1. GENERAL CLASSIFICATION
1.1 MUELLER Cushioned Swing Check Valves comply with all applicable provisions of ANSI/AWWA C508.
1.2 MUELLER Cushioned Swing Check Valves are suitable for non-shock cold water service.
1.3 MUELLER Cushioned Swing Check Valves are iron body, bronze mounted. Available with rubberfaced or bronzed-faced disc.

2. SIZE RANGE AND WORKING PRESSURE
2.1 2½” through 12” – 175 psi working pressure.

3. TYPE OF VALVE
3.1 MUELLER Cushioned Swing Check Valves are offered with two designs of disc closure mechanisms:
   3.1.1 Lever and Weight Operated Check Valve has adjustable position weight and lever arm attached to disc assembly for variable closure force.
   3.1.2 Lever and Spring Operated Check Valve has adjustable tension spring and lever arm attached to disc assembly for variable closure force.
3.2 MUELLER Cushioned Swing Check Valves are swing-type check valves for vertical or horizontal mounting. Vertical installation may require use of Check Valve with counter balance.
3.3 MUELLER Cushioned Swing Check Valves are offered with flange ends; flange dimensions and drilling complying with ANSI B16.1 Class 125 specifications (optional PN10/PN16 drilling available).

4. CUSHION CYLINDER
4.1 Corrosion-free brass piston connected to clapper disc shaft on outside of valve.
4.2 Rugged steel cylinder barrel rigidly mounted to check valve body.
4.3 Needle valve allows close regulation of cushioning effect at closure by restricting air flow from cylinder.
4.4 “Slamming” upon flow reversal is all but eliminated by cushion action. (Use of rubber disc facing is also helpful.)

5. MATERIAL SPECIFICATIONS
5.1 Body – Cast Iron ASTM 126 Grade B.
5.2 Cover – Cast Iron ASTM 126 Grade B.
5.3 Cover gasket – Cloth Inserted Rubber ASTM D2000.
5.4 Cover bolts and nuts – Steel ANSI B18.2.1.
5.5 Test plug – Steel ASTM A307.
5.6 Clapper arm – Cast bronze ASTM B584 Alloy C84400.
5.7 2½” and 3” valves.
   5.7.1 Stuffing box – Bronze ASTM A126 Grade B.
   5.7.2 Hinge pin – Stainless steel ASTM A267 Type 303.
   5.7.5 Cap screws – Steel ANSI B18.2.1.
5.8 4” thru 12” valves
   5.8.1 Stuffing box – Bronze ASTM B138.
   5.8.2 Hinge pin – Stainless steel ASTM A276 Type 303.
   5.8.5 Snap ring – Stainless steel

(Continued)
5. **MATERIAL SPECIFICATIONS** (continued)

5.9 Disc stud – Bronze ASTM B21 Alloy C46400.
5.10 Disc stud nut – Cast bronze ASTM B62.
5.11 Disc
  5.11.1 3” and smaller sizes (and 4” with rubber faced disc) – Bronze, ASTM B584 Alloy C84400.
  5.11.2 4” and larger sizes (except 4” with rubber faced disc) – Cast iron, ASTM 126 Grade B.
5.12 Disc facing
  5.12.1 Metal type – Cast bronze ASTM B584 Alloy C84400; 4” and larger valves, permanently pressing into cast iron disc.
5.13 Seat ring – Cast bronze ASTM B584 Alloy C84400.
5.14 Disc retainer washer – Cast bronze ASTM B584 Alloy C84400.
5.15 Disc retainer nut – Bronze ASTM B62.
5.16 Hinge pin set screw – Stainless steel ASTM A193 Grade B-8.
5.17 Jam nut – Stainless steel ASTM A194 Grade 8.
5.18 Nut – Steel ASTM A307.
5.19 Lever
  5.19.1 Weight lever – Steel ASTM A36; 4” and 6” valves, Ductile Iron ASTM A536.
  5.19.2 Spring lever – Steel ASTM A107.
*5.20 Weight – Cast iron ASTM A126 Grade B.
*5.21 Weight adjustment screw – Steel AISI B18.6.2.
*5.22 Spring – Steel ASTM A227.
*5.23 Spring bracket – Steel ASTM A107.
*5.24 Spring shackle and pin – Forged steel.
5.27 Paint – Water reducible alkyd enamel primer, black.

*As applicable

6. **DESIGN FEATURES**

6.1 Iron Body with thread attached bronze seat ring.
6.2 Clear full opening waterway when disc is in fully open position.
6.3 Operating parts accessible through top opening.
6.4 Heavy bronze bearings support hinge pin and pressure sealed with O-rings.
6.5 Large diameter stainless steel hinge pin.
6.6 Heavy bronze clapper arm.
6.7 Weights or spring lever may be used on either side of valve.
6.8 Weight or spring operated type check valves have clapper arm clamped to hinge pin with Stainless steel screws and jam nuts.
6.9 Heavy bronze disc stud is used.
6.10 Iron discs for metal seated valves have bronze disc rings roll swaged into place.
6.11 “D” shaped cover used with flow direction shown cannot be incorrectly assembled to cause flow direction error.

7. **TEST PRESSURE**

7.1 The pressure test on each Mueller Swing Check valve, in sizes 2½” thru 12”, exceeds the requirements of ANSI/AWWA C508 for Check Valves in that no leakage is permitted past the seat at twice the rated 175 psig working pressure. ANSI/AWWA C508 permits allowable leakage for Check Valves with metal seats.