

 **TAKUMI**

G Series



High Speed Bridge-Type Graphite Machining Center (Dry Type)

G600
G1000

G Series

The Takumi G Series, high-speed graphite milling machine provides an optimal solution for graphite machining. The unique design provides clean and dry machining for high accuracy, surface quality and dynamic processing thanks to the optimal mechanical structure, high response axial transmission system, low vibration and excellent thermal controlled spindle.

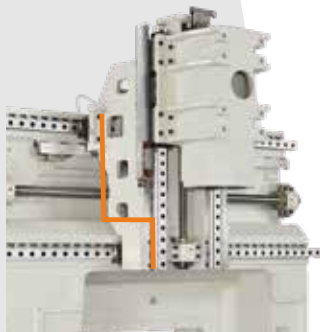


01

G Series Basic Structure

Double column structure

The one-piece design provides increased weight to absorb cutting vibration, and increased rigidity. The dual contact areas with the base eliminates pitch in the Y-axis and reduces the effect of machine leveling changes over time.



Outstanding ladder structure on the beam

The bridge utilizes a "ladder design" head casting and saddle which increases rigidity, reduces overhang and eliminates head deflection. The Y-axis cross rail saddle carries a constant weight, allowing for faster cutting while maintaining excellent part finish.

Highly efficient suction device

Clean working environment is guaranteed. With a strong vacuum dependably removes graphite dust. The maximum air volume of vacuum system can reach 95CMM. Thanks to six filter elements, the filtration degree can reach 0.5μ.



Protective device

Linear guideways and ballscrews with the high graded dusts-proof design which offers optimal protection against graphite dusts and extends the life of linear guideways and ballscrews.



High speed built-in spindle

The high-power built-in spindle limits vibration, noise and power loss during high speeds to achieve superior part finish. The helical cooling channel design minimizes thermal distortion and enables precision over extended cycle times.



High-efficient vacuum system (G600):

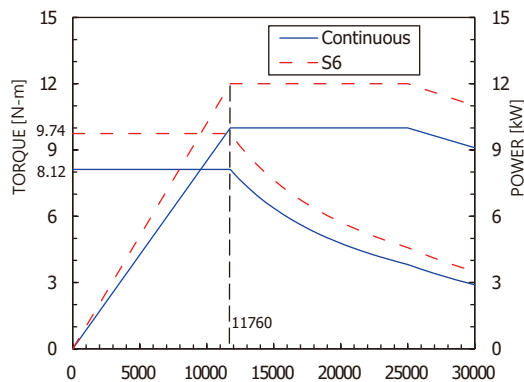
The vacuum system is designed on the table with 2 6-inch collection hoses to extract the graphite dusts without tool interference.



High-efficient vacuum system (G1000):

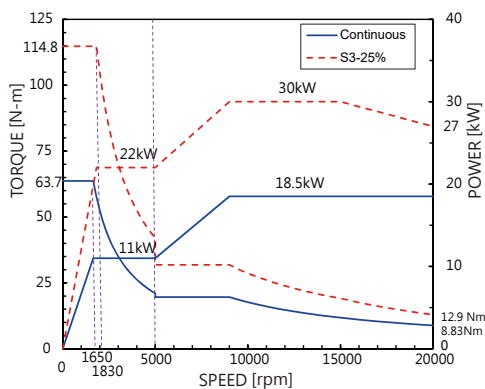
High-efficient dust suction rate at 83%, thanks to the minimal distance of dusts suction nozzle to the tool tip.

Spindle Power - Torque Curve



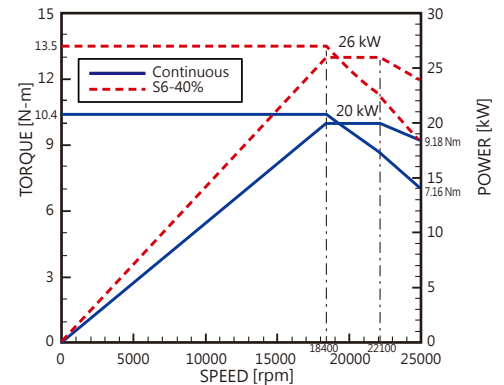
30,000rpm Built-in spindle

(ST:G600)



18,000rpm Built-in spindle

(ST:G1000)



25,000rpm Built-in spindle

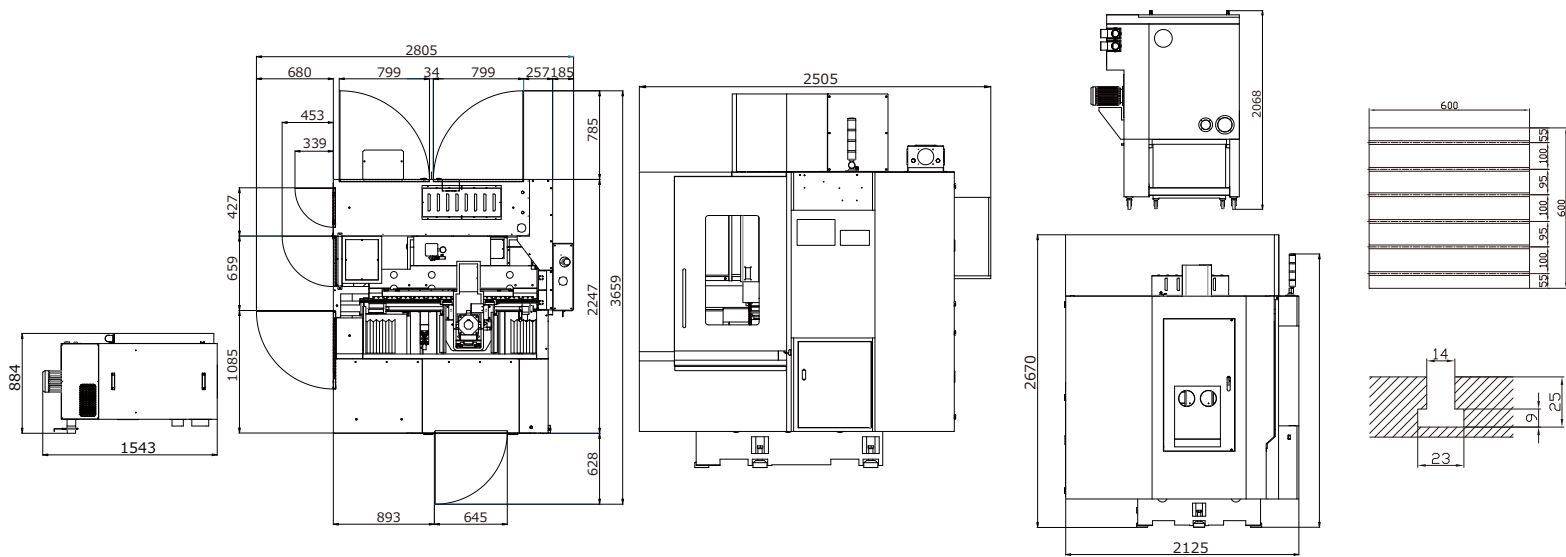
(OP:G1000)

02 **G Series Spindle**

External Dimension

G600

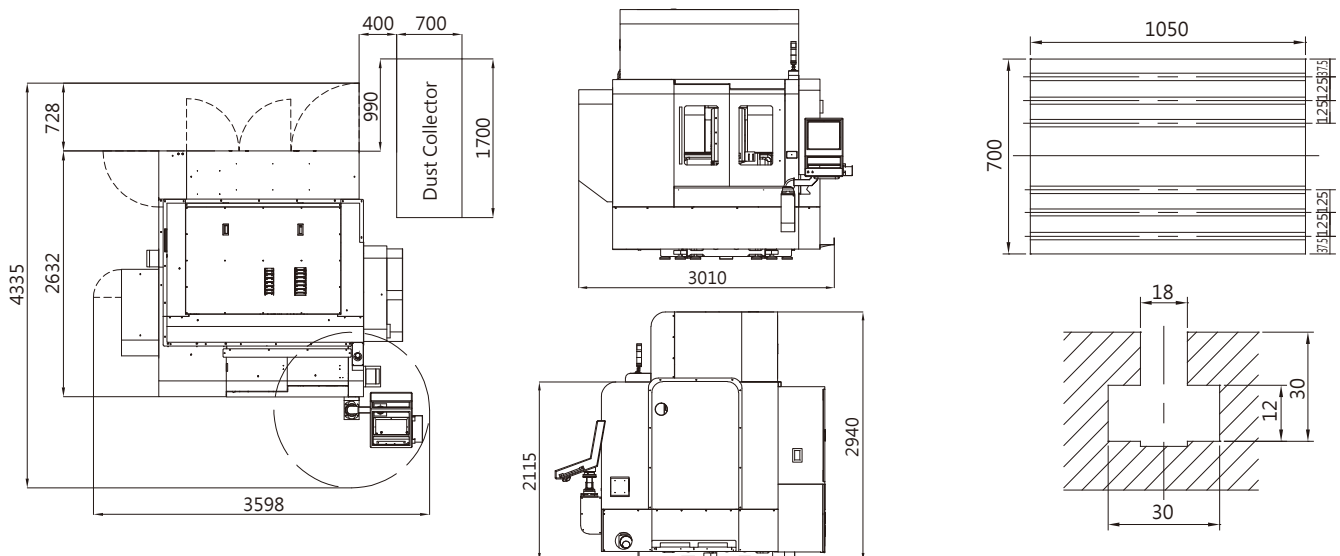
Unit : mm



(NOTE: The G600 final enclosure guard is coming soon, above drawings are for your reference.)

G1000

Unit : mm



Machine Specification

Travel	G600	G1000
X-axis	600mm	1020mm
Y-axis	600mm	700mm
Z-axis	350mm	500mm
Distance from spindle nose to table	120-470mm	180-680mm
Distance between columns	680mm	1080mm

Table		
Dimension	600 x 600mm	1050 x 700mm
Max. load	500kg	800kg
T-slot	14 x 100 x 6mm	18 x 125 x 6mm

Spindle		
Spindle type	Built-in	Built-in
Spindle speed	30000rpm	18000rpm
Spindle motor power	8.12kW/9.74kW (Cont./S6)	18.5kW/30kW (Cont./S3-25%)
Spindle taper	HSK-E40	HSK-A63

Feed		
Rapid feed (X/Y/Z)	30/30/30m/min	32/32/32m/min
Cutting feed	12000mm/min	20000mm/min
Motor power (X/Y/Z)	1.6/1.6/3.0kW	4.5/4.5/4.5kW

ATC & Magazine	Umbrella	
ATC type		
Number of tools	20pcs	16pcs
Max. tool diameter (next pockets empty)	75/100mm	105/120mm
Max. tool length	200mm	250mm
Max. tool weight	1.5kg	3kg

Supply		
Air pressure	6kgf/cm ²	
Electric power supply	30kVA	50kVA

Net Weight		
Machine weight	5500kg	9100kg

* The specifications and information may be changed without prior notice.

Standard & Optional

Standard:

- G600
Fanuc 0iMF-Plus 10.4"
30,000rpm, HSK-E40, Built-in spindle
20T, Umbrella ATC
- G1000
Fanuc 0iMF-Plus 10.4"
18,000rpm, HSK-A63, Built-in spindle
16T, Umbrella ATC
Graphite vacuum system
Spindle air blast
Cutting air blast
Spindle oil cooler
Automatic centralized lubrication system
3-Axis absolute encoder motors
Heat exchanger for electrical cabinet
Full chip enclosure
Ethernet & RS-232 interface
3-Color signal light
Working light
Leveling block and screws
Maintenance tools
Manuals
Air gun
Manual pulse generator

Optional:

- Heidenhain TNC640
25,000rpm, HSK-E50, built-in spindle (G1000)
30T, HSK-A63 (G1000)
3-Axis ballscrew cooling
Linear scales (X/Y/Z)
Workpiece measurement
Tool measurement
Transformer
CE certificated

Graphite Cutting Package:

- Wiring preparation for graphite dust collector
- Grease lubrication
- Top cover
- Without wet cutting function
- Graphite dust collector
- Motor: 5HP/220V



No.10, Gong 10th Rd., Dajia Distr., Taichung City 437, Taiwan
T +886 4 26811215
F +886 4 26822803
sales-os@takumi.com.tw
www.takumi.com.tw

