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Comfort Systems USA (Arkansas), Inc.
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Little Rock, AR 72231
Phone 501-834-3320
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Date: 5/17/2024

Return Request: 5/27/2024

Project: CALS Main Library Renovations

Supplier: Fluid Solutions

Manufacturer: Griswold

Submittal: Hydronic Piping (Valve Packages)

Submittal Number: 23 21 13-02

Drawing # and Installation: Mechanical Drawings

ARCHITECT

Polk Stanley Wilcox
801 South Spring St.
Little Rock, AR 72201
501-378-0878

ENGINEER

Bernhard
1 Allied Drive, Bldg. 2, Suite 2600
Little Rock, AR 72202
501-666-6776

GENERAL CONTRACTOR

CDI
3000 Cantrell Rd.
Little Rock, AR 72202
501-5666-4300

MECHANICAL SUBCONTRACTOR

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

Notes:

CSUSA PROJECT NO.

23-8016

dpierce@comfortar.com

9924 Landers Rd.
No. Little Rock, AR 72117



SUBMITTAL DATA

DATE: April 30, 2024

PROJECT: CALS Main Library Renovation

CONTRACTOR: Comfort Systems USA

ENGINEER: Bernhard TME

GRISWOLD VALVE PACKAGES

*Pipe, 2-Way/3-Way ATC Valve (by others), and coil sizes will be coordinated in the field. We will coordinate actual sizes with approved equipment submittals before ordering.

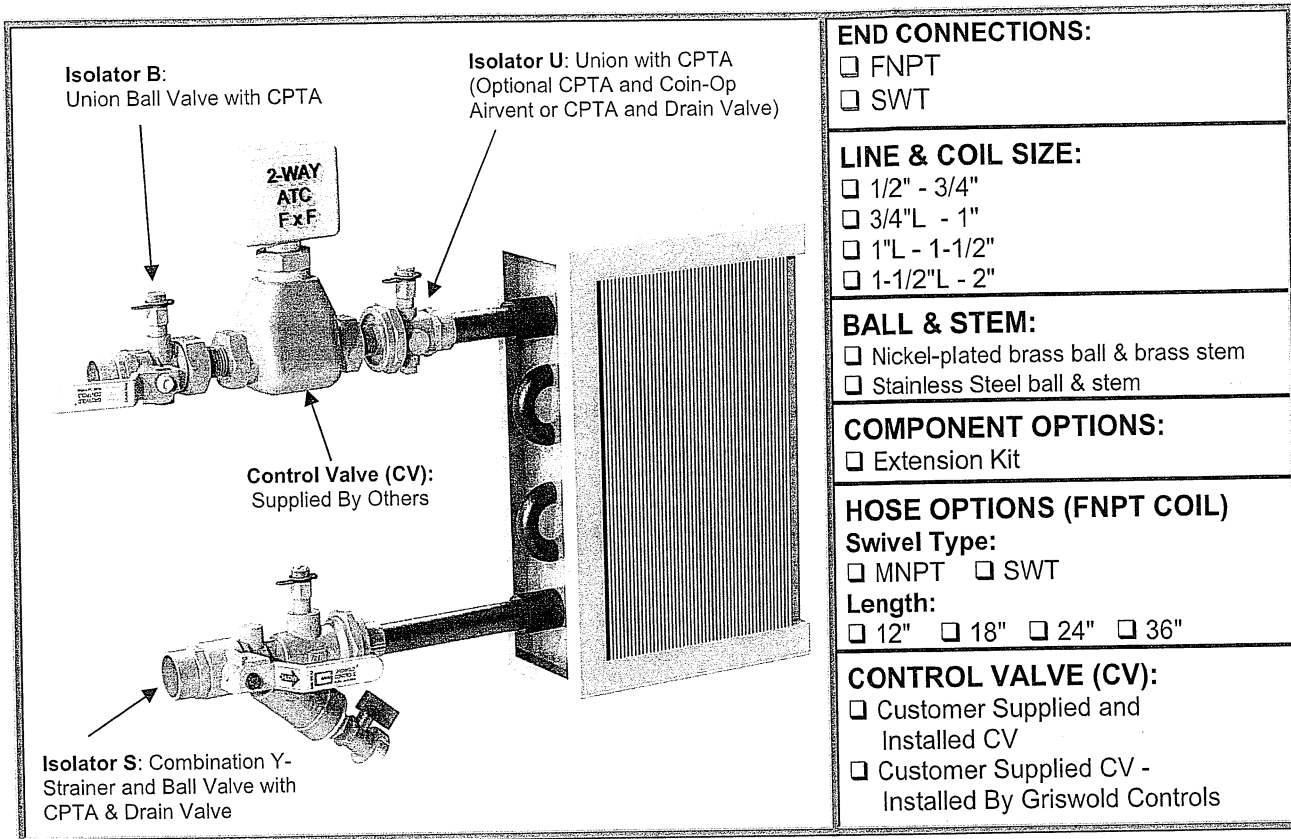
*TBD - Incoming line sizes will also be coordinated with field conditions.

TAG	MODEL	Pipe Size	Coil Size	GPM	ATC Size
ST	CPP2IBIS	Per Plans	TBD	As Scheduled	TBD
FPT	CPP2IBIS	Per Plans	TBD	As Scheduled	TBD

10350 Riverview Corporate Drive · Maumelle, AR 72113

Phone (501) 663-8886 · Fax (501) 663-8738

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SPECIFICATIONS

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 20 mesh stainless steel and can be removed from housing without disturbing pipe connections for inspection or replacement. Valve includes one fixed (FNPT or SWT) connection and one union (FNPT or SWT) connection. Union end includes union nut and EPDM o-ring. Body has one port with combination Pressure/Temperature Test Valves & Manual Air Vent (CPTA). Assembly includes drain valve with 3/4" hose connection with cap. Valve is fully assembled. PSI/Temperature Rating: 1/2" to 1-1/2" 600 WOG 400 PSI / 250°F.

Isolator B: Forged brass (ASTM B283) union ball valve. Valve housing includes Teflon seals and Nickel plated full port ball. 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. Includes combination Pressure/Temperature Test Valve and Manual Air Vent (CPTA). Valves are fully assembled. PSI/Temperature Rating: 400 PSI / 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: Rated 275 PSI / 250°F. Brass housing, Nickel plated ball. 3/4" NPSH hose connection.

Pressure/Temperature Test Valve: Rated 1000 PSI / 350°F. Brass Housing, Nordel Seal.

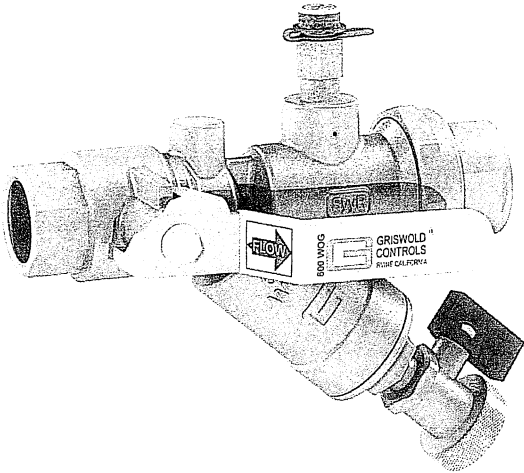
Combination Pressure/Test Valve & Manual Air Vent (CPTA): Pressure/Temperature Test Valve works in conjunction with valve body feature to function as Manual Air Vent. Requires both components to operate as manual air vent.

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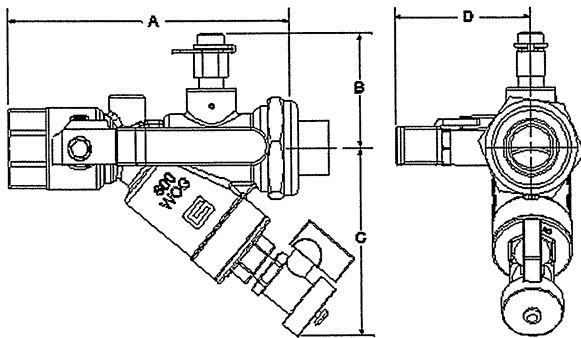
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CONTROLS**
A FlowCon International/Griswold Controls LLC. Company



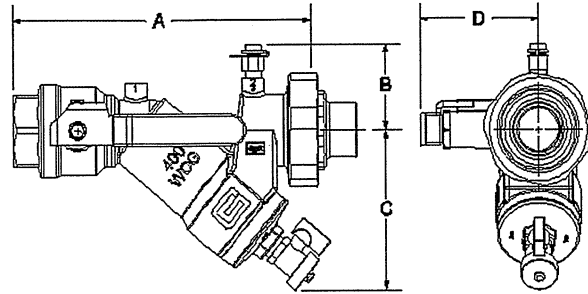
SPECIFICATIONS

- 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, QuickPress¹, Grooved²
- 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" Bypass⁴, 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.

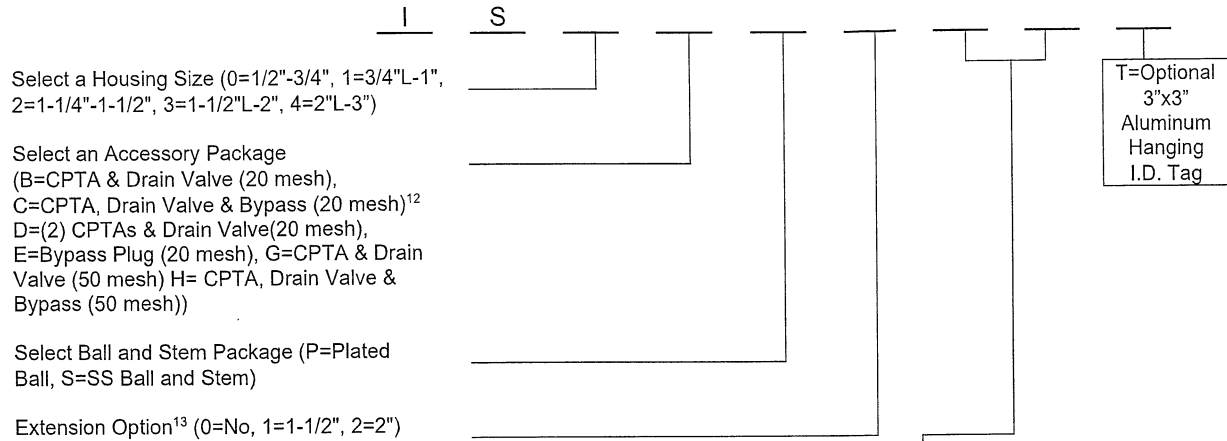
SIZE	A - FIXED END CONNECTION		UNION END CONNECTION ⁵						B	C	D ⁶	Cv ⁷	WEIGHT (LBS.)	
	FNPT	SWT	FNPT		MNPT		SWT							
1/2"	3.9	3.8	1/2":1.0	3/4":N/A ⁸	1/2":1.0	3/4":1.2	3/8",1/2":0.8	3/4":1.1	1.9	2.9	0.5,1.5,2.2	4.7	0.9	
3/4"	3.9	4.0												
3/4"L	5.4	5.4	1/2",3/4":1.0	1":N/A ⁸	1/2"-3/4":1.0	1":1.4	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							
2-1/2"	11.1	N/A	N/A ¹⁰						2.9	4.0	4.0, 4.6	60	12.4	
3"	11.3	N/A	N/A ¹⁰											

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



Valve	FIXED END OR UNION END ¹⁴ (No Union Tailpiece=Z)			UNION END ONLY ¹⁴
	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

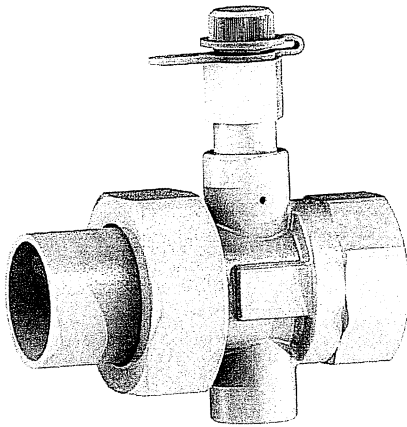
- ¹¹ Model no. and flow rate are indicated on label affixed to body.
- ¹² C option with bypass is only available for 1/2" to 1-1/2" size.
- ¹³ Extension Option includes handle cover and accessory extensions for either 1-1/2" or 2" insulation.
- ¹⁴ Select the Fixed End First and the Union End Second. 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".

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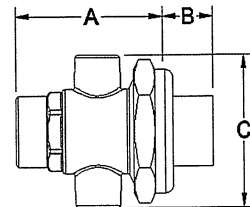
SPECIFICATIONS

PSI / Temperature Rating: 400 PSI / 250°F
Body Material: Forged Brass ASTM B283-06
End Connections: Brass – NPT, Sweat or QuickPress¹
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"	2.0	1.9	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
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



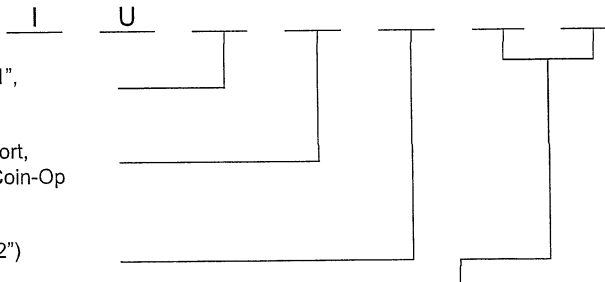
For QuickPress connections add 3.1" (1/2"), 3.6" (3/4"), 4.1" (1") to the FNPT length (A) listed for a valve.

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.

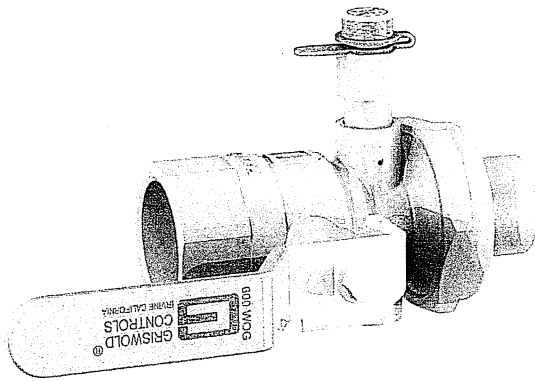
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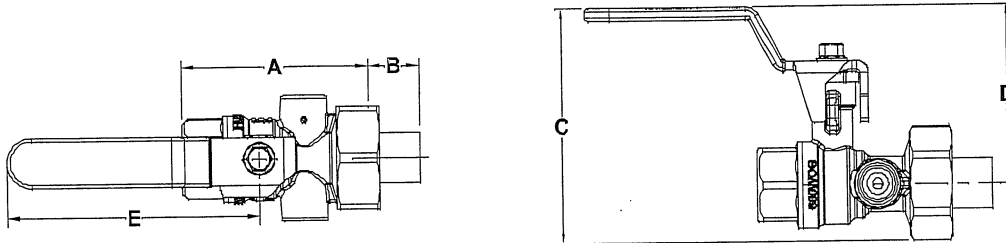


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SPECIFICATIONS



PSI/Temperature Rating: 600 WOG 400 PSI / 250°F
Body Material: Forged Brass ASTM B283-06
End Connections: Brass – NPT, Sweat or QuickPress¹
Ball Valve Seals: Teflon
Union Seal: EPDM O-ring
Body Tappings²: (2) Bosses for CPTAs and Drain Valve
Ball Valve: Nickel-plated brass ball, full port
 Optional: Stainless steel ball
Field Repairable Stem: Dual Teflon seals and EPDM O-ring
Assembly: Valve comes fully assembled.
Options: Combination P/T Test Valve and Manual Air Vent (CPTA), Drain Valve, 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	D ⁴	E	Cv ⁵	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	1.5	3.7	11	0.7	
3/4"	2.6	3.2					3/4":1.1								
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":1.3	3.8	2.6	3.7	32	1.0	
1"	3.2	3.4					4.0	2.9		5.0	51	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 ⁷		1",1-1/4":1.7		1-1/2":1.4		4.3	3.1	5.0	99	3.5
1-1/2"	4.4	4.6									4.5	3.5	5.5	165	4.5
2"	5.1	5.5	1-1/4",1-1/2":1.6	2":N/A ⁶	1",1-1/4":1.8	1-1/2",2":1.6	1-1/4",2":1.6		1-1/2":1.7	5.3	4.0	5.5	260	6.9	

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 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 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.
- ⁵ Cv's are used to calculate the pressure drop. $PSID=(Flow/Cv)^2$.
- ⁶ Tailpiece is not available for this size. Male tailpiece used with coupling.
- ⁷ 1-1/4"-1-1/2" valves can also take 1/2"-3/4" MNPT tailpieces.

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F-5389D

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