

Iron Check Valves

Illustrated Index

	Iron Body Swing Check Valve Bronze Mounted or All Iron 125 lb. SWP 200 lb. CWP  F-918-B/F-918-N/T-918-B Bronze or Cast Iron Disc Sizes 2" thru 12" Flanged or Threaded Page 60, 61	Iron Body Swing Check Valve Bronze Mounted 250 lb. SWP 500 lb. CWP  F-968-B Bronze Disc Sizes 2½" thru 6" Flanged Page 62
Iron Body Silent Check Valve In-Line Lift • Wafer Style • Spring Actuated 125 lb. Class/200 lb. CWP 250 lb. Class/400 lb. CWP  W-910, 125 lb. Class W-960, 250 lb. Class Bronze or Buna-N Seat Sizes 2" thru 10" Wafer Style Page 63	Iron Body Silent Check Valve In-Line Lift • Globe Style • Spring Actuated 125 lb. Class/200 lb. CWP 250 lb. Class/400 lb. CWP  F-910, 125 lb. Class F-960, 250 lb. Class Bronze or Buna-N Seat Sizes 3" thru 16" Flanged Page 64	Iron Body Twin Disk Check Valve 125 lb. Class/200 lb. CWP  W-920-W Buna-N Seat Sizes 2" thru 24" Wafer Style Page 65

Class 125 Iron Body Check Valves

Bolted Bonnet • Horizontal Swing • *Renewable Seat and Disc

125 PSI/8.6 Bar Saturated Steam to 353° F/178° C
200 PSI/13.8 Bar Non-Shock Cold Working Pressure
to -20° F to 150° F/-29° C to 66° C♦

CONFORMS TO MSS SP-71 TYPE 1

MATERIAL LIST

PART	SPECIFICATION
1. Body Bolt	Steel ASTM A 307
2. Identification Plate	Aluminum
3. Bonnet	Cast Iron ASTM A 126 Class B
4. Body Gasket	Synthetic Fibres
5. Body Nut	Steel ASTM A 307
6. Side Plug	Brass ASTM B 16 Alloy C36000
7. Hanger Pin	Brass ASTM B 16 Alloy C36000
8. 7 Hanger	Cast Bronze ASTM B 584 Alloy C84400
9. 1 Disc	Cast Bronze ASTM B 584 Alloy C84400 or ASTM A 536 Ductile Iron with Bronze Face Ring
10. Seat Ring	Cast Bronze ASTM B 584 Alloy C84400
11. Disc Nut	Brass ASTM B 16 Alloy C36000
12. Body	Cast Iron ASTM A 126 Class B
13. 1 Disc Bolt	Brass ASTM B 16 Alloy C36000
14. Disc Plate	Cast Iron ASTM A 126 Class B
15. Disc Cage	Cast Iron ASTM A 126 Class B

1 2" thru 4" have Bronze ASTM B 62 Disc.

5" thru 12" have Iron Disc with Bronze Disc Face Rings and Disc Bolt.

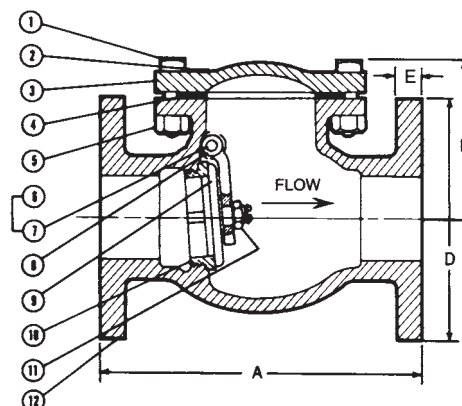
2 10" is Ductile Iron ASTM A 536.



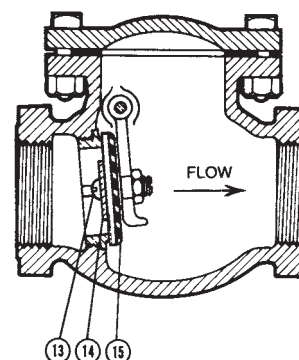
F-918-B
Flanged



T-918-B
Threaded



F-918-B
Flg x Flg



T-918
NPT x NPT

DIMENSIONS—WEIGHTS—QUANTITIES

Dimensions															
Size		F-918-B		T-918-B		B		D		E		F-918-B		T-918-B	
		A		A								Lbs. Kg.		Lbs. Kg.	
In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	Lbs.	Kg.	Lbs.	Kg.
2	50	8.00	203	6.50	165	3.94	100	6.00	152	.63	16	24	11	15	7
2½	65	8.50	216	7.50	191	4.50	114	7.00	178	.69	17	35	16	26	12
3	80	9.50	241	8.00	203	5.13	130	7.50	191	.75	19	47	21	31	14
4	100	11.50	292	9.38	238	6.13	156	9.00	229	.94	24	80	36	54	24
5	125	13.00	330	10.63	270	6.81	173	10.00	254	.94	24	100	45	80	36
6	150	14.00	356	12.25	311	8.00	203	11.00	279	1.00	25	146	66	121	54
8	200	19.50	495	x	x	9.44	240	13.50	343	1.13	29	274	124	x	x
10	250	24.50	622	x	x	12.06	306	16.00	406	1.19	30	426	193	x	x
12	300	27.50	699	x	x	16.13	410	19.00	483	1.25	32	675	306	x	x

Note: On pump discharge, the preferred check valves are an in-line spring loaded, swing design with lever and weight or lever and spring. You should also install the check valve as far from the pump as possible and at a minimum length of 5 times the pipe diameter. Flow straighteners may be required.

* Proper machining facilities required.

x Not available this size.

2½" thru 12" are available with lever and weight or lever and spring.

WARNING: Do not use for Reciprocating Air Compressor Service.

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

♦ For detailed Operating Pressure, refer to Pressure Temperature Chart on page 107.

Class 125 Iron Body Check Valves

Bolted Bonnet • Horizontal Swing • *Renewable Iron Seat and Disc

125 PSI/8.6 Bar Fluid Pressure to 353° F/178° C
200 PSI/13.8 Bar Non-Shock Cold Working Pressure
to -20° F to 150° F/-29° C to 66° C♦

CONFORMS TO MSS SP-71 TYPE 1

MATERIAL LIST

PART	SPECIFICATION
1. Body Bolt	Steel ASTM A 307
2. Identification Plate	Aluminum
3. Bonnet	Cast Iron ASTM A 126 Class B
4. Body Gasket	Synthetic Fibres
5. Body Nut	Steel ASTM A 307
6. Side Plug	Steel ASTM A 307
7. Hanger Pin	Steel ASTM A 108 1214L
8. Hanger	Ductile Iron ASTM A 536
9. Disc	Cast Iron ASTM A 126 Class B or ASTM A 536 Ductile Iron (2"-4")
10. Seat Ring	Cast Iron ASTM A 126 Class B
11. Disc Nut	Steel ASTM A 307
12. Body	Cast Iron ASTM A 126 Class B
13. † Disc Bolt	Mild Steel (not shown)

† 5" thru 12" only.



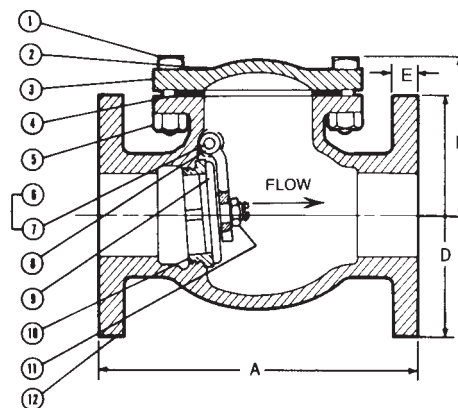
F-918-N
Flanged

DIMENSIONS—WEIGHTS—QUANTITIES

Size		Dimensions								F-918-N	
		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	99	45
6	150	14.00	356	8.00	203	11.00	279	1.00	25	147	67
8	200	19.50	495	9.44	240	13.50	343	1.13	29	254	115
10	250	24.50	622	12.06	306	16.00	406	1.19	30	424	192
12	300	27.50	699	16.13	410	19.00	483	1.25	32	646	293

* Proper machining facilities required.

Note: On pump discharge, the preferred check valves are an in-line spring loaded, swing design with lever and weight or lever and spring. You should also install the check valve as far from the pump as possible and at a minimum length of 5 times the pipe diameter. Flow straighteners may be required.



F-918-N
Flg x Flg

WARNING: Do not use for Reciprocating Air Compressor Service.

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

♦ For detailed Operating Pressure, refer to Pressure Temperature Chart on page 107.

Class 250 Iron Body Check Valves

Bolted Bonnet • Horizontal Swing • *Renewable Bronze Seat and Disc

250 PSI/17.2 Bar Saturated Steam to 406° F/207° C
500 PSI/34.5 Bar Non-Shock Cold Working Pressure
to -20° F to 150° F/-29° C to 66° C♦

CONFORMS TO MSS SP-71 TYPE 1

MATERIAL LIST

PART	SPECIFICATION
1. Body Bolt	Steel ASTM A 307
2. Identification Plate	Aluminum
3. Bonnet	Cast Iron ASTM A 126 Class B
4. Body Gasket	Reinforced Graphite
5. Body Nut	Steel ASTM A 307
6. Side Plug	Brass ASTM B 16 Alloy C36000
7. Hanger Pin	Brass ASTM B 16 Alloy C36000
8. Hanger	Cast Bronze ASTM B 584 Alloy C84400
9. Disc Nut	Cast Bronze ASTM B 584 Alloy C84400
10. Disc	Cast Bronze ASTM B 584 Alloy C84400
11. Seat Ring	Cast Bronze ASTM B 584 Alloy C84400
12. Body	Cast Iron ASTM A 126 Class B

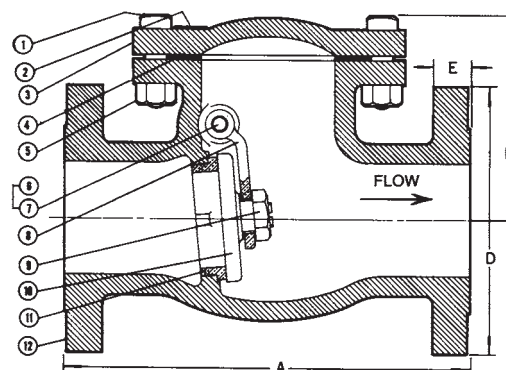


F-968-B
Flanged

DIMENSIONS—WEIGHTS—QUANTITIES

Dimensions (Metric) Conversions											
Size		Dimensions								F-968-B	
		A		B		D		E			
In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	Lbs.	Kg.
2½	65	11.50	292	5.83	149	7.50	191	1.00	25	62	28
3	80	12.50	318	6.31	160	8.25	210	1.13	29	77	35
4	100	14.00	356	7.56	192	10.00	254	1.25	32	129	58
6	150	17.50	445	8.50	216	12.50	318	1.44	37	225	102

* Proper machining facilities required.



F-968-B
Flg x Flg

WARNING: Do not use for Reciprocating Air Compressor Service.

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

♦ For detailed Operating Pressure, refer to Pressure Temperature Chart on page 107.

Class 125/250 Iron Body Silent Check Valves

Wafer Style • Renewable Seat and Disc • Spring Actuated

Class 125, 200 PSI/13.8 Bar Non-Shock Cold Working Pressure

Class 250, 400 PSI/27.6 Bar Non-Shock Cold Working Pressure

Maximum Temperature to 200° F/93° C♦

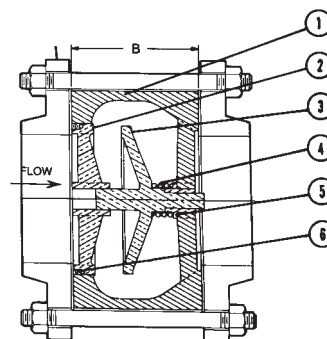
FM APPROVED

MATERIAL LIST

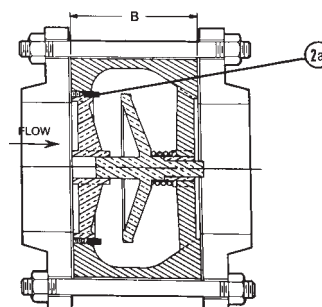
PART	SPECIFICATION
1. Body	Cast Iron ASTM A 48 Class 35
2. Seat	Bronze ASTM B 584 Alloy C83600 (B)
2a. Seat	Buna-N Bonded to Bronze (W)
3. Disc	Bronze ASTM B 584 Alloy C83600
4. Spring	Stainless Steel Type 302 ASTM A 313
5. Bushing	6" and smaller ASTM B 16 8" and larger ASTM B 584 C93200
6. Set Screws	Stainless Steel Type 304 ASTM A 276



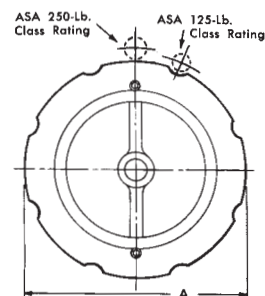
**W-910 125 lb. Class
W-960 250 lb. Class**



W-910-B/W-960-B
Wafer



W-910-W/W-960-W
Wafer



W-910-B/W-960-B
Wafer

DIMENSIONS—WEIGHTS—QUANTITIES

Size		Dimensions				W-910		W-960	
		A		B					
In.	mm.	In.	mm.	In.	mm.	Lbs.	Kg.	Lbs.	Kg.
*2	50	4.25	108	2.63	67	5	2	5	2
*2½	65	5.00	127	2.88	73	8	4	8	4
*3	80	5.75	146	3.13	79	11	5	11	5
*4	100	7.00	178	4.00	102	18	8	18	8
*5	125	8.38	213	4.63	117	27	12	27	12
*6	150	9.75	248	5.50	140	37	17	37	17
8	200	13.38	340	6.50	165	†86	39	†95	43
10	250	16.00	406	8.25	210	†130	59	†145	66

*NOTE: Sizes 2" thru 6" have dual class ratings (125 lb. and 250 lb.) resulting in W-910 and W-960 being identical. 8" and 12" have special machining in accordance with Flange Class.

316 Stainless Steel Trim available – Consult Factory.

† Class 125 only.

‡ Class 250 only.

USE THIS VALVE ONLY WITH FLAT FACE FLANGE AND FULL FACE GASKET

- WARNING:**
1. Seat end of valve must be mated to a standard flat faced metal flange. Rubber flanges not acceptable.
 2. These are not to be used as steam valves.
 3. Valves are not to be used near a reciprocating air compressor.
 4. Install 5 pipe diameters minimum downstream from pump discharge or elbows to avoid flow turbulence. Flow straighteners may be required in extreme cases.

NOTE: On pump discharge, the preferred check valves are an in-line spring loaded, swing design with lever and weight or lever and spring.

♦ For detailed Operating Pressure, refer to Pressure Temperature Chart on page 107.

Class 125/250 Iron Body Silent Check Valves

Flanged • Globe Style • Renewable Seat and Disc • Spring Actuated

Class 125, 200 PSI/13.8 Bar Non-Shock Cold Working Pressure

Class 250, 400 PSI/27.6 Bar Non-Shock Cold Working Pressure

Maximum Temperature to 200° F/93° C♦

CONFORMS TO MIL-V-18436F

FM APPROVED

MATERIAL LIST

PART	SPECIFICATION
1. Body	Cast Iron ASTM A 48 Class 35
2. Seat	Bronze ASTM B 584 Alloy C83600 (B)
2a. Seat	Buna-N Bonded to Bronze (W)
3. Disc	Bronze ASTM B 584 Alloy C83600
4. Spring	Stainless Steel Type 302 ASTM A 313
5. Bushing	6" and smaller ASTM B 16 8" and larger ASTM B 584 C83600
6. Set Screws	Stainless Steel Type 304 ASTM A 276



F-910, 125 lb. Class
F-960, 250 lb. Class
Flanged

DIMENSIONS—WEIGHTS—QUANTITIES

Size		Dimensions		F-910		F-960	
		In.	mm.				
2½	65	5.50	140	24	11	24	11
3	80	6.00	152	28	13	36	16
4	100	7.25	184	43	20	59	27
5	125	8.50	216	55	25	78	35
6	150	9.75	248	71	32	103	47
8	200	12.50	318	123	56	179	81
10	250	13.50	343	183	83	253	115
12	300	14.25	362	306	139	401	182
14	350	15.75	400	410	186	511	232
16	400	17.63	448	501	227	697	316
18	450	18.75	476	725	329	960	435
20	500	20.63	524	890	404	1180	535
24	600	24.00	610	1220	553	x	x
30	750	29.25	743	2000	907	x	x
36	900	45.00	1143	4425	2007	x	x

x Not available these sizes.

NOTE: F-910 made to 125 lb. Flange dimensions.

F-960 made to 250 lb. Flange dimensions.

A Wafer Style Butterfly Valve can be mated on the down stream side of the F-910 2½"–10" sizes without use of spacers or adapters.

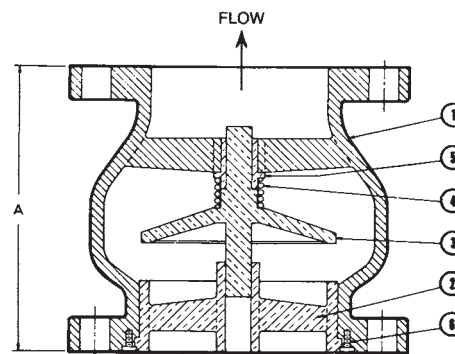
316 Stainless Steel Trim available – Consult Factory.

USE THIS VALVE ONLY WITH FLAT FACE FLANGE AND FULL FACE GASKET.

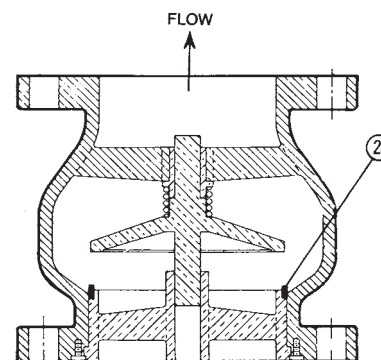
WARNING:

1. Seat end of valve must be mated to a standard flat faced metal flange. Rubber flanges not acceptable.
2. These are not to be used as steam valves.
3. Valves are not to be used near a reciprocating air compressor.
4. Install 5 pipe diameters minimum downstream from pump discharge or elbows to avoid flow turbulence. Flow straighteners may be required in extreme cases.

NOTE: On pump discharge, the preferred check valves are in-line spring loaded, swing design with lever and weight or lever and spring.



F-910-B or F-960-B
Flg x Flg Flg x Flg



F-910-W or F-960-W
Flg x Flg Flg x Flg

♦ For detailed Operating Pressure, refer to Pressure Temperature Chart on page 107.

Class 125 Iron Body Silent Check Valves

Twin Disc • Wafer Style • Bronze Disc • Buna-N Seat • Spring Actuated

200 PSI/13.8 Bar Non-Shock Cold Working Pressure
Maximum Temperature to 200° F/93° C♦

CONFORMS TO ANSI B16.1
FM APPROVED

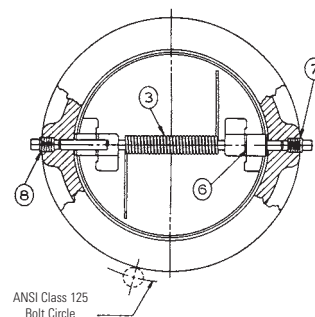
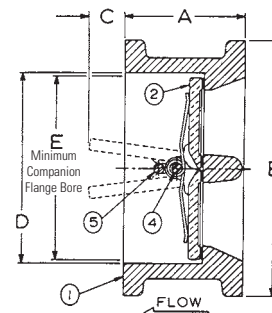
MATERIAL LIST

PART	SPECIFICATION
1. Body	Cast Iron ASTM A 126 Class B w/Buna-N Resilient Seat Molded to Body
2.* Disc	Bronze ASTM B 584
3. Spring	Stainless Steel T-316 ASTM A 313
4. Disc Hinge Pin	Stainless Steel T-316 ASTM A 276
5. Disc Stop Pin	Stainless Steel T-316 ASTM A 276
6. Disc Thrust Bearing	Stainless Steel T-316 ASTM A 240
7. Hinge Pin Retainer	Steel
8. Stop Pin Retainer	Steel
9. Lifting Eye Bolt	Steel (not shown)

* Sizes 14" thru 24" are Nickel Plated Ductile Iron ASTM A 536 as standard.
Aluminum Bronze is optional.



W-920-W
Wafer



W-920-W
Wafer

DIMENSIONS—WEIGHTS—QUANTITIES

Size		Dimensions										W-920-W	
		A		B		C		D		E			
In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	Lbs.	Kg.
2	50	2.13	54	4.13	105	.19	5	2.56	65	1.88	48	5	2
2½	65	2.38	60	4.88	124	.31	8	3.06	78	2.38	60	7	3
3	80	2.63	67	5.38	137	.50	13	3.69	94	2.88	73	9	4
4	100	2.63	67	6.88	175	1.00	25	4.63	117	3.88	98	13	6
5	125	3.25	83	7.75	197	1.13	29	5.69	144	4.88	124	19	9
6	150	3.75	95	8.75	222	1.25	32	6.75	171	5.75	146	26	12
8	200	5.00	127	11.00	279	1.31	33	8.75	222	7.75	197	49	22
10	250	5.50	140	13.38	340	2.50	64	10.88	276	9.75	248	90	41
12	300	7.13	181	16.13	410	2.38	60	12.88	327	11.00	279	141	64
*14	350	7.25	184	17.75	451	3.25	83	14.38	365	13.00	330	200	91
*16	400	7.50	191	20.25	514	4.50	114	16.38	416	15.00	381	285	129
*18	450	8.00	203	21.63	549	5.25	133	18.38	467	17.00	432	325	147
*20	500	8.38	213	23.88	606	6.38	162	20.25	514	19.00	483	410	186
*24	600	8.75	222	28.25	718	8.63	219	24.25	616	23.25	591	725	329

* 150 PSI Non-Shock Cold Working Pressure

NOTE: Twin Disc Check Valves can be installed horizontally or in the vertical position with flow up.

CAUTION: For horizontal flow applications, the valve must be installed with disc hinge pin in the vertical position, to insure proper operation.

WARNING:

1. Seat end of valve must be mated to a standard flat faced metal flange. Rubber flanges not acceptable.
2. These are not to be used as steam valves.
3. Valves are not to be used near a reciprocating air compressor.
4. Install 5 pipe diameters minimum downstream from pump discharge or elbows to avoid flow turbulence. Flow straighteners may be required in extreme cases.

NOTE: On pump discharge, the preferred check valves are in-line spring loaded, swing design with lever and weight or lever and spring.

♦ For detailed Operating Pressure, refer to Pressure Temperature Chart on page 107.