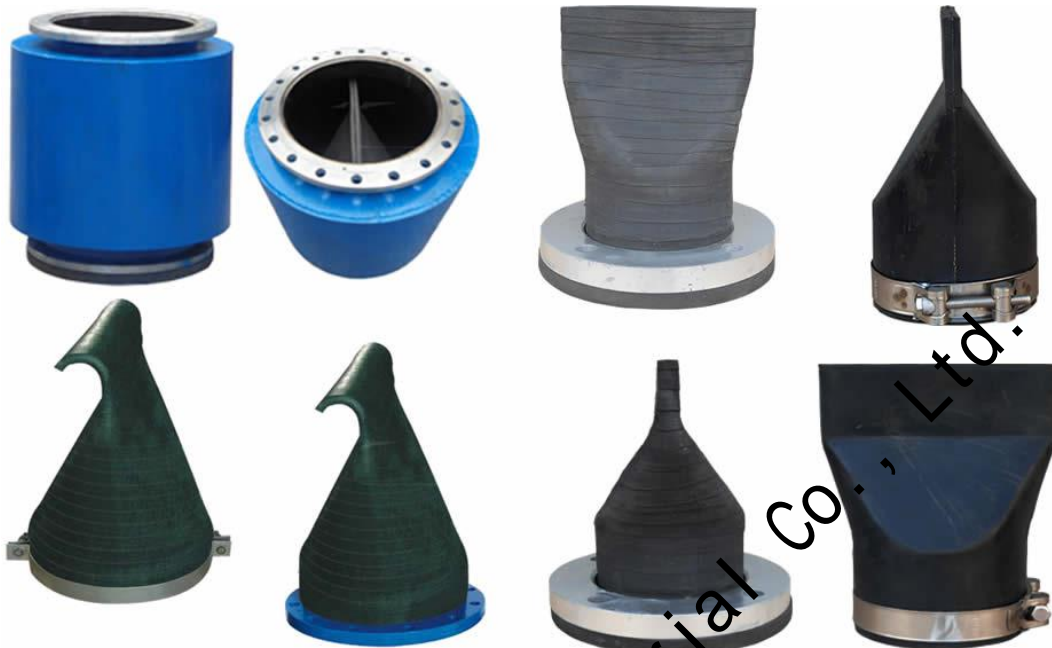




Duckbill Check Valve



Introduction

Duckbill check valve is also named rubber slow close check valve duckbill check valve, which has special structure like duckbill. It is one new water supply and drainage valve which has the function of discharge in positive direction while non-return in opposite direction. It can be widely applicable to be mounted on the discharge outlet of municipal, water works, waste water treatment projects to prevent of back flow, so that it has various advantages of slow close, silence, less maintenance and non-corrosive performance.

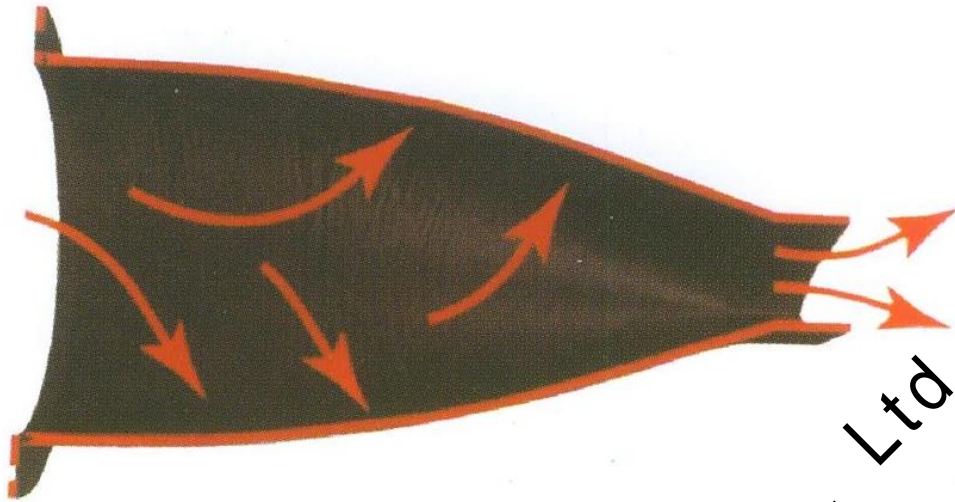
Features

Duckbill check valve adopts all-rubber materials in which include reinforced fibers, which has simple structure, non-corrosive performance and no mechanical parts. As a result, its simple structure will not bring about filling up or blocking up, reducing the maintenance costs.

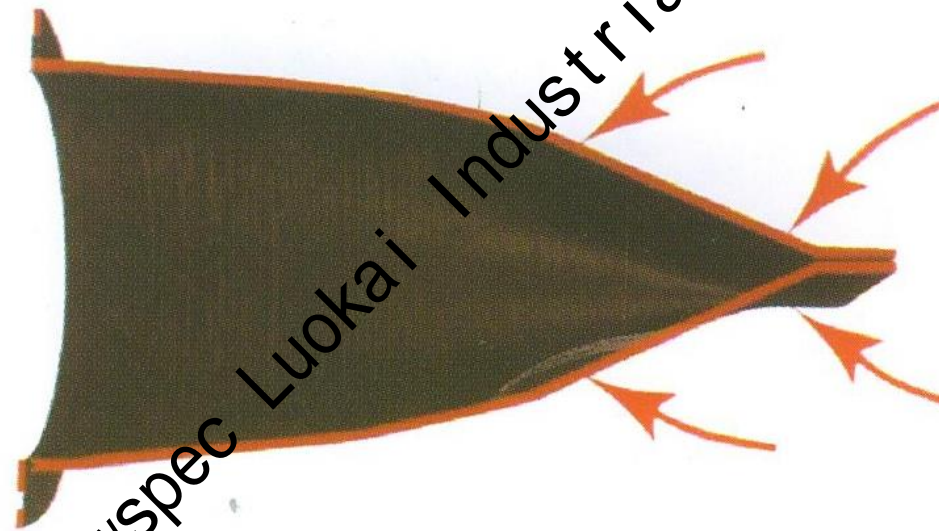
Duckbill check valve has strong operating performance, which can provide efficient and silent operation without any more energy device, reducing operating costs.

Duckbill check valve is applicable to general operating conditions, and special conditions of wearing and corrosive mediums, such like water, sludge, and mud. Its unique design allows solid particles to go through the valve freely, and even more that it can use its self-flexibility to pack these solid particles to make sure the sealing. Duckbill check valve has excellent effects of prevent of back flow. It use its self-flexibility and back pressure to achieve reliable sealing. Especially for the new flexure type valve nozzle which can develop its sealing performance to reduce leakage or achieve no leakage.

Duckbill check valve use differential pressure between its inside and outside to achieve open and close naturally, so that it's the best choice of waste water drainage system and pipeline system.



When inside pressure is bigger than outside pressure, duckbill check valve will open automatically



When outside pressure is bigger than inside pressure, duckbill check valve will close automatically

Specifications

1. Duckbill check valve adopts different materials according to different mediums. Because the sea water, river water, rain water, waste water and industrial waste water has different composition, corrosively and aging characteristic, we have to adopt different rubber to meet different operating conditions. Because both the flexible rubber and reinforced fiber adopt import raw materials, which ensures the duckbill check valve quality in terms of their sources, meeting the customer various requirements.
2. Duckbill check valve different parts have different Shore hardness. According to different operating conditions and installation requirements, the rubber has different hardness which could be indicated by Shore hardness. The valve installation part Shore hardness is the biggest, and then the valve pressure bearing part Shore

hardness, and the valve nozzle part Shore hardness is the smallest.

3. Duckbill check valve has different rigidity. According to different open resistance (Min) of discharge and back pressure (Max.) of non-return, the valve will be designed with different rigidity.
4. Duckbill check valve has different internal structure. Because different operating conditions should have different water discharge spread and valve nozzle open sectional area, and then valve internal structure design should be different as a result, the two back rubbers should have different included angle.
5. Duckbill check valve open pressure (Min) should be smaller than 0.008MPa (Equivalent to 80mm H₂O), and also could open at quiescent conditions. While it's sealing pressure of non-return (Min) should be 0MPa.
6. Duckbill check valve materials have various kinds of rubbers to meet different mediums. The nature rubber has excellent flexibility, air tightness, tensile stretch, tensile-strength and processing technic performance, which is applicable to abrasive particles, weak chemical liquids with temperature lower than 190°C. The chloroprene rubber has excellent anti-aging, fire resistance, oil resistance and solvent resistance performance, which is applicable to grease, medium chemical liquids, ozone, fat and fluorocarbon with temperature up to 200°C. The NBR could be applicable to various fluorocarbon and medium chemical liquids with temperature up to 150°C. The Fluor rubber could be applicable to ozone, grease, chemical solvent, hydrocarbon with temperature up to 250°C.

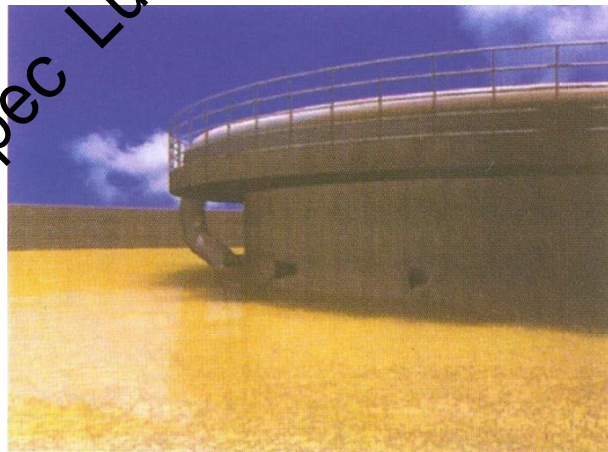
Applications

1. Waste Water System

Duckbill check valve can prevent of the flood and waste water flowing back into sewer and basement.

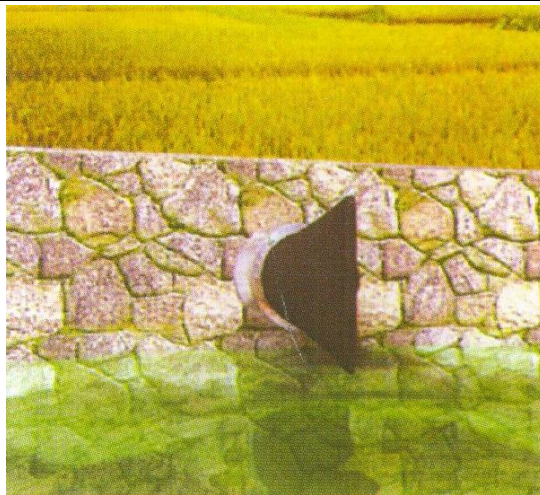
2. Drainage System

Duckbill check valve can prevent the flood from flowing back into city, sewage treatment works and drainage pump station when the water level rises.



3. Dam Drainage

Duckbill check valve can solve the problems of drainage door completely when applying to beach drainage.



4. Airport and Highway Water Drainage

Duckbill check valve is applicable to airport and highway for large acreage drainage, preventing of back flow.

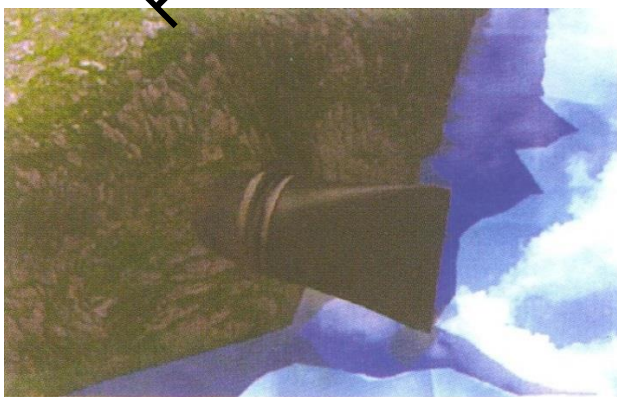


5. Sewage Pool Drainage

Duckbill check valve is applicable to sewage pool to prevent the waste water flow from one water section of embedded pool into another. Especially in raw sewerage, ENE duckbill check valve can operate without effect of plastics, branches or silk.

6. Odor Separation

Duckbill check valve is mounted in pipeline to prevent of the odor of waste water and sapid fluids spread, and also discharge water at any time.





7. Sewers Drainage

Duckbill check valve is applicable to sewer to prevent of the city river water flowing up to the street through the sewer.

8. Aeration System

Duckbill check valve is the good choice for municipal and factory aeration system.

9. Pump Station System

Duckbill check valve is applicable to large drainage pump station to prevent of backflow after pump stop. And even more that all-rubber structure check valve can also prevent of seawater corrosion.

Duckbill check valve is applicable to clean water or sewage pump station and sludge pump, it will not cause close imprecisely because of blockage, it also has no noise and little head loss.

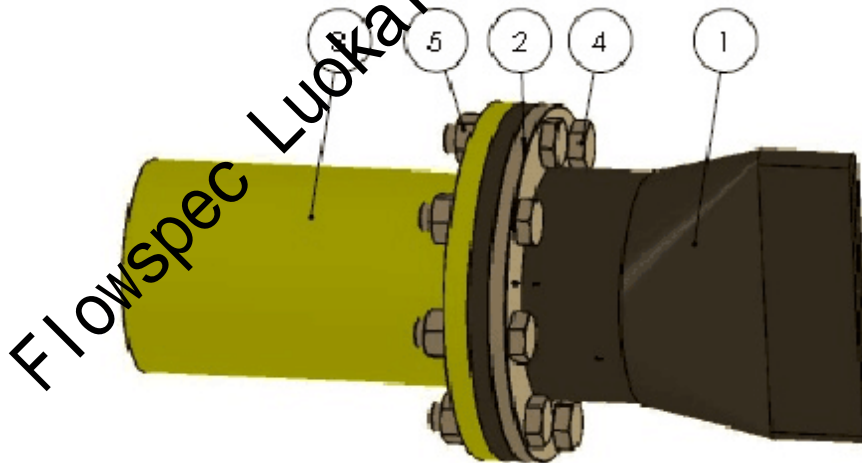
Flowspec Luokai Industrial Co., Ltd.

Flanged Type Duckbill Check Valve with Straight Bill



Introduction

RCV41 model of flanged type duckbill check valve is mounted onto the pipe with flanges. We adopt one whole piece of rubber construction makes its sealing much better. RCV41 model of flanged duckbill check valve is applicable widely to rain water, river water, sea water, sludge and industrial sewage. Its sizes are normally from DN20 (3/4") to DN300 (12") according to flange standard of DIN PN10/16, ANSI150LB, JIS10K, and UNI EN1092 table D/E.

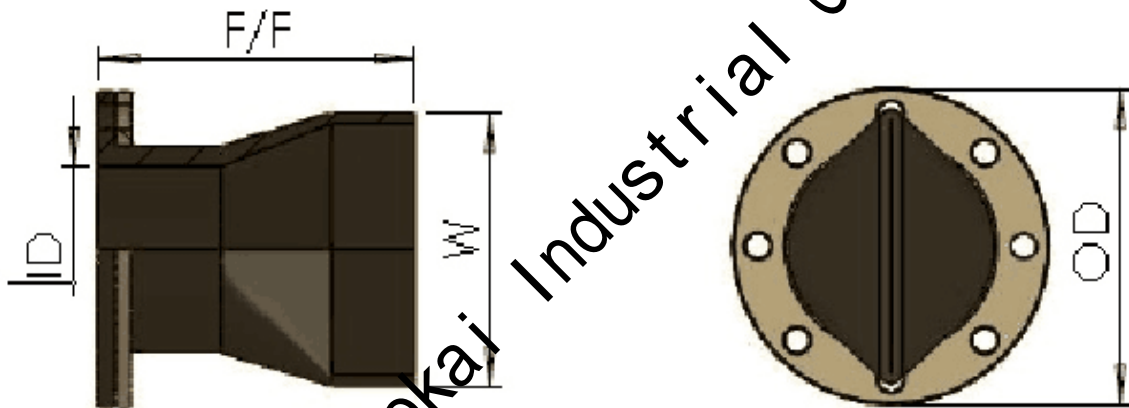


Main Parts and Materials

Item	Parts	Materials
1	Valve	1. Pure Gum Rubber 2. Neoprene 3. Chlorobutyl 4. Buna-N 5. Polyurethane



		6. Hypalon 7. Viton 8. EPDM
2	Ring Flange	1. Steel 2. Stainless Steel 3. Plastic
3	Pipe	1. Plastic Pipe 2. Steel Pipe 3. Stainless Steel Pipe 4. Cement Pipe
4	Bolt	1. Steel 2. Stainless Steel
5	Nut	1. Steel 2. Stainless Steel

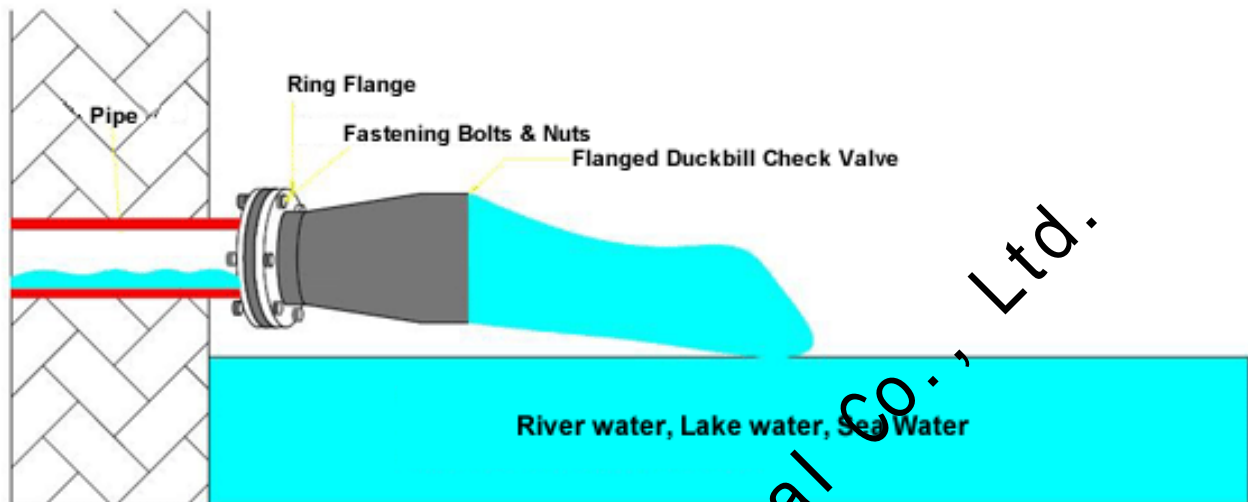


Main Connection Dimensions

DN(mm)	20	25	32	40	50	65	80	100	125	150	200	250	300
F/F	80	90	97	120	160	180	210	240	285	350	455	495	
OD	105	115	140	150	165	185	200	220	250	285	340	405	460
ID	20	25	32	40	50	65	80	100	125	150	200	250	300
W	37	48	57	67	100	120	140	175	210	254	345	455	480
Weight (Kgs)	0.1	0.1	0.2	0.2	0.3	0.5	0.9	1.4	2	2.7	5.3	10.2	15.8



Flanged Duckbill Check Valve Drainage Diagram



Notes:

1. Dimensions are approximate and may change due to pipe dimension changes, inlet pressure, back pressure and flow rates.
2. The weight is approximate without ring flange.
3. Any flange standard drilling is available according to customer's request.

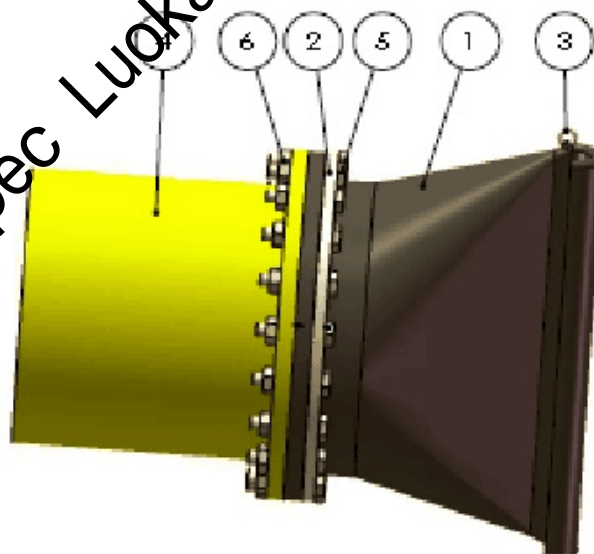
Flowspec Luokai Industrial Co., Ltd.

Flanged Type Duckbill Check Valve with Curved Bill



Introduction

RCV42 model of flanged type duckbill check valve is mounted onto the pipe with flanges. We adopt one whole piece of rubber construction makes its sealing much better. RCV42 model of flanged duckbill check valve is applicable widely to rain water, river water, sea water, slurry and industrial sewage. Its sizes are normally from DN150 (6") to DN2400 (96") according to flange standard of DIN PN10/16, ANSI150LB, JIS10K, and UNI EN1092 table D/E.

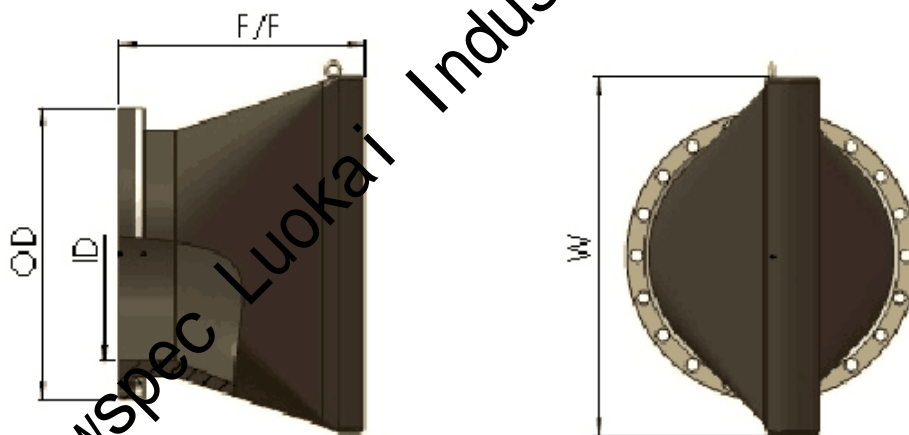


Main Parts and Materials

Item	Parts	Materials
1	Valve	1. Pure Gum Rubber 2. Neoprene



		3. Chlorobutyl 4. Buna-N 5. Polyurethane 6. Hypalon 7. Viton 8. EPDM
2	Ring Flange	1. Steel 2. Stainless Steel 3. Plastic
3	Eye Bolt	1. Steel 2. Stainless Steel
4	Pipe	1. Plastic Pipe 2. Steel Pipe 3. Stainless Steel Pipe 4. Cement Pipe
5	Bolt	3. Steel 4. Stainless Steel
6	Nut	3. Steel 4. Stainless Steel



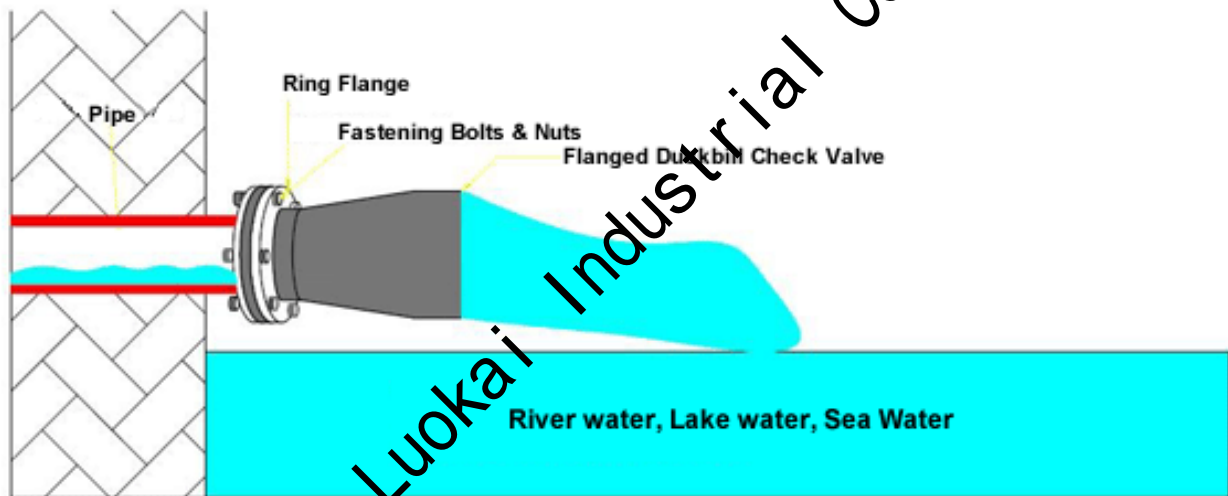
Main Connection Dimensions

DN(mm)	150	200	250	300	350	400	450	500	600	700	800
OD	285	340	395	445	505	565	615	670	780	895	1015
F/F	215	350	455	520	620	660	690	760	920	1120	1180
ID	150	200	250	300	350	400	450	500	600	700	800
W	254	345	455	480	600	680	750	850	980	1130	1250
Weight (Kgs)	2.72	5.26	10.2	15.8	20	26	34.6	40.3	61.5	85.6	114



DN(mm)	900	1000	1200	1400	1500	1600	1800	2000	2200	2400	
OD	1115	1230	1405	1630	1720	1830	2045	2265	2475	2685	
F/F	1110	1350	1400	1600	1600	1860	1930	1930	2147	2604	
ID	900	1000	1200	1400	1500	1600	1800	2000	2200	2400	
W	1370	1450	1800	1900	2070	2080	2360	2700	3500	3838	
Weight (Kgs)	135	185	272	377	410	456	580	695	770	820	

Flanged Duckbill Check Valve Drainage Diagram



Notes:

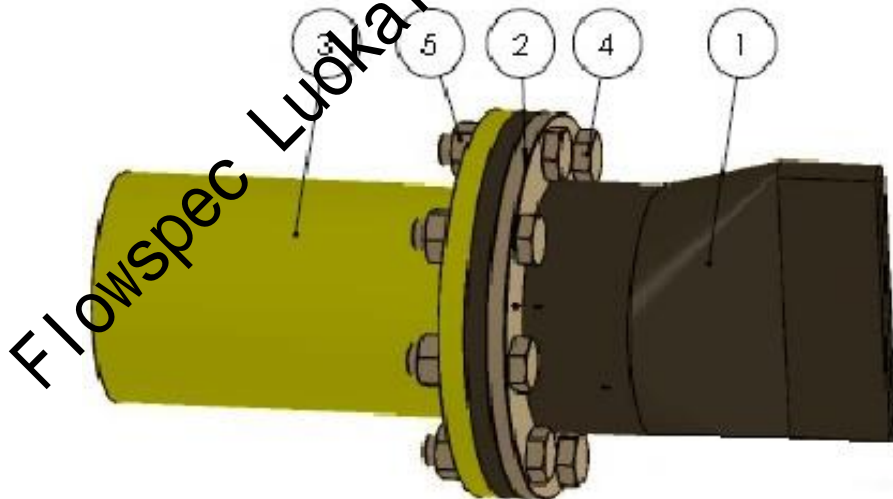
1. Dimensions are approximate and may change due to pipe dimension changes, inlet pressure, back pressure and flow rates.
2. The weight is approximate without ring flange.
3. Any flange standard drilling is available according to customer's request.

Flanged Type Duckbill Check Valve with Flat Bill



Introduction

RCV43 model of flanged type duckbill check valve is mounted onto the pipe with flanges. We adopt one whole piece of rubber construction makes its sealing much better. RCV43 model of flanged duckbill check valve is applicable widely to rain water, river water, sea water, sludge and industrial sewage. Its sizes are normally from DN100 (4") to DN2400 (196") according to flange standard of DIN PN10/16, ANSI150LB, JIS10K, and UNI EN1092 table D/E.

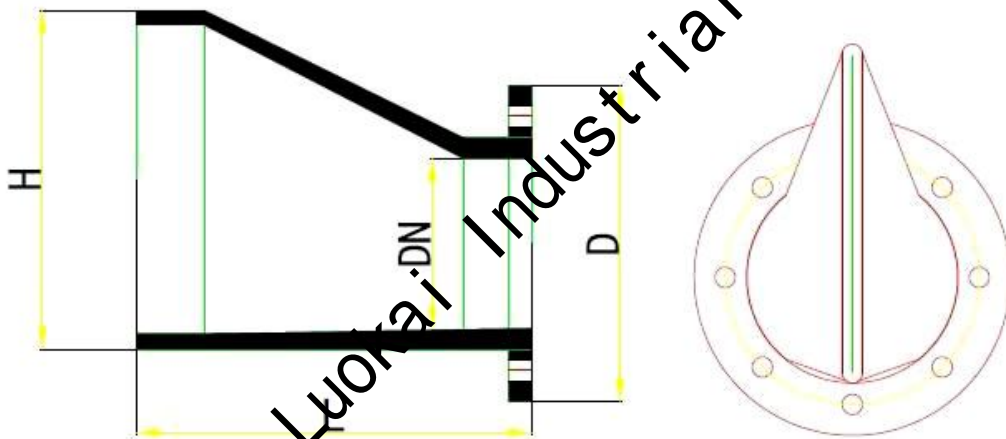


Main Parts and Materials

Item	Parts	Materials
1	Valve	1. Pure Gum Rubber 2. Neoprene 3. Chlorobutyl 4. Buna-N



		5. Polyurethane 6. Hypalon 7. Viton 8. EPDM
2	Ring Flange	1. Steel 2. Stainless Steel 3. Plastic
3	Pipe	1. Plastic Pipe 2. Steel Pipe 3. Stainless Steel Pipe 4. Cement Pipe
4	Bolt	1. Steel 2. Stainless Steel
5	Nut	1. Steel 2. Stainless Steel



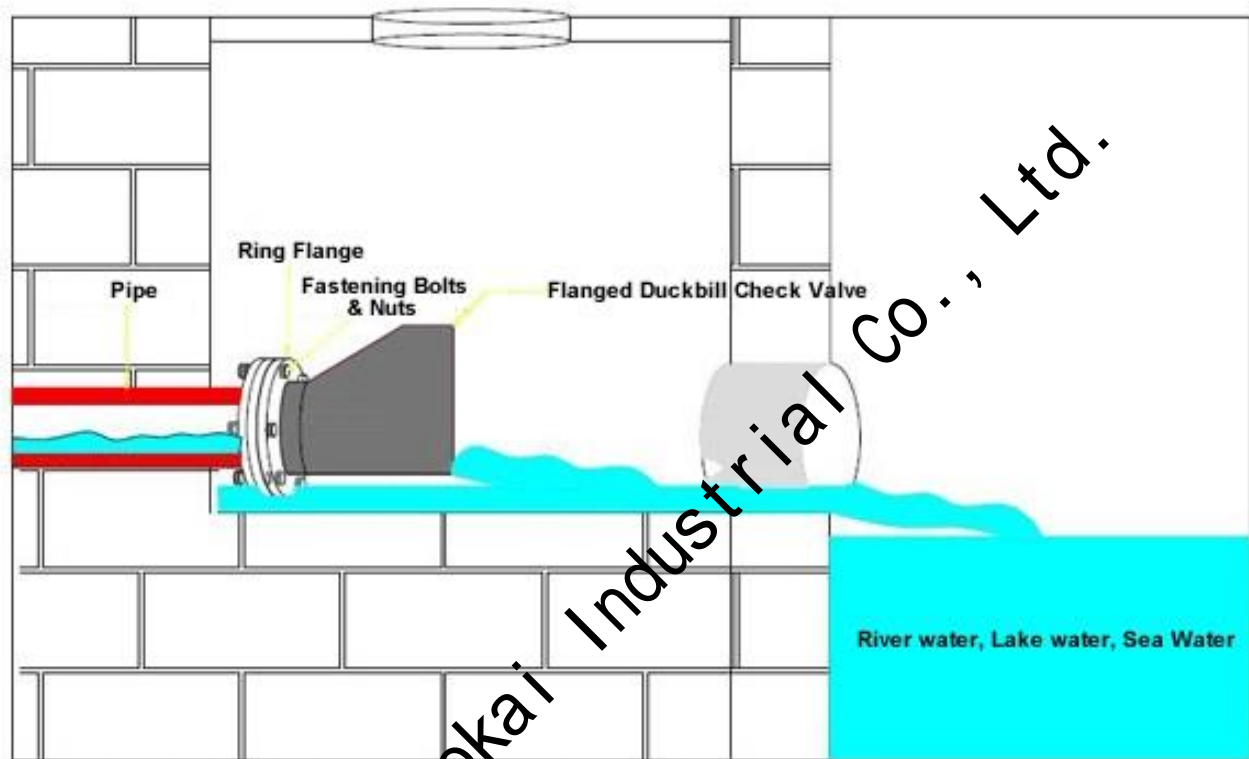
Main Connection Dimensions

DN(mm)	100	125	150	200	250	300	350	400	450	500	600	700
L	190	224	260	330	370	475	530	630	670	737	862	932
H	175	212	254	350	400	435	490	605	645	750	880	950
D	220	250	285	340	395	445	505	565	615	670	780	895
Weight (Kgs)	0.9	1.1	2.3	4.6	9.5	14.8	19	24	31.6	36	65	80
DN(mm)	800	900	1000	1200	1400	1500	1600	1800	2000	2200	2400	
L	1180	1110	1350	1400	1600	1600	1860	1930	1930	2147	2604	
H	1250	1370	1450	1800	1900	2070	2080	2360	2700	3500	3838	



D	1015	1115	1230	1455	1675	1720	1915	2115	2325	2475	2685	
Weight (Kgs)	107	127	175	262	365	398	444	565	675	740	780	

Flanged Duckbill Check Valve Drainage Diagram



Notes:

1. Dimensions are approximate and may change due to pipe dimension changes, inlet pressure, back pressure and flow rates.
2. The weight is approximate without ring flange.
3. Any flange standard drilling is available according to customer's request.