AV-TEK®

VALVES THAT REDEFINE INDUSTRY STANDARDS

Hi-DEX High Performance
Double Eccentric Wafer Butterfly Valve

MAIN FEATURES

Double Eccentric Design

The centerline of the disc rotation is horizontally and vertically offset from the body seat. This high-performance design eliminates “seat set” compression while the valve is in the open position. Compression on the seal is released after only a few degrees of opening which reduces friction and wear. This makes the Hi-DEX valve ideal for modulation or in the open position for extended periods of time.

AWWA Wafer Dimensions

2” to 16" Class 150 ANSI Class
125/150 Wafer dimensions
Pressure Rated at 250 PSI

High Working Pressures

AISI CF8M (316 Cast Stainless Steel) body with 316 Stainless Steel upper and lower shafts make the Av-Tek® Hi-DEX suitable for 250 PSI CWP applications.

316L Welded SST Body Seat for Carbon Steel Bodies

The Nickel Chromium, 316L Stainless Steel body seat is applied to the carbon steel valve body by robotic welded overlay process and then micro finished and polished. The chemical properties of the 316L SST prevent corrosion between the seat and the valve body. The permanent welding process eliminates the possibility of body seat separation and allows for a seat on disc design. On Av-Tek's stainless steel body, the seat is micro finished and polished after casting.

Drinking Water Safe

The Hi-DEX valves are constructed of NSF61. compliant materials.

Replaceable Packing Glands

The disc hub and shaft design in the Hi-Dex are protected through a Stainless Steel Bushing and Graphite packing. This keeps the line media from leaking out of the pipeline. The packing glands are adjustable and easily replaceable.

Certified Zero Leakage

Each Hi-DEX double eccentric butterfly valve is tested in accordance with EN Standards, Av-Tek® provides a unique test certificate for each valve that leaves its factory. The certificate includes a leak test report, bidirectional tightness, and heat trace numbers of the valve components and more.

Engineered Linings and Coatings

The ST37 Carbon Steel body comes standard with Primer lining and coating ready for final paint. Cast 316 SST bodies do not require coating.

Ease of Maintenance

The Double offset design requires zero to minimal maintenance. In the event of seal replacement or repair it can be accomplished in the field, with common tools, without the need of a specialized technician.

HI-DEX HIGH PERFORMANCE

Modern Double Offset Design

The Av-Tek® Hi-DEX Butterfly Valve is the result of years of advanced engineering and study. This progressive design offers the latest technology specifically designed for use in industrial and water applications. With its modern features and high-grade materials, the Hi-DEX brings unprecedented longevity and reliability to meet the critical service demands of a modern industrial or water structure.

Superior Design

The Av-Tek® Hi-DEX Double Eccentric Butterfly Valve offers a modern design compared to the traditional lug or wafer, commodity type, butterfly valve. The double offset design occurs from the centerline of the disc rotation being horizontally and vertically offset from the stainless steel body seat. Unlike traditional concentric butterfly valves, the double offset design offers a "non-rubbing" resilient sealing ring that releases compression after only a few degrees of opening, resulting in decades of zero leakage sealing capabilities. This makes the Hi-DEX ideally suited for critical isolation applications, where performance and reliability are paramount. In the rare event a resilient seal ever need adjustment or replacement, this can be achieved with common tools, in the field, and with out removing the valve from the pipeline unlike epoxy filled seats that require special equipment, training and skill. With the high qaulity materials of construction and a PTFE seat the valve is rated for 437° F.

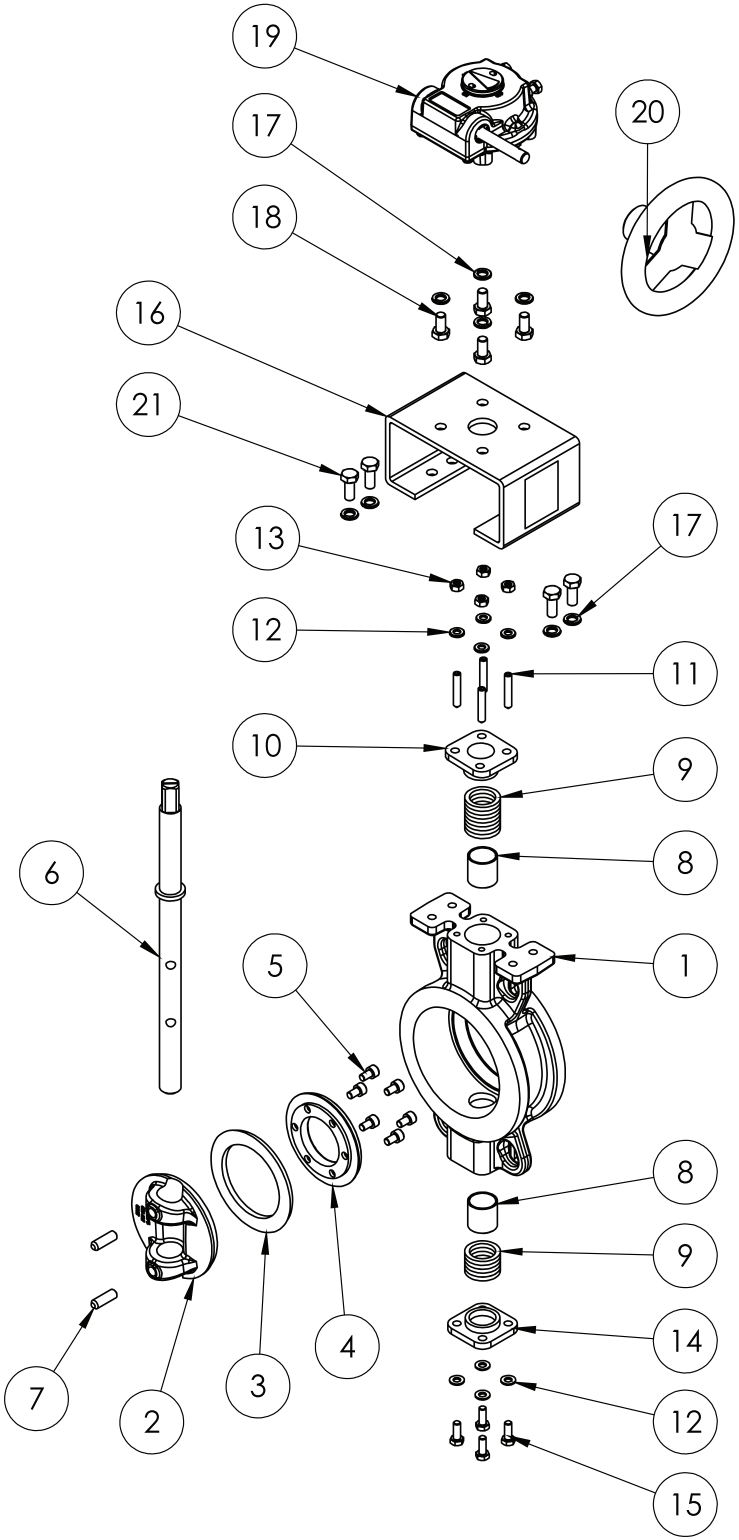
Critical Sealing System

The Av-Tek® Hi-DEX Butterfly Valve has been designed to give superior shut off due to the robotic welded 316L SST seat on Carbon Steel Valves and machined 316 SST seat on Stainless bodies, and a continuous, replaceable PTFE (Teflon) seal. This sealing syste allows for 360°uninterrupted, bubble tight, bi-directional shut off. Each resilient seal is manufactured in the same facility as the valves, thus insuring the highest of standards are met.

AV-TEK
VALVES THAT REDEFINE INDUSTRY STANDARDS

Hi-DEX WAFER BUTTERFLY VALVE PART LIST

P.No	Part Name	Material
1	Body	Cast 316 SST or ST37 Carbon Steel
2	Disc	Cast 316 SST or ST37 Carbon Steel
3	Seat	PTFE
4	Retaining Ring	316 Stainless Steel
5	Bolt	316 Stainless Steel
6	Shaft	316 SST (Standard), 2205 Duplex SST (Optional)
7	Pin	316 SST (Standard), 2205 Duplex SST (Optional)
8	Bushing	SB (Stainless Steel + PFTE)
9	Packing	Graphite
10	Gland	304 Stainless Steel
11	Setscrew	304 Stainless Steel
12	Washer	304 Stainless Steel
13	Nut	304 Stainless Steel
14	Cover	304 Stainless Steel
15	Bolt	304 Stainless Steel
16	Bridge	304 Stainless Steel
17	Washer	304 Stainless Steel
18	Bolt	Stainless Steel
19	Gearbox	Cast Iron Worm Gear
20	Handwheel	ST37 CARBON STEEL / EN GJS 500-7

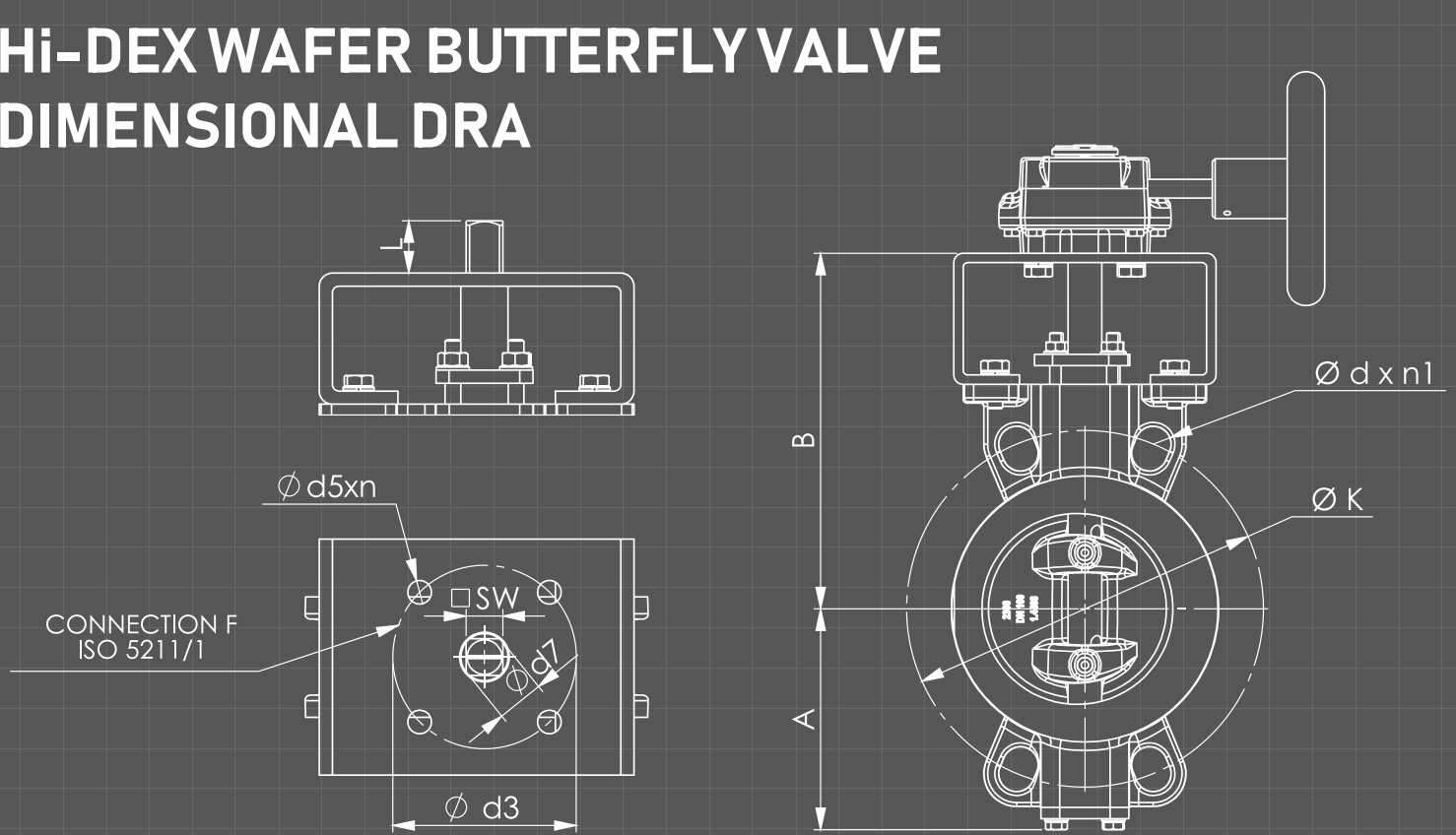


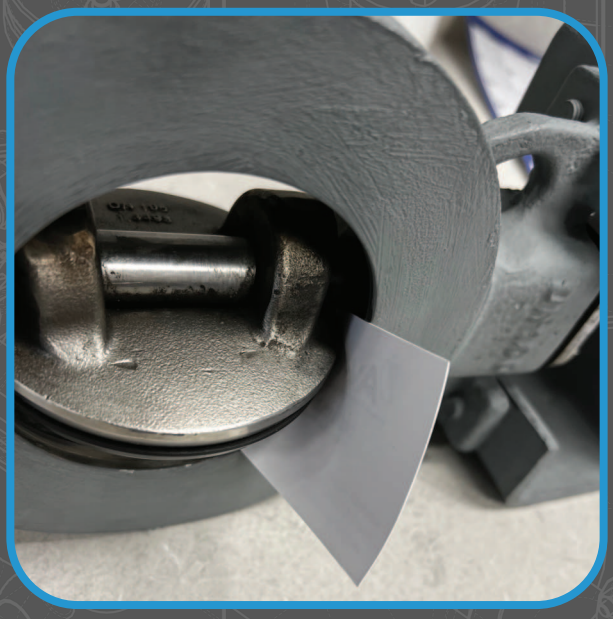
DN / NPS	CL 150		A	B	FF	F	Ø d3	Ød5xn	□ SW	Ød7	L
	Ø k	Ø d x n1									
2"	4.75"	19 x 4	3.15"	5.19"	1.69"	05	1.96"	7x4	11mm	0.55"	0.47"
3"	6"	19 x 4	3.93"	5.78"	1.81"	07	2.75"	9x4	14mm	0.70"	0.62"
4"	7.5"	19 x 8	4.65"	7.48"	2.05"	07	2.75"	9x4	14mm	0.70"	0.62"
5"	8.5"	22.5 x 8	4.96"	7.87"	2.20"	07	2.75"	9x4	17mm	0.86"	0.74"
6'	9.5"	22.5 x 8	5.71"	8.42"	2.20"	10	4.01"	11x4	17mm	0.86"	0.74"
8"	11.75"	22.5 x 8	7.40"	10.12"	2.36"	10	4.01"	11x4	22mm	1.10"	0.94"
10"	14.25"	25.5 x 12	8.66"	11.88"	2.67"	10	4.01"	11x4	27mm	1.41"	1.18"
12"	17"	25.5 x 12	10.03"	13.58"	3.07"	10	4.01"	11x4	32mm	1.55"	1.37"

Subject to change without notice, Please contact us for other sizes and materials.

Part No: 37 - 4306

Hi-DEX WAFER BUTTERFLY VALVE DIMENSIONAL DRA





A business card is placed between the NiCr welded body seat and resilient seal showing a true double offset design.

Valve Construction

The standard Av-Tek® Hi-DEX 2320 Butterfly Valve is constructed of robust Cast 316 Stainless Steel or ST37 Carbon Steel Body and Disc. It comes standard with a 318 SST shaft, and a PTFE Seat. The 1/4 turn disc is guided by a graphite packing and 304 SST gland. Primer coatings and linings ready for final paint come standard on all Carbon Steel Hi-DEX BFV's.

Leak-tight closure is made when the Cast 316 SST or ST37 Carbon Steel Disc is rotated into the PTFE body seat.

Av-Tek® is committed to offering the highest quality valves for industrial and water systems, not just the minimum standard. All castings are meticulously inspected for impurities. Castings undergo dual inspections, first when they arrive from the foundry, and again after the coating process has been completed.

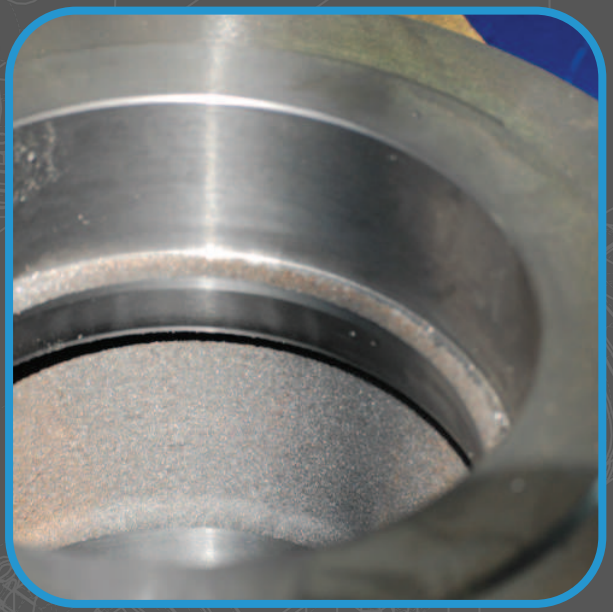
2205 Duplex Stainless Steel

The Av-Tek® Hi-DEX optional shaft material is 2205 Duplex stainless steel, to ensure the highest level of strength and corrosion resistance for critical service applications.

2205 Duplex is a Stainless Steel with nearly equal proportions of austenite and ferrite, containing about 40 - 50% ferrite in the annealed condition. 2205 has been a practical solution to chloride stress corrosion cracking problems experienced with 304 or 316 stainless steel.

The high chromium, molybdenum, and nitrogen contents provide corrosion resistance superior to 316 stainless steel in water applications.

The design strength of 2205 is significantly higher than ASTM 316 stainless steel, which allows for the use of smaller shaft diameters in larger valves, thus improving flow characteristics.



A 316L stainless steel machine welded seat ensures no leak through under the seat as you will often see when the seat is pressed in.

SPECIFICATION

AV-TEK
VALVES THAT REDEFINE INDUSTRY STANDARDS

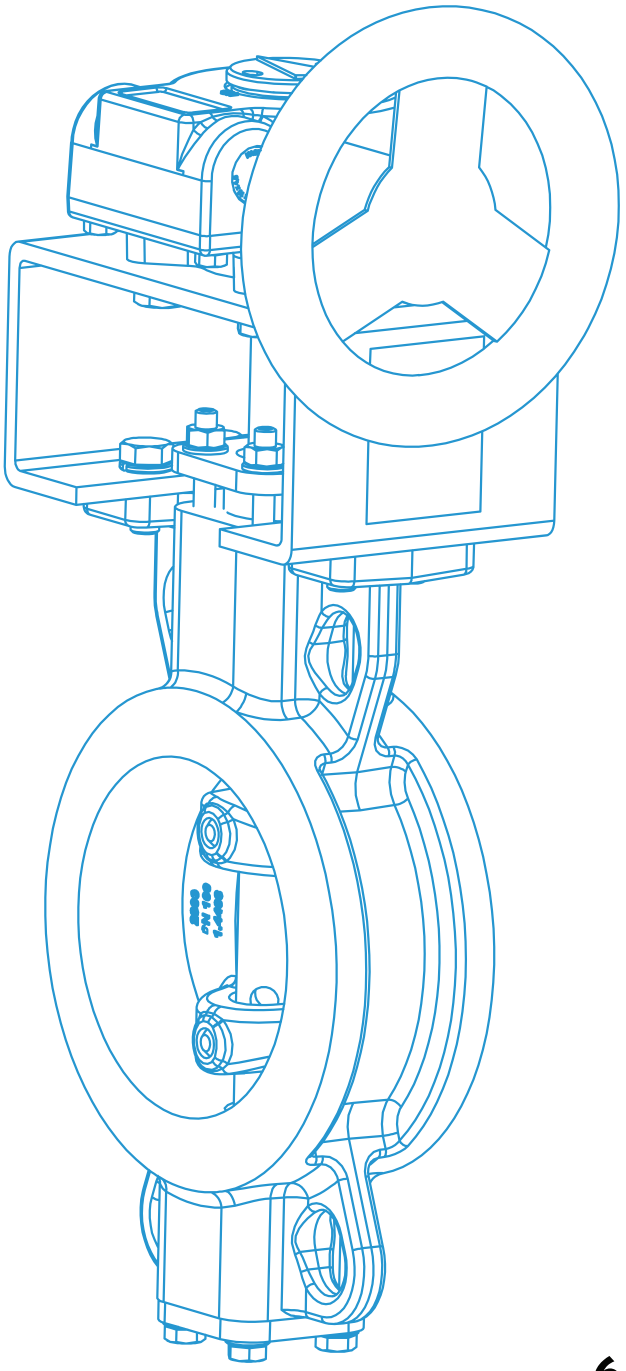
Hi-DEX Wafer-Style High Performance Double

Eccentric BFV

CERTIFIED ISO 9001:2008 COMPANY

Valves Body:

- Shall be one-piece Class 150 ANSI Class 125/150 wafer design.
- A graphite bushing and a self-adjusting stem seal shall be provided. No field adjustment shall require special tools to maintain optimum field performance.
- Valve body shall be Cast 316 Stainless Steel or A37 Carbon Steel.



Disc:

- Disc edge and hub on metal discs shall be spherically machined for minimum torque and maximum sealing capability.
- Disc shall be Cast 316 Stainless Steel. with PTFE Seal and 316 SST mechanically retained retaining ring for ease of maintenance.

Stem:

- Stem material shall be 2205 Duplex Stainless Steel
- Shall be one-piece design
- Disc to stem connection shall be permanently affixed Stainless steel pins.

Seat:

- Shall be single piece of PTFE mechanically retained to the Disc by a 316 SST Retaining Ring.
- The seat shall be field replaceable with a common tool set.

Testing:

- Valve shall be tested to 110% of the rated pressure.

Pressure Ratings:

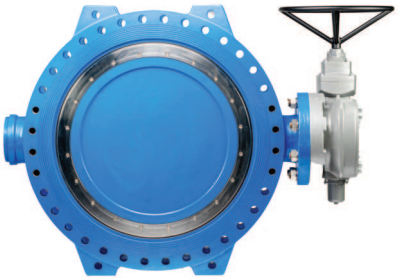
- Valve shall have a minimum cold working pressure rating of 250 PSI and 437°F Temperature rating.

Valve Type:

- Manufactuer shall be ISO 900:2015 Accredited and Certified.
- Manufacturer shall have minimum 5 years experience in manufacturing double eccentric butterfly valves.
- Av-Tek™Hi-DEX Series 2320 Wafer; or approved equal.

AV-TEK®

VALVES THAT REDEFINE INDUSTRY STANDARDS



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 superior design and quality. Exceeding the requirements of AWAA C504, this valve simply just works, even years down the road, 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® SDX, Sliding Disk Check Valve, is a globe style check valveand is truely leak tight due to its mechanically retained, resilient seat. Great for pump stations and distribution.

The Av-Tek® Model 4900 Ball Check Valve has a 100% opening port, there is virtually no head loss when the valve is fully open. Ball Check Valves are a resilient seatedcheck valve used in wastewater lift stations. Different weighted balls allow for this to be adjusted to your application.

The Hydrant Air Eshaust or HAX, is a patent pending device that allows you to make your system more efficient by removing the air out of your lines, and easily checking line pressure through any fire hydrant!

info@AvTekValves.com
www.AvTekValves.com

775W, 1000N, Suite 150
Logan, Utah 84321, USA
Phone: (385) 325-2504