

HS-450i with FANUC 31i-A SPECIFICATIONS			
	DESCRIPTIONS	ENGLISH	METRIC
TRAVEL	X-axis, Y- axis, Z- axis	25.2" , 24.0" , 26.8"	640 mm, 610 mm, 680 mm
	Spindle center to pallet surface	2.0" – 26.0"	50 - 660 mm
	Spindle nose to pallet center	3.9" – 30.7"	100 - 780 mm
	Pallet top height (from the floor)	43.3"	1,100 mm
TABLE	Table size (2pallets)	15.7" × 15.7"	400 mm × 400 mm
	Workpiece max. size	19.7" × 19.7" Optional	500 mm × 500 mm Optional
	Max. payload	Ø29.5" × 39.4"	Ø750 mm × 1000 mm
	Configuration	1,100 lb	500 kg
	Min. indexing degree	M16×25L P = 3.1"	M16×25L P = 80 mm
	Indexing speed	(P=3.9" for 500 mm pallet)	(P=100mm for 500 mm pallet)
	Pallet clamping system	0.001"	0.001"
	Pallet clamping force	1.1 sec. /90 degrees	1.1 sec. /90 degrees
	B-axis clamping torque	Mechanical Lock	Mechanical Lock
		2,203 lb × 4 cones	9.8 kN × 4 cones
		2,582 lb-ft	3,500 Nm
SPINDLE	Spindle speed	40 - 15,000 rpm	40 - 15,000 rpm
	Spindle rated torque	147 lb-ft (2 min.)	200 Nm (2 min.)
	Spindle acceleration / declaration	110 lb-ft (15 min.)	150 Nm (15 min.)
	Spindle taper	3.2 sec (0-15K rpm) / 3.3 sec (15K-0 rpm)	3.2 sec (0-15K rpm) / 3.3 sec (15K-0 rpm)
	Through spindle coolant	ISO 7/24 Taper NT No. 40	ISO 7/24 Taper NT No. 40
		285 psi	2.0 Mpa
FEED	Rapid feed(X/Y/Z)	2,362 ipm	60,000 mm/min
	Cutting feed(X/Y/Z)	787.4 ipm	20,000 mm/min
	Table rotating speed	33.3 rpm	33.3 rpm
	Guide ways (X/Y/Z)	Roller ways	Roller ways
	Acceleration(X/Y/Z)	1+ G	1+ G
	Ballscrews size	Ø1.5747"	Ø40 mm
ATC	Type of tool shank	CAT-40 / BBT-40 (optional)	CAT-40 / BBT-40 (optional)
	Type of pull-stud	CAT-40 / JIS (optional)	CAT-40 / JIS (optional)
	Number of tools	80 / Optional 120, 220	80 / Optional 120, 220
	Max. tool diameter	Ø3.7" / Ø7.2"	Ø95 mm / Ø185 mm
	(Adjacent pots full / empty)		
	Max. tool length	15.7"	400 mm
	Max. tool weight	17.6 lb	8 kg
	Tool selection system	Random / Fixed	Random / Fixed
	Tool to tool	1 sec (2.1 : Heavy tool programmable)	1 sec (2.1 : Heavy tool programmable)
	Chip to chip	3 sec (3.5 : Heavy tool programmable)	3 sec (3.5 : Heavy tool programmable)
APC	Number of pallets	2, Optional 6	2, Optional 6
	Pallet change system	Rotation	Rotation
	APC exchange time	7 sec.	7 sec.
MOTOR	Spindle motor	30 / 20 hp	22 / 15 kW
	Feed axes motors (X/Y/Z/B)	6.0 / 6.0 / 6.0 / 3.6 hp	4.5 / 4.5 / 4.5 / 2.7 kW
	Lubrication pump motor	0.024 hp	18 W
	Spindle coolant pump	1.7 hp	1,270 W
	Chips flush (base) coolant pump	2.1 hp	1,580 W
	Through spindle coolant pump	1.0 hp	750 W
	Overhead shower flush coolant pump	0.8 hp	600 W
	Hydraulic pump	3.0 hp	2.23 kW
SUPPLY	Electric voltage	200 - 230 volt	200 - 230 volt
	Electric power supply	50 / 55 kVA for optional 6 APC	50 / 55 kVA for optional 6 APC
	Air pressure	72.5 psi	0.5 Mpa
	Air volume	132 gal/min	500 liter/min
TANK	Hydraulic unit tank	15.9 gallon	60 liters
	Coolant tank	145.3 gallon	550 liters
	Lubrication unit tank	0.47 gallon	1.8 liters
SIZE	Machine dimension (L × W × H)	190.6" × 104.9" × 101.2"	4,840 × 2,665 × 2,570 mm
	Required floor space (L × W × H)	214.8" × 153.0" × 101.2"	5,455 × 3,885 × 2,570 mm
	Machine weight	25,619 lb	11,645 kg

*Specifications Subject to Change Without Notice

Standard Accessories

- Full chip enclosure
- Automatic power on / off
- Air through spindle (cutting)
- Spindle air seal
- Spindle air blow
- 285 psi through spindle coolant
- Central oil-air lubrication system
- Programmable ATC speed (heavy tools)
- Flood coolant system
- Guide-way cover
- Chiller for spindle and X/Y/Z axes
- Sealed electric cabinet
- Heat exchange for electric cabinet
- Safety door
- Leveling blocks and screws
- Oil skimmer
- 3-color machine status indicator
- Prepped for 1,000 psi CTS
- Fluorescent lamps
- Maintenance tools
- Manuals

Options

- 6 Auto Pallet Changer
- 120, 220 Tools Magazine
- Dual Spiral Auger
- 500 mm x 500 mm Pallet
- Auto Workpiece Measure
- Auto Tool Length Measure
- Laser Tool Length Measure
- Scales
- Electrical Cabinet Heat Exchanger
- Mist Collector



HS - 450i
ULTIMATE HIGH SPEED
HORIZONTAL MACHINING CENTER

1 G
ACCELERATION

2,362 IPM
60 m/min

15,000
RPM

1 SEC
TOOL TO TOOL
CHANGE



WHITEHOUSE

ADVANCED | ENGINEERING | SOLUTIONS

WHITEHOUSE MACHINE TOOLS LTD
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WHITEHOUSE

HS-450i Standard Features

- Large Travels: X 25.2" Y 24" Z 26.8"
- Large Work Envelop: Φ 29.5" x 39.4"
- Fanuc 31i Nano Control
- 80 Tool ATC
- 15,000 RPM 30 HP Big-Plus® Spindle
- 285 psi Through Spindle Coolant
- 2,362 IPM Rapid Traverse
- THK® Roller Guide Ways
- 1G+ Acceleration & Deceleration
- Tsudakoma® Full Rotary 4th Axis
- Thermal Compensation System:
Chilled XYZ Axes Ball Screws & Bearings,
Chilled Spindle Cartridge & Motor Housing
- Automatic Machine Power Up / Shut Down
- Pressurized Oil & Air Lubricated Spindle,
- Ball Screws and Roller Guide Ways
- Mechanical Lock Pallet Clamping System
- Stepped Style Casting One Piece with
- Heavy Ribbed Column
- Air Cutting Through Spindle
- Automatic Pallet Wash System (Overhead)



Fanuc Series 31i Control

High-Speed, High Accuracy, Advanced Multi-Axis Multi-Path Nano CNC control

- AICC II - High Speed Contour Control II
- with 200 Block Look Ahead
- JERK Control
- HRV- III High Performance Servo Drives
- Full 4 Axes Control
- 300 Fixture Offsets
- Helical Interpolation
- Circular Interpolation
- Rigid Tapping
- Ethernet
- Tool Life Management
- Tool Offset Memory C



Multi Pallet Expansion, Fast, Easy & Affordable

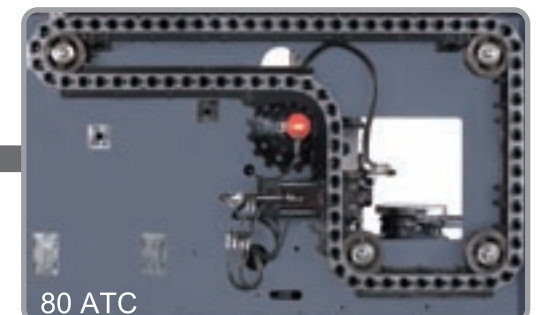
Start with the standard HS-450i (2APC, 80 Tools) and expand to 6 pallet with 120 or 220 tool storage capacities as needed to boost production efficiency.



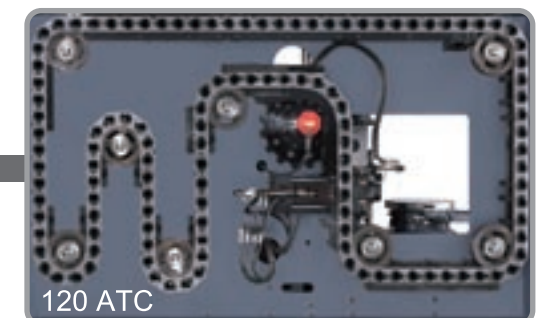
HS-450i 2 APC with 80 TOOLS



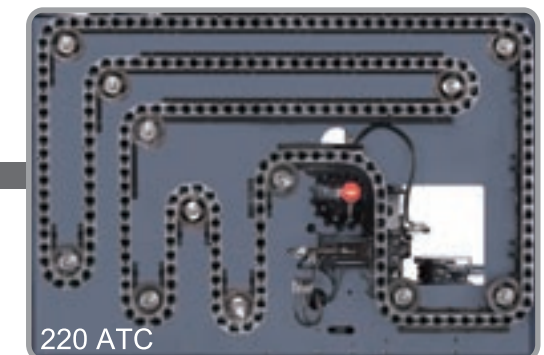
6 PALLET EXPANSION KIT



80 ATC



120 ATC



220 ATC

ATC Configurations