



# Brazing & Soldering **APPLICATION DATA** No. 545 – Shotgun Assembly

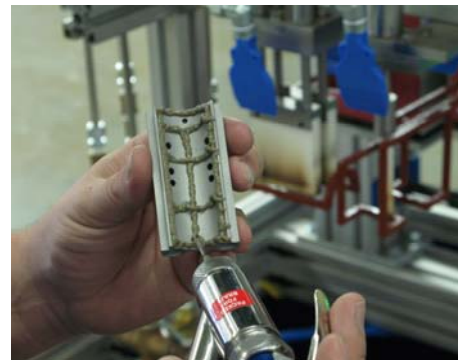


## Single Station Brazing Machine Specifications

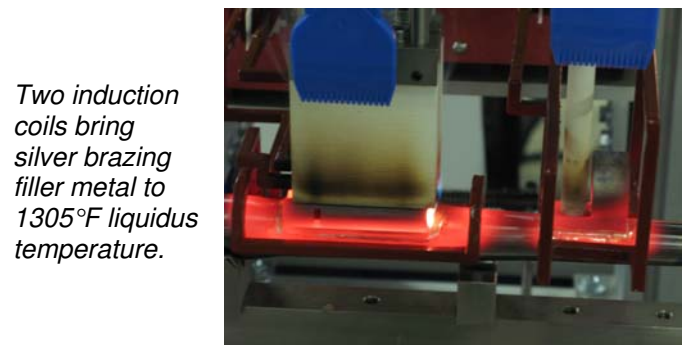
- **Assembly:** Steel gas block and guide ring to steel shotgun barrel.
- **Induction Heat:** (2) RDO 15 kW induction power units with (2) coils; 5 ton water chiller.
- **Paste Filler Metal:** Fusion STK-1205-750 (BAg 7) cadmium-free, 1205°F (651°C) liquidus.
- **Production Rate:** 25 parts per hour, one operator (Heat time: 45 seconds; Cycle time: 150 seconds).
- **Dimensions:** 36" X 50" aluminum extrusion frame. Induction control units and 5 ton water chiller positioned nearby. (*see reverse side*)
- **Utilities:** Electrical (480 VAC, 3PH) 40 amp, Control voltage 24VDC, Compressed air (5 CFM).
- **PLC:** Allen Bradley Micrologix 1500 with Panel View Plus 400 operator interface.
- **Safety Features:** Perimeter guarding on three sides of machine with safety interlocks. Light curtain for E-stop function. Vent hood for fume extraction.

### Sequence:

1. Operator loads shotgun barrel into pasting fixture.
2. Operator dispenses brazing paste on gas block and guide ring with MLF applicator gun then places in position on barrel.
3. Pasted assembly is transferred to the heating fixture.
4. Heating fixture lifts assembly into induction heat coils to bring joints to brazing temperature.
5. Heating cycle concludes, followed by forced air cool, fixture retracts and operator unloads brazed assembly.



*Hand-held applicator gun dispenses a pattern of paste filler metal to gas block.*



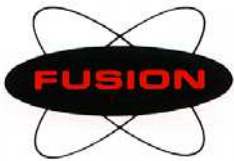
*Two induction coils bring silver brazing filler metal to 1305°F liquidus temperature.*



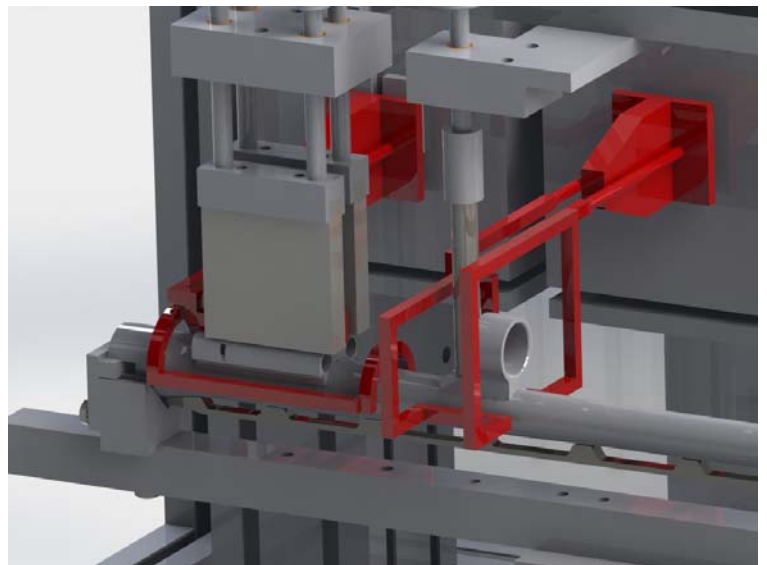
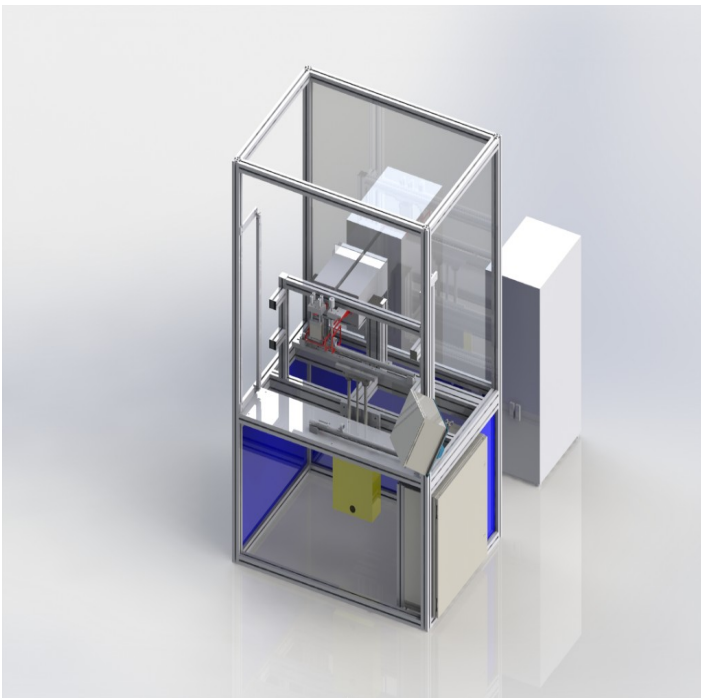
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**See Reverse side for 3-D System Drawings**



*Control units for induction power supplies allow the user to monitor power output, voltage, frequency and current.*



*3D rendering of induction coils.*