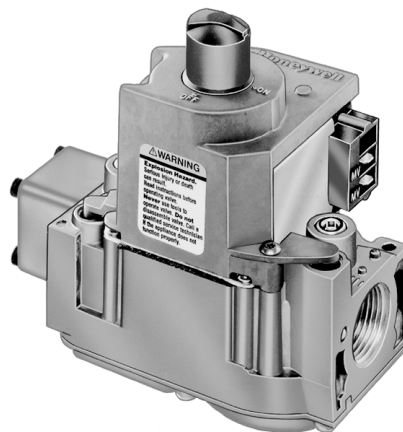


VR8305 Direct Ignition Dual Automatic Valve Combination Gas Controls

The VR8305 Direct Ignition Dual Automatic Valve Combination Gas Controls are for use with direct ignition systems in gas-fired appliances. The controls include a safety shut-off, a manual valve, two automatic operators, and a pressure regulator.



- Used with S89C,E,F and S87 series 5 and later.
- Used with 24 Vac heating appliances that burn natural or liquefied petroleum (LP) gas.
- Capacity rated up to 300 feet³/hour at 1 inch wc pressure drop [8.5 meters³/hour at 0.25 kPa]. Maximum capacity rated up to 415 feet³/hour [11.8 meters³/hour]. Minimum capacity rated at 30 feet³/hour [0.8 meters³/hour].
- Solenoid operated dual first automatic valves open on thermostat call for heat and close when call for heat ends.
- Opening of the solenoid-operated second automatic valve engages the servo pressure regulator. Loss of power or gas closes the valve.
- Two-position gas control knob has ON and OFF positions.
- All adjustments and wiring connections accessible from top of the control.
- Compact size.
- Straight-through body pattern; right angle adapters available for inlet and outlet.
- Available in 1/2 inch and 3/4 inch inlet and outlet. 1/2 inch and 3/4 inch straight and angle adapters available.
- Adjustable servo regulator effectively maintains almost constant gas output pressure under wide fluctuations in gas supply pressure.
- Inlet screen included.
- Wiring terminal block color-coded brown to indicate direct ignition control.
- May be installed at any angle including vertically between 0 and 90 degrees from the upright position.
- 1/4 inch male quick-connect terminals for electrical connections.
- -40° F to +175° F [-40° C to +79° C] temperature range. (VR8305H 0° F to 175° F [-18° C to 79° C]).
- Inlet and outlet pressure taps included; both taps accessible from top of control.
- Standard, slow, and step-opening models available.
- Natural to LP gas conversion kit included for standard-opening and slow-opening models.
- LP to natural gas conversion kit available for standard-opening and slow-opening models.

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Specifications

IMPORTANT: *The specifications given in this publication do not include normal manufacturing tolerances. Therefore a particular 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.*

MODELS: VR8305 Dual Automatic Valve Combination Gas Controls for use in Direct Ignition Systems. See

Table 1 for model specifications.
 SUPPLY VOLTAGE: 24 Vac, 60 Hz.
 CURRENT DRAW: 0.7A.
 ELECTRICAL CONNECTIONS: 1/4 inch male quick-connects. Two convenience terminals on top of control (optional). Terminal block color-coded brown.
 TYPE OF GAS: VR8305 setup for natural gas includes a 393691 LP Conversion Kit. Kit for conversion from LP to natural gas is available for standard-opening and slow-opening models. See Accessories.

TABLE 1—MODEL SPECIFICATIONS.

Model No. Suffix Letter	Opening Charac- teristic	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
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
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— 3-5	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— 2-3	Step—none; Full Rate— 8-12	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

^a Step pressure not adjustable.

Ordering Information

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

1. Order number.
2. Natural or LP gas.
3. Step pressure on VR8305P.
4. Accessories, if desired.
5. Order separately; transformer, igniter, sensor, module, 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
 Minneapolis, Minnesota 55422-4386

(In Canada—Honeywell Limited/Honeywell Limitee, 740 Ellesmere Road, Scarborough, Ontario M1P 2V9) International Sales 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.

CAPACITY:

Size (Inlet x Outlet)	Capacity at 1 inch wc Pressure Drop ^a	Minimum Regulated Capacity	Maximum Regulated Capacity
1/2 X 1/2	240 feet ³ /hour [6.8 meter ³ /hour]	30 feet ³ /hour [0.8 meter ³ /hour]	340 feet ³ /hour [9.6 meter ³ /hour]
1/2 X 3/4	270 feet ³ /hour [7.6 meter ³ /hour]	30 feet ³ /hour [0.8 meter ³ /hour]	370 feet ³ /hour [10.5 meter ³ /hour]
3/4 X 3/4	300 feet ³ /hour [8.5 meter ³ /hour]	30 feet ³ /hour [0.8 meter ³ /hour]	415 feet ³ /hour [11.8 meter ³ /hour]

^a Capacity 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].

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.

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

TABLE 3—ADAPTER (FLANGE) PART NUMBERS.

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

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

PRESSURE TAPPING: Inlet and outlet taps standard. Taps accessible from top of gas control. Tap is 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, including vertically, from the upright position of the gas control knob.

TEMPERATURE RATING:

VR8305M,P: -40° F to +175° F [-40° C to +79° C].

VR8305H: 0° F to 175° F [-18° C to +79° C].

DIMENSIONS: See Fig. 1.

APPROVALS:

American Gas Association design certificate: UP-70-69A.

Canadian Gas Association design certificate: UP-70-69A.

Australian Gas Association certified: 4717.

DELTA C: UP-70-69A.

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.

Fig. 1—VR8305 installation dimensions in inches and [millimeters].

