

## Oil Cushion Check Valves

**Styles:** Bronze to Buna-n, Bronze to Bronze, Stainless Steel to Buna-n

**Sizes:** 3" to 72"

**Uses:** Water / Sludge/ Sewer service

**General:** Swing check valves are of self contained free swinging disc style. Valves conform to all standards set forth in AWWA C508. Valve hinge pins are Stainless Steel and conform to the industry standards set forth for cushion valves. Manufacturer should have a minimum of ten years experience supplying air and oil cushion AWWA 508 valves.

### Referenced Standards:

ANSI B16.1: Cast Iron Pipe Flanges and Flanged Fittings Class 25, 125, 250 and 800. AWWA C508: Swing Check Valves for Waterworks Service, 2" through 24" NPS.

### Rating:

Valves are rated for 150 p.s.i. water working pressure or per engineer requirements. All testing is done in accordance with AWWA C508.

**End Configuration:** Valves have integrally cast flat face flanges in accordance with ANSI B16.1 Class 125.

**Materials:** All cast iron used conforms to ASTM A126 CLB.

Valve Hanger and Disc are of ductile iron conforming to ASTM A536

GR65-45-12. Hinge Pins conform to ASTM A276 GR304.

Seat Rings are of Low Zinc Bronze conforming to ASTM B62 or of Stainless Steel conforming to ASTM A276 GR31 6

**Coating:** Internal and external coatings are high build two component epoxy conforming to AWWA C550.

**Design:** All valves meet the standards of AWWA C508. All valves utilize a dual disc mounted to a clevis hinge which prevents the disc from tipping. The valve disc swings open once the pump starts and allows for full flow. When closed the valve offers a tight shut-off. Valve body and cover are of Cast Iron, valve hinge is of Ductile Iron. Disc seating surface is either Bronze, Stainless Steel or of Buna-n depending on application. Valve seat rings are of Bronze, unless otherwise noted.

The valve body has a bolted cover design and flanges are integral to body casting—not wafer style. Valve body and disc are designed in such a way as to minimize turbulence. Spring and cushion systems are externally mounted on the side of the body and do not come into contact with main line media. The valve arm must be able to be placed on either side for operation. Valve closure shall be controlled by a single external weighted lever arm and cushion. Valves shall have a double arm, double weight where required. The lever arm action shall be cushioned by hydraulic oil for each arm as required. Counterweights and cushion cylinders shall be designed so that adjustments can be made in the field to minimize surge and to prevent backflow and hammering noises during actual service conditions. The hydraulic oil cushion system shall be completely self-contained.

Provide a NEMA 4 limit switch, when required, to indicate when the valve is closed. Limit switch actuation point shall be easily adjustable.

**Marking:** Markings on the valves are in accordance with AWWA C508, and include the name of manufacturer, the year of manufacture, maximum working pressure and size of valve.

**Installations:** All valves are built for horizontal installation. However, all valves operate equally well in the vertical installations. Prior to valve installation CCNE should be notified of vertical mounting position so lever arm and weight can be properly positioned on valve.

### Common Features of the Cushion Check Valves:

Enlarged Stainless Steel Hinge Pins.

Flanges conform to ANSI B16.1/ Class 125.  
 Lever and Weight may be installed on either side.  
 Non tilt disc with Buna-n insert for water tight shut off.  
 Meets AWWA standards and Dimensional Standards of Large Pin  
 Cushion Products.  
 Totally Enclosed Oil Cushion with Stainless Steel Hardware and  
 Adjustable speed control.

Valve Size	Minimum Hinge Pin/Shaft		Hinge Pin Diameter
	Diameters: Hinge Pin Diameter	Valve Size	
2"	.5	14"	3"
2.5"	.5	16"	3.5"
3"	1"	18"	3.75"
4"	1.25"	20"	4"
6"	1.37"	24"	4"
8"	1.75"	30"	3.75"
10"	2.12"	36"	
12"	2.5"	42"	

**Acceptable Manufacturers:**  
 CCNE, LLC  
 Henry Pratt  
 Engineer Pre-approved Equal