



# Brazing & Soldering APPLICATION DATA

No. 541 – Carbide Bur Assembly

Ask for



Video



## Brazing Machine Specifications

- **Assembly:** Tungsten carbide blank (1/4", 3/8", and 1/2" in cylinder and conical shapes) to 3mm, 1/8", 6mm, and 1/4" dia. shanks; 10 part numbers.
- **Joint Specs:** T.I.R. of 0.008" max. Strength Test: bend shank at 90° without breaking braze joint.
- **Paste Filler Metal:** Fusion STK-1260-750 (BAg 24) cadmium-free, 1305°F liquidus.
- **Production Rate:** 250 parts per hour, no operator.
- **Dimensions:** 55" X 72" welded steel base, 21" dia. anodized tooling plate mounted to Weiss TC 220 indexer.
- **Utilities:** Electrical (460 VAC, 3PH), Control voltage 24VDC, Compressed air (2 CFM)
- **PLC:** Allen Bradley SLC 5/03 with PanelView 550 operator interface.
- **Safety Features:** Perimeter guarding on four sides of machine with safety interlocks.

## Sequence:

- Station 1 - Robot picks shank from tray, presents it to paste dispenser and loads into fixture nest.
- Station 2 - Robot picks blank from tray and loads onto pasted shank.
- Station 3 - Open
- Station 4 - Induction Heat
- Station 5 - Bur assembly aligned and cooled.
- Station 6 - Brazed assembly automatically ejected to discharge chute.

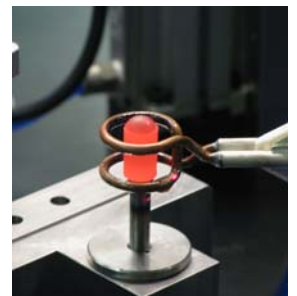


*Applicator gun dispenses premeasured deposit of paste filler metal to shank.*



*SCARA robot loads both shanks and carbide blanks into machine fixtures.*

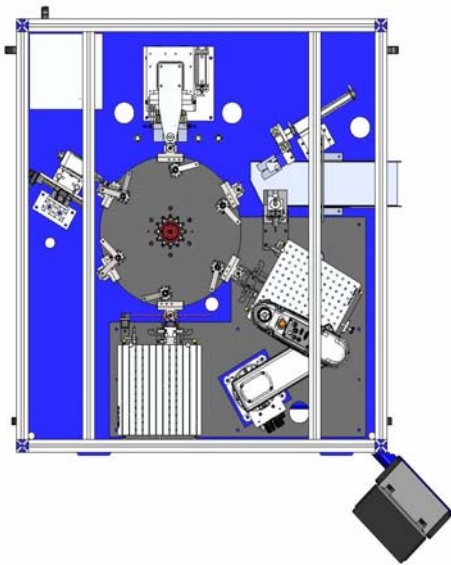
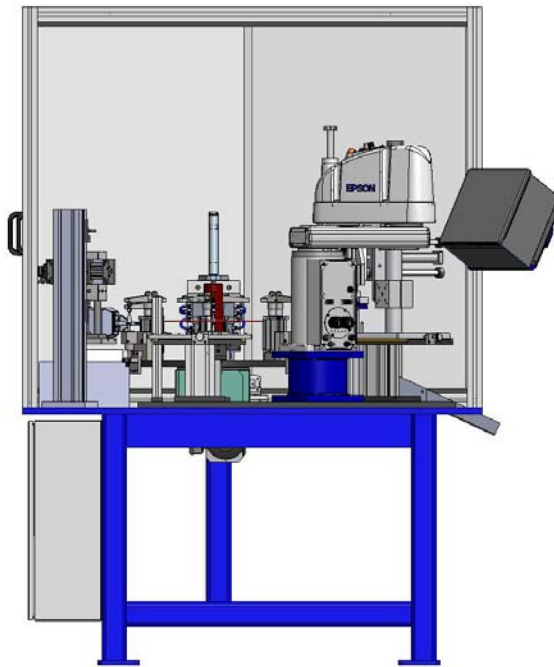
*Induction coil brings silver brazing filler metal to 1305°F liquidus temperature.*



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See Reverse Side for 3-D System Drawings



### Six Station Brazing Machine Special Features

- Part trays hold 144 blanks and 144 shanks.
- Alignment station includes water cooled part grippers to dissipate heat.
- Optical pyrometer measures part temperature.
- 4-axis motion SCARA robot
- Fixture nests hold 3mm, 1/8", 6mm, and 1/4" dia. shanks.

