

Ductile and Alloy Iron Globe, Angle and Check Valves

Illustrated Index

Ductile Iron Body Globe Valve Outside Screw and Yoke Bronze Trim Class 150 SWP 285 lb. CWP  F-738-31 Bronze Disc Sizes 2" thru 10" Flanged-Raised Face Page 84	Ductile Iron Body Angle Valve Outside Screw and Yoke Bronze Trim Class 150 SWP 285 lb. CWP  F-838-31 Bronze Disc Sizes 2" thru 8" Flanged-Raised Face Page 85	3% Nickel Iron Body Check Valve Stainless Steel Trim Class 125 SWP 200 lb. CWP  F-918-13 Stainless Steel Disc Sizes 2" thru 12" Flanged Ends Page 86
Lead Free Ductile Iron Body Swing Check Valve Bronze Trim Class 150 SWP 250 lb. CWP  F-938-31 Bronze Disc Sizes 2" thru 12" Flanged-Raised Face Page 87	Ductile Iron Body Swing Check Valve 316SS Stainless Steel Trim Class 150 SWP 285 lb. CWP  F-938-33 Stainless Steel Disc Sizes 2" thru 12" Flanged-Raised Face Page 88	Why Ductile Iron? Page 89 How Ductile Iron Compares to Cast Iron and Cast Steel. Page 90 Construction Features. Page 91 Ductile Iron Valve Specifications . . Page 92

NOTE: Check valves should never be installed immediately adjacent to a pump discharge or change in direction. Check Valves should be installed downstream from all sources of line turbulence, including fittings and valves, at a minimum of 5x the nominal pipe diameter (preferably 10x) with straight piping to provide laminar flow.

Visit www.nibco.com for current Chem-Guide and galvanic potential in piping systems information.

Class 150 Ductile Iron Body Globe Valves

Raised Face Flanges • Bolted Bonnet • Outside Screw and Yoke • Bronze Trim

285 PSI/19.7 bar non-shock cold working pressure to -20°F to 100°F/-29°C to 38°C*

Maximum working temperature 650°F/343°C at 125 PSI/8.6 bar

150 PSI/10.3 bar saturated steam to 366°F/186°C

TESTING SPECIFICATION TO MSS SP-85

MATERIAL LIST

PART	SPECIFICATION
1. Handwheel Nut	Steel ASTM A563
2. Identification Plate	Aluminum
3. Handwheel	Iron ASTM A126 Class B
4. Yoke Bushing	Brass ASTM B584
5. Bonnet	Ductile Iron ASTM A395
6. Stem	Brass ASTM B371 Alloy C69400 or C69430
7. Gland Follower Nut	Brass ASTM F467 Alloy C27000
8. Gland Follower	Ductile Iron ASTM A536
9. Packing Gland	Zinc Plated Powdered Iron ASTM B 310 or Brass ASTM B371 C69300
10. Gland Follower Stud	Steel ASTM A307/SAE J429
11. Packing	PTFE Braided
12. ¹ Body Bolt	Steel ASTM A307/SAE J429
13. Body Gasket	Synthetic Fibers
14. ² Body Nut	Steel ASTM A563
15. Swivel Nut	Brass ASTM B584 Alloy C84400
16. ² Disc	Brass ASTM B584 Alloy C84400
17. Seat Ring	Brass ASTM B584 Alloy C84400
18. Body	Ductile Iron ASTM A395

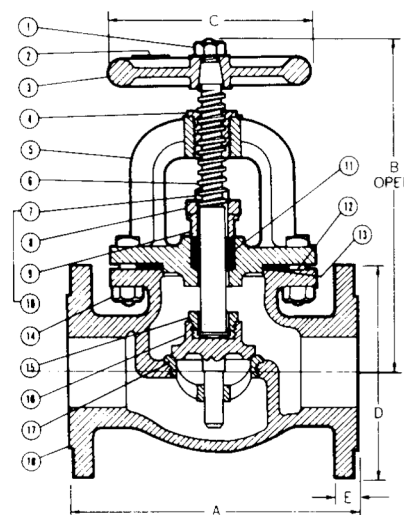
¹ 2" and 10" have hex head steel capscrew.

² 2" thru 6" have Bronze ASTM B584 Disc. 8" thru 10" have Ductile Iron Disc with Bronze ASTM B584 Disc Face Rings and Brass Pilots.



F-738-31

Flanged-Raised Face



F-738-31

Flg x Flg

DIMENSIONS—WEIGHTS—QUANTITIES

Dimensions Weights Quantities													
Size		Dimensions										Weight	
		A		B		C		D		E			
In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	Lbs.	Kg.
2	50	8.00	203	10.19	259	7.00	178	6.00	152	.63	16	32	15
2½	65	8.50	216	11.81	300	8.00	203	7.00	178	.69	17	49	22
3	80	9.50	241	12.50	318	8.00	203	7.50	191	.75	19	66	30
4	100	11.50	292	15.81	402	10.00	254	9.00	229	.94	24	98	45
5	125	13.00	330	16.50	419	10.00	254	10.00	254	.94	24	139	63
6	150	14.00	356	18.88	479	12.00	305	11.00	279	1.00	25	183	83
8	200	19.50	495	21.13	537	16.00	406	13.50	343	1.13	29	362	164
10	250	24.50	622	25.19	640	18.00	457	16.00	406	1.19	30	582	264

FREEZING WEATHER PRECAUTION: Subsequent to testing a piping system, valves should be left in an open position to allow complete drainage.

♦ For detailed Operating Pressure, refer to Pressure Temperature Chart on page 114.

Install 5 pipe diameters minimum downstream from pump discharge or changes in direction to avoid flow turbulence. Flow straighteners may be required in extreme cases.

Visit www.nibco.com for current Chem-Guide and galvanic potential in piping systems information.

Class 150 Ductile Iron Body Angle Valves

Raised Face Flanges • Bolted Bonnet • Outside Screw and Yoke • Bronze Trim

285 PSI/19.7 bar non-shock cold working pressure to -20°F to 100°F/-29°C to 38°C[†]

Maximum working temperature 650°F/343°C at 125 PSI/8.6 bar

150 PSI/10.3 bar saturated steam to 366°F/186°C

TESTING SPECIFICATION TO MSS SP-85

MATERIAL LIST

PART	SPECIFICATION
1. Handwheel Nut	Steel ASTM A563
2. Identification Plate	Aluminum
3. Handwheel	Iron ASTM A126 Class B
4. Yoke Bushing	Brass ASTM B584
5. Bonnet	Ductile Iron ASTM A395
6. Stem	Brass ASTM B371 Alloy C69400 or C69430
7. Gland Follower Nut	Brass ASTM F467 Alloy C27000
8. Gland Follower Stud	Steel ASTM A307/SAE J429
9. Gland Follower	Ductile Iron ASTM A536
10. Packing Gland	Zinc Plated Powdered Iron ASTM B 310 or Brass ASTM B 372 C69400
11. Packing	PTFE Braided
12. ¹ Body Bolt	Steel ASTM A307/SAE J429
13. Body Gasket	Synthetic Fibers
14. ¹ Body Nut	Steel ASTM A563
15. Swivel Nut	Brass ASTM B584 Alloy C84400
16. ² Disc	Brass ASTM B584 Alloy C84400
17. Seat Ring	Brass ASTM B584 Alloy C84400
18. Body	Ductile Iron ASTM A395

¹ 2" have hex head steel capscrew.

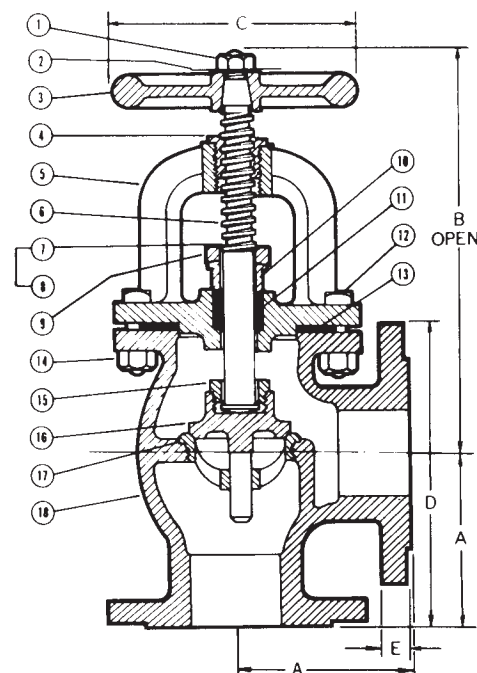
² For Disc 2" thru 6" have Bronze ASTM B584 Disc. 8" thru 10" have Ductile Iron Disc with Bronze ASTM B584 Disc Face Rings and Brass Pilots.

Consult Factory for non-return feature. Fig. No. F-838-31NR.



F-838-31

Flanged-Raised Face



F-838-31

Flg x Flg

DIMENSIONS—WEIGHTS—QUANTITIES

Size		Dimensions										Weight	
		A		B		C		D		E			
In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	Lbs.	Kg.
2	50	4.00	102	10.00	254	7.00	178	6.00	152	.63	16	30	14
2½	65	4.25	108	11.50	292	8.00	203	7.00	178	.69	17	51	23
3	80	4.75	121	12.25	311	8.00	203	7.50	191	.75	19	60	27
4	100	5.75	146	15.00	381	10.00	254	9.00	229	.94	24	99	45
5	125	6.50	171	16.50	419	10.00	254	10.00	254	.94	24	132	60
6	150	7.00	178	18.88	479	12.00	305	11.00	279	1.00	25	188	85
8	200	9.75	248	20.75	527	16.00	406	13.50	343	1.13	29	349	158

FREEZING WEATHER PRECAUTION: Subsequent to testing a piping system, valves should be left in an open position to allow complete drainage.

♦ For detailed Operating Pressure, refer to Pressure Temperature Chart on page 114.

Install 5 pipe diameters minimum downstream from pump discharge or changes in direction to avoid flow turbulence. Flow straighteners may be required in extreme cases.

Visit www.nibco.com for current Chem-Guide and galvanic potential in piping systems information.

Class 125 3% Nickel Iron Body Check Valves

Bolted Bonnet • Renewable Seat and Disc* • Stainless Steel Trim

200 PSI/13.8 bar non-shock cold working pressure to -20°F to 150°F/-29°C to 66°C*

Maximum working temperature 450°F/232°C at 125 PSI/8.6 bar

125 PSI/8.6 bar saturated steam to 353°F/178°C

CONFORMS TO MSS SP-71

MATERIAL LIST

PART	SPECIFICATION
1. Body Bolt ¹	Steel ASTM A307
2. Identification Plate	Aluminum
3. Bonnet	ASTM A126 3% Nickel Iron Class B
4. Body Gasket	Synthetic Fibers
5. Nut	Steel ASTM A563
6. Side Plug	ASTM A 193 B8M S31600SS
7. Hanger Pin	Ductile Iron ASTM A536
8. Hanger	Ductile Iron ASTM A395
9. Disc ²	ASTM A351 CF8M
10. Seat Ring	ASTM A351 CF8M
11. Disc Nut	ASTM A194 B8M S31600 SS
12. Body	ASTM A126 3% Nickel Iron Class B
13. Disc Bolt ²	ASTM A276 S31600 Stainless Steel

¹2" and 10" have hex head steel capscrew

²2"-4" SST ASTM A351 CF8M disc

5"-12" 3% nickel iron disc with SST disc face ring and disc bolt

DIMENSIONS—WEIGHTS—QUANTITIES

Size		Dimensions								Weight	
		A		B		D		E			
In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	Lbs.	Kg.
2	50	8.00	203	3.94	100	6.00	152	.63	16	24	11
2½	65	8.50	216	4.50	114	7.00	178	.69	17	35	16
3	80	9.50	241	5.13	130	7.50	191	.75	19	47	21
4	100	11.50	292	6.13	156	9.00	229	.94	24	80	36
6	150	14.00	356	8.00	203	11.00	279	1.00	25	146	66
8	200	19.50	495	9.44	240	13.50	343	1.13	29	255	116
10	250	24.50	622	12.06	306	16.00	406	1.19	30	426	193
12	300	27.50	699	16.13	410	19.00	483	1.25	32	657	298

*Proper machining facilities required.

Note: On pump discharge, the preferred check valves are:

- inline, spring assisted, center-guided, lift checks
- spring assisted twin (double) disc
- swing design with lever and weight or lever and spring

Install 5 pipe diameters minimum downstream from pump discharge or changes in direction to avoid flow turbulence. Flow straighteners may be required in extreme cases.

NIBCO® Check Valves may be installed in both horizontal and vertical lines with upward flow or in any intermediate position.

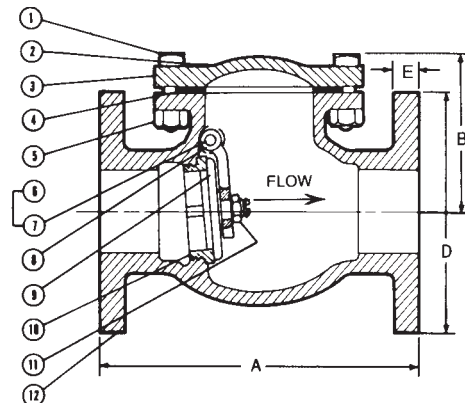
Warning: Do not use for Reciprocating Air Compressor Service.

♦ For detailed Operating Pressure, refer to Pressure Temperature Chart on page 114.



F-918-13

Flanged



F-918-13

Flg x Flg

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Class 150 Ductile Iron Body Swing Check Valves

Raised Face Flanges • Bolted Bonnet • Bronze Trim

285 PSI/19.7 bar non-shock cold working pressure to -20°F to 100°F/-29°C to 38°C♦

Maximum working temperature 650°F/343°C at 125 PSI/8.6 bar

150 PSI/10.3 bar saturated steam to 366°F/186°C

CONFORMS TO MSS SP-136

MATERIAL LIST

PART	SPECIFICATION
1. Bolt	Steel ASTM A307
2. Identification Plate	Aluminum
3. Bonnet	Ductile Iron ASTM A395
4. Body Gasket	Synthetic Fibers
5. Nut	Steel ASTM A563
6. Side Plug	Brass ASTM B584 C84400
7. Hanger Pin	Brass ASTM B371 C69430/C69400
8. Hanger	Ductile Iron ASTM A536
9. Disc ¹	Brass ASTM B584 C84400
10. Seat Ring	Brass ASTM B584 C84400
11. Disc Nut	Brass ASTM B371 C69430/C69400
12. Body	Ductile Iron ASTM A395
13. Disc Bolt ¹	Brass ASTM B371 C69430/C69400

¹2"-4" bronze disc

¹5"-12" ductile iron disc with bronze face ring and disc bolt



F-938-31

Flanged-Raised Face

DIMENSIONS—WEIGHTS—QUANTITIES

Dimensions - Weight - Centrifugal											
Size		Dimensions								Weight	
		A		B		D		E			
In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	Lbs.	Kg.
2	50	8.00	203	3.94	100	6.00	152	.63	16	24	11
2½	65	8.50	216	4.50	114	7.00	178	.69	17	35	16
3	80	9.50	241	5.13	130	7.50	191	.75	19	47	21
4	100	11.50	292	6.13	156	9.00	229	.94	24	81	37
5	125	13.00	330	6.81	173	10.00	254	.94	24	100	45
6	150	14.00	356	8.00	203	11.00	279	1.00	25	146	66
8	200	19.50	495	9.44	240	13.50	343	1.13	29	255	116
10	250	24.50	622	12.06	306	16.00	406	1.19	30	426	193
12	300	27.50	699	16.13	410	19.00	483	1.25	32	660	299

Lever and Weight/Spring Options available only in 3", 4" and 6". (see page 101)

Note: On pump discharge, the preferred check valves are:

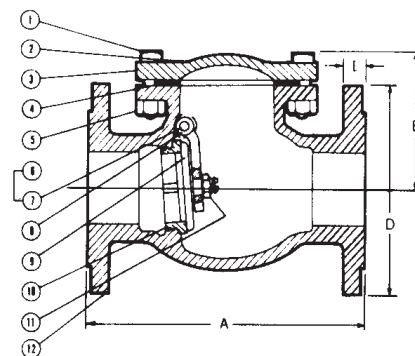
- inline, spring assisted, center-guided, lift checks
- spring assisted twin (double) disc
- swing design with lever and weight or lever and spring

Install 5 pipe diameters minimum downstream from pump discharge or changes in direction to avoid flow turbulence. Flow straighteners may be required in extreme cases.

NIBCO® Check Valves may be installed in both horizontal and vertical lines with upward flow or in any intermediate position.

WARNING: Do not use for Reciprocating Air Compressor Service.

♦ For detailed Operating Pressure, refer to Pressure Temperature Chart on page 114.



F-938-31

Flg x Flg

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Class 150 Ductile Iron Body Swing Check Valves

Raised Face Flanges • Bolted Bonnet • 316 Stainless Steel Trim

285 PSI/19.7 bar non-shock cold working pressure to -20° F to 100° F/-29° C to 38° C*

Maximum working temperature 650°F/343°C at 125 PSI/8.6 bar

150 PSI/10.3 bar saturated steam to 366°F/186°C

CERTIFIED LEAD-FREE* TO NSF/ANSI-61-8 (INCLUDES ANNEX F AND G) AND NSF/ANSI-372 • CONFORMS TO MSS SP-136



NSF/ANSI 61
NSF/ANSI 372

MATERIAL LIST

PART	SPECIFICATION
1. Bolt	Steel ASTM A307
2. Identification Plate	Aluminum
3. Bonnet	Ductile Iron ASTM A395
4. Body Gasket	Synthetic Fibres
5. Nut	Steel ASTM A563
6. Side Plug	Stainless Steel ASTM A193 B8M
7. Hanger Pin	Stainless Steel ASTM A276
8. Hanger	Ductile Iron ASTM A395
9. Disc ¹	Stainless Steel ASTM A351 CF8M
10. Seat Ring	Stainless Steel ASTM A351 CF8M
11. Disc Nut	Stainless Steel ASTM A351 CF8M
12. Body	Ductile Iron ASTM A395
13. Disc Bolt ¹	Stainless Steel UNS S31600

¹2"-4" stainless steel disc

5"-12" ductile iron disc with SST disc face ring and disc bolt

DIMENSIONS—WEIGHTS—QUANTITIES

Size		Dimensions								Weight	
		A		B		D		E			
In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	Lbs.	Kg.
2	50	8.00	203	3.94	100	6.00	152	.63	16	24	11
2½	65	8.50	216	4.50	114	7.00	178	.69	17	35	16
3	80	9.50	241	5.13	130	7.50	191	.75	19	47	21
4	100	11.50	292	6.13	156	9.00	229	.94	24	80	36
5	125	13.00	330	6.81	173	10.00	254	.94	24	100	46
6	150	14.00	356	8.00	203	11.00	279	1.00	25	146	66
8	200	19.50	495	9.44	240	13.50	343	1.13	29	274	125
10	250	24.50	622	12.06	306	16.00	406	1.19	30	426	194
12	300	27.50	699	16.13	410	19.00	483	1.25	32	655	298

Lever and Weight/Spring Options available only in 3", 4" and 6". (see page 101)

Note: On pump discharge, the preferred check valves are:

- inline, spring assisted, center-guided, lift checks
- spring assisted twin (double) disc
- swing design with lever and weight or lever and spring

Install 5 pipe diameters minimum downstream from pump discharge or changes in direction to avoid flow turbulence. Flow straighteners may be required in extreme cases.

NIBCO® Check Valves may be installed in both horizontal and vertical lines with upward flow or in any intermediate position.

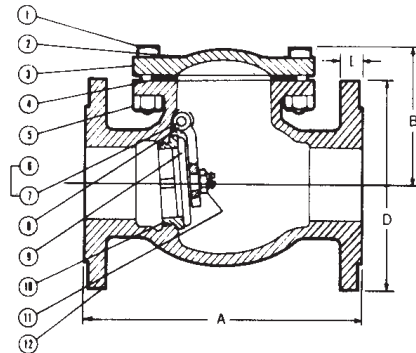
WARNING: Do not use for Reciprocating Air Compressor Service.

♦ For detailed Operating Pressure, refer to Pressure Temperature Chart on page 114.



F-938-33

Flanged-Raised Face



F-938-33

Flg x Flg