



Introducing



Revolutionary New PermaBond process for hermetically sealed joints

Fab-Tech's PermaBond process eliminates
the possibility of joint leakage with
gasket free sealed joints.

OVERVIEW

Fab-Tech's PermaBond process provides gasket free joints for 4" to 14" diameter coated PSP[®] duct. The process heat bonds the coated flanges of the duct joint together forming a seamless interior surface of PermaBond barrier coating. Once the joint is cooled, a proprietary PSP-EZ[™] clamp is installed for structural support. PermaBond duct is sealed to a class suitable for helium leak testing.

PROCESS STEPS

1. Fasten heating/cooling head to an aligned duct joint.
2. Apply axial load to (squeeze) the joint together.
3. Press "Start" on the controller.
4. Soak the joint for a preset interval at elevated temperature.
5. Soften coating of the mating duct flanges to point of flow.
6. Cool the joint under continued axial load.
7. Print joint thermal cycle.
8. Remove heating/cooling head and install EZ clamp.

CONTROLLER (DRAGON)

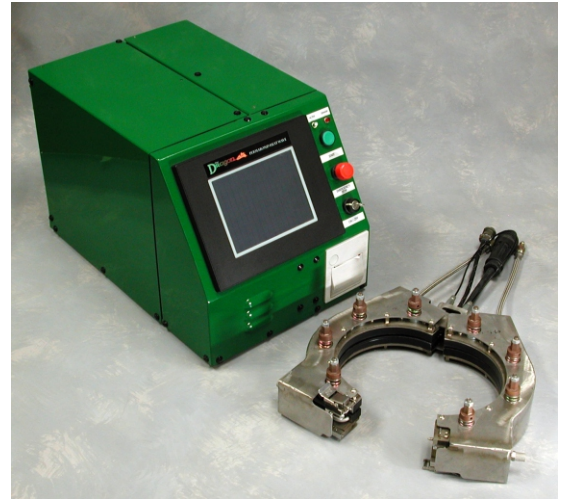
- The Controller is the brain and muscle for the heat bonding process, providing computer control for heating and cooling functions.
- Furnished with a touch screen interface to display process status, a printout of each joint thermal cycle is provided.
- Monitors itself and the bonding process for errors.
- Available as a dual head configuration to allow two joints to be bonded simultaneously.
- 100% duty cycle.
- Uses standard 208V three-phase power 30 amps per leg, through a NEMA (L21-30P outlet).
- The time required to bond a joint varies with size, but most require less than 20 minutes for a complete cycle.

HEATING/COOLING HEADS

- Heads are available for sizes 4"-14" inclusive as interchangeable units.
- Heads also incorporate heat shrouds for a surface temperature of ~160°F during bonding.
- For the cooling phase, the duct surfaces are cooled to 150°F before the heating/cooling head is removed.
- Does not produce smoke or odors under normal operation.
- Production units include 25' cables and hoses for convenient reach of heating/cooling heads.

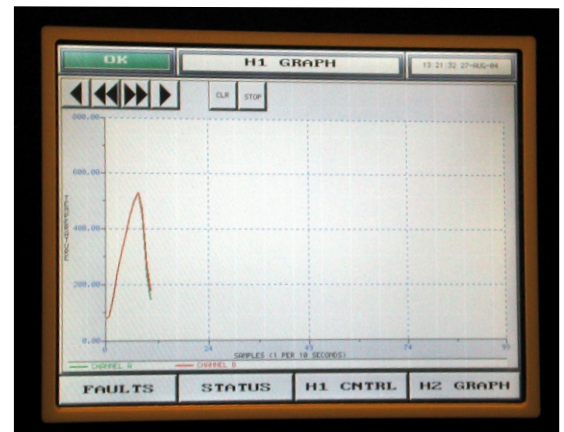
PSP-EZ[™] CLAMP

- Bonded joints support PSP-EZ[™] clamps and would possess the same resistance to bending loads up to 250lbs.
- Clamped joints will maintain structural integrity and will not separate in the event of fire.
- Fab-Tech's PSP-EZ[™] clamp system as well as the PermaBond process is FM Global approved.



Heating/cooling head shown with controller.

* Heating/cooling head shown on cover:
8" with two sections of 8" dia. coated duct



Controller graph showing heating/cooling data for a bonded joint.

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