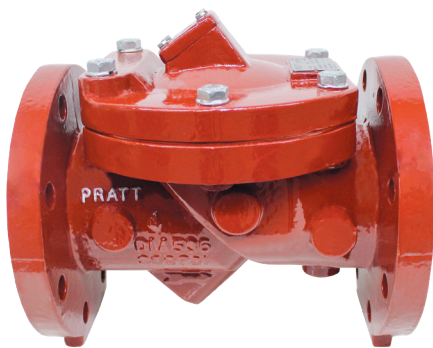


# PRATT®

a MUELLER brand

## RD-SERIES® Flex Check Valve



### CONSTRUCTION SPECIFICATIONS

<b>SIZES</b>	2" Through 24" Flanged Ends 3" Through 16" Mechanical Joint Ends
<b>BODY</b>	Ductile Iron
<b>DISC</b>	Buna-N Encapsulated Steel
<b>SEAT</b>	45° Non-Slam Seat

Manufactured to comply with AWWA C508, the Pratt® RD-Series® Check Valve has only one moving part: a resilient disc reinforced with steel. This simple, innovative valve provides dependable, maintenance free performance, and quiet operation with its inherent non-slam construction. The large, unobstructed flow path makes the valve an excellent choice for wastewater as well as water applications. The design has undergone a rigorous 1,000,000 continuous cycle test with no signs of wear or distortion to the valve disc or seat. All sizes have a 250 psi rating and are NSF/ANSI 61/372 certified.

### FEATURES

#### BODY

Ductile Iron in ASTM A-536 Grade 65-45-12, and features a full flow area providing 100% unrestricted flow and low head loss. Flanges are in full compliance with ANSI B16.1, Class 125.

#### BONNET

Ductile iron domed access bonnet allows for easy removal and inspection of the flexible disc assembly.

#### DISC

The only moving part, featuring a fully Buna-N encapsulated steel disc with nylon reinforcement in the flex area. The molded elastomer with integral O-ring ensures a bubble-tight shut off, without backflow.

#### BODY SEAT

Constructed on a 45 degree angle to reduce the travel of the disc to the full open position; significantly reducing the potential for water hammer.

#### FLOW

The flow area is equal to or greater than the equivalent pipe size throughout, resulting in low head losses, compared to other types of check valves.

#### INSTALLATION

Suitable for both horizontal and vertical pipelines with flow upward.

#### COATINGS

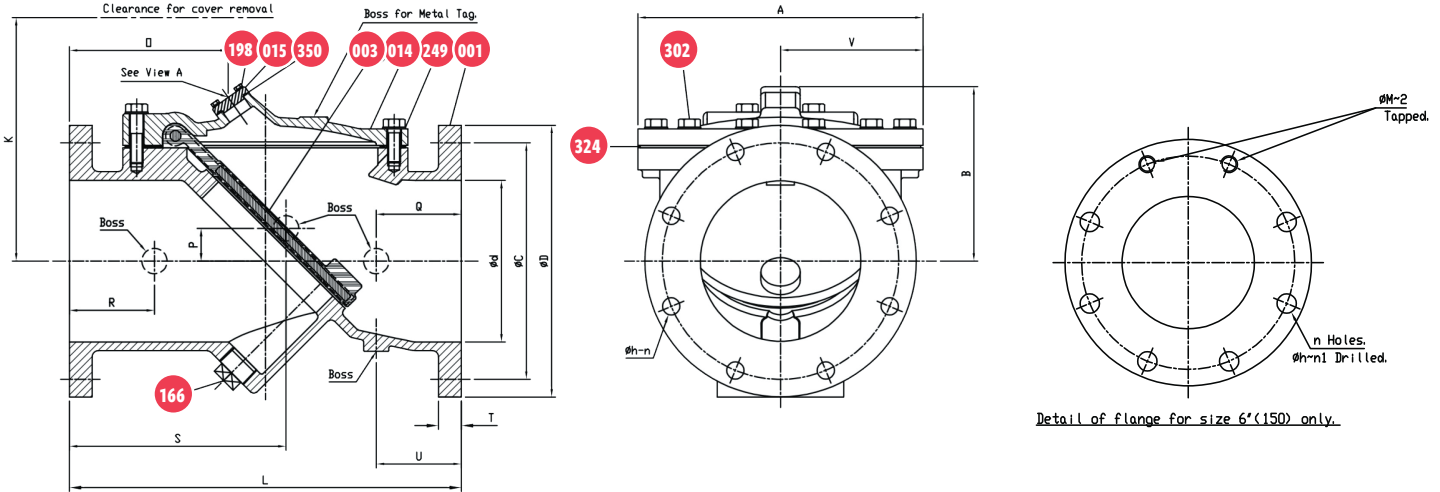
The valve interior and exterior surfaces are fully coated with fusion bonded epoxy suitable for use in potable water service. Special coatings can be furnished on request.

#### ACCESSORIES/OPTIONS

- Disc position indicator
- External backflow device - to manually open disc
- Disc position indicator with limit switch
- EPDM disc option
- Stainless steel cover bolts
- Spring assisted closure

**MUELLER**

# 2" TO 16" FIG. 851 FLEX CHECK VALVES 250 PSI, ANSI CLASS 125 FLANGES

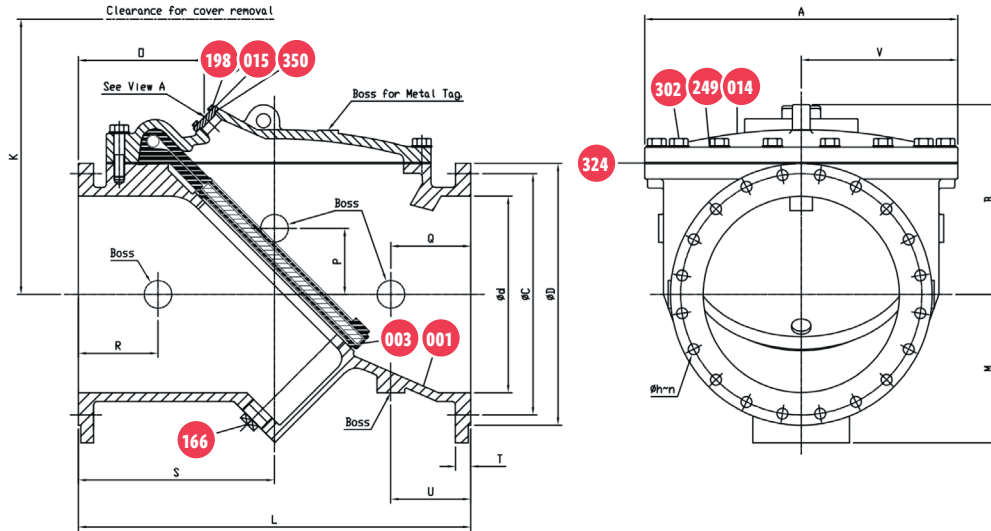


NO.	PARTS	MATERIAL	ASTM DESIGNATION	QTY.
302	Cover Bolt	Galvanized Steel 316SS Hastelloy	A307 Grade B (Standard) ASTM A193 Grade B8M (Optional) C276 (Optional for AIS)	1Set
350	O-ring A	Rubber (EPDM) Rubber (Buna-N)	ASTM D2000 CA707 (Optional) D2000 BK 707 (Standard)	1 1
324	Cover Gasket	Rubber (EPDM) Rubber (Buna-N)	ASTM D2000 CA807 (Optional) D2000 BK 707 (Standard)	1 1
249	Washer	Galvanized Steel 316SS Hastelloy	A307 Grade B (Standard) ASTM A193 Grade B8M (Optional) C276 (Optional for AIS)	1Set
198	End Plate Bolt	Galvanized Steel	A307 Grade B	1Set
166	Plug	Stainless Steel	A 276 Type 304	1
015	End Plate	Ductile Iron	A 536 Gr. 65-45-12	1
014	Cover	Ductile Iron	A 536 Gr. 65-45-12	
003	Disc.	Steel Rubber (EPDM) Rubber (Buna-N)	A36 ASTM D2000 CA707 (Optional) D2000 BK 707 (Standard)	1
001	Body	Ductile Iron	A 536 Gr. 65-45-12	1

SIZE	ØD	L	ANSI B16.1 CL. 125				A	B	K	O	P	Q	R	S	U	V	ØM	N1	COVER BOLT SIZE (IN) X (MM) (1)	NO. OF BOLTS (1)	COVER BOLT SIZE (IN) X (MM) (1)	NO. OF BOLTS (2)	APPROX WEIGHT (LBS.)	PLUG SIZE	BOSS DIAMETER
IN. MM	ØD	ØC	ØH	N	T																				
2 50	8±1/16	6	4 3/4	3/4	4	5/8	5.19	4.85	6.30	3.08	0.87	2.03	2.03	4.31	1.81	2.60			1/2-13 x 50	2	1/2-13 x 35	2	25	3/4	1
2 1/2 65	8 1/2±1/16	7	5 1/2	3/4	4	1 1/16	6.75	4.92	6.30	2.86	0.55	1.44	1.44	5.00	1.87	3.39			1/2-13 x 50	2	1/2-13 x 35	4	32	3/4	1
3 80	9 1/2±1/16	7 1/2	6	3/4	4	3/4	7.40	5.14	6.69	3.80	0.59	1.87	1.87	5.45	1.89	3.76			1/2-13 x 50	2	1/2-13 x 35	4	41	3/4	1
4 100	11 1/2±1/16	9	7 1/2	3/4	8	1 5/16	9.02	5.86	7.68	4.72	0.98	2.51	2.51	6.26	2.51	4.55			1/2-13 x 50	2	1/2-13 x 38	4	63	1	1.25
6 150	14 ±1/16	11	9 1/2	7/8	8	1	11.02	7.60	8.86	5.83	1.42	3.01	3.01	7.99	3.0	5.43	Ø3/4 x 10TPI	6	1/2-13 x 55	2	1/2-13 x 40	10	103	1 1/4	1.25
8 200	19 1/2±1/16	13 1/2	11 3/4	7/8	8	1 1/8	14.17	8.85	10.24	7.90	1.61	4.23	4.23	10.81	4.23	7.09			5/8-11 x 65	2	5/8-11 x 45	10	182	1 1/4	1.25
10 250	24 1/2±1/16	16	14 1/4	1	12	1 3/16	19.60	11.80	14.17	10.71	2.17	4.34	4.34	14.21	4.34	9.74			3/8-9 x 110	2	3/8-9 x 65	10	445	2	2.75
12 300	27 1/2±1/16	19	17	1	12	1 1/4	21.26	13.23	15.75	10.74	2.17	4.61	4.61	15.72	4.61	10.63			3/8-9 x 100	2	3/8-9 x 65	10	488	2	3.38
14 350	31 ±1/8	21	18 3/4	1 1/8	12	1 3/8	25.83	14.57	16.93	15.49	2.95	4.84	4.84	18.44	4.84	12.91			1-8 x 100	2	1-8 x 80	10	685	2	3.38
16 400	36 ±1/8	23 1/2	21 1/4	1 1/8	16	1 7/16	25.20	15.40	18.50	14.59	4.33	8.39	8.39	17.99	8.39	12.60			1-8 x 120	2	1-8 x 80	10	847	2	3.38

\*Dimensions in inches unless otherwise noted.

# 18" TO 24" FIG. 851 FLEX CHECK VALVES 250 PSI, ANSI CLASS 125 FLANGES



NO.	PARTS	MATERIAL	ASTM DESIGNATION	QTY.
302	Cover Bolt	Galvanized Steel 316SS Hastelloy	A307 Grade B (Standard) ASTM A193 Grade B8M (Optional) C276 (Optional for AIS)	1Set
350	O-ring A	Rubber (EPDM) Rubber (Buna-N)	ASTM D2000 CA707 (Optional) D2000 BK 707 (Standard)	1 1
324	Cover Gasket	Rubber (EPDM) Rubber (Buna-N)	ASTM D2000 CA807 (Optional) D2000 BK 707 (Standard)	1 1
249	Washer	Galvanized Steel 316SS Hastelloy	A307 Grade B (Standard) ASTM A193 Grade B8M (Optional) C276 (Optional for AIS)	1Set
198	End Plate Bolt	Galvanized Steel	A307 Grade B	1Set
166	Plug	Stainless Steel	A 276 Type 304	1
015	End Plate	Ductile Iron	A 536 Gr. 65-45-12	1
014	Cover	Ductile Iron	A 536 Gr. 65-45-12	
003	Disc.	Steel Rubber (EPDM) Rubber (Buna-N)	A36 ASTM D2000 CA707 (Optional) D2000 BK 707 (Standard)	1
001	Body	Ductile Iron	A 536 Gr. 65-45-12	1

SIZE ØD	L	ANSI B16.1 CL. 125					A	B	K	M	O	P	Q	R	S	U	V	COVER	COVER	APPROX WEIGHT (LBS.)	PLUG SIZE	BOSS DIAMETER		
		BOLT SIZE (IN) X (MM) (1)	NO. OF BOLTS (1)	BOLT SIZE (IN) X (MM) (1)	NO. OF BOLTS (2)																			
IN. MM	ØD	ØC	ØH	N	T																			
18 450	40±1/8	25	22¾	1¼	16	1 9/16	29.13	18.90	22.83	14.17	14.59	3.94	9.49	11.46	20.00	9.49	14.57	1 1/8 x 130	2	1 1/8 x 85	10	1170	2½	3-38
20 500	40±1/8	27½	25½	1¼	20	1 11/16	31.90	20.67	25.20	14.96	14.97	4.72	8.19	8.19	20.00	8.19	15.94	1 1/8 x 140	2	1 1/8 x 85	14	1590	3	3-38
24 600	40±1/8	32	29½	1¾	20	1 7/8	38.27	23.19	28.35	18.15	15.40	8.07	9.76	9.76	24.00	9.76	19.13	1 1/8 x 140	2	1 1/8 x 100	14	2330	3	3-38

\*Dimensions in inches unless otherwise noted.

# SUGGESTED SPECIFICATION FOR FLANGED FLEX CHECK VALVES

## SUGGESTED SPECIFICATIONS

Check valve shall be of the flanged, full body type with no internal moving parts except for the resilient disc. The flanged ends shall be manufactured in accordance with ANSI B16.1 Class 125. Valves shall be rated to 250 psi for all sizes.

The valves shall be designed, manufactured, tested and certified to ANSI / AWWA C508 Standard.

The valves used in potable water service shall be certified to NSF / ANSI 61 Drinking Water System Components – Health Effects, and certified to be Lead-Free in accordance with NSF / ANSI 372.

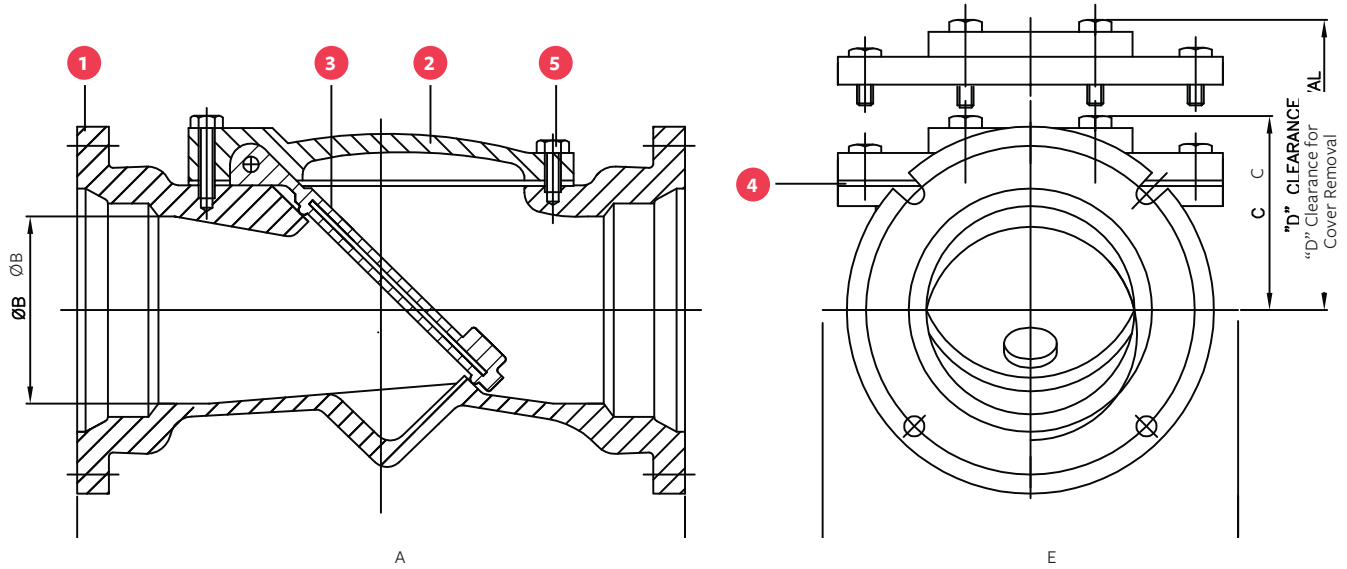
The valve body shall be constructed of ductile iron ASTM A-536 Grade 65-45-12 with flow area equal to the nominal pipe inside diameter throughout the valve. Seat shall be constructed on a 45 degree angle to reduce disc travel. The seat and internal body shall be fully coated with a two part liquid epoxy suitable for use in both potable water and wastewater applications.

The domed bonnet shall be manufactured of ductile iron ASTM A-536 Grade 65-45-12. The bonnet-to-body seal shall be provided by a gasket to allow easy removal and replacement of the access bonnet. Bonnet bolting shall be SAE Grade 5 zinc plated.

The resilient disc shall feature a fully encapsulated steel pressure plate with integral molded O-ring on the face of the elastomer. Nylon reinforcements shall be provided in the flexible hinge area of the disc assembly.

If requested the manufacturer shall furnish certified results of a proof of design test performed at an independent testing laboratory. Testing shall include a million-cycle continuous test to demonstrate the durability of the flexible connection.

# 3" TO 16" FIGURE 850 MECHANICAL JOINT END FLEX CHECK VALVES 250 PSI



VALVE SIZE	A	B	C	D	E
3	13.00	3.0	3.90	4.69	7.75
4	14.96	4.0	4.65	5.63	9.25
6	19.30	6.0	6.22	7.28	12.00
8	23.81	8.0	7.80	8.98	15.00
10	28.34	10.0	10.20	11.54	20.00
12	33.00	12.0	11.38	12.80	22.00
14	35.00	14.0	12.00	13.89	25.825
16	37.00	16.0	13.58	15.16	25.25

ITEM	QTY	DESCRIPTION	MATERIAL	ASTM DESIGNATION
1	1	Body	Ductile Iron	ASTM A-536-GR 65-45-12
2	1	Bonnet	Ductile Iron	ASTM A-536-GR 65-45-12
3	1	Disc	Steel / Buna N	ASTM A-36 / D2000 BK 807
4	1	Gasket	Rubber (Buna N)	D2000 BK 807
5	AR	Cap Bolts	Stainless Steel	A 276 Type 304

**Notes:**

1. Mechanical joint ends are per ANSI/AWWA C111 / A21.11.
2. Dimension "D" required to remove access cover.

## SUGGESTED SPECIFICATIONS

Check valve shall be of the mechanical joint, full body type with no internal moving parts except for the resilient disc. The mechanical joint ends shall be manufactured in accordance with ANSI / AWWA C111. Valves shall be rated to 250 psi for all sizes.

The valve body shall be constructed of ductile iron ASTM A-536 Grade 65-45-12 with flow area equal to the nominal pipe inside diameter throughout the valve. Seat shall be constructed on a 45 degree angle to reduce disc travel. The seat and internal body shall be fully coated with a two part liquid epoxy suitable for use in both potable water and wastewater applications.

The domed bonnet shall be manufactured of ductile iron ASTM A-536 Grade 65-45-12. The bonnet-to-body seal shall be provided by a gasket to allow easy removal and replacement of the access bonnet. Bonnet bolting shall be stainless steel A276 Type 304.

The resilient disc shall feature a fully encapsulated steel pressure plate with integral molded o-ring on the face of the elastomer. Nylon reinforcements shall be provided in the flexible hinge area of the disc assembly.

If requested the manufacturer shall furnish certified results of a proof of design test performed at an independent testing laboratory. Testing shall include a million-cycle continuous test to demonstrate the durability of the flexible connection.

**For more information about Pratt or to view our full line of water products, please visit [www.prattvalve.com](http://www.prattvalve.com) or call Pratt customer service at 1.800.423.1323.**

Mueller refers to one or more of Mueller Water Products, Inc., a Delaware corporation ("MWP"), and its subsidiaries. MWP and each of subsidiaries are legally separate and independent entities when providing products and services. MWP does not provide products or services to third parties. MWP and each of its subsidiaries are liable only for their own acts and omissions and not those of each other. MWP brands include Mueller®, Echologics®, Hydro Gate®, Hydro-Guard®, HYMAX®, i2O®, Jones®, Krausz®, Mi.Net®, Milliken®, Pratt®, Pratt Industrial®, Singer®, and U.S. Pipe Valve & Hydrant. Please see [www.muellerwp.com/about](http://www.muellerwp.com/about) to learn more.

© 2021 Henry Pratt Company, LLC. All Rights Reserved. The trademarks, logos and service marks displayed in this document are the property of Henry Pratt Company, LLC., its affiliates or other third parties. Products above marked with a section symbol (§) are subject to patents or patent applications. For details, visit [www.prattvalve.com](http://www.prattvalve.com). These products are intended for use in potable water applications. Please contact your Mueller Sales or Customer Service Representative concerning any other application(s).

