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SPECIFICATION: **G-100,298-9**

TITLE: **VALVES FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEMS**

VOLUME: **6**

COURSE ID: **NONE**

REQUIRED TRAINING GROUPS: **NONE**

Each group listed is responsible for its own training which may be specific to a title/individual and not to the group in its entirety. Please check with your local training coordinator/department.

SUBSTANTIVE REVISIONS: (See ★)

1)	Sections 3.1, 3.2	-	Reformatted legal requirements to align with guidelines in G-8215.
2)	Sections 6.1, 13.1(C)	-	Updated language regarding stops and gear operators.
3)	Section 18.1	-	Removed compression-end 3" & 4" metal valves from table.
4)	Section 18.17	-	Removed listings for ISCO horizontal gear valves. Removed Kerotest valves. Removed ½" and 1" CTS valves.

Gas Operations Standards

TITLE: VALVES FOR GAS TRANSMISSION AND DISTRIBUTION PIPING SYSTEM

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1.0 SCOPE

1.1 This specification sets forth the minimum requirements for ball and plug valves for all sizes and pressure ratings that are furnished by suppliers for installation on mains and services in Consolidated Edison's natural gas transmission and distribution systems.

1.2 Unless otherwise specified, only valves listed in this specification are approved for purchase.

1.3 All valves furnished under this specification are to be new. Reclaimed or rebuilt valves are not acceptable.

1.4 All coatings, lubricants and grease mentioned in this specification must be approved by Con Edison's Environmental, Health and Safety (EH&S) Department.

2.0 DEFINITIONS

Company	-	Consolidated Edison Company of New York, Inc., or its duly authorized representative
Supplier	-	Valve manufacturer or authorized distributor
ANSI	-	American National Standards Institute
ASME	-	American Society of Mechanical Engineers
ASTM	-	ASTM International (formerly American Society of Testing Materials)
MSS	-	Manufacturers' Standardization Society of the Valve and Fitting Industry
CWP	-	Cold Working Pressure or Maximum Working Pressure (PSIG).
C_v	-	Capacity Factor (Flow Coefficient for Valves).
ALT valve	-	An alternative valve that meets the requirements of API 6D.

3.0 LEGAL REQUIREMENTS

For references to external standards cited in this specification, use the accepted revision indicated in 16 NYCRR Section 10.3. If the external standard is not listed within section 10.3, use the latest revision of the standard.

Valves purchased under this specification shall comply with the requirements in:

★ 3.1 49 CFR Part 192, Sections 145 and 363.

★ 3.2 16 NYCRR Part 255 Sections 145 and 363.

3.3 New York City Fuel Gas Code, Appendix E, “Meters and Gas Service Piping.”

4.0 MARKING AND IDENTIFICATION

4.1 All valves shall be identified with the valve type and the Company Class and Stock Number. This information shall be included on a corrosion-resistant tag permanently secured to the valve or, if space permits, included on the valve nameplate. Tags shall not be wired to the valve hand-wheel.

4.2 Markings shall conform to MSS Specification SP-25 “Standard Marking System for Valves, Fittings, Flanges, and Unions”. The information listed below is also required:

A) Manufacturer/Type/Model No.
B) Figure No. or Part No.
C) Pressure Rating
D) Size
E) Serial No.
F) The gear operator model number (if applicable) and the number of turns required to fully operate gear operated valves shall be permanently marked on gear housing, the valve nameplate, or on a tag securely fastened to the valve.
G) ALT valve designations

5.0 PACKAGING AND TRANSPORTATION

5.1 Deficiencies

The supplier shall be liable to correct any deficiencies noted prior to installation that are due to damage or failure to suitably protect all surfaces, including end connections.

5.2 Assembled Valve Requirements

A) All inside valve surfaces which will be exposed to natural gas products shall be free of metal chips, weld splatter, slag, grease, dirt, and other foreign materials.

B) Valve stem packing and bonnet gaskets shall be asbestos free and suitable for use in natural gas piping systems.

C) Valve ends shall be sealed to prevent entrance of water, dirt, or foreign materials.

D) Valves shall be shipped with the ball or plug in the following position(s):

Valve Manufacturer	Position
Andronaco	Fully Opened
Balon	Fully Opened
Cameron	Fully Opened
Delta	Fully Opened
Dresser	Fully Opened
Grove	Fully Opened
Kerotest	Fully Opened
Mueller	Fully Opened
Nordstrom	Fully Opened
Orbit	**Fully Closed**
Walworth	Fully Opened

E) All valves shall be fully assembled; no loose parts shall be shipped in the body cavity.

F) Ball valves shall be shipped without any emergency seal lubricant in the seat areas.

6.0 METALLIC VALVE GENERAL DESIGN REQUIREMENTS

6.1 Travel and Stops

★ A) Valves shall operate in the clockwise direction when going from the opened to close position and shall have stops that match the fully open and fully closed position.

★ B) Valve stops must be designed to resist being sheared off by a standard street tee wrench.

★ C) The indicated fully opened and fully closed stops of any gear operator must match the actual position of the moving element (e.g. ball or plug) of the valve.

6.2 Plug Valves

A) Lubricated plug valves shall be equipped with tapered plugs.

B) Lubricated plug valves shall be provided with double ball check assemblies in the stem area to prevent leakage of gas to atmosphere when the lubrication fitting is removed.

C) Lubrication fittings shall be a combination type with a button-head end allowing lubrication with either a high-pressure gun or by the stick sealant method.

D) Lubricated plug valves shall be factory-lubricated with an approved sealant as per Con Edison Specification G-100,011, "Sealants and Lubricants for Valves Installed on Gas Mains and Services."

E) Valve flow coefficient values (C_v values) for all valves along with their equivalent lengths shall be made available upon request to the supplier by the Company, unless this information is available on the supplier or manufacturer's website.

6.3 Ball Valves

A) The following port designs are acceptable:

- ANSI Class 150- Full port or Reducing Port (Venturi Opening)
- ANSI Class 300- Full port

6.0 METALLIC VALVE GENERAL DESIGN REQUIREMENTS (Continued)

6.3 Ball Valves (Continued)

B) The approved valve seat materials are Buna-N, Nylatron GSM, Hycar, Viton and Nylon. Seats shall be resistant to cracking, abrasion, cuts, or deterioration from hydrocarbons and other foreign materials common to the gas stream. Manufacturer's offering seats other than the type listed above shall submit test reports demonstrating that the material is at least equivalent to those listed.

C) Ball valves shall be provided with double block and bleed unless otherwise specified. An accessible vent plug must be provided in the valve body to check for leakage past either seat. The vent plug shall be designed so that it cannot blow out during operation. Body vent plugs shall be installed with teflon tape prior to the manufacturer's pressure test.

D) If a relief valve is provided as part of the valve body, the manufacturer or suppliers of valves shall remove the relief valve and install a 3000 lb. forged steel plug with ANSI tapered thread. The plug shall be seal welded. Steel plugs and button head lubrication fittings shall be installed prior to performing the pressure tests.

E) All 6" and larger size ball valves shall be provided with an emergency lubrication system so in the event of damage to the elastomer seats, a bubble-tight shutoff can be aided by injecting a sealant, as per Con Edison Specification G-100,011, through fittings in the valve seat area.

F) Dust caps shall be provided on all lubrication fittings.

7.0 METALLIC VALVE END REQUIREMENTS

7.1 Welding Ends

Steel-bodied valves with welding ends shall have the ends beveled for butt-welding to steel pipe as per ASME B16.25, “Butt-Welding Ends” - Figs. 1 and 2 (no backing ring), and ASME B31.8 “Gas Transmission and Distribution Piping Systems,” Appendix I, unless otherwise specified.

7.2 Flanged Ends

Steel-bodied valves with flanged ends shall have ends faced and drilled in accordance with ASME B16.5, “Steel Pipe Flanges and Flanged Fittings” and MSS SP-44, “Steel Pipe Line Flanges.” Gasket surface finish shall be either concentrically or phonographically (spirally) serrated. Cast iron valves with flanged ends shall have ends faced and drilled in accordance with ASME B16.1, "Cast Iron Pipe Flanges and Flanged Fittings, 25, 125, and 800 lb." for Class 125 lb. flanges.

7.3 Compression Ends

Compression ends shall have conductive gaskets to provide electrical continuity between the valve and the steel gas pipe.

Material, fabrication and marking requirements for compression ends shall be in accordance with G-100,285 “Compression End Couplings, Tees, Elbows, Line Caps and Riser Tees for Gas Pipe and Tubing.”

7.4 Screwed Ends

All valves with screwed ends shall be supplied with internal Standard Taper Pipe Threads in accordance with ASME B1.20.1, “Pipe Threads, General Purpose.”

8.0 VALVES FOR THE GENERAL GAS DISTRIBUTION SYSTEM

8.1 Main and Service Curb Valves (For buried applications)

A) Gear operated valves shall be equipped with watertight housings filled with approved machine grease. The grease or lubricant must be approved by Con Edison's Gas EH&S Department.

B) All metallic valves, except for "weld-end" valves shall be supplied with a copper crimp-on connector attached to the body of the valve for bonding, or cathodic protection requirements. The connector shall be large enough to accept a No.10 AWG stranded copper wire.

C) Buried valves shall not include relief valves.

8.2 Service Head, Meter and Service Regulator Valves (For above ground applications)

A) Service head valves up to 4 inch size and meter and regulator valves up to 6 inch size shall have valve stems operable with an open end wrench or equivalent.

B) Wrench-operated valves shall be designed to accommodate a locking device in the closed position.

C) Wrench-operated service head and meter valves shall be of a tamper-proof design such that removal of the gland bolts cannot be compromised or accomplished with ordinary household tools.

D) Gear-operated valves shall have steel hand-wheels capable of being replaced by a chain-wheel or having a chain operator adapter attached to it. The gearing shall be enclosed in a metal housing.

E) Valves in this section shall **not** be coated, but approved shop primer is acceptable.

8.0 VALVES FOR THE GENERAL GAS DISTRIBUTION SYSTEM (Continued)

8.3 Regulator Station Valves (For Vault Applications)

A) All ball valves shall be flanged and supplied with a hand-wheel operator.

B) Valves 6" and larger shall be equipped with a gear operator enclosed in a watertight housing.

C) All plug valves listed shall be wrench operated.

D) Valves in this section shall **not** be coated, but approved shop primer is acceptable.

8.4 Compressor Station Valves

No valve having shell (body, bonnet, cover, and/or end flange) components made of cast iron, malleable iron, or ductile iron may be used in the gas pipe components of compressor stations (192.145 (e) & 255.145(c))

9.0 ACCESSORIES

Operating Adapter

Main and service curb valves shall be equipped with 2" square adapters for wrench operation (unless hand-wheels or levers are specified on the purchase order). The adapter will be securely fastened to the stem so that it cannot loosen, stick to the operating key, or jam against the gear housing.

10.0 RADIOGRAPHING OF WELDS AND CASTINGS FOR ANSI CLASS 300 VALVES

10.1 When radiographic inspection of ANSI Class 300 valves is requested by the Company, the manufacturer shall inspect in accordance with API Standard 1104, “Standard for Welding Pipe Lines and Related Facilities.”

10.2 All radiographs shall be marked so that they may be readily identified with the weld. Castings shall be radiographed in accordance with MSS SP-54 “Radiographic Examination Method” and MSS SP-55, “Visual Method.”

11.0 STEEL AND CAST IRON VALVE MATERIAL AND PRESSURE RATING

11.1 For steel valves furnished as ANSI 150 and 300 classes (unless otherwise specified), the maximum working pressures or CWP ratings shall be 285 and 740 psig, respectively. These valves shall be steel as per ASTM 216 grade WCB or WCC or ASTM A350LF2 according to the manufacturer.

11.2 For Cast Iron valves furnished in accordance with ASTM A126 Class B, the maximum working pressures or CWP rating shall be between 125 and 200 psig.

12.0 TESTING

12.1 The Company's Purchasing Department may canvass manufacturers and direct all potential suppliers of valves to the Gas Development Lab for the approval process covered in this section.

12.2 Each steel ball and plug valve must be hydrostatically shell and seat tested by the manufacturer to meet the minimum requirements of API 6D “Specification for Pipeline Valves”, Section 11.0 prior to shipment to the Company.

12.3 Each cast iron valve must be tested by the manufacturer and meet the requirements set forth in MSS SP-78 “Cast Iron Plug Valves, Flanged and Threaded Ends,” Tables II and III prior to shipment to the Company.

12.0 **TESTING** (Continued)

12.4 Certification of tests performed shall be submitted to the Company by the manufacturer when the valve is purchased.

12.5 The Test Report/Certificate of Compliance shall contain the Procurement Dept. Purchase Order Number, and Company Work Order number to facilitate Transmission System record keeping requirements.

12.6 For all ANSI 300 class valves, a copy of the individual valve's Test Report/Certificate of Compliance shall accompany each valve when shipped to Con Edison. A copy shall also be sent to the Manager of Major Projects, Gas Engineering Department, 1615 Bronxdale Avenue – Bldg 21 – 2nd Floor, Bronx, New York 10462

12.7 When approving a new valve for service, the Gas Development Lab may perform extended testing of valves as outlined in "Tests for Valves" based on Company Specifications and Industry Standards. These tests do not qualify new valves per API 6D or any other industry standard and are not meant to replace the aforementioned industry testing standards. Acceptance of new valves for use in the distribution and transmission system shall include a qualification documentation review and consultation with the manufacturer and their authorized representative(s).

12.8 The Gas Development Lab shall test one size of a specific design valve of the same manufacturer. Acceptance or rejection shall apply to all valves of same design. Changes to the design between sizes will require additional testing. The Lab shall produce an Acceptance Test Report which describes all tests that were performed and the results of such tests.

12.9 The approval of any valve shall be through the Lab's Acceptance Test report. This report will document all reviews and/or appropriate extended test results. It will then recommend the valve's approval to the appropriate Section Manager. The Section Manager shall then approve the valve by signing the Lab's Acceptance Report.

13.0 POLYETHYLENE VALVE GENERAL REQUIREMENTS

13.1 Travel and Stops

A) Valves shall operate in the clockwise direction when going from the opened to close position and shall have stops in the full open and full closed position.

B) Stops must be designed to resist being sheared off by a standard street tee wrench.

★ C) The indicated fully opened and fully closed stops of any gear operator must match the actual position of the moving element (e.g. ball or plug) of the valve.

13.2 Polyethylene (PE) valves shall meet the requirements of ASME B16.40, ASTM D2513 and ASTM D3261.

13.3 All PE resins used in the fabrication of ball and plug valves shall be meet the minimum requirements of ASTM Material Designation PE3408 or PE4710 for high density polyethylene materials.

13.4 All IPS and 1/2" CTS valves must be rated for operating pressures up to 100 psig, and for service temperatures ranging from minus 20° F to 140°F.

13.5 All 1" CTS and 1¼" CTS valves must be rated for operating pressures up to 89 psig and 72 psig, respectively and for service temperatures ranging from minus 20°F to 140°F.

13.6 All polyethylene valves 8" I.P.S and greater that will be installed in the distribution system by using either heat fusion or electrofusion shall be supplied by the manufacturer with 10" long "pup" pieces butt fused onto each end. Manufacturers shall supply letters of compliance that show their joining procedure is qualified per 49 CFR §192.283.

14.0 COATING

14.1 Unless otherwise specified, all metallic valves for underground use or use in regulator manholes shall be supplied factory coated. The surface preparation and coating application shall be in accordance with the coating manufacturer's recommended procedure. All coatings must be approved by Con Edison's Corrosion Control Section. Approved coatings and minimum dry film thicknesses shall be as follows:

Valve Manufacturer	Approved Mill Coating	Minimum Dry Film Thickness
Delta	Tarset	20 Mils
Grove	Tarset	20 Mils
Orbit	Tarset	20 Mils
Cameron	Bitumastic No. 300-M	20 Mils
Nordstrom	Tarset	20 Mils
Walworth	Scotchkote 309	20 Mils
Southern Manufacturing	Bitumastic No. 300-M	20 Mils
Dresser	1) Al-Clad Plastisol 017 for Black Valve Bodies and compression end nuts	35 Mils
	2) Al-Clad E-Coat Black (2" Sq. Operating nut only)	0.8 Mils

14.2 Bare welding ends, flange ends, and areas of the valve which will not be exposed to the environment after installation need not be coated. However, these areas must be protected to prevent corrosion during storage and shipment. Flange faces and the inside of anode connectors shall not be coated.

14.0 **COATING** (Continued)

14.3 Valves supplied with welding ends shall have the coating cut back 2" from each end unless valve end geometry makes this impractical. After coating, all valves shall be operated one complete cycle to ensure operability.

14.4 All valves shall be adequately packaged to prevent any damage to the coating during shipping, handling, or storage.

15.0 **APPROVALS**

15.1 Engineering drawings and component material specifications and MSDS sheets (coatings, shop primers, lubricants) must be submitted to the Gas Development Lab by manufacturers who wish to have their valves considered for approval in accordance with testing requirements of Section 12 of this specification. Specific samples shall be supplied by the manufacturer for testing when requested.

15.2 The Gas Development Lab will notify the Chief Gas Distribution Engineer, the Chief Gas Transmission Engineer, and the Purchasing Department of valves that have successfully passed Company reviews and/or testing requirements and are approved for inclusion on the Material Management System. A hard copy of this approval letter shall be kept with the file.

15.3 The manufacturer shall make no variation in the valve design, materials of construction, coatings or markings after inclusion of the valve in any of the approved lists of this specification. Proposed modifications shall be submitted to the Gas Development Lab for consideration for approval.

15.4 Approval of a specific valve design applies to all size valves and pressure classes made in the same design and by the same manufacturer. When applicable, the approval will be indicated in the Lab's Acceptance Test Report which is signed by the appropriate Chief Engineer in Gas Engineering.

16.0 RECORDS RETENTION

Any records generated in the course of performing work in accordance with this specification shall be maintained as required by Corporate Instruction CI-870-1 "Records Management." Guidance on the retention of Company Gas Operations records can also be found on the Records Management intranet site.

17.0 REFERENCE SPECIFICATIONS

G-100,285 - "Compression End Couplings, Tees, Elbows, Line Caps and Riser Tees for Gas Pipe and Tubing"

G-100,011 - "Sealants and Lubricants for Valves Installed on Gas Mains and Services"

18.0 APPROVED VALVE LIST

★ 18.1 Plug Valves: Cast Iron - Compression Ends - Wrench Operated

Size	Type	Manufacturer & Figure #	Turns to Operate	Max Working Pressure (psig)	Class & Stock #
1"	Non-Lub	Southern 0100-425-D-1-RS49/ Dresser 0175-0127-288	¼	175	374-2145
1¼"		Southern 0125-425-D-1-RS49/ 0175-0128-288	¼	175	374-2152
1½"		Southern 0150-425-D-1-RS49/ 0175-0129-288	¼	175	374-2160
2"		Southern 0200-425-D-1-RS49/ 0175-0130-288	¼	175	374-2178
6"	Lub	Nordstrom 24191	¼	200	374-2210

* Valves with an asterisk should include Dresser followers, gaskets, nuts and bolts, ground lug for 8 AWG wire, surface preparation per SSPC-SP5, and coatings per section 14.1

18.0 **APPROVED VALVE LIST** (Continued)

18.2 **Plug Valves: Cast Iron - Screwed - Wrench Operated (Short Pattern)**

Size	Type	Manufacturer & Figure #	Turns to Operate	Max Working Pressure (psig)	Class & Stock #
¾"	Non-Lub	Dresser 0175-0007-161	¼	175	374-2350
	Lub	Nordstrom 142T		200	
	Lub	Walworth 1796T		200	
1"	Non-Lub	Dresser 0175-0011-161	¼	175	374-0248
	Lub	Nordstrom 142T		200	
	Lub	Walworth 1796T		200	
1¼"	Non-Lub	Dresser 0175-0012-161	¼	175	374-2434
	Lub	Nordstrom 142T		200	
	Lub	Walworth 1796T		200	
1½"	Non-Lub	Dresser 0175-0013-161	¼	175	374-2095
	Lub	Nordstrom 142T		200	
	Lub	Walworth 1796T		200	
2"	Non-Lub	Dresser 0175-0006-161	¼	175	374-0321
	Lub	Nordstrom 142T		200	
	Lub	Walworth 1796T		200	
3"	Lub	Nordstrom 142T	Contact manufacturer	200	374-0354
4"	Lub	Nordstrom 142T	¼	200	374-2103

18.3 **Plug Valves: Cast Iron - 125 Lb.Flanged - Wrench Operated (Short Pattern)**

Size	Type	Manufacturer & Figure #	Turns to Operate	Max Working Pressure (psig)	Class & Stock #
3"	Lub	Nordstrom 143T/ Walworth1797F	¼	200	374-1345
4"	Lub	Nordstrom 143T/ Walworth1797F	¼	200	374-2335
6"	Lub	Nordstrom 143T/ Walworth1718F	¼	200	374-0413
8"	Lub	Nordstrom 143T/ Walworth1718F	Contact manufacturer	200	374-0507

18.0 **APPROVED VALVE LIST** (Continued)

18.4 Plug Valves: Cast Iron - 125 Lb.Flanged - Gear Operated (Short Pattern)

Size	Type	Manufacturer & Figure #	Turns to Operate	Max Working Pressure (psig)	Class & Stock #
6"	Lub	Nordstrom 50169/ Walworth 1727F	Old: 12.5 New: 15	200	374-2269
8"	Lub	Nordstrom 50169/ Walworth 1727F	Old: 12.5 New: 17	200	374-2285
10"	Lub	Walworth 1727F	Contact manufacturer	200	Non-Stock
12"	Lub	Nordstrom 50169/ Walworth 1727F	Old: 19.5 New: 17	200	374-2301
16"	Lub	Nordstrom 50169	Contact manufacturer	200	374-2582

18.5 Plug Valves: Cast Iron - Screwed - Wrench Operated (Regular Pattern)

Size	Type	Manufacturer & Figure #	Turns to Operate	Max Working Pressure (psig)	Class & Stock #
4"	Lub	Nordstrom 524	Contact manufacturer	500	Non-Stock

18.0 **APPROVED VALVE LIST** (Continued)

18.6 Plug Valves: Cast Iron - 125 Lb. Flanged- Wrench Operated (Regular Pattern)

Size	Type	Manufacturer & Figure #	Turns to Operate	Max Working Pressure (psig)	Class & Stock #
4"	Lub	Nordstrom 525	Contact manufacturer	500	Non-Stock
6"	Lub	Nordstrom 525		500	
	Lub	Walworth 1700FT		200	

18.7 Plug Valves: Cast Iron - 125 Lb. Flanged - Gear Operated (Regular Pattern)

Size	Type	Manufacturer & Figure #	Turns to Operate	Max Working Pressure (psig)	Class & Stock #
6"	Lub	Nordstrom 50169/ Walworth 1707F	15	200	374-2277
8"	Lub	Nordstrom 50169/ Walworth 1707F	15	200	374-2293
10"	Lub	Nordstrom 50169/ Walworth 1707F	17	200	374-2772
12"	Lub	Nordstrom 50169/ Walworth 1707F	22	200	374-2319

18.8 Plug Valves: Steel – Butt Welding – Wrench Operated (Short Pattern)

Size	Type	WE Wall Thickness (in)	Manufacturer & Figure #	Turns to Operate	ANSI Class	Class & Stock #
1"	Lub	0.179	Nordstrom 2024 1/2*	¼	300	374-1634*
2"	Lub	0.154	Nordstrom 1925 1/2 Walworth 1749WE	¼	150	374-2392
	Lub	0.218	Nordstrom 2045 1/2	¼	300	374-2632
3"	Lub	0.216	Nordstrom 1925 1/2 Walworth 1749WE	¼	150	374-2400
	Lub	0.216	Nordstrom 2045 1/2	Contact manufacturer	300	Non-Stock
4"	Lub	0.237	Nordstrom 1925 1/2	¼	150	374-2418
6"	Lub	0.280	Nordstrom 4185 1/2 Walworth 1967WE	¼	150	374-2426

***** *Valves with an asterisk are socket weld*

18.0 **APPROVED VALVE LIST** (Continued)

18.9 **Plug Valves: Steel - Screwed - Wrench Operated (Short Pattern)**

Size	Type	Manufacturer & Figure #	Turns to Operate	ANSI Class	Class & Stock #
1"	Lub	Nordstrom 2024	¼	300	374-1360
2"	Lub	Nordstrom 2024 Walworth 1760	¼	300	374-1865

18.10 **Plug Valves: Steel - Butt Welding - Gear Operated (Not for main use)**

Size	Type	WE Wall Thickness (in)	Manufacturer & Figure #	Turns to Operate (approx.)	ANSI Class	Class & Stock #
8"	Lub	0.322	Nordstrom 4187 1/2	1.5	150	374-2236
10"	Lub	0.365	Nordstrom 4187 1/2	1.5	150	374-2244
12"	Lub	0.375	Nordstrom 4187 1/2	3.2	150	374-2251

18.11 **Plug Valves: Steel - 150 Lb. Flanged - Wrench Operated (Short Pattern)**

Size	Type	Manufacturer & Figure #	Turns to Operate	ANSI Class	Class & Stock #
2"	Lub	Nordstrom 1925/ Walworth 1749FT	¼	150	374-2343
3"	Lub	Nordstrom 1925/ Walworth 1749FT	¼	150	Non-Stock
4"	Lub	Nordstrom 1925/ Walworth 1749FT	¼	150	374-2764
6"	Lub	Nordstrom 1925	¼	150	Non-Stock

18.0 **APPROVED VALVE LIST** (Continued)

18.12 **Ball Valves: Steel – 150 Lb. Flanged – W/ Handwheel (Full Port) – Double Block & Bleed Type**

Size	Ball Bore	Manufacturer & Figure #	ANSI Class	Class & Stock #
2"	2.06"	Orbit 1123MBB-RF/ Cameron 800101-2-216	150	379-5853
3"	3.13"	Orbit 1123BB/ Cameron 800101-2-216	150	379-5838
4"	4.06"	Orbit 1123MSBB/ Cameron 800101-2-216	150	379-5861
6"	6.00"	Orbit 1123BBGS/ Grove B-5/ Cameron 800101-2-216/ Delta Type 55	150	379-5887
8"	8.00"	Orbit 1123MBB-RF/ Grove B-5/ Cameron 800101-2-452B/ Delta Type 55	150	374-2871
10"	10.00"	Orbit 1123BB / Grove B-5/ Cameron 800101-2-452B/ Delta Type 55	150	Non-Stock
12"	12.00"	Orbit 1123BB / Grove B-5/ Cameron 800101-2-452B/ Delta Type 55	150	
16"	15.25	Orbit 1123BB / Grove B-5/ Cameron 800101-2-452B/ Delta Type 55	150	

18.12a **Ball Valves: Steel -150 Lb. Flanged**

Size	Manufacturer & Figure #	Turns to Operate	ANSI Class	Class & Stock #
2"	Ball-O-Max 2BMF285RP/ Kerotest 72566896	¼	150	379-7222
3"	Ball-O-Max 3BMF285RP/ Kerotest 72566904	¼	150	379-7214
4"	Ball-O-Max 4BMF285RP/ Kerotest 72566912	¼	150	379-7206

18.0 **APPROVED VALVE LIST** (Continued)

18.13 **Plug Valves: Steel - 300 Lb. Flanged - Wrench Operated (Short Pattern)**

Size	Type	Manufacturer & Figure #	Turns to Operate	ANSI Class	Class & Stock #
1"	Lub	Nordstrom 2025	¼	300	374-0180
2"	Lub	Nordstrom 2025	¼	300	374-0842

18.13a **Plug Valves: Steel - 300 Lb. Flanged - Venturi Pattern**

Size	Type	Manufacturer & Figure #	Turns to Operate	ANSI Class	Class & Stock #
6"	Lub	Nordstrom 4249	¼	300	374-0198

18.0 **APPROVED VALVE LIST** (Continued)

18.14 **Ball Valves: Steel - 300 Lb. Flanged - W/ Handwheel (Full Port) – Double Block & Bleed**

Size	Ball Bore	Manufacturer & Figure #	ANSI Class	Class & Stock #
2"	2.06"	Orbit 1223MBB-RF Cameron T-31	300	379-5846
3"	3.13"	Orbit 1223MBB-RF Cameron T-31	300	379-5812
4"	4.06"	Orbit 1223MBB-RF Cameron T-31	300	379-5879
6"	6.00"	Orbit 1223MBB-RF Grove B-5, Cameron T-31 Delta Type 55	300	379-5820
8"	8.00"	Orbit 1223MBB-RF Grove B-5, Cameron T-32 Delta Type 55	300	379-7180
10"	10.00"	Orbit 1223MBB-RF Grove B-5, Cameron T-32 Delta Type 55	300	379-6703
12"	12.00"	Orbit 1223MBB-RF Grove B-5, Cameron T-32 Delta Type 55	300	Non-Stock
16"	15.25"	Orbit 1223MBB-RF Grove B-5, Cameron T-32 Delta Type 55	300	
20"	19.25"	Orbit 1223MBB-RF Grove B-5, Cameron T-32 Delta Type 55	300	

18.0 **APPROVED VALVE LIST** (Continued)

18.15 **Ball Valves: Steel - Butt Welding - Wrench Operated (Full Port) – Double Block & Bleed**

Size	WE Wall Thickness (in)	Manufacturer & Figure #	ANSI Class	Class & Stock #
2"	0.218	Cameron T-31	300	Non-Stock
	0.154	Cameron T-31	150	
3"	0.216	Cameron T-31	300	Non-Stock
	0.216	Cameron T-31	150	
4"	0.237	Cameron T-31	300	379-7164
	0.237	Cameron T-31	150	379-7164

18.16 **Ball Valve: Steel - Butt Welding - Gear Operated (Full Port) – Double Block & Bleed**

Size	WE Wall Thickness (in)	Manufacturer & Figure #	ANSI Class	Class & Stock #
6"	0.280	ISCO MT Deason HiSeal, Grove B-5, Cameron T-31, Delta Type 55	150 300	374-2525
8"	0.322	ISCO MT Deason HiSeal, Grove B-5, Cameron T-32, Delta Type 55	150	Non-Stock
			300	374-2517
10"	0.365	ISCO MT Deason HiSeal, Grove B-5, Cameron T-32, Delta Type 55	150	Non-Stock
			300	Non-Stock
12"	0.375	ISCO MT Deason HiSeal, Grove B-5, Cameron T-32	300	374-2509
		Delta Type 55	300	Non-Stock
16"	0.375	ISCO MT Deason HiSeal, Grove B-5, Cameron T-32, Delta Type 55	150	Non-Stock
			300	374-2491
20"	0.375	ISCO MT Deason HiSeal, Grove B-5, Cameron T-32, Delta Type 55	150	Non-Stock
			300	374-2483
	0.500	ISCO MT Deason HiSeal, Grove B-5, Cameron T-32, Delta Type 55	300	379-7487
24"	0.375	ISCO MT Deason HiSeal, Grove B-5, Cameron T-32, Delta Type 55	150	Non-Stock
			300	379-6695
	0.500	ISCO MT Deason HiSeal, Grove B-5, Cameron T-32, Delta Type 55	150	Non-Stock
			300	379-7479
30"	0.375	ISCO MT Deason HiSeal, Grove B-5, Cameron T-32, Delta Type 55	150	Non-Stock
			300	
	0.500		300	379-6687
36"	0.375	ISCO MT Deason HiSeal, Grove B-5, Cameron T-32, Delta Type 55	150	379-7461
	0.562		300	379-0457*

** Valve includes pup pieces*

18.0 **APPROVED VALVE LIST** (Continued)

★ 18.17 **Plastic Ball Valves - Wrench Operated**

Size	Type	Manufacturer & Figure #	Max Working Pressure (psig)	Class & Stock #
1"	IPS SDR-11	Andronaco Polyvalve 1-89111	100	374-1367
1¼"	CTS .090 WT	Andronaco Polyvalve 1.25-89600.090	72	374-1368
	IPS SDR-11	Andronaco Polyvalve 1.25-89211	100	374-1369

18.0 **APPROVED VALVE LIST** (Continued)

18.18 **Plastic Ball Valves - Full Port**

Size	Type	Manufacturer & Figure #	Operation	Turns to Operate	Max Working Pressure (psig)	Class & Stock #
2"	IPS SDR 11	Andronaco Polyvalve 89111 RW Lyall BV0200Y-MFNO-000 Polytec Valve SDR11 PE FP B VLV BF Broen PEB2IHD 100 DR11 14 Kerotest 99052011 MT Deason Polyflow TRI10901	Wrench	¼	100	379-4229
3"	IPS SDR 11	Andronaco Polyvalve 89111 RW Lyall BV0200Y-MFNO-000 Polytec Valve SDR11 PE FP B VLV BF Broen PEB3IHD 100 DR11 14 Kerotest 99053011 MT Deason Polyflow TRI10961	Wrench	¼	100	379-7412
4"	IPS SDR 11	Andronaco Polyvalve 89111 RW Lyall BV0200Y-MFNO-000 Polytec Valve SDR11 PE FP B VLV BF Broen PEB4IHD 100 DR11 14 Kerotest 99054011 MT Deason Polyflow TRI11001	Wrench	¼	100	379-7271
6"	IPS SDR 11	Andronaco Polyvalve 89111 RW Lyall BV0200Y-MFNO-000 Polytec Valve SDR11 PE FP B VLV BF Broen PEB6IHD 100 DR11 14 Kerotest 99056011 MT Deason Polyflow TRI11101	Wrench	¼	100	374-2921
8"	IPS SDR 11	Andronaco Polyvalve 89111 RW Lyall BV0200Y-MFNO-000 Polytec Valve SDR11 PE FP B VLV BF Broen PEB8IHD 100 DR11 14 Kerotest 99058011 MT Deason Polyflow TRI11201	Wrench	¼	100	374-2939
12"	IPS SDR 11	Andronaco Polyvalve 89111 Broen PEB12IHD 100 DR11 14 Kerotest 99159311	Gear	1.5	100	379-7198
16"	IPS SDR 11	PEB16IHD100 DR11 51	Gear	22	100	374-0263

18.0 **APPROVED VALVE LIST** (Continued)

18.19 **Plastic Ball Valves With Electrofusion & Plain Ends**

Size	Type	Manufacturer & Figure #	Operation	Turns to Operate	Max Working Pressure (psig)	Class & Stock #
2"	SDR 11	MT Deason	Wrench	¼	100	379-1703
3"	SDR 11	MT Deason	Wrench	¼	100	379-1704
4"	SDR 11	MT Deason	Wrench	¼	100	379-1705
6"	SDR 11	MT Deason	Wrench	¼	100	379-1706
8"	SDR 11	MT Deason	Wrench	¼	100	379-1707
12"	***SDR 11***	***MT Deason***	***Gear***	***22***	***100***	***379-1702****
16"	***SDR 11***	***MT Deason***	***Gear***	***22***	***100***	***379-1735****

***Note:** As of October 2022, the 12" and 16" electrofusion valves have been deauthorized for use. The valve bodies are still approved for use as long as the prefabricated electrofusion coupling has been removed. Contact the Development Lab for more information, if needed.

18.20 **Meter Valves (Security-Type) - Screwed Wrench Operated**

Size	Type	Manufacturer & Figure #	Max Working Pressure (psig)	Class & Stock #
¾"	Shur-Stop	Mueller Co 805002	175	374-2616
	Tamper-proof	AY McDonald 560P, Dresser 275, Jomar T-175LWN	175	374-0644
		Mueller Co. H-11118-B	100	
1"	Shur-Stop	Mueller Co. 805006	175	374-2624
	Tamper-proof	AY McDonald 560P, Dresser 275, Jomar T-175LWN	175	374-0651
		Mueller Co. H-11118-B	100	
1¼"	Tamper-proof	AY McDonald 560P, Dresser 275, Jomar T-175LWN	175	374-2897
		Mueller Co. H-11118-B	100	
1½"	Tamper-proof	AY McDonald 560P, Jomar T-175LWN	175	374-2905
		Mueller Co. H-11118-B	100	
2"	Tamper-proof	AY McDonald 560P, Jomar T-175LWN	175	374-2913
		Mueller Co. H-11118-B	100	

19.0 APPROVED VALVE LIST SUMMARY TABLE

All of the approved valves which are listed in this specification are conveniently summarized in a table which appears in the home page of the Gas Hub's Gas Specifications Website and is available by clicking the following link:

Approved Valve List for Gas Transmission and Distribution Piping Systems

20.0 VALVE MANUFACTURERS

Periodically, valve manufacturers change ownership and the names listed on the nameplates change. Attached is a list of valve name equivalents for valve approval reference.

Manufacturer – New Designation	**Manufacturer** – Old Designation
Dresser	Grove
Southern Manufacturing	Dezurik