

Quick-Start Operating Guide

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# Process Gas Heater

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Your Comprehensive  
 Equipment Source





# Process Gas Heater

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## Safety Notice

A thorough familiarity with all operating guidelines is essential to safe operation of the product. Failure to observe safety precautions could result in poor performance, damage to the system or other property, or serious bodily injury or death.

The following symbols are intended to call your attention to two levels of hazard involved in operation:



CAUTION

Cautions are used when failure to observe instructions could result in significant damage to equipment.



WARNING

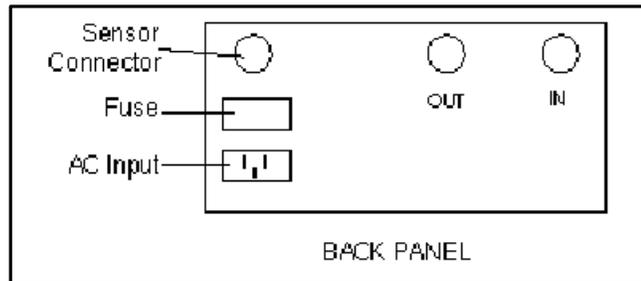
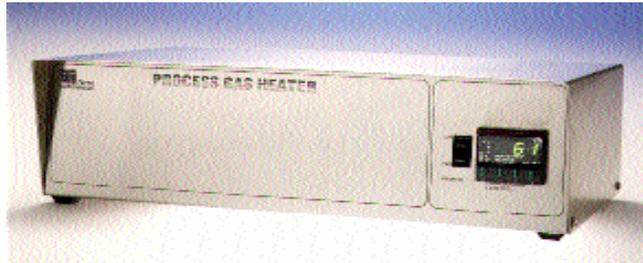
Warnings are used when failure to observe instructions or precautions could result in injury or death.

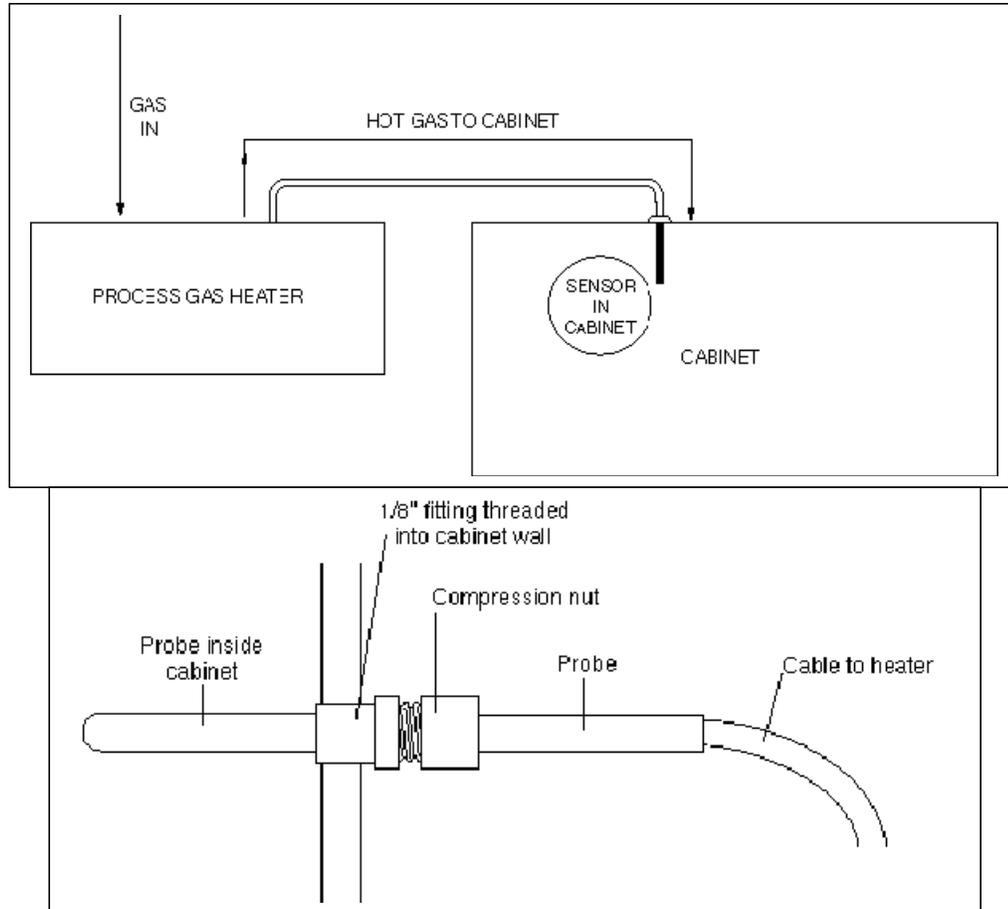
The information presented here is subject to change without notice.

## 1.0 Introduction

This manual provides information on installing and operating your Terra Process Gas Heater.

By studying this document carefully, you can be assured of a long, efficient service life from your system.





## 2.0 Description

Terra Universal's Process Gas Heater provides a safe and highly accurate way to enhance a variety of semiconductor and other processing operations.

Its Programmable Controller ensures safe, clean heating and provides overtemperature protection. Within a matter of seconds, it raises the temperature of the process gas (such as nitrogen, argon or oxygen) up to 350°F. The thermostatic control ensures temperature stability.

Its isolated heating system provides controlled heating without direct contact with the process gas—guaranteeing safe, noncontaminating operation with potentially explosive gases. The "smart" programmable temperature controller monitors and responds to gas temperature measured at either the outlet or inside a cabinet, continuously adjusting the temperature profile and guarding against temperature overshoot. A digital readout toggles between the user-defined set point and the actual gas temperature.

The Process Gas Heater comes complete with a temperature controller with digital LCD readout and 3/8" compression inlet/outlet fittings for gas tubing.



## 3.0 Installation

Before installing Terra Universal's Process Gas Heater, carefully unpack the unit and check for signs of damage or missing parts. Plug the cord into an electrical outlet and make sure that the light on the controller lights up.

**! CAUTION!!:** Turn off and unplug the unit before making the necessary connections (as specified in illustrations)

Terra Universal offers a turnkey package for its Process Gas Heater, complete with all necessary lines and connectors. If your unit is not part of a turnkey system, you will need two 3/8" stainless steel lines. Connect one line from the OUT bulkhead fitting on the back panel of the unit to your cabinet. Connect the other line from your in-house gas supply to the IN bulkhead fitting on the back panel.

**! CAUTION!!:** The hot gas line running from the Process Gas Heater to the cabinet must be insulated. To avoid serious shocks and burns, do not touch the line for at least an hour after turning off the unit!

**! CAUTION!!:** Use inert gases only!! Do not attempt to heat any combustible gases

Installing the sensor requires that a 1/8" NPT brass fitting first be threaded into the cabinet wall, near the gas exhaust or RB valve. Install the Sensor as shown at left

**NOTE:** Some applications may require a monitoring of the outlet gas temperature instead of cabinet temperature. In those instances, the sensor should instead be secured into a connector along the line.



## 4.0 Warranty

**Products Manufactured by Terra:** Terra Universal, Inc., warrants products which it manufactures to be free from defects for a period of 90 days for parts and labor. Terra's sole responsibility is to repair or replace, at its option, any part of the product which proves defective or malfunctioning during this time limit. In some cases, components incorporated in Terra Universal products are covered by additional warranties from component manufacturers; obtain specific information from Terra sales representatives. This warranty is void if the equipment is abused or modified by the customer, is operated outside Terra's operating instructions or specifications, or is used in any application other than that for which it is specified. This warranty does not include routine maintenance or service procedures, breakage of quartz baths after 60 days, shipping damage, nor damage from misuse, intentional or unintentional abuse, neglect, natural disasters, or acts of God.

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*Thank you for ordering from  
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