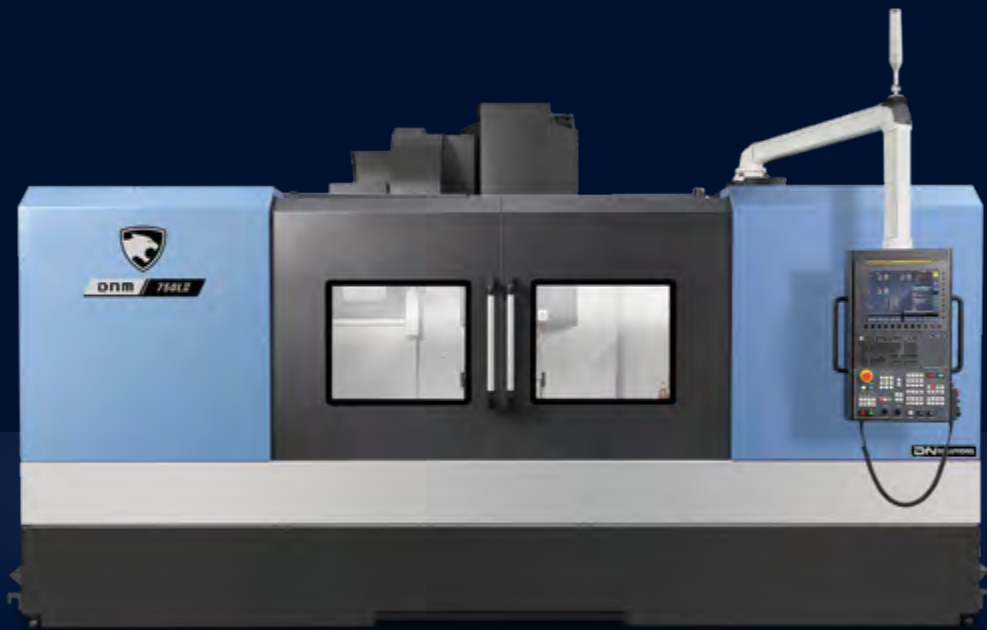




HIGH PRODUCTIVITY VERTICAL MACHINING CENTER

# DNM

750 II • 750L II



# DNM 750 II · DNM 750L II

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Designed as high productivity vertical machining centers, the DNM 750 II and DNM 750L II have a rigid structure and are equipped with either directly-coupled, built-in or belt-driven spindles. An oil cooler system is supplied as a standard enabling the machines to be used continuously, at high speed, over long periods of time. The oil is cooled in the cooler system before being circulated around the spindle head and ball screw nut to minimize thermal displacement and deliver high-precision cutting. The Ez work functions in the machines' control systems ensure efficient and trouble-free job set ups and machining operations.





### THE LARGEST CUTTING AREA IN THEIR CLASS

- The X-axis travel distance, table size and maximum table load have all been increased allowing larger and heavier workpieces to be machined.

### HIGH PRODUCTIVITY MACHINES FOR HIGHLY STABLE MACHINING PERFORMANCE

- Spindle cooling and ball screw cooling systems are supplied as standard to ensure reliable and repeatable machining performance.

### EASY OPERATION OF CNC SYSTEM

- Fast, efficient and error-free operation
- The Ez work functions are user friendly and are easy-to-use.

# BASIC STRUCTURE | AXIS SYSTEM

## Basic structure

The machines' rigid column design ensures highly-stable machining performance. Larger workpieces can be machined by extending the X-axis stroke.

### Traverse distance (X x Y x Z axis)

DNM 750 II

**1630 / 762 / 650** mm

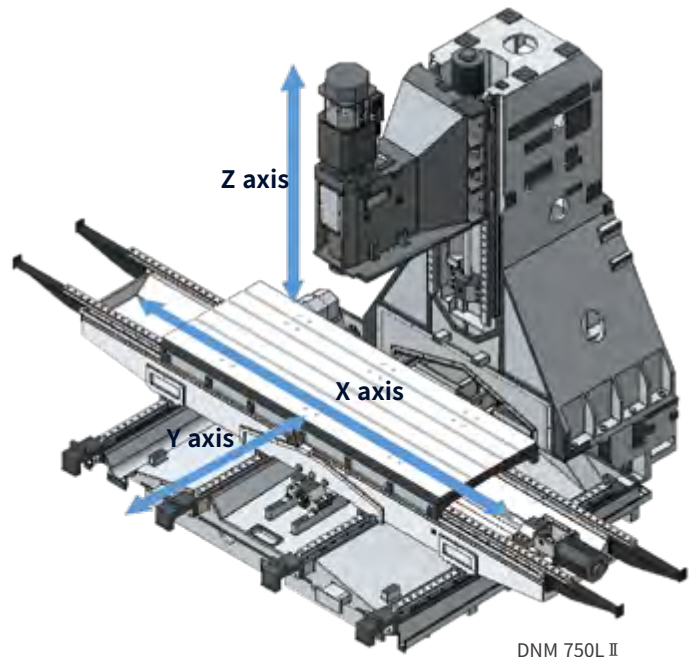
64.2 x 30.0 x 25.6 inch

DNM 750L II

**2160 / 762 / 650** mm

85.0 x 30.0 x 25.6 inch

The DNM 750L II uses four-row Roller guideways in the Y-axis that eliminate overhang and provide optimum stability. ( DNM 750 II has two-row Roller guideways).



## Axis system

Roller LM guideways are used as standard on all axes to improve rigidity.

### Rapid traverse rate (X / Y / Z axis)

DNM 750 II

**30 / 30 / 24** m/min

1181.1 / 1181.1 / 944.9 ipm

DNM 750L II

**24 / 24 / 24** m/min

944.9 / 944.9 / 944.9 ipm

Roller LM guideway life is twice that of Ball LM guideways.



## TABLE

The machines offer a wide range cutting capacities and capabilities, and can handle a range of large workpieces.

### Table size (A x B)

DNM 750 II

**1630 x 760** mm 64.2 x 29.9 inch

DNM 750L II

**2160 x 760** mm 85.0 x 29.9 inch

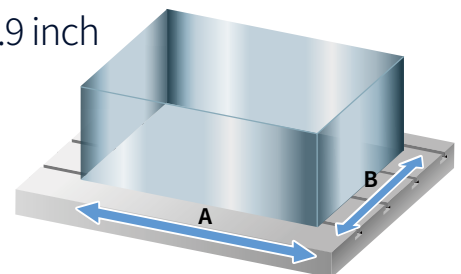
### Max. weight on table

DNM 750 II

**1500** kg  
3306.9 lb

DNM 750L II

**1800** kg  
3968.3 lb



# SPINDLE

## Spindle

Directly-coupled spindles have been adopted as a standard feature to further reduce vibration and noise while enhancing productivity, the working environment and machining accuracy. The dual contact tool system is used as standard for extra rigidity and reliability.

### Max. spindle speed

**8000** r/min\*

**12000** r/min\*\* option

### Max. spindle motor power

**18.5** kW 24.8 Hp

**28** kW 37.5 Hp option

**15.6** kW 20.9 Hp option

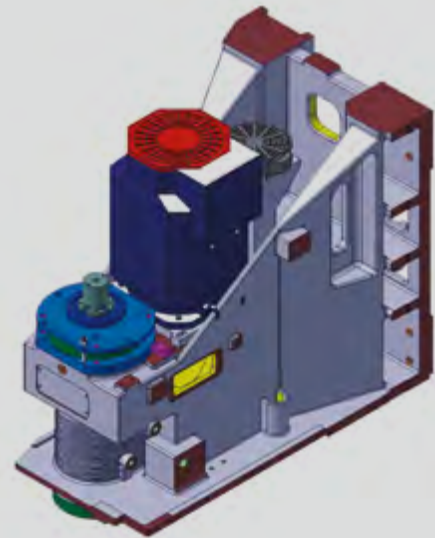
### Max. spindle motor torque

**118** N.m 87.1 ft-lbs

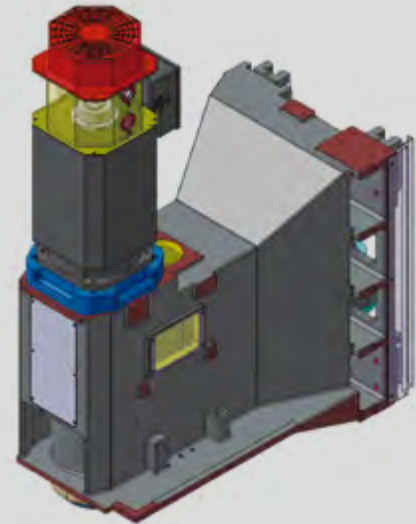
**159.1** N.m 117.4 ft-lbs option

**165.5** N.m 122.1 ft-lbs option

\* Belt type    \*\* Direct type



Belt



Direct

# TOOL CHANGE SYSTEM

Higher productivity can be achieved with the CAM-type tool changer that has faster tool changing capability.

### Tool storage capacity

**30** ea / **40** ea option

### Tool to Tool

**1.3** sec

### Chip-to-Chip\*

**3.7** sec

\* The Chip-to-Chip time has been tested in accordance with DN Solutions's strict testing conditions, but may vary depending on the user's operating conditions.



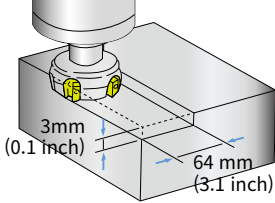
# MACHINING PERFORMANCE

To provide best cutting performance. Tool change time has been optimized to reduce non cutting time.

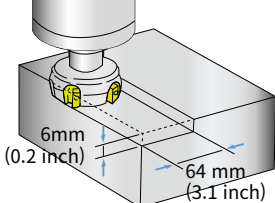
## Cutting performance

Result of cutting test on DNM 750 II (12000r/min, Direct, 15.6/15.6kW (20.9/20.9 Hp))

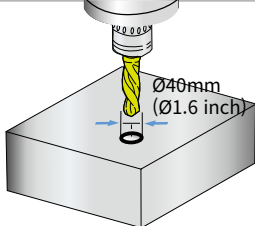
Face mill (ø80 mm (ø3.1 inch) Carbon steel (SM45C))		
Chip removal rate (cm <sup>3</sup> /min(inch <sup>3</sup> /min))	Spindle speed (r/min)	Feedrate (mm/min (ipm))
806 (49.2)	1500	4200 (165.4)

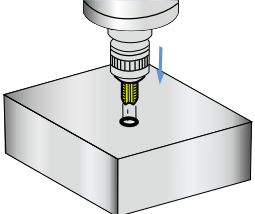
Face mill (ø80 mm (ø3.1 inch) Aluminium alloy (AL6061))		
Chip removal rate (cm <sup>3</sup> /min(inch <sup>3</sup> /min))	Spindle speed (r/min)	Feedrate (mm/min (ipm))
1728 (105.4)	1500	4500 (177.2)

U-Drill (ø40 mm (ø1.6 inch) Carbon steel (SM45C))		
Chip removal rate (cm <sup>3</sup> /min(inch <sup>3</sup> /min))	Spindle speed (r/min)	Feedrate (mm/min (ipm))
251 (15.3)	1200	200 (7.9)

Tap Carbon steel (SM45C)		
Tap size (mm)	Spindle speed (r/min)	Feedrate (mm/min (ipm))
M30 x P3.5	200	700 (27.6)

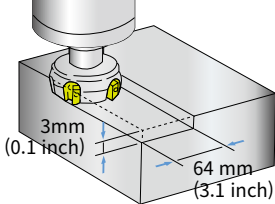


\* The results, indicated in this catalogue are provides as example. They may not be obtained due to differences in cutting conditions and environmental conditions during measurement.

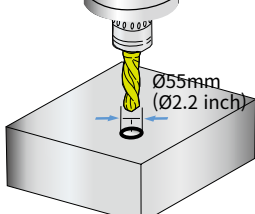
## Cutting performance

Result of cutting test on DNM 750 II (12000r/min, Direct, 28/11kW (37.5/14.8 Hp))

Face mill (ø80 mm (ø3.1 inch) Carbon steel (SM45C))		
Chip removal rate (cm <sup>3</sup> /min(inch <sup>3</sup> /min))	Spindle speed (r/min)	Feedrate (mm/min (ipm))
864 (52.7)	1500	4500 (177.2)

U-Drill (ø55 mm (ø2.2 inch) Carbon steel (SM45C))		
Chip removal rate (cm <sup>3</sup> /min(inch <sup>3</sup> /min))	Spindle speed (r/min)	Feedrate (mm/min (ipm))
356 (21.7)	700	150 (5.9)



\* The results, indicated in this catalogue are provides as example. They may not be obtained due to differences in cutting conditions and environmental conditions during measurement.

# STANDARD | OPTIONAL SPECIFICATIONS

Various optional features are available to meet customers' specific machining requirements and applications.

Description	Features				DNM 750 II DNM 750L II	
Spindle	FANUC	8000 r/min	Belt	18.5/15 kW (24.8/20.1 Hp) (S3 60%/Cont.)	●	
		12000 r/min	Direct	28/11 kW (37.5/14.8 Hp) (S3 15%/Cont.)	○	
	HEIDENHAIN	8000 r/min	Belt	15.6/15.6 kW (20.9/20.9 Hp) (S3 40%/Cont.)	○	
		12000 r/min	Direct	20/15 kW (26.8/20.1 Hp) (S6 60%/Cont.)	○	
	SIEMENS	8000 r/min	Belt	21.8/16.3 kW (29.2/21.9 Hp) (S6 40%/Cont.)	○	
		12000 r/min	Direct	16.5/11 kW (22.1/14.8 Hp) (S6 40%/Cont.)	○	
Spindle cooling system	FANUC	8000 r/min	Belt	18.5/15 kW (24.8/20.1 Hp)	●	
		12000 r/min	Direct	28/11 kW (37.5/14.8 Hp)	●	
	HEIDENHAIN	8000 r/min	Belt	15.6/15.6 kW (20.9/20.9 Hp)	●	
		12000 r/min	Direct	20/15 kW (26.8/20.1 Hp)	●	
	SIEMENS	8000 r/min	Belt	20/15 kW (26.8/20. Hp)	●	
		12000 r/min	Direct	21.8/16.3 kW (29.2/21.9 Hp)	●	
Magazine	Tool storage capacity	30 ea			●	
		40 ea			○	
Tool shank type	BIG PLUS BT40 BIG PLUS CAT40 BIG PLUS DIN40				●	
					○	
					○	
Coolant	FLOOD		0.15 Mpa, 0.4 kW (0.5 Hp)		●	
			0.7 MPa, 1.8 kW (2.4 Hp)		○	
	TSC		None		●	
			2 MPa, 1.5kW (2.0 Hp)		○	
			2 MPa, 4.0 kW (5.4 Hp)		○	
	SHOWER Oil skimmer MQL Chip pan		7 Mpa, 5.5 kW (7.4 Hp)		○	
		0.1 MPa, 1.1 kW (1.5 Hp)		○		
Chip disposal	Chip conveyor		Hinged type (Left / Right / Rear)		○	
			Magnetic scraper type (Left / Right / Rear)		○	
			Drum filter type (Rear)		○	
			Chip bucket		○	
Precision machining option	Linear scale AICC II (200 block) Fine surface machining		X / Y / Z axis		●	
			Look-ahead block is Max.200		○	
			-AI contour control II+ -Smooth tolerance control+ -Jerk control		●	
Measurement & Automation	Automatic tool measurement Automatic tool breakage detection Automatic workpiece measurement Automatic front door with safety device		TS27R		○	
			OTS		○	
			OMP60		○	
					○	
Accessories	WORK LIGHT SMART THERMAL CONTROL AIR BLOWER AUTO TOOL LENGTH MEASUREMENT AUTO TOOL BREAKAGE DETECTION AUTO WORKPIECE MEASUREMENT 4TH AXIS PREPARATION CABLING FOR SERVO/1-PNEUMATIC PIPING AIR GUN Coolant gun Mist collector ANCHORING <sup>(1)</sup> COOLANT CHILLER <sup>(2)</sup> TSA <sup>(3)</sup> RAISING BLOCK CHIP CONVEYOR 20 BAR TSC with INVERTER MAGAZINE TOOL STORAGE CAPACITY SERVO MAGAZINE AEROSPACE PACKAGE SPINDLE HEAD TYPE AUTO TOOL LENGTH MEASUREMENT AUTO TOOL BREAKAGE DETECTION AUTO DOOR WITH SAFETY EDGE	MAKER/SPEC.		LED LAMP		●
				SENSORLESS TYPE(ONLY SPINDLE)		●
				-		○
				RENISHAW / TS27R		○
				RENISHAW / OTS		○
				FAR-EAST MACHINE TOOL/FEM-1CP(NEEDLE TYPE IN CUTTING AREA)		○
				RENISHAW / OMP60		○
				FACTORY READY MADE		○
				-		○
				-		○
Customized Special Option	SIDE CLAMP & CHEMICAL ANCHOR BOLT - 0.54 150mm 200mm 300mm HINGED PLATE TYPE LEFT SIDE MAGNETIC SCRAPER TYPE RIGHT SIDE MAGNETIC SCRAPER TYPE LEFT SIDE DRUM CHIP CONVEYOR WITH HINGED PLATE DRUM CHIP CONVEYOR WITH SCRAPER OUTLET DIRECTION - REAR SIDE TYPE 50Hz → 60Hz 60T(CHAIN ATC) 30T 40T 30K SPINDLE(HSK-63A) IMPROVED CHIP EVACUATION 11/18.5(S3 15%), 15,000 rpm, DIRECT TYPE LTS MSC/BK9(NEEDLE TYPE ON MAGAZINE) -					○
						○
						○
						○
						○
						○
						○
						○
						○
						○
						○
						○
						○
						○

\* Please contact DN Solutions for detailed specification information.


● Standard ○ Optional X Not applicable

(1) Please refer to foundation drawing in relation to anchoring. If more detail information want, consult with DN Solutions service

(2) In case of using neat cutting oil, this device is highly recommended in order to reduce the change of accuracy by rising the coolant temperatures.

(3) In case of TSC is not required and only TSA is needed, this option can be selected.

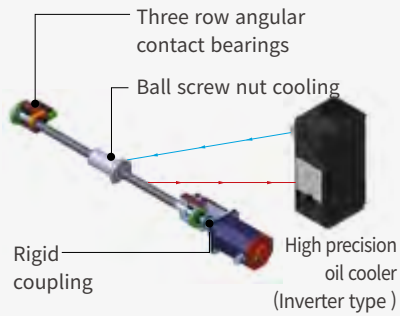
\*When using a semi-synthetic type or synthetic type, contact our sales representative or service center in advance.

 **Fire Safety Precautions** | There is a high risk of fire when using non-water-soluble cutting fluids, processing flammable materials, neglecting the controlled and careful use of coolants and modifying the machine without the consent of the manufacturer. Always check the SAFETY GUIDELINES carefully before using the machine.

# PERIPHERAL EQUIPMENT

## Spindle and ball screw nut cooling system

The machines' cooling system helps minimize thermal displacement of the spindle and axes and features oil, that is cooled and is then circulated around the spindle head and ball screw nuts.



## Chip conveyor option



Long



Short



Needle



Sludge

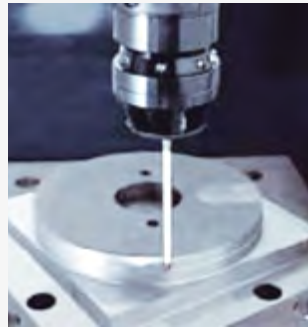
Material		Carbon steel			Cast iron		Aluminium		
		Long	Short	Needle	Short	Sludge	Long	Short	Needle
Chip conveyor type									
Hinged belt type		○	△	X	△	X	○	△	X
Scraper type	Normal	X	○	△	○	△	X	△	X
	Magnetic	X	○	○	○	○	—	—	—
Drum filter type	Hinged type	○	△	X	△	X	○	△	X
	Scraper	X	○	△	○	△	X	○	△

○ : Suitable, △ : Possible, X : Not suitable

## Measurement & Automation option



Automatic tool measurement

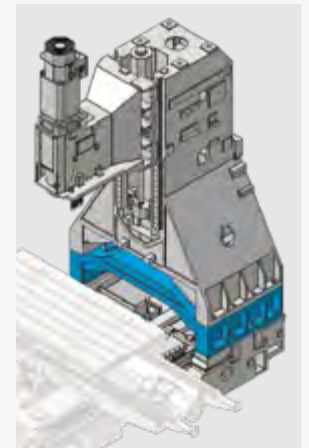


Automatic workpiece measurement

## Raised block option

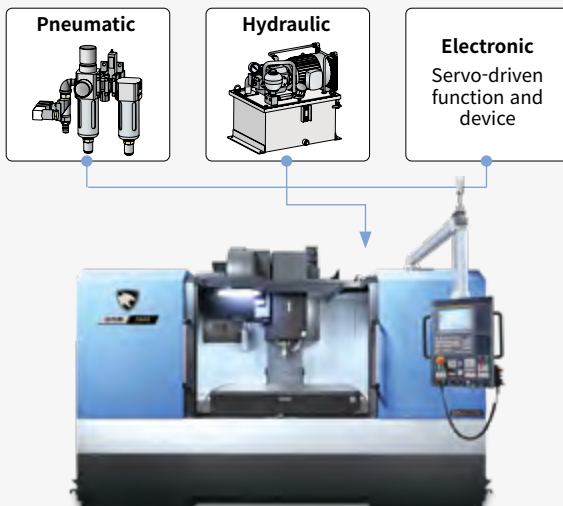
When the distance between the table top and the spindle nose needs to be extended, for example, to accommodate a fixture or rotary axis on the table, a raised block can be used.

Height **150** mm (5.9 inch)  
**200** mm (7.9 inch)  
**300** mm (11.8 inch)



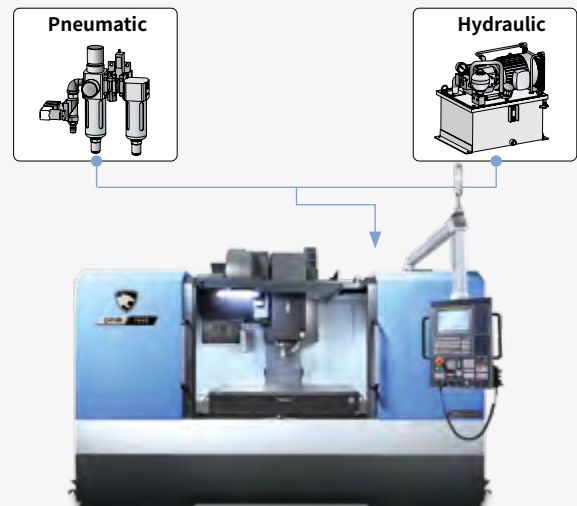
## 4th-axis auxiliary device interface option

Customers wishing to set up a rotary axis on the table to increase application flexibility are encouraged to contact DN Solutions in advance.



## Hydraulic / Pneumatic fixture line option

Customers should prepare pipelines for hydraulic/pneumatic fixtures whose detailed specifications should be determined and agreed through discussions with DN Solutions.





# DN SOLUTIONS FANUC i PLUS

DN Solutions Fanuc i Plus is optimized for maximizing customer productivity and convenience.

## 15 inch screen + new operation panel

DN Solutions Fanuc i Plus' operation panel enhances operating convenience by incorporating common-design buttons and layout, and features the Qwerty keyboard for fast and easy operation.

## DN Solutions Fanuc i Plus

- 15 inch color display
- Intuitive and user-friendly design

## USB & PCMCIA card

## QWERTY keyboard

- EZ-guide i standard
- Ergonomic operator panel
- 2MB Memory
- Hot key



## iHMI touchscreen option

iHMI provides an intuitive interface that uses a touchscreen for quick and easy operation.

## Range of applications

Providing various applications related to planning, machining, improvement and utility, for customer convenience.

# NUMERIC CONTROL SPECIFICATIONS

# FANUC

Item	Specifications	DN Solutions Fanuc i (0i Plus) DNM 4digit	
<b>Controlled axis</b>	Controlled axes	3 (X,Y,Z)	
	Simultaneously controlled axes	4 axes	
<b>Data input/output</b>	Additional controlled Axis	●	
	Fast data server	○	
	Memory card input/output	●	
	USB memory input/output	●	
	Large capacity memory(2GB)*2	○	
<b>Interface function</b>	Embedded Ethernet	●	
	Fast Ethernet	○	
	Enhanced Embedded Ethernet function	●	
<b>Operation</b>	DNC operation	●	
	DNC operation with memory card	●	
<b>Program input</b>	Workpiece coordinate system	●	
	Addition of workpiece coordinate system	●	
	Tool number command	●	
	Tilted working plane indexing command	○	
<b>Feed function</b>	AI contour control I	X	
	AI contour control II	●	
	AI contour control II	X	
	AI contour control II	X	
	High smooth TCP	X	
<b>Operation guidance function</b>	EZ Guidei (Conversational Programming Solution)	●	
	iHMI with Machining Cycle	X	
	EZ Operation package	●	
<b>Setting and display</b>	CNC screen dual display function	●	
	FANUC MTConnect	⊕	
<b>Network</b>	FANUC OPC UA	⊕	
<b>Others</b>	Display unit	X	
		10.4" color LCD	X
		15" color LCD	X
		15" color LCD with Touch Panel	●
		640M(256KB)_500 programs	X
		1280M(512KB)_1000 programs	X
		2560M(1MB)_1000 programs	X
		5120M(2MB)_1000 programs	●
		10240M(4MB)_1000 programs	X
		20480M(8MB)_1000 programs	X
		2560M(1MB)_2000 programs	X
		5120M(2MB)_4000 programs	X
		10240M(4MB)_4000 programs	X
		20480M(8MB)_4000 programs	X

\*1) The number of look-ahead blocks may be changed or limited depending on the peripheral device or the configuration of the internal NC system.

\*2) Available Option only with Fanuc i plus iHMI

● Standard ○ Optional X N/A ⊕ Available  
Network: FANUC MT Connect and FANUC OPC UA available.

# EZ WORK

The software developed by DN Solutions features numerous functions designed for convenience and ease of operation.

## EZ work

The EZ work delivers speed and efficiency. This menu-driven innovation not only helps customers reduce setup times, but also simplifies common tasks and procedures, reducing the potential for errors. EZ work reduces operating time, protects machinery, enhances quality and speeds up maintenance interventions.



### Thermal Compensation

A function to maintain high-precision machining quality by analyzing and correcting the amount of thermal displacement of a structure through a temperature sensor



### M/G-Code List

Functional description of M code and G code



### Tool Management

Function to manage tool information [Tool information / Tool No. / Tool condition (normal, large diameter, worn / damaged, used for the rst time, manual) / Tool name]



### Operation Rate

Machine operation history management function by date based on load



### Adaptive Feed Control

Function to control feedrate so that the cutting can be carried out at a constant load (To adapt to the spindle load set up with constant load feedrate control function)



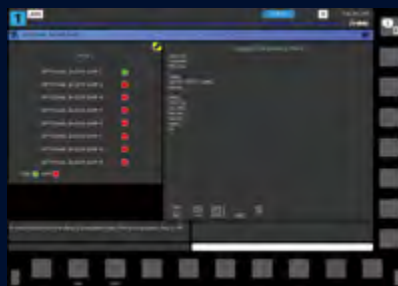
### Spindle Warm Up

A function that assists spindle warm-up for spindle life when the spindle has not been used for a certain period of time



### ATC Recovery

Function to view detailed info with recommended actions and to perform step-by-step operation manually (when an alarm is triggered during an ATC operation)



### Addition of Optional Block Skip

In addition to the OPTIONAL BLOCK SKIP of the operation panel, the function to skip a specific block selected in the machining program

# CONVENIENT OPERATION

## HEIDENHAIN TNC620

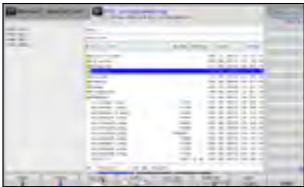
### Superior hardware specifications

The TNC 620 features optimized motion control, short block processing times and special control strategies. Together with its uniform digital design and its integrated digital drive control (including inverters), it enables you to achieve high machining speeds and the best possible contour accuracy.

- 15.6" display
- 21GB Storage memory
- 1024 look ahead blocks
- High user convenience with folder structure data management



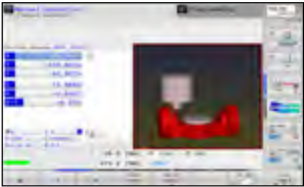
### Conversational convenient function



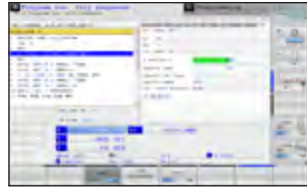
Data are controlled in the folder structure; convenient communication via USB devices



KinematicOpt & KinematicComp option  
(Touch probe cycle for automatic measurement)



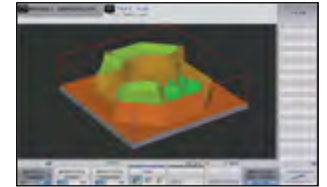
Collision protection system option



Adaptive feed control option



Various built-in pattern cycles for a wider scope of application (Software standard)



Graphic simulation

## NUMERIC CONTROL SPECIFICATIONS



HEIDENHAIN

Item		Specifications	TNC620 DNM
Controlled axis	Controlled axis		3 (X,Y,Z)
	Simultaneously controlled axis		4 axis
Data input/output	USB memory input/output		●
Interface function	Embedded ethernet		●
Feed function	Look-ahead	5000 blocks	●
Axis compensation	KinematicsOpt	Automatic measurement and optimization of machine kinematics	○
Collision monitoring	Dynamic collision monitoring (DCM)		X
Network	MTConnect		⊕
Others	Display unit	15.1 inch TFT color flat panel	●
		15.1 inch TFT color with Touch Panel	○
		19 inch TFT color flat panel	○
		19 inch TFT color with Touch Panel	○
	Part program storage size & number of registerable programs	21GB 1.8GB	X ●

● Standard ○ Optional X Not Available ⊕ Available

# CONVENIENT OPERATION

## SIEMENS 828D

### 15.6" screen + new operation panel

The newly-designed operation panel improves the customer convenience by incorporating and using common-design buttons and layouts, and includes the familiar QWERTY keyboard for fast and easy operation.

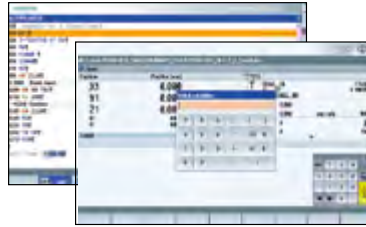
- 15.6" display
- 10MB high capacity user memory
- USB & ethernet (standard)
- QWERTY keyboard (standard)
- High-speed calculation and simulation can be fulfilled by improved processor functionality



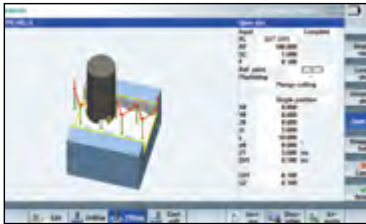
### Conversational convenient function



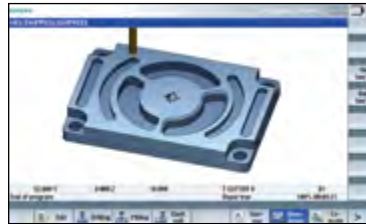
Shop Mill Part Programming



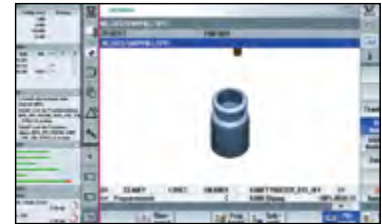
Smart function



Advanced program language programGUIDE



Simulation and machining contour monitoring



Side screen widget

## NUMERIC CONTROL SPECIFICATIONS

SIEMENS

	Item	Specifications	S828D
			DNM
Controlled axis	Controlled axes ( 제어축수 )	-	3축
	Simultaneously controlled axes ( 동시 제어축수 )	-	3축
Data input/output	Memory card input/output	(Local drive)	X
	USB memory input/output		●
Interface function	Ethernet	(X130)	●
Operation	On network drive	(without EES option, Extcall)	○
	On USB storage medium, e.g. memory stick	(without EES option, Extcall)	●
Program input	Workpiece coordinate system	G54 - G57	●
	Addition of workpiece coordinate system	G505 - G599	●
Interpolation & Feed function	Advanced surface		●
	Top surface		○
Programming & Editing function	Look ahead number of block	S/W version 4.8	450
	3D simulation, finished part		●
	Simultaneous recording		●
	Measure kinematics		X
Operation Guidance Function	DXF Reader for PC integrated in SINUMERIK Operate		○
	ShopMill		●
Setting and display	EZ Work		●
	Operation via a VNC viewer		●
Network	MTConnect		⊕
	OPCUA		○
Etc. function	15.6" color display with touch screen		●
	19" color display without touch screen		X
	21.5" color display with touch screen		X
	CNC user memory	10 MB	●
	Expansion by increments	2 ~ 12 MB	○
	Collision avoidance		X
Collision avoidance ECO (machine, working area)		X	

● Standard ○ Optional X Not Available ⊕ Available

# POWER | TORQUE

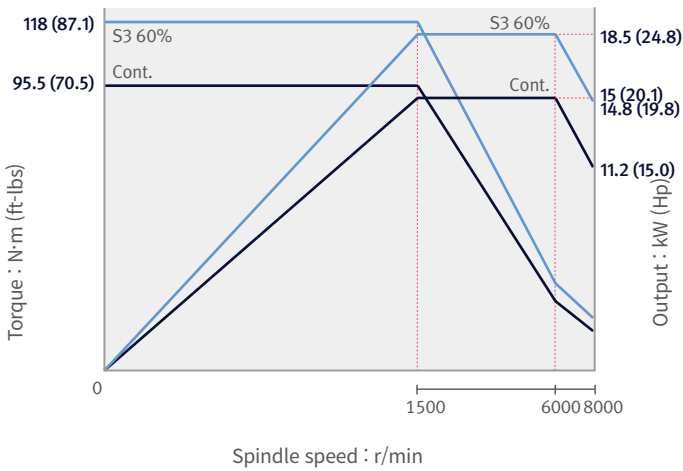
## FANUC

### FANUC 8000 r/min

8000 r/min

Max. spindle power: 18.5 kW (24.8 Hp)

Max. spindle torque: 118 N·m (87.1 ft-lbs)

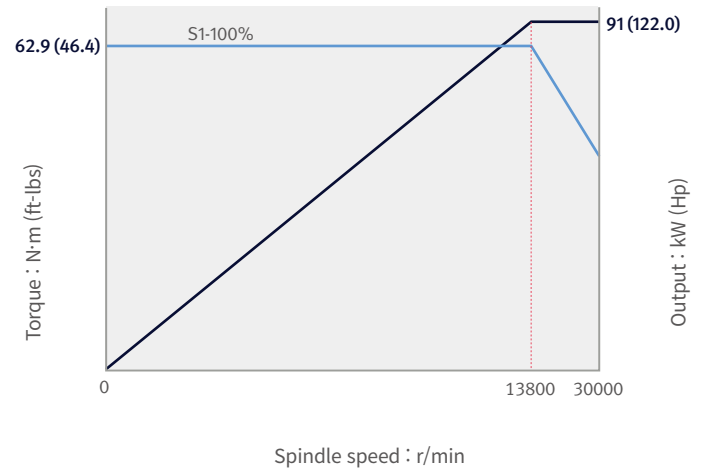


### FANUC 30000 r/min option

30000 r/min

Max. spindle power: 91 kW (122.0 Hp)

Max. spindle torque: 62.9 N·m (46.4 ft-lbs)

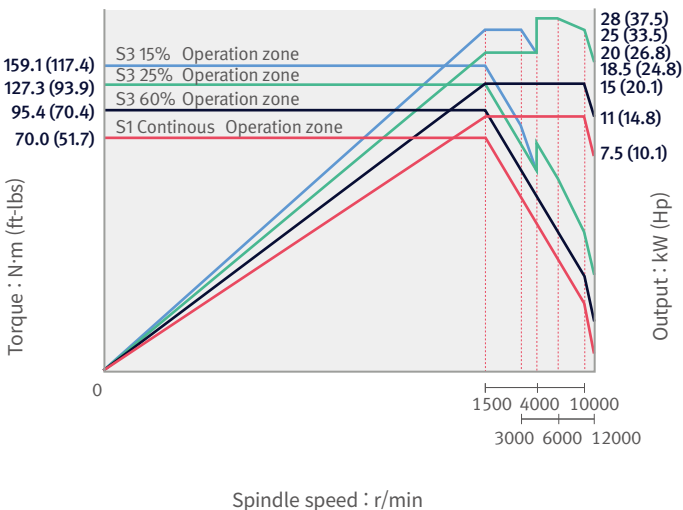


### FANUC 12000 r/min option

12000 r/min

Max. spindle power: 28 kW (37.5 Hp)

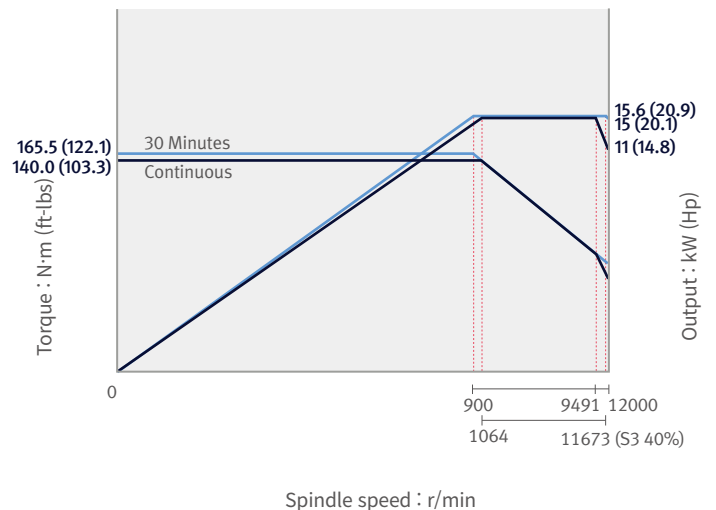
Max. spindle torque: 159.1 N·m (117.4 ft-lbs)



12000 r/min

Max. spindle power: 15.6 kW (20.9 Hp)

Max. spindle torque: 165.5 N·m (122.1 ft-lbs)



# POWER | TORQUE

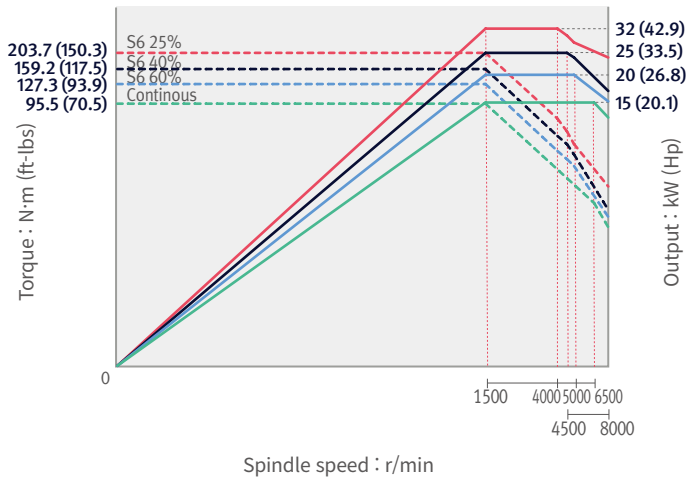
HEIDENHAIN | SIEMENS

## HEIDENHAIN 8000 r/min

8000 r/min

Max. spindle power: 32 kW (42.9 Hp)

Max. spindle torque: 203.7 N·m (150.3 ft-lbs)

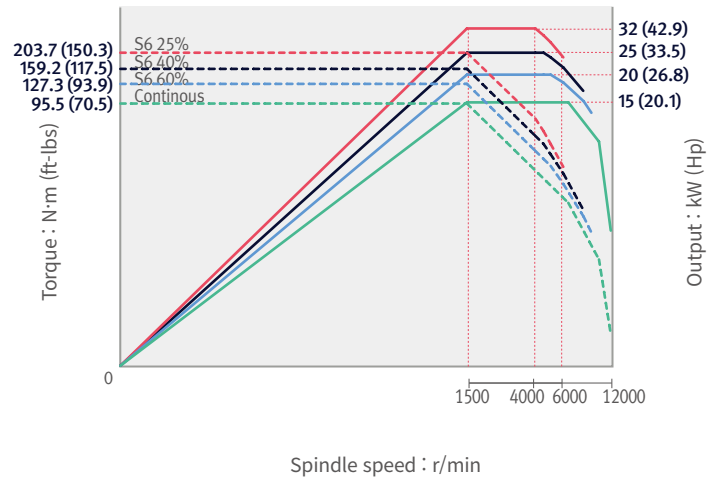


## HEIDENHAIN 12000 r/min option

12000 r/min

Max. spindle power: 32 kW (42.9 Hp)

Max. spindle torque: 203.7 N·m (150.3 ft-lbs)

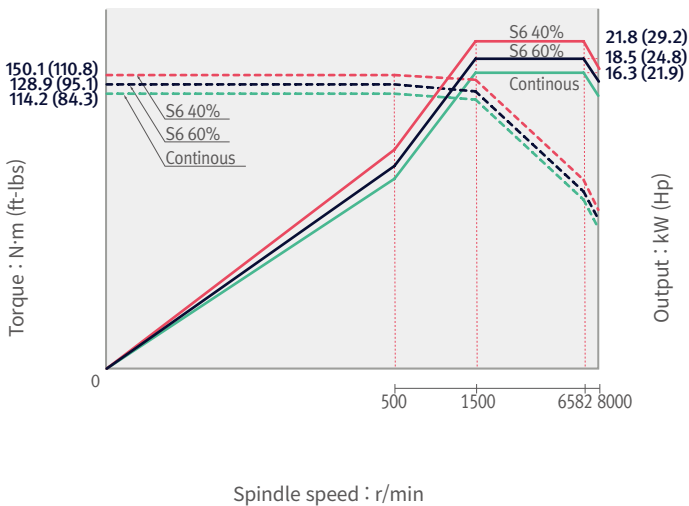


## SIEMENS 8000 r/min

8000 r/min

Max. spindle power: 21.8 kW (29.2 Hp)

Max. spindle torque: 150.1 N·m (110.8 ft-lbs)

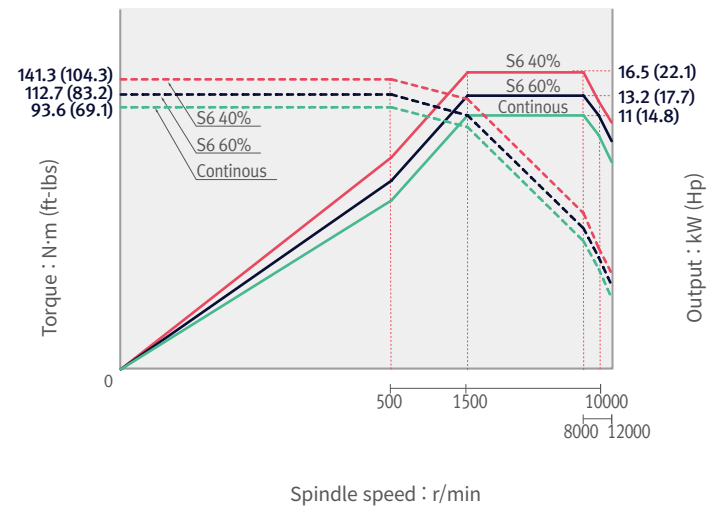


## SIEMENS 12000 r/min option

12000 r/min

Max. spindle power: 16.5 kW (22.1 Hp)

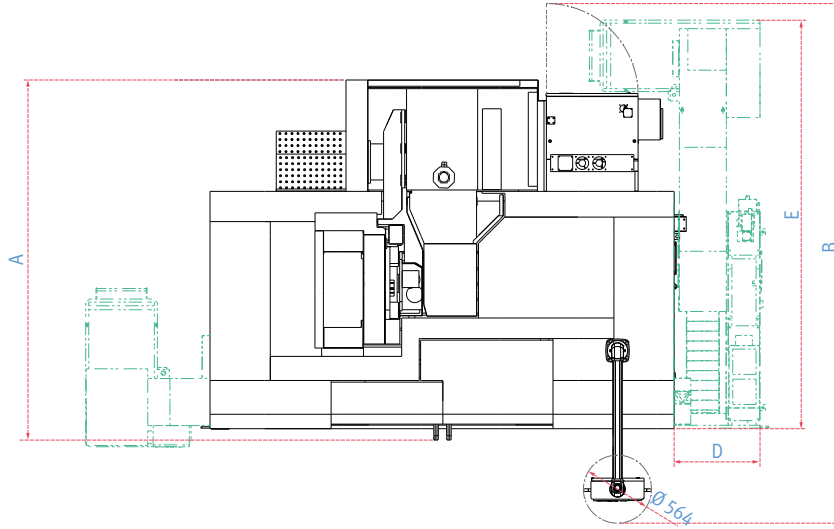
Max. spindle torque: 141.3 N·m (104.3 ft-lbs)



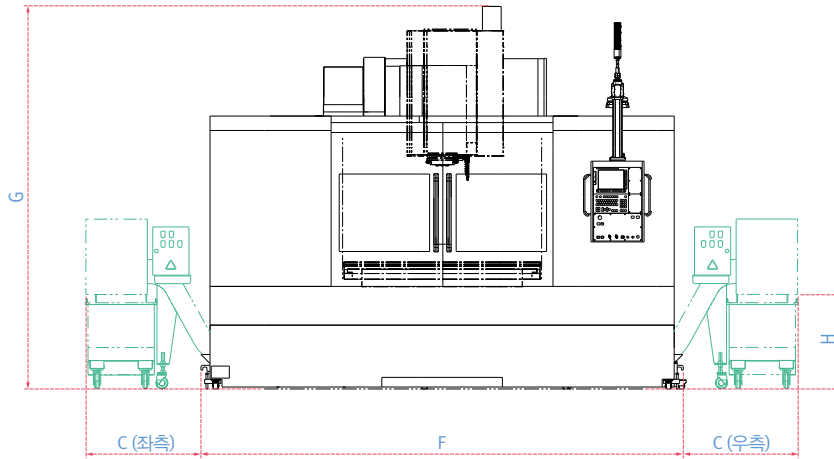
# DIMENSIONS

Units : mm (inch)

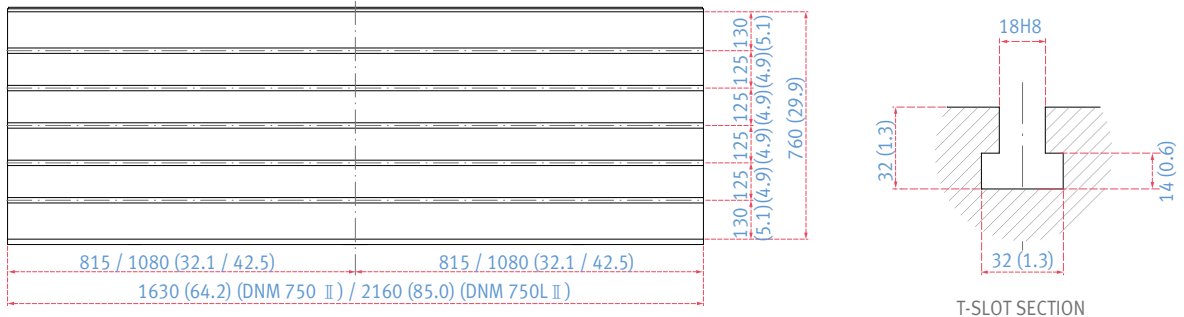
TOP



FRONT



TABLE



Model	A (Length)	B (Max. machine length)	C (Additional width to accommodate the side chip conveyor)	D (Additional width to accommodate the rear chip conveyor)	E (Length to accommodate the rear chip conveyor)	F (Width)	G* (Height)	H (Height from the floor to the chip outlet)
DNM 750 II	2986 (117.6)	4309 (169.6)	Left & Right : 953 (37.5)	790 (31.1)	3390 (133.5)	4000 (157.5)	3170 / 3251 (124.8 / 128.0)	805 (31.7)
DNM 750L II	2986 (117.6)	4309 (169.6)	Left & Right : 953 (37.5)	790 (31.1)	3390 (133.5)	5050 (198.8)	3170 / 3251 (124.8 / 128.0)	805 (31.7)

\* Some peripheral equipment can be placed in other places

\* 8k spindle / 12k spindle

# MACHINE SPECIFICATIONS

Description			Unit	DNM 750 II	DNM 750L II
Travels	Travel distance	X axis	mm (inch)	1630 (64.2)	2160 (85.0)
		Y axis	mm (inch)	762 (30.0)	
		Z axis	mm (inch)	650 (25.6)	
	Distance from spindle nose to table top		mm (inch)	150 ~ 800 (5.9 ~ 31.5)	
Table	Table size		mm (inch)	1630 x 760 (64.2 x 29.9)	2160 x 760 (85.0 x 29.9)
	Table loading capacity		kg (lb)	1500 (3306.9)	1800 (3968.3)
	Table surface type		mm (inch)	T-SLOT [5-125 (4.9) x 18 (0.7)H8]	
Spindle	Max. spindle speed	FANUC	Direct	r/min	8000
				r/min	{12000}*
			Built in	r/min	{12000}*
				r/min	{30000}*
		HEIDENHAIN	Belt	r/min	8000
			Direct	r/min	{12000}*
		SIEMENS	Belt	r/min	8000
			Direct	r/min	{12000}*
	Taper			-	ISO #40
	Spindle power	FANUC	Direct	kW (Hp)	18.5/15 (24.8/20.1)
				kW (Hp)	{28/11 (37.5/14.8)}*
			kW (Hp)	{15.6/15.6 (20.9/20.9)}*	
		HEIDENHAIN	Belt	kW (Hp)	32/15 (42.9/20.1)
			Direct	kW (Hp)	{32/15 (42.9/20.1)}*
		SIEMENS	Belt	kW (Hp)	21.8/16.3 (29.2/21.9)
	Direct	kW (Hp)	{16.5/11 (22.1/14.8)}*		
Max. spindle torque	FANUC	Direct	N · m (ft-lbs)	118 (87.1)	
			N · m (ft-lbs)	{159.1 (117.4)}*	
		N · m (ft-lbs)	{165.5 (122.1)}*		
	HEIDENHAIN	Belt	N · m (ft-lbs)	203.7 (150.3)	
		Direct	N · m (ft-lbs)	{203.7 (150.3)}*	
	SIEMENS	Belt	N · m (ft-lbs)	150.1 (110.8)	
Direct	N · m (ft-lbs)	{141.3 (104.3)}*			
Feedrates	Rapid traverse rate	X axis	m/min (ipm)	30 (1181.1)	24 (944.9)
		Y axis	m/min (ipm)	30 (1181.1)	24 (944.9)
		Z axis	m/min (ipm)	24 (944.9)	24 (944.9)
	Type of tool shank		Tool shank	-	BT 40 [CAT40/DIN40]*
		Pull stud	-	PS806	
Tool storage capa.			ea	30 {40}*	
Max. tool diameter	Continuous		mm (inch)	80 (3.1) {76 (3.0)}*	
	Without Adjacent Tools		mm (inch)	125 (4.9)	
Max. tool length			mm (inch)	300 (11.8)	
Max. tool weight			kg (lb)	8 (17.6)	
Max. tool moment			N · m (ft-lbs)	5.88 (4.3)	
Tool selection			-	MEMORY RANDOM	
Tool change time	Tool-to-tool		sec	1.3   1.6	
	Chip-to-chip		sec	3.7   4.0	
Power source	Electric power supply (Rated capacity)		kVA	40.00 / 37.50 / 43.30	
	Compressed air supply		Mpa	0.54	
Tank capacity	Coolant tank capacity		L (gal)	520 (137.4)   590 (155.9)	
Machine Dimensions	Height		mm (inch)	3170 (124.8)	
	Length		mm (inch)	3480 (137.0)	
	Width		mm (inch)	3850 (151.6)   4900 (192.9)	
	Weight		kg (lb)	13500 (531.5)   15000 (590.6)	
Control	CNC system		-	DN Solutions Fanuc i Plus / SIEMENS S828D / HEIDENHAIN TNC620	

\*{ } : Option



# WHY DN SOLUTIONS

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The DN Solutions promise, MACHINE GREATNESS, has two important meanings. The first is simple: DN Solutions makes great machines. The second is a challenge to our end-users. With a product line that is this comprehensive, accurate and reliable, we equip our customers to machine greatness. The big question: **Why should you choose DN Solutions over other options?**

Here's why...



**MACHINE  
GREATNESS™**



WHAT YOU MAKE AND HOW YOU MAKE IT MATTERS—SO MAKE IT  
GREAT WITH DN SOLUTIONS.

---

## UNBEATABLE MACHINES

You won't find a more comprehensive range or a better combination of value, performance and reliability anywhere else.

---

## ROBUST PRODUCT LINE

We offer an impressive range of machine models and hundreds of configurations. Whatever your machining needs and requirements, there's a DN Solutions for you.

---

## READILY AVAILABLE - ANYWHERE IN THE WORLD

Machining centres (including 5-axis machines), lathes, multi-tasking turning centres and mill-turn machines, and horizontal borers with best-in-class specifications are all available...ready to install.

---

## EXPERT SERVICE

Our dedicated, experienced and knowledgeable team is totally committed to improving your productivity, growth and success.

# CUSTOMER SUPPORT AND SERVICES

**We're there for you whenever you need us.**

We help our customers operate at maximum efficiency by providing them with a range of tried, tested and trusted services - from pre-sales consultancy to post-sales support.



## FIELD SERVICES

- On-site service
- Machine installation and testing
- Scheduled preventive maintenance
- Machine repair service



## PARTS SUPPLY

- Supplying a wide range of original DN Solutions spare parts
- Parts repair service



## TRAINING

- Programming, machine setup and operation
- Electrical and mechanical maintenance
- Applications engineering



## TECHNICAL SUPPORT

- Supports machining methods and technology
- Responds to technical queries
- Provides technical consultancy

# RESPONDING TO CUSTOMERS ANYTIME, ANYWHERE

## DN Solutions Global Network

DN Solutions provides systems-based professional support services, before and after the machine tool sale, by responding quickly and efficiently to customers. By supplying spare parts, product training, field service and technical support, we provide the expert care, attention and assistance our customers expect from a market leader.



Global sales and service support network

<b>4</b>	<b>Corporations</b>
<b>155</b>	<b>Dealer networks</b>
<b>51</b>	<b>Technical centers</b> Technical Center, Sales Support, Service Support, Parts Support
<b>200</b>	<b>Service posts</b>
<b>3</b>	<b>Factories</b>





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\* For more details, please contact DN Solutions.

\* Specifications and information contained within this catalogue may be changed without prior notice.