



Rapide cutting feedrate
30,000mm/min
among Taiwanese machines

HPA-6/HPA-10

Ultra-High-Speed Vertical
Machining Center

Create high-efficient and high-stability superiority



HPA-6

High Rigidity Structure Design

Synchronously adopt the European & Japanese design

- Wide-span rigid column
- Adopt Japan-made NSK extra-large 35mm precise roller-type linear guide way
- X/Y/Z axis adopt high specification direct driven motor and high rigid coupling
- High quality fully enclosed splash guard. Elegant appearance, well-executed and in good taste.

Extra-large X/Y axis motor

3.0/4.0KW

Extra-large Z axis motor

4.0KW(no counter balance design)

High reliable and high accuracy ballscrew design

ø40mm high class double nut provides strong rigidity, high torque, better accuracy, long-life, and effectively heat extension control.

Extra Wide door design

The width of door reaches 850mm for conveniently loading and unloading the fixture and workpiece.

Stable air supply equipment

The gas storage barrel assists to acquire steady air source to increase equipment utility rate.



HPA-6

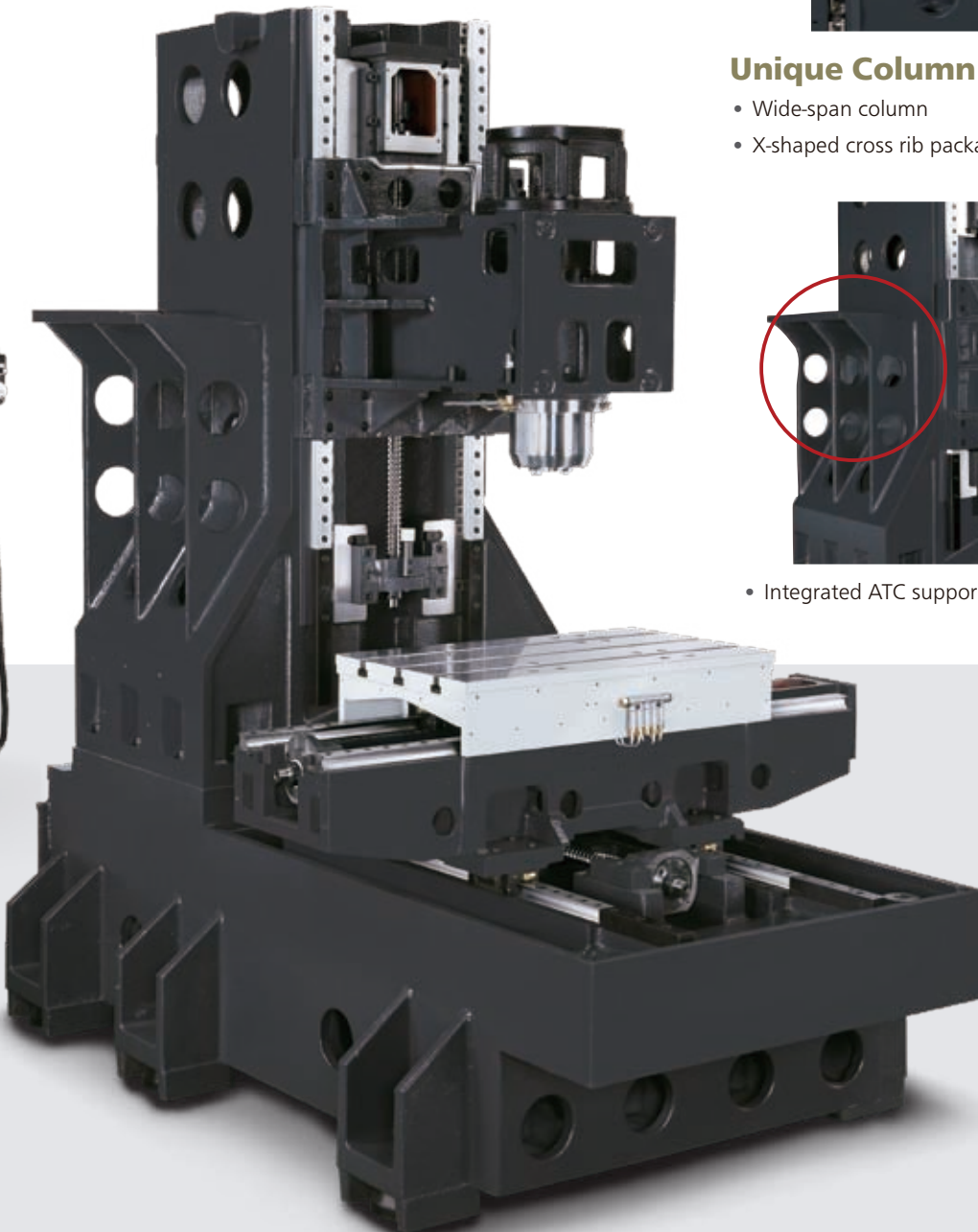
X/Y/Z 610/420/460mm

Arm type 24 tools ATC

Direct Driven 10,000 rpm(15,000rpm option)

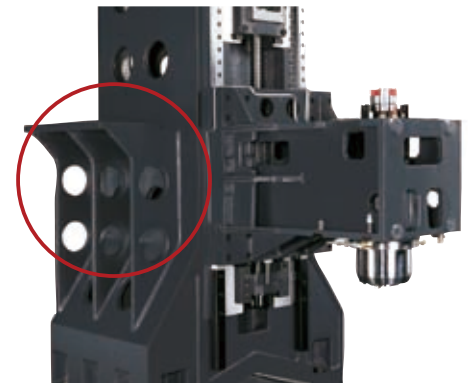
HPA-6

High Rigidity Structure Design



Unique Column Design

- Wide-span column
- X-shaped cross rib package column structure



- Integrated ATC support interface Block

HPA-10

High Rigidity Structure Design

Synchronously adopt the European & Japanese design

- Wide-span rigid column
- Adopt Japan-made NSK extra-large 45mm precise roller-type linear guide way
- X/Y/Z axis adopt high specification direct driven motor and high rigid coupling
- High quality fully enclosed splash guard. Elegant appearance, well-executed and in good taste.

Extra-large X/Y axis motor

4.0/7.0KW

Extra-large Z axis motor

7.0KW (no counter balance design)

High reliable and high accuracy ballscrew design

ø40mm high class double nut provides strong rigidity, high torque, better accuracy, long-life, and effectively heat extension control.

Extra Wide door design

The width of door reaches 1160mm for conveniently loading and unloading the fixture and workpiece.

Stable air supply equipment

The gas storage barrel assists to acquire steady air source to increase equipment utility rate.



PMC Picture

Agma authorizes PMC to conduct 100% inspection to full travel length of three axes. Standard VDI 3441 3 δ is employed to ensure the machine accuracy and righteousness of the inspection. For each axis, inspection along full axial travel length backwards and forwards for 6 times is conducted.

HPA-10

X/Y/Z 1,020/560/510mm

Arm type 24 tools ATC

Direct Driven 10,000 rpm(15,000rpm option)

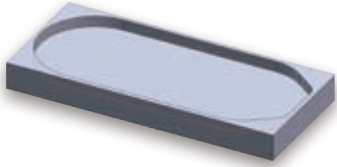
HPA-10

High Rigidity Structure Design



HPA-6/HPA-10

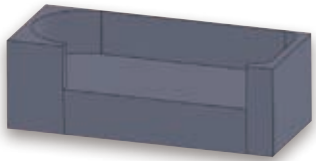
Cutting Capability



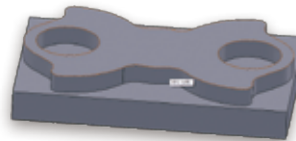
Workpiece Material : A6061 T6
 Spindle Speed : 15,000rpm
 Cutting Feedrate : **30,000mm/min.**
 Cutter : $\phi 12 \times 3$ Flutes End Mill for Aluminum
 Depth of cut : 12 mm
 Width of cut : 1.8 mm



Workpiece Material : Ti6Al4V
 Spindle Speed : 3,000rpm
 Cutting Feedrate : **2,100mm/min.**
 Cutter : $\phi 12 \times 4$ Flutes End Mill
 Depth of cut : 18 mm
 Width of cut : 0.857 mm



Workpiece Material : P20
 Spindle Speed : 8,000rpm
 Cutting Feedrate : **10,000mm/min.**
 Cutter : $\phi 12 \times 4$ Flutes End mill
 Depth of cut : 24 mm
 Width of cut : 0.8 mm

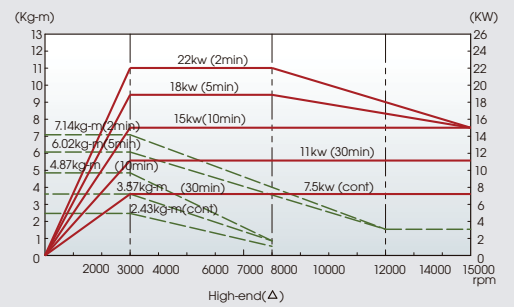
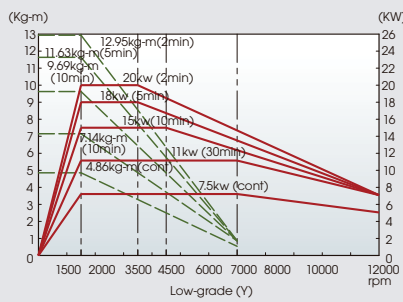
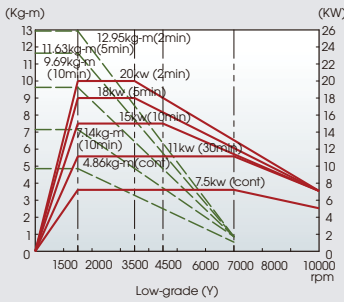


Workpiece Material : SUS420
 Spindle Speed : 4,800rpm
 Cutting Feedrate : **3,200mm/min.**
 Cutter : $\phi 12 \times 4$ Flutes End Mill
 Depth of cut : 12 mm
 Width of cut : 1.8 mm

FANUC Spindle Torque Drawing

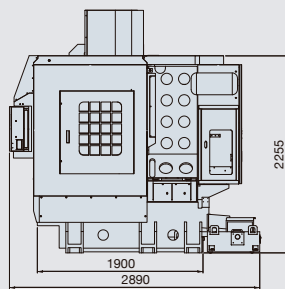
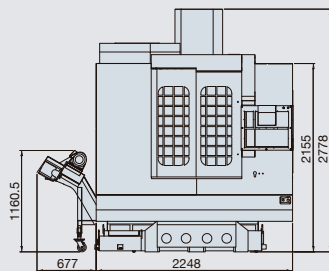
Spindle:10,000rpm
 (α i8)

Spindle:15,000rpm
 (α iT8)



Machine Layout

HPA-6



HPA-10

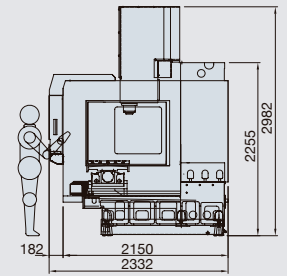
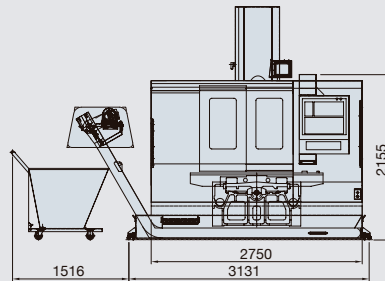
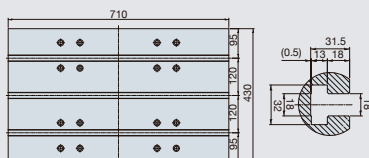
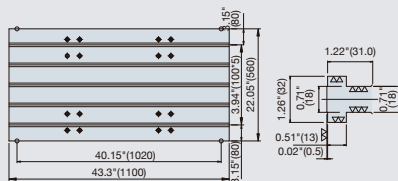


Table Dimension

HPA-6



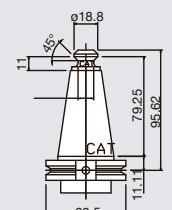
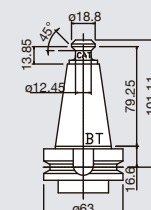
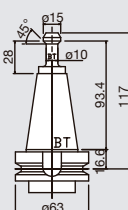
HPA-10



BT40# (W/O CTS)

BT#40 (CTS)

CAT40#(CTS)



Model	HPA-6	HPA-10
Spindle		
Spindle Taper	NO.40	
Transmission	Direct Driven	
Spindle Speed	10,000 r.p.m.	
Table		
Table Size	700 x 420 mm	1,100 x 560 mm
T-Slot Size	18 x 3 x 120 mm	18 x 5 x 100 mm
Working Area	610 x 420 mm	1,020 x 560 mm
Max. Table Load	600 kgs	900 kgs
Travel & Feedrate		
X Axis	610 mm	1,020 mm
Y Axis	420 mm	560 mm
Z Axis	460 mm	510 mm
Distance from Spindle Nose to Table	150~610 mm	150~660 mm
Distance from Spindle Center to Surface of Column Way	434 mm	624 mm
Rapid Traverse (X/Y/Z)	X,Y,Z:36/36/36 M/min	X,Y,Z:32/32/30 M/min
Cutting Feedrate	X,Y,Z:1~30,000 mm/min	
ATC		
Tool Shank	BT-40	
Pull Stud	MAS P40T-1(45°)	
Magazine Capacity	24 pcs	
Max. Tool Diameter (Full Storage)	φ 80 mm	
Max. Tool Diameter (With Adjacent Pocket Empty)	φ 130 mm	
Max. Tool Length	300 mm	
Max. Tool Weight	7 kgs	
ATC Type	Arm Type	
Tool Choose Method	Short Cut for Tool Choose	
Motor		
For Spindle (Cont./30 min./10min.)	7.5/11/15 kw(10/15/20 HP)	
For X/Y/Z Axis (Fanuc)	3/4/4 kw (4/5.4/5.4 HP)	4/7/7 kw (5.4/10/10 HP)
Lubrication Pump	0.025 kw	
Coolant Pump	0.86 kw	
Misc.		
Machine Height	2,690 mm	2,980 mm
Machine Space	2,250 x 2,890 mm	4,200 x 2,350 mm
Machine Weight	5,700 kgs	7,000 kgs
Controller	FANUC OiMD 8.4"	

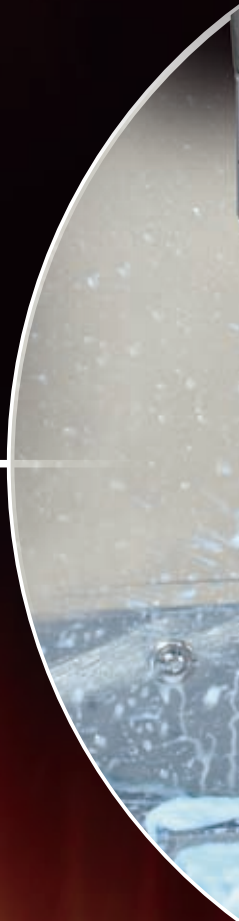
• Specification is subject to change without further notice.

Standard Accessories :

1. Fanuc OiMD controller
2. Heat Exchanger for Electric Cabinet
3. Program Execution/End/Abnormal Three Color Indicate Light
4. Quartz Work Lamp
5. Fluorescent Lamp
6. RS-232C Interface
7. Oil Circulating Coolant System for Spindle
8. Spindle Air Blast
9. Three Axes Ballscrew Coolant Equipment
10. Automatic Lubrication Equipment
11. Full Splash Guard
12. Rigid Tapping
13. Auto Power Off
14. Chip Conveyor with Chip Cart (For HPA-6 only)
15. Dual Screw Type Chip Augers and Chip Conveyor with Chip Cart. (For HPA-10 only)
16. Tool Box w/Leveling Bolt
17. Machine and Electric Operation Manual
18. (380/220V) Transformer (Exclude India, USA and Canada)
19. CE/CSA Electrical Specification (For European/Canada Only)
20. Precision Roller Rail Linear Guideways

Optional Accessories :

1. Fanuc 31iMB Controller
2. Mitsubishi 70/720/730M controller
3. Direct Driven Spindle 15,000rpm
4. Coolant Through Tool
5. Three Axes Absolute Type Optical Linear Scale
6. Oil Mist
7. Oil Mist Collector
8. Coolant Through Spindle A Type (20/70 Bars)
9. Renishaw TS-27R Tool Setup Probe (Tool Setter)
10. Disc Type Oil Skimmer
11. CNC Rotary Table
12. Air Conditioning Equipment for Electric Cabinet
13. 4th Axis Interface.



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