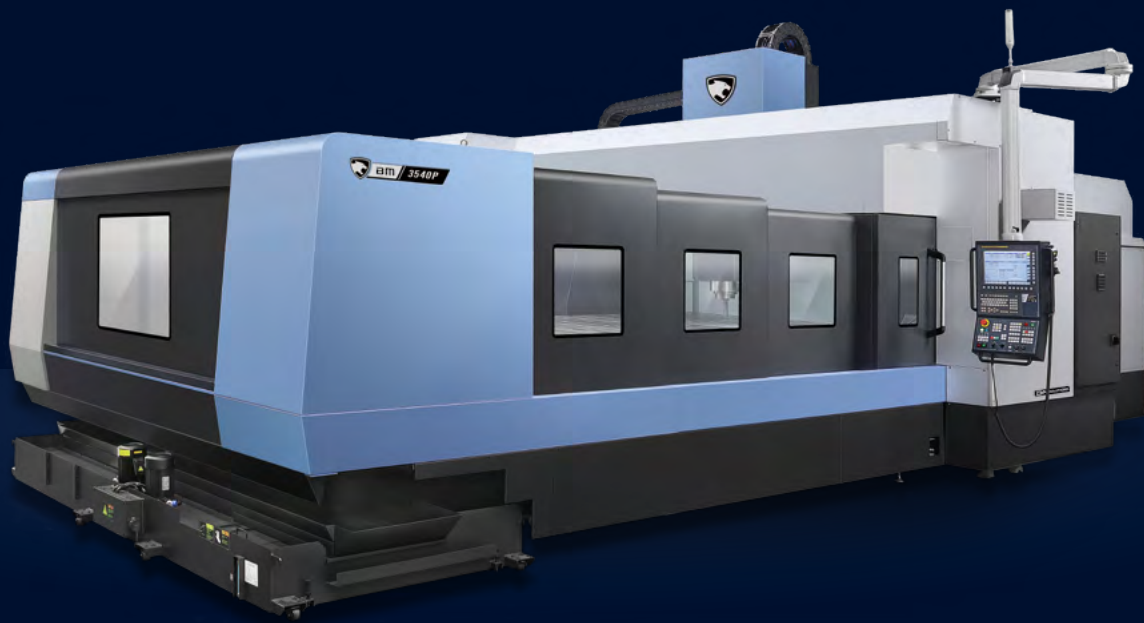




DOUBLE COLUMN MACHINING CENTER FOR
ALUMINUM PANEL MACHINING

BM

3540P



DN SOLUTIONS

BM 3540P

The BM General series are double-column type machining center designed to process general part. High torque spindle and new improved design delivers greater efficiency, there by raising customers' productivity and creating maximum added value.





EQUIPPED WITH A HIGH-SPEED, HIGH-RIGIDITY SPINDLE AS A STANDARD FEATURE

Equipped with a dual contact and built-in type spindle as a standard feature for high rigidity and minimum vibration.

STABILIZE STRUCTURE FOR HIGHER LEVEL OF PRECISION

Apply double column structure & 3 LM guide way for high precision.

EASY OPERATION FOR IMPROVING CONVENIENCE TO USE NC SYSTEM

Easy operation for user's convenient machine operation.
The EZ Work functions for the user-friendliness has improved the convenience of customers.

BASIC STRUCTURE

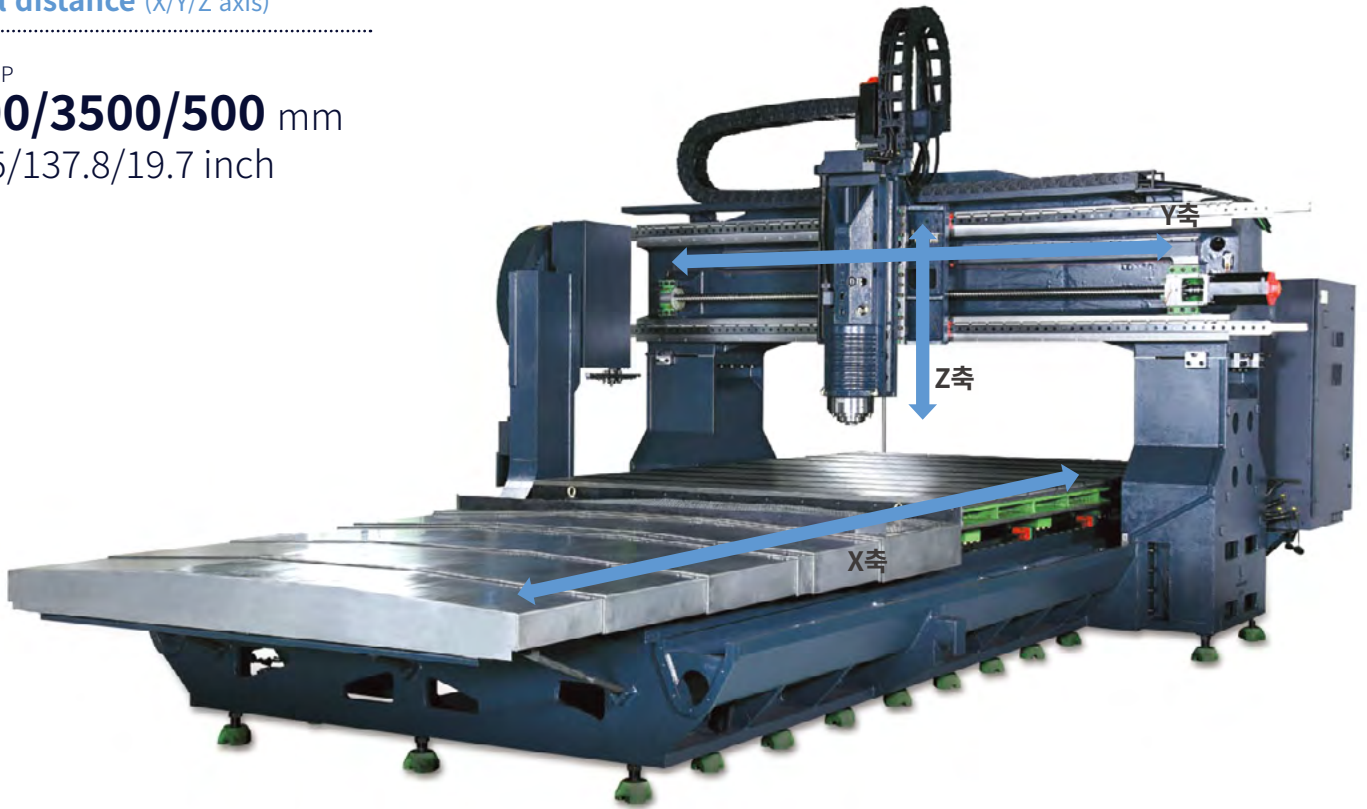
Double-column structure for stable precision level.

Travel distance (X/Y/Z axis)

BM 3540P

4000/3500/500 mm

157.5/137.8/19.7 inch



TABLE

Proper table size for large works.

Table size

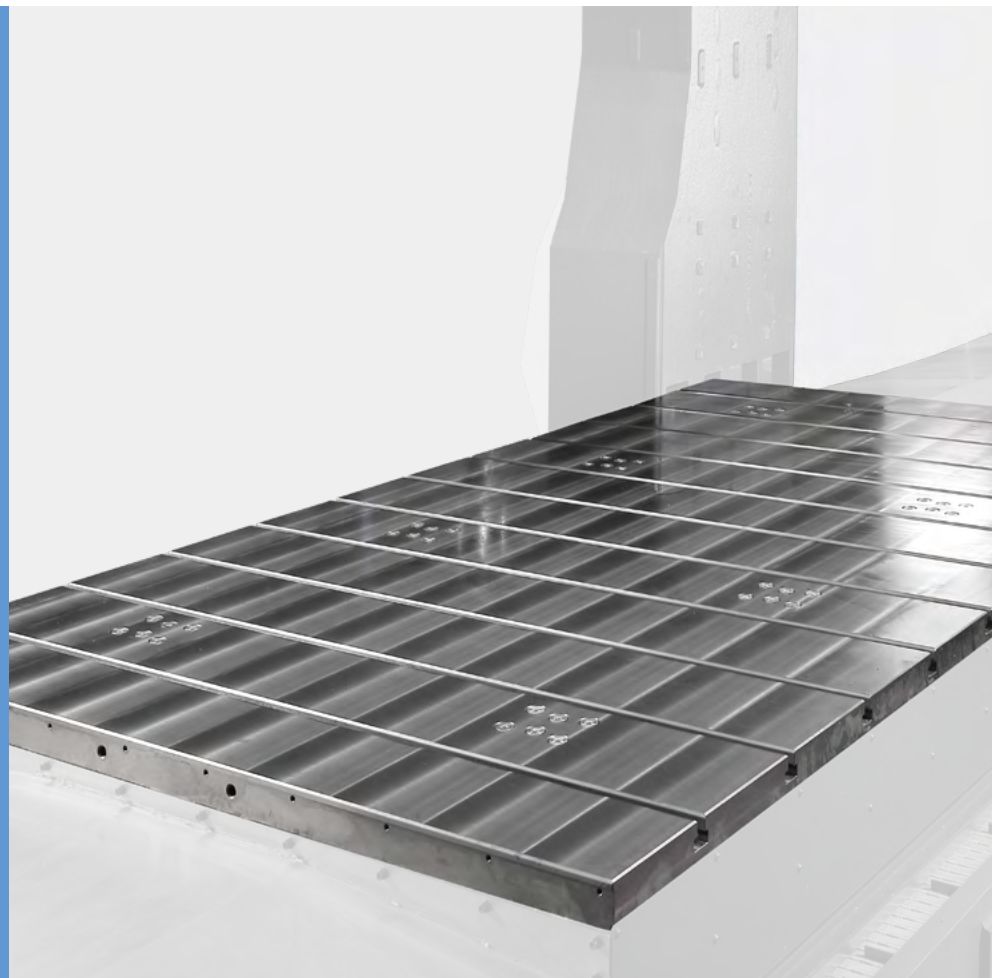
4000 x 2500 mm

157.5 x 98.4 inch

Max weight on table

3000 kg

6613.8 lb



SPINDLE

A high-speed, high rigidity Built-in spindle is provided as a standard feature to enhance the productivity of machining large works.

Taper

BT 40

Max. spindle speed

12000 r/min

Max. spindle motor power

22 kW
29.5 Hp

Max. spindle motor torque

204 N·m
150.6 ft-lbs



Feed axes

Equipped with roller LM guideways for increased rigidity and a cooling system as a standard feature to minimize thermal displacement.

Stable and fast feed shaft structure

Roller-type LM Guideways deliver high rigidity to guarantee the outstanding accuracy of the linear feed system.

High-rigidity feed system structure

Roller guides

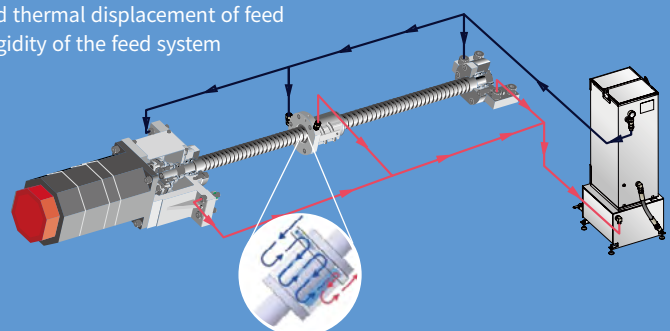


Rigid coupling



Ball screw nut cooling

Greatly reduced thermal displacement of feed shafts stable rigidity of the feed system



TOOL CHANGE SYSTEM

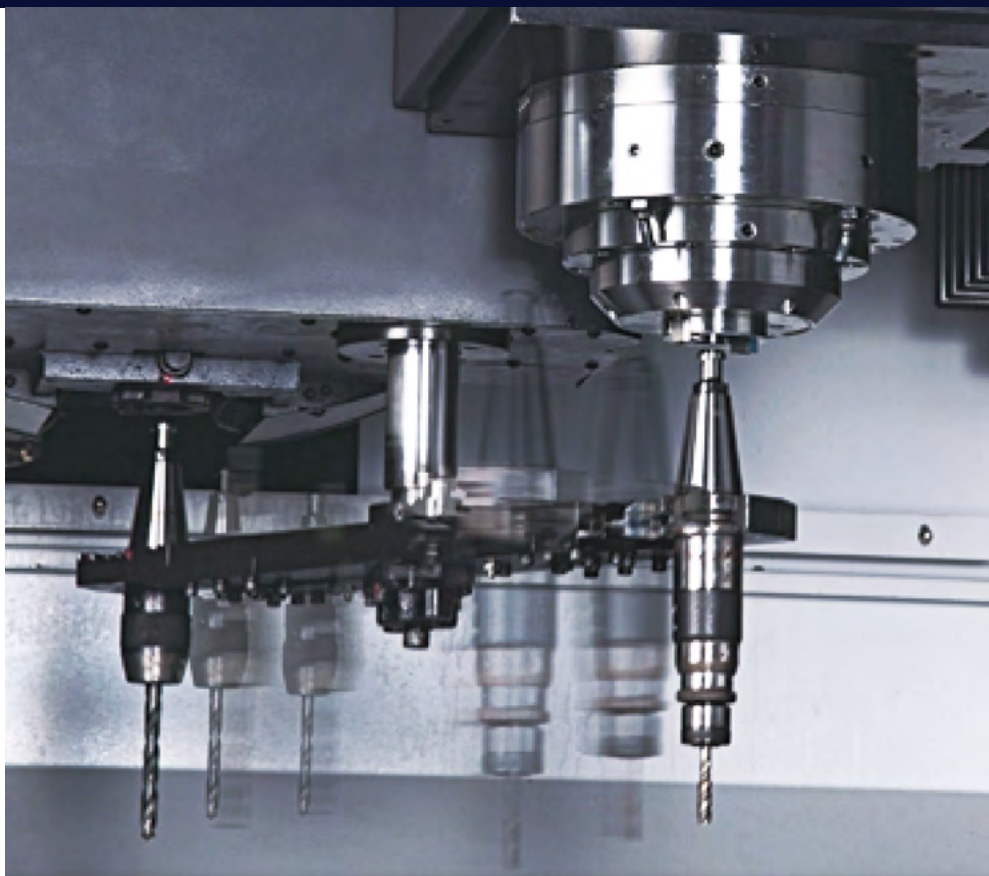
Higher productivity can be achieved with the CAM-type tool changer that supports faster tool changing.

Tool storage capacity

30{40^{OPTION}} ea

Tool change time (Tool to Tool)

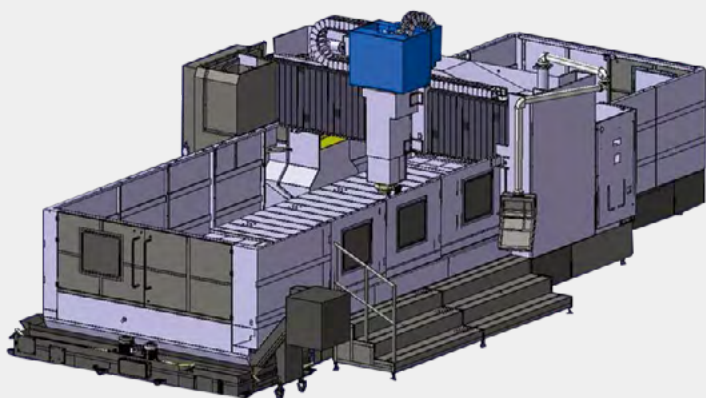
1.5 s



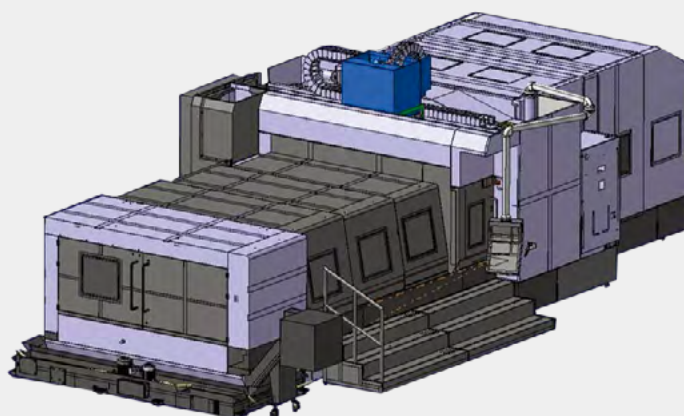
CONVENIENCE

Applied 2 type of cover are available to the customers requirements.

Semi cover



Full cover ^{OPTION}



STANDARD | OPTIONAL SPECIFICATIONS

A range of options is available to suit individual requirements.

Description	Features		BM 3540P	
Spindle	12000 r/min	18.5 / 22 kW, 204 N·m	●	
Magazine	Tool storage capacity	30 ea	●	
		40 ea	○	
Tool shank type	BIG PLUS BT40		●	
	BIG PLUS CAT40		○	
	BIG PLUS DIN40		○	
Raising Block	150 mm		○	
	300 mm (11.8 inch)		○	
Coolant	FLOOD	0.44 MPa (1.1 kW)	●	
		0.7 MPa (1.8 kW)	○	
	TSC	None		●
		2 MPa (1.5kW)		○
		2 MPa (4kW)		○
		7 MPa(5.5kW)		○
		Coolant level switch : Sensing level - Low **		○
Chip disposal	Chip conveyor	Chip pan	●	
		Hinged type	○	
	Chip bucket	Forklift type	○	
		Rotating type	○	
	Air blower		○	
	Air gun		○	
	Coolant gun		●	
Precision machining option	Linear scale	X / Y / Z axis	○	
	AICC I (30 block)		●	
	AICC II (80 block)		○	
Measurement & Automation	Automatic tool measurement	TS27R_RENISHAW	○	
		OTS_RENISHAW	○	
	Automatic tool breakage detection	Needle	○	
	Automatic workpiece measurement	OMP60_RENISHAW	○	
Others	LED Work light		●	
	Signal tower		●	
	Tool load monitoring		●	
	EZ Guide i		○	
	Automatic power off		○	
Lubrication	Grease		○	

* Please contact DN Solutions to select detailed steady rest specifications

● Standard ● Optional X Not applicable



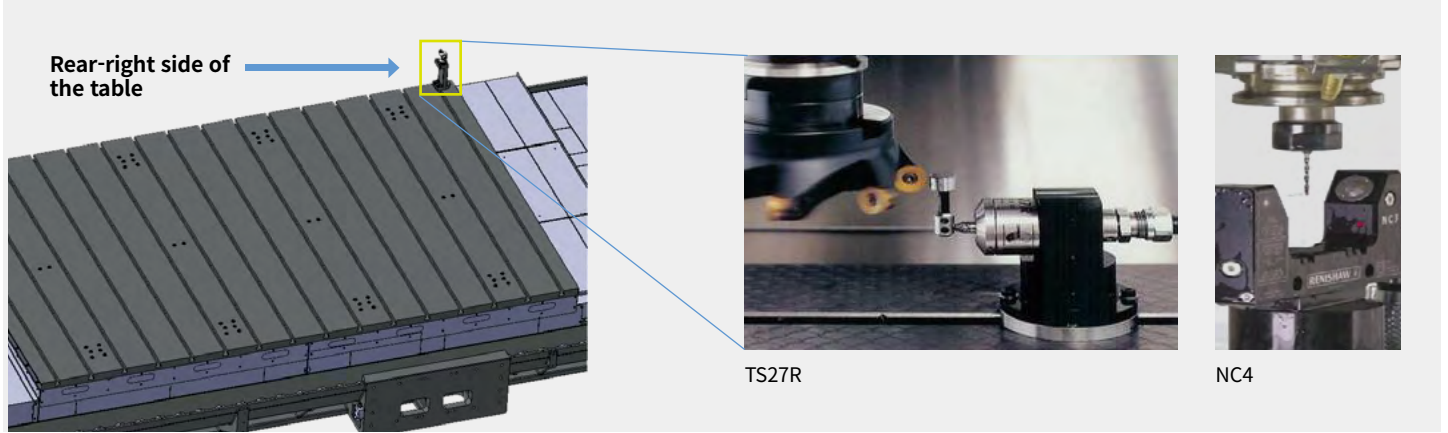
Fire Safety Precautions

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

Various solutions are available for better machining performance and higher-quality.

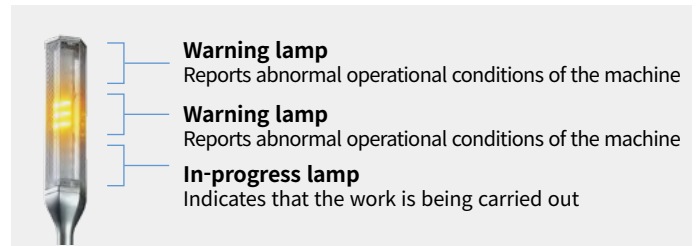
Tool measuring devi OPTION



MPG MPG suitable for large works



3-Stage Signal Tower



Linear scale OPTION



Power saving function

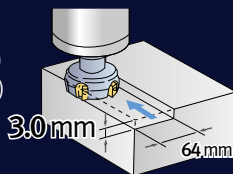
This function saves electricity when the machine is not in use.

Cutting performance

High cutting performance with high speed built-in spindle.

Face mill

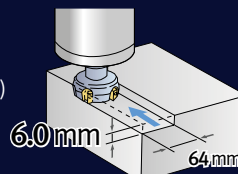
Carbon steel (SM45C)
ø80mm Face mill (6Z)



Machining rate	768 cm ³ /min
Spindle speed	1200 r/min
Feedrate	4000 mm/min

Face mill

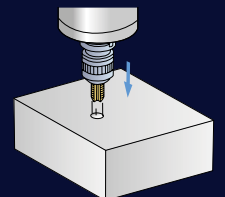
Aluminum (AL6061)
ø80mm Face mill (6Z)



Machining rate	2688 cm ³ /min
Spindle speed	1200 r/min
Feedrate	7000 mm/min

Tap

Aluminum (AL6061)



Machining rate	M3 x P0.5
Spindle speed	3600 r/min
Feedrate	1800 mm/min

FANUC 32i PLUS

Fanuc 32i Plus maximizes customer productivity and convenience.

15" Touch screen + New OP

DN Solutions Fanuc 32i Plus' operation panel enhances operating convenience by incorporating common-design buttons and layout. It features a Qwerty keyboard for fast and easy data input and operation.



iHMI touchscreen

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.

Fanuc 32i Plus

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

USB and PCMCIA card QWERTY keyboard

- EZ-Guide i standard
- Ergonomic operator panel
- 4MB Memory
- Hot keys
- Enhance AICC BLOCK
- Touch pen provided as standard



NUMERIC CONTROL SPECIFICATIONS

FANUC

Division	Item	Specifications	BM 3540P F32iB Plus	
Controlled axis	Controlled axes		3 (X,Y,Z)	
	Simultaneously controlled axes		3 axes	
Data input/output	Additional controlled Axis	Add 1 Axis (5th Axis)	●	
	Fast data server		○	
	Memory card input/output		●	
	USB memory input/output		●	
Interface function	Large capacity memory(2GB)*2	Available Option only with 15" Touch LCD (iHMI Only) *2)	○	
	Embedded Ethernet		●	
	Fast Ethernet		○	
Operation	Enhanced Embedded Ethernet function		●	
	DNC operation	Included in RS232C interface.	●	
Program input	DNC operation with memory card		●	
	Workpiece coordinate system	G52 - G59	●	
	Addition of workpiece coordinate system	G54.1 P1 X 48 (48 pairs)	●	
	Tool number command		T4 digits	
Feed function	Tilted working plane indexing command	G68.2 TWP	X	
	AI contour control I	G5.1 Q_, 40 Blocks	X	
	AI contour control II	G5.1 Q_, 200 Blocks	X	
	AI contour control III	G5.1 Q_, 600 Blocks	●	
	AI contour control IV	G5.1 Q_, 1000 Blocks *1)	X	
Operation Guidance Function	High smooth TCP		X	
	EZ Guidei (Conversational Programming Solution)		○	
Setting and display	iHMI with Machining Cycle	Only with 15" Touch LCD standard *2)	●	
	EZ Operation package		●	
Network	CNC screen dual display function		●	
	FANUC MTConnect		✎	
Others	FANUC OPC UA		✎	
	Display unit	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		X
		10240M(4MB)_1000 programs		●
		20480M(8MB)_1000 programs		○
		2560M(1MB)_2000 programs		○
		5120M(2MB)_4000 programs		○
		10240M(4MB)_4000 programs		○
		20480M(8MB)_4000 programs		○

● Standard ○ Optional X N/A ✎ Available

POWER | TORQUE

DN Solutions Fanuc 32i

Max. spindle speed : **12000** r/min

Max. power: **22** kW
29.5 Hp

Max Torque: **204** N·m
150.6 lbf-ft

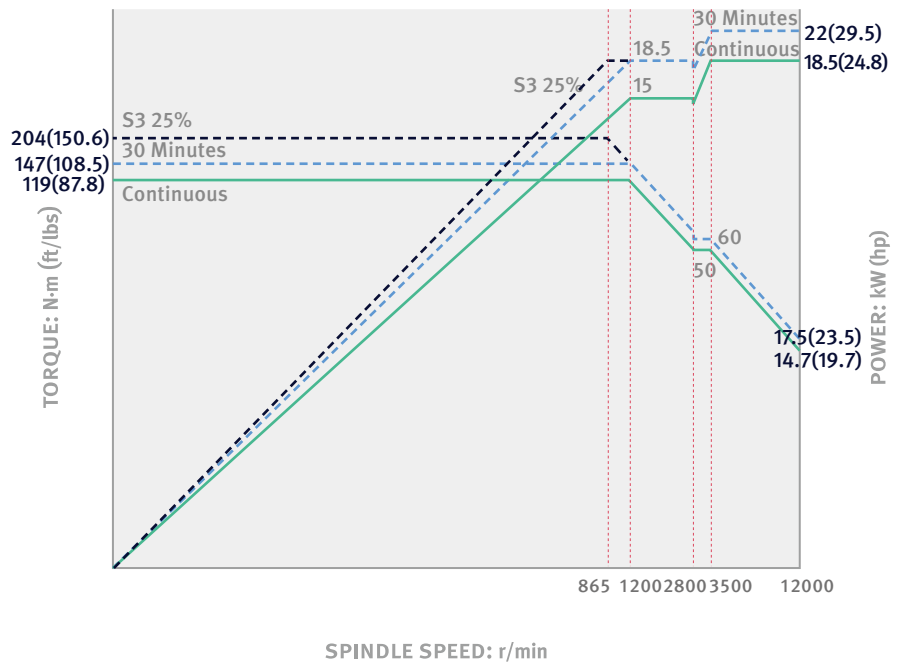
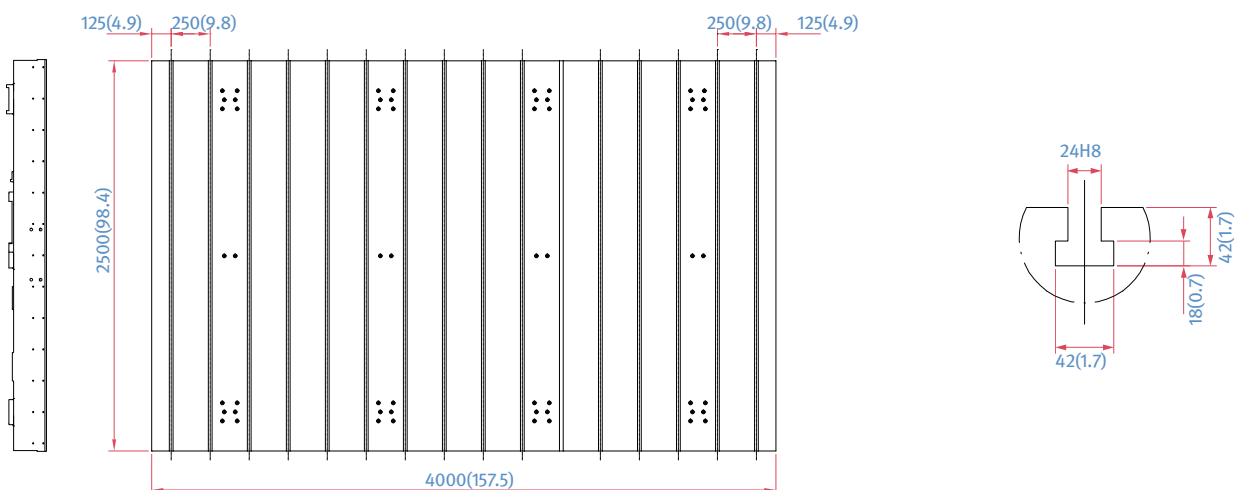


TABLE DIMENSIONS

Unit : mm (inch)

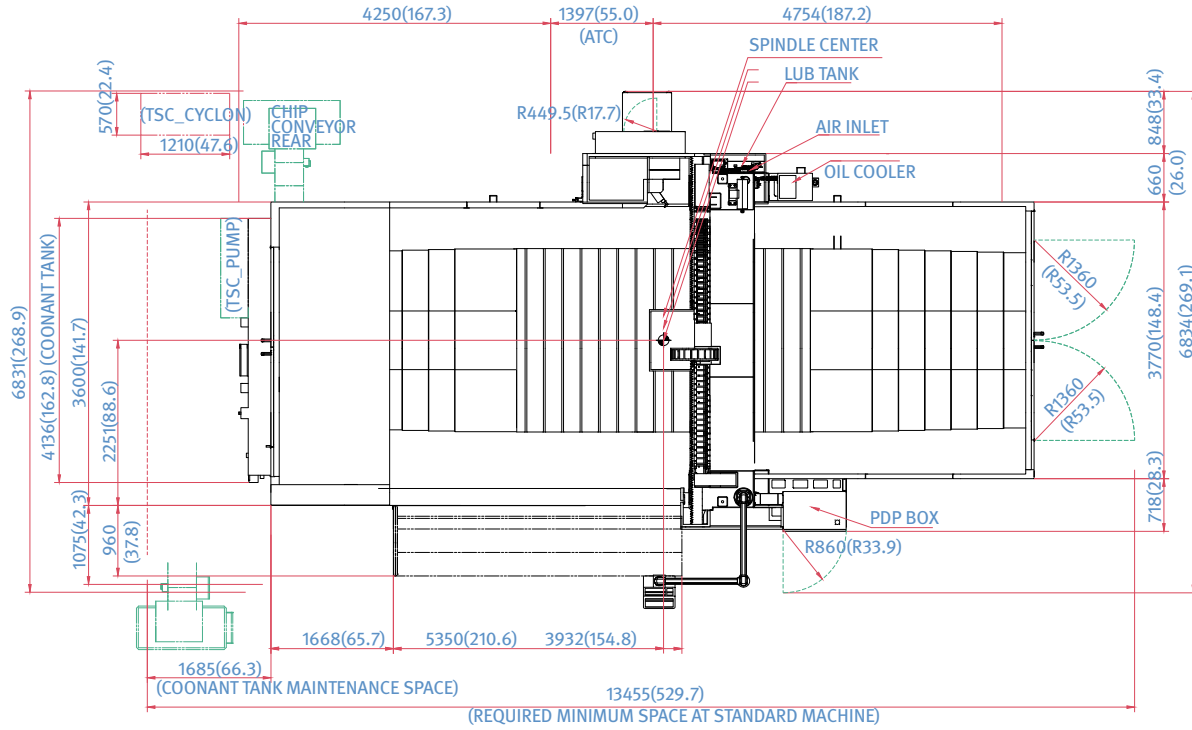


EXTERNAL DIMENSIONS

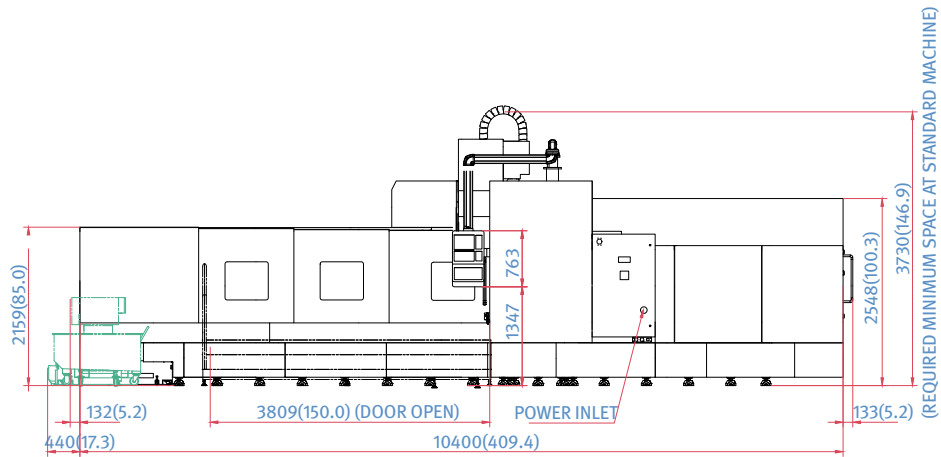
BM 3540P

Unit : mm (inch)

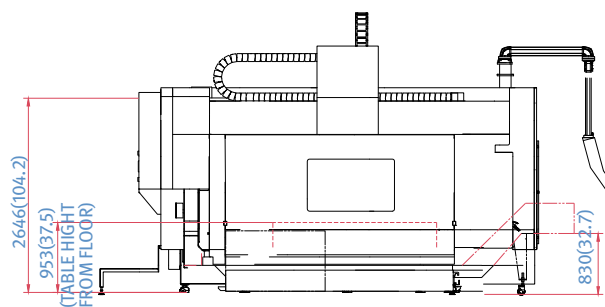
TOP



SIDE



TOP



* Some peripheral equipment can be placed in other places.

MACHINE SPECIFICATIONS

Description		Unit	BM3540P	
Tavel	Travel distnace	X axis	mm (inch)	4000 (157.5)
		Y axis	mm (inch)	3500 (137.8)
		Z axis	mm (inch)	500 (19.7)
	Spindle to table surface		mm (inch)	160~660 (6.3~26.0)
Table	Distance between columns		mm (inch)	3500 (137.8)
	Table size		mm (inch)	4000 x 2500 (157.5 x 98.4)
	Loading capacity		kg (lb)	3000 (6613.8)
	Table surface		mm (inch)	T-SLOT (16-250 x 24H8) (0.6-9.8 X 0.9H0.3))
Spindle	Max. spindle speed		r/min	12000
	Taper		-	BT 40
	Max. spindle power(S3/Cont.)		kW (Hp)	22 / 18.5 (29.5 / 24.8)
	Max. spindle torque		N-m (ft-lbs)	204 (150.6)
Feedrate	Rapid feedrate	X axis	m/min (ipm)	16 (629.9)
		Y axis	m/min (ipm)	24 (944.9)
		Z axis	m/min (ipm)	36 (1417.3)
ATC	Tool storage capacity		ea	30{40}*
	Max. tool diameter	Continuous	mm (inch)	80{76}
		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 type			MEMORY RANDOM
	Tool change time(Tool to Tool)		s	1.5
Utility	Required power capacity		kVA	55.3
	Compressed air		Mpa (psi)	0.54 (78.3)
Coolant system	Tank capacity		L (gal)	660 (174.4)
Machine size	Height (without Raising block)		mm (inch)	3840 (151.2)
	Length		mm (inch)	6524 (256.9)
	Width		mm (inch)	10825 (426.2)
	Weight		kg (lb)	41000 (90388.2)
Controller	CNC system			FANUC 32i

*{ } : Option

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.

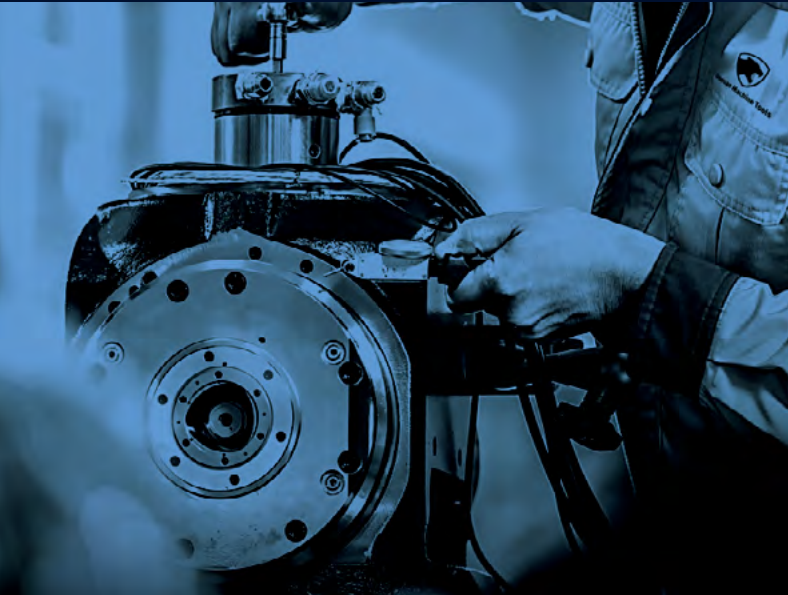
EXPERT SERVICE

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

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





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