

GS 150i TURNING CENTER

Faster Machining Duty Cycle Time
and Reduced Non-Cutting Time



HARDINGE GS150i

FEATURES

- 3 Jaw Chuck
- Full Machine Documentation
- Custom Macro B
- AUTO Environmentally Friendly Grease Lubrication
- User Friendly Operators Panel
- Bright Fluorescent Work Light
- Chip Conveyor Interface
- Manual Guide 0i (program assist)
- Rigid Tapping
- Pendant Mounted Control – Color Display
- PC/MICA Flash Card Slot
- USB Drive Slot
- Run Time/Parts Counter
- Chip Conveyor
- Complete Operator's, Programmer's and Maintenance Documentation
- 180psi Coolant
- Hollow Hydraulic Actuator Cylinder



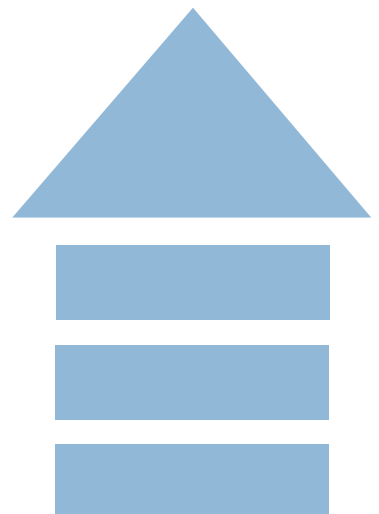
FANUC OITF STANDARD CNC CONTROL

Designed and manufactured by Hardinge to our exacting standards for quality and durability, the all new GSi Series offers an excellent combination of features in a compact, affordable machine.



WORKHOLDING OPTIONS

- Collet Adaptation Chucks
- FLEX C Collet System
- Expanding Collet Systems

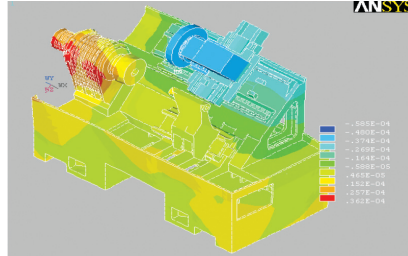


GS150i KEY FEATURES

HIGH EFFICIENCY

Faster machining duty cycle time and reduced non-cutting time

- Fast spindle speeds up to 6,000 RPM on GS150i
- Fast rapid traverse rates of 30m/min
- Fast turret indexing time of .45sec T to T



RIGID STRUCTURE

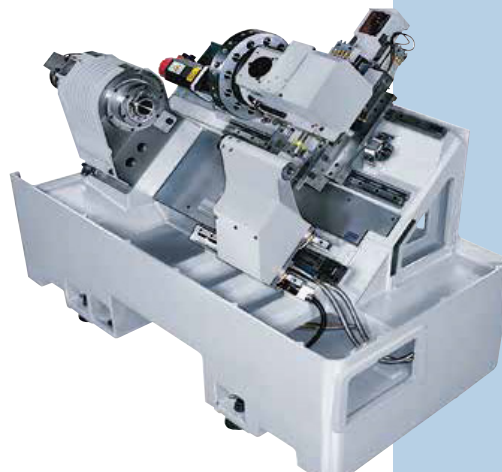
Longer tool life and heavy cutting ability

- 45° rigid, stable base with strategically ribbed reinforcements
- High quality one piece cast iron base
- Designed utilizing the latest in FEA (Finite Element Analysis) techniques
- Class 2 ball screw, pre-tensioned, double ball nut design
- Heavy duty linear guideways for increased stiffness and longer machine life
- Headstock design minimizes thermal displacement to assure continuous machining accuracy



ONE PIECE BED AND BASE STRUCTURE

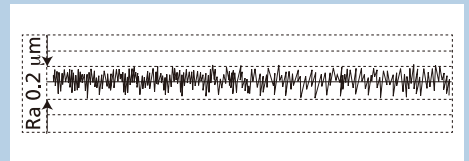
FEA qualified structural components. Strategically ribbed, one piece, 45° slant bed design for easy access and chip removal. High quality cast iron base and integrated structure contributes to overall stability, rigidity and durability of the machine. Special headstock design minimizes thermal displacement and assures continuous machining accuracy.



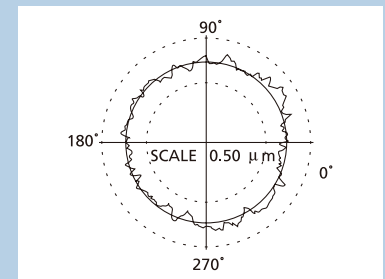
EXCELLENT AND STABLE ACCURACY

Stable static and cutting accuracy

- Full stroke positioning accuracy of 0.01mm (ISO230-2) on X and Z axes
- Full stroke repeatability accuracy of 0.005mm (ISO230-2) on X and Z axes
- Actual machining results
- Spindle Speed: 1250 RPM



SURFACE FINISH: RA 0.8μM



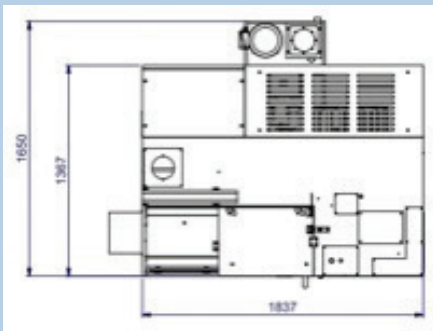
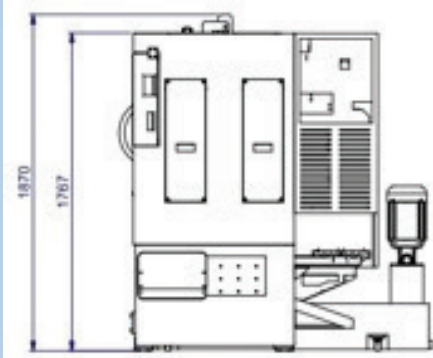
ROUNDNESS: 2μM

KEY FEATURES GS150i

COMPACT AND EFFICIENT

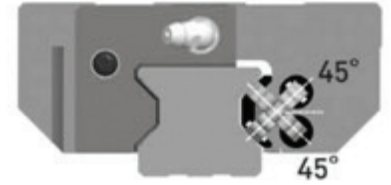
Small floor plan with large working envelope

- Machine layout with small floor plan



HEAVY DUTY 2-ROW LINEAR GUIDEWAY

X and Z axis 2-row linear guideways feature maximum static and dynamic stiffness, longer machine life and overall machining consistency.



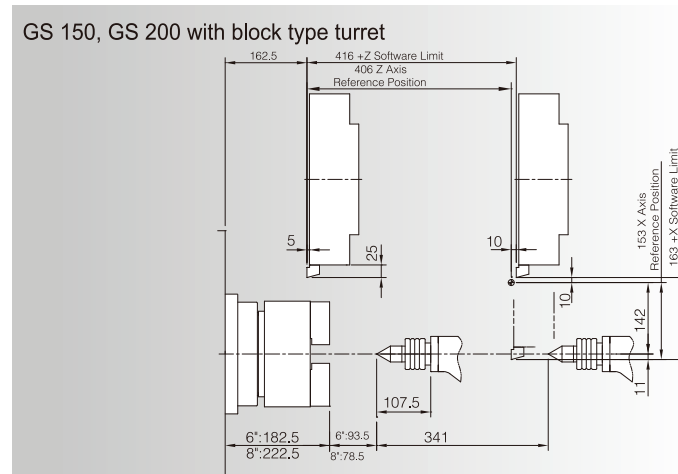
HIGH PRECISION AND HIGH STIFFNESS SPINDLE

The precision and reliability have been verified by wide utilization in customers. There are four 25° angular contact bearings which offers both axial and radial stiffness for maximum cutting accuracy.



X AND Z AXIS TRAVELS

NOTE: Shown with Optional Tailstock



UNIT : mm

GS150i CONTROL FEATURES

FANUC OITF STANDARD CNC CONTROL FEATURES

General

8.4" Color LCD Display

Two Interpolating Axis

Programmable Resolution - .0001"/.001mm

Tool Offset Capability - .0001"/.001mm

Tool Geometry and Tool Wear Offsets (64 pair each)

Inch/Metric Data Selection by G-Code

1280 Meters (512 KB) Part Program Storage

Flash Card Slot Capability (up to 128 MB)

Data Input/Output

MDI (Manual Data Input) Operation

Reader/Punch Interface Connection (RS-232 Software/Hardware)

DNC (Remote Buffer)

Embedded Ethernet

Miscellaneous

Alarm Display

English Color LCD Display with Full Keyboard

On-Screen "HELP" Functions for Alarms

Program Protect

Run Time and Parts Counter

Self-Diagnosis Function

Spindle Lock (Servo)

Spindle Orient – One Degree

Stored Pitch Error Compensation

Programming Functions

Absolute/Incremental Programming

Additional Tool Offsets (64 Pair Total)

AI Contour Control

Background Editing

Blueprint Programming

Canned Cycles (Drilling)

Chamfer/Corner Rounding

Constant Surface Speed Programming

Continual Thread Cutting

Coordinate System Setting (G50)

Custom Macro B

Diameter/Radius Programming

Extended Part Program Edit (Copy/Replace)

Graphic Display

Hardinge Safe Start Format

Input of Offset Value by Programming (G10)

Programming Functions (Continued)

Interpolation (Linear and Circular)

Manual Guide Oi (G-code assist)

Multiple Repetitive Canned Cycles I (Turning)

Multiple Repetitive Canned Cycles II (Pockets)

Nano Interpolation

Registered Part Programs (200 total)

Rigid Tapping

Single Block Operation

Spare M-Codes (8)

Thread, Synchronous Cutting

Tool Life Management

Tool Nose Radius Compensation

Variable Lead Thread Cutting

Operation

Block Delete

Clamp/Unclamp Indicator Light Switch

Coolant Control

Dry Run

Dwell Time

Emergency Stop

Feedhold

Feedrate Override (0 to 150%)

Incremental Jog

Jog Feed Override (0 to 150%)

Machine Lock

Manual Pulse Generator (MPG Hand wheel)

On-Screen Spindle & Axis Load Meters

Option Stop

Rapid Traverse Override (Low-25-50-100%)

Single Block

Spindle Speed and T-Code Displays on All Screens

Spindle Speed Override (50 to 120%)

OPTIONAL EQUIPMENT GS150i



OPTIONAL EQUIPMENT

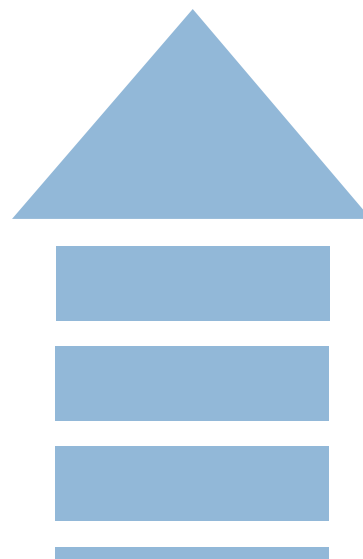
- Hydraulic Tailstock

TAILSTOCK (OPTION)

Type	Hydraulic Positioned	Hydraulic Positioned
Sub Base Travel	13.42"	341mm
Quill Travel	No	No
Thrust (Max)	780lbs	3470N
Morse Taper	MT4	MT4
Max Feed Rate (Rapid)	216IPM	5.5M/min
Max Part Length (Collet Spindle)	13.42"	341mm
Min Part Length (Collet Spindle)	0.68"	17.3mm

CHIP CONVEYOR (STANDARD)

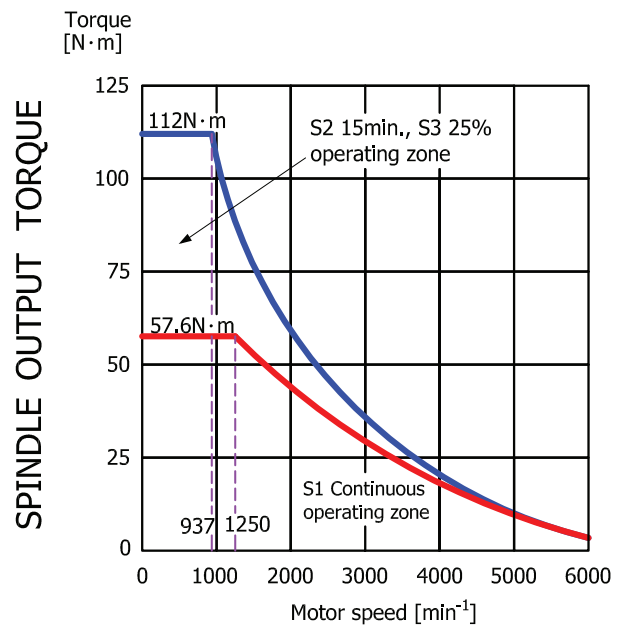
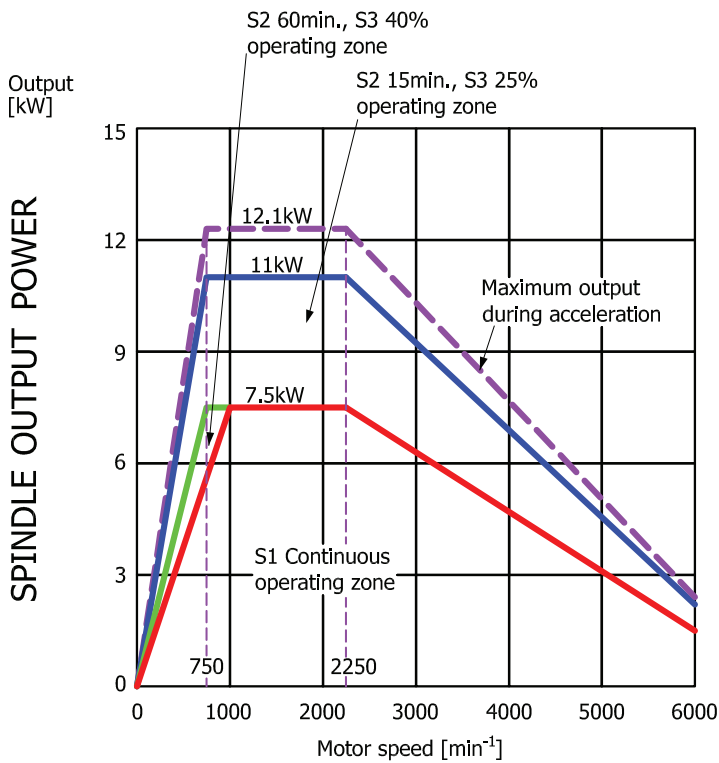
Type	Side Discharge	
Speed (60Hz)	55IPM	1.4M/min
Width	12"	305mm
Belt Width	9.8"	250mm
Drive	1/4HP	1/4HP



GS150I FANUC MOTOR SPECIFICATIONS

BiI 8/12000

Main Spindle 6000RPM Output Diagram



SPECIFICATIONS GS150i

	GS150i
Capacity	
Swing Over Way Covers (Dia)	18" (457mm)
Chuck Size 3 Jaw	6.65" (168mm)
Part Weight w/ Chuck	105Lbs (48Kgs)
Max Machining Dia	11.1" (284mm)
Max Turning Length	16" (406mm)
Part Accuracy	
Roundness	.00008" (2 micron)
Surface Finish Ra	32µin (0.8 micron)
Total Part Variation On Dia (CMA)	.00071" (18 micron)
Spindle/Head	
Spindle Nose	A2-5 (Standard)
Spindle Hole Thru	N/A
Max Speed/Base Speed	6000/1250rpm
Front Bearing Bore	90mm
Motor	Fanuc βi118 / 12000i
Power @ Spindle (Continuous)	10HP/7.5Kw
Power @ Spindle (15Min)	14.7HP/11Kw
Torque @ Spindle (Continuous)	42.4Ft-Lbs (57.5 Nm)
Torque @ Spindle (15Min)	82.6Ft-Lbs (112 Nm)
Belt Drive Ratio (Motor/Spindle)	1.6
Spindle Accel Time	TBD
Spindle Decel Time	TBD
Slides	
Z Axis	
Guide Z	PMI or HIWIN RGH30HA
Travel Z (w/ 8" Chuck)	16" (406mm)
Rapid Traverse Z	1181ipm (30m/min)
Axis Motor Z	Fanuc β8 / 3000i (1.2kw)
Axis Thrust Z (Continuous), Fanuc	989Lbs (4398N)
Axis Thrust Z (Max), Fanuc	2119Lbs (9424N)
Drive Ratio	1:1
Z Axis Ball Screw	
MFR	PMI
Pitch	0.4" (10mm)
Dia	1.1" (28mm)
Class	3
Nut Type	Double Nut w/External Tubes & Spacer Preloaded

GS150i SPECIFICATIONS

	GS150i
Preload	7%
X Axis	
Guide X	PMI or HIWIN RGH30CA
Travel X (Reference Position)	6.02" (153mm)
Rapid Traverse X	1182ipm (30m/min)
Axis Motor X	Fanuc β8 / 3000i (1.2kw)
Axis Thrust X (Continuous), Fanuc	989Lbs (4398N)
Axis Thrust X (Max), Fanuc	2119Lbs (9424N)
Drive Ratio, X-Axis	1:1
X Axis Ball Screw	
MFR	PMI
Pitch	.04" (10mm)
Dia	1.1" (28mm)
Class	2
Nut Type	Double Nut w/Eternal Tube
Preload	7%
Max Operating Temperature Range	50-114F (10-45C)
X Axis	
Position Accy/Total Travel (ISO 230-2)	.0004" (0.01mm)
Repeatability (ISO 230-2)	.0002" (0.005mm)
Machine Dimensions	
Spindle CI Height	39.88" (1013mm)
Length w/o chip conveyor	72.3" (1836.42mm)
Width	65" (1650mm)
Height	69.5" (1767mm)
Weight	5732Lbs (2600kg)
Required Floor Space	3.0M ²
Spindle Reach	11" (280mm)
Base	
Material	Cast Iron
Slide Configuration	Slant Base 45 Deg
Width of Ways (Carriage)	11.6" (295mm)
Weight of Base (Approx)	2970Lbs (1350Kgs)
Lubrication (Standard)	
Ball Screws	AUTO Grease
Guides (X & Z & Tailstock)	AUTO Grease
Bearings	Grease For Life

SPECIFICATIONS GS150i

	GS150i
Coolant Facilities	
Reservoir Capacity	125L
Pump Size	1.1HP
Pump Rating	26L
Pressure	180psi (12.5Bar)
Turret/Top Plate (Standard)	
Type	Motor Drive Turret
Number of Stations	12
Top Plate Size Across Flat	11.26" (286mm)
Index Time Next Station (Unlock, Index, & Lock) 45	0.45 sec
Turret/Top Plate (Option)	
Type	—
Number of Stations	—
Top Plate Size Across Flat	—
Index Time Next Station (Unlock, Index & Lock)30	—
Chuck	
Max Speed	6000rpm
Stroke	0.5" (12mm)
Jaw Movement	0.108" (2.75mm)
Thru Hole	1.77" (45mm)
External Chucking Capacity	0.51"-6.5" (13mm-169mm)
CNC Control (Standard)	Fanuc 0i TF 8.4"LCD

All specifications and designs are subject to alterations without notice

GS 150i





HARDINGE WORLDWIDE

Hardinge is a leading international provider of advanced metal-cutting solutions. We provide a full spectrum of highly reliable CNC turning, milling, and grinding machines as well as technologically advanced work-holding accessories.

The diverse products we offer enable us to support a variety of market applications in industries including aerospace, agricultural, automotive, construction, consumer products, defense, energy, medical, technology, transportation and more.

We've developed a strong global presence with manufacturing operations in North America, Europe, and Asia. Hardinge applies its engineering and applications expertise to provide your company with the right machine tool solution and support every time.

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