

## SERIES 851 CHECK VALVE

The Milliken Series 851 Flex Check Valve has only one moving part: a resilient Disc reinforced with Steel. This simple, innovative Valve gives dependable, maintenance free and quiet operation due to 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 250psig/17barg rating.

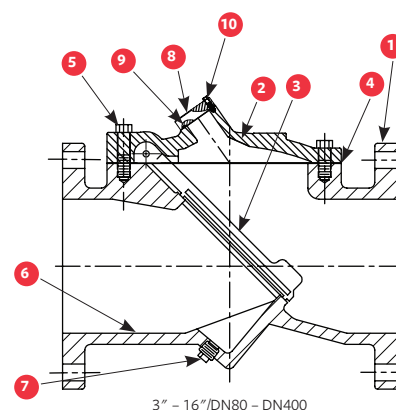
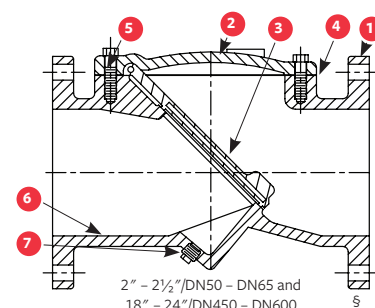
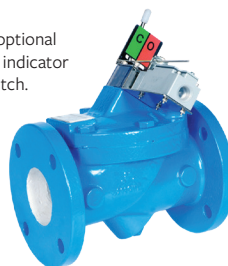
### PRODUCT FEATURES

- 2" – 24"/DN50 – DN600 flanged ends.
- Ductile Iron Body – ASTM A-536 Grade 65-45-12 features a full flow area providing 100% unrestricted flow and low head loss. Flanges available in PN10, PN16 and ANSI B16.1, Class 125.
- Ductile Iron domed access bonnet allows easy removal and inspection of the flexible disc assembly.
- Only one moving part, featuring a fully NBR (EPDM available to order) encapsulated Steel disc with Nylon reinforcement in the flex area. The moulded disc with integral O-ring ensures bubble-tight shut off and no backflow.
- Body Seat constructed on a 45° angle to reduce the travel of the disc, significantly reducing the potential for water hammer.
- Flow area is equal to or greater than the equivalent pipe size, resulting in low head loss compared to other types of Check Valves.
- Installation suitable for horizontal and vertical pipelines with upward flow.
- Valve interior is fully coated with liquid thermosetting epoxy suitable for use in potable Water service. The exterior is provided as standard with a universal primer enamel suitable for coating in the field. Special coatings available on request.

### ACCESSORIES/OPTIONS

- Disc position indicator (3" – 16"/DN80 – DN400 only)
- Disc position indicator with limit switch (3" – 16"/DN80 – DN400 only)
- Glass lined
- Rubber lined
- External backflow device
- Proximity limit switch
- EPDM disc option
- Stainless Steel cover bolts

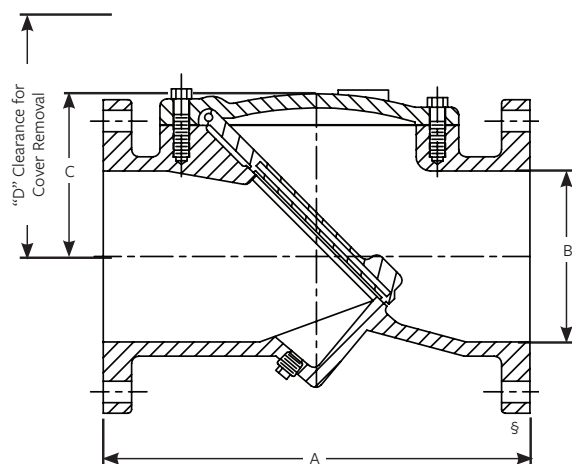
Shown with optional disc position indicator and limit switch.



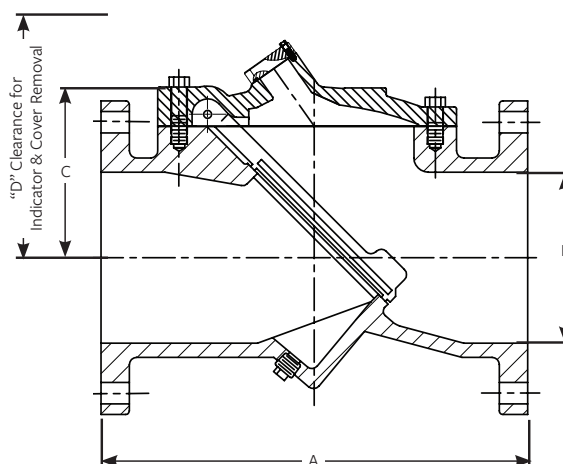
### PARTS LIST

ID	PART NAME	MATERIAL STANDARDS
1	Body	Ductile Iron ASTM A-536
2	Bonnet	Ductile Iron ASTM A-536
3	Disc	Steel/NBR ASTM A-36/D2000
4	Gasket	Rubber (NBR) ASTM D2000
5	Cap Bolts	Steel/Zinc Plated
6	Interior Lining	Epoxy
7	Plug	Ductile Iron ASTM A-536
8	Boss Cover	Ductile Iron ASTM A-536
9	O-Ring	Rubber (NBR) ASTM D2000
10	Boss Cover Bolts	Steel/Zinc Plated

\*3" – 16"/DN80 – DN400 CHECK VALVES ONLY.

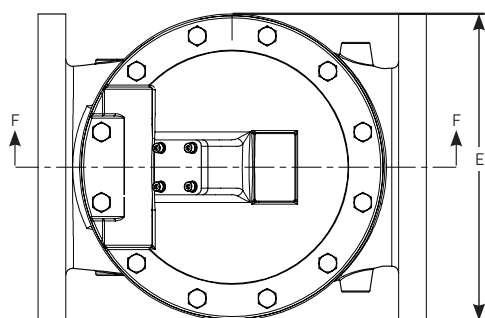


2" - 2½"/DN50 - DN65 and 18" - 24"/DN450 - DN600



3" - 16"/DN80 - DN400

## FLANGED END DIMENSIONS - INCHES (MM)



VALVE SIZE	A	B	C	D	E	WT-LB KG
2"/DN50	8.0 (203)	2.0 (51)	3.38 (86)	5.75 (146)	5.2 (132)	22 (10)
2½"/DN65	8.5 (216)	2.5 (64)	3.38 (86)	5.75 (146)	6.8 (173)	30 (14)
3"/DN80	9.5 (241)	3.0 (76)	3.88 (99)	8.28 (210)	7.4 (188)	40 (18)
4"/DN100	11.5 (292)	4.0 (102)	4.63 (118)	9.25 (235)	9.0 (229)	71 (32)
6"/DN150	15 (381)	6.0 (152)	5.88 (149)	10.28 (261)	10.9 (277)	125 (57)
8"/DN200	19.5 (495)	8.0 (203)	7.63 (194)	12.28 (312)	14.2 (360)	222 (101)
10"/DN250	24.5 (622)	10.0 (254)	9.88 (251)	14.28 (363)	19.6 (498)	372 (169)
12"/DN300	27.5 (698)	12.0 (305)	11.38 (289)	15.78 (401)	21.3 (541)	514 (234)
14"/DN350	31.0 (787)	14.0 (356)	13.38 (340)	17.78 (452)	25.8 (655)	696 (316)
16"/DN400	32.0 (813)	16.0 (406)	15.38 (391)	19.78 (502)	25.2 (640)	987 (449)
18"/DN450	36.0 (914)	18.0 (457)	17.13 (435)	28.94 (735)	29.1 (739)	1340 (609)
20"/DN500	40.0 (1016)	20.0 (508)	19.13 (486)	31.13 (791)	31.9 (810)	1670 (759)
24"/DN600	48.0 (1219)	24.0 (610)	22.75 (578)	38.75 (984)	38.3 (973)	2147 (976)

### Notes:

1. Dimension "D" required to remove access cover.
2. Flanges are per ansi b16.1 Cl. 125/150 Flat faced.

## SUGGESTED SPECIFICATIONS

Check Valve shall be of the flanged, full body type with no internal moving parts except for the resilient disc. Valves shall be rated to 250 psi/17barg 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 thermosetting 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 moulded O-ring on the face of the elastomer. Nylon reinforcements shall be included in the flexible hinge area of the disc assembly.

If requested the manufacturer shall provide 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.

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