Increased productivity with every turn

 Victor Taichung - an established ISO-9001 & 14001 company
From the initial design stages through to the final testing, machine production is tightly controlled and monitored adhering strictly to the principles setout in ISO 9001 & 14001. In today's increasingly competitive market, Victor Taichung has held true to traditional methods of building quality and reliable machine tools that will maintain their accuracies and their values in years to come.

**Vturn Lathes**
The cornerstone on which to build your production.

### Vturn-16 / 20 / 26
**Entry model for reliable heavy cutting.**
- Box slideways with hardness HRC 55 for heavy cutting.
- Genuine 45° slant bed for minimum distance from Z-axis ball screw to the tool tip.
- Hydraulic 6”/8”/10” chuck is offered as standard.
- Programmable tailstock and chip conveyor is offered as standard.
- Wide range spindle motor Fanuc αPi is installed to offer high cutting force at low rpm.
- High reliability and cost-effective.
- Maximum turning length 610mm for Vturn-16/20/26 and 1090mm for Vturn-26/110.
- Special LSB option on Vturn-26 for bar capacity 91mm/2500rpm.

### VturnII-16 / 20
**Available with upgraded servo turret, built-in spindle, C-axis, and rear chips disposal.**
- Genuine 30°one piece slant bed enables large turning diameter 440mm.
- Box slideways with power full spindle motor 11/15kW for heavy cutting.
- Servo driven turret for quick tool indexing.
- Right or Rear chip disposal.
- Servo driven turret for quick tool indexing.
- C-axis available with built-in spindle allows faster acceleration time and less vibration so as to improve overall efficiency and accuracy.
Vturn-46
4-step gearbox for powerful heavy cutting.
- Box slideways with hardness HRC 55 for heavy cutting.
- Genuine 60° slant bed with minimal distance from Z-axis ball screw to the tool tip so as to reduce the chip built-up.
- Hydraulic 15" chuck is offered as standard and optional 24" chuck is possible.
- Built-in 4-step gearbox inside the headstock further enhances the cutting torque at low rpm.
- Spindle nose A2-11.
- Maximum turning length 1650mm.
- Available with C-axis spindle and live tooling by Victor’s own VDI turret.

Vturn-36
2-step gearbox for heavy cutting.
- Box slideways with hardness HRC 55 for heavy cutting.
- Genuine 45° slant bed for minimum distance from Z-axis ball screw to the tool tip.
- Hydraulic 12" chuck is offered as standard.
- 2-step gearbox is included to further enhance the cutting torque at low rpm.
- Maximum turning length 855mm for Vturn-36/85 and 1255mm for Vturn-36/125.
- Available with C-axis spindle and live tooling by Victor’s own VDI turret.
- Special LSB option with spindle nose A2-11 for bar capacity 160mm /1300rpm.

Vturn-40 & Vturn-45
2 meter lathe with high feed rate for heavy cutting.
- Rapid feed rate 20/20m/min !
- Maximum turning length 2200mm !
- Single piece cast slant bed (45°) for minimum distance from ball screw to the tool tip.
- Box slideways with hardness HRC 55 for heavy cutting.
- Hydraulic 15" (18") chuck is offered as standard for Vturn-40 (Vturn-45).
- Spindle nose A2-11.
- 2-step gearbox is included to further enhance the cutting torque at low rpm.
- Available with C-axis by built-in spindle (DDS) for Vturn-40CV.
**Headstock machining & boring:**
To ensure the quality control on the accurate parts such like headstock and spindle, Victor Taichung has developed their own spindle boring machines to ensure long service life for bearing installation.

**Headstock & spindle assembly:**
All spindles are assembled in-house in a temperature controlled environment and undergo a series of run-in tests of up to 24 hours. This post-assembly testing pinpoints any excessive bearing temperatures which would otherwise be crippling on the customers shop floor.

**Meehanite® cast iron:**
The foundation of any machine tool, this must offer rigidity, strength and above all else high damping properties. These characteristics are best found in quality nodular gray cast iron, produced in Victor’s own ISO-9001 certified foundry. All castings are made following the Meehanite process which is recognized worldwide as the Quality Mark for good castings.

**Machine design:**
Through the use of advanced CAD and CAE systems, our R&D laboratory makes computer simulations of structures to test for deformation and vibration characteristics which can later be confirmed by computer aided testing.
Hardened box slide ways:
Cast-in slide ways for maximum rigidity. Nodular grey cast iron offers ideal friction properties without sacrificing toughness. Heat treated using high frequency induction heating to produce a wrap around structure with hard wear resistance surface & tough internal core. A depth of 0.5mm for maximum wear resistance, ensuring accuracies are held throughout machine life.

The carriage:
To ensure smooth and accurate operation of the carriage along the slideway Victor employs the traditional craftsmanship of hand scraping by skilled technicians. This produces large contact areas for improved stability in machining. Add to this hand finished lubrication channels for improved lubrication properties to ensure the carriages benefit from traditional methods of manufacture.

Machine assembly:
With the philosophy that quality must be built in not inspected in, moving pallet assembly lines are employed so that each machine can be closely monitored and controlled long before it reaches the QC department. This is maintained by encouraging one person to be fully responsible for the quality of each station as it progresses.

Quality inspection:
Every machine that leaves the factory floor has passed numerous inspection procedures to achieve vigorous demands of our customers.
Genuine 45° slant bed for minimum distance from Z-axis ball screw to the tool tip.
Box slideways with hardness HRC 55 for heavy cutting.
Hydraulic 6"/8"/10" chuck is offered as standard.
Programmable tailstock and chip conveyor is offered as standard.
Only wide range spindle motor Fanuc αP1 is installed to offer high cutting force at low rpm.
Z-axis ball screw diameter 40mm for heavy cutting and high reliability.
Maximum turning length 610mm for Vturn-16/20 and 1090mm for Vturn-26/110.
Special LSB option on Vturn-26 for bar capacity 91mm/2500rpm.

### Spindle Torque Output Diagram

<table>
<thead>
<tr>
<th>Model</th>
<th>Spindle Motor</th>
<th>Base Speed (rpm)</th>
<th>Max. Speed (rpm)</th>
<th>P. Cont. (kw)</th>
<th>P. (kw)</th>
<th>Tor. Cont. (kg-m)</th>
<th>Tor. (kg-m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vturn-16</td>
<td>αP15i</td>
<td>Low winding</td>
<td>500</td>
<td>5</td>
<td>9</td>
<td>9.73</td>
<td>17.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High winding</td>
<td>750</td>
<td>7.5</td>
<td>9</td>
<td>9.73</td>
<td>11.67</td>
</tr>
<tr>
<td>Vturn-20</td>
<td>αP15i</td>
<td>Low winding</td>
<td>350</td>
<td>5</td>
<td>9</td>
<td>13.9</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High winding</td>
<td>525</td>
<td>7.5</td>
<td>9</td>
<td>13.9</td>
<td>16.68</td>
</tr>
<tr>
<td>Opt.</td>
<td>αP22i</td>
<td>Low winding</td>
<td>350</td>
<td>1050</td>
<td>9</td>
<td>15 (15 min.)</td>
<td>20.84</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High winding</td>
<td>525</td>
<td>4200</td>
<td>15</td>
<td>15 (30 min.)</td>
<td>27.98</td>
</tr>
<tr>
<td>Vturn-26</td>
<td>αP30i</td>
<td>Low winding</td>
<td>308</td>
<td>1050</td>
<td>11</td>
<td>18.5 (15 min.)</td>
<td>34.77</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High winding</td>
<td>443</td>
<td>3500</td>
<td>15</td>
<td>18.5 (30 min.)</td>
<td>39.92</td>
</tr>
<tr>
<td>Vturn-26HD</td>
<td>αP40i</td>
<td>Low winding</td>
<td>308</td>
<td>1156</td>
<td>13</td>
<td>22 (15 min.)</td>
<td>40.98</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High winding</td>
<td>443</td>
<td>3500</td>
<td>18.5</td>
<td>22 (30 min.)</td>
<td>48.58</td>
</tr>
<tr>
<td>Vturn-26LSB</td>
<td>αP30i</td>
<td>Low winding</td>
<td>211</td>
<td>833</td>
<td>11</td>
<td>18.5 (15 min.)</td>
<td>48.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High winding</td>
<td>211</td>
<td>3500</td>
<td>15</td>
<td>18.5 (30 min.)</td>
<td>56.94</td>
</tr>
<tr>
<td>Opt.</td>
<td>αP40i</td>
<td>Low winding</td>
<td>316</td>
<td>833</td>
<td>13</td>
<td>22 (15 min.)</td>
<td>57.48</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High winding</td>
<td>316</td>
<td>2500</td>
<td>18.5</td>
<td>22 (30 min.)</td>
<td>67.69</td>
</tr>
</tbody>
</table>

*30 min. may be replaced by 15%, 15 min or 20 min. according to Fanuc technical specification

High rigidity & high precision spindle
- Encased in well ribbed headstock for maximum heat dissipation.
- Angular thrust bearings absorb axial cutting force and NN-type roller bearings facilitate heavy cutting.
Genuine slant bed

Vturn series lathes have the Z-axis ballscrew mounted on the slant bed (P1) instead of machine base (P2) to minimize the distance from ballscrew to the tool insert and thus upgrades the turret and carriage stiffness.

Vturn-26LSB (Large Spindle Bore) (optional)

Without the expense or space demanded by an oversized machine, Vturn-26LSB including an oversized headstock and 12” chuck combines the bed of Vturn-26 to offer bar capacity 91mm/2500rpm to minimize your investment.

Vturn-26"HD" for Heavy Duty Application

Package with the following features:
- Bigger spindle motor (αP40i) 22kW.
- Bigger Z-axis motor (α22i) 4kW.
- Larger turning diameter 410mm.
- Larger swing over carriage 380mm.
- Coolant flush on Z-axis cover.
- Upgraded guarding improves coolants and chips disposal.
C-axis Spindle with Built-in Motor

- for or high accuracy
- Belt-driven spindle for standard 2-axis lathe
- Direct Drive Spindle (DDS) with built-in motor for optional C-axis clamping offers extra torque output at low spindle speed than conventional belt-driven spindle and eliminates the vibrations from the belt for a greater surface finish and roundness.

Spindle Torque Output Diagram

The directly driven spindle unit uses the powerful FANUC αPi series motors with their wide range of high torque output and fast acceleration times to optimum speeds.

<table>
<thead>
<tr>
<th>Model</th>
<th>Spindle Motor</th>
<th>Base Speed (rpm)</th>
<th>Max. Speed (rpm)</th>
<th>P. Cont. (kW)</th>
<th>P. (kW)</th>
<th>Tor. Cont. (kg-m)</th>
<th>Tor. (kg-m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VturnII-16</td>
<td>αP22i</td>
<td>Low winding 500</td>
<td>1500</td>
<td>7.5</td>
<td>15 (15 min.)</td>
<td>14.6</td>
<td>29.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High winding 750</td>
<td>6000</td>
<td>11</td>
<td>15 (30 min.)</td>
<td>14.4</td>
<td>19.6</td>
</tr>
<tr>
<td></td>
<td>αP15i</td>
<td>Low winding 500</td>
<td>1500</td>
<td>5</td>
<td>9 (15 min.)</td>
<td>9.73</td>
<td>17.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High winding 750</td>
<td>6000</td>
<td>7.5</td>
<td>9 (30 min.)</td>
<td>9.73</td>
<td>11.67</td>
</tr>
<tr>
<td>VturnII-20</td>
<td>αP22i</td>
<td>Low winding 350</td>
<td>1050</td>
<td>7.5</td>
<td>15 (15 min.)</td>
<td>20.84</td>
<td>41.69</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High winding 525</td>
<td>4200</td>
<td>11</td>
<td>15 (30 min.)</td>
<td>20.52</td>
<td>27.98</td>
</tr>
<tr>
<td></td>
<td>αP15i</td>
<td>Low winding 350</td>
<td>1050</td>
<td>5</td>
<td>9 (15 min.)</td>
<td>13.9</td>
<td>25 (15 min.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High winding 525</td>
<td>4200</td>
<td>7.5</td>
<td>9 (30 min.)</td>
<td>13.9</td>
<td>16.68</td>
</tr>
<tr>
<td>VturnII-16CV</td>
<td>αB160M1</td>
<td>Low winding 300</td>
<td>900</td>
<td>5.5</td>
<td>7.5 (15%)</td>
<td>17.8</td>
<td>24.3 (15%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High winding 850</td>
<td>6000</td>
<td>11</td>
<td>18.5 (15%)</td>
<td>12.6</td>
<td>21.2 (15%)</td>
</tr>
<tr>
<td>VturnII-20CV</td>
<td>αB180M1</td>
<td>Low winding 450</td>
<td>800</td>
<td>11</td>
<td>15 (20 min.)</td>
<td>23.8</td>
<td>32.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High winding 800</td>
<td>4200</td>
<td>11</td>
<td>15 (30 min.)</td>
<td>13.3</td>
<td>18.2</td>
</tr>
</tbody>
</table>
Large Spindle Bore (LSB) 
- 66mm/4500 rpm (optional)
Besides the popular application to link bar feeder to the lathe with part catcher, this new LSB (Large Spindle Bore) option has the bar capacity dia. 66mm and upgraded spindle speed 4500rpm to minimize your investment costs.

Servo Driven Turret for Faster Indexing
- Fast tool indexing time 0.2 seconds using servo driven turret.
- Available with Victor Taichung’s own milling turret in conjunction with servo motor to offer a near constant torque output over the complete speed range up to 3000rpm.
- 12 station VDI turret with 12 live tool pockets allows quick tool changeover with commercially available tool holders.

Chip Disposal from Right or Rear
Separate chip conveyor can be positioned to expel chips from the traditional side of the machine for easy cleaning or even from the rear of the machine to reduce costly shop floor space requirement.

One-piece Slant Bed with Hardened Boaxways
- Rectangular machine base guarantees the optimal structure stiffness to sustain the high rapid feed rate 20/24m/min (X/Z) on the lathes with box slideways.
- Optimum ribbing determined by FEM to minimize distortion during operation.
- To ensure perfect alignment in the machine structure, the bed is machined in a single set-up on a large five-face machining center.
- Separate chip conveyor can be positioned to expel chips from the traditional side for easy cleaning or from rear of the machine to link with robot application.
Two step gearbox for reliable heavy cutting!

- Genuine 45° slant bed for minimum distance from Z-axis ball screw to the tool tip.
- Z-axis ball screw diameter 50mm.
- 91mm bar capacity.
- Box slideways with hardness HRC 55 for heavy cutting.
- Hydraulic 12" chuck is offered as standard.
- 2-step gearbox is included to further enhance the cutting torque at low rpm.
- Maximum turning length 855mm for Vturn-36/85 and 1255mm for Vturn-36/125.
- Available with C-axis spindle and live tooling by Victor's own VDI turret.
- Special LSB option with spindle nose A2-11 for bar capacity 160mm/1300rpm.

Spindle Torque Output Diagram

- Vturn-36 STD
- Vturn-36CV
C-axis VDI turret with live tooling (CV option.)
- Live tooling is provided through the use of VDI turret that not only provide an international tooling system but also allows for quick and simple tool mounting.
- Coupling specification DIN-5480.
- Milling power 7kW/2500rpm.

Large Spindle Bore (LSB)-160mm/1300rpm (optional)
- Large bore spindle with bar capacity of 160mm.
- Ideal for machining of large diameter pipes.
- Max. spindle speed: 1800rpm (1300rpm limited by pneumatic chuck).
- Bearing diameter 220mm.
- Standard 18” Pneumatic chuck at front and manual chuck at rear of spindle for extra stability during bar turning.

Spindle speed output diagram for Vturn-36LSB

1st speed 134~401 rpm
2nd speed 401~1300 rpm

- 26KW: 30 min rating
- 22KW: Continuous rating

FANUC motor α22i

Spindle Speed (r.p.m)

Power (kw)
Vturn-40 & Vturn-45

2 meter lathe with gearbox and high feed rate for heavy cutting!

- Genuine 45° one piece slant bed for maximal structure rigidity.
- Maximum turning length 2200mm (86.61")!
- Rapid feed rate 20/20m/min!
- Spindle nose A2-11 with hydraulic 15°/18° chuck for bar capacity 91mm for Vturn-45 and 117.5mm for Vturn-45.
- Spindle power 37kW by Fanuc α30/6000 motor.
- Z-axis ballscrew diameter 50mm (1.97”).
- Box slideways with hardness HRC 55 for heavy cutting.
- 2-step gearbox is included to further enhance the cutting torque at low rpm.
- Bar capacity: 91mm (3.58”) for Vturn-40, 117.5mm (4.62”) for Vturn-45.

2-step gearbox
Moving CRT allows for more space for machine operator and avoids the high freight for transportation.

**One piece cast bed**
- Built in the latest technology, the new Vturn-40 and Vturn-45 have one-piece slant bed to enhance the structure stiffness.
- The turret carriage has even been enhanced 15% structure rigidity than Vturn-36 model to afford more cutting resistance.
- High volume coolant flush onto the Z-axis cover helps to reduce the chip built-up inside the machine.
- Double lead Japanese ballscrews facilitate rapid feed 20m/min.

**C-axis VDI turnet with live tooling (CV option)**
- DDS built-in spindle (for Vturn-40CV only)

**Enlarged coolant tank with oil skimmer as standard.**

**Manual steady rest (Standard)**
- Clamping range: 280-400mm (Opt. 150-300mm)
Built-in 4-Step Gearbox for powerful heavy cutting!

- Genuine 60° slant bed for minimum distance from Z-axis ball screw to the tool tip so as to reduce the chip built-up.
- Built-in 4-step gearbox inside the headstock further enhances the cutting torque 536.4kg-m at low spindle speed 67 rpm.
- Spindle nose A2-11 with hydraulic 15” chuck is offered as standard and available with 18”/21”/24” chucks.
- Z-axis ballscrew diameter 50mm.
- Maximum turning length 1650mm.
- Available with C-axis spindle and live tooling by Victor’s own VDI turret.

Spindle Torque Output Diagram

- 1st speed 67 - 260 rpm
- 2nd speed 144 - 560 rpm
- 3rd speed 300 - 1170 rpm
- 4th speed 640 - 1500 rpm

FANUC motor α 30i

- 37KW: 30 min rating
- 30KW: Continuous rating
C-axis VDI turret with live tooling (CV option.)
- Live tooling is provided through the use of VDI turret which not only provides an international tooling system but also allows for quick and simple tool mounting.
- Cf-axis design with angular encoder is included as standard to assure high indexing accuracy.
- Coupling specification DIN-5480.
- Milling power 7kW/2500rpm.

Powerful tailstock
- Built-in bearings for fixed center.
- MT#:5 tailstock for powerful engagement.

Vturn-46CV cutting capability on mild steel S45C

<table>
<thead>
<tr>
<th>OD turning</th>
<th>Drilling (Z-axis α=30°)</th>
<th>Milling</th>
<th>Tapping</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metal removal rate (spindle loading %)</td>
<td>792cc/min (93%)</td>
<td>672cc/min</td>
<td>30cc/min (99%)</td>
</tr>
<tr>
<td>Tool</td>
<td>Ø32x10mm</td>
<td>Ø58x35mm</td>
<td>Ø25x15mm</td>
</tr>
<tr>
<td>Spindle speed</td>
<td>686rpm</td>
<td>848rpm</td>
<td>600rpm</td>
</tr>
<tr>
<td>Feed</td>
<td>F0.35mm/rev</td>
<td>F0.3mm/rev</td>
<td>F80mm/min</td>
</tr>
</tbody>
</table>

Vturn-46CV cutting capability on mild steel S45C
Standard Accessories

**Reliable Fanuc CNC control**
- The proven reliability of Fanuc Oi-TD control is combined with Victor Taichung own PLC to offer customers an entire control system who reliability is second to none.

**Programmable tailstock**
- Mounted on slideways for maximum clamping stability.
- Hydraulic clamping to bed with variable hydraulic pressure to tailstock quill.
- Smooth tow along action by turret and programmable by M-codes.

**Reliable Power Chuck**
Hydraulic 3 jaw hollow chuck is foot operated for safe and easy operation.

**Chip conveyor and cart**
Separate chip conveyor and coolant sum design with access from the front of the machine allows easy cleaning and reduces costly shop floor space requirement.

**Automatic forced lubrication**
All slideways & moving members are automatically lubricated. Pressurised system is used to monitor amount of oil in circulation. Alarm given if leak or pressure drop occurs. Oil tank and pump located outside guarding for easy maintenance.

**Separation system for oil & coolants**
A drip tray cast into bed is used to catch waste lubricating oil from Z axis slideway and ballscrew. The drip tray is sloped so that the oil can flow to an outlet at the rear of the machine. This system reduces contamination or dilution of the cutting fluid.
Optional Accessories

**Tool Presetter (Renishaw®)**
- No longer to perform tedious time consuming cuts to determine tool geometry, the operator needs only to touch the tool tip to the tool presetter sensor to get the tool geometries not only reducing tool set-up time, but reducing down time due to tool breakage.
- Manual tool presetter (MTP): Arm is rotated manually.
- Auto tool presetter (ATP): Arm is rotated automatically by programming.

**Parts catcher & parts conveyor**
To enhance the machines productivity a parts catcher is available to work in conjunction with the bar feed system.
The parts catcher is fully programmable to allow automated running with finished parts being dispensed in collection tray in door compartment. Door flap is used to seal door off from swarf during contamination.
Note: Parts catcher not available for Vturn-46: For heavier parts a rotary chute system mounted below the spindle is used.

**Manual steady rest**
The large bar capacity and long bed of Vturn lathes make these machines ideal for shaft turning. Victor Taichung can offer inexpensive manual steady rest with manually adjusted rollers to suit this job for simple operation.

Clamping range (mm):
- Vturn-16 & Vturn-20: Ø20 – 150
- Vturn-16 & Vturn-20: Ø20 – 150
- Vturn-26: Ø20 – 150 / Ø25 – 200
- Vturn-36: Ø20 – 150 / Ø30 – 300
- Vturn-40 & Vturn-45: Ø150 – 300 / Ø280 – 400
- Vturn-46: Ø75 – 150 / Ø150 – 300 / Ø280 – 400

**Bar feeder interface**
For automatic loading of workpieces, the bar feeder provides a simple yet highly effective system. Interfaces are available on the Vturn lathes so that a number of different barfeeding systems can be worked in conjunction with the lathe. Add to the barfeeder a parts catcher and you have an efficient turnkey system with parts being loaded and unloaded automatically.

**Hydraulic steady rest**
For greater centering accuracy and easier setup, hydraulic steady rests mounted to the tailstock slideways are also available.

**High pressure coolants**
Through a combination of high pressure coolant, shower curtain and air gun located through & above the spindle, Victor Taichung can offer you the most efficient chip removal system available on the market today.
When combined with automation system it ensures continuous running time and time again.
### Standard

**Controlled Axes:**
- 1. Control Axes
- 2. Simultaneous Controlled Axes
- 3. Coordinate System Rotation
- 4. Rotary Axis Designation
- 5. Rotary Axis Roll-over
- 6. Axis Control by PMC
- 7. Control Axis Detach (for C-axis)
- 8. Coordinate System Detach (for C-axis)
- 9. Stored Pitch Error Compensation
- 10. Backlash Compensation

**Feed:**
- 11. Feed Stop
- 12. Jog Override 0~100%
- 13. Reference Position Return
- 14. Manual Handle Feed 1 Unit / Each Path
- 15. Chamfering on/off
- 16. Mirror Image
- 17. Chamfering/corner R
- 18. Programmable Data Input
- 19. Circular interpolation by 9-digit R designation
- 20. Multiple Repetitive Cycle
- 21. Linear Interpolation
- 22. Variable threading
- 23. Threading retract
- 25. JERK control

**Operation:**
- 1. Automatic Operation
- 2. MDI Operation
- 3. DNC Operation
- 4. Control In / Out
- 5. Parity Check
- 6. High Speed M / S / T Interface
- 7. Rapid Traverse Override
- 8. Circular Interpolation
- 9. Feed rate Override
- 10. Single Block
- 11. JOG Feed
- 13. Manual Handle Feed 1 Unit / Each Path
- 14. Manual Handle Feed Rate
- 15. Chamfering
- 16. Over-travel
- 17. Diameter / radius programming
- 18. Input Unit 10 Time Multiply
- 19. Programmable Data Input
- 20. Program restart
- 21. Color LCD (MDI) 8.4" (0i-D), 10.4" (0i-D*1, 32i-B)
- 22. Spindle Setting Screen
- 23. Data Protection Key
- 24. Alarm History Display
- 25. JERK control

**Accuracy Compensation:**
- 1. backlash Compensation
- 2. Stored Pitch Error Compensation

**Edit Operation:**
- 1. File Program Storage Length (in total) 1280m (0i-D/32i-B)
- 2. Number of Program and subprogram in memory 1000
- 3. File Program Editing
- 4. Program Protect
- 5. Alarm Display
- 6. Alarm History Display
- 7. Operation History Display
- 8. File New
- 9. Run Hour and Parts Count Display
- 10. Display Cutting Feed rate Display
- 11. Display spindle Speed and T code At Actual
- 12. 255 Characters in Edit by automatic function
- 13. Servo Setting Screen
- 14. Display of Hardware and Software Configuration
- 15. Multi-Language Display
- 16. Status Monitor
- 17. MDI B
- 18. MDI B Screen Display
- 19. Color LCD (MDI) 8.4" (0i-D), 10.4" (0i-D/32i-B)

### Options

**ITEM SPECIFICATION**

<table>
<thead>
<tr>
<th>Item</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>0i-D</td>
<td>32i-B</td>
</tr>
<tr>
<td>1. Conversational programming</td>
<td>Manual guide 9*</td>
</tr>
<tr>
<td>2. Conversational programming</td>
<td>Manual guide 9*</td>
</tr>
<tr>
<td>3. Data server with PCB and AFA (card)</td>
<td>N.A.</td>
</tr>
<tr>
<td>4. Embedded Ethernet (8Mbps)</td>
<td>N.A.</td>
</tr>
<tr>
<td>5. Coordinate System Expansion</td>
<td>N.A.</td>
</tr>
<tr>
<td>6. Coordinate System Rotation</td>
<td>N.A.</td>
</tr>
<tr>
<td>7. Rotary Axis Designation</td>
<td>N.A.</td>
</tr>
<tr>
<td>8. Rotary Axis Roll-over</td>
<td>N.A.</td>
</tr>
<tr>
<td>9. Axis Control by PMC</td>
<td>N.A.</td>
</tr>
<tr>
<td>10. Control Axis Detach for C-axis</td>
<td>N.A.</td>
</tr>
<tr>
<td>11. Coordinate System Detach (for C-axis)</td>
<td>N.A.</td>
</tr>
<tr>
<td>12. Coordinate System Expansion</td>
<td>N.A.</td>
</tr>
</tbody>
</table>

**Without hardware included:**
- 1. Manual Guide is available on 0i-D when the monitor is upgraded to 10.4" LCD.
- 2. Options with hardware included: 0i-D 32i-B

---

*Manual Guide is available on 0i-D when the monitor is upgraded to 10.4" LCD.*
### Machine Specifications

<table>
<thead>
<tr>
<th>ITEM \ MODEL</th>
<th>Vturn-16</th>
<th>Vturn-20</th>
<th>VturnII-16</th>
<th>Vturn-26/60 (HD)</th>
<th>Vturn-26/110 (HD)</th>
<th>Vturn-36/85</th>
<th>Vturn-40/220</th>
<th>Vturn-45/220</th>
<th>Vturn-46/165</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swing over bed mm</td>
<td>450</td>
<td>590</td>
<td>520</td>
<td>650</td>
<td>780</td>
<td>820</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Std. Turning dia. mm</td>
<td>160</td>
<td>370</td>
<td>360</td>
<td>445</td>
<td>520</td>
<td>520</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. turning dia. mm</td>
<td>230</td>
<td>440</td>
<td>(330 for CV)</td>
<td>380 (410)</td>
<td>550</td>
<td>(458 for CV)</td>
<td>500</td>
<td>620 (390 for CV)</td>
<td>730</td>
</tr>
<tr>
<td>Swing over carriage mm</td>
<td>300</td>
<td>400</td>
<td>350 (380)</td>
<td>475 (for VDI)</td>
<td>620</td>
<td>520</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Center distance mm</td>
<td>635</td>
<td>540</td>
<td>650</td>
<td>890</td>
<td>2165</td>
<td>1750</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bar capacity hole through draw bar mm</td>
<td>40</td>
<td>52 (66 for LSB)</td>
<td>75 (91 for LSB)</td>
<td>91</td>
<td>91</td>
<td>115</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Machine Specifications (Continued)

<table>
<thead>
<tr>
<th>ITEM</th>
<th>MODEL</th>
<th>Vturn-16</th>
<th>Vturn-20</th>
<th>VturnII-16</th>
<th>Vturn-26/60 (HD)</th>
<th>Vturn-26/110 (HD)</th>
<th>Vturn-36/85</th>
<th>Vturn-40/220</th>
<th>Vturn-45/220</th>
<th>Vturn-46/165</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swing over bed mm</td>
<td>450</td>
<td>590</td>
<td>520</td>
<td>650</td>
<td>780</td>
<td>820</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Std. Turning dia. mm</td>
<td>160</td>
<td>370</td>
<td>360</td>
<td>445</td>
<td>520</td>
<td>520</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. turning dia. mm</td>
<td>230</td>
<td>440</td>
<td>(330 for CV)</td>
<td>380 (410)</td>
<td>550</td>
<td>(458 for CV)</td>
<td>500</td>
<td>620 (390 for CV)</td>
<td>730</td>
<td></td>
</tr>
<tr>
<td>Swing over carriage mm</td>
<td>300</td>
<td>400</td>
<td>350 (380)</td>
<td>475 (for VDI)</td>
<td>620</td>
<td>520</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Center distance mm</td>
<td>635</td>
<td>540</td>
<td>650</td>
<td>890</td>
<td>2165</td>
<td>1750</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bar capacity hole through draw bar mm</td>
<td>40</td>
<td>52 (66 for LSB)</td>
<td>75 (91 for LSB)</td>
<td>91</td>
<td>91</td>
<td>115</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Optional Accessories

- Bar feeder interface
- Steady rest (Manual or hydraulic)
- C-axis with live tooling (CV) for Vturn-36 / 40 / 46
- VDI turret
- 12" chuck/300rpm for Vturn-26(HD)
- Bigger chuck on Vturn-36 / 40 / 45 / 46
- High/low chucking pressure
- Large spindle bore for Vturn-36 / 45
Technical Drawings

Vturn II-16

Vturn II-16CV with C axis & VDI turret

Vturn II-20

Vturn II-20CV with C axis & VDI turret
Technical Drawings

Vturn-16

Vturn-20

Vturn-26

Vturn-26HD
Technical Drawings

**Vturn-36**

**Vturn-36CV**

**Vturn-40 (Vturn-45)**

**Vturn-40CV**
### Technical Drawings

#### Vturn-46

[Diagram of Vturn-46]

#### Vturn-46CV

[Diagram of Vturn-46CV]

#### Tooling Accessories

<table>
<thead>
<tr>
<th>Tooling Accessory</th>
<th>Vturn-16</th>
<th>Vturn-20</th>
<th>Vturn-26</th>
<th>Vturn-26HD</th>
<th>Vturn-36</th>
<th>Vturn-40</th>
<th>Vturn-46</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tool Shank for Turret Disk</td>
<td>20 mm</td>
<td>20 mm</td>
<td>25 mm</td>
<td>25 mm</td>
<td>32 mm</td>
<td>32 mm</td>
<td>32 mm</td>
</tr>
<tr>
<td>Maximum Boring Bar Dia.</td>
<td>32 mm</td>
<td>32 mm</td>
<td>40 mm</td>
<td>50 mm</td>
<td>50 mm</td>
<td>60 mm</td>
<td></td>
</tr>
<tr>
<td>Face &amp; O.D. Cutting Tool Holder</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Face &amp; I.D. Cutting Tool Holder</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Extended I.D. Cutting Tool Holder</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Boring Bar Holder</td>
<td>-</td>
<td>-</td>
<td>4</td>
<td>5</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>32 mm</td>
<td>6</td>
<td>6</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>40 mm</td>
<td>-</td>
<td>-</td>
<td>4</td>
<td>5</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>50 mm</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>5</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>60 mm</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Boring Bar Sleeve</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>8 mm</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>10 mm</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>12 mm</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>16 mm</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>20 mm</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>25 mm</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32 mm</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40 mm</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 mm</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drill Socket</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>M1</td>
<td>Opt.</td>
<td>Opt.</td>
<td>1</td>
<td>Opt.</td>
<td>1</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>U Drill Holder</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>U Drill Socket</td>
<td>1</td>
<td>1</td>
<td>Opt.</td>
<td>Opt.</td>
<td>1</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

Note: Tooling accessories are subject to change without notice.
Vturn Machine Layout

---

**ITEM \ MODEL** | **Vturn-16** | **Vturn-16** | **Vturn-26/60 (HD)** | **Vturn-36/85** | **Vturn-40/220** | **Vturn-46/165**
---|---|---|---|---|---|---
A | 2540 | 2300 | 3025 (3175) | 3700 | 5633 | 5180
B | 750 | 930 + 1300 move out | 750 | 1070 | 1207 + 460 move out | 1030
C | 1500 | 1685 | 1745 | 1985 | 2446 | 2477
D (CE mark) | 800 (563) | 890 (750) | 855 (678) | 1100 (994) | 1264 (914) | 1065 (899)
E | 900 | 956 | 960 | 1108 | 1201 | 1165
F | 1050 | 1255 | 1175 | 1352 | 1453 | 1364
G | 1650 | 1700 | 1940 | 2205 | 2313 | 2365

---

Vturn-P16 with built-in robot

Vturn-A20Y with Y-axis BMT turret

Vturn-V560 vertical lathe

---

**THE VICTOR-TAICHUNG COMPANIES**

TAIWAN
http://www.or.com.tw
E-mail: info@mail.or.com.tw

Victor Taichung Machinery Works Co., Ltd.
Headquarters:
2088, Sec. 4, Taiwan Blvd.,
Taichung, Taiwan, R.O.C.
TEL: 886-4-23592101
FAX: 886-4-23592943

Overseas Marketing Division:
TEL: 886-4-23580701
FAX: 886-4-23584541

UK
Victor CNC (UK) Ltd.
TEL: 44-1-706-648485
FAX: 44-1-706-648483

FRANCE
Victor France
TEL: 33-1-64772000
FAX: 33-1-64772063

GERMANY
Victor GmbH
TEL: 49-2261-478434
FAX: 49-2261-478327

MALAYSIA
Victor Machinery (M) SDN. BHD.
TEL: 60-3-56337180
FAX: 60-3-56337191

THAILAND
Victor (Thailand) Co. Ltd.
TEL: 66-2-9263735
FAX: 66-2-9032373

INDONESIA
PT. Victor Machinery Indonesia
TEL: 62-21-8958504
FAX: 62-21-8958513

USA
Fortune International Inc.
TEL: 1-732-2140700
FAX: 1-732-2140701

SOUTH AFRICA
Victor Fortune (PTY) Ltd.
TEL: 27-11-3923800
FAX: 27-11-3923899

CHINA
Jianrong Precision Machinery (Shanghai)
TEL: 86-21-59768018
FAX: 86-21-59768009

---

*Victor Taichung profile:
Sales turnover: USD 170 mil’s (in 2012)*
No. of employees: 1091
*Exchange rate: 1 USD=30 TWD.

---

VtGE1014EB was also marketed under the brand names VICTOR (outside North America) and FORTUNE.