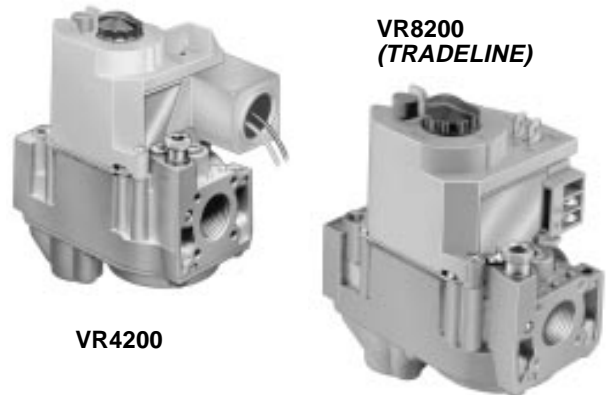


## VR8200; VR4200 Combination Gas Controls

The VR8200 Continuous Pilot Dual Automatic Valve Combination Gas Controls are used in gas-fired, standing pilot appliances. They include safety shutoff, a manual valve, two automatic operators, a pressure regulator, a pilot adjustment, and a conduit cover (VR4200 only).



- VR8200 for use with 24 Vac heating appliances and VR4200 for use with 120 Vac heating appliances that burn natural or liquefied petroleum (LP) gas.
- Capacity rated at 130 feet<sup>3</sup>/hour at 1 inch wc pressure drop [3.7 m<sup>3</sup>/hr at 0.25 kPa]. Maximum regulated capacity is 200 feet<sup>3</sup>/hour [5.7 meter<sup>3</sup>/hour]. Minimum regulated capacity is 20 feet<sup>3</sup>/hour [0.6 meter<sup>3</sup>/hour].
- Solenoid-operated first automatic valve opens on thermostat call for heat and closes when call for heat ends.
- Diaphragm-operated second automatic valve opens under control of the regulator and closes if gas or power supply is interrupted.
- Three-position manual gas control knob has ON, OFF, and PILOT positions.
- Separate reset button must be held down to permit gas flow while lighting pilot; can be pushed down only in PILOT position.
- All adjustments, wiring connections and pilot outlet are accessible from the top of the gas control.
- Compact size.
- Straight-through body pattern; right angle adapters available for inlet and outlet
- 1/2 in. inlet and 1/2 inch outlet; adapters available for 3/8 or 3/4 inch.
- Adjustable servo regulator effectively maintains almost constant gas output pressure under wide fluctuation in gas supply pressure.
- Inlet and outlet screens included.
- Pilot filter included.
- Wiring terminal block color-coded beige to identify standing pilot models.
- May be installed at any angle between 0 and 90 degrees from the upright position, including vertically.
- 1/4-inch male quick-connect terminals for electrical connections. Combination screw and quick-connect terminals on TRADELINE<sup>®</sup> models.
- 0° F to +175° F [-18° C to +79° C] temperature range standard; -40° F to +175° F [-40° C to 79° C] available.
- ECO connector included with some models: also available as accessory.
- Inlet and outlet pressure taps included; both taps accessible from top of gas control.
- Standard-, slow- and step-opening models available.
- Natural to LP gas conversion kit included with TRADELINE standard and slow-opening models. Natural to LP gas conversion kit available for non-TRADELIN standard and slow-opening models.
- LP to natural gas conversion kit available for standard and slow-opening models.

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# Specifications

**IMPORTANT:** *The specifications given in this publication do not include normal manufacturing tolerances. Therefore, this unit may not exactly match the listed specifications. Also, this product is tested and calibrated under closely controlled conditions, and some minor differences in performance can be expected if those conditions are changed.*

## **SUPER TRADELINE MODELS**

SUPER TRADELINE® controls offer features not available on TRADELINE or standard models, and are designed to replace a wide range of Honeywell and competitive controls.

SUPER TRADELINE model specifications are the same as those of standard models except as noted below. SUPER TRADELINE MODEL AVAILABLE: VR8200A

Continuous Pilot Dual Automatic Combination Gas Control. Models for natural or LP gas.

### **ADDITIONAL FEATURES:**

- Combination 1/4 inch quick-connect and screw terminals (includes convenience terminals).
- One 3/8 inch bushing.
- One 3/4 inch straight flange assembly (with O-ring and screws).
- One tool for flange hex screws.
- One pilot compression fitting.
- One Q340A 36-inch thermocouple with adapters and clip.

## **TRADELINE MODELS**

TRADELINE models are selected and packaged to provide ease of stocking, ease of handling and maximum replacement value. TRADELINE model specifications are the same as those of standard models except as noted below.

TRADELINE MODEL AVAILABLE: VR8200A Continuous Pilot Dual Automatic Combination Gas Control. Models for natural or LP gas.

### **ADDITIONAL FEATURES:**

- Combination 1/4 inch quick-connect and screw terminals (includes convenience terminals)
- One 3/8 inch bushing

- One 3/4 inch straight flange assembly (with O-ring and screws)
- One tool for flange hex screws
- One pilot compression fitting

## **STANDARD MODELS**

MODEL: VR8200 and VR4200 Continuous Pilot Dual Automatic Valve Combination Gas Controls. For use in standing pilot appliances. See Table 1 for model specifications.

### **SUPPLY VOLTAGE:**

VR4200: 120 Vac, 60 Hz.

VR8200: 24 Vac, 60 Hz.

(50/60 Hz models available on request.)

### **POWER UNIT:**

Hold-in current: 300 mA maximum.

Drop-out current: 250 to 90 mA.

### **THERMOCOUPLE:**

Nominal output: 30 mV (0.018 ohms).

Open Circuit Turndown Voltage: 2 mV.

ELECTRICAL CONNECTIONS (2): 1/4 inch male quick-connects. Two convenience terminals on top of control (optional). Terminal block color-coded beige.

### **THERMOSTAT HEAT ANTICIPATOR SETTING:**

VR4200: 0.1A

VR8200: 0.5A

TYPE OF GAS: VR8200 and VR4200 set up for natural gas includes a 393691 LP Conversion Kit. Kit for conversion from LP to natural gas is available for standard and slow opening models. See Accessories.

CAPACITY: 130 feet<sup>3</sup>/hour [4.2 meters<sup>3</sup>/hour]. Capacity is based on 1000 Btu/feet<sup>3</sup>, 0.64 specific gravity natural gas at 1 inch water column pressure drop [37.3 MJ/meters<sup>3</sup>, 0.64 specific gravity natural gas at 0.25 kPa pressure drop].

Maximum regulated capacity is 200 feet<sup>3</sup>/hour [5.7 meters<sup>3</sup>/hour]. Minimum regulated capacity is 20 feet<sup>3</sup>/hour [0.6 meters<sup>3</sup>/hour]. Use conversion factors in Table 2 to convert to capacities for other gases.

Minimum regulated capacity is 40 feet<sup>3</sup>/hour for propane.

# Ordering Information

When purchasing replacement and modernization products from your TRADELINE® wholesaler or your distributor, refer to the price sheets for complete ordering number, or specify—

1. Order number, SUPER TRADELINE or TRADELINE if desired.
2. Natural or LP gas.
3. Step pressure on step-opening control.
4. Convenience terminals, if desired.
5. Accessories, if desired.
6. Order separately: pilot burner, thermocouple, transformer, limit controller, and thermostat or controller as required.

If you have additional questions, need further information, or would like to comment on our products or services, please write or phone:

1. Your local Honeywell Residential and Building Controls Sales Office (check white pages of your phone directory).
2. Residential and Building Controls Division Customer Satisfaction  
Honeywell Inc., 1885 Douglas Drive North  
Minneapolis, Minnesota 55422-4386 (612) 951-1000

In Canada—Honeywell Limited/Honeywell Limitée, 740 Ellesmere Road, Scarborough, Ontario M1P 2V9. International Sales and Service Offices in all principal cities of the world. Manufacturing in Australia, Canada, Finland, France, Germany, Japan, Mexico, Netherlands, Spain, Taiwan, United Kingdom, U.S.A.

TABLE 1—MODEL SPECIFICATIONS.

Model No. Suffix Letter	Opening Charac- teristic	Type of Gas	Standard Factory Settings		Optional Factory Regulator Settings		Range of Field Adjustment	
			in. wc	kPa	in. wc	kPa	in. wc	kPa
VR8200A, M VR4200A, M	Standard- opening	Natural	3.5	0.9	3 to 5	0.7 to 1.2	3 to 5	0.7 to 1.2
		LP	10.0	2.5	8 to 12	2 to 3	8 to 12	2 to 3
VR8200C, P VR4200C, P	Step- opening	Natural	Step—0.7, 0.9, 1.2 or 1.7, as ordered <sup>a</sup> Full Rate— 3.5	Step—0.17, 0.22, 0.30 or 0.48 as ordered <sup>a</sup> Full Rate— 0.9	Step—0.7, 0.9, 1.2 or 1.7, as ordered <sup>a</sup> Full Rate— 3 to 5	Step—0.17, 0.22, 0.30 or 0.48 as ordered <sup>a</sup> Full Rate— 0.7 to 1.2	Step—none; Full Rate— 3-5	Step—none; Full Rate— 0.7 to 1.2
		LP	Step—1.4, 2.5, 4.0 or 5.5, as ordered <sup>a</sup> Full Rate— 10	Step—0.35, 0.62, 0.99 or 1.37, as ordered <sup>a</sup> Full Rate— 2.5	Step—1.4, 2.5, 4.0 or 5.5, as ordered <sup>a</sup> Full Rate— 8 to 12	Step—0.35, 0.62, 0.99 or 1.37, as ordered <sup>a</sup> Full Rate— 2 to 3	Step—none; Full Rate— 8-12	Step—none; Full Rate— 2 to 3
VR8200H VR4200H	Slow- opening	Natural	3.5	0.9	3 to 5	0.7 to 1.2	3 to 5	0.7 to 1.2
		LP	10.0	2.5	8 to 12	2 to 3	8 to 12	2 to 3
VR8200J	Delayed and Slow-opening	Natural	3.5	0.9	3 to 5	0.7 to 1.2	3 to 5	0.7 to 1.2
		LP	10.0	2.5	8 to 12	2 to 3	8 to 12	2 to 3

<sup>a</sup> Step pressure not adjustable.

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

BODY PATTERN: Straight-through with 1/2 inch inlet and 1/2 inch outlet. Flanges available for 3/8, 1/2 and 3/4 inch straight and 90° angle connection. See Table 3.

TABLE 3—FLANGE PART NUMBERS.

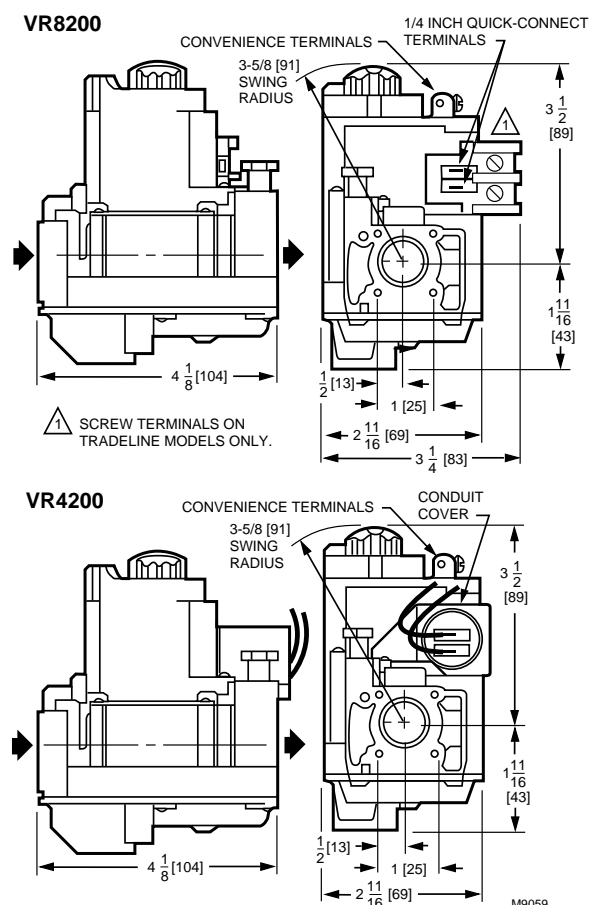
Inlet/Outlet Pipe Size	Flange Type	Part Number	
		Less Hex Wrench	With Hex Wrench
3/8 in. NPT	Straight	393690-1	393690-11
	Elbow <sup>a</sup>	393690-2	393690-12
1/2 in. NPT	Straight	393690-6	393690-16
	Elbow <sup>a</sup>	393690-3	393690-13
3/4 in. NPT	Straight	393690-4	393690-14
	Elbow <sup>a</sup>	393690-5	393690-15

<sup>a</sup> Elbow (angle) flanges cannot provide right hand inlet when the ECO connector is used.

NOTE: Flange Kits include one flange with attached O-ring and four mounting screws. TRADELINE kits include 9/64 in. hex wrench, as noted.

PILOT GAS OUTLET: Compression fitting for 1/4 in. OD tubing.

Fig. 1—VR8200, VR4200 dimensions in in. [mm].



**PRESSURE TAPPING:** Inlet and outlet pressure taps accessible from top of gas control. Taps are 1/8 inch NPT with plug containing recess for 3/16 inch Allen wrench.

**PRESSURE RATING:** A.G.A. rating 1/2 psi [3.5 kPa] inlet pressure.

**PRESSURE REGULATION:** See Table 1. Regulator adjustment accessible from top of gas control.

**MOUNTING:** Can be mounted 0 to 90 degrees in any direction from the upright position of the gas control knob, including vertically.

**TEMPERATURE RATING:**  
VR8200A,C,H,J; VR4200A,C,H: 0° F to +175° F [-18° C to +79° C].  
VR8200M,P; VR4200M,P: -40° F to +175° F [-40° C to +79° C].

**DIMENSIONS:** See Fig. 1.

**APPROVALS:**

American Gas Association design certificate: L2025006.

Canadian Gas Association design certificate: L2025006.

Australian Gas Association design certificate: 4214.

Approved for Delta C applications.

**OPTIONAL SPECIFICATIONS:**

- Convenience terminals.

**ACCESSORIES:**

- Flanges, see Table 3.
- 393200-1 ECO Connector.
- 393691 Natural to LP Conversion Kit.
- 394588 LP to Natural Conversion Kit.
- 3943499/64 inch hex tool for flange assembly screws.

## Installation

### WHEN INSTALLING THIS PRODUCT...

1. Read these instructions carefully. Failure to follow them could damage the product or cause a hazardous condition.

2. Check the ratings given in the instructions and on the product to ensure the product is suitable for your application.

3. Ensure installer is a trained, experienced service technician.

4. After installation is complete, use these instructions to check out product operation.



### WARNING

**FIRE OR EXPLOSION HAZARD,  
CAN CAUSE PROPERTY DAMAGE,  
SEVERE INJURY, OR DEATH.**

Follow these warnings exactly:

1. Disconnect power supply before wiring to prevent electrical shock or equipment damage.
2. To avoid dangerous accumulation of fuel gas, turn off gas supply at the appliance service valve before starting installation, and perform Gas Leak Test after completion of installation.
3. Do not bend pilot tubing at gas control or pilot burner after compression fitting has been tightened, or gas leakage at the connection may result.
4. Always install sediment trap in gas supply line to prevent contamination of gas control.
5. Do not force the gas control knob. Use only your hand to push down the reset button or turn the gas control knob. Never use any tools. If the gas control knob or reset button will not operate by hand, the gas control should be replaced by a qualified service technician. Force or attempted repair may result in fire or explosion.



### CAUTION

Never apply a jumper across or short the valve coil terminals. This may burn out the heat anticipator in the thermostat.

**IMPORTANT:** *These gas controls are shipped with protective seals over inlet and outlet tappings. Do not remove seals until ready to connect piping.*

Follow the appliance manufacturer instructions if available; otherwise, use the instructions provided below.

### CONVERTING BETWEEN NATURAL AND LP GAS



### WARNING


**FIRE OR EXPLOSION HAZARD,  
CAN CAUSE PROPERTY DAMAGE,  
SEVERE INJURY, OR DEATH.**

1. Do not use a gas control set for natural gas on an LP gas system or a gas control set for LP gas on a natural gas system.
2. When making conversion, main pilot burner orifices *must* be changed to meet appliance manufacturer specifications.

VR8200 and VR4200 gas controls can be converted from one gas to another. To convert from natural gas to LP, use the 393691 LP Conversion Kit that is included with the gas control. To convert from LP to natural gas, use the 394588 Natural Gas Conversion Kit (ordered separately). VR8200C,P and VR4200C,P gas controls cannot be converted.

To convert control from one gas to another:

1. Turn off main gas supply to the appliance.
2. Remove the regulator cap screw and pressure regulator adjusting screw. See Fig. 2 or 3.
3. Remove the existing spring.
4. Insert the replacement spring with the tapered end down. See Fig. 4.

5. Install the new plastic pressure regulator adjustment screw so that the top of the screw is flush (level) with the top of the regulator. Turn the pressure regulator adjustment screw clockwise  six complete turns. This provides a preliminary pressure setting of about 10.0 in. wc [2.5 kPa]