

# VIPER

S E R I E S

## ALEX-TECH MACHINING

*World Class Machine Tool Manufacturer*

VERTICAL TURNING LATHE  
HORIZONTAL TURNING CENTERS  
AND HORIZONTAL MACHINING CENTERS





# One Brand ..

## ***Aerospace Defense***

Machine complex parts according to precision industry requirements. Vipers are able to meet precision standards, they are approved to Mil-I-45208A and ISO 9001 compliant. Complete tough jobs on titanium, alloy steel, Inconel and stainless steel raw stock.

## ***Medical Electronics***

Alex-Tech offers virtually vibration resistance machining that enables the production of small plastic parts for medical components — PVC with carbide cutters at spindle speeds up to 8,000 rpm.



# Does It All.

## ***Automotive Mold & Die***

Machine heavy parts, automotive shafts, engine components and wheels. For automotive machining, Alex-Tech offers you the speed and power for heavy and fine cutting requirements.

## ***Oil Field Drilling Tooling & Parts***

Top oil well parts manufacturers rely on Mighty's heavy-duty Viper VT-50A x4000 to produce precision parts. Leading fabrication and machine shops in the oil piping industry are thrilled with the performance of the Viper VT-50A x4000 turning center.





## VIPER SERIES VERTICAL MACHINING CENTERS AND TURNING CENTERS

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 CNC turning centers with multi-axes capacity.

The Viper line offers a wide selection of choices, sizes, center distances, specifications and innovative engineering design.

Learn more about the One-Brand advantage.

Ask for a Viper demo today — turn your business 'On' to greater profits.

### GANG STYLE PRODUCTION LATHE

VT-8	VT-10	VT-12	DS-155	DS-175
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### TURNING CENTERS

VT-15	VT-23 M	VT-30	VT-38	VT-70A
VT-17L	VT-23 S	VT-33	VT-40A	
VT-20	VT-25B	VT-36BL	VT-40B	
VT-22	VT-25BL	VT-36CL	VT-50A	
VT-21 M	VT-27G	VT-36DL	VT-50B	
VT-21 S	VT-28			

### MILL TURN

VT-21 MS	VT-23 MS	VT-2100Y	VT-2300Y	VT-2800Y
VT-3000Y	VT-2100YS	VT-2300YS	VT-2500YS	VT-3000YS

### TA TEACHING ASSISTANT LATHE

TA-1743	TA-1767	TA-2143	TA-2167
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### VTL VERTICAL TURNING CENTER

VTL-12/14	VTL-16/20(M)	VTL-20/24(M)
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### HORIZONTAL SERIES

HMC-450	HMC-500
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## Alex-Tech Big, Alex-Tech Tough

Kingdream, Ltd., one of the top five oil well bit manufacturers in the world, just invested in six heavy-duty Viper VT-50Ax2000s.

Hall Industrial Services, Inc. one of the leading fabrication and machine shops in the oil piping industry are thrilled with the performance of their new Viper turning center the VT-50Ax2000.

# BIG

## Spindle Bore



### Turning On with Viper CNCs

One of our customers bought 25 lathes ten years ago. Business improved and the company grew. The company has invested in 25 to 30 new turning centers each year for the past ten years. The new units are not replacements, but have been added each year! In fact the original units are still turning out precision parts to this day. As such, this customer anticipates ordering 25 to 30 units per year.



# TURN Your

BOX WAY



**VT-8**

**Max. Swing(Slide) :** 120mm(4.72")  
**Max. Swing(Z Way Cover) :** 320mm(12.60")  
**Max. Turning Diameter :** 120mm(4.72")  
**Max. Turning Length :** 90mm(3.54")  
**X Axis Stroke :** 200mm(7.87")  
**Z Axis Stroke :** 180mm(7.09")  
**Spindle Motor(30min) :** 3.7kw(5hp)  
**Type of Spindle Nose :** A2-4  
**Spindle Thru Hole :** 35mm(1.38")  
**Spindle Speed Range :** 6000rpm  
**Chuck Size :** 5"  
**Shank Diameter for Boring Bar :** 20mm(0.79")  
**Turret Type :** Gang Type

BOX WAY



**VT-10 / VT-10T / VT-10TM**

**Max. Swing(Slide) :** 120mm(4.72")  
**Max. Swing(Z Way Cover) :** 350mm(13.78")  
**Max. Turning Diameter :** 120mm(4.72")/190mm(7.48")  
**Max. Turning Length :** 120mm(4.72")  
**X Axis Stroke :** 250mm(9.84")  
**Z Axis Stroke :** 250mm(9.84")  
**Spindle Motor(30min) :** 7.5kw(10hp)  
**Type of Spindle Nose :** A2-5  
**Spindle Thru Hole :** 52mm(2.05")  
**Spindle Speed Range :** 5000rpm  
**Chuck Size :** 6"  
**Shank Diameter for Boring Bar :** 20mm(0.79")  
**Turret Type :** Gang Type/ +8 Tools  
**Live Turret Type :** -- / VDI 30

**CNC**

**TURNING  
CENTER**

▶ **GANG  
STYLE**

THK LINEAR WAY



**VT-12**

**Max. Swing(Slide) :** 120mm(4.72")  
**Max. Swing(Z Way Cover) :** 400mm(15.75")  
**Max. Turning Diameter :** 180mm(7.09")  
**Max. Turning Length :** 150mm(5.91")  
**X Axis Stroke :** 305mm(12.01")  
**Z Axis Stroke :** 290mm(11.42")  
**Spindle Motor(30min) :** 11kw(15hp)  
**Type of Spindle Nose :** A2-6  
**Spindle Thru Hole :** 62mm(2.44")  
**Spindle Speed Range :** 5000rpm  
**Chuck Size :** 8"  
**Shank Diameter for Boring Bar :** 25mm(1.00")

BOX WAY



**DS-155 / DS-175**

**Max. Swing(Slide) :** 210mm(8.27") / 280(11.02")  
**Max. Swing(Z Way Cover) :** 380mm(14.96") / 500mm(19.69")  
**Max. Turning Diameter :** 200mm(7.87") / 240mm(9.45")  
**Max. Turning Length :** 350mm(13.78")  
**X Axis Stroke :** 160mm(6.30")  
**Z Axis Stroke :** 350mm(13.78") / 450mm(17.72")  
**Spindle Motor(30min) :** 7.5kw(10hp) / 11kw(15hp)  
**Type of Spindle Nose :** A2-5 / A2-6  
**Spindle Thru Hole :** 52mm(2.05") / 62mm(2.44")  
**Spindle Speed Range :** 4000rpm  
**Chuck Size :** 6" / 8"  
**Shank Diameter for Boring Bar :** 25mm(1.00")  
**Turret Type :** 10 Tools  
**Live Turret Type :** VDI 30

# Business On.

## VT-15 / VT-17 L/LM

- Max. Swing(Slide) : 280mm(11.02")
- Max. Swing(Z Way Cover) : 480mm(18.90")
- Max. Turning Diameter : 300mm(11.81") / 420mm(16.54")
- Max. Turning Length : 370mm(14.57")
  - X Axis Stroke : 170mm(6.69") / 240mm(9.45")
  - Z Axis Stroke : 470mm(18.50")
- Spindle Motor(30min) : 11kw(15hp) / 15kw(20hp)
- Type of Spindle Nose : A2-5 / A2-6
- Spindle Thru Hole : 52mm(2.05") / 62mm(2.44")
- Spindle Speed Range : 6000rpm / 5000rpm
- Chuck Size : 6" / 8"
- Shank Diameter for Boring Bar : 25mm(1.00")
- Turret Type : 10 / 12 Tools
- Live Turret Type : VDI 30



**Work Horse**

BOX WAY

## VT-20 / VT-22

- Max. Swing(Slide) : 380mm(14.96")
- Max. Swing(Z Way Cover) : 600mm(23.62")
- Max. Turning Diameter : 385mm(15.16")
- Max. Turning Length : 500mm(19.69")
  - X Axis Stroke : 225mm(8.86")
  - Z Axis Stroke : 520mm(20.47")
- Spindle Motor(30min) : 15kw(20hp) / 26kw(35hp)
- Type of Spindle Nose : A2-6 / A2-8
- Spindle Thru Hole : 61mm(2.40") / 81mm(3.19")
- Spindle Speed Range : 5000rpm / 4500rpm
- Chuck Size : 8" / 10"
- Shank Diameter for Boring Bar : 40mm(1.57")
- Turret Type : 12 Tools
- Live Turret Type : VDI 40



**Work Horse**

BOX WAY

## VT-21 / VT-23 M / MS / S

- Max. Swing(Slide) : 400mm(15.75")
- Max. Swing(Z Way Cover) : 620mm(24.41")
- Max. Turning Diameter : 390mm(15.35")
- Max. Turning Length : 610mm(24.02")
  - X Axis Stroke : 225mm(8.86")
  - Z Axis Stroke : 620mm(24.41")
- Spindle Motor(30min) : 15kw(20hp) / 26kw(35hp)
- Type of Spindle Nose : A2-6 / A2-8
- Spindle Thru Hole : 61mm(2.40") / 81mm(3.19")
- Spindle Speed Range : 5000rpm / 4500rpm
- Chuck Size : 8" / 10"
- Shank Diameter for Boring Bar : 40mm(1.57")
- Turret Type : 12 Tools
- Live Turret Type : VDI 40



**Sub Spindle**

BOX WAY

# TURN Your



## VT-25B / VT-25BL

**Max. Swing(Slide) :** 345mm(13.58")  
**Max. Swing(Z Way Cover) :** 460mm(18.11")  
**Max. Turning Diameter :** 345mm(13.58")  
**Max. Turning Length :** 550mm(21.65") / 1050mm(41.34")  
**X Axis Stroke :** 235mm(9.25")  
**Z Axis Stroke :** 600mm(23.62")  
**Spindle Motor(30min) :** 26kw(35hp)  
**Type of Spindle Nose :** A2-8  
**Spindle Thru Hole :** 87mm(3.43")  
**Spindle Speed Range :** 3500rpm  
**Chuck Size :** 10"  
**Shank Diameter for Boring Bar :** 50mm(1.97")  
**Turret Type :** 12 Tools  
**Live Turret Type :** VDI 40

**CNC**

**TURNING  
CENTER**



## VT-27G / VT-28B / VT-30B / VT-33B L / LM / LMS

**Max. Swing(Slide) :** 480mm(18.90")  
**Max. Swing(Z Way Cover) :** 680mm(26.77")  
**Max. Turning Diameter :** 470mm(18.50")  
**Max. Turning Length :** 550mm(21.65") – 2050mm(80.71")  
**X Axis Stroke :** 280mm(11.02")  
**Z Axis Stroke :** 590mm(23.23") – 2090mm(82.28")  
**Spindle Motor(30min) :** 26kw(35hp) / 37kw(50hp)  
**Type of Spindle Nose :** A2-8 / A2-11  
**Spindle Thru Hole :** 87mm(3.43") – 131mm(5.16")  
**Spindle Speed Range :** 3500rpm/3500rpm/3000rpm/2400rpm  
**Chuck Size :** 12" / 15"  
**Shank Diameter for Boring Bar :** 50mm(1.97") / 63mm(2.48")  
**Turret Type :** 10 / 12 Tools  
**Live Turret Type :** VDI 40

▶ **CAPACITY**



## VT-36B / VT-36C / VT-36D L / LM

**Max. Swing(Slide) :** 630mm(24.80")  
**Max. Swing(Z Way Cover) :** 800mm(31.50")  
**Max. Turning Diameter :** 630mm(24.80")  
**Max. Turning Length :** 1050mm(41.34") - 3050mm(120.08")  
**X Axis Stroke :** 335mm(13.19")  
**Z Axis Stroke :** 1090mm(42.91") – 3090mm(121.65")  
**Spindle Motor(30min) :** 26kw(35hp) / 37kw(50hp)  
**Type of Spindle Nose :** A2-11/ A2-15  
**Spindle Thru Hole :** 131mm(5.16") – 260mm(10.24")  
**Spindle Speed Range :** 2100rpm / 1400rpm / 1000rpm  
**Chuck Size :** 15" / 20" / 25"  
**Shank Diameter for Boring Bar :** 60mm(2.36") / 80mm(3.15")  
**Turret Type :** 10 / 12 Tools  
**Live Turret Type :** VDI 50

※Spindle speed will be limited by Max. RPM of chucking device.



# Business On.

## VT2100 / 2300 / 2800 / 3000 Y / YS

**Max. Swing(Slide) :** 480mm(18.90")  
**Max. Swing(Z Way Cover) :** 600mm(23.62")  
**Max. Turning Diameter :** 350mm(13.78")  
**Max. Turning Length :** 1053mm(41.46") - 2053mm(80.83")  
**Distance between Centers :** (Y)600mm(23.62") - 2100mm(82.68")  
**X Axis Stroke :** 305mm(12.01")  
**Y Axis Stroke :** ±60mm(2.36")  
**W Axis Stroke :** (YS)1100mm(43.31") - 2100mm(82.68")  
**Z Axis Stroke :** (Y)600mm(23.62") - 2100mm(82.68")  
 (YS)1000mm(39.37") - 2000mm(78.74")  
**Spindle Motor(30min) :** 15kw(20hp) / 26kw(35hp)  
**Type of Spindle Nose :** A2-6 / A2-8 / A2-11  
**Spindle Thru Hole :** 62mm(2.44") - 105mm(4.13")  
**Spindle Speed Range :** 4500rpm / 4000rpm / 3500rpm / 3000rpm  
**Main Spindle Thru Bar Capacity :** 52mm(2.1") - 90mm(3.54")  
**Chuck Size :** 8" / 10" / 12"  
**Shank Diameter for Boring Bar :** 40mm(1.57")  
**Turret Type :** 12 Tools  
**Live Turret Type :** VDI 40



BOX WAY

## VT-38 / 40A / 40B / 50A / 50B

**Max. Swing(Slide) :** 740mm(29.13")  
**Max. Swing(Z Way Cover) :** 980mm(38.58")  
**Max. Turning Diameter :** 880mm(34.65")  
**Max. Turning Length :** 960mm(37.80") - 3960mm(155.91")  
**X Axis Stroke :** 450mm(17.72")  
**Z Axis Stroke :** 1000mm(39.37") - 4000mm(157.48")  
**Spindle Motor(30min) :** 37kw(50hp) / 45kw(60hp)  
**Type of Spindle Nose :** A2-11 - A2-20  
**Spindle Thru Hole :** 131mm(5.16") - 308mm(12.12")  
**Spindle Speed Range :** 2000 / 2500 / 1890 / 1100 / 850rpm  
**Chuck Size :** 15" / 18" / 20" / 24"  
**Shank Diameter for Boring Bar :** 60mm(2.36")  
**Turret Type :** 10 / 12 Tools  
**Live Turret Type :** VDI 60



BOX WAY

## VT-70A

**Max. Swing(Slide) :** 990mm(38.98")  
**Max. Swing(Z Way Cover) :** 1150mm(45.28")  
**Max. Turning Diameter :** 990mm(38.98")  
**Max. Turning Length :** 990mm(38.98") - 3990mm(157.09")  
**X Axis Stroke :** 559mm(22.01")  
**Z Axis Stroke :** 1000mm(39.37") - 4000mm(157.48")  
**Spindle Motor(30min) :** 37kw(50hp) / 45kw(60hp)  
**Type of Spindle Nose :** A2-20  
**Spindle Thru Hole :** 131mm(5.16") - 265mm(10.43")  
**Spindle Speed Range :** 850rpm  
**Chuck Size :** 18" / 24"  
**Shank Diameter for Boring Bar :** 60mm(2.36")  
**Turret Type :** 10 / 12 Tools  
**Live Turret Type :** VDI 60



BOX WAY

# High Accuracy. High Rigidity.



## TA-1743 / 1767 / 2143 / 2167

<b>Swing Over Bed:</b>	17 – 21" (430 – 530 mm)
<b>Swing Over Carriage:</b>	9 – 11.8" (230 – 300 mm)
<b>Swing Over Gap:</b>	24 – 28" (610 – 710 mm)
<b>Distance Between Centers:</b>	43 / 67 / 80" (1100 / 1700 / 2000 mm)
<b>Spindle Bore:</b>	2.25" (58 mm)
<b>X-Axis:</b>	11" (270 mm)
<b>Z-Axis:</b>	33 / 57 / 69" (850 / 1450 / 1750 mm)
<b>Spindle Motor:</b>	10 hp



## HMC-450 / 500

<b>X Travel:</b>	21.7" (550 mm)
<b>Y Travel:</b>	15.7 – 20" (400 – 510 mm)
<b>Z Travel:</b>	23.6" (600 mm)
<b>Number Of Pallets:</b>	2
<b>Spindle Motor:</b>	10 / 15 hp
<b>Spindle Speed Range:</b>	Up to 10000 rpm



## VTL-12/14 VTL-16/20(M) VTL-20/24(M)

<b>Table Diameter :</b>	1250 / 1600 / 2000 (49.21" / 63" / 78.75")
<b>Max. Swing :</b>	1400 / 2000 / 2400 (55.12" / 78.75" / 94.50")
<b>Max. Turning Diameter :</b>	1400 / 2000 / 2400 (55.12" / 78.75" / 94.50")
<b>Max. Turning Height :</b>	1200 / 1500 / 1500 (47.25"/59.06"/59.06")
<b>Max. Mass of Workpiece :</b>	8000 / 13000 / 20000kg (17600 / 28600 / 44000 lbs)
<b>Max. Torque of Table :</b>	8800 / 20000 / 24600NM (6500/14750/18150 lbs-ft)
<b>X Axis Stroke :</b>	1400 / 1635 / 1835 (55.12" / 64.37" / 72.25")
<b>Z Axis Stroke :</b>	900mm(35.43") / 1000mm(39.37")
<b>Ram Size :</b>	230×230mm(9.06"×9.06")
<b>Table Speed :</b>	3-280rpm / 1-250rpm / 1-200rpm
<b>Table Main Motor(30min) :</b>	37(50hp) / 45(60hp) / 45kw(60hp)
<b>ATC Magazine Capacity :</b>	12/ 18(18 only for M type)
<b>Live Spindle Speed :</b>	30-2000rpm(Only for M type)
<b>Live Spindle Motor :</b>	10/ 15hp(Only for M type)



## Manufacturing Excellence

To support customers around the world, Alex-Tech has a network of distributors in Europe, Asia, Africa, America and the Pacific Rim.

**Alex-Tech** has been in operation since 1989, has over 100 employees, and has sold thousands of machine tools around the world. Along

the way we have established a reputation for being a world-class manufacturer.

## Machine Automation Solutions

### VT-23S Robotic System



This complete turn key application provides 24 hour non-stop workpiece production. A gang loader with parts conveyor and parts wash-up station that features load-up and off loading of raw stock and cast parts.

Automating machines with loading and unloading systems can minimize down time by increasing work shift efficiency, resulting in greater parts productivity. Robot systems are able to move parts in and out of turning centers with ease and no fatigue.

Streamline your parts production, grow and gain momentum to successfully complete in the present and future world-wide economy.

Integrate this advanced robotic system onto your shop floor to increase your productivity and generate greater business profits. ◆

An innovative design marking a milestone in full automation for turning centers, delivered to you from Mighty, the manufacturer that continues to advance machine tool design.

▶ Throughout our history, *Viper* has been, and is, synonymous with productivity, quality, structural magnitude, and superior cutting capability. More importantly, we meet or exceed our customer's expectations and requirements, resulting in customer satisfaction. Where performance counts, in the machining of your parts, we are second to none. This, coupled with our unprecedented *Viper Series* CNC Turning Centers will further increase your productivity. ▶



伍將機械工業股份有限公司

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