

VR8204; VR4204 Intermittent Pilot Dual Automatic Valve Combination Gas Controls

The VR8204 AND VR4204 Intermittent Pilot Dual Automatic Valve Combination Gas Controls are used in gas-fired, intermittent pilot appliances. The controls include a safety shutoff, a manual valve, two automatic operators, a pressure regulator, a pilot adjustment screw and a conduit cover (VR4204 only).



- VR8204 used with S8600, S8610 and S8620 Control Modules.
- VR4204 used with 120 Vac intermittent ignition modules.
- VR8204 for use with 24 Vac heating appliances and VR4204 for use with 120 Vac heating appliances that burn natural or manufactured gas, or liquified petroleum (LP) gas.
- Capacity rated at 150 cfh at 1 in. wc pressure drop [4.2 m³/hr at 0.25 kPa].
- 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.
- Two-position gas control knob has ON and OFF positions.
- All adjustments and wiring connections are accessible from top of the control.
- Compact size.
- Straight-through body pattern; right angle adapters available for inlet and outlet.
- 1/2 in. inlet and 1/2 in. outlet; adapters available for 3/8 or 3/4 in.

- Adjustable servo regulator effectively maintains almost constant gas output pressure under wide fluctuations in gas supply pressure.
- Inlet and outlet screens included.
- Pilot filter included.
- Wiring terminal block color-coded orange to indicate intermittent pilot control.
- May be installed at any angle between 0 and 90 degrees from the upright position, including vertically.
- 1/4 in. male quick-connect terminals for electrical connections.
- 0° F to 175 F° [-18° C to +79° C] temperature range standard; -40° F to 175° F [-40° C to +79° C] available.
- Inlet and outlet pressure taps provided; both taps accessible from top of control.
- Standard-, slow- and step-opening models available.

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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.*

TRADELINE® MODELS

TRADELINE controls 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: VR8204A Dual Automatic Combination Gas Control for Intermittent Pilot Systems. Models for natural or LP gas.

ADDITIONAL FEATURES:

- 3/8 in. bushing.
- 3/4 in. straight flange assembly (with O-ring and screws).
- Tool for flange hex screws.
- Pilot compression fitting.

STANDARD MODELS

MODELS: VR8204 and VR4204 Dual Automatic Valve Combination Gas Controls for use in Intermittent Pilot Systems. VR8204 for use with S8600, S8610 and S8620 Modules. VR4204 for use with 120 Vac modules. See Table 1 for model specifications.

SUPPLY VOLTAGE:

VR4204: 120 Vac, 60 Hz.
 VR8204: 24 Vac, 60 Hz.
 (50/60 Hz models available on request.)

TABLE 1—MODEL SPECIFICATIONS.

Model No. Suffix Letter	Opening Characteristic	Type of Gas	Standard Factory Regulator Settings		Optional Factory Regulator Settings		Range of Field Adjustment	
			in. wc	kPa	in. wc	kPa	in. wc	kPa
VR8204A,M VR4204M	Standard	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
VR8204C,P VR4204P	Step-opening	Natural	Step—0.7, 0.9, 1.2 or 1.7, as ordered ^a Full Rate—3.5	Step—0.17 0.22, 0.30 or 0.48 as ordered ^a Full Rate—0.9	Step—0.7, 0.9, 1.2 or 1.7 as ordered ^a Full Rate—3 to 5	Step—0.17 0.22, 0.30 or 0.48, as ordered ^a 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 ^a Full Rate—10	Step—0.35, 0.62, 0.99 or 1.37 as ordered ^a Full Rate—2.5	Step—1.4, 2.5, 4.0 or 5.5, as ordered ^a Full Rate—8 to 12	Step—0.35, 0.62, 0.99 or 1.37, as ordered ^a Full Rate—2 to 3	Step—none; Full Rate—8-12	Step—none; Full Rate—2 to 3
VR8204H,K VR4204H	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

^aStep pressure is not adjustable.

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, TRADELINE, if desired.
2. Natural or LP gas.
3. Step pressure on VR4204C,P and VR8204C,P.
4. Accessories, if desired.
5. Order separately: pilot burner, igniter-sensor, 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 Home and Building Control Sales Office (check white pages of your phone directory).
2. Home and Building Control Division Customer Satisfaction
 Honeywell Inc., 1885 Douglas Drive North
 Minneapolis, Minnesota 55422-4386 (612) 951-1000

In Canada—Honeywell Limited/Honeywell Limitee, 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.

CURRENT DRAW:

VR4204: 0.1A.

VR8204: 0.5A.

ELECTRICAL CONNECTIONS: 1/4 in. male quick-connects. Terminal block color-coded orange.

TYPE OF GAS: Separate models for natural (and manufactured) or LP gas.

CAPACITY:

At minimum regulation:

Natural gas: 20,000 Btuh [5860W]^a.

LP gas: 40,000 Btuh [11,700W].

At 1 in. [0.25 kPa] pressure drop: 150,000 Btuh [44,000W]^a.

At maximum regulation: 200,000 Btuh [58,600W]^a.

^a0.64 sp gr natural gas at 1 in. [0.25 kPa] pressure drop; use conversion factors in Table 2 to convert for other gases.

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

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

PRESSURE TAPPING: Inlet and outlet taps standard. Taps accessible from top of control. Tap is 1/8 in. NPT with plug containing recess for 3/16 in. Allen wrench.

PRESSURE RATING: AGA rating 1/2 psi [3.5 kPa] inlet pressure.

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

TABLE 2—
GAS CAPACITY CONVERSION FACTORS.

sp gr	Multiply Listed Capacity By
0.60	0.516
0.70	0.765
1.53	1.62

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

TEMPERATURE RATING:

VR8204A,C,H and VR4204H: 0° F to 175° F [-18° C to +79° C].

VR8204M,P,K and VR4204M,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.

ACCESSORIES:

- Flanges, see Table 3.
- 394349 9/64 in. hex tool for flange assembly screws.
- 393691 Natural to LP Conversion Kit.
- 394588 LP to Natural Conversion Kit.

TABLE 3—FLANGE PART NUMBERS.

Inlet/Outlet Pipe Size	Flange Type	Part No.	
		Less Hex Wrench	With Hex Wrench
3/8 in. NPT	Straight	393690-1	393690-11
	Elbow	393690-2	393690-12
1/2 in. NPT	Straight	393690-6	393690-16
	Elbow	393690-3	393690-13
3/4 in. NPT	Straight	393690-4	393690-14
	Elbow	393690-5	393690-15

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

Fig. 1—Dimensions in in. [mm] of VR4204/VR8204 Combination Gas Control.

