



Digital Vacuum Regulator

CG-4600-01

User's Manual



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REV: CG050725

Table of Contents:

	<u>page</u>
Features	3
General Use	3
Setup	4
Operation	5
Ramp to Set point (Activate)	5
Ramp to Set point (De-Activate)	6
Specifications	6
Troubleshooting	6
Warranty	7

FEATURES:

1. Digital LED Display.
2. Illuminated ON/OFF Switch.
3. Circuit protection.
4. Wetted parts are 100% 316 Stainless Steel.
5. Vacuum Transducer (Sensor) and Solenoid Valve are built into unit.
6. Selectable Regulation— Full, Metered, or Off.
7. Resists all organic solvents, water, acids, and bases.

GENERAL USE:

The CG-4600-01 is designed to regulated the pressure (vacuum) of essentially any piece of laboratory equipment to less than +/- 2 torr (mm Hg). The CG-4600-01 is connected between a standard high vacuum pump, or any other vacuum source, and the laboratory apparatus to be regulated. The Regulator opens and closes its valve to maintain the desired input value in the metered position, or leaves the valve open for full vacuum in the full position. The CG-4600-01 is ideal for regulating the pressure in rotary evaporators.



Figure 1

SETUP : (Figure 2)

1. Connect a suitable line from the Vacuum Source to the **INLET** side of the Vacuum Regulator (CG-4600-01).
2. Connect a suitable line from the **OUTLET** side of the CG-4600-01 to the equipment to be evacuated.
3. Turn the ON/OFF switch to its OFF position.
4. Plug the power cord of the Digital Vacuum Regulator into an electrical outlet
5. If a needle valve is installed, ensure that it is fully closed before operating.

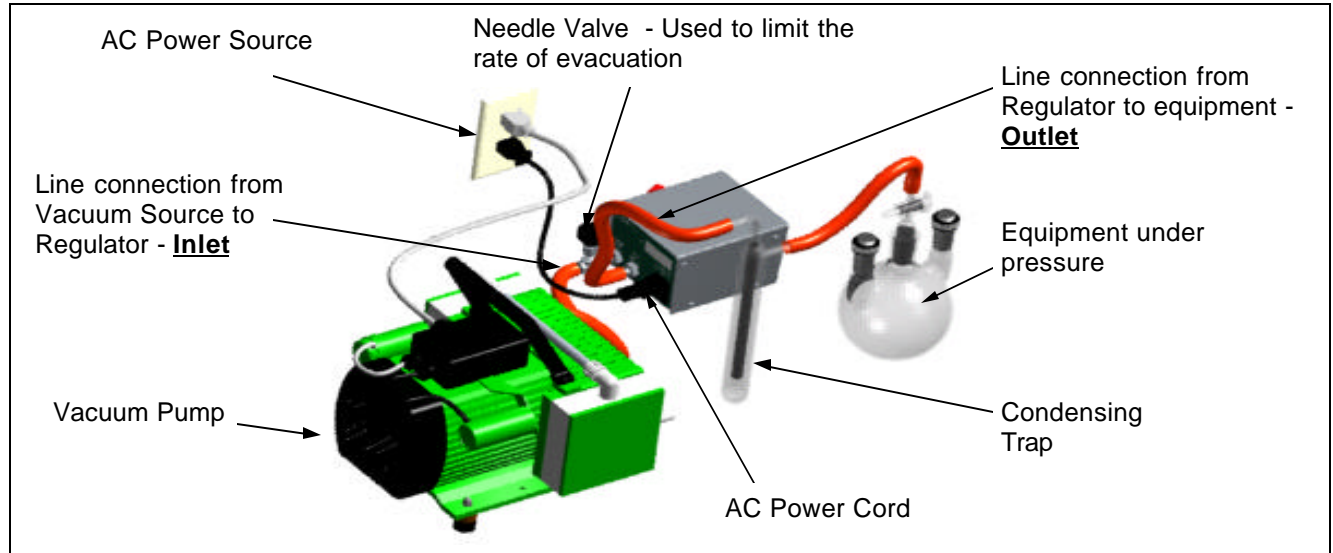
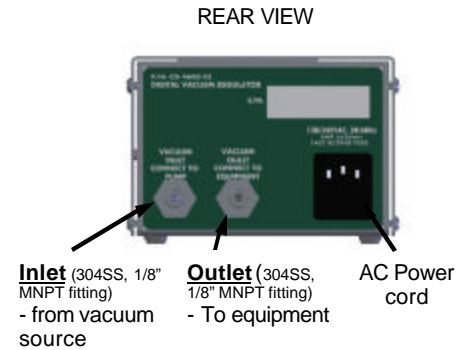


Figure 2

OPERATION: (See Figure 1)

1. Position the Regulator Selector knob to the “OFF” position.
2. Turn the Regulator (CG-4600-01) and Vacuum Source on.
3. The default display of the Regulator while Selector knob is in the “OFF” position represents the pressure of the equipment that it is connected to in mm of Hg (Torr).
4. Enter the desired pressure by pressing and holding the Control key * and pressing either the Up key ▲ or Down key ▼ to reach the desired set point. Note: The set point value can be seen at any time by pressing the control key *.
5. Position the Regulator Selector knob to the “METER” position. The Regulator will maintain the desired set point in the “METER” position.
6. If a needle valve is installed on the INLET Line, open the valve until the equipment is evacuated at a reasonable rate. Once the set point is achieved, adjust the needle valve for the most stable pressure regulation.
7. If the Regulator is switched to the “FULL” position, the solenoid valve inside the regulator remains continuously open (regardless of the set point pressure). The pressure in the attached equipment is then lowered to the limitation of the vacuum pump.
8. The Opti-Chem Digital Vacuum Regulator should only be used with vacuum. It does not regulate pressures above atmospheric pressure.

RAMP-TO-SET POINT (Activate):

1. Press and hold in both the ▲ and ▼ keys on the front of the meter until “**tune**” appears in the display, then release both keys.
2. Press the ▲ key (8 times) until “**SPrr**” appears in the display. At this point the ramp is set in torr/hour. First, hold in the * key, then while holding in the * key, press either the ▲ or the ▼ key to set the desired value, then release all keys. Units are in torr/hour.
3. Press the ▲ key one time, “**SPrn**” appears in the display. This function turns the ramping feature ON, OFF, or to Hold. First, hold in the * key, then while holding in the * key, press either the ▲ or the ▼ key to set the desired value, then release all keys.
4. Press the ▲ key once and “**SoaK**” appears in the display. This is where the soak time is set in units of Minutes. A soak time of “--” indicates to soak endlessly, (this setting is one below “0”). First, hold in the * key, then while holding in the * key, press either the ▲ or the ▼ key to enter the desired value in minutes, then release all keys. “**StoP**” indicates a soak time has elapsed and the power has been turned off.
5. To exit the programming mode, press and hold both the ▲ and ▼ keys until the vacuum pressure appears in the display, then release both keys.

RAMP-TO-SETPOINT (De-Activate):

1. Press and hold in both the ▲ and ▼ keys on the front of the meter until “**tune**” appears in the display, then release both keys.
2. Press the ▲ key (9 times) until “**SPrn**” is displayed. This function turns the ramping feature ON and OFF. First, hold in the * key, then while holding in the * key, press either the ▲ or the ▼ key until “**OFF**” is displayed, then release all keys.
3. To exit the programming mode, press and hold both the ▲ and ▼ keys until the vacuum pressure appears in the display, then release both keys.

NOTES: While the Ramp -to-Setpoint is active, the display will alternate between the pressure and “**SPr**”.

The Ramp -to-Setpoint feature retains last setting when power is turned off. It must be deactivated to turn off.

SPECIFICATIONS:

Supply Voltage - 120VAC or 240VAC +/-10%, 50-60 Hz
Ambient Temperature - 0 to 50°C, 32 to 130°F

Dimensions h x w x d (in) - 3½ x 5¼ x 7½
Fuse - 1A/250V, 5 x 20 mm, fast acting

TROUBLESHOOTING:

Problem	Possible Cause	Corrective Action
No display when unit is switched ON	Blown fuse, no power from source	Replace fuse. Check source circuit
Set point pressure is not obtained	Value is beyond limit of pump. Leak in connections	Change value or replace pump. Repair any leaks in connections
Unit does not regulate in METER position	Solenoid valve or transducer malfunction	Call for service

Warranty

Chemglass, Inc. warrants this unit against defects in material and workmanship for a period of one year from the date of sale. If the unit should malfunction, it must be returned for evaluation. If the unit is determined to have a defect in materials or workmanship, then it will be repaired or replaced at no charge. Tampering with the unit or damage resulting from excessive current, heat, moisture, vibration, corrosive materials, or misuse will void this warranty. Programming changes or reconfigurations are not covered under warranty.

To return this item under warranty, advise the Chemglass Electronic department of the situation and they will provide you with a return authorization number. The unit will be evaluated and repaired as required in accordance to the warranty.

Please contact the Chemglass Electronics department with warranty repair information.

Chemglass Electronics department:

Tel: 1-800-843-1794 ext. 2124

Fax: 1-800-922-4361

Email: electronics@chemglass.com