

Millivoltage Combination Gas Controls

VS820 Millivoltage Combination Gas Controls



These gas controls combine a Lite-Rite manual gas cock, safety shutoff Pilotstat assembly, millivoltage automatic valve operator, and optional gas pressure regulator. They require the use of a 750 mv Powerpile generator (thermopile). The generator, heated by the pilot burner flame, provides the electrical energy to operate the combination gas control. A millivoltage thermostat with suitable accessory controls completes the automatic control system for the heating appliance. Models equipped with the standard pressure regulator are identified by the suffix letter "A" VS820A. Models without pressure regulator carry the suffix letter "B" (VS820B). Suffix letter "C" (VS820C) identifies models having step opening type regulators. Pressure regulators and operator are standardized and interchangeable on all models in the two capacity ranges - 225 and 335 cubic feet per hour.

- Include pilot flow adjustment screw.
- Easy to install, adjust and service; all adjustments and connections are accessible from top of control.
- Add separate energy cutoff (ECO) where codes call for dual safety shutoff.
- Complete safety shutoff on pilot flame failure.
- LITE-RITE (OFF-PILOT-ON) lighting sequence.
- ECO connector for V800 models, Part No. 392451-1.

Application: Self-powered automatic control. Use with 750 mV pilot generator.

Dimensions, Approximate: 4 3/4 in. high x 4 1/16 in. wide x 3 3/16 in. deep (121 mm high x 103 mm wide x 81 mm deep)

Body Pattern: Straight-through. multi-tapped with 1/2 in. right and left outlets plugged, except as noted.

Pressure Ratings: 1/2 psi (3.5 kPa)

Pressure Tapping: 1/8 in. NPT with plug.

Temperature Range: 32 F to 175 F (0 C to 79 C)

Electrical Ratings: 750 mV

Pilot Gas Outlet: Compression fitting for 1/4 in. OD tubing.

Electrical Connections: Terminal block has 3 combination screw and 1/4 in. quick connect terminals.

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

Approvals:

American Gas Association: AGA Design Certified: File no. L2025003

Canadian Gas Association: CGA Design Certified: File no. L2025003

Underwriters Laboratories Inc. UL Component Recognized

Residential
Combustion Controls

| Product Number | Type of Gas | Inlet/Outlet Size (in.) | Pressure Regulator | Pressure Regulator Setting | | Includes | Comments |
|----------------|-------------|---|--------------------|--|-------------------------------------|--|--|
| | | | | (psi) | (kPa) | | |
| * VS820A1047 | Natural | 1/2 in. NPT x 3/4 in. NPT with 1/2 in. NPT side outlets | Standard | 3.5 in. wc Reg. Set/3-5 in. Adj. Range | 0.87 kPa | One 3/4 in. x one 1/2 in. reducer bushing; one 1/2 in. x 3/8 in. reducer bushing | — |
| * VS820A1054 | Natural | 3/4 in. NPT x 3/4 in. NPT with 1/2 in. NPT side outlets | Standard | 3.5 in. wc Reg. Set/3-5 in. Adj. Range | 0.87 kPa | One 1/2 in. x 3/8 in. reducer bushing; one 3/4 in. x 1/2 in. reducer bushing | — |
| • VS820A1088 | Natural | 3/4 in. NPT x 3/4 in. NPT with 1/2 in. NPT side outlets | Standard | 3.5 in. wc Reg. Set/3-5 in. Adj. Range | 0.87 kPa | One 1/2 in. x 3/8 in. reducer bushing; one 3/4 in. x 1/2 in. reducer bushing; one Natural to LP conversion kit; remote rod adapter | Comes with two 3/4 in. x 1/2 in. reducer bushings; one Natural to LP conversion kit; one 1/2 in. x 3/8 in. reducer bushing; and a remote rod adapter |
| * VS820A1336 | LP | 3/4 in. NPT x 3/4 in. NPT with 1/2 in. NPT side outlets | Standard | 10.0 in. wc Reg. Set/8-12 in. Adj. Range | 2.49 kPa | One 3/4 in. x one 1/2 in. reducer bushing; one 1/2 in. x 3/8 in. reducer bushing | — |
| * VS820C1100 | Natural | 3/4 in. NPT x 3/4 in. NPT with 1/2 in. NPT side outlets | Step Opening | Step: 0.9 in. wc non-adjustable; Full rate: 3.5 in. wc, 3-5 in. adjustable | Step: 0.22 kPa; Full rate: 0.87 kPa | One 3/4 in. x one 1/2 in. reducer bushing; one 1/2 in. x 3/8 in. reducer bushing | — |

* TRADELINE models • SUPER TRADELINE models

Gas Valve Selection Guide

Gas Valve Selection Guide

| Trade Replacements (Double-Check Specifications Before Replacement) | | Specifications | | | | Accessories (Includes) | | | | | |
|---|---------------------------------|--|-------------------------|---|----------------------------|------------------------|-----------------------------------|------------------------------|------------------------|-----------------------------------|--------------------|
| Universal Service Part | Direct Service Part Replacement | Opening Characteristics (standard, step) | Inlet/Outlet Size (in.) | Pressure Regulator Setting (psi) | Temperature Range | Q340 Thermocouple | 3/4 in. x 1/2 in. Reducer Bushing | Natural to LP Conversion Kit | 3/4 in. Straight Range | 1/2 in. x 3/8 in. Reducer Bushing | Remote Rod Adapter |
| VR8300A4516 | VR8300A4508 | Standard | 3/4 x 3/4 | 3.5 in. wc (0.87 kPa) | 0 to 175 F (-18 to 79 C) | None | Two | One | None | None | None |
| | VR8300A3500 | Standard | 1/2 x 3/4 | 3.5 in. wc (0.87 kPa) | 0 to 175 F (-18 to 79 C) | None | One | One | None | None | None |
| | VR8300A4516 | Standard | 3/4 x 3/4 | 3.5 in. wc (0.87 kPa) | 0 to 175 F (-18 to 79 C) | One | Two | One | None | None | None |
| VR8245M2530 | VR8204A2076 | Standard | 1/2 x 1/2 | 3.5 in. wc (0.87 kPa) | 0 to 175 F (-18 to 79 C) | None | None | One | One | One | None |
| | VR8204M1091 | Standard | 1/2 x 1/2 | 3.5 in. wc (0.87 kPa) | -40 to 175 F (-40 to 79 C) | None | None | One | One | One | None |
| | VR8205A2024 | Standard | 1/2 x 1/2 | 3.5 in. wc (0.87 kPa) | 0 to 175 F (-18 to 79 C) | None | None | One | One | One | None |
| | VR8245M2530 | Standard | 1/2 x 1/2 | 3.5 in. wc (0.87 kPa) | -40 to 175 F (-40 to 79 C) | None | None | One | None | One | None |
| VR8345H4555 | VR8205H1003 | Slow | 1/2 x 1/2 | 3.5 in. wc (0.87 kPa) | 0 to 175 F (-18 to 79 C) | None | None | None | None | None | None |
| | VR8304H4503 | Slow | 3/4 x 3/4 | 3.5 in. wc (0.87 kPa) | 0 to 175 F (-18 to 79 C) | None | None | One | None | None | None |
| | VR8345H4555 | Slow | 3/4 x 3/4 | 3.5 in. wc (0.87 kPa) | 0 to 175 F (-18 to 79 C) | None | Two | One | None | None | None |
| VR8345M4302 | VR8304M3509 | Standard | 1/2 x 3/4 | 3.5 in. wc (0.87 kPa) | -40 to 175 F (-40 to 79 C) | None | One | One | None | None | None |
| | VR8304M4507 | Standard | 3/4 x 3/4 | 3.5 in. wc (0.87 kPa) | -40 to 175 F (-40 to 79 C) | None | Two | One | None | None | None |
| | VR8305M3506 | Standard | 1/2 x 3/4 | 3.5 in. wc (0.87 kPa) | -40 to 175 F (-40 to 79 C) | None | One | One | One | None | None |
| | VR8345M4302 | Standard | 3/4 x 3/4 | 3.5 in. wc (0.87 kPa) | -40 to 175 F (-40 to 79 C) | None | Two | One | None | None | None |
| VR8345Q4563 | VR8205Q2555 | 2-Stage | 1/2 x 1/2 | 1.7 in. wc Low Fire; 3.5 in. wc High Fire | -40 to 175 F (-40 to 79 C) | None | None | One | None | One | None |
| | VR8304Q4511 | 2-Stage | 3/4 x 3/4 | 1.7 in. wc Low Fire; 3.5 in. wc High Fire | -40 to 175 F (-40 to 79 C) | None | Two | One | None | None | None |
| | VR305Q4500 | 2-Stage | 3/4 x 3/4 | 1.7 in. wc Low Fire; 3.5 in. wc High Fire | -40 to 175 F (-40 to 79 C) | None | One | One | None | None | None |
| | VR8345Q4563 | 2-Stage | 3/4 x 3/4 | 1.7 in. wc Low Fire; 3.5 in. wc High Fire | -40 to 175 F (-40 to 79 C) | None | Two | One | None | None | None |
| VR8200A2744 | VR8200A2124 | Standard | 1/2 x 1/2 | 3.5 in. wc (0.87 kPa) | 0 to 175 F (-18 to 79 C) | One | None | One | One | One | None |
| | VR8200A2132 | Standard | 1/2 x 1/2 | 3.5 in. wc (0.87 kPa) | 0 to 175 F (-18 to 79 C) | None | None | One | One | One | None |
| | VR8200A2744 | Standard | 1/2 x 1/2 | 3.5 in. wc (0.87 kPa) | 0 to 175 F (-18 to 79 C) | None | None | One | One + One Elbow | One | None |
| VS820A1088 | VS820A1054 | Standard | 3/4 x 3/4 | 3.5 in. wc (0.87 kPa) | 32 to 175 F (0 to 79 C) | None | Two | None | None | One | None |
| | VS820A1336 | Standard | 3/4 s 3/4 | 10.0 in. wc (2.49 kPa) | 32 to 175 F (0 to 79 C) | None | Two | None | None | One | None |
| | VS820A1088 | Standard | 3/4 x 3/4 | 3.5 in. wc (0.87 kPa) | 32 to 175 F (0 to 79 C) | None | Two | One | None | One | Yes |

Notes:

All piloted valves have a 1/4 in. compression fitting.
 All the VR valves come set for natural gas, but can be converted to LP gas.
 The VS820A1054 is for natural gas. The VS820A1336 is for LP gas.
 All the VR valves have inlet and outlet pressure taps. The VS820 valves have just an outlet pressure tap