

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 Taper | | 50 Taper | | 50 Taper | |
| Control | CNC, Force Control, Position Control | | | | |