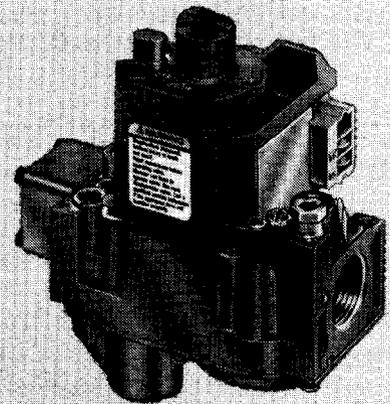


Honeywell

THE VR8300 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, AND A PRESSURE REGULATOR.

- For use with 24 Vac heating appliances that burn natural or liquefied petroleum (LP) gas.
- Capacity rated up to 200 feet³/hour at 1 inch wc pressure drop [5.7 meters³/hour at 0.25 kPa]. Maximum capacity rated up to 300 feet³/hour [8.5 meters³/hour]. Minimum capacity rated at 30 feet³/hour [0.8 meters³/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 control.
- Compact size.
- Straight-through body pattern; right angle adapters available for inlet and outlet.
- Available in 1/2 and 3/4 inch inlet and outlet. 1/2 and 3/4 inch straight and angle flanges available.
- Adjustable servo regulator effectively maintains almost constant gas output pressure under wide fluctuations in gas supply pressure.
- Inlet screen 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.
- 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 included; both taps accessible from top of control.
- Standard-, slow-, and step-opening models available.
- Natural/LP gas conversion kits available for standard and slow-opening models.

CONTINUOUS PILOT DUAL AUTOMATIC VALVE COMBINATION GAS CONTROLS



VR8300

SPECIFICATIONS

IMPORTANT

THE SPECIFICATIONS GIVEN IN THIS PUBLICATION DO NOT INCLUDE NORMAL MANUFACTURING TOLERANCES. THEREFORE, THIS UNIT MAY NOT MATCH THE LISTED SPECIFICATIONS EXACTLY. 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 Models Available:
VR8300A Combination Gas Control
3/4 inch inlet x 3/4 inch outlet

Additional Features:

- 393691 Natural to LP gas conversion kit
- Two 1/2 x 3/4 inch reducer bushings
- One Q340 Thermocouple (36 inch lead length)
- SUPER TRADELINE packaging with cross reference label and special instruction sheet.

TRADELINE MODELS

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

TRADELINE Models Available:
VR8300A Combination Gas Control
VR8300C Combination Gas Control

Additional Features:

- 393691 Natural to LP gas conversion kit (not available for VR8300C models)
- For 1/2 x 3/4 inch models, one 1/2 x 3/4 inch reducer bushings
- For 3/4 x 3/4 inch models, two 1/2 x 3/4 inch reducer bushings
- TRADELINE packaging with cross reference label and special instruction sheet

STANDARD MODELS

MODELS: VR8300 Continuous Pilot Dual Automatic Valve Combination Gas Controls. For use in standing pilot appliances. See Table 1 for model specifications.

SUPPLY VOLTAGE: 24 Vac, 50/60 Hz.

POWER UNIT:

Reset current: 300 mA maximum.
Drop-out current: 70mA minimum.

THERMOCOUPLE:

Nominal output: 30 mV (0.018 ohms).
Open Circuit Turndown Voltage: 2mV.

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: 0.7 A.

ORDERING INFORMATION

WHEN PURCHASING REPLACEMENT AND MODERNIZATION PRODUCTS FROM YOUR WHOLESALER OR YOUR DISTRIBUTOR, REFER TO THE PRICE SHEETS FOR COMPLETE ORDERING NUMBER, OR SPECIFY—

1. Order number.
2. Natural or LP gas.
3. Step pressure on VR8300C,P.
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 DIVISION SALES OFFICE (CHECK WHITE PAGES OF YOUR PHONE DIRECTORY).
2. RESIDENTIAL AND BUILDING CONTROLS DIVISION CUSTOMER SATISFACTION
HONEYWELL INC., 1885 DOUGLAS DRIVE NORTH
GOLDEN VALLEY, MINNESOTA 55422-4386 (612) 542-7500

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.

TABLE 1—MODEL SPECIFICATIONS.

MODEL NO. SUFFIX LETTER	OPENING CHARACTERISTIC	TYPE OF GAS	STANDARD FACTORY REGULATOR SETTINGS		RANGES OF OPTIONAL FACTORY REGULATOR SETTINGS		RANGES OF FIELD ADJUSTMENT	
			in. wc	kPa	in. wc	kPa	in. wc	kPa
A,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
C,P	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 to 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 to 12	Step—none; Full Rate—2 to 3
H	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 not adjustable.

CAPACITY:

SIZE (INLET X OUTLET)	CAPACITY AT 1 INCH WC PRESSURE DROP ^a	MINIMUM REGULATED CAPACITY	MAXIMUM REGULATED CAPACITY
1/2 X 1/2	180 feet ³ /hour [5.1 meter ³ /hour]	30 feet ³ /hour [0.8 meter ³ /hour]	225 feet ³ /hour [6.4 meter ³ /hour]
1/2 X 3/4	190 feet ³ /hour [5.4 meter ³ /hour]	30 feet ³ /hour [0.8 meter ³ /hour]	290 feet ³ /hour [8.2 meter ³ /hour]
3/4 X 3/4	200 feet ³ /hour [5.7 meter ³ /hour]	30 feet ³ /hour [0.8 meter ³ /hour]	300 feet ³ /hour [8.5 meter ³ /hour]

^aCapacity based on 1000 btu/feet³, 0.64 specific gravity natural gas at 1 inch wc pressure drop [37.3 MJ/meter³, 0.64 specific gravity natural gas at 0.25 kPa pressure drop.

TYPE OF GAS: Separate models available for natural or LP gas. Natural/LP gas conversion kits are available for standard- and slow-opening models. See Accessories.

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

BODY PATTERN: Straight-through body pattern.

INLET X OUTLET SIZES AVAILABLE: 1/2 x 1/2 inch, 1/2 x 3/4 inch, and 3/4 x 3/4 inch with inlet flange.

ADAPTERS: Adapters available for 1/2 and 3/4 inch straight and angle connections. Refer to Table 3.

NOTE: Flange Kits include one flange with attached O-ring and four mounting screws.

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

TABLE 3—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

PRESSURE TAPPING: Inlet and outlet pressure taps accessible from top of 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:

VR8300A,C,H: 0° F to +175° F [-18° C to +79° C].

VR8300M,P: -40° F to +175° F [-40° C to +79° C].

DIMENSIONS: See Fig. 1.

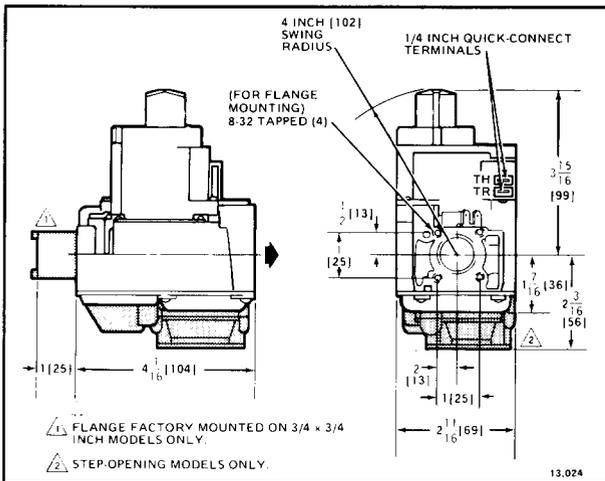


FIG. 1—VR8300 DIMENSIONS IN INCHES AND [MILLIMETERS].

APPROVALS:

AMERICAN GAS ASSOCIATION DESIGN CERTIFICATE: UP-70-69A.

CANADIAN GAS ASSOCIATION DESIGN CERTIFICATE: UP-70-69A.

AUSTRALIAN GAS ASSOCIATION: NOT AVAILABLE.
DELTA C: NOT AVAILABLE.

OPTIONAL SPECIFICATIONS:

- Convenience terminals.

ACCESSORIES:

- Flanges, see Table 3.
- 394349 9/64 inch hex tool for flange assembly screws.
- 393691 Natural to LP gas conversion kit.
- 394588 LP to Natural gas conversion kit.

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's 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**
Do not use a gas control set for natural gas on LP gas or a gas control set for LP gas on natural gas.

To convert a gas control from natural gas to LP gas or from LP gas to natural gas, contact your Honeywell representative.

Standard- or slow-opening gas controls are converted from one gas to another with a conversion kit (order separately). Order Part Number 393691 to convert from natural to LP gas. Order Part Number 394588 to convert from LP to natural gas. Step-opening gas controls can not be converted.

INSTALL ADAPTERS TO CONTROL

If adapters are to be installed on the gas control, mount them as follows: