Knee Type Milling Machine

Venture knee type milling machines are quality constructed to give extraordinary milling efficiency, quality, maximum rigidity, smooth operation and long term accuracy.

SERIES
LW-2VH
LW-2T
LW-2HT
LW-2VHT
The Most Comprehensive Choice of Knee Type Milling Machine

**LW-2VH**

**VERTICAL & HORIZONTAL MILLING MACHINE**
- Powerful vertical and horizontal head configuration
- Table size 1100 x 500mm
- X-axis travel 1000mm
- Y-axis travel 500mm
- Z-axis travel 450mm
- Spindle taper NST#40

**LW-2VHT**

**HORIZONTAL VERTICAL TURRET MILLING MACHINE**
- Powerful vertical, horizontal and turret head configuration
- Table size 1300 x 300mm
- X-axis travel 1000mm
- Y-axis travel 300mm
- Z-axis travel 450mm
- Turret type head with 16 step speeds, 75-3600 RPM (standard), Variable speed 85-3800 RPM (optional)
- Spindle taper NST#40

**LW-2T**

**VERTICAL TURRET MILLING MACHINE**
- Vertical turret head configuration
- Table size 1000 x 200mm
- X-axis travel 1000mm
- Y-axis travel 500mm
- Z-axis travel 450mm
- 16 step speeds, 75-3600 RPM (standard), Variable speed 85-3800 RPM (optional)
- Spindle taper NST#40

**LW-2HT**

**HORIZONTAL VERTICAL TURRET MILLING MACHINE**
- Horizontal and turret head configuration
- Table size 1300 x 300mm
- X-axis travel 1000mm
- Y-axis travel 300mm
- Z-axis travel 450mm
- 16 step speeds, 75-3600 RPM (standard), Variable speed 85-3800 RPM (optional)
- Spindle taper NST#40

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**Quality Features Assure Great Milling Performance**

- **Horizontal Spindle & Transmission Mechanism**
- The high-end spindle is a premium model from SOKO ST alloy steel, impregnated with cermet to minimize vibrations. The spindle uses a precision bearings system for long-term high-speed running, ensuring stable and accurate milling.

- **Power Elevation of Knee**
- The knee elevation is driven by a servo motor for precise positioning. The knee also features a detentless function, allowing for smooth and controlled movements.

- **Precision Ball Screw on X and Y Axes**
- The X and Y axes are equipped with precision ball screws, optimized for smooth operation and high precision cutting, ensuring minimal backlash.

- **Integrated Control Panel**
- The panel’s automatic lubrication delivers an oil mist lubrication system, ensuring smooth operation in all conditions and minimizing wear on the machine.

- **Servo Motor Drive for Two Axes**
- The X and Y axes are driven by a servo motor, promoting fast motion. Rapid traverse speed up to 15000mm/min.

- **Horizontal Head**
- Gear drive milling head with 16 step speeds 75-3600 RPM (standard), Variable speed 85-3800 RPM (optional)
- Spindle taper NST#40

- **Turret Type Head**
- The gears are hardened and precision ground, ensuring the gear drive milling head accuracy and durability.
- 16 step speeds, 75-3600 RPM (standard), Variable speed 85-3800 RPM (optional)
- Spindle taper NST#40

- **Powerful Vertical Head**
- The gears are hardened and precision ground, ensuring the gear drive milling head accuracy and durability.
- 16 step speeds, 75-3600 RPM (standard), Variable speed 85-3800 RPM (optional)
- Spindle taper NST#40
**Features:**

- The machine column is manufactured from high quality cast iron FC-30, tempered for long term accuracy.
- FC-30 cast iron table is tempered, hardened and precision ground.
- The spindle is precision machined from SCM-21 alloy steel, tempered and carbon treated, ensuring maximum stability for heavy duty cutting.
- X and Y axes are driven by an AC servo motor for smooth traverse.
- X and Y axis slideways are precision ground, and coated with Turcite-B wear resistant media.
- The knee is power elevated and has rapid traverse function.

- X and Y axes employ precision ball screws.
- The drive gears in the powerful vertical head are hardened and precision ground for maximum wear resistance and low noise running.
- Equipped with an automatic lubricator for lubrication to 3-axis slideways, feed screws, gears and bearings, ensuring high working efficiency and long service life of parts.
- The coolant tray effectively prevents cutting fluid leakage.
- Employs high pressure coolant pump for efficient chip removing.
- Halogen work light.

**Dimensional Drawings:**

**LW-2T**  
**LW-2HT**  
**LW-2VHT**  

**LW-2VH**
Vertical Turret Head,
Horizontal Head, Powerful Vertical Head...

Choice of various head configurations to meet your specific machining requirements.

Standard accessories

- Automatic lubricator .............. 1 set
- Ball screw (X, Y) ................. 1 set
- Complete cooling system ......... 1 set
- Tool kits .......................... 1 set
- Tool box .......................... 1 pc
- Milling arbor with spacer ......... 1 set
- Draw bar .......................... 1 set
- Splash guard ....................... 1 set
- Chip guard ......................... 1 set
- Halogen work light ................. 1 set

Optional accessories

- Dividing head ...................... 1 set
- Rotary table ....................... 1 set
- Swivel milling vise ............... 1 set
- Face milling cutter ............... 1 pc
- Face cutter arbor .................. 1 pc
- End mill collets .................... 1 set

SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Table</th>
<th>Unit: mm</th>
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</thead>
<tbody>
<tr>
<td>Table size</td>
<td>1300 x 300</td>
</tr>
<tr>
<td>X-axis travel</td>
<td>1000</td>
</tr>
<tr>
<td>Y-axis travel</td>
<td>360 (390)</td>
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<tr>
<td>Z-axis travel</td>
<td>450 (490)</td>
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<tr>
<td>T-slot (Size x numbers x distance)</td>
<td>16 x 3 x 63</td>
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<tr>
<td>X, Y axes feedrate (variable) mm/min</td>
<td>2500</td>
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<tr>
<td>X, Y axes rapid travel mm/min</td>
<td>750</td>
</tr>
<tr>
<td>Z-axis rapid travel mm/min</td>
<td>750</td>
</tr>
</tbody>
</table>

Vertical Spindle

Turret Head

- Spindle speeds RPM 16 steps, 75-3600 (standard) *variable, 80-3800 (optional)
- Quill travel 140
- Quill feedrate (3 steps) mm/rev 0.035, 0.07, 0.14
- Spindle nose N.S.T 40#
- Swivelling angle of spindle head (R & L) 90°
- Swivelling angle of overarm 360°
- Overarm travel 660
- Spindle nose to table surface 110-560
- Spindle center to column 110-700

Powerful Vertical Head

- Spindle speeds RPM 9 steps, 85-1300
- Spindle nose N.S.T 40#
- Spindle nose to table surface 0-386
- Spindle center to column 369

Horizontal Spindle

Horizontal Head

- Spindle speeds RPM, steps, 85-1300
- Spindle nose (N.S.T) N.S.T 40#
- Dial of milling arbor 25.4
- Spindle center to table surface 0-450
- Spindle center to overarm bottom 369

Motor

- Powerful vertical head spindle 5HP x 4P AC motor
- Turret head spindle 5HP Pole change motor
- Horizontal spindle 5HP x 4P AC motor
- Table longitudinal & cross feedrate 750W servo motor
- Vertical feedrate 1HP x 6P AC motor
- Coolant pump 1/8 HP

* Venture Machine Tools, Inc. and its associates reserve the right to alter any mechanical specification without prior notice in the interest of product development.

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