A compact machine that meets the demand for turning, milling, centerwork, and other needs of today’s market.
A spacious work area with an overall compact machine size. (The photo shows the CL2000B.)

### Max. Spindle Speed

**A-type**
- **High-speed spindle specifications**
  - Max. spindle speed
  - CL2000A/AT: 4,500 min⁻¹, 7.5/5.5 kW (10/7.5 HP) <30 min/cont>
  - CL2000AM: 4,500 min⁻¹, 11/7.5 kW (15/10 HP) <30 min/cont>

**B-type**
- **Heavy cutting specifications emphasizing output and torque**
  - Max. spindle speed
  - 3,500 min⁻¹, 11/7.5 kW (15/10 HP) <30 min/cont>

### Machine Size

<table>
<thead>
<tr>
<th>Model</th>
<th>Max. Turning Diameter</th>
<th>Standard Turning Diameter</th>
<th>Max. Turning Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>CL1500</td>
<td>420 (16.5)</td>
<td>176 (6.9)</td>
<td>370 (14.5)</td>
</tr>
<tr>
<td>CL2000A/B</td>
<td>440 (17.3)</td>
<td>196 (7.7)</td>
<td>363 (14.2)</td>
</tr>
<tr>
<td>CL1500M</td>
<td>490 (19.2)</td>
<td>217 (8.5)</td>
<td>321 (12.6)</td>
</tr>
<tr>
<td>CL2000AM/BM</td>
<td>420 (16.5)</td>
<td>176 (6.9)</td>
<td>313 (12.3)</td>
</tr>
<tr>
<td>CL1500T</td>
<td>440 (17.3)</td>
<td>196 (7.7)</td>
<td>570 (22.4)</td>
</tr>
<tr>
<td>CL2000AT/BT</td>
<td>440 (17.3)</td>
<td>196 (7.7)</td>
<td>563 (22.1)</td>
</tr>
</tbody>
</table>

### Working Area

- **Floor Space**
  - CL1500, CL2000A/B: 2.7 m² (28.4 ft²)
  - CL1500M, CL2000AM/BM: 3.4 m² (36.1 ft²)
  - CL1500T, CL2000AT/BT: 3.3 m² (35.5 ft²)

- **Z-Axis**
  - CL1500, CL2000A/B: 2.7 m² (28.4 ft²)
  - CL1500M, CL2000AM/BM: 3.4 m² (36.1 ft²)
  - CL1500T, CL2000AT/BT: 3.3 m² (35.5 ft²)

- **X-Axis**
  - 3.4 m² (36.1 ft²)

- **CL2000A/B**
  - Max. Turning Length: 363 mm (14.2 in.)
  - Max. Turning Diameter: 440 mm (17.3 in.)

### Milling

- Standard
- Tailstock
- CL1500
- CL1500M
- CL1500T

### Tailstock

- Standard
- CL2000A
- CL2000AM
- CL2000AT
- CL2000B
- CL2000BM
- CL2000BT
The tailstock design ensures long travel. (The photo shows the CL2000BT)

Sufficient torque is ensured across the full speed range from low to high speed. Acceleration/deceleration time has also been shortened.

### Spindle

**CL1500**

- **6-inch chuck**

**CL2000**

- **8-inch chuck**

### Acceleration/deceleration time

**CL2000B**

- **CL1500**
  - Acceleration time (0 → 3,500 min⁻¹): **3.2 sec.**
  - Deceleration time (3,500 min⁻¹ → 0): **3.2 sec.**

### Tailstock

**Max. turning length**

<table>
<thead>
<tr>
<th></th>
<th>CL1500T</th>
<th>CL2000AT/BT</th>
</tr>
</thead>
<tbody>
<tr>
<td>570 mm (22.4 in.)</td>
<td>563 mm (22.1 in.)</td>
<td></td>
</tr>
</tbody>
</table>

**Tailstock travel**

- 340 (13.4)*

**Tailstock spindle diameter**

- 85 (3.3)

**Taper hole of tailstock spindle**

- MT4 <live center>
- [MT3 <built-in center>]

**Tailstock spindle travel**

- 120 (4.7)

*Option

*When the length of a workpiece is 100 mm (3.9 in.) or less, the tailstock may not be usable. For the details of the tailstock travel, please refer to "axis travel diagram" in "CL1500, 2000 – Diagrams."
## Turret

<table>
<thead>
<tr>
<th>Turret indexing time</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1-station</td>
<td>0.7 sec.</td>
</tr>
<tr>
<td>Furthest station</td>
<td>1.4 sec.</td>
</tr>
</tbody>
</table>

### Milling specifications
(The photo shows the CL2000AM)

- **Rapid traverse rate**
  - X-axis, Z-axis: 24 m/min (944.9 ipm)

### Capto-compatible holder

## Rigid base

- FEM designed body for stable high-speed, high-precision machining.
  - FEM: Finite Element Method

- Box bed with ideally placed ribs.
  - Box way which absorbs vibration effectively.
Convenience and safety

Approach to spindle

302 mm (11.9 in.)

By placing the spindle closer to the operator, the level of convenience has been raised over previous models.

Wide door opening

33% wider than previous model

Door opening

480 mm (18.9 in.)

Built for safety

Impact resistant viewing window

Chuck jaw stroke end check
(featured only when optional chuck/cylinder is selected)

Footswitch with lock device

Standard features

- Door interlock system
- Cylinder check valve
- Overtravel (software)
- Low hydraulic pressure detecting switch

Option

- Tailstock spindle travel check
- Low air pressure detecting switch (consultation required)
- Danger sensing device interface
- Earth leakage breaker

Machine type CL2000B

Tool Diamond tool <nose radius 0.4 mm (0.016 in.)>

Material <JIS> A5052

*2 (Aluminum)

Outer diameter

A 80 mm (A 3.1 in.)

Spindle speed 3,000 min^-1

Feedrate 0.05 mm/rev (0.0020 ipr)
### Peripheral equipment

- **Manual type in-machine tool presetter**
- **Parts catcher**
- **Mist collector**
- **Work stopper (in spindle)**

### Chip disposal

- **In-machine cover chute**
- **Chip conveyor**

   Supports dry-machining due to improved chip removal.

   - **Chip transport route**

### Automatic operation support (option)

- **Bar feeder**

   Bars can be fully machined on a single machine when coupled with a parts catcher.

- **Bar work capacity**

<table>
<thead>
<tr>
<th>Machine type</th>
<th>mm (in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CL1500/M/T</td>
<td>ø33 (ø1.2)*</td>
</tr>
<tr>
<td>CL2000A/AM/AT</td>
<td>ø51 (ø2.0)*</td>
</tr>
<tr>
<td>CL2000B/BM/BT</td>
<td>ø65 (ø2.5)*</td>
</tr>
</tbody>
</table>

* Depending on the chuck/cylinder used and its restrictions, it may not be possible to reach full bar work capacity.

### Chip disposal

- **In-machine cover chute**
- **Chip conveyor**

   - **Hinge type**
   - **Spiral type**
   - **Scraper type**

   *Photo shows right discharge type*

### Tool life management function (standard features)

- **Total counter**
- **Tool life management function (standard features)**

### Load monitoring function (standard features)

- **Signal light**
- **Work stopper (in spindle)**
- **Parts catcher**
- **Guide bushing**
- **Work stopper**
- **Workpiece counter**
- **Total counter**
- **Tool life management function (standard features)**

### Load monitoring function (standard features)

- **Signal light**
- **Work stopper (in spindle)**
- **Parts catcher**
- **Guide bushing**
- **Work stopper**
- **Workpiece counter**
- **Total counter**
- **Tool life management function (standard features)**

### Chip conveyor

- **Chip conveyor**
- **Hinge type**
- **Spiral type**
- **Scraper type**

### Recommended accessories for bar feeder specifications

- **Parts catcher**
- **Guide bushing**
- **Work stopper**
- **Workpiece counter**
- **Signal light**
- **Total counter**
- **Tool life management function (standard features)**
- **Load monitoring function (standard features)**

*The colors and configurations shown in the photographs or illustrations may differ from those of the actual product.*
Automatic operation support (option)

Gantry-type loader system (LG-05)

A ball caster wheel conveyor is used because it does not cause many chip problems.

The open/close check switch is standard, improving the reliability of workpiece chucking.

A ball caster wheel conveyor is used because it does not cause many chip problems.

The open/close check switch is standard, improving the reliability of workpiece chucking.

Gantry-type loader system variations

- **Specifications**
  - Type A
  - Type A II
  - Type A III
  - Type A IV
  - Type C
  - Type C II
  - Type C III
  - Type C IV
  - Type E III

Other specifications <Consultation is required>

- **Units**
  - Machine
  - Workstocker
  - Loader
  - Turnover unit

- Separate consultation is required for hollow cylinder specifications. (Type A I, Type A II, Type C I, Type C II, Type E B)

Parallel hands

- 14-station rotary workstocker
- Spindle orientation
- Loader interface

Rotary workstocker

- Hand air-blow
- Low air pressure detecting switch
- Air blow for chuck
- Ceiling shutter
- Auto power off
- Workpiece counter (internal)

Gantry-type loader specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>LG-05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. transfer weight</td>
<td>5 kg (11 lb.) x 2</td>
</tr>
<tr>
<td>Max. travel speed</td>
<td>180 m/min (590.6 fpm)</td>
</tr>
<tr>
<td>X-axis &lt;hand up/down&gt;</td>
<td>200 m/min (656.2 fpm)</td>
</tr>
<tr>
<td>2-axis &lt;loader unit left/right&gt;</td>
<td></td>
</tr>
<tr>
<td>Number of pallet tables</td>
<td>14 [20] [26]</td>
</tr>
<tr>
<td>Max. workpiece weight</td>
<td>35 kg (77 lb./pallet)</td>
</tr>
<tr>
<td>Max. workpiece stacked height</td>
<td>470 mm (18.5 in.)</td>
</tr>
</tbody>
</table>

Loader hand

- Parallel hands for flanged workpieces

Allowable workpiece

- Outer diameter: 40–150 mm (1.6–5.9 in.)
- Length: 20–120 mm (0.8–4.7 in.)
- Weight: 5 kg (11 lb.) x 2

[ ] Option

- When the tailstock specifications are selected as an option, separate consultation is required.
- Please consult our sales representative in the case that a workpiece diameter is less than 40 mm (1.6 in.), or a workpiece length is less than 20 mm (0.8 in.).
Optional features

- Rotary workstocker
- Flat workstocker
- Workstocker for shaft workpieces
- Belt conveyor

- Transfer unit
- Turnover unit
- Transfer turnover unit
- Washing unit

- Measuring system
- Quality inspection station
- 3-guide specification
- Center-guide specification

- Hexagonal bar guide specification
- Tray changer
- Shaft pitch feed conveyor

- Gantry-type loader for shaft work
- Chip conveyor (right disposal/rear disposal)
- Turret-mounted workpiece-pusher
- 20-, 26-station rotary workstocker
- Workpiece holding detector
- Mist collector
- External emergency stop button
- Signal light 3 layers
- Ejecting chuter <NG, quality>
The CPU’s processing power has been improved, with many functions which dramatically reduce the time for programming and setup. The 3rd generation operating system MAPPS III is designed for productivity. A new interface connecting person and machine.

### Improved hardware specs

**Equipped with a USB interface**
- Data can be transferred easily between the machine and your PC.
  
  (For the USB memory, please use DMG MORI specified products. We cannot guarantee correct operations with other peripheral equipment such as USB hard disks)

**A large MAPPS program storage area**
- We have prepared an area which is separate from the NC memory, where programs can be stored in MAPPS.
  
  50 MB 6 GB

**DNC operation using external memory (front USB port)**
- DNC operation can be performed using programs stored in an external memory (USB). It is also possible to transfer data between an external memory and the NC memory and delete/copy/rename programs in an external memory.
  
  (Macro programs such as GOTO, IF and WHILE cannot be used in DNC operating programs.)

### Network

**MORI-SERVER [Standard features]**
- A network-enabled data management system for high-speed transfer of data between computer and machine.

**MORI-NET Global Edition**
- DMG MORI’s MORI-NET Global Edition is a customer support service using the Internet.

### Basic programming functions

- We have achieved efficient operation by strengthening basic programming functions.

  - Simultaneous 3-way split display
  - Synchronized drawing

### Power-saving function

- While ensuring efficient operation, it reduces power consumption.

  - Power-saving setting
    - Automatic machine light function
    - Automatic sleep function

### Conversational automatic programming

- Since necessary tools, conditions and values can be set automatically only by entering data as instructed on the screen, time and efforts required for programming are dramatically reduced.

  - Machining menu
  - 3D cutting simulation

### Faster setup

- We have added new functions to reduce the time in the preparatory stages and to prevent errors during the setup.

  - Simple soft jaw forming function

*Programs can be transferred between the program storage area and an external device such as an NC memory, an RS-232-C connection, a card interface, a USB interface or the MORI-SERVER. Programs that call sub-programs stored in the program storage area using M98/G65 must be stored in the NC memory.*

*Please see the product catalog for details. *The photo shown may differ from actual machine. *Information about the screen is current as of March 2017.

- This machine is also available without MAPPS. For details, please consult our sales representative.
- Descriptions above are based on MT308M (with MAPPS III).
<Precautions for Machine Relocation>

**EXPORTATION:**
All contracts are subject to export permit by the Government of Japan. Customer shall comply with the laws and regulations of the exporting country governing the exportation or re-exportation of the Equipment, including but not limited to the Export Administration Regulations. The Equipment is subject to export restrictions imposed by Japan and other exporting countries and the Customer will not export or permit the export of the Equipment anywhere outside the exporting country without proper government authorization.

To prevent the illegal diversion of the Equipment to individuals or nations that threaten international security, it may include a "Relocation Machine Security Function" that automatically disables the Equipment if it is moved following installation. If the Equipment is so-disabled, it can only be re-enabled by contacting DMG MORI or its distributor representative. DMG MORI and its distributor representative may refuse to re-enable the Equipment if it determines that doing so would be an unauthorized export of technology or otherwise violates applicable export restrictions.

DMG MORI and its distributor representative shall have no obligation to re-enable such Equipment. DMG MORI and its distributor representative shall have no liability (including for lost profits or business interruption or under the limited service warranty included herein) as a result of the Equipment being disabled.

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+ If you have any questions regarding the content, please consult our sales representative.

+ The information in this catalog is valid as of March 2017. Designs and specifications are subject to changes without notice.

+ The machines shown in the catalog may differ from the actual machines. The location and the size of the nameplates may also differ from the actual machines, or the nameplates may not be attached to some machines.

+ DMG MORI is not responsible for differences between the information in the catalog and the actual machine.