

# White Rodgers 25M42M002 Gas Valve

# PACTROL CONTROLS

Technical Data file



White  
Rodgers

## General

A Dual Solenoid Gas valve with regulator. Manufactured by White Rodgers USA. The 25M series gas valve is a compact, multifunctional valve, with a direct-acting regulator ideal for use in the following applications

- Wall heaters
- Caravan heaters
- Gas clothes dryers
- Gas fires
- Radiant heaters
- Water heaters
- Catering equipment
- Agricultural heaters

The 25M series gas valve utilizes a direct acting regulator construction to maintain proper outlet gas pressure for fluctuating inlet pressures. (Refer to Fig. 1)

## Regulator Operation

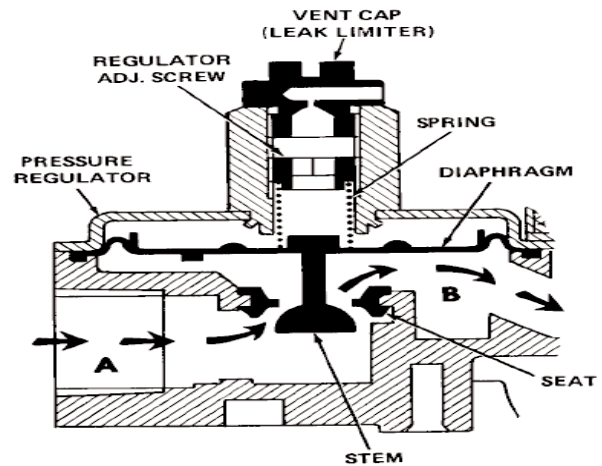


Figure 1

### 1) Calibration

The regulator is adjusted at the factory to give the outlet pressure to an orifice as required by the customer (This is referred to as the set point). The outlet pressure (B) and the orifice are selected by the customer to give the desired flow rate of gas necessary for his application. This adjustment is made at an inlet pressure (A) of 7.0" W.C. for natural gas and 14.0" for L.P. gas.

### 2) Fluctuating Inlet Pressure (A)

When the inlet pressure (A) increases, the outlet pressure (B) starts to increase, but the increasing force created on the diaphragm causes the stem to move closer to the seat thereby throttling the flow and reducing the pressure onto the diaphragm. As this pressure decreases the stem moves away from the seat allowing more flow and higher outlet pressure (B). The outlet pressure, therefore, modulates (high frequency and small amplitude) with respect to the set point. This is normal operation for direct acting types of regulators.

# Technical

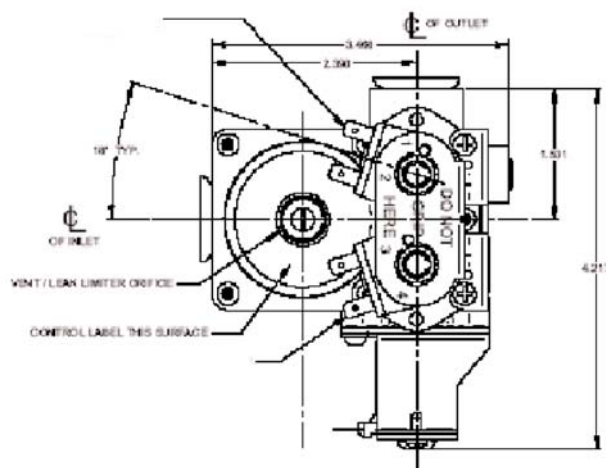
<b>Series:</b>	25M
<b>Type:</b>	002
<b>Solenoid Type:</b>	Dual in series (Redundant) (EN spec - quiet)
<b>Voltage:</b>	220/240 VDC*
<b>Current Requirements</b>	0.06A @ 50Hz 0.05A @ 60Hz
<b>Frequency:</b>	50/60 Hz
<b>Maximum Pressure</b>	1/2 Psi
<b>1" P.D. Capacity</b>	40K BTU
<b>2" P.D. Capacity</b>	60K BTU
<b>Ambient Temperature Rating</b>	0 - 60 °c
<b>Outlet Pressure Adjustment Range</b>	6.97 - 9.96 mB
<b>Range of Regulation</b>	Natural Gas: 5,000 to 65,000 BTU/hr

<b>Inlet Size</b>	3/8" Rp
<b>Outlet Size</b>	3/8" Rp

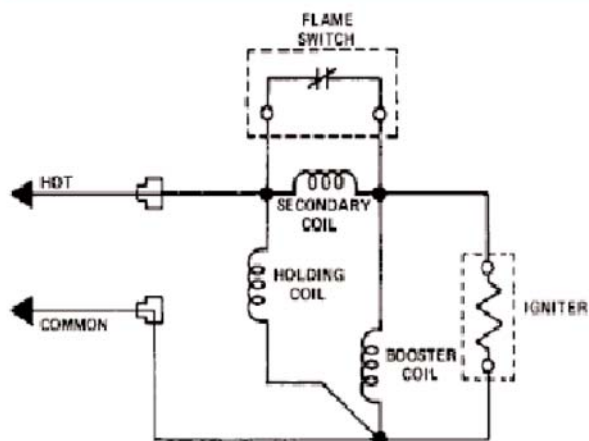
CSA Approved

\*(Rated for full wave rectified AC)

## Two Stage Model



## Typical Wiring Diagrams



TYPICAL WIRING DIAGRAM FOR MODEL 25M APPLIANCE VALVE

**White**  
**Rodgers**

**EMERSON**  
Climate Technologies

New models are continuously under development. For further information visit our Website [www.pactrol.com](http://www.pactrol.com) or contact the sales team at [sales@pactrol.com](mailto:sales@pactrol.com) Pactrol Controls reserve the right to change the specification of this product range without notice.