

Reliable®

Model CVE 4" (100mm), 6" (150mm), 165mm, and 8" (200mm) Swing & Riser Check Valves

Features

1. Grooved End Connections.
2. Valve has removable faceplate.
3. Approved for horizontal and vertical installation.
4. 300 psi (20, 7 bar) ratings. Factory tested hydrostatically to 600 psi (41, 4 bar).
5. Elastomer-faced clapper provides leak-free, non-sticking sealing.
6. Non-slamming, spring loaded clapper to minimize water hammer.

Listings and Approvals

1. Listed by Underwriters' Laboratories Inc. and UL certified for Canada (cULus).
2. Certified by FM Approvals
3. NYC MEA 258-93-E

General (Swing Check Valve Applications)

Reliable Model CVE Swing Check Valves are multiple purpose valves that perform regular check valve duties (see Fig. 1). All four sizes are approved for use in fire protection systems and have a removable face plate. Typical applications include connections between public water supplies and private fire systems, at the discharge from fire pumps, at gravity tank connections and at fire department pumper connections.

Grooved end connections provide fast and easy installation using listed or approved mechanical grooved couplings. Rigid style grooved couplings can be used for positive clamping to resist flexural and torsional loads.

When Model CVE Swing Check Valves are installed vertically, the direction of the flow arrow must point upward. For horizontal installations, the hinge pin must be located at the top.

Reliable check valves and associated equipment shall periodically be given a thorough inspection and test. NFPA 25 provides the minimum maintenance recommendations. The check valve shall be tested, operated, cleaned, inspected and parts replaced as required at least annually.



Fig. 1



Fig. 2

General (Riser Check Valve Applications)

Reliable Model CVE Riser Check Valves are intended for installation in wet pipe fire protection system risers and preaction systems. The Riser Valve and Trim Kit (see Figure 2) with a water flow detector can provide an electric alarm, and is a cost effective alternative to an alarm valve in installations not requiring a mechanical alarm.

Model CVE Riser Check Valves are factory tapped for 2" NPT and 3/4" NPT system connections and for a 1/2" NPT supply connection (see Fig. 3).

Grooved end connections provide fast and easy installation using Listed or approved mechanical grooved couplings. Rigid style grooved couplings can be used for positive clamping to resist flexural and torsional loads.

When Model CVE Swing Check Valves are installed vertically, the direction of the flow arrow must point upward. For horizontal installations, the hinge pin must be located at the top.

Reliable check valves and associated equipments shall periodically be given a thorough inspection and test. NFPA 25 provides the minimum maintenance recommendations. The check valve shall be tested, operated, cleaned, inspected and parts replaced as required at least annually.

Valve Description

1. Rated working pressure of 300 psi (20,7 bar).
2. Factory hydrostatic test pressure of 600 psi (41,4 bar).
3. End and trim connections:
 - Groove dimensions per ANSI/AWWA C606.
4. Color - Gray
5. Friction Loss - Expressed in equivalent length of pipe, based on Hazen-Williams formula with C=120 and a flowing velocity of 15 ft/s (4.6 m/s):

Equiv. Length

For the 4" (100mm) valve	17' (5.18m)
For the 6" (150mm) & 165mm valves	27' (8.23m)
For the 8" (200mm) valve	29' (8.84m)

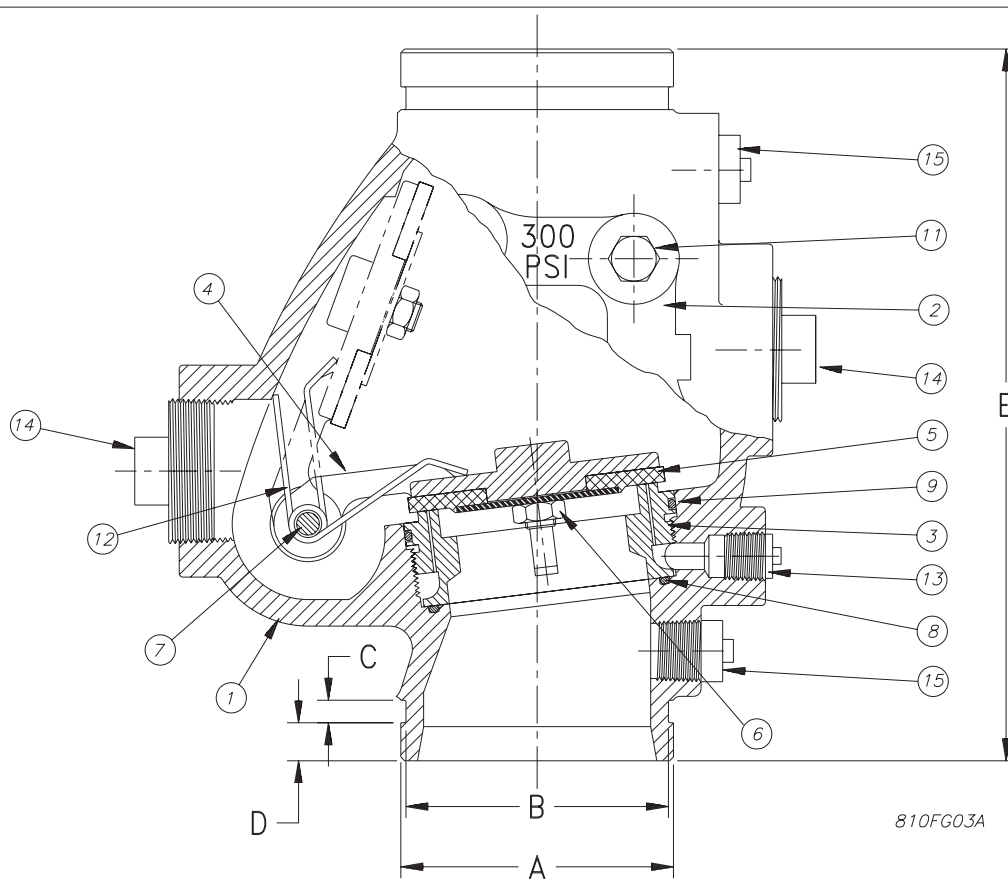


Fig. 3

Table A - Model CVE Check Valve Parts List (Refer to Fig. 3)

Item No.	Part Name	Material	Quantity	Part Number			
				4" (100mm)	6" (150mm)	165mm	8" (200mm)
1	Valve Body	Gray Iron, ASTM-A48, Class 30A	1	91006015	91006017	91006020	91006019
2	Cover	Gray Iron, ASTM-A48, Class 30A	1	92116014	92116016	92116017	92116018
3	Seat	Bronze, C83600	1	96016114	96016116	96016116	96016118
4	Clapper & Bushing Assembly	Ductile Iron, ASTM-A536 (Clapper) & Brass C36000 (Bushing)	1	71020424	71020426	71020426	71020428
5	Facing & Clamping Ring Assembly	EPDM (Facing) & Stainless Steel, 304 (Clamping Ring)	1	93416104	93416106	93416106	93416108
6	Clamping Ring Nut (4" (100mm only))	Stainless Steel , 304	1	94906124	N/A	N/A	N/A
	Clamping Ring Screw	Stainless Steel , 304	4 (6" & 165mm), 5 (8")	N/A	95606126	95606126	95606126
7	Hinge Pin	Brass C36000	1	95006124	95006126	95006126	95006128
8	O-Ring	Nitrile (Buna-N)	1	65436124	65436126	65436126	65436128
9	O-Ring	Nitrile (Buna-N)	1	95446124	95446126	95446126	95446128
10	Cover Gasket (Not Shown)	Neoprene	1	93706124	93706126	93706126	93706128
11	Cover Bolt, 1/2"-13 x 1-1/2"	Steel	6	91106124	N/A	N/A	N/A
	Cover Bolt, 5/8"-11 x 1-3/4"	Steel	6	N/A	91106126	91106126	91106126
12	Spring	Bronze, C51000	1	96406124	96406124	96406124	96406124
13	Pipe Plug, 1/2" (One Not Shown)	Malleable Iron	2	98604406	98604406	98604406	98604406
14	Pipe Plug, 2"	Malleable Iron	2	95206104	95206104	95206104	95206104
15	Pipe plug, 3/4"	Malleable Iron	2	98614401	98614401	98614401	98614401

Table B - Model CVE Check Valve Dimensions and Weights (Refer to Fig. 3)

Valve Size		Outlet Dia. (A)		Groove Dia. (B)		Groove Width. (C)		Face to Groove Dim. (D)		Face to Face Dim. (E)		Weight	
In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	lbs.	kg
4	100	4.500	114.0	4.334	110.1	3/8 "	9.5	5/8 "	16.0	11 3/4 "	299.0	60	27.2
6	150	6.625	168.0	6.455	164.0	3/8 "	9.5	5/8 "	16.0	13 1/2 "	343.0	75	34
6	165	6.500	165.0	6.330	160.8	3/8 "	9.5	5/8 "	16.0	13 1/2 "	343.0	75	34
8	200	8.625	219.0	8.441	214.0	7/16 "	11.0	3/4 "	19.0	14 1/2 "	368.0	126	57.2

Table C - Model CVE Riser Check Valve Trim Parts List (Refer to Fig. 4)

Item No.	Part Name	Quantity	Part Number
1	-----	--	-----
2	Nipple, Galv., 1/4" x 3"	1	98543220
3	3-Way Valve, 1/4", Brass	2	98840160
4	Pipe Plug, Galv., 1/4"	2	98614403
5	Pressure Gauge, 0-600 psi	2	98248005
6	Nipple, Galv., 1/4" x 2-1/2"	1	98543225
7	Reducing Bushing, 3/4" x 1/4"	2	98048025
8	Angle Valve, 2", Brass	1	98840100
9	Nipple, Galv., 2" x Close	1	98543238

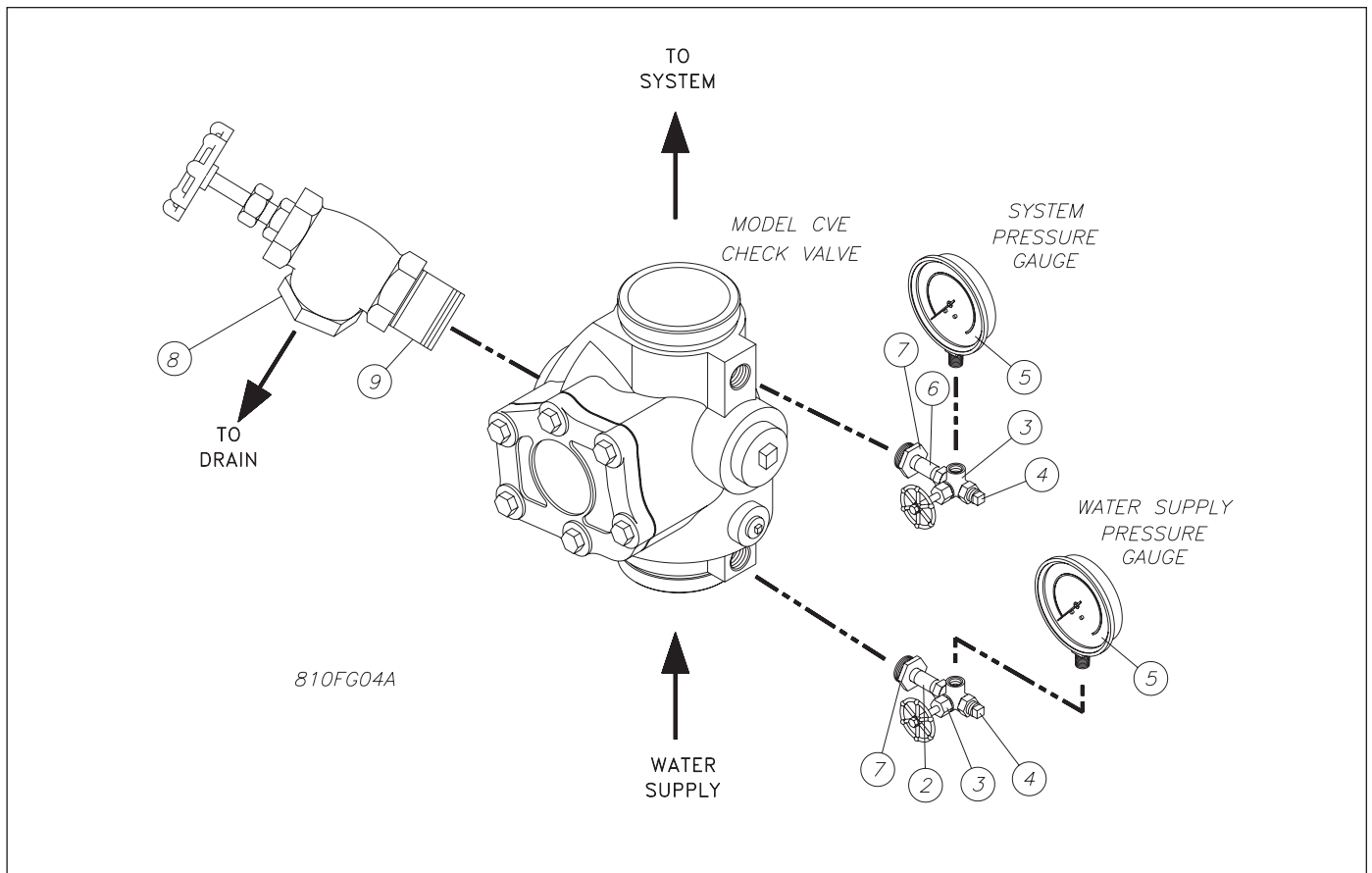


Fig. 4

Inspection and Maintenance

1. Damage to the clapper's rubber facing:

Inspect the surface of the rubber facing for imbedded foreign matter. Replace the facing if it is found to be damaged (be certain that clapper and clapper clamping ring surfaces are thoroughly cleaned before assembling with the new facing.)

2. Damage to the valve seat's sealing surface:

Clean the seat thoroughly. Inspect for any nicks in seat or stones or other foreign matter that may be lodged in the seat's groove. If the seat or other parts of valve are found to be severely damaged, an authorized Reliable distributor should be contacted.

Model CVE Swing Check Valve

Engineering Specification

Swing check valve shall be a [4" (100 mm)] [6" (150 mm)] [6" (165 mm)] [8" (200 mm)] [cULus Listed] [FM Approved] spring-loaded check valve having a rated working pressure of 300 psi (20,7 bar) and factory hydrostatic tested to a pressure of 600 psi (41,4 bar). Valve body and cover construction shall consist of gray iron per ASTM-A48 Class 30A, containing a bronze seat and ductile iron clapper/brass bushing assembly, consisting of EPDM rubber facing seal and stainless steel clamping ring. End connections to be grooved per ANSI/AWWA C606. The valve body shall have a removable faceplate for ease of inspection and maintenance as required by NFPA 25, Standard for Inspection, Testing and Maintenance of Water-Based Fire Protection Systems. The swing check valve shall be factory tapped with one ½" and two 2" NPT plugged connections. Check valve shall be Reliable Model CVE Swing Check Valve, Bulletin 810.

Ordering Information

Specify:

Model CVE Swing Check Valve			
Size		Part Number	
4" (100mm)		6108040000	
6" (150mm)		6108060000	
165mm		6108065000	
8" (200mm)		6108080000	
Model CVE Riser Check Valve			
Valve Size	Trim Part Number Individual Parts	Trim Part Number Fully Assembled to Valve	Valve Part Number
4" (100mm)	6506000044	6506000040	6108040000
6" (150mm)		6506000041	6108060000
165mm		6506000043	6108065000
8" (200mm)		6506000042	6108080000

Model CVE Riser Check Valve Engineering Specification

Riser check valve for wet pipe sprinkler system shall be a [4" (100 mm)] [6" (150 mm)] [6" (165 mm)] [8" (200 mm)] [cULus Listed] [FM Approved] spring-loaded check valve having a rated working pressure of 300 psi (20,7 bar) and factory hydrostatically tested to a pressure of 600 psi (41,4 bar). Valve body and cover construction shall consist of gray iron per ASTM-A48 Class 30A. Check valve shall have a threaded-in, one piece seat of bronze construction for ease of maintenance, and O-ring seals to prevent corrosion and leakage. Clapper assembly shall be ductile iron casting with brass bushing assembly, with EPDM rubber facing seal and stainless steel clamping ring. End connections to be grooved per ANSI/AWWA C606. The valve body shall have a removable faceplate for ease of inspection and maintenance as required by NFPA 25, Standard for Inspection, Testing and Maintenance of Water-Based Fire Protection Systems. The Riser check valve shall be factory tapped with one ½" and two 2" NPT plugged connections. Basic riser check valve trim shall consist of galvanized and brass trim components, including 2 inch main drain, and both system and supply water pressure gauges. The Valve and trim assembly shall be approved for both vertical and horizontal installations. Riser check valve shall be Reliable Model CVE Riser Check Valve, Bulletin 810.

Reliable...For Complete Protection

Reliable offers a wide selection of sprinkler components. Following are some of the many precision-made Reliable products that guard life and property from fire around the clock.

- Automatic sprinklers
- Flush automatic sprinklers
- Recessed automatic sprinklers
- Concealed automatic sprinklers
- Adjustable automatic sprinklers
- Dry automatic sprinklers
- Intermediate level sprinklers
- Open sprinklers
- Spray nozzles
- Alarm valves
- Retarding chambers
- Dry pipe valves
- Accelerators for dry pipe valves
- Mechanical sprinkler alarms
- Electrical sprinkler alarm switches
- Water flow detectors
- Deluge valves
- Detector check valves
- Check valves
- Electrical system
- Sprinkler emergency cabinets
- Sprinkler wrenches
- Sprinkler escutcheons and guards
- Inspectors test connections
- Sight drains
- Ball drips and drum drips
- Control valve seals
- Air maintenance devices
- Air compressors
- Pressure gauges
- Identification signs
- Fire department connection

The equipment presented in this bulletin is to be installed in accordance with the latest pertinent Standards of the National Fire Protection Association, Factory Mutual Research Corporation, or other similar organizations and also with the provisions of governmental codes or ordinances whenever applicable.

Products manufactured and distributed by Reliable have been protecting life and property for over 80 years, and are installed and serviced by the most highly qualified and reputable sprinkler contractors located throughout the United States, Canada and foreign countries.

Manufactured by



The Reliable Automatic Sprinkler Co., Inc.

(800) 431-1588
(800) 848-6051
(914) 829-2042
www.reliablesprinkler.com

Sales Offices
Sales Fax
Corporate Offices
Internet Address



Revision lines indicate updated or new data.
E.G. Printed in U.S.A. 01/08 P/N 9999970293