

HS-540k with AVEREX-FANUC MPro I SPECIFICATIONS			
	DESCRIPTIONS	IMPERIAL	METRIC
TRAVEL	X-axis, Y-axis, Z-axis	31.5", 31.5", 31.5"	800 mm, 800 mm, 800 mm
	Spindle center to pallet surface	1.6" - 33.1"	40 - 840 mm
	Spindle nose to pallet center	3.9" - 35.4"	100 - 900 mm
	Pallet top height (from the floor)	42.1"	1,070 mm
TABLE	Table size (2 pallets)	15.7" x 15.7"	400 mm x 400 mm
	Workpiece max. size	19.7" x 19.7" Optional	500 mm x 500 mm Optional
	Max. payload	Ø31.5" x 39.4" for 2APC	Ø800 mm x 1000 mm for 2APC
	Configuration	1,100 lb	500 kg
	Min. indexing degree	M16x25L P=3.1"	M16x25L P=80mm
	Indexing speed	(P=3.9" for 500 mm pallet)	(P=100 mm for 500 mm pallet)
	Pallet clamping system	1° (0.001° Optional)	1° (0.001° Optional)
	Pallet clamping force	2.0 sec./90° (1.1 sec./90° Optional)	2.0 sec./90° (1.1 sec./90° Optional)
	B-axis clamping torque	Mechanical Lock	Mechanical Lock
		2,203 lb x 4 cones	9.8 kN x 4 cones
SPINDLE	Spindle speed	4,425 lb-ft	6,000 Nm
	Spindle rated torque	40-15,000 rpm /40-20,000 rpm (Optional)	40-15,000 min ⁻¹ /40-20,000 min ⁻¹ (Optional)
	Spindle acceleration / deceleration	184 lb-ft (S3 15%)	249 Nm (S3 15%)
	Spindle taper	110 lb-ft (Cont.)	150 Nm (Cont.)
	Through spindle coolant	3.2 sec. (0-15K rpm) / 3.3 sec. (15K-0 rpm)	3.2 sec. (0-15K min ⁻¹) / 3.3 sec. (15K-0 min ⁻¹)
		ISO 7/24 Taper NT No. 40	ISO 7/24 Taper NT No. 40
FEED	Rapid feed (X/Y/Z)	435 psi	3.0 MPa
	Cutting feed (X/Y/Z)	2,362 ipm	60,000 mm/min
	Table rotating speed	787.4 ipm	20,000 mm/min
	Guide ways (X/Y/Z)	33.3 rpm	33.3 min ⁻¹
	Acceleration (X/Y/Z)	Roller ways	Roller ways
	Ballscrews size	1 G	1 G
ATC	Type of tool shank	Ø1.5747"	Ø40 mm
	Type of pull-stud	CAT-40 / BBT-40 (Optional)	CAT-40 / BBT-40 (Optional)
	Number of tools	CAT-40 / JIS (Optional)	CAT-40 / JIS (Optional)
	Max. tool diameter	46 / Optional 60, 80	46 / Optional 60, 80
	(Adjacent pots full / empty)	Ø2.95" / Ø5.91"	Ø75 mm / Ø150 mm
	Max. tool length	15.7"	400 mm
	Max. tool weight	17.6 lb	8 kg
	Tool selection system	Random	Random
	Tool to tool	1.2 sec. (2.1 : Heavy tool programmable)	1.2 sec. (2.1 : Heavy tool programmable)
	Chip to chip	3.4 sec. (4.4 : Heavy tool programmable)	3.4 sec. (4.4 : Heavy tool programmable)
APC	Number of pallets	2	2
	Pallet change system	Rotation	Rotation
	APC exchange time	5 sec.	5 sec.
MOTOR	Spindle motor	50 / 20 hp	37 / 15 kW
	Feed axes motors (X/Y/Z/B)	6.0 / 7.3 / 6.0 / 3.6 hp	4.5 / 5.5 / 4.5 / 2.7 kW
	Lubrication pump motor	0.024 hp	18 W
	Spindle coolant pump	2.2 hp	1.62 kW
	Chips flush (base) coolant pump	0.8 hp	0.62 kW
	Through spindle coolant pump	3.0 hp	2.24 kW
	Overhead shower flush coolant pump	1.7 hp x 2	1.29 kW x 2
	Hydraulic pump	3.0 hp	2.23 kW
SUPPLY	Electric voltage	200 - 230 volt	200 - 230 volt
	Electric power supply	50 kVA	50 kVA
	Air pressure	87.0 psi	0.6 MPa
	Air volume	132 gal/min	500 liter/min
TANK	Hydraulic unit tank	15.9 gallon	60 liter
	Coolant Tank	198 gallon	750 liter
	Lubrication unit tank	0.47 gallon	1.8 liter
SIZE	Machine dimension (L x W x H)	193.8" x 104.7" x 102.4"	4,922 x 2,660 x 2,600 mm
	Required floor space (L x W x H)	193.8" x 123.9" x 102.4"	4,922 x 3,148 x 2,600 mm
	Machine weight	27,580 lb	12,510 kg



Standard Accessories

- Full chip enclosure
- High quality 3-axes telescopic way covers
- Safety door
- Sealed electric cabinet
- Heat exchanger for electric cabinet
- Chiller for spindle
- Central oil-air lubrication system
- Air through spindle (cutting)
- Spindle air seal
- Spindle air blow (ATC)
- Cutting air blow
- 30 Bar through spindle coolant, prepared for optional 70 Bar
- Flood coolant system
- Oil skimmer
- Floating ball type level detection for coolant tank
- Dual chip augers
- Manual Guide Oi
- Multi-language display
- Programmable spindle tool load monitoring
- Programmable ATC speed (heavy tools)
- Automatic power on / off and warm-up within 7 days
- 3-color machine status indicator
- Fluorescent lamps at operation
- Leveling blocks and screws
- Maintenance tools
- Manuals

Optional Accessories

- Full 4th axis rotary table (0.001°)
- 60T or 80T tools magazine
- Chip conveyor and chips cart
- 500 mm x 500 mm pallet
- Hydraulic overhead arms for fixture
- Automatic Pallet Indexing at Loading Zone
- A/C for heat exchanger of E-cabinet
- Linear scale (X/Y/Z/B)
- Workpiece measurement
- Tool measurement
- Tool breakage detection
- Chiller for coolant tank
- Oil mist collector
- Rotary wiper
- Energy-saving function
- CE certified EN ISO 13849-1
- Tool shank and pull stud



HS-540k

Ultimate High Speed Horizontal Machining Center

Specifications subject to change without notice.



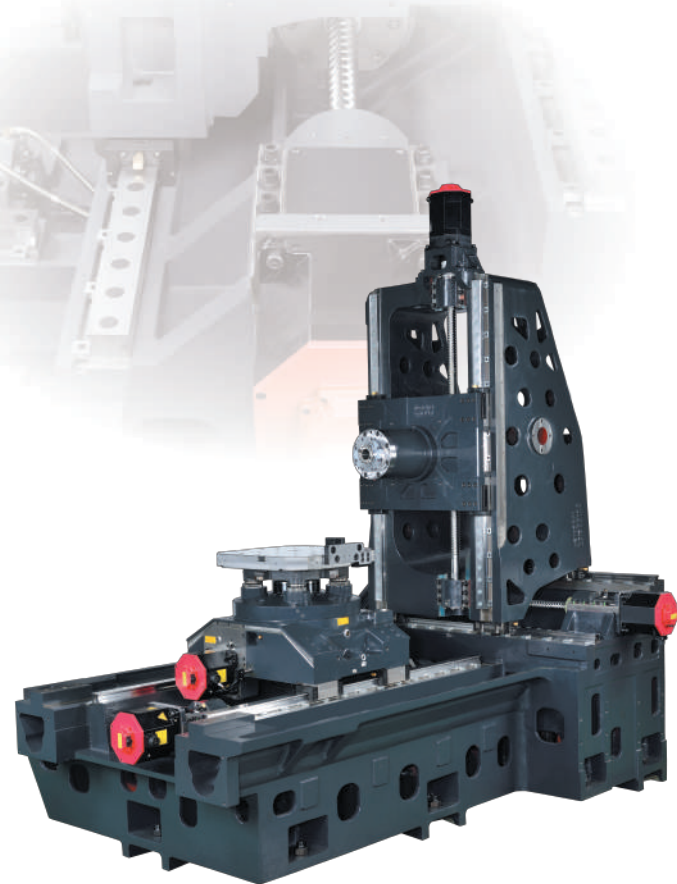
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HS-540k *Standard Features*

- Large Travels: X 800mm x Y 800mm x Z 800mm
- Large Work Envelope: Ø800mm x 1,000mm
- One-piece Stepped Machine Base with Heavy Ribbed
- AVEREX-FANUC MPro I
- 15,000 rpm, 37kW / 249 Nm **Big-Plus®** BBT-40 Spindle
- Standard 1° Index Table (Optional 0.001° Full 4th Axis Rotary Table)
- 46 Tools Automatic Tool Changer (1.2 Sec. T-T)
- 60 m/min Rapid Traverse
- 1G Acceleration and Deceleration
- **THK®** Roller Guide Ways
- **TSUBAKI®** Ballscrews
- Thermal Compensation (Chilled Spindle)
- Pressurized Oil-Air Lubricated Spindle, Ballscrews and Guide Ways
- Mechanical Lock Pallet Clamping System with Air Seal Detection
- Air Cutting Through Spindle
- 30 Bar Through Spindle Coolant, Prepared for Optional 70 Bar
- Overhead Automatic Pallet Wash System & Z-axis Way Cover Wash
- Programmable Spindle Tool Load Monitoring
- Automatic Machine Power On / Off and Warm-up within 7 Days

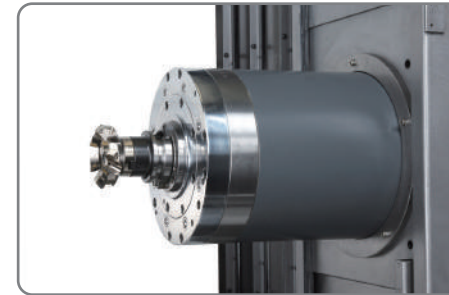
One-piece Machine Base



Standard 30 Bar CTS and Optional Scraper Type Chip Conveyor



Powerful Spindle

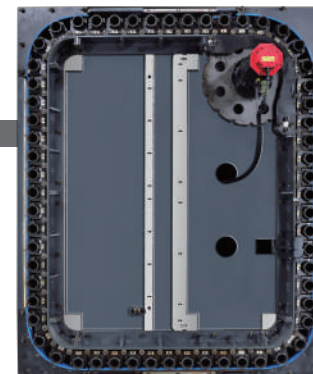


- 15,000 rpm / 37 kW / 249 Nm Max. Spindle Output
- 12,000 rpm / 30 kW / 287 Nm Max. Spindle Output (Optional)
- 20,000 rpm / 22 kW / 60 Nm Max. Spindle Output (Optional)

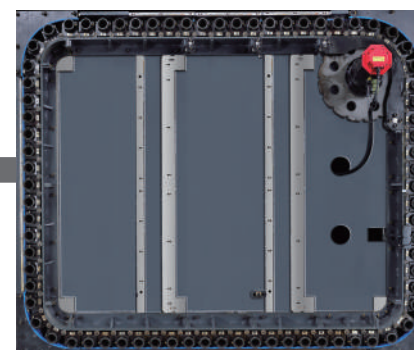
Automatic Tool Changer (ATC)



46 ATC **ST**



60 ATC **OP**



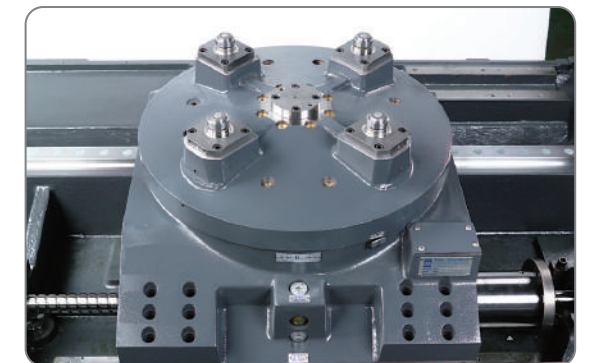
80 ATC **OP**

AVEREX-FANUC MPro I / NC Standard Features

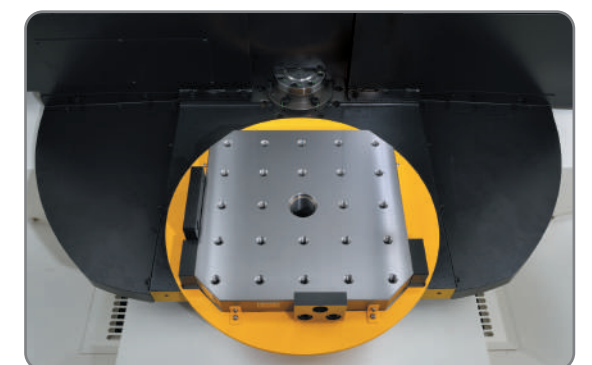


- 10.4" Color LCD
- AICC II Nano Control with 200 Blocks Look Ahead
- HRV-III+ High Performance Servo Drives
- Full 4 axes Control
- 48 Pairs Workpiece Coordinate Offsets
- Helical Interpolation
- Circular Interpolation
- Rigid Tapping
- Canned Cycle
- Ethernet and CF/USB Device
- Tool Life Management
- Tool Offset Memory C
- Manual Guide Oi
- 1,280 meter Part Program Memory
- Custom Marco B
- 400 Registerable Programs
- Programmable Spindle Tool Load Monitoring
- Programmable Data Input G10
- Coordinate System Rotation
- High Speed Skip
- Addition of Custom Macro Common Variables #500-#999
- 400 Pairs Tool Offsets
- Polar Coordinates
- Programmable Mirror Image
- Scaling
- Program Restart
- Manual Handle Interruption

Automatic Pallet Changer (APC)



Standard 1° Index Table (Optional 0.001°)



5 Sec. Pallet changing