

Item	Specification	Unit	TMV-400(400+APC)	TMV-510/[510II](510+APC)	TMV-510T(510T+APC)	QT-II(QT-II+APC)
TABLE	Working Area (LxW)	mm	500x320(500x300)	600x360	600x360	600x360
	Max. Load Capacity	kg	200(100x2)	200(100x2)	200(100x2)	200(100x2)
	Table Height From Floor	mm	850(920)	850(920)	850(920)	850(920)
	T-Slots (SizexNo.)	mm	18x3	18x3	18x3	18x3
SPINDLE	Spindle Nose		7/24 Taper No.30	7/24 Taper No.30	7/24 Taper No.30	7/24 Taper No.30
	Spindle Speed	rpm	8000(Opt. 4000,12000)	8000(Opt. 4000,12000)	8000(Opt. 4000,12000)	15000
TRAVEL	X/Y/Z Axis Stroke	mm	400/250/250(400/300/300)	510/360/250(510/360/300)	510/360/300(510/360/435)	510/360/300(510/360/435)
	Spindle Nose to Table	mm	200-450(200-500)	200-450(200-500)	200-500(200-635)	200-500(200-635)
FEED	X/Y/Z Rapid Traverse	m/min	36/36/30 (30/30/30)	36/36/30[48/48/40] (40/40/48)	48/48/40 (40/40/48)	48/48/48 (40/40/48)
	Cutting Feedrate	mm/min	1-10000	1-10000	1-10000	1-10000
ATC	Tool Capacity	pc	10(Opt. 14)	10(Opt. 14)	20	20
	Max. Tool Diameter	mm	Ø80	Ø80	Ø68	Ø68
	Max. Tool Length	mm	200	200	200	200
	Max. Tool Weight	kg	3	3	3	3
MOTOR	Spindle Motor(50% ED)	kw	3.7/1.1	3.7/1.1(Opt. 5.5/3.7)	3.7/1.1(Opt. 5.5/3.7)	2.2/1.5
	X/Y/Z Servo Motor	kw	1.4/1.4/1.6	1.4/1.4/1.6(1.6/1.6/1.6)	1.4/1.4/1.6(1.6/1.6/1.6)	1.4/1.4/1.6(1.6/1.6/1.6)
	Coolant Motor	kw	0.185	0.185	0.185	0.185
MACHINE	Length	mm	2260(2840)	2410(3050)	2410(3050)	2410(3050)
	Width	mm	1400(1910)	1400(2000)	1400(2000)	1400(2000)
	Height	mm	2280(2350)	2280(2450)	2280(2450)	2350(2450)
	Weight	kg	2000(3000)	2300(4300)	2300(4300)	2300(4300)

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Standard Accessories

- Spindle Speed 8000 RPM
- Air Blower Unit
- Rigid Tapping
- Halogen
- Coolant Unit
- Automatic Lubrication Equipment
- Full-Enclosed Splash Guard
- Door Interlock Unit
- Spindle Load Meter
- Workpiece Counter

Option Accessories

- Spindle Speed 4000/12000RPM
- Transformer / Stabilizer
- Auto Door
- Tool Length Automatic Measuring Unit
- Tool Life Management
- Tool Breakage Detector
- Oil Skimmer
- Oil & Mist Collector
- Chip Conveyor / Chip Tank
- 4th-Axis Function
- A/C For Electric Cabinet
- Additional M CODE
- Auto Power Off
- Sub Operation Box
- Q-SENSOR



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ISO 9001 ISO 14001 CE
A Worldwide Tradition of Quality Products and Customer Service

CNC Milling Tapping Center SUPER TAPMILL

High ■Quality ■Precision ■Efficiency ■Economy



TMV-400(400+APC)
TMV-510(510+APC)
TMV-510T(510T+APC)



QT-II
QT-II+APC

Special Design for
Aluminum or Magnesium
Alloy High Speed
Machining.

CNC Milling & Tapping Center



QT-II

Rapid Traverse	X/Y/Z Axis:48/48/48 m/min
Stroke	X/Y/Z Axis:510/360/300 mm
Spindle Speed & Output	MAX. 15000 rpm Direct-connection type 2.2/1.5 kW
High Speed ATC BT30	ARM Type 20Tools T to T 0.8 sec, C to C 2.0 sec

TMV-510T

Rapid Traverse	X/Y/Z Axis:48/48 m/40 m/min
Stroke	X/Y/Z Axis:510/360/300 mm
Spindle Speed & Output	8000 rpm(Opt. 4000 rpm, 12000 rpm) 3.7/1.1 kW(Opt. 5.5/3.7 kW)
High Speed ATC BT30	ARM Type 20Tools T to T 0.8 sec, C to C 2.0 sec



TMV-510/510II (Precision Type)

Rapid Traverse	X/Y/Z Axis:36/36/30 m/min (Opt. 48/48/40 m/min)
Stroke	X/Y/ ZAxis:510/360/250 mm
Spindle Speed & Output	8000 rpm (Opt.4000 rpm, 12000 rpm) 3.7/1.1 kW(Opt. 5.5/3.7 kW)
High Speed ATC BT30	Rotary Type 10Tools (Opt. 14Tools) T to T 1.5 sec, C to C 2.8 sec

TMV-400

Rapid Traverse	X/Y/Z Axis:36/36/30 m/min
Stroke	X/Y/Z Axis:400/250/250 mm
Spindle Speed & Output	8000 rpm (Opt. 4000 rpm, 12000 rpm) 3.7/1.1 kW
High Speed ATC BT30	Rotary Type 10Tools (Opt. 14Tools) T to T 1.5 sec, C to C 2.8 sec



QT-II+APC (Column Moving Type)

Rapid Traverse	X/Y/Z Axis:40/40/48 m/min
Stroke	X/Y/Z Axis:510/360/435 mm
Spindle Speed & Output	MAX. 15000rpm Direct-connection type 2.2/1.5 kW
High Speed ATC BT30	ARM Type 20Tools T to T 0.8 sec, C to C 2.0 sec

TMV-510T+APC (Column Moving Type)

Rapid Traverse	X/Y/Z Axis:40/40/48 m/min
Stroke	X/Y/Z Axis:510/360/435 mm
Spindle Speed & Output	8000 rpm(Opt. 4000 rpm, 12000 rpm) 3.7/1.1 kW(Opt. 5.5/3.7 kW)
High Speed ATC BT30	ARM Type 20Tools T to T 0.8 sec, C to C 2.0 sec



TMV-510+APC (Column Moving Type)

Rapid Traverse	X/Y/Z Axis:40/40/48 m/min
Stroke	X/Y/Z Axis:510/360/300 mm
Spindle Speed & Output	8000 rpm (Opt. 4000 rpm, 12000 rpm) 3.7/1.1 kW(Opt. 5.5/3.7 kW)
High Speed ATC BT30	Rotary Type 10Tools (Opt. 14Tools) T to T 1.5 sec, C to C 2.8 sec

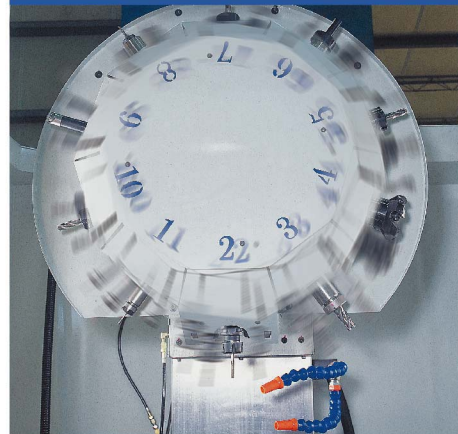
TMV-400+APC (Column Moving Type)

Rapid Traverse	X/Y/Z Axis:30/30/30 m/min
Stroke	X/Y/Z Axis:400/300/300 mm
Spindle Speed & Output	8000 rpm (Opt.4000 rpm, 12000 rpm) 3.7/1.1 kW
High Speed ATC BT30	Rotary Type 10Tools (Opt. 14Tools) T to T 1.5 sec, C to C 2.8 sec

Super Tapmill

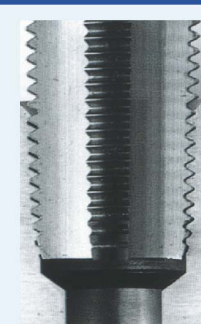
High Speed Machining for Precision Parts

High Speed ATC BT30



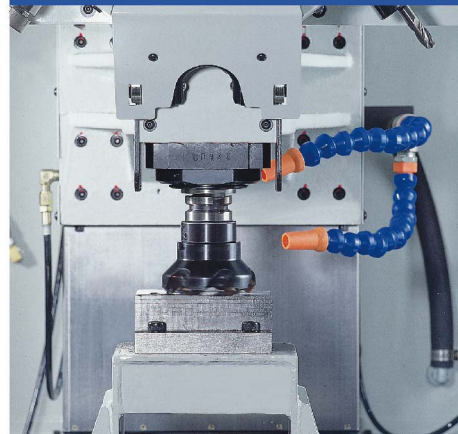
- Drive Mechanism, Fast and Rigid Cam.
- Shortest Tool Change
T to T 1.5 sec
C to C 2.8 sec
- Tool Capacity
Standard=10 sec
Option=14 sec

Max. Rigid Tapping Speed



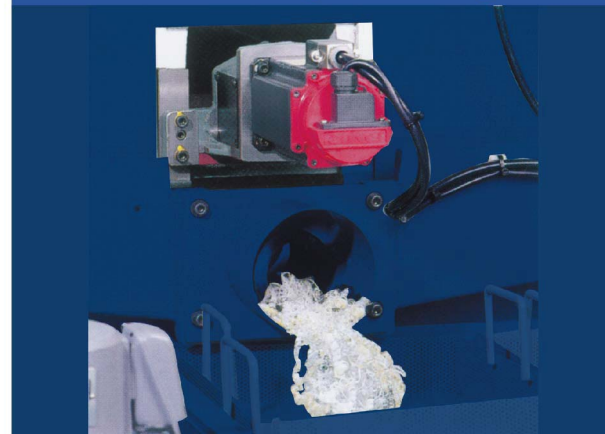
- 4000 rpm(510T)
- 6000 rpm(QT-II)

Multi-Function Spindle Speed

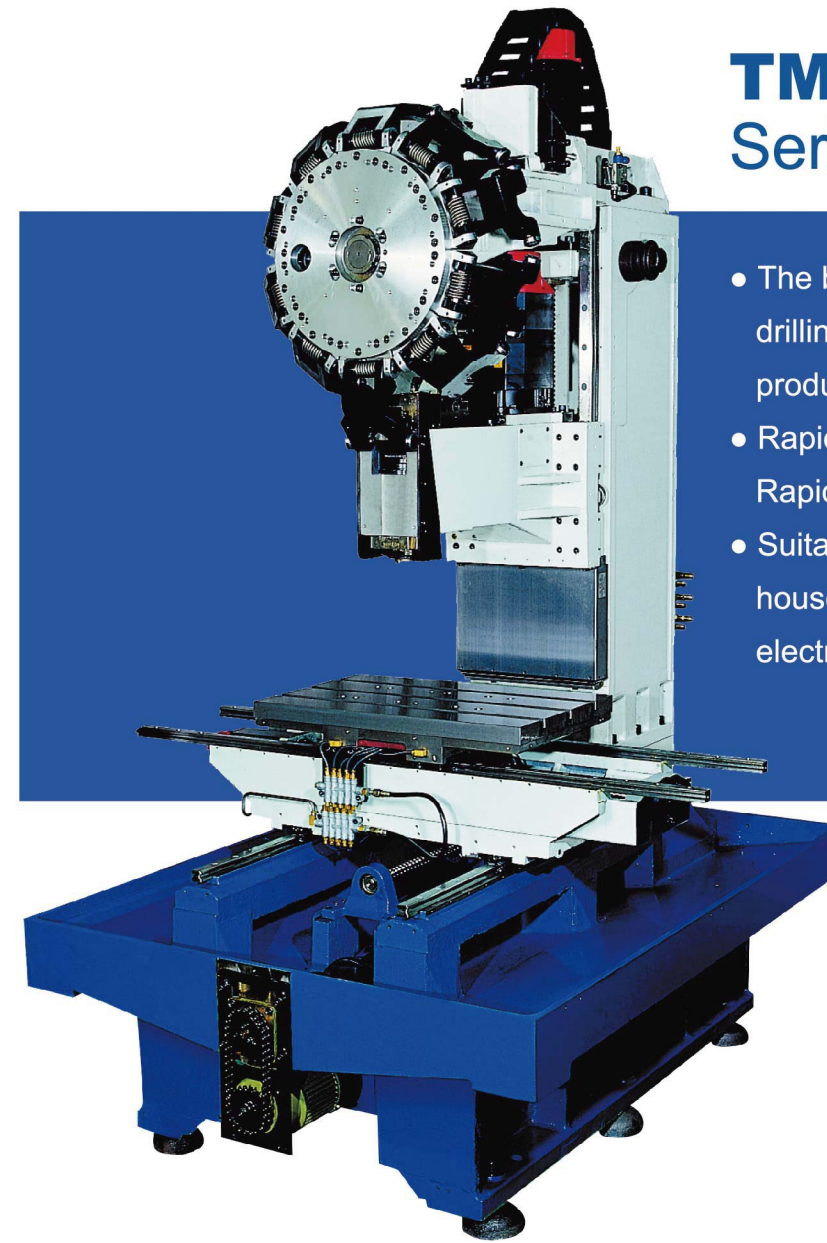


- Standard Speed
8000 rpm/min
- Option
Low Speed=4000 rpm/min
High Speed=12000 rpm/min
- Spindle Power
Standard 3.7 kW
Option 5.5 kW

Excellent Chip Flow Design



TMV-400/500 Series



- The bed structure is designed for high speed drilling, milling and tapping to highly upgrade production efficiency.
- Rapid traverse 36/36/30 m/min
Rapid traverse 48/48/40 m/min (TMV-510II)
- Suitable for machining automobile, motorbike, household appliances, air conditioning and electronic precision parts.

Controller (Standard FANUC Oi-M)



Suitable for Following Applications



High Speed! High Efficiency!

Pre-loaded ball screws prevent the machine from heat expansion during machining operations.

Standard for TMV-510II

TMV-510T/QT-II Series

Advanced High Speed Machining Design Consideration !

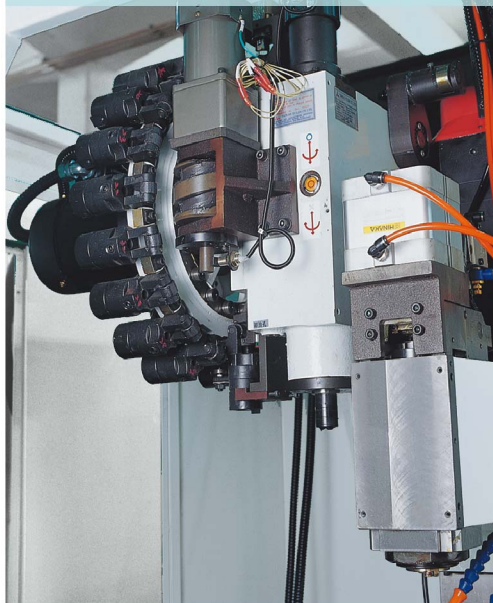
- Rapid traverse 48/48/48 m/min.
- Suitable for machining high-precision electronic parts, aluminum and magnesium material workpiece.

QT-II Series

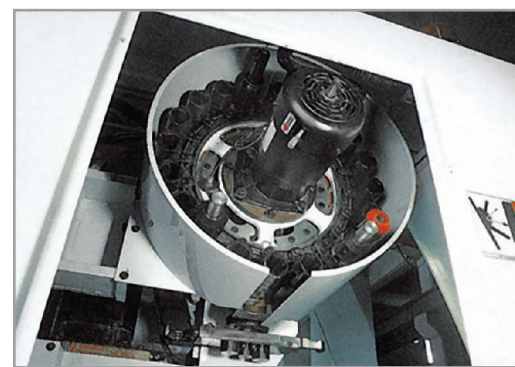
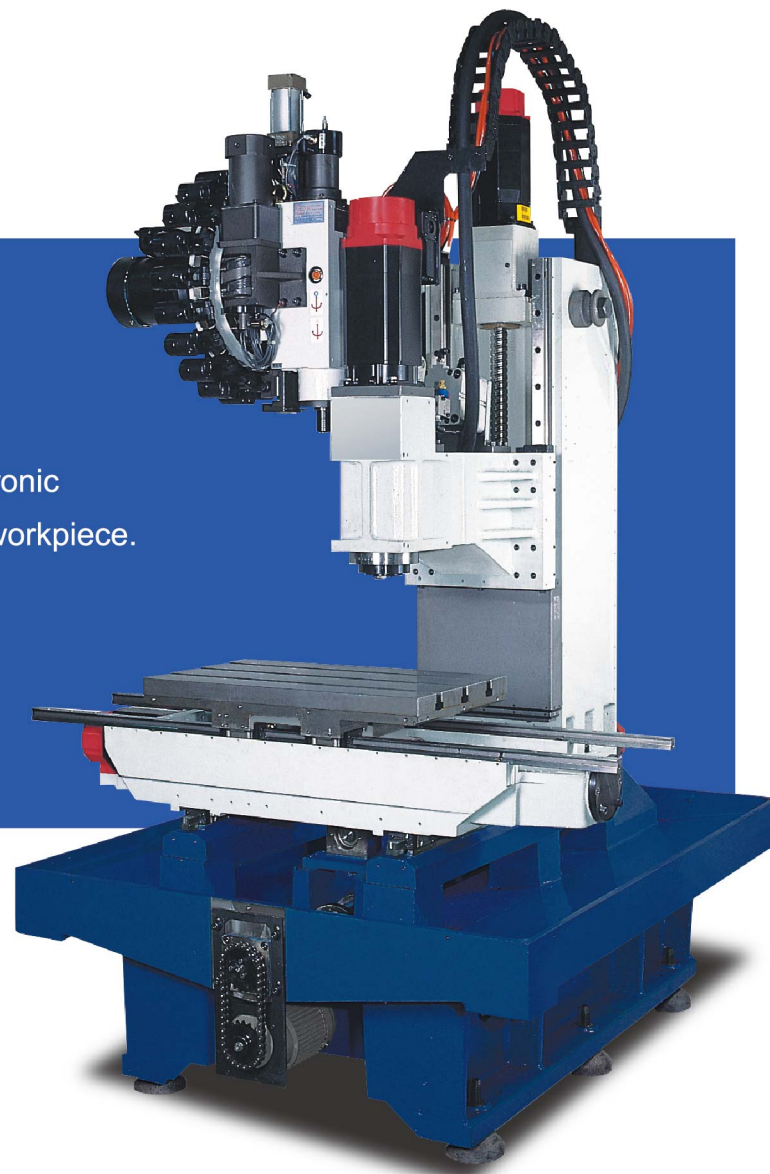


- Direct-Drive High Speed Spindle 15000 rpm
- Spindle Power 2.2/1.5 kW

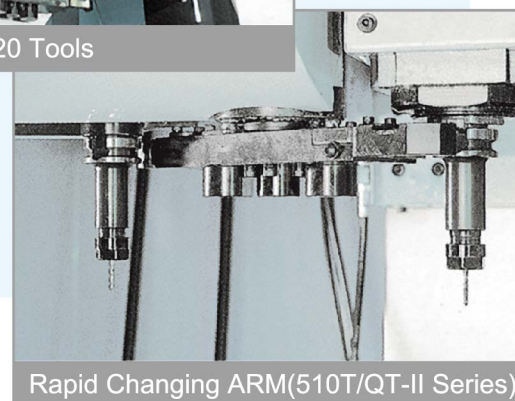
TMV-510T Series



- Spindle 12000/8000/4000 rpm (Three Types for selection)
- Spindle Power 3.75 kW(Opt. 5.5 kW)



ARM Type ATC 20 Tools



Rapid Changing ARM(510T/QT-II Series)

APC Series

- Column moving design and APC table can highly upgrade production efficiency.
- APC with hydraulic unit available for fixture clamping & unclamping.



■ Pallet Changing Time 0-180°=5 sec.



■ APC with Hydraulic Fixtures Control Unit(Opt.)



Coolant Through Spindle (Opt.)
A Type 15 kg/m²



High Pressure Pump with Filter (Opt.)



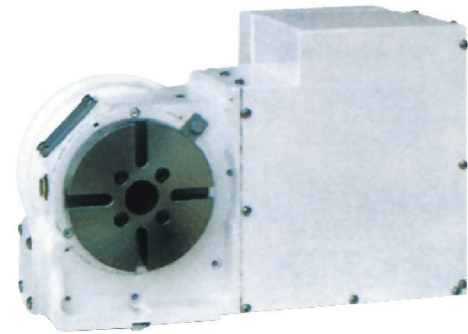
Column Moving Structure



Option Equipment



■ Simple Tool Breakage Detector

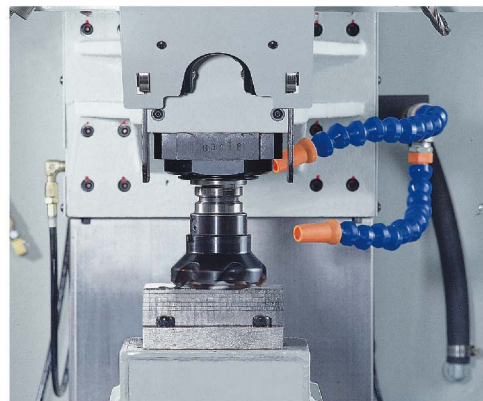


■ Fourth Axis Function



■ Raster for Safety

Suggested Value for Cutting Ability



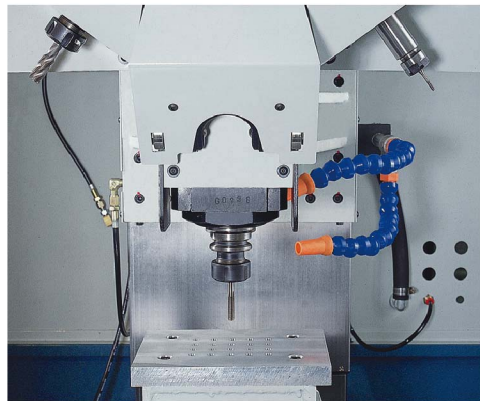
- Milling
- TMV-400**
Low 20 cc/min
Middle 14 cc/min
High 8 cc/min
- TMV-510**
Low 29 cc/min
Middle 22 cc/min
High 10 cc/min



- End Milling
- TMV-400**
Low 15 cc/min
Middle 10 cc/min
High 7 cc/min
- TMV-510**
Low 16 cc/min
Middle 22 cc/min
High 8 cc/min



- Drilling
- TMV-400**
Low Ø18 mm
Middle Ø16 mm
High Ø13 mm
- TMV-510**
Low Ø23 mm
Middle Ø20 mm
High Ø16 mm



- Tapping
- TMV-400**
Low M14
Middle M12
High M10
- TMV-510**
Low M20
Middle M16
High M12

Testing Data From Actual Cutting

Item	Material	Tool	R.P.M	Feeding seat (mm/min)	Width×Depth (mm/min)	Cutting rate (cc/min)
Rigid Tapping	S 45C	M12×1.75p HSS	530			
Drilling	S 45C	Dia. 16 HSS	490	88	30 mm. Depth	
End Milling	S 45C	Dia. 20 HSS-Co 4 Pieces Cutter	450	130	20×6	15.6
Face Milling	S 45C	Dia. 80 Face Milling Cutter	600	180	70×1.58	20
Face Milling	A1.	Dia. 80 Face Milling Cutter	4000	1500	70×2	210
End Milling	A1.	Dia. 20 HSS-Co 2 Pieces Cutter	1350	250	20×10	50

Spindle Speed : General Type 8000 rpm Type

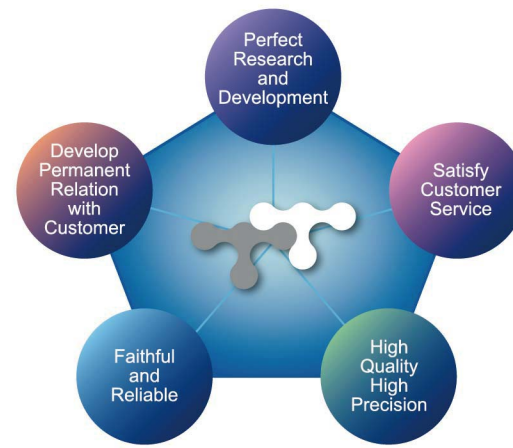
Spindle Power : FANUC α1.5 3.7 kW

Drilling Material : Aluminum Alloy 6061

- Ø5 mm×20 mm(Depth)/10holes
S=6000 rpm
F=1200 mm/min
- Spending Time : 17.66 sec

Tapping Material : Aluminum Alloy 6061

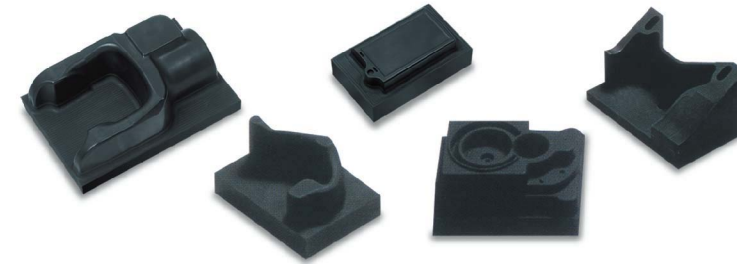
- M6×20mm(Depth)/10 holes
S=4000 rpm
F=4000 mm/min
- Spending Time : 20 sec



Tongtai is expert in metal cutting machine manufacturing. We provide wide range of standard machines. We also supply whole production lines as you give us the parts and we give you the rate of production you preferred.



Optional Function for QT-II with Graphite Machining



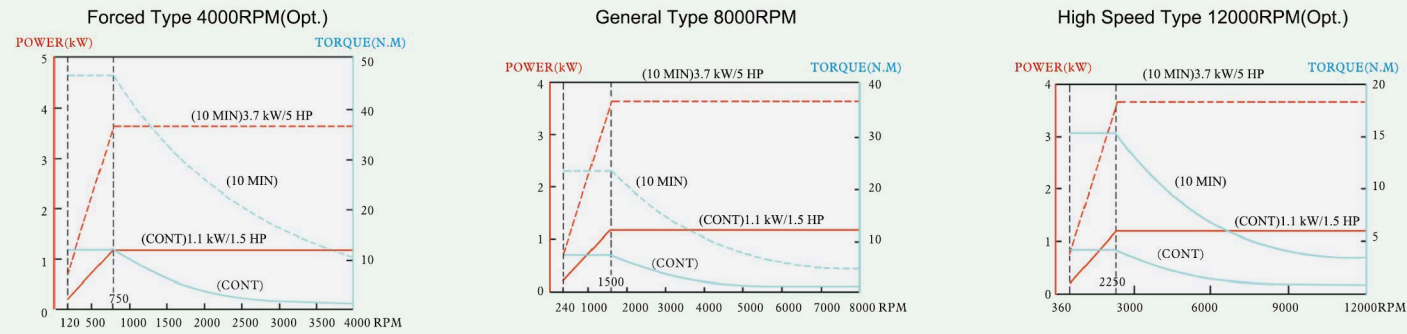
- FANUC Controller Box 0i-M
- High Speed \ High Precision \ Contour Machining Function
- Special Dust-collection Equipment
- All Enclosed Guarding Cover

Examples of Finished Parts

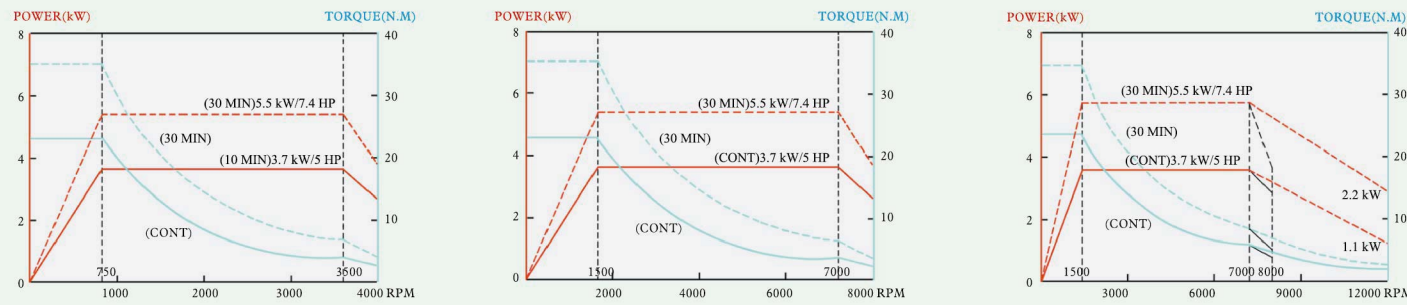


Spindle Output & Torque Charts

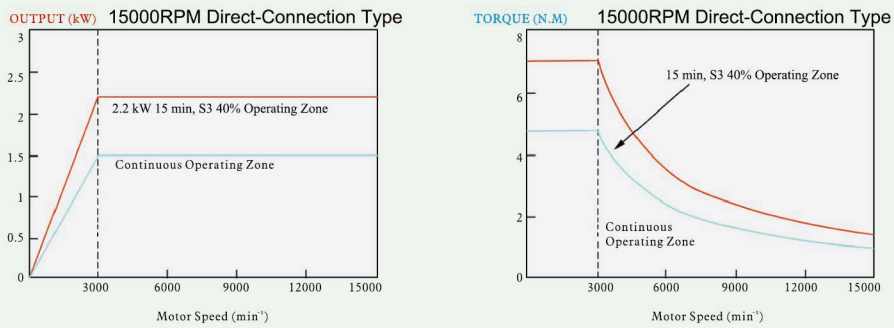
■TMV-400/510/510T Series (3.7 kW)



■TMV-510/510T Series (5.5 kW Opt.)



■QT-II (2.2 kW)



Numerical Control System FANUC 0i-M

Item	Specification
Control axis	4 Axes
Parts program storage length	640 M
Setting/display unit	8.4" color LCD/MDI
Graphic function	Standard
Servo waveform display	Standard
HRV control	Standard
Inch/metric conversion	Standard
Stored stroke check	Standard
Stored pitch error compensation	Standard
Manual handle feed	Standard
Positioning	G00
Single positioning	G60
Linear interpolation	G01
Circular interpolation	G02/G03
Dwell	G04
Cylindrical interpolation	Standard
Threading, synchronous cutting	Standard
Advanced preview control	Standard
Max. programmable dimensions	8 digits
Program number	04 digits
Polar coordinate command	Standard

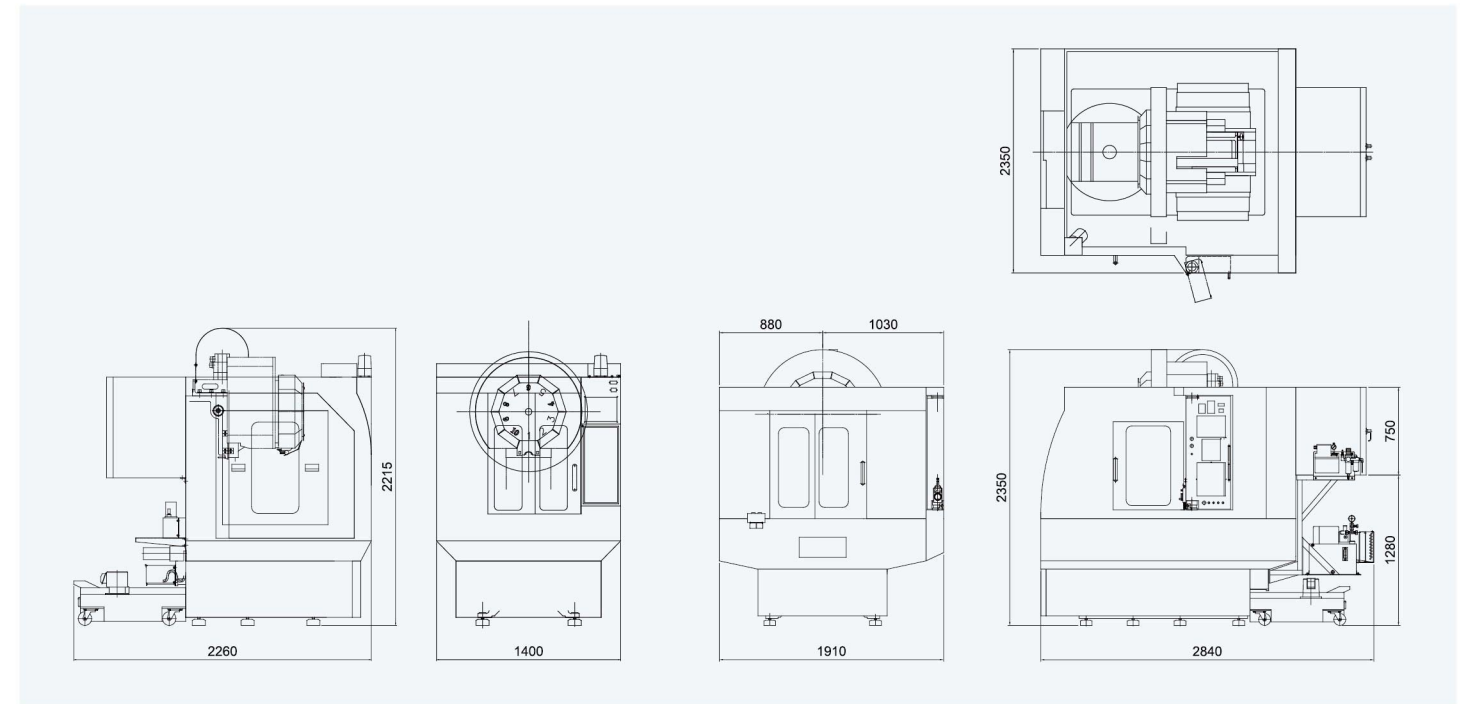
Item	Specification
Workpiece coordinate system	G54-G59
Addition of workpiece coordinate system pair	48 pairs
Programmable data input	G10
Custom macro B	Standard
Canned cycles for drilling	Standard
Automatic corner override	Standard
Automatic corner deceleration	Standard
Scaling	Standard
Coordinate system rotation	Standard
Programmable mirror image	Standard
Rigid tapping	Standard
Tool function	Standard
Tool offset pairs	6 digits - 400 sets
Tool offset memory C	Standard
Tool life management	Standard
Number of registerable programs	400
Background editing	Standard
Parts count display	Standard
Multi-language display	English / Japan / German / French / Italian / Chinese / Spanish / Korean

Machine Dimensions

Unit : mm

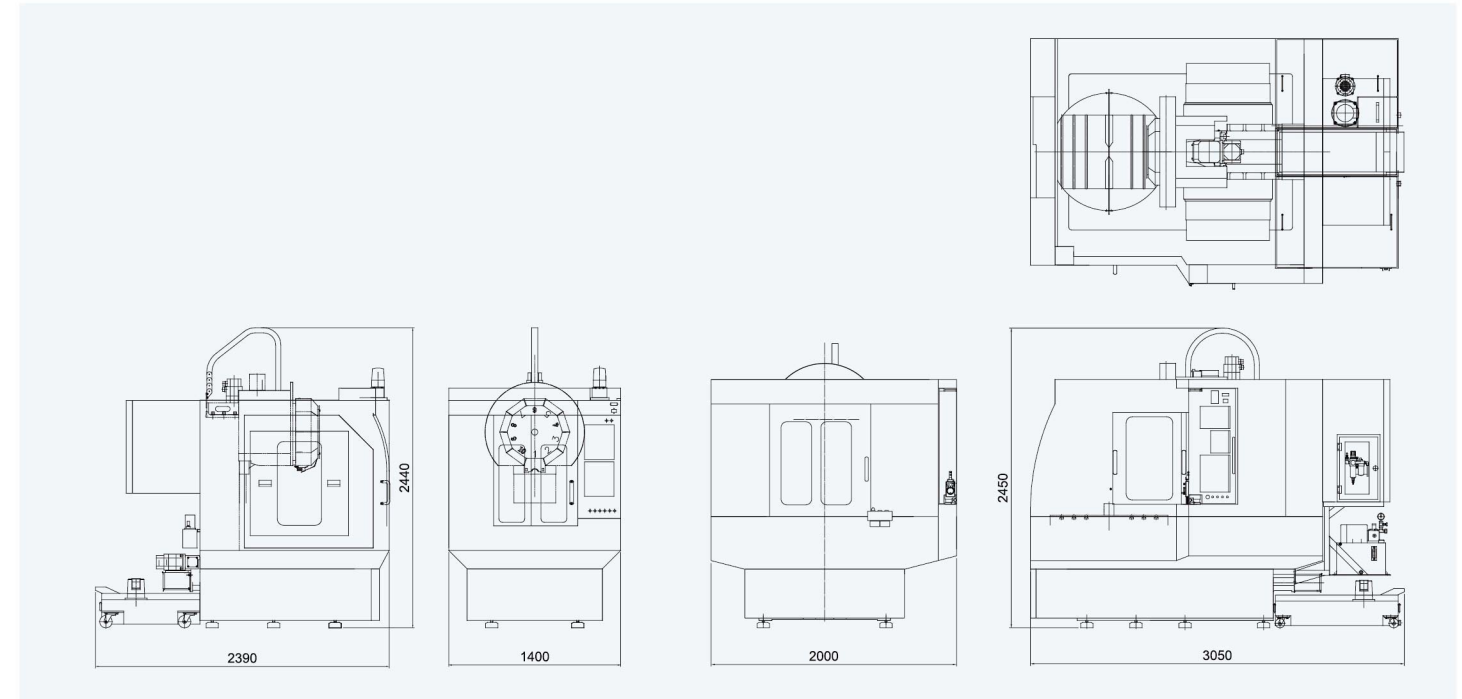
■TMV-400

■TMV-400+APC



■TMV-510/510II

■TMV-510+APC



■TMV-510T/QT-II

■TMV-510T+APC/QT-II+APC

