

TEC - TIG SPOT GUIDE

Caution: Read and understand the TIG welding machine operating instructions.

Wear proper protective clothing, protective gloves and flash goggles.

Materials

- Mild steel, alloy steels and stainless steels only.
- No aluminum, magnesium or copper materials.
- No coated, painted or galvanized materials.
- Materials must be clean, dry, oil free.
- 2 pieces, thicker piece on the bottom if possible.
- Clamp or fixture work pieces if needed to hold materials flat. There cannot be any gap between the materials in the area of spot weld puddle.

Power Supply

- Standard TIG machine with SPOT TIMER and HIGH FREQUENCY ARC START control.
- DCSP (spot gun --, work piece +).
- High frequency switch set to “start” or “continuous”, either works.
- Water cooled spot gun (5000) requires 1 qt. per minute water flow @ 50 psi maximum. Do not use a water solenoid valve on machine. Allow water to flow continuously through spot gun.
- Work must be grounded to “work” (+) terminal on TIG machine.
- Spot gun trigger switch wired to contactor pins on control plug. (Can use foot control to activate machine for testing).
- Initial machine settings: 100 amps DCSP, set 2 seconds on timer and gas post flow of 8-10 seconds. Adjust arc time amps on front panel of machine to get desired results. (TIP) adjust amps or time separately, do not change both at same time.

SPOT GUN

- Connect spot gun to machine just like a manual TIG torch. (Connect spot gun power lead to electrode (-) terminal).
- Use a 3/32 diameter tungsten electrode (pointed as usual for steel).
- Tungsten electrode tip must be recessed inside the end of the metal locator tip by 1/16” (.063, 1.6mm).

REGULATOR – FLOWMETER

- Set argon gas flow for 10 - 12 CFH. (Argon-Helium mix may be used for heavy gauge materials)
- Purge air from the spot gun gas hose using the argon shielding gas. (Hold spot gun away from work piece or ground source and activate the gun trigger switch several times).

SAFETY FIRST - Make no adjustments to spot gun front end parts or connections when the machine power is turned on as metal parts may be conductive.