



# Rubber Flex

## Duckbill Check Valve



# Cla-Val Rubber-Flex™ Duckbill Check Valves



RF-DBF

## Rubber-Flex Flanged Duckbill Check Valve

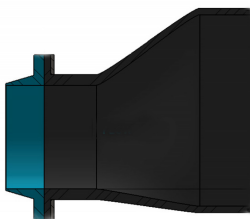
- Available in sizes 1" - 72" (25mm - 1800mm)
- Standard flange drilling is ANSI 125/150# but can be supplied with ANSI 250/300, DIN, JIS, BS or AS Flange patterns
- 1" - 2" (25mm - 50mm) cracking pressure enables these valves to have the lowest head loss in the industry
- 316SS retaining rings are supplied as standard



RF-DBO

## Rubber-Flex Slip-On Duckbill Check Valve

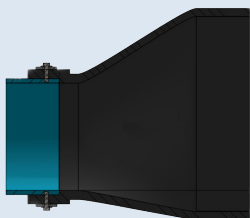
- Available in sizes 1" - 72" (25mm - 1800mm)
- Designed to slip directly over an existing pipe
- Supplied with heavy duty stainless steel clamps
- Can be installed in either a vertical or horizontal position
- 1" - 2" (25mm - 50mm) cracking pressure enables these valves to have the lowest head loss in the industry



RF-DBF-SB

## Rubber-Flex Duckbill Flanged Sloped Bottom Check Valve

- Available in sizes 3" - 72" (80mm - 1800mm)
- Standard flange drilling is ANSI 125/150# but can be supplied with ANSI 250/300, DIN, JIS, BS or AS Flange patterns
- 1" - 2" (25mm - 50mm) cracking pressure enables these valves to have the lowest head loss in the industry
- 316SS retaining rings are supplied as standard



RF-DBO-SB

## Rubber-Flex Slip-On Sloped Bottom Duckbill Check Valve

- Available in sizes 3" - 72" (80mm - 1800mm)
- Designed to slip directly over an existing pipe
- Supplied with heavy duty stainless steel clamps
- Can be installed in either a vertical or horizontal position
- 1" - 2" (25mm - 50mm) cracking pressure enables these valves to have the lowest head loss in the industry



RF-DBI

## Rubber-Flex Flanged In-Line Duckbill Check Valve

- Available in sizes 2" - 72" (50mm - 1800mm)
- This valve can be slipped inside of a pipe and installed between two existing pipe flanges, eliminating the need for a valve body
- Standard flange drilling is ANSI 125/150# but can be supplied with ANSI 250/300, DIN, JIS, BS or AS Flange patterns
- 1" - 2" (25mm - 50mm) cracking pressure enables these valves to have the lowest head loss in the industry

**Notes:** All Cla-Val Duckbill Check Valves can be provided with Internal Vacuum Supports for high pressure/vacuum applications. Consult Factory for material options not listed here.



**RF-DBI-IN**

### Rubber-Flex Slip-In In-Line Duckbill Check Valve

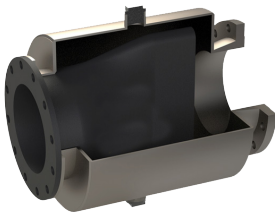
- Available in sizes 2" - 36" (50mm - 900mm)
- Ideal for corrosive materials
- Designed to fit directly in-side of an existing pipe
- Includes Stainless Steel Expansion Clamp to secure valve in place
- Can be installed in either a vertical or horizontal position
- 1" - 2" (25mm - 50mm) cracking pressure enables these valves to have the lowest head loss in the industry



**RF-DBI-LH**

### Rubber-Flex Low Head Loss In-Line Duckbill Check Valve

- Available in sizes 3" - 72" (80mm - 1800mm)
- Use this valve for airport runway run-offs, railway washouts, highway flood damage prevention and odor control and more
- Ensures 100% (flush) operation on heavy sewage applications



**RF-DBJ**

### Rubber-Flex Jacket Style Duckbill Check Valve

- Available in sizes 2" - 36" (50mm - 900mm)
- Ideal for heavy duty service, abrasive slurries and sludge
- An internal valve (RF-DBF) provides low head loss with a full port design
- Materials include Carbon Steel (Epoxy Coated), Stainless Steel and other materials



**RF-DBF-TT**

### Rubber Flex Flanged Blending System Check Valves

- Available in sizes 10.5" - 15" (267mm - 381mm)
- The RB-DBF-TT ensures 100% mixing capability in potable water and sewage reservoir/storage tanks
- Features a new torsional flow design that provides a unique spinning motion – a stand-alone, never-before-offered feature



**RF-CBD**

### Rubber Flex Coarse Bubble Diffuser

- Available in sizes 7.5" - 9.5" (191mm - 241mm)
- They typically produce 1/4 to 1/2 inch (6.4 to 13 mm) bubbles that rise rapidly from the floor of a wastewater or sewage treatment plant tank
- Coarse bubble diffusers are a pollution control technology used to aerate or mix wastewater for effluent/sewage treatment

# ***Cla-Val Rubber-Flex™ Duckbill Check Valves***

## **Overview**

Cla-Val Series RF-DB Rubber-Flex Check Valves are a cost effective way to control back pressures from sewage treatment plants, outfalls and tidal operations. They are a fully passive flow device requiring neither maintenance nor any outside sources of power or manual assistance to operate.

Cla-Val Series RF-DB Rubber-Flex Check Valves are offered as direct replacements for ineffective and maintenance ridden flap type check valves, commonly known to seize, rust and bind in unwanted positions. Our Series RF-DB handle large obstructions without jamming while providing protection from:

- Sewage slurries
- Outfalls to ocean fronts from heavy rainfall activity
- Prevention from land erosion due to back flow condition
- Protection from saltwater to fresh water ponds and catch basins and numerous other water based applications.

## **Design**

The simple, one-piece “duckbill” sleeve eliminates moving components and intrusive body structures that create problems with conventional check valve designs. There are no mechanical parts that can freeze, corrode, bind, or otherwise inhibit smooth operation. Unlike conventional check and flap gate valves, the Cla-Val Duckbill Check valve does not require regular maintenance to replace worn seats, hinge pins, balls, or flappers.

## **Operation**

The principal of operation is simple. Upstream pressure in the valve forces the lips or “duckbill” apart to permit flow. As pressure or flow increases, the lips open further, allowing more flow. This feature allows solids to pass unhindered with low pressure loss. When there is backpressure or reverse flow, the lips squeeze tightly together, preventing backflow. Even with some wear, the “duckbill” check sleeve will still function including sealing around entrapped solids.

## Typical Installations

Available Material Combinations and Operating Temperatures				
Mat'l Code	Cover Elastomer	Tube Elastomer	Maximum Temperature	F.S.A. Mat'l Class
BB	Chlorobutyl	Chlorobutyl	250° F 121° C	STD. III
EE	EPDM	EPDM	250° F 121° C	STD. III
NH	Neoprene	CSM	212° F 100° C	STD. II
NN	Neoprene	Neoprene	225° F 107° C	STD. II
PP	Nitrile	Nitrile <sup>3</sup>	225° F 107° C	STD. II
NR	Neoprene	Natural Rubber	180° F 82° C	STD. I



## Material Notes

All products are reinforced with polyester tire cord.

1. Check Valve "cover" can be CSM coated on special order.
2. Styles with Neoprene covers meet all requirements of USCG.
3. NSF/ANSI Standard 61 certified products upon request.





# Global Locations



## Global Headquarters

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