**Technical Leader**

The Vertical Machining Center Hi-MOLD6500 designed by Hyundai WIA with years of expertise and the latest technology, ensures performance requirements of the mold industry.

<table>
<thead>
<tr>
<th>Technical Leader</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hi-MOLD6500</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Table Size</td>
</tr>
<tr>
<td>Max. Load Capacity</td>
</tr>
<tr>
<td>Spindle Taper</td>
</tr>
<tr>
<td>Spindle Speed</td>
</tr>
<tr>
<td>Spindle Output</td>
</tr>
<tr>
<td>No. of Tools</td>
</tr>
<tr>
<td>Travel(X/Y/Z)</td>
</tr>
<tr>
<td>Rapid Traverse Rate</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>1,200×650 (47.2″×25.6″)</td>
</tr>
<tr>
<td>1,000 (2,205)</td>
</tr>
<tr>
<td>BBT40</td>
</tr>
<tr>
<td>20,000 [24,000]</td>
</tr>
<tr>
<td>22/18.5 (29.5/24.8) [22/18.5 (29.5/24.8)]</td>
</tr>
<tr>
<td>30</td>
</tr>
<tr>
<td>1,100/650/550 (43.3″/25.6/21.7″)</td>
</tr>
<tr>
<td>40/40/40 (1,575/1,575/1,575)</td>
</tr>
</tbody>
</table>
State of the art Technology for Machining Precision Molds

Hi-MOLD6500

- Bridge type machining center for utmost quality of molding
- High precision spindle design with accurate angular contact bearing
- 20,000 rpm built-in spindle for high precision molding (Option : 24,000 rpm)
- Ball screw nut cooling system in all axes as standard
- Hyundai WIA mold package for optimal mold machining
Basic Features
Super Quality & Productivity
Vertical Machining Center for Mold Machining

Bridge Type Column Structure
Hi-MOLD6500 is built upon a bridge type column frame. The greatest benefit of the double column machining center is the increase of rigidity and the decrease of heat generation. Hence, it retains accuracy and repeatability at the highest levels.

Built-In Spindle
Maximum spindle speed up to 20,000 rpm (Opt: 24,000 rpm) is possible due to the installation of ultra precision Angular Ball Bearings.

Step Type Column Structure
Since the column’s X-axis cross beam has incorporated a ‘step type’ design, the load that occurs at the front during machining has reduced. Furthermore, stability has increased by optimizing the column’s weight.

Grease Lubrication Method
Significant cost savings is achieved by incorporating the grease lubrication system versus the oil lubrication method.

X Type Rib Structure Bed
Hi-MOLD6500 is designed with a highly rigid X type rib structure, showing the best performance in high quality mold machining. It can also offer powerful cutting and high precision machining due to excellent vibration absorption.
HI-MOLD6500 has also adopted ball screw nut cooling system which protects travel axes from thermal displacement.

- **Rapid Traverse Rate** (X/Y/Z axis): 40/40/40 m/min (1,575/1,575/1,575 ipm)
- **Feed Travel** (X/Y/Z axis): 1,100/650/550 mm (43.3”/25.6”/21.7”)
High Precision Spindle
Long Lasting High Accuracy & Excellent Performance
Vertical Machining Center
Spindle Cooling

Oil–Air lubrication at spindle bearings is applied to minimize thermal displacement.

Dual Contact Spindle

The Big Plus spindle system (BBT40) provides dual contact between the spindle face and the flange face of the tool holder. This greatly increases tool rigidity, reduces run out and adds significant productivity to machining applications.

Built-In Spindle

The built-in Spindle, designed with Angular Contact Bearings at front and back, can rotate at 24,000rpm. Also, high speed and high precision machining are possible with its rapid acceleration/deceleration. Especially, it reduces noise and vibration generated by high speed, and minimizes thermal displacement to enable stable machining.

Through Spindle Coolant

Through Spindle Coolant is exceedingly useful when drilling deep holes. It helps increase the lifetime of the tool, while decreasing cycle time.

<table>
<thead>
<tr>
<th>Power (kW/HP)</th>
<th>Torque (N·m/lbf·ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>98N·m [72.3lbf·ft] (S2, 15min)</td>
<td>88 [72.3]</td>
</tr>
<tr>
<td>80N·m [59lbf·ft] (Cont.)</td>
<td>80 [59]</td>
</tr>
<tr>
<td>22kW [29.5HP] (S2, 15min)</td>
<td>22 [16.2]</td>
</tr>
<tr>
<td>18.5kW [24.8HP] (Cont.)</td>
<td>18.5 [12.4]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Power (kW/HP)</th>
<th>Torque (N·m/lbf·ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>53N·m [39.1lbf·ft] (S2, 10min)</td>
<td>53 [39.1]</td>
</tr>
<tr>
<td>37N·m [27.3lbf·ft] (Cont.)</td>
<td>37 [27.3]</td>
</tr>
<tr>
<td>22kW [29.5HP] (S2, 10min)</td>
<td>22 [16.2]</td>
</tr>
<tr>
<td>18.5kW [24.8HP] (Cont.)</td>
<td>18.5 [12.4]</td>
</tr>
</tbody>
</table>
Table & Machining Area

Compared to competitive machines, the Hi-Mold6500 has a large work envelop making setup and use easy and convenient for the operator.

- Table Size (X/Y axis): 1,200/650 mm (47.2”/25.6”)
- Table Load Capacity: 1,000 kg (2,205 lb)
**Magazine**

The tool magazine and machining area are completely separated by a shutter so that chip, coolant and dust particles can be blocked.

This helps to maintain high precision and cleanliness. Also, 30-pocket tool magazine is provided for increased machining flexibility and user convenience.

- Number of Tools: 30 EA
- Tool Shank: BBT40
- Max. Diameter of Tools: (W.T/W.O) Ø80/Ø150 (Ø3.1”/Ø5.9”)
- Max. Length of Tools: 300 mm (11.8”)
- Max. Weight of Tools: 8 kg (17.6 lb)
- Tool Selection Method: Random

**ATC**

The Double Arm ATC provides fast and reliable tool changes, reducing non-cutting time.

- Tool Change Time
  - Tool to Tool: 2 Sec
  - Chip to Chip: 6.5 Sec
Smart System
Software for Smart Operating and Machining

Faster processing and enhanced accuracy in are possible through the HYUNDAI WIA Smart System. The user friendly software and equipment monitoring of the Smart System maximizes productivity.

Mold–related Software

**HW–AFC**
HYUNDAI WIA Adaptive Feed Control
Software that controls the feed automatically to maintain a certain working load to extend tool life as well as productivity.

**HW–MCS**
HYUNDAI WIA Machining Condition Selection
Software that automatically sets cutting and feeding parameters according to the machining types (speed, degree, quality).
Smart Factory  **HW-MMS (HYUNDAI WIA-Machine Monitoring System)**  [OPTION]

A brand new manufacturing machine by HYUNDAI WIA, HW-MMS is a unique software capable of monitoring the operation status of manufacturing machines in factories, a smart solution to improve manufacturing conditions of customers.

**HW-MCG**  
**HYUNDAI WIA Machine Guidance**

Software that offers operation, maintenance, management monitoring and various user friendly features.

**HW-WARMUP**  
**HYUNDAI WIA WARMing Up**

Warm-up software that measures main spindle halt and offers system warm-up time automatically.

**HW-TDC**  
**HYUNDAI WIA Thermal Displacement Compensation**

Software that measures the changes in the external environment as well as heat emission during processing to help reduce thermal displacement.

**HW-ESS**  
**HYUNDAI WIA Energy Saving System**

An environmental friendly software that reduces the unnecessarily wasted standby power waiting for an operation.

**HW-TOM**  
**HYUNDAI WIA Tool Offset Measurement**

User friendly GUI software that indicates tool length, diameter, and damage (*H/W excluded*).

**HW-TM**  
**HYUNDAI WIA Tool Monitoring**

A tool monitoring software which analyzes the load of the spindle motor to determine and monitor possible damage of tools.
Mold Package

Powerful Mold Package,
HYUNDAI-WIA Mold All in One

HWM ALL-IN-ONE

To enhance mold machining, the "HWM ALL-IN-ONE" is provided as a standard feature for Hi-MOLD6500.
This ensures accurate and high quality surface finishing and contouring.

Mold Package Specification

<table>
<thead>
<tr>
<th>HWM ALL IN ONE</th>
<th>Standard</th>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>AICC II Package</td>
<td></td>
<td></td>
</tr>
<tr>
<td>600 block</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>1,000 block</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>S/W : HW-MCS, HW-AFC</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Auto Power Off</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Spindle Heat Distortion Compensation Device (8 Channels)</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Cutting Air Blow</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Auto Tool Measuring Device</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Data Server 1GB</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>
Mold Package

Thermal Displacement Compensation Device
Thermal displacement of the spindle is minimized by the use of cooling techniques. This provides high accuracy when machining at high speed.

- **Main Spindle Cooling Device (8-channel)**
  Maintains temperature on the main spindle from thermal displacement. (heat sensor)

- **Cutting Air Blow**
  Cutting air blow is provided for mold machining.

- **Auto Tool Measuring Device (RENISHAW TS27R)**
  Detects and sets tool length, and attrition (Graphic User Interface included)

High Speed Contouring Control (AICC II : 600 Block)
Automatic Power Off Device

Compensation of heat displacement (control of transmission axis)
Cooling system (Opt. control of setting temperature)
Lubrication system (Oil-Air)

T.D.C With PT100 Sensor
T.D.C With DISP. Sensor
Power supply (Opt. Filter Choke)
Hydraulic Device

Hydraulic Supply Unit
Instead of the standard hydraulic supply unit, an optional fixture unit can bring the pressure up to 80 bar (1,160 psi), maximizing the clamping force on the fixture.

Environment Device

Mist Collector
Mist Collector reduces the amount of smoke and oil mist in the air. This helps build a safe and comfortable working environment and improve durability.

Precision Device

Linear Scale
Linear scales can be applied when highly accurate positioning is required.

Measuring Device

Touch Sensor
Workpiece coordinate values can be set automatically using the optional spindle probe.

TLM - Laser & Touch
Tool lengths and diameters can be set automatically using the optional tool setter. This can also be used to monitor tool attrition and detect broken tools.
You can save 20% of energy when you choose the Huyundai WIA Eco Saving System which provides Screen Saver, Auto Power Off and Hydraulic Servo Motor Auto Control.

<table>
<thead>
<tr>
<th></th>
<th>Production Power</th>
<th>Standby Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td></td>
<td></td>
</tr>
<tr>
<td>After</td>
<td>Production Power</td>
<td>Standby Power</td>
</tr>
</tbody>
</table>

20% reduction
# SPECIFICATIONS

## Standard & Optional

<table>
<thead>
<tr>
<th>Spindle</th>
<th>HI-MOLD6500</th>
</tr>
</thead>
<tbody>
<tr>
<td>20,000rpm 12/18/34kw (29.5/24.8 HP)</td>
<td>FANUC ●</td>
</tr>
<tr>
<td>24,000rpm 12/18/34kw (29.5/24.8 HP)</td>
<td>FANUC ○</td>
</tr>
</tbody>
</table>

### Spindle Cooling System
- ●
- ○

### ATC
- Tool Shank Type: BBT40 ●
- U-Center: ER43 ●
- Pull Stud: 40° ●
- 60° ●
- 90° ●

### Table & Column
- APC ●
- T-Style Table ●
- High Column: 400mm (11.8") ●

### Coolant System
- Std. Coolant (Nozzle) ●
- Bed Flushing Coolant ○
- Through spindle coolant* ○
  - 20bar (290 psi) ○
  - 30bar (435 psi) ○
  - 50bar (735 psi) ○
- Tool Coolant: 20bar (290 psi) ○
- 30bar (435 psi) ○
- 50bar (735 psi) ○
- Top Cover (Thru coolant applied when necessary) ●
- Shower Coolant ○
- Gun Coolant ○
- Side Oil Hole Coolant ○
- Air Gun ○
- Cutting Air Blow ●
- Tool Measuring Air Blow (Only for TLM) ●
- Air Blow for Automation ○
- Thru MQL Device (Without MQL) ○
- Cooler Chiller ○
- Power Coolant System (For Automation) ○

### Chip Disposal
- Coolant Tank: 480ℓ (127.5 gal) ●
- Chip Conveyor (Hinge/Scrap) Left(Left) ●
- Special Chip Conveyor (Drum Filter) ○

### Chip Wagon
- Standard: 180ℓ (47.5 gal) ●
- Swing: 200ℓ (52.8 gal) ○
- Large Swing: 250ℓ (67.2 gal) ○
- Large Size: 330ℓ (89.7 gal) ○
- Customized ○

### S/W
- Machine guidance (HAW-MCG) ●
- Tool Monitoring (HAW-TMP) ○
- DNC Software (HAW-DNC) ○
- Spindle Hole Drilling Compensation (HAW-TDC) ●
- Spindle Warm up Function (HAW-WHUP) ●
- Energy Saving System (HAW-ESS) ●
- Machine Monitoring System (HAW-MMS) ○
- Tool Offset Measurement (HAW-TOFM) ●
- Machining Condition Selection (HAW-MCS) ●
- Adaptive Feed Control (HAW-AFC) ●
- Conversational Program (HAW-DPRD) ○

### Electric Device
- Call Light ○ Color: ■ ●
- Call Light ○ Color: ■○ ●
- Call Light ○ Color: ■□ ●
- Call Light & Buzzer ○ Color: ■□□ ●
- Work Light ○
- Electric Cabinet Light ○
- Remote MPG ○
- 3 Axis MPG ●
- Work Counter: Digital ○
- Total Counter: Digital ○
- Tool Counter: Digital ○
- Multi Tool Counter: PCA ○
- Electric Circuit Breaker ○
- Auto Voltage Regulator ○
- Transformer: 50kVA ○
- Auto Power Off ●
- Back up Module for Black out ○

### Measuring Device
- Air Zero ○
- TLM Touch ●
- Tool Broken Detector Device ○
- Linear Scale: KYY/Z Axis ●
- Coolant Level Sensor ○
- Coolant Tank 400ℓ (105.7 gal) ●
- Chip Conveyor ○
- Chip Wagon ○
- Standard (32" length) ○
- Swing (32.75") ○
- Large Swing (35") ○
- Large Size (330ℓ) ○
- Customized ○

### Environment
- Air Conditioner ○
- Dehumidifier ○
- Oil Mist Collector ○
- Oil Skimmer (Only for Chip Conveyor) ○
- MQL (Minimal Quantity Lubrication) ●
- Auto Power Off ●

### Fixture & Automation
- Auto Door ○
- Auto Shutter (Only for Automatic System) ●
- Sub O/P ○
- TLM Rotary Table/P Separator Single ○
- Control of Additional Axis ○
- External M Code Area ○
- I/O Extension (In & Out) 16 Contact ○
- 32 Contact ○

### Hyd. Device
- Std. Hyd. Unit: 70bar (1,015 psi) ○
- Center Type: 2x30ℓ/Port ○
- Hyd. Supply Unit: 2x30ℓ/Port ○
- Hyd. Unit for Fixture: 100bar (1,450 psi) ○
- Customized ○

### ETC
- Tool Box ●
- Customized Color ○
- CAD/CAM Software ○

---

*Through Spindle Coolant*: Please check the filter types with sales representative.

Specifications are subject to change without notice for improvement.

---

Through Spindle Coolant*: Please check the filter types with sales representative.

Specifications are subject to change without notice for improvement.
SPECFICATIONS

External Dimensions

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Unit (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>985 (38.8)</td>
<td></td>
</tr>
<tr>
<td>3365 (132.5)</td>
<td></td>
</tr>
<tr>
<td>970 (38.2)</td>
<td></td>
</tr>
<tr>
<td>1200 (47.2)</td>
<td></td>
</tr>
<tr>
<td>890 (35)</td>
<td></td>
</tr>
<tr>
<td>1644 (64.7)</td>
<td></td>
</tr>
<tr>
<td>478 (18.8)</td>
<td></td>
</tr>
<tr>
<td>3002 (118.2)</td>
<td></td>
</tr>
<tr>
<td>468 (18.4)</td>
<td></td>
</tr>
<tr>
<td>2753 (108.4)</td>
<td></td>
</tr>
<tr>
<td>450 (17.7)</td>
<td></td>
</tr>
<tr>
<td>182 (7.2)</td>
<td></td>
</tr>
<tr>
<td>1192 (46.9)</td>
<td></td>
</tr>
<tr>
<td>2500 (98.4)</td>
<td></td>
</tr>
<tr>
<td>3410 (134.3)</td>
<td></td>
</tr>
</tbody>
</table>
## SPECIFICATIONS

### Table Dimensions

<table>
<thead>
<tr>
<th>61</th>
<th>88</th>
<th>88</th>
<th>88</th>
<th>61</th>
<th>24</th>
<th>88</th>
<th>88</th>
</tr>
</thead>
<tbody>
<tr>
<td>(2.4)</td>
<td>(3.5)</td>
<td>(3.5)</td>
<td>(3.5)</td>
<td>(2.4)</td>
<td>(2.4)</td>
<td>(3.5)</td>
<td>(3.5)</td>
</tr>
</tbody>
</table>

unit: mm (in)

<table>
<thead>
<tr>
<th>600 (23.6)</th>
<th>600 (23.6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1200 (47.2)</td>
<td></td>
</tr>
</tbody>
</table>

**Detail T-Slot**

- Ø18H8 (Ø0.7)
- 32 (1.3)
- 20 (0.8)
- 30 (1.2)
- 0.5
- 12
SPECIFICATIONS

Tool Shank

BT40/BBT40, BIG PLUS

CAT40/BCV40

Through Coolant

Through Coolant

unit: mm (in)
## Specifications

<table>
<thead>
<tr>
<th>ITEM</th>
<th>Hi-MOLD6500</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TABLE</strong></td>
<td></td>
</tr>
<tr>
<td>Table Size (L×W) mm(in)</td>
<td>1,200×650 (47.2″×25.6″)*</td>
</tr>
<tr>
<td>Maximum Load Capacity kg(lb)</td>
<td>1,000 (2,205)</td>
</tr>
<tr>
<td>Table Change Time sec</td>
<td>-</td>
</tr>
<tr>
<td>Change Method</td>
<td>-</td>
</tr>
<tr>
<td>Table Driving Method</td>
<td>-</td>
</tr>
<tr>
<td><strong>SPINDLE</strong></td>
<td></td>
</tr>
<tr>
<td>Spindle Taper</td>
<td>#40</td>
</tr>
<tr>
<td>Spindle RPM r/min</td>
<td>20,000 [24,000]</td>
</tr>
<tr>
<td>Spindle Power Output (Max./Cont.) kW(HP)</td>
<td>22/18.5 (29.5/24.8) [22/18.5 (29.5/24.8)]</td>
</tr>
<tr>
<td>Spindle Torque (Max./Cont.) N・m(lbf・ft)</td>
<td>98/80 (72.3/59) [53/37 (39.1/27.3)]</td>
</tr>
<tr>
<td>Spindle Driving Method</td>
<td>BUILT IN</td>
</tr>
<tr>
<td><strong>FEED</strong></td>
<td></td>
</tr>
<tr>
<td>Travel (X/Y/Z) mm(in)</td>
<td>1,100/650/550 (43.3″/25.6″/21.7″)*</td>
</tr>
<tr>
<td>Distance from Table Surface to SP mm(in)</td>
<td>150 ~ 700 (5.9″ ~ 27.6″)*</td>
</tr>
<tr>
<td>Distance from Column to SP center mm(in)</td>
<td>260 (10.2″)*</td>
</tr>
<tr>
<td>Rapid Traverse Rate (X/Y/Z) m/min(ipm)</td>
<td>40/40/40 (1,575/1,575/1,575)</td>
</tr>
<tr>
<td>Slide Type</td>
<td>ROLLER GUIDE</td>
</tr>
<tr>
<td><strong>ATC</strong></td>
<td></td>
</tr>
<tr>
<td>Number of Tools ea</td>
<td>30</td>
</tr>
<tr>
<td>Tool Shank</td>
<td>BBT40</td>
</tr>
<tr>
<td>Max. Tool Dia. W/ T Adjacent Tool mm(in)</td>
<td>Ø80/Ø150 (Ø3.1″/Ø5.9″)*</td>
</tr>
<tr>
<td>Max. Tool Length mm(in)</td>
<td>300 (11.8″)*</td>
</tr>
<tr>
<td>Max. Tool Weight kg(lb)</td>
<td>8 (17.6)</td>
</tr>
<tr>
<td>Tool Selection Method</td>
<td>RANDOM</td>
</tr>
<tr>
<td>Tool Change Time T-T sec</td>
<td>2</td>
</tr>
<tr>
<td>C-C sec</td>
<td>6.5</td>
</tr>
<tr>
<td><strong>TANK CAPACITY</strong></td>
<td></td>
</tr>
<tr>
<td>Coolant Tank ℓ(gal)</td>
<td>400 (105.7)</td>
</tr>
<tr>
<td>Lubricating Tank ℓ(gal)</td>
<td>3 (0.8)</td>
</tr>
<tr>
<td>Hydraulic Tank ℓ(gal)</td>
<td>15 (4)</td>
</tr>
<tr>
<td><strong>POWER SUPPLY</strong></td>
<td></td>
</tr>
<tr>
<td>Air Consumption (0.5MPa) ℓ/min</td>
<td>500</td>
</tr>
<tr>
<td>Electric Power Supply KVA</td>
<td>40</td>
</tr>
<tr>
<td>Thickness of Power Cable Sq</td>
<td>Over 50</td>
</tr>
<tr>
<td>Voltage V/Hz</td>
<td>220/60 (200/50)*</td>
</tr>
<tr>
<td><strong>MACHINE</strong></td>
<td></td>
</tr>
<tr>
<td>Floor Space (L×W) mm(in)</td>
<td>3,365×2,753 (132.5″×108.4″)*</td>
</tr>
<tr>
<td>Height mm(in)</td>
<td>3,018 (118.8″)*</td>
</tr>
<tr>
<td>Weight kg(lb)</td>
<td>11,000 (24,251)</td>
</tr>
<tr>
<td><strong>NC</strong></td>
<td></td>
</tr>
<tr>
<td>Controller</td>
<td>FANUC 31i-B</td>
</tr>
</tbody>
</table>

*) Using 50Hz voltage instead of 60Hz may lower the output of motors (excluding servo motors and inverter motors) Specifications are subject to change without notice for improvement.
FANUC 31i-B

Controlled axis / Display / Accuracy Compensation

Control axes: 3 axes (X, Y, Z) / 4 axes (X, Y, Z, B)
Simultaneously controlled axes: 3 axes (Max. 4 axes)
Least setting unit: X, Y, Z axes: 0.001 mm (0.0001 inch)
Least input increment: X, Y, Z axes: 0.001 mm (0.0001 inch)

Increment / Metric conversion: X: 0.0001" / G57
High response vector control
Interlock: All axes / Each axis
Machine lock: All axes
Backlash compensation: ± 0 – 9999 pulses
(Cutaneous feed / Cutting feed)
Position switch: LCD / CRT
Feedback: Absolute meter / Feedback

Stored stroke check: 1
Stored pitch error compensation

Operation

Automatic operation / Memory
MIDI operation
TCN operation: Needed TNC software / CF card
Program restart

Wiring connection prevention
Program check function: dry run, Program check

Single block
Search function: Program number / Sequence number

Interpolation functions

Trapezoidal interpolation
Positioning: G00
Linear interpolation: G60
Cylindrical interpolation: G63, G60
Exact stop mode: Single / G09, Continuous / G61
Swing: G04, 0 ~ 9999.9999 sec
Skip: G01
Reference position return: 1st reference / G37
2nd reference / G37
Ref. position check / G38
Thread synchronizer cutting: G39
Helical interpolation: (Circular + Linear interpolation 2 axes max.)

Feed function / Acc. & Dec. control

Manual feed: Rapid traverse
Jog: 0.01 mm/min (197 rpm)
Manual handwheel: X, Y, Z: 1000 pulses
Reference position return

Cutting feed command: Direct Input F code
Feedrate override: 0 ~ 1000% (10% Unit)
Rapid traverse override: 100%, 50%, 25%, 50%, 100%

Override cancel
Feed per minute: G94
Feed per revolution: G95

Look-ahead block: 1 Block

Program input

Tape code: EIA / ISO
Optional block skip: 1 ea
Absolute / Incremental program: G90 / G91
Program stop / end: M00, M01 / M02, M30
Maximum command unit: ± 9999,9999 mm (± 99,999.9999 inch)
Workpiece coordinate system: G52, G53 / 6 pairs (G54 ~ G59)
Manual absolute: Fixed G01
Programable data input: G00
Sub program call: 10 folds nested
Custom macro: #100 ~ #149, #500 ~ #549
G code system: A
Programmable mirror image: G51.1, G50.1
G code preventing buffering: G41

Including Chamfering / Corner R

Canned cycle: G73, G74, G76, G80 ~ G89
Coordinate rotation: G67, G68

Figures in inch are converted from metric values.
The FANUC controller specifications are subject to change based on the policy of company CNC supplying.

Auxiliary function / Spindle speed function

Auxiliary function: M & 4 digit
Level-up M Code: Multi / Bypass M code
Spindle speed command: 5 & 6 digit / Digital output
Spindle override: 0% ~ 100% (10% Unit)
Spindle orientation: G19
F53B (High speed rigid tapping)

Tool function / Tool compensation

Tool function: Max. 10 digit
Tool life management: 256 pairs
Tool offset pairs: 64 pairs
Tool nose radius compensation: G40, G41, G02
Tool nose length compensation: G43, G44, G49
Tool offset memory (C): Tool length, diameter, abrasion (length, diameter)
Tool length measurement: Z axes input C

Editing function

Part program storage size: 640m (256K)
No. of registerable programs: 500 ea
Program protect

Background editing
Extended part program editing: Copy, move and change of F program

Memory card program edit

Data input / output & Interface

I/O interface: RS-232C serial port, FT card, USB memory
Screen hard copy
External message
External key input
External workpiece number search
Automatic data backup

Setting, display and diagnosis

Self-diagnosis function
History display: Alarm & Operator message / Operation
Run hour / Parts count display
Maintenance information
Actual cutting feed rate display
Display of spindle speed / T code

Graphic display

Operating monitor screen: Spindle / Servo load etc.
Power consumption monitoring: Spindle & Servo
Spindle / Servo setting screen
Multi language display: Support 20 languages
Display language switching: Selection of 5 optional languages
LCD Screen Saver: Screen saver
Processing select: Speed / Rigidity setting

Option

Additional optional block skip: 9 ea
Fast ethernet

Data server

Protection of data at 8 levels
Sub Spindle control

Polar coordinate command: G15, G16

Cylindrical interpolation: G07.1
One-way positioning: G40

Stroked stroke check 1, 2, 3

In-circuit feed: G93

Scaling: G30, G10

Manual guide: Conversational auto program

Handle interrupt

Manual handle feed: 2/3 units

Additional custom macro variables:

#100 ~ #149, #580 ~ #589
#18000 ~ #18049

Retraction for rigid tapping

Tool management function

Tool offset number: Max. 1000 pair
Program storage capacity: 512 / 8K (000 ~ 999)
Program registration number: Max. 400 ea

Additional work coordinate: 48 pair (G54.1 ~ P48)

AICC: 1200 block

400 / 600 / 1000 block

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