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## NC Specifications

<b>Controls</b>	
Controlled axes	"DL series 2-axis(X,Z) / DT,DL M series 3-axis(X,Y,Z) "
Spindle control axis	"1 axis / (TM,TBM C Axis ADD.)" Axis functions
<b>Axis functions</b>	
Backlash compensation	Max. 255 pulses
Chamfering on/off	
HRV 2/3 control	
Inch / metric conversion	G20 / G21
Increment system 1/10	0.0001mm / 0.00001deg / 0.0001inch
Mirror image	
<b>Feed functions</b>	
Cutting feedrate clamp	
Feed per minute	G98
Feed per revolution	G99
Feedrate override	0 - 150%(10% unit)
Rapid traverse override	F0 / 25 / 50 / 100%
<b>Auxiliary &amp; Spindle functions</b>	
1st Spindle orientation	
Constant surface speed control	"G96, G97"
High speed M/S/T interface	
M-function	M3 digit
Rigid tapping	
Spindle speed override	50-150%
High speed M/S/T interface	
<b>Programming functions</b>	
Absolute / Incremental programming	
Additional block skip	Total 9(Only NC function)
Circular interpolation by R programming	
Drilling canned cycle(G80 series)	
G code system B/C(selectable)	
Input code	"ISO840, EIA RS422"
Manual absolute on and off	
Maximum command dimension	0.99999.999mm/(0.9999.999 inch)
Multi repetitive canned cycle	G70~G76
Multi repetitive canned cycle 2	
Programmable data input	G10
Simple canned cycle	"G90, G92, G94"
Sub program call	Nested holds up to 4
Work coordinate system selection	G52~G59
<b>Tool functions</b>	
Auto tool offset	
Direct input of tool offset value measured B	
Number of tool offsets	64EA
Tool geometry / wear offset	Geometry & wear data
Tool nose radius compensation	G40~G42
Tool number command (T-code function)	T4-digit
Tool offset	"G43, G44, G49"
Editing op.functions	
<b>Expanded part program editing</b>	
"Copy, Move, Change of NC program"	
No. of Registered programs	400EA
Part program storage length	512K
Program protect	
<b>Others</b>	
MDI / DISPLAY unit	"10.4" TFT LCD Color Monitor
PMC system	

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※ Design and specifications are subject to change without prior notice.  
※ We do not take responsibility for the difference between the information in catalogues and the actual machine.



VERTICAL MACHINING CENTER

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# DM V SERIES



DMC

**DMC**  
MACHINE TOOLS



## DM V SERIES

DM 42V / 42VL / 50V / 52VL / 65V / 70V

High precision compact

Heavy duty cutting vertical machining center

The DM V Series of vertical machining center offers superior reliability and high precision machining.

The wide table that easily accommodates large workpiece, and the LM guide with greater speed and higher accuracy satisfy you with optimal productivity.



## High-efficiency, High-productivity

### High accuracy design for high precision

- High rigidity bed of a low center of gravity with a great speed, high-precision and optimal productivity LM Guide
- Left / Right type spiral coil chip conveyor for easy chip disposal (standard feature)
- Front facing spiral chip conveyor (optional)



### Column

- Wide column with super rigidity for heavy duty machining
- Column width : 1,060mm  
Spindle height from end : 1,080mm

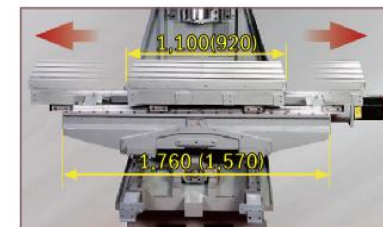
### Bed & Saddle LM Guide, Table & Saddle

DM 52V TABLE  
DM 50V TABLE ( )



The sturdy one-piece cast-iron bed and wide linear guideway

Saddle : 1880 (1,720) mm  
Bed guide way : 685 mm



The wide guideway and saddle designed to prevent table overhang

### Table : Saddle

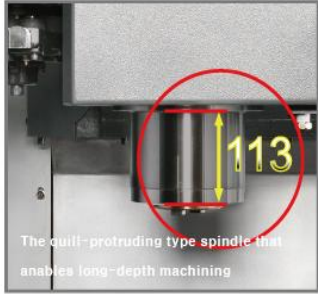
1,100 mm : 1,760 mm [DM 52VL]  
920 mm : 1,570 mm [DM 50V]

# DM V series

VERTICAL MACHINING CENTER

High-efficiency, High-productivity

## High speed & accuracy spindle

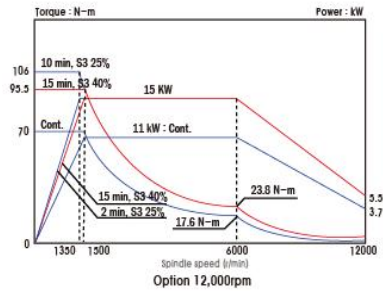
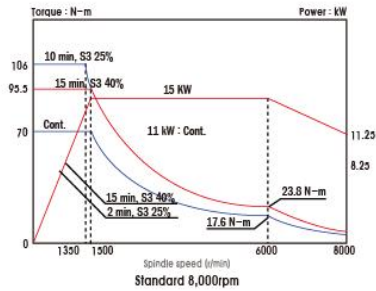


The quill-protruding type spindle that enables long-depth machining

The high speed spindle enables greatly enhanced productivity, long-term stability and accuracy in machining, and exceptional heavy duty cutting both at high torque on low speed

**Spindle speed**  
8,000rpm (12,000rpm)  
**Spindle motor**  
15/11 kW  
**Spindle max. torque**  
106 N.M

## Main spindle power & Torque diagram



## ATC to reduce non-cutting time

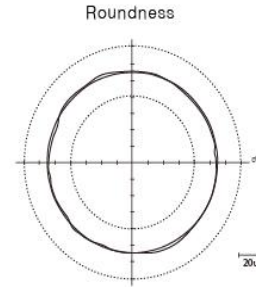


**ATC (T-T)**  
1.3 Sec  
The random tool changing type ATC reduces time, ensuring greater productivity



**BBT40**  
24ea  
30 / 40ea [Option]  
30 tools can be easily loaded into the magazine

## Machining capacity



**Roundness 7.0 µm**

Machine	DM 50V, DM 52VL
Material	A 1050P
Tool	Ø25x4T
Spindle Speed	1,200RPM
Depth of Out	0.1mm
Work Size	Ø180
Cutting Feedrate	300m/min

### Face mill

Carbon steel (SM45C)  
Ø90mm Face mill (S2)  
Cutting amount: 384 cm<sup>3</sup>/min  
Spindle speed: 1500 r/min  
Feedrate: 2400 mm/min

### End mill

Carbon steel (SM45C)  
Ø30mm End mill (S2)  
Cutting amount: 54 cm<sup>3</sup>/min  
Spindle speed: 222 r/min  
Feedrate: 84 mm/min

### Tap

Carbon steel (SM45C)  
Tool: M24xP3  
Spindle speed: 200 r/min  
Feedrate: 600 mm/min

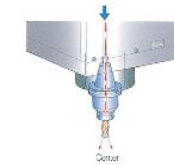
## Standard & Accessories



Auto tool length measurement system



GUN COOLANT



THROUGH-SPINDLE COOLANT SYSTEM



OIL MIST SYSTEM



CNC ROTARY TABLE



CHIP CONVEYOR

### Standard

- 10.4" TFT LCD color monitor
- Machine work light
- Coolant system
- Full splash guard
- Lubrication system
- Leveling adjust part
- Tool and tool box
- Gun coolant
- Spindle cooler (Standard for 12,000r/min model)
- Screw conveyor
- 3-color tower light
- Door interlock
- LED worklight

### Option

- 12,000RPM Spindle (oil cooler)
- Lift up chip conveyor & Bucket
- Linear scale
- Oil skimmer
- Auto tool length measurement
- CNC Rotary table (additional 1st, 2nd axis)
- AI contour control
- Through spindle coolant system (20bar)
- Auto door
- Shower coolant
- High column

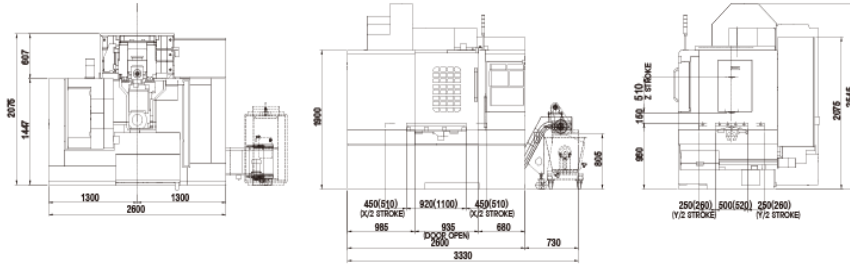
# DM V series

## VERTICAL MACHINING CENTER

High-efficiency, High-productivity

### Machine lay out

#### DM 50V ( 52VL )



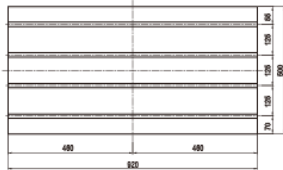
▶ Top view

▶ Front view

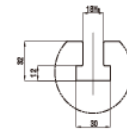
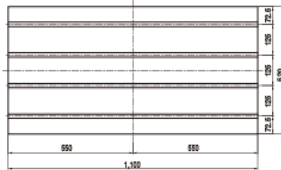
▶ Side view

### Table

#### DM 50V

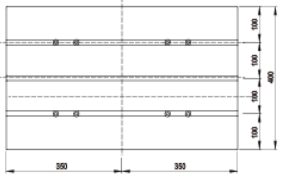


#### DM 52VL

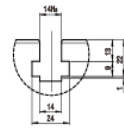
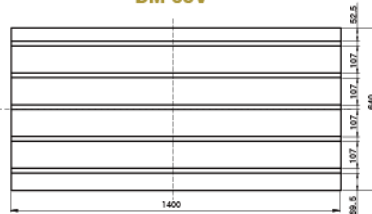


DM 42VL, 50V, 52VL, 65V, 70V  
T-slot section

#### DM 42V

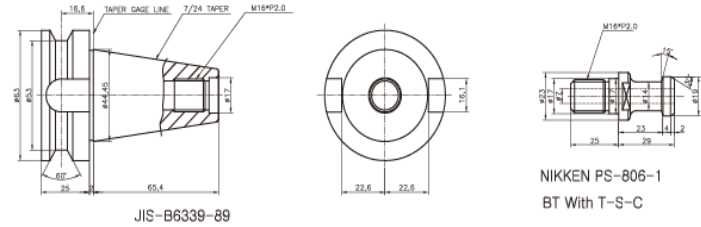


#### DM 65V



DM42V  
T-slot section

### Tool shank (BBT40)



### Major machine specifications

ITEM	UNIT	DM 42V	DM 42VL	DM 50V	DM 52VL	DM 65V	DM 70V	
X/Y/Z axis	mm	620/400/510	765/420/510	900/500/510	1,020/520/510	1,280/650/630	1,280/700/630	
Travel	Distance from table top to spindle nose	150~660				150~780		
	Distance from spindle center to column	476		525		575		
Table	Table size	700X400	900X420	920X500	1,100X520	1,400X640	1,500X680	
	Loading capacity	300			600			
Spindle speed	mm-1	8,000(12,000)				8,000(10,000/12,000)		
Spindle	Spindle motor (30min./Cont)	kW	11/7.5	15/11				
	Spindle torque (30min./Cont)	N.m	15/10	24/15				
Feedrate	Rapid traverse (X/Y/Z)	m/min	36/36/30					
	Cutting feedrate (X/Y/Z)	mm/min	1~15,000					
	Feed motor (X/Y/Z)	kW	1.8/1.8/2.5			1.8/2.5/2.5		
Slide guide		LM Guide						
Tool shank		BBT 40						
Pull stud type		MAS P40T-1						
Tool changing time (T-T)	sec	1.3						
ATC	Magazine capacity	EA	24 (16,20)	24 (30)		24 (30,40)		
	Tool Selection		Memory Random					
	Maximum tool length/Dia/Weight	kg/mm	7/Ø80/300			8/Ø80/300		
Motors	Coolant Pump Motor	kW	1.8					
	Lubricant Pump	W	250					
	Coolant tank capacity	l	200		400		480	
	Lub tank capacity	l	1.8					
Others	Power supply	kVA	25				30	
	Machine size (L x W x H)	mm	2,250x2,500	2,500x2,500	2,600x2,075		3,200x2,571	
	Machine weight	kgf	4,000	5,100	5,650	5,700	7,500	
CNC SYSTEM		Fanuc 0i-MD						