



Bell & Gossett
a xylem brand

SPECIFICATIONS
Ultra Setter™ Compact
0.5 inch thru 2 inch
Pressure Independent Control Valve
BGPIUS-SP-10011 R2

SECTION 23 09 13.33

Control Valves

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Unit shall be a Bell & Gossett® Ultra Setter™ Compact pressure independent control valve Model PVC/Model AU/Model AX as manufactured by Xylem.
- B. Furnish pressure independent control valve with capabilities as indicated in the plans.

1.02 RELATED SECTIONS

- A. Section 23 09 13.13 – Integrated Automation Actuators and Operators
- B. Section 25 35 19 – Integrated Automation Control Valves
- C. Section 23 08 00 – Commissioning of HVAC

1.03 REFERENCES

- A. ANSI - American National Standards Institute.
- B. UL - Underwriters Laboratories.
- C. ISO - International Standards Organization.

1.04 SUBMITTALS

- A. Submit data cover sheet.
- B. Dimensional print(s).
- C. Sales bulletin.
- D. Installation, operation & maintenance manual.

1.05 QUALITY ASSURANCE

- A. The Valve manufacturer shall be fully certified by the International Standards Organization per ISO 9001.
- B. The manufacturer shall carry a minimum product liability insurance of \$5,000,000.00 per occurrence.
- C. The valve actuator shall be UL listed or recognized by Underwriters' Laboratories, Inc.

1.06 MAINTENANCE MATERIAL SUBMITTALS

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Subject to compliance with these specifications, the following manufacturers shall be acceptable:
 - 1. Pressure Independent Control Valve
 - a. Xylem Inc. Bell & Gossett Ultra Setter pressure independent control valve Model PVC, Model AU, or Model AX.
 - b. Pre-approved equal

2.02 COMPONENTS

- A. Pressure Independent Control Valve
 - 1. Valve assembly shall provide 100% authority at all times.
 - 2. Valve assembly shall include a field adjustable, lockable dial that will have the gallons per minute printed on it.
 - 3. Valve assembly shall provide full stroke control regardless of the GPM setting on the dial.

Ultra Setter Compact Specifications

4. If no actuator is used the valve shall be suitable for use as a pressure independent flow limiter.
 5. Valve shall meet an ANSI Class IV leakage rating up to 60 PSID.
 6. Valve shall provide close off up to 140 PSID with no actuator used.
 7. Valve flow shall be accurate to within +/-5% of set GPM when the differential pressure is within the valve's operating range.
 8. ½" – 1¼" valve bodies shall be constructed out of brass and rated for 360 PSIG working pressure.
 9. 1½" – 2" valve bodies shall be constructed out of ductile iron and rated for 360 PSIG working pressure.
 10. Valve assembly shall contain a stainless steel stem and spring.
 11. Valve bodies shall be rated for fluid temperatures 32°F (0°C) to 248°F (120°C) and ambient temperatures 34°F (1°C) to 122°F (50°C).
 12. **(Model AU Only)** Valve body shall have an integral isolation valve with stainless steel ball and stem with integrated pressure\temperature port and another pressure\temperature port located on the body itself.
 13. **(Model AU Only)** Valve body shall have the ability to accommodate a union ended tailpiece that can connect to copper, male NPT piping, and female NPT connections and a union nut that can secure the tailpiece to the body of the valve to create a water-tight seal.
 14. **(Model PVC & Model AX Only)** Valve body shall include two pressure\temperature ports to allow for verification of differential pressure.
 15. **(Model AX Only)** Valve shall have a separate attached male NPT x female NPT ball isolation valve. Isolation valve shall have a brass body with chrome plated brass ball.
- B. Pressure Independent Control Valve Actuator
1. Actuator shall be manufactured by either by Siemens AG, Honeywell International Inc., or Johnson Controls Inc.
 2. Actuator shall either be provided by Xylem Inc. Bell & Gossett or "By Others".
 3. Actuator control shall either be:
 - a. 0-10v modulation
 - b. 2-10v modulation (Honeywell Only)
 - c. 3 position; On-Floating-Off
 - d. On\Off (Honeywell excluded)
 4. Actuator shall perform in accordance to the Manufacturer's specifications.
 5. Actuators shall calibrate to full spectrum of flow once power has been applied to the actuator (Honeywell excluded).
 6. Actuators shall provide a linear characteristic performance output.

2.02 ACCESSORIES

- A. Pressure Independent Control Valve Accessories
1. Extended Pressure\Temperature Ports

PART 3 EXECUTION

1. INSTALLATION

- A. Install pressure independent control valve in accordance with manufacturer's instructions.
- B. Power wiring, as required, shall be the responsibility of the electrical contractor. All wiring shall be performed per manufacturer's instructions and applicable state, federal and local codes.
- C. Unit shall be a Bell & Gossett[®] Ultra Setter[™] Compact pressure independent control valve Model PVC/Model AU/Model AX as manufactured by Xylem.

END OF SECTION



Xylem Inc.
8200 N. Austin Avenue
Morton Grove, IL 60053
Tel: (847) 966-3700 Fax: (847) 965-8379
www.xylem.com/bellgossett

Xylem, Bell & Gossett and Circuit Setter are trademarks of Xylem Inc. or one of its subsidiaries.

© 2022 Xylem BGPIUS-SP-10011 R2 August 2022