



Quality People. Building Solutions.

Comfort Systems USA (Arkansas), Inc.

P.O. Box 16620

LittleRock, AR 72231

Phone 501-834-3320

Fax 501-834-5416

Date: 8/21/2025

Return Request: 9/4/2025

Project: Hot Springs National Park – Rehabilitate Bathhouses – Buckstaff Bathhouse

Supplier: Boone & Boone

Manufacturer: Varies

Submittal: Hydronic Specialties

Submittal Number: 232114.001

Spec Section: 232114, 2.1 through 2.13

Drawing # and Installation Location: M3-1 through M3-4, and M4-1

ARCHITECT

Kenneth Hahn Architects, Inc.

1343 S. 75th Street

Omaha, Nebraska 68124

(402)391-2111

GENERAL CONTRACTOR

Tepa, LLC

2345 Grand Blvd, Suite 700

Kansas City, Missouri 64108

(816)708-1110

ENGINEER

Alvine Engineering

1201 Cass Street

Omaha, Nebraska 68102

(402)346-7007

MECHANICAL SUBCONTRACTOR

Comfort Systems USA (Arkansas), Inc.

9924 Landers Road

North Little Rock, Arkansas 72117

(501)834-3320

Comments:

CSUSA PROJECT NO.

25-7065

joe@comfortar.com

9924 Landers Road
No. LittleRock, AR 72117



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Comfort Systems USA (Arkansas), Inc.

P.O. Box 16620

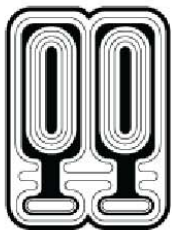
LittleRock, AR 72231

Phone 501-834-3320

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Spec Section 232114, 2.1.

Diaphragm/Bladder Expansion Tanks



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SUBMITTAL

NLA-SERIES

HVAC EXPANSION TANKS

Models: NLA-35 to NLA-800L

Submittal Sheet No. A-1010A Rev. 1 5/17/2018

Job Name _____ Buckstaff Bathhouse HVAC
Location _____
Engineer _____ Alvine Engineering
Contractor _____ Comfort Systems, USA
Sales Rep. _____ Boone & Boone

Submitted By _____ Date _____
Approved By _____ Date _____
Order No. _____ Date _____
Notes Salesman: Mark Eley 501-940-7747
marke@2boonesales.com

Description:

Wessels patented NLA tanks are ASME removeable bladder type pre-charged HVAC expansion tanks. They are designed to absorb the expansion forces and control the pressure in heating/cooling systems. The system's expanded water (fully compatible with water/glycol mixtures) is contained in a full acceptance heavy-duty butyl bladder that prevents tank corrosion and waterlogging problems. All NLA expansion tanks can be installed vertically or horizontally.

Construction:

Shell: Carbon Steel
Heads: Carbon Steel
Exterior: Carbocoat 140 - Harvester Red
Interior: Heavy Duty Butyl Bladder

Design Parameters:

Maximum Design Pressure: 125 PSIG*
Temperature Range: -20°F to 240°F

*150, 200 & 250 PSIG available

Model Number	Part Number	Tank Volume (Gallons)	Tagging Information	Quantity
NLA-35	22010035	10	ET-1	1
NLA-50	22010050	13	ET-2	1
NLA-85	22010085	23		
NLA-130	22010130	35		
NLA-200	22010200	53		
NLA-300	22010300	79		
NLA-400	22010400	106		
NLA-500	22010500	132		
NLA-600	22010600	158		
NLA-800L	22010805	211		

Typical Specification

Furnish and install, as shown on plans, a _____ gallon _____" diameter X _____" (high) pre-charged steel HVAC expansion tank with heavy-duty butyl bladder. The tank shall have multiple water-side connections to eliminate stagnate water within the tank, a 0.302"-32 charging valve connection (standard tire valve) to facilitate the on-site charging of the tank to meet system requirements, a pressure gauge, and bladder integrity monitor. The tank must be constructed in accordance with the most recent addendum of Section VIII Division 1 of the ASME Boiler and Pressure Vessel Code and rated for 125 psig.

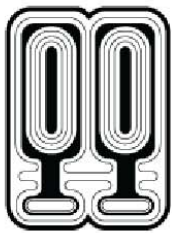
Each tank shall be Wessels model number NLA-_____ or approved equal.

E-mail



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101 Tank Street Greenwood, IN 46143
P: 317-888-9800 F: 317-865-7411
www.westank.com



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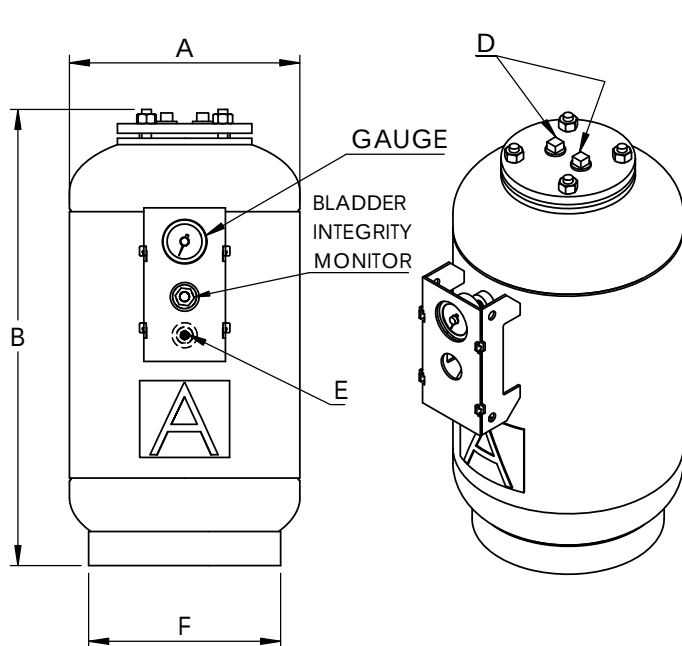
SUBMITTAL

NLA-SERIES

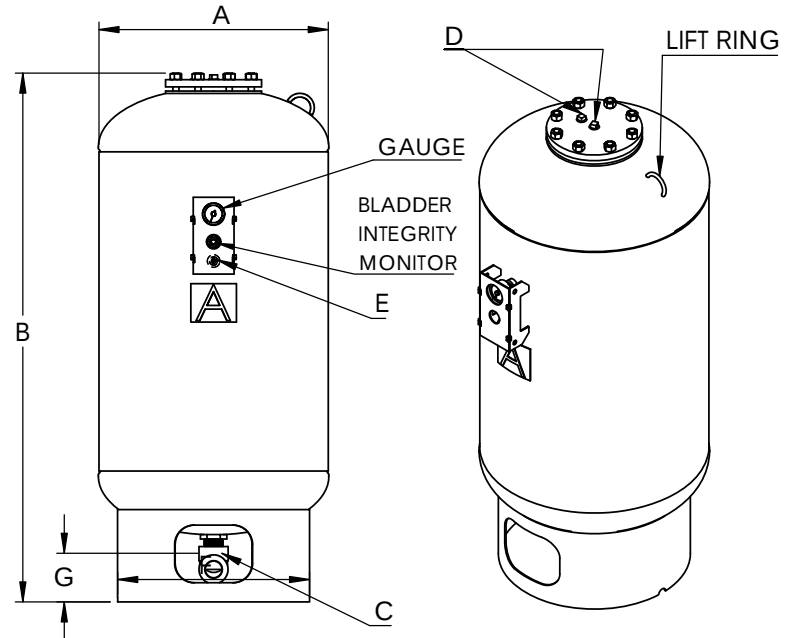
HVAC EXPANSION TANKS

Models: NLA-35 to NLA-800L

Submittal Sheet No. A-1010A Rev. 1 5/17/2018



NLA-35 & NLA 50



NLA-85 TO NLA-800L

Dimensions & Weights:

Model Number	Dimensions in Inches							Approx. Shipping Weight (lbs)
	A	B	System Connection		Charging Valve	F	G	
			C	D	E			
NLA-35	12	23 1/2	-	3/4 NPT	0.302"-32NC	10	-	40
NLA-50	14	24						50
NLA-85	16	37	1 NPT			12	5 1/2	90
NLA-130	20					16		125
NLA-200	24	43	1 1/2 NPT			20	5 1/4	210
NLA-300		55						225
NLA-400	30	49	2 NPT			24		300
NLA-500		57						335
NLA-600		65						360
NLA-800L	32	76				28		475

Notes:

- Tanks are factory pre-charged at 40 psig and field adjustable.
- California code-sight glass is available upon request.
- Both top and bottom connections (C & D) access the bladder.
- Mounting clips are available upon request.
- U.S. Patent No. 8,633,825 B2



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 company

101 Tank Street Greenwood, IN 46143
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Comfort Systems USA (Arkansas), Inc.

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Phone 501-834-3320

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Spec Section 232114, 2.2.

Air Vents

JOB: Buckstaff Bathhouse HVAC

REPRESENTATIVE: Boone & Boone Sales
Salesman: Mark Eley
Rep Phone Number: 501-940-7747
Rep Email: marke@2boonesales.com

UNIT TAG: ET-1, ET-2

ENGINEER: Alvine Engineering

CONTRACTOR: Comfort Systems, USA

ORDER NO.

SUBMITTED BY:

APPROVED BY:

DATE:

DATE:

DATE:



Miscellaneous Accessories

DESCRIPTION

NO. 87, 67, and 7 AUTOMATIC AIR VENTS - are designed to vent the accumulation of troublesome air wherever it can be trapped. These non-ferrous automatic air vents are 4-3/4"x2-1/4", 3-3/16"x1-1/2", and 4-1/6"x2-3/16"(height and width), respectively, and are rated for a maximum operating temperature of 240°F at pressures of 150, 35, and 75 PSI, respectively. The No. 87 has a combination of 1/2" FPT / 3/4"MPT connection, whereas No's. 67 and 7 have 1/8" MPT and 1/8" FPT connections, respectively.

No. 26 VACUUM BREAKER - Designed to protect closed vessels and piping systems against collapse when the induced vacuum exceeds design conditions. When used on steam heating piping systems, the No. 26 Vacuum Breaker controls induced vacuum permitting normal return of condensate to the boiler. Adjustable range 1/4" to 20" (mercury) vacuum - 150 PSIG maximum working pressure - 300 °F maximum operating temperature (Factory set at 4" mercury).

No. 17 SR. AUTOMATIC AIR VALVE - No. 17 Sr. Valve is a deluxe, hygroscopic air valve with manual shut-off. 1/8" MNPT connection.

30 PSIG Working Pressure
225 °F Maximum Operating Temperature

No. 4V "COIN-OPERATED" AIR VENT - This vent is specially designed for the new types of radiators. A particular feature is that it projects only slightly, being almost flush with the radiator.

150 PSIG Working Pressure
250 °F Maximum Operating Temperature

NO. 107A HIGH CAPACITY AIR VENT - A rugged High Capacity Air Vent designed to purge free air from liquid systems at operating pressures up to 150 psig. The Model 107A Air Vent has a cast iron body and bonnet, with stainless steel, brass, and EPDM internal components and is suitable for a maximum operating temperature of 250°F. The Model 107A Air Vent has a 3/4" FNPT inlet and 3/8" FNPT outlet.

RV-125A READOUT VALVE AND RP-250B READOUT PROBE -

The RV-125A is designed for use wherever pressure tapings are required to monitor flow or pressures. This Readout Valve is fitted with an EPT insert which incorporates a unique check valve feature designed to check flow when the Readout Valve is not being used to monitor flow. Use companion RP-250B Readout Probes with the RV-125A Readout Valve. 300 PSIG working pressure - 250°F maximum operating temperature.

DT-2 DRAIN-O-TANK® AIR CHARGER - The Drain-O-Tank Air Charger offers a sure, quick way to recharge a water-logged compression tank.

125 PSIG Working Pressure
240 °F Maximum Operating Temperature

No. 97 Air Vent - is a float type automatic air vent that is designed to vent troublesome air from hydronic heating systems. The 97 vent has forged brass body and cap with non-ferrous internals. The vent is 3-1/8"x1-7/8" with a maximum operating pressure of 150 PSI and temperature of 240°F.

150 PSIG Working Pressure
240 °F Maximum Operating Temperature

No. 98 Air Vent - is a high capacity automatic air vent that is designed to remove air in closed loop systems. The No. 98 high capacity air vent has brass body and cap with non-ferrous internals. The vent is 4-1/2"x2-1/4" with 1/2" NPTF connection.

150 PSIG Working Pressure
250 °F Maximum Operating Temperature

SCHEDULE

MODEL NUMBER	PART NUMBER	PRODUCT	MAXIMUM WORKING PRESSURE PSIG	MAXIMUM OPERATING TEMPERATURE °F	TAGGING INFORMATION	QUANTITY
4V	113055	Air Vent	150	250		
67	113020	Automatic Air Vent	35	240		
7	113001	Automatic Air Vent	75	240		
87	113021	Automatic Air Vent	150	240		
107A	113076	High Capacity Automatic Air Vent	150	250		
17 Sr.	113004	Automatic Air Valve	30	225		
26	113075	Vacuum Breaker	150	300		
DT-2	113041	Drain-O-Tank	125	240		
97	113222	Automatic Air Vent	150	240		
98	113246	High Capacity Automatic Air Vent	150	250		
RV-125A	113100	Readout Valve	300	250		
RP-250B	113102	Readout Probe	300	250		

DIMENSIONS AND WEIGHTS

MODEL NUMBER	PART NUMBER	DIMENSIONS INCHES		CONNECTIONS INCHES NPT		APPROX. SHPG. WT. LBS.	
		WIDTH	HEIGHT	SIZE	TYPE	CARTON OF	TOTAL
4V	113055	5/8	5/8	1/8	M	48	2.0
67	113020	1-1/2	3-3/16	1/8	M	12	3.0
7	113001	2-3/16	4-1/16	1/8	F	12	6.0
87	113021	2-1/4	4-3/4	3/4 1/2	M F	12	8.0
107A	113076	4-1/2	9-5/8	3/4	F	1	10.0
17 Sr.	113004	13/16	1-1/4	1/8	M	12	2.0
26	113075	1-1/4	3	3/4	M	6	3.0
DT-2	113041	2-1/4	9-5/16	1/2	M	12	8.0
97	113222	1-7/8	3-1/8	1/8	M	10	4.0
98	113246	2-1/4	4-1/2	1/2	F	10	8.0
RV-125A	113100	1/2	1-3/32	1/8	M	50	4.0
RP-250A	113102	1/2	1-31/32	7/16	M	6	0.1

* All dimensions and weights are approximate and not to be used for construction, pre-piping or freight rating unless certified by Bell & Gossett in writing.

MATERIALS OF CONSTRUCTION

Body (all products except Model 107A High Capacity Air Vent): Brass

Body & Bonnet (Model 107A High Capacity Air Vent): Cast Iron

Internals: Nonferrous



Xylem Inc.
8200 N. Austin Avenue
Morton Grove, IL 60053
Phone: (847)966-3700
Fax: (847)965-8379
www.xylem.com/bellgossett

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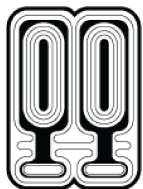
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Spec Section 232114, 2.3.

Air Separators



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SUBMITTAL

WVA-SERIES

AIR & DIRT SEPARATOR

Models: WVA-2 thru WVA-12

Submittal Sheet No. D-1006A

Date: 7/22

Job Name	Buckstaff Bathhouse HVAC	Submitted By		Date	
Location		Approved By		Date	
Engineer	Alvine Engineering	Order No.		Date	
Contractor	Comfort Systems, USA	Notes	Salesman: Mark Eley 501-940-7747		
Sales Rep.	Boone & Boone		marke@2boonesales.com		

Description

Wessels WVA series Air & Dirt Separators are designed to eliminate entrained air and separate debris associated with start-up and maintenance of any hydronic systems. The design incorporates a skim valve, used to eliminate floating debris, removable end cover for coalescing medium access, and an air vent to automatically release air from the separator.

Construction

Shell: Carbon Steel
Coalescing Medium: Stainless Steel
Blow Down Valve (optional): Bronze
Skim Valve (optional): Bronze
Vent (optional): Cast Iron
Exterior: Primer Painted

Performance Limitations

Maximum Design Temperature: 250°F
Maximum Design Pressure: 150 PSIG*

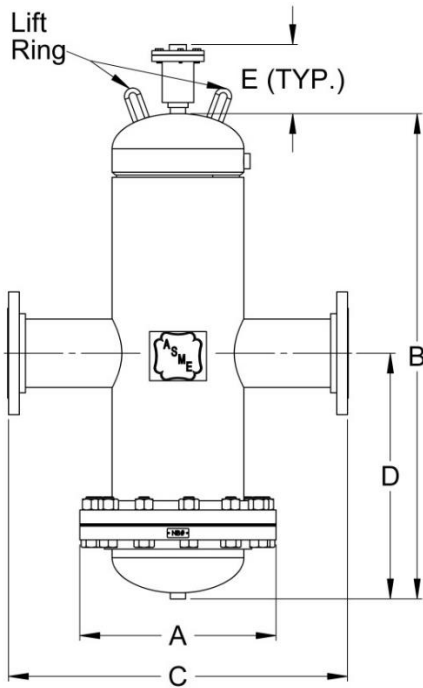
*125, 200 & 250 PSIG available

Model Number	Part Number	Max Flow (GPM)	Tagging Information	Quantity
WVA-2	72302001	69	AS-HW	1
WVA-2-NPT	72302012	69		
WVA-2.5	72302035	108		
WVA-2.5-NPT	72302046	108		
WVA-3	72302069	144		
WVA-3-NPT	72302080	144		
WVA-4	72302103	255	AS-CW	1
WVA-5	72302137	398		
WVA-6	72302160	570		
WVA-8	72302183	945		
WVA-10	72302206	1440		
WVA-12	72302229	2100		

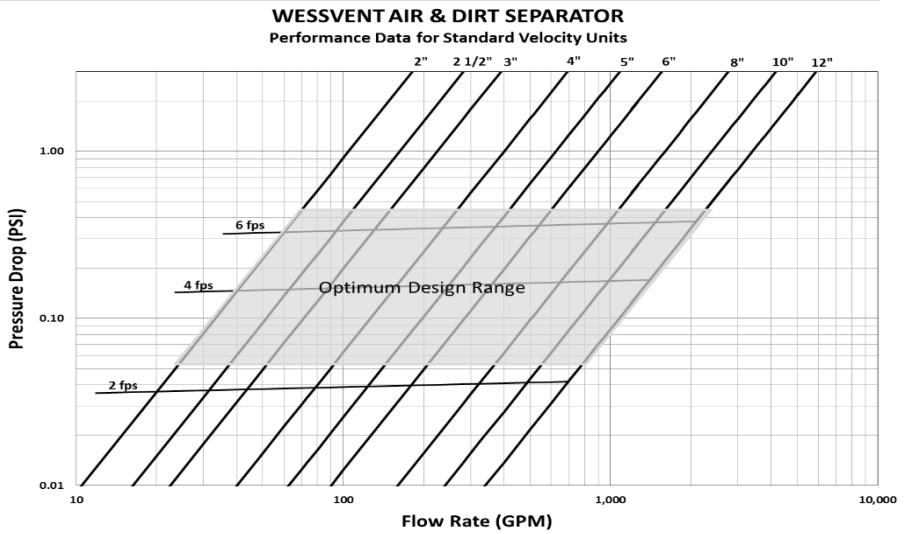
Typical Specification

Furnish and install, as shown on plans, a WVA- Air & Dirt Separator as manufactured by Wessels Company. Each separator must be designed with a blow down valve, skim valve, and automatic air vent. The separator must also utilize in its design a stainless steel coalescing medium to aid in the separation of air and dirt in the systems entrained water. The separator must be constructed in accordance with most recent addendum of Section VIII Division 1 of the ASME Boiler and Pressure Vessel Code and shall be constructed and stamped for 150 PSI working pressure @ 250°F.

Each air separator shall be Wessels model number WVA- or approved equal.



WVA-2 thru WVA-12



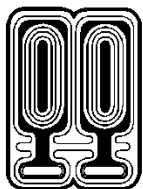
Model	Pipe Size	Width	Standard Height	Standard GPM	CV Rating
WVA-2	2	15 1/4	23	69	99
WVA-2.5	2 1/2	15 3/4	23	108	163
WVA-3	3	20 1/4	29	144	204
WVA-4	4	20 5/8	29	255	361
WVA-5	5	27 3/4	39	398	588
WVA-6	6	27 3/4	39	570	864
WVA-8	8	33 5/8	49	945	1378
WVA-10	10	37 1/2	65	1440	2268
WVA-12	12	42 1/2	76	2100	3095

Dimensions & Weights

Model Number	Dimensions in Inches						Approx Shipping Wt (lbs)
	Connection Size	A	B	C	D	E	
WVA-2	2	9	23	15 1/4	11 1/2	8 5/8	100
WVA-2-NPT				9			90
WVA-2.5	2.5	10		15 3/4			125
WVA-2.5-NPT				10 1/2			115
WVA-3	3	11	29	20 1/4	14 1/2		150
WVA-3-NPT				12 3/4			130
WVA-4	4	13 1/2		20 5/8			250
WVA-5	5	16	39	27 3/4	19 1/2		310
WVA-6	6	19					375
WVA-8	8	23 1/2	49	33 5/8	24 1/2		700
WVA-10	10	27 1/2	65	37 1/2	32 1/2		1000
WVA-12	12	32	76	42 1/2	38		1500

Notes

- Trim package is optional.
- U.S. Patent No. 10,708,538



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SUBMITTAL

WVA TRIM PACKAGE

Models: WVA-2 thru WVA-36
Submittal Sheet No. D-1123A

Date: 11/20

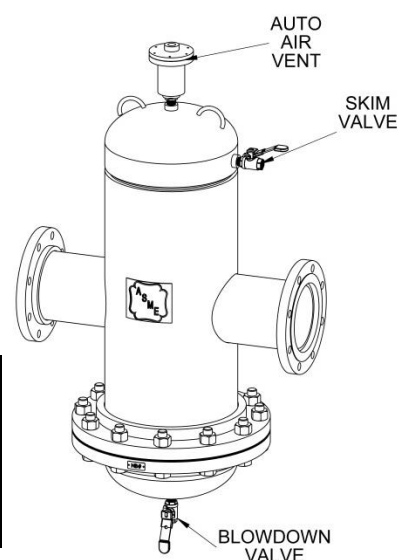
Job Name	Buckstaff Bathhouse HVAC	Submitted By	_____	Date	_____
Location	_____	Approved By	_____	Date	_____
Engineer	Alvine Engineering	Order No.	_____	Date	_____
Contractor	Comfort Systems, USA	Notes	Salesman: Mark Eley 501-940-7747		
Sales Rep.	Boone & Boone		marke@2boonesales.com		

Description

Wessels WessVent Trim Package is designed to remove the harmful air and contaminants normally found in a closed loop heating or cooling system. When installed, the trim package includes all essential parts for taking full advantage of the WessVent Air/Dirt Separator's potential.

Performance Limitations

Maximum Design Pressure: 150 PSI
Maximum Design Temperature: 240°F



Model Number	Part Number	Tagging Information	Quantity
WVA-2 thru WVA-14	74099993	AS-CW, AS-HW	2
WVA-16 thru WVA-36	74099995		

Dimensions & Weights

Model Number	Part Description	Quantity	Material	Approx Shipping Weight
WVA-2 thru WVA-14	#706 Air Vent	1	Cast Iron	9 lbs
	1" Ball Valve	1	Brass	
	1/2" Ball Valve	1		
	3/4" x 1/2" Bushing	1	Carbon Steel	
	1/2" x Close Nipple	1		
WVA-16 thru WVA-36	#706 Air Vent	1	Cast Iron	12 lbs
	2" Ball Valve	1	Brass	
	1" Ball Valve	1		
	1" x 3/4" Reducer Bushing	1	Carbon Steel	
	3/4" x Close Nipple	1		



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Spec Section 232114, 2.4.

Strainers

For Liquid and Steam Service

Job Name _____
 Job Location _____
 Engineer _____
 Approval _____

Contractor _____
 Approval _____
 Contractor's P.O. No. _____
 Representative _____

Series 777S, ~~S777S~~ Wye-Pattern Bronze Strainers

Sizes: 1/2" – 4" (15-100mm)

Series 777S, S777S Wye-Pattern Bronze Strainers are designed to protect system components from dirt, rust and other damaging debris in the piping system. This series features a retainer cap tapped for closure plug.

Features

- Bronze body
- Wye-pattern
- Retainer cap tapped for closure plug

Models

777S – 1/2" – 4" (15 – 100mm) threaded connections

~~S777S 1/2" – 2" (15 – 50mm) solder connections~~

Specifications

A wye-pattern bronze strainer to be installed as indicated on the plans. The strainer must have retainer cap tapped for closure plug. Strainer shall be rated to 400psi (27.6 bar) WOG @ 210°F (99°C); 125psi (8.6 bar) WSP @ 353°F (178°F) for sizes 1/2" – 3" (15 – 75mm) and 300psi (20.7 bar) WOG @ 210°F (99°C); 125psi (8.6 bar) @ 353°F (178°C) for size 4" (100mm). Strainer shall be a Watts Regulator Company Series 777S (threaded ends) or S777S (solder ends).

Materials

Body:	Bronze
Retainer Cap:	1/2" (15mm): Brass 3/4" – 4" (20-100): Bronze
Cap Gasket:	1/2" – 2" (15-50mm): EPDM Other sizes consult factory
Standard Screen:	1/2" – 2 1/2" (15-65mm): 304 stainless steel #20 mesh, 3" (75mm): 3/64" (1.2mm) 304 stainless steel perforated screen 4" (100mm): 1/8" (3mm) 304 stainless steel perforated screen

Strainers
(2" and Below)



777S



~~**S777S**~~

BAA/ARRA Compliant*

*This product complies with the Buy American Act and The American Recovery and Reinvestment Act. For more information, visit watts.com.

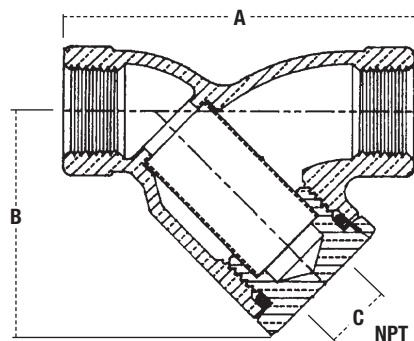
Pressure – Temperature

Maximum Working Pressure:

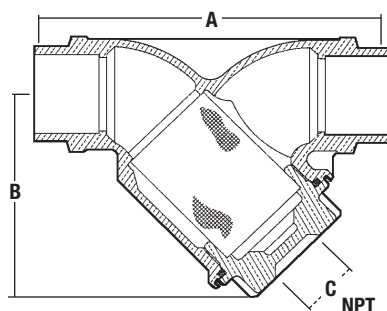
1/2" – 3" (15-75mm)	400psi (27.6 bar) WOG @ 210°F (99°C)
	125psi (8.6 bar) WSP @ 353°F (178°F)
4" (100mm)	300psi (20.7 bar) WOG @ 210°F (99°C)
	125psi (8.6 bar) WSP @ 353°F (178°F)

Strainers (2" and Below)

Dimensions—Weights



777S



S777S

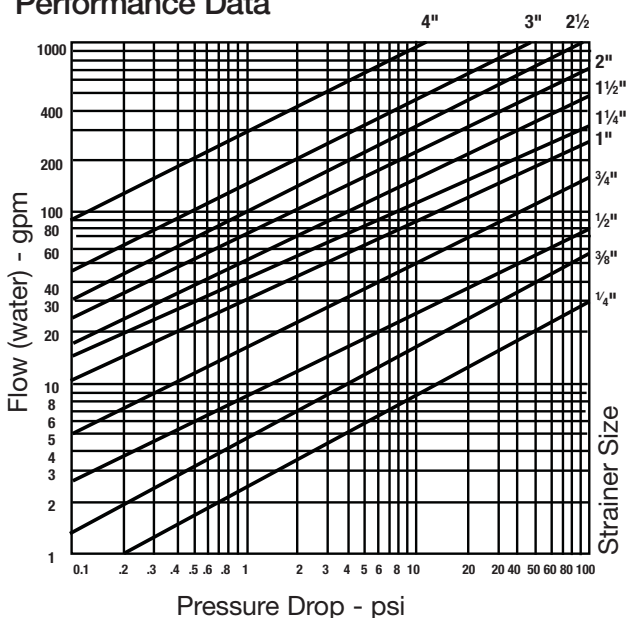
Screen Options

304 Stainless Steel Wire Mesh Liners: (#30, #40, #60, #80, #100)

304 Stainless Steel Perforated Screens: (1/32", 3/64", 1/16", 1/8", 3/16", 1/4")

Consult factory for ordering codes

Performance Data



777S

SIZE (DN)		DIMENSIONS						WEIGHT	
in.	mm	A		B		C (NPT)		lbs.	kgs.
1/4	8	2 1/16	68	1 1/16	43	3/8	10	1.7	0.77
3/8	10	2 1/16	68	1 1/16	43	3/8	10	1.7	0.77
1/2	15	3	76	2	51	3/8	10	1.7	0.77
3/4	20	3 5/16	84	2 5/16	59	1/2	15	1.7	0.77
1	25	4 1/2	114	2 5/16	59	3/4	20	2.7	1.22
1 1/4	32	5 5/8	130	3 1/8	79	3/4	20	3.0	1.36
1 1/2	40	5 7/8	149	3 3/4	95	1	25	4.0	1.81
2	50	6 3/16	157	4 7/8	124	1 1/4	32	7.4	3.36
2 1/2	65	8 1/8	206	4 15/16	125	1 1/4	32	12.0	5.44
3	75	10 1/8	257	6 11/16	170	1 1/2	40	24.0	10.90
4	100	13	325	10 1/2	267	1 1/2	40	41.0	18.60

S777S

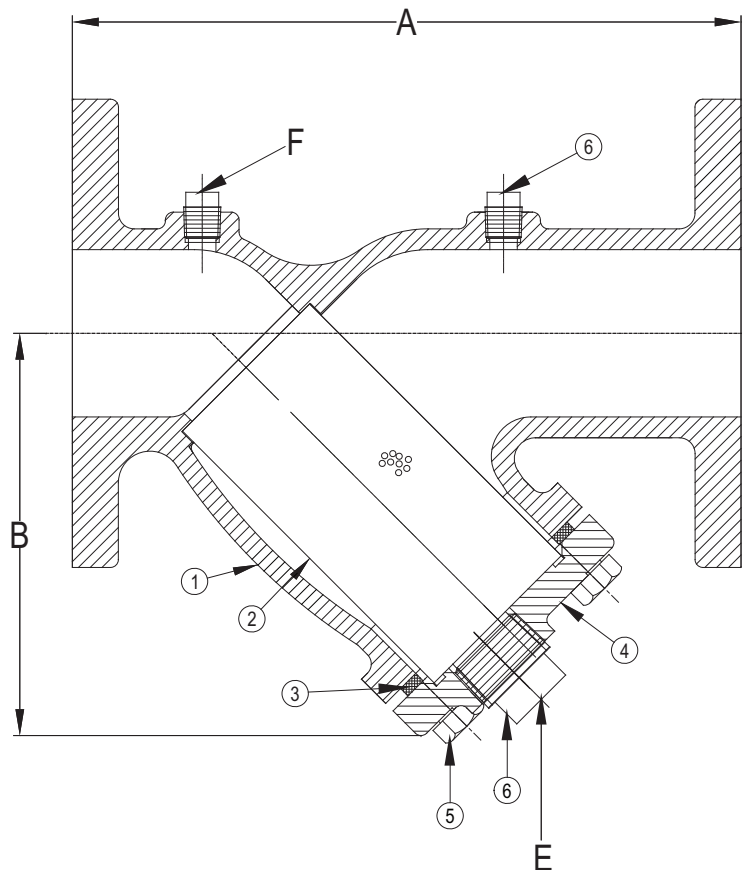
SIZE (DN)		DIMENSIONS						WEIGHT	
in.	mm	A		B		C (NPT)		lbs.	kgs.
1/2	15	3 3/8	86	2 1/16	52	3/8	10	1.5	0.68
3/4	20	3 3/4	95	2 9/16	65	1/2	15	1.6	0.73
1	25	5	127	3	76	3/4	20	2.5	1.13
1 1/4	32	5 5/8	143	3 1/4	82	3/4	20	2.8	1.25
1 1/2	40	6 7/16	164	3 13/16	97	1	25	4.0	1.81
2	50	7 1/2	191	4 5/8	118	1 1/4	32	7.4	3.39



A Watts Water Technologies Company



USA: No. Andover, MA • Tel. (978) 688-1811 • Fax: (978) 794-1848 • www.watts.com
Canada: Burlington, ONT. • Tel. (905) 332-4090 • Fax: (905) 332-7068 • www.wattscanada.ca



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

Strainers
(2-1/2" and Above)

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	16	3/4-10 x 1-3/4	772
161FFY-CI125P34-FBB	16	38-3/4	30-1/8	2	N/A	16	3/4-10 x 1-3/4	994
181FFY-CI125P34-FBB	18	43-1/2	33-1/4	2	N/A	20	7/8-9 x 2	1379
201FFY-CI125P34-FBB	20	49-1/2	39-1/4	2	N/A	20	1-8 x 2-1/4	1652
241FFY-CI125P34-FBB	24	55-13/16	41	2	N/A	-	-	3400

†See "Style A7 Product Number Configuration" for additional options.

Dimensions and weights are for reference only. When required, request certified drawings.

Face to face values tolerance in compliance with ASME B16.1.

STANDARD SCREENS SUPPLIED

SIZE	SCREEN PERFORATION			
	FOR LIQUID	OPEN AREA	FOR STEAM	OPEN AREA
in	in		in	
2 to 4	1/16	30%	3/64	33%
5 to 10	1/8	43%	3/64	33%
12	1/8	43%	1/16	30%
14 & UP	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 A7

SCALE: NTS

DATE: 09/21/2020

MAT'L: (As Noted Above)

REQ. ---

DR. BY DSF



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Comfort Systems USA (Arkansas), Inc.

P.O. Box 16620

LittleRock, AR 72231

Phone 501-834-3320

Fax 501-834-5416

Spec Section 232114, 2.5.

Pump Suction Diffusers

Job/Project: Buckstaff Bathhouse HVAC		Representative: Boone & Boone Sales	
ESP-Systemwise: WIZE-14D04D59	09/09/2025	Phone: (501) 940-7747 Mark Eley	
Location/Tag: CWP-1, CWP-2		Email: marke@2boonesales.com	
Engineer: Alvine Engineering		Submitted By:	Date:
Contractor: Comfort Systems USA		Approved By:	Date:

Suction Diffuser Plus

Bell & Gossett Model: DB-3X

The Bell & Gossett Suction Diffuser Plus is designed for direct application to the pump suction and provides ideal flow conditions for the pump, providing NPSH requirements are met. Its integrated Flow Cone directs flow through the unit and into the pump suction while working with the full length straightening vanes to create a more uniform flow profile. The orifice cylinder has a free area equal to five times the cross section of the pump suction opening and serves as a coarse strainer to protect the pump from large sediment. Type X-For Closed Systems

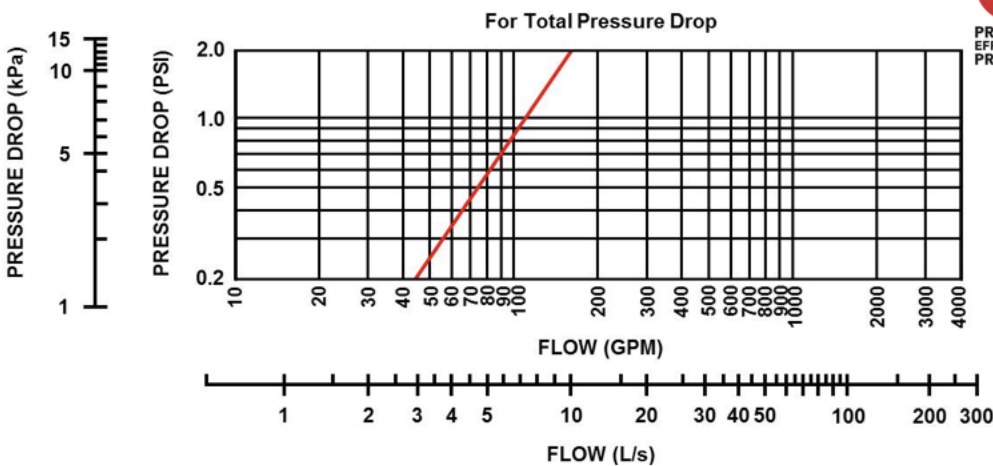
<http://bellgossett.com/hydronic-plumbing-accessories/pump-accessories/suction-diffuser/>



Suction Diffuser Selection

Model	DB-3X
System Size	3.0 in
Pump Size	2.0 in
Pressure Drop @ Design Flow	0.0'
Connection Type	NPT/NPT
Cv	107
Fluid Type	Water
Fluid Temp	68 °F

Performance characteristics:



DB-3X

Materials of construction

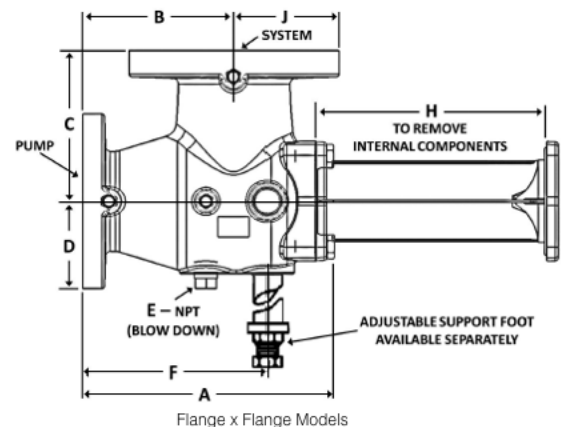
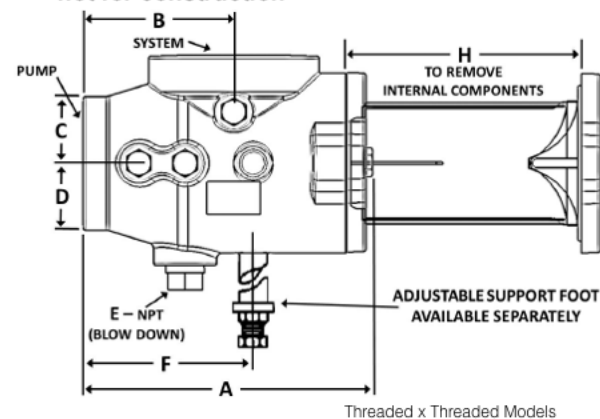
Body	Cast Iron
Inlet Vanes	Steel
Orifice Cylinder	Steel
Start-up Strainer	16 Mesh Bronze

Operating Data

Max Working Pressure	175 psi
Max Temp	250°F

Dimensional data:

not for construction



*Dimensions include orifice cylinder + 2-1/2 (64) inch clearance.

DIMENSIONS - INCHES (mm)

Model No.	System Side	Pump Side	A	B	C	D	E	F	G	H	J	Orifice Cylinder Free Area in ² (cm ²)	Approx. Shpg. Wt. Lbs. (Kg)
DB-3	3 (76.2)	T 2 (50.8)	7.56 (192)	3.87 (98)	2.75 (70)	2.75 (70)	3/4 (19)	4.38 (111)	5.75 (146)	6.75 (171.5)	N/A	20-1/2 (132)	17 (8)

Job/Project: Buckstaff Bathhouse HVAC		Representative: Boone & Boone Sales	
ESP-Systemwise: WIZE-14D04D59	09/09/2025	Phone: (918) 664-9756	
Location/Tag: HWP-1, HWP-2		Email: cpestel@2boonesales.com	
Engineer: Alvine Engineering		Submitted By:	Date:
Contractor: Comfort Systems USA		Approved By:	Date:

Suction Diffuser Plus

Bell & Gossett Model: BA-3X

The Bell & Gossett Suction Diffuser Plus is designed for direct application to the pump suction and provides ideal flow conditions for the pump, providing NPSH requirements are met. Its integrated Flow Cone directs flow through the unit and into the pump suction while working with the full length straightening vanes to create a more uniform flow profile. The orifice cylinder has a free area equal to five times the cross section of the pump suction opening and serves as a coarse strainer to protect the pump from large sediment. Type X-For Closed Systems

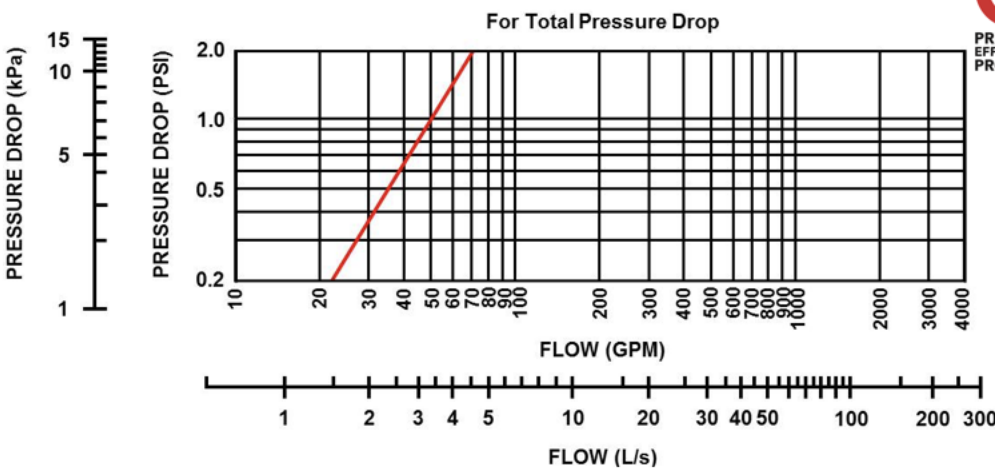
<http://bellgossett.com/hydronic-plumbing-accessories/pump-accessories/suction-diffuser/>



Suction Diffuser Selection

Model	BA-3X
System Size	2.0 in
Pump Size	1.5 in
Pressure Drop @ Design Flow	0.0'
Connection Type	NPT/NPT
Cv	50
Fluid Type	Water
Fluid Temp	68 °F

Performance characteristics:



BA-3X

Materials of construction

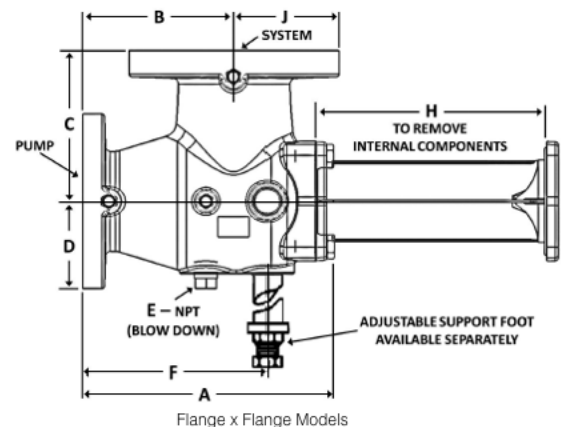
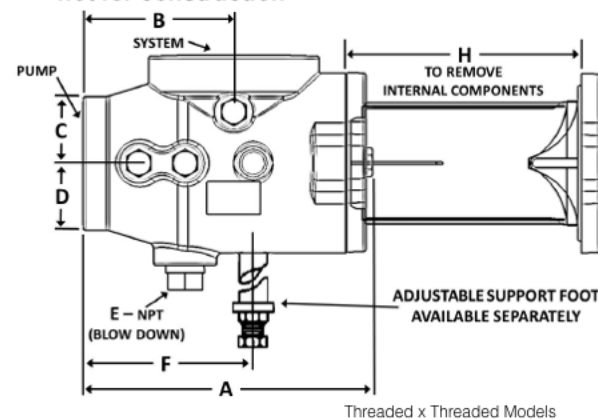
Body	Cast Iron
Inlet Vanes	Steel
Orifice Cylinder	Steel
Start-up Strainer	16 Mesh Bronze

Operating Data

Max Working Pressure	175 psi
Max Temp	250°F

Dimensional data:

not for construction



*Dimensions include orifice cylinder + 2-1/2 (64) inch clearance.

DIMENSIONS - INCHES (mm)

Model No.	System Side	Pump Side	A	B	C	D	E	F	G	H	J	Orifice Cylinder Free Area in ² (cm ²)	Approx. Shpg. Wt. Lbs. (Kg)
BA-3	2 (50.8)	T 1-1/2 (38.1)	5.96 (151)	3 (76)	2.25 (57)	2.37 (60)	3/4 (19)	3.81 (97)	5.25 (133)	5.15 (130.8)	N/A	11 (71)	13 (6)



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Fax 501-834-5416

Spec Section 232114, 2.6.

Combination (Triple/Multi) Duty Valves

Job/Project: Buckstaff Bathhouse HVAC	Representative: Boone & Boone Sales		
ESP-Systemwize: WIZE-14D04D59	09/09/2025	Phone: (501) 940-7747 Mark Eley	
Location/Tag: CWP-1, CWP-2		Email: marke@2boonesales.com	
Engineer: Alvine Engineering		Submitted By:	Date:
Contractor: Comfort Systems USA		Approved By:	Date:

Triple Duty Valve

Bell & Gossett Model: 3DS-3B

The Triple Duty Valve is a quiet operating heavy-duty valve which performs all of the functions normally required on the discharge side of hydronic system pumps. The valve serves as a nonslam check valve as needed for zoned pumping, parallel and standby pumping, and condenser water applications. The spring loaded disk prevents valve chatter, and assures positive shutoff.. The Triple Duty Valve is also equipped with Model RV-125A readout valves for more accurate system balance. The calibrated nameplate allows the valve to be returned to the original balance position after shutoff.

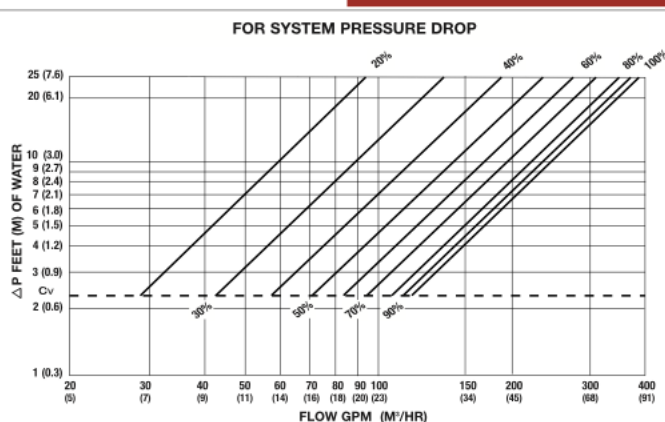
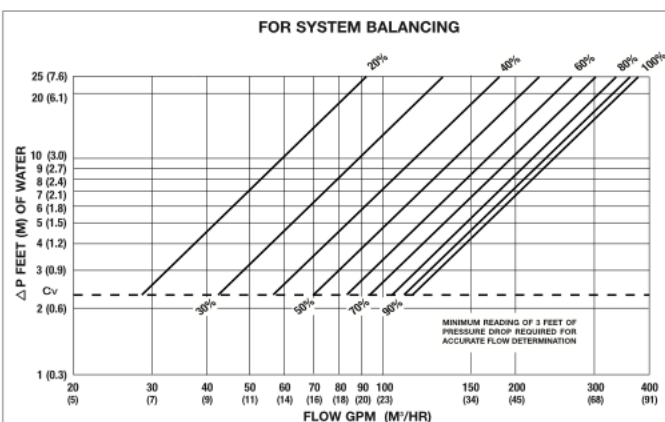


Triple Duty Valve Selection

Model	3DS-3B
Size	3.0 in
Pressure Drop @ Design Flow & Designated Stem Position	0.0'
Stem Position	60%
Connection Type	Flanged
Cv @ Designated Step Position	83

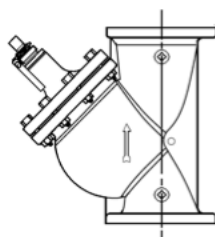
Performance Characteristics:

3DS-3B



Materials of construction

Body:	Cast Iron with Bronze seat
Disc	Brass with EPDM Seat Insert
Stem	Stainless Steel
Spring	Stainless Steel
Packing	Teflon-Graphite (asbestos-free)
Gasket	Non-Asbestos
Readout Valve	Brass with EPT insert, check valve & gasket



**PROPER INSTALLATION
SHOWING STEM UPRIGHT**

Operating Limits

Max Working Pressure (standard)	175 psi
Max Temp (standard)	250°F

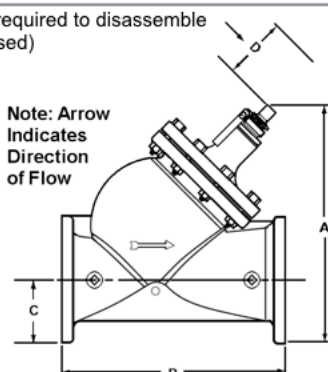
Dimensional Data:

not for construction

Distance required to disassemble
(valve closed)

FLANGE SIZE*	DIMENSIONS IN INCHES (mm)					APPROX. SHPG. WT. LBS. (Kg)
	OPEN	CLOSED	B	C	D	
3 (76.2)	11.22 (285.00)	10.51 (266.90)	10.00 (254.00)	3.75 (95.25)	3.50 (88.90)	36 (16)

Note: Arrow
Indicates
Direction
of Flow



*STANDARD 125 PSIG (862 kPa) ANSI FLANGES.

Dimensions are subject to change. Not to be used for construction purposes unless certified.

Job/Project: Buckstaff Bathhouse HVAC		Representative: Boone & Boone Sales	
ESP-Systemwise: WIZE-14D04D59	09/09/2025	Phone: (501) 940-7747 Mark Eley	
Location/Tag: HWP-1, HWP-2		Email: marke@2boonesales.com	
Engineer: Alvine Engineering		Submitted By:	Date:
Contractor: Comfort Systems USA		Approved By:	Date:

Triple Duty Valve

Bell & Gossett Model: 3DV-2NMF

The Bell & Gossett Triple Duty Valve Model 3DV is a combination shut-off, check, and balance valve for use in HVAC systems. The full port ball valve provides complete shut-off to allow your pump to be removed without draining the system. The spring loaded check prevents gravity circulation and backflow in systems utilizing zoned or parallel pumping, while allowing the valve to be rotated in any direction. The calibrated nameplate with memory stop provides basic balance capabilities for your entire system. The valve features a FNPT fixed outlet connection and a choice of rotatable flange union tailpiece or MNPT union tailpiece inlet connection. The valve also features an extended handle design as well as two extended 1/4" PT valves for insulated systems.

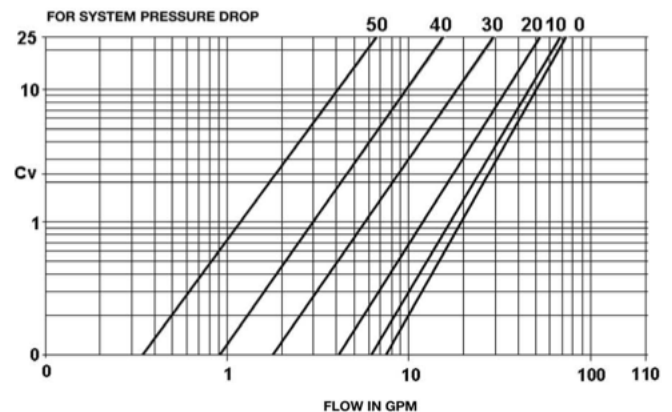
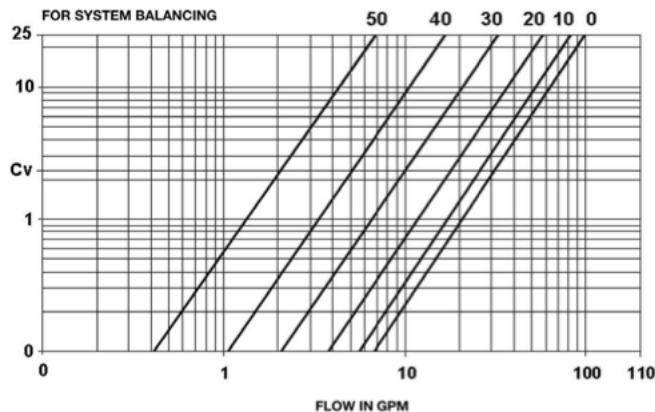


Triple Duty Valve Selection

Model	3DV-2NMF
Size	2.0 in
Pressure Drop @ Design Flow & Designated Stem Position	NA
Stem Position	60%
Connection Type	NPT Male
Cv @ Designated Step Position	0

Performance Characteristics:

3DV-2NMF



Materials of construction

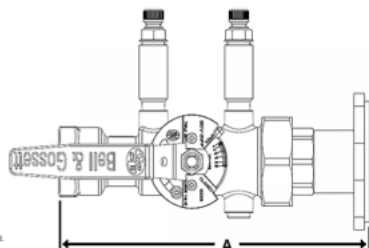
Valve Body:	C37700 Brass
Ball	Chrome Plated C36000 Brass
Seating Rings	Glass & Carbon
PT Valves	C37700 Brass w/ EPDM Seals
Stem	C37700
Check Valve Body	Glass Filled Noryl
Check Valve Seals	EPDM

Operating Limits

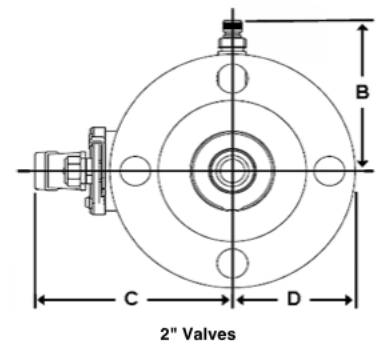
Max Operating Pressure	200 psi
Max Temp Range	4°F - 250°F

Dimensional Data:

not for construction



*All dimensions +/- 0.125 (3.2 mm) tolerance. Dimensions are subject to change. Not to be used for construction purposes unless certified.



Size	Inlet Connection Type	DIMENSIONS* IN INCHES (mm)				Cv	Approx. Weight lbs. (kg)
		A	B	C	D		
2"	NPT Male	10.53 (267.5)	3.86 (98.0)	4.82 (122.4)	1.34 (34.0)	28	8.3 (3.8)



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Spec Section 232114, 2.7.

Pressure/Temperature Test Plugs

Test Plugs & Accessories

The **Trerice Test Plug** provides a convenient access port for determining the pressure and/or temperature of process media contained in a pipe line or vessel. The test plug is designed for use in chilled or hot water systems and is permanently installed in the system at the desired test location. A test thermometer or pressure gauge with test adapter can be inserted through the plug to determine the conditions within the system. When the probe is withdrawn, the inner valve plug closes to seal the system. The test plug includes a removable cap to protect the inner valve plug and provide a secondary seal.



D3742 shown

Nordel, otherwise known as EPDM, provides excellent service in hot or cold water. **Nordel should not be used with hydrocarbon solvents, hydrocarbon oils, chlorinated hydrocarbons or turpentine.**

Neoprene, a synthetic rubber, provides excellent service in ammonia, high aniline point petroleum oils and silicate ester lubricants. **Neoprene should not be used with silicone greases, silicone oils or di-ester based lubricants.**

Test plugs are designed for initial startup and testing, not continuous or frequent use. If continuous or frequent use is desired or expected, a test well should be installed for temperature applications and a needle valve installed for pressure applications.

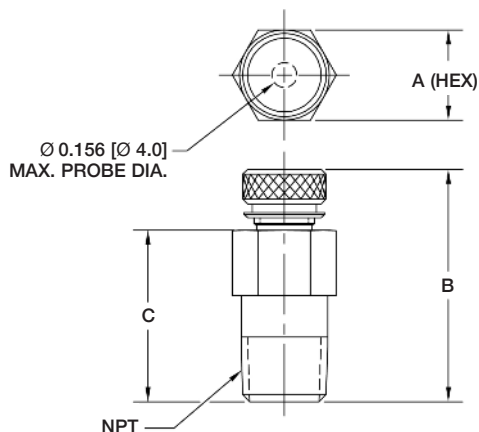
Tests should be made as quickly as possible because the inner plug resealing time is dependent upon the length of time the probe remains inserted, as well as the temperature and pressure of the system. The test plug may take longer to reseal at lower temperatures or pressures. The probe used for testing should never exceed a diameter of 0.156" (4 mm). The pressure gauge used for testing should always have a range of twice the system pressure.

PRESSURE GAUGES

Test Plugs

Test Plug Item No.	Test Plug with Retainer Item No.	Connection Size (NPT)	Body Length	Body & Cap	Core	Max Pres. (psig)	Max Temp.	Approximate Shipping Weight
D3741	D3764	1/4	1 1/2"	Brass*	Nordel	1000	350°F	0.1 lbs [0.05 kg]
D3743	D3763	1/4	1 1/2"	Brass*	Neoprene	1000	200°F	0.1 lbs [0.05 kg]
D3758	D3766	1/4	1 1/2"	316SS	Nordel	1000	350°F	0.1 lbs [0.05 kg]
D3757	D3765	1/4	1 1/2"	316SS	Neoprene	1000	200°F	0.1 lbs [0.05 kg]
D3742	D3770	1/2	1 1/2"	Brass*	Nordel	1000	350°F	0.2 lbs [0.09 kg]
D3744	D3769	1/2	1 1/2"	Brass*	Neoprene	1000	200°F	0.2 lbs [0.09 kg]
D3762	D3772	1/2	1 1/2"	316SS	Nordel	1000	350°F	0.2 lbs [0.09 kg]
D3761	D3771	1/2	1 1/2"	316SS	Neoprene	1000	200°F	0.2 lbs [0.09 kg]
D3767	D3773	1/4	3"	Brass	Nordel	1000	350°F	0.4 lbs [0.18 kg]
D3768	D3774	1/4	3"	Brass	Neoprene	1000	200°F	0.4 lbs [0.18 kg]

* Add (PBF) to the end of part number to specify Lead-Free brass.



All dimensions are nominal. Dimensions in [] are in millimeters.

Part No.	A	B	C	NPT
D3741	0.56 [14]	1.50 [38]	1.06 [27]	1/4 - 18
D3743				
D3758				
D3757				
D3742	0.88 [22]	1.50 [38]	1.06 [27]	1/2 - 14
D3744				
D3762				
D3761				
D3767	0.56 [14]	3.00 [76]	2.56 [65]	1/4 - 18
D3768				



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Spec Section 232114, 2.8.

Manually Calibrated Balancing Valves



SUBMITTAL DATA

DATE: September 16, 2025

PROJECT: Hot Springs Bathhouses Buckstaff

CONTRACTOR: Comfort Systems USA

GRISWOLD VALVE PACKAGES

ATC valve size & coil connection size will be coordinated when we receive approved submittals.

Incoming line size will be verified with field conditions.

TAG	MODEL	PIPE SIZE	GPM
CC, HC, & RHC	CPP2QIS	Per Plans	Per Schedules

Control Valve (CV):
Supplied By Others

QuickSet®:
Manual Balance Valve

2-WAY ATC F x F

Isolator U: Union with CPTA (Optional CPTA and Coin-Op Airvent or CPTA and Drain Valve)

Select Supply Side Valve:
Isolator B: Union Ball Valve with CPTA & Drain Valve

Isolator S: Combination Y-Strainer & Ball Valve with CPTA & Drain Valve (Optional 2nd CPTA)

LINE TYPE:		COIL TYPE:	
☐ FNPT		☐ FNPT	
☐ SWT		☐ SWT ☐ MNPT	
☐ QuickPress ¹		☐ QuickPress ¹	
LINE SIZE:	COIL SIZE:	CV SIZE:	
☐ 1/2"	☐ 1/2"	☐ 1/2"	
☐ 3/4"	☐ 3/4"	☐ 3/4"	
☐ 1"	☐ 1"	☐ 1"	
☐ 1-1/4"	☐ 1-1/4"	☐ 1-1/4"	
☐ 1-1/2"	☐ 1-1/2"	☐ 1-1/2"	
☐ 2"	☐ 2"	☐ 2"	
BALL & STEM:			
☐ Nickel-plated brass ball & brass stem			
☐ Stainless Steel ball & stem			
COMPONENT OPTIONS:			
☐ 1-1/2" Ext Kit ☐ 2" Ext Kit			
☐ Strainer 20 Mesh ☐ Strainer 50 Mesh			
☐ Union Coin-Op&CPTA ☐ Union CPTA&DV			
☐ Isolator S 2 nd CPTA ☐ Isolator B in lieu IS			
HOSE OPTIONS (FNPT COIL):			
Swivel Type: ☐ MNPT ☐ SWT			
Length: ☐ 12" ☐ 18" ☐ 24" ☐ 36"			
CONTROL VALVE (CV):			
☐ Customer Supplied and Installed CV			
☐ Customer Supplied CV - Installed By Griswold Controls			

SPECIFICATIONS

QuickSet®: Forged brass manual balance valve with brass venturi insert and graduated memory stop. Valve housing includes field repairable dual Teflon and EPDM o-ring seal stem. Valve includes one fixed end (FNPT or SWT) connection and one union (MNPT) connection. Union end includes union nut and EPDM o-ring. Valve body has two ports with (1) combination Pressure/Temperature Test Valves and manual air vent (CPTA), and (1) Pressure/Temperature Test Valve. PSI/Temp Rating: 600WOG-400PSI/250°F

Isolator S: Ball valve and integrated strainer. Valve housing is forged brass with field repairable dual Teflon and EPDM o-ring seal stem. Strainer is Stainless Steel and can be removed from housing without disturbing pipe connections for inspection or replacement. Valve includes one fixed connection and one union connection. Union end includes union nut and EPDM o-ring. Body has one port with combination Pressure/Temperature Test Valves (CPTA). Assembly includes drain valve with 3/4" hose connection with cap. PSI/Temp Rating: 600WOG-400PSI/250°F

Isolator B: Forged brass union ball valve. Valve housing includes field repairable dual Teflon and EPDM o-ring seal stem. Valve includes one fixed end (FNPT or SWT) connection and one union (FNPT or SWT) connection. Union end includes union nut and EPDM o-ring. Valve body has two ports with one combination Pressure/Temperature Test Valve and Manual Air Vent (CPTA), and one Drain Valve. PSI/Temp Rating: 600WOG-400PSI/250°F.

Union: Forged brass (ASTM B283) union. Union includes one fixed end (FNPT or SWT) connection and one union (MNPT) connection. Union end includes union nut and EPDM o-ring. Union body has one port with combination Pressure/Temperature Test Valves and manual air vent (CPTA). PSI/Temperature Rating: 400 PSI / 250°F.

Drain Valve: Brass housing, Nickel plated ball. 1/2"-1":1/2"UNFx3/4"NPSH. 1-1/4"-2":3/4"UNFx3/4" NPSH. Rated 300PSI/250°F

Combination Pressure/Test Valve & Manual Air Vent (CPTA): Brass Housing, EPDM Seal. Rated 1000PSI/350°F Pressure/Temperature Test Valve works in conjunction with valve body feature to function as Manual Air Vent. Requires both components to operate as manual air vent.

NOTES

¹ QuickPress connections are compatible with popular press tools and are rated for maximum 200 PSI.

MODEL NUMBER SELECTION

Size	Model Number- FNPT Line	Model Number- SWT Line	Model Number- PRESS Line	Select Coil Size & Type ² for Model Number	Select CV Size for Model Number
1/2"	CP2Q0_E__0	CP2Q0_L__0	CP2Q0_2__0	FNPT:(E=1/2,F=3/4) MNPT:(H=1/2, I=3/4) SWT: (K=3/8,L=1/2,M=3/4) PRESS:(2=1/2,3=3/4)	MNPT:(H=1/2)
3/4"	CP2Q0_F__0	CP2Q0_M__0	CP2Q0_3__0		MNPT:(1/2=H,I=3/4)
3/4"L	CP2Q1_F__0	CP2Q1_M__0	CP2Q1_3__0	FNPT:(E=1/2,F=3/4,G=1) MNPT:(H=1/2,I=3/4,J=1) SWT:(L=1/2,M=3/4,N=1) PRESS:(2=1/2,3=3/4,1=1)	MNPT:(1/2=H,I=3/4)
1"	CP2Q1_G__0	CP2Q1_N__0	CP2Q1_1__0		MNPT:(1/2=H,I=3/4,J=1)
1-1/4"	CP2Q2_P__0	CP2Q2_K__0	CP2Q2_4__0	FNPT:(G=1,P=1-1/4,Q=1-1/2) MNPT:(J=1, S=1-1/4,T=1-1/2) SWT:(N=1,K=1-1/4,W=1-1/2) PRESS:(1=1, 4=1-1/4, 5=1-1/2)	MNPT:(1/2=H,I=3/4,J=1,S=1-1/4)
1-1/2"	CP2Q2_Q__0	CP2Q2_W__0	CP2Q2_5__0		MNPT:(J=1,S=1-1/4,T=1-1/2)
2"	CP2Q3_R__0	CP2Q3_Y__0	CP2Q3_6__0	FNPT:(P=1-1/4,Q=1-1/2,R=2) MNPT:(S=1-1/4, T=1-1/2,U=2) SWT:(K=1-1/4,W=1-1/2,Y=2) PRESS:(4=1-1/4, 5=1-1/2, 6=2)	MNPT:(T=1-1/2,U=2)

Some Control Valve sizes have QuickSet Cv limitations. 1/2" Control Valve may not be compatible with Cv of 12.2, 21.8, 22.1, 54.7; 3/4" Control Valve may not be compatible with Cv of 21.8, 22.1, 54.7; 1" Control Valve may not be compatible with Cv of 54.7 or 105.2; 1-1/4" Control Valve may not be compatible with Cv of 105.2.

NOTES:

- Standard CPPs include nickel-plated brass ball and brass stem. For optional Stainless Steel ball and stem change "CP" to "CS" in model number.
- Insert Venturi Cv letter Code in 6th digit from flow table.
- Insert Coil Size & Type in 8th digit.
- Insert Control Valve (CV) Size in 9th digit.
- Insert Supply Side Product Code: **Isolator S** ("B"=(1) CPTA/DV, 20 mesh screen, "D"=(2) CPTAs & (1) DV, 20 mesh screen, "G"=(1) CPTA/DV, 50 mesh screen, "J"=(2) CPTAs & (1) DV, 50 mesh screen) or **Isolator B** ("V"=(1) CPTA/DV)
- Optional Extension Kit- includes cap and tube for insulation around handle and appropriate number of extensions for PT/CPTA included in package. Change "0" to "1" for 1-1/2" extension option or "2" for 2" extension option.³
- If Control Valve (CV) is installed at the factory by Griswold Controls add an "A" to end of model number.

FLOW RATES (+/-1%⁴)

OUTLET SIZE	QUICKSET MODEL NO.	FLOW GPM ⁽⁵⁾ AT 4 FT/SEC	Cv ⁽⁶⁾	GPM RANGE FOR 5"-100" W.C. ΔP (SET W/100" GAUGE)	GPM RANGE FOR 5"-300" W.C. ΔP (SET W/300" GAUGE)
1/2", 3/4"	QS0	3.8	A=0.39	0.15 – 0.67	0.15 – 1.16
			B=1.1	0.3 – 1.4	0.3 – 2.4
			C=2.5	0.6 – 2.8	0.6 – 4.6
			D=4.2	1.2 – 5.4	1.2 – 9.4
3/4"L	QS1	6.7	B=0.9	0.3 – 1.4	0.3 – 2.5
			C=1.9	0.6 – 2.8	0.6 – 4.9
			D=3.9	1.3 – 5.6	1.3 – 9.7
			E=7.0	2.6 – 11.5	2.6 – 19.9
1"	QS1	10.8	C=1.8	0.6 – 2.8	0.6 – 5.0
			D=3.8	1.3 – 5.6	1.3 – 9.7
			F=7.6	2.6 – 11.5	2.6 – 19.9
			G=12.2	3.9 – 17.3	3.9 – 30.0
1-1/4"	QS2	18.7	H=10.0	3.4 – 15.0	3.4 – 26.2
			I=21.8	7.2 – 32.3	7.2 – 55.9
1-1/2"	QS2	25.4	J=22.1	7.4 – 33.0	7.4 – 57.2
			N=54.7	13.9 – 62.0	13.9 – 107.4
2"	QS3	41.9	M=65.2 ⁷	21.6 – 96.5	21.6 – 167.1
			P=105.2	21.6 – 96.5	21.6 – 167.1

NOTES

² Coil Type must be FNPT if hoses are required.

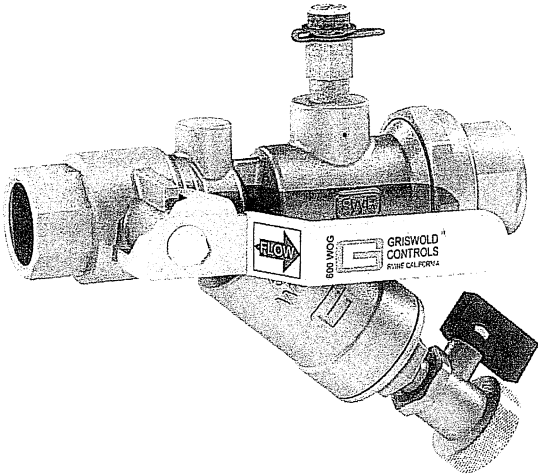
³ Extension Option includes handle cover and accessory extensions for either 1-1/2" or 2" Insulation.

⁴ Accuracy is for venturi portion of valve only. Pressure readability is dependent on accuracy of gauge and system pressure stability.

⁵ The generally accepted upper limit as recommended by ASHRAE to prevent pipe noise is 4 ft/sec.

⁶ Cv's are used to calculate the permanent pressure drop. $PSID=(Flow/Cv)^2$. Use the Flow Curve for flow measurement.

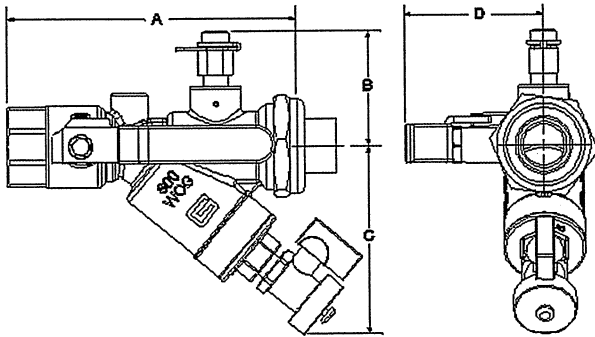
⁷ 65.2 Cv includes an optimizer insert in the ball.



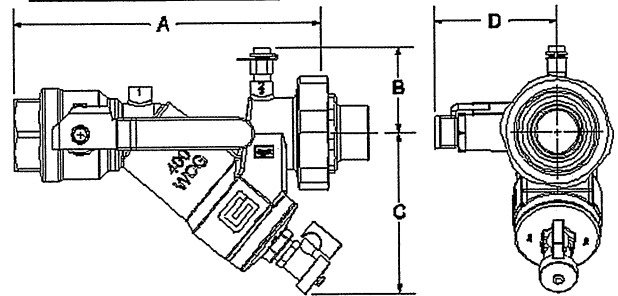
SPECIFICATIONS

PSI/Temperature Rating:	1/2"-1-1/2": 600 WOG 400 PSI / 250° F 1-1/2"L-3": 400 WOG 275 PSI / 250° F
Body Material:	1/2"-1-1/2": Forged Brass ASTM B283-06 1-1/2"L-3": Cast brass
End Connections:	Brass – NPT, Sweat, QuickPress ¹ , Grooved ²
Ball Valve Seals:	Teflon
Union Seal:	EPDM O-Ring
Body Tappings³:	(3) Bosses for CPTAs and Drain Valve
Ball Valve:	Nickel-plated brass ball Optional: Stainless Steel ball
Field Repairable Stem:	Dual Teflon seals and EPDM O-ring
Strainer:	20 mesh stainless steel (optional 50 mesh)
Options:	Combination P/T Test Valve and Manual Air Vent (CPTA), Drain Valve, or 1/2" Bypass ⁴ , Extension Option

1/2" – 1-1/2" Housing



1-1/2"L - 3" Housing



DIMENSIONS & WEIGHTS (NOMINAL)

All dimensions are for planning purposes only and may change without notice.

SIZE	A - FIXED END CONNECTION		UNION END CONNECTION ⁵						B	C	D ⁶	Cv ⁷	WEIGHT (LBS.)	
	FNPT	SWT	FNPT		MNPT		SWT							
1/2"	3.9	3.8	1/2":1.0	3/4":N/A ⁸	1/2":1.0	3/4":1.2	3/8", 1/2":0.8		3/4":1.1	1.9	2.9	0.5, 1.5 2.2	4.7	0.9
3/4"	3.9	4.0												
3/4"L	5.4	5.4	1/2", 3/4":1.0	1":N/A ⁸	1/2"-3/4":1.0	1":1.4	3/8", 3/4":1.0	1/2":0.7	1":1.3	2.2	3.6	2.6, 3.2	9.1	2.3
1"	5.4	5.6												
1-1/4"	7.6	7.7	1", 1-1/4", 1-1/2":1.7		1", 1-1/4", 1-1/2":1.7 ⁹		1", 1-1/4":1.7	1-1/2":1.4	2.5	3.1	3.1, 3.7	24.6	5.0	
1-1/2"	7.5	7.9												
1-1/2"L, 2"	9.3	9.8	1-1/4", 1-1/2":1.6	2": N/A ⁸	1", 1-1/4":1.8	1-1/2", 2":1.6	1-1/4", 2":1.6	1-1/2":1.7	2.6	3.7	3.7, 4.3	35	8.8	
2"L	10.9	11.2	2": 2.5		2": 1.6		2": 1.6		2.9	4.0	4.0, 4.6	60	12.4	
2-1/2"	11.1	N/A	N/A ¹⁰											
3"	11.3	N/A												

For QuickPress connections add 3.1" (1/2") 3.6" (3/4", 3/4"L), 4.1" (1"), to the FNPT length (A) listed for a valve.

NOTES

¹ QuickPress is available on 1/2" to 1" valves only. Connections are compatible with popular press tools and are rated for maximum 200 PSI.

² Grooved End connection is available on 2-1/2" and 3" valves only.

³ Body Tappings for accessories are a leak proof metal to metal seal and do not require pipe dope or tape. Tape or dope should not be used.

⁴ Bypass is only available on 1/2" to 1-1/2" valves.

⁵ For overall length, add union end connection length to body length.

⁶ Space Saver handle standard on 1/2"-3/4" valves. Standard handle on 1" to 3" valves and 1-1/2" extended handle in 1/2" to 3" is compatible with 1-1/2" insulation. Largest extended handle is compatible with 2" insulation.

⁷ Cv's are based on a clean 20 mesh stainless steel strainer. When a 50 mesh screen is used, multiply PSID by 1.3.

⁸ Tailpiece is not available for this size. Male tailpiece used with coupling.

⁹ 1-1/4"-1-1/2" valves can also take 1/2"-3/4" MNPT tailpieces.

¹⁰ 2-1/2" and 3" Valves are fixed end by fixed end connection. Union connection is not available.

MODEL NUMBER SELECTION¹¹

Select a Housing Size (0=1/2"-3/4", 1=3/4"L-1", 2=1-1/4"-1-1/2", 3=1-1/2"L-2", 4=2"L-3")

Select an Accessory Package

(B=CPTA & Drain Valve (20 mesh),

C=CPTA, Drain Valve & Bypass (20 mesh)¹²

D=(2) CPTAs & Drain Valve(20 mesh),

E=Bypass Plug (20 mesh), G=CPTA & Drain

Valve (50 mesh) H= CPTA, Drain Valve &

Bypass (50 mesh))

Select Ball and Stem Package (P=Plated

Ball, S=SS Ball and Stem)

Extension Option¹³ (0=No, 1=1-1/2", 2=2")

T=Optional
3"x3"
Aluminum
Hanging
I.D. Tag

	FIXED END OR UNION END ¹⁴ (No Union Tailpiece=Z)			UNION END ONLY ¹⁴
Valve	Female Threaded	Female Sweat	QuickPress	Male Threaded
IS0	1/2"=E, 3/4"=F ¹⁵	3/8"=K ¹⁶ , 1/2"=L, 3/4"=M	1/2"=2, 3/4"=3	1/2"=H, 3/4"=I
IS1	1/2"=E ¹⁶ , 3/4"=F, 1"=G ¹⁵	3/8"=K ¹⁶ , 1/2"=L ¹⁶ , 3/4"=M, 1"=N	1/2"=2 ¹⁶ , 3/4"=3, 1"=1	1/2"=H, 3/4"=I, 1"=J
IS2	1"=G ¹⁶ , 1-1/4"=P, 1-1/2"=Q	1"=N ¹⁶ , 1-1/4"=K, 1-1/2"=W	N/A	1/2"=H, 3/4"=I, 1"=J, 1-1/4"=S, 1-1/2"=T
IS3	1-1/4"=P ¹⁶ , 1-1/2"=Q, 2"=R ¹⁵	1-1/4"=K ¹⁶ , 1-1/2"=W, 2"=Y	N/A	1-1/4"=S, 1-1/2"=T, 2"=U
IS4 ¹⁴ (Union)	2"=L	2"=Y	N/A	1-1/4"=S, 1-1/2"=T, 2"=U
IS4 ¹⁴ (Fixed End)	2"=L, 2-1/2"=M, 3"=N ¹⁷	N/A	N/A	N/A

NOTES

¹¹ Model no. and flow rate are indicated on label affixed to body.

¹² C option with bypass is only available for 1/2" to 1-1/2" size.

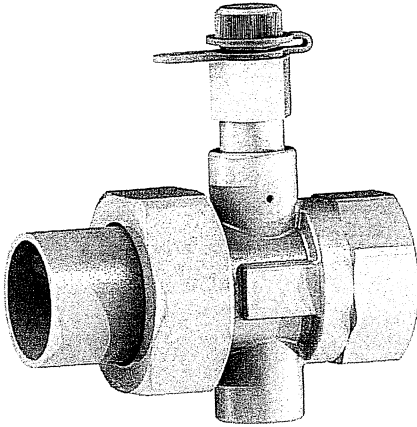
¹³ Extension Option includes handle cover and accessory extensions for either 1-1/2" or 2" insulation.

¹⁴ Select the Fixed End First and the Union End Second. For 2-1/2" and 3" size select a 2nd fixed end instead of a union end.

¹⁵ Tailpiece is not available for this size. Male tailpiece used with coupling.

¹⁶ Fixed end not available for this size. Union tailpiece only.

¹⁷ For Grooved End option use MG=2-1/2" and NG=3".



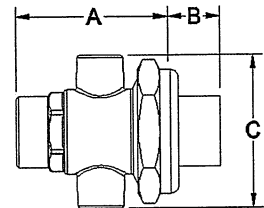
SPECIFICATIONS

PSI / Temperature Rating:	400 PSI / 250°F
Body Material:	Forged Brass ASTM B283-06
End Connections:	Brass – NPT, Sweat or QuickPress ¹
Union Seal:	EPDM O-ring
Body Tappings²:	(2) Bosses for CPTAs, Airvent. and Drain Valve
Options:	Combination P/T Test Valve and Manual Air Vent (CPTA), Drain Valve, Coin Operated Airvent, Extension Option

DIMENSIONS & WEIGHTS (NOMINAL)

All dimensions are for planning purposes only and may change without notice.

SIZE	A - FIXED END CONNECTION		B - UNION END CONNECTION ³							C	WEIGHT (LBS.)	
	FNPT	SWT	FNPT		MNPT		SWT					
3/8"	N/A	1.7	1/2":1.0	3/4":N/A ⁴	1/2":1.0	3/4":1.2	3/8",1/2":0.8		3/4":1.1		1.2	0.3
1/2"	2.0	1.9										
3/4"	1.9	1.9										
1"	2.2	2.2	1/2",3/4":1.0	1":N/A ⁴	1/2"-3/4":1.0	1":1.4	3/8",3/4":1.0	1/2":0.7	1":1.3	2.0	1.1	
1-1/4"	2.6	2.6	1",1-1/4",1-1/2":1.7		1",1-1/4",1-1/2":1.7 ⁵		1",1-1/4":1.7		1-1/2":1.4		2.7	2.4
1-1/2"	2.8	2.8										
2"	2.8	2.8	1-1/4",1-1/2":1.6	2": N/A ⁴	1",1-1/4":1.8	1-1/2",2":1.6	1-1/4",2":1.6		1-1/2":1.7		3.4	3.2
2-1/2"	3.0	N/A	1-1/2" – 2-1/2": 1.2		3": 2.2	1-1/2"-2-1/2": 1.5	3": 2.5	2":2.0			3.7	5.1
3"	3.2	N/A										5.6



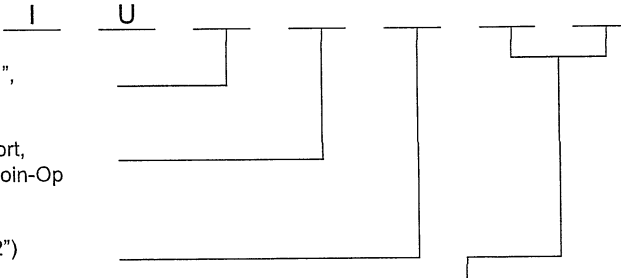
For QuickPress connections add 3.1" (1/2"), 3.6" (3/4"), 4.1" (1") to the FNPT length (A) listed for a valve.

MODEL NUMBER SELECTION

Select a Housing Size (0=1/2"-3/4", 1=1", 2=1-1/4"-1-1/2", 3=2", 4=2-1/2"-3")

Select an Accessory Package (0=No Port, B=CPTA, C=CPTA & Drain Valve, D=Coin-Op Airvent, E=Coin-Op Airvent and CPTA)

Extension Option⁶ (0=No, 1=1-1/2", 2=2")



Valve	FIXED END OR UNION END ⁷ (No Union Tailpiece=Z)			UNION END ONLY ⁷
	Female Threaded	Female Sweat	QuickPress	Male Threaded
IU0	1/2"=E, 3/4"=F ⁴	3/8"=K, 1/2"=L, 3/4"=M	1/2"=2, 3/4"=3	1/2"=H, 3/4"=I
IU1	1/2"=E ⁸ , 3/4"=F ⁸ , 1"=G ⁴	3/8"=K ⁸ , 1/2"=L ⁸ , 3/4"=M ⁸ , 1"=N	1/2"=2 ⁸ , 3/4"=3 ⁸ , 1"=1	1/2"=H, 3/4"=I, 1"=J
IU2	1"=G ⁸ , 1-1/4"=P, 1-1/2"=Q	1"=N ⁸ , 1-1/4"=K, 1-1/2"=W	N/A	1/2"=H, 3/4"=I, 1"=J, 1-1/4"=S, 1-1/2"=T
IU3	1-1/4"=P ⁸ , 1-1/2"=Q ⁸ , 2"=R ⁴	1-1/4"=K ⁸ , 1-1/2"=W ⁸ , 2"=Y	N/A	1-1/4"=S, 1-1/2"=T, 2"=U
IU4	1-1/2"=Q ⁸ , 2"=R ⁸ , 2-1/2"=A, 3"=B	2"=Y ⁸	N/A	1-1/2"=T, 2"=U, 2-1/2"=C, 3"=D

NOTES

¹ QuickPress is available on 1/2" to 1" valves. Connections are compatible with popular press tools and are rated for maximum 200 PSI.

² Body Tappings for accessories are a leak proof metal to metal seal and do not require pipe dope or tape. Tape or dope should not be used.

³ For overall length, add union end connection length to body length.

⁴ Tailpiece is not available for this size. Male tailpiece used with coupling.

⁵ 1-1/4"-1-1/2" valves can also take 1/2"-3/4" MNPT tailpieces.

⁶ Extension Option includes accessory extensions for either 1-1/2" or 2" insulation.

⁷ Select the Fixed End First and the Union End Second.

⁸ Fixed end not available for this size. Union tailpiece only.

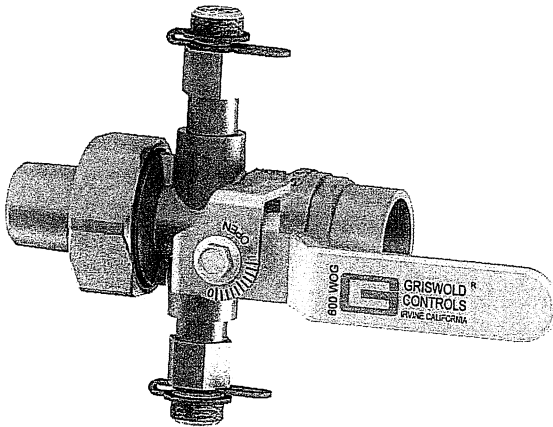
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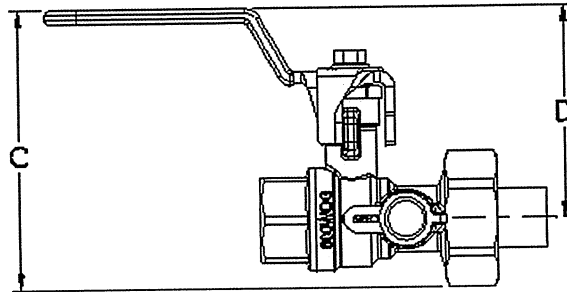
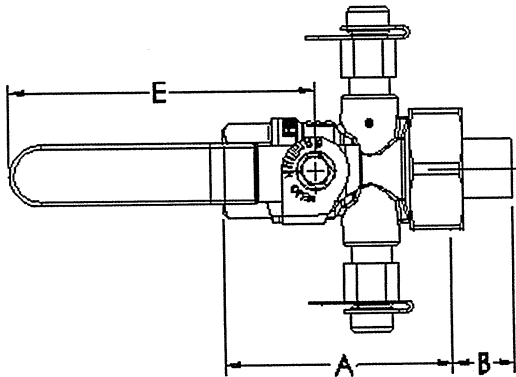
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F-5388F

SPECIFICATIONS



PSI/Temperature Rating: 600 WOG 400 PSI / 250°F
Flow Elements: Venturi: Brass
Body Material: Forged Brass ASTM B283-06
End Connections: Brass – NPT, Sweat or QuickPress¹
Ball Valve Seals: Teflon
Union Seal: EPDM O-ring
Ball Valve: Nickel-plated brass ball, full port
 Optional: Stainless steel ball
Body Tappings²: Two Combination P/T Test Valve and Manual Air Vent (CPTA)
Field Repairable Stem: Dual Teflon seals and EPDM O-ring
Handle: Memory Stop with graduated markings
Installation: Straight sections of piping upstream and downstream of the QuickSet aren't necessary for proper operation
Options: Extension Option³



DIMENSIONS & WEIGHTS (NOMINAL)

All dimensions are for planning purposes only and may change without notice.

SIZE	A - FIXED END CONNECTION		B - UNION END CONNECTION ⁴						C	D ⁵	E	WEIGHT (LBS.)	
	FNPT	SWT	FNPT		MNPT		SWT						
1/2"	2.6	2.5	1/2":1.0	3/4":N/A ⁶	1/2":1.0	3/4":1.2	3/8", 1/2":0.8		3/4":1.1	3.0	1.0, 1.5, 2.2	3.7	0.7
3/4"	2.6	3.2											
3/4"L	3.0	3.1	1/2", 3/4":1.0	1":N/A ⁶	1/2"-3/4":1.0	1":1.4	3/8", 3/4":1.0	1/2":0.7	1":1.3	3.8	2.1, 2.6, 3.2	3.7	1.0
1"	3.2	3.4								4.0	2.9, 3.5	5.0	1.5
1-1/4"	3.9	4.1					1", 1-1/4", 1-1/2":1.7	1", 1-1/4", 1-1/2":1.7	1", 1-1/4":1.7	1-1/2":1.4	4.3	3.1, 3.7	5.0
1-1/2"	4.4	4.6	5.3	3.5, 4.1	5.5	4.5							
2"	5.1	5.5	1-1/2":1.6	2": N/A ⁶	1-1/2", 2":1.6	1-1/2":1.7	2":1.6	5.3	4.0, 4.6	5.5	6.9		

For QuickPress connections add 3.1" (1/2", 1/2"L) 3.6" (3/4", 3/4"L), 4.1" (1") to the FNPT length (A) listed for a valve.

NOTES

¹ QuickPress is available on 1/2" to 1" valves. Connections are compatible with popular press tools and are rated for maximum 200 PSI.

² Body Tappings for accessories are a leak proof metal to metal seal and do not require pipe dope or tape. Tape or dope should not be used.

³ Extension Option includes handle cover and accessory extensions for either 1-1/2" or 2" insulation.

⁴ For overall length, add union end connection length to body length.

⁵ Space Saver handle standard on 1/2"-3/4"L valves. Standard handle on 1" to 2" valves and 1-1/2" extended handle in 1/2" to 2" is compatible with 1-1/2" insulation. Largest extended handle is compatible with 2" insulation.

⁶ Tailpiece is not available for this size. Male tailpiece used with coupling.

FLOW RATES (+/-1%)

OUTLET SIZE	MODEL NO.	FLOW GPM ⁽⁸⁾ AT 4 FT/SEC	Cv ⁽⁹⁾	GPM RANGE FOR 5"-100" W.C. ΔP (SET W/100" GAUGE)	GPM RANGE FOR 5"-300" W.C. ΔP (SET W/300" GAUGE)
1/2", 3/4"	QS0	3.8	A=0.39	0.15 – 0.67	0.15 – 1.16
			B=1.1	0.3 – 1.4	0.3 – 2.4
			C=2.5	0.6 – 2.8	0.6 – 4.6
			D=4.2	1.2 – 5.4	1.2 – 9.4
3/4"L	QS1	6.7	B=0.9	0.3 – 1.4	0.3 – 2.5
			C=1.9	0.6 – 2.8	0.6 – 4.9
			D=3.9	1.3 – 5.6	1.3 – 9.7
			E=7.0	2.6 – 11.5	2.6 – 19.9
1"	QS1	10.8	C=1.8	0.6 – 2.8	0.6 – 5.0
			D=3.8	1.3 – 5.6	1.3 – 9.7
			F=7.6	2.6 – 11.5	2.6 – 19.9
			G=12.2	3.9 – 17.3	3.9 – 30.0
1-1/4"	QS2	18.7	H=10.0	3.4 – 15.0	3.4 – 26.2
			I=21.8	7.2 – 32.3	7.2 – 55.9
1-1/2"	QS2	25.4	J=22.1	7.4 – 33.0	7.4 – 57.2
			N=54.7	13.9 – 62.0	13.9 – 107.4
2"	QS3	41.9	M=65.2 ¹⁰	21.6 – 96.5	21.6 – 167.1
			P=105.2	21.6 – 96.5	21.6 – 167.1

MODEL NUMBER SELECTION

Select a Housing Size (0=1/2"-3/4", 1=3/4"L-1", 2=1-1/4"-1-1/2", 3=2") Q S

Select a Cv Factor (Use letter code from flow table) _____

Select Ball and Stem Package (P=Plated Ball, S=SS Ball and Stem) _____

Extension Option³ (0=No, 1=1-1/2", 2=2") _____

T=Optional 3"x3" Aluminum Hanging I.D. Tag

Valve	FIXED END OR UNION END ¹¹ (No Union Tailpiece=Z)			UNION END ONLY ¹¹
	Female Threaded	Female Sweat	QuickPress	Male Threaded
QS0	1/2"=E, 3/4"=F ¹²	3/8"=K ^{13/14} , 1/2"=L, 3/4"=M	1/2"=2 ¹⁴ , 3/4"=3	1/2"=H, 3/4"=I
QS1	1/2"=E ¹⁴ , 3/4"=F, 1"=G ¹²	3/8"=K ^{13/14} , 1/2"=L ^{13/14} , 3/4"=M, 1"=N	1/2"=2 ¹⁴ , 3/4"=3, 1"=1	1/2"=H ¹⁴ , 3/4"=I, 1"=J
QS2 (1-1/4")	1"=G ¹³ , 1-1/4"=P, 1-1/2"=Q	1"=N ¹³ , 1-1/4"=K, 1-1/2"=W	N/A	1/2"=H ¹⁴ , 3/4"=I ¹⁴ , 1"=J, 1-1/4"=S, 1-1/2"=T
QS2 (1-1/2")	1"=G ^{13/14} , 1-1/4"=P, 1-1/2"=Q	1"=N ^{13/14} , 1-1/4"=K, 1-1/2"=W	N/A	1"=J ¹⁴ , 1-1/4"=S, 1-1/2"=T
QS3 (2")	1-1/2"=Q ¹³ , 2"=R ¹²	1-1/2"=W ¹³ , 2"=Y	N/A	1-1/2"=T, 2"=U

Size reductions to the ATC (tailpiece side) of more than two line sizes may affect pressure signal of venturi depending on ATC configuration.

NOTES

⁷ Accuracy is for venturi portion of valve only. Pressure readability is dependent on accuracy of gauge and system pressure stability.

⁸ The generally accepted upper limit as recommended by ASHRAE to prevent pipe noise is 4 ft/sec.

⁹ Cv's are used to calculate the permanent pressure drop. $PSID = (Flow/Cv)^2$. Use the Flow Curve to set valve or for flow measurement.

¹⁰ 65.2 Cv includes an optimizer insert in the ball.

¹¹ Select the Fixed End First and the Union End Second.

¹² Tailpiece is not available for this size. Male tailpiece used with coupling.

¹³ Fixed end not available for this size. Union tailpiece only.

¹⁴ This tailpiece has Cv limitations. 3/8" tailpiece is not compatible with Cv of 4.2, 7.0, 7.6, 12.2; 1/2" tailpiece is not compatible with Cv of 12.2, 21.8, 22.1, 54.7; 3/4" tailpiece is not compatible with Cv of 21.8, 22.1, 54.7; 1" tailpiece is not compatible with Cv of 54.7 or 105.2; 1-1/4" tailpiece is not compatible with Cv of 105.2.

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CONTROLS**
 A FlowCon International/Griswold Controls LLC. Company

7/20
F-5411J



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LittleRock, AR 72231
Phone 501-834-3320
Fax 501-834-5416

Spec Section 232114, 2.9.

Automatic Flow Control/Balance Valves

Not Applicable!



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Spec Section 232114, 2.10.

Relief Valves



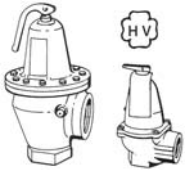
JOB: buckstaff Bathhouse HVAC

REPRESENTATIVE: Boone & Boone Sales
Salesman: Mark Eley (501)-940-7747
marke@2boonesales.com

UNIT TAG: System Relief
ENGINEER: Alvine Engineering
CONTRACTOR: Comfort Systems, USA

ORDER NO.
SUBMITTED BY:
APPROVED BY:

DATE:
DATE:
DATE:

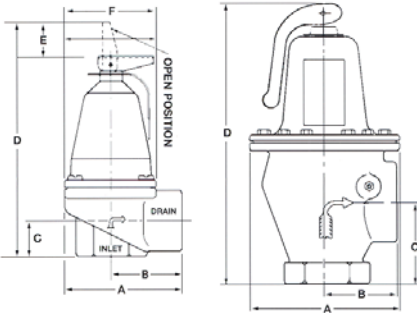


Safety Relief Valves ASME Valves and Fittings

Patent No. 3,294,114

DESCRIPTION

B&G diaphragm operated cast iron and diaphragm-assist operated bronze ASME Safety Relief Valves are designed to protect fired and unfired hot water pressure vessels against over-pressure conditions. These valves feature a unique failsafe disc with sufficient area to permit the valves to maintain their safety relief function in the event of a diaphragm rupture. These valves are designed, manufactured, tested and labeled in accordance with the requirements of Section IV of the ASME Boiler and Pressure Vessel code. They are offered in a wide range of capacities to permit a close match with the boiler output rating.



OPERATING DATA

MODEL	MAXIMUM WORKING PRESSURE	MAXIMUM OPERATING TEMPERATURE
790	125 PSIG (8.6 bar)	250°F (121°C)
1170		
3301	50 PSIG (3.4 bar)	250°F (121°C)
4100		

CONSTRUCTION

790 & 1170

Body: Brass
Diaphragm & Seat: EPDM
Internal Wetted Parts: Brass

3301 & 4100

Body: Cast Iron
Diaphragm & Seat: EPDM
Internal Wetted Parts: Brass

DIMENSIONS & WEIGHTS

MODEL NUMBER*	BODY	DIMENSIONS-INCHES (mm)								APPROXIMATE SHIPPING WEIGHT LBS. (kg)
		NPT CONNECTIONS		A	B	C	D	E	F	
		INLET	OUTLET							
790	BRASS	3/4	3/4	2-9/16 (65.1)	1-1/2 (38.1)	3/4 (19.1)	4-9/16 (115.9)	1-1/32 (26.2)	2-3/16 (55.6)	1.2 (0.5)
1170	BRASS	1	1	2-7/8 (73.0)	1-3/4 (44.5)	7/8 (22.2)	4-15/16 (125.4)	1-1/32 (26.2)	2-7/16 (61.9)	1.5 (0.7)
3301	IRON	1-1/2	2	6 (152.4)	2-7/8 (73.0)	3-1/4 (82.6)	11 (279.4)	N/A	N/A	17 (7.7)
4100	IRON	2	2	6 (152.4)	2-7/8 (73.0)	3-1/4 (82.6)	11 (279.4)	N/A	N/A	17 (7.7)

*Actual unit model numbers include individual valve pressure settings as a suffix to the basic valve model number noted.
Do Not Use For Construction. Dimensions are approximate and subject to change. Contact factory for certified dimensions.

TYPICAL SPECIFICATIONS

Furnish and install as shown on plans a diaphragm operated Safety Relief Valve, ASME labeled for relieving pressure of psig _____ with a rating of _____ BTU/Hr. The fluid should not discharge into the spring chamber. The valve should have a low blow-down differential.

The valve seat and all moving parts exposed to the fluid are to be of non-ferrous material.

Manufacturer Xylem Bell & Gossett Model No. _____ ASME Safety Relief Valve set at _____psig, rated at _____ BTU/Hr.

SAFETY RELIEF VALVES - ASME (Valves and Fittings)

A-434E

SCHEDULE

MODEL NUMBER	PART NUMBER	SIZE TAPPINGS	RELIEF SETTING PSIG	CAPACITY BTU/HR	TAGGING INFORMATION	QUANTITY
790-15	110120	3/4" NPT	15	515,000		
790-20	110750	3/4" NPT	20	610,000		
790-25	110751	3/4" NPT	25	700,000		
790-30	110121	3/4" NPT	30	790,000		
790-36	110122	3/4" NPT	36	900,000		
790-40	110752	3/4" NPT	40	975,000		
790-45	110123	3/4" NPT	45	1,065,000		
790-50	110124	3/4" NPT	50	1,160,000		
790-55	110753	3/4" NPT	55	1,250,000		
790-60	110754	3/4" NPT	60	1,340,000		
790-65	110755	3/4" NPT	65	1,435,000		
790-70	110756	3/4" NPT	70	1,525,000		
790-75	110125	3/4" NPT	75	1,615,000	System Relief	2
790-80	110757	3/4" NPT	80	1,710,000		
790-85	110758	3/4" NPT	85	1,800,000		
790-90	110759	3/4" NPT	90	1,890,000		
790-95	110760	3/4" NPT	95	1,985,000		
790-100	110126	3/4" NPT	100	2,075,000		
790-105	110761	3/4" NPT	105	2,165,000		
790-110	110762	3/4" NPT	110	2,260,000		
790-115	110763	3/4" NPT	115	2,350,000		
790-120	110764	3/4" NPT	120	2,440,000		
790-125	110127	3/4" NPT	125	2,535,000		
1170-20	110765	1" NPT	20	900,000		
1170-25	110766	1" NPT	25	1,035,000		
1170-30	110129	1" NPT	30	1,170,000		
1170-36	110130	1" NPT	36	1,330,000		
1170-40	110767	1" NPT	40	1,440,000		
1170-45	110131	1" NPT	45	1,575,000		
1170-50	110132	1" NPT	50	1,710,000		
1170-55	110768	1" NPT	55	1,845,000		
1170-60	110769	1" NPT	60	1,980,000		
1170-65	110770	1" NPT	65	2,115,000		
1170-70	110771	1" NPT	70	2,250,000		
1170-75	110133	1" NPT	75	2,385,000		
1170-80	110772	1" NPT	80	2,520,000		
1170-85	110773	1" NPT	85	2,655,000		
1170-90	110774	1" NPT	90	2,790,000		
1170-95	110775	1" NPT	95	2,925,000		
1170-100	110134	1" NPT	100	3,060,000		
1170-105	110776	1" NPT	105	3,195,000		
1170-110	110777	1" NPT	110	3,330,000		
1170-115	110778	1" NPT	115	3,465,000		
1170-120	110779	1" NPT	120	3,600,000		
1170-125	110135	1" NPT	125	3,735,000		
3301-30	110033	1-1/2" x 2"	30	3,300,000		
3301-36	110080	1-1/2" x 2"	36	3,800,000		
3301-45	110081	1-1/2" x 2"	45	4,500,000		
3301-50	110082	1-1/2" x 2"	50	4,900,000		
4100-30	110034	2"	30	4,100,000		
4100-36	110084	2"	36	4,600,000		
4100-45	110085	2"	45	5,515,000		
4100-50	110086	2"	50	5,990,000		



Xylem Inc.
 8200 N. Austin Avenue
 Morton Grove, IL 60053
 Phone: (847)966-3700
 Fax: (847)965-8379
www.xyleminc.com/bellgossett

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Spec Section 232114, 2.11.

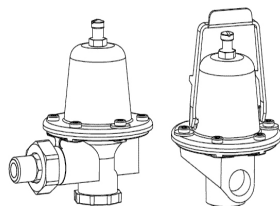
Pressure Reducing Valves

JOB: Buckstaff Bathhouse HVAC

REPRESENTATIVE: Boone & Boone Sales Mark Eley 501-940-7747

 UNIT TAG: Makeup Water
 ENGINEER: Alvine Engineering
 CONTRACTOR: Comfort Systems, USA

 ORDER NUMBER:
 SUBMITTED BY:
 APPROVED BY:

 DATE:
 DATE:
 DATE:


Lead Free* Reducing Valves

Valves and Fittings

DESCRIPTION

Bell & Gossett reducing valves protect heating and plumbing systems against excessive line pressures. They are factory set at specified limits although adjustment is easily made. Equipped with built-in-strainer and low inlet pressure check valve. Tail piece for union models is combination - 1/2" cooper sweat and 1/2" NPTE.

CONSTRUCTION

Wetted Parts: BODY, cast lead free* brass; DIAPHRAGM, EPT with special insert; CHECK VALVE, EPDM; SEAT, lead free* brass; STEM, lead free* brass with EPDM insert; VALVE PLATE, STAINER AND STRAINER NUT, lead free* brass.

Non-Wetted Parts: steel.

*CSA certified to NSF/ANSI 372 that product contains less than 0.25% lead content by weight on wetted surface.

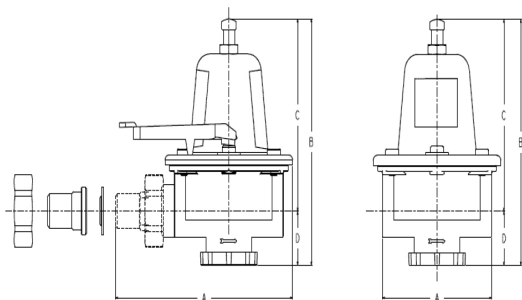
SCHEDULE

Model Number	Part Number	Size Inches	Factory Setting PSIG	Adjustable Range PSIG Lbs (Kg)	Tagging Information	Quantity
B-38	110190LF	1/2 NPT	12	10-25		
B7-12	110196LF	3/4 NPT	12	10-25	Makeup Water	2
B-38TU	110191LF	1/2 Union NPT/Sweat	12	10-25		
FB-38*	110192LF	1/2 NPT	12	10-25		
FB-38TU*	110193LF	1/2 Union NPT/Sweat	12	10-25		
6	110194LF	1/2 NPT	45	25-60		
7	110195LF	3/4 NPT	45	25-60		

MAXIMUM FLOW 5-1/2 – 6 GPM AT 125 PSIG INLET PRESSURE.

MAXIMUM OPERATING TEMPERATURE 225°F(107°C) - MAXIMUM WORKING PRESSURE 125 PSIG (862 kPa)

*FAST FILL MODELS



SCHEDULE

Model Number	Dimensions - Inches (mm)				Approximate Shipping Wt. Lbs. (kg)
	A	B	C	D	
B-38	3-1/16 (77.8)	4-7/8 (123.8)	3-3/4 (95.3)	1-1/8 (28.6)	1-3/4 (0.8)
B7-12	3 (76.2)	5-1/32 (127.8)	3-23/32 (94.5)	1-5/16 (33.3)	2-1/4 (1.0)
B-38TU	4-31/32(126.2)	4-7/8 (123.8)	3-3/4 (95.3)	1-1/8 (28.6)	2 (0.9)
FB-38	3-1/16 (77.8)	4-7/8 (123.8)	3-3/4 (95.3)	1-1/8 (28.6)	1-3/4 (0.8)
FB-38TU	3-1/16 (77.8)	4-7/8 (123.8)	3-3/4 (95.3)	1-1/8 (28.6)	2 (0.9)
6	3-1/16 (77.8)	4-7/8 (123.8)	3-3/4 (95.3)	1-1/8 (28.6)	1-3/4 (0.8)
7	3 (76.2)	5-1/32 (127.8)	3-23/32 (94.5)	1-5/16 (33.3)	2-1/4 (1.0)

TYPICAL SPECIFICATIONS

Furnish and install as shown on plans, a diaphragm operated Pressure Reducing Valve with brass body, low inlet pressure check valve and inlet strainer. The strainer must be easily removed without system shutdown.

The valve seat, strainer and stem must be removable and of non-corrosive material.

Xylem Bell & Gossett, No. _____. Set @ _____ lbs.



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Spec Section 232114, 2.13.

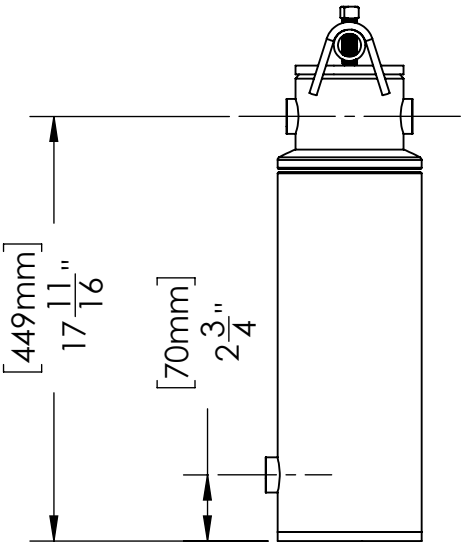
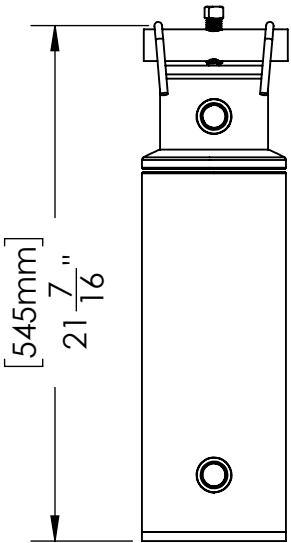
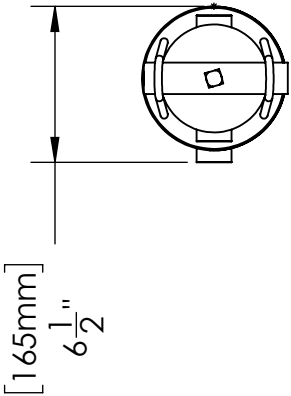
Bypass Chemical Feeders

Project: Buckstaff Bathhouse HVAC
Contractor: Comfort Systems, USA
Engineer: Alvine Engineering
Rep: Boone & Boone Sales Company
Salesman: Mark Eley
Rep Phone Number: 501-940-7747
Rep Email: marke@2boonesales.com
Tag: BCF-CW, BCF-HW

POT FEEDER

GENERAL WATER SYSTEMS

THIS DRAWING IS FOR SPATIAL CONSIDERATION ONLY, AND SUBJECT TO
CHANGE W/O PREVIOUS NOTICE, DO NOT PRE-PLUMB TO THESE DIMENSIONS



FB-2-SB-CS-Z				
Operating Point		More than 500 Gallon System Volume		
Pot Feeder - Size & Style		Flat Bottom 2 Gallon Safety Bar		
Construction		Carbon Steel (Welded)		
PROCESS INLET				
Connection - Type & Size		NPT 3/4"		
PROCESS OUTLET				
Connection - Type & Size		NPT 3/4"		
PRESSURE - Maximum Operating				
Vessel		180 psi (12.4 bar)		
TEMPERATURE - Maximum Operating				
System		34°F - 250°F (1°C - 121°C)		
WEIGHTS		DRY	SHIPPING	OPERATING
lbs (kg)		23	25	40

PREPARED BY: HECTOR J. GUZMAN	REV A
RELEASED BY: TIM BOYLEN	DATE: 3/16/2024



General Water Systems | 1525 East 6th Street | CA | 92879
www.gwslp.com | info@gwslp.com | 951.278.8992
*UNLESS OTHERWISE SPECIFIED -
ALL DIMENSIONS ARE IN INCHES

FB-2-SB-CS-Z

VP-75 Valve Package, 3/4", Set of 2



FP-75 Funnel Package 10" x 10" Includes Funnel, 3/4" Valve & Fittings

