



HEAT SEALER EQUIPMENT

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Company Profile TCI manufactures high-performance PTFE materials for industrial applications. These materials often require thermal-welding (heat sealing) in field service. Cost effective and easy-to-use heatsealers are manufactured by TCI for use with TCI materials.

Product Description The main function of a heat sealer is to introduce enough heat to allow a proper bond between PTFE surfaces of TCI material. The melting point of PTFE is around 621°F (327°C). However, the setting of a heat sealing iron is determined by factors like ambient temperature, thickness of bonding materials, and the surface upon which you heat seal. Applying pressure can help facilitate a good bond, but in order to achieve a correct bond, the melting point of the TCI materials must be reached.

HEAT SEALER FEATURES

The diagram features a central image of a heat sealer with three callout boxes and their corresponding features:

- Accurate Temperature Control:** A callout box on the left points to a close-up of the temperature dial on the sealer, which has markings from 0 to 800 °F.
- Large Heat Sealing Area:** A callout box on the bottom left points to the wide, flat heating surface of the sealer.
- Easy and Safe to Handle:** A callout box on the right points to the ergonomic handle and control panel of the sealer.

Heat Sealer Operation To operate the Heat Sealer, proceed with the following directions:

- * Plug the unit into an electrical outlet.
- * Push the toggle switch up to the “on” position.
- * Set the temperature by turning the dial to the desired temperature. A temperature range of 700°-740°F (370-385°C) is typical for TCI materials.

The unit contains two lights, a “heat up” light and a “ready” light. The “heat up” light will remain lit until the unit reaches the set temperature, at which point the “ready” light will go on.

SAFETY PRECAUTIONS Experience has shown fluoropolymers can be processed and used at elevated temperatures without hazard if proper ventilation is used. Make certain all heat sealing is performed in well ventilated areas. Make certain the heat sealer is safely handled during use. The heat sealer temperature will reach 725°F in normal operation. Special care must be taken with the heat sealer during handling due to the high temperature.

■ ■ ■ ■ INSTRUCTIONS CONTINUE ON REVERSE ■ ■ ■ ■

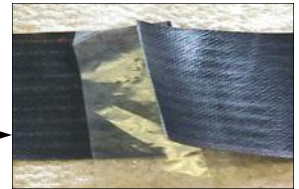
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STEP No. 1



Prepare a surface that will not **CONDUCT AWAY** the heat. The needled fiberglass shown in this picture is ideal for this purpose.

STEP No. 2



A PFA adhesive is recommended for best sealing performance with **TCI** materials. Place the PFA between the two surfaces to be sealed. For difficult angles, it may be easier to tack or staple the PFA in place. PFA thicknesses of 0.005" or 0.010" are typically used.

STEP No. 3



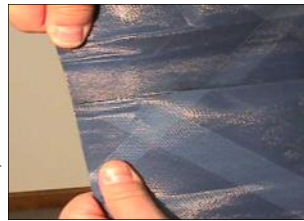
Bring the heat sealer in contact with the splice area. Make sure the heat sealer has reached the set point temperature of 700°-740°F (371°-385°C) before using.

STEP No. 4



Applying pressure will achieve a better bond in a shorter time period. **Residence time for a heat seal is a function of the material and the ambient conditions.** Five minutes will typically work for standard products in a normal plant setting. For wide splices, heat seal in sections, allowing a slight overlap from one section to the next to ensure a continuous bond.

STEP No. 5



When the heat seal has been completed, remove the sealer. Allow the splice to cool to room temperature before handling.

IMPORTANT



A practice seal is always recommended. A practice seal can help determine the temperature setting for the heat sealer. A proper bond between PTFE surfaces is stronger than the bond between the PTFE and the fiberglass. Pull the practice seal apart. If fiberglass is exposed, as shown in the picture, good splicing conditions have been achieved.

Product Specifications

TCI



Product

3 X 6 Heat Sealer

3 X 15 Heat Sealer

Platen Dimensions

3" x 6" (76 x 152 mm)

3" x 15" (76 x 381 mm)

Supply Voltage

120 Volts or 240 Volts

120 Volts or 240 Volts

Current

7.1 Amps @ 120 Volts
3-1/2 Amps @ 240 Volts

7.5 Amps @ 120 Volts
3-1/2 Amps @ 240 Volts

Controller

Fenwal Series 54-4

Fenwal Series 54-4

Weight

12.5 lbs (5.7 kg)

9.9 lbs (4.5 kg)

Wattage

850 Watts

900 Watts

Frequency

60/50 Hz

60/50 Hz