

Fully Lined PFA Wafer Dual Check Valve general situation

PTV Fully lined PFA wafer dual check valve are ideal for use in totally lined piping systems or to replace costly high alloy steel valves in high corrosion applications. The valve can be mounted horizontally or vertically with upward flow. The PFA lining locked by grooves allow the valve body to be used on high pressure and temperature without lining collapse, shrinkage and blowout. Also it is virtually unaffected by changes in processing operation or chemical concentration like chloride, sulfuric acid and mixed acid.

How it Works

Double plate check valves are spring loaded. When the pump starts and the downstream flow creates the required pressure drop in the forward direction the double plate will automatically open. When the pump stops and the flow ceases, the torsion of the spring will automatically close the double plate prior to flow reversal. This creates a positive shut-off against flow reversal and minimizes system surges and water hammer.

PFA

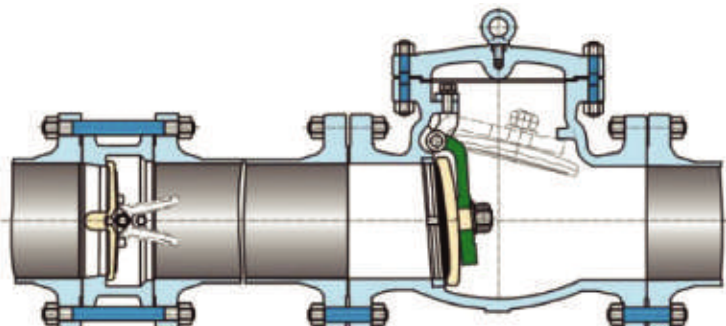
PFA is a fluoropolymer with extended temperature limits. It is a copolymer that combines the carbon-fluorine backbone of fluorocarbons with a perfluoroalkoxy side chain.

PFA offers a variety of attributes and benefits:

1. Handles a wide range of fluids .
 2. Chemically inert . Heat resistant .
 3. Weather resistant .
 4. Stress-cracking resistant .
 5. Negligible moisture absorption
 6. Better sealing and wear resistance between parts -because it is moldable and machinable to close tolerances.
 7. PFA is a true thermoplastic and is melt processible, so it can be locked to the valve components.
- Blow-out or liner collapse are virtually impossible.

A) **Cost efficient design** Short structural length, only 1/4 - 1/8 of that of traditional flanged check valve.

Low volume, light weight, only 1/4~1/20 of those of traditional flanged swing check valve.



Wafer Dual Check Valve

Flange Swing Check Valve



B) Fully Lined PFA Body, disc, spring and stem all lined PFA

C) Locked-in lining The PFA lining have cast dovetail recesses and machined grooves that lock the lining to the body casting. Blow-out or liner collapse are virtually impossible.

Features:

- D) **Minimal head loss** The contoured body of the Valve provides a short and straight flow path that generates very little turbulence. Additionally, the spring-loaded discs are designed with very low cracking pressure which reduces the amount of energy required to open the valve.
- E) **Quick Close to Reduce Water Hammer** Shut-off is achieved via the fully automatic, spring-assisted discs that close near zero flow velocity. The lightweight, split disc design creates a positive shutoff prior to flow reversal and helps minimize valve slam and surge.
- F) **Applicable for and easily** installed for vertical or horizontal pipelines.
- G) **Flexible action** and good sealing performance.
- H) **Narrow valve** travel and small closedown impact.
- I) **Long service life** and good reliability.

Technical Data

1. Size range: NPS 2" ~ 14"
2. Pressure ratings: 150LB
3. Working temperature: -29℉ ~ +120℉
5. Body Material: A216 WCB lined PFA
6. Disc Material: A351 CF8M lined PFA
7. Spring Material: A276 SS304 Lined PFA
8. Stem Material: A276 SS304 Lined PFA

Performance Standard

1. Design & Manufacture standard as to: API 594
2. Face to Face dimension standard as to: MFR-STD
3. Flange dimension conforms as to: ASME B16.5 RF
4. Testing And Inspection as to: API 598
5. Anti Corrosion as per NACE MR-0175 requirement

APPLICATION

Fully Lined PFA Wafer Dual Check Valve offer economical solutions for the vast majority of chemical applications while maintaining the highest possible degree of performance in terms of in-line leakage.

Fully Lined PFA Wafer Dual Check Valve are commonly used within the following industries:

- Chlor-Alkali
- Industrial Inorganic Chemicals
- Metal and Mining
- Nitrogen and Phosphatic Fertilizers
- Petroleum Refining
- Pharmaceutical

Within these industries, Fully Lined PFA Wafer Dual Check Valve have superior performance in the following applications:

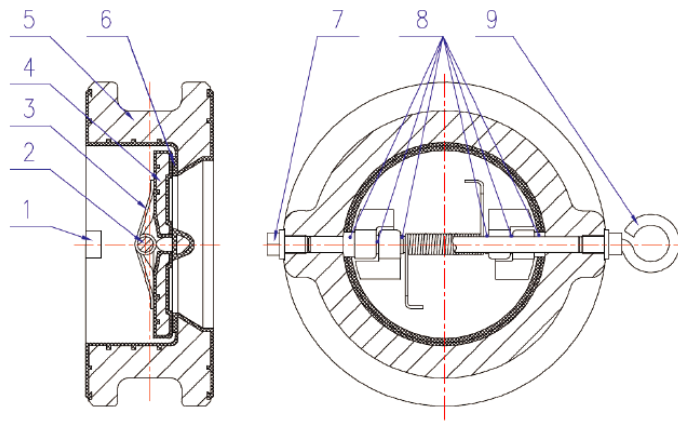
- Chlorine
- Benzene
- Bromine
- Sulfuric Acid
- Nitric Acid
- Hydrochloric Acid
- Phosphoric Acid
- Sea Water



Media types

Clean Liquids & Gases----- Superior Performance
 Corrosive Liquids & Gases----- Superior Performance
 Hazardous Liquids & Gases----- Superior Performance
 Viscous Liquids----- Superior Performance
 Dry Materials----- Superior Performance
 Vacuum Service----- Superior Performance

Dirty Liquids & Gases----- Limited Application
 Scaling Liquids & Slurries----- Limited Application
 Abrasive Slurries----- Limited Application
 Fibrous Slurries----- Limited Application



Part List:

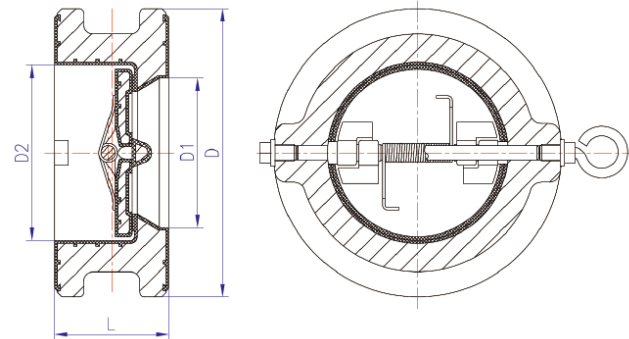
Fully Lined PFA Wafer Dual Check Valve

No.	Part Name	Material	Standard
1.	Baffle Plate	PFA	MFR-STD
2.	Shaft	SS304+PFA Lined	ASTM A276
3.	Spring	SS304+PFA Lined	ASTM A276
4.	Disc	CF8M+PFA Lined	ASTM A351
5.	Body	WCB+ PFA Lined	ASTM A216
6.	Seat	PFA	MFR-STD
7.	Bolt	B7	ASTM A193
8.	Shaft Bearing	PFA	MFR-STD
9.	Lifting Lug	Carbon Steel	AISI 1025

Main Dimensions:

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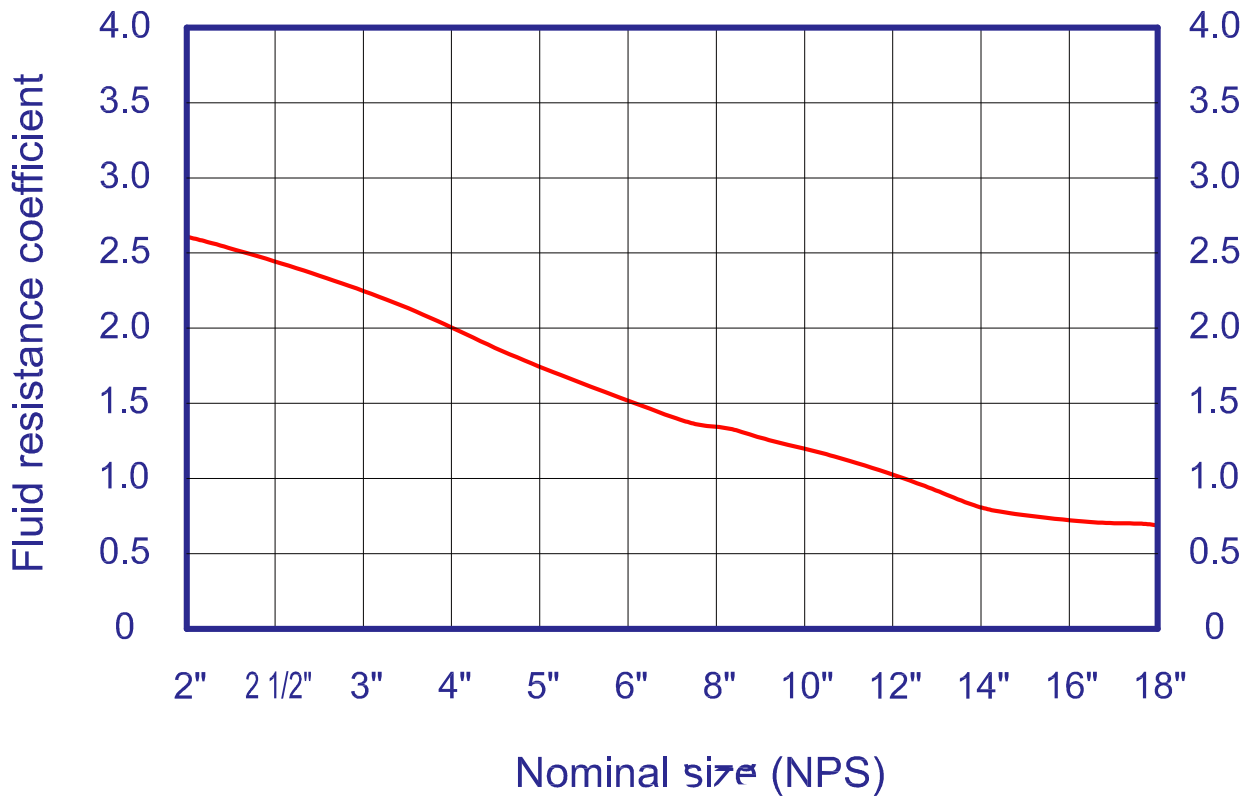
NPS	L	D	D1	D2
2"	60	Φ103	Φ51	Φ56
2 1/2"	67	Φ122	Φ65	Φ73
3"	73	Φ135	Φ80	Φ88
4"	73	Φ173	Φ102	Φ108
5"	86	Φ195	Φ127	Φ132
6"	98	Φ220	Φ152	Φ160
8"	127	Φ277	Φ203	Φ210
10"	146	Φ337	Φ254	Φ266
12"	181	Φ407	Φ305	Φ310
14"	184	Φ448	Φ350	Φ355



SBM PTV Engineering Data

Fully Lined PFA wafer fual Check Valve

The hydromechanics performance/ The flid resistance coefficient



ORDERING CODE:

Example: LDC-2-400

Lined Duo Check SS316 Body, Size 4"

Available Body Material Code:

WCB A216 Cast Steel: 1

SS316 CF8M Stainless Steel: 2

SS316L CF3M Stainless Steel: 3

Available Size Code:

2": 200

2 ½": 250

3": 300

4": 400

6": 600

8": 800

10": 1000

12": 1200

14": 1400