



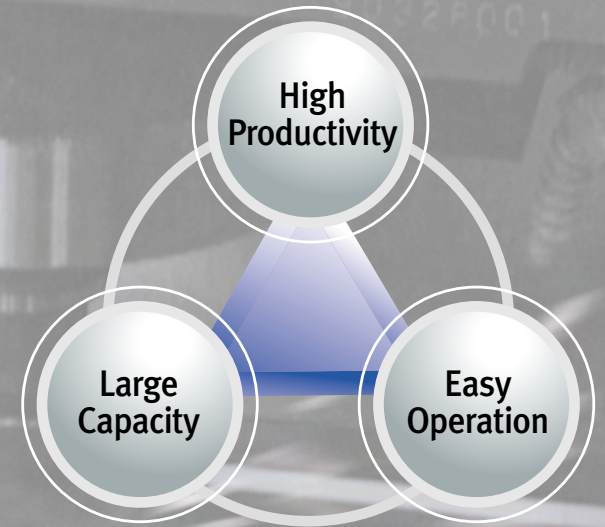
Doosan Infracore
Machine Tools

Mynx 5400 / 6500 / 7500

Heavy Duty Vertical Machining Center



Heavy Duty Vertical Machining Center



The Mynx 5400/6500/7500 are designed to offer exceptionally high rigidity and powerful spindles to form the basis for heavy duty machining capability, which will satisfy our customers' demands for high productivity.

Heavy Duty Vertical Machining Center

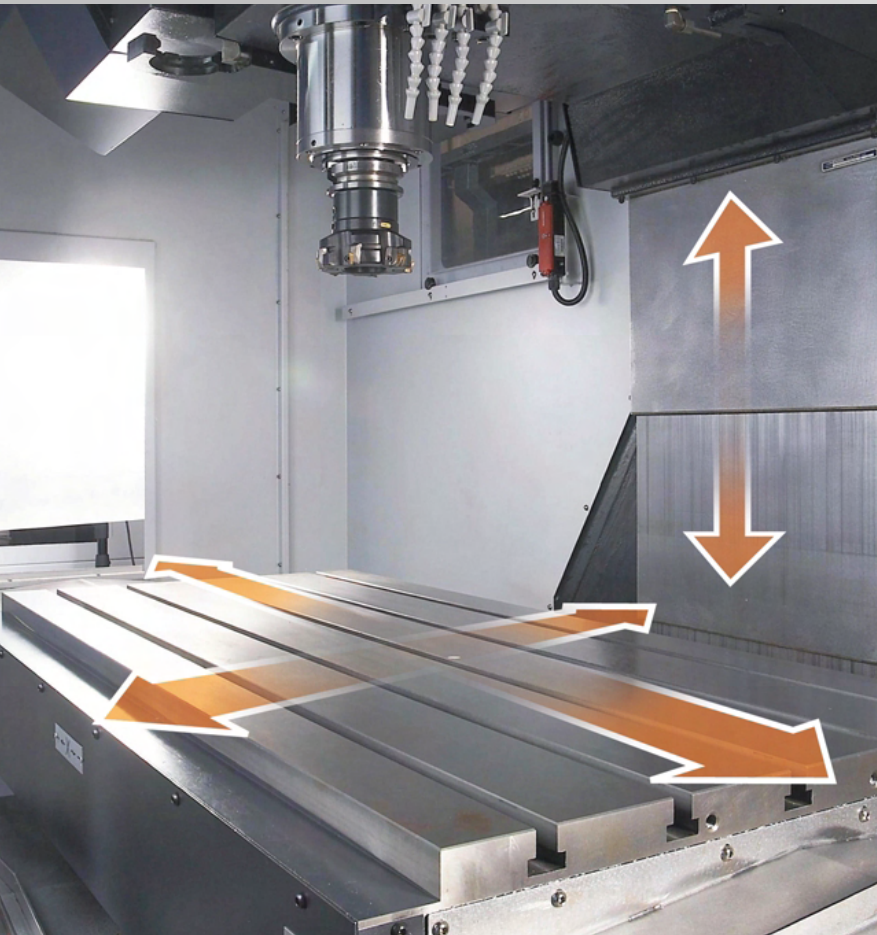
Mynx 5400 / 6500 / 7500



The Mynx series' improved features such as a wide selection of spindles, an increased tool storage capacity on a cam-type tool changer, an extended Y-stroke, an easy operation software package etc. compared to the previous models will enable our customers to experience maximum machining capability and operability for various machining operations.

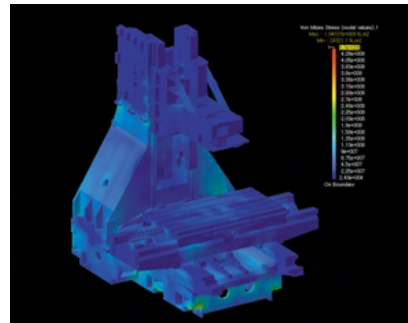
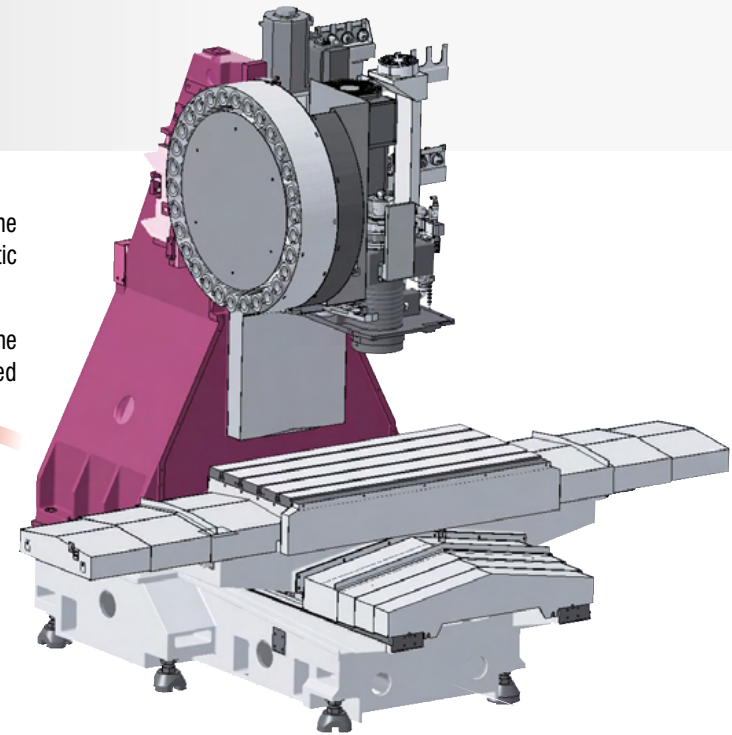
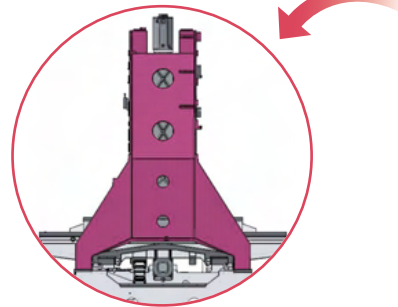
High Rigidity Mynx 5400 / 6500 / 7500

We designed a highly rigid body structure which allows heavy duty machining.



We achieved a highly rigid body structure by using the latest FEM analysis method which has optimized the static and dynamic stiffness characteristics of the Mynx series.

As a result, the **arch-shaped body structure** provides the highest level of rigidity which results in unsurpassed heavy duty machining.



Static stiffness

The highly rigid body raises the static stiffness by 30% compared to the previous model.

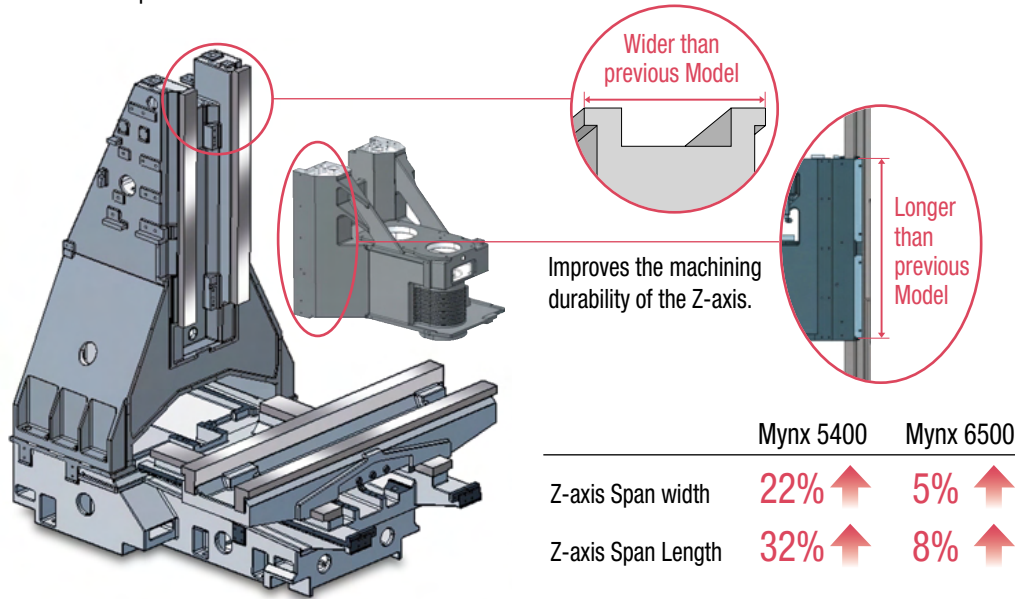
Dynamic stiffness

Great improvements in dynamic stiffness of X, Y, Z axes have been achieved, with high frequency response being increased by 30% compared to the previous model.

- FEM analysis used to design a stable body. (FEM : Finite Elements Method)

Broader box guideways

The broader box guideways improve the dynamic characteristics of the machine compared to the previous model.

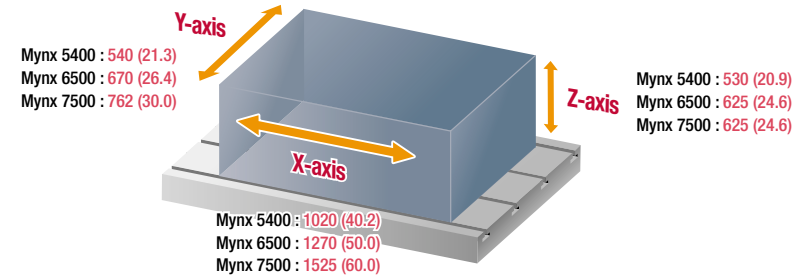


Scraping of surface

Fluoroplastic resin, Rulon® 142 is bonded onto the sliding surfaces of the guideways to reduce friction characteristics and then hand scrapped for a perfect fit.

Extension of the Y-axis stroke

The extended Y-axis stroke allows wider work area compared to the previous model.



Previous Model

Mynx 540 510 mm
(20.1 inch)

Mynx 650 650 mm
(25.6 inch)

Mynx 750 762 mm
(30.0 inch)

Mynx series

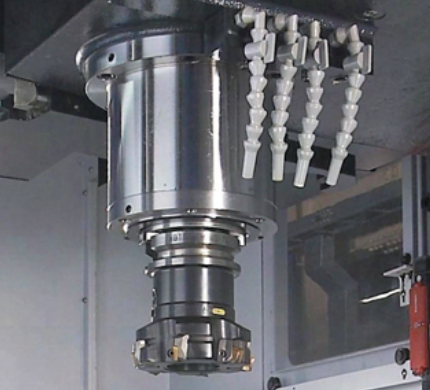
Mynx 5400 540 mm
(21.3 inch) 30 mm UP ↑
(1.2 inch)

Mynx 6500 670 mm
(26.4 inch) 20 mm UP ↑
(0.8 inch)

Mynx 7500 762 mm
(30.0 inch)

Rapid traverse

		Mynx 650	Mynx series
X-axis	m/min (ipm)	24 (944.9)	30 (1181.1)
Y-axis	m/min (ipm)	24 (944.9)	30 (1181.1)
Z-axis	m/min (ipm)	20 (787.4)	24 (944.9)

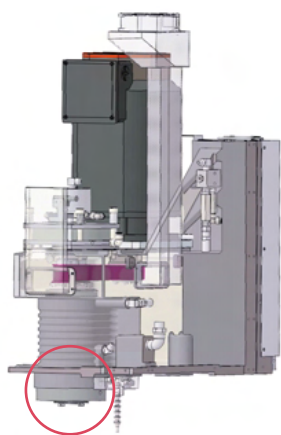


High Power Mynx 5400 / 6500 / 7500

The Mynx series' powerful spindles meet customers' demands for heavy duty machining.

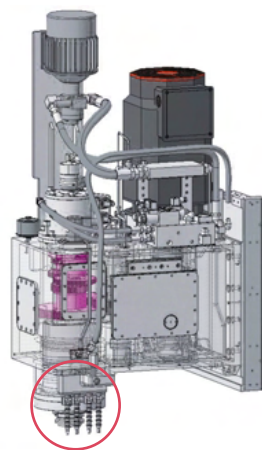
Belt driven Std.

40 taper spindle is a true cartridge type unit supported by four precision class high speed bearings which are permanently greased and lubricated. The spindle is driven by a high torque A.C. motor delivering high power.



Gear driven opt.

The two step gear box generates and exceptionally high torque for any kind of heavy duty machining. (Only for taper #50)



Dual contact (BIG PLUS) Std.



The dual contact system offers simultaneous dual contact at the tapered side and the nose face of the spindle.

A wide selection of spindles

The Mynx series offers a wide selection of spindles that enables our customers to make an optimal choice in various machining operations.

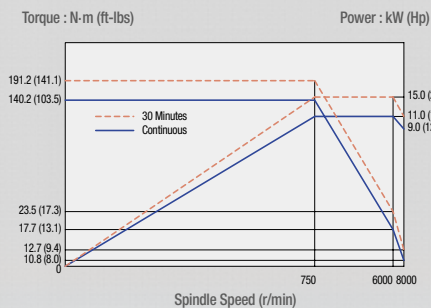
Model	Taper [BT/CAT/DIN]	Speed : r/min	Power Transmission	Power : kW (Hp)	Max. Torque : N.m (ft-lbs)
Mynx 5400 Mynx 6500	#40	8000	Belt-driven	std. 11/15 (14.8/20.1) [Con./30min]	191.1 (141.0) [30min]
		12000		opt. 15.6/15.6 (20.9/20.9) [Con./30min]	165.7 (122.3) [30min]
	#50	6000	Belt-driven	std. 11/15/15 (14.8/20.1/20.1) [Con./15/30min]	381.5 (281.5) [15min]
				opt. 15/18.5 (20.1/24.8) [Con./30min]	306.9 (226.5) [30min]
Mynx 7500	#40	8000	Belt-driven	opt. 18.5/22 (24.8/29.5) [Con./30min]	452.0 (333.6) [30min]
		12000		std. 22/26 (29.5/34.9) [Con./30min]	165.7 (122.3) [30min]
	#50	6000	Belt-driven	std. 15/18.5 (20.1/24.8) [Con./30min]	306.9 (226.5) [30min]
				opt. 18.5/22 (24.8/29.5) [Con./30min]	365.5 (269.7) [30min]
#50	8000	Gear-driven	opt. 18.5/22 (24.8/29.5) [Con./30min]	452.0 (333.6) [30min]	
			opt. 11/15/15 (14.8/20.1/20.1) [Con./15/30min]	286.4 (211.4) [15min]	

Spindle power-torque diagram

#40

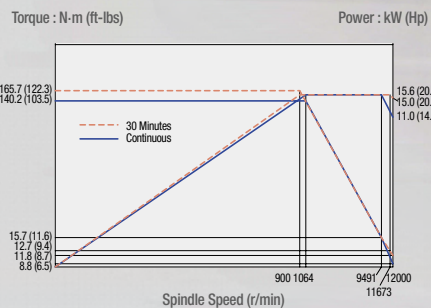
8000 r/min Belt driven
Mynx 5400 / 6500

- Spindle motor power : 11 / 15 kW
(14.8 / 20.1 Hp)



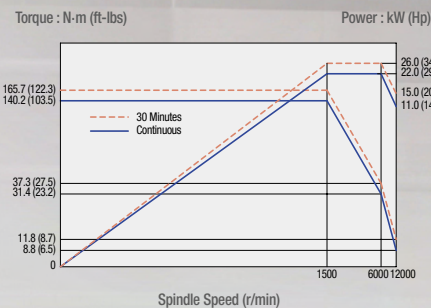
12000 r/min Belt driven
Mynx 5400 / 6500

- Spindle motor power : 15.6 / 15.6 kW
(20.9 / 20.9 Hp)



12000 r/min Belt driven
Mynx 7500

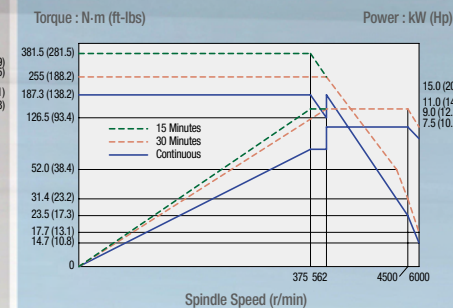
- Spindle motor power : 22 / 26 kW
(29.5 / 34.9 Hp)



#50

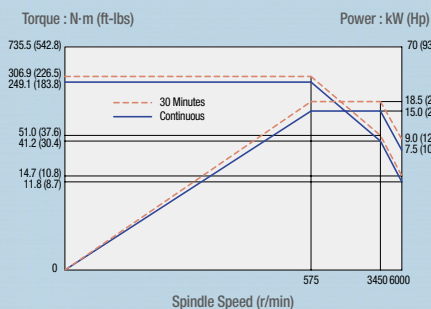
6000 r/min Belt driven
Mynx 5400 / 6500

- Spindle motor power : 11 / 15 / 15 kW
(14.8 / 20.1 / 20.1 Hp)



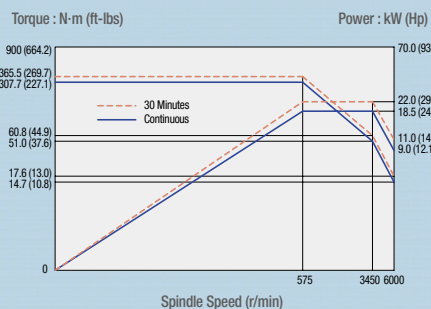
6000 r/min Belt driven
Mynx 5400 / 6500 / 7500

- Spindle motor power : 15 / 18.5 kW
(20.1 / 24.8 Hp)



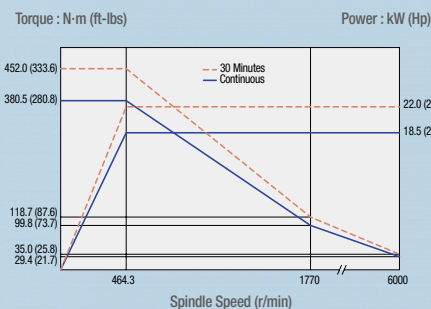
6000 r/min Belt driven
Mynx 7500

- Spindle motor power : 18.5 / 22 kW
(24.8 / 29.5 Hp)



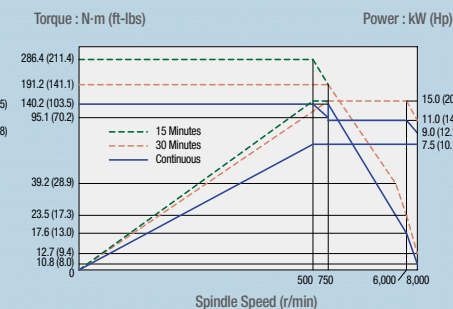
6000 r/min Gear driven
Mynx 5400 / 6500 / 7500

- Spindle motor power : 18.5 / 22 kW
(24.8 / 29.5 Hp)



8000 r/min Belt driven
Mynx 5400 / 6500 / 7500

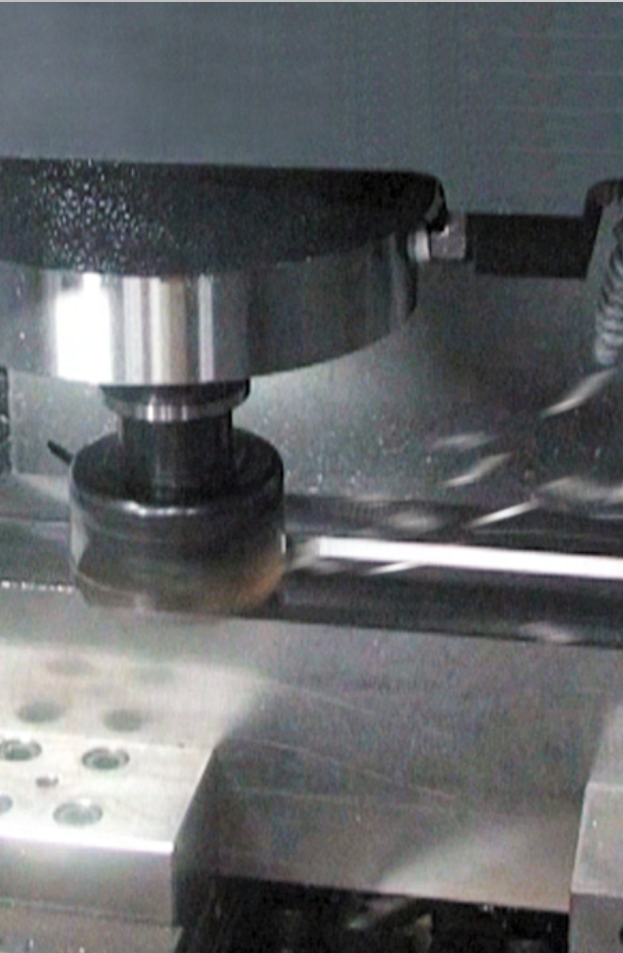
- Spindle motor power : 11 / 15 / 15 kW
(14.8 / 20.1 / 20.1 Hp)



Machining Capacity

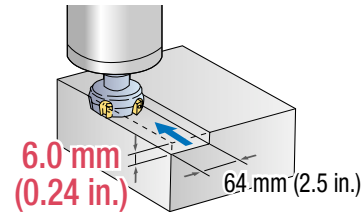
Mynx 5400 / 6500 / 7500

The Mynx series provides high machining performance in various cutting processes.



Face mill BT40 [11/15 kW (14.8 / 20.1 Hp)] Carbon steel (SM45C)

- ø80mm (3.15 in.) Face mill (5Z)



Machining rate

422 cm³/min (16.6 in³/min)

Spindle speed

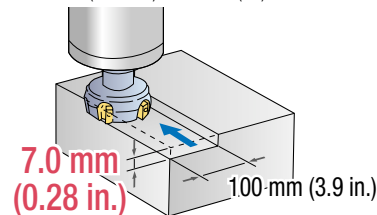
750 r/min

Feedrate

1100 mm/min (43.3 ipm)

Face mill BT50 [15/18.5 kW (20.1 / 24.8 Hp)] Carbon steel (SM45C)

- ø125mm (4.92 in.) Face mill (8Z)



Machining rate

504 cm³/min (19.8 in³/min)

Spindle speed

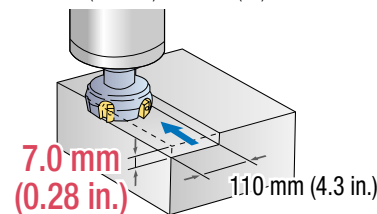
575 r/min

Feedrate

720 mm/min (27.6 ipm)

Face mill BT50 Gear-driven [18.5/22 kW (24.8 / 29.5 Hp)] Carbon steel (SM45C)

- ø125mm (4.92 in.) Face mill (8Z)



Machining rate

739 cm³/min (29.1 in³/min)

Spindle speed

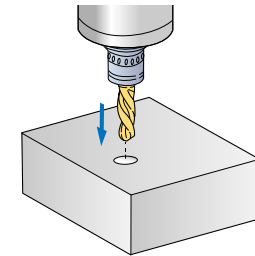
407 r/min

Feedrate

960 mm/min (37.8 ipm)

Drill BT40 Carbon steel (SM45C)

- ø50mm (3.15 in.) Drill



Spindle torque

200 r/min

Feedrate

42 mm/min (1.7 ipm)

Tap BT40 Carbon steel (SM45C)

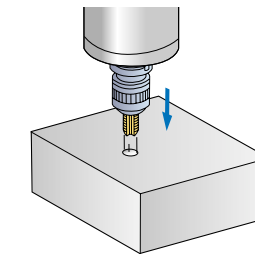
Tool
M36 x P4.0

Spindle torque

250 r/min

Feedrate

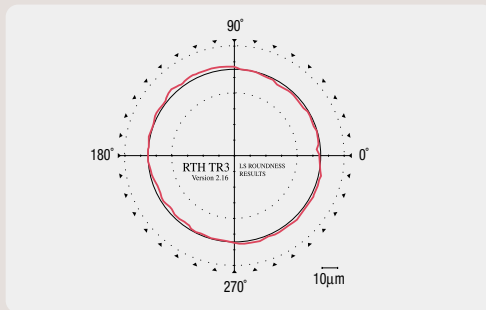
1000 mm/min (39.4 ipm)



Machining Accuracy

Mynx 5400 / 6500 / 7500

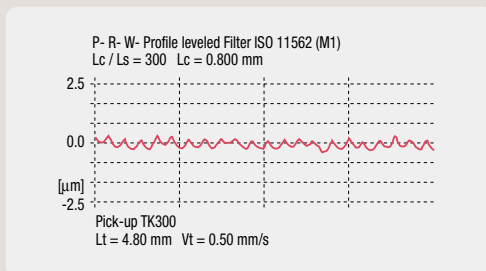
The Mynx series includes features to reduce thermal deformation, resulting in a highly accurate machining capability.



Roundness

5.8 µm

- Model : Mynx 6500
- Material : A7075F
- Tool : Endmill $\phi 16\text{mm}$ ($\phi 0.6$ in.) (4 blades)



Roughness

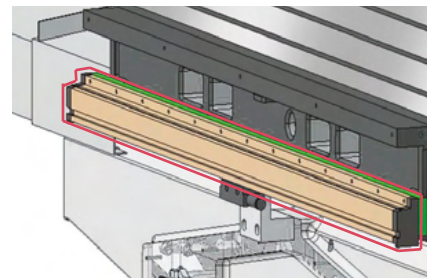
Ra 0.12 µm

- Spindle speed : 8000 r/min
- Feedrate : 1000 mm/min (39.4 ipm)

Features provided to reduce thermal deformation



Forced re-circulation of heated air replaced by fresh air is used to reduce thermal deformation. This reduces Z-axis thermal growth by 30% compared to the previous model.



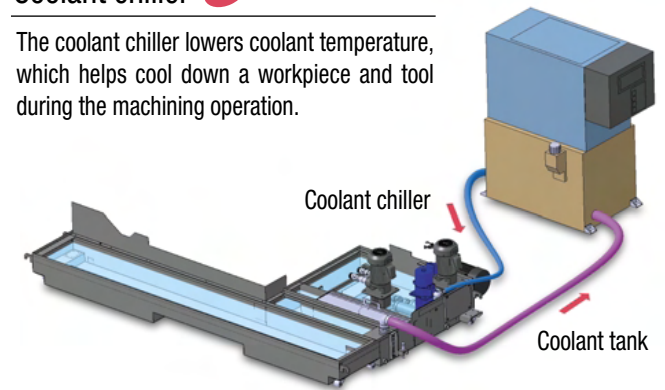
Direct scale feedback system **opt.**

Closed loop feedback system by optical linear scales ensures supreme positioning accuracy. Available on the X, Y and Z axes.

Resolution : 0.001 mm (0.0004 inch)

Coolant chiller **opt.**

The coolant chiller lowers coolant temperature, which helps cool down a workpiece and tool during the machining operation.



Oil cooler **opt.**

The oil cooler keeps the cooling oil at a constant temperature and the oil circulates around the spindle and bearings to reduce the thermal deformation of the spindle.



Automatic Tool Changer Mynx 5400 / 6500 / 7500

Increased tool storage capacity and shorter tool change time on a cam-type tool changer provides high machining flexibility.

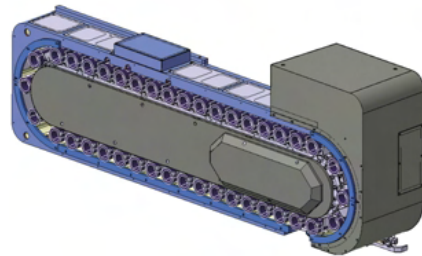
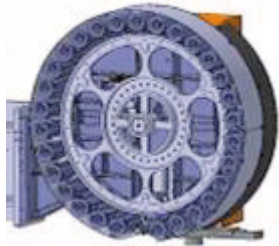


A wide selection of tool magazine

Model	Taper (BT/CAT/DIN)	Std. (Tools)	Opt. (Tools)
Mynx 5400	#40	30	40
	#50	24	-
Mynx 6500	#40	30	40
	#50	24	30 *
Mynx 7500	#40	30	40
	#50	24	40 *

Drum type magazine with CAM

Loop type magazine with CAM *



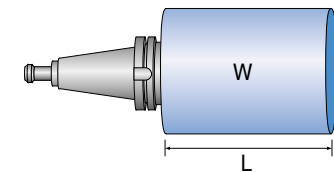
Tool change time (T-T-T)

Taper #40	1.5 s	➔	1.3 s
Taper #50	2.5 s		2.5 s

Tool storage capacity

	Previous Model	➔	Mynx series
Taper #40	24 tools		30 tools std. , 40 tools opt.
Taper #50	16 tools		24 tools std. , 30 tools opt. , 40 tools opt.

Maximum tool size



	Length mm (inch)		Weight kg (lb)
	Previous ➔ Mynx 5400 / 6500		Previous ➔ Mynx 5400 / 6500
Taper #40	250 (9.8) ➔ 300 (11.8)		8 (17.6) ➔ 8 (17.6)
Taper #50	300 (11.8) ➔ 350 (13.8)		12 (26.5) ➔ 15 (33.1)

Chip Disposal Mynx 5400 / 6500 / 7500

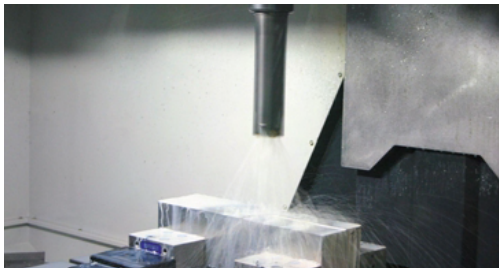
Chip control is important for high productivity and also the operators' working environment. The Mynx series offers many features to optimize chip disposal.

Inner structure for effective chips and coolant flow

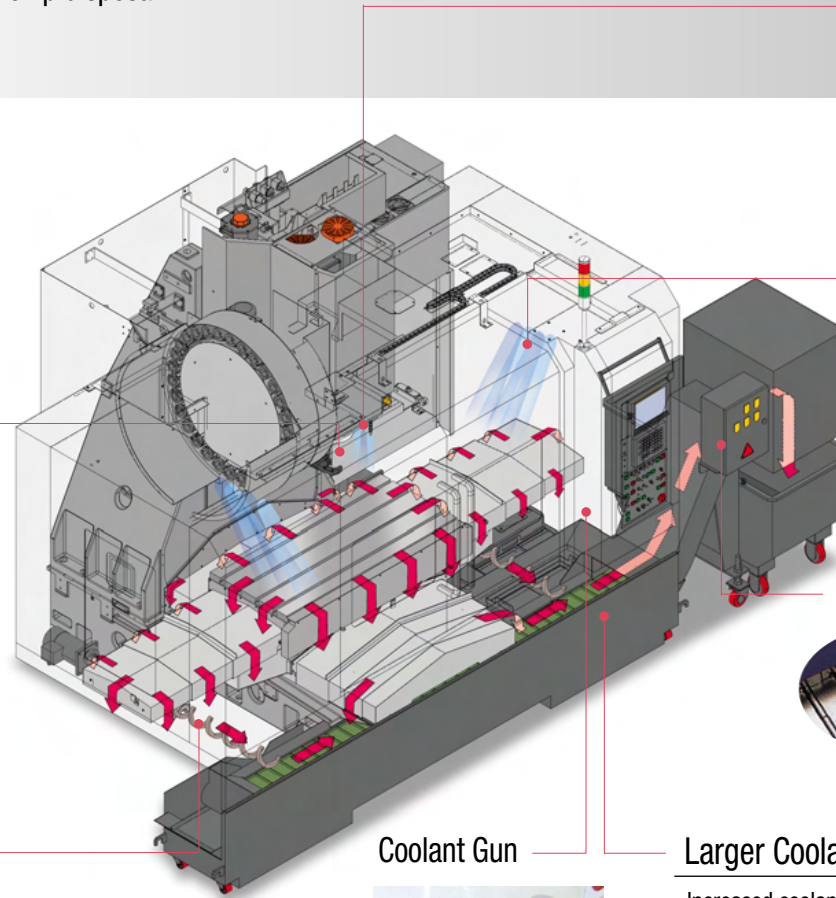
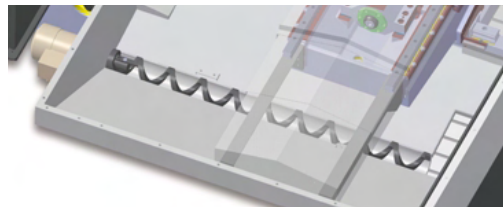
The inner structure of the Mynx series is designed to lead chips and coolant to flow into the front-mounted chip pan for effective chip disposal.

Through spindle coolant opt.

Middle pressure 1.96 Mpa (284.2 psi)
High pressure 6.86 Mpa (994.7 psi)



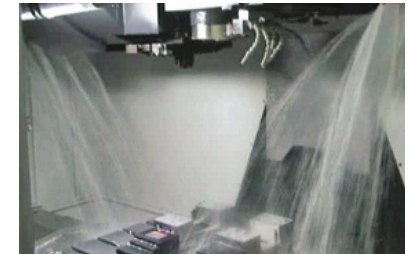
Internal screw conveyor



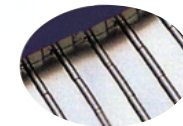
Flood coolant



Shower coolant opt.



Chip conveyor opt.



Hinge type



Scraper type



Drum filter type

Coolant Gun



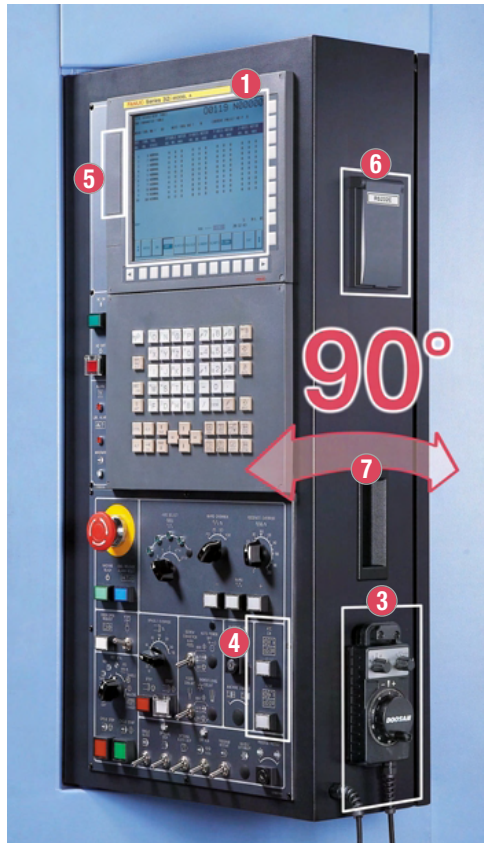
Larger Coolant Tank Capacity

Increased coolant tank capacity improves the efficiency of machine operation.

Previous Model	Mynx series
Mynx 540 300 L (79.3 gallon)	Mynx 5400 380 L (100.4 gallon)
Mynx 650 300 L (79.3 gallon)	Mynx 6500 380 L (100.4 gallon)
Mynx 750 300 L (79.3 gallon)	Mynx 7500 430 L (113.6 gallon)

Easy Set-up

Mynx 5400 / 6500 / 7500

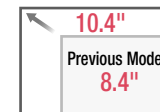


• Mynx 5400 / 6500

Operating Console Std.

1 10.4" Color TFT LCD Monitor as Standard Feature

The wide screen displays more useful information for the operator. Doosan's customized pages make setting up, operating, and machine condition monitoring easier.



2 Pentium Board is standard. Easy retrofit of AICC or Easy Guide-i

3 Portable MPG

It makes workpiece setting easier for the operator



4 ATC operation button on main panel.



It gives much easier operation and maintenance for ATC.

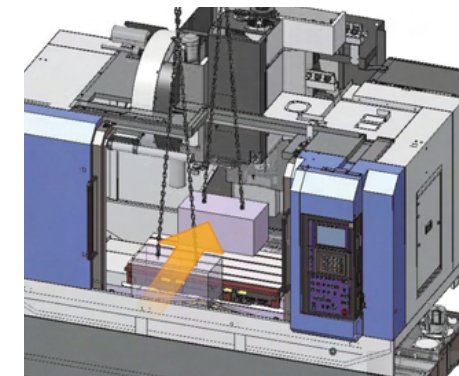
5 PCMCIA Card

6 Embedded Ethernet / RS-232C

7 Swivelling Operating Console

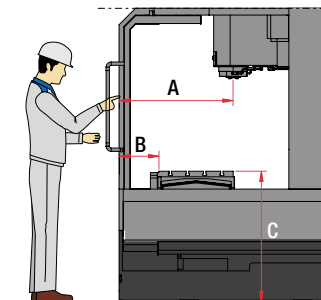
The easy-to-use operation panel can swivel 0-90°

Workpiece loading



Accessibility

Unit : mm (inch)



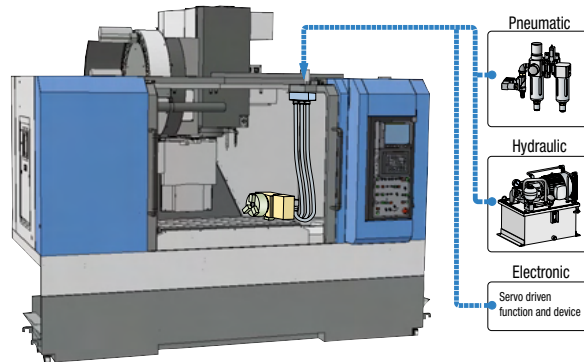
	Mynx 5400	830 (32.7)
A	Mynx 6500	895 (35.2)
	Mynx 7500	1077 (42.4)
	Mynx 5400	290 (11.4)
B	Mynx 6500	224 (8.8)
	Mynx 7500	321 (12.6)
	Mynx 5400	950 (37.4)
C	Mynx 6500	950 (37.4)
	Mynx 7500	1050 (41.3)

Optional Equipment Mynx 5400 / 6500 / 7500

Various options are available to improve the machine performance for different applications.

Interface for additional equipment

(Example) Interface for additional 1 axis

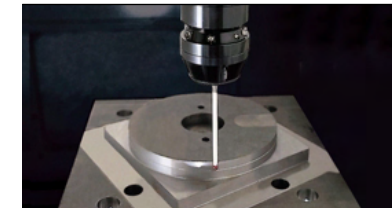


Hydraulic power units can be supplied to suit different applications including rotary tables.

Automatic tool length measurement



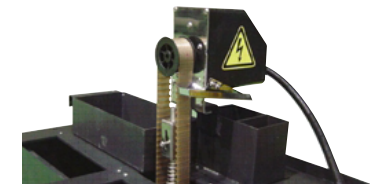
Automatic workpiece measurement



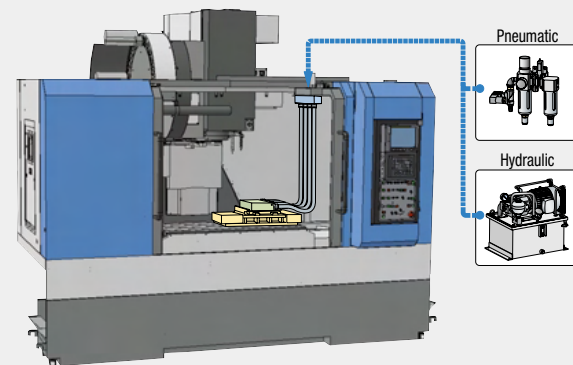
Minimum Quantity Lubrication



Oil skimmer



(Example) interface with fixture



Fixture check list (for hydraulic / pneumatic fixtures)

Pressure source

Hydraulic P/T A/B

Pneumatic P/T A/B

Number of ports

1pair (2-PT 3/8" port)

2pair (4-PT 3/8" port)

3pair (6-PT 3/8" port)

Hydraulic power unit

• Supply scope : User Doosan

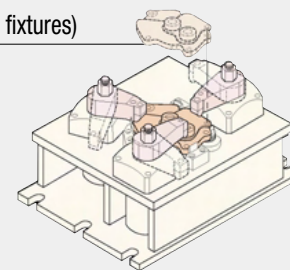
(Please check the below detail specification, if you want Doosan to supply.)

Use Doosan standard unit

24 L/min (6.3 gal/min) / 4.9 MPa (711 psi)

Special requirement

_____ L/min (gal/min) at _____ MPa (psi)



• Contact Doosan for more information

Easy Operation Package Mynx 5400 / 6500 / 7500

Doosan easy operation software package has been customized to provide fast and easy operation for tooling, workpiece, and program setup. These features minimize the lost time caused by process setup and maximize the machine's productivity.

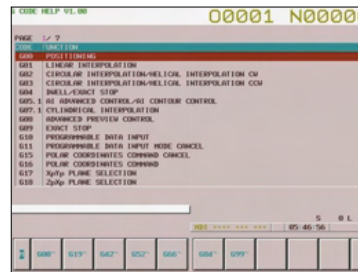
Programming



- Doosan Fanuc i series
- 10.4" color TFT LCD
- Part programming storage 1280m
- Embedded Ethernet

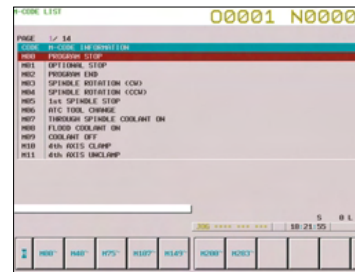
Std.

G Code List



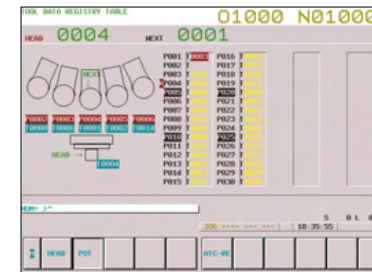
Operator can check the meaning of each G-code.

M Code List



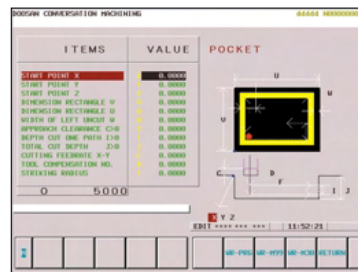
Operator can check the meaning of each M-code.

Tool Data Registry Table



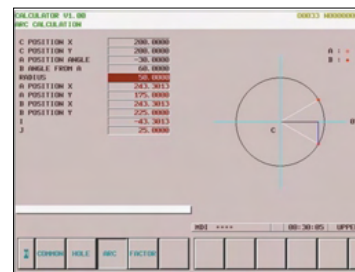
Operator can edit & check the tool number of the tool magazine pot.

Pattern Cycle



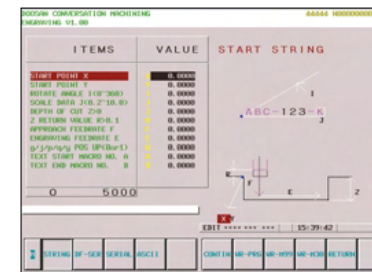
It is easy to make pattern cycle program by this function.

Calculator



Operator can calculate numerical formula in relation to arc and hole easily.

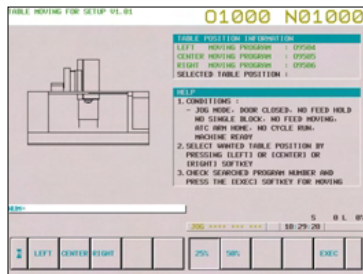
ENGRAVING opt.



It makes "Engraving" programming easy.

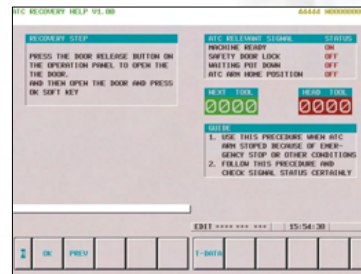
Operation / Maintenance

Table Moving for Setup



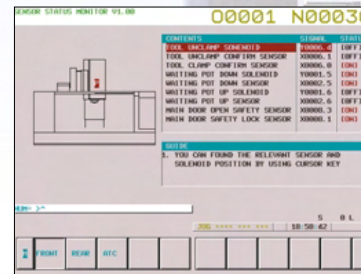
It is easy to move the table to 3 positions along the X-axis.

ATC Recovery Help



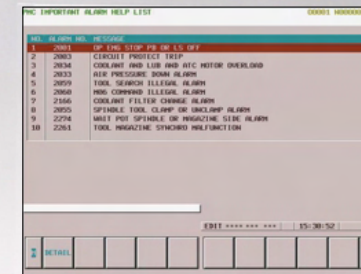
It makes the operator recover ATC from ATC alarm status easily.

Sensor Status Monitor



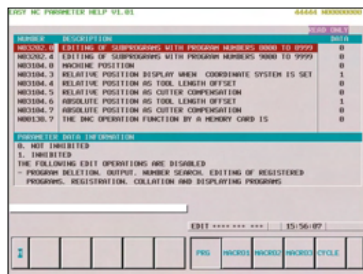
Solenoid valve and sensor status can be checked without the electric diagram.

Alarm Guidance



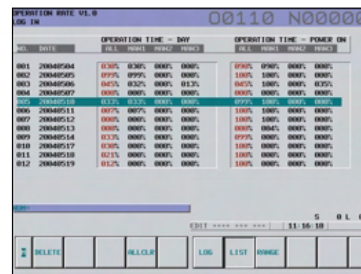
Alarm remedy method is displayed on the screen about some important alarms.

Easy NC Parameter Help



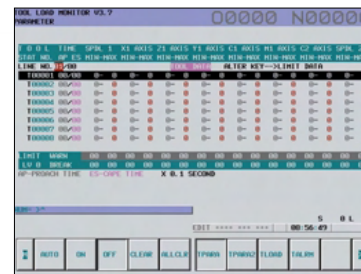
Operator can check some useful parameters for easy operation.

Operation Rate



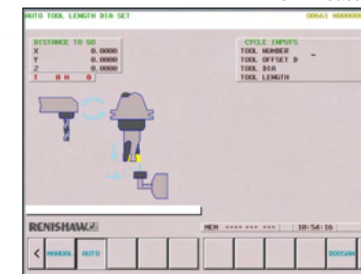
Working and operation time in each operation can be managed by this function.

Tool Load Monitor ^{opt.}



The axis and spindle load in cutting are monitored and it leads to minimize the further damage of tool.

Renishaw Gui ^{opt.} Tool measure Work measure



Tool & work measure system of Renishaw is operated on conversational screen

• Some functions may be unavailable depending on machine model. Please contact Doosan for details.

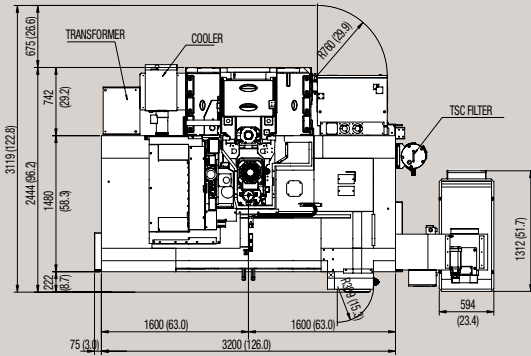
External Dimensions

Unit : mm (inch)

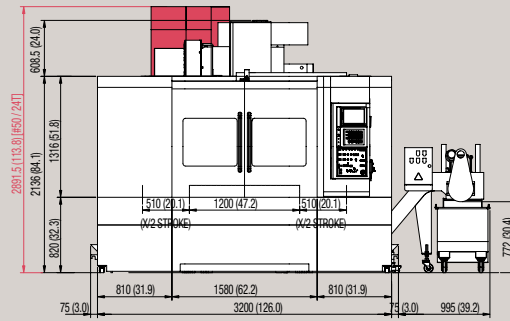
Mynx 5400

■ BT50

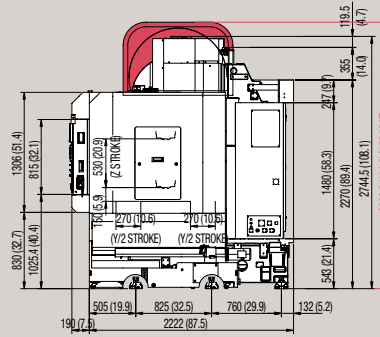
Top View



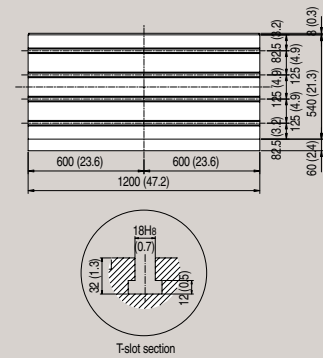
Front View



Side View

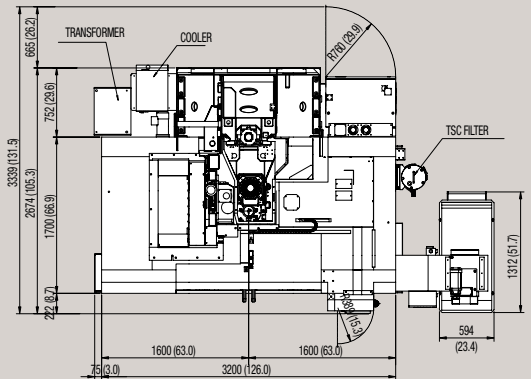


Table

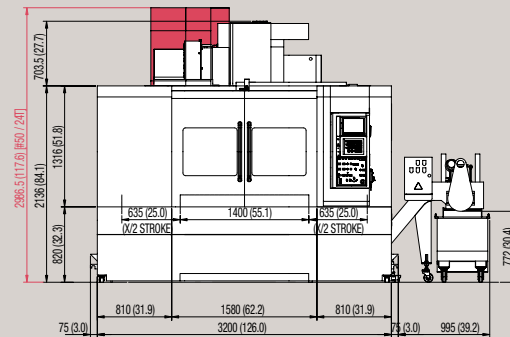


Mynx 6500

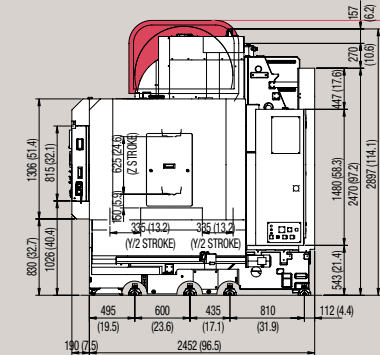
Top View



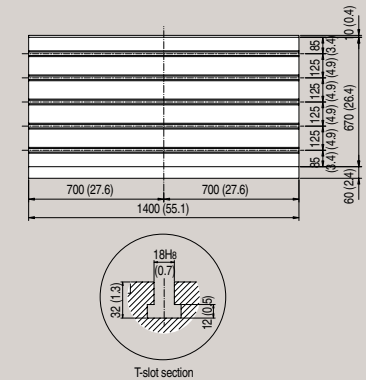
Front View



Side View



Table

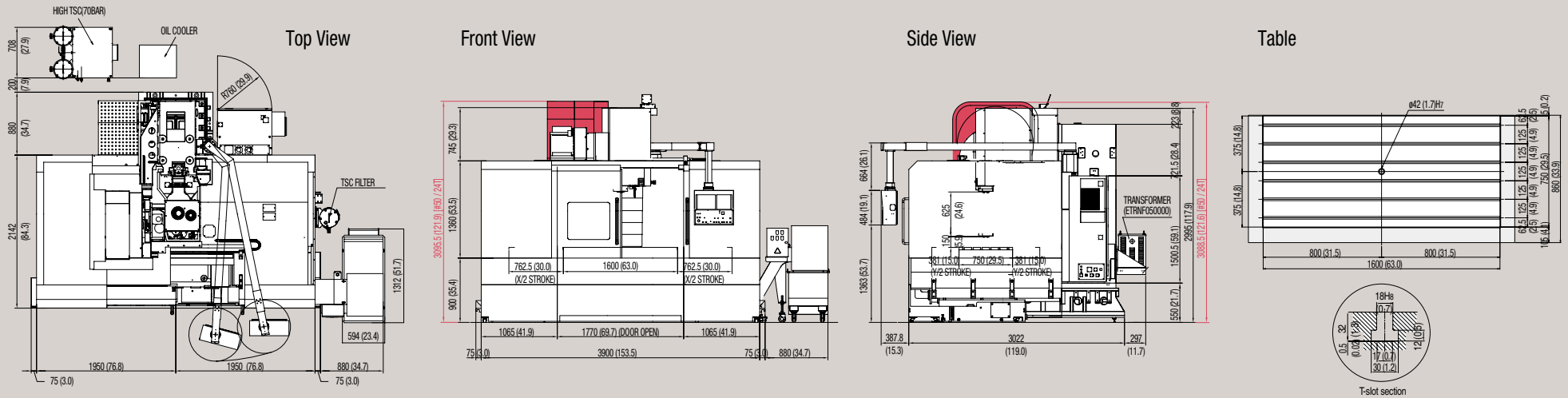


External Dimensions

Unit : mm (inch)

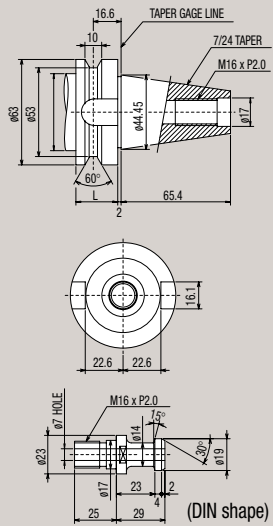
Mynx 7500

BT50

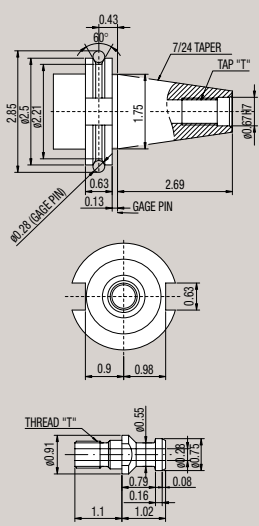


Tool Shank

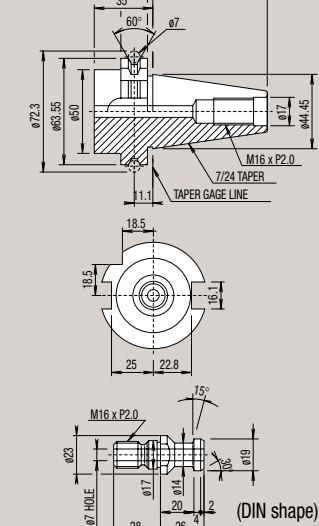
BT40 Tool



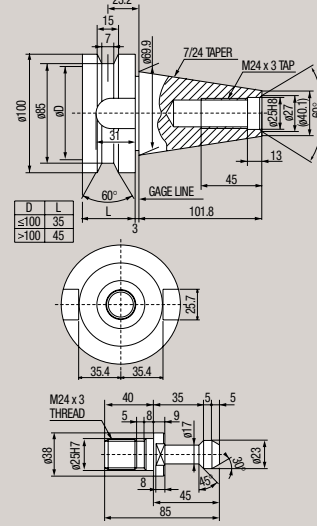
CAT40 Tool



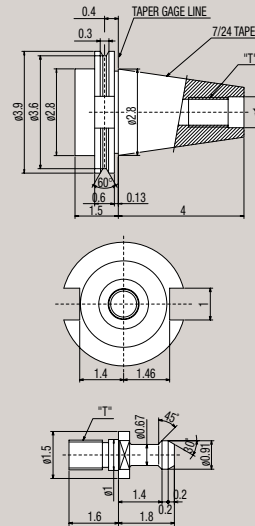
DIN40 Tool



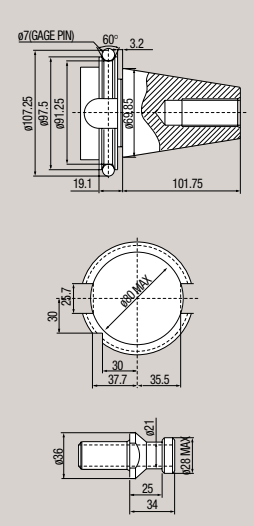
BT50 Tool



CAT50 Tool



DIN50 Tool



Machine Specifications

Features		Mynx 5400	Mynx 5400/50	Mynx 6500	Mynx 6500/50	Mynx 7500	Mynx 7500/50
Travel	X-axis	1020 (40.2)		1270 (50.0)		1525 (60.0)	
	Y-axis	540 (21.3)		670 (26.4)		762 (30.0)	
	Z-axis	530 (20.9)		625 (24.6)		625 (24.6)	
	Distance from nose to table top	150-680 (5.9-26.8)	200-730 (7.9-28.7)	150-775 (5.9-30.5)	200-825 (7.9-32.5)	150-775 (5.9-30.5)	200-825 (7.9-32.5)
	Distance from center to column	567 (22.3)		722 (28.4)		785 (30.9)	
Table	Table size	1200 x 540 (47.2 x 21.3)		1400 x 670 (55.1 x 26.4)		1600 x 750 (63.0 x 29.5)	
	Table loading capacity	800 (1763.7)		1000 (2204.6)		1500 (3306.9)	
	Table surface	4-125 x 18H ₈ (4-4.9 x 0.7H ₈)		5-125 x 18H ₈ (5-4.9 x 0.7H ₈)		6-125 x 18H ₈ (6-4.9 x 0.7H ₈)	
Spindle	Max. spindle speed	8000 {12000}	6000 {8000}	8000 {12000}	6000 {8000}	12000	6000 {8000}
	Spindle Taper	ISO #40 7/24 Taper	ISO #50 7/24 Taper	ISO #40 7/24 Taper	ISO #50 7/24 Taper	ISO #40 7/24 Taper	ISO #50 7/24 Taper
	Max. Torque	191.1 {165.7} (141.0 {122.3})	286.4 {286.4} (211.4 {211.4})	191.1 {165.7} (141.0 {122.3})	286.4 {286.4} (211.4 {211.4})	165.6 {122.0} (122.2 {90.0})	306.7 {226.2} (286.2 {211.1})
Feedrate	Rapid traverse rate (X / Y / Z)	30 / 30 / 24 (1181.1 / 1181.1 / 944.9)					
	Cutting feedrate	12000 (4724.4)					
Automatic tool changer	Type of tool shank	BT40, CAT40, DIN40	BT50, CAT50, DIN50	BT40, CAT40, DIN40	BT50, CAT50, DIN50	BT40, CAT40, DIN40	BT50, CAT50, DIN50
	Tool storage capacity	ea 30 {40}	24	30 {40}	24 {30}	30 {40}	24 {40}
	Max. tool diameter	mm (inch) 80 {76} (3.2 {3.0})	125 (4.9)	80 {76} (3.2 {3.0})	125 (4.9)	80 {76} (3.2 {3.0})	125 (4.9)
	Max. tool diameter without adjacent tools	mm (inch) 125 (4.9)	220 (8.7)	125 (4.9)	220 (8.7)	125 (4.9)	220 (8.7)
	Max. tool length	mm (inch) 300 (11.8)	350 (13.8)	300 (11.8)	350 (13.8)	300 (11.8)	350 (13.8)
	Max. tool weight	kg (lb) 8 (17.6)	15 (33.1)	8 (17.6)	15 (33.1)	8 (17.6)	15 (33.1)
	Method of tool selection	Memory Random					
	Tool change time (tool-to-tool)	s 1.3	2.5	1.3	2.5	1.3	2.5
Tool change time (chip-to-chip)	s 3.7	5.5	3.7	5.5	3.7	5.5	
Motor	Spindle motor (15 min)	kW (Hp) 15 (20.1)					
	Feed motor (X / Y / Z)	3.0 / 3.0 / 4.0 (4.0 / 4.0 / 5.4)		4.0 / 4.0 / 7.0 (5.4 / 5.4 / 9.4)		4.0 / 4.0 / 7.0 (5.4 / 5.4 / 9.4)	
Power source	Electric power supply (Rated capacity)	kVA 47.7		48.4		56.9	
	Compressed air supply	MPa (psi) 0.54 (78.3)					
Tank capacity	Coolant tank capacity	L (gal) 380 (100.4)		380 (100.4)		430 (113.6)	
	Lubrication tank capacity	L (gal) 1.4 (0.4)				4.3 (1.14)	
Machine size	Machine height	mm (inch) 2744 (108.0)	2900 (114.2)	2897 (114.1)	2995 (117.9)	3190 (125.6)	3240 (127.6)
	Machine dimension (L x W)	mm (inch) 2444 x 3350 (96.2 x 131.9)		2674 x 3350 (105.3 x 131.9)		3704 x 4050 (145.8 x 159.5)	
	Machine weight	kg (lb) 7000 (15432.1)		9200 (20282.2)		14000 (30864.3)	

- The specifications and information above-mentioned may be changed without prior notice.
- For more details, please contact Doosan.
- The electronic power supply may vary depending upon the type of a motor.

Note : { } are optional.

Standard Feature

- Assembly & operation tools
- Coolant tank & chip pan
- Door interlock for safety
- Flood coolant system
- Installation parts
- Internal screw conveyor
- Operator call lamp (red, yellow, green)
- Portable MPG
- Splash guard
- Work light
- X, Y, Z Absolute pulse coder

Optional Feature

- 4th axis preparation
- Automatic power off
- Automatic tool length measurement
- Automatic workpiece measurement
- Chip conveyor & chip bucket
- EZ Guide i
- Minimum Quantity Lubrication
- Oil cooler & spindle head cooling system
- Oil skimmer
- Shower coolant
- Test bar
- Through spindle coolant system

NC Unit Specifications

DOOSAN-fanuc i series

AXES CONTROL

- Controlled axes	3 (X,Y,Z)
- Simultaneously controllable axes	
Positioning (G00) / Linear interpolation (G01) : 3 axes	
Circular interpolation (G02, G03) : 2 axes	
- Backlash compensation	
- Emergency stop / overtravel	
- Follow up	
- Least command increment :	0.001mm / 0.0001"
- Least input increment :	0.001mm / 0.0001"
- Machine lock	all axes / Z axis
- Mirror image	Reverse axis movement (setting screen and M-function)
- Stored pitch error compensation	Pitch error offset compensation for each axis
- Stored stroke check 1	Overtravel controlled by software
- Absolute pulse coder	
- Position switch	

INTERPOLATION & FEED FUNCTION

- 2nd reference point return	G30
- Circular interpolation	G02, G03
- Cylindrical interpolation	G07.1
- Dwell	G04
- Exact stop check	G09, G61(mode)
- Feed per minute	mm / min
- Feedrate override (10% increments)	0 - 200 %
- Helical interpolation	
- Jog override (10% increments)	0 - 200 %
- Linear interpolation	G01
- Manual handle feed	Max. 3 units
- Manual handle feedrate	0.1 / 0.01 / 0.001mm
- Manual handle interruption	
- Override cancel	M48 / M49
- Positioning	G00
- Rapid traverse override	F0 (fine feed), 25 / 50 / 100 %
- Reference point return	G27, G28, G29
- Skip function	G31

SPINDLE & M-CODE FUNCTION

- M-code function	M3 digits
- Spindle orientation	
- Spindle serial output	
- Spindle speed command	S5 digits
- Spindle speed override (10% increments)	50-150 %

TOOL FUNCTION

- Cutter compensation C	G40, G41, G42
- Number of tool offsets	400 ea
- Tool length compensation	G43, G44, G49
- Tool life management	
- Tool number command	T2 digits
- Tool offset memory C	Geometry / Wear and Length / Radius offset memory
- Tool position offset	G45 - G48

PROGRAMMING & EDITING FUNCTION

- Absolute / Incremental programming	G90 / G91
- Automatic Coordinate system setting	
- Background editing	
- Canned cycle	G73, G74, G76, G80 - G89, G99
- Circular interpolation by radius programming	
- Custom macro B	
- Decimal point input	
- Extended part program editing	
- I / O interface	RS - 232C
- Inch / metric conversion	G20 / G21

- Label skip	
- Local / Machine coordinate system	G52 / G53
- Maximum commandable value	±99999.999 mm (±9999.9999 inch)
- No. of Registered programs	400 ea
- Optional block skip	
- Optional stop	M01
- Part program storage	1280 m
- Playback	
- Program number	O4-digits
- Program protect	
- Program stop / end	M00 / M02, M30
- Rigid tapping	G84, G74
- Sub program	Up to 4 nesting
- Tape code	ISO / EIA Automatic discrimination
- Thread cutting	
- Work coordinate system	G54 - G59

OTHERS FUNCTIONS (Operation, setting & Display, etc)

- 3rd / 4th reference return	
- Additional work coordinate system	G54.1 P1 - 48 (48 pairs)
- AI APC/Advanced Preview Control)	20 block preview
- Alarm display	
- Alarm history display	
- Automatic corner override	G62
- Clock function	
- Coordinate rotation	G68, G69
- Cycle start / Feed hold	
- Display of PMC alarm message	Message display when PMC alarm occurred
- Dry run	
- Embedded Ethernet	
- Graphic display	Tool path drawing
- Help function	
- High speed skip function	
- Loadmeter display	
- Look ahead control	G08
- MDI / DISPLAY unit	10.4" Color LCD, keyboard for data input(small), soft-keys
- Memory card interface	
- Operation functions	Tape / Memory / MDI / Manual
- Operation history display	
- Optional angle chamfering / corner R	
- Polar coordinate command	G15 / G16
- Program restart	
- Programmable data input	Tool offset and work offset are entered by G10, G11
- Programmable mirror image	G50.1 / G51.1
- Run hour and part number display	
- Scaling	G50, G51
- Search function	Sequence NO. / Program NO.
- Self - diagnostic screen	
- Servo setting screen	
- Single block	
- Single direction positioning	G60
- Stored stroke check 2	

OPTIONAL SPECIFICATIONS

- Additional controlled axes	5 axes in total
- AICC (AI Contour Control) with Hardware	40 block preview
- EZ Guide I (Doosan Infracore Conversational Programming Solution)	
- with 10.4" Color TFT	
- Dynamic graphic display (w/10.4" Color LCD)	Machining profile drawing
=> When the EZ Guide I is used, the Dynamic graphic display cannot application	
- Fast Data server	
- Fast Ethernet	
- Tool load monitoring function (Doosan)	

FANUC 32i-A ^{opt.}

AXES CONTROL

- Controlled axes	3 (X, Y, Z)
- Simultaneously controllable axes	Positioning (G00) / Linear interpolation (G01) : 3 axes Circular interpolation (G02, G03) : 2 axes
- Backlash compensation	
- Emergency stop / overtravel	
- Follow up	
- Least command increment	0.001 mm (0.0001 inch)
- Least input increment	0.001 mm (0.0001 inch)
- Machine lock	All axes / Z axis
- Mirror image	Reverse axis movement (Setting screen and M - function)
- Stored pitch error compensation	Pitch error offset compensation for each axis
- Stored stroke check 1	Overtravel controlled by software
- Absolute pulse coder	

INTERPOLATION & FEED FUNCTION

- 2nd reference point return	G30
- Circular interpolation	G02, G03
- Dwell	G04
- Exact stop check	G09, G61 (mode)
- Feed per minute	
- Feedrate override (10% increments)	0 - 200 %
- Jog override (10% increments)	0 - 200 %
- Linear interpolation	G01
- Manual handle feed 1 unit	
- Manual handle feedrate	x1, x10, x100 (per pulse)
- Override cancel	M48 / M49
- Positioning	G00
- Rapid traverse override	F0 (fine feed), 25 / 50 / 100 %
- Reference point return	G27, G28, G29
- Skip function	G31
- Helical interpolation	
- AICC II + Machining	30 block
- Thread cutting, synchronous cutting	
- Program restart	
- Automatic corner deceleration (Specify AI Contour control II)	
- Feedrate clamp by circular acceleration (Specify AI Contour control II)	
- Linear ACC / DEC before interpolation (Specify AI Contour control II)	
- Linear ACC / DEC after interpolation	
- Rapid traverse bell-shaped acceleration/deceleration	
- Smooth backlash compensation	

SPINDLE & M-CODE FUNCTION

- M-code function	M3 digits
- Spindle orientation	
- Spindle serial output	
- Spindle speed command	S5 digits
- Spindle speed override (10% increments)	10 - 150 %
- Spindle output switching	
- Retraction for rigid tapping	
- Rigid tapping	G84, G74

TOOL FUNCTION

- Tool nose radius compensation	G40, G41, G42
- Number of tool offsets	64 ea
- Tool length compensation	G43, G44, G49
- Tool number command	T2 digits
- Tool life management	Geometry / Wear and Length / Radius offset memory
- Tool offset memory C	
- Tool length measurement	

PROGRAMMING & EDITING FUNCTION

- Absolute / Incremental programming	G90 / G91
- Auto. Coordinate system setting	
- Background editing	
- Canned cycle	G73, G74, G76, G80 - G89, G99
- Circular interpolation by radius programming	
- Custom macro B	
- Custom size 512Kb	
- Decimal point input	
- I / O interface	RS - 232C
- Inch / metric conversion	G20 / G21
- Label skip	
- Local / Machine coordinate system	G52 / G53
- Maximum commandable value	±99999.999 mm (±9999.9999 inch)
- No. of Registered programs	500 ea
- Optional stop	M01

- Part program storage	640 m (2,100 ft) (256 kb) m
- Program number	O4-digits
- Program protect	
- Program stop / end	M00 / M02, M30
- Programmable data input	Tool offset and work offset are entered by G10, G11
- Sub program	Up to 4 nesting
- Tape code	ISO / EIA Automatic discrimination
- Work coordinate system	G54 - G59
- Additional work coordinate system (48 Pair)	G54.1 P1 - 48 pairs
- Coordinate system rotation	G68, G69
- Extended part program editing	
- Optional angle chamfering / corner R	
- Macro executor	

OTHERS FUNCTIONS (Operation, Setting & Display, etc)

- Alarm display	
- Alarm history display	
- Clock function	
- Cycle start / Feed hold	
- Control axis detach	
- Display of PMC alarm message	Message display when PMC alarm occurred
- Dry run	
- Embedded Ethernet	
- Graphic display	Tool path drawing
- Help function	
- Loadmeter display	
- MDI / DISPLAY unit	10.4" Color TFT LCD, Keyboard for data input, soft-keys
- Memory card interface	
- Operation functions	Tape / Memory / MDI / Manual
- Operation history display	
- Program restart	
- Run hour and part number display	
- Search function	Sequence NO. / Program NO.
- Self - diagnostic function	
- Servo setting screen	
- Single block	
- External data input	
- Multi language display	
- Stored stroke check 2	

OPTIONAL SPECIFICATIONS

- 3-dimensional coordinate conversion	
- 3-dimensional tool compensation	
- 3rd / 4th reference return	
- Addition of tool pairs for tool life management	1024 pairs
- Additional controlled axes	Max. 5 axes in total
- Additional work coordinate system	G54.1 P1 - 300 (300 pairs)
- DSQ 1 (AICC II + Machining condition selection function)	80 block preview
- DSQ 2 (AICC II + Machining condition selection function + Data server + 1GB)	80 block preview
- Automatic corner override	G62
- Chopping function	G81.1
- Cylindrical interpolation	G07.1
- Dynamic graphic display	Machining profile drawing
- Exponential interpolation	
- Interpolation type pitch error compensation	
- EZ Guide I (Doosan Infracore Conversational Programming Solution) with 10.4" Color TFT	
=> When the EZ Guide I is used, the Dynamic graphic display cannot application	
- Tape format for FS15	
- Increment system 1/10	G72.1, G72.2
- Inverse copying	
- Handle interruption	
- High speed skip function	
- Involute interpolation	G02.2, G03.2
- Machining time stamp function	
- No. of Registered programs	1000 ea
- Number of tool offsets	99 / 200 / 400 pairs
- Optional block skip addition	9 blocks
- Part program storage	512K / 1M / 2M byte
- Playback function	
- Polar coordinate command	G15 / G16
- Polar coordinate interpolation	G12.1 / G13.1
- Programmable mirror image	G50.1 / G51.1
- Single direction positioning	G60
- Tool load monitoring function (Doosan)	
- Tool position offset	G45 - G48
- Position switch	

*) Pre discussion required

Mynx 5400 / 6500 / 7500
Heavy Duty Vertical Machining Center



Doosan Infracore
Machine Tools

<http://domss.doosaninfracore.com>

Head Office :

Doosan Tower 23rd FL., 18-12, Euljiro-6Ga, Jung-Gu, Seoul, Korea 100-730
Tel : ++82-2-3398-8651 Fax : ++82-2-3398-8699 E-mail : master@domss.com

Doosan Infracore America Corp.:

8 York Avenue, West Caldwell, NJ 07006, U.S.A. Tel : ++1-973-618-2500 Fax : ++1-973-618-2501

Doosan Infracore Germany GmbH :

Hans-Böckler-Strasse 29, D-40764 Langenfeld-Fuhrkamp, Germany. Tel : ++49-2173-8509-0 Fax : ++49-2173-8509-60

Doosan Infracore Yantai Co., LTD :

13 Building, 140 Tianlin Road, Xuhui District, Shanghai, China (200233) Tel : ++86-21-6440-3384 (808, 805) Fax : ++86-21-6440-3389