

The GC and WC Series Silent Check Valves

**Globe and Wafer Check Valves prevent flow reversal
Fully automatic • Spring-loaded • Double-guided**



Crispin
Since 1905

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GC SERIES

Globe Style Silent Check Valve

Globe Style Silent Check Valve

Service Applications

Municipal Water Systems



Industrial Class HVAC-Liquid Service



Industrial Piping Systems



Irrigation Systems

Pressure/ Temperature Rating

Maximum Temperature Rating:
150°F (65°C)



Pressure Class:
ANSI B16.42
B.S. 4504 DIN PN 10
PN 16 & PN 25

Sizes

Available in sizes
2 1/2" to 36"

NOTE: Crispin Globe Style Check Valves are intended for liquid service only. Please consult factory when applications other than liquid are required.

Globe Style Check Valves are designed to close before the pump stops completely. This prevents flow reversal, which eliminates water hammer and system surges associated with valve closure. Fully automatic, spring-loaded and double-guided, the valve opens as the pump starts, and closes just prior to flow reversal upon pump outage. With a standard ductile iron body, stainless steel seat, disc and bushing, and a stainless steel spring, all internal parts of the Globe Style Check Valve are field replaceable for ease of maintenance. In addition, the Globe Style Check Valve is designed so that a butterfly valve may be used downstream without the use of a space flange or spool piece. This feature is available in sizes through 10".

Resilient seats are highly recommended for potable water or drip tight applications.

Standard and Optional Materials

NAME	MATERIAL
BODY	DUCTILE IRON ASTM A536 GR65-45-12
DISC	STAINLESS STEEL ASTM A743, CF8M, T316
SEAT RING*	STAINLESS STEEL ASTM A743 CF8M, T316
*BUNA-N or VITON resilient seating available.	
SPRING	S/S ASTM T316
BUSHING	SS/S ASTM A276, T316
SCREWS	STAINLESS STEEL T316

Consult factory for optional construction materials.

Pressure Testing

	CLASS 150	CLASS 300
2-1/2" (65mm) - 12" (300mm)		
NON SHOCK GAGE PRESSURE	250 psi (17.0 BAR)	500 psi (34.0 BAR)
SHELL TEST PRESSURE	325 psi (25.5 BAR)	938 psi (63.8 BAR)
SEAT TEST PRESSURE	375 psi (25.5 BAR)	500 psi (34.0 BAR)
14" (350mm) - 36" (400mm)		
NON SHOCK GAGE PRESSURE	250 psi (17.0 BAR)	500 psi (34.0 BAR)
SHELL TEST PRESSURE	325 psi (25.5 BAR)	938 psi (63.8 BAR)
SEAT TEST PRESSURE	375 psi (25.5 BAR)	500 psi (34.0 BAR)

Globe Style Silent Check Valve



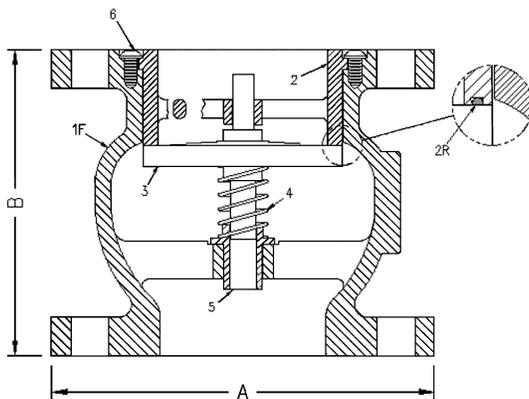
Globe Style Silent Check Valve

* Please contact the factory for info on additional sizes up to 36."

Valve Dimensions

MODEL		ANSI CLASS FLANGE	VALVE SIZE in. (mm)	FACE TO FACE (B) in. (mm)	MAX. DIA. (A) in. (mm)	WEIGHT lb. (kg.)	# OF BOLTS	BOLT SIZE in. (mm)
STD TRIM SEAT	STD TRIM RESILIENT SEAT							
GC31	GC31.R	150	3 (80)	6 (152.5)	7 1/2 (190.5)	30 (14)	4	5/8 (16) x 3 (76)
GC33	GC32.R	300	3 (80)	6 (152.5)	8 1/4 (209.5)	38 (17)	8	3/4 (20) x 3 1/2 (89)
GC41	GC41.R	150	4 (100)	7 1/4 (184)	9 (229)	45 (21)	8	5/8 (16) x 3 (76)
GC43	GC42.R	300	4 (100)	7 1/4 (184)	10 (254)	61 (28)	8	3/4 (20) x 3 3/4 (95)
GC61	GC61.R	150	6 (150)	9 3/4 (248)	11 (279.5)	80 (37)	8	3/4 (20) x 3 1/4 (82.5)
GC63	GC62.R	300	6 (150)	9 3/4 (248)	12 1/2 (317.5)	110 (50)	12	3/4 (20) x 4 (101.5)
GC81	GC81.R	150	8 (200)	12 1/2 (317.5)	13 1/2 (343)	139 (64)	8	3/4 (20) x 3 1/2 (89)
GC83	GC82.R	300	8 (200)	12 1/2 (317.5)	15 (381)	181 (83)	12	7/8 (24) x 4 1/2 (114)
GC101	GC101.R	150	10 (250)	15 1/2 (394)	16 (406.5)	234 (107)	12	7/8 (24) x 3 3/4 (95)
GC103	GC102.R	300	10 (250)	15 1/2 (394)	17 1/2 (444.5)	239 (109)	16	1 (27) x 5 1/4 (133.5)
GC121	GC121.R	150	12 (300)	14 1/4 (362)	19 (482.5)	335 (152)	12	7/8 (24) x 3 3/4 (95)
GC123	GC122.R	300	12 (300)	14 1/4 (362)	20 1/2 (521)	417 (192)	16	1 1/8 (28) x 5 1/2 (140)
GC141	GC141.R	150	14 (350)	15 3/4 (400)	21 (533.5)	380 (175)	12	1 (27) x 4 1/4 (105)
GC143	GC142.R	300	14 (350)	15 3/4 (400)	23 (561)	511 (230)	20	1 1/8 (28) x 6 (150)
GC161	GC161.R	150	16 (400)	17 5/8 (448)	23 1/2 (575)	501 (237)	16	1 (27) x 4 1/2 (110)
GC163	GC162.R	300	16 (400)	17 5/8 (448)	25 1/2 (625)	697 (316)	20	1 1/4 (31) x 6 1/4 (155)
GC181	GC181.R	150	18 (450)	22 (750)	29 (610)	529 (240)	16	1 1/8 (30) x 4 3/4 (115)
GC183	GC182.R	300	18 (450)	18 3/4 (460)	28 (685)	725 (329)	24	1 1/4 (31) x 6 1/2 (160)
GC 201	GC201.R	150	20 (490)	20 5/8 (503)	31 1/4 (763)	890 (405)	20	1 1/4 (31) x 5 (122)
GC 203	GC202.R	300	20 (490)	20 5/8 (503)	31 1/4 (763)	1150 (522)	24	1 1/4 (31) x 6 3/4 (165)
GC241	GC241.R	150	24 (586)	24 (586)	37 1/4 (1290)	1220 (554)	20	1 1/4 (31) x 5 1/2 (140)
GC243	GC242.R	300	24 (586)	24 (586)	37 1/4 (1290)	1650 (759)	24	1 1/2 (37) X 7 1/2 (183)

GC SERIES



Parts List

ITEM	DESCRIPTION	MATERIAL (standard)
1	Body	Ductile Iron
2*	Seat Ring	Stainless Steel
3	Disc	Stainless Steel
4	Spring	Stainless Steel
5	Bushing	Stainless Steel
6	Screws	Stainless Steel

* The inside diameter of the mating flange must overlap the valve seat in order to provide proper seat retention. The flange gasket must be sized to provide a seal between the internal diameter of the valve body and the outside diameter of the seat.

Consult factory for optional construction materials.
*Resilient seating of BUNA-N or VITON available.
Materials and Prices Subject to Change Without Notice.



GC SERIES

Globe Style Silent Check Valve

Globe Style Silent Check Valve

Flow Velocity

These valves have a maximum recommended flow velocity of 10 feet per second. In addition, flow curves are based on the flow of clean water at an ambient temperature.

Valve Replacement

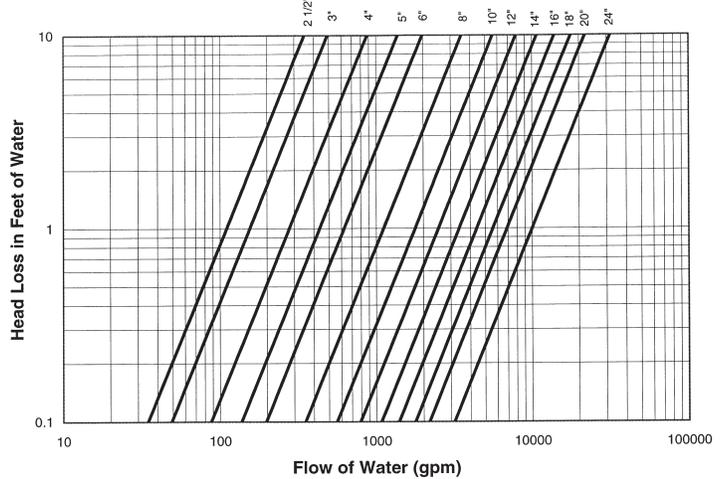
Existing swing check valves can easily be replaced with a Crispin Globe Style Check Valve. The replacement involves the addition of a spool piece to be bolted to the replacement valve. The entire assembly can be provided to conform to the existing valve's face-to-face dimension.

Line Placement

Preferred piping standards recommend placing check valves 5 to 10 pipe diameters from any turbulence producing devices (i.e. pumps, elbow, etc.). This installation recommendation should be followed to prevent increased valve wear or possible damage.

Head Loss Characteristics

Globe Style Check Valve Performance Curves



Special Maintenance Note:

The Globe Style Silent Check Valve should never be inspected by only removing the valve inlet flange piping. If this is done, seat damage to the valve or personal injury to the inspector may occur. If the valve must be serviced, it should be isolated and the line pressure relieved on both sides of the valve. For additional instructions, consult the Operation and Maintenance section of the Crispin Valve catalog.

These valves are intended for use on municipal water systems, or approved commercial and/or industrial applications only.

Order resilient seats for potable water or drip tight applications.

Additional Ordering Option:



The Globe Style Check Valve is designed so that a butterfly valve may be used downstream without the use of a space flange or spool piece.

Submittal Sheet for Crispin GC Series

3"–4" Globe Check Valve

Date: 2016

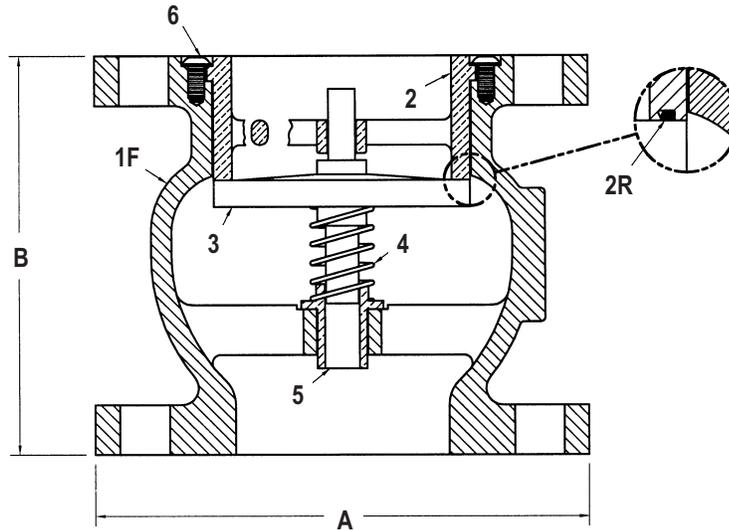


Specifications

The Silent Globe Check Valve(s) shall be fully automatic, spring loaded and double guided. The valve shall open as the pump starts, and close just prior to flow reversal upon pump outage.

The valve shall have a ductile iron body, stainless steel seat, disc and bushing, and stainless steel spring. All internal parts shall be field replacable for east of maintenance.

The valve shall be model _____ as manufactured by Crispin Valve, Berwick, PA.



Size Specifications

MODEL	VALVE SIZE	A	B	WEIGHT
GC31	3" 150# FLG	7.50	6.00	30
GC33	3" 300# FLG	8.25	6.00	38
GC41	4" 150# FLG	9.00	7.25	45
GC43	4" 300# FLG	10.00	7.25	61

* Parts are interchangeable and optional at customer's request
For resilient seat, add .R to Model Number.

Parts List for Globe Check Valve

ITEM	DESCRIPTION	MATERIAL	ASTM
1	BODY	DUCTILE IRON	A536
*2	SEAT	STAINLESS STEEL	T316
*2R	RESILIENT SEAT	STAINLESS STEEL/BUNA-N RUBBER	T316/D2000
3	DISC	STAINLESS STEEL	T316
4	SPRING	STAINLESS STEEL	A313
5	BUSHING	STAINLESS STEEL	T316
6	SCREW	STAINLESS STEEL	A193

SUBMITTAL SHEET FOR GC SERIES



Submittal Sheet for Crispin GC Series

6"-24" Globe Check Valve†

Date: 2016

SUBMITTAL SHEET FOR GC SERIES

Specifications

The Silent Globe Check Valve(s) shall be fully automatic, spring loaded and double guided. The valve shall open as the pump starts, and close just prior to flow reversal upon pump outage.

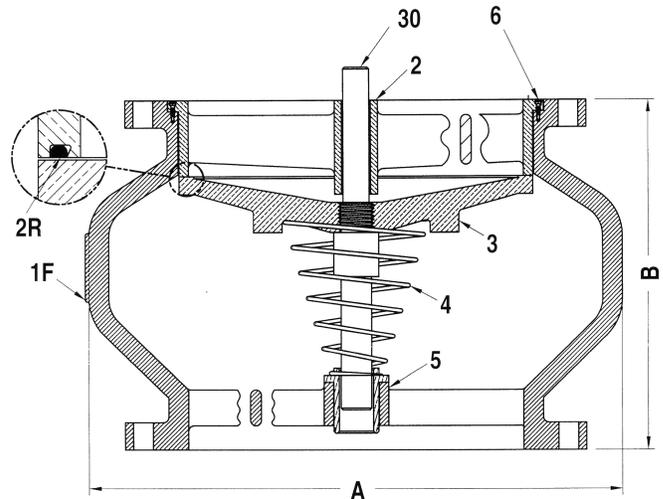
The valve shall have a ductile iron body, stainless steel seat, disc and bushing, and stainless steel spring. All internal parts shall be field replacable for east of maintenance.

The valve shall be model _____ as manufactured by Crispin Valve, Berwick, PA.

* Parts are interchangeable and optional at customer's request

For resilient seat, add .R to Model Number.

† For sizes 24" thru 36", please contact the factory for additional information.



Size Specifications

MODEL	VALVE SIZE	A	B	WEIGHT
GC61	6" 150# FLG	11.00	9.75	80
GC63	6" 300# FLG	12.50	9.75	110
GC81	8" 150# FLG	13.50	12.50	139
GC83	8" 300# FLG	15.00	12.50	181
GC101	10" 150# FLG	16.00	15.50	234
GC103	10" 300# FLG	17.50	15.50	314
GC121	12" 150# FLG	19.00	14.25	335
GC123	12" 300# FLG	20.50	14.25	417
GC141	14" 150# FLG	21.00	15.75	380
GC143	14" 300# FLG	23.00	15.75	511
GC161	16" 150# FLG	23.50	17.625	501
GC163	16" 300# FLG	25.50	17.625	529
GC181	18" 150# FLG	29.00	22.50	750
GC183	18" 300# FLG	28.00	18.75	725
GC201	20" 150# FLG	31.25	20.75	860
GC203	20" 300# FLG	31.25	20.75	1150
GC241	24" 150# FLG	37.25	24.00	1220
GC243	24" 300# FLG	37.25	24.00	1650

Parts List for Globe Check Valve

ITEM	DESCRIPTION	MATERIAL	ASTM
1F	BODY	DUCTILE IRON	A536
*2	SEAT	STAINLESS STEEL	T316
*2R	RESILIENT SEAT	STAINLESS STEEL/BUNA-N RUBBER	T316/D2000
3	DISC	STAINLESS STEEL	T316
4	SPRING	STAINLESS STEEL	A313
5	BUSHING	STAINLESS STEEL	T316
6	SCREW	STAINLESS STEEL	A193
30	SHAFT	STAINLESS STEEL	T316

Wafer Style Silent Check Valve



WC SERIES

Wafer Style Silent Check Valve

Service Applications

Municipal Water Systems



Industrial Class HVAC-Liquid Service



Industrial Piping Systems



Irrigation Systems

Pressure/Temperature Rating

Maximum Temperature Rating: 150°F (65°C)



Pressure Class: ANSI B16.1 B.S. 4504 DIN PN 10 PN 16 & PN 25

Sizes

Available in sizes 2" to 10"

NOTE: Crispin Wafer Style Check Valves are intended for liquid service only. Please consult factory when applications other than liquid are required.

Wafer Style Silent Check Valves are designed to close before the pump stops completely. This prevents flow reversal, which eliminates water hammer and the surges associated with check valve closure. Fully automatic, spring-loaded and double-guided, the valve opens as the pump starts, and closes just prior to flow reversal upon pump outage. With a standard cast iron body; bronze seat; bronze disc and bushing; and a stainless steel spring. All internal parts of the Wafer Style Check Valve are field replaceable for ease of maintenance. Resilient seats are highly recommended for potable water or drip tight applications.

Standard and Optional Materials

NAME	MATERIAL (STANDARD)	MATERIAL (OPTIONAL)
BODY	CAST IRON ASTM A126 CLASS B	DUCTILE IRON ASTM A536 GR65-45-12
DISC	BRONZE ASTM B62	STAINLESS STEEL ASTM A743, CF8M, T316
SEAT RING*	BRONZE ASTM B62 <i>*Resilient seating of BUNA-N or VITON available.</i>	STAINLESS STEEL ASTM A743 CF8M, T316
SPRING	S/S ASTM A313	S/S ASTM T316
BUSHING	BRONZE ASTM B584	S/S ASTM A276, T316
SCREWS	STAINLESS STEEL 18-8	STAINLESS STEEL T316

Consult factory for optional construction materials.

Pressure Testing

	CLASS 125	CLASS 250
	2" (50mm) - 10" (250mm)	
NON SHOCK GAGE PRESSURE	200 psi (13.6 BAR)	400 psi (27.2 BAR)
SHELL TEST PRESSURE	300 psi (20.4 BAR)	750 psi (51.0 BAR)
SEAT TEST PRESSURE	300 psi (20.4 BAR)	400 psi (27.2 BAR)



Please consult the factory for information on ordering Wafer Style Check Valves with higher pressure classes than those listed above.



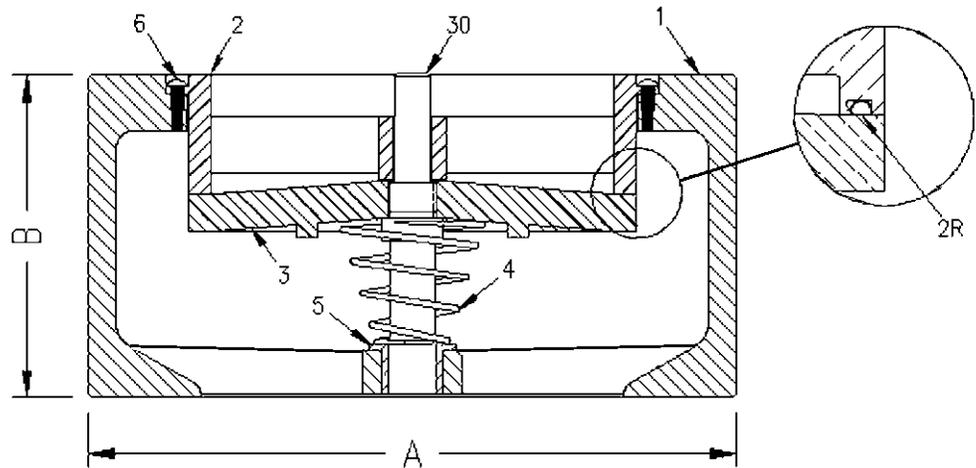
Wafer Style Silent Check Valve

Wafer Style Silent Check Valve

WC SERIES

Valve Dimensions

STD TRIM	STD TRIM RESILIENT SEAT	MODEL		ANSI CLASS FLANGE	VALVE SIZE in. (mm)	FACE TO FACE (B) in. (mm)	MAX. DIA. in. (mm)	W T. lb. (kg.)	NO.		BOLTS SIZE in. (mm)	
		S/S TRIM	S/S TRIM RESILIENT SEAT						125	250	125	250
WC20	WC20.R	WC20.2	WC20.2R	125, 250	2 (50)	2 5/8 (66.7)	4 1/4 (108)	5 (2.5)	4	8	5/8 (16) x 5 (127)	5/8 (16) x 5 1/2 (134)
WC30	WC30.R	WC30.2	WC30.2R	125, 250	3 (80)	3 1/8 (80)	5 3/4 (146)	11 (5)	4	8	5/8 (16) x 6 (152)	3/4 (16) x 7 (178)
WC40	WC40.R	WC40.2	WC40.2R	125, 250	4 (100)	4 (101.6)	7 (178)	18 (8)	8	8	5/8 (16) x 7 (178)	3/4 (20) x 8 (203)
WC60	WC60.R	WC60.2	WC60.2R	125, 250	6 (150)	5 1/2 (139.7)	9 3/4 (248)	36 (16)	8	12	3/4 (20) x 9 (229)	3/4 (24) x 10 (254)
WC801	WC801.R	WC801.2	WC801.2R	125	8 (200)	6 1/2 (165.1)	13 3/8 (340)	83 (28)	8	—	3/4 (20) x 10 (254)	—
WC802	WC802.R	WC802.2	WC802.2R	250	8 (200)	6 1/2 (165.1)	13 3/8 (340)	86 (39)	—	12	—	7/8 (24) x 12 (305)
WC1001	WC1001.R	WC1001.2	WC1001.2R	125	10 (250)	8 1/4 (209.6)	16 (406)	132 (60)	12	—	7/8 (24) x 12 (305)	—
WC1002	WC1002.R	WC1002.2	WC1002.2R	250	10 (250)	8 1/4 (209.6)	16 (406)	138 (63)	—	16	—	1 (27) x 14 (356)



Valve Diagram

PART #	NAME	STANDARD MATERIAL	Consult factory for optional construction materials.
1	Body	Cast Iron	
2*	Seat Ring	Bronze	*Resilient seating of BUNA-N or VITON available.
3	Disc	Bronze	
4	Spring	Stainless Steel	
5	Bushing	Bronze	
6	Screws	Stainless Steel	Materials and Prices Subject to Change Without Notice.

* The inside diameter of the mating flange must overlap the valve seat in order to provide proper seat retention. The flange gasket must be sized to provide a seal between the internal diameter of the valve body, and the outside diameter of the seat.

Wafer Style Silent Check Valve



WC SERIES

Wafer Style Silent Check Valve

Flow Velocity

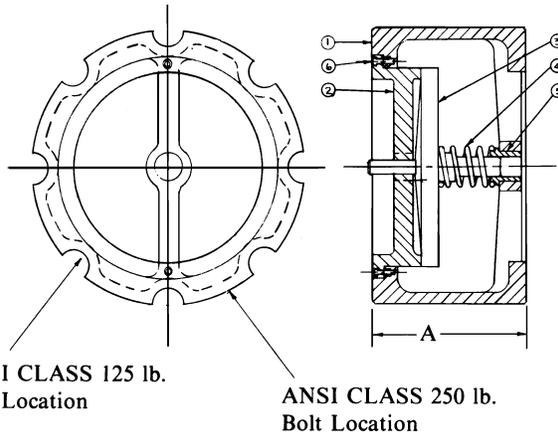
These valves have a maximum recommended flow velocity of 10 feet per second. In addition, flow curves are based on the flow of clean water at ambient temperature.

Line Placement

Preferred piping standards recommend placing check valves 5 to 10 pipe diameters from any turbulence producing devices (i.e. pumps, elbow, etc.). This installation recommendation should be followed to prevent increased valve wear or possible damage.

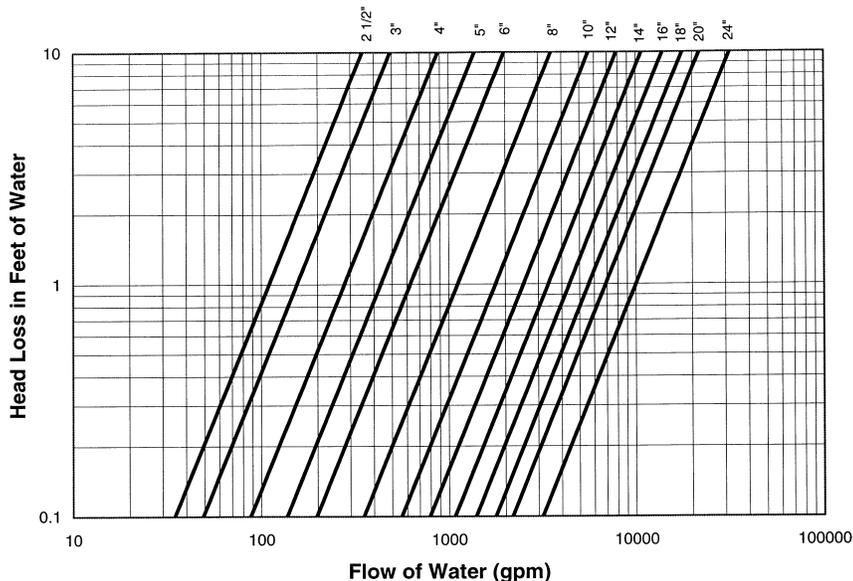
Special Maintenance Note:

The Wafer Style Silent Check Valve should never be inspected by only removing the valve inlet flange piping. If this is done, seat damage to the valve or personal injury to the inspector may occur. If the valve must be serviced, it should be isolated and the line pressure relieved on both sides of the valve. For additional instructions, consult the Operation and Maintenance section of the Crispin Multiplex Manufacturing Company catalog. These valves are intended for use on municipal water systems or approved commercial and/or industrial applications only.



Head Loss Characteristics

Globe Style Check Valve Performance Curves





Submittal Sheet for Crispin WC Series

2 1/2"–4" Wafer Check Valve

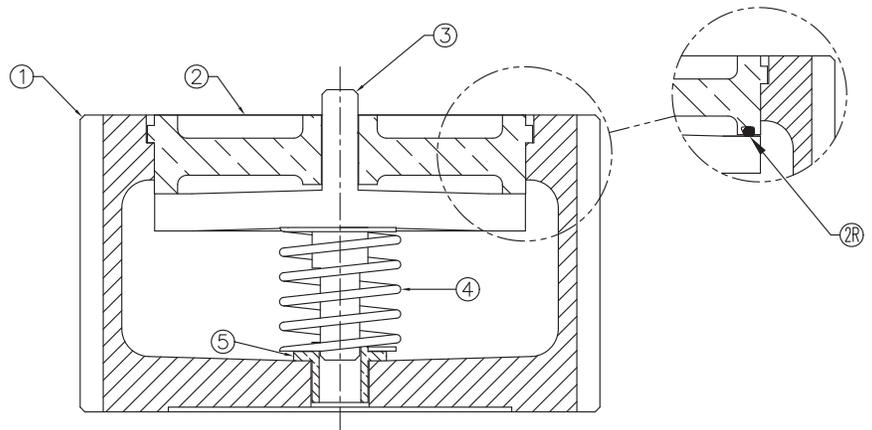
Date: 2016

Specifications

The Silent Wafer Check Valve(s) shall be fully automatic, spring loaded and double guided. The valve shall open as the pump starts, and close just prior to flow reversal upon pump outage.

The valve shall have a cast iron body; bronze seat; bronze disc and bushing; and stainless steel spring. All internal parts shall be field replaceable for ease of maintenance.

The valve shall be model _____ as manufactured by Crispin-Multiplex Manufacturing Co., Crispin Valve Division, Berwick, PA.



Size Specifications

MODEL	VALVE SIZE	A	B	WEIGHT
WC250	2 1/2" 125#/250# FLG	5.00	3.00	7
WC30	3" 125#/250# FLG	5.75	3.25	11
WC40	4" 125#/250# FLG	7.00	4.00	1

* Parts are interchangeable and optional at customer's request
For resilient seat, add .R to Model Number.

Parts List for Globe Check Valve

ITEM	DESCRIPTION	MATERIAL	ASTM
1	BODY	CAST IRON	A126 CL.B
*2	SEAT	STAINLESS STEEL	B62
*2R	RESILIENT SEAT	STAINLESS STEEL/BUNA- N RUBBER	B62/D2000
3	DISC	STAINLESS STEEL	B62
4	SPRING	STAINLESS STEEL	A313
5	BUSHING	STAINLESS STEEL	B505
6	SCREW	STAINLESS STEEL	A194

Submittal Sheet for Crispin WC Series

6"—10" Wafer Check Valve



Date: 2016

Size Specifications

MODEL	VALVE SIZE	A	B	WEIGHT
WC60	6" 125#/250# FLG	9.75	5.50	36
WC801	8" 125# FLG	13.50	6.50	83
WC802	8" 250# FLG	13.50	6.50	86
WC1001	10" 125# FLG	16.00	8.25	132
WC1002	10" 250# FLG	16.00	8.25	138

Parts List for Globe Check Valve

ITEM	DESCRIPTION	MATERIAL	ASTM
1	BODY	CAST IRON	A126 CL.B
*2	SEAT	CAST BRONZE	B62
*2R	RESILIENT SEAT	CAST BRONZE/BUNA- N RUBBER	B62/D2000
3	DISC	CAST BRONZE	B62
4	SPRING	STAINLESS STEEL	A313
5	BUSHING	BRASS	B62
6	SCREW	STAINLESS STEEL	A193
30	SHAFT	BRONZE	B62

Specifications

The Silent Wafer Check Valve(s) shall be fully automatic, spring loaded and double guided. The valve shall open as the pump starts, and close just prior to flow reversal upon pump outage.

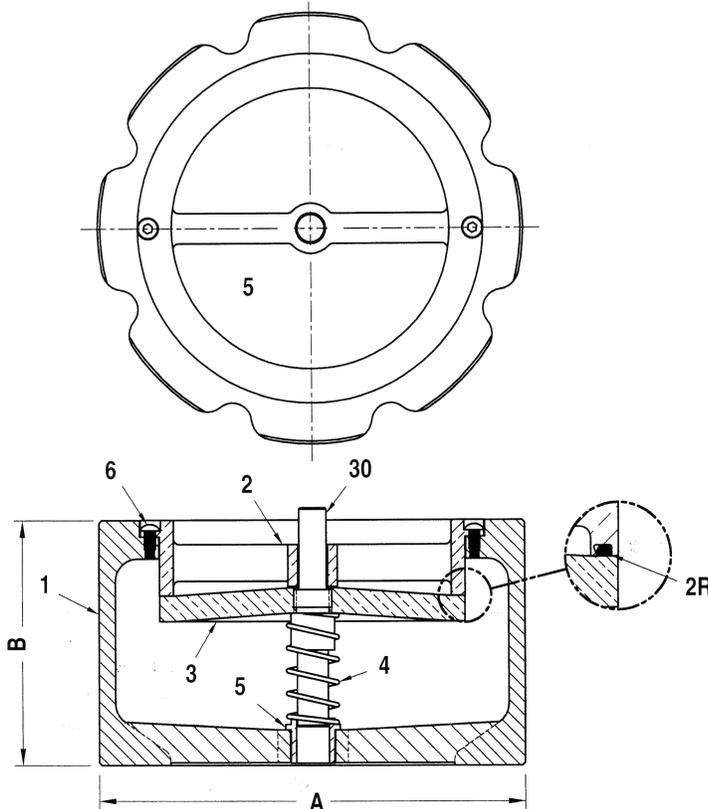
The valve shall have a cast iron body; bronze seat; bronze disc and bushing; and stainless steel spring. All internal parts shall be field replaceable for ease of maintenance.

The valve shall be model _____ as manufactured by Crispin-Multiplex Manufacturing Co., Berwick, PA.

* Parts are interchangeable and optional at customer's request

For resilient seat, add .R to Model Number.

Also available with stainless steel trim.



SUBMITTAL SHEET FOR WC SERIES

