

# The RF Series Rubber Flapper Check Valve

Sizes 2" to 24" • Available in #150 and #300 ratings  
Ductile Iron Body • Epoxy Coated inside and out



**Crispin**  
Since 1905

Crispin Multiplex Manufacturing Co. • 600 Fowler Avenue • Berwick, PA 18603 • 1-800-AIR-VALV  
T: (570) 752-4524 • F: (570) 752-4962 • [www.crispinvalve.com](http://www.crispinvalve.com) • [sales@crispinvalve.com](mailto:sales@crispinvalve.com)



# Rubber Flapper Check Valve

RF  
SERIES

**C**rispin-Multiplex Manufacturing Co. is proud to announce the introduction of its RF Series Rubber Flapper Check Valve.

It is the perfect combination of simplicity, function and design. Developed as a versatile and cost-effective solution to flow reversal, the RF Series is based on a low-maintenance concept. Its standard ductile iron body and steel-reinforced Buna-N rubber flapper are produced under the same rigid quality requirements that have

made Crispin synonymous with quality for over 95 years.

The 45 degree seat angle also provides a smaller stroke than conventional swing check valves, reducing slamming.

- In the static position, the “flex” and tension of the flapper provide a firm, tight seal.
- During flow, the flapper flexes out of the media, while not traveling nearly as far as a standard swing check disc.

- On flow stoppage, the flapper flexes back to the body seat, and gives a soft, yet strong and quick seal.

All of this is accomplished in a virtually maintenance-free atmosphere. The steel disc inside the rubber flapper is “over-engineered” for strength, and may never need to be replaced. In addition, the smooth body interior of the valve does not give solids the opportunity to collect anywhere on the inside of the body. ●

## Crispin Rubber Flapper Check Valve Function

### Design

The “RF” concept is simple: full pipe flow, low head loss, maintenance-free construction. With a standard ASTM A536, grade 65-45-12 Ductile Iron Body, the “RF” valve already meets tomorrow’s material requirements. The Buna-N-Flapper, with “O-Ring” face, is nylon and steel reinforced, providing superior long-term operability and Drip Tight Seating, even with abrasive media. The flow area equal to or greater than the nominal pipe diameter, making the “RF” ideal for sewage or any other solid-containing application.

### Function

Operating on the same principles as most in-line check valves, the “RF” is primarily used for Basic Flow Reversal situations. Because the seat area is angled 45°, the valve can be mounted horizontally or vertically.

### Materials

The “RF” comes standard with a 65-45-12 Ductile Iron Body, epoxy coatings and Buna-N/Steel Flapper. A variety of materials and coatings are available to suit most municipal and industrial applications. The flapper is available in most common

Rubber materials, including Buna-N, Viton and EPDM.

### Options

- **Backflow Device**—used for draining or pump priming, this option is a safe and effective way to manually activate the valve.
- **Proximity Signal**—can be provided on the exterior for positive confirmation of flapper open/closed positioning.
- **Rubber Lining**—is available for abrasive and particularly harsh applications.
- **Special Coatings**—a variety are available.

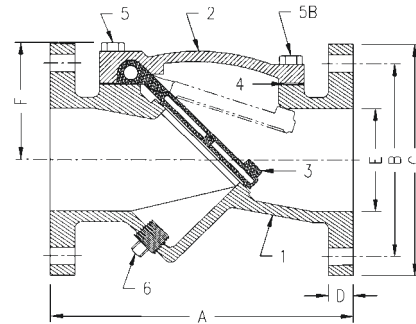
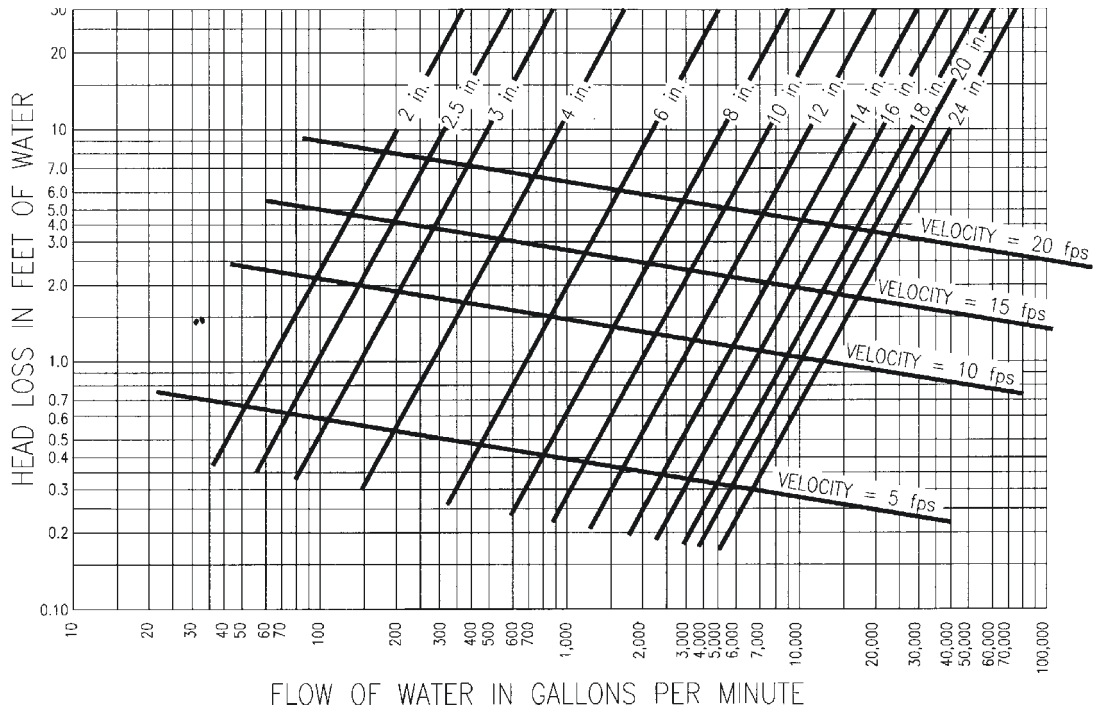


## Rubber Flapper Check Valve

# Rubber Flapper Check Valve

RF SERIES

### “RF” Head Loss Characteristics



### RF Series Materials Description

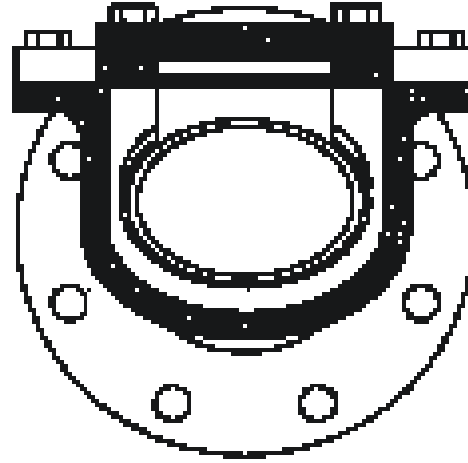
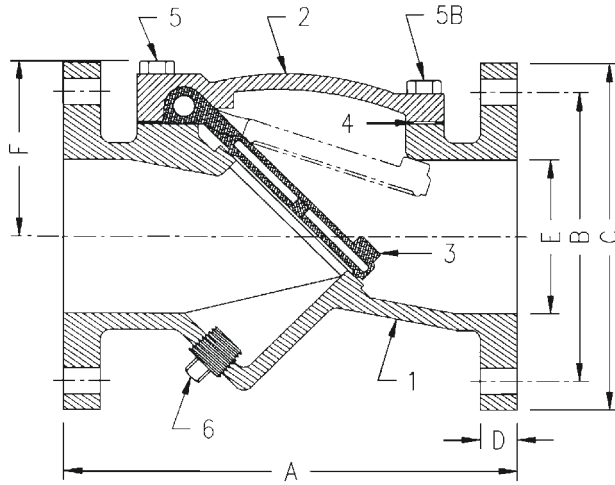
ITEM	DESCRIPTION	MATERIAL	ASTM
1	Body	Ductile Iron	A536 GR. 65-45-12
2	Cover	Ductile Iron	A536 GR. 65-45-12
3	Disc	Buna-N-Rubber, Steel & Nylon	D2000
4	Gasket	Armstrong, N-8092	N/A
5	Bolt	Steel	A307 GR. B
5B	Bolt	Steel	A307 GR. B
6	Plug	Cast Iron	A126



# 2"-24" Rubber Flapper Check Valve

Manufactured in compliance with ANSI/AWWA C508

Date: October, 2001



## Rubber Flapper Parts List

ITEM	DESCRIPTION	MATERIAL	ASTM
1	BODY	DUCTILE IRON	A536 GR. 65-45-12
2	COVER	DUCTILE IRON	A536 GR. 65-45-12
3	DISC	BUNA-N RUBBER, STEEL & NYLON	D2000, A240
4	GASKET	ARMSTRONG N-8092	N/A
5	BOLT	STEEL	A307 GR. B
5B	BOLT	STEEL	A307 GR. B
6	PLUG	CAST IRON	A126 CL.. B

## Class 150 Specifications\*

MODEL #	A	B	C	D	E	F	# OF BOLTS	WT. lbs.
RF21	8	4.75	6	0.63	2	3.38	4	24
RF251	8.5	5.5	7	0.69	2.5	3.38	4	26
RF31	9.5	6	7.5	0.75	3	3.88	4	37
RF41	11.5	7.5	9	0.94	4	4.63	8	67
RF51	13.75	8.5	10	0.94	5	5.13	8	76
RF61	15	9.5	11	1	6	5.88	8	120
RF81	19.5	11.75	13.5	1.13	8	7.63	8	219
RF101	24.5	14.25	16	1.19	10	9.88	12	360
RF121	27.5	17	19	1.25	12	11.38	12	503
RF141	31	18.75	21	1.38	14	13.38	12	680
RF161	32	21.25	23.5	1.44	16	15.38	16	975
RF181	36	22.75	25	1.57	18	17.13	16	1325
RF201	40	25	27.5	1.69	20	19.13	20	1650
RF241	48	29.5	32	1.88	24	22.75	20	2125

\*For Class 300 Specifications, please call the factory.

## Specifications

The Rubber Flapper Check Valve(s) shall be installed for use in basic flow reversal situations, and may be mounted either horizontally or vertically.

The valve(s) shall be \_\_\_\_\_" ANSI Class (150, 300) with a standard ASTM A536 65-45-12 ductile iron body and a steel-reinforced Buna-N Rubber Flapper with "O-Ring" face, and epoxy coating inside and out. It shall operate at \_\_\_\_\_ PSIG, with a maximum 250 PSIG.

The valve(s) shall be Crispin Model \_\_\_\_\_ Rubber Flapper Valve as manufactured by Crispin-Multiplex Manufacturing Co., Berwick, PA.

**Option:** A Proximity Signal can be provided on the exterior for positive confirmation of flapper open/closed positioning.

**Option:** A Rubber Lining is available for abrasive and particularly harsh applications.

**Option:** A variety of special coatings are available. Please contact the factory for more information.

**Option:** If needed, the rubber flapper can be made from (Viton, EPDM) instead of Buna-N.



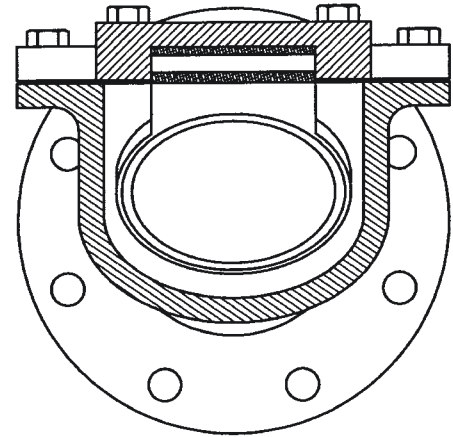
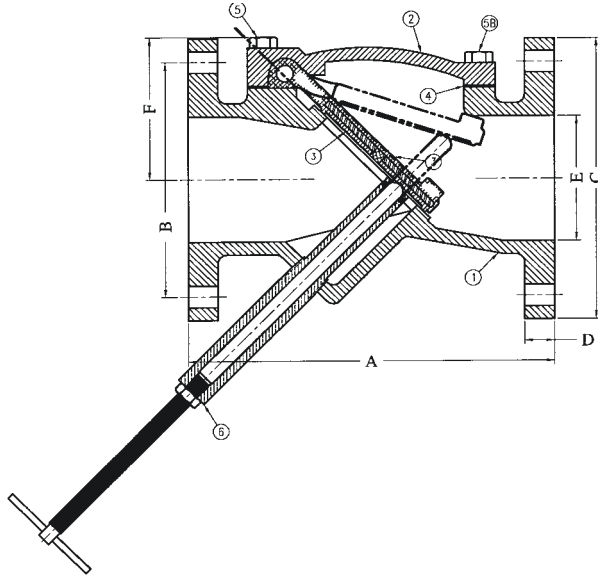
## Submittal Sheet for Crispin RF Series

# 2"-24" Rubber Flapper Check Valve

Manufactured in compliance with ANSI/AWWA C508

Date: October, 2001

### With Backflow Actuator



### Specifications

The Rubber Flapper Check Valve(s) shall be installed for use in basic flow reversal situations, and may be mounted either horizontally or vertically.

The valve(s) shall be \_\_\_\_\_" ANSI Class (150, 300) with a standard ASTM A536 65-45-12 ductile iron body and a steel-reinforced Buna-N Rubber Flapper with "O-Ring" face, and epoxy coating inside and out. It shall operate at \_\_\_\_\_ PSIG, with a maximum 250 PSIG. A backflow device will also be used for draining or pump priming.

The valve(s) shall be Crispin Model \_\_\_\_\_ Rubber Flapper Valve as manufactured by Multiplex Manufacturing Co., Berwick, PA.

**Option:** A Proximity Signal can be provided on the exterior for positive confirmation of flapper open/closed positioning.

**Option:** A Rubber Lining is available for abrasive and particularly harsh applications.

**Option:** A variety of special coatings are available. Please contact the factory for more information.

**Option:** If needed, the rubber flapper can be made with (Viton, EPDM) instead of Buna-N.

### RF/Backflow Parts List

ITEM	DESCRIPTION	MATERIAL	ASTM
1	BODY	DUCTILE IRON	A536 GR. 65-45-12
2	COVER	DUCTILE IRON	A536 GR. 65-45-12
3	DISC	BUNA-N RUBBER, STEEL & NYLON	D2000, A240
4	GASKET	ARMSTRONG N-8092	N/A
5	BOLT	STEEL	A307 GR. B
5B	BOLT	STEEL	A307 GR. B
*6	BACKFLOW	STAINLESS STEEL/ACTUATOR	A582, B505 BRASS

\* Backflow actuator is optional

### Class 150 Specifications\*

MODEL #	A	B	C	D	E	F	# OF BOLTS	WT. lbs.
RF21	8	4.75	6	0.63	2	3.38	4	n/a
RF251	8.5	5.5	7	0.69	2.5	3.38	4	n/a
RF31	9.5	6	7.5	0.75	3	3.88	4	39
RF41	11.5	7.5	9	0.94	4	4.63	8	71
RF51	13.75	8.5	10	0.94	5	5.13	8	78
RF61	15	9.5	11	1	6	5.88	8	126
RF81	19.5	11.75	13.5	1.13	8	7.63	8	230
RF101	24.5	14.25	16	1.19	10	9.88	12	378
RF121	27.5	17	19	1.25	12	11.38	12	528
RF141	31	18.75	21	1.38	14	13.38	12	714
RF161	32	21.25	23.5	1.44	16	15.38	16	1024
RF181	36	22.75	25	1.57	18	17.13	16	1392
RF201	40	25	27.5	1.69	20	19.13	20	1733
RF241	48	29.5	32	1.88	24	22.75	20	2232

\*For Class 300 Specifications, please call the factory.