Recuperator Assembly Stations

Janda Seam Welder:

Resistance weld parting sheets to edge bar pressure boundary
Braze Assembly Station:

Assemble unit cells into a graphite braze fixture for vacuum furnace brazing

500 lb Jib Hoist

Graphite fixture with 3 unit cells

Assemble unit cells into a graphite braze fixture for vacuum furnace brazing
Resistance Welder 320 joules:

Light energy tack weld to apply foil onto parting sheets
Fin compaction tooling:

Uncompacted Fin

1500 lb Hydraulic Compaction Ram

Compacted Fin:
Plate Stamping Rig:

Stamp parting sheets onto forming dies

Three 250 lb rams
Pressure Test Station:

Pressurize internal cell to validate acceptance into core assembly

23000 psi Barbie hydro test pump

Manifold Seals
Parts Degreaser:

Cabinet Spray Washer. High pressure jets aqueous degreaser solution.
# Unit Cell Assembly Table:

- **Resistance weld unit cell details into a cell assembly for brazing**
- **600 joule resistance welder**
- **Tack weld probe**
- **High pressure internal fin. 70 fins per inch.**
Linear Edge Weld Station:

Plasma weld unit cells along a profiled plate edge.

- Linear actuator slide
- Unit cell weld cassette
- Touchscreen Control Panel
- Plasma Torch
- Pinch Wheels
Abar Ipsen Vacuum Furnace:

Furnace braze unit cells in graphite fixtures

Vacuum Furnace

Work zone: 15” x 12” x 36”
Vacuum Pumps:

Accessory pumps to remove gas molecules and leave a reduced vacuum atmosphere
Vacuum Furnace Control Station:

Program and monitor furnace cycle procedure

Vacuum control tower

Furnace control software
Substack Assembly Station:

Station to assemble 10 unit cells into a core substack