



SUBMITTAL DATA

DATE: March 26, 2025

PROJECT: Center for Animal Models of Infection and Disease

CONTRACTOR: Comfort Systems USA

ENGINEER: Clarks Enersen

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	ATC VALVE SIZE	COIL SIZE	GPM
VAV	CPP2IBIS	3/4"	TBD	TBD	As Scheduled

GRISWOLD MANUAL BALANCING VALVES

Griswold manual balancing valves with PT ports. Butterfly valves by others.

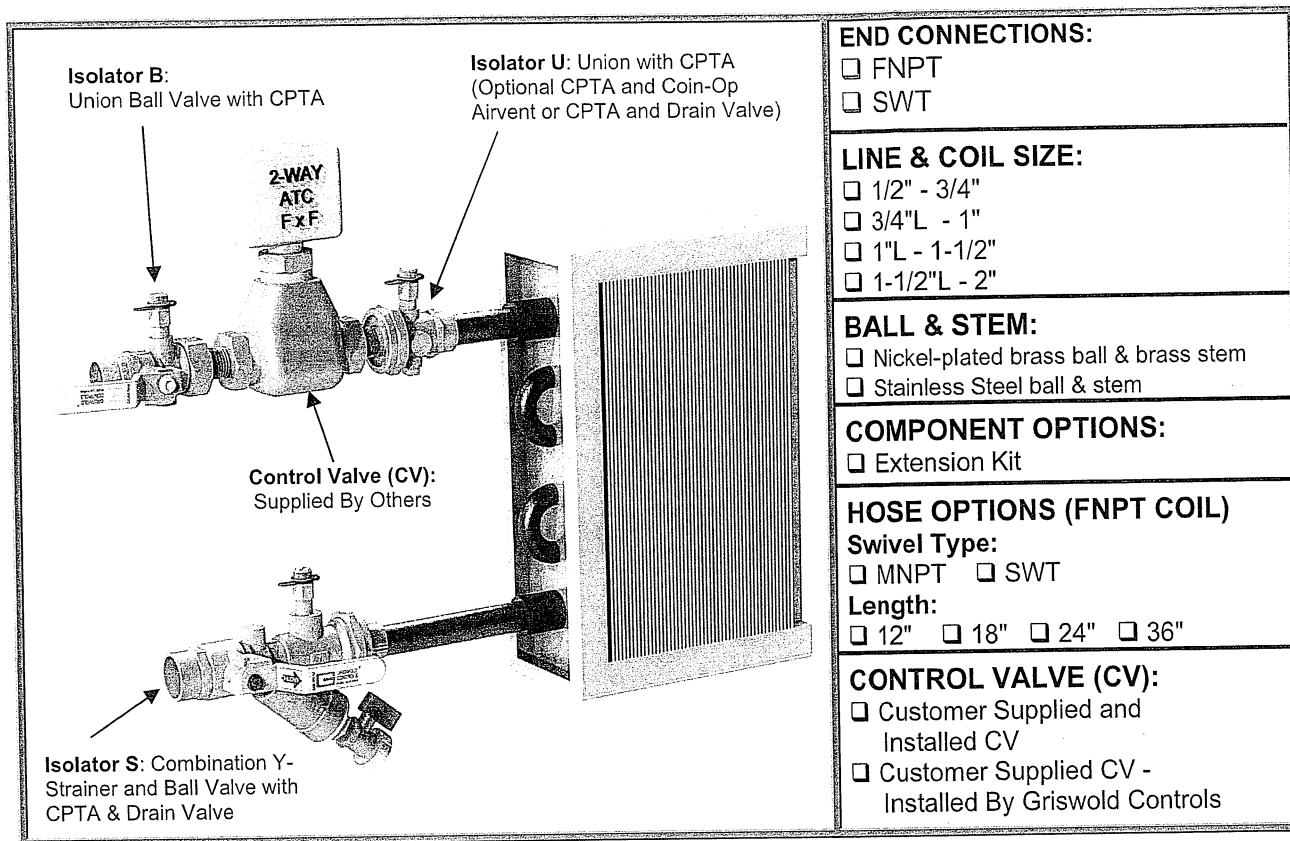
CC-2A – 4” Valve

CC-2B – 4” Valve

HRC-2C, 2D, 5C, 2A, 2B – 2” Valve

HRC-5A, 5B – 2-1/2” Valve

Model Quickset



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.

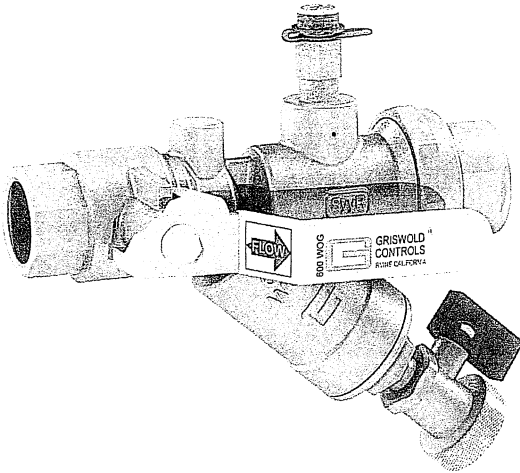
Combination Pressure/Test Valve & Manual Air Vent (CPTA): Pressure/Temperature Test Valve works in conjunction with valve body feature to function as Manual Air Vent. Requires both components to operate as manual air vent.

11/20
F-5585A

This specification © 2020 Griswold Controls

1700 Barranca Parkway, Irvine, CA 92606
(949) 559-6000 Fax (949) 559-6088
www.GriswoldControls.com

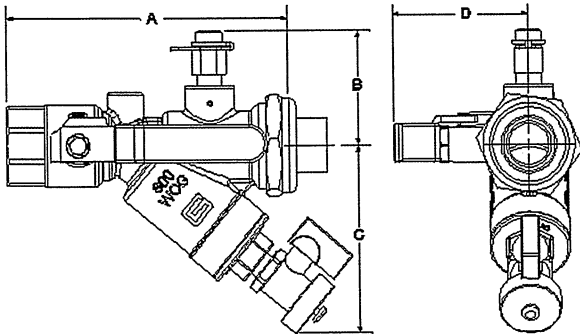
GRISWOLD
CONTROLS
A FlowCon International/Griswold Controls LLC. Company



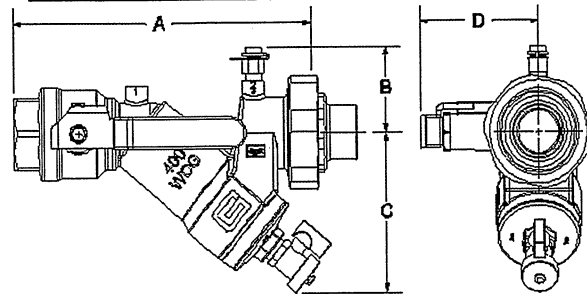
SPECIFICATIONS

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, 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			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	
3/4"L	5.4	5.4														
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

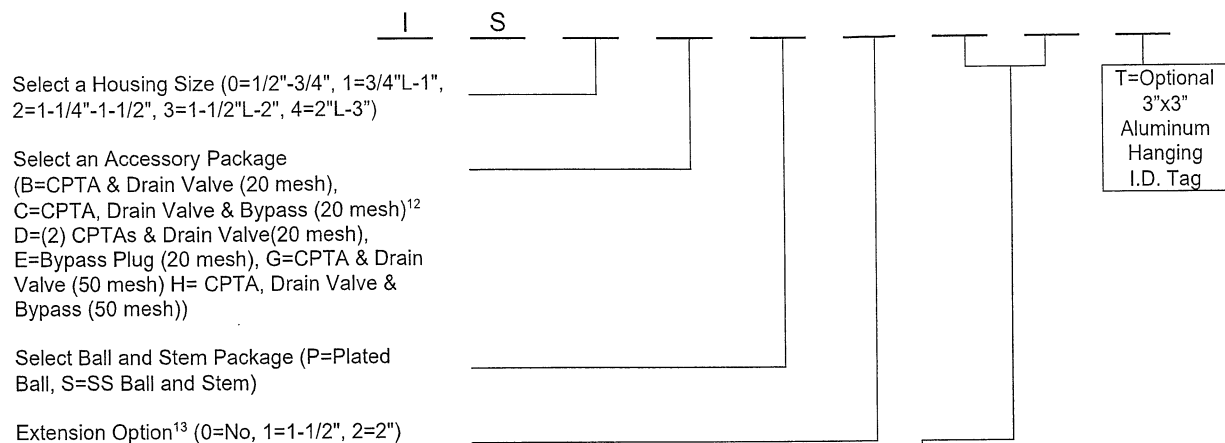
- ¹ QuickPress is available on 1/2" to 1" valves only. Connections are compatible with popular press tools and are rated for maximum 200 PSI.
- ² Grooved End connection is available on 2-1/2" and 3" valves only.
- ³ Body Tappings for accessories are a leak proof metal to metal seal and do not require 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.

This specification © 2020 Griswold Controls

1700 Barranca Parkway, Irvine, CA 92606
(949) 559-6000 Fax (949) 559-6088
www.GriswoldControls.com

GRISWOLD[®] CONTROLS
A FlowCon International/Griswold Controls LLC. Company

7/20
F-5387M

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.

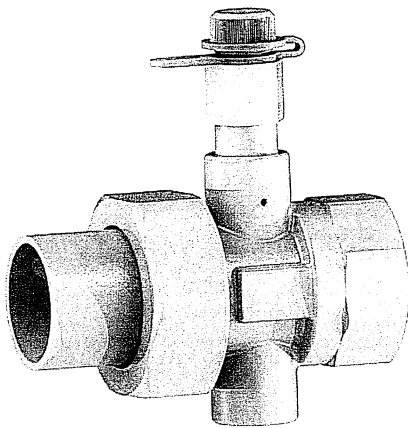
¹⁵ Tailpiece is not available for this size. Male tailpiece used with coupling.

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

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

This specification © 2020 Griswold Controls

1700 Barranca Parkway, Irvine, CA 92606
(949) 559-6000 Fax (949) 559-6088
www.GriswoldControls.com



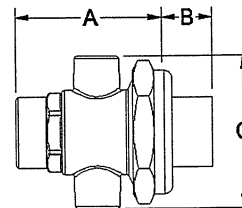
SPECIFICATIONS

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)

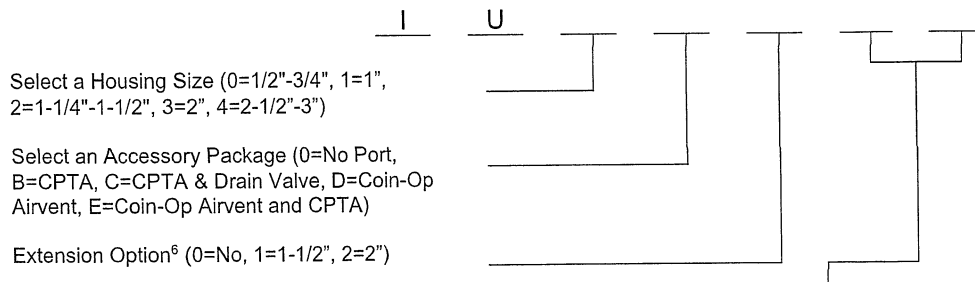
All dimensions are for planning purposes only and may change without notice.

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



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.

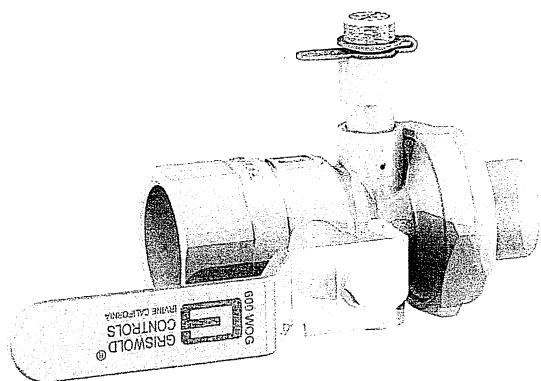
11/20
F-5388F

This specification © 2020 Griswold Controls

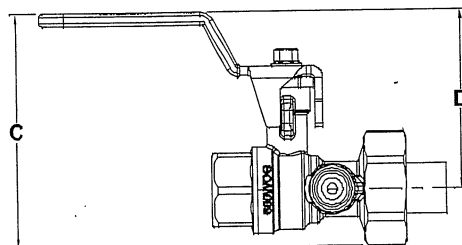
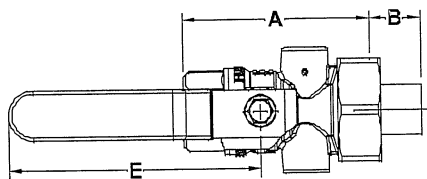
1700 Barranca Parkway, Irvine, CA 92606
(949) 559-6000 Fax (949) 559-6088
www.GriswoldControls.com

GRISWOLD CONTROLS
A FlowCon International/Griswold Controls LLC Company

SPECIFICATIONS



PSI/Temperature Rating:	600 WOG 400 PSI / 250°F
Body Material:	Forged Brass ASTM B283-06
End Connections:	Brass – NPT, Sweat or QuickPress ¹
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"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	2.6	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":1.7		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.

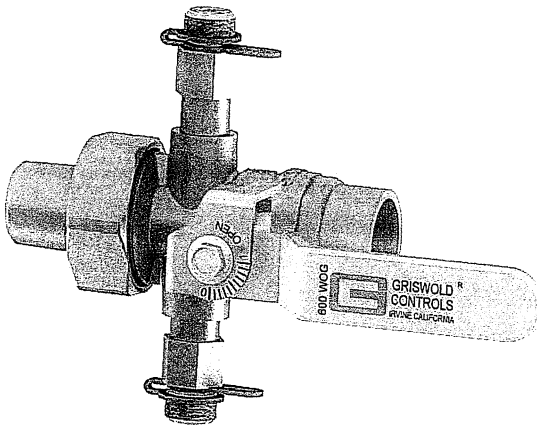
11/20
F-5389D

This specification © 2020 Griswold Controls

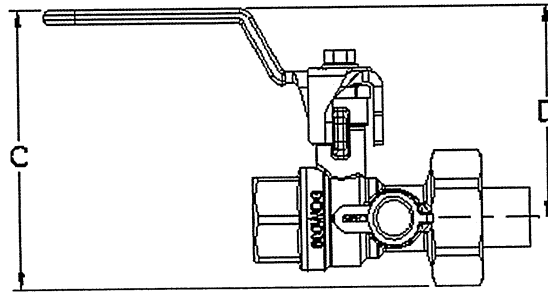
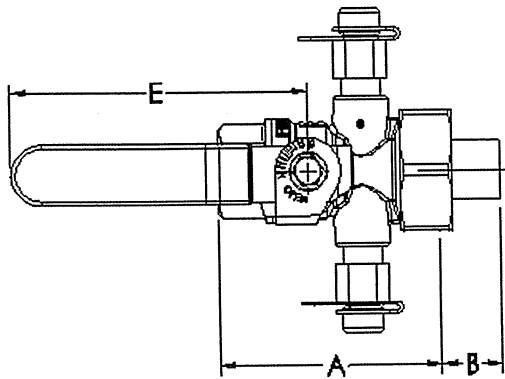
1700 Barranca Parkway, Irvine, CA 92606
(949) 559-6000 Fax (949) 559-6088
www.GriswoldControls.com

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

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	3.5		
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.

This specification © 2020 Griswold Controls

1700 Barranca Parkway, Irvine, CA 92606
 (949) 559-6000 Fax (949) 559-6088
 www.GriswoldControls.com

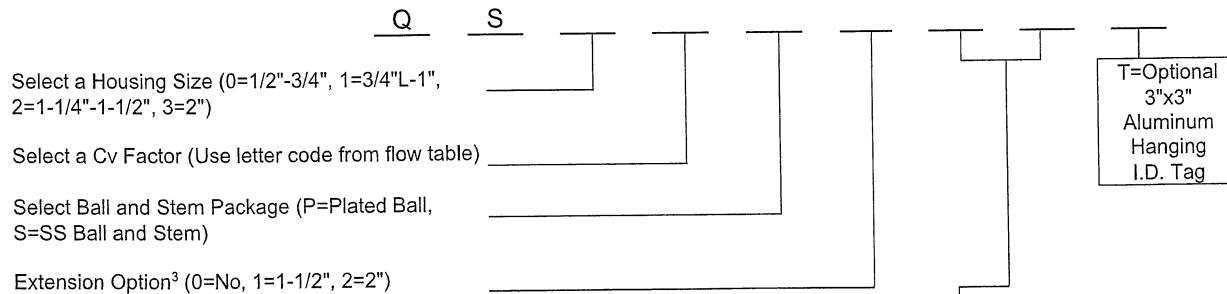
GRISWOLD CONTROLS
 A FlowCon International/Griswold Controls LLC. Company

7/20
 F-5411J

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



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.

7/20

F-5411J

This specification © 2020 Griswold Controls

1700 Barranca Parkway, Irvine, CA 92606

(949) 559-6000 Fax (949) 559-6088

www.GriswoldControls.com

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

SPECIFICATIONS:

PSI/Temperature Rating

Metering Station:

QuickSet:

Low Loss Venturi:

Body Material:

Butterfly Valve¹:

End Connections:

Installation:

240 PSI/275° F

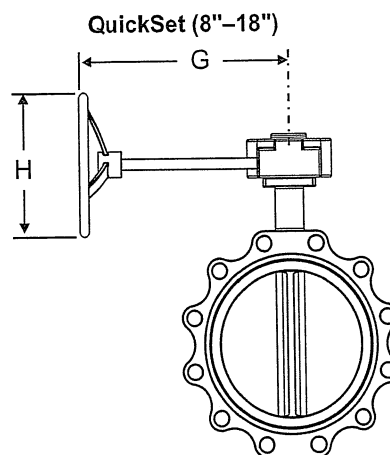
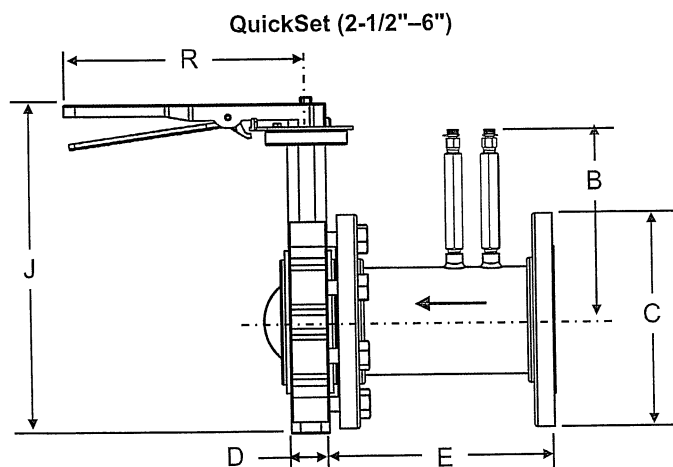
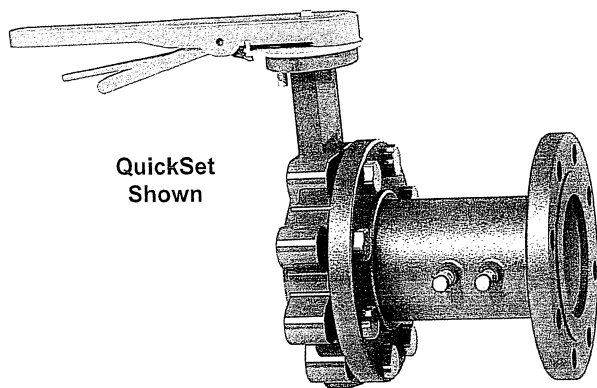
200 PSI (14"-18": 150 PSI) /275° F

Carbon Steel with Piezo-Ring
to average low signal pickup.

Carbon Steel SA-53 Grade B.

Bronze disk, S.S. Stem

Steel flanges ANSI B16.5 CL 150

No straight-run pipe is necessary
for normal operation. Consult chart
(F-4439) for exact Flow Constant
and Permanent Pressure Drop
calculations.

DIMENSIONS & WEIGHTS FOR QUICKSET (NOMINAL)

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

LINE SIZE	B	C	D	E	G	H	J	R	WEIGHT (LBS.)	
									W/ HANDLE	W/GEAR WHEEL
2-1/2"	7.3	7.0	1.8	6.3	N/A	N/A	11.6	10.5	24.9	N/A
3"	7.6	7.5	1.8	6.8	N/A	N/A	12.1	10.5	29.4	N/A
4"	8.0	9.0	2.0	8.4	N/A	N/A	13.6	10.5	43.0	N/A
5"	8.6	10.0	2.1	10.3	N/A	N/A	14.6	10.5	54.0	N/A
6"	9.1	11.0	2.3	11.8	N/A	N/A	15.6	10.5	70.3	N/A
8"	10.1	13.5	2.4	15.3	N/A	12.0	18.9	N/A	N/A	126.5
10"	11.2	16.0	2.6	18.3	9.5	12.0	21.3	N/A	N/A	187.3
12"	12.2	19.0	3.0	21.8	9.5	12.0	24.6	N/A	N/A	280.7
14"	12.8	21.0	3.0	24.3	9.5	12.0	26.8	N/A	N/A	378.3
16"	13.8	23.5	4.0	27.8	15.0	16.0	30.0	N/A	N/A	486.7
18"	14.8	25.0	4.5	32.0	15.0	16.0	31.6	N/A	N/A	614.2

NOTES

¹ Butterfly valve is standard on QuickSet only.

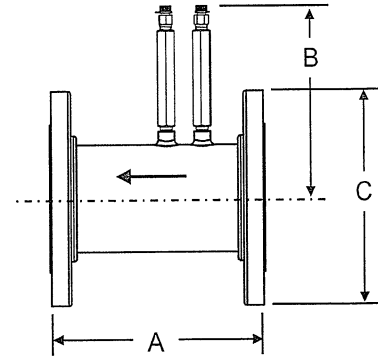
This specification © 2020 Griswold Controls

1700 Barranca Parkway, Irvine, CA 92606
(949) 559-6000 Fax (949) 559-6088
www.GriswoldControls.com

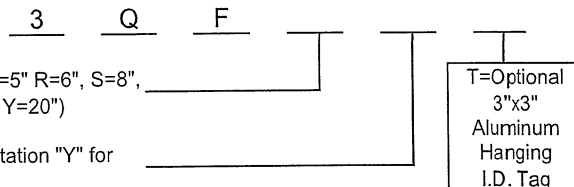
DIMENSIONS & WEIGHTS FOR METERING STATIONS (NOMINAL)

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

LINE SIZE	A	B	C	WEIGHT (LBS.)
2-1/2"	6.3	7.3	7.0	17.9
3"	6.8	7.6	7.5	21.9
4"	8.4	8.0	9.0	31.5
5"	10.3	8.6	10.0	40.0
6"	10.8	9.1	11.0	51.7
8"	12.8	10.1	13.5	86.5
10"	16.0	11.2	16.0	130.6
12"	16.8	12.2	19.0	191.1
14"	17.0	12.8	21.0	244.7
16"	18.0	13.8	23.5	300.1
18"	17.3	14.8	25.0	326.5
20"	20.9	14.2	27.5	TBD

***FLOW RATES (+/-1%²)***

LINE SIZE	MODEL NO.	Cv Metering Station ³	Cv Quickset ³	GPM RANGE FOR 5"-100" ⁴ W.C. ΔP (SET W/100" GAUGE)	GPM RANGE FOR 5"-300" W.C. ΔP (SET W/300" GAUGE)	Turn Down Ratio
2-1/2"	3QFM	171	135	19 – 87	19 – 151	7.9
3"	3QFN	269	201	32 – 147	32 – 255	7.9
4"	3QFP	580	417	58 – 260	58 – 451	7.8
5"	3QFQ	800	630	80 – 372	80 – 645	8.1
6"	3QFR	1250	980	140 – 624	140 – 1075	7.7
8"	3QFS	2100	1745	260 – 1180	260 – 2045	7.8
10"	3QFT	4000	3201	375 – 1610	375 – 2790	7.4
12"	3QFU	5700	4690	600 – 2790	600 – 4820	8.0
14"	3QFV	7300	6225	775 – 3420	775 – 5940	7.7
16"	3QFW	9600	8283	1250 – 5525	1250 – 9575	7.7
18"	3QFX	14500	12057	1650 – 7405	1650 – 12830	7.8
20" ⁵	3QFY	26400	19950	2246 – 10071	22460 – 17448	7.7

MODEL NUMBER SELECTION

Select a Size (M=2.5", N=3", P=4", Q=5" R=6", S=8", T=10", U=12", V=14", W=16", X=18", Y=20")

Select Valve Style ("0" for Metering Station "Y" for QuickSet with Butterfly Valve)

T=Optional
3"x3"
Aluminum
Hanging
I.D. Tag***NOTES***² Accuracy is for venturi portion of valve only. Pressure readability is dependent on accuracy of gauge and system pressure stability.³ Cv's are used to calculate permanent pressure drop. $PSID = (Flow/Cv)^2$. Consult chart F-4439 Smart Phone app for flow measurement.⁴ Not all gages/meters can accurately show a 5" signal. Readability is dependent on quality of the meter. Digital gages can read below 1".⁵ 20" is only available as a Metering Station.

This specification © 2020 Griswold Controls

7/20
F-4407G1700 Barranca Parkway, Irvine, CA 92606
(949) 559-6000 Fax (949) 559-6088
www.GriswoldControls.com

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