

Water Technology Resources

9201 E Bloomington Freeway Suite Z

Bloomington, MN 55420

9/20/17

Phone: 952-641-9004 Fax: 952-885-9173

Bid Specifications Jefferson Parish, LA

Bid # 50-00121034

Rubber Flapper Check Valves (45°)

Specification Check List

	<u>Yes</u>	<u>No</u>
<u>1.0 General</u>		
A. One (1) WTR 24" – Rubber Flapper Check Valve – Model CVFD45-24 – 24" ID x 48" Flange Face to Face – 48"	Yes	
B. Delivery – within (6) weeks as specified		
<u>1.1 Quality Assurance</u>		
Descriptive literature is included with our bid	Yes	
<u>2.0 Product</u>		
A. 250 PSI Pressure Rating – Flanged Class 125/250 End Connections Full Waterway Design 45° Valve Seat Angle	Yes	
B. Removable Cover to allow removal of Disc without removing Valve from Pipeline. Cover is dome shaped and includes a plugged opening to permit installation of Disc Position Indicator	Yes	
C. The Flexible Disc shall be one-piece precision molded with steel and nylon reinforcement and an integral O Ring style seat to obtain drip tight seating at low pressure.	Yes	
The Flexible shall have been independently tested to a minimum of one million cycles with no signs of failure and drop tight seating	Yes	
D. Valves shall be provided with a Stainless-Steel Spring Assist to ensure quick closure of the Disc. The Disc shall be field replaceable without removing the Valve from the line or the need for special tools	Yes	

<u>2.1 Materials of Construction</u>		
A. Valve Body and Cover – Ductile Iron ASTM A536 Grade 65-45-12	Yes	
B. The Flexible Disc shall be made from Buna N (NBR) Rubber	Yes	
C. The Spring Assist shall be 316 Stainless-Steel	Yes	
D. The Valve Body and Cover shall have a Factory Coating, inside and outside, with a 12-16 Mil Thickness of Fusion Bonded Epoxy (FBE) – NSF61 Approved and Certified for contact with Drinking Water	Yes	

The WTR 45° Flex Flapper Disc Valves are offered in complete accordance with the specifications. No exceptions are needed and none are taken.

We respectfully call to your attention we (WTR) have furnished this same style Check Valve – to Jefferson Parish – in the past

2014 – (3) 12” and (1) 14”

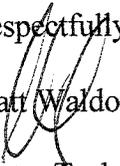
2015 – (3) 18” and (2) 24”

Descriptive data is included with our bid.

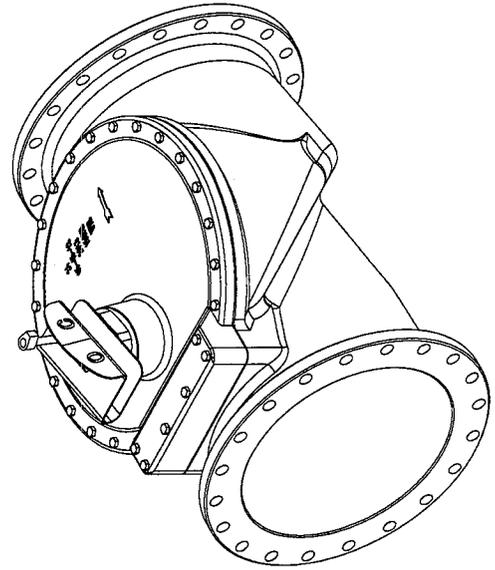
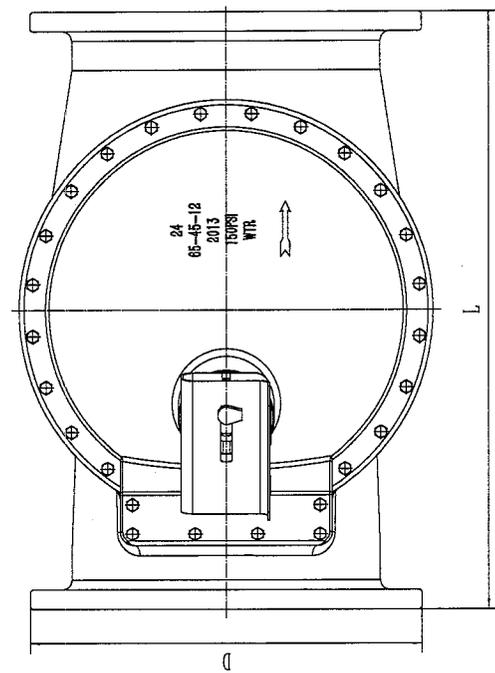
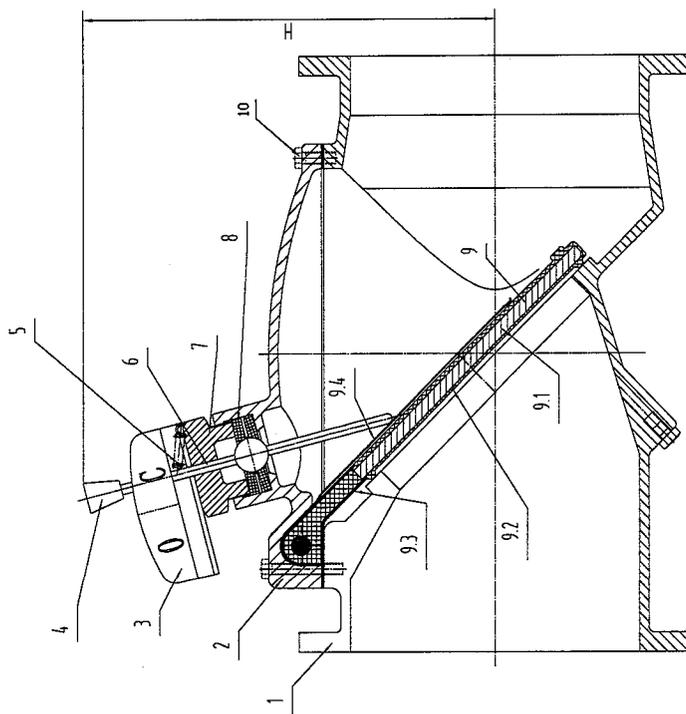
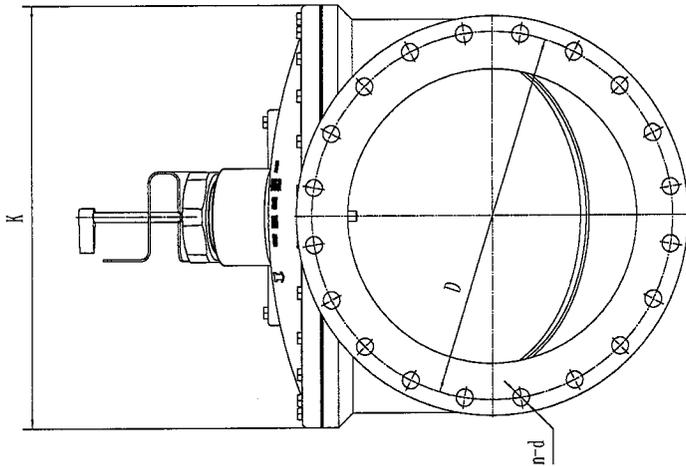
Thank you for your consideration.

We would greatly appreciate receiving this Contract Award.

Respectfully submitted,


Matt Waldor

Water Technology Resources



Size	L	H	K	D	D _h	n-d
12"	27.5"	17.2"	24.6"	19"	17"	12-1"
14"	31"	18.9"	24.9"	21"	18 3/4"	12-1 1/8"
16"	36"	19.3"	25.4"	23 1/2"	21 1/2"	16-1 1/8"
18"	40"	20.4"	29.2"	25"	22 3/4"	16-1 1/4"
20"	40"	21.7"	31.7"	27 1/2"	25"	20-1 1/4"
24"	48"	24.6"	36.4"	32"	29 1/2"	20-1 3/8"
30"	56"	27.7"	43.7"	38 3/4"	36"	28-1 3/8"
36"	63"	32.4"	52.6"	46"	42 3/4"	32-1 3/8"
42"	70"	39.6"	60.2"	53"	49 1/2"	36-1 3/8"
48"	76"	43.5"	67.2"	59 1/2"	56"	44-1 3/8"

Dimensions in inches

1. Flange conforms to ANSI B16.1 Class 125/150
2. Work pressure: 150/250 PSI
3. Suitable medium: water and neutral liquid
4. Working temperature: EPDM ≤ 120°C
5. Full waterway flow area

10	Bolt	SS304
9.4	Spring	SS316
9.3	Rubber Hinge	NBR+strength nylon
9.2	Rubber coated	NBR
9.1	Disc core	Carbon Alloy Steel
9	Disc	Carbon Alloy Steel
8	Sealing rings	PTFE
7	Gland	Brass
6	Stem of Indicator	SS304
5	Spring	SS 17-4PH
4	Disc Indicator (opt.)	SS
3	Panel	SS304
2	Bonnet	DI 65-45-12/ASTM A536
1	Body	DI 65-45-12/ASTM A536
NO	Part's name	Material
4.5" Flex Disc Check Valve Size 12" to 48"		
APPROVED		
CHECKED		
DRAWN		
DESIGNED		
SIGNATURE		
	SCALE	UNIT
		inch
		Water Technology Resources
		REV02
		Aug12015

WATER TECHNOLOGY RESOURCES – WTR VALVES

January, 2014

45° Flexible Disc Check Valves

AWWA C-508

Flex Disc Check Valves are designed for tough pumping applications where performance, reliability, and minimal maintenance are of utmost importance. This design has particularly good performance in applications having high discharge pressures in which reverse flows can cause excessive surging and severe slamming of the Disc resulting in water hammer.

The Valve is designed with a 45° angle valve seat and a short disc stroke of 35° to achieve rapid closure, and positive seating at high or low pressures. This reduced closing time results in minimizing the impact of flow reversal and resultant slamming and water hammer.

The Valve design provides positive, tight seating and is provided with a smooth, contoured, streamline design providing 100% unrestricted full flow with minimal head loss, while allowing a clear passageway for large size solids.

The 45° Valve seat angle design provides full flow capability equal to the nominal Valve inlet/outlet size. A 4" Valve is capable of passing a 3" diameter sphere.

The Valve disc is one piece, constructed of ductile iron, fully encapsulated in an elastomer rubber and provided with a strong nylon reinforcement.

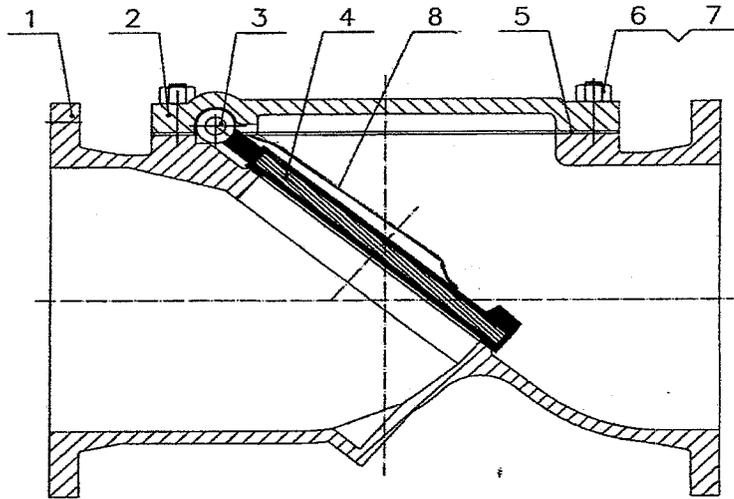
The Flex Disc Check Valve has advantages over conventional Swing Checks which have a 90° stroke and which are typically fitted with an outside weight and lever or spring mechanism to assist in closing the Disc. However, the 90° design involves increased head loss, extra maintenance, and reduced service life. The closing action pulls the disc down into the flow path to close off the flow and in the process the disc tends to create turbulence causing it to oscillate in the flow, subjecting the bearings, shaft and shaft seal to additional stress and strain.

The Swing Flex Valve design reduces the impact of reverse flow by achieving a rapid close of approximately one half the time of the 90° design. Quick closing action is assisted by an optional Stainless Steel Spring Assist.

Options include: Backflow Actuator, Stainless Steel Spring Assist, Valve Disc Position Indicator, Synthetic Liners, Different Alloy Materials of Construction, and Limit Switch for remote signal.

Swing Flex Valves are designed, manufactured and tested in accordance with AWWA C-508. Standards dimensions and face to face lay lengths to match AWWA Full Flow Check Valve Standards, i.e. 6" = 14" FF

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Materials of Construction

Part	Description	Material
1	Body	Ductile Iron
2	Bonnet	Ductile Iron
3	Stem	Stainless Steel
4	Disc	Carbon Steel Encapsulated with EPDM or Neoprene
5	Gasket	NBR
6	Bolt	Stainless Steel
7	Nut	Stainless Steel
8	Disc Close - Spring Assist	Stainless Steel

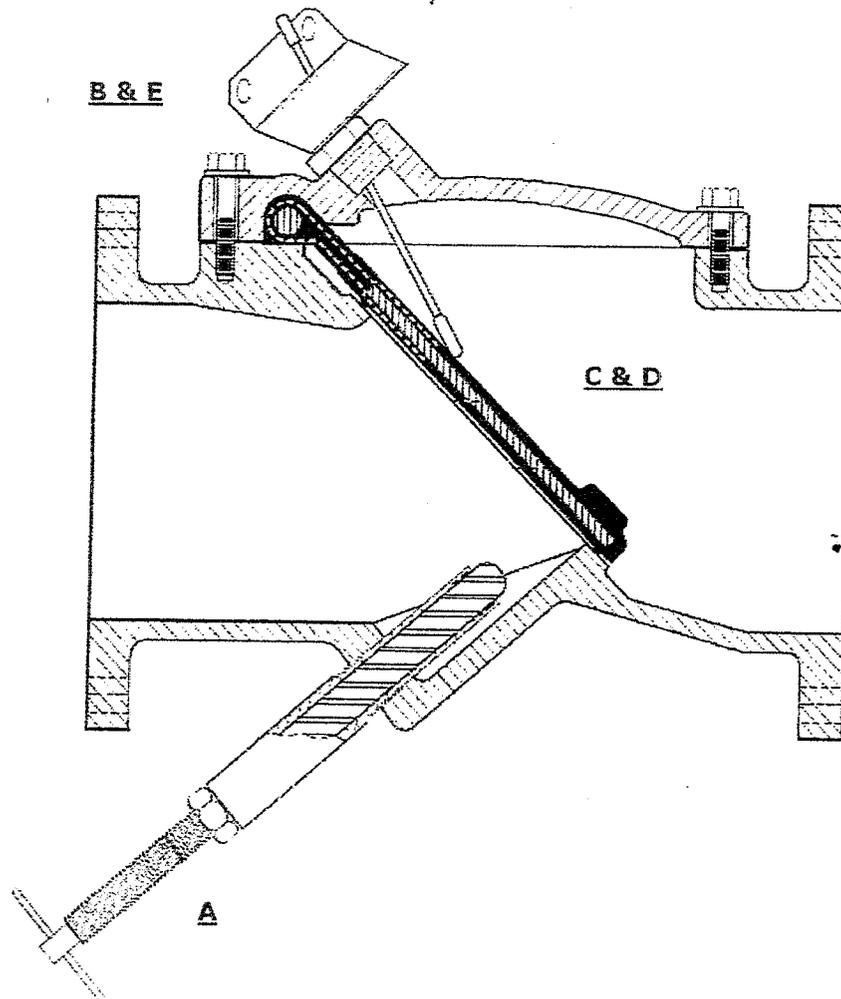
Table 2. Valve Construction Materials

Maintenance

Due to the simplicity of the 45° Flex Disc Check Valve design, no scheduled maintenance or lubrication is necessary. The only moving part of the valve is the rubber encapsulated disc. The 45° Flex Disc Check Valve can be inspected internally and serviced without removal from the line following the steps for disassembly.

AWWA C508

45° SWING FLEX RUBBER FLAPPER CHECK VALVES



OPTIONAL ITEMS AVAILABLE

- A) Backflow Actuator – Positive Backflush
- B) Valve Disc Position Indicator
- C) Synthetic Liners
- D) Various Materials of Constriction
- E) Limit Switch for Remote Signal

WATER TECHNOLOGY RESOURCES – WTR VALVES

January, 2014

Flexible Swing Disc Rubber Flapper Check Valve

Series 3100

Item	Component	Material	Specification
1	Plug	Malleable Iron	Commercial
2	Body	Ductile Iron	A536-65-45-12
3	Disc	DI+Elastomer coating	NBR / EPDM
4	Gasket	Elastomer	NBR / EPDM
5	Cover	Ductile Iron	A536-64-45-12
6	Bolts	Stainless Steel	316-SS
7	Bolts	Stainless Steel	316-SS
8	Spring Assist	Stainless Steel	316-SS

