

Quality People. Building Solutions.

Comfort Systems USA (Arkansas), Inc.
P.O. Box 16620
Little Rock, AR 72231
Phone 501-834-3320
Fax 501-834-5416

Date: 10/10/2023

Return Request: 10/16/2023

Project: ASU Mid-South RC & UC Chiller Replacement

Supplier: Comfort Systems USA (Arkansas), Inc.

Manufacturer: Nibco

Submittal: Valves

Submittal Number: 23 05 23-01

Drawing # and Installation: Mechanical Drawings

ARCHITECT

Witsell Evans Rasco
901 W. Third Street
Little Rock, AR 72201
501-374-5300

ENGINEER

Pettit & Pettit
201 E. Markham St. #400
Little Rock, AR 72201
501-374-3731

GENERAL CONTRACTOR

Baldwin & Shell
3725 Champion Hills Driver, Suite 1300
Memphis, TN 38125
901-755-2952

MECHANICAL SUBCONTRACTOR

Comfort Systems USA (Arkansas), Inc.
9924 Landers Rd.
N. Little Rock, AR 72117
501-834-3320

Notes:

CSUSA PROJECT NO.

23-1024

jon@comfortar.com

Lead-Free Bronze Ball Valves

Features: Silicon Performance Bronze® Alloy • Two-Piece Body • Full Port • Blowout-Proof Stem

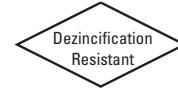
Approvals: MSS SP-110/145 • IAPMO/ANSI Z1157 • NSF/ANSI 61/372-8 Commercial Hot 180°F

Size range: ¼" - 3"

Pressure rating: 600 PSI non-shock cold working pressure

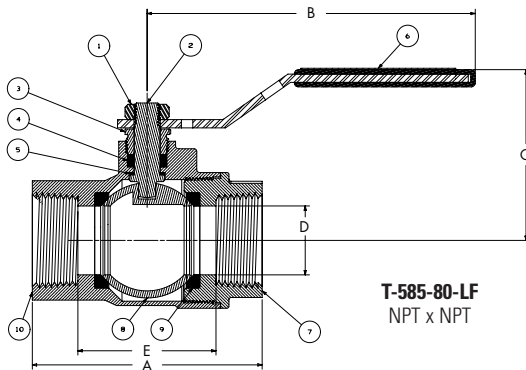
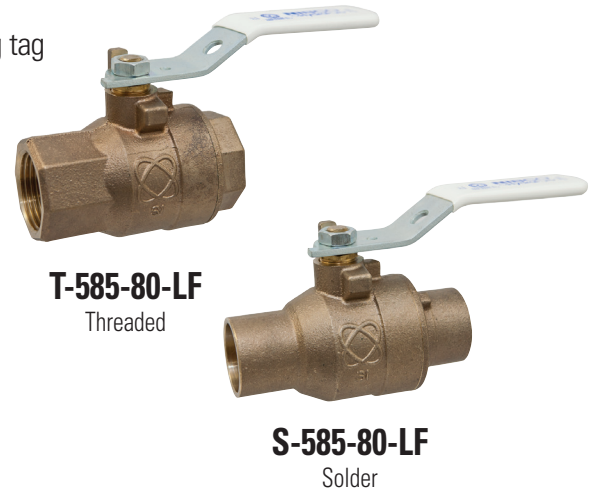
Maximum pressure / temperature: 100 PSI at 300° F

Lead-free markings: Double oval in body casting, white handle and blue hang tag

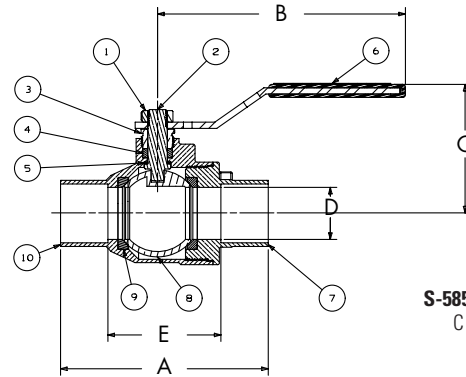


MATERIAL LIST

PART	SPECIFICATION
1. Handle Nut	Zinc Plated Steel
2. Stem	Silicon Bronze ASTM B371 Alloy C69300
3. Pack Gland	Brass ASTM B16 Alloy C36000
4. Packing, Stem	Virgin PTFE
5. Washer, Thrust	Reinforced PTFE
6. Handle	Zinc Plated Steel Clear Chromate Plastisol Coated
7. End Piece	Silicon Bronze ASTM B584 Alloy C87600
8. Seat Ring (2)	Reinforced PTFE
9. Ball	DZR Brass SAE J461 C46500 (¼"-1") Stainless Steel ASTM A276 S31600 or ASTM A351CF8M (1¼"-3")
10. Body	Silicon Bronze ASTM B584 Alloy C87600



T-585-80-LF
NPT x NPT

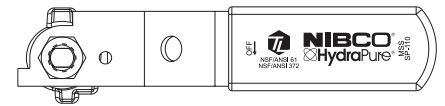


S-585-80-LF
C x C

DIMENSIONS—WEIGHTS—QUANTITIES

Dimensions

SIZE	T-585-80-LF		S-585-80-LF		T-585-80-LF		S-585-80-LF		T-585-80-LF		S-585-80-LF		T-585-80-LF		S-585-80-LF		Master Ctn. Qty.			
	A	A	B	C	D	E	E	Lbs.	Kg.	Lbs.	Kg.	Lbs.	Kg.	Lbs.	Kg.					
¼	8	1.78	45	1.83	46	3.96	101	1.86	47	0.31	8	1.00	25	1.21	31	0.43	0.19	0.40	0.18	24
⅜	10	1.79	45	1.97	50	3.96	101	1.85	47	0.38	10	1.80	46	1.21	31	0.44	0.20	0.41	0.19	24
½	15	2.23	57	2.4	61	3.96	101	1.96	50	0.5	13	1.16	29	1.40	36	0.65	0.30	0.56	0.25	80
¾	20	2.78	71	3.16	80	4.76	121	2.28	58	0.75	19	1.68	43	1.66	42	1.20	0.55	1.02	0.46	60
1	25	3.34	85	3.99	101	4.76	121	2.48	63	1	25	2.00	51	2.17	55	1.63	0.74	1.50	0.68	40
1¼	32	3.75	95	4.13	105	6.75	171	3.10	79	1.25	32	2.39	61	2.19	56	2.87	1.30	2.41	1.09	20
1½	40	4.26	108	4.97	126	6.75	171	3.32	84	1.5	38	2.89	73	2.79	71	3.83	1.74	3.62	1.64	10
2	50	4.80	122	6.02	153	6.75	171	3.56	90	2	51	3.40	86	3.34	85	5.57	2.53	5.54	2.51	6
2½	65	6.00	152	7.21	183	8.06	205	4.40	112	2.50	64	4.12	105	4.27	108	13.70	6.21	12.80	5.80	2
3	76	6.5	165	8	202	8.06	205	4.65	118	2.95	75	4.46	113	4.62	117	14.30	6.49	12.50	5.67	2



Handle Markings

Handle Options:

- Stainless Steel Lever
- NIB-Seal®
- NIB-Seal® Locking Lever
- Locking Lever
- Stainless Steel Locking Lever
- Memory Stop
- Extended Lever w/ Memory Stop
- Round
- Wing
- Horizontal and Vertical Chain



WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

LEAD-FREE: Weighted average lead content ≤ 0.25%

Bronze Ball Valves

Two-Piece Body • Full Port • Bronze Trim • Blowout-Proof Stem



600 PSI/41.4 bar non-shock cold working pressure
150 PSI/10.3 bar saturated steam*

CONFORMS TO MSS SP-110

MATERIAL LIST

PART	SPECIFICATION
1. Handle Nut	Zinc Plated Steel
2. Handle	Zinc Plated Steel Clear Chromate Plastisol Coated
3. Threaded Pack Gland	Brass ASTM B 16 Alloy C36000
4. Packing	PTFE
5. Stem	Silicon Bronze ASTM B 371 Alloy C69300 or ASTM B 99 Alloy C65100
6. Thrust Washer	Reinforced PTFE
7. Ball	Brass ASTM B 124 Alloy C37700 or ASTM B16 Alloy C36000 EACH with Hard Chrome Plate
8. Seat Ring (2)	Reinforced PTFE
9. Body	Cast Red Bronze ASTM B 584 Alloy C84400
10. Body End Piece	Cast Red Bronze ASTM B 584 Alloy C84400

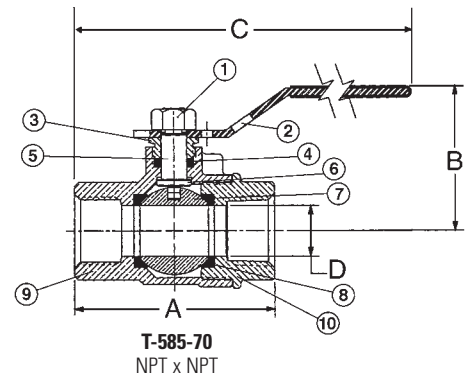
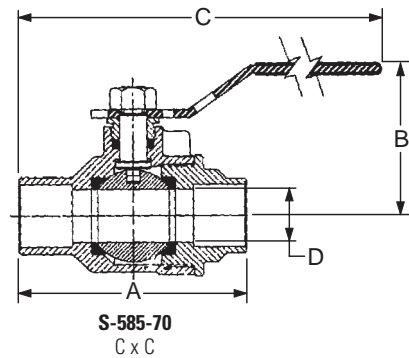
¼" size only has a 304 stainless steel grounding washer.



T-585-70
Threaded



S-585-70
Solder



DIMENSIONS—WEIGHTS—QUANTITIES

Dimensions

Size	T-585-70		S-585-70		T-585-70		S-585-70		D	T-585-70		S-585-70		Master Ctn. Qty.
	A	A	B	C	C	C	C	Lbs.		Kg.	Lbs.	Kg.		
In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	Lbs.	Kg.	Lbs.	Kg.	Lbs.	Kg.	
¼ 8	2.00 51	1.75 44	1.75 44	5.00 127	4.75 121	.38 10	.45 .21	.42 .19	100					
⅜ 10	2.00 51	1.84 47	1.75 44	5.00 127	4.81 122	.38 10	.45 .21	.42 .19	100					
½ 15	2.44 62	2.56 65	1.88 48	5.19 132	5.25 133	.50 13	.64 .29	.60 .27	100					
¾ 20	2.94 75	3.25 82	2.25 57	6.25 159	6.25 159	.75 19	1.33 .60	1.27 .58	50					
1 25	3.34 85	3.75 95	2.38 60	6.44 164	6.63 168	1.00 25	1.79 .81	1.72 .78	40					
1¼ 32	4.19 106	5.06 128	3.00 76	6.75 171	7.19 183	1.25 32	3.12 1.41	3.18 1.44	20					
1½ 40	4.72 120	5.99 151	3.16 80	9.06 230	9.69 246	1.50 38	4.78 2.17	5.12 2.32	10					
2 50	5.16 131	6.72 170	3.50 89	9.25 235	10.06 256	2.00 51	6.68 3.03	7.10 3.22	8					

Note: solder end is designed to be soft-soldered into lines using solders with the melting point not exceeding 500°F. Higher temperature solders will damage the seat material. See installation sheet packaged with valves.

♦ For detailed operating pressure, refer to pressure temperature chart on page 41.

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

*Weighted average lead content ≤ 0.25%

**LEAD FREE*
OPTION
AVAILABLE**

**OXYGEN
SERVICE
OPTION
AVAILABLE**

Visit our website for the most current information.

200 PSI Butterfly Valves

Ductile Iron Body • Extended Neck • Geometric Drive • Molded-In Seat Liner
• Lug and Wafer Style

Sizes 2" through 12"

Install between Std. ASME Class 125/150 flanges.
Lug Style 200 PSI bi-directional dead end service rating without a downstream flange required.

THIRD PARTY CERTIFIED BY QAI TO MEET MSS SP-67 STANDARD •
U.S. COAST GUARD "CATEGORY A" • CERTIFIED LEAD-FREE* BY
TRUESDAIL LABS TO NSF/ANSI 61-8 COMMERCIAL HOT 180°F
AND NSF/ANSI 61 AND 372



WD-2000
Wafer Style
EPDM Liner
and Aluminum
Bronze Disc



LD-2000
Lug Style
EPDM Liner
and Aluminum
Bronze Disc

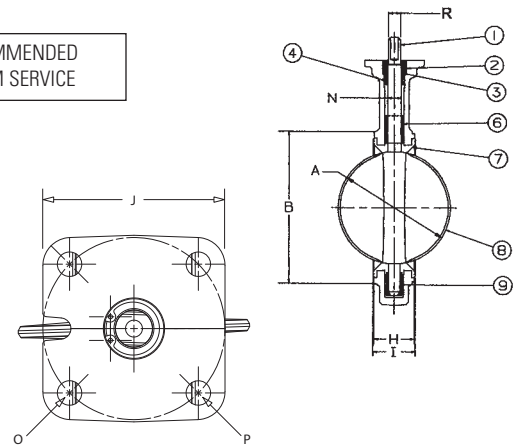
MATERIAL LIST

PART	SPECIFICATION
1. Stem	Stainless Steel ASTM A582 Type 416
2. Collar Bushing	Brass ASTM B16
3. Stem Seal	EPDM Rubber
4. Body Seal	EPDM Rubber
5. Nameplate	Aluminum
6. Upper Bushing	Copper CDA 122
7. Liner	EPDM Rubber
8. Disc	Alum. Brz. ASTM B148 Alloy 955
9. Lower Bushing	Copper CDA 122
10. Body Wafer	Ductile Iron ASTM A536
11. Body Lug	Ductile Iron ASTM A536

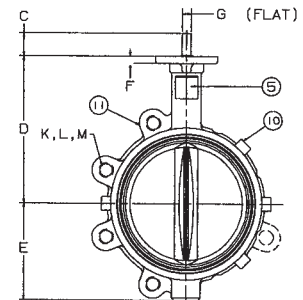
NOT RECOMMENDED
FOR STEAM SERVICE

DIMENSIONS — WEIGHTS

Size	Flat Metal Rubber Square Dia.										
In. mm. A B C D E F G H I J N											
2 50	2.53	4.00	1.25	5.38	2.88	.38	.312	1.688	1.812	3.25	.500
2½ 65	2.90	4.69	1.25	5.88	3.27	.38	.370	1.812	1.938	3.25	.562
3 80	3.15	5.12	1.25	6.12	3.40	.38	.370	1.812	1.938	3.25	.562
4 100	4.09	6.12	1.25	6.88	4.00	.38	.403	2.062	2.188	3.25	.625
5 125	5.13	7.25	1.25	7.38	4.75	.38	.496	2.188	2.312	3.25	.750
6 150	6.13	8.25	1.25	8.00	5.29	.38	.496	2.188	2.312	3.25	.750
8 200	8.13	10.41	1.25	9.25	6.50	.50	.560	2.375	2.500	3.25	.875
10 250	10.13	12.52	1.25	10.50	8.00	.50	.686	2.688	2.812	4.75	1.125
12 300	12.13	15.00	1.25	12.00	9.25	.50	.748	3.000	3.125	4.75	1.250



Capscrew/Stud Data											Lug Weight		Wafer Weight	
Size	O	P	R	K	L	Wafer Length	Lug Length	M	B.C.	Lbs.	Kg.	Lbs.	Kg.	
In. mm.	B.C.	Dia.	Dia.	No.	Dia.			B.C.						
2 50	3.25	.437	.437	4	5/8-11unc	Refer to butterfly valve technical information for bolt lengths		4 ¾	7	3.2	5.5	2.5		
2½ 65	3.25	.437	.500	4	5/8-11unc		5 ½	9	4.1	7.5	3.4			
3 80	3.25	.437	.500	4	5/8-11unc		6	9.5	4.3	8	3.6			
4 100	3.25	.437	.562	8	5/8-11unc		7 ½	15	6.8	11	5.0			
5 125	3.25	.437	.656	8	¾-10unc		8 ½	21	9.5	15	6.8			
6 150	3.25	.437	.656	8	¾-10unc		9 ½	24	10.9	18	8.2			
8 200	3.25	.437	.781	8	¾-10unc		11 ¾	34	15.4	28	12.7			
10 250	5.00	.562	1.000	12	7/8-9unc	14 ¼	62	28.1	45.5	20.7				
12 300	5.00	.562	1.062	12	7/8-9unc	17	90	40.9	70	31.8				



For actuated service where a lower torque is required use NIBCO Fig. No. WDLXXX-0 or LDLXXX-0 series, sizes 2" thru 12" only. Maximum pressure rating of 100 PSI for wet application and 50 PSI for dry application.

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

*Weighted average lead content ≤ 0.25%

Class 150 Bronze Gate Valves

Union Bonnet • Rising Stem • Solid Wedge

150 PSI/10.3 bar saturated steam to 366° F/185° C
300 PSI/20.7 bar non-shock cold working pressure

CONFORMS TO MSS SP-80

MATERIAL LIST

PART	SPECIFICATION
1. Handwheel Nut	300 Series Stainless Steel
2. Identification Plate	Aluminum
3. Handwheel	Malleable Iron ASTM A 47
4. Stem	Silicon Bronze ASTM B 371 Alloy C69400/C69430 or ASTM B 99 Alloy C65100
5. Packing Nut	Bronze ASTM B 62 or ASTM B124 Alloy C84400 or Brass ASTM B16
6. Packing Gland	Bronze ASTM B 62 or ASTM B584 Brass ASTM B16 C36000
7. Packing	Aramid Fibers with Graphite
8. Bonnet	Bronze ASTM B 62
9. Union Nut	Bronze ASTM B 62
10. Body	Bronze ASTM B 62
11. Wedge	Bronze ASTM B 62

DIMENSIONS—WEIGHTS—QUANTITIES

Size	Dimensions						T-134		S-134		Master Ctn. Qty.	
	A		B		C		Lbs.	Kg.	Lbs.	Kg.		
In.	mm.	In.	mm.	In.	mm.	In.	mm.	Lbs.	Kg.	Lbs.	Kg.	
¼	8	1.96	50	4.81	122	x	x	1.08	0.49	x	x	50
⅜	10	1.96	50	4.81	122	0.79	20	1.12	0.51	1.02	0.46	50
½	15	2.31	59	4.81	122	0.76	19	1.12	0.51	1.06	0.48	40
¾	20	2.51	64	5.81	148	0.98	25	1.70	0.77	1.54	0.70	30
1	25	2.92	74	7.09	180	1.13	29	2.38	1.08	2.26	1.03	20
1¼	32	3.20	81	8.13	206	1.18	30	3.73	1.69	3.56	1.61	10
1½	40	3.33	85	9.81	249	1.29	33	4.67	2.12	4.46	2.02	10
2	50	3.44	87	11.56	294	1.31	33	7.77	3.53	7.14	3.24	6
2½	65	4.35	110	14.31	364	1.81	46	12.70	5.77	12.30	5.58	4
3	80	5.31	135	16.50	419	1.97	50	18.74	8.51	17.13	7.78	2

x Not available this size.

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 116.

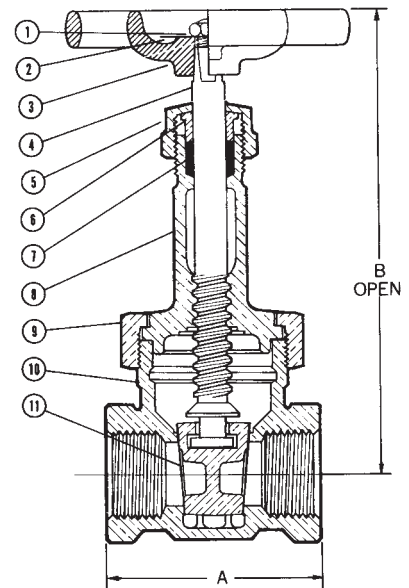
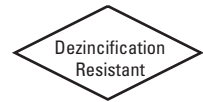
WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.



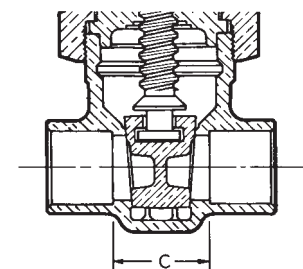
T-134
Threaded



S-134
Solder



T-134
NPT x NPT



S-134
C x C

Visit our website for the most current information.

Lead-Free Bronze Gate Valves

Features: Silicon Performance Bronze® Alloy • Screw-In Bonnet • Rising Stem

Approvals: Conforms to MSS SP-139 • Solid Wedge • NSF/ANSI-61-8 Commercial Hot 180°F (includes annex F and G) and NSF/ANSI-372

Size range: 1/4" - 3"

Pressure rating: 300 PSI non-shock cold working pressure

Maximum pressure / temperature: 100 PSI at 300° F

Lead-free markings: Double oval in body casting, white handle and blue hang tag



NSF/ANSI 61
NSF/ANSI 372



MATERIAL LIST

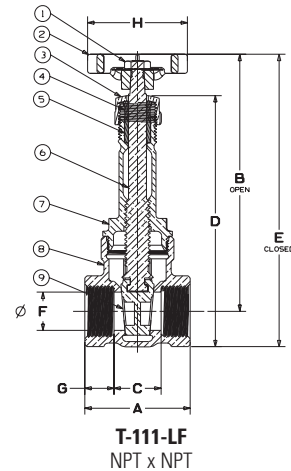
PART	SPECIFICATION
1. Handwheel Nut	300 Series Stainless Steel
2. Identification Plate	Aluminum
3. Handwheel	Malleable Iron ASTM A47
4. Stem	Silicon Bronze ASTM B371 Alloy C69430 or ASTM B99 Alloy C65100
5. Packing Nut	Bronze ASTM B62 or ASTM B584 Alloy C84400 or Brass ASTM B16
6. Packing Gland	Bronze ASTM B62 or ASTM B584 Alloy C84400 or Brass ASTM B16
7. Packing	Aramid Fibers with Graphite
8. Bonnet	Silicon Bronze ASTM B584 Alloy C87850
9. Body	Silicon Bronze ASTM B584 Alloy C87850
10. Wedge	Silicon Bronze ASTM B584 Alloy C87850



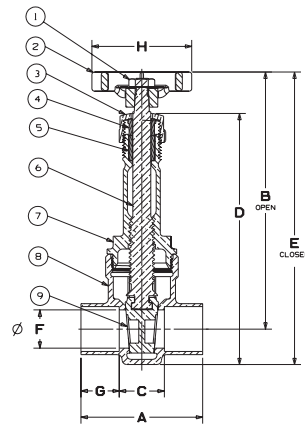
T-111-LF
Threaded



S-111-LF
Solder



T-111-LF
NPT x NPT



S-111-LF
C x C

DIMENSIONS—WEIGHTS—QUANTITIES

SIZE	A	B	C	D	E	F	G	T-111-LF		Master
In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	Lbs.	Kg.	Ctn Qty.
1/4†	8 1.68	43 5.12	130 0.88	22 3.62	92 4.54	115 0.31	8 0.38	10 0.75	0.34	50
3/8†	10 1.68	43 5.20	132 0.84	21 3.62	92 4.56	116 0.38	10 0.42	11 0.72	0.33	50
1/2†	15 1.94	49 4.85	123 0.86	22 3.92	100 4.82	122 0.5	13 0.54	14 0.83	0.38	50
3/4	20 2.06	52 5.89	150 0.92	23 4.93	125 5.74	146 0.75	19 0.57	14 1.13	0.51	50
1	25 2.44	62 7.21	183 1.04	26 5.95	151 6.93	176 1.00	25 0.70	18 1.88	0.86	30
1-1/4	32 2.62	67 8.20	208 1.20	30 6.69	170 7.84	199 1.25	32 0.71	18 2.53	1.15	20
1-1/2	40 2.88	73 9.40	239 1.38	35 7.51	191 8.94	227 1.50	38 0.75	19 3.57	1.62	10
2	50 3.06	78 11.54	293 1.48	38 9.65	245 10.84	275 2.00	51 0.79	20 5.28	2.39	10
2-1/2	65 4.12	105 14.40	366 1.84	47 11.86	301 13.52	343 2.50	64 1.14	29 10.26	4.66	5
3	80 4.50	114 16.60	422 2.10	53 13.89	353 15.65	398 3.00	76 1.20	30 14.72	6.67	4

SIZE	A	B	C	D	E	F	G	S-111-LF		Master
In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	Lbs.	Kg.	Ctn Qty.
1/2†	15 1.75	44 5.46	139 0.75	19 3.88	99 4.80	122 0.50	13 0.50	13 0.69	0.31	50
3/4	20 2.38	60 5.89	150 0.88	22 4.93	125 5.74	146 0.75	19 0.75	19 1.02	0.47	50
1	25 2.82	72 7.21	183 1.00	25 5.87	149 6.85	174 1.00	25 0.91	23 1.68	0.76	30
1-1/4	32 3.12	79 8.20	208 1.18	30 6.69	170 7.84	199 1.25	32 0.97	25 2.39	1.08	20
1-1/2	40 3.42	87 9.40	239 1.24	31 7.48	190 8.91	226 1.50	38 1.09	28 3.25	1.47	10
2	50 4.00	102 11.54	293 1.31	33 9.60	244 10.78	274 2.00	51 1.34	34 4.97	2.25	10

†No packing gland, packing only in this size.



WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

LEAD-FREE: Weighted average lead content ≤ 0.25%

Class 125 Iron Body Gate Valves

Bolted Bonnet • Outside Screw and Yoke • Solid Wedge • Bronze Mounted • Stem Pack Ring Material Options

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

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-70

MATERIAL LIST

PART	SPECIFICATION
1. Stem	Copper Alloy, ASTM B16 C36000
2. Nut, Handwheel	Cast Copper Alloy, ASTM B584 C84400
3. Nameplate, I.D.	Aluminum
4. Handwheel, Blue	Cast Iron, ASTM A126-B
5. Bushing, Yoke	Cast Copper Alloy, ASTM B584 C84400
6. Screw, Hex - Bonnet Cap	Steel, ASTM A307 / SAE J429
7. Cap, Bonnet	Ductile Iron, ASTM A536
8. Nut, Square - Bonnet Cap	Steel, ASTM A563
9. Bonnet ¹	Cast Iron, ASTM A126-B
10. Nut, Heavy Hex - GLD Follow	Steel, ASTM A563
11. Gland Follower	Ductile Iron, ASTM A536
12. Pack Gland	Powdered Metal, ASTM B783
13. Pack Ring	F617-O: Aramid Fibers/Graphite F617-OTP: Synthetic Fibers/PTFE
14. Bolt, SQ Head - GLD Follow	Steel, ASTM A307 / SAE J429
15. Screw, Hex - Body	Steel, ASTM A307 / SAE J429
16. Gasket, Body	Graphite/SST
17. Nut, Hex - Body	Steel, ASTM A563
18. Collar, Stem	Copper Alloy, ASTM B16 C36000
19. Pin, Wedge	Copper Alloy, ASTM B140 C31600
20. Ring, Seat - Wedge	Cast Copper Alloy, ASTM B584 C84400
21. Wedge ²	Cast Iron, ASTM A126-B
22. Ring, Seat - Body	Cast Copper Alloy, ASTM B584 C84400
23. Body	Cast Iron, ASTM A126-B

¹ Sizes thru 8", Yoke and Bonnet are intergral. 10" and 12" sizes separate. Yoke is bolted to Bonnet.

² Sizes 2" thru 6" have Cast Copper Alloy Wedges. Sizes 8" thru 12" made with Cast Iron Wedge with Cast Copper Alloy Face Rings.

NOTE: 1. F-617-O available 2"-24". F-617-OTP available 2"-12".

2. NIBCO may substitute Ductile Iron ASTM A395 (60-40-18) for ASTM A126 Class B Cast Iron for the Body, Bonnet, Wedge, or Disc. NIBCO may substitute Ductile Iron ASTM A395 (60-40-18) or ASTM A536 (65-45-12) for all other ASTM A126 Class B Cast Iron components.

DIMENSIONS—WEIGHTS—QUANTITIES

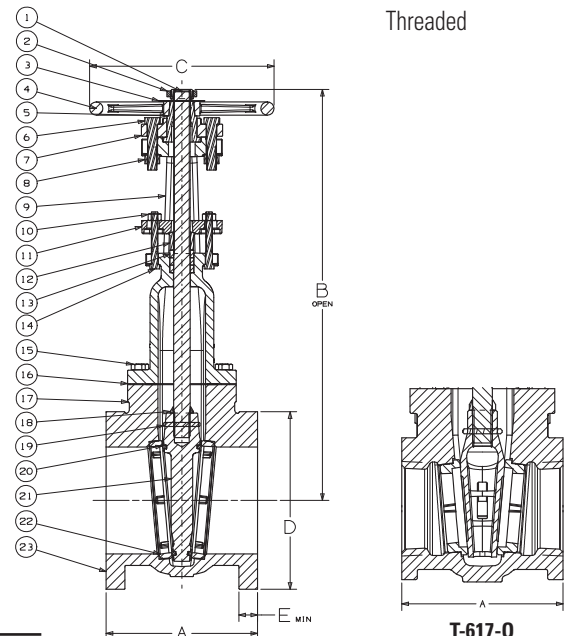
Size	Dimensions														F-617-O/OTP		T-617-O	
	F-617-O/OTP		T-617-O		A		B		C		D		E		Lbs.	Kg.	Lbs.	Kg.
	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.				
2	50	7.00	178	5.63	143	16.26	413	8.00	203	6.00	152	0.62	16	41	19	30	14	
2½	65	7.50	191	5.88	149	17.26	438	8.00	203	7.00	178	0.69	18	55	25	39	18	
3	80	8.00	203	6.13	156	19.44	494	8.00	203	7.50	114	0.75	19	67	30	47	21	
4	100	9.00	229	6.50	165	23.54	598	10.25	260	9.00	229	0.94	24	107	49	77	35	
5	125	10.00	254	—	—	27.01	686	10.25	260	10.00	254	0.94	24	145	66	—	—	
6	150	10.50	267	—	—	30.73	781	12.00	305	11.00	279	1.00	25	178	81	—	—	
8	200	11.50	292	—	—	40.29	1023	14.00	356	13.50	343	1.12	28	309	140	—	—	
10	250	13.00	330	—	—	48.45	1231	16.25	413	16.00	406	1.19	30	481	219	—	—	
12	300	14.00	356	—	—	56.26	1429	18.00	457	19.00	483	1.25	32	706	321	—	—	



F-617-O
F-617-OTP
Flanged



T-617-O
Threaded



F-617-O
F-617-OTP
Flg x Flg

T-617-O
NPT x NPT

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 116.



WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Visit our website for the most current information.

300 PSI CWP Iron Body Gate Valves

Bolted Bonnet • Non-Rising Stem • Resilient Wedge • Flanged Ends

300 PSI/20.6 bar non-shock cold working pressure to 33°F to 160°F
Maximum working temperature 180°F at 250 PSI

CERTIFIED LEAD-FREE* BY TRUESDAIL
LABORATORIES TO NSF/ANSI 61 AND 372



MATERIAL LIST

PART	SPECIFICATION
1. Valve Body	Ductile Iron ASTM A536 65-45-12
2. Resilient Wedge	Ductile Iron ASTM A536/EPDM ASTM D2000
3. Wedge Nut	ASTM B584 UNS C83600
4. Stem	Stainless Steel 304
5. Bonnet Gasket	EPDM ASTM D2000
6. Bonnet Screw	Corrosion-resistant Steel
7. Bonnet	Ductile Iron ASTM A536
8. Stem Primary O-Ring	EPDM ASTM D2000
9. Stem Thrust Washer (lower)	Bronze ASTM B584 UNS C83600
10. Stem Thrust Washer (upper)	Stainless Steel ASTM A276 UNS S41000
11. Gland Seal O-Ring	EPDM ASTM D2000
12. Stem Seal Bushing	ASTM B584 UNS C83600
13. Stem Secondary O-Ring	EPDM ASTM D2000
14. Gland Flange	Ductile Iron ASTM A536
15. Stem Ring Wiper	EPDM ASTM D2000

Coating — Electrostatically applied fusion-bonded epoxy 8-20 mil. inside and outside meets or exceeds performance requirements of AWWA C550.
Epoxy coating is not intended to serve as a dielectric barrier internal to the piping system.

NOTE: Hand wheel is consistent with ANSI B16.1 Class 125.

NOTE: 14" & 16" sizes rated to 250 psi

NOTE: Hand wheel is secured with a 12mm x 25mm metric socket head cap screw. Also needs 1/2" wide diameter flat washer.

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

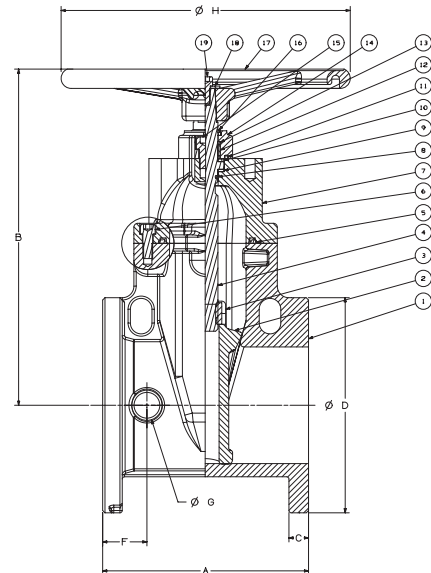
WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.



F-619-RWS
Flanged



F-619-RWS-SON
Flanged



F-619-RWS

Flg x Flg

Shown with optional handwheel,
square operating nut not shown

DIMENSIONS—WEIGHTS—QUANTITIES

Size	Dimensions										Bolt Circle	Flange Holes	Turns to Open	Weight	
	A	B	C	D	F	G	H	Lbs.	Kg.						
In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	Holes	Open	Lbs.	Kg.
2	50 7.0	178 10.3	261 0.63	16 6.0	152 1.42	36 1.6	40 7.9	200 4.75	121 4	6.3	22	10			
2½	65 7.5	191 11.2	285 0.69	18 7.0	178 1.48	38 1.6	40 7.9	200 5.50	140 4	8.1	29	13			
3	80 8.0	203 12.6	320 0.75	19 7.5	191 1.73	44 1.4	36 10.2	260 6.00	152 4	10.0	35	16			
4	100 9.0	229 13.5	342 0.94	24 9.0	229 2.13	54 1.4	36 10.2	260 7.50	191 8	12.5	75	34			
6	150 10.5	267 17.2	438 1.00	25 11.0	279 2.26	57 1.5	39 14.8	375 9.50	241 8	15.0	105	48			
8	200 11.5	292 20.8	527 1.13	29 13.5	343 2.46	62 1.5	39 14.8	375 11.75	298 8	16.7	163	74			
10	250 13.0	330 24.1	613 1.19	30 16.0	406 3.15	80 1.8	46 15.8	400 14.25	362 12	20.8	256	116			
12	300 14.0	356 27.5	698 1.25	32 19.0	483 2.91	74 1.8	46 19.7	500 17.00	432 12	25.0	399	181			
14*	350 15.0	381 32.2	817 1.38	35 21.0	533 2.95	75 3.2	82 19.7	500 18.75	476 12	43.8	620	281			
16*	400 16.0	406 34.6	878 1.50	38 23.5	597 3.03	77 3.2	82 19.7	500 21.25	540 16	50.0	816	370			

*Weighted average lead content ≤ 0.25%

Visit our website for the most current information.

Lead-Free Bronze Check Valves

Features: Silicon Performance Bronze® Alloy • Horizontal Swing • Regrinding Type • Y-Pattern • Renewable Seat and Disc

Approvals: Conforms to MSS SP-139 • NSF/ANSI-61-8 Commercial Hot 180°F (includes annex F and G) and NSF/ANSI-372

Size Range: 1/4" - 2"

Pressure Rating: 200 PSI Non-Shock Cold Working Pressure
Maximum Pressure / Temperature: 100 PSI at 300° F

Lead-free marking: Double oval in body casting



NSF/ANSI 61
NSF/ANSI 372



T-413-Y-LF
Threaded

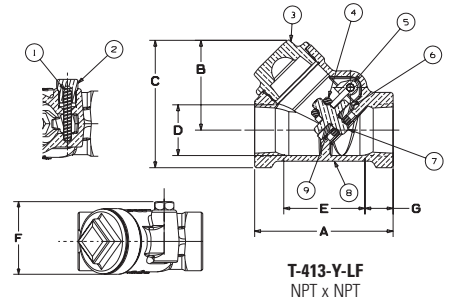


S-413-Y-LF
Solder

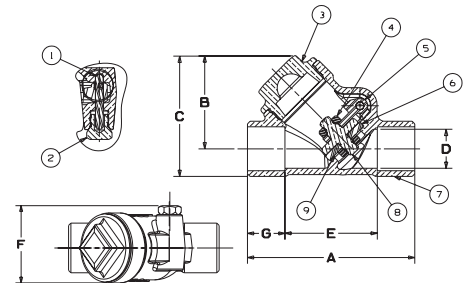
MATERIAL LIST

PART	SPECIFICATION
1. Hinge Pin	316SS or 304SS
2. Hinge Pin Plug	Silicon Bronze ASTM B283 Alloy C69300
3. Bonnet	Silicon Bronze ASTM B584 Alloy C87850
4. Nut (2)	316SS or 304SS
5. Disc Hanger	Silicon Bronze ASTM B584 Alloy C87850 or MPIF SS-316NI-25
6. Seat Disc	PTFE
7. Seat Disc Washer *	304SS or 316SS
8. Disc Holder	Silicon Bronze ASTM B283 Alloy C69300
9. Body	Silicon Bronze ASTM B584 Alloy C87850

*Sizes 3/4", 1", 1 1/4", 1 1/2" and 2" only. No Seat Disc Washers on 1/2" and 3/4" with PTFE (Y) discs.



T-413-Y-LF
NPT x NPT



S-413-Y-LF
C x C

DIMENSIONS—WEIGHTS—QUANTITIES

SIZE	A		B		C		D		E		F		G		T-413-Y-LF		Master	
In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	Lbs.	Kg.	Ctn Qty.
1/4	8	2.12	53.85	1.31	33.27	1.37	34.79	0.67	17	1.57	40	1.401	27	0.26	7	0.508	0.23	50
3/8	10	2.12	53.85	1.31	33.27	1.31	33.27	0.67	17	1.40	36	1.401	27	0.35	9	0.478	0.22	50
1/2	15	2.44	62	1.66	42	2.31	59	0.81	21	1.61	41	1.401	33	0.42	11	0.55	0.25	50
3/4	20	2.9	74	1.88	48	2.67	68	1.04	26	2.06	52	1.702	40	0.42	11	0.90	0.41	50
1	25	3.56	90	2.27	58	3.29	84	1.26	32	2.44	62	1.953	52	0.55	14	1.46	0.66	30
1-1/4	32	4.18	106	2.73	69	3.93	100	1.59	40	3.00	76	2.179	60	0.59	15	2.17	0.99	20
1-1/2	40	4.48	114	3.08	78	4.44	113	1.86	47	3.39	86	2.430	70	0.57	13	2.95	1.34	10
2	50	5.29	134	3.84	98	5.48	139	2.29	58	3.74	95	3.067	83	0.76	19	4.79	2.17	10

SIZE	A		B		C		D		E		F		G		S-413-Y-LF		Master	
In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	Lbs.	Kg.	Ctn Qty.
1/4	8	2.12	53.85	1.31	33.27	1.37	34.79	0.67	17	1.57	40	1.401	27	0.26	7	0.508	0.23	50
3/8	10	2.12	53.85	1.31	33.27	1.31	33.27	0.67	17	1.40	36	1.401	27	0.35	9	0.478	0.22	50
1/2	15	2.52	64	1.540	42	1.940	49	0.54	14	1.52	39	1.416	20	0.50	13	0.55	0.25	50
3/4	20	3.34	85	1.861	48	2.410	61	0.78	20	1.84	47	1.717	28	0.75	19	0.88	0.40	50
1	25	4.06	103	2.206	29	2.880	73	1.02	26	2.25	57	1.947	34	0.91	23	1.48	0.67	30
1-1/4	32	4.69	119	2.737	38	3.520	89	1.26	32	2.75	70	2.178	40	0.97	25	2.22	1.01	20
1-1/2	40	5.28	134	3.030	44	3.950	100	1.51	38	3.09	78	2.429	47	1.09	28	3.00	1.36	10
2	50	6.44	164	3.640	98	4.863	123	1.98	50	3.74	95	3.073	62	1.34	34	4.87	2.21	10

NIBCO check valves may be installed in both horizontal and vertical lines with upward flow or in any intermediate position. They will operate satisfactorily in a declining plane (no more than 15°). Install check valves as far from pump discharge or line direction change as possible and at a minimum length of 5 times the pipe diameter.

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Do not use for reciprocating air compressor service.

LEAD-FREE: Weighted average lead content ≤ 0.25%

Lead-Free* Class 125/250 Iron Body Silent Check Valves

Flanged • Globe Style • Renewable Seat and Disc • Spring Actuated (1 / 2 PSI cracking pressure)

¹Class 125, 200 PSI/13.8 bar non-shock cold working pressure

²Class 250, 400 PSI/27.6 bar non-shock cold working pressure

Maximum temperature to 200°F/93°C

CERTIFIED LEAD-FREE* BY WQA TO NSF/ANSI 372 •

NSF/ANSI 61 CERTIFIED BY UL •

CONFORMS TO MSS SP-125 • CONFORMS TO MIL-V-18436F •

FM APPROVED — 2½" thru 10" ONLY (F-910-B-LF)



C USA
COMPONENT LEAD-FREE



WATER QUALITY NSF 61 CERTIFIED



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

MATERIAL LIST

PART	SPECIFICATION
1. Body	Cast Iron ASTM 126 Class B
2. Seat (B)	Bronze ASTM B584 Alloy C87600
2a. Seat (W)	with Buna-N O-ring
3. Disc	2½" - 10" - Bronze ASTM B584 Alloy C87600 12" - 36" - Class 250 Alloy ASTM B148 C95500
4. Spring	Stainless Steel ASTM A313 UNS S31600
5. Bushing	Aluminum Bronze B505 C95400
6. Set Screws†	Stainless Steel Type 316 ASTM F879

DIMENSIONS—WEIGHTS

Size	Dimensions		F-910-LF		F-960-LF		
	In.	mm.	Lbs.	Kg.	Lbs.	Kg.	
2½	65	5.50	140	24	11	30	14
3	80	6.00	152	29	13	36	16
4	100	7.25	184	42	19	59	27
5	125	8.50	216	52	24	78	35
6	150	9.75	248	73	33	103	47
8	200	12.50	318	126	57	179	81
10	250	15.50	394	205	93	253	115
12	300	14.25	362	306	139	401	182
14	350	15.75	400	350	172	511	232
16	400	17.63	448	501	227	697	316
18	450	18.75	476	724	328	959	435
20	500	20.63	524	890	404	1180	535
24	600	24.00	610	1220	553	1680	762
30	750	29.25	743	2000	907	2375	1077
36	900	45.00	1143	4421	2005	5511	2500

¹14" - 36" sizes - Class 125, 150 psi/10.3 bar CWP

²14" - 36" sizes - Class 250, 300 psi/20.7 bar CWP

† 2½" - 12" : No Set Screws

NOTE: F-910-LF made to 125 lb. Flange dimensions.
F-960-LF made to 250 lb. Flange dimensions.

A Wafer Style Butterfly Valve can be mated on the down stream side of the F-910-LF 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.

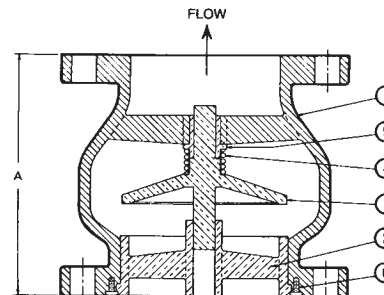
WARNING: 1. Seat end of valves 14" and larger must be mated to a standard flat faced metal flange. Rubber flanges not acceptable.
2. These are not to be used as steam valves.
3. Valves are not to be used near a reciprocating air compressor.
4. Do not install in vertical line with downward flow.

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

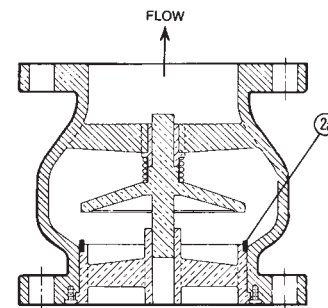
Install 5 pipe diameters minimum downstream from pump discharge or changes in direction to avoid flow turbulence. Flow straighteners may be required in extreme cases.

*Weighted average lead content ≤ 0.25%

Visit our website for the most current information.



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



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



WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Class 125 Iron Body Check Valves

Bolted Bonnet • Horizontal Swing • Renewable Seat and Disc*

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 TYPE 1

MATERIAL LIST

PART	SPECIFICATION
1. Body Bolt	Steel ASTM A307
2. Identification Plate	Aluminum
3. Bonnet	Cast Iron ASTM A126 Class B
4. Body Gasket	Synthetic Fibers
5. Body Nut	Steel ASTM A563
6. Side Plug	Brass ASTM B16 Alloy C36000
7. Hanger Pin	Brass ASTM B16 Alloy C36000
8. Hanger	Ductile Iron ASTM A536
9. ¹ Disc	Brass ASTM B584 Alloy C84400 or ASTM A536 Ductile Iron with Brass Face Ring
10. Seat Ring	Brass ASTM B584 Alloy C84400
11. Disc Nut	Brass ASTM B16 Alloy C36000
12. Body	Cast Iron ASTM A126 Class B
13. ¹ Disc Bolt	Brass ASTM B16 Alloy C36000
14. Disc Plate**	Cast Iron ASTM A126 Class B
15. Disc Cage**	Cast Iron ASTM A126 Class B

¹2" thru 4" have Bronze ASTM B584 Disc.

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

**These items are not in the -B, only the -W and -Y.

DIMENSIONS—WEIGHTS—QUANTITIES

Dimensions															
Size	F-918-B		T-918-B		B	D	E	F-918-B	T-918-B	F-918-B	T-918-B	F-918-B	T-918-B		
	A	A	A	A										Lbs.	Kg.
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	x	x	6.81	173	10.00	254	.94	24	100	45	80	36
6	150	14.00	356	x	x	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:

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

*Proper machining facilities required.

x Not available this size.

¹2½" thru 12" are available 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 Iron Body 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.



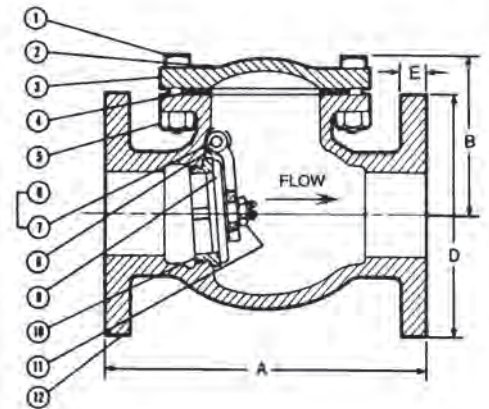
F-918-B

Flanged

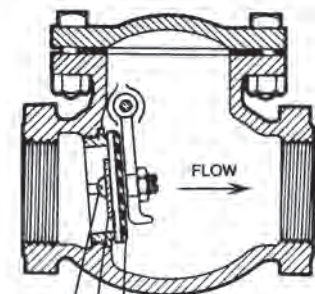


T-918-B

Threaded



F-918-B
Flg x Flg



T-918
NPT x NPT
Buna-N Disc Shown



WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

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 450°F/232°C at 185 PSI/12.8 Bar

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



NSF/ANSI/CAN 61
NSF/ANSI/CAN 372

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

MATERIAL LIST

PART	SPECIFICATION
1. Bolt	Steel ASTM A193 B7/SAE J429 Grade 8
2. Identification Plate	Aluminum
3. Bonnet	Ductile Iron ASTM A395
4. Body Gasket	Graphite/SST
5. Nut	Steel ASTM A194 2H/SAE J995 Grade 8
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

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

DIMENSIONS—WEIGHTS—QUANTITIES

Size	Dimensions								Weight			
	In.	mm.	A In.	A mm.	B In.	B mm.	D In.	D 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 102)

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.

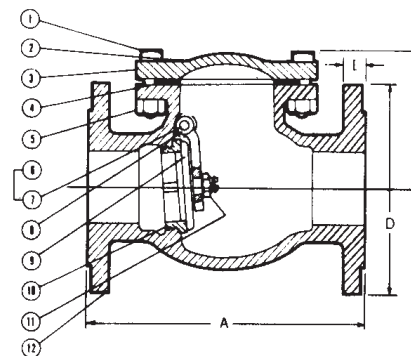
Warning: Swing checks are not recommended for vertical installation in NPS 4 or larger.

♦ For detailed Operating Pressure, refer to Pressure Temperature Chart on page 116.

WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.



F-938-33
Flanged-Raised Face



F-938-33
Flg x Flg

*Weighted average lead content ≤ 0.25%

Visit our website for the most current information.