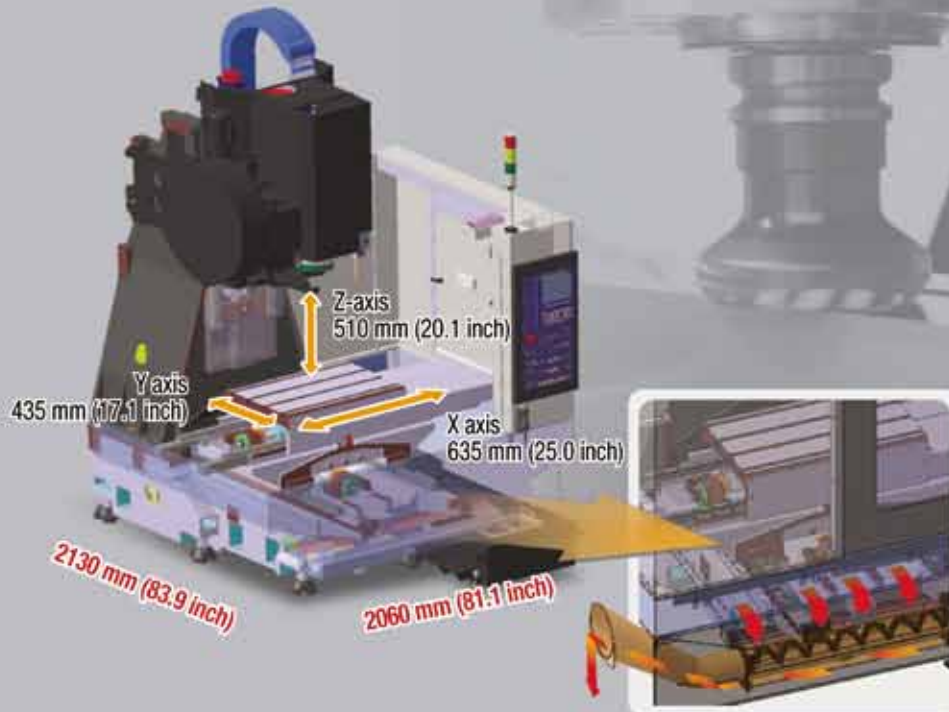




# DNM 400a

## Compact Vertical Machining Center

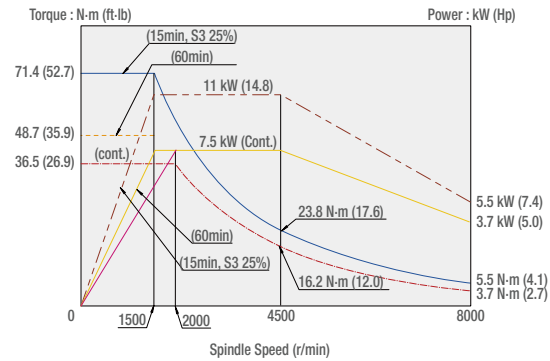
- Compact design for space saving
- Enhanced machining productivity
- Fit for light cutting operations





## Main Spindle

### Spindle power-torque diagram



Spindle motor power (15min/Cont.) **11 / 7.5 kW**  
(14.8 / 10.1 Hp)

Max. Spindle speed **8000 r/min**

## Rapid Traverse



The linear motion guide ways and the high-speed servo motors enable fast axis movements, which reduce machining time and non-cutting time, resulting in enhanced productivity.



|        |             | DNM 400a           |
|--------|-------------|--------------------|
| X-axis | m/min (ipm) | <b>30 (1181.1)</b> |
| Y-axis | m/min (ipm) | <b>30 (1181.1)</b> |
| Z-axis | m/min (ipm) | <b>30 (1181.1)</b> |

## Auto Tool Changer

Fast tool change time on a cam-type tool changer helps improve productivity.



Tool change time (T-T-T)

DNM series **1.3 s**

• This value is based on the motor on-off time and 60Hz.

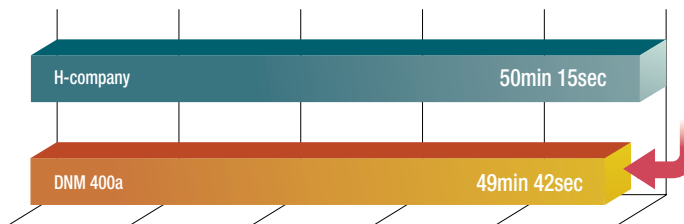
Tool storage capacity

**20 tools**

## Machining Productivity

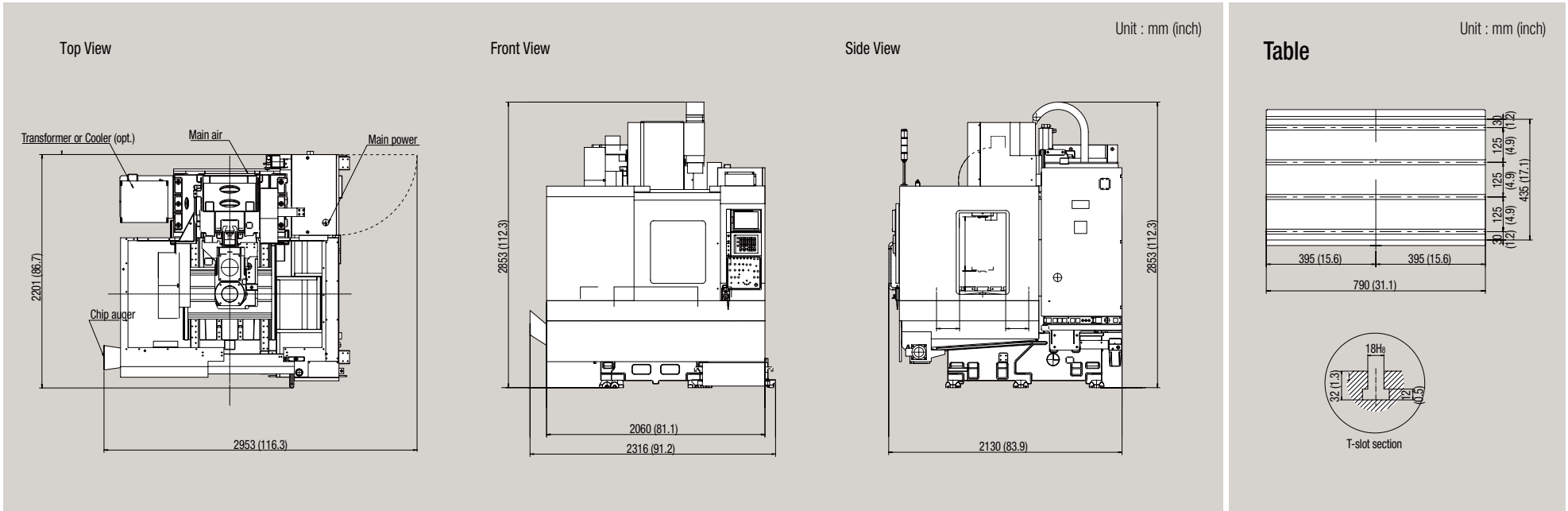
The basic concept of the machine design enables fast machining performance, which ensures an improvement in productivity.

### Comparison of Cutting Time



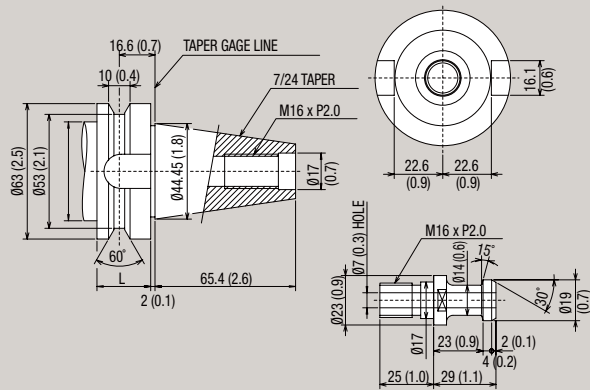
Material : Aluminum (Al606-T6)  
Size : 561 x 210 x 40 mm  
(22.1 x 8.3 x 1.6 inch)  
No. of tools used : 18 tools

# External Dimensions

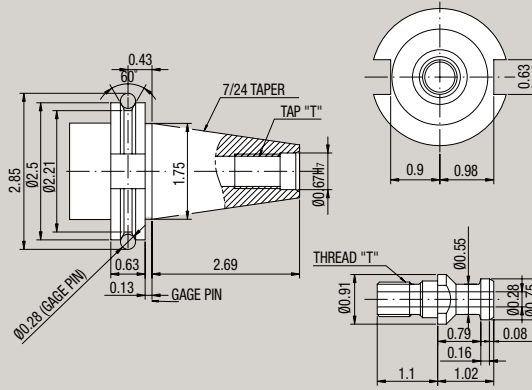


## Tool Shank

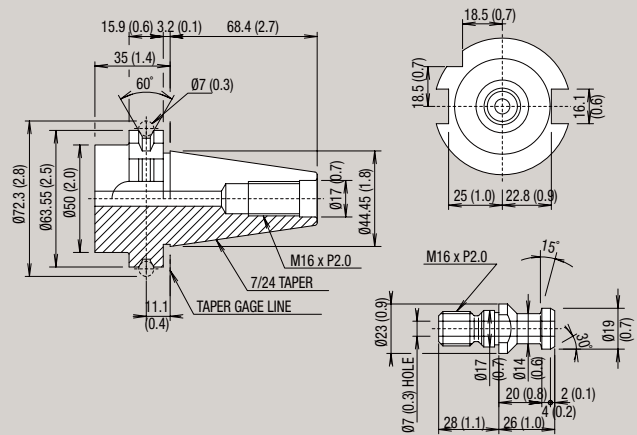
**BT40** Unit : mm (inch)



**CAT40** Unit : inch



**DIN40** Unit : mm (inch)



## Machine Specifications

|                        | Features                                  |              | DNM 400a                             |
|------------------------|---|--------------|--------------------------------------|
| Travel                 | X-axis                                    | mm (inch)    | 635 (25.0)                           |
|                        | Y-axis                                    | mm (inch)    | 435 (17.1)                           |
|                        | Z-axis                                    | mm (inch)    | 510 (20.1)                           |
|                        | Distance from Spindle to table surface    | mm (inch)    | 150-660 (5.9-26.0)                   |
| Table                  | Table size                                | mm (inch)    | 790 x 435 (31.1 x 17.1)              |
|                        | Table loading capacity                    | kg (lb)      | 400 (881.8)                          |
|                        | Table surface                             |              | 4-125 x 18H8                         |
| Spindle                | Max. spindle speed                        | r/min        | 8000                                 |
|                        | Spindle Taper                             |              | ISO #40 7/24 Taper                   |
|                        | Max. Torque                               | N-m (ft-lb)  | 71 (695.8) / 15min                   |
| Feedrate               | Rapid traverse rate (X / Y / Z)           | m/min (ipm)  | 30 (1181.1)                          |
|                        | Cutting feedrate                          | mm/min (ipm) | 15000 (590.6)                        |
| Automatic tool changer | Type of tool shank                        |              | BT / CAT / DIN 40                    |
|                        | Tool storage capacity                     | ea           | 20                                   |
|                        | Max. tool diameter                        | mm (inch)    | Ø80 (3.2)                            |
|                        | Max. tool diameter without adjacent tools | mm (inch)    | Ø125 (4.9)                           |
|                        | Max. tool length                          | mm (inch)    | 300 (11.8)                           |
|                        | Max. tool weight                          | kg (lb)      | 8 (17.6)                             |
|                        | Method of tool selection                  |              | memory random                        |
|                        | Tool change time (tool-to-tool)           | s            | 1.3                                  |
| Motor                  | Spindle motor                             | kW (Hp)      | 11 / 7.5 (14.8 / 10.1) [15min/Cont.] |
|                        | Feed motor (X / Y / Z)                    | kW (Hp)      | 1.2 / 1.2 / 1.8 (1.6 / 1.6 / 2.4)    |
| Power source           | Electric power supply (Rated capacity)    | kVA          | 27.4                                 |
|                        | Compressed air supply                     | MPa (psi)    | 0.54 (78.3)                          |
| Tank capacity          | Coolant tank capacity                     | L (gal)      | 300 (79.3)                           |
|                        | Lubrication tank capacity                 | L (gal)      | 1.4 (0.37)                           |
| Machine size           | Machine height                            | mm (inch)    | 2853 (112.3)                         |
|                        | Machine dimension (L x W)                 | mm (inch)    | 2130 x 2060 (83.9 x 81.1)            |
|                        | Machine weight                            | kg (lb)      | 4000 (8818.5)                        |
| NC system              |   |              | DOOSAN FANUC i series                |

- The specifications and information above-mentioned may be changed without prior notice.
- For more details, please contact Doosan.



## Doosan Machine Tools

<http://www.doosanmachinetools.com>

[www.facebook.com/doosanmachinetools](https://www.facebook.com/doosanmachinetools)

### Optimal Solutions for the Future

#### Head Office

Yeonkang Bldg., 6th FL., 270, Yeonji-dong,  
Jongno-gu, Seoul, Korea  
Tel +82-2-3670-5345 / 5362  
Fax +82-2-3670-5382

#### Doosan Machine Tools America

19A Chapin Rd., Pine Brook, NJ 07058, U.S.A.  
Tel +1-973-618-2500  
Fax +1-973-618-2501

#### Doosan Machine Tools China

Room 101,201,301, Building 39 Xinzhuan Highway  
No.258 Songjiang District,China Shanghai(201612)  
Tel +86 21-5445-1155  
Fax +86 21-6405-1472

#### Doosan Machine Tools Europe

Emdener Strasse 24, D-41540 Dormagen, Germany  
Tel +49-2133-5067-100  
Fax +49-2133-5067-001

#### Doosan Machine Tools Japan

#2412, Mita Kokusai Bldg. 1-4-28 Mita,  
Minato-ku, Tokyo 108-0073, Japan  
Tel +81 3 5730 9013  
Fax +81 3 5730 9016

#### Doosan Machine Tools India

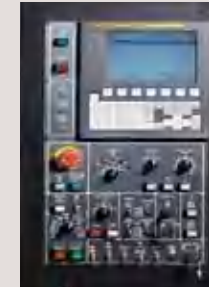
106 / 10-11-12, Amruthahalli, Byatarayanapura,  
Bellary road, Bangalore-560 092, India  
Tel +91-80-4266-0122 / 121 / 100



ver. EN 160502 SU

## NC Unit Specifications

### DOOSAN FANUC i series



### Standard Feature

- Assembly & operation tools
- Auger chip conveyor
- Coolant tank & chip pan
- Door interlock for safety
- Enclosure splash guard (Top cover **opt.**)
- Flood coolant system
- Installation parts
- Operator call lamp (red, yellow, green)
- Portable MPG
- Work light

### Optional Feature

- 4th axis preparation
- Automatic power off
- Automatic tool length measurement
- Hydraulic line for fixture
- Pneumatic line for fixture
- Rotary table
- Shower coolant
- Spindle head cooling system
- Test bar
- Through spindle coolant (Top cover **std.**)
- Top cover

- Number of tool offsets : 400 ea
- Tool life management : 128 sets
- Tool offset memory C : Geometry / Wear and Length / Radius offset memory
- No. of Registered programs : 400 ea
- Part program storage : 1280 m
- Additional work coordinate system : G54.1 P1 - 48 (48 pairs)
- AI APC(Advanced Preview Control) : 20 block preview
- MDI / DISPLAY unit : 8.4" Color TFT LCD, keyboard for data input (small), soft-keys
- Embedded ethernet

\* For more details, please contact Doosan Machine Tools.

\* The specifications and information above-mentioned may be changed without prior notice.

\* Doosan Machine Tools Co., Ltd. is a subsidiary of MBK Partners, a Korean private equity firm. The trademark DOOSAN is used under a licensing agreement with Doosan Corporation, the registered trademark holder.