

HS-630i with FANUC 31i-A SPECIFICATIONS

| | DESCRIPTIONS | ENGLISH | METRIC |
|---------|---|---|---|
| TRAVEL | X-axis, Y-axis, Z-axis | 41.3", 35.4", 40.2" (10,000rpm Spindle) 41.3" / 34.6" / 40.2" (6,000rpm Spindle) | 1,050 mm, 900 mm, 1,020 mm (10,000 min ⁻¹ Spindle) 1,050mm, 880mm, 1,020mm (6,000 min ⁻¹ Spindle) |
| | Spindle center to pallet surface | 3.1" - 34.6" (10,000rpm Spindle) 3.9" - 34.6" (6,000rpm Spindle) | 80 - 980 mm (10,000 min ⁻¹ Spindle) 100 - 980 mm (6,000 min ⁻¹ Spindle) |
| | Spindle nose to pallet center Pallet top height (from the floor) | 2.0" - 42.1" 52.4" | 50 - 1,070mm 1,330 mm |
| TABLE | Table size | 24.8" x 24.8" | 630 mm x 630 mm |
| | Workpiece max. size | Φ39.4" x 51.2" | Φ1,000 x 1,300 mm |
| | Max. payload | 2,640 lb | 1,200 kg |
| SPINDLE | Configuration | M16 x 30L P=4.9" | M16 x 30L P=125 mm |
| | Min. indexing degree | 1° [opt : 0.001°] | 1° [opt : 0.001°] |
| | Indexing speed | 2.2 sec/90° 2.0 sec/90° [opt : 0.001°] | 2.2 sec/90° 2.0 sec/90° [opt : 0.001°] |
| FEED | Pallet clamping system | Mechanical Lock | Mechanical Lock |
| | Pallet clamping force | 3,590 lb x 4 cone | 16Kn x 4 cone |
| | B-axis clamping torque | 36,140lb-ft 3,023lb-ft [opt : 0.001°] | 49,000Nm 5,500Nm [opt : 0.001°] |
| SPINDLE | Spindle speed | 20 ~ 10,000 rpm [opt : 6,000 rpm] | 20 ~ 10,000 rpm [opt : 6,000 min ⁻¹] |
| | Spindle rated torque | 442 lb-ft (15%ED) 309 lb-ft (15 min) 885 lb-ft (10% ED) [opt : 6,000 rpm] 481 lb-ft (30 min) [opt : 6,000 rpm] | 600Nm (15%ED) 420Nm (15 min) 1202Nm (10% ED) [opt : 6,000 min ⁻¹] 653 Nm (30 min) [opt : 6,000 min ⁻¹] |
| | Spindle acceleration / declaration | 5.5 sec (0-10K rpm)/5.5 sec (10K-0 rpm) | 5.5 sec (0-10K min ⁻¹)/5.5 sec (10K-0 min ⁻¹) |
| FEED | Spindle taper | ISO 7/24 Taper NT No. 50 | ISO 7/24 Taper NT No. 50 |
| | Through spindle coolant | 428 psi | 3.0 Mpa |
| | Rapid feed (X/Y/Z) | 1,969 ipm | 50,000 mm/min |
| ATC | Cutting feed (X/Y/Z) | 0.04~1,969 ipm | 1~50,000 mm/min |
| | Table rotating speed | Parkson: 16.6 rpm Tsudakoma: 22.2 rpm | Parkson: 16.6 min ⁻¹ Tsudakoma: 22.2 min ⁻¹ |
| | Guide ways (X/Y/Z) | Roller ways [THK] Acceleration (X/Y/Z) Ballscrews size | Roller ways [THK] 0.7 G/1.4 G/0.9 G Φ1.97" |
| ATC | Type of tool shank | BBT 50 /CAT 50 [opt.] | BBT 50 /CAT 50 [opt.] |
| | Type of pull-stud | JIS 50P/CAT 50 [opt.] | JIS 50P/CAT 50 [opt.] |
| | Number of tools | 60 | 60 |
| ATC | Max. tool diameter (Adjacent pots full / empty) | 4.5" / 11.8" | Φ115mm / Φ300mm |
| | Max. tool length | 23.6" | 600 mm |
| | Max. tool weight | 55 lb | 25 kg |
| ATC | Tool selection system | Random | Random |
| | Tool to tool | 2 sec 3 sec (heavy tool programmable) 7 sec | 2 sec 3 sec (heavy tool programmable) 7 sec |
| | Chip to chip | 8 sec (heavy tool programmable) | 8 sec (heavy tool programmable) |
| APC | Number of pallets | 2 [opt: 6] | 2 [opt: 6] |
| | Pallet change system | Rotation | Rotation |
| | APC exchange time | 15 sec | 15 sec |
| MOTOR | Spindle motor | 60 / 50 hp | 45 / 37 kW |
| | Feed axes motors (X/Y/Z/B) | 7.4 / 6.7 / 7.4 / 5.4 hp | 5.5 / 5.0 / 5.5 / 4.0 kW |
| | Lubrication pump motor | 0.024 hp | 18W |
| MOTOR | Spindle coolant pump | 1.7hp | 1,270 W |
| | Chips flush (base) coolant pump | 2.2hp | 1,620 W |
| | Through spindle coolant pump | 3.0hp | 2,200 W |
| MOTOR | Overhead shower flush coolant pump | 3.2hp | 2,350 W |
| | Hydraulic pump | 3.0 hp | 2.23 kW |
| | Electric voltage | 200 - 230 V | 200 - 230 V |
| SUPPLY | Electric power supply | 45 / 50 kVA, 70kVA | 45 / 50 kVA, 70kVA |
| | Air pressure | 87.0 psi | 0.6 Mpa |
| | Air volume | 198 gallon/min | 750 liter/min |
| TANK | Hydraulic unit tank | 15.9 gallon | 60 liter |
| | Coolant tank | 264.2 gallon | 1,000 liter |
| | Lubrication unit tank | 0.47 gallon | 1.8 liter |
| SIZE | Machine dimension (L x W x H) | 229.9" x 161.6" x 132.4" | 5,839 mm x 4,104 mm x 3,364 mm |
| | Required floor space (L x W x H) | 261.4" x 220.3" x 132.4" | 6,639mm x 5,595mm x 3,364 mm |
| | Machine weight | 40,124 lb | 18,200 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
- Cutting air blow
- Spindle load monitoring
- 30 Bar 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
- Multi-language display
- Safety door
- Leveling blocks and screws
- Oil skimmer
- 3-color machine status indicator
- Prepped for 1,000 psi CTS
- Fluorescent lamps
- Maintenance tools
- Manuals
- Chip augers
- iPad with video camera

Optional Accessories

- 6 pallet APC
- Chip conveyor
- Workpiece measurement
- Tool length measurement
- Laser tool measurement
- Linear scale (X/Y/Z)
- Tool shank
- Pull Stud
- A/C cooler for electric cabinet
- Oil mist collector
- Floating ball type level detection for coolant tank
- Energy-saving function

HS-630i

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HS-630i Standard Features

- Large Travels: X 41.3" Y 35.4" Z 40.2"
- Large Work Envelope: $\Phi 39.4" \times 51.2"$
- FANUC 31i-MB Nano Control
- 60 Tool Automatic Tool Changer (ATC) (2 Sec. T-T Change)
- Standard 10,000 rpm Big-Plus[®] 60 HP/ 600 Nm High Spindle Speed
Optional 6,000 rpm Big-Plus[®] 74 HP/ 1,200 Nm High Spindle Torque
- 30 Bar Through Spindle Coolant
- AICC II Contour Control with 200 Block Lock Ahead
- 50m/min Rapid Traverse
- 0.7G/1.4G/0.9G(X/Y/Z) Acceleration and Deceleration
- THK[®] Roller Guide Ways
- TSUBAKI[®] Through Ballscrews Coolant
- Standard 1° Index Table
Optional Full 4th Axis Rotary Table (0.001°)
Optional Tsudakoma[®] Full 4th Axis Rotary Table (0.001°)
- Thermal Compensation (Chilled Spindle and Through Ballscrews Coolant System)
- Automatic Machine Power Up and Shut Down
- Pressurized Oil and Air Lubricated for the Spindle
- Pressurized Oil Lubricated for Roller Guide Ways and Ballscrews
- Stepped Style Casting One Piece with Heavy Ribbed Base
- Air Cutting Through Spindle
- Automatic Pallet Wash System (overhead)
- Spindle Load Monitoring



Easy Operator's Panel

One-piece Machine Base



Standard 30 Bar CTS and
Optional Roller Type Chip Conveyor

Powerful Spindle



10,000 RPM / 60 HP / 600 Nm Max. Spindle Output

FANUC Series 31i-MB Control



Automatic Pallet Changer (APC)

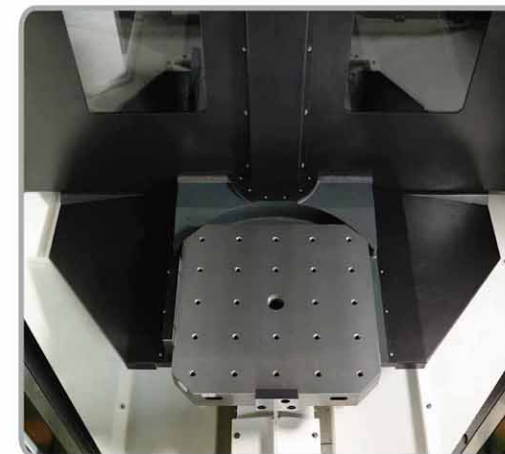


Full 4th Rotary Table (Standard 1° / Optional 0.001°)

Automatic Tool Changer (ATC)



60 Tools Magazine



15 Sec. APC Change



2 Sec. T-T Change