



MODEL **81-01**
(Full Internal Port)
681-01
(Reduced Internal Port)

Check Valve



- Simple Proven Design
- No-Slam Operation
- Drip-Tight Shut-Off
- No Packing Glands or Stuffing Boxes
- Easy to Install & Maintain

The Cla-Val Model 81-01/681-01 Check Valve is a hydraulically operated No-Slam Check Valve. This valve opens when the pressure at the inlet exceeds the discharge pressure. A gradual rate of opening prevents sudden opening surges. When a pressure reversal occurs the higher downstream pressure is applied to the cover chamber through the control tube lines, and the valve closes drip tight.

This valve is ideally suited for use where a positive shutoff is required. The rubber disc assures tight sealing even if the fluid contains grit or other small-size particles. The simple packless design insures reliable operation and freedom from leaks.

Note: The effectiveness of this valve is related to pipeline velocity. We recommend a maximum flow based on pipeline velocity of 6 feet per second. If pipeline velocities exceed 6 feet per second, consideration should be given to adding a Cla-Val Model 50-01 Pressure Relief Valve or a Cla-Val Model 52 Series Surge Control Valve to the system.

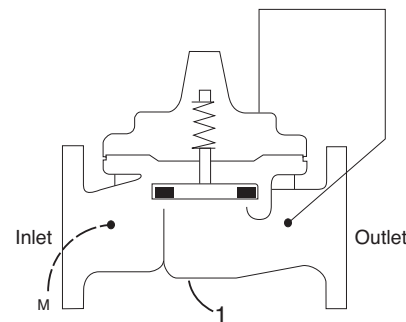


NSF/ANSI 372:
National Lead Free
Mandate "Reduction
of Lead in Drinking
Water Act"



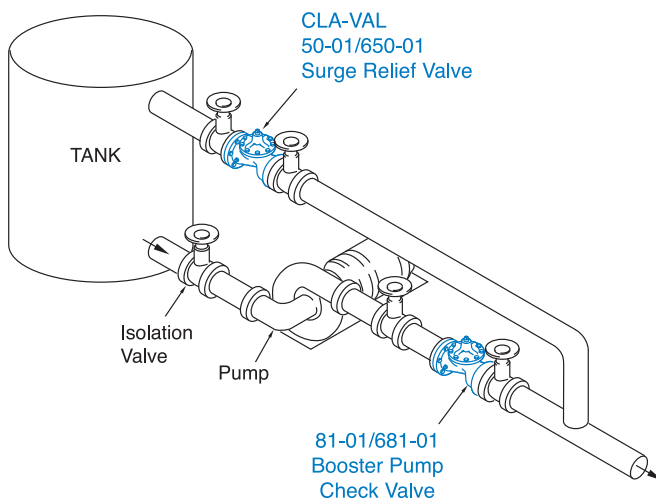
Schematic Diagram

Item	Description
1	Hytrol (Reverse Flow Main Valve)



Product Dimensions Data:

For the 81-01 Main Valve (100-01) dimensions, see pages 17.
For the 681-01 Main Valve (100-20) dimensions, see pages 29.



Typical Applications

Smaller sizes of this valve are used in pilot control systems in Cla-Val Automatic Control valves. This valve can also be used in any piping system where one-way flow is desired.

Install on the discharge of booster pumps to prevent return flow into tank when pump is off. Relief valve as shown is good practice to minimize surges when pump stops.

For valve sizes larger than 3", use Model 81-02.

81-02

(Full Internal Port)

MODEL

681-02

(Reduced Internal Port)



Check Valve



- Simple Proven Design
- No-Slam Operation
- Drip-Tight Shut-Off
- Dual Speed Control
- No Packing Glands or Stuffing Boxes
- Available in a Variety of Materials

The Cla-Val Model 81-02/681-02 Check Valve is a hydraulically operated No-Slam Check Valve with dual speed controls. This valve opens when the pressure at the inlet exceeds the discharge pressure. A gradual rate of opening prevents sudden opening surges. When a pressure reversal occurs, the higher downstream pressure is applied to the cover chamber through the control tube lines, and the valve closes drip tight.

This valve is ideally suited for use where a positive shutoff is required. The rubber disc assures tight sealing even if the fluid contains grit or other small-size particles. The simple packless design insures reliable operation and freedom from leaks.

Note: The effectiveness of this valve is related to pipeline velocity. We recommend a maximum flow based on pipeline velocity of 6 feet per second. If pipeline velocities exceed 6 feet per second, consideration should be given to adding a Cla-Val Model 50-01 Pressure Relief Valve or a Cla-Val Model 52 Series Surge Control Valve to the system.

Schematic Diagram

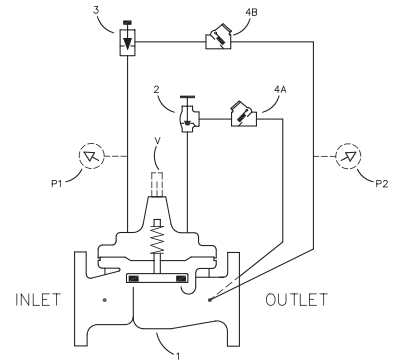
Item	Description
1	Hytrol (Reverse Flow Main Valve)
2	CGA Angle Valve (Closing)
3	CNA Needle Valve (Opening)
4	CSC Swing Check Valve

Optional Features

Item	Description
P	X141 Pressure Gauge
V	X101 Valve Position Indicator



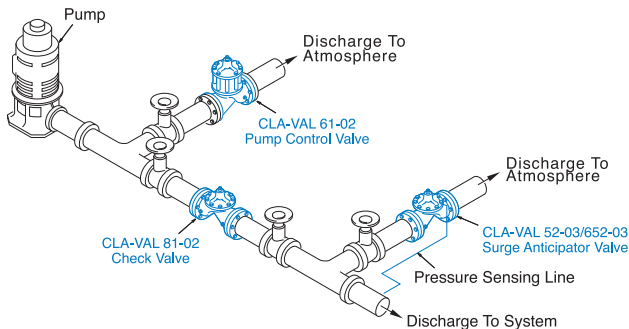
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Product Dimensions Data:

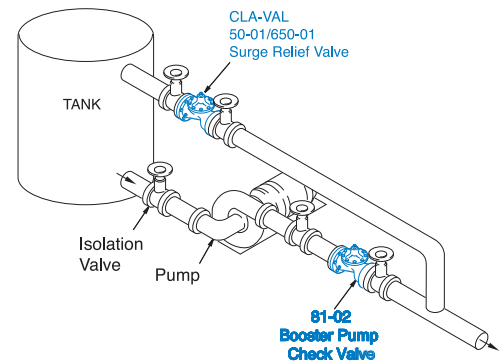
For the 81-02 Main Valve (100-01) dimensions, see pages 17.
For the 681-02 Main Valve (100-20) dimensions, see pages 29.

Typical Applications



Deep Well Pump

This valve should be an integral part of any well designed pumping system. It is used to prevent damaging and sometimes expensive flow reversal.



Booster Pump

Install on the discharge of booster pumps to prevent return flow into tank when pump is off. Relief valve as shown is good practice to minimize surges when pump stops.



MODEL **81-12**
(Full Internal Port)
681-12
(Reduced Internal Port)

Check Valve

- Simple Proven Design
- No-Slam Operation
- Drip-Tight Shut-Off
- Recommended for Variable Speed Pumps
- No Packing Glands or Stuffing Boxes
- Easy to Install & Maintain

The Cla-Val Model 81-12 Check Valve is a hydraulically operated No-Slam Check Valve. This valve opens when the pressure at the inlet exceeds the discharge pressure. A gradual rate of opening prevents sudden opening surges. When a pressure reversal occurs the higher downstream pressure is applied to the cover chamber through the control tube lines, and the valve closes drip tight.

This valve is ideally suited for use where a positive shutoff is required. The rubber disc assures tight sealing even if the fluid contains grit or other small-size particles. The simple packless design insures reliable operation and freedom from leaks.



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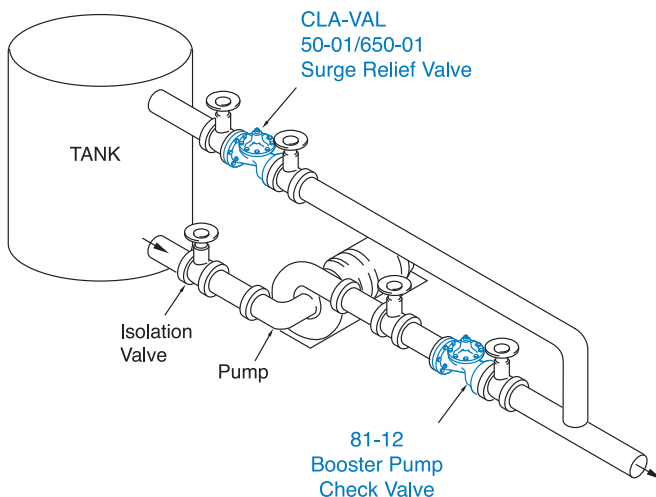
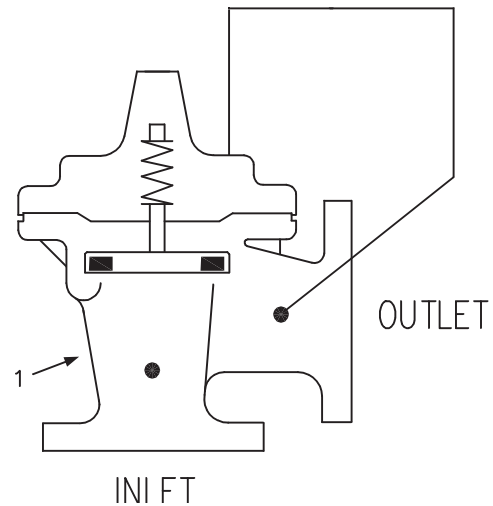


Schematic Diagram

Item	Description
1	100-01 Hytrol Main Valve

Product Dimensions Data:

For the 81-12 Main Valve (100-01) dimensions, see pages 17.



Typical Applications

Install on the discharge of booster pumps to prevent return flow when pump is off. Relief valve as shown is good practice to minimize surges when pump stops.

For valve sizes 3" and larger consult factory



Series 501A

Wafer Swing Check Valve

- **Low Head Loss**
- **Watertight Nitrile Seat**
- **Spring Assisted, Fast Closure**
- **Extremely Light Weight**

Standard Style
2"-12"



This product meets Federal Mandate for Lead Content Limit

DESCRIPTION

Cla-Val Series 501A Wafer Swing Check Valve has a quick, spring-assisted closure that minimizes the possibility of water hammer. The swing check design offers low head loss and a full-flow passageway making it ideal for water or wastewater applications. The short lay length of the valve allows for a space-saving design. It is available in sizes 2" to 30", with either a 125 lb. or 150 lb. pressure class rating.

Available in a variety of materials, including all 316 stainless steel, the Cla-Val Wafer Swing Check Valve uses a standard soft seat to ensure a drip-tight seal. For ease of installation, valves 6" and larger are supplied with a tapped hole to mount an eye bolt for lifting. All materials conform to ASTM specifications, ensuring performance reliability.

SPECIFICATIONS

The wafer swing check valve shall have torsional a spring-assisted fast closure to minimize possibility of water hammer. The valve shall be constructed of either cast iron or steel body.

The body shall have a machined dovetail groove to retain a field replaceable Nitrile (Buna-N®) Seal that provides water-tite shut-off at low/high pressure

The valve disc/arm assembly shall be one piece design utilizing an integral disc arm for connection to the shaft for positive shut-off and no disc flutter.

For corrosion resistance the valve shall be Electroless Nickel Plated

Valve Body:

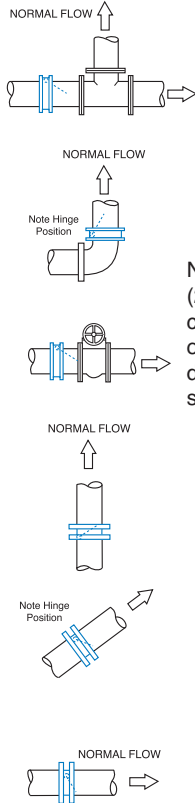
- 2" -12" Cast Iron ASTM A48 Electroless-Nickel Plated
- 14" - 30" Carbon Steel ASTM A216 WCB Electroless-Nickel Plated

Valve Trim:

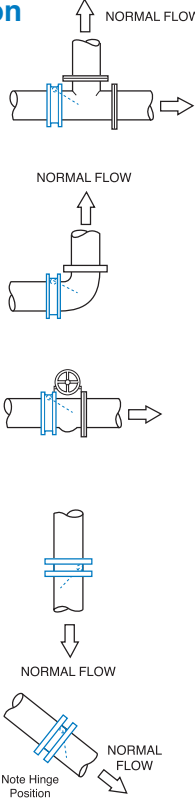
- 2" - 12" 316 Stainless Steel ASTM A23, Electroless-Nickel Plated
- 14" - 30" Carbon Steel ASTM A216 WCB Electroless-Nickel Plated
- Seat O-ring: Nitrile, Other Seat Materials Available

All materials conform to ASTM specifications, The valve shall be a Cla-Val Series 501A Wafer Swing Check Valve, Newport Beach, CA 92659-0325

Typical Applications with Correct Valve Location



Avoid These Applications with Incorrect Valve Location



Note: Allow minimum (2) pipe diameters clearance downstream of check valve with disc open to promote smooth flow

Recommendations for Installation Position

1. Install the valve in horizontal or upward flow for proper valve closure.
- Caution: Do not use with reciprocating compressors, or in other pulsating services.



Series 580

Silent Wafer Check Valve



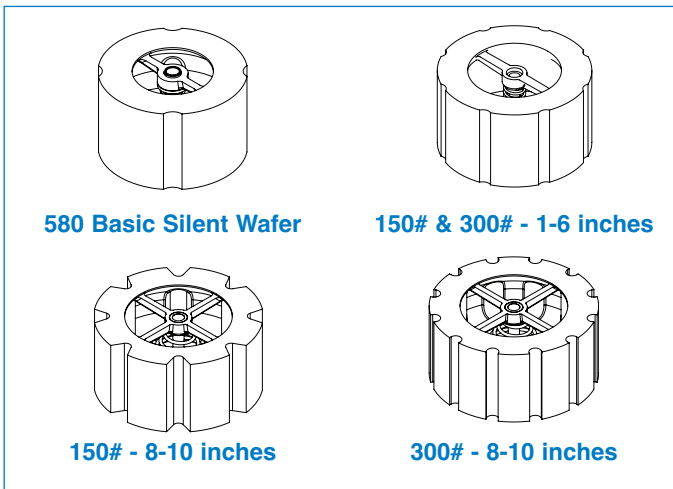
This product meets Federal Mandate for Lead Content Limit

Product Advantages

- Operates Horizontally or Vertically
- Watertight Metal-to-Metal Seating
- Field Replaceable Parts
- Factory Mutual Approved – 4 through 10-inches
- Optional Resilient Seat

The Cla-Val Series 580 Silent Wafer Check Valve has a spring-loaded poppet that allows the valve to close before flow reversal occurs, resulting in a silent, non-slam closure. It is a truly silent check valve. For ease of installation, the valve can be installed in vertical or horizontal positions with flow up or flow down. The short lay length of the valve allows for a space-saving design. Silent Wafer Check Valves are available in sizes 1" to 10", with either a 125/150# or 250/300# pressure class rating.

Constructed of an epoxy coated ductile iron body with stainless steel trim, the Cla-Val Silent Wafer Check Valve offers watertight shutoff with metal-to-metal seating. For special applications, Buna-N® resilient seats are available as options. All materials conform to ASTM specifications, ensuring long lasting reliable performance. As a confirmation of Cla-Val's commitment to quality, all Series 580 125/250# class valves are Factory Mutual approved except those supplied with Buna-N® resilient seats.



Approvals & Certifications

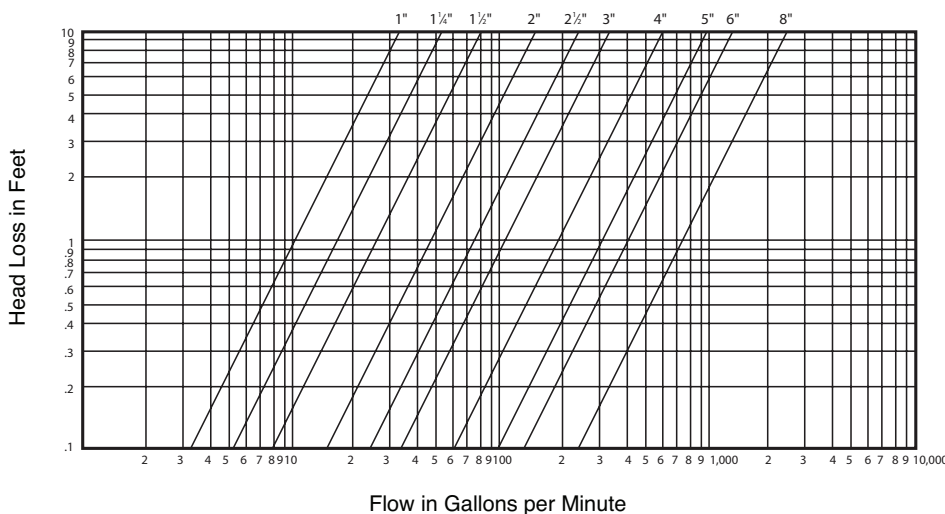
- 125/150 Class Valves 4 - 10-inches - FM Approved
- 125/150 & 250/300 Class Valves 1 - 10-inches meet Federal Mandate for Lead Content Limits

Pressure Ratings

- 125/150 (Rated to 250 psi)
- 250/300 (Rated to 640 psi)



Head Loss Characteristics for 580 Series Wafer Style Silent Check Valves



Materials

Valve Body:

Ductile Iron - ASTM 536 65-45-12

Disc & Seat:

304 Stainless Steel -
SS ASTM A276 T304



Spring:

316 Stainless Steel; Stone
Tumbled and Stress Relieved - SS
ASTM A276 T16

Note:

Standard offering is two-part epoxy coating interior and exterior

Series 581

Silent Globe Check Valve



This product meets Federal Mandate for Lead Content Limit

Product Advantages

- Operates Horizontally or Vertically
- Watertight Metal-to-Metal Seating
- Field Replaceable Parts
- Factory Mutual Approved – 4 through 12-inches
- Optional Resilient Seat

The Cla-Val Series 581 Silent Globe Check Valve has a spring-loaded poppet that allows the valve to close at 1/4 psi before flow reversal occurs, resulting in a silent, non-slam closure.

Constructed of a ductile iron body with stainless steel trim, the Cla-Val Silent Globe Check Valve offers watertight shutoff with metal-to-metal seating. Buna-N[®] resilient seats are available as an option for special applications,

Specifications

The silent globe check valve shall consist of an epoxy-coated ductile iron body, stainless steel seat, disc and spring. The valve disc shall be center guided at both ends with an integral shaft and shall be spring loaded for silent operation. The spring shall be helical or conical and stone tumbled to achieve a micro-finish to resist mineral deposits. For ease of maintenance, the seat and disc shall be replaceable in the field.

Check valve shall be capable of silent operation when installed in vertical or horizontal positions with either flow up or flow down. The flow area through the body shall be equal to or greater than the cross-section area of the equivalent pipe size. Sizes 2 1/2" to 10" shall allow bolting a wafer style butterfly valve directly to the outlet flange without a spool piece.

Approvals & Certifications

- 125/150 and 250/300 Class Valves 4 through 12-inches - FM Approved
- 125/250 & 250/300 Class valves 3 through 42-inches meet Federal Mandate for Lead Content Limits



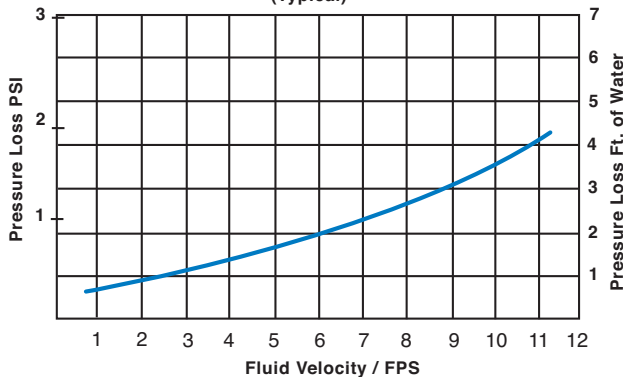
4 through 12-inches

Pressure Ratings

- 125/150 (Rated to 250 psi)
- 250/300 (Rated to 640 psi)

Series 581P Pressure Loss Curve

(Typical)



Materials

Valve Body:

Ductile Iron - ASTM 536 65-45-12

Disc & Seat:

304 Stainless Steel - SS ASTM A276 T304

Spring:

316 Stainless Steel; Stone Tumbled and Stress Relieved - SS ASTM A276 T16



Note:

Standard offering is two-part epoxy coating interior and exterior



Series 582

Two-Door Wafer Check Valve



This product meets Federal Mandate for Lead Content Limit

- Low Head Loss
- Resilient Seat
- Non-Slam Closure
- Stabilizer Spheres Prevent Vibration Wear

The Cla-Val Series 582 Two-Door Wafer Check Valve has torsion springs that force the two doors to shut before flow reversal, reducing the water hammer potential that normally occurs with single-door swing check valves. To help reduce water hammer, the two-door design also reduces the travel distance from open to shutoff for a quicker response. Extremely short in lay length, the valve is both a compact and economical solution. Two-Door Wafer Check Valves are available in sizes 2" to 36". Valve sizes 2" - 6" are dual rated to 150 and 300 pressure classes. Valve sizes 8" - 36" are rated to 150 pressure class.

SPECIFICATIONS

The two-door wafer check valve shall be compact wafer design to fit between ANSI flanges. The check valve doors shall be spring-loaded closed, by means of one or more heavy-duty stainless steel torsion springs. Flow shall cause the doors to open and upon pump shut down, the torsion spring will shut the doors, before reverse flow starts, for non-slam closure.

Seating shall be resilient Buna-N®, watertight and molded to the body. Valves 10" and larger shall be supplied with an eye bolt for lifting. The valve shall be a Cla-Val Series 582 Valves sizes 2" - 6" with alignment grooves for mounting between 150 or 300 lb. flanges. Valves sizes 8" - 36" inches will be wafer style to be mounted between 150 lb. flanges.

Although lighter in weight than globe style swing check valves, Cla-Val Two-Door Wafer Check Valves are designed for heavy-duty applications. For ease of installation, valves 10" and larger are supplied with a tapped hole for installing a lifting eye bolt.

Materials

Valve Body:

Ductile Iron - ASTM 536 65-45-12

Doors:

Aluminum Bronze ASTM B148

Disc & Seat:

Stainless Steel

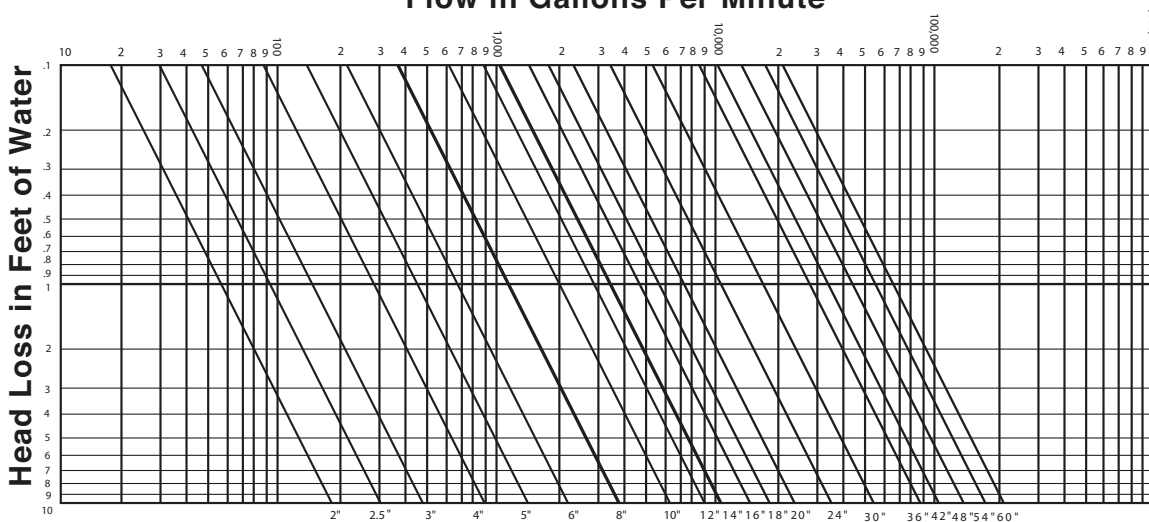
Spring:

Stainless Steel

Note: Standard offering is two-part epoxy coating interior and exterior

Lug pattern available - consult factory

Flow in Gallons Per Minute



4 through 12-inches



8 through 12-inches





Model 584

Flex-Check Valve



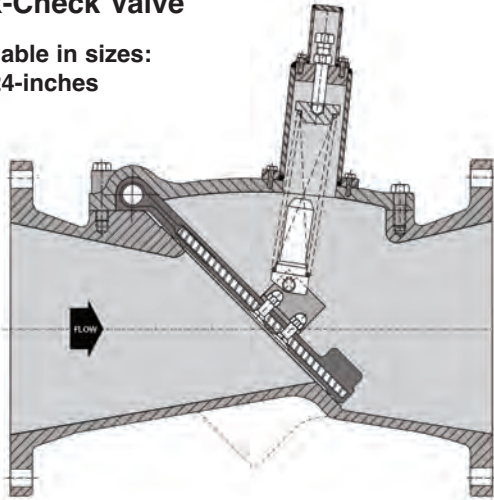
This product meets Federal Mandate for Lead Content Limit

- Full Pipe Size Flow Area
- Drip Tight Seating
- Non-Slam Closure
- Fusion Bonded Epoxy NSF-61
- Available with Integral Surge Protector, Position Indicator and Backflushing features
- Sizes 1 through 24 inches available
- Meets Federal Mandate for Lead Content Limits

The Cla-Val Series 584 Flex-Check Valve has a full-flow area body with integral seat at 45° angle to reduce head loss. This minimizes disc travel to 35° degrees for improved non-slam check action and for reliable vertical up flow operation even on slurry applications. Body and Cover are fusion bonded NSF-61 epoxy coated for long service life on potable and non-potable systems. Unique one-piece steel and nylon reinforced BUNA-N rubber flapper flexes to eliminate traditional metal hinge problems. During system flowing conditions the flapper flexes up to the open position allowing unrestricted flow through the valve. When system reverse flow conditions occur the flapper flexes down to the closed position for drop-tight seal preventing reverse flow. The flapper reliability is test-proven to over one million cycles. The optional Return Flow Actuator offers manual opening for pump priming, back flushing, draining lines, or system testing needs and is easy to field install.

Model 584SP Surge Protector Flex-Check Valve

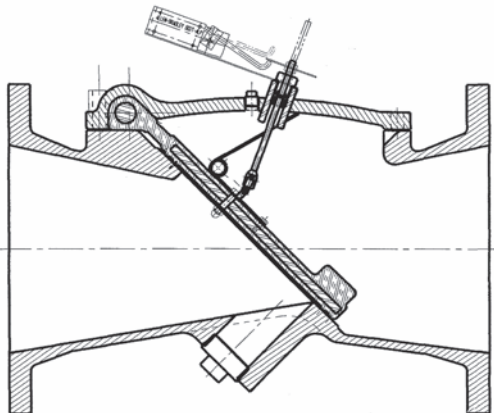
Available in sizes:
3 - 24-inches



Typical Applications

- Water Systems
- Industrial Waste
- Erosive Services
- Acid Lines
- Light Slurries
- Leaching Lines
- Brine & Salt Water Systems
- Raw Sewage
- Chemical Lines
- Ash Service
- Tailings Systems
- Corrosive Services
- Scrubbers

Model 584SA Flex-Check with Optional Position Indicator



Available in sizes: 3 - 24-inches

Model 584BF Backflushing Flex-Check Valve



Sizes
3 - 24 inches

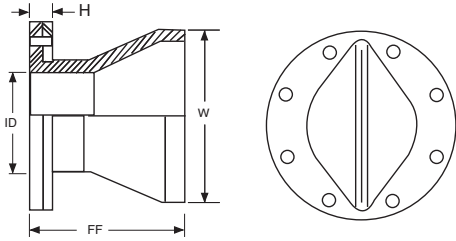
Optional Return Flow Actuator
3-inches and larger

DB Series



Duckbill Check Valves

Cla-Val Series DBF Duckbill Flanged Style Check Valves feature an integral, metal-backed, rubber flange for attaching directly to flanged-end connections from tank or head wall. A variety of elastomers allow DBF valves to be used with many different fluids. When ordering, specify Model DBF, valve ID size, flange drilling, and add first letter of elastomer material IE: 4"-DB-N (N for Neoprene)



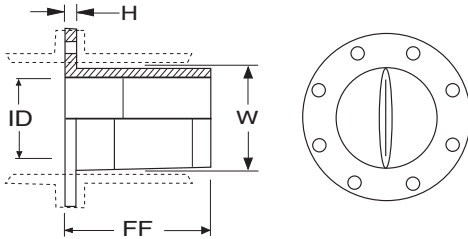
Note 1:
Dimensions are for clearance purposes only. Actual product dimensions may vary based upon specific application requirements.

Note 2:
Larger sizes are available, contact local office for pricing.



For the DBF Duckbill dimensions, www.cla-val.com

Cla-Val Series DBI Duckbill In-Line Flanged Style Check Valves are for pressurized pipeline applications where it is inserted between pipe flanges. Cla-Val Series DBI Duckbill In-Line Flanged Style Check Valves have an integral, metal-backed, rubber flange for attaching directly to flanged-end pipe connections. A variety of elastomers allow DBI valves to be used with many fluids. When ordering, specify Model DBI, pipe ID size, flange drilling, and add first letter of elastomer material. IE: 4"-DBI-N (N for Neoprene)



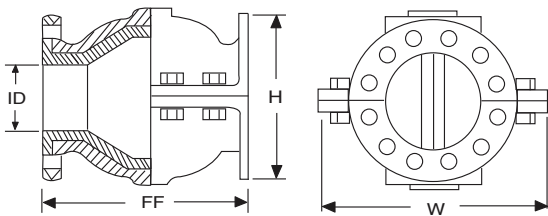
Note 1:
Dimensions are for clearance purposes only. Actual product dimensions may vary based upon specific application requirements.

Note 2:
Larger sizes are available, contact local office for pricing.



For the DBI Duckbill dimensions, www.cla-val.com

Cla-Val Series DBJ Duckbill Jacket Style Check Valves feature all-metal enclosures for installation in pipelines as a whisper quiet, non-slamming, low-maintenance, low pressure-drop check valve. A variety of elastomers allow DBJ valves to be used with many different fluids. When ordering, specify Model DBJ, nominal pipe, flange drilling, and add first letter of elastomer material IE: 4"-DBJ-N (N for Neoprene)



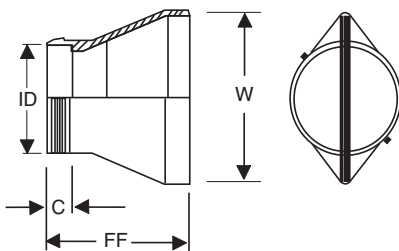
Note 1:
Dimensions are for clearance purposes only. Actual product dimensions may vary based upon specific application requirements.

Note 2:
Larger sizes are available, contact local office for pricing.



For the DBJ Duckbill dimensions, www.cla-val.com

Cla-Val Series DBO Duckbill Slip-Over Style Check Valves feature a soft sleeve end for slip over connection to pipe end and fastened with stainless steel clamp for low inlet pressure applications. A variety of elastomers allow DBO valves to be used with many different fluids. When ordering, specify Model DBO, pipe OD size, and add first letter of elastomer material. E: 4"-DBO-N (N for Neoprene)



Note 1:
Dimensions are for clearance purposes only. Actual product dimensions may vary based upon specific application requirements.

Note 2:
Larger sizes are available, contact local office for pricing.



For the DBO Duckbill dimensions, www.cla-val.com