

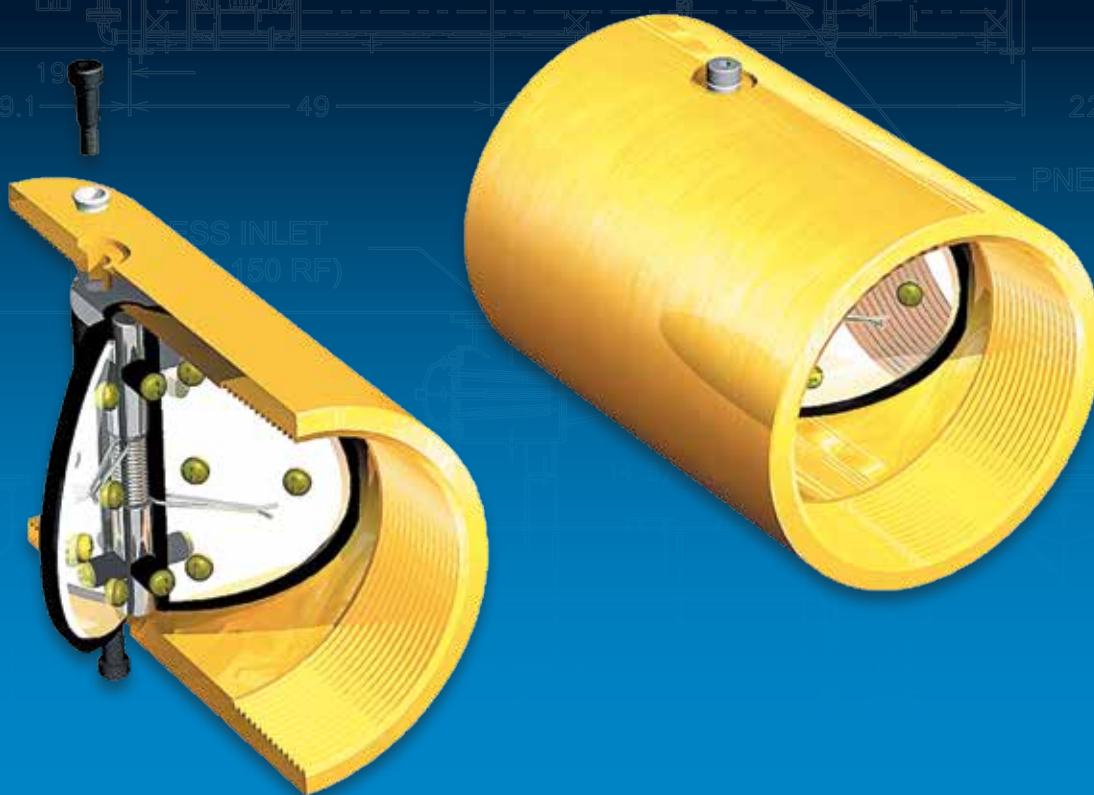
PROCESS DISCHARGE
(3" FL- CL150 RF)

COOLING WATER
OUT (2" NPT) IN

BIODIESEL VACUUM SEAL
WATER COOLER
(E-B1-2403)



ISO 9001:2008



Deep Well Check Valves

Full Port — Lowest Pressure Drop

Maximizing the Flow

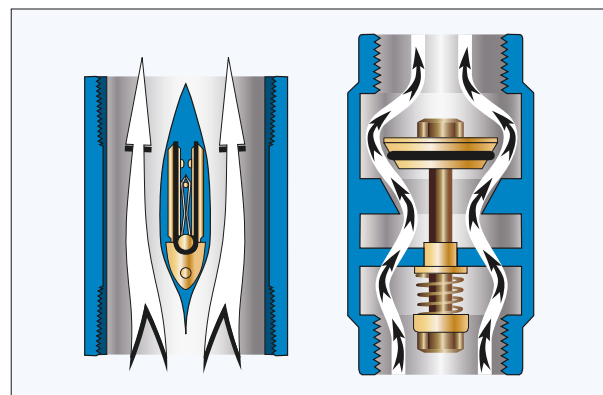
Full Port • Lowest Pressure Drop • Quick Delivery

Full Port, Lowest Pressure Drop

Full Port Check Valves provide more flow and lower pressure drops than conventional check valves. Our elastomer hinge check valve design takes performance to an entirely new level by eliminating the restrictive valve seat and substantially increasing the valve's open area and flow coefficient (Cv). The resulting flow is more laminar, with lower pressure loss and reduced turbulence.

Valve Testing

Every elastomer hinge check valve we manufacture is assembled, inspected and tested in our plant in Maryland -USA. Our commitment to quality assures you the performance and reliability you demand and expect. Material test reports and test certificates are available on request.



US Valve Design

*Open flow path, low ΔP ,
more laminar flow*

Conventional Design

*Restricted flow path, high ΔP ,
increased turbulence*

Features & Benefits

Full Port Check Valves offer some impressive advantages over other types of check valves.

• Low Pressure Drop (High Cv)

Our elastomer hinge check valves have larger open area than other designs, thus providing higher capacity and lower pressure drops than swing and lift check, or even traditional dual plate wafer designs.

• ARRA Compliant

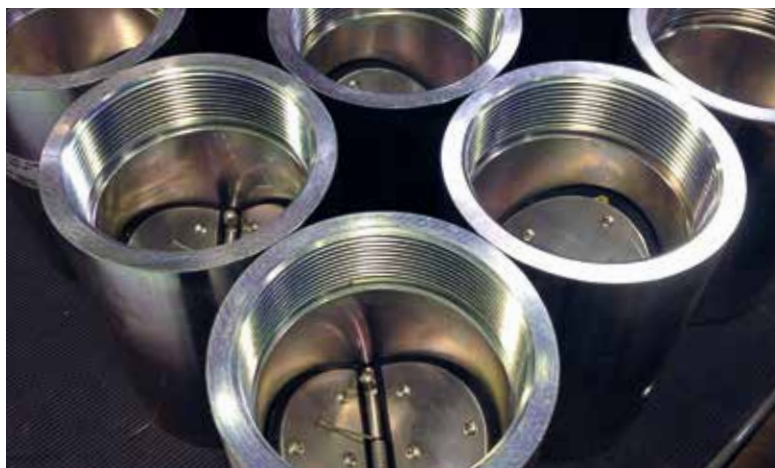
USA content, substantial transformation and local assembly makes our Full Port Check Valves ARRA compliant for government funded projects.

• Alleviates Water Hammer

When spring activated, our discs are designed to close 33% faster than standard dual disc check valves due to the fact that they are closed at a 30 degree angle. This makes for an effective non-slam design when installed in liquid applications.

ISO9001:2008 Certified

US Valve is **ISO 9001:2008 Certified**. We always keep our certification current. We take our commitment to product quality and documentation seriously. You can rest comfortably knowing that we provide only the best to our customers.



US Valve Deep Well Check Valves are designed to support up to 1000 feet of pipe plus the weight of your typical well pump.

US Valve LLC – The Right Choice

US Valve is a New Jersey Corporation with headquarters in New Jersey and manufacturing locations in Maryland-USA, Europe and Asia. Our primary focus is check valves and our roots are grounded in low pressure drop designs. Our application engineers can assist you in making the right choice of valve for your application.

Low Price, Delivery & Service

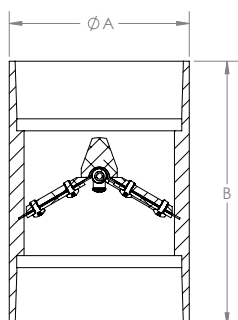
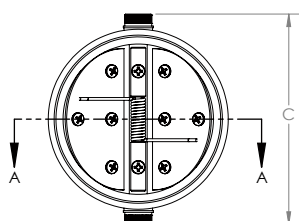
We want to be your supplier of Full Port, Low Pressure Drop Check Valves, so we offer *Competitive Pricing, Fast Delivery* and *Outstanding Service*. We maintain an extensive inventory of valves, parts and components in a wide variety of materials so we can respond to your needs quickly. Valves are typically assembled and tested within 1 to 2 days after receipt of an order.

We can say with confidence that our customer service is the best in our industry. Give us a chance to prove it.

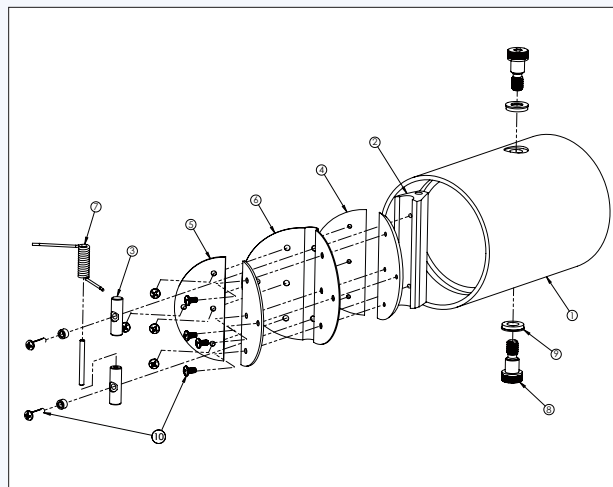
Valve Dimensions

Size	A	B	C
1	1.88	4.50	2.00
1 ¼	2.25	4.50	2.30
1 ½	2.50	5.00	2.70
2	3.00	5.00	3.10
2 ½	3.40	5.50	3.50
3	4.00	6.00	4.10
4	5.25	7.00	5.25
5	6.25	8.00	6.25
6	7.50	9.00	7.50
8	9.63	11.00	9.63

All dimensions in inches. Consult Factory for larger sizes.



Exploded View



Part No.	Part Description
1	Body (FNPT Shown)
2	Wing Support
3	Spring Pin
4	Disc
5	Back-up Disc
6	Elastomer Seal
7	Spring
8	WS/LM Fastener
9	Sealing Washer
10	Internal Fasteners

Standard Models and Materials

Model	Body	Discs	Wing Support	MAWP*
17-1-4SP	Carbon Steel ASTM A106 Gr.B	316 Stainless Steel ASTM A240	316 Stainless Steel ASTM A276	450 PSI
17-4-4SP	Stainless Steel ASTM A312 Gr.316	316 Stainless Steel ASTM A240	316 Stainless Steel ASTM A276	450 PSI

*MAWP — Maximum Allowable Working Pressure at 60°F

ELASTOMER SEAL		
Code	Material	Temp. Range
B	Buna N	-60°F to 225°F
E	EPDM	-40°F to 300°F
V	Viton	-20°F to 450°F
S	Silicon	-100°F to 500°F
T	Teflon	-20°F to 450°F

SPRING OPTIONS	
Code	Nomenclature
SP	316 SS Standard Torque
SL	316 SS Low Torque
SH	316 SS Heavy Torque

All fasteners and spring pins are 316 stainless steel. BUNA-N is standard seal in all valves. Optional seal materials: EPDM, VITON, SILICON and TEFLON. 316 stainless steel springs are standard for all models and are also available in low or heavy torque. Consult factory for any other special material requirements.

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OUT (2" NPT) IN

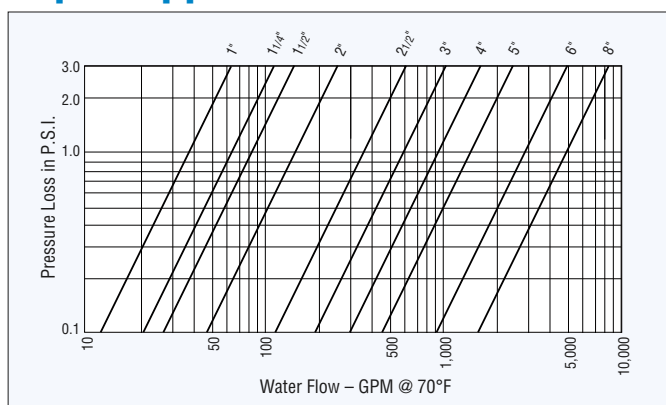
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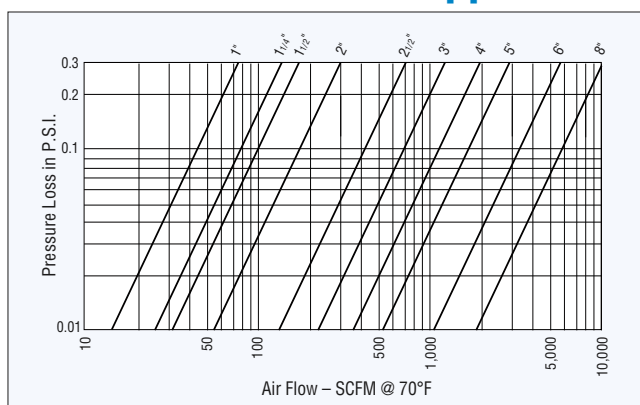
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Pressure Losses

Liquid Applications



Gas Applications



Pressure Losses for Gas Applications are based on valves without optional springs.

US Valve Flow Coefficients (Cv) vs. Conventional Designs

Size	US Valve Full Port Dual Disc	Conventional Swing Check Design	Conventional Lift Check Valve
1	37	22	17
1 1/4	65	39	—
1 1/2	83	55	35
2	145	65	63
2 1/2	350	90	100
3	590	135	148
4	920	215	260
5	1400	680	415
6	2800	1270	620
8	4900	2350	1030

Check Valve Flow Coefficient Comparisons (Cv) — GPM of water @ 60°F and 1 PSI Pressure Drop

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Maximizing the Flow