CTI-CRYOGENICS

PURGE GAS HEATER FOR A HIGH-VACCUM CRYOPUMP SYSTEM (230V)

Overview

These instructions show how to install a purge gas heater (230V) into a high-vacuum pump system. Use these instructions with the Purge Gas Heater Kit (CTI-Cryogenics kit number 8080250K036).

Upgrade Contents

Kit Contents 2

Operation Specifications 2
- Electrical 2
- Pressure 2
- Wire Requirements 2

Installing the Purge Gas Heater 3

Kit Contents

Table 1: Kit Contents

Item Number	Description	Quantity
1	Purge Gas Heater	1
2	4-Position Receptacle	1
3	Female Crimp Terminal	4
4	Instruction Sheet (8040197)	1

Operation Specifications

Electrical

The purge gas heater is electrically operated, and rated at:

- 230 VAC ± 10%
- 50/ 60 Hz
- 90 Watts

Pressure

Maximum rated pressure is 250 psig. Normal operating pressure is 30 psig.

Wire Requirements

- 14 - 20 AWG
- Maximum insulation diameter: 0.065 inches - 0.160 inches (1.65mm - 4.06mm)

Installing the Purge Gas Heater

To install the purge gas heater (see Figure 1):

1. Plumb the purge gas heater (gas-out fitting) directly to the purge gas valve, using the 1/ 4-inch Swagelok fitting provided. Hand tighten the Swagelok nut and then tighten an additional 1-1/ 4 turns using a wrench.

2. Plumb the purge gas heater (gas-in fitting) to the purge gas supply regulator, using suitable materials. The heater inlet tube is 1/ 4-inch OD tubing.

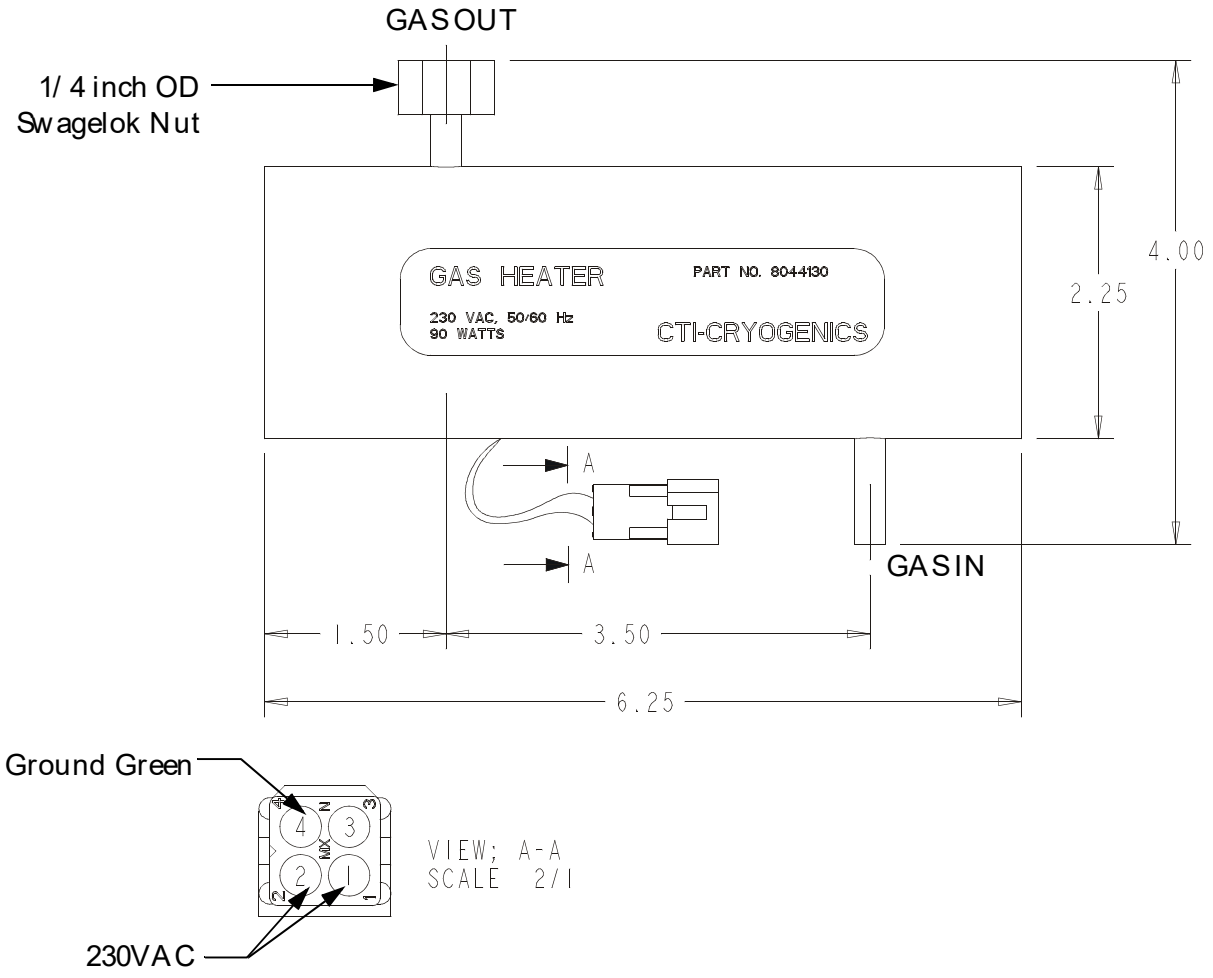


Figure 1: Purge Gas Heater

NOTE: All Figure 1 dimensions are in inches.

3. Connect the 4-position receptacle (Table 1, item 2) to the 230 VAC power source.

NOTE: Only qualified personnel should perform this connection in accordance with national, state, and local codes.

4. Strip the wires to 0.146” - 0.165” (3.70mm - 4.20mm).

5. Crimp the terminals (Table 1, item 3) using a Molex Hand Crimp Tool, Molex number 63811-3200.

6. Insert crimped terminals into 4-position receptacle (Table 1, item 2).
   - 230 VAC - 1
   - 230 VAC - 2
   - Ground - 4

7. Connect the 4-position plug to the 4-position receptacle.

8. Verify the purge gas heater operates properly.

You have now finished installing the purge gas heater.