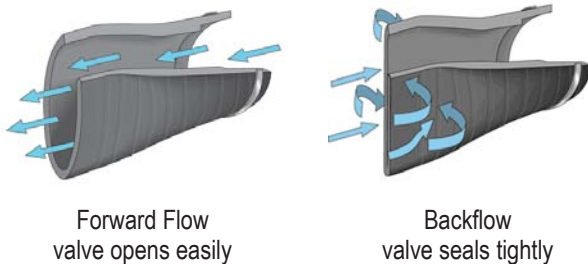
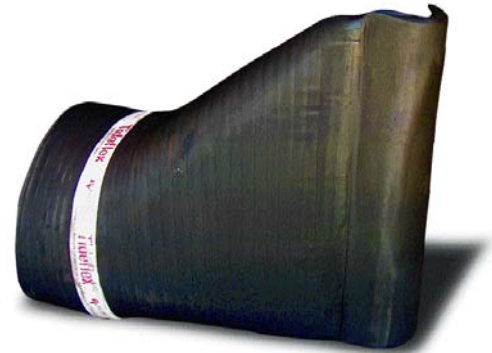




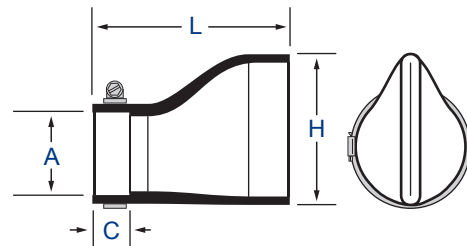
Tideflex® TF-1 Check Valve

- Lightweight, all-elastomer design
- Seals around entrapped solids
- Odour control
- Excellent drainage with low falls
- Minimum bottom clearance required
- Quiet - no slamming
- Ideal for manhole installations
- Self cleaning, low maintenance
- Working underwater or buried in sand
- Long operational life span



MATERIALS:

Body: Neoprene, Buna-N, Hypalon, EPDM, Viton,
Mounting bands / back-up rings: AISI 304.



OPERATION:

The Tideflex® TF-1 Check Valves eliminate potential backflow and are an excellent replacement for ineffective metal flap gate valves. Tideflex valves do not corrode, warp or freeze and are virtually maintenance free. They handle large obstructions without jamming, and there is no flap, gate or door to hang open or jam shut. Due to its nature, the valve collapses around any debris and seals off the backflow.

Tideflex DN450 (18") and larger are constructed with a 180° curved bill, which increases the sealing area and allows the valve to form a tighter seal area around solids. The more flexible curved tip allows even lower headloss.

The flat bottom and offset-bill design of the Tideflex valve allows it to be installed without any modifications to the structure of existing interceptors, manholes and chambers.

To eliminate standing water Tideflex valve offers low cracking pressure that is not affected by rust, corrosion or lack of lubrication.

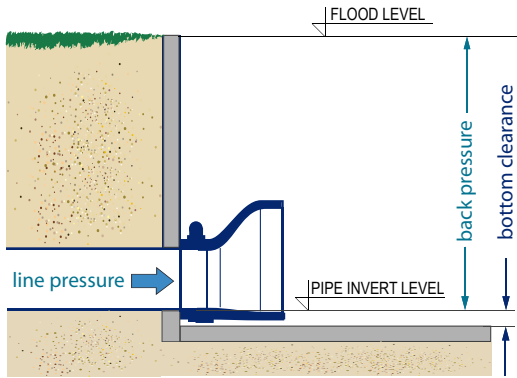
For example, in tidal areas the duckbill lips collapses tighter and tighter as the tide height increases. The pressure forcing the lips together puts a squeeze effect on any solids build-up. The valve forms around the obstruction until enough runoff flexes the lips open and flushes the material out.

Valves permanently located underwater or buried in sand, silt or mud can still discharge flow.

| A* [mm] | L [mm] | H [mm] | C [mm] |
|---------|--------|--------|--------|
| 100 | 355 | 305 | 50 |
| 150 | 355 | 305 | 50 |
| 200 | 440 | 390 | 50 |
| 250 | 545 | 480 | 75 |
| 300 | 660 | 560 | 100 |
| 400 | 815 | 740 | 130 |
| 500 | 1015 | 915 | 205 |
| 600 | 1170 | 1100 | 205 |
| 750 | 1405 | 1400 | 230 |
| 900 | 1650 | 1750 | 255 |
| 1050 | 1510 | 1800 | 255 |
| 1200 | 1800 | 2300 | 255 |
| 1500 | 2050 | 2450 | 330 |
| 1800 | 2440 | 2920 | 410 |

* Please note that Tideflex valve's body is made every 50mm/2in. - 100mm, 150mm, etc., and the valve's cuff is precisely made to fit the pipe.

Headloss charts request.
Please email us with information about valve type and size.



Headloss charts request.
Please email us with information
about valve type and size.

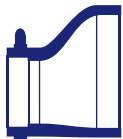
LP - line pressure [m]
BP - back pressure [m]
BC - bottom clearance [mm]



Required bottom clearance for TF-1 Valve.

| DN | 150 | 200 | 300 | 400 | 450 | 500 | 600 | 700 | 800 | 1000 | 1200 | 1400 | 1600 |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|
| BC [mm] | 15 | 35 | 55 | 60 | 70 | 70 | 75 | 85 | 100 | 125 | 145 | 165 | 230 |

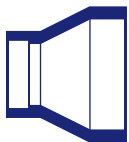
Tideflex® Check Valves - Engineered for Every Drainage System



TF-1 Slip-on / Flat Bottom design - STANDARD.

Enables installation of Tideflex without any modifications to existing structures.

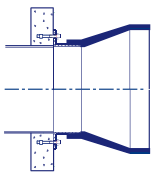
Please specify: OD - pipe outside diameter [mm]
BP - max. back pressure [m]



TF-2 Slip-on / Centered Bill design.

A standard design on inline valves, which requires greater bottom clearance than TF-1. It has been superseded by TF-1, but still remains available on special demand.

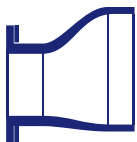
Please specify: OD - pipe outside diameter [mm]
BP - max. back pressure [m]



TF-1 Headwall design.

Supplied with AISI 304 stainless steel mounting plate, which is designed to fit the existing site structure.

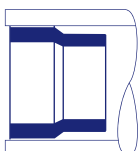
Please specify: OPE - opening diameter [mm]
BP - max. back pressure [m]



Series 35-1 Flanged design.

Furnished with an integral elastomer flange and steel back-up rings for installation. The flange size drilling conforms to DIN 2632 or other standards.

Please specify: flange type and size
BP - max. back pressure [m]



Series 37-G Slip-Inside Pipe design.

The outside diameter of the valve is custom-built to match the inside diameter of the pipe, which is buried or accessible from a manhole.

Please specify: PID - pipe inside diameter [mm]
BP - max. back pressure [m]





Tideflex® Advantage

The Tideflex Check Valve was invented in the 1970's and has proven to be a superior performing, completely passive check valve that requires no maintenance.

While the valve looks simple from the exterior, it has required and undergone an unprecedented amount of research & development.



Grant to Develop Tideflex

The USEPA issued a grant to Red Valve Company in 1981 to research and develop, design, and test an all-rubber "duckbill" check valve to overcome problems associated with conventional/mechanical flap gate valves.

As a result Tideflex became the first reliable check valve that does not require maintenance.

Finite Element Analysis (FEA)

Red Valve conducted FEA to analyze the deflection, and stress and strain characteristics of Tideflex under various loading conditions including forward differential pressure during flow (submerged and free discharge) and reverse differential pressure during check.

Red Valve used the results of the FEA to develop fabrication protocols for the construction of each Tideflex that provided enough reinforcement to withstand all of the loads while minimizing stiffness to reduce headloss.

Independent Hydraulic Testing

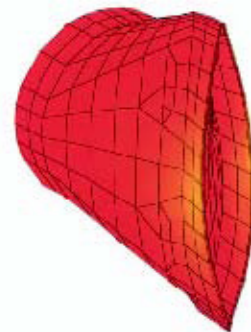
There are up to 50 different hydraulic variations of Tideflex per nominal size. Valves were tested for free discharge, submerged, and partially submerged conditions.

With the extensive amount of test data, modeling programs used to provide hydraulic characteristic curves for all Tideflex Valves were developed.



Manufacturing Capabilities

Tideflex Technologies (A Division of Red Valve Company) operates one of the most advanced rubber-based product manufacturing facilities in the world. Tideflex Technologies invested in the most advanced tooling, machinery, and autoclave equipment to produce the highest quality products in the industry to manufacture Tideflex Valves from 1/2" over 102" in size.



Patents

Since its beginning in 1953, Red Valve has been a pioneer in the water and wastewater markets with a great reputation for developing innovative solutions to solve customers problems.

With this pioneering spirit, Red Valve has received over 50 patents for new products and systems.



