



HIGH SPEED VERTICAL MACHINING CENTER

# DNM S

4500S • 5700S



# DNM S SERIES 4500S • 5700S

Building on the pedigree and success of the DNM series, the new DNM S series boasts even greater reliability and performance. In addition, the DNM S series includes grease lubrication on its roller guideways for a more environmentally-friendly lubrication system. The key strengths of the DNM4500S and DNM5700S machines are their high speed, their high productivity and their wide application potential. Other advantages include the machines having the largest machining space in their class, directly coupled spindles, roller guideways and thermal compensation.



The DNM S series of vertical machining centres deliver high speed, high productivity and high precision.



**HIGHLY VERSATILE VERTICAL MACHINING CENTERS OFFERING THE LARGEST MACHINING SPACE IN THEIR CLASS**

- Although requiring only the same installation floor space as the previous models, the new DNM machines have larger tables with higher maximum table loads, and increased Y-axis travels.

**STANDARD DIRECTLY-COUPLED SPINDLES FOR HIGHER PRODUCTIVITY**

- Directly-coupled spindles, compared to belt-driven types, reduce vibration and noise thereby improving performance and environmentally-friendliness
- Higher productivity has been achieved by reducing tool change times and by improving acceleration and deceleration times.

**AN ENVIRONMENTALLY-FRIENDLY MACHINE DESIGNED FOR STABLE AND EASY OPERATION**

- Thermal error compensation functionality, fitted as standard, optimizes machine accuracy by reducing the effects of heat generated during extended machining runs.
- For ease of operation the Ez work function can be accessed and checked in the pop-up window on the NC control's main screen.
- Grease lubrication for axis roller guideways is a standard feature and is a more environmentally-friendly lubrication solution.

# BASIC STRUCTURE | TABLE

## Basic structure

Designed with a highly-stable and rigid structure, the new DNM S series machines provide customers with impressive Y-axis capacity (400 - 570mm) and the ability to machine a wider range of workpieces.

### Travel distance (X / Y / Z axis)

DNM 4500S

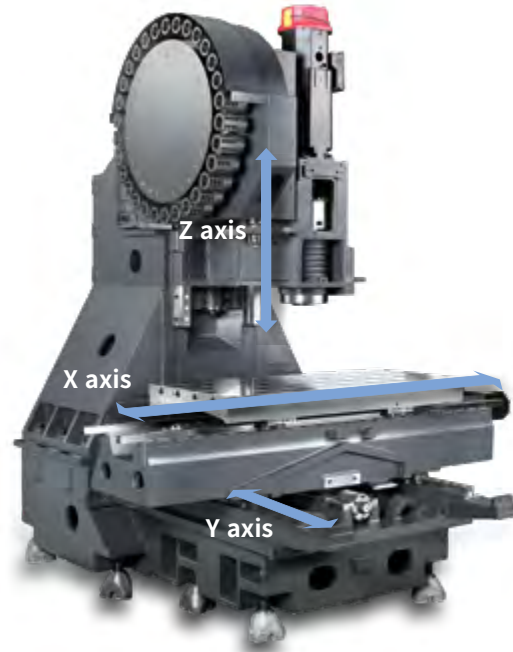
**800 / 450 / 510** mm

31.5 / 17.7 / 20.1 inch

DNM 5700S

**1050 / 570 / 510** mm

41.3 / 22.4 / 20.1 inch



## Axis system

Environmentally friendly grease lubrication is adopted as standard for the axis feed system, and Roller-type LM Guides are provided for rigidity.

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

**42 / 42 / 36** m/min

1653.5 / 1653.5 / 1417.3 ipm

Roller-type LM Guides are a standard feature.



Grease lubrication for all axes is a standard feature.

## TABLE

The increased table size and maximum load capacity, within the same footprint as previous models, provides customers with more machining flexibility and the ability to machine larger and heavier workpieces.

### Table size (A x B)

DNM 4500S

**1000 x 450** mm 39.4 x 17.7 inch

DNM 5700S

**1300 x 570** mm 51.2 x 21.3 inch

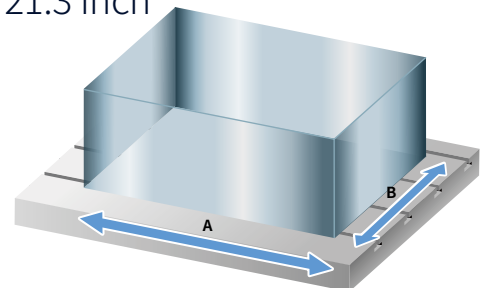
### Max weight on table

DNM 4500S

**600** kg  
1322.8 lb

DNM 5700S

**800** kg  
1763.7 lb



# SPINDLE | TOOL CHANGE SYSTEM | MACHINING PERFORMANCE

## Spindle

Directly-coupled spindles are a standard feature and help reduce vibration and noise whilst enhancing productivity and the working environment, and improving machining accuracy.

### Max. spindle speed

**15000** r/min

**20000** r/min option

### Max. spindle motor power

**18.5** kW 24.8 Hp

**15** kW 20.1 Hp option

### Max. spindle motor torque

**117.8** N·m 86.9 lbf-ft

**52.5** N·m 38.7 lbf-ft option



## Tool change system

Improved tool change times reduce non cutting time. The highly-reliable tool magazine can accommodate up to 30 tools, as standard.

### Tool storage capacity

**30** ea / **40, 60** ea option

### Tool to Tool time

**1.2** sec

### Chip to Chip\* time

**3.2** sec

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

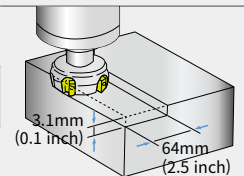


## Machining performance

The DNM S series delivers the best cutting performance in its class to optimize productivity.

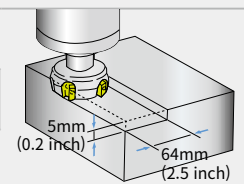
### Face mill (ø80mm), 날수 : 6 Carbon steel (SM45C)

Chip removal rate cm <sup>3</sup> /min (inch <sup>3</sup> /min)	Spindle speed r/min	Feedrate mm/min (ipm)
527 (32.2)	1500	2700 (106.3)



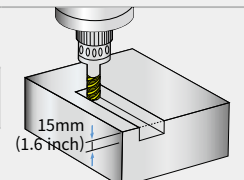
### Face mill (ø80mm), 날수 : 6 Aluminium(AL6061)

Chip removal rate cm <sup>3</sup> /min (inch <sup>3</sup> /min)	Spindle speed r/min	Feedrate mm/min (ipm)
1901 (116.0)	1500	5940 (233.9)



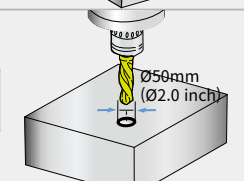
### End mill (ø30mm) Carbon steel (SM45C)

Chip removal rate cm <sup>3</sup> /min (inch <sup>3</sup> /min)	Spindle speed r/min	Feedrate mm/min (ipm)
48 (2.9)	222	107 (4.2)



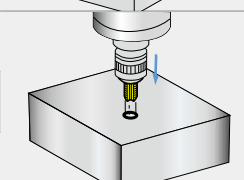
### U-Drill (ø50mm) Carbon steel (SM45C)

Chip removal rate cm <sup>3</sup> /min (inch <sup>3</sup> /min)	Spindle speed r/min	Feedrate mm/min (ipm)
501 (30.6)	1500	255 (10.0)



### Tap Carbon steel (SM45C)

Tap size mm (inch)	Spindle speed r/min	Feedrate mm/min (ipm)
M 36 x P 4.0	221	884 (34.8)



\* The results, indicated in this catalogue, are provided as examples only. Differences in cutting and environmental conditions will, in all likelihood, deliver different results.

# STANDARD | OPTIONAL SPECIFICATIONS

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

Description	Features		DNM 4500S	DNM 5700S	
Spindle Unit: kW(Hp), N·m(lbf-ft)	15000 r/min	18.5/11(24.8/14.8), 117.8(86.9)_FANUC	●	●	
		17/10 (22.8/13.4), 108.2 (79.9)_HEIDENHAIN	○	○	
		16.5/11 (22.1/14.8), 141.3 (104.3)_SIEMENS	○	○	
Magazine	Tool storage capacity	20000 r/min	○	○	
		11/5(14.8/6.7), 52.5(38.7)_FANUC/Siemens/HEIDENHAIN	○	○	
		30 ea	●	●	
Tool shank type	BIG PLUS BT40 BIG PLUS CAT40 BIG PLUS DIN40	40 ea	○	○	
		60 ea	○	○	
			○	○	
Raised column	150 mm (5.9 inch) 200 mm (7.9 inch) 300 mm (11.8 inch)		○	○	
			○	○	
			○	○	
Coolant	FLOOD	0.19 MPa(27.6 psi), 0.4 kW(0.5 Hp)	●	●	
		0.69 MPa(100.1 psi), 1.8 kW(2.4 Hp)	○	○	
	TSC**	None	●	●	
		2 MPa(290.1 psi), 1.5kW(2.0 Hp)	○	○	
		2 MPa(290.1 psi), 4 kW(5.4 Hp)	○	○	
		7 MPa(1015.3 psi), 5.5 kW(7.4 Hp)	○	○	
FLUSHING		○	○		
SHOWER (200 L/min (52.8 gal/min))		○	○		
Chip disposal	Chip conveyor	Chip pan	●	●	
		Hinged type (Left/Right/Rear)	○	○	
		Magnetic scraper type (Left/Right/Rear)	○	○	
		Screw(AUGER) type (Left/Right)	○	○	
	Chip bucket		○	○	
Precision machining option	Linear scale AICC II (200 block) SSP (Smooth Surface Package)	X / Y / Z axis	○	○	
			●	●	
			○	○	
Measurement & Automation	Automatic tool measurement	TS27R_RENISHAW	○	○	
		OTS_RENISHAW	○	○	
	Automatic tool breakage detection		○	○	
	Automatic workpiece measurement	OMP60_RENISHAW	○	○	
	Automatic front door with safety device		○	○	
Others	WORK LIGHT	LED LAMP	●	●	
	OPERATOR CALL LAMP	3-COLOR SIGNAL TOWER(LED)	●	●	
	LEVELING BLOCK & BOLT	-	●	●	
	SMART THERMAL CONTROL	SENSORLESS TYPE(ONLY SPINDLE)	●	●	
	ASSEMBLY & OPERATION TOOLS KIT	-	●	●	
	4TH AXIS PREPARATION CABLING FOR SERVO/1-PNEUMATIC PIPING	FACTORY READY MADE	○	○	
	AIR GUN		○	○	
	Air blower		○	○	
	Coolant gun		○	○	
	Mist collector		○	○	
			○	○	
Customized Special Option	ANCHORING <sup>(1)</sup>	SLIDE CLAMP & CHEMICAL ANCHOR BOLT	○	○	
		TSA <sup>(2)</sup>	0.54	○	○
	TOOL TYPE	HSK63A	○	○	
	ATC AUTO SHUTTER	30TOOL / 40TOOL	○	○	
	ATC FULL COVER	30TOOL / 40TOOL	○	○	
	Drum chipconveyor	HINGE TYPE	○	○	
		SCRAPER TYPE	○	○	
	Oil lubrication	X, Y, Z AXIS	○	○	
	20 Bar TSC with inverter	50Hz → 60Hz	○	○	
	FINE DUST PROTECTING PACKAGE	WET MACHINING	BELLOWS COVER(X/Y/Z)	○	○
			PROTECT COVER(X-AXIS)	○	○
			BALL SCREW BELLOWS COVER(X/Y)	○	○
			GUIDE WAY DOUBLE WIPER	○	○
		DRY MACHINING	PROTECT COVER(X-AXIS)	○	○
			BALL SCREW BELLOWS COVER(X/Y)	○	○
			GUIDE WAY DOUBLE WIPER	○	○
			AIR OIL SUCTION(ONLY 15k SPINDLE)	○	○
AUTO TOOL LENGTH MEASUREMENT	RENISHAW / LTS	○	○		
AUTO TOOL BREAKAGE DETECTION	MSC/BK9(NEEDLE TYPE ON MAGAZINE)	○	○		

\* Please contact DN Solutions for detailed specification information.

\*If this option is selected, the TSA(Through Spindle Air) Max.pressure is 0.54MP

(1) Please refer to foundation drawing in relation to anchoring. If more detailed information is required consult with DN Solutions service

(2) If TSC is not required - TSA can be selected as an option.

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

● Standard ○ Optional X Not applicable

# PERIPHERAL EQUIPMENT

## Grease lubrication system

The standard grease lubrication system eliminates the need for an oil skimmer and reduces lubrication costs by up to 60% compared to oil lubrication.

### Yearly maintenance cost

Reduced by  
Max. **60%**

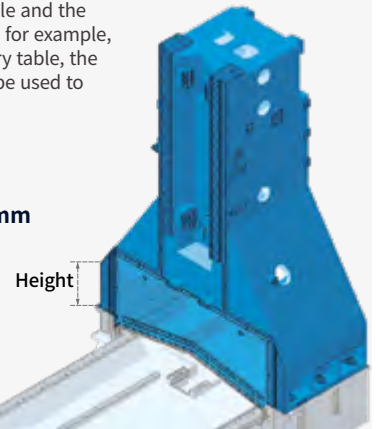


## Raised column option

When the distance between the table and the spindle nose needs to be extended, for example, to accommodate a fixture or a rotary table, the solid one-piece raised column can be used to increase the distance required.

### Height

**150/200/300 mm**  
5.9/7.9/11.8 inch



## Chip conveyor option



Hinged belt



Magnetic scraper



Screw(Auger) type

## Chip bucket option

### Capacity

**300 L (79.3 gal)**



## 4th-axis rotary table option

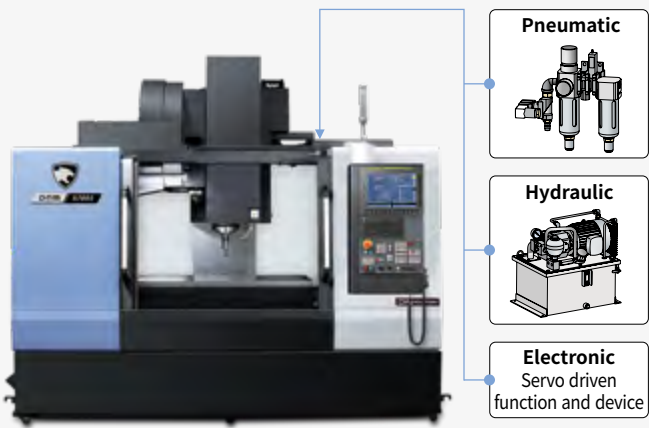
The high-precision split system with its compact and highly rigid design and double piston structure, enables vertical and horizontal use and delivers a strong clamping force.



Chip conveyor type	Material	Description
Hinged belt	Steel	Hinged belt chip conveyor, which is most commonly used for steel work [for cleaning chips longer than 30mm(1.2inch)], is available as an option.
Magnetic scraper	Cast Iron	Magnetic scraper type chip conveyor, which is ideal for die-casting work [for cleaning small chips], is available as an option.
Screw(Auger) type	Steel	Screw(Auger) type chip conveyor is suitable for minimizing installation space. About 85% floor space is required to install Screw(Auger) type chip conveyor compared to Hinged belt type.

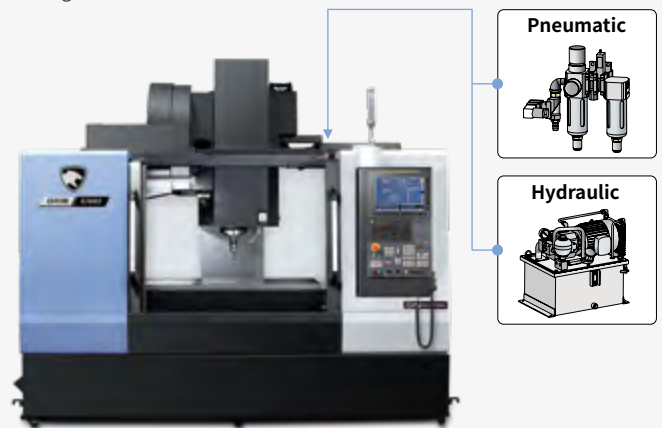
## 4th axis auxiliary device interface option

Customers who wish to set up a rotary axis on the table in order to increase application potential 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 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 (Oi Plus)		
		DNM 4digit		
Controlled axis	Controlled axes	3 (X,Y,Z)		
	Simultaneously controlled axes	4 axes		
	Additional controlled Axis	Add 1 Axis (5th Axis)	●	
Data input/output	Fast data server		○	
	Memory card input/output		●	
	USB memory input/output		●	
	Large capacity memory(2GB)*2	Available Option only with 15" Touch LCD (iHMI Only) *2)	○	
Interface function	Embedded Ethernet		●	
	Fast Ethernet		○	
	Enhanced Embedded Ethernet function		●	
Operation	DNC operation	Included in RS232C interface.	●	
	DNC operation with memory card		●	
Program input	Workpiece coordinate system	G52 - G59	●	
	Addition of workpiece coordinate system	G54.1 P1 X 48 (48 pairs)	●	
	Tool number command		T4 digits	
	Tilted working plane indexing command	G68.2 TWP	○	
Feed function	AI contour control I	G5.1 Q_, 40 Blocks	X	
	AI contour control II	G5.1 Q_, 200 Blocks	●	
	AI contour control II	G5.1 Q_, 600 Blocks	X	
	AI contour control II	G5.1 Q_, 1000 Blocks *1)	X	
	High smooth TCP		X	
Operation guidance function	EZ Guidei (Conversational Programming Solution)		●	
	iHMI with Machining Cycle EZ Operation package	Only with 15" Touch LCD standard *2)	X ●	
Setting and display	CNC screen dual display function		●	
Network	FANUC MTConnect		⊗	
	FANUC OPC UA		⊗	
Others	Display unit	10.4" color LCD	X	
		15" color LCD	X	
		15" color LCD with Touch Panel	●	
	Part program storage size & Number of registerable programs	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)



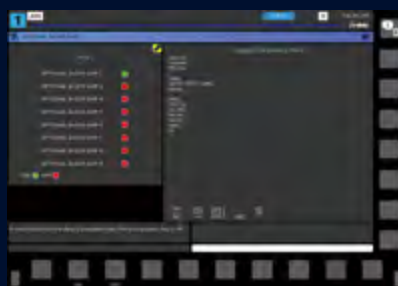
### Spindle Warm Up

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

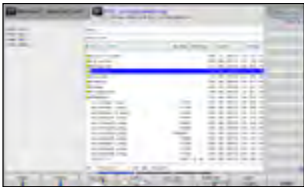
### Superior hardware specifications

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



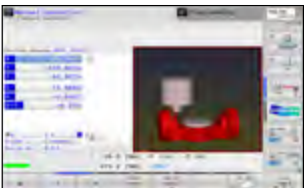
### Conversational convenient function



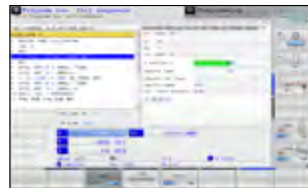
Data are controlled in the folder structure; convenient communication via USB devices



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



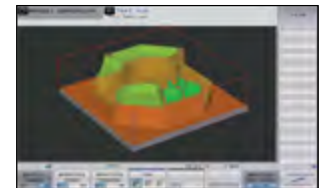
Collision protection system option



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	MTCconnect		⊗
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.

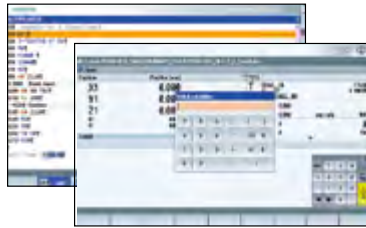
- 15.6" display
- 10MB high capacity user memory
- USB & ethernet (standard)
- QWERTY keyboard (standard)
- High-speed calculation and simulation can be fulfilled by improved processor functionality



### Conversational convenient function



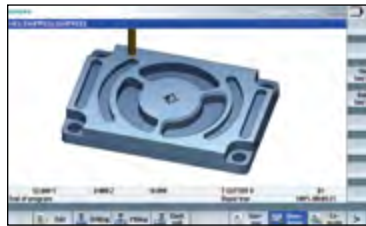
Shop Mill Part Programming



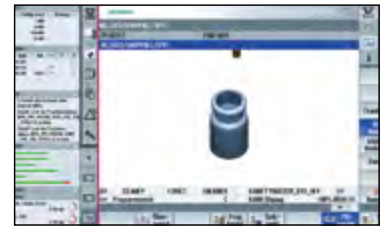
Smart function



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	

# POWER | TORQUE

FANUC

## FANUC 15000 r/min

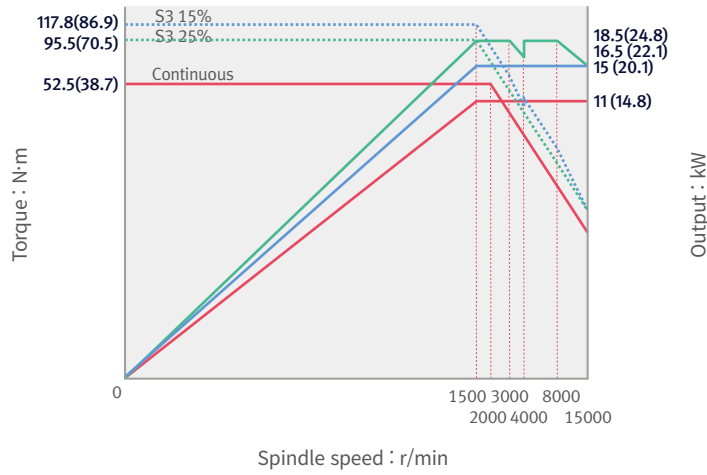
15000 r/min

Max. spindle power:

18.5 kW (24.8 Hp)

Max. spindle torque:

117.8 N·m (86.9 lbf-ft)



## FANUC 20000 r/min option

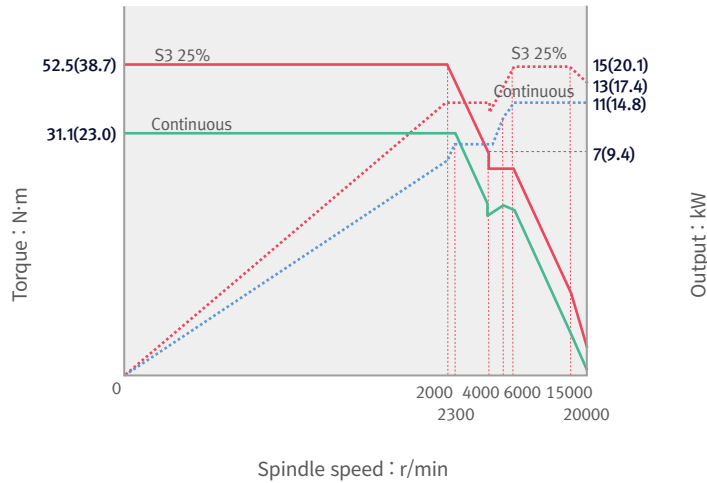
20000 r/min

Max. spindle power:

15 kW (20.1 Hp)

Max. spindle torque:

52.5 N·m (38.7 lbf-ft)



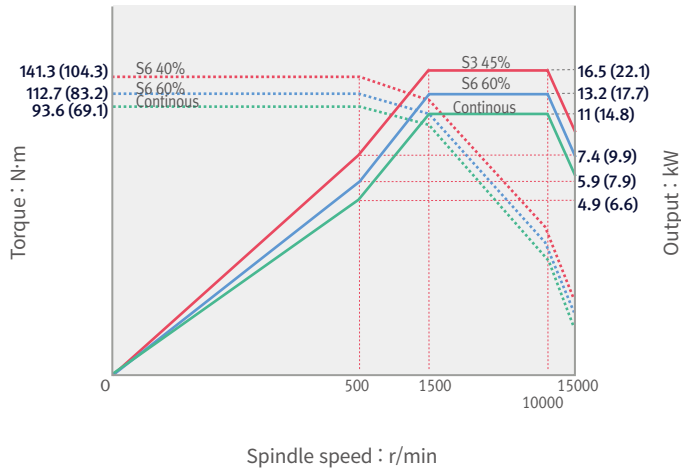
# POWER | TORQUE

HEIDENHAIN | SIEMENS

## HEIDENHAIN

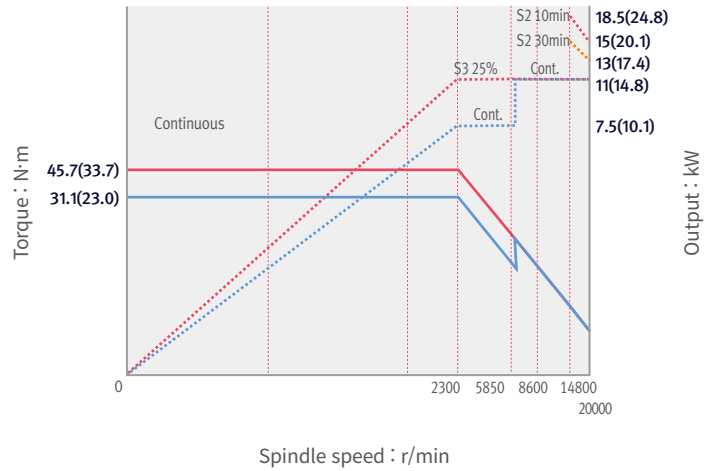
15000 r/min

Max. spindle power: 16.5 kW (22.1 Hp)  
 Max. spindle torque: 141.3 N·m (104.3 lbf-ft)



20000 r/min option

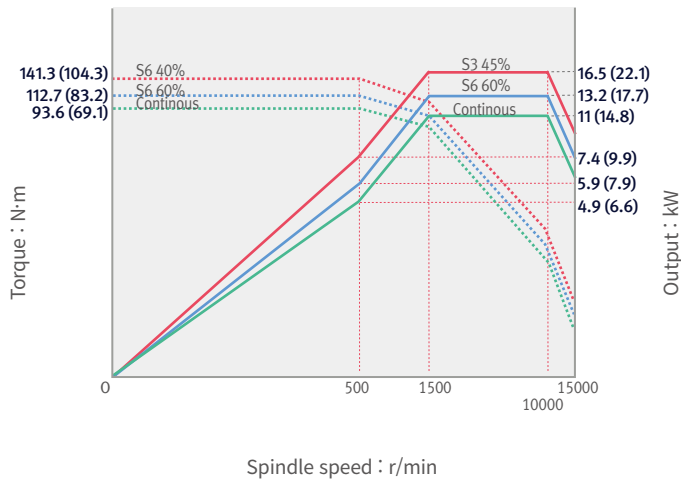
Max. spindle power: 18.5 kW (24.8 Hp)  
 Max. spindle torque: 45.7 N·m (33.7 lbf-ft)



## SIEMENS

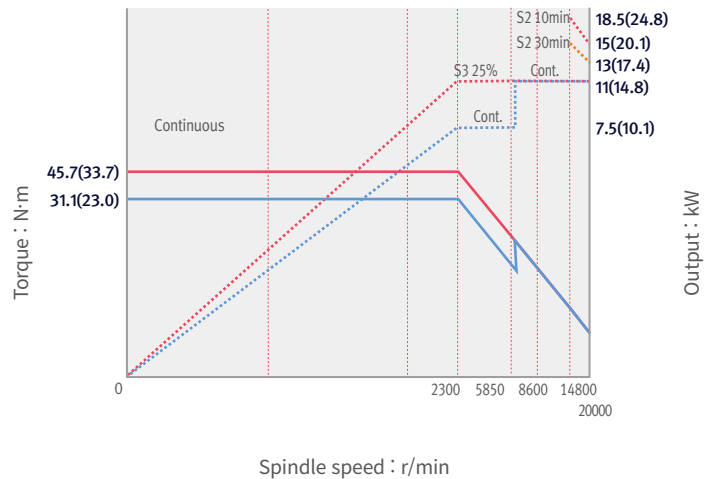
15000 r/min

Max. spindle power: 16.5 kW (22.1 Hp)  
 Max. spindle torque: 141.3 N·m (104.3 lbf-ft)



20000 r/min option

Max. spindle power: 18.5 kW (24.8 Hp)  
 Max. spindle torque: 45.7 N·m (33.7 lbf-ft)

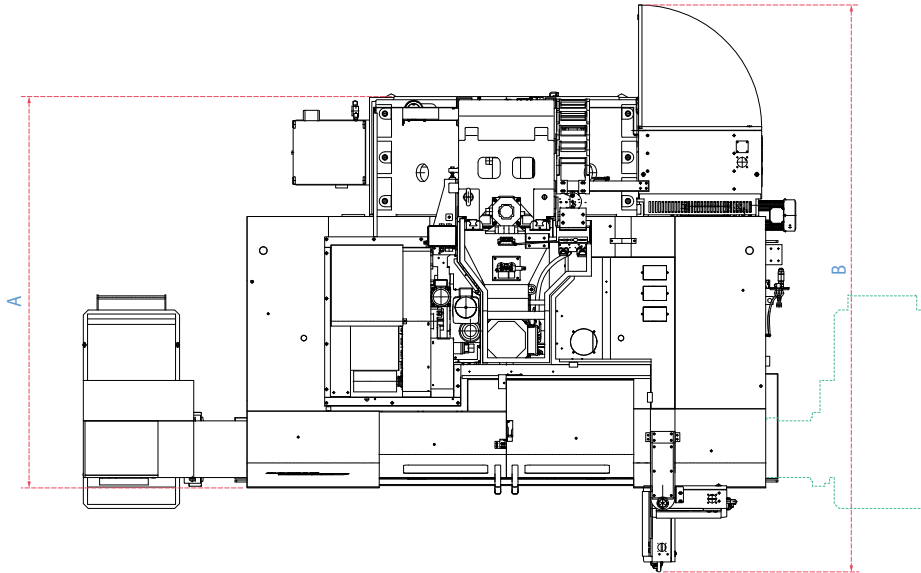


# DIMENSIONS

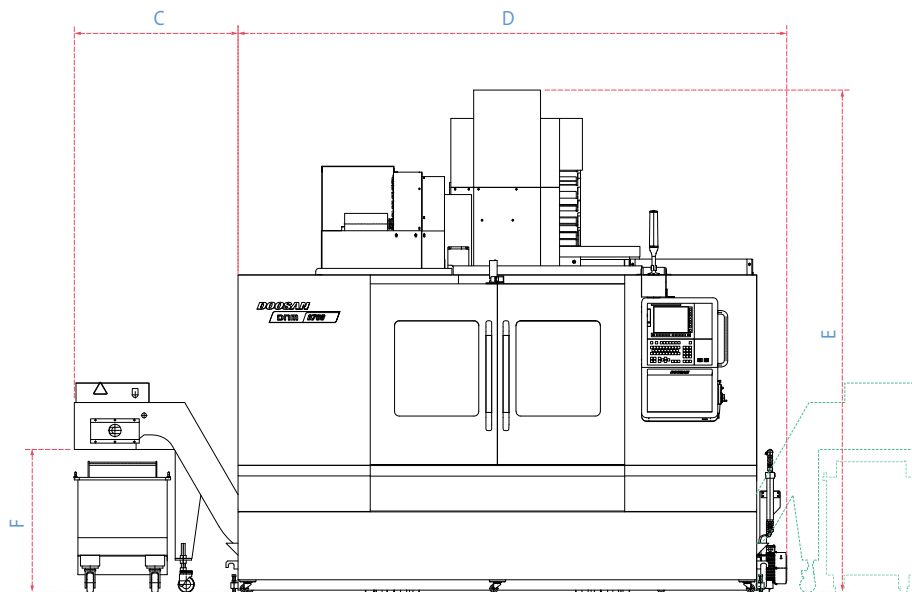
## DNM S series (Left or Right side chip conveyor)

Unit: mm (inch)

Top View



Front View



Model	A (Length)	B <sup>1</sup>	C <sup>2</sup>	D (Width)	E (Height)	F <sup>3</sup>
<b>DNM 4500S</b>	1966 (77.4)	3219 (126.7)	1010 (39.8) [414 (16.3)]	2634 (103.7)	2985 (117.5)	883 (34.8) [440 (17.3)]
<b>DNM 5700S</b>	2221 (87.4)	3349 (131.9)	1010 (39.8) [398 (15.7)]	3145 (123.8)	2985 (117.5)	883 (34.8) [440 (17.3)]

<sup>1</sup> Max. machine length (including electric cabinet door and operation panel swiveling)

<sup>2</sup> Additional width to accommodate the side chip conveyor. [ ] indicates the additional width required to accommodate a screw(auger)type chip conveyor.

<sup>3</sup> Height from the floor to the chip outlet. [ ] indicates the height when a screw(auger) type chip conveyor is installed.

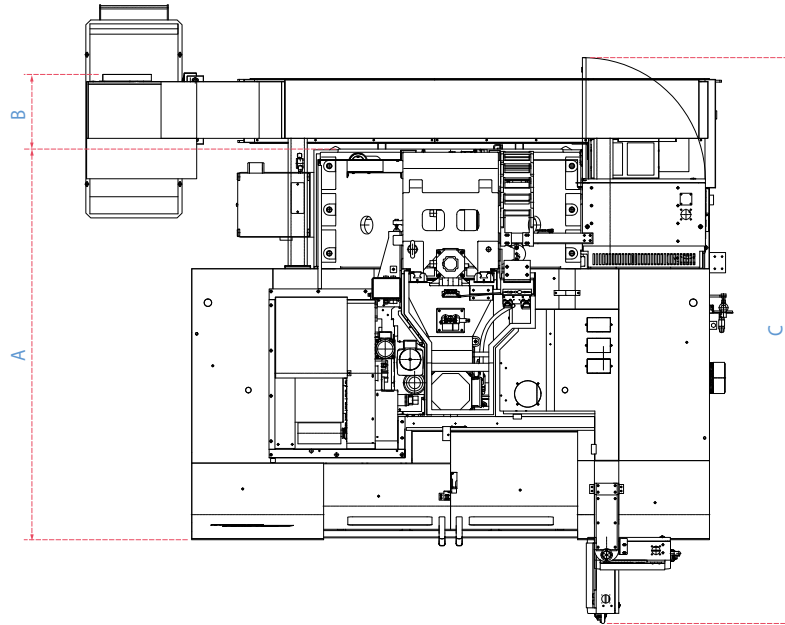
\* Some peripheral equipment can be placed in other places

# DIMENSIONS

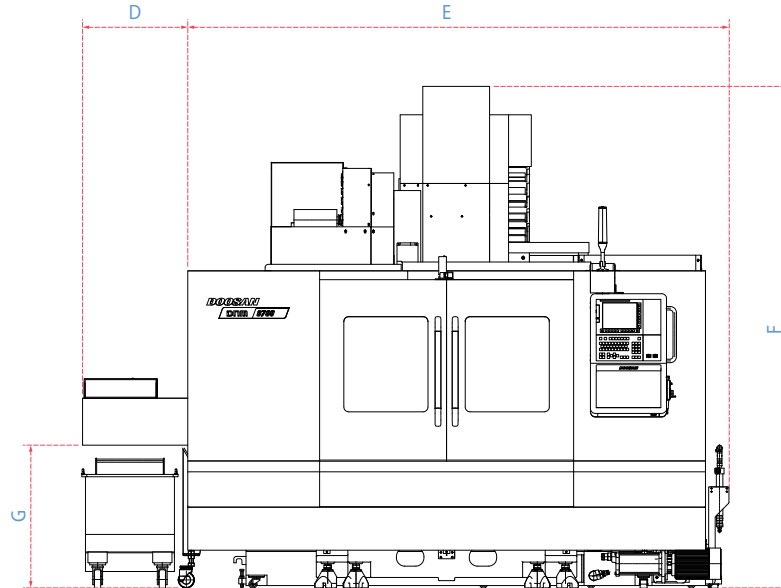
## DNM S series (Rear side chip conveyor)

Unit: mm (inch)

Top View



Front View



Model	A (Length)	B <sup>1</sup>	C <sup>2</sup>	D <sup>3</sup>	E (Width)	F (Height)	G		
							SCRAPER	HINGED	SCREW
<b>DNM 4500S</b>	1966 (77.4)	458 (18.0)	3219 (126.7)	880 (34.6)	2607 (102.6)	2985 (117.5)	883 (34.8)	865 (34.1)	440 (17.3)
<b>DNM 5700S</b>	2221 (87.4)	458 (18.0)	3349 (131.9)	650 (25.6)	3105 (122.2)	2985 (117.5)	883 (34.8)	865 (34.1)	440 (17.3)

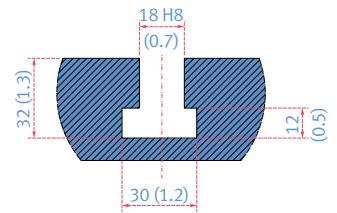
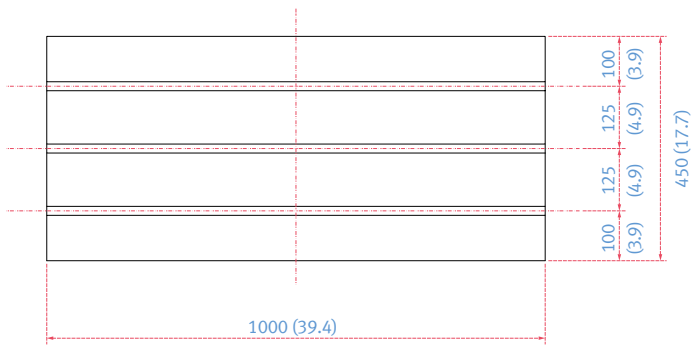
- <sup>1</sup> Additional length required to accommodate a rear-side chip conveyor.
- <sup>2</sup> Max. machine length (including electric cabinet door and operation panel swiveling)
- <sup>3</sup> Additional space required for the machine to accommodate a rear-side chip conveyor.

\* Some peripheral equipment can be placed in other places

# TABLE DIMENSION

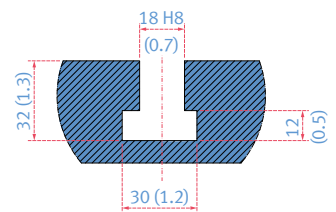
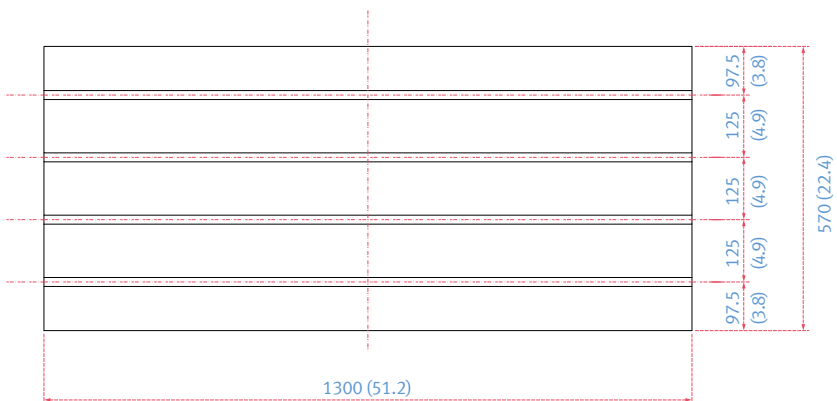
## DNM 4500S

Unit: mm (inch)



## DNM 5700S

Unit: mm (inch)





# MACHINE SPECIFICATIONS

Description			Unit	DNM 4500S	DNM 5700S
Travels	Travel distance	X axis	mm (inch)	800 (31.5)	1050 (41.3)
		Y axis	mm (inch)	450 (17.7)	570 (22.4)
		Z axis	mm (inch)	510 (20.1)	510 (20.1)
	Distance from spindle nose to table top		mm (inch)	150~660 (5.9~26.0)	
Table	Table size		mm (inch)	1000 x 450 (39.4 x 17.7)	1300 x 570 (51.2 x 22.4)
	Table loading capacity		kg (lb)	600 (1322.8)	800 (1763.7)
	Table surface type		mm (inch)	T-SLOT (3-125(4.9) x 18(0.7)H8)	T-SLOT (4-125(4.9) x 18(0.7)H8)
Spindle	Taper		-	ISO #40	
	Max. spindle speed	Fanuc	r/min	15000 {20000}*	
		Siemens	r/min	15000 {20000}*	
		Heidenhain	r/min	15000 {20000}*	
	Max. Spindle power	Fanuc	kW (Hp)	18.5/11 (24.8/14.8) {15/11 (20.1/14.8)}*	
		Siemens	kW (Hp)	16.5/11 (22.1/14.8) {15/11 (20.1/14.8)}*	
		Heidenhain	kW (Hp)	17/10 (22.8/13.4) {15/11 (20.1/14.8)}*	
	Max. spindle torque	Fanuc	N · m (lbf-ft)	117.8 (86.9) {52.5(38.7)}*	
		Siemens	N · m (lbf-ft)	141.3 (104.3) {52.5(38.7)}*	
Heidenhain		N · m (lbf-ft)	108.2 (79.9) {52.5(38.7)}*		
Feedrates	Rapid traverse rate	X axis	m/min (ipm)	42 (1653.5)	
		Y axis	m/min (ipm)	42 (1653.5)	
		Z axis	m/min (ipm)	36 (1417.3)	
Automatic Tool Changer	Type of tool shank	Tool shank	-	BT 40 {CAT 40 / DIN 40}*	
		Pull stud	-	PS806 {Modified DIN / DIN 69872 #40}*	
	Tool storage capa.		ea	30 {40, 60}*	
	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	1.2	
Tool change time (Chip-to-chip)		sec	3.2		
Power source	Electric power supply(rated capacity)		kVA	33	
	Compressed air supply		MPa (psi)	0.54 (78.3)	
Tank capacity	Coolant tank capacity		L (gal)	280 (74.0)	315 (83.2)
Machine Dimensions	Height		mm (inch)	2985 (117.5)	2985 (117.5)
	Length		mm (inch)	2158 (85.0)	2413 (95.0)
	Width		mm (inch)	2615 (103.0)	3110 (122.4)
	Weight		kg (lb)	5000 (11023)	6500 (14330)
Control	NC system		-	DN Solutions Fanuc i Plus / SIEMENS S828D / HEIDENHAIN TNC620	

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.

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



## 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



[dn-solutions.com](http://dn-solutions.com)

**Head Office**

22F T Tower, 30, Sowol-ro 2-gil  
Jung-gu, Seoul, Korea, 04637

Tel: +82-2-6972-0370/0350  
Fax: +82-2-6972-0400

**DN Solutions America**

19A Chapin Road, Pine Brook  
New Jersey 07058, United States

Tel: +1-973-618-2500  
Fax: +1-973-618-2501

**DN Solutions Europe**

Emdener Strasse 24, D-41540  
Dormagen, Germany

Tel: +49-2133-5067-100  
Fax: +49-2133-5067-111

**DN Solutions India**

No.82, Jakkuar Village  
Yelahanka Hobli, Bangalore-560064

Tel: + 91-80-2205-6900  
E-mail: [india@dncompany.com](mailto:india@dncompany.com)

**DN Solutions 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

**Sales inquiry**

[sales@dncompany.com](mailto:sales@dncompany.com)

\* For more details, please contact DN Solutions.

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