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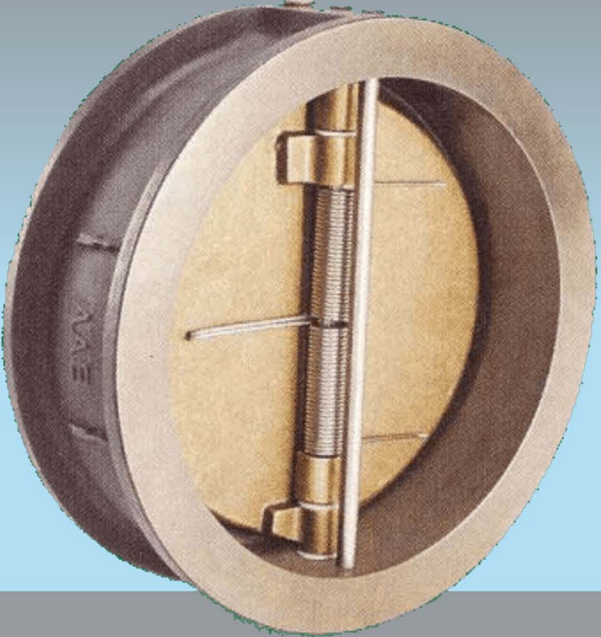
WAFER CHECK VALVES
SERIES "LSDDB"



Manufacturer of Pumps, Tanks, Heat Exchangers & Accessories
for HVAC Market After-Sales Parts and Services

WAFER CHECK VALVES SERIES "LSDDB"

FLO FAB INC
LAKE WORTH,
FLORIDA, USA

www.flofab.com

WAFER CHECK Valves
Series "LSDDB"

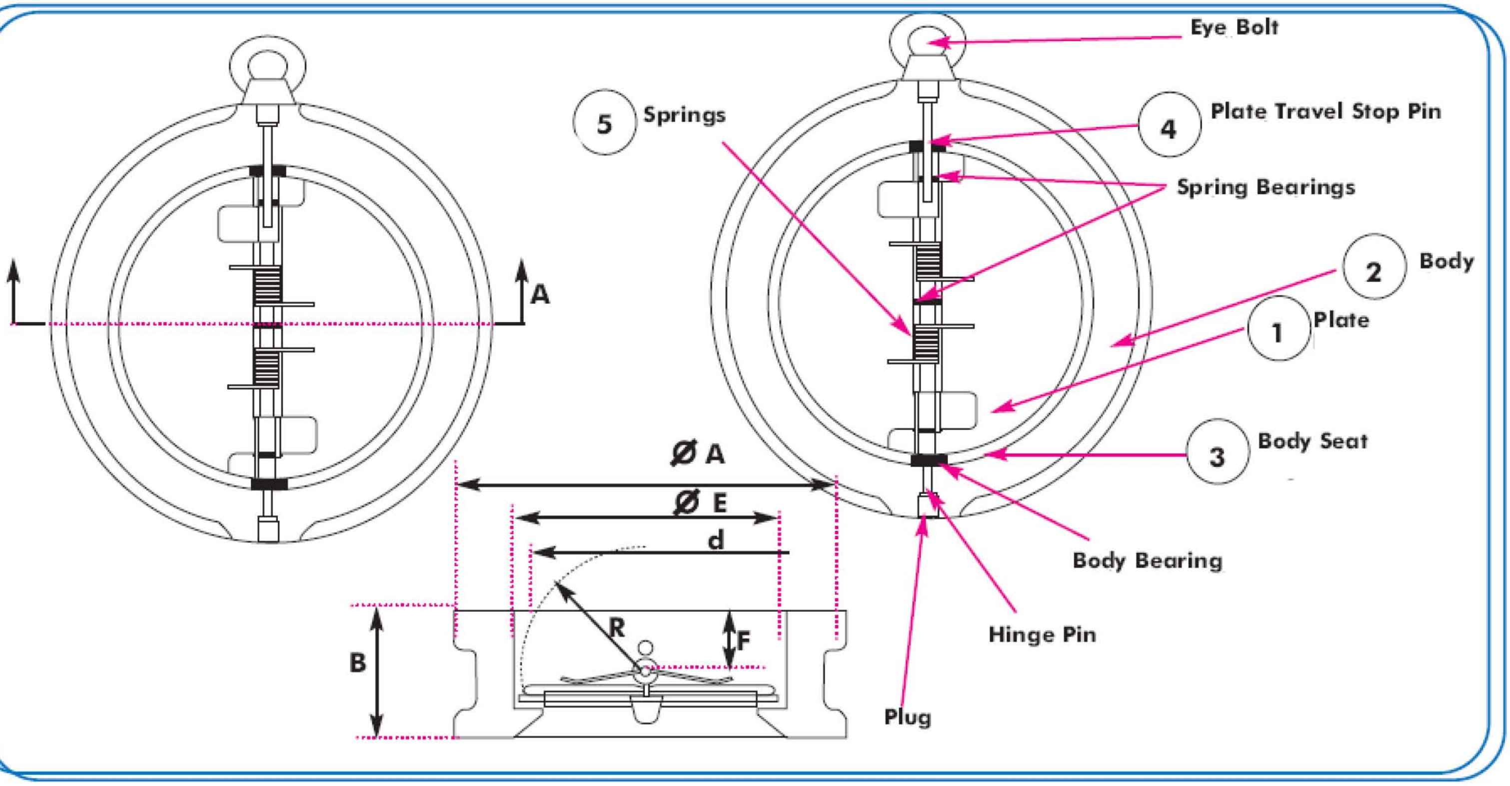
Wafer Check Valves Series "LSDDB"

SUBMITTAL DATA SHEET
ISSUE DATE: MAY 2008
REVISION DATE: MAY 2008

Features

Type:	Wafer
Face to Face:	DIN 3202, ISO 5752
Flange:	ANSI 150 lbs.
Application:	HVAC, Water Supply and Sewage, Chemical and/or Petrochemical Processing, Power and Utilities, Paper and Pulp, Ship building
Maximum Working Pressure	From 2" (50 mm) to 18" (450 mm) 200 PSI PN16 (1376 kPa) @ 225°F (107°C) From 20" (500 mm) to 32" (800mm) 150 PSI PN10 (1034 kPa) @ 225oF (107°C)

Sizes Dimensions		B	E	F	R	d	A	Weight Poids
in po	DN						ANSI 150	
2	50	43	65	19	28.8	43.3	102	1.5
2½	65	46	80	20	36.1	60.2	121	2.4
3	80	64	94	28	43.4	66.4	133	3.6
4	100	64	117	27	52.8	90.8	171	5.7
5	125	70	145	30	65.7	116.9	193	7.3
6	150	76	170	31	78.6	144.6	219	9.0
8	200	89	224	33	104.4	198.2	276	17
10	250	114	265	50	127	233.7	336	26
12	300	114	310	43	148.3	283.9	406	42
14	350	127	360	45	172.4	332.9	448	55
16	400	140	410	52	197.4	381	511	75
18	450	152	450	58	217.8	419.9	546	107
20	500	152	505	58	241	467.8	603	111
24	600	178	624	73	295.4	572.6	714	172
28	700	229	720	98	354	680	828	219
32	800	241	825	100	398	770.5	936	316



Series "LSDDB" Construction

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Construction

1	**Dual Plates:**	Dual plates provide full seal for bubble-tight shut off
2	**Body:**	Wafer type with plain face, small and light design, easy to install between different standard pipe flanges.
3	**Body Seat:**	Body seat has choice for several different elastometer compounds lining on the body to meet different application demands.
4	**Plate Travel Stop Pin:**	Made of stainless steel.
5	**Dual Corrosion resistant Springs:**	Activate the check valve plates and distribute the load force evenly across each plate, ensuring quick sure response.

Parts	Standard Material	Other Optional Material
Body	Cast Iron	Ductil Iron
Body Seat	EPDM	NBR, Viton, Neoprene
Dual Plates	Bronze	CF 8, CF 8M
Plate Travel Stop Pin	Stainless Steel	------------
Springs	Stainless Steel	-------------
Body Bearing	PTFE	-------------
Spring Bearing	PTFE	-------------
Eye Bolt	Carbon steel	-------------
Plug	Carbon Steel	-------------
Hinge Pin	Stainless Steel	-------------

Silent Check Valve Engineering Data

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Wafer Silent Check Valve Pressure Drop – Liquids (Sizes 2” - 16”)

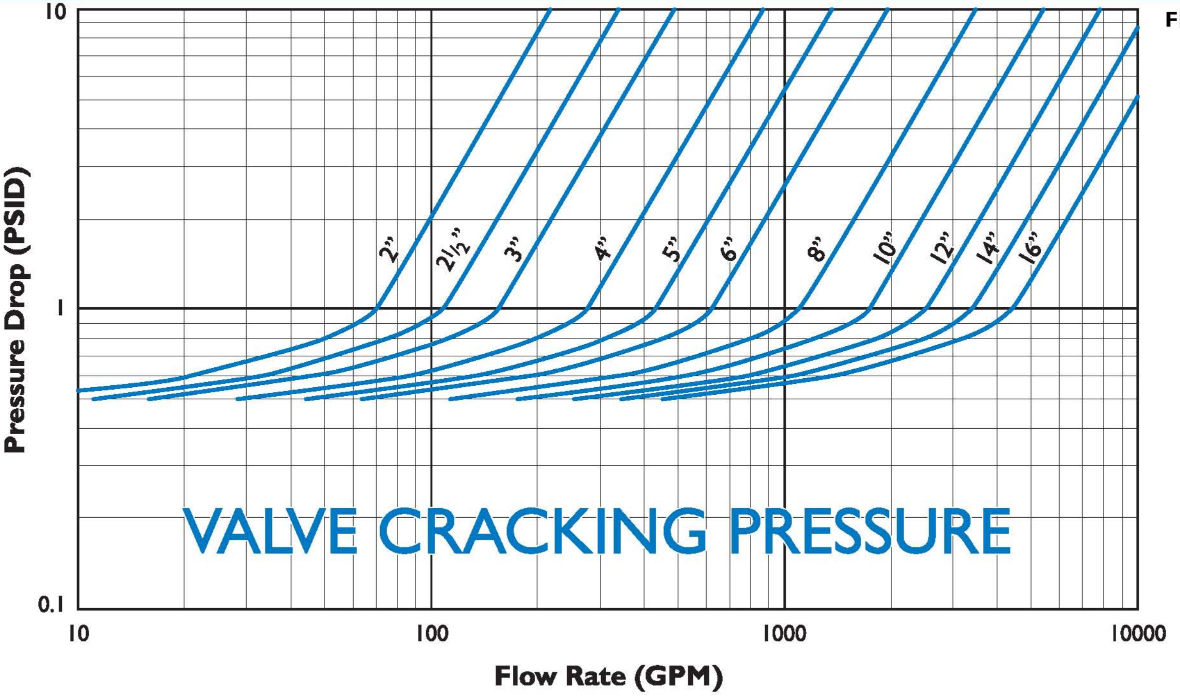


FIGURE 13

Notes:

1. Pressure drop curves are based on water flow.
2. Valve cracking pressure is equal to or less then 0.5 psid.
3. Valve cracking pressure increases to between 0.75 and 1.25 psid when installed vertically with flow upwards.

Method of Calculating Flow

Liquid Flow

$$C_V = Q\sqrt{\frac{G}{\Delta P}} \qquad Q = C_V\sqrt{\frac{\Delta P}{G}} \qquad \Delta P = G\left(\frac{Q}{C_V}\right)^2$$

Gas Flow

$$C_V = \frac{Q}{963}\sqrt{\frac{GT}{\Delta P\,(P_1 + P_2)}} \qquad Q = 963C_V\sqrt{\frac{\Delta P\,(P_1 + P_2)}{GT}}$$

Saturated Vapour

$$C_V = \frac{W}{K}\sqrt{\frac{1}{\Delta P\,(P_1 + P_2)}} \qquad W = C_V K\sqrt{\Delta P\,(P_1 + P_2)}$$

Superheated Vapour

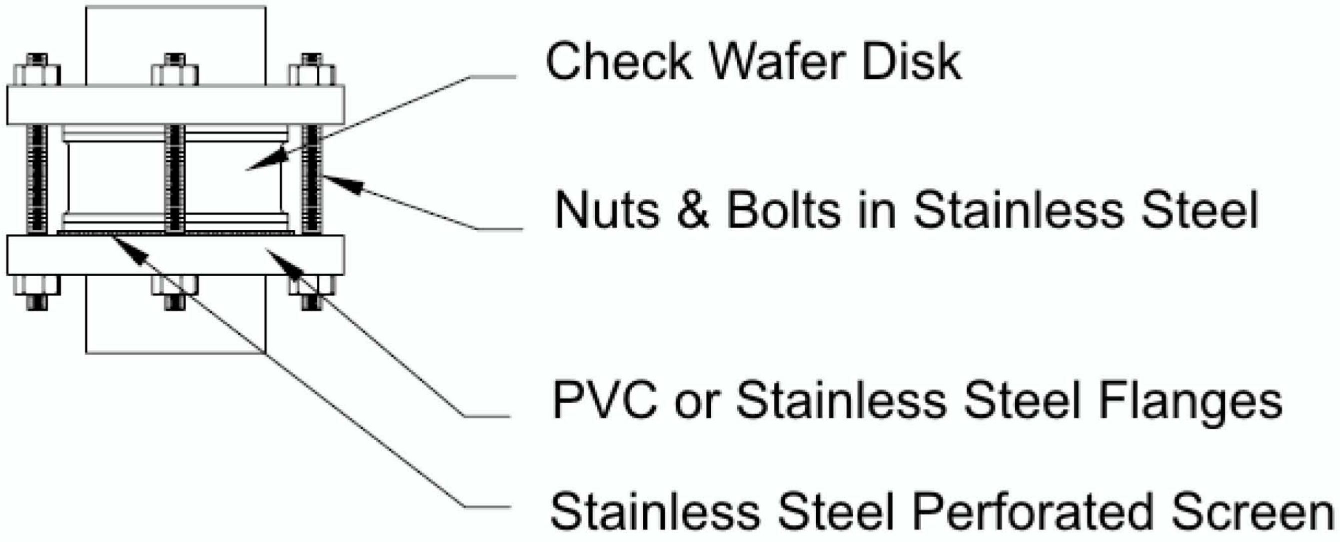
$$C_V = \frac{W(1+0.0007T_{SH})}{K}\sqrt{\frac{1}{\Delta P\,(P_1 + P_2)}} \qquad C_V = \frac{C_V K}{(1+0.0007T_{SH})}\sqrt{\Delta P\,(P_1 + P_2)}$$

Variables

Cv = Valve Coefficient
ΔP = $(P_1 - P_2)$ Pressure Drop
P_1 = Inlet Pressure (PSIA)
P_2 = Outlet Pressure (PSIA)
G = Specific Gravity
Water = 1.0 at 60°F and 1 ATM
Air = 1.0 at 60°F and 1 ATM

Q = Flow
Liquid = USGPM
Gas = SCFH
T = Absolute Temperature (°F + 460)
T_{SH} = Superheat (°F)
Total Temperature Minus Saturation Temperature
W = lbs. Per Hour (LB/H)
K = Constant For Vapours

FOOT VALVE ARRANGEMENT



TYPICAL DRAWING, FINALE DIMENSIONS AND DESIGN MAY VARY

TITLE
FLO FAB
FOOT VALVE

FLO FAB
AQUA PROFAB
860 BOULEVARD INDUSTRIEL
BOIS-DES-FILION, QC
J6Z 4V7, (450) 621-2995

ENGINEER			
CUSTOMER			
PART LIST N°		DATE	2007/11/20
DRAWN BY M.LYMBURNER	SCALE N / A	DRAWING N° FOOT VALVE	REV 0

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