AV·TEK®

VALVES THAT REDEFINE INDUSTRY STANDARDS

SDX Sliding Disc Check Valve
Model 4600

Main Features

Sliding Disc Design

The Av-Tek SDX combines the technology of the standard Silent Style Check valve, with the advanced features of the Av-Tek DEX Double Eccentric Butterfly Valve providing bubble tight shut off in clean water applications, without the fear of losing the seat due to high velocities or being pulled loose.

What's Different

Typical silent check valves come standard metal seated, which have leakage. If bubble tight shut off is required, other manufactures machine a small groove into the seat of the valve and hand press an O-Ring into that small groove. This provides "bubble tight shut off" until the O-Ring falls out of the groove, and gets caught up in the spring, this is a common failure. The Av-Tek SDX check valve, has a mechanically retained seat on the disc ensuring the resilient seat is blowout proof. This also allows for much faster velocities and bubble tight shut off. The seat is easily replaceable only requiring an Allen Wrench.

316L SST Welded Body Seat

The Nickel Chromium (316L) Stainless Steel body seat is applied to the Ductile Iron valve body by means of a robotic welded overlay process and then micro finished and polished. The chemical properties of the Nickel Chromium SST prevent corrosion between the seat and the Ductile Iron valve body. The permanent welding process eliminates the possibility of body seat separation and undercutting.

Certified Zero Leakage

Each SDX check valve is tested in accordance with EN Standards and AWWA standards, Av-Tek® provides a unique test certificate for each valve that leaves its factory. The certificate includes a leak test report, tightness, and heat trace numbers of the valve components.

Ease of Maintenance

This new modern design requires zero to minimal maintenance. The CUSN12 Bronze bushings are self lubricating and are wear resistant. In the event of seal replacement or repair it can be accomplished in the field, with common tools, without the need of replacing a body seat or disc.

Oversized Body

To maximize the flow and reduce head loss an oversized body is utilized ensuring maximum flow through the valve. The body of the valve is equal to the OD of the flange.

High Working Pressures

ASTM A536 Ductile Iron body with a 316 Stainless Steel shaft make the Av-Tek® SDX suitable for 250 PSI CWP applications as a standard and Av-Tek offers the SDX for pressures up to 580 psi.

Size Offering

6” to 48” - Class 150B ANSI Class 125 flanged or AWWA C519 250B ANSI Class 250 or DN PN10 - PN 40 Flanges also available.

Drinking Water Safe

Certified to NSF/ANSI 61/372 for use in potable water systems.

SDX High Performance

Mechanically retained seat

The Av-Tek® SDX Check Valve is the result of years of advanced engineering and study. This progressive design offers the latest technology specifically designed for use in water applications. Standard silent check valves are metal seated valves and have an allowable leakage of 1 oz, per inch of diameter, per hour. With its modern features and high-grade materials, the SDX is bubble tight and will not have leakage. Av-Tek strives to brings unprecedented longevity and reliability to meet the critical service demands of a modern water structure. Av-Tek offers different spring options to ensure your valve performs in both high and low pressure lines, as well as high and low velocity applications. When placing the SDX after a pump, the valve must be installed at least 3 pipe diameters after the outlet of the pump.

Easy to Service

Replaceable Seat

Fusion Bonded Epoxy

NSF 61/372

NiCr 316L SST Welded Body Seat

4600 SDX Sliding Disc Check Valve

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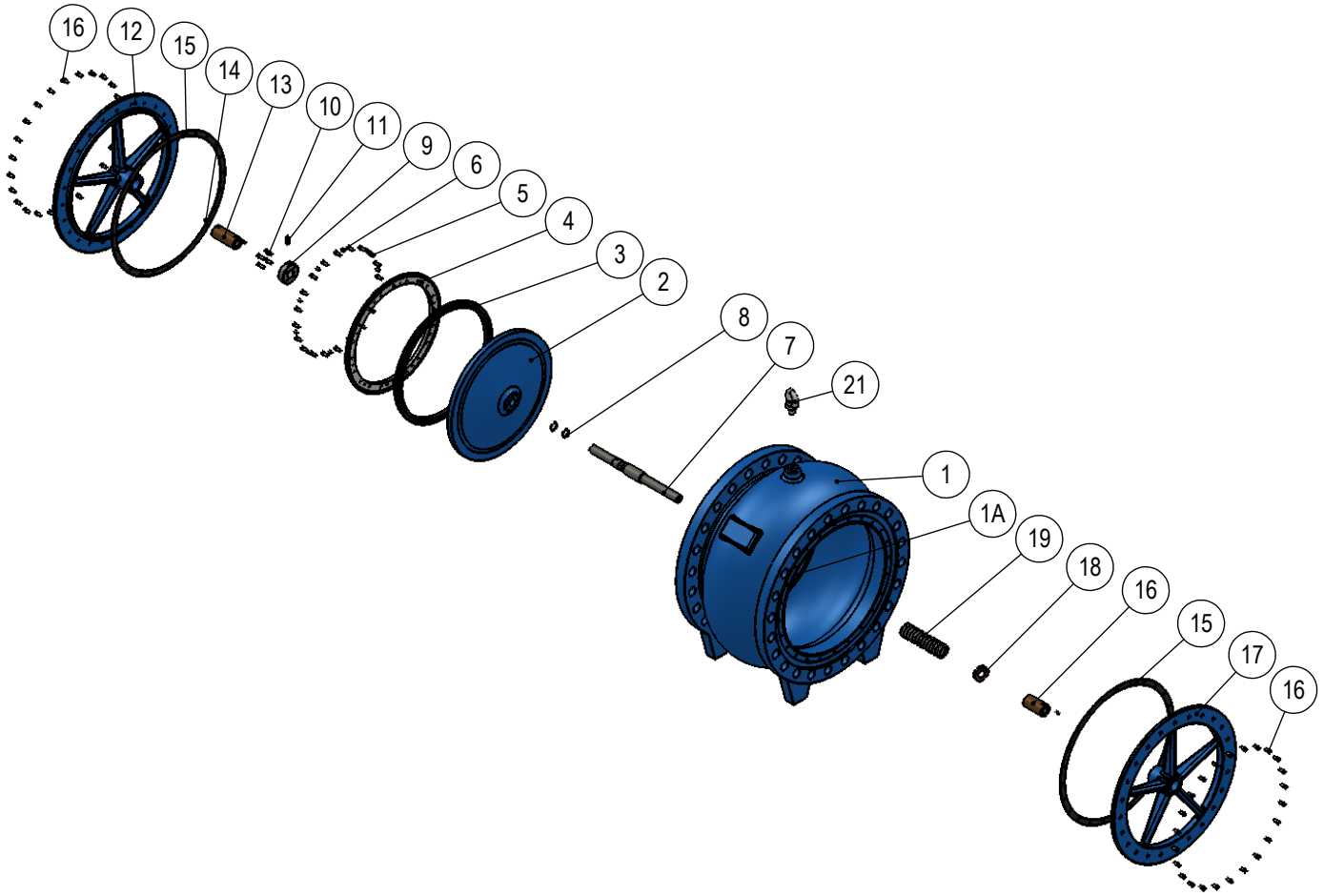


Sizes 6" - 48"
Parts List & Material Specification

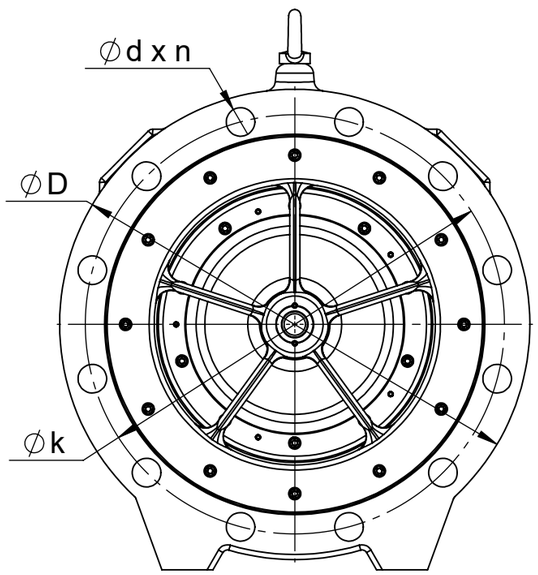
P. No	Part Name	Material
1	Body	Ductile Iron
1A	Body Seat	316L Stainless Steel w/ Welding
2	Disc	Ductile Iron
3	Seat	EPDM
4	Retaining Ring	316 SST
5	Bolt	304 SST
6	Setscrew	304 SST
7	Shaft	420 SST
8	O-Ring	EPDM
9	Fixing Ring	420 SST
10	Bolt	304 SST
11	Setscrew	304 SST
12	Front Difuzor	Ductile Iron
13	Front Bushing	Bronze
14	Setscrew	304 SST
15	Gasket	EPDM
16	Bolt	304 SST
17	Back Difuzor	Ductile Iron
18	Back Bushing	Bronze
19	Spring	Stainless Steel
20	Spring Bushing	Bronze
21	Eye Bolt	Carbon Steal

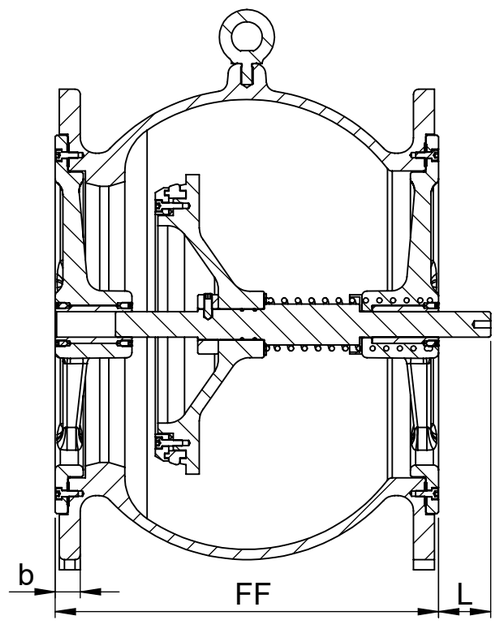
Subject to change without notice,
Please contact us for other sizes.
Part No: 37-863

REV:B

06.11.2014

4600 SILENT CHECK VALVE DIMENSIONAL DRAWING





CL150								
MM	**Size**	**ØD**	**Øk**	**Ød**	**n**	**b**	**FF**	**L**
125	5	10.03"	8.5"	0.88"	8	0.75"	7.87"	0.98"
150	6	11.02"	9.49"	0.88"	8	0.75"	8.86"	0.98"
200	8	13.58"	11.77"	0.88"	8	0.79"	10.83"	1.37"
250	10	15.94"	14.25"	1"	12	0.87"	12.8"	1.69"
300	12	19.09"	17"	1"	12	0.96"	14.76"	2"
350	14	21.06"	18.74"	1.13"	12	1.04"	16.73"	2.2"
400	16	23.43"	21.26"	1.13"	16	1.10"	18.7"	2.55"
450	18	25"	22.76"	1.25"	16	1.18"	19.69"	2.87"
500	20	28"	25"	1.25"	20	1.24"	21.65"	3.14"
600	24	32.09"	29.49"	1.38"	20	1.42"	23.62"	3.7"
750	30	38.78"	35.98"	1.38"	28	1.69"	27.56"	4.4"
900	36	46.06"	42.76"	1.62"	32	1.83"	31.5"	5.03"
1050	42	52.95"	49.48"	1.62"	36	2.36"	35.43"	5.9"
1200	48	60.23"	55.98"	1.62"	44	2.71"	35.43"	6.3"

Subject to change without notice.
Please contact us for other sizes.
Part No: 37 - 4038

REV:0 04.02.2022

Quality Coating Systems from Av-Tek® Valves

Fusion Bonded Epoxy

The Av-Tek® *SDX* Sliding Disc Check Valve receives a heat fused powder lining and coating known as Fusion Bonded Epoxy. During this process, the powder coating is applied to a pre-heated, sand blasted body, and then cured in a high temperature oven. This entire process must be done in less than 4 hours. The standard minimum thickness is 12 Mil DFT.

Coating Testing

Quality Assurance Engineers at the Av-Tek® manufacturing facility test and certify the dry film thickness of the *SDX* Check Valve with an Elcometer. The Av-Tek® Coating system is approved for contact with drinking water.

Holiday Testing

A holiday or a “spark test” is performed on the *SDX* Check Valve to ensure that coating is free from pinholes or voids in the protective coating. If pores or voids are detected the valve is rejected and the coating process is repeated.

Product Specification - Av-Tek® - *SDX* Check Valve

DESIGN

A. The check valve shall be a globe style, silent design whereby the valve begins to open as forward velocity begins. The valve shall have a spring to assist in the closure of the valve ensuring no slamming or water hammer takes place.
B. The valve must be drip tight by means of a mechanically retained EPDM Seat that is attached to the disc by the use of a retaining ring. The retaining ring shall be one single piece and constructed of 316 Stainless Steel. Metal Seated valves are not allowed. Valves utilizing an O-Ring seal and Groove solution for zero leakage sealing purposes are not allowed.
C. Valves shall be supplied with integral ANSI B16.1 Class 125 flanges. Valves requiring specific mating flange inner diameters to hold the internal components in place shall not be allowed.
D. The valve size, pressure rating, year of manufacture, and manufacturer's name and model shall be cast onto the valve body or be on a permanently attached nameplate.
E. Body Seat: The metallic body seat shall be 316L NiCr Stainless Steel and applied to the valve body by means of a robotic weld overlay process eliminating the possibility of leakage through the body/seat joint.
F. Each valve shall be supplied with a factory inspection certificate outlining body pressure test, leakage test, valve size, valve serial number, pressure rating, body heat No., disc heat No., stem heat No. seat material, and seat heat No.
G. The valve body shall be oversize to allow maximum flow.
H. The allowable leakage is zero.
I. Valve shall be tested and certified complaint according to the latest standards of NSF 61 & 372.

MATERIALS

A. Body: Valve bodies shall be ductile iron, ASTM A536 65-45-12 or A536 60-40-18, with ANSI B16.1s. The valve shall be supplied with a lifting hook that can be threaded into the valve body for ease of installation.
B. Disc: The disc shall be ductile iron, ASTM A536 65-45-12 or ASTM A536 60-40-18. The disc shall be secured to the valve shaft using mechanically retained stainless steel shaft fixing ring made from 420 stainless steel.
C. Shaft: The valve shafts shall be made of high strength 316 grade Stainless Steel.
D. Elastomeric Seal: Valve seats shall be EPDM mounted on the valve disc with a AISI 316 stainless steel seat retainer. The seat retainer shall be counter bored and drilled. Seat retaining fasteners shall be AISI 316 Stainless Steel and shall not extrude above the seat retaining ring. Seat shall be field replaceable and adjustable with common tools.
E. Metallic Seat: The metallic body seat shall be 316L NiCr Stainless Steel and applied to the valve body by means of a robotic weld, double overlay process and machined finished. Nickel welding is not allowed.
F. Shaft Bearings: Valve shaft bearings shall be corrosion resistant, self-lubricating sleeve type and made of bronze. Non-metallic shaft bearings are not allowed.

G. The iron surfaces of the valve body and disc shall be coated with minimum 12 mil DFT fusion bonded epoxy.

MANUFACTURER

A. Manufacture shall be ISO 9001:2008, Accredited and Certified.
B. Manufacture shall have valve performance independently tested and verified in the USA by an accredited third party flow testing facility.
C. Manufacture must have 5 years minimum experience in the production of Silent Check Valves w/ the seat mechanically retained to the disc.
D. Valve shall be the *SDX* Sliding Disc Check Valve, AV-Tek™ Valve USA

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Av-Tek® Inc. offers modern solutions for the persistent problems facing water users, plant operators, and engineering firms. Our technology far exceeds the current options in the marketplace, and clients are quickly realizing Av-Tek® is setting a new standard for quality, performance, and craftsmanship.

The Av-Tek® DEX double eccentric butterfly valve is a primary example of our superior design and quality, and comes with options available to match any market needs. With hard rubber lining, aluminum bronze discs, and certified to meet the most stringent requirements, you can rest assured there is not a better valve on the market today.

The Av-Tek® VRX Plunger Valve has been engineered and designed for absolute control; specifically, for water applications. The VRX accompanied with an electric motor operator can function as a critical isolation, pressure, and control valve without the fear of cavitation damage.

The Av-Tek® Resilient Seated butterfly valves are a crucial part of nearly every application, and the advanced design allows for quick replacement of seats. The disc is never penetrated, ensuring this valve has a long life, free of leaks and defects.

The Av-Tek® Model 4900 is a resilient seated ball check valve with a sinking or floating ball to prevent back flow. This allows for flow passage with minimum friction loss.

The Av-Tek® Dismantling Joints are recommended anytime a valve is above ground, for easy mounting and dismounting. Dismantling joints also remove the stress on valves in line due to installation problems. Ductile Iron Bodies, Fusion Bonded Epoxy In & Out, and EPDM O-Rings are always standard.

Contact us today for further information or any questions you may have. Our team is happy to discuss your specific situation and provide expert recommendations that will deliver long-lasting solutions for your water management needs.

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