

Specifications

GS-Series Performance Turning Centers

	GS 150/42	GS 200/51	GS 200/66/65	GS 200/66 L	GS 250	GS 250 L
Spindle						
Chuck-Ready Spindle Config.—ANSI ¹	A2-5	A2-6	A2-6	A2-6	A2-8	A2-8
Draw Tube Type	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic
Through Draw Tube Capacity	45mm (1.77")	52mm (2.05")	66mm (2.60")	66mm (2.60")	78mm (3.07")	78mm (3.07")
GS 42/GS 51/GS 65	42 (1.65")	51mm (2")	67mm (2.63")			
Jaw Chuck Size—Max.	150mm (6")	200mm (8")	200mm (8")	200mm (8")	250mm (10")	250mm (10")
Gripping Capacity ¹ 35mm (5.31")	7.28"/185mm	7.28"/185mm	7.28"/185mm	9.00"/288.6mm	9.00"/288.6mm	
Machining Diameter—Max.	284mm (11.10")	284mm (11.10")	356mm (14.015")	356mm (14.015")	356mm (14.015")	356mm (14.015")
Turning Length—Max. ^{2,3}	406mm (15.98")	406mm (15.98")	600mm (23.62")	1050mm (41.34")	600mm (23.62")	1024.6mm (40.31")
GS 42/GS 51/GS 65	456mm (17.95")	456mm (17.95")	600mm (23.62")			
Hang Weight with Device and Part	34kg (75lb)	48kg (105lb)	70kg (154lb)	70kg (154lb)	117kg (258lb)	117kg (258lb)
Spindle Centerline Height	1,000mm (39.40")	1,000mm (39.40")	1,041mm (41.00")	1,041mm (41.00")	1,041mm (41.00")	1,041mm (41.00")
Operator's Reach to Spindle	280mm (11")	280mm (11")	432mm (17")	432mm (17")	432mm (17")	432mm (17")
AC Digital Spindle Drive System⁴						
Fanuc Control (S3)—High Winding						
Peak Power Rating	18.5kW (24.7hp)	18.5kW (24.7hp)	26kW (35hp)	26kW (35hp)	26kW (35hp)	26kW (35hp)
Torque Rating	126Nm (93ft-lb)	151Nm (111.3ft-lb)	322Nm (237.6ft-lb)	322Nm (237.6ft-lb)	386Nm (285ft-lb)	386Nm (285ft-lb)
Base Speed	1400 rpm	1167 rpm	770 rpm	770 rpm	642 rpm	642 rpm
Max. Speed-l-rpm Steps	6000 rpm	5000 rpm	4200 rpm	4200 rpm	3500 rpm	3500 rpm
Fanuc Control (S3)—Low Winding*						
Peak Power Rating	11kW (15hp)	11kW (15hp)	18.5kW (24.8hp)	18.5kW (24.8hp)	18.5kW (24.8hp)	18.5kW (24.8hp)
Torque Rating	175Nm (128.4ft-lb)	210Nm (154ft-lb)	504Nm (371.4ft-lb)	504Nm (371.4ft-lb)	605Nm (445.6ft-lb)	605Nm (445.6ft-lb)
Base Speed	600 rpm	500 rpm	350 rpm	350 rpm	292 rpm	292 rpm
Max. Speed-l-rpm Steps	1500 rpm	1250 rpm	1050 rpm	1050 rpm	875 rpm	875 rpm
Carriage and Cross Slide						
Swing Dia. Over Way Cover—Max.	457mm (18.00")	457mm (18.00")	595mm (23.42")	595mm (23.42")	595mm (23.42")	595mm (23.42")
Travel—Max.—X Axis	153mm (6.023")	153mm (6.023")	271.5mm (10.70")	271.5mm (10.70")	271.5mm (10.70")	271.5mm (10.70")
Z Axis	406mm (16.00")	406mm (16.00")	600mm (23.62")	1050mm (41.34")	600mm (23.62")	1050mm (41.34")
Traverse Rates—Max.						
X and Z Axes	30m/min (1,181ipm)	30m/min (1,181ipm)	30m/min (1,181ipm)	30m/min (1,181ipm)	30m/min (1,181ipm)	30m/min (1,181ipm)
Z-Axis Thrust—Max.						
With Fanuc Control	17,907N (4,026lb)	17,907N (4,026lb)	21,991N (4,944lb)	21,991N (4,944lb)	21,991N (4,944lb)	21,991N (4,944lb)
Ball Screw Diameter—X Axis	28mm (1.102")	28mm (1.102")	36mm (1.417")	36mm (1.417")	36mm (1.417")	36mm (1.417")
Z Axis	28mm (1.102")	28mm (1.102")	40mm (1.575")	40mm (1.575")	40mm (1.575")	40mm (1.575")
Accuracy						
Evaluation Standard	ISO 230-2	ISO 230-2	ISO 230-2	ISO 230-2	ISO 230-2	ISO 230-2
Repeatability—X and Z Axes (ISO)	.005mm (.0002")	.005mm (.0002")	.005mm (.0002")	.005mm (.0002")	.005mm (.0002")	.005mm (.0002")

1—Optional collet adaptation chucks available in many configurations, including 5C, 16C, 20C, 3J, S15, S20, B42 and B60.

2—Dependent on type of live center used.

3—Maximum turning length with tailstock option.

4—Peak ratings used for power and torque specifications.

5—Index time (includes undamp and clamp).

6—Original equipment only.

7—Available on VDI top plate only.

8—Balanced, 3-phase.

*—Availability may be limited to certain markets.

	GS 150/42	GS 200/51	GS 200/66/65	GS 200/66 L	GS 250	GS 250 L
Turret Top Plate—Bidirectional	Vertical Block or VDI 30	Vertical Block or VDI 30	Vertical Block or VDI 40	Vertical Block or VDI 40	Vertical Block or VDI 40	Vertical Block or VDI 40
Number of Station	12	12	12	12	12	12
Square Shank Tool Size—Max.	20mm or ¾"	20mm or ¾"	25mm or 1"	25mm or 1"	25mm or 1"	25mm or 1"
Round Shank Tool Size—Max.	32mm or 1¼"	32mm or 1¼"	40mm or 1½"	40mm or 1½"	40mm or 1½"	40mm or 1½"
Index Time—Adjacent Station⁵						
Vertical Block	.46 Second	.46 Second	.3 Second	.3 Second	.3 Second	.3 Second
VDI	0.78 Second	0.78 Second	0.78 Second	0.78 Second	0.78 Second	0.78 Second
VDI Live Tooling/C-Axis Option^{6,7}						
Tool Shank Diameter w/ER25 Collets	2 to 16mm	2 to 16mm	2 to 16mm	2 to 16mm	2 to 16mm	2 to 16mm
	.079 to .625"	.079 to .625"	.079 to .625"	.079 to .625"	.079 to .625"	.079 to .625"
Power Rating at Tool Tip ⁴	3.7kW (5hp)	3.7kW (5hp)	8kW (10.5hp)	8kW (10.5hp)	8kW (10.5hp)	8kW (10.5hp)
Torque Rating at Tool Tip ⁴	25Nm (18.44ft-lb)	25Nm (18.44ft-lb)	35.0Nm (25.80ft-lb)	35.0Nm (25.80ft-lb)	35.0Nm (25.80ft-lb)	35.0Nm (25.80ft-lb)
Maximum Speed—I-rpm Steps	5,000	5,000	4,000	4,000	4,000	4,000
C-Axis Contouring Resolution	.001 Degree	.001 Degree	.001 Degree	.001 Degree	.001 Degree	.001 Degree
Positioning Accuracy	± 1 Arc Min.	± 1 Arc Min.	± 1 Arc Min.	± 1 Arc Min.	± 1 Arc Min.	± 1 Arc Min.
Repeatability	1.75 Arc Min.	1.75 Arc Min.	1.75 Arc Min.	1.75 Arc Min.	1.75 Arc Min.	1.75 Arc Min.
Tailstock (Fully-Programmable) Option⁶						
Positioning	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic
Morse Taper Center	MT No. 4	MT No. 4	MT No. 5	MT No. 5	MT No. 5	MT No. 5
Travel of Tailstock Base	341mm (13.42")	341mm (13.42")	625mm (24.60")	1075mm (42.32")	625mm (24.60")	1075mm (42.32")
Part Length—Max. ^{2,8}	381mm (15.00")	381mm (15.00")	578mm (22.76")	1012.5mm (39.86")	565mm (23.62")	1012.5mm (39.86")
GS 42/GS 51	499.7mm (23.62")	499.7mm (23.62")				
Min. ²	GS150 42.7mm (1.68")	GS200 42.7mm (1.68")	20.0mm (0.787")	20.0mm (0.787")	20.0mm (0.787")	20.0mm (0.787")
Feedrate—Max.	5.5 m/min (216ipm)	5.5 m/min (216ipm)	5.5 m/min (216ipm)	5.5 m/min (216ipm)	5.5 m/min (216ipm)	5.5 m/min (216ipm)
Thrust—Max.	3,470N (780lb)	3,470N (780lb)	9,354N (2,103lb)	9,354N (2,103lb)	9,354N (2,103lb)	9,354N (2,103lb)
Parts Catcher Option						
Workpiece Dia. x Length—Max.	52 x 100mm	52 x 100mm	65 x 160mm	65 x 160mm	65 x 160mm	65 x 160mm
	2.05 x 4"	2.05 x 4"	2.56 x 6.3"	2.56 x 6.3"	2.56 x 6.3"	2.56 x 6.3"
Miscellaneous						
Power Supply Requirement⁸						
Fanuc Control	220v/67FLA/3phase	220v/67FLA/3phase	220v/74FLA/3phase	220v/74FLA/3phase	220v/74FLA/3phase	220v/74FLA/3phase
Coolant Tank Capacity	125liter (33gal)	125liter (33gal)	290liter (76.62gal)	290liter (76.62gal)	290liter (76.62gal)	290liter (76.62gal)
Coolant Pressure—Standard	2.8bar (40psi)	2.8bar (40psi)	2.8bar (40psi)	2.8bar (40psi)	2.8bar (40psi)	2.8bar (40psi)
Thru-Tool Coolant Option	20bar (280psi)	20bar (280psi)	20bar (280psi)	20bar (280psi)	20bar (280psi)	20bar (280psi)
Machine Weight—Approx.	2694kg (5,940lb)	2794kg (6,160lb)	4950kg (10,915lb)	5550kg (12,236lb)	5000kg (11,024lb)	5600kg (12,346lb)
Shipping Weight—Approx.	3057kg (6,739lb)	3157kg (6,959lb)	5290kg (11,664lb)	5950kg (13,117lb)	5340kg (11,773lb)	6000kg (13,228lb)
Machine Dimensions						
Length	1998mm (78.66")	1998mm (78.66")	2988mm (117.64")	3792mm (149.29")	2988mm (117.64")	3792mm (149.29")
Length w/Chip Conveyor Option	2958mm (116.46")	2958mm (116.46")	3672mm (144.60")	4476mm (176.22")	3672mm (144.60")	4476mm (176.22")
Depth	1650mm (65")	1650mm (65")	2142mm (84.33")	2142mm (84.33")	2142mm (84.33")	2142mm (84.33")
Depth w/Control Unit at Max. Swivel	2153mm (84.76")	2153mm (84.76")	2453mm (96.58")	2453mm (96.58")	2453mm (96.58")	2453mm (96.58")
Height	1781mm (70.12")	1781mm (70.12")	1812mm (71.34")	1823mm (71.77")	1812mm (71.34")	1823mm (71.77")
Floor Area—Approx.	3.3m ² (35.5ft ²)	3.3m ² (35.5ft ²)	5.1m ² (54.9ft ²)	8.5m ² (91.5ft ²)	5.1m ² (54.9ft ²)	8.5m ² (91.5ft ²)

Actual results may be greater or less than those listed due to a number of factors including but not limited to warm up cycles, speeds, feeds, tooling, machine maintenance, coolant, material, ambient temperature and type of machine foundation.