

CNC TURNING LATHE

VT-30 VT-33

HIGH PERFORMANCE

- ▶ 15 or 12-inch chuck
- ▶ Live Milling and Sub-Spindle
- ▶ 3000 rpm / 35 hp



Bed Lengths
up to 80.7" (2050mm)

VIPER



*Ideal for Big
Diameter
and Long
Turning Jobs*

VT-SERIES

30

33

www.alex-tech.com

Superior Performance

Large Bore with Heavy Duty Turret



PERFORMANCE FEATURES

- Live Milling
- Sub-Spindle
- Static VDI-40 Turret*
- 35 / 50 hp* Motor

YOUR MIGHTY VIPER EDGE

From micro-finishing to hard-turning, shaft and flange work pieces, Viper turning centers are known worldwide for their durability and affordability. They're rigid, high-performing, precision-cutting CNC lathes with multi-axis cutting capacity.

The Viper line offers a wide selection of choices, sizes, center distances, specifications and innovative enhancements. Ask for a Viper demo. Then, take your turn.

SOLID CONSTRUCTION

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

A 45° slant bed design for our **VT-30 / VT-33** 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 ways which facilitate exceptionally fast cutting rates.

*Optional accessory.

MACHINE FEATURES

AXES DRIVE SYSTEMS AND BALL SCREW

Viper drives the axis with maximum radial torque through extremely accurate, zero backlash, large-diameter pretensioned

Powerful, robust, ultra-precise Viper ball screws, which are preloaded and double anchored, generate slide way movement in both axes for optimum drive conditions.

double-nut ball screws. Since the feed screws require high-speed feeding and a reverse capability, our VT-Series employs extremely accurate single-pitch ball screws.



TURRET SELECTION

STATIC BLOCK TOOL TURRET

A large, rigid, high speed, precision-ground 0.5 second turret-indexing from station to station, and shortest path indexing, makes Viper excellent for production turning. The turret is designed with 10 stations or 12 stations that accept OD tooling, ID tooling and bore tooling.



PROGRAMMABLE TAILSTOCK

Viper's highly-rigid tailstock is matched-ground to the headstock mounting surface establishing absolute alignment between the two. With a two-piece modular design and center of gravity in the horizontal plane, the heavy-duty tailstock eliminates machine-induced taper into the workpiece.

Viper's tailstock body is positioned by a drive bar which engages with the carriage. Drive bar and tailstock clamping are programmable and tow along. Which means quick setups.

THREE-JAW PRECISION HYDRAULIC CHUCK



- VT-30.....12" (305mm)
- VT-33.....15" (380mm)

STATIC VDI-40 WITH BLOCK TOOL TURRET

Provides easy set up and heavy turning for any job requirement. Designed by Alex-Tech



Patent pending design.

STATIC VDI-40 TURRET

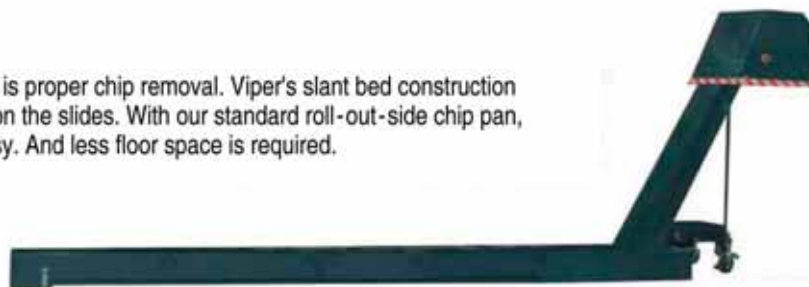
Provides quick and easy set up.



Tailstock for larger models with rotary quill.

CHIP REMOVAL

Essential in the production process is proper chip removal. Viper's slant bed construction prevents chips from accumulating on the slides. With our standard roll-out-side chip pan, Viper chip removal is quick and easy. And less floor space is required.



PERFORMANCE OPTIONS



TOOL PRESETTER

With its tool presetter system, Viper is an ideal machine for both short-run and high production environments. Its tool presetting system assists in reducing set-up time, changing tools and ensures accurate measurement of tool offsets. The tool presetter allows for various checkpoints throughout the program to obtain optimal part accuracy and finish. These tool offsets are quickly and accurately measured by the tool presetter probe system.

TORQUE LIMITER CLUTCH

The clutch disengages when pre-set limiting torque is exceeded and axial movement stops immediately.



A fitted limit switch detects the clutch disengaging movement and signals the drive off. After removal of the overload, the clutch re-engages automatically.

HEAVY PARTS LOADER

An Alex-Tech design, a large capacity parts loader that picks up and unloads parts up to 12" (300mm) / 25 lbs (11kgs).



Available for machines with a chuck size range of 10" (250mm) to 15" (375mm).

BAR FEEDER*

IEMCA servo driven

Model	Bar Capacity	Stroke
V66E 2.59" (65mm) 49" (1244mm)
V66EL 2.59" (65mm) 61" (1550mm)
VIP-80 3.15" (80mm) 61" (1550mm)
VIP-100	... 3.93" (100mm) 63" (1600mm)

*Factory order with machine only.



SELF-CENTERING STEADY REST (SMW AUTOBLOCK)

The installation for hydraulic Steady Rest consist of four pieces of M16x120mm bolt and two pieces of Ø10mm positioning pin makes operator job easier.

Centering range without chip guard:

- SLU3 Ø12 ~ Ø152 (0.47" ~ 5.98")
- SLU3.1 Ø20 ~ Ø165 (0.79" ~ 6.49")
- SLU3.2 Ø50 ~ Ø200 (1.96" ~ 7.87")

Optional Equipment on Steady Rest:

- Spring loaded, self adjusting swarfguard to protect arm rollers against chips.
- Large capacity steady rest may require wider full length splash guard.
- Stroke control (without proximity switch).
- Central oil lubrication for heavy cutting.
- Safety valve



AUTOMATIC DOOR

Push button efficiency, open or close door automatically. VT-30/ VT-33 may be equipped with auto door for models with extended Z-axis travel up to 61.0" (1550mm).

Maximum door opening width is 65" (1650 mm) / 85" (2159 mm)



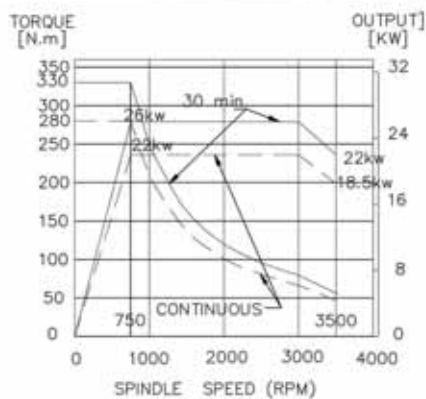
Patent pending door system design.

MORE OPTIONS

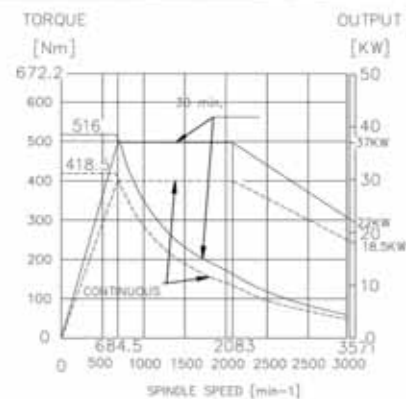
- Air Chuck
- Automatic gantry loading and unloading system.
- High pressure coolant pump and large capacity coolant tank.
- Tool socket sleeve, inner diameter (I.D.)
- Tool holder, inner diameter (I.D.)
- 1000 psi coolant thru the tool
- Static VDI-40 with block tool
- VDI-40 live turret

TORQUE POWER

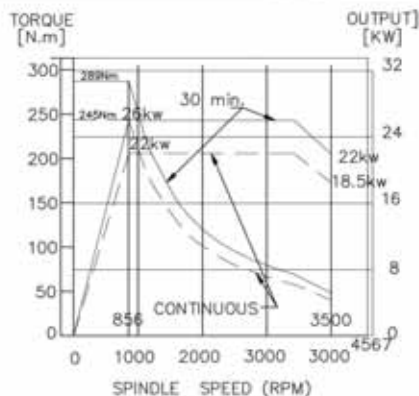
VT-30 Torque Chart



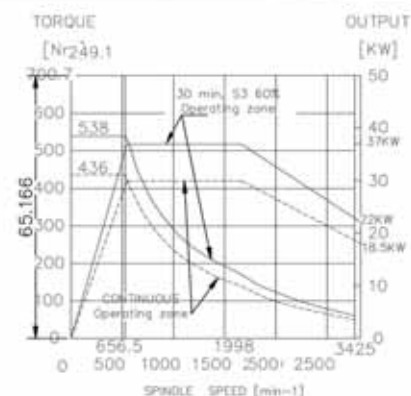
VT-30 Torque Chart (Option)



VT-33 Torque Chart



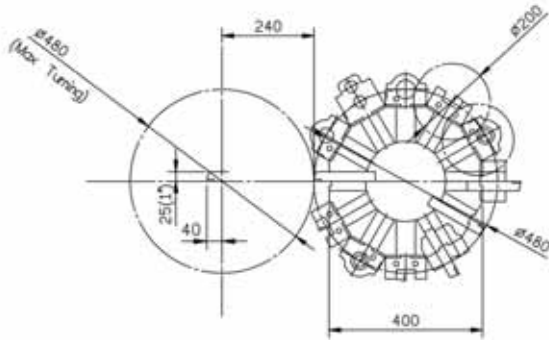
VT-33 Torque Chart (Option)



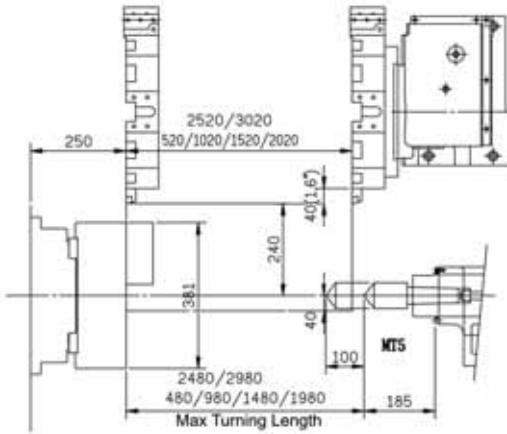
TURRET CAPACITY

VT-30 / VT-33

Static Block Tool

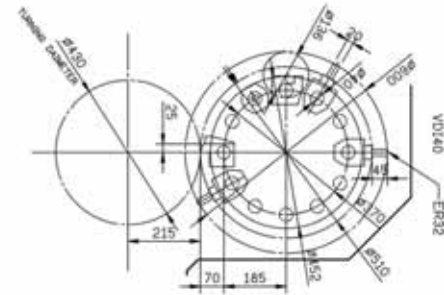


(VT-33)
(VT-30)
A2-11
15"

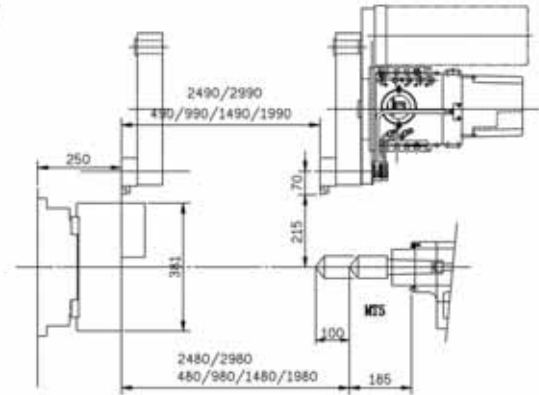


VDI 40 Live (Axial)

SAUTER VDI40 AXIAL TURRET
0.5.436.220/12
P.C.D.370

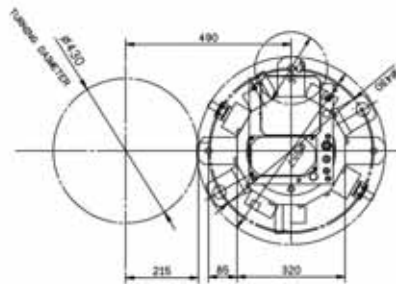


(VT-33)
(VT-30)
A2-11
15"

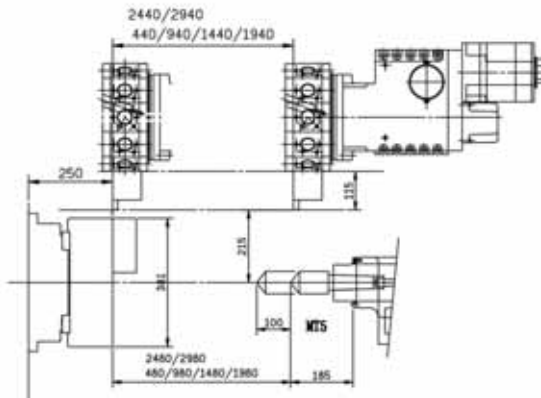


VDI 40 Live (Radial)

SAUTER 0.5.450.420/12 SW=320MM
SAUTER VDI40 RADIAL LIVE TURRET
COUPLING 5480

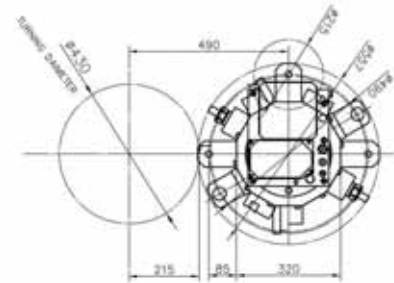


(VT-33)
(VT-30)
A2-11
15"

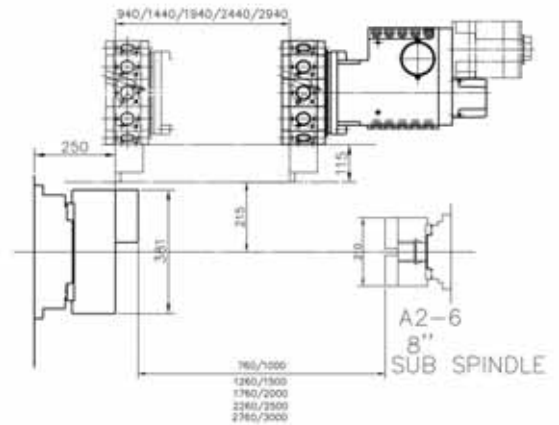


VDI 40 Live with Sub-Spindle (Radial)

SAUTER 0.5.450.420/12 SW=320MM
SAUTER VDI40 RADIAL LIVE TURRET
COUPLING 5480



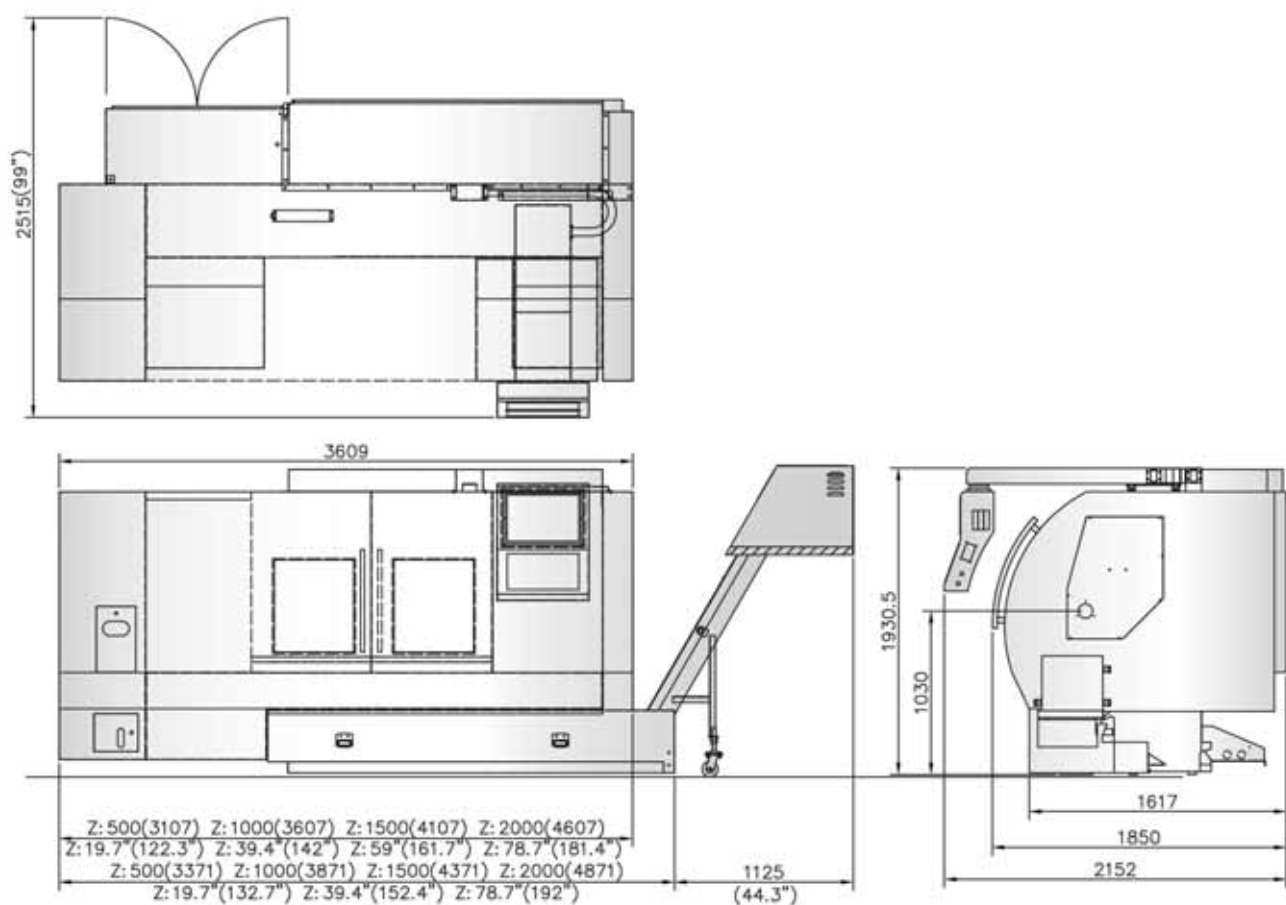
(VT-33)
(VT-30)
A2-11
15"



MACHINE DIMENSIONS

VT-30 • VT-33

CNC Turning Lathe



Units = mm (inch)

Machine Specifications

ITEM	UNIT	VT-30		VT-33	
		500/1000/1500/2000/2500/3000	500/1000/1500/2000/2500/3000	500/1000/1500/2000/2500/3000	500/1000/1500/2000/2500/3000
CAPACITY					
Swing Over Z Way Cover	in (mm)	26.8 (680)			
Max. Turning Diameter	in (mm)	18.9 (480)			
Swing Over Cross Slide	in (mm)	18.9 (480)			
Max. Turning Length	in (mm)	18.9(480) / 38.5(980) / 58.2(1480) / 77.9(1980) / 97.6(2480) / 117.3(2980)			
Slideway Slant Angle	degree	45			
TRAVEL					
X-Axis Travel	in (mm)	9.4+1.57(240+40)			
Z-Axis Travel	in (mm)	23.2(590) / 42.9(1090) / 62.6(1590) / 82.3(2090) / 101.9(2590) / 121.7(3090)			
SPINDLE					
Type of Spindle Nose	ISO	A2-11		A2-11	
Chuck Diameter & Type	in (mm)	12 (305)		15 (380)	
Main Spindle Bearing Inner Diameter	in (mm)	7.08 (180)		7.08 (180)	
Main Spindle Through Hole Diameter	in (mm)	4.33 (110)		5.15 (131)	
Main Spindle Through Bar Capacity	in (mm)	3.54 (90)		4.52 (115)	
Main Spindle Drive Motor (30 min.)	hp (kW)	35(26)		35(26)	
Main Spindle Speed Range	rpm	3000		2400	
TURRET					
Tool Number	—	12(SW=400) / 10*			
Turret Type	—	Static / VDI-40*			
Turret Indexing Time	second	0.9 = Hydraulic Driven / 0.15 = Servo Driven			
Live Tool Speed	rpm	6000			
Live Tool Power (30 min.)	hp (kW)	5.0 (3.5)			
FEEDRATE					
Rapid Traverse Rate X-Axis	ipm (M/min.)	787 (20)			
Rapid Traverse Rate Z-Axis	ipm (M/min.)	945 (24)			
Ballscrew Diameter of X-axis	in (mm)	1.3 (32)			
Ballscrew Diameter of Z-axis	in (mm)	1.6 (40)			
TAILSTOCK					
Tailstock Travel	in (mm)	18.9(480) / 38.6(980) / 58.2(1480) / 77.9(1980) / 97.6(2480) / 2980(117.3)			
Tailstock Spindle Diameter	in (mm)	4.33 (110)			
Tailstock Spindle Travel	in (mm)	4 (100)			
Taper Hole of Tailstock Spindle	—	MT-5			
SUB-SPINDLE					
For L=1000mm and L=1500 MODEL					
Type of spindle nose	ISO	A2-6			
Chuck diameter and type	in (mm)	8 (200)			
Spindle bearing inner diameter	in (mm)	4.33 (110)			
Through spindle hole diameter	in (mm)	2.4 (61)			
Through bar capacity	in (mm)	2 (51)			
Spindle drive motor (cont. / 30 min.)	hp (kW)	15 (11)			
Spindle speed range	rpm	4000			
REMARKS					
Coolant Pump Motor	hp (kW)	0.75 (0.6)			
Coolant Tank Capacity	gal (L)	75 (286) / 91 (345) / 106 (403) / 122 (462)			
Floor Space	in (mm)	L=185.2(4704)/204.88(5204)/224.56(5704)/244.25(6204)/263.9(6704)/283.6(7204) x W=85(2152)			
Machine Weight	lbs (kg)	L500 = 12826 (5830) L1000 = 15246 (6930) L1500 = 17666 (8030) L2000 = 20086 (9130) L2500 = 22506 (10230) L3000 = 24926 (11330)		L500 = 13640 (6200) L1000 = 16060 (7300) L1500 = 18480 (8400) L2000 = 20900 (9500) L2500 = 23320 (10600) L3000 = 25740 (11700)	

Design and specifications are subject to change without prior notice.

* Optional Accessory | ** Factory order only | L = Bed Length

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 thru turret 300 psi (4 gpm)
- High pressure coolant thru turret 1000 psi (8 gpm)
- Static VDI-40 turret, 12-tool
- 50 hp spindle motor
- Self-centering steady rest SMW autoblok
- Tool presetter
- Torque limiter clutch



伍將機械工業股份有限公司

ALEX-TECH MACHINERY INDUSTRIAL CO., LTD.

No. 5, Chun An Rd., Shengang District,

Taichung City 429, Taiwan

Tel:886-4-25626039

Fax:886-4-25626040

http://www.alex-tech.com

E-mail:alextech@ms24.hinet.net

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Standard Features

- Auto Lubrication System
- Block for Base
- Cooling System
- Coolant Tank Guard

- Chip Conveyor
- Fluid Bearing Way System
- Hard Jaws (1-Set)
- Heat Exchanger for Control System
- Hydraulic Adjustment System

- Lubrication Monitoring System
- Soft Jaws (1-Set)
- Tool box with Hand Tools
- Work Light