## **GG** Series

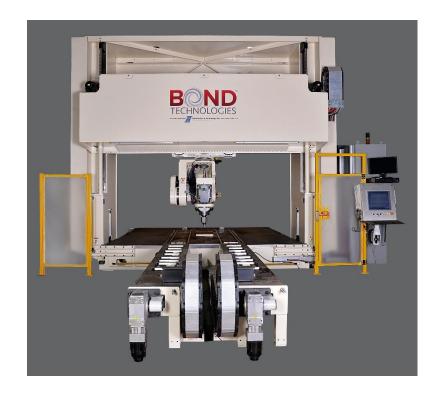
The GG Series FSW machines are the most versatile heavy section Friction Stir Welders on the market. Capable of welding complex contours with agility only surpassed by a robot, but with power, precision and rigidity far superior to any robot.

## **Applications:**

- Complex contour geometry
- Research and production applications

## GG Series basic configuration:

- X-Axis Sliding table, ball screw driven, servo actuated, on precision ground rails.
- X-Axis Moving Gantry, quad pinion driven, servo actuated, on precision ground rails.
- Y-Axis Trans versing spindle carriage, ball screw driven, servo actuated, on precision ground rails.
- Z-Axis Forging bridge, dual ball screw driven, servo actuated on precision ground rails.
- Tilt Gimbal, belt driven servo or manually actuated, on precision pivot joints.



Available in a fixed table or largely expandable rail versions.



## **GG SERIES**

	GG4		GG7		GG10
Material Thickness Capability	Aluminum 2-10 mm Steel 1-4 mm Titanium 1-4 mm Copper 2-6 mm		Aluminum 2-25 mm Steel 2-10 mm Titanium 2-8 mm Copper 2-12 mm		Aluminum 4-30 mm Steel 2-15 mm Titanium 2-12 mm Copper 4-25 mm
	Table System	Rail System	Table System	Rail System	Table System
X-Axis	Stroke				
	Min:2m Max:4m	Min:2m Max:60m	Min:2m Max:4m	Min:2m Max:60m	Min:2m Max:4m
	Velocity				
	3m/min 5m/min Max	3m/min 6m/min Max	3m/min 5m/min Max	3m/min 6m/min Max	3m/min 5m/min Max
Y-Axis	Stroke				
	Min:2m Max:5m		Min:2m Max:4m		Min:2m Max:3m
	Velocity				
	3m/min Standard		3m/min Standard		3m/min Standard
Z-Axis	Stroke				
	Max:1250mm		Max:1250mm		Max:1250mm
	Velocity				
	1m/	/min	1m/min		1m/min
	Forging Force				
	40kN		67kN		100kN
B-Axis	GG4 - 0 to 100° GL4 - ±15°		GG7 - 0 to 100° GL7 - ±15°		±15°
C-Axis	GG4 - 0 to 365° GL4 - ±15°		GG7 - 0 to 365° GL7 - ±15°		±15°
Motor & Spindle	Power				
	9kW Standard		15 kW Standard 30kW Water-Cooled Optional		31kW Standard
	Speed				
	Up to 4000 rpm		Up to 3000 rpm		Up to 2500 rpm
	Torque				
	Up to 80Nm		Up to 340Nm		Up to 645Nm
	Tool Interface				
	50 T	aper	50 Taper		50 Taper
Control	CNC, Force Control, Position Control				

