

Hardinge GS 42 & GS 51 Turning Centers

GS 42 & GS 51 turning centers feature Hardinge's unique collet ready spindle allowing for better part accuracy and surface finish. These Hardinge designed and manufactured machines are intended for speed, power, accuracy and durability over other competitive machines. Built on a robust one-piece cast iron base, heavy-duty linear roller guideways and ballscrews is what has made this machine platform Hardinge's workhorse in the market.

The X- and Z-axis ball screws, linear roller guides and guide trucks feature a large load rating with minimal friction, resulting in low heat and thermal growth, longer machine life, maximum static and dynamic stiffness and overall machining consistency. The double-nut hardened & ground ball screws are laser calibrated and supported by heavy-duty ball screw supports.

The GS 42 & 51 come standard with the Hardinge/Fanuc i-Series GS CNC control which includes many value-added features that are offered as options by other machine builders. Choose from the numerous productivity options and you'll have a truly versatile machine with the level of quality you would expect from Hardinge.

TURNING MILLING
GRINDING WORKHOLDING



Key Options Available:

- Live Tooling & C-Axis
- Tailstock
- Chip Conveyor
- 280PSI - Thru Turret Coolant
- Arm Type Parts Catcher w/ Conveyor
- Tool Touch Probe

Hardinge's Unique Collet-Ready Spindle

The preferred method of holding a workpiece for precision machining is with a collet. The Hardinge-designed and built collet-ready spindle permits the industry's best part rigidity and accuracy since parts are gripped close to the spindle bearings. Ask for "The Hardinge Advantage" Technical Information Bulletin (TIB-229) to learn more.

Extra-Stable, Heavy Machine Base

Our one-piece, high-quality cast iron bases feature an impressive weight for heavy cutting, precision tolerances and fine surface finishes (the GS 42 & GS 51 base weighs 2,970 lbs). The robust bases are strategically ribbed, providing superior rigidity and durability. A 45-degree base is featured on the GS 42 & GS 51.

Grease Lubrication System

Grease lubrication is provided for all ballscrews and linear roller guides on the GS 42 & GS 51. Grease lubrication provides several advantages over way lube oil systems including:

- No oil skimmer required
- No degradation of water-base coolants
- Environmentally friendly
- Improves machine maintenance

Hardinge Inc.

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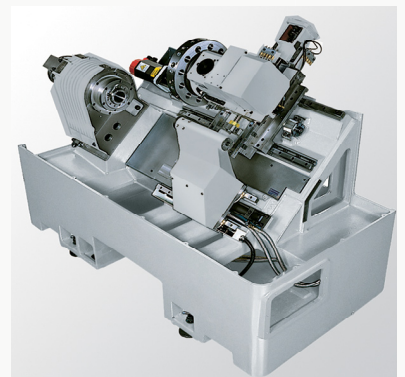
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Hardinge GS 42

- A2-5 16C spindle
- 11-kW (15-hp) spindle drive system
- 6,000-rpm spindle speed
- 42mm (1.65") Bar Capacity
- 12 Station Vertical Block Type Turret

Hardinge GS 51

- A2-6 20C spindle
- 11-kW (15-hp) spindle drive system
- 5,000-rpm spindle speed
- 51mm (2") Bar Capacity
- 12 Station Vertical Block Type Turret



 **HARDINGE**
EXPECT MORE™

Hardinge®/GE Fanuc 32-Bit Oi-TC CNC Control

Hardinge GS 42 & GS 51 turning centers feature a Fanuc Oi-TC CNC control with the latest hardware and software technology, providing an operator-friendly, common platform. Many standard features are included that other machine tool builders charge extra for providing exceptional value for the GS-Series turning centers.



Hardinge GS 42 & 51 Turning Centers Specifications

	GS 42	GS 51
Collet-Ready Spindle		
Configuration (ANSI)	A2-5, 16C	A2-6, 20C
Max. Speed	6,000 RPM	5,000 RPM
Max. Power Rating	11kW (15HP)	11kW (15 HP)
Torque at Spindle (15 min)	171.5 Nm (126.5 ft-lb)	206Nm (152 ft-lb)
Spindle Centerline Height	1,000mm (39.4")	1,000mm (39.4")
Operator's Reach to Spindle	432mm (11")	432mm (11")
Work Capacities		
Max Bar Capacity	42mm (1.65")	51 mm (2")
Max Machining Diameter	284mm (11.10")	284mm (11.10")
Max Machining Length	456mm (17.95")	456mm (17.95")
Travel and Feedrates		
Max X-Axis Travel (Block) (Standard)	153mm (6.02")	153mm (6.02")
Max X-Axis Travel (VDI) (Optional)	218mm (8.58")	218mm (8.58")
Max Z-Axis Travel	456mm (17.95")	456mm (17.95")
Max. Z-Axis Thrust 1 Sec. (Fanuc)	17,907N (4,026 lbs.)	17,907N (4,026 lbs.)
Max. Z-Axis Thrust 1 Min. (Fanuc)	7,540N (1,695 lbs.)	7,540N (1,695 lbs.)
X and Z Axis Rapid Traverse Rates	30m/min (1,181 IPM)	30m/min (1,181 IPM)
Turret Top Plate - Vertical Block Type		
Bi-Directional	12 Station	12 Station
Square Shank	20mm (.750")	20mm (.750")
Round Shank Tooling	32mm (1.250")	32mm (1.250")
Rotation / Index Time	.25 /1 Second	.25/1 Second
Tool Shank Dia. w/ER 25 Collets	2mm-16mm (.079-.625")	2mm-16mm (.079-.625")
Programmable Hydraulic Tailstock (Option)		
Morse Taper (no quill needed)	MT #4	MT #4
Max Part Length (With Collet - Block)	451mm (17.75")	451mm (17.75")
Max Part Length (With Chuck - Block)	351mm (13.82")	330mm (12.99")
Max Tailstock Travel	341mm (13.42")	341mm (13.42")
Max Traverse Rate	5.5 m/min (216 IPM)	5.5 m/min (216 IPM)
Max Thrust	3,470N (780lbs)	3,470N (780lbs)
Coolant Facilities		
Coolant Capacity	156 Liter (41 Gallon)	156 Liter (41 Gallon)
Max Pressure	2.8 Bar (40 psi)	2.8 Bar (40 psi)
Pump Size	1.1 HP	1.1 HP
Pump Rating	26L	26L
Accuracy Specifications (ISO - 230-2)		
Overall Axis Repeatability	.0025mm (.0001")	.0025mm (.0001")
Miscellaneous		
Power Supply Requirement	220v/3Phase/67FLA	220v/3Phase/67FLA
Program Resolution	0.001mm (0.0001")	0.001mm (0.0001")
Machine Lubrication	Grease	Grease
Machine Communication	RS-232-C and PCMCIA Card Capability	RS-232-C and PCMCIA Card Capability
Machine Dimensions		
Length	1998mm (78.66")	1998mm (78.66")
Length with Chip Conveyor Option	2958mm (116.46")	2958mm (116.46")
Depth	1650mm (65")	1650mm (65")
Height	1781mm (70.12")	1781mm (70.12")
Weight (Approx.)	2,694kg (5,940lb)	2,800kg (6,160lb)
Shipping Weight (Approx.)	3,057kg (6,739lb)	3,156kg (6,959lb)