

AMERICAN FLOW CONTROL

SECTION 7

CHECK VALVES

AFC Series 2100

AFC Series 50-SC

Waterous Series 600

7A-1 through 7A-11

7B-1 through 7B-15

7C-1 through 7C-13



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SERIES 2100 RESILIENT SEATED CHECK VALVE



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SERIES 2100 – FEATURES AND SPECIFICATIONS

Features

The American Flow Control Series 2100 Resilient Seated Check Valve is simple, durable and eliminates most problems associated with metal seated swing check valves. The Series 2100 features a compact ductile iron body and bonnet. Ductile iron has more than twice the strength of gray iron.

The disc is made of ductile iron encapsulated with rubber. The 2100 is rated for 250 p.s.i.g. The valve seals 100% leak tight at pressure above 5 p.s.i.g. The waterway is unobstructed and free from pockets.

This valve is designed to minimize disc slam. The disc only has to travel 35 degrees from full open to full closed. This allows the valve to close before flow reversal in most applications.

There is only one moving part making this valve virtually maintenance free. Should the disc be damaged it can be **reversed** and the valve put back into immediate service.

Advantages Over Metal Seated Swing Check Valves

- 250 p.s.i.g. rating
- Ductile iron body, bonnet and disc
- Fusion bonded epoxy coating inside and outside
- Does not require outside lever and weights or springs
- Only one moving part
- No bronze seat ring to wear or need replacing.
- Tight shutoff at pressures above 5 p.s.i.g.
- The 100% unobstructed flow area is free of pockets which can trap debris
- A factory installed back flushing actuator can be furnished as an option. This device is useful for priming pumps, back flushing, draining lines and system testing.

Specifications

Resilient seated check valves shall be manufactured from ductile iron meeting or exceeding ASTM A-536 65-45-12. Valves shall be rated for 250 p.s.i.g. cold water working pressure. Valves to comply with ANSI/AWWA C508, latest revision.

Valves shall have a ductile iron disc fully encapsulated with rubber. Disc travel to closure shall not be more than 35 degrees and shall seal drop tight at pressures above 5 p.s.i.g.

Valves to be coated with fusion bonded epoxy on all internal and external ferrous surfaces.

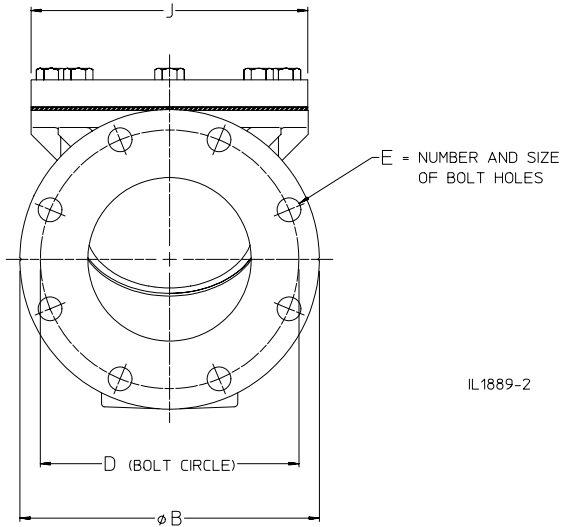
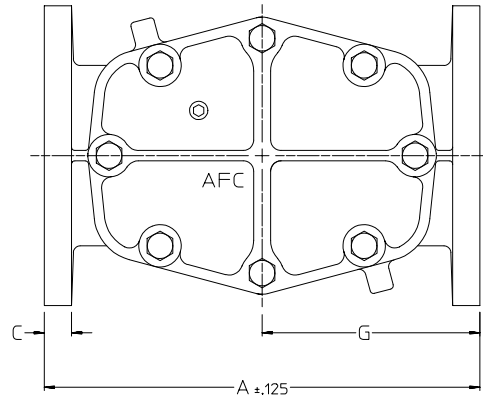
Bronze seat rings are not allowed. Disc shall be the only allowable moving part. Disc must be **reversible** such that either side will seal equally. Outside lever and weight or spring are not allowed.

Valves shall be equal to American Flow Control's Series 2100 Ductile Iron Resilient Seated Check Valve.

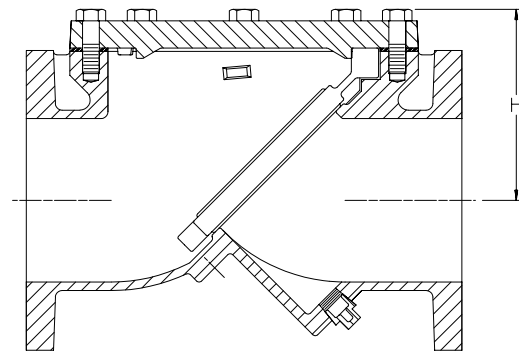
SERIES 2100 – STANDARD DIMENSIONS, 3” –12” SIZES



SERIES 2100 – STANDARD DIMENSIONS, 3” –12” SIZES



IL1889-2



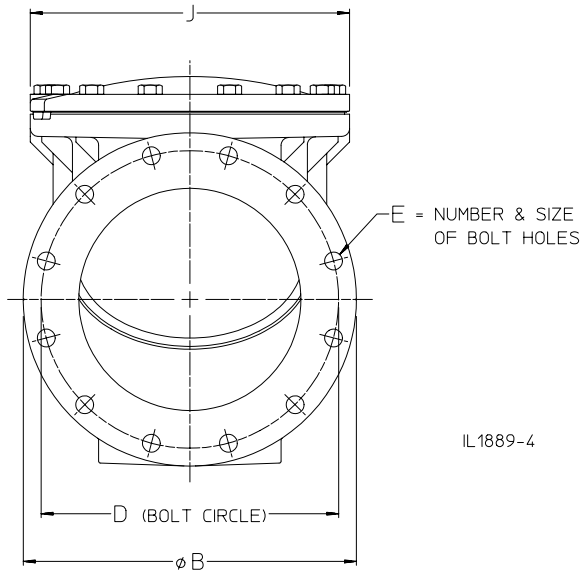
Size	A	B	C	D	E	G	H	J
3"	11.00	7.50	.75	6.00	4-0.62	5.50	4.50	5.31
4"	13.00	9.00	.94	7.50	8-0.75	6.50	5.19	6.75
6"	16.00	11.00	1.00	9.50	8-0.88	8.00	7.00	10.25
8"	19.50	13.50	1.12	11.75	8-.088	9.75	8.41	12.06
10"	24.50	16.00	1.19	14.25	12-1.00	12.25	10.19	14.88
12"	27.50	19.00	1.25	17.00	12-1.00	13.75	11.94	17.62

NOTES:

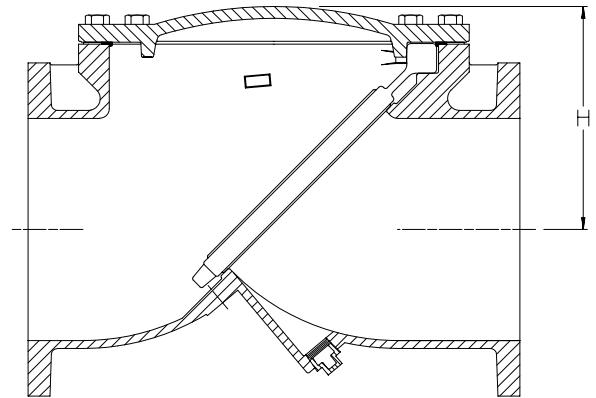
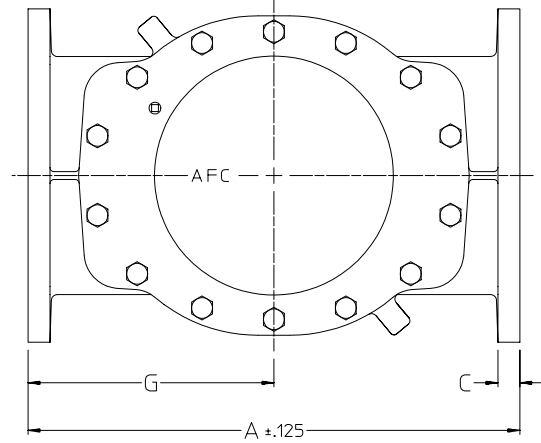
1. Series 2100 Check Valves meet or exceed requirements of ANSI/AWWA C508.
2. 250 p.s.i.g. rated working pressure, 500 p.s.i.g. test pressure.
3. End flanges in accordance with ANSI/AWWA C110/A21.10 or ANSI B16.1, Class 125.
4. Body and bonnet coated with fusion bonded epoxy coating in compliance with ANSI/AWWA C550.
5. Valves have manufacturer's name, pressure class and year of manufacture cast on body or bonnet.
6. 4" thru 16" valves are certified to ANSI/NSF Standard 61.



SERIES 2100 - STANDARD DIMENSIONS, 14" & 16" SIZES



IL1889-4



Size	A	B	C	D	E	G	H	J
14"	31.00	21.00	1.38	18.75	12-1.12	15.50	14.12	20.12
16"	34.00	23.50	1.44	21.25	16-1.12	17.00	15.75	22.88

SERIES 2100 – WEIGHTS



Size	Assembly Weight
3"	31 LBS
4"	50 LBS
6"	98 LBS
8"	168 LBS
10"	290 LBS
12"	449 LBS
14"	545 LBS
16"	760 LBS

SERIES 2100 - WEIGHTS



AMERICAN FLOW CONTROL®
SERIES 2100 RESILIENT SEATED CHECK VALVE



SUBMITTAL SHEET

SERIES 2100 - SUBMITTAL SHEET

QUANTITY							
3"	4"	6"	8"	10"	12"	14"	16"
Optional Backflushing Actuator: <input type="checkbox"/> Yes <input type="checkbox"/> No							
Other Requirements (List): _____							

American Flow Control®
American-Darling Valve and Waterous
A Division of American Cast Iron Pipe Company

NOTES:

1. Series 2100 Check Valves meet or exceed requirements of ANSI/AWWA C508.
2. 250 p.s.i.g. rated working pressure.
3. 4" thru 16" valves are certified to ANSI/NSF Standard 61.

Visit our web site at <http://www.acipco.com/afc>

SERIES 2100 – INSTALLATION

This instruction is issued as a recommendation to the customer for the proper installation of resilient seated check valves.

Receiving Inspection

When valves are received, they should be unloaded carefully and stored with disc in closed position. Any damage or shortage should be reported immediately to the delivering carrier, noted on the bill of lading, and signed by the driver on your copy.

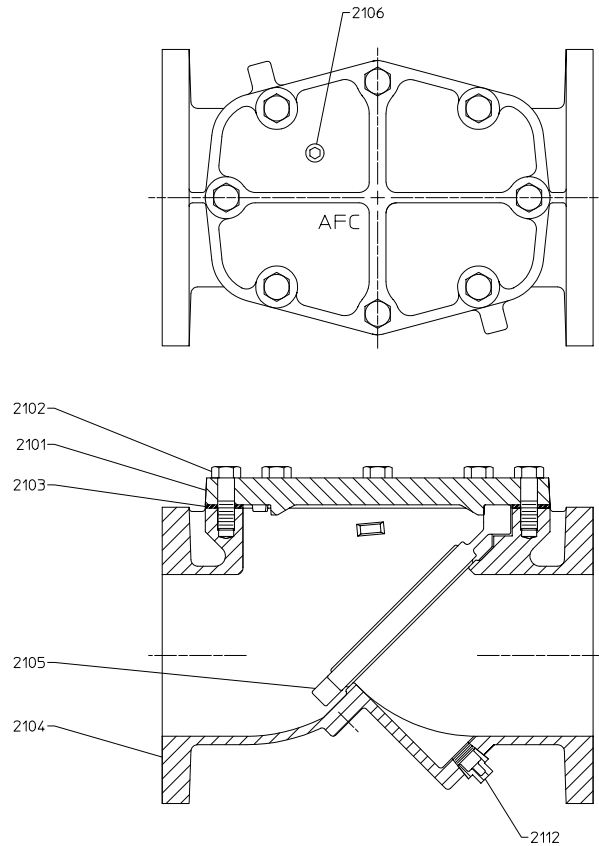
Installation

1. Protect stored valves from the elements and from undue damage in handling.
2. Check bonnet bolting for tightness.
3. At the time of installation make sure that the disc swings freely from the closed position to the stop in the open position. Check the direction of flow in the pipeline and make sure that the arrow cast on the side of the valve body agrees with this direction of flow so that the disc will swing open with flow through the valve.
4. Do not install check valves in a vertical line with downward flow.
5. Valve must be supported so that excessive line strains are not exerted on the check valve body. In cases where the valve is to be inserted as a final step on the piping, make sure that the piping is properly lined up and spaced so that the bolting of the valve in the line is not used to correct any errors in piping alignment or spacing.
6. If the disc is ever damaged it can be reversed and the valve restored to service. To reverse the disc, you must shut off line pressure and bleed residual pressure from the line before attempting to remove the bonnet cover. Remove bonnet bolting and the bonnet. Reverse disc and replace bonnet and bolting. Be sure that bonnet gasket is in its proper position before tightening the bolts.





SERIES 2100 - STANDARD PARTS LIST, 3" - 12" SIZES



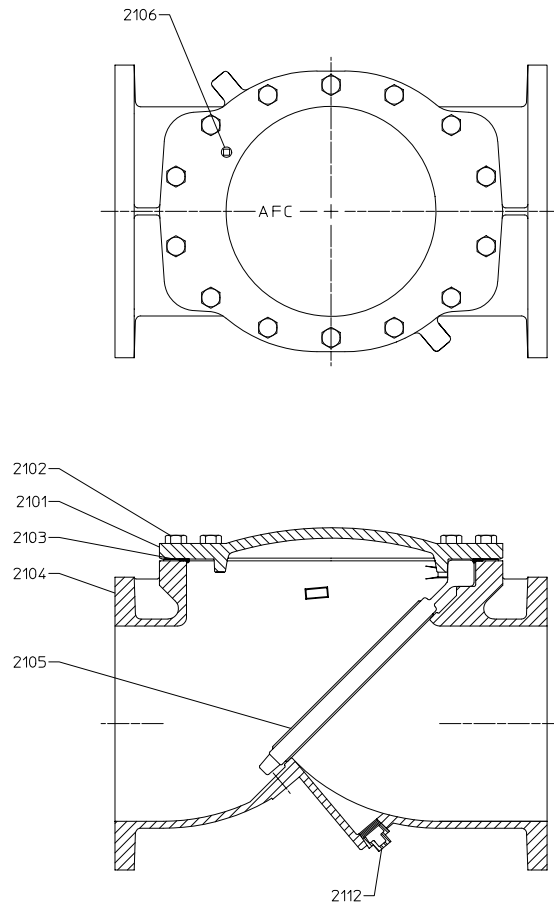
IL1889-6

REF NO.	DESCRIPTION	MATERIAL	QTY
2101	Valve Bonnet	Ductile Iron	1
2102	Bonnet Bolt	Stainless Steel	Varies
2103	Bonnet Gasket	Buna N	1
2104	Valve Body	Ductile Iron	1
2105	Disc	See Note 7	1
2106	Pipe Plug, Square Head, 3/8 NPT	Stainless Steel	1
2112	Pipe Plug, Square Head, 3/4 NPT	Stainless Steel	1

NOTES:

1. Series 2100 Check Valves meet or exceed requirements of ANSI/AWWA C508.
2. 250 p.s.i.g. rated working pressure, 500 p.s.i.g. test pressure.
3. End flanges in accordance with ANSI/AWWA C110/A21.10 or ANSI B16.1, Class 125.
4. Body and bonnet coated with fusion bonded epoxy coating in compliance with ANSI/AWWA C550.
5. Valves have manufacturer's name, pressure class and year of manufacture cast on body or bonnet.
6. Ductile iron is ASTM A536 grade 65-45-12.
7. Disc is ductile iron with stainless steel shaft and nylon reinforcement, encapsulated with rubber.
8. 4" thru 12" valves are certified to ANSI/NSF Standard 61.

SERIES 2100 – STANDARD PARTS LIST, 14” & 16” SIZES



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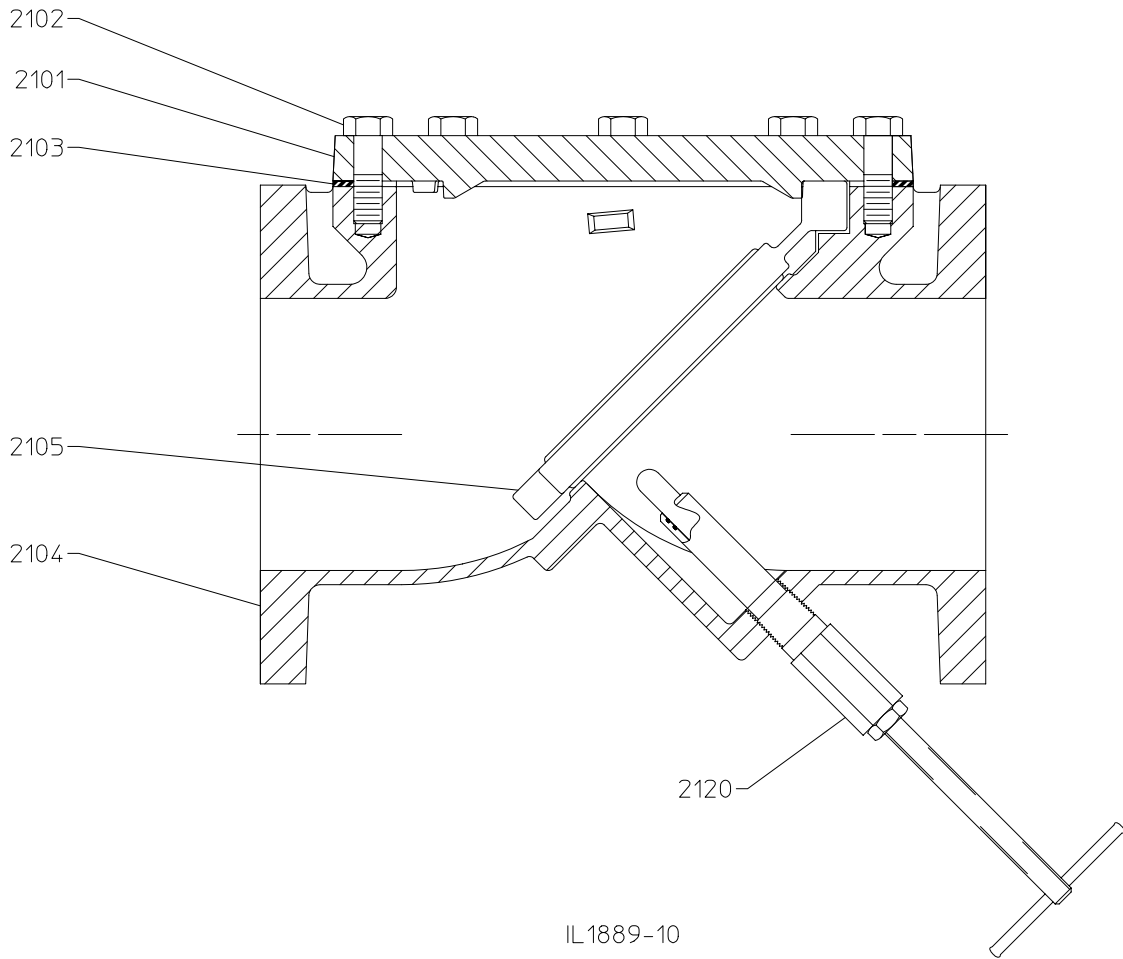
REF NO.	DESCRIPTION	MATERIAL	QTY
2101	Valve Bonnet	Ductile Iron	1
2102	Bonnet Bolt	Stainless Steel	Varies
2103	Bonnet Gasket	Buna N	1
2104	Valve Body	Ductile Iron	1
2105	Disc	See Note 7	1
2106	Pipe Plug, Square Head, 3/8 NPT	Stainless Steel	1
2112	Pipe Plug, Square Head, 3/4 NPT	Stainless Steel	1

NOTES:

1. Series 2100 Check Valves meet or exceed requirements of ANSI/AWWA C508.
2. 250 p.s.i.g. rated working pressure, 500 p.s.i.g. test pressure.
3. End flanges in accordance with ANSI/AWWA C110/A21.10 or ANSI B16.1, Class 125.
4. Body and bonnet coated with fusion bonded epoxy coating in compliance with ANSI/AWWA C550.
5. Valves have manufacturer's name, pressure class and year of manufacture cast on body or bonnet.
6. Ductile iron is ASTM A536 grade 65-45-12.
7. Disc is ductile iron with stainless steel shaft and nylon reinforcement, encapsulated with rubber.
8. 14" and 16" valves are certified to ANSI/NSF Standard 61.



**SERIES 2100 – OPTIONAL BACKFLUSHING
ACTUATOR PARTS LIST, 3” – 12” SIZES**



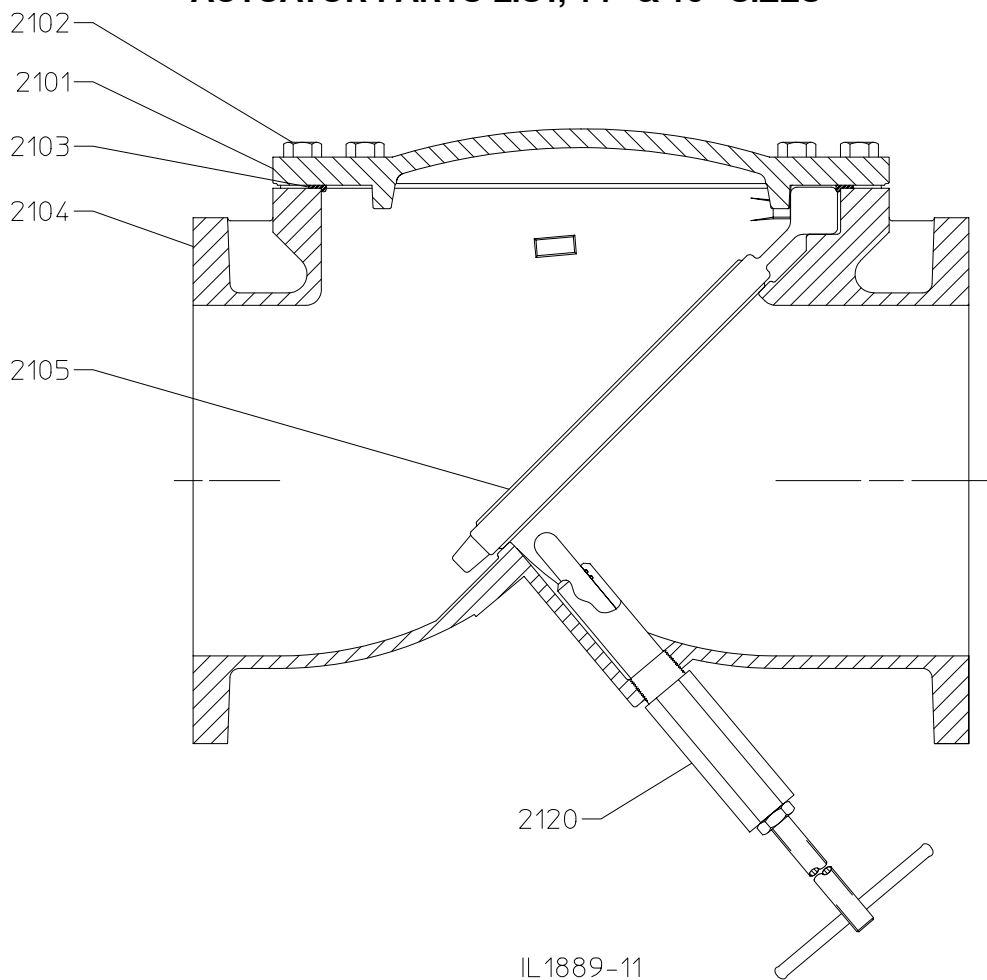
REF NO.	DESCRIPTION	MATERIAL	QTY
2101	Valve Bonnet	Ductile Iron	1
2102	Bonnet Bolt	Stainless Steel	Varies
2103	Bonnet Gasket	Buna N	1
2104	Valve Body	Ductile Iron	1
2105	Disc	See Note 7	1
2120	Backflushing Actuator Assembly	Assembly	1

NOTES:

1. Series 2100 Check Valves meet or exceed requirements of ANSI/AWWA C508.
2. 250 p.s.i.g. rated working pressure, 500 p.s.i.g. test pressure.
3. End flanges in accordance with ANSI/AWWA C110/A21.10 or ANSI B16.1, Class 125.
4. Body and bonnet coated with fusion bonded epoxy coating in compliance with ANSI/AWWA C550.
5. Valves have manufacturer's name, pressure class and year of manufacture cast on body or bonnet.
6. Ductile iron is ASTM A536 grade 65-45-12.
7. Disc is ductile iron with stainless steel shaft and nylon reinforcement, encapsulated with rubber.
8. 4" thru 12" valves are certified to ANSI/NSF Standard 61.



**SERIES 2100 – OPTIONAL BACKFLUSHING
ACTUATOR PARTS LIST, 14” & 16” SIZES**



REF NO.	DESCRIPTION	MATERIAL	QTY
2101	Valve Bonnet	Ductile Iron	1
2102	Bonnet Bolt	Stainless Steel	Varies
2103	Bonnet Gasket	Buna N	1
2104	Valve Body	Ductile Iron	1
2105	Disc	See Note 7	1
2120	Backflushing Actuator Assembly	Assembly	1

NOTES:

1. Series 2100 Check Valves meet or exceed requirements of ANSI/AWWA C508.
2. 250 p.s.i.g. rated working pressure, 500 p.s.i.g. test pressure.
3. End flanges in accordance with ANSI/AWWA C110/A21.10 or ANSI B16.1, Class 125.
4. Body and bonnet coated with fusion bonded epoxy coating in compliance with ANSI/AWWA C550.
5. Valves have manufacturer's name, pressure class and year of manufacture cast on body or bonnet.
6. Ductile iron is ASTM A536 grade 65-45-12.
7. Disc is ductile iron with stainless steel shaft and nylon reinforcement, encapsulated with rubber.
8. 14" and 16" valves are certified to ANSI/NSF Standard 61.

