

DNM 4000

High Productivity Compact Vertical Machining Center

The DNM 4000 packs the same advanced features of Doosan's larger DNM machines such as a direct coupled spindle, linear motion roller guideways, and one piece bed design into a lean and compact footprint.



Main Features

- Fanuc 0i-M Control
- Meehanite cast iron bed
- High precision, direct coupled spindle design with (11 / 18.5 kw \ 15 / 25 hp motor, 12,000 rpm)
- Spindle oil chiller
- Spindle orientation, load meter, override and rigid tapping
- Cam Type, Double Arm ATC (20 tools)
- Large Linear Roller Guides (X - 25 mm \ .984", Y - 35 mm \ 1.377", Z - 35 mm \ 1.377")
- Servo motors mounted directly to the oversized, double pre-tensioned ball screws (X - 32 mm \ 1.259", Y - 32 mm \ 1.259", Z - 32 mm \ 1.259")
- Fast rapid traverse rate (X - 48 m/min \ 1,889 ipm, Y - 48 m/min \ 1,889 ipm, Z - 48 m/min \ 1,889 ipm)
- AICC 1 (40 block look ahead)
- Renishaw probe ready (OMI-2T optical receiver and GUI software only)
- Doosan Tool Load Monitoring and Adaptive Feedrate Control
- Doosan Smart Thermal Monitoring (Software algorithm based thermal compensation system)

Standard Equipment and Warranty

- 20 bar (230 psi) Through spindle coolant, Air through spindle
- Flood coolant with large separate coolant tank (200 liter \ 52 gallon)
- Bed flush coolant system
- Full enclosure splash guard
- Telescopic covers
- Eco friendly grease lubrication with 1 cartridge pre-installed on the machine
- Portable manual pulse generator
- Program and data protection key
- Work light and 3 color tower signal light
- Two-year machine parts warranty, one-year labor warranty. See warranty pages for details.
- Two-year control warranty: Parts and Labor
- Doosan instruction, operation, parts list and electrical drawing manuals in hardcopy format
- FANUC manuals provided on USB drive (Hardcopy available for purchase, contact parts department)

SPECIFICATIONS:

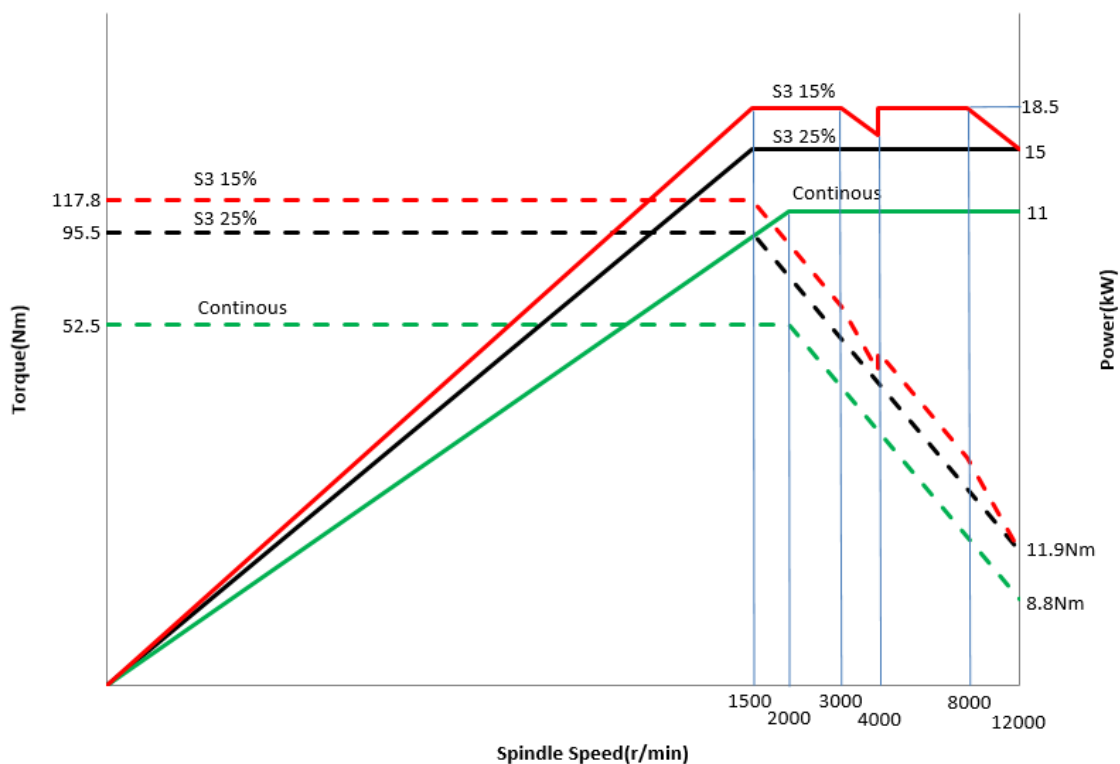
CAPACITY:

X axis travel	520 mm (20.472")
Y axis travel	400 mm (15.748")
Z axis travel	480 mm (18.897")
Table loading area	650 mm x 400 mm (25.59" x 15.748")
Allowable table load	400 kg (882 lbs)
Table T-slot spacing x width	(3) - 100 mm x 14H8 (3) - 3.937" x .551"

SPINDLE:

Spindle nose to table top	150 mm to 630 mm (5.9" to 24.8")
Big Plus Spindle system	CAT 40 Big Plus
Spindle speed	12,000 rpm
AC Spindle Motor (S3 15%)	11 / 18.5 kw (15 / 25 hp)
Spindle Torque (S3 15%)	118 nm (87 ft-lbs)
Spindle Acceleration \ Deceleration time	0 -12k (2.06 sec) \ 12k - 0 (2.12 sec)

DNM aT8 12,000 rpm



AUTOMATIC TOOL CHANGER:

Number of Tools	20
Tool Shank	CAT 40
Pull Stud (Supply Company #)	711-23
Max. Tool Dia. \ Adjacent pots are empty	90 mm \ 125 mm (3.54" \ 4.9")
Max. Tool Length	270 mm (10.63")
Max. Tool Weight	5 kg (11.02 lbs)
Tool to Tool	1.3 seconds
Chip to Chip	2.6 seconds

MOTION:

X axis rapid traverse rate	48 m/min (1,889 ipm)
Y Axis rapid traverse rate	48 m/min (1,889 ipm)
Z axis rapid traverse rate	48 m/min (1,889 ipm)
Cutting feed rate	1 - 24,000 mm/min (.04 - 945 ipm)
Least command increment	.001 mm (.0001")
X axis feed thrust (Continuous)	922 lbs
Y axis feed thrust (Continuous)	922 lbs
Z axis feed thrust (Continuous)	1,342 lbs
Positioning accuracy (Full Stroke)*	+/- .005 mm (+/- .0002")
Repeatability	+/- .002 mm (+/- .000080")

GENERAL:

Machine Height	2,753 mm (108.4")
Floor Space Required (L x W)	2,858 mm x 1,650 mm (112.5" x 65")
Machine Weight	3,300 kg (7,275 lbs)

UTILITY:

Power required	30 kVA / 85.2 amps @ 220v
Voltage required - Fanuc	205-235 Volts / 3 Phase

TANK CAPACITY:

Coolant tank capacity	200 liters (52 gallons)
Lubrication tank capacity	.7 liter (.18 gallon)
Air Required	.54 mpa (80 psi) * 5.3 cfm

* Geometric accuracies guaranteed only if machine installed on a foundation meeting the minimum requirements of Doosan Machine Tools America. Please see your dealer for the current machine requirements.