



# **SOUTHWEST GAS CORPORATION**

® ENGINEERING STAFF

## **MATERIAL SPECIFICATION**

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<b>Issue Date:</b>	03/01/16
<b>Superseded Date:</b>	02/19/15

**Prepared By:** Engineering Staff 

**Approved By:** Jerome T. Schmitz 

### **VALVES AND STOPS**

Five-Valve Meter Manifold

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#### **1. SCOPE**

This specification covers five-valve meter manifolds used for isolation and metering in field meters and differential pressure transmitters. Each valve will be capable of withstanding a pressure rating of 3,000 PSI at 200 °F (93.3 °C).

#### **2. APPLICABLE DOCUMENTS**

- 2.1 Manufacturers Standardization Society (MSS) Standard Practice (SP) 25, "Standard Marking System for Valves, Fittings, Flanges and Unions."
- 2.2 American National Standard Institute (ANSI) B-1.20.1, "Pipe Threads, General Purpose (INCH)."
- 2.3 ASTM International (ASTM) A-108, "Specification for Steel Bars, Carbon, Cold Finished, Standard Quality."
- 2.4 ASTM International (ASTM) A-581, "Specification for Free-Machining Stainless and Heat Resisting Steel Wire and Wire Rods."
- 2.5 United States Department of Transportation (DOT), Code of Federal Regulations (CFR), Title 49, Part 192, "Transportation of Natural and Other Gas by Pipeline; Minimum Safety Standards."

**NOTE:** Unless otherwise specified, the editions of the above documents incorporated by DOT 49 CFR 192 are applicable. Documents not incorporated by DOT 49 CFR 192 will be the most recent edition.

#### **3. TERMINOLOGY**

##### **3.1 General**

- 3.1.1 "Southwest Gas," "Southwest" or "SWG" wherever used in this specification and other related documents will refer exclusively to Southwest Gas Corporation.
- 3.1.2 The terms "approved," "as approved," "satisfactory," "as directed," "or equal" or other similar terms wherever used in this specification and other related documents will mean "as determined by Southwest Gas," unless specifically stated otherwise.



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### **3. TERMINOLOGY** (Cont'd)

3.1.3 "Product Information Package" or "PIP" wherever used in this specification and other related documents will mean the required technical product information that a manufacturer must submit to SWG to determine if the product is suitable for use by SWG, unless specifically stated otherwise.

### **4. MATERIALS AND MANUFACTURING**

- 4.1 All threaded connections will conform to ANSI B-1.20.1.
- 4.2 All sealing components and connections will be compatible with natural gas.
- 4.3 Southwest reserves the right to require current testing or hydrostatic shell testing.
- 4.4 The valve shall be made of carbon steel material.
- 4.5 The valve bonnet and body will be in accordance with ASTM A-108.
- 4.6 Packing shall be Teflon or Viton O-ring with Teflon back-up ring.
- 4.7 The valve stem shall be in accordance with ASTM A-581.
- 4.8 The valve scat shall be made of Delrin material.

### **5. PERFORMANCE REQUIREMENTS**

- 5.1 All threaded connections will not leak while operating at the rated pressure.
- 5.2 All valves will be hand operable.
- 5.3 All valves will provide complete shut-off in the specified pressure range and anticipated pressure differentials.

### **6. DIMENSIONS AND TOLERANCES**

Dimensions and tolerances will be in accordance with Appendix A.



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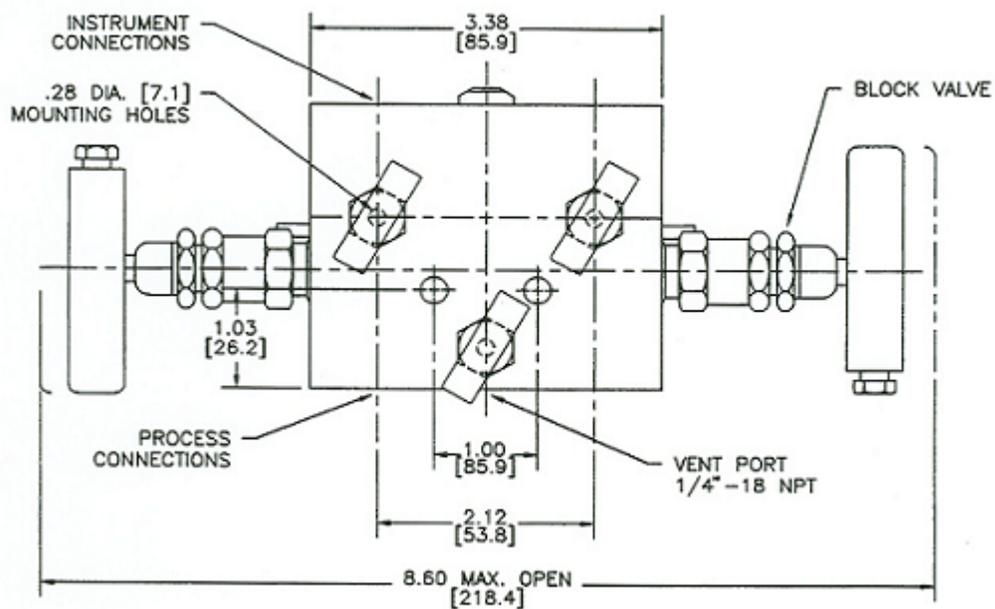
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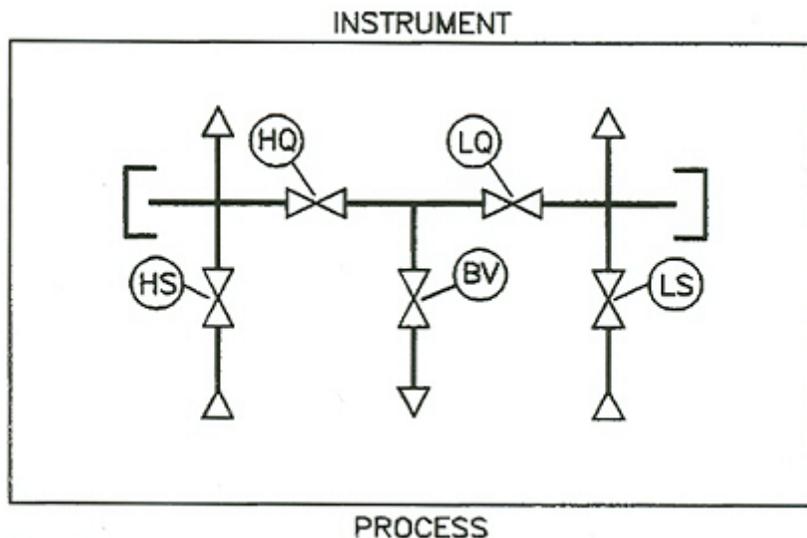
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**APPENDIX A**



- [ ] Metric equivalent
- HS High-side process block valve
- LS Low-side process block valve
- HQ High-side block equalizing valve
- LQ Low-side block equalizing valve
- BV Bleed vent valve





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**7. INSPECTION**

- 7.1 Successful review of the Product Information Package (PIP) as well as any future reference by Southwest to the seller's part number or internal code number in any future contract or purchase, will mean only that no conflict with the specification was found and will not relieve the seller from meeting all the requirements of this specification.
- 7.2 SWG retains the option to inspect the manufacture and testing of five-valve meter manifolds sold to SWG.
- 7.3 Southwest will make appropriate inspections and test of any and all materials, products or systems supplied to this specification. Southwest will have the right, at their option, to reject any material which fails to conform to this specification. Any such rejection may take place at the manufacturer's facility; the supplier's warehouse or any subsequent delivery location before or after Southwest assumes possession. Notice of the rejection will be made promptly to the supplier by SWG. The defective product will be replaced or returned for credit at the manufacturer's expense.
- 7.4 Any changes in the manufacturing of previously approved valves covered under this specification for sale to Southwest must be approved by Southwest's Engineering Staff. **Failure to obtain Southwest's approval may be cause for rejection and disqualification as an approved supplier.**

**8. CERTIFICATION**

The manufacturer's or supplier's certification will be furnished to Southwest. This certification will state that samples representing each lot have been manufactured, tested and inspected in accordance with this specification and that all requirements have been met. When specified in the purchase order or contract, a report of results will be provided.

Upon the request of Southwest, the certification of an independent third party indicating conformance to this specification may be considered at Southwest's expense.



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**9. SAFETY DATA SHEETS**

In accordance with law, the Seller will supply Safety Data Sheets for all applicable items supplied under this specification to the following:

- 1) The Receiving Location
- 2) Engineering Staff
- 3) Southwest Gas Corporation  
Staff Safety  
Mail Station LVA-581  
P.O. Box 98510  
Las Vegas, NV 89193-8510

**10. PRODUCT MARKING**

All five-valve meter manifolds will be marked in accordance to MSS SP 25 for quality control purposes.

**11. PACKAGING AND PACKAGE MARKING**

Five-valve meter manifolds will be packaged to prevent damage during transportation and storage. Installation instructions will be packaged with each shipment.

**12. STOCK CLASSIFICATION DESCRIPTION**

MANIFOLD, METER, 5-VALVE.