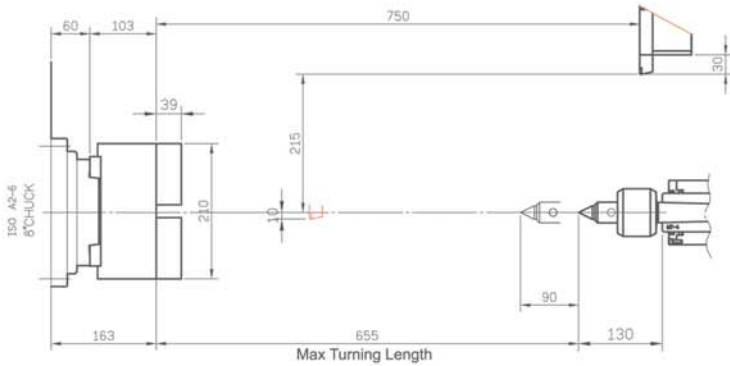
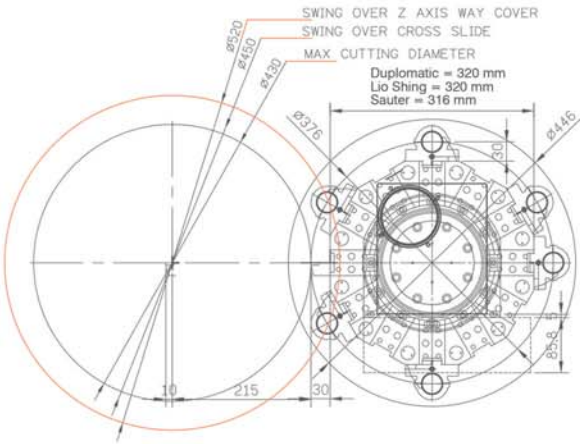


TURRET INTERFERENCE DRAWING

VT-18L

Static Block Tool

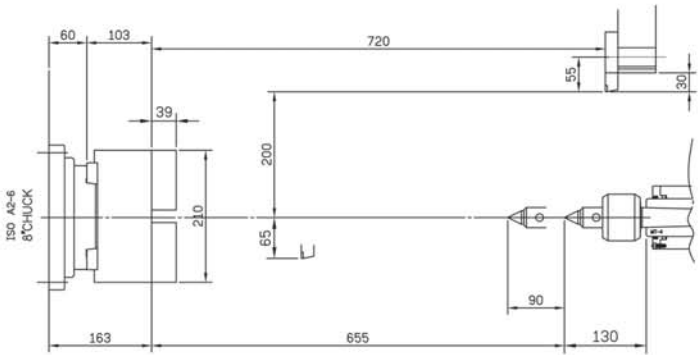
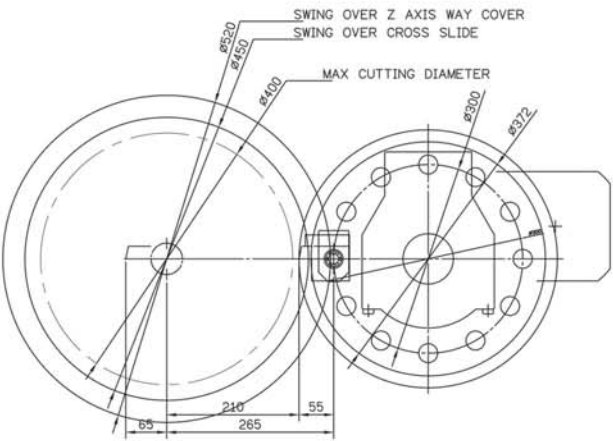
HYDRAULIC TURRET
12T



VT-18L

Live VDI 30

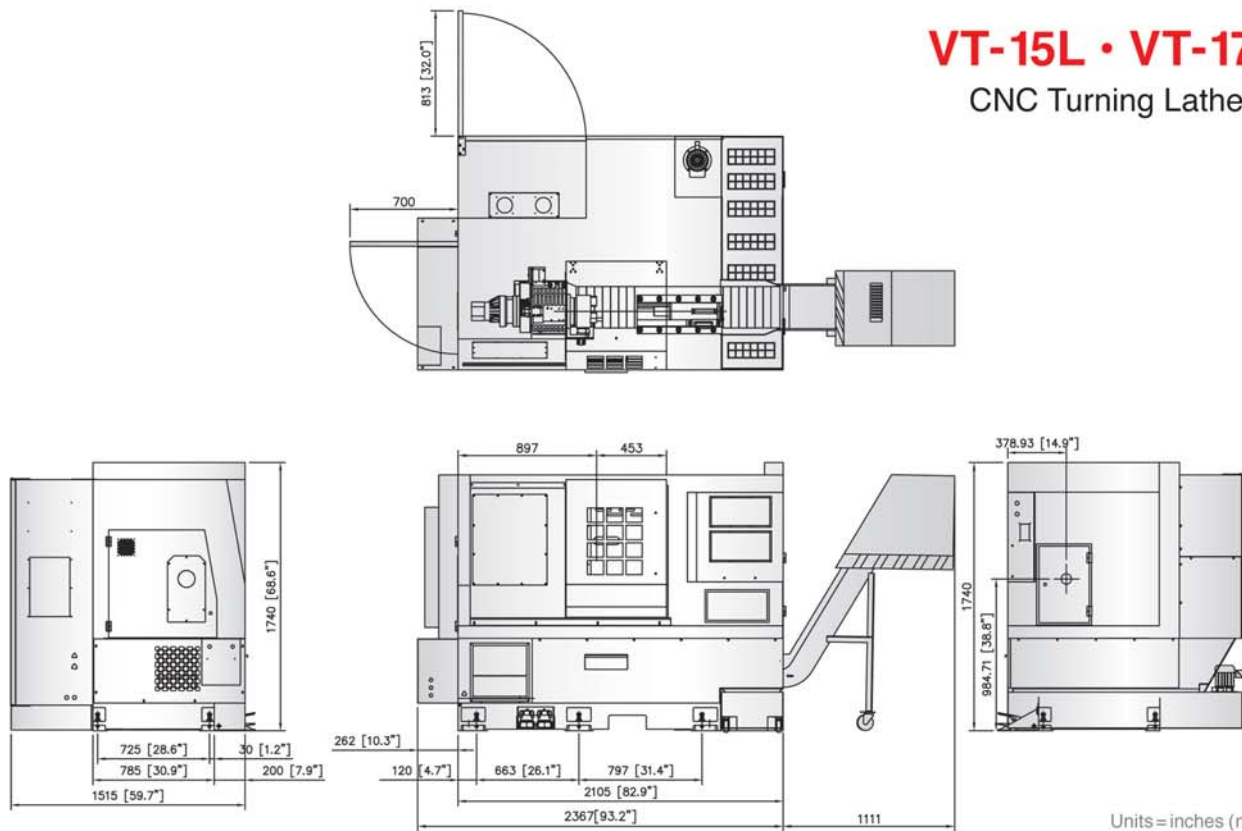
LIVE TURRET AXIAL
VDI30 PCD=300



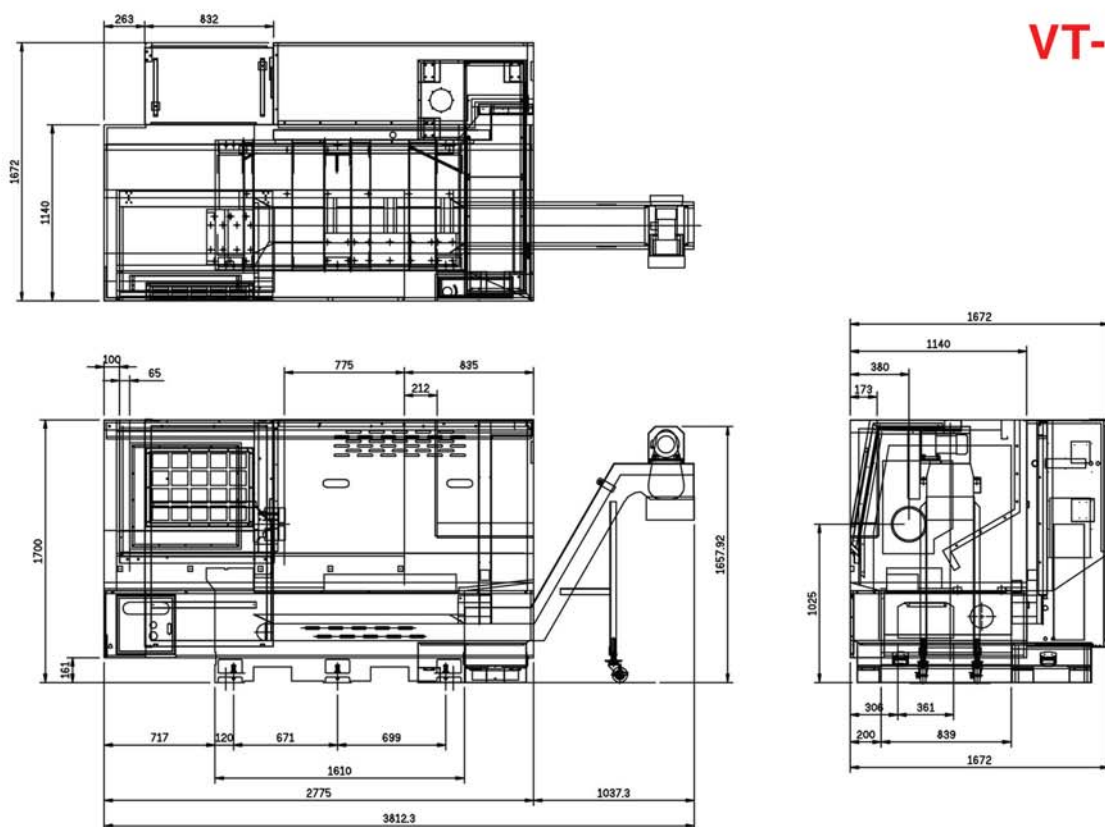
MACHINE DIMENSIONS

VT-15L • VT-17L

CNC Turning Lathe



VT-18L



Machine Specifications

ITEM	UNIT	VT-15L	VT-17L	VT-18L
CAPACITY				
Swing over Z way cover	in (mm)	18.9 (480)	18.9 (480)	20.4 (520)
Max. turning diameter	in (mm)	15.3 (390)	15.3 (390)	16.9 (430)
Swing over cross slide	in (mm)	11 (280)	11 (280)	17.7 (450)
Distance between centers	in (mm)	14.6 (370)	14.6 (370)	25.6 (650)
Max. turning length	in (mm)	14.6 (370)	14.6 (370)	25.6 (650)
Slideway slant angle	degree	30	30	30
TRAVEL				
X-axis travel	in (mm)	7.87+0.59(200+15)	7.87+0.59(200+15)	8.85+0.39 (225+10)
Z-axis travel	in (mm)	18.5 (470)	18.5 (470)	29.5 (750)
SPINDLE				
Type of spindle nose	ISO	A2-5	A2-6	A2-6
Chuck diameter	in (mm)	6 (152)	8 (204)	8 (204)
Main spindle bearing inner diameter	in (mm)	3.5 (90)	4.3 (110)	4.3 (110)
Main spindle through hole diameter	in (mm)	2.0 (51)	2.4 (61)	2.4 (61)
Main spindle through bar capacity	in (mm)	1.7 (42)	2.0 (51)	2.0 (51)
Main spindle drive motor	hp (kW)	15 (11)	15 (11)	15 (11)
Main spindle speed range	rpm	6000	5000	5000
TURRET				
Turret type (Tool number)	—	Static Block Tool (12)/(10)*OPT Live VDI-30(12)		
Turret indexing time	second	0.8 = Hydraulic Driven / 0.15 = Servo Driven		
Live tool speed	rpm	6000	6000	5000
Live tool power (30 min.)	hp(kW)	5.0 (3.5)	5.0 (3.5)	5.0 (3.5)
FEEDRATE				
Rapid traverse rate X-axis	ipm (M/min.)	787 (20)	787 (20)	787 (20)
Rapid traverse rate Z-axis	ipm (M/min.)	787 (20)	787 (20)	787 (20)
Ballscrew diameter of X-axis	in (mm)	1.1 (28)	1.1 (28)	1.1 (28)
Ballscrew diameter of Z-axis	in (mm)	1.26 (32)	1.26 (32)	1.26 (32)
TAILSTOCK				
Tailstock travel	in (mm)	11.8 (300)	11.8 (300)	25.7 (655)
Tailstock quill diameter	in (mm)	2.4 (60)	2.4 (60)	2.4 (60)
Tailstock quill diameter travel	in (mm)	3.14 (80)	3.14 (80)	3.54 (90)
Taper hole of tailstock quill	—	MT-4	MT-4	MT-4
OTHER				
Power requirements	V (kVA)	208 (20) 3 Phase	208 (20) 3 Phase	208 (20) 3 Phase
Coolant pump motor	hp(kW)	0.75 (0.56)	0.75 (0.56)	0.75 (0.56)
Coolant tank capacity	gal (L)	54 (205)	54 (205)	66 (250)
Floor space	in (mm)	100 x 79 (2550 x 2010)	100 x 79 (2550 x 2010)	109 x 65 (2775 x 1672)
Machine weight	lbs(kg)	8140 (3700)	8250 (3750)	8366 (3795)

Design and specifications are subject to change without prior notice.

* Optional accessory | ** Factory order only

Optional Accessories

- Air chuck
- Automatic gantry loading and unloading system
- Bar feeder interface (Factory order only)
- Collect chuck (16C)
- Heavy parts loader
- High pressure coolant pump and large capacity tank
- High pressure coolant through turret 300 psi (4 gpm)
- High pressure coolant through turret 1000 psi (8 gpm)
- Parts catcher (2.5" x 6")
- VDI-30 live turret: 12-station turret
- 20 hp spindle motor (for non-live turret)
- Self-centering steady rest SMW autoblok
- Tool presetter
- Torque limiter clutch

Standard Features

- Auto Lubrication System
- Block for Base
- Cooling System and Chip Tray
- Coolant Tank Guard
- Chip Conveyor
- Fluid Bearing Way System
- Hard Jaw (1 Set)
- Heat Exchange for Control System
- Hydraulic Adjustment System
- Lubrication Monitoring System
- Soft Jaw (1 Set)
- Tool box with Hand Tool
- Work Lamp



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