

**SAMPLE SPECIFICATION**

**Pressure Reducing & Solenoid Valve**

GA-4050-SPEC Rev A

PART 1 GENERAL

 1.01 SUBMITTALS

1. Submit detailed product data and descriptive literature including dimensions, weights, headloss data, pressure rating and materials of construction.
2. Provide shop drawings that clearly illustrate the general arrangement of the equipment and cross-sectional views of the components.

 1.02 QUALITY ASSURANCE

A. Supplier shall have been manufacturing automatic control valves for a period of at least ten (10) years and shall, at the request of the Engineer, provide a list of installations involving equipment of similar size and application.

 PART 2 PRODUCTS

 2.01 PRESSURE REDUCING & SOLENOID VALVE

A. Construction: Pressure Reducing Valves larger than 2-inch shall consist of a main valve assembly and a pilot system, completely assembled, tested as a unit and ready for field installation.

1. Main valve body shall be globe style, constructed of high strength cast iron conforming to ASTM A126 Class B with integral flanges, faced and drilled per ANSI B16.1 Class 125 or Class 250. The valve shall be "full-ported" with a flow area through the valve no less than the area of its nominal pipe size and have an integral bottom pad or feet to permit support directly beneath the body.
2. The main valve shall operate on the differential piston principle such that the area on the underside of the piston is no less than the pipe area and the area on the upper surface is greater than that of the underside. There shall be no diaphragms or springs in the main valve.
3. The valve piston shall be fully guided on its outside diameter and all guiding and sealing surfaces shall be bronze. To minimize the consequences of throttling, throttling shall be by long, stationary vee-ports located downstream of the seat and not by the seat itself. Sawtooth attachments or other add-on devices are not permitted.
4. The valve shall be fully capable of operating in any position without the need of springs and shall not incorporate stems, stem guides or spokes in the waterway. A visual position indicator shall be provided.
5. The main valve shall be serviceable in the line through a single flanged cover that provides easy access to all internal components.

B. PILOT SYSTEM

1. Provide a system of pilots and controls to enable the valve to perform the functions listed below. All controls and control piping shall be non-corrosive and suitable for the working pressure.
2. System shall include a normally open, direct-acting, diaphragm operated, spring-loaded bronze pressure reducing pilot and a 120VAC solenoid pilot. Reducing pilot shall be easily field adjustable from near zero to a minimum of 10% above the factory setting. Controls shall include adjustable closing speed control, y-strainer, and pilot isolating valves.

 C. FUNCTION

1. The valve shall function to reduce a higher, fluctuating inlet pressure to a lower, steady outlet pressure regardless of variations in demand.

2. The main valve shall close tight anytime upon electrical signal to the solenoid

2.02 MANUFACTURER

A. The valve shall be GA Industries Figure 4050-D (Class 125) or 4050-U (Class 250) as manufactured by VAG USA, LLC Mars, PA USA