

VR8300/VR8301 Continuous Pilot Combination Gas Control

Application

These continuous pilot gas controls are used in gas-fired appliances with capacities up to 200 cu ft/hour at 1 in. wc pressure drop [5.7 cu m/hr at 0.25 kPa] on natural gas. They include a manual valve, safety shutoff, single automatic operators, and a pressure regulator. See Table 3 for temperature ranges and regulator types.

BODY PATTERN: Straight-through body pattern.
INLET X OUTLET SIZES AVAILABLE: 1/2 x 1/2 in., 1/2 x 3/4 in., and 3/4 x 3/4 in. (factory-installed inlet flange).
ADAPTERS: Adapters available for 1/2 and 3/4 inch straight and angle connections. Refer to Table 4.
ELECTRICAL RATINGS:
 Voltage and Frequency: 24 Vac, 50/60 Hz.
 Current Draw: 0.70A.
CAPACITY: See Table 1.

TABLE 1: CAPACITY OF VR8300/VR8301

| Size (Inlet x Outlet) | Capacity (at 1 in. wc pressure drop) ^a | Minimum Regulated Capacity | Maximum Regulated Capacity |
|-----------------------|---|------------------------------|-------------------------------|
| 1/2 x 1/2 | 180 cu ft/hr [5.1 cu m/hr] | 30 cu ft/hr [0.8 cu m/hr] | 225 cu ft/hr [6.4 cu m/hr] |
| 1/2 x 3/4 | 190 cu ft/hr [5.4 cu m/hr] | 30 cu ft/hr [0.8 cu m/hr] | 290 cu ft/hr [8.2 cu m/hr] |
| 3/4 x 3/4 | 200 cu ft/hr [5.7 cu m/hr] | 30 cu ft/hr [0.8 cu m/hr] | 300 cu ft/hr [8.5 cu m/hr] |

^a Capacity based on 1000 Btu/cu ft, 0.64 specific gravity natural gas at 1 in. wc pressure drop [37.3 MJ/cu m, 0.64 specific gravity natural gas at 0.25 kPa pressure drop.

Use conversion factors in Table 2 to convert capacities for other gasses.

TABLE 2—GAS CAPACITY
CONVERSION FACTORS.

| Gas | Specific Gravity | Multiply Listed Capacity By |
|--------------|------------------|-----------------------------|
| Manufactured | 0.60 | 0.516 |
| Mixed | 0.70 | 0.765 |
| Propane | 1.53 | 1.62 |

TABLE 4—FLANGE PART NUMBERS.

| Inlet/Outlet Pipe Size | Flange Type | Part Number | |
|------------------------|-------------|--------------------|-----------------|
| | | Without Hex Wrench | With Hex Wrench |
| 1/2 inch NPT | Straight | 394599-6 | 393690-16 |
| | Elbow | 394599-3 | 393690-13 |
| 3/4 inch NPT | Straight | 394599-4 | 393690-14 |
| | Elbow | 394599-5 | 393690-15 |

NOTE: Flange kits include one flange with attached O-ring and fan mounting screw.

TABLE 3—TEMPERATURE RANGES AND REGULATOR TYPES.

| Model Number | Ambient Temperature Range | Regulator Type |
|--------------|-------------------------------------|------------------|
| VR8300A | 0° F to 175° F [-18° C to +79° C] | Standard-opening |
| VR8300C | 0° F to 175° F [-18° C to +79° C] | Step-opening |
| VR8300H | 0° F to 175° F [-18° C to +79° C] | Slow-opening |
| VR8300K | -40° F to 175° F [-40° C to +79° C] | Slow-opening |
| VR8300M | -40° F to 175° F [-40° C to +79° C] | Standard-opening |
| VR8300P | -40° F to 175° F [-40° C to +79° C] | Step-opening |
| VR8301 | 0° F to 175° F [-18° C to 79° C] | Standard-opening |