

FLOWSEAL FIGURE NUMBER SYSTEM

VALVE SIZE			VALVE TYPE			MATERIALS OF CONSTRUCTION					FEATURES			
[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]
1			2	3	4	5	6	7	8	9	10	11	12	13*
1. Size Code 02 = 2" 025 = 2 1/2" 03 = 3" 035 = 3 1/2" 04 = 4" to 48 = 48"			5. Body Material Code 1 = Carbon Steel 2 = 316 SS 3 = Monel 4 = Alloy 20 5 = Alum Bronze MIL-B-24480 8 = Alum Bronze B148 ASTM C958 H = Hastelloy C X = Special			8. Seat Material Code T = TFE R = RTFE L = Polyethylene (UHMWPE) F = Fire-Flow (TFE & Metal) B = Fire-Flow (RTFE & Metal) M = Inconel S = 300 SS C = Fire-Flow (TFE & Monel) J = Fire-Flow (RTFE & Monel) H = Fire-Flow (TFE & Hastelloy C) K = Fire-Flow (RTFE & Hastelloy C) X = Special					11. Actuator Type Code B = Bare Shaft H = Ratchet Handle L = Ratchet Handle w/Lock T = Throttle 3 = Worm Gear 4 = Pneumatic Double Acting 5 = Pneumatic SR Fail Close 6 = Pneumatic SR Fail Open 7 = Hydraulic 8 = Electric X = Other			
2. Body Class Code 0 = 150 PSI Max. Diff. Pressure 1 = ANSI 150 3 = ANSI 300 6 = ANSI 600			6. Disc Material Code 0 = Alum Bronze/ENP B148 C958 2 = 316 SS 3 = Monel 4 = Alloy 20 5 = Alum Bronze MIL-B-24480 7 = 316 SS Nitrided 8 = Alum Bronze B148 ASTM C958 9 = 316 SS/ENP H = Hastelloy C J = Hastelloy C/ENP X = Special			9. Packing Material Code T = TFE G = Graphite F = Fire-Flow X = Special					12. Special Feature Code O = None A = Oxygen Service B = Bi-directional C = Chlorine Service D = Dead-end Service F = Flat Face M = Mil-V-24624 N = NACE Construction S = 60 to 125 AARH Facing V = Vacuum Service X = Special Feature Further Description Required			
3. Body Type Code W = Wafer L = Lugged			7. Shaft Material Code 1 = 17-4PH SS 2 = 316 SS (Note 1) 3 = Monel 4 = Alloy 20 6 = Inconel 718/750 7 = Ferralium A479 0 = Nitronic 50 H = Hastelloy C X = Special			10. Bearing Material Code G = Glass Backed TFE H = 316 SS Backed TFE F = Fire-Flow (Garfil & 316 SS) S = Stainless Steel Nitrided B = Bronze K = Monel J = Hastelloy C Backed TFE X = Special					13. Series Code *Factory Assigned			
4. Shaft Design Code A = Straight 2" - 24" ANSI 150 2" - 12" ANSI 300 2" - 8" ANSI 600 C = Balanced 30" - 48" ANSI 150 14" - 30" ANSI 300 10" - 16" ANSI 600														

Note 1. Use of 316 SS shaft may lower shutoff differentials. Consult factory.

Standard materials

Example: 12 - 1WA - 121TTG - 30G

TYPICAL SPECIFICATION

- 1.0 **Scope**
This specification covers the design and testing of high pressure offset seat butterfly valves.
- 2.0 **Applicable Standards**
The following standards shall apply
ANSI B16.5: Pipe Flanges and Flanged Fittings (24" size and smaller).
ANSI B16.34: Valves-Flanged and Butt-welding End.
MSS SP-25: Standard Marking System for Valves, Fittings, Flanges and Unions.
MSS SP-61: Pressure Testing of Steel Valves.
MSS SP-68: High Pressure-Offset Seat Butterfly Valves.
API 609: Butterfly Valves, Lug-Type and Wafer-Type.
- 3.0 **Design Requirement**
 - 3.1 Valves shall be High Performance Butterfly with offset seat and eccentric shaft. They shall be capable of sealing against full differential pressure in either flow direction.
 - 3.2 Valve seat shall be both self and pressure energized with an elastomeric core. The self energizing member shall be isolated from the line media.
 - 3.3 Valves shall have retained top and bottom low friction bearings.
 - 3.4 Shaft design shall be single or dual piece.
 - 3.5 Retainer rings must be recessed in the body so that the line gasket prevents any potential external leakage.
- 3.6 Valves shall have internal stop to prevent disc over-travel.
- 3.7 Valves shall be Flowseal or approved equal.
- 4.0 **Materials**
 - 4.1 Valves shall be constructed of new material.
 - 4.2 Carbon steel valves shall be constructed from materials below:
 - 4.2.1 Body-ASTM A105 or A216 Gr. WCB.
 - 4.2.2 Disc-ASTM A182 F316 or A351 Gr. CF8M.
 - 4.3 Stainless steel valves shall be constructed from materials below:
 - 4.3.1 Body-ASTM A182 Gr. F316 or A351 Gr. CF8M.
 - 4.3.2 Disc-ASTM A182 Gr. F316 or A351 Gr. CF8M.
 - 4.4 Shafts shall be ASTM A564 type 630 H 1150 or 316 SS.
- 5.0 **Inspection and Test**
 - 5.1 Valves shall be hydrostatically shell tested per ANSI B16.34 and MSS SP-61.
 - 5.2 Valves shall be seat tested per MSS SP-61. No leakage is permitted for resilient seated valves.
 - 5.3 API 598 testing available upon request.