



# Brazing & Soldering **APPLICATION DATA** No. 527 – Manifold Assembly

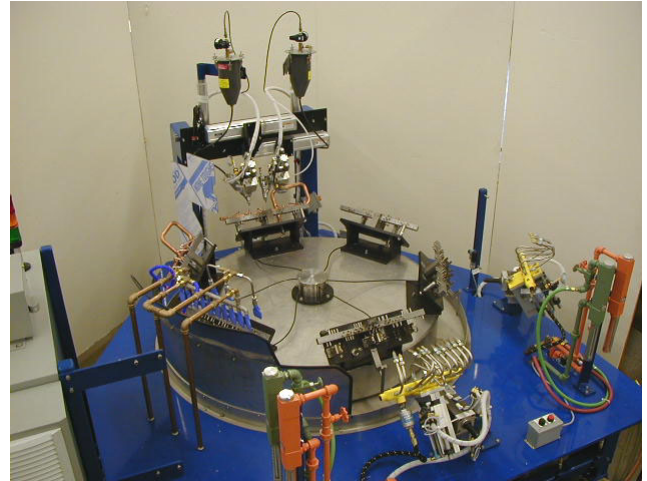


## Brazing Machine Specifications

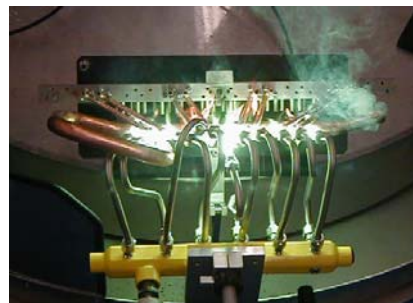
- ❑ **Assembly:** 3/8" O.D. copper tubes to 7/8" O.D. header; (4) assembly styles – 5, 7, 9, 11 tubes.
- ❑ **Paste Filler Metal:** Fusion CTT-1310-940, copper bearing, fluxless, 1340°F liquidus.
- ❑ **Production Rate:** 120-200 per hour, two operators (varies depending on part style).
- ❑ **Dimensions:** 110" X 110" welded steel base, 50" diam. Aluminum toolplate with stainless steel cover, Weiss TC320 barrel cam indexer.
- ❑ **Utilities:** Electrical (440 VAC, 3 PH), Control voltage 24VDC, Gas (86 CFH), Oxygen (110 CFH), Compressed air (5 CFM), water and drain.
- ❑ **PLC:** Allen Bradley SLC500 with Panel View 550 operator interface.
- ❑ **Options:** Nitrogen purged through assembly during heating to control internal oxidation. Three level heat control (idle, low, high).

## Sequence:

1. Operator 1 loads header and outside tubes into fixture; unloads brazed assembly.
2. Two, single axis robots control applicator guns to apply paste deposits at joint areas.
3. Operator 2 loads remaining tubes in position.
4. Gas/oxygen burner pattern begins heating cycle.
5. Second, gas/oxygen burner pattern completes heat cycle.
6. Water cool assembly and fixture.



*Single axis robots guide applicator guns to dispense paste filler metal to tube joints.*



*Gas/oxygen flames are gas flux enriched to minimize copper discoloration.*



*Quick-change heat manifolds permit easy transition to braze four part styles.*



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