The Latest and Best Quality Machinery.

DMV-800
Traveling Column Vertical Machining Center

PT-128
Portal Type Machining Center

MCH-630
Horizontal Machining Center

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MCV-1450
MCV-1450
Dah Lih's Cutting Edge Technology for Precision and Efficient Machining

The Dah Lih MCV-1450 Vertical Machining Center is a rugged and high precision machine with unmatched value. It is the most popular machining center on the market today. Ideal applications include precision mold and die making, middle sized parts machining and automotive and motorcycle parts machining.

Its outstanding value results from the fact that it offers many features - as you have come to expect. It is ruggedly constructed throughout for optimum structural rigidity and accuracy. Four box ways on the base provide extra firm support for heavy loads. The nitrogen gas counter-balancing system assures extremely stable motion. Cutting feed rate is up to 10,000 mm/min for increased efficiency.
Rigid, Massive Constructed Design for Lifetime Accuracy.

- Major machine parts are manufactured from rigid cast iron for maximum structural stability.
- Double wall box type structure for column, bed and saddle. Scientifically rib reinforced for added rigidity, while reducing thermal strain to a minimum.
- Four box ways on base assure solid support for heavy loads.
- Symmetric and well counter-balanced design on the column assures precision machining.
- Pre-tension ball screws on the 3 axes reduce thermal growth.

EXCELLENT PERFORMANCE SPINDLE
- High torque and performance is achieved from the two step (low and high gear) spindle.
- Accuracy is assured at both high and low speeds.

PRECISE CUTTING HEADSTOCK
- Spindle through can be equipped with a coolant device which is ideal for deep hole drilling.
- Easy chip removal. Specially-designed spindle is adaptable to all speeds and requirements.
- Spindle bearing life is extended through the floating design of the tool unclamp unit.
- Superior rigidity is achieved through the box-type construction of the headstock.
- The specially-designed longer spindle makes using smaller tools much easier.

RUGGED CONSTRUCTION
- ★ The machine structure is designed and analyzed by advanced "Finite Element Analysis" to achieve the highest stability and rigidity, high speed travel and light weight.
- ★ Ball screws are pre-tensioned to reduce thermal deformation to a minimum.
- ★ Base, saddle and column structures are reinforced by V-shaped ribs with shortened stress lines. This fully eliminates rib deformation while assuring the maximum rigidity of the machine.
- ★ Saddle is supported four ways featuring uniform load distribution and minimum deformation.
EXEMPLARY TECHNOLOGY AND OUTSTANDING PRODUCTS - SURELY, THE BEST MACHINE FROM TAIWAN.

CAM TYPE MAGAZINE
- The CAM type magazine rotation is driven by a cylindrical cam for fast and dependable tool change. Tool loading capacity is 30 tools. Random tool selection provides highly efficient tool changing.

LATEST ADVANCED CNC CONTROLLER
- Equipped with Fanuc, Heidenhain and other CNC controllers.

NITROGEN GAS COUNTER-BALANCE
- The newly designed nitrogen gas counter-balancing system employs an accumulator which does not require additional power.
- No hydraulic power unit is required.
- No noise, extremely stable motion, no resonance and greatly upgrades machining efficiency.
- Easy to adjust servo parameters.

HEAT EXCHANGER FOR CONTROL CABINET
- The high performance heat exchanger ensures a constant temperature inside the control cabinet. It provides protection for electronic components, controller and motor driver.

COOLANT AROUND SPINDLE
- The coolant jets around the spindle effectively remove heat from the cutting tool and the workpiece ensuring high cutting accuracy.

SPINDLE OIL COOLER
- High speed and accurate machining is assured because of the spindle oil cooler: It prevents the spindle from getting variation and thermal deformation.

WORK LIGHT
- Two quartz work lights provide lighting for the working area. They feature soft illumination without being irritating to the operator’s eyes.

TOOL KNOCKING DEVICE
- The tool knocking device with floating design features a buffering function which not only fully avoids damage to the spindle and bearings during tool release, but it also extends the service life of the spindle.
- Tool knocking motion is actuated by an air cylinder for efficient tool release.

CHIP AUGER
- During machining, chips are flushed and fall down to the chip auger for delivering to the chip conveyor. It efficiently removes chips to eliminate being affected by chip heat and keeps work area clean at all times.
Rigid, Precise Spindle
8,000 RPM Precision Spindle Especially

- Two speed ranges for the spindle transmission system provides full power output and high torque output at low speed range, allowing for heavy duty machining. High speed range fully meets high speed machining requirements.
- Satellite gear drive design minimizes backlash while assuring extremely smooth running at high speed.
- The spindle runs on ceramic bearing to reduce spindle thermal deformation to a minimum.

DIRECT-DRIVE SPINDLE POWER / TORQUE DIAGRAM (8,000 RPM)

More Powerful and Efficient Operations with Extra Optional Accessories

- Automatic Tool Length Measuring Device
- 4th Axis Connector
- Coolant Wash
- Fast CAM ATC, 40 Tools
- Coolant Through Spindle Device
- Coolant Through Tool
- Coolant and Air Gun

<table>
<thead>
<tr>
<th>Cutting Shape</th>
<th>Material</th>
<th>Steelbelt Chip Conveyor</th>
<th>Screw Type Conveyor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metallic Chip</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coat Chip</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Curly Aluminum Chip</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Aluminum Chip</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Metallic Chip</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

FLAT TYPE CHIP CONVEYOR

SCREW TYPE CHIP CONVEYOR
### SPECIFICATIONS:

<table>
<thead>
<tr>
<th>MODEL</th>
<th>MCV-1450</th>
<th>MCV-1450B</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TABLE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working Surface</td>
<td>mm (inch)</td>
<td>1,600 x 800 (62.99 x 31.5)</td>
</tr>
<tr>
<td>T-Slots (Size x Number)</td>
<td>mm (inch)</td>
<td>22 x 5 (0.87 x 5)</td>
</tr>
<tr>
<td>Max. Table Load</td>
<td>kgw (lbs)</td>
<td>2,000 (4,400)</td>
</tr>
<tr>
<td><strong>TRAVEL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Longitudinal Travel (X)</td>
<td>mm (inch)</td>
<td>1,450 (57.09)</td>
</tr>
<tr>
<td>Cross Travel (Y)</td>
<td>mm (inch)</td>
<td>750 (29.53)</td>
</tr>
<tr>
<td>Headstock Travel (Z)</td>
<td>mm (inch)</td>
<td>750 (29.53)</td>
</tr>
<tr>
<td>Distance Between Spindle End and Table Top</td>
<td>mm (inch)</td>
<td>200-950 (7.87-37.4)</td>
</tr>
<tr>
<td>Distance Between Spindle Center and Column Surface</td>
<td>mm (inch)</td>
<td>850 (33.46)</td>
</tr>
<tr>
<td><strong>SPINDLE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spindle Nose</td>
<td>mm</td>
<td>N.T. 50</td>
</tr>
<tr>
<td>Spindle Speeds</td>
<td>R.P.M.</td>
<td>6,000</td>
</tr>
<tr>
<td>Spindle Speed Range</td>
<td>Two Gears Variable Inifinite Variable</td>
<td></td>
</tr>
<tr>
<td><strong>FEED</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cutting Feed</td>
<td>mm/min (inch/min)</td>
<td>10,000 (393.7)</td>
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<tr>
<td>Rapid Traverse</td>
<td>m/min (inch/min)</td>
<td>20/20/12 (787/787/472)</td>
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<tr>
<td>Minimum Input Increment</td>
<td>mm (inch)</td>
<td>0.001 (0.0001)</td>
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<tr>
<td><strong>ATC (Automatic Tool Changer)</strong></td>
<td>Tools</td>
<td>BT 50</td>
</tr>
<tr>
<td>Tool Storage Capacity</td>
<td>Tools</td>
<td>BT 40</td>
</tr>
<tr>
<td>Max. Tool Dia. x Length</td>
<td>Ø x mm (inch)</td>
<td>105 x 300 (4.1 x 11.8)</td>
</tr>
<tr>
<td>Max. Tool Weight</td>
<td>kgw (lbs)</td>
<td>15 (33)</td>
</tr>
<tr>
<td>Max. Tool Dia. of adjacent pots are empty</td>
<td>Øxmm</td>
<td>200</td>
</tr>
<tr>
<td>Tool Selection</td>
<td>Random</td>
<td></td>
</tr>
<tr>
<td><strong>MOTOR</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spindle Drive Continuous Rating</td>
<td>Kw (HP)</td>
<td>11 (15)</td>
</tr>
<tr>
<td>Motor Rated Output for 30 Minutes</td>
<td>Kw (HP)</td>
<td>15 (20)</td>
</tr>
<tr>
<td>Drive Motors</td>
<td>X, Y, Z Axis</td>
<td>4.0 (5.4), 7.0 (9.4), 3 (4)</td>
</tr>
<tr>
<td><strong>MACHINE WEIGHT SPACE AND PACKING</strong></td>
<td>mm</td>
<td>5,330 x 4,150</td>
</tr>
<tr>
<td></td>
<td>inch</td>
<td>(209.84 x 163.39)</td>
</tr>
<tr>
<td>Net Weight</td>
<td>Kg (lbs)</td>
<td>14,500 (33,880)</td>
</tr>
</tbody>
</table>

**STANDARD ACCESSORIES:**
- Heat Exchanger
- Removable Manual Pulse Generator
- Coolant Around Spindle
- Spiral Type Chip Conveyor
- Semi-enclosed Splash Guard
- RS-232 Interface
- Automatic Power Off
- Call Light
- Automatic Lubrication Equipment
- Work Light
- Tool Kit
- Spare Fuses
- Spindle Cooler
- Rigid Tapping

**SPECIAL ACCESSORIES:**
- Enclosed Splash Guard
- Flat Type Chip Conveyor and Chip Wagon
- Rotary Table With 4th Axis Control
- 4th Axis Connector
- Coolant Through Tool
- Coolant Through Spindle With Filter
- Coolant Wash
- Automatic Tool Length Measuring Device
- Automatic Centering Device (Renishaw MP-10)
- Cam Mechanism ATC (40 Tools)

**MACHINE DIMENSIONS:**
Unit: mm

**TABLE & T-SLOT & SPINDLE**

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**SPINDLE POWER / TORQUE DIAGRAM (6,000 RPM)**

**SPINDLE SPEED (RPM)**

Specifications are subject to change without prior notice.