



Quality People. Building Solutions.

Comfort Systems USA (Arkansas), Inc.
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Date: 2/17/2025
Return Request: 2/27/2025
Project: UAMS (CAMID)
Supplier: Comfort Systems USA (Arkansas), Inc.
Manufacturer: Various
Submittal: Hydronic Piping
Submittal Number: 23 21 13-01
Drawing # and Installation: Plumbing Drawings

ARCHITECT

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ENGINEER

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GENERAL CONTRACTOR

CDI Contractirs
3000 Cantrell Rd.
Little Rock, AR 72202
501-666-4300

MECHANICAL SUBCONTRACTOR

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

Notes:

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CSUSA PROJECT NO.

22-6069

sean@comfortar.com

9924 Landers Rd.
No. Little Rock, AR 72117

Pipe Valve & Fitting Schedule - UAMS (CAMID)				
System	Spec Section	Pipe	Fittings	Joint
Chilled Water 2" & Below - Above Grade	23 21 13	Type L Hard Copper; ASTM B88	Wrought Copper; ASME B.16.22	Lead-Free Solder; ASTM B32
Chilled Water 2 1/2" & Above - Above Grade	23 21 13	Schedule 40 Steel; ASTM A53/A53M	Schedule 40 Forged Steel; ASME B16.3/ASTM A234	Welded (2 1/2" & Larger)
Heating Water 2" & Below - Above Grade	23 21 13	Type L Hard Copper; ASTM B88	Wrought Copper; ASME B.16.22	Lead-Free Solder; ASTM B32
Heating Water 2 1/2" & Above - Above Grade	23 21 13	Schedule 40 Steel; ASTM A53/A53M	Schedule 40 Forged Steel; ASME B16.3/ASTM A234	Welded (2 1/2" & Larger)
Equipment Drains & Overflow - Above Grade	23 21 13	Type L Hard Copper; ASTM B88	Wrought Copper; ASME B.16.22	Lead-Free Solder; ASTM B32

Bronze Ball Valves

Two-Piece Body • Full Port • Stainless Trim • Blowout-Proof Stem • Vented Ball

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	Stainless Steel 300 Series
2. Handle	Zinc Plated Steel Clear Chromate Plastisol Coated
3. Threaded Pack Gland	Brass ASTM B 16 Alloy C36000
4. Packing	PTFE
5. Stem	Stainless Steel ASTM A 276 Type 316
6. Thrust Washer	Reinforced PTFE
7. Ball (Vented)	Stainless Steel ASTM A 276 Type 316 or ASTM A 351 Type CF8M
8. Seat Ring (2)	Reinforced PTFE
9. Body	Bronze ASTM B 584 Alloy C84400
10. Body End Piece	Bronze ASTM B 584 Alloy C84400

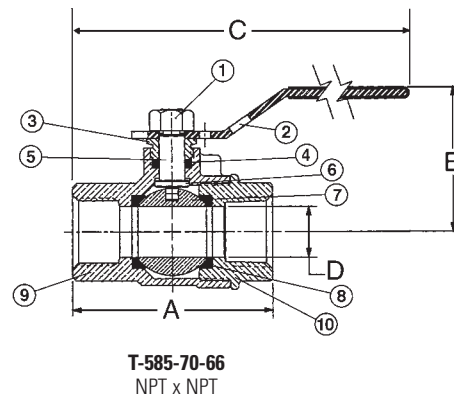
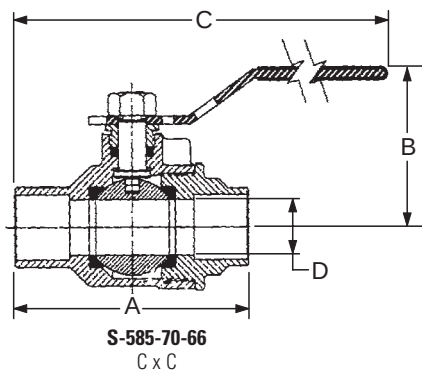
¼" size only has a 304 stainless steel grounding washer.



T-585-70-66
Threaded



S-585-70-66
Solder



DIMENSIONS—WEIGHTS—QUANTITIES

Dimensions

T-585-70-66				S-585-70-66				T-585-70-66				S-585-70-66								Master Ctn. Qty.
Size		A		A		B		C		C		D		T-585-70-66		S-585-70-66				
In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	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		
1 ¼	32	4.19	106	5.06	128	3.00	76	6.75	171	7.19	183	1.25	32	3.34	1.52	3.40	1.55	20		
1 ½	40	4.72	120	5.99	151	3.16	80	9.06	230	9.69	246	1.50	38	4.84	2.20	5.18	2.35	10		
2	50	5.16	131	6.72	170	3.50	89	9.25	235	10.06	256	2.00	51	7.41	3.37	7.83	3.56	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.

**LEAD FREE*
OPTION
AVAILABLE**

**OXYGEN
SERVICE
OPTION
AVAILABLE**

Visit our website for the most current information.

*Weighted average lead content ≤ 0.25%

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

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

DIMENSIONS — WEIGHTS

Size	In.	mm.	A	B	C	D	E	F	G	H	I	J	K	L	M	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	Lug	M	Lug Weight		Wafer Weight			
In.	mm.	B.C.	Dia.	Dia.	No.	Dia.	Length	Length	B.C.	Lbs.	Kg.	Lbs.	Kg.	
2	50	3.25	.437	.437	4	5/8-11unc	Refer to butterfly valve technical information for bolt lengths	4 3/4	7	3.2	5.5	2.5		
2½	65	3.25	.437	.500	4	5/8-11unc		5 1/2	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 1/2	15	6.8	11	5.0		
5	125	3.25	.437	.656	8	3/4-10unc		8 1/2	21	9.5	15	6.8		
6	150	3.25	.437	.656	8	3/4-10unc		9 1/2	24	10.9	18	8.2		
8	200	3.25	.437	.781	8	3/4-10unc		11 3/4	34	15.4	28	12.7		
10	250	5.00	.562	1.000	12	7/8-9unc		14 1/4	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.

Visit our website for the most current information.

*Weighted average lead content ≤ 0.25%

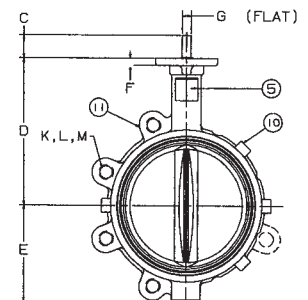
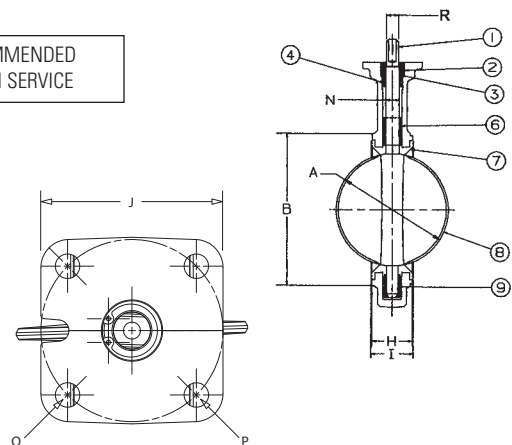


WD-2000
Wafer Style
EPDM Liner
and Aluminum
Bronze Disc



LD-2000
Lug Style
EPDM Liner
and Aluminum
Bronze Disc

NOT RECOMMENDED
FOR STEAM SERVICE



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 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/CAN 61/372-8 Commercial Hot 180°F (includes annex F)

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

MATERIAL LIST

PART	SPECIFICATION
1. Hinge Pin	ASTM A276 S30400 or S31600
2. Hinge Pin Plug	Silicon Bronze ASTM B 371 C69300
3. Bonnet	Silicon Bronze ASTM B584 Alloy C87850
4. Hanger Nut	ASTM F594 S30400or S31600
5. Disc Hanger	Silicon Bronze ASTM B584 Alloy C87850 or MPIF SS-316NI-25
6. Seat Disc	PTFE
7. Seat Disc Washer *	ASTM F594 S30400 or S31600
8. Disc Holder	Silicon Bronze ASTM B 371 Alloy C69300
9. Body	Silicon Bronze ASTM B584 Alloy C87850
10. Seat Disc Nut	ASTM F594 S30400 or S31600

*Sizes 1", 1¼", 1½" and 2" only. No Seat Disc Washers on 1/2" and 3/4" with PTFE (Y) discs.

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.

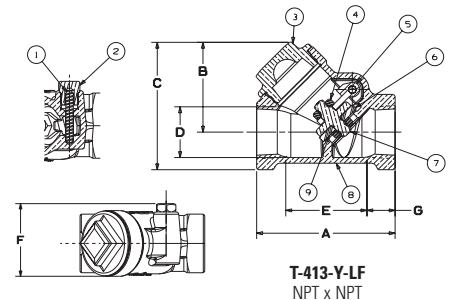
Do not use for reciprocating air compressor service.



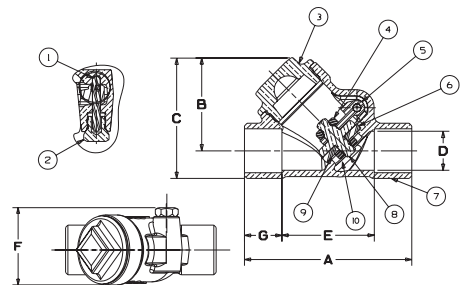
T-413-Y-LF
Threaded



S-413-Y-LF
Solder



T-413-Y-LF
NPT x NPT



S-413-Y-LF
C x C

LEAD-FREE: Weighted average lead content ≤ 0.25%

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.

5" 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	
		A		A											
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	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.

2½" 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.



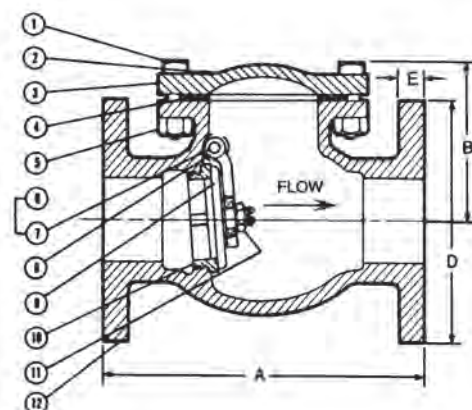
F-918-B

Flanged



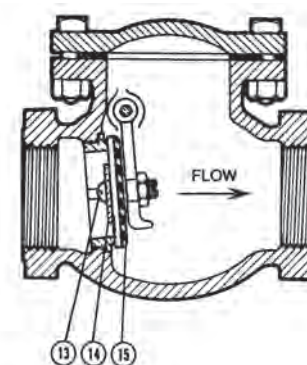
T-918-B

Threaded



F-918-B

Flg x Flg



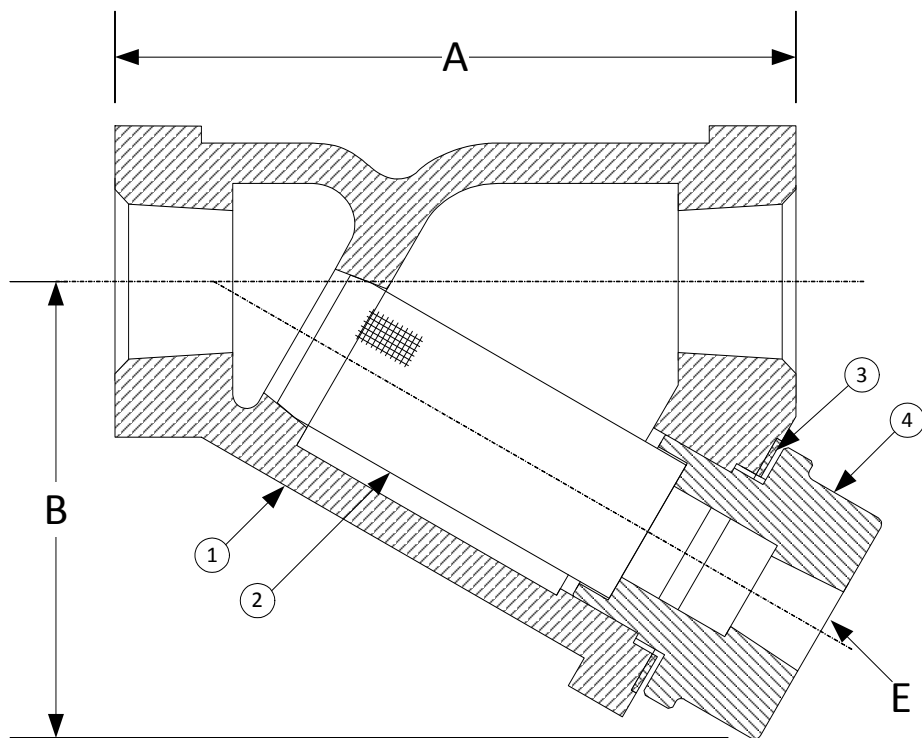
T-918

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.



1/4" thru 2"
Hydronic Piping

DRAWING NO.
AL 112700

BODY PRESSURE & TEMPERATURE RATINGS – NON SHOCK		
NOM. RATING	MEDIA	1/4" to 3"
250# (THREADED)	STEAM	250 PSI @ 406°F
	W.O.G.	400 PSI @ 150°F

PARTS LIST		
ITEM	DESCRIPTION	MATERIAL
1	BODY	CAST IRON (ASTM A 126, CLASS B)
2	SCREEN	STAINLESS STEEL (304)
3	GASKET	GRAPHITE
4	BUSHING	CAST IRON (ASTM A 126, CLASS B)

Optional: Blow-off Plug, Malleable Iron

Product Number†	SIZE	DIMENSIONS (in)			WEIGHT (lbs)
		A	B	E	
1/43THY-CIM20M34-FT	1/4	3-3/16	2-1/16	1/4	2
3/83THY-CIM20M34-FT	3/8	3-3/16	2-1/16	1/4	2
1/23THY-CIM20M34-FT	1/2	3-3/16	2-1/16	1/4	2
3/43THY-CIM20M34-FT	3/4	3-3/4	2-7/16	3/8	3
13THY-CIM20M34-FT	1	4	2-5/8	3/8	3
11/43THY-CIM20M34-FT	1-1/4	5	3-3/8	3/4	5
11/23THY-CIM20M34-FT	1-1/2	5-3/4	3-7/8	3/4	7
23THY-CIM20M34-FT	2	7	4-3/4	1	13
21/23THY-CI062P34-FT	2-1/2	9-1/4	5-7/8	1-1/2	26
33THY-CI062P34-FT	3	10	6	1-1/2	30

†See "Style B7 Product Number Configuration" for additional options.

STANDARD SCREENS SUPPLIED

SIZE in	SCREEN GAGE	SCREEN PERFORATION			
		FOR STEAM in	OPEN AREA	FOR LIQUID in	OPEN AREA
1/4 to 2		20 MESH STAINLESS STEEL			49%
2-1/2 to 3	28	3/64	33%	1/16	30%

Standard screens supplied are for **liquid service**, unless otherwise specified.
Options: Other meshes, perforations, and screen materials are available.

KECKLEY

3400 CLEVELAND

SKOKIE ILLINOIS

DRAWING NO.
AL 112700

DIMENSIONAL ASSEMBLY

PART NO.

1/4" to 3" 250# Threaded Style B7

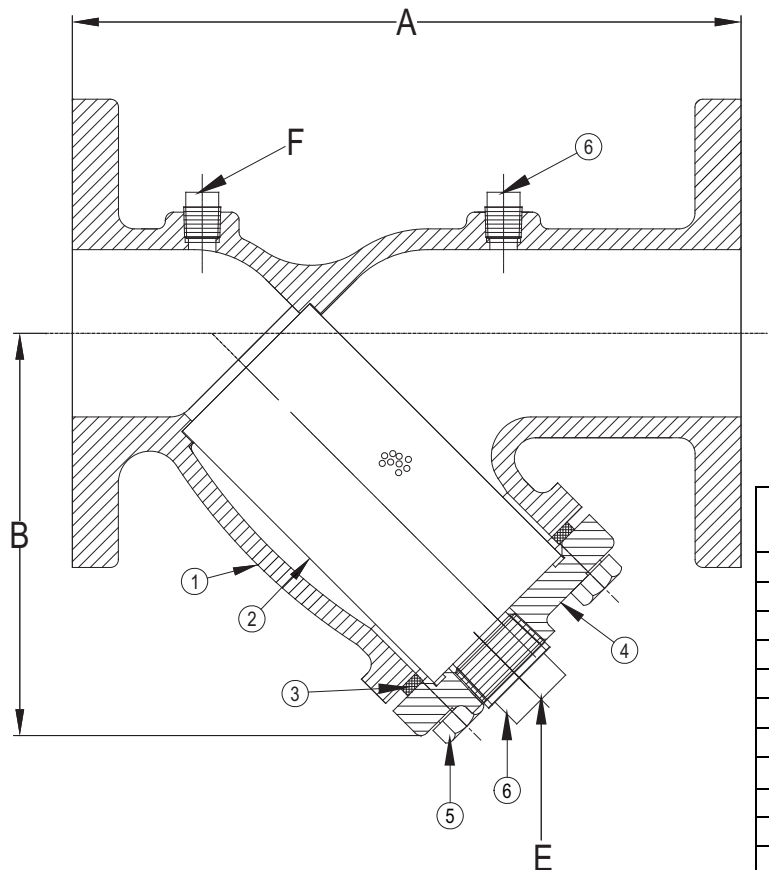
SCALE: NTS

DATE: 02/01/2012

MAT'L: Cast Iron

REQ. ---

DR. BY DSF



BODY PRESSURE & TEMPERATURE RATINGS – NON SHOCK			
NOM. RATING	MEDIA	2" to 12"	14" and UP
125# F.F. & D.	STEAM	125 PSI @ 450°F	100 PSI @ 353°F
(STANDARD FLANGE)	W.O.G.	200 PSI @ 150°F	150 PSI @ 150°F

**2 1/2" & Larger
Hydronic Piping**

**DRAWING NO.
AL 91600**

PARTS LIST		
ITEM	DESCRIPTION	MATERIAL
1	BODY	CAST IRON (ASTM A 126, CLASS B)
2	SCREEN	STAINLESS STEEL (304)
3	GASKET	COMPOSITION
4	COVER	CAST IRON (ASTM A 126, CLASS B)
5	HEX HEAD CAP SCREWS	STEEL
6	PLUG	CARBON STEEL (ASTM A 105)

Product Number†	SIZE	DIMENSIONS (in)				COVER		WEIGHT (lbs)
		A	B	E	F	No of bolts	Size of Bolts	
21FFY-CI062P34-FBB	2	7-7/8	5-1/16	1/2	1/4	6	3/8-16 x 1-1/2	17
21/21FFY-CI-062P34-FBB	2-1/2	10	6-1/8	1	1/4	6	3/8-16 x 1-1/2	24
31FFY-CI06234-FBB	3	10-1/8	6-9/16	1	1/4	4	1/2-13 x 1-3/4	31
41FFY-CI062P34-FBB	4	12-1/8	8-1/16	1-1/2	1/4	4	1/2-13 x 1-1/2	50
51FFY-CI125P34-FBB	5	15-5/8	11	2	1/4	8	5/8-11 x 1-3/4	86
61FFY-CI125P34-FBB	6	18-1/2	12-5/8	2	1/4	8	5/8-11 x 1-3/4	114
81FFY-CI125P34-FBB	8	21-5/8	15-5/8	2	1/4	8	3/4-10 x 2	203
101FFY-CI125P34-FBB	10	25-3/4	17-3/4	2	1/4	12	7/8-9 x 2-1/4	293
121FFY-CI125P34-FBB	12	29-7/8	21-5/16	2	1/4	12	7/8-9 x 2-1/2	489
141FFY-CI125P34-FBB	14	33-1/4	26-3/4	2	N/A			772
161FFY-CI125P34-FBB	16	38-3/4	30-1/8	2	N/A			994
181FFY-CI125P34-FBB	18	43-1/2	33-1/4	2	N/A			1379
201FFY-CI125P34-FBB	20	49-1/2	39-1/4	2	N/A			1652
241FFY-CI125P34-FBB	24	55-13/16	41	2	N/A	-	-	3400

†See "Style A-7 Product Number Configuration" for additional options.

STANDARD SCREENS SUPPLIED

SIZE in	SCREEN GAGE	SCREEN PERFORATION			
		FOR STEAM in	OPEN AREA	FOR LIQUID in	OPEN AREA
2 to 4	28	3/64	33%	1/16	30%
5 to 10	24	3/64	33%	1/8	43%
12	24	1/16	30%	1/8	43%
14 & UP	20	1/8	43%	1/8	43%

Standard screens supplied are for liquid service, unless otherwise specified.
Options: Other perforations, meshes, and screen materials are available.

KECKLEY

3400 CLEVELAND

SKOKIE ILLINOIS

**DRAWING NO.
AL 91600**

DIMENSIONAL ASSEMBLY

PART NO.

2" to 24" 125# Flg Style A-7

SCALE: NTS

DATE: 02/10/2016

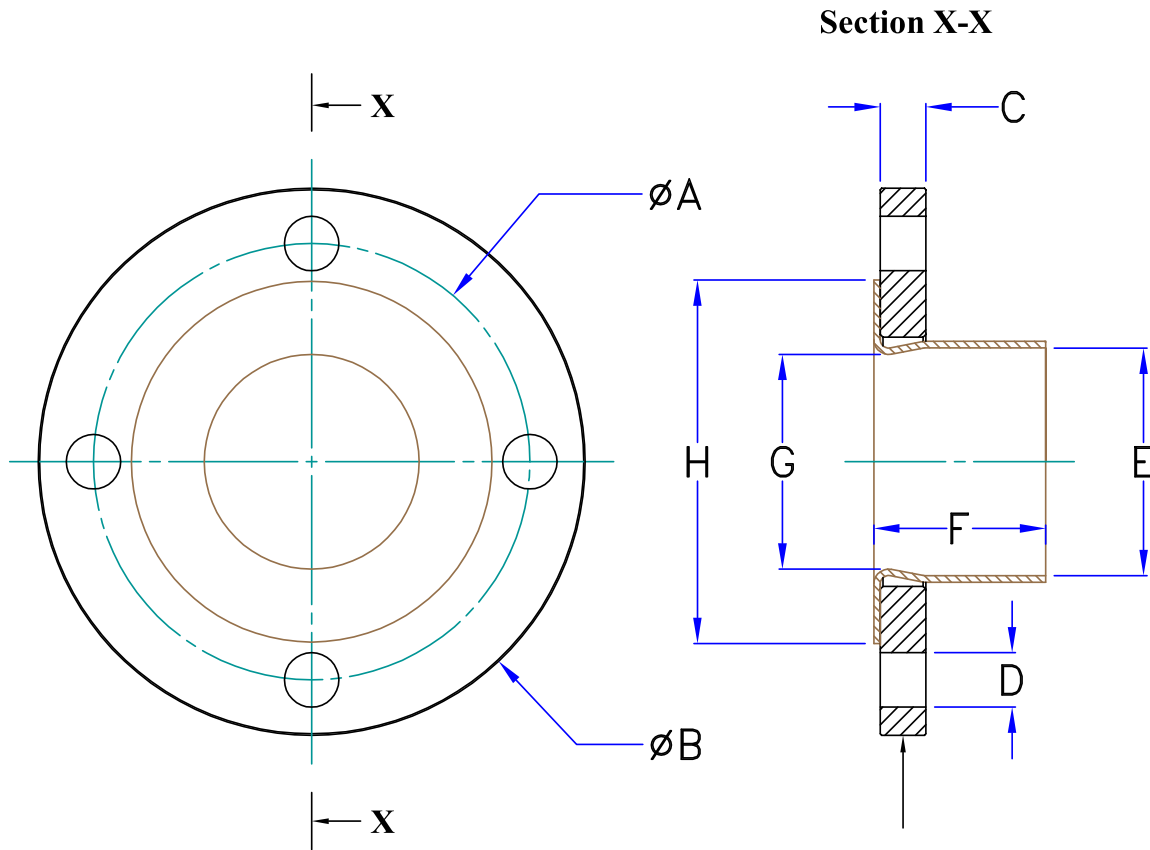
MAT'L: (As Noted Above)

REQ. ---

DR. BY DSF

JOB NAME _____ CONTRACTOR _____
 LOCATION _____ APPROVAL _____
 ENGINEER _____ CONT. P.O NO. _____
 APPROVAL _____ REPRESENTATIVE _____

150lb Copper Coated Flange



EDGE OF FLANGE MARKED WITH
 CTS (Size) INCH 150LB - ANSI B16.5 (Heat Number*)
 EG: CTS 3 INCH 150LB - ANSI B16.5 11F24702
 (* If Specified)

Manufactured to ASME B16.22-95

		1.5 INCH	2 INCH	2.5 INCH	3 INCH	4 INCH	5 INCH	6 INCH
	Code	CC015	CC002	CC025	CC003	CC004	CC005	CC006
A.	Bolt Circle Diam	3.88	4.75	5.50	6.00	7.50	8.50	9.50
B.	Flange Diameter	5.00	6.00	7.00	7.50	9.00	10.0	11.0
C.	Flange Thickness	0.63	0.63	0.63	0.63	0.71	0.75	0.87
	No. Bolt Holes	4	4	4	4	8	8	8
D.	Bolt Hole Diam	0.65	0.75	0.75	0.75	0.75	0.87	0.87
E.	Tube End Nom ID	1.63	2.13	2.63	3.13	4.13	5.13	6.13
F.	Cu Piece Length	1.60	1.85	2.02	2.35	2.81	3.87	4.31
G.	Cu Piece Min ID	1.47	1.94	2.42	2.89	3.84	4.70	5.72
H.	Cu Flange OD	3.10	3.70	4.20	5.00	6.20	7.30	8.40

Spec sheet measurements accurate at time of printing

