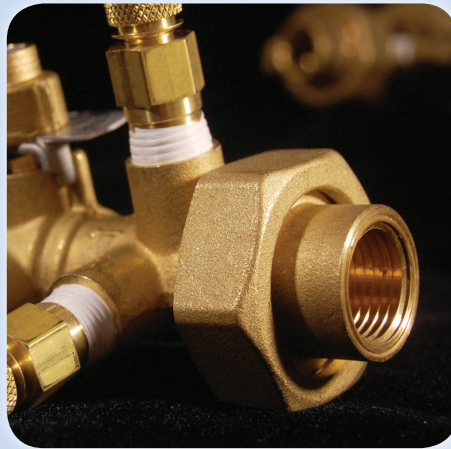
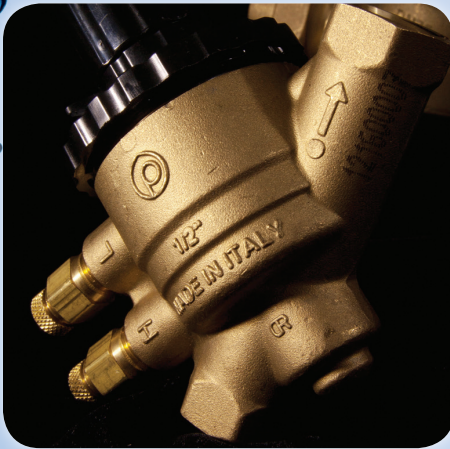


Hci

Hydronic Components Inc.



***Balancing Solutions Technical
Specifications***

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Pressure Independent Control Valve

Pressure Regulating Cartridge • Axial Control Valve • Presetting Ring • 360 WOG



91 Series

Features

- 5-58 PSID operating range
- +/- 5% accuracy up to 15 PSID
- Two pressure / temperature (PT) test ports
- Location tag
- ANSI class IV leakage rate
- 100% leak tested
- Control Valve Stroke: 2.7mm
- Rangeability: 50-100

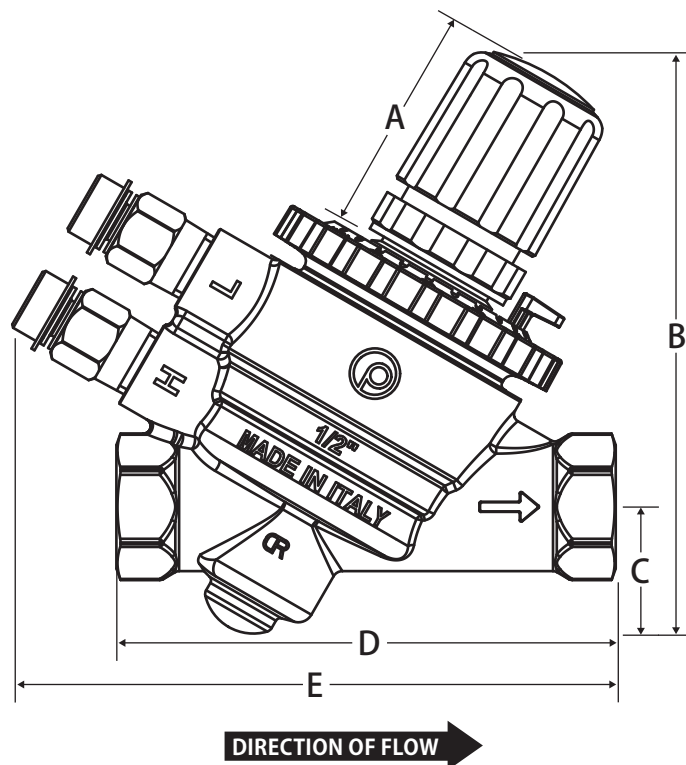
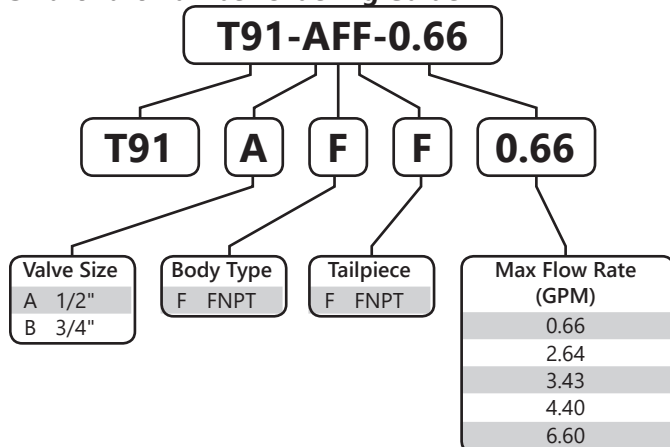
Pressure and Temperature Rating

- 360 WOG
- 15 - 250°F

Accepted Actuator Manufacturers

- Spartan PD
- Siemens
- Honeywell
- Johnson Controls
- Neprionics

Smart Part Number Ordering Guide



Material Specifications

Part	Material
Body	Brass - CW602N
Regulating Cartridge	High Resistance Polymer, EPDM, 303 Stainless Steel
Control Valve	Brass - CW614N, 18/8 Stainless Steel
Presetting Ring	High Resistance Polymer
O-rings	EPDM

Dimensions

Size	A	B	C	D	E
1/2"	1.85	4.53	0.98	3.90	4.72
3/4"	1.85	4.53	0.98	4.25	4.72



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

Pressure Independent Control Valve

Pressure Regulating Cartridge • Axial Control Valve • Presetting Ring • Double Union • 360 WOG



93 Series

Features

- 5-58 PSID operating range
- +/- 5% accuracy up to 15 PSID
- Two supply / demand (PT) sensors
- Location agnostic
- ANSI class IV leakage
- 100% leak tested
- Control Valve Stroke: 6.0mm
- Rangeability: 100-150

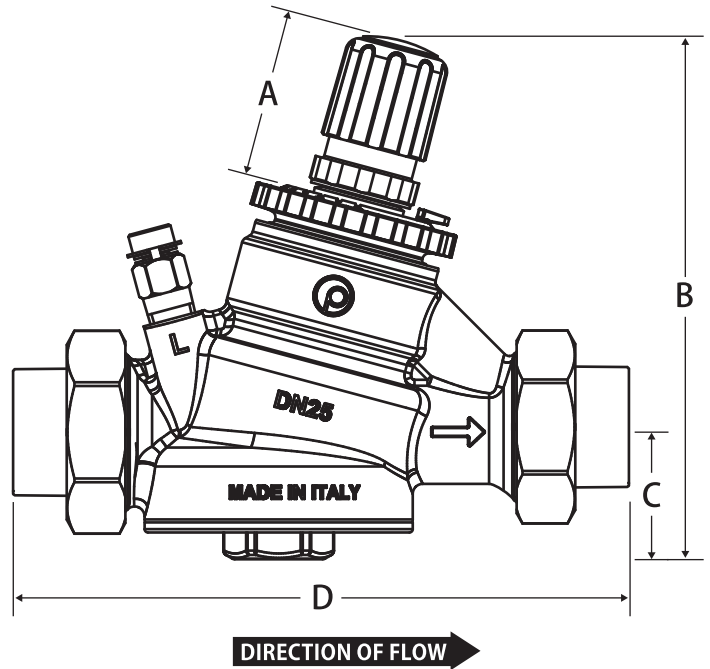
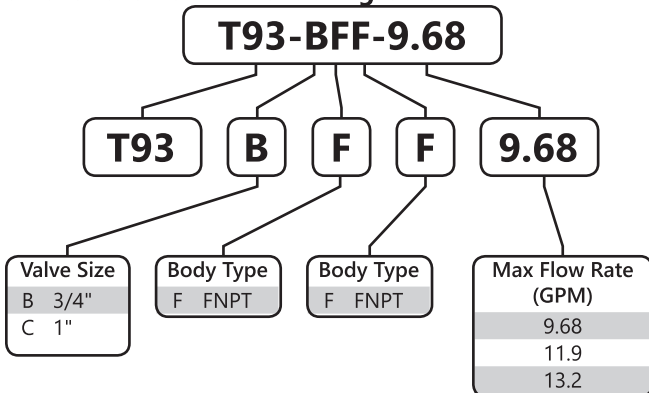
Pressure and Temperature Rating

- 360 WOG
- 15 - 250°F

Accepted Actuator Manufacturers

- Staran PD
- Siemens
- Honeywell
- Johnson Controls
- Neotronics

Smart Part Number Ordering Guide



Material Specifications

Part	Material
Body	Brass - CW602N
Regulating Cartridge	Brass - CW614N, EPDM, 303 Stainless Steel
Control Valve	Brass - CW614N, 18/8 Stainless Steel
Presetting Ring	High Resistance Polymer
O-rings	EPDM

Dimensions

Size	A	B	C	D
3/4"	1.85	5.98	1.50	5.28
1"	1.85	5.98	1.50	5.28



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

Pressure Independent Control Valve

Pressure Regulating Cartridge • Rotary Control Valve • Manual Shutoff • Double Union • 230 WOG



85 Series

Features

- 5-58 PSID operating range
- +/- 5% accuracy up to 15 PSID
- Two pressure / temperature (PT) test ports
- Location tag
- ANSI class IV leakage rate
- 100% leak tested
- Control Valve Stroke: 90°
- Rangeability: >100

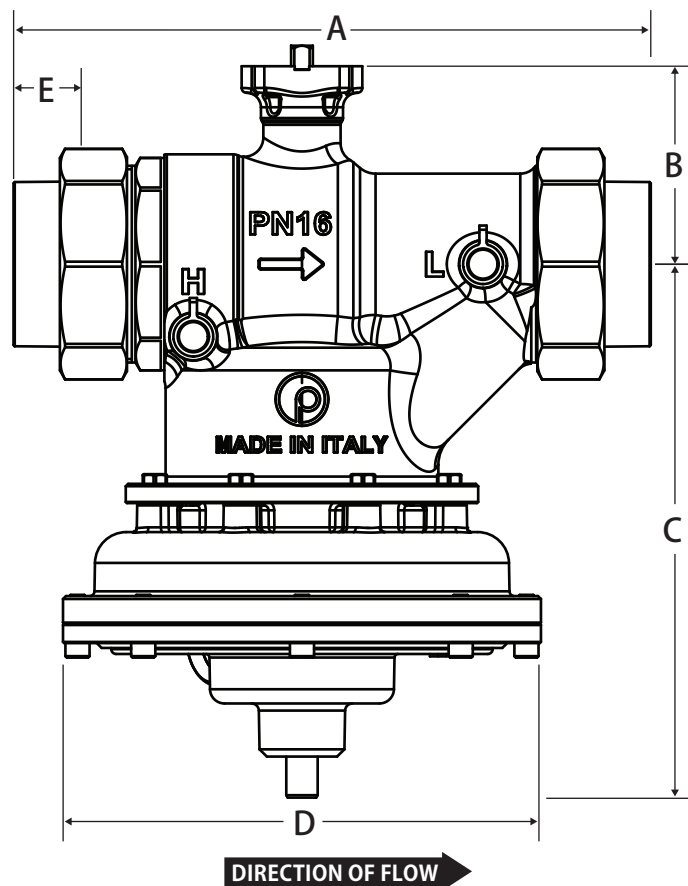
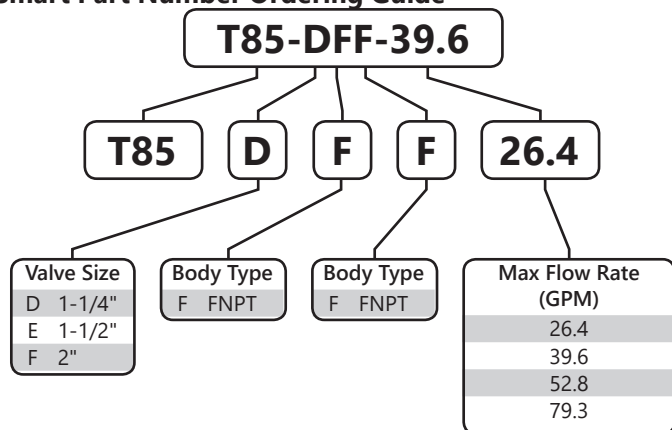
Pressure and Temperature Rating

- 230 WOG
- 15 - 250°F

Accepted Actuator Manufacturers

- HCI
- Johnson Controls

Smart Part Number Ordering Guide



Material Specifications

Part	Material
Body	Ductile Iron
Regulating Device	High Resistance Polymer, EPDM, 303 Stainless Steel
Control Valve	Brass - CW614N, 18/8 Stainless Steel
Stem	Brass - CW602N
O-rings	EPDM
Manual Shut-Off	Brass - CW614N

Dimensions

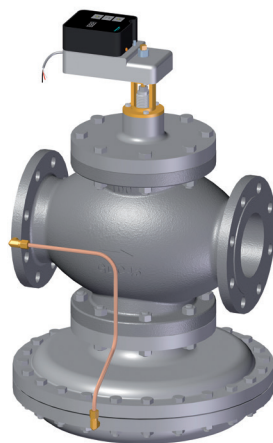
Size	A	B	C	D	E
1-1/4"	9.14	3.45	6.9	6.24	1.06
1-1/2"	9.14	3.45	6.9	6.24	1.06
2"	10.65	3.73	8.68	7.81	1.27



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

Pressure Independent Control Valve

Pressure Regulating Cartridge • Multi-Turn Control Valve • Flange Connection • 230 WOG



94F Series

Features

- 4.35-58 PSID operating range
- +/- 5% accuracy up to 15 PSID
- Two pressure / temperature (PT) test ports
- Location tag
- ANSI class IV leakage rate
- 100% leak tested
- Control Valve Stroke: 15-22mm
- Rangeability: >100
- Flange: ANSI B16.1, Class 125
- Face to Face: ISA-75.08.01-2002, Class 125

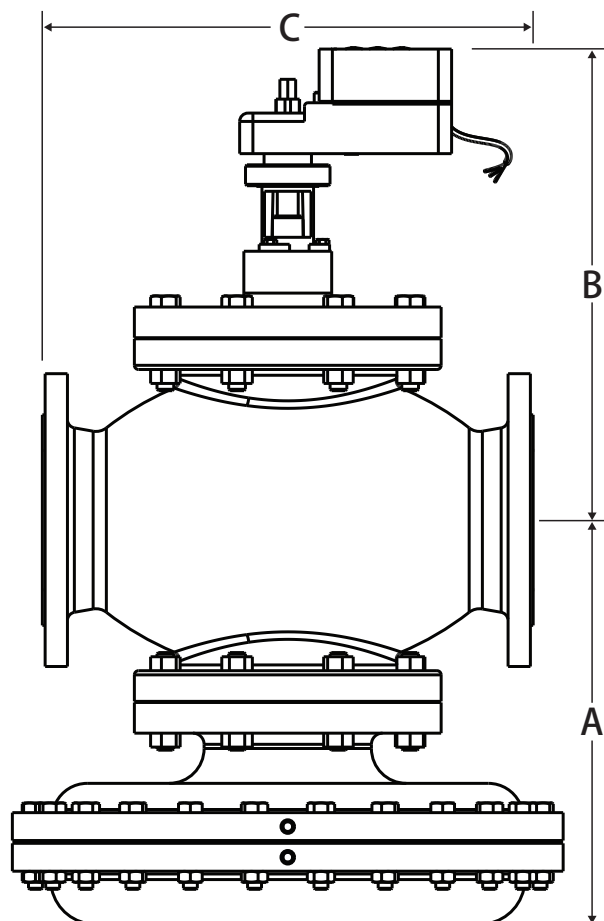
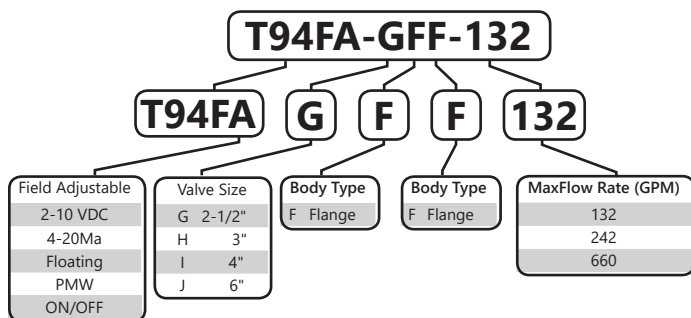
Pressure and Temperature Rating

- 230 WOG
- 15 - 250°F

Accepted Actuator Manufacturers

- HCI

Smart Part Number Ordering Guide



DIRECTION OF FLOW →

Material Specifications

Part	Material
Body	Ductile Iron
Regulating Device	Brass - CW602N, EPDM, 303 Stainless Steel
Control Valve	Brass - CW602N, 18/8 Stainless Steel
O-rings	EPDM

Dimensions

Size	A	B	C
2 1/2"	9.21	11.10	10.87
3"	9.41	11.42	11.73
4"	11.22	12.17	13.86
6"	13.78	14.92	17.76



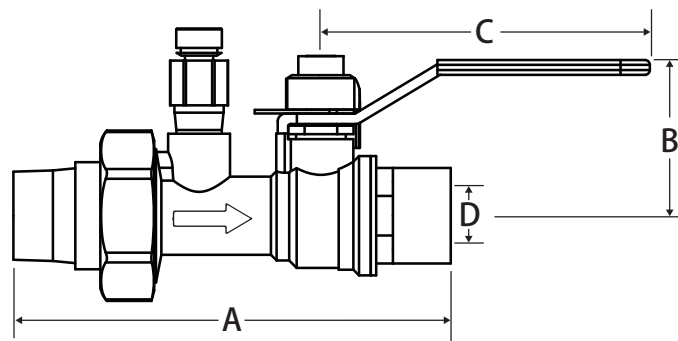
WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer, and lead, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Manual Balancing Valve

**Fixed Orifice • Isolation Ball Valve • Memory Stop • Union •
400 WOG**



Terminator B



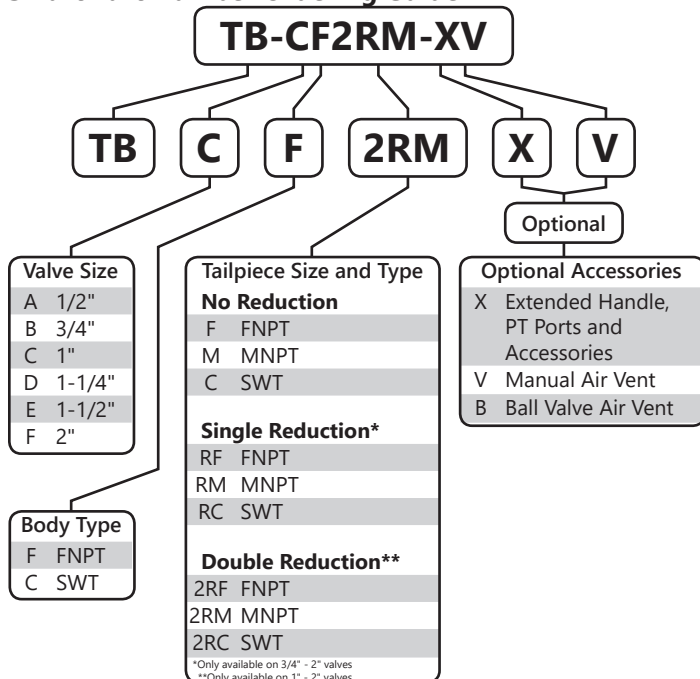
Features

- Patented removable venturi
- +/- 2% Accuracy
- Two pressure / temperature (PT) test ports
- Location tag
- Additional accessory tap
- Triple sealing stem with 2 Viton® o-rings and Teflon® seal
- Blow out proof stem
- 100% leak tested
- Made in Italy
- Leakproof stem - Lifetime warranty
- See end of catalog for pressure drop charts

Pressure and Temperature Rating

- 400 WOG
- 300°F Max

Smart Part Number Ordering Guide



Material Specifications

Part	Material
Body	Brass - CW617N
End Connection	Brass - CW617N
Ball	Chrome Plated Brass - CW617N
Seat (2)	Virgin PTFE
Stem	Brass - CW614N
Packing	Virgin PTFE
Stem O-ring (2)	Viton®
Packing Gland	Brass - CW614N
Handle	Steel - Geomet® Plated
Handle Nut	Steel - Geomet® Plated
Metering Plate	Aluminum
Memory Stop	Brass - CW617N
Memory Stop Screw	Steel - Geomet® Plated
Union O-ring	Viton®
Tail Piece	Brass - CW617N
Union Nut	Brass - CW617N
Venturi	Brass - CW614N
Venturi O-ring	Viton®

Dimensions

Size	A*	B	C	D
1/2"	4.56	1.57	2.95	0.59
3/4"	4.88	1.57	2.95	0.59
1"	5.65	1.93	3.74	0.79
1-1/4"	7.00	2.44	4.72	0.98
1-1/2"	7.81	2.64	4.72	1.26
2"	9.19	3.29	5.91	1.58

*Length is for a SWT x MNPT valve, additional dimensions available upon request



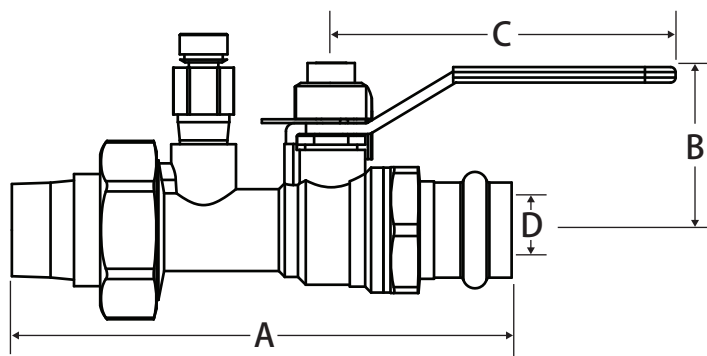
WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer, and lead, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Manual Balancing Valve

Fixed Orifice • Isolation Ball Valve • Integrated Memory Stop • Union • Press Body Connection • 250 WOG



Terminator B Press



DIRECTION OF FLOW

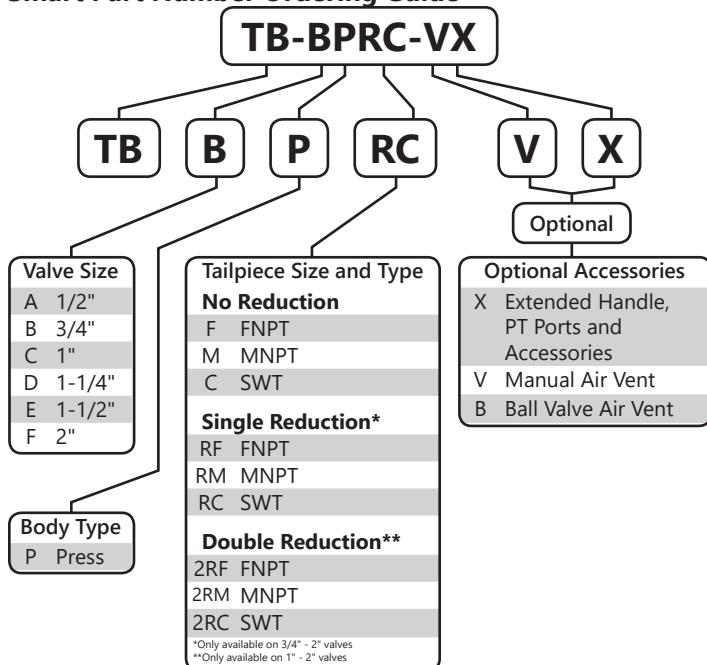
Features

- Patented removable venturi
- +/- 2% Accuracy
- Two pressure / temperature (PT) test ports
- Location tag
- Additional accessory tap
- Triple sealing stem with 2 Viton® o-rings and Teflon® seal
- Blow out proof stem
- 100% leak tested
- Made in Italy
- Leakproof stem - Lifetime warranty
- See end of catalog for pressure drop charts

Pressure and Temperature Rating

- 250 WOG
- 300°F Max

Smart Part Number Ordering Guide



Material Specifications

Part	Material
Body	Brass - CW617N
End Connection	Brass - CW617N
Press O-ring	EPDM
Ball	Chrome Plated Brass - CW617N
Seat (2)	Virgin PTFE
Stem	Brass - CW614N
Packing	Virgin PTFE
Stem O-ring (2)	Viton®
Packing Gland	Brass - CW614N
Handle	Steel - Geomet® Plated
Handle Nut	Steel - Geomet® Plated
Metering Plate	Aluminum
Memory Stop	Brass - CW617N
Memory Stop Screw	Steel - Geomet® Plated
Union O-ring	Viton®
Tail Piece	Brass - CW617N
Union Nut	Brass - CW617N
Venturi	Brass - CW614N
Venturi O-ring	Viton®

Dimensions

Size	A*	B	C	D
1/2"	5.17	1.57	2.95	0.59
3/4"	5.35	1.57	2.95	0.59
1"	—**	1.93	3.74	0.79
1-1/4"	—**	2.44	4.72	0.98
1-1/2"	—**	2.64	4.72	1.26
2"	—**	3.29	5.91	1.58

*Length is for a Press x MNPT valve, additional dimensions available upon request
**1" - 2" is FNPT body with MNPT x Press adapter



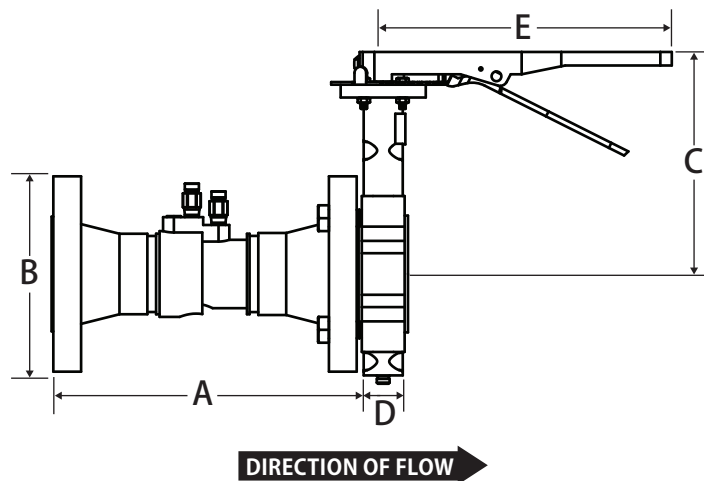
WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer, and lead, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Manual Balancing Valve

Fixed Orifice • Isolation Butterfly Valve • Lug x Flange Connection • Class 150



Terminator B Lug x Flange



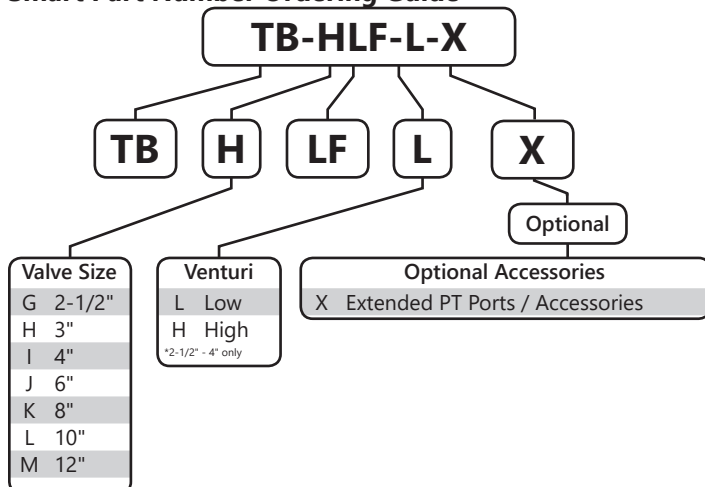
Features

- +/- 1% Accuracy
- Two pressure / temperature (PT) test ports
- Location tag
- Additional accessory tap
- Ten-position lockable lever handle
- Class 150 Flange
- 100% leak tested
- 5 straight pipe diameters are required upstream of balance valve
- 2-1/2 straight pipe diameters are required downstream of balance valve
- See end of catalog for pressure drop charts

Pressure and Temperature Rating

- 200 WOG
- 225°F Max

Smart Part Number Ordering Guide



Material Specifications

Part	Material
Venturi Body	Carbon Steel - ASTM-A126
Flange (2)	Carbon Steel - ASTM-A126
Butterfly Valve	(See Butterfly Valve Spec Sheet)

Dimensions

Size	A	B	C	D	E
2-1/2"	10.75	7.00	7.6	1.76	10.64
3"	11.13	7.50	8.15	1.78	10.64
4"	12.25	9.00	8.39	2.05	10.64
6"	14.75	11.00	9.13	2.2	10.64
8"	16.75	13.50	10.16	2.39	14.18
10"	20.37	16.00	11.85	2.58	19.7
12"	21.5	19.00	13.11	3.03	19.7



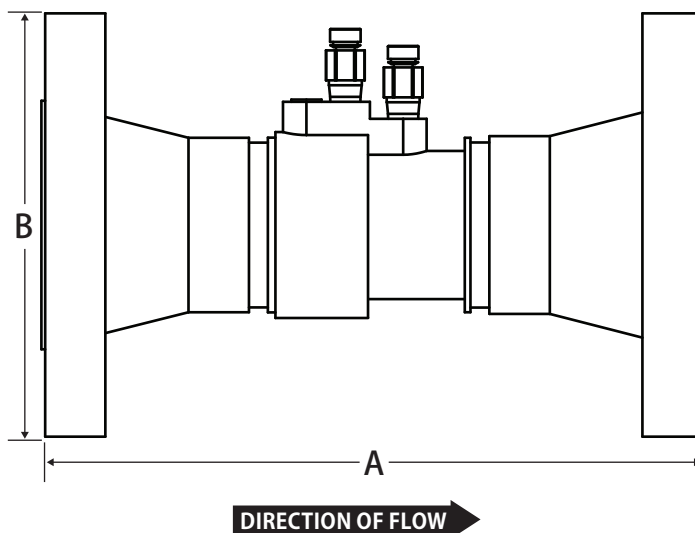
WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer, and lead, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Metering Station

Fixed Orifice • Flange Connection • Class 150



Terminator MS Flange x Flange



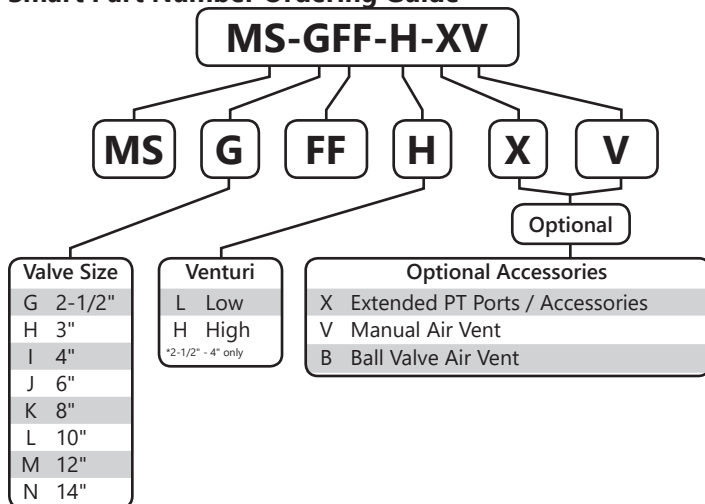
Features

- +/- 1% Accuracy
- Two pressure / temperature (PT) test ports
- Location tag
- Additional accessory tap
- Class 150 Flange
- 100% leak tested
- 5 straight pipe diameters are required upstream of metering station
- 2-1/2 straight pipe diameters are required downstream of metering station
- See end of catalog for pressure drop chart

Pressure and Temperature Rating

- 200 WOG
- 225°F Max

Smart Part Number Ordering Guide



Material Specifications

Part	Material
Venturi Body	Carbon Steel - ASTM 126
Flange (2)	Carbon Steel - ASTM 126

Dimensions

Size	A	B
2-1/2"	10.9	7.0
3"	11.3	7.5
4"	12.5	9.0
6"	15.0	11.0
8"	16.9	13.5
10"	20.6	16.0
12"	26.3	19.0



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

Manual Balancing Valve

Variable Orifice • Globe Valve • Threaded & Solder Connections • Memory Stop • 300 WOG



Terminator GV

Features

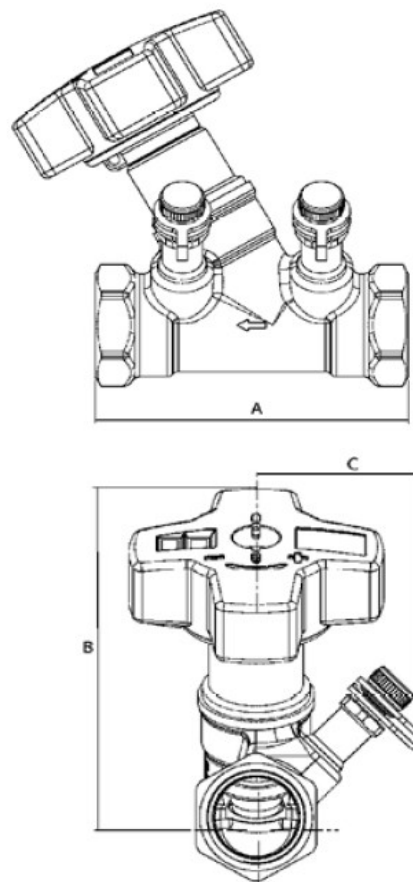
- "Y" pattern globe style design
- Dezincification resistant brass
- Positive shut-off
- Offsetting pressure/temperature ports
- Multi-turn, 360° handwheel with vernier scale and digital readouts
- Built-in memory stop
- Precise flow measurement and flow balancing

Pressure / Temperature Rating

- 300 PSI
- -4°F to 250°F



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



Material Specifications

Part	Material
Body, Bonnet	Brass - C35330
Gasket	EPDM
Seat Seal	EPDM
Hand Wheel	Plastic

Dimensions

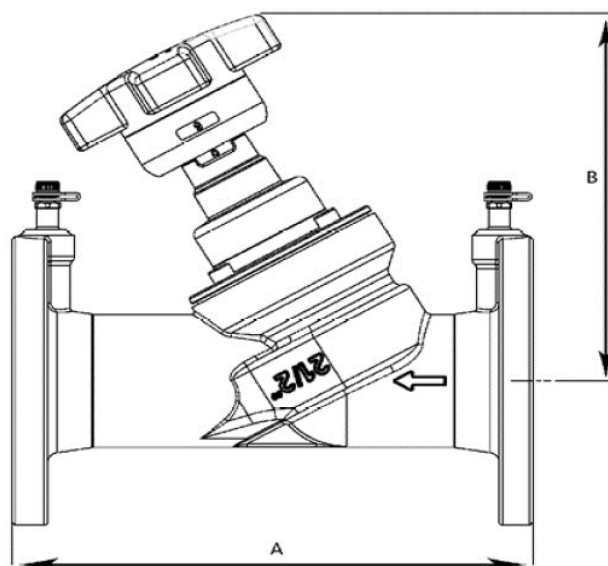
Part Number	Size	A	B	C	Minimum Flow	Nominal Flow	Maximum Flow
Threaded Connection							
TGV-AFF	1/2"	3.39	3.74	1.57	0.14	0.50-3.08	12.10
TGV-BFF	3/4"	3.54	3.74	1.65	0.26	3.80-5.50	17.40
TGV-CFF	1"	4.02	3.78	1.73	0.37	5.50-9.50	30.00
TGV-DFE	1-1/4"	4.72	3.78	1.85	0.60	9.50-14	44.60
TGV-EFF	1-1/2"	5.20	4.25	1.93	0.91	14-20	66.40
TGV-FFF	2"	6.46	4.37	2.09	1.52	20-33	107.20
Sweat Connection							
TGV-ACC	1/2"	3.39	3.74	1.57	0.14	0.50-3.08	12.10
TGV-BCC	3/4"	3.54	3.74	1.65	0.26	3.80-5.50	17.40
TGV-CCC	1"	4.02	3.78	1.73	0.37	5.50-9.50	30.00
TGV-DCC	1-1/4"	4.72	3.78	1.85	0.60	9.50-14	44.60
TGV-ECC	1-1/2"	5.20	4.25	1.93	0.91	14-20	66.40
TGV-FCC	2"	6.46	4.37	2.09	1.52	20-33	107.20

Manual Balancing Valve

Variable Orifice • Globe Valve • Memory Stop • 230 WOG



Terminator GV



Features

- Accurate and precise flow measurement and balancing
- Positive shut-off
- "Y" pattern globe style design
- Multi-turn, 360° handwheel with vernier scale and digital readout
- Built in memory stop
- Offset pressure/temperature ports

Pressure / Temperature Rating

- 230 WOG
- 14°F -248°F

Material Specifications

Part	Material
Body	Cast Iron
End Connections	ANSI 125 Flanged
Gaskets	EPDM
Seat Seal	PTFE
Handwheel	Polyamide Plastic

Dimensions

Part Number	Size	A	B	Minimum Flow	Nominal Flow	Maximum Flow
TGV-GFF	2-1/2"	11.42	8.94	2.13	33-100	318.30
TGV-HFF	3"	12.20	9.5	4.19	100-117	374.50
TGV-IFF	4"	13.78	10.20	6.09	117-200	646.80
TGV-KFF	6"	18.90	12.05	13.70	320-440	1447.00
TGV-LFF	8"	23.60	13.50	30.00	450-750	2415
TGV-MFF	10"	28.70	16.00	47.00	750-1300	4050
TGV-NFF	12"	33.50	19.00	43.00	1300-1600	5115



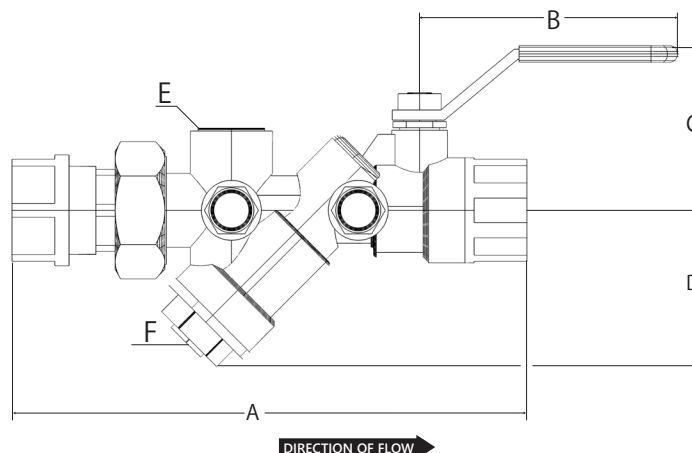
WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer, and lead, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Automatic Balancing Valve

Automatic Flow Limiter • Isolation Ball Valve • Union • 600 WOG



TA1



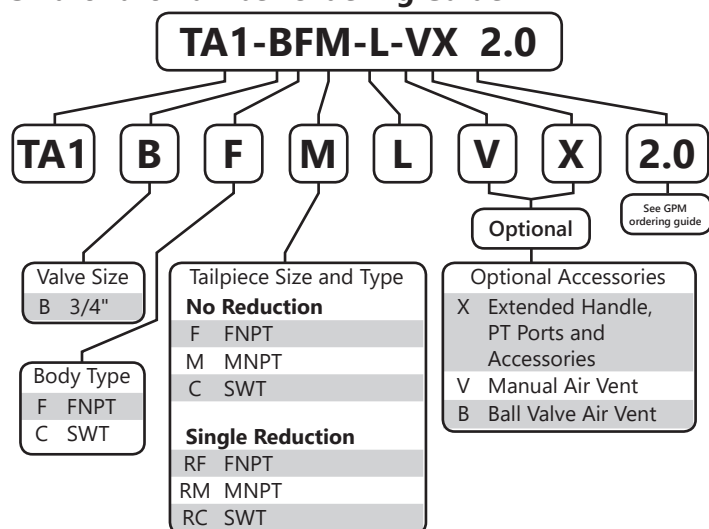
Features

- +/- 5% Accuracy
- Two pressure / temperature (PT) test ports
- Location tag
- Two additional accessory taps
- Triple sealing stem with 2 Viton® o-rings and Teflon® seal
- Blow out proof stem
- 100% leak tested

Pressure and Temperature Rating

- 600 WOG
- 325°F Max

Smart Part Number Ordering Guide



Material Specifications

Part	Material
Body	Brass - C85700
End Connection	Brass - CW617N
Ball	Chrome Plated Brass - CW617N
Seat (2)	PTFE
Stem	Brass - CW617N
Packing	PTFE
Stem O-ring (2)	Viton®
Packing Gland	Brass - CW617N
Handle	Steel - Zinc Plated
Handle Nut	Brass - CW617N
Service Cap	Brass - CW617N
Service Cap O-ring	Viton®
Union Gasket	EPDM
Tailpiece	Brass - C37700
Union Nut	Brass - C37700
Balancing Cartridge	Stainless steel, EPDM
Cartridge Retaining Spring	Stainless Steel

Dimensions

Size	Flow Range	A*	B	C	D	E	F
3/4"	Low Flow	6.28	3.08	2.00	1.86	0.50	0.25
3/4"	High Flow	6.28	3.08	2.00	1.86	0.50	0.25

*Length is for a SWT x MNPT valve, additional dimensions available upon request

GPM Ordering Guide

Size	Cartridge	GPM							PSI
3/4"	C1-L	0.33	0.50	0.75	1.00	1.50	2.00	2.50	2-32
Low	C1-H	4.00	5.50	-	-	-	-	-	5-60

Pressure range varies, see PSI column



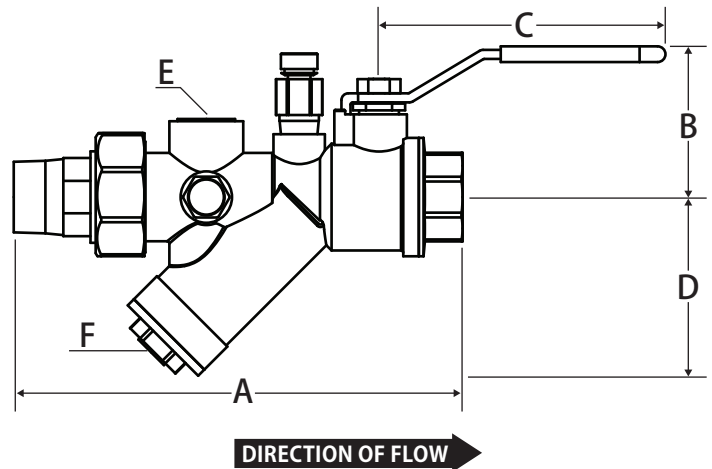
WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer, and lead, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Automatic Balancing Valve

Automatic Flow Limiter • Isolation Ball Valve • Union • 600 WOG



Terminator A



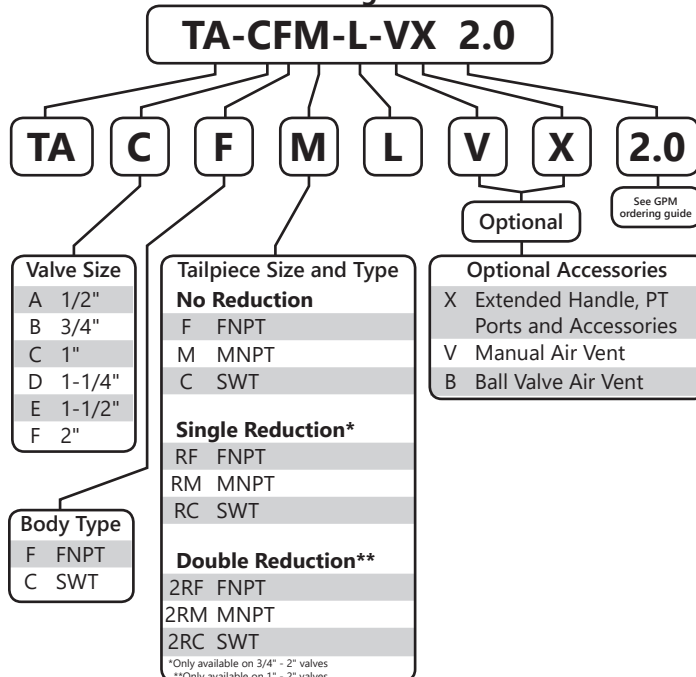
Features

- 2-60 PSID operating range
- +/- 5% Accuracy
- Two pressure / temperature (PT) test ports
- Location tag
- Two additional accessory tap
- Triple sealing stem with 2 Viton® o-rings and Teflon® seal
- Blow out proof stem
- 100% leak tested
- See end of catalog for GPM ordering guide

Pressure and Temperature Rating

- 600 WOG
- 325°F Max

Smart Part Number Ordering Guide



Material Specifications

Part	Material
Body	Brass -CW617N
End Connection	Brass -CW617N
Ball	Chrome Plated Brass -CW617N
Seat (2)	PTFE
Stem	Brass -CW614N
Packing	PTFE
Stem O-ring (2)	Viton®
Packing Gland	Brass -CW617N
Handle	Steel - Zinc Plated
Handle Nut	Brass -CW614N
Service Cap	Brass -CW617N
Service Cap O-ring	Viton®
Union Gasket	EPDM
Tailpiece	Brass -CW617N
Union Nut	Brass -CW617N
Balancing Cartridge	Brass, Stainless steel, EPDM
Cartridge Retaining Spring	Stainless Steel

Dimensions

Size	A*	B	C	D	E	F
1/2"	5.54	1.70	3.40	1.60	0.50	0.25
3/4"	6.38	1.80	3.40	2.40	0.50	0.25
1"	6.81	1.80	3.40	2.40	0.50	0.25
1-1/4"	8.88	2.50	4.40	3.50	0.75	0.25
1-1/2"	9.13	2.50	4.40	3.50	0.75	0.25
2"	11.38	3.50	5.50	4.50	0.75	0.50

*Length is for a SWT x MNPT valve, additional dimensions available upon request



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

Automatic Balancing Valve

Automatic Flow Limiter • Isolation Ball Valve • Union • Press Body Connection • 250 WOG



Terminator A Press

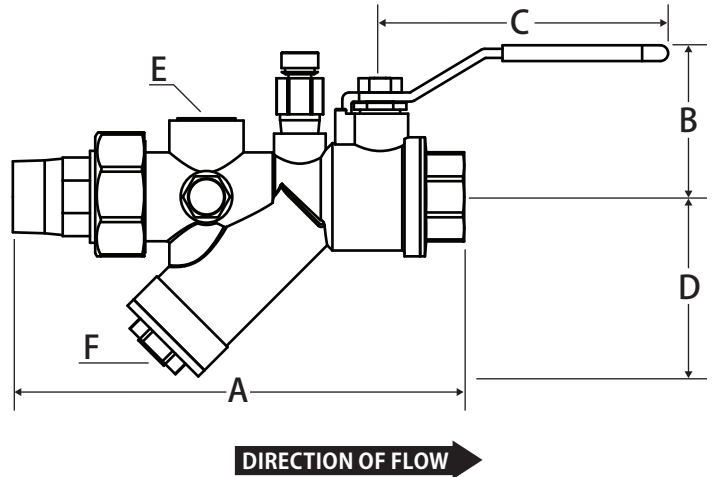
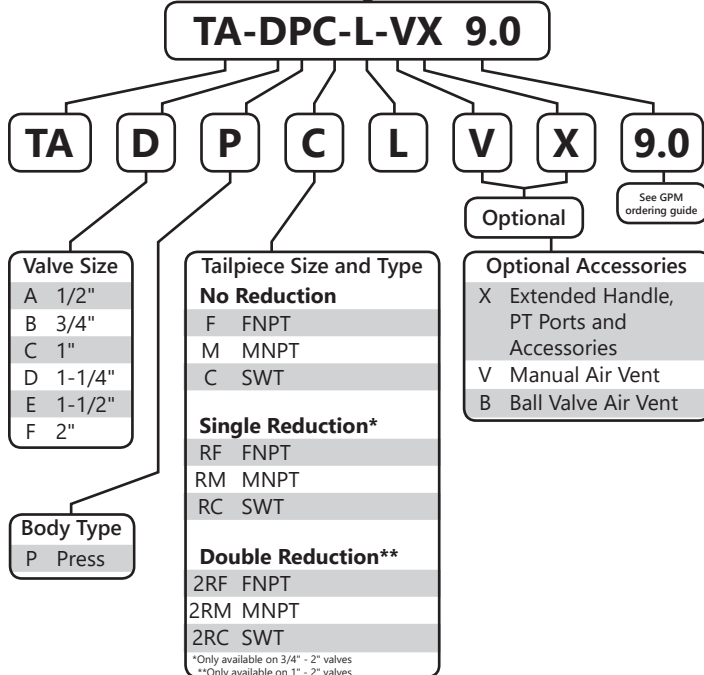
Features

- 2-60 PSID operating range
- +/- 5% Accuracy
- Two pressure / temperature (PT) test ports
- Location tag
- Two additional accessory tap
- Triple sealing stem with 2 Viton® o-rings and Teflon® seal
- Blow out proof stem
- 100% leak tested
- See end of catalog for GPM ordering guide

Pressure and Temperature Rating

- 250 WOG
- 325°F Max

Smart Part Number Ordering Guide



Material Specifications

Part	Material
Body	Brass -CW617N
End Connection	Brass -CW617N
Press O-ring	EPDM
Ball	Chrome Plated Brass -CW617N
Seat (2)	PTFE
Stem	Brass -CW617N
Packing	PTFE
Stem O-ring (2)	Viton®
Packing Gland	Brass -CW614N
Handle	Steel - Zinc Plated
Handle Nut	Brass -CW614N
Service Cap	Brass -CW614N
Service Cap O-ring	Viton®
Union Gasket	EPDM
Tailpiece	Brass -CW617N
Union Nut	Brass -CW617N
Balancing Cartridge	Brass, Stainless steel, EPDM
Cartridge Retaining Spring	Stainless Steel

Dimensions

Size	A*	B	C	D	E	F
1/2"	5.92	1.70	3.40	1.60	0.50	0.25
3/4"	6.94	1.80	3.40	2.40	0.50	0.25
1"	-**	1.80	3.40	2.40	0.50	0.25
1-1/4"	-**	2.50	4.40	3.50	0.75	0.25
1-1/2"	-**	2.50	4.40	3.50	0.75	0.25
2"	-**	3.50	5.50	4.50	0.75	0.50

*Length is for a Press x MNPT valve, additional dimensions available upon request
**1" - 2" is FNPT body with MNPT x Press adapter



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

Automatic Balancing Valve

Automatic Flow Limiter, Union, 400 WOG



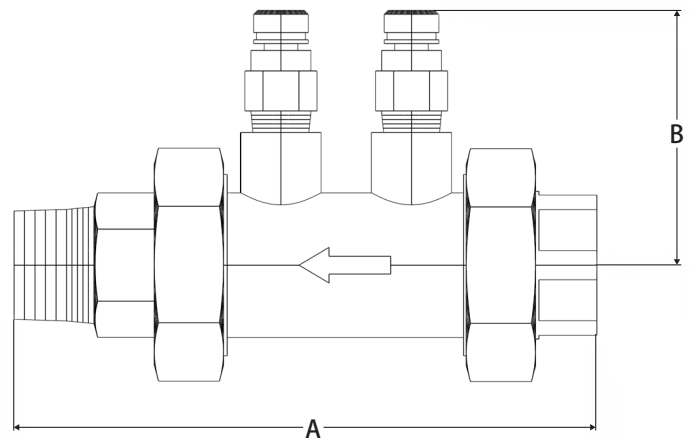
TAF

Features

- +/- 5% accuracy
- Two pressure / temperature (PT) ports
- 100% lead tested

Pressure and Temperature Rating

- 400 WOG
- 325°F Max



Material Specifications

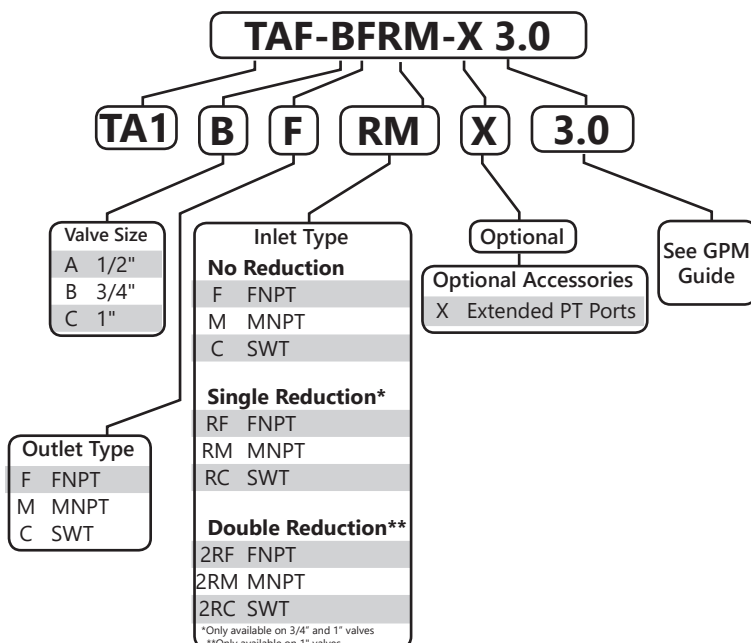
Part	Materials
Body	Lead Free Brass - CW510L
Union Nut (2)	Brass - CW617N
Tail Piece (2)	Lead Free Brass - CW510L
Temperature Test Port	Brass - CW617N
Balancing Cartridge	316 Stainless Steel

Dimensions

Size	A	B
1/2"	5.23	2.29
3/4"	5.25	2.29
1"	6.32	2.29

*Lengths is for FNPT x MNPT valve, additional dimensions available upon request

Smart Part Number Ordering Guide



GPM Ordering Guide

Cartridge	Pressure Range	GPM							
C2-L	2-32	1.00	2.00	3.00	4.00	4.50	6.00	7.00	8.00
C2-H	5-60	9.00	10.00	11.00	12.00				



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

Automatic Balancing Valve

Automatic Flow Limiter • Wafer Connection • 400 WOG



Terminator A Wafer x Wafer

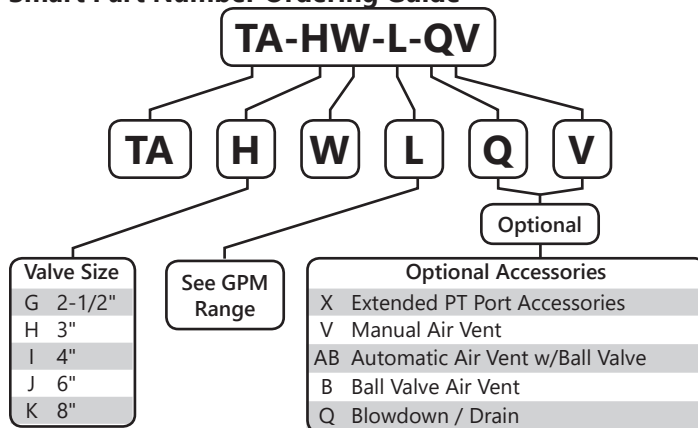
Features

- 2-50 PSID operating range
- +/- 5% Accuracy
- Two pressure / temperature (PT) test ports
- Location tag
- Two additional accessory tap

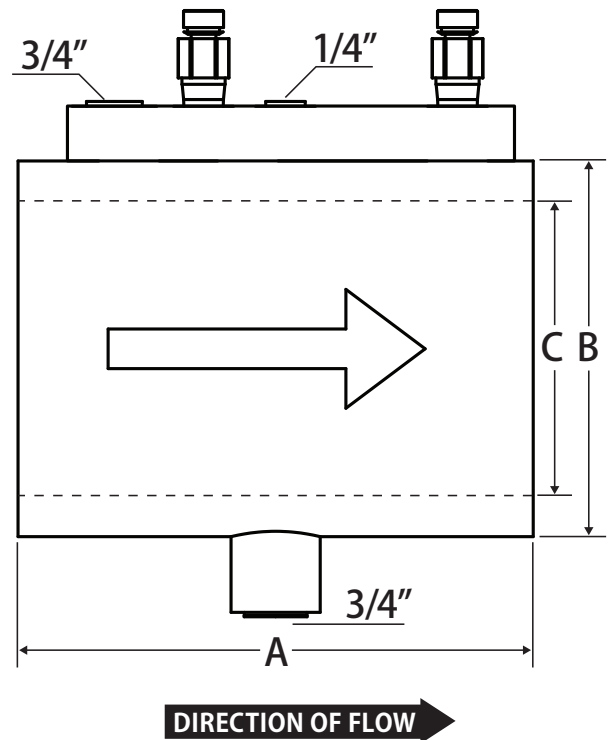
Pressure and Temperature Rating

- 2-1/2" - 6": 426 WOG
- 8" - 12": 400 WOG
- 350°F Max

Smart Part Number Ordering Guide



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



Material Specifications

Part	Material
Body (2-1/2" - 6")	Cast Iron
Body (8" - 12")	Carbon Steel
Balancing Cartridge	Brass, Stainless steel, EPDM
Cartridge C-Clip Retainer	Carbon Steel

Dimensions

Size	A	B	C
2-1/2"	6.26	4.875	2.56
3"	6.26	5.875	3.34
4"	6.26	6.875	4.86
6"	6.26	8.750	7.10
8"	6.26	11.00	9.26

GPM Range

Size	Flow Rate	Low or High
2-1/2"	10 - 60	L
2-1/2"	61 - 126	H
3"	18 - 126	L
3"	127 - 300	H
4"	18 - 150	L
4"	151 - 326	H
6"	62 - 260	L
6"	261 - 526	H
8"	180 - 463	L
8"	464 - 926	H

Combination Strainer Valve

Y-Strainer • Isolation Ball Valve • Union • 600 WOG



TY1

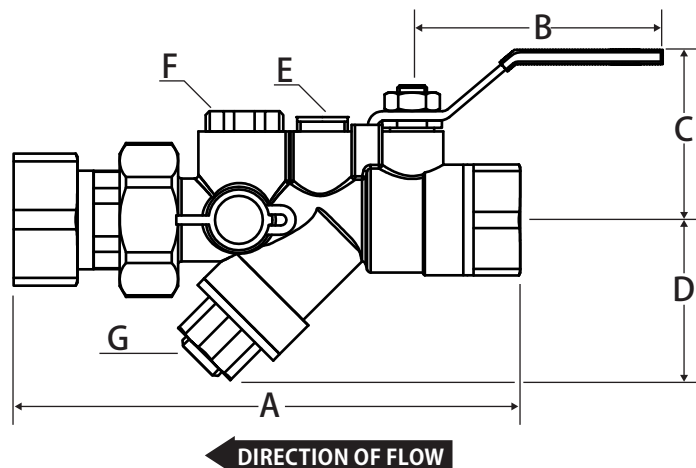
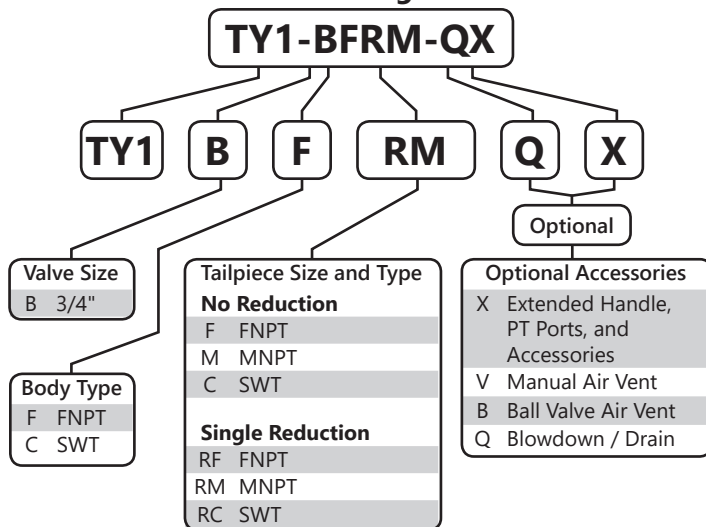
Features

- Three additional accessory taps
- Triple sealing stem with 2 Viton® o-rings and Teflon® seal
- Blow out proof stem
- 100% leak tested

Pressure and Temperature Rating

- 600 WOG
- 325°F Max

Smart Part Number Ordering Guide



Material Specifications

Part	Material
Body	Brass - C85700
End Connection	Brass - CW617N
Ball	Chrome Plated Brass - CW617N
Seat (2)	PTFE
Stem	Brass - CW617N
Packing	PTFE
Stem O-ring (2)	Viton®
Packing Gland	Brass - CW617N
Handle	Steel - Zinc Plated
Handle Nut	Brass - CW617N
Service Cap	Brass - CW617N
Service Cap O-ring	Viton®
Strainer	304 Stainless Steel
Union Gasket	EPDM
Tailpiece	Brass - C37700
Union Nut	Brass - C37700

Dimensions

Size	A*	B	C	D	E	F	G	Cv
3/4"	5.70	3.08	2.00	1.55	0.25	0.50	0.25	5.50

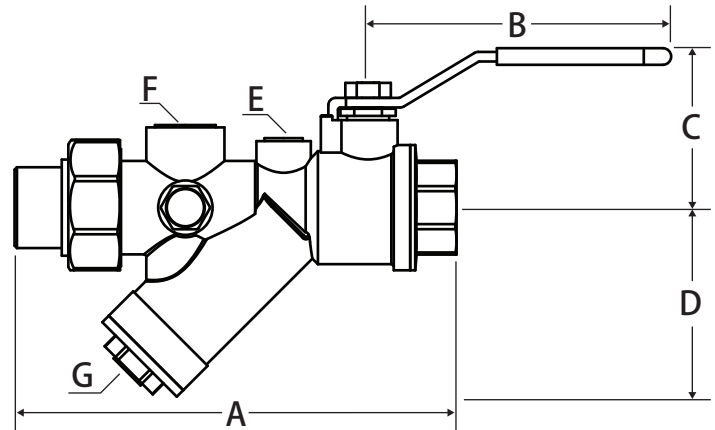
*Length is for a SWT x FNPT valve, additional dimensions available upon request

Combination Strainer Valve

Y-Strainer • Isolation Ball Valve • 20 Mesh Strainer with Union and PT Port • 600 WOG



Terminator Y



DIRECTION OF FLOW

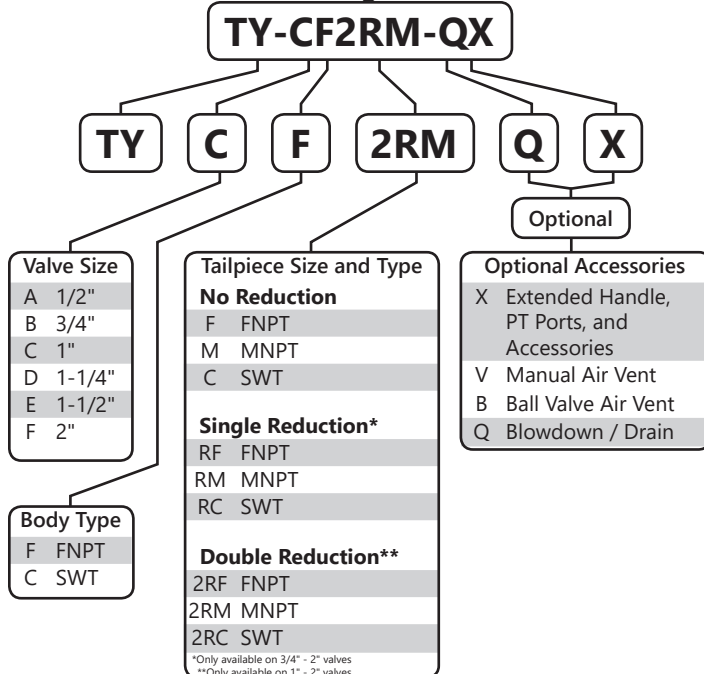
Features

- Three additional accessory tap
- Triple sealing stem with 2 Viton® o-rings and Teflon® seal
- Blow out proof stem
- 100% leak tested

Pressure and Temperature Rating

- 600 WOG
- 325°F Max

Smart Part Number Ordering Guide



Material Specifications

Part	Material
Body	Brass -CW617N
End Connection	Brass -CW617N
Ball	Chrome Plated Brass -CW617N
Seat (2)	PTFE
Stem	Brass -CW617N
Packing	PTFE
Stem O-ring (2)	Viton®
Packing Gland	Brass -CW617N
Handle	Steel - Zinc Plated
Handle Nut	Brass -CW617N
Service Cap	Brass -CW617N
Service Cap O-ring	Viton®
Strainer	304 Stainless Steel
Union Gasket	EPDM
Tailpiece	Brass -CW617N
Union Nut	Brass -CW617N

Dimensions

Size	A*	B	C	D	E	F	G	Cv
1/2"	5.03	3.40	1.70	1.60	0.25	0.50	0.25	5.50
3/4"	5.88	3.40	1.80	2.40	0.25	0.50	0.25	9.00
1"	6.25	3.40	1.80	2.40	0.25	0.50	0.25	9.00
1-1/4"	7.88	4.40	2.50	3.50	0.25	0.75	0.25	28.00
1-1/2"	8.00	4.40	2.50	3.50	0.25	0.75	0.25	28.00
2"	10.31	5.50	3.50	4.50	0.25	0.75	0.50	32.00

*Length is for a SWT x FNPT valve, additional dimensions available upon request



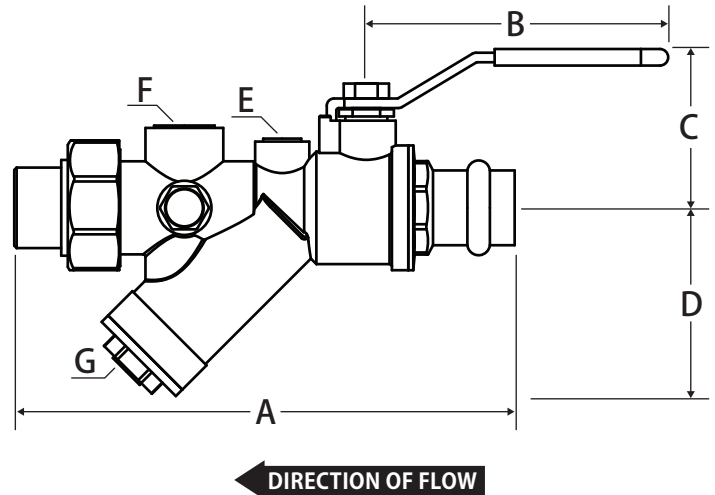
WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer, and lead, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Combination Strainer Valve

Y-Strainer • Isolation Ball Valve • Union • Press Body Connection • 250 WOG



Terminator Y Press



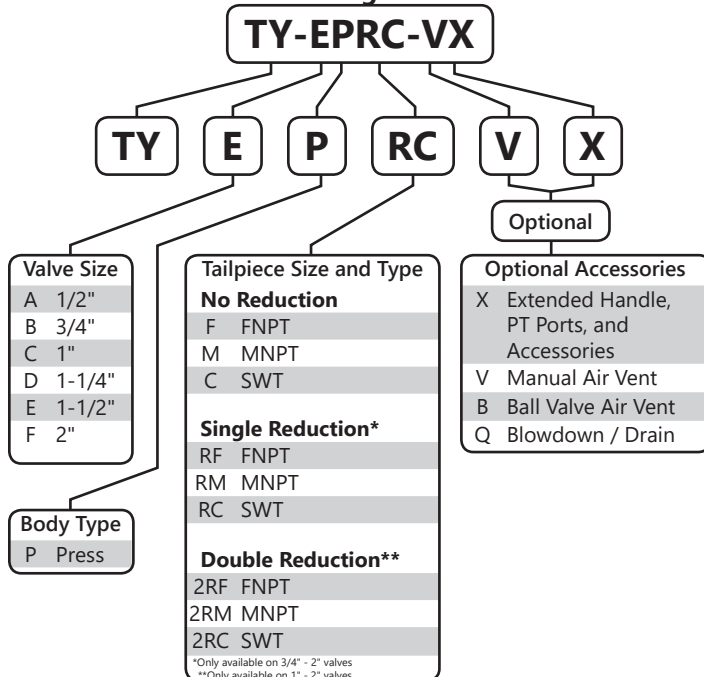
Features

- Three additional accessory tap
- Triple sealing stem with 2 Viton® o-rings and Teflon® seal
- Blow out proof stem
- 100% leak tested

Pressure and Temperature Rating

- 250 WOG
- 325°F Max

Smart Part Number Ordering Guide



Material Specifications

Part	Material
Body	Brass -CW617N
End Connection	Brass -CW617N
Press O-ring	EPDM
Ball	Chrome Plated Brass -CW617N
Seat (2)	PTFE
Stem	Brass -CW617N
Packing	PTFE
Stem O-ring (2)	Viton®
Packing Gland	Brass -CW617N
Handle	Steel - Zinc Plated
Handle Nut	Brass -CW617N
Service Cap	Brass -CW617N
Service Cap O-ring	Viton®
Strainer	304 Stainless Steel
Union Gasket	EPDM
Tailpiece	Brass -CW617N
Union Nut	Brass -CW617N

Dimensions

Size	A*	B	C	D	E	F	G	Cv
1/2"	5.42	3.40	1.70	1.60	0.25	0.50	0.25	5.50
3/4"	6.50	3.40	1.80	2.40	0.25	0.50	0.25	9.00
1"	-**	3.40	1.80	2.40	0.25	0.50	0.25	9.00
1-1/4"	-**	4.40	2.50	3.50	0.25	0.75	0.25	28.00
1-1/2"	-**	4.40	2.50	3.50	0.25	0.75	0.25	28.00
2"	-**	5.50	3.50	4.50	0.25	0.75	0.25	32.00

*Length is for a Press x FNPT valve, additional dimensions available upon request

**1" - 2" is FNPT body with MNPT x Press adapter



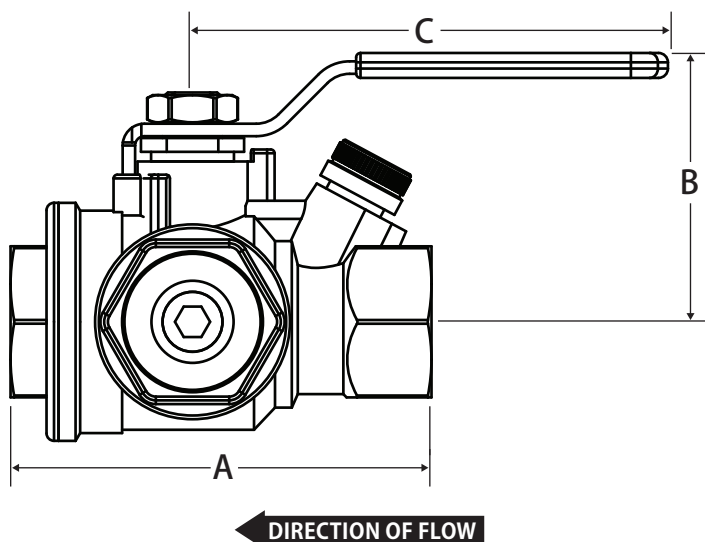
WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer, and lead, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Combination Strainer Valve

Integrated Isolation Ball Valve and Strainer • 400 WOG



Terminator S Junior



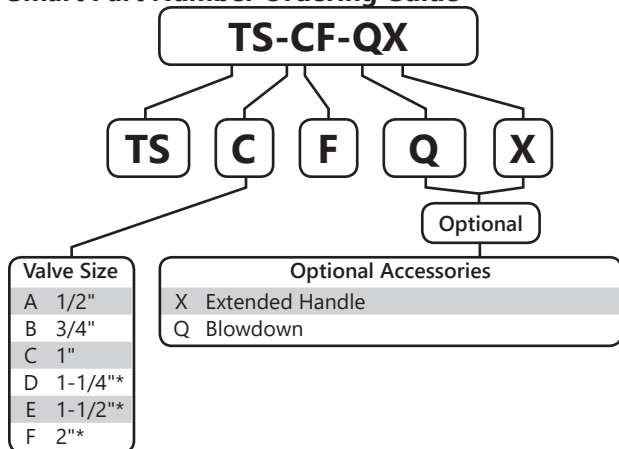
Features

- Integrated backflush
- Additional accessory tap
- Triple sealing stem with 2 Viton® o-rings and Teflon® seal
- Blow out proof stem
- 100% leak tested
- Made in Italy
- Leakproof stem - Lifetime warranty

Pressure and Temperature Rating

- 400 WOG
- 250°F Max

Smart Part Number Ordering Guide



*Does not have back flush feature

Material Specifications

Part	Material
Body	Brass - CW602N
End Connection	Brass - CW602N
Ball	Chrome Plated Brass - CW602N
Seat (2)	Virgin PTFE
Stem	Brass - CW602N
Packing	Virgin PTFE
Stem O-ring (2)	Viton®
Packing Gland	Brass - CW614N
Handle	Steel - Geomet® Plated
Handle Nut	Steel - Geomet® Plated
Filter Basket	304 Stainless Steel
C-Clip Retainer	304 Stainless Steel
Body Insert	Brass - CW602N
Auxiliary Seat	Virgin PTFE
Cap	Brass - CW602N
O-ring	Viton®
Back Flush Plug	Brass - CW614N
Back Flush O-ring	Viton®
Back Flush Cap	Brass - CW614N

Dimensions

Size	A	B	C	Cv
1/2"	3.48	2.40	4.75	13.02
3/4"	3.48	2.40	4.75	13.02
1"	4.19	2.60	4.75	16.28
1-1/4"	4.84	3.23	5.88	24.20
1-1/2"	5.00	3.50	5.88	39.63
2"	6.61	3.15	8.13	74.85



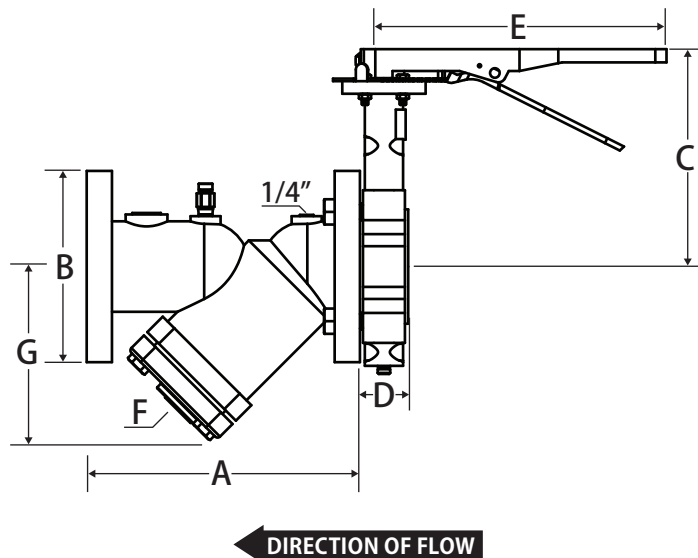
WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer, and lead, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Isolation Y-Strainer

Y-Strainer • Isolation Butterfly Valve • Lug x Flange Connection • Class 125



Terminator S



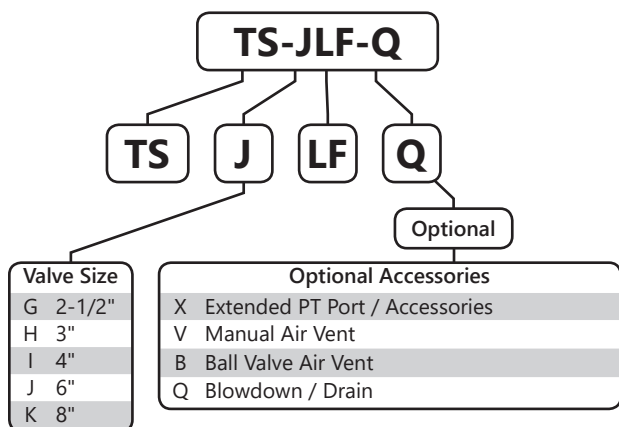
Features

- Pressure / temperature (PT) test port
- Three additional accessory tap
- Ten-position lockable lever handle
- Class 150 Flange
- 100% leak tested
- Standard Screens:
 - 2" - 4": 1/16" perforations
 - 6" - 8": 1/8" perforations

Pressure and Temperature Rating

- 200 WOG
- 150°F Max

Smart Part Number Ordering Guide



Material Specifications

Part	Material
Body	Ductile Iron
Service Cover	Ductile Iron
Bolt (4)	Carbon Steel - A307
Gasket	Non-Asbestos
Strainer	304 Stainless Steel
Butterfly Valve	(See Butterfly Valve Spec Sheet)

Dimensions

Size	A	B	C	D	E	F (NPT)	G
2-1/2"	10.00	7.00	7.60	1.76	10.64	3/4"	6.50
3"	10.13	7.50	8.15	1.78	10.64	3/4"	7.00
4"	12.13	9.00	8.39	2.05	10.64	3/4"	8.25
6"	18.50	11.00	9.13	2.20	10.64	3/4"	13.50
8"	21.63	13.50	10.16	2.39	14.18	3/4"	15.50



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

Y-Strainer

Y-Strainer • Flange Connection • Class 125



Terminator Y

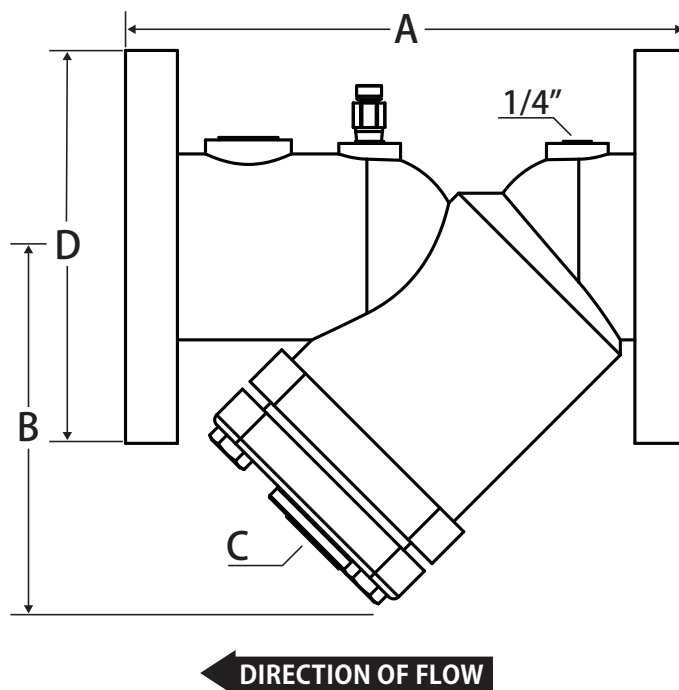
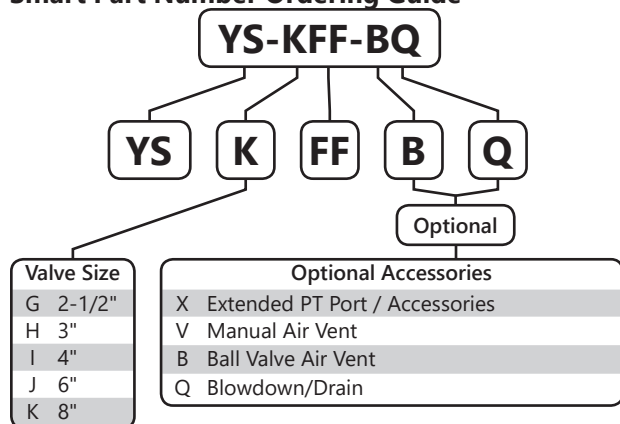
Features

- Three additional accessory taps
- Class 125 Flange
- 100% leak tested
- Standard Screens:
 - 2" - 4": 1/16" perforations
 - 6" - 8": 1/8" perforations

Pressure and Temperature Rating

- 200 WOG
- 150°F Max

Smart Part Number Ordering Guide



Material Specifications

Part	Material
Body	Ductile Iron
Service Cover	Ductile Iron
Bolt (4)	Carbon Steel - A307
Gasket	Non-Asbestos
Strainer	304 Stainless Steel

Dimensions

Size	A	B	C (NPT)	D
2-1/2"	10.00	6.50	0.25	7.00
3"	10.13	7.00	0.25	7.50
4"	12.13	8.25	0.25	9.00
6"	18.50	13.50	0.25	11.00
8"	21.63	15.50	0.25	13.50



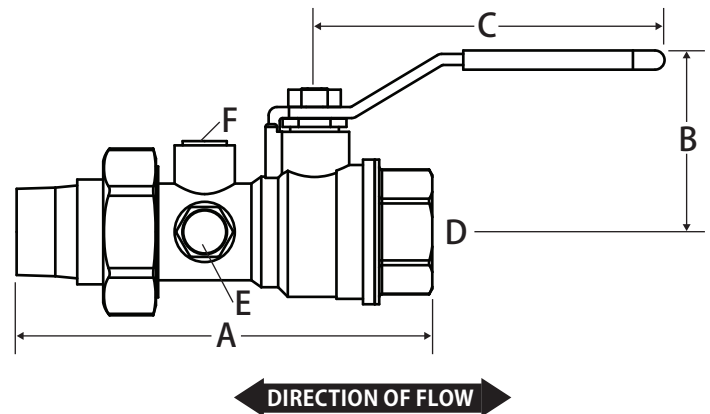
WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer, and lead, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Combination Ball Valve

Isolation Ball Valve • Union • 600 WOG



Terminator N



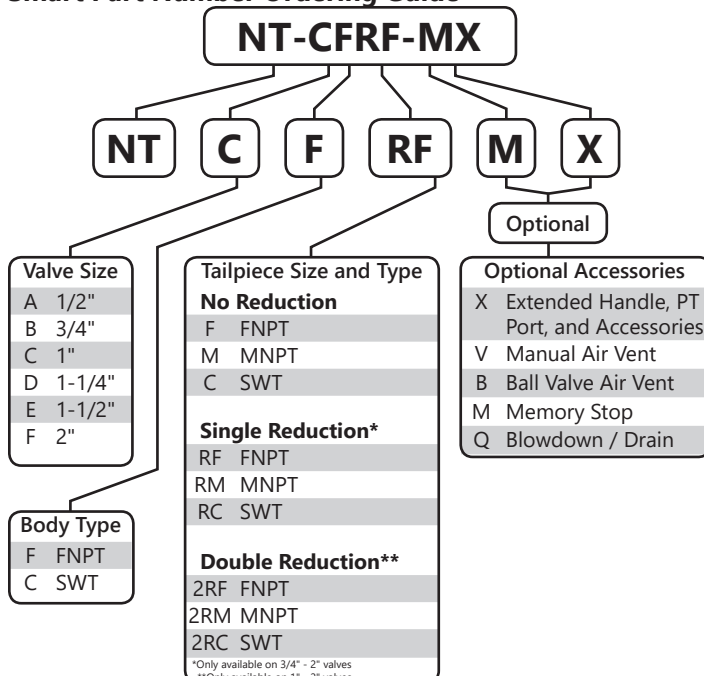
Features

- Pressure / temperature (PT) test ports
- Additional accessory tap
- Triple sealing stem with 2 Viton® o-rings and Teflon® seal
- Blow out proof stem
- 100% leak tested
- Made in Italy
- Leakproof steam - Lifetime warranty

Pressure and Temperature Rating

- 1/2" - 3/4" 600 WOG
- 1" - 2" 500 WOG
- 300°F Max

Smart Part Number Ordering Guide



Material Specifications

Part	Material
Body	Brass - CW617N
End Connection	Brass - CW617N
Ball	Chrome Plated Brass -CW617N
Seat (2)	Virgin PTFE
Stem	Brass - CW614N
Packing	Virgin PTFE
Stem O-ring (2)	Viton®
Packing Gland	Brass - CW614N
Handle	Steel - Geomet® Plated
Handle Nut	Steel - Geomet® Plated
Union O-ring	Viton®
Tailpiece	Brass - CW617N
Union Nut	Brass - CW617N

Dimensions

Size	A*	B	C	D	E	F	Cv
1/2"	4.68	1.53	2.95	0.59	0.25	0.25	16.82
3/4"	4.73	1.93	3.74	0.79	0.25	0.25	34.80
1"	5.44	2.40	4.72	1.00	0.25	0.25	52.20
1-1/4"	6.45	2.59	4.72	1.25	0.37	0.25	112.52
1-1/2"	7.10	3.22	5.90	1.57	0.37	0.25	174.00
2"	7.68	3.50	5.90	2.00	0.37	0.25	255.20

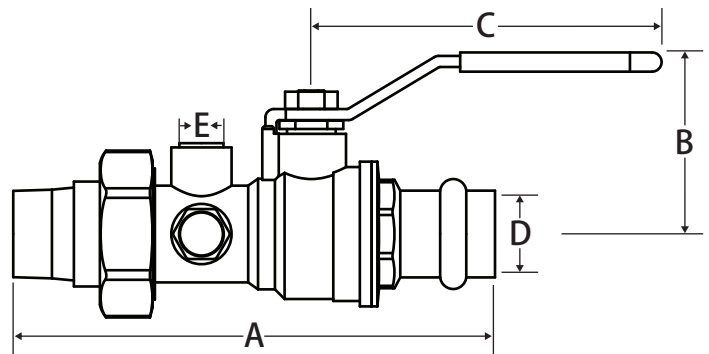
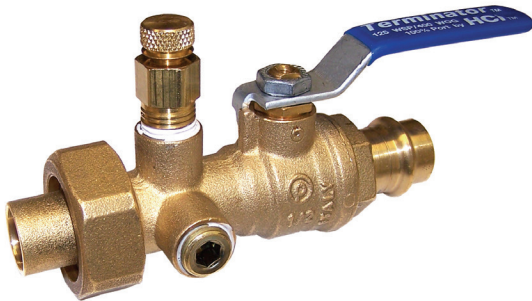
*Length is for a FNPT x MNPT valve, additional dimensions available upon request



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

Combination Ball Valve

Isolation Ball Valve • Union • Press Body Connection • 250 WOG



← DIRECTION OF FLOW →

Terminator N Press

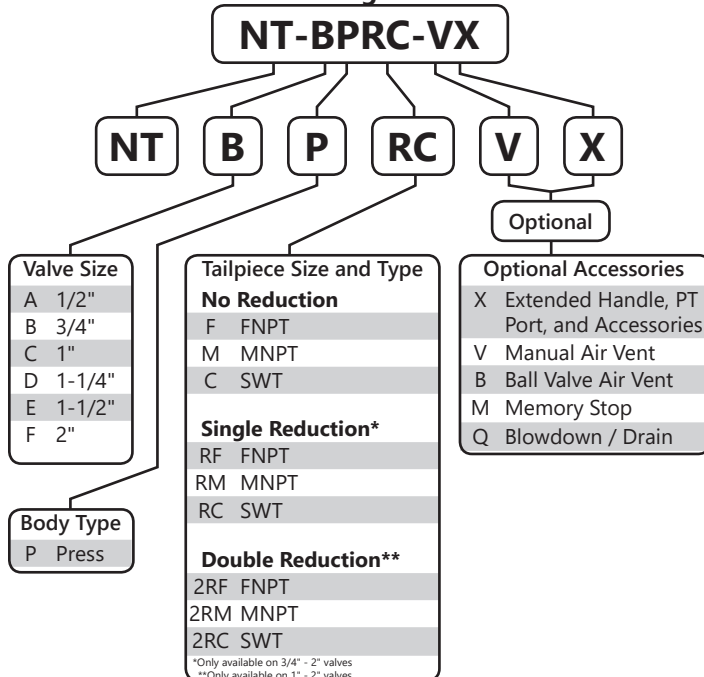
Features

- Pressure / temperature (PT) test ports
- Additional accessory tap
- Triple sealing stem with 2 Viton® o-rings and Teflon® seal
- Blow out proof stem
- 100% leak tested
- Leakproof stem - Lifetime warranty

Pressure and Temperature Rating

- 250 WOG
- 300°F Max

Smart Part Number Ordering Guide



Material Specifications

Part	Material
Body	Brass - CW617N
End Connection	Brass - CW617N
Press O-ring	EPDM
Ball	Chrome Plated Brass - CW617N
Seat (2)	Virgin PTFE
Stem	Brass - CW614N
Packing	Virgin PTFE
Stem O-ring (2)	Viton®
Packing Gland	Brass - CW614N
Handle	Steel - Geomet® Plated
Handle Nut	Steel - Geomet® Plated
Union O-ring	Viton®
Tailpiece	Brass - CW617N
Union Nut	Brass - CW617N

Dimensions

Size	A*	B	C	D	E	Cv
1/2"	5.29	1.53	2.95	0.59	0.25	20.25
3/4"	5.38	1.93	3.74	0.79	0.25	41.83
1"	-**	2.40	4.72	1.00	0.25	78.38
1-1/4"	-**	2.59	4.72	1.25	0.37	132.10
1-1/2"	-**	3.22	5.90	1.57	0.37	206.96
2"	-**	3.50	5.90	2.00	0.37	346.00

*Length is for a Press x FNPT valve, additional dimensions available upon request

**1" - 2" is FNPT body with MNPT x Press adapter



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

Hydronic Union

600 WOG



Terminator U

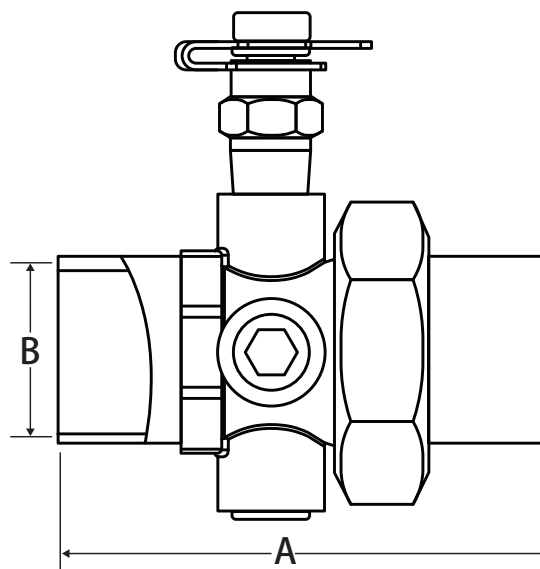
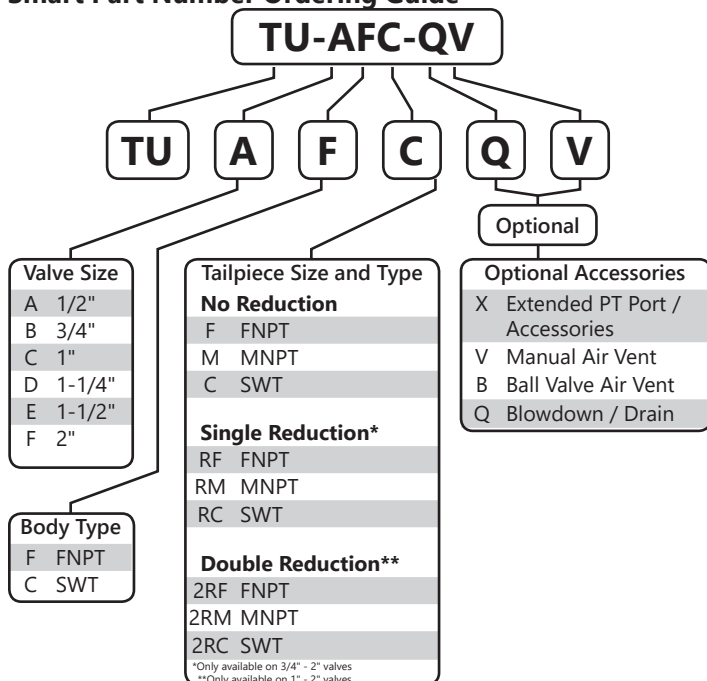
Features

- Pressure / temperature (PT) test ports
- Additional accessory taps
- 100% leak tested

Pressure and Temperature Rating

- 600 WOG
- 250°F Max

Smart Part Number Ordering Guide



DIRECTION OF FLOW

Material Specifications

Part	Material
Body	Brass - CW617N
O-ring	EPDM
Tail Piece	Brass - CW617N
Union Nut	Brass - CW617N

Dimensions

Size	A	B
1/2"	2.30	0.63
3/4"	3.10	0.88
1"	3.28	1.13
1-1/4"	3.99	1.38
1-1/2"	3.86	1.63
2"	4.65	2.13

Note: Dimensions for a SWT x SWT valve, additional dimensions available upon request



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

Hydronic Union with Press Connection

250 WOG



Terminator U Press

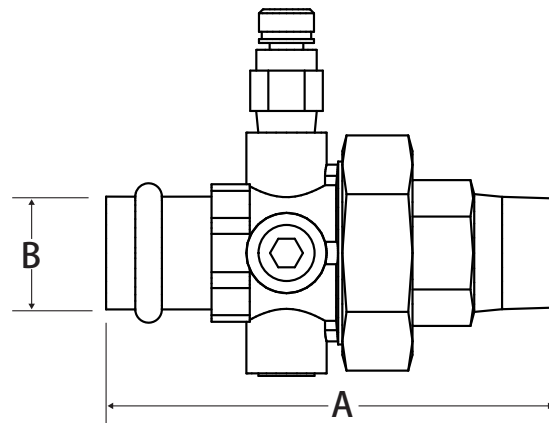
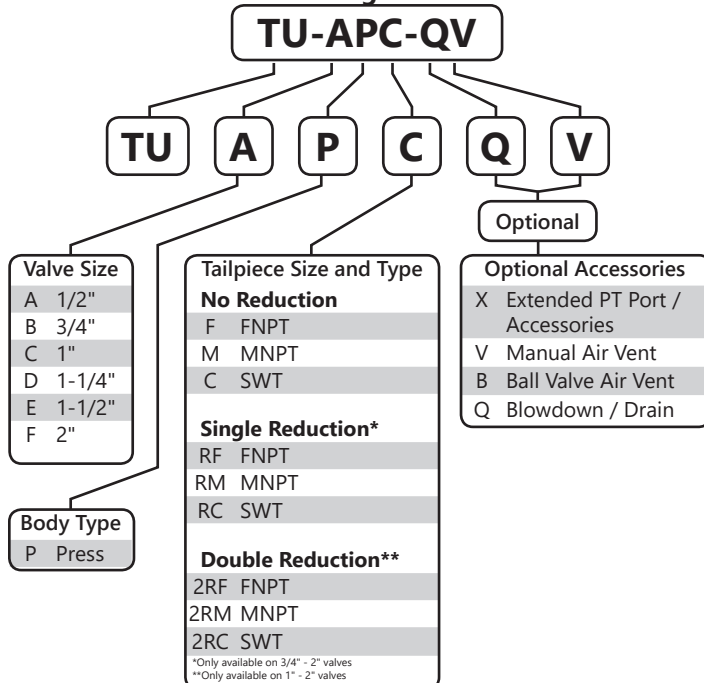
Features

- Pressure/temperature test ports
- Accessory taps

Pressure and Temperature Rating

- 250 WOG
- 250°F Max

Smart Part Number Ordering Guide



Material Specifications

Part	Material
Body	Brass - CW617N
O-ring	EPDM
Tailpiece	Brass - CW617N
Union Nut	Brass - CW617N

Dimensions

Size	A*	B
1/2"	3.16	0.63
3/4"	3.44	0.88
1"	—**	1.13
1-1/4"	—**	1.38
1-1/2"	—**	1.63
2"	—**	2.13

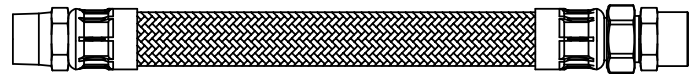
*Length is for a Press x MNPT valve, additional dimensions available upon request
 **1"-2" is FNPT Body with MNPT x Press Adapter



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

Flexible Hose

Braided Stainless Steel Hose • EPDM Core • Union



Features

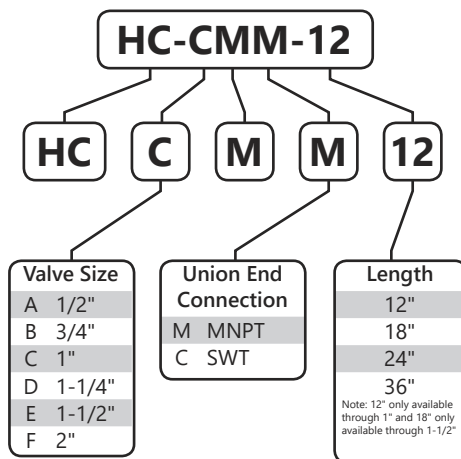
- ASTM E84 Fire rated - meets 25/50
- Union Connection
 - 1/2" - 1" gasket-less cone connection
 - 1-1/4" - 2" flat connection with BA-U fiber gasket
- 100% leak tested

Temperature Rating

Operating Range: -5°F to 195°F

Intermittent Max: 248°F

Smart Part Number Ordering Guide



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

Material Specifications

Part	Material
Hose Braiding	304 Stainless Steel
Crimping Ferrules	304 Stainless Steel
Core	EPDM
End Connection (2)	Brass - CW614N
Union Nut	Nickle Plated Brass - CW614N
Tail Piece	Brass - CW614N
Gasket*	BA-U Fiber

*Gasket only used on 1 1/4" - 2" hoses

Length	Cv					
	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
12"	3.3	11.0	20.9	N/A	N/A	N/A
18"	3.2	10.7	20.3	37.9	64.4	N/A
24"	3.1	9.9	19.5	36.9	61.0	110.7
36"	3.0	9.3	18.2	34.7	55.0	100.8

Max. Operating & Burst Pressure Rating

Size	Operating (PSI)	Burst (PSI)
1/2"	400	1500
3/4"	400	1200
1"	225	900
1-1/4"	200	800
1-1/2"	175	600
2"	150	500

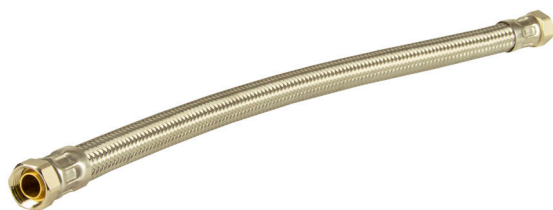
Installation Notes

- **ON INSTALLATION :** Avoid absolutely any tension due to stretching, twisting or torsion during the course of tightening the connectors.
 - Install and tighten the fixed male connector
 - Install and tighten the union adapter
 - Install and tighten the swivel nut
- Use two spanners in order to screw in the union: One to hold the hexagon of the adapter. The other to tighten the nut at the same time.

IMPORTANT - Do not re-screw the fixed connector or adaptor after tightening of the swivel nut; this will cause torsion on the flexible hose, with a risk of rapid deterioration. On removal, take the same precautions. Not applicable for gas applications. Before installing refer to the installation & operation instructions for complete details.

Flexible Hose

Braided Stainless Steel Hose • EPDM Core • Dual Union



Features

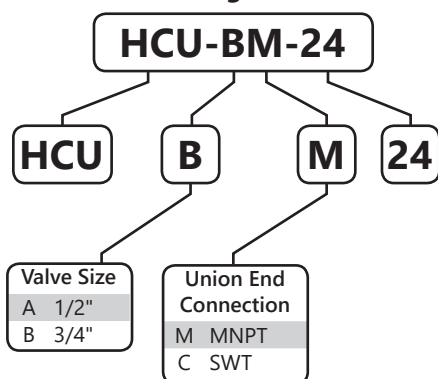
- Designed for water source heat pump hose kits
- ASTM E84 Fire rated - meets 25/50
- Union Connection
 - 1/2" - 3/4" gasket-less cone connection
 - Mounts direct to TY/TA-__H Series Valves
- 100% leak tested

Temperature Rating

Operating Range: -5°F to 195°F

Intermittent Max: 248°F

Smart Part Number Ordering Guide



Material Specifications

Part	Material
Hose Braiding	304 Stainless Steel
Crimping Ferrules	304 Stainless Steel
Core	EPDM
End Connection	Brass - CW614N
Union Nut	Nickle Plated Brass - CW614N
Tail Piece	Brass - CW614N

Max. Operating, Burst Pressure Rating, and CV

Size	Operating (PSI)	Burst (PSI)	CV
1/2"	400	1500	3.1
3/4"	400	1200	9.9

Installation Notes

- ON INSTALLATION : Avoid absolutely any tension due to stretching, twisting or torsion during the course of tightening the connectors.
- Use two spanners in order to screw in the union: One to hold the hexagon of the adapter. The other to tighten the nut at the same time.

IMPORTANT - Not applicable for gas or potable water applications. Before installing refer to the installation & operation instructions for complete details.



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

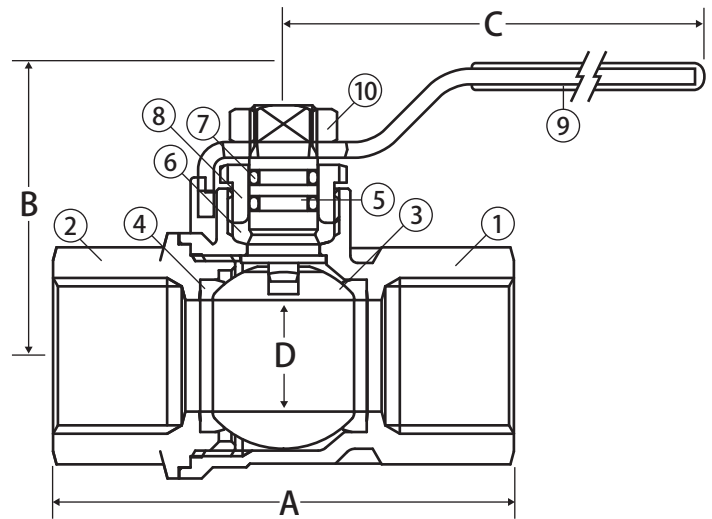
Brass Ball Valve

2 Piece • Full Port • Threaded Connections • 600 WOG



H100NE

CRN# 0C16887.5469870YTN



Features

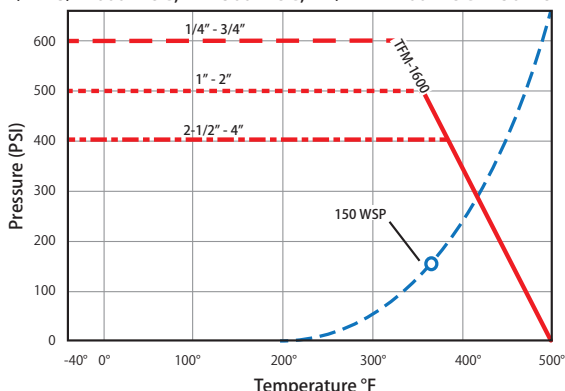
- Blow-out proof stem
- Triple sealing stem with 2 Viton® o-rings and Teflon® seal
- 100% leak tested
- 100% Made in Italy
- Leakproof stem - Lifetime Warranty
- 29 in-HG vacuum rating

Approvals

- UL Listed (1/4" - 2")
 - VQGU - Trim & drain
 - MHKZ - Manual valves
 - YQNZ - Compressed gas shut-off valves
 - YRBX - Flammable liquid shut-off valves
 - YRPV - Gas shut-off valves
 - YSDT - LP gas shut-off valves
 - SFJQ - Valves, refrigerant
- CSA Certified
 - ANSI Z21.15 (.5 PSIG) (1/4" - 3")
 - ASME B16.33 (125 PSIG) (1/2" - 2")
 - ASME B16.38 (125PSIG) (2-1/2" - 4")
 - CGA 3.16 (125 PSI) (1/4" - 4")
 - CGA 9.2 (1/4" - 3")
 - Delta C (3/8" - 3/4")
- FM Approval (1/4" - 2")
- MSS SP-110
- ANSI B1.20.1

Valve Seat Rating

1/4" - 3/4" 600 WOG, 1-2" 500 WOG, 2-1/2" - 4" 400 WOG - 150 WSP



Material Specifications

No.	Part	Material
1	Body	Brass - CW617N
2	End Connection	Brass - CW617N
3	Ball	T.E.A. Coated Brass - CW617N
4	Seat (2)	Hostafion® TFM 1600
5	Stem	Brass - CW614N
6	Packing	Hostafion® TFM 1600
7	Stem O-ring (2)	Viton®
8	Packing Gland	Brass - CW614N
9	Handle	Steel - Geomet® Plated
10	Handle Nut	Steel - Geomet® Plated

Dimensions

Part No.	Size	A	B	C	D	Cv
H100-701	1/4"	1.86	1.41	2.95	0.39	7.66
H100-702	3/8"	1.86	1.41	2.95	0.39	7.77
H100-703	1/2"	2.45	1.53	2.95	0.59	16.82
H100-704	3/4"	2.71	1.95	3.74	0.79	34.80
H100-705	1"	3.30	2.40	4.75	0.97	52.20
H100-706	1-1/4"	3.80	2.59	4.75	1.23	112.52
H100-707	1-1/2"	4.16	3.22	6.00	1.49	174.00
H100-708	2"	5.00	3.40	6.00	1.99	255.20
H100-709	2 1/2"	6.06	4.60	8.00	2.46	350.32
H100-710	3"	7.08	4.90	8.00	2.99	563.76
H100-711	4"	8.57	5.90	9.88	4.00	879.28



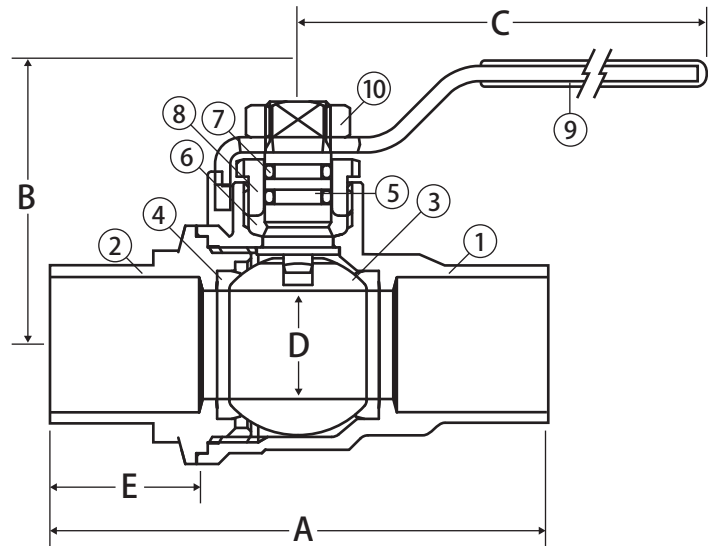
WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer, and lead, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Brass Ball Valve

2 Piece • Full Port • Solder Connection • 600 WOG



H100CG



Features

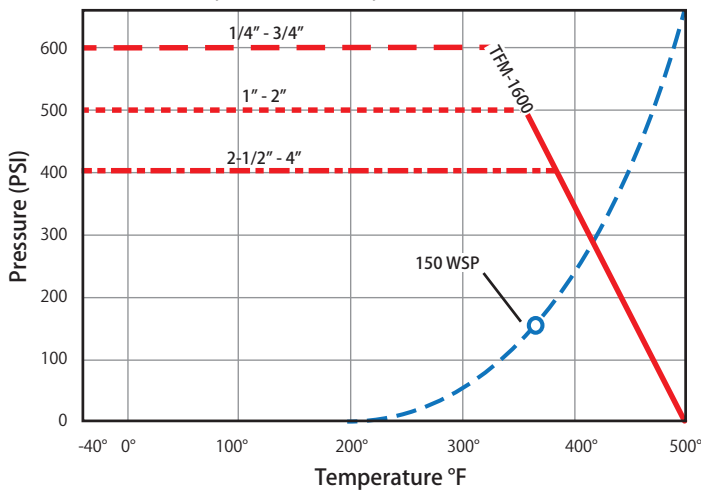
- Blow-out proof stem
- Triple sealing stem with 2 Viton® o-rings and Teflon® seal
- 100% leak tested
- 100% Made in Italy
- Leakproof stem - Lifetime Warranty
- 29 in-Hg vacuum rating

Approvals

- UL Listed (1/2" - 2")
 - VQGU - Trim & drain
- FM Approval (1/2" - 2")
- MSS SP-110
- ASME/ANSI B16.18

Valve Seat Rating

1/4" - 3/4" 600 WOG, 1-2" 500 WOG, 2-1/2" - 4" 400 WOG - 150 WSP



Material Specifications

No.	Part	Material
1	Body	Brass - CW617N
2	End Connection	Brass - CW617N
3	Ball	T.E.A. Coated Brass - CW617N
4	Seat (2)	Hostaflo® TFM 1600
5	Stem	Brass - CW614N
6	Packing	Hostaflo® TFM 1600
7	Stem O-ring (2)	Viton®
8	Packing Gland	Brass - CW614N
9	Handle	Steel - Geomet® Plated
10	Handle Nut	Steel - Geomet® Plated

Dimensions

Part No.	Size	A	B	C	D	E	Cv
H100-813	1/2"	2.48	1.56	2.95	0.59	0.51	16.82
H100-814	3/4"	3.26	2.05	3.74	0.79	0.76	34.80
H100-815	1"	3.94	2.55	4.75	0.97	0.92	52.20
H100-816	1-1/4"	4.50	2.66	4.75	1.23	0.98	112.52
H100-817	1-1/2"	5.07	3.31	6.00	1.49	1.10	174.00
H100-818	2"	6.22	3.60	6.00	1.99	1.34	255.20
H100-819	2 1/2"	7.28	4.74	8.00	2.46	1.45	350.32
H100-820	3"	8.48	5.05	8.00	2.99	1.63	563.76

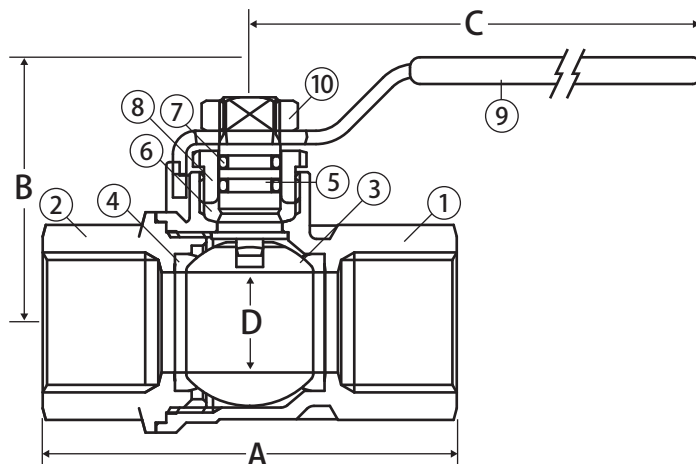
Brass Ball Valve

2 Piece • Full Port • Threaded Connection • 600 WOG • with
Stainless Steel Ball and Stem



CRN# 0C16887.5469870YTN

H100SS



Features

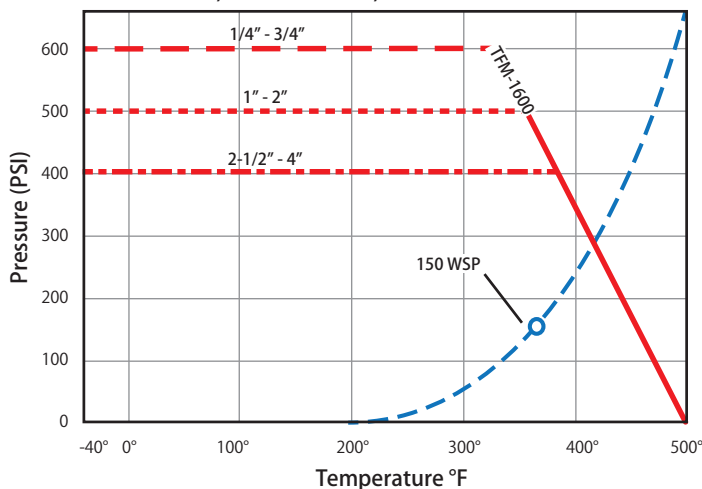
- Blow-out proof stem
- T.E.A. Ternary Eco Alloy® coated body, which prevents dezincification and galvanic corrosion
- Triple sealing stem with 2 Viton® o-rings and Teflon® seal
- 100% leak tested
- 100% Made in Italy
- Leakproof stem - Lifetime Warranty
- 29 in-Hg vacuum rating

Approvals

- CSA Certified
 - ASME B16.33 (125 PSIG) (1/2" - 2")
 - CGA 3.16 (125 PSIG) (1/4" - 2")
- FM Approval (1/4" - 2")
- ANSI B1.20.1
- MSS SP-110

Valve Seat Rating

1/4" - 3/4" 600 WOG, 1-2" 500 WOG, 2-1/2" - 4" 400 WOG - 150 WSP



Material Specifications

No.	Part	Material
1	Body	T.E.A. Coated Brass - CW617N
2	End Connection	T.E.A. Coated Brass - CW617N
3	Ball	316 Stainless Steel
4	Seat (2)	Hostafon® TFM 1600
5	Stem	316 Stainless Steel
6	Packing	Hostafon® TFM 1600
7	Stem O-ring (2)	Viton®
8	Packing Gland	Nickel Plated Brass - CW614N
9	Handle	Steel - Geomet® Plated
10	Handle Nut	Steel - Geomet® Plated

Dimensions

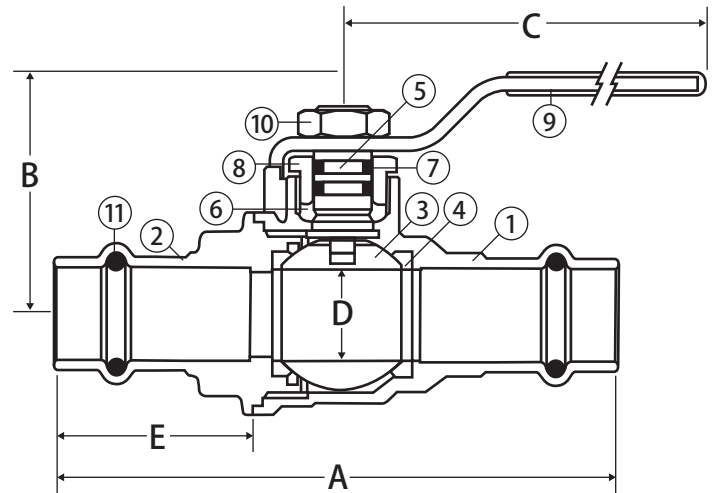
Part No.	Size	A	B	C	D	Cv
H100-501	1/4"	1.86	1.41	2.95	0.39	7.66
H100-502	3/8"	1.86	1.41	2.95	0.39	7.77
H100-503	1/2"	2.45	1.53	2.95	0.59	16.82
H100-504	3/4"	2.71	1.95	3.74	0.79	34.80
H100-505	1"	3.30	2.40	4.75	0.97	52.20
H100-506	1-1/4"	3.80	2.59	4.75	1.23	112.52
H100-507	1-1/2"	4.16	3.22	6.00	1.49	174.00
H100-508	2"	5.00	3.40	6.00	1.99	255.20
H100-509	2 1/2"	6.06	4.60	8.00	2.46	350.32
H100-510	3"	7.08	4.90	8.00	2.99	563.76

Brass Ball Valve

2 Piece • Full Port • Press Connection • 250 WOG



H100P



Features

- Blow-out proof stem
- Triple sealing stem with 2 Viton® o-rings and Teflon® seal
- Corrosion resistant brass
- 100% leak tested
- 100% Made in Italy
- Leakproof stem - Lifetime Warranty

Approvals

- Conforms to IAPMO PS 117

Pressure/Temperature Rating

- 250 WOG
- Max. 250°F



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

Material Specifications

No.	Part	Material
1	Body	Brass - CW602N
2	End Connection	Brass - CW602N
3	Ball	T.E.A. Coated Brass - CW617N
4	Seat (2)	Hostaflon® TFM 1600
5	Stem	Brass - CW602N
6	Packing	Hostaflon® TFM 1600
7	Stem O-ring (2)	Viton®
8	Packing Gland	Brass - CW602N
9	Handle	Steel - Geomet® Plated
10	Handle Nut	Steel - Geomet® Plated
11	O-ring (2)	EPDM

Dimensions

Part No.	Size	A	B	C	D	E	Cv
H100-203	1/2"	3.54	1.53	2.95	0.59	1.24	16.82
H100-204	3/4"	3.84	1.95	3.74	0.79	1.28	34.80
H100-205	1"	4.31	2.40	4.75	0.97	1.38	52.20
H100-206	1-1/4"	4.80	2.59	4.75	1.23	1.30	112.52
H100-207	1-1/2"	5.61	3.22	6.00	1.49	1.50	174.00
H100-208	2"	7.16	3.40	6.00	1.99	2.01	255.20

LIT-HCI-TS 080818

Brass Ball Valve

2 Piece • Full Port • Male x Female Threaded Connection • 600 WOG



CRN# 0C16887.5469870YTN

H100MF

Features

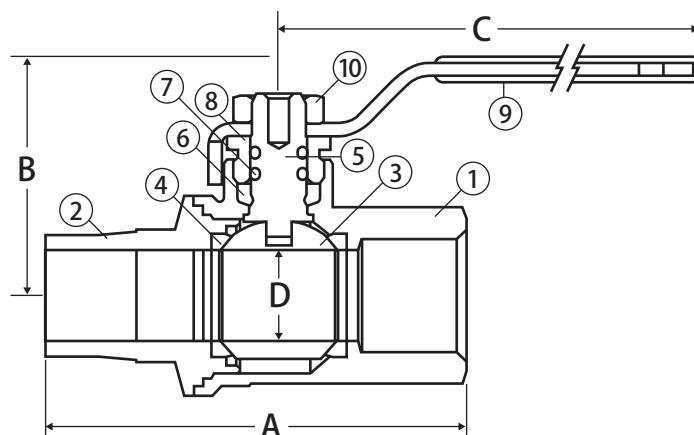
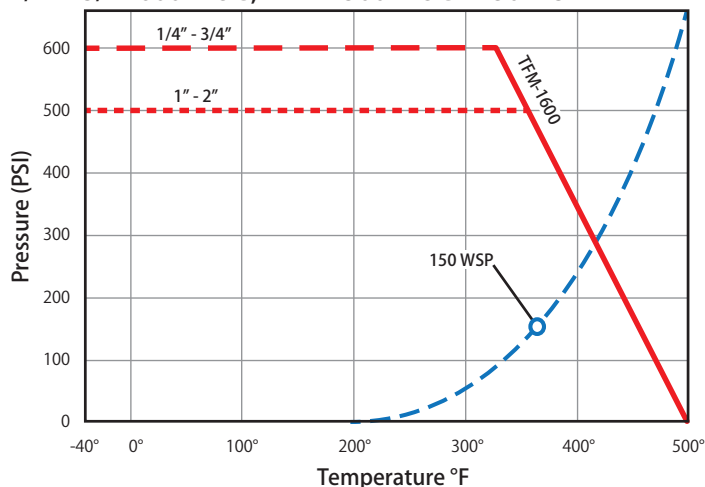
- Blow-out proof stem
- Triple sealing stem with 2 Viton® o-rings and Teflon® seal
- 100% leak tested
- 100% Made in Italy
- Leakproof stem - Lifetime Warranty
- 29 in-Hg vacuum rating

Approvals

- CSA Certified (1/4" - 1")
 - ASME B16.33 (125 PSIG)
 - CGA 3.16 (125 PSIG)
- MSS SP-110
- ANSI B1.20.1

Valve Seat Rating

1/4" - 3/4" 600 WOG, 1" - 2" 500 WOG - 150 WSP



Material Specifications

No.	Part	Material
1	Body	Brass - CW617N
2	End Connection	Brass - CW617N
3	Ball	Chrome Plated Brass - CW617N
4	Seat (2)	Hostaflon® TFM 1600
5	Stem	Brass - CW614N
6	Packing	Hostaflon® TFM 1600
7	Stem O-ring (2)	Viton®
8	Packing Gland	Brass - CW614N
9	Handle	Steel - Geomet® Plated
10	Handle Nut	Steel - Geomet® Plated

Dimensions

Part No.	Size	A	B	C	D	Cv
H100-601	1/4"	2.29	1.41	2.95	0.39	7.66
H100-602	3/8"	2.26	1.41	2.95	0.39	7.77
H100-603	1/2"	2.75	1.53	2.95	0.59	16.82
H100-604	3/4"	3.10	1.95	3.74	0.79	34.80
H100-605	1"	3.68	2.40	4.75	0.97	52.20



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

Butterfly Valve

Lug Style • EPDM Seats • Epoxy-Coated Ductile Iron Body



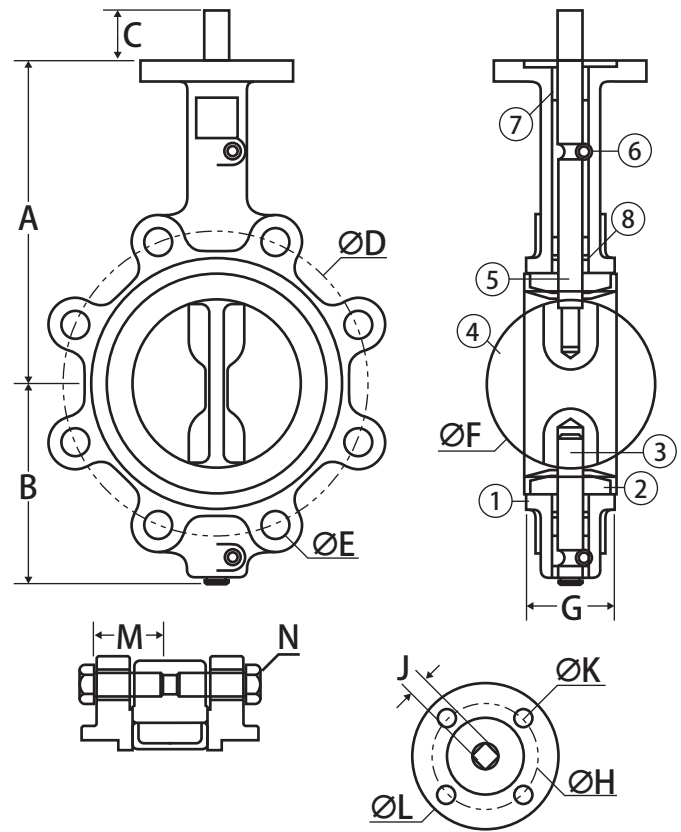
Terminator BFV

Features

- Designed for commercial and industrial applications up to 200 PSI
- Easily accepts actuator with ISO 5211 mounting flange
- Seat to flange seal eliminates the need for flange gaskets
- Series 600 Lug bodies are bidirectional for dead end service
- Epoxy coated finish
- Ideal for mounting pneumatic/electrical actuators
- Square stem for direct mount
- Wetted surfaces contain less than .25% lead content

Approvals

- API 609
- MSS SP-67



Seat Temperature Ranges

	EPDM
Temperature range (°F)	-30 to 250
Inline service (psi)	200
Dead end service w/down stream flange (psi)	200
Dead end service w/o down stream flange (psi)	100

Material Specifications

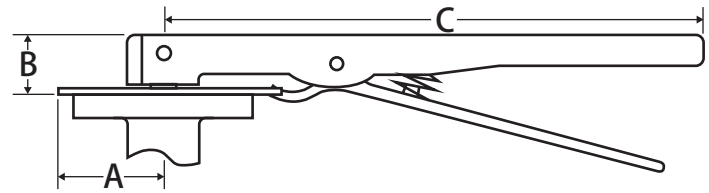
No.	Part	Materials
1	Body	Ductile Iron - Epoxy Coated
2	Seat	EPDM
3	Lower Shaft	410 Stainless Steel
4	Disc	CF8M Stainless Steel
5	Upper Shaft	410 Stainless Steel
6	Locating Pin (2)	Carbon Steel
7	Bushing (3)	PTFE
8	O-ring (2)	EPDM

Dimensions

Part No.	Size	A	B	C	D	E	F	G	H	J	K	L	M	N	Weight
BF-GLL	2-1/2"	6.89	3.5	1.26	5.5	4 : 5/8"	2.54	1.76	1.97	0.35	04:00.3	3.03	1.5	5/8-11UNC	9.26
BF-HLL	3"	7.13	3.74	1.26	6	4 : 5/8"	3.1	1.78	1.97	0.35	04:00.3	3.03	1.5	5/8-11UNC	10.36
BF-ILL	4"	7.87	4.49	1.26	7.5	8 : 5/8"	4.09	2.05	2.76	0.43	04:00.3	3.54	1.75	5/8-11UNC	19.84
BF-JLL	6"	8.9	5.47	1.26	9.51	8 : 3/4"	6.13	2.2	2.76	0.55	04:00.3	3.54	2	3/4-10UNC	31.31
BF-KLL	8"	10.24	6.89	1.61	11.75	8 : 3/4"	7.97	2.39	4.02	0.67	04:00.5	4.92	2	3/4-10UNC	40.12
BF-LLL	10"	11.5	7.99	1.61	14.25	12 : 7/8"	9.86	2.58	4.02	0.87	04:00.5	4.92	2.25	7/8-9UNC	59.08
BF-MLL	12"	13.27	9.53	1.61	17.01	12 : 7/8"	11.87	3.03	4.02	0.87	04:00.5	5.51	2.5	7/8-9UNC	88.18

Butterfly Valve Handle

Ten-position Lockable Lever Handle



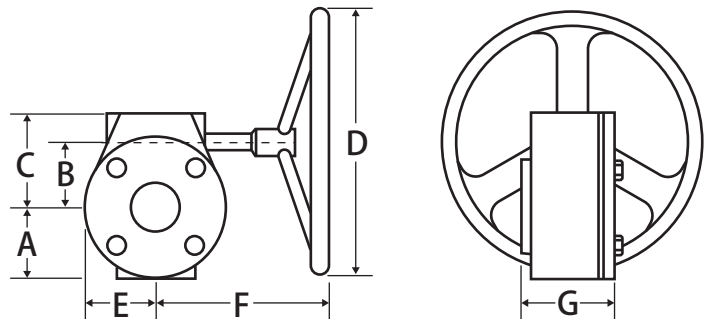
Dimensions

Part No.	Size	A	B	C
BLH2-3*	2-1/2" - 3"	2.00	1.26	10.64
BLH4*	4"	2.00	1.26	10.64
BLH5-6*	5" - 6"	2.00	1.26	10.64
BLH8	8"	4.30	1.77	14.18
BLH10	10"	5.84	1.77	19.7
BLH12	12"	5.8	1.77	19.7

Terminator BFV Lever Handle

*Comes standard with terminator BFV

Butterfly Gear Operator



Dimensions

Part No.	Size	A	B	C	D	E	F	G
2-14"								
BGO2-3	2-1/2" - 3"	2.05	1.77	2.92	5.91	2.05	6.00	2.96
BGO4	4"	2.05	1.77	2.92	5.91	2.05	6.00	2.96
BGO5-6	5" - 6"	2.05	1.77	2.92	5.91	2.05	6.00	2.96
BGO8	8"	2.96	2.47	3.98	11.82	2.96	9.85	3.39
BGO10	10"	2.96	2.47	3.98	11.82	2.96	9.85	3.39
BGO12-14	12"-14"	3.19	3.15	4.65	11.82	3.19	8.94	3.27

Terminator BFV Gear Operator

LIT-HCI-TS 080818

Lead Free Brass Inline Check Valve

Threaded Connection • 300 WOG • Class 150



T-521G

Features

- Forged Lead Free Brass Body
- Bubble tight Teflon seal
- Wetted surfaces contain less than .25% lead content

Approvals

- Lead Free Compliant
- ANSI B1.20.1

Pressure/Temperature Rating

- 300WOG
- Max. 250°F

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

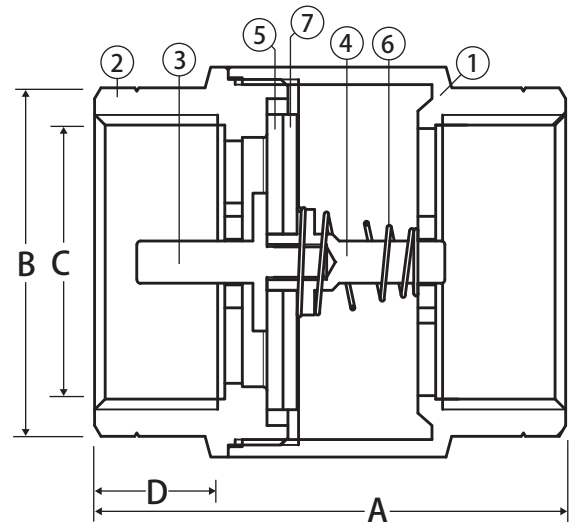
Note: On pump discharge, the preferred check valves are: inline, spring assisted, center-guided, lift checks.

Jomar Check Valves may be installed in both horizontal and vertical lines with upward flow or in an intermediate position. They will operate satisfactory in a declining plane (no more than 15°).

Warning: Do Not Use For Reciprocating Air Compressor Service



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



Material Specifications

No.	Part	Materials
1	Body	Lead Free Brass
2	Tailpiece	Lead Free Brass
3	Disc Holder 1	Lead Free Brass
4	Disc Holder 2	Lead Free Brass
5	Disc	PTFE
6	Spring	304 Stainless Steel

Dimensions

Part No.	Size	A	B	C	D
105-603G	1/2"	1.28	1.91	0.50	0.49
105-604G	3/4"	1.54	2.06	0.75	0.59
105-605G	1"	1.77	2.30	1.00	0.59
105-606G	1-1/4"	2.17	2.64	1.25	0.73
105-607G	1-1/2"	2.34	2.74	1.50	0.71
105-608G	2"	3.15	3.31	2.00	0.83

Brass Mini Ball Valve

2 Piece • Full Port • Threaded Connection • Mini Valves • 600 WOG

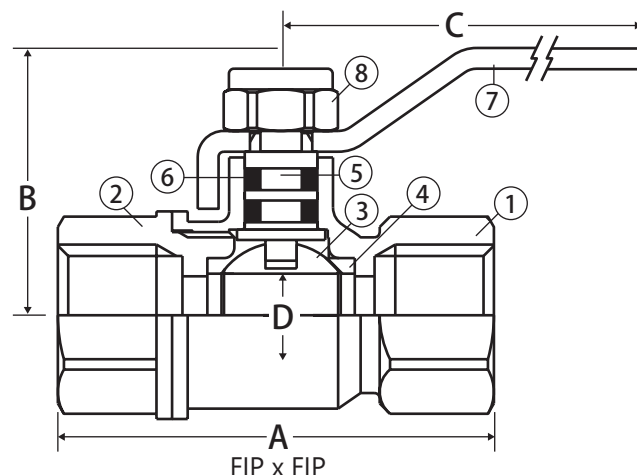
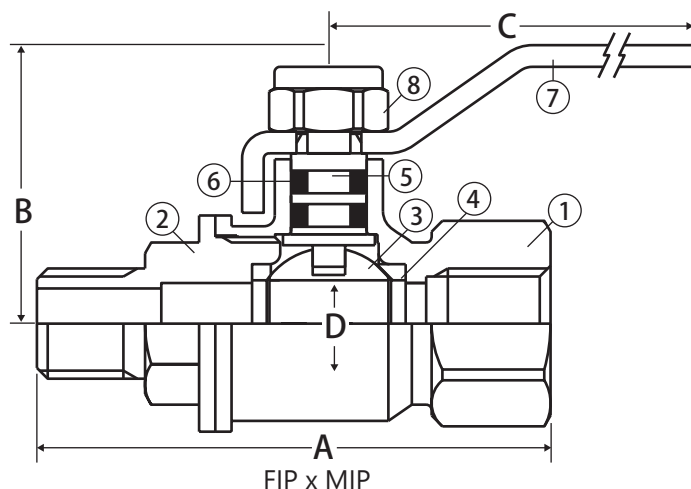
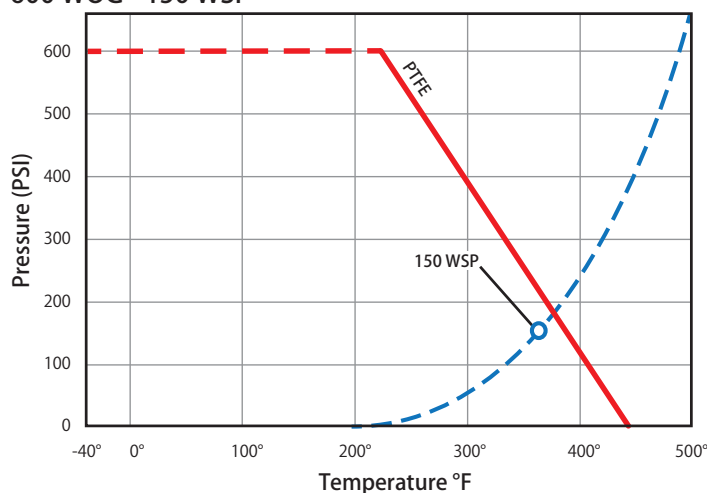


T-83C

Features

- Large raised wrench flats
- 2 Buna-N o-rings
- 100% leak tested

Valve Seat Rating 600 WOG - 150 WSP



Material Specifications

No.	Part	Materials
1	Body	Brass - C37700
2	End Connection	Brass - C37700
3	Ball	Chrome Plated Brass - C37700
4	Seat (2)	PTFE
5	Stem	Brass - C37700
6	Stem O-ring (2)	Buna-N
7	Handle*	Steel - Chrome Plated or Aluminum
8	Handle Nut / Screw*	Steel - Chrome Plated

*Material depends on handle selection

Dimensions

Part No.	Size	A	B	C	D
H100-398	1/4" FIP x 1/8" MIP	1.93	1.07	1.77	0.28
H100-399	1/4" FIP x 1/4" MIP	2.01	1.07	1.77	0.28
H100-400	1/4" FIP x 1/4" FIP	1.65	1.07	1.77	0.28



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Drain and Blowdown Valve

Isolation Ball Valve • 600 WOG



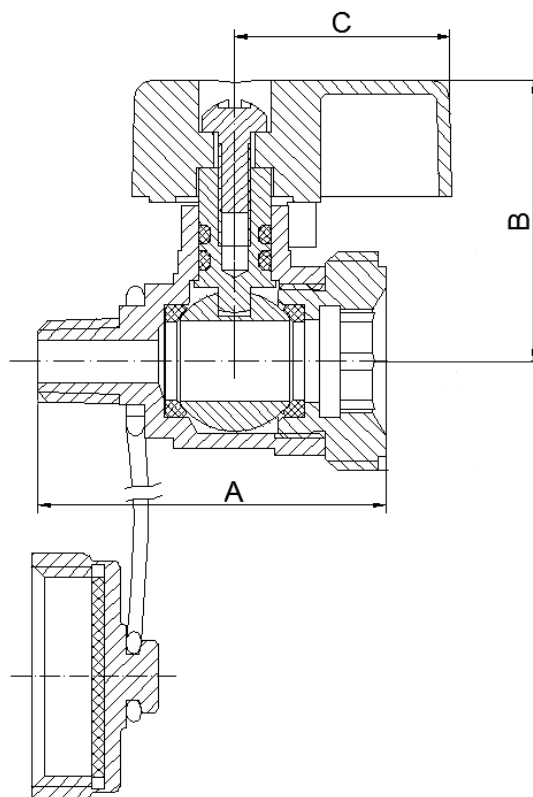
Picture shown is TQ-B1

Features

- 3/4" garden hose drain connection
- Includes drain cap and retainer
- 100% leak tested

Pressure and Temperature Rating

- 600 WOG
- 300°F Max



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

Material Specifications

Part	Material
Body	Brass - CW617N
Retaining Ring	Brass - CW617N
Ball	Chrome Plated Brass - C3604DB
Seat (2)	PTFE
Stem	Brass - CW617N
Stem Sealing	EPDM
Handle	Painted Aluminum
Screw	Steel - Nickel Plated
Cap	Brass - CW617N
Retaining Strap	Plastic
Washer Ring	EPDM

Dimensions

Part #	Inlet	Outlet	A	B	C
TQ-B1	1/4" MNPT	3/4" GH	1.76	1.37	1.06
TQ-B3-N	1/2" MNPT	3/4" GH	1.81	1.36	0.88
TQ-B4	3/4" MNPT	3/4" GH	3.28	1.70	4.39

Manual Air Vent

Coin Operated • 250 WOG

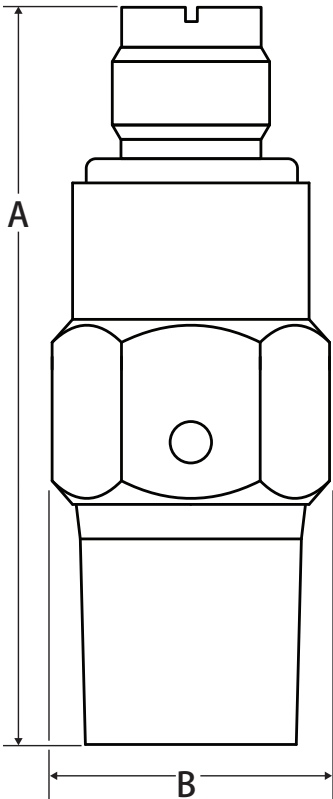


Features

- 100% leak tested

Pressure and Temperature Rating

- 250 WOG
- 250°F Max



Material Specifications	
Part	Material
Body	Brass - C36000
Plug Screw	Brass - C36000

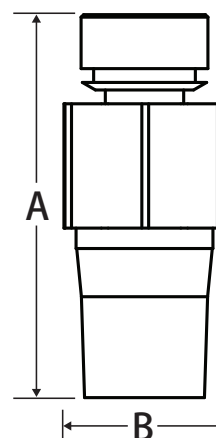
Dimensions			
Part #	Size	A	B
TV-A2	1/4" MNPT	1.63	0.58
TVX-A2-N	1/4" MNPT	2.75	0.58



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

Pressure / Temperature Test Port

Dual Nordel Core • 1000 WOG • with PT Port Cap Retainer



Pressure and Temperature Rating

- 1000 WOG
- 350°F Max



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

Material Specifications

Part	Material
Body	Brass
Core	Nordel
Cap	Brass
Flat Washer	Buna-N

Dimensions

Part #	Size	Port Length	A	B
SP-B	1/4"	1-1/2"	1.55	.56
PTE	1/4"	2.5"	2.75	.56

Memory Stop



Material Specifications

Part	Material
Metering Plate	Aluminum
Memory Stop	Brass - CW617N
Memory Stop Screw	Steel - Geomet® Plated

Dimensions

Part #	Size	Fits
MS-A	1/2"	NT, T-100 Series
MS-B	3/4"	NT, T-100 Series
MS-C	1" - 1-1/4"	NT, T-100 Series
MS-D	1-1/2" - 2"	NT, T-100 Series



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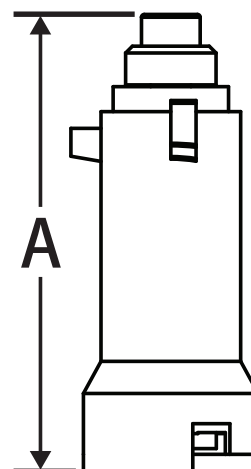
Handle Extension

Compatible with Memory Stop



Features

- Allows for easy insulation



Material Specifications

Part	Material
Body	Brass - CW617N
Inner Rod	Brass - CW614N
Spacer	Steel
Screw	Steel - Geomet® Plated

Dimensions

Part #	Fits					A
	TB	TA	TY	NT	H100	
TX-A-MS	1/2", 3/4"	1/2"	1/2"	1/2"	1/2"	2.0
TX-B-MS	1"	3/4", 1"	3/4", 1"	3/4"	3/4"	2.0
TX-C-MS	1-1/4", 1-1/2"	1-1/4", 1-1/2"	1-1/4", 1-1/2"	1", 1-1/4"	1", 1-1/4"	2.0
TX-D-MS	2"	2"	2"	1-1/2", 2"	1-1/2", 2"	2.0



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

Pressure Drop Chart

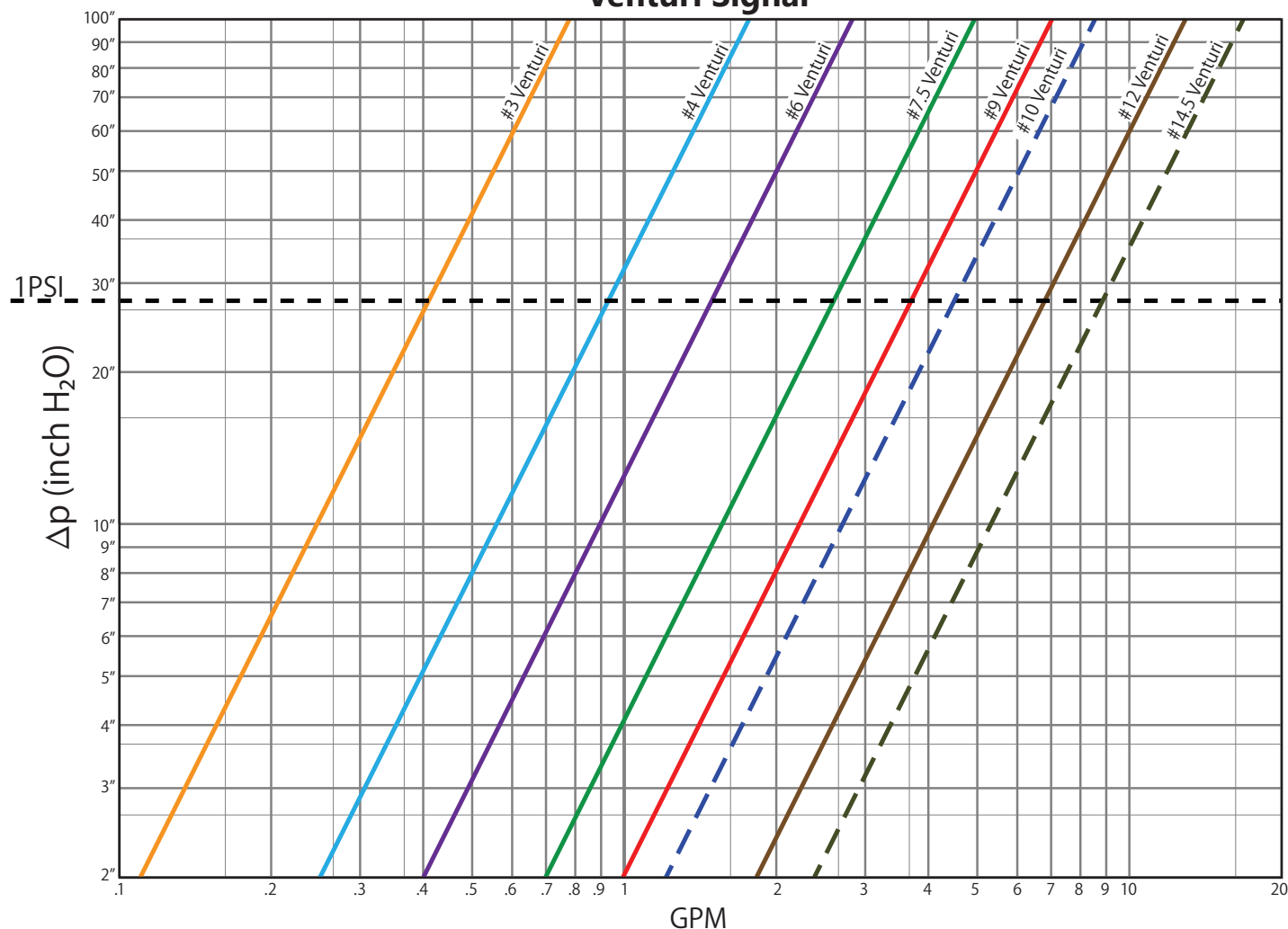
Terminator B (1/2" - 1")

CV of Valves

- 1/2" & 3/4" w/ #3 Venturi: **0.44**
- 1/2" & 3/4" w/ #4 Venturi: **1.30**
- 1/2" & 3/4" w/ #6 Venturi: **2.65**
- 1/2" & 3/4" w/ #7.5 Venturi: **3.61**
- 1/2" & 3/4" w/ #9 Venturi: **7.05**
- 1/2" & 3/4" w/ #12 Venturi: **11.40**
- 1" w/ #10 Venturi: **7.05**
- 1" w/ #14.5 Venturi: **17.6**



Venturi Signal



Pressure Drop Chart

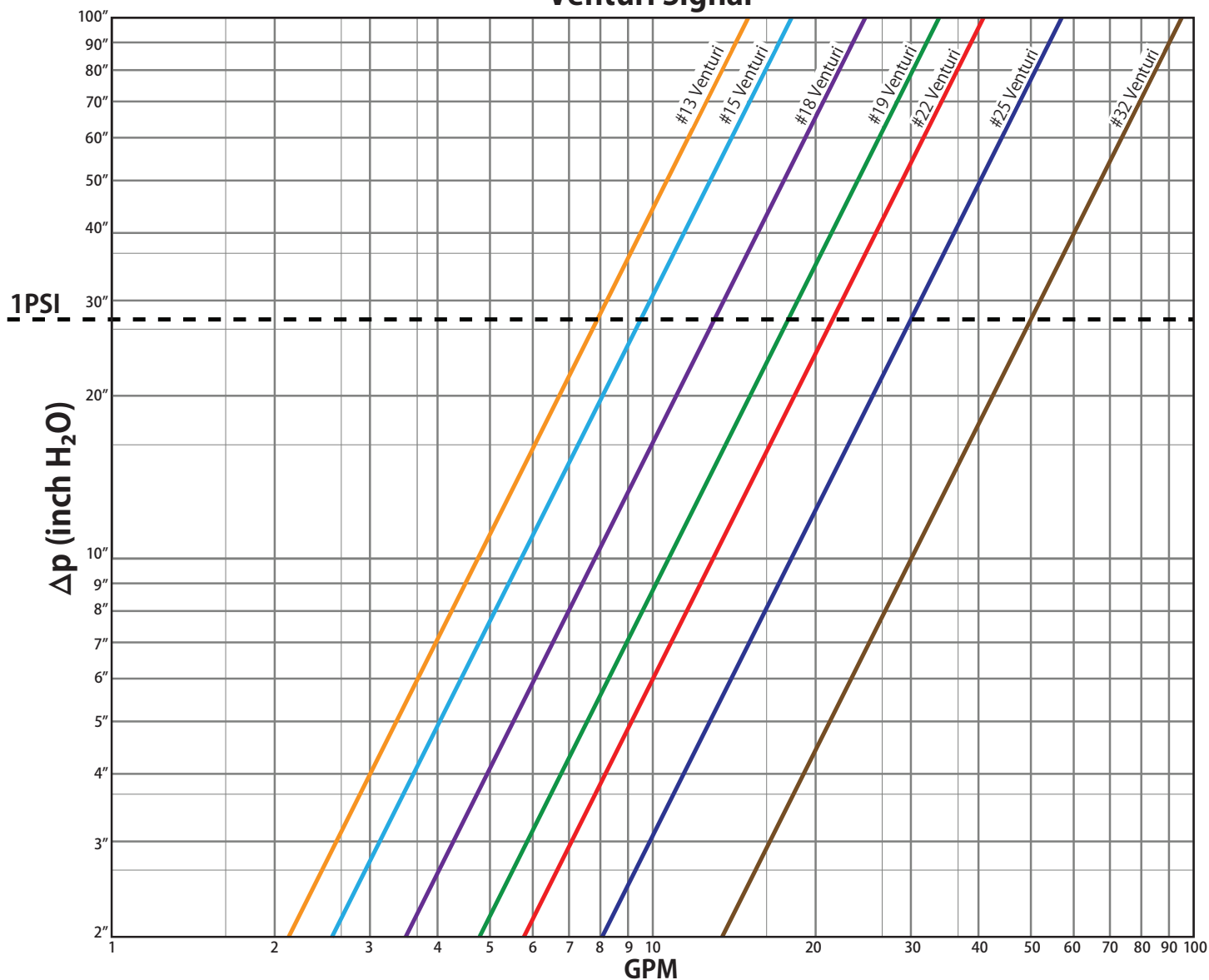
Terminator B (1-1/4" - 2")

CV of Valves

- 1-1/4" w/ #13 Venturi: **15.0**
- 1-1/4" w/ #19 Venturi: **34.0**
- 1-1/2" w/ #15 Venturi: **20.9**
- 1-1/2" w/ #22 Venturi: **57.0**
- 2" w/ #18 Venturi: **30.8**
- 2" w/ #25 Venturi: **57.0**
- 2" w/ #32 Venturi: **88.0**



Venturi Signal



LIT-HCI-TS 080818

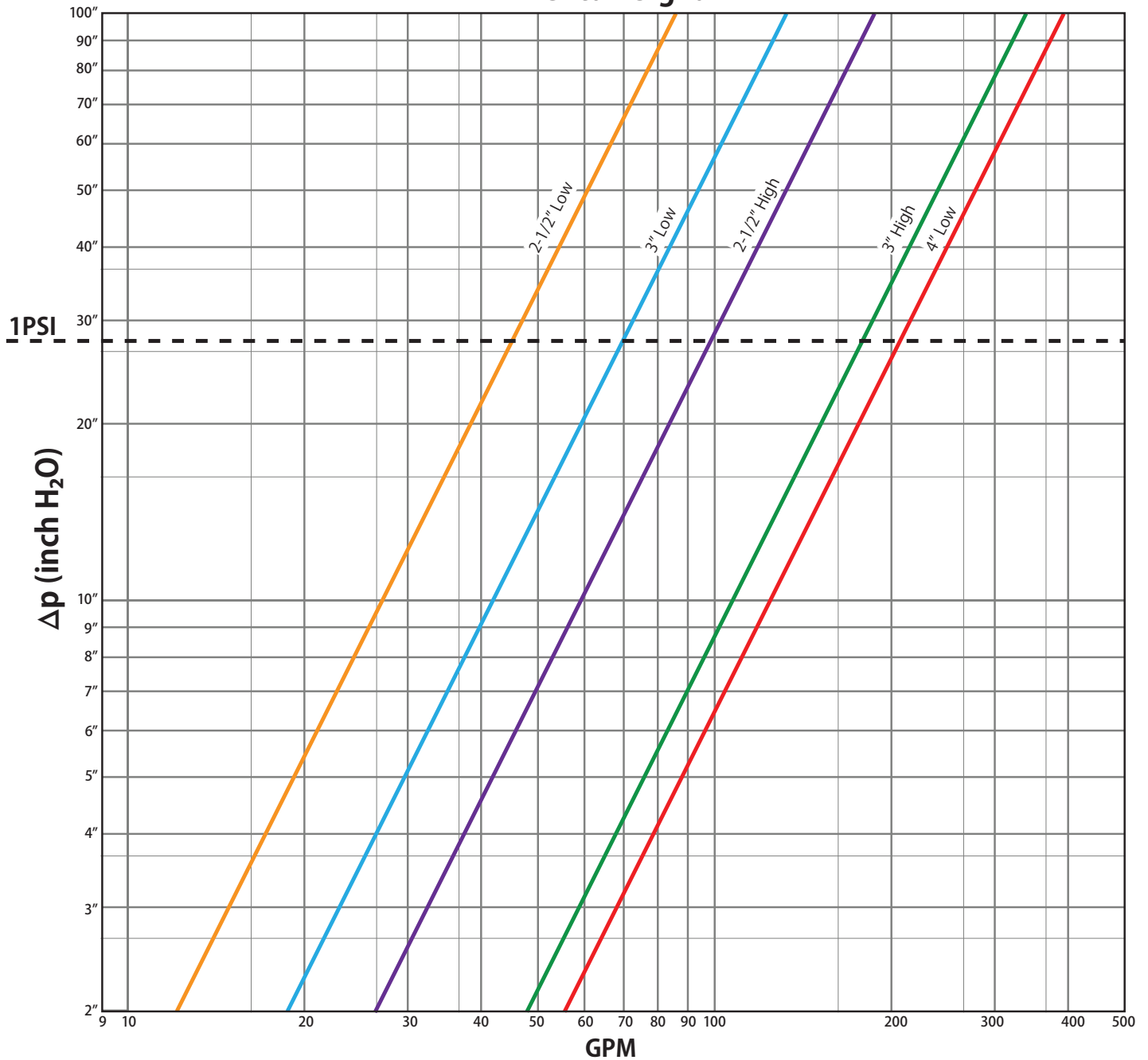
Pressure Drop Chart

Terminator B & MS (2-1/2" - 4")

Permanent pressure loss is 6% of the differential pressure



Venturi Signal

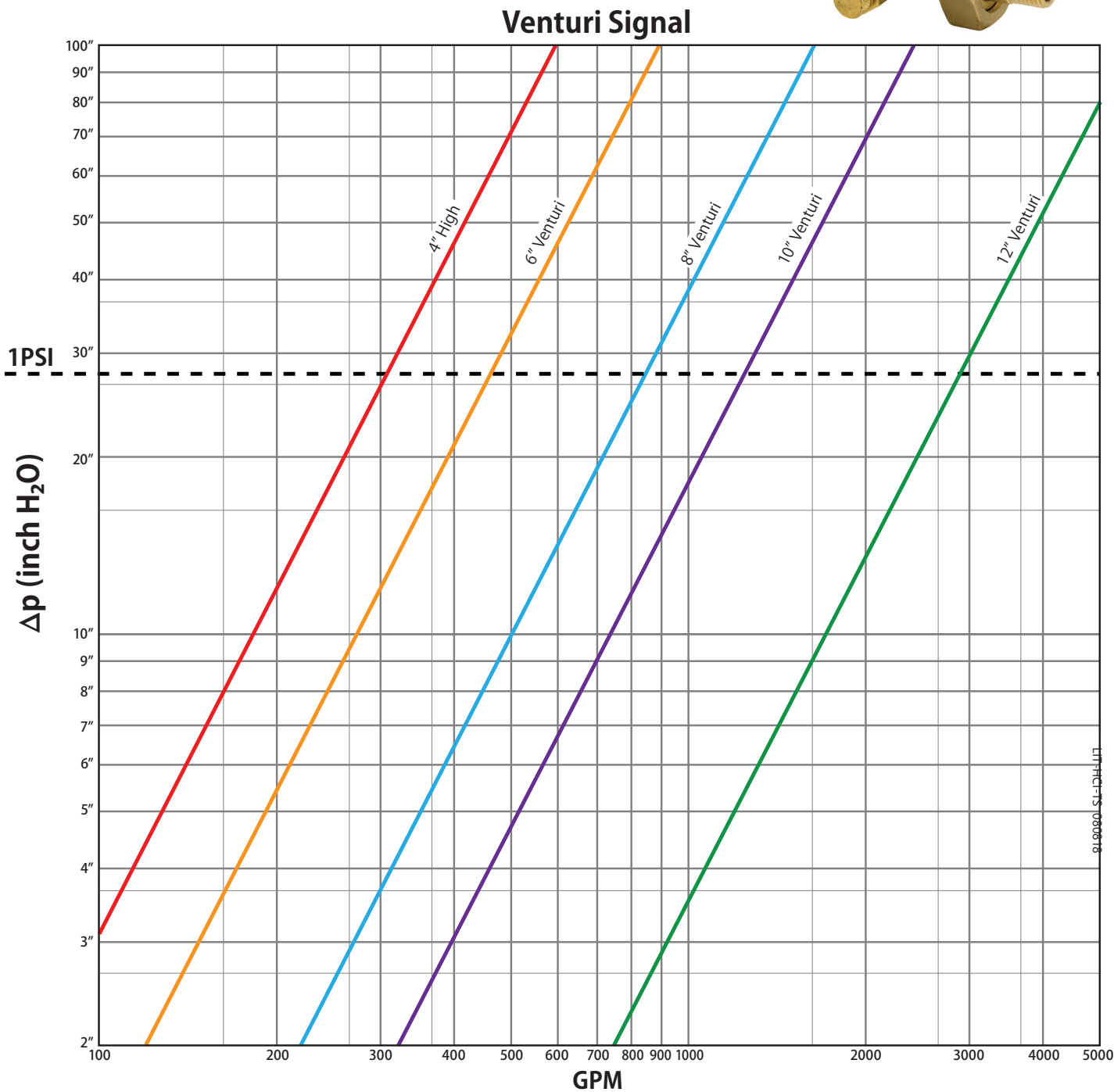


Pressure Drop Chart

Terminator B & MS (6" - 12")



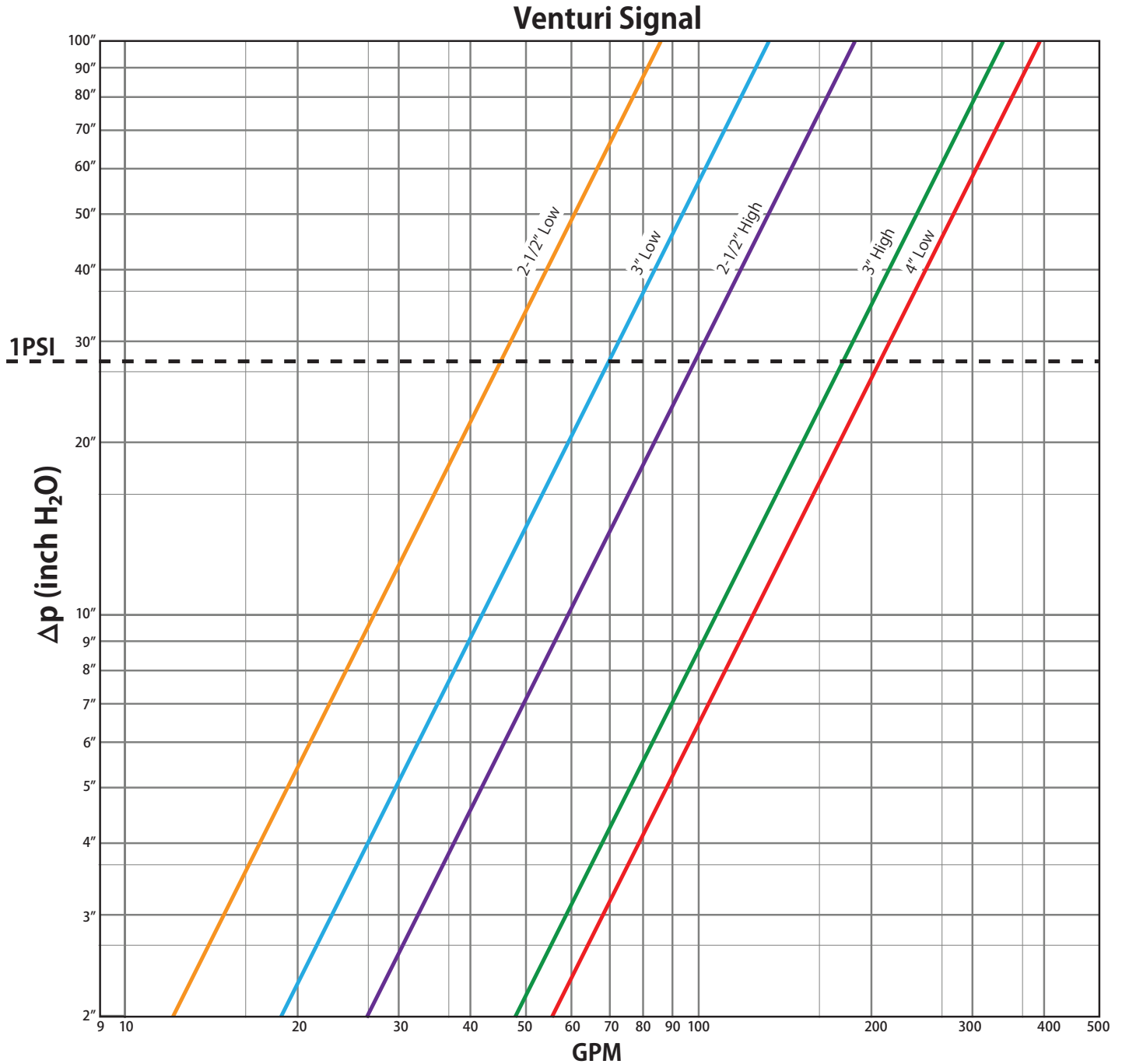
Permanent pressure loss is 6% of the differential pressure



Pressure Drop Chart

Terminator MS (2-1/2" - 4")

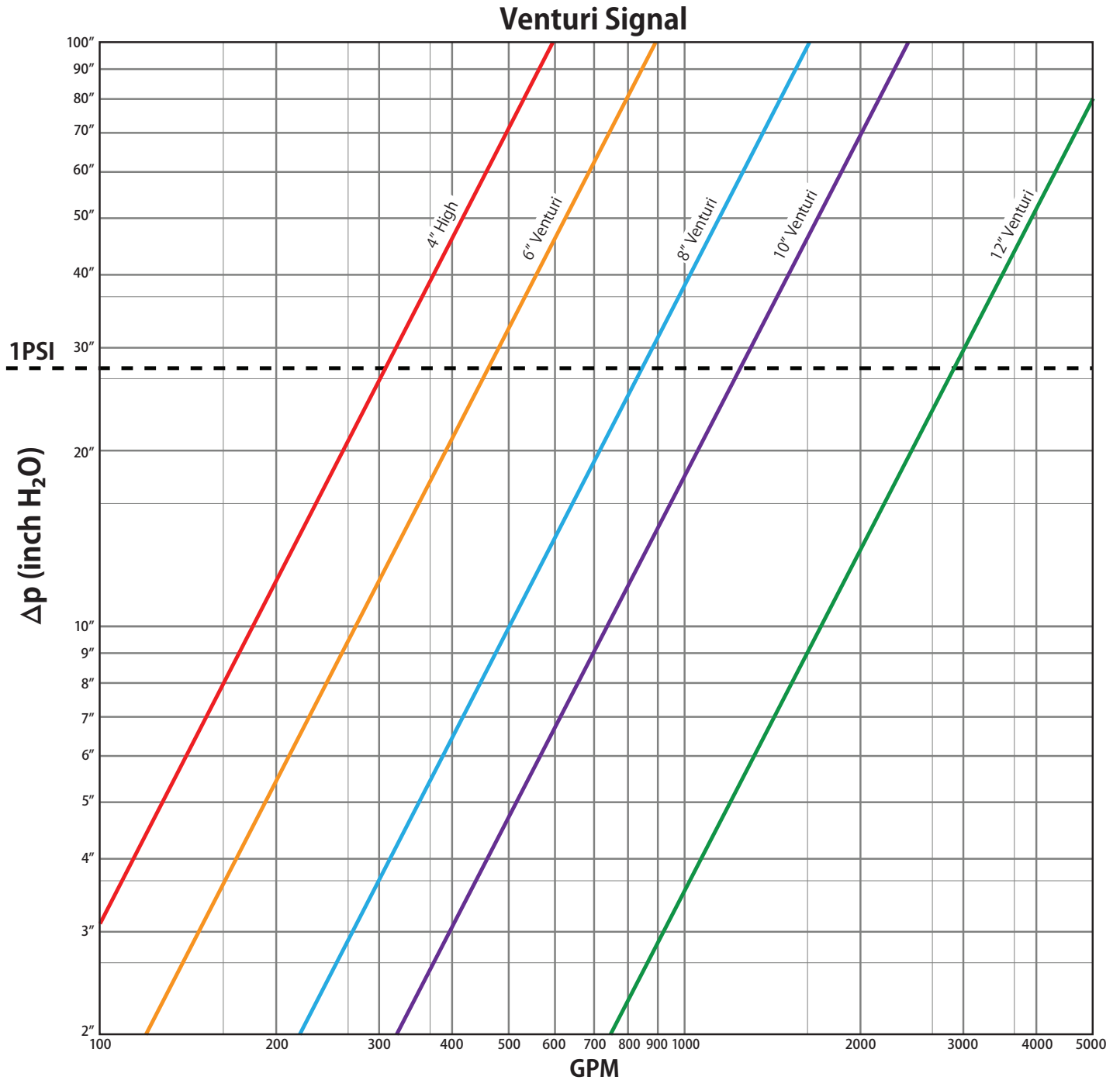
Permanent pressure loss is 6% of the differential pressure



Pressure Drop Chart

Terminator MS (6" - 12")

Permanent pressure loss is 6% of the differential pressure



TGV

0.50" - 2.00"

This diagram details the relationship between flow, pressure drop and valve preset points. Use the diagram to select the correct valve size and corresponding handwheel setting to fulfill the application requirements.

Determine the required flow in the circuit (A) and the pressure drop (B). Draw a line between these two values. Read off the corresponding Cv value on the Cv scale.

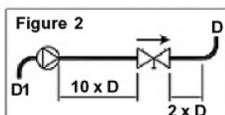
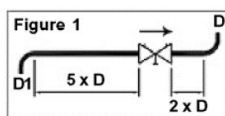
Determine the valve setting, in handwheel turns, by drawing a horizontal line (D) from the intersection point on the Cv scale to the corresponding valve setting position.

For the highest level of accuracy, it is recommended to choose a valve that has at least 3 open turns.

Example: A 1" valve is required to be open 8 turns for a Cv value of 7.5 at a flow rate of 10 gpm and a pressure drop of 4ft.

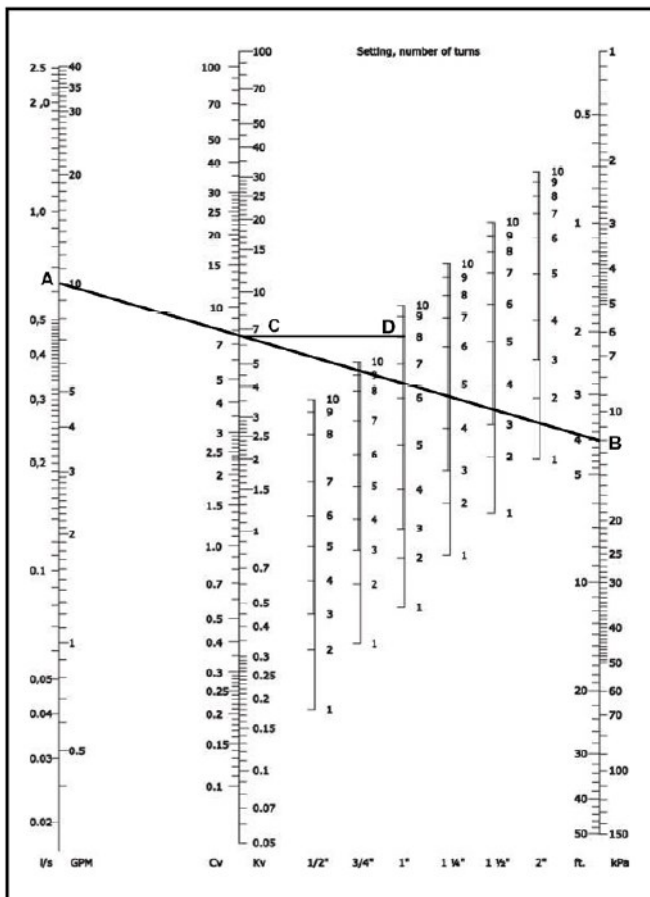
Installation Recommendations

Install the valve in the correct flow direction according to the arrow on the valve body and the distance parameters detailed in Figure 1. (Note: D = pipe diameter).



When used with a pump, it is recommended to use a straight length of pipe totaling 10 x D (instead of 5 x D) upstream or downstream to avoid turbulence that will affect the measuring accuracy. See Figure 2.

Turbulence can influence the measurements by up to 20% if this recommendation is not followed.



Cv Values for Valve TGV

Flow coefficient values (Cv's) at various handwheel settings	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Handwheel Setting	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50
1	0.21	0.39	0.56	0.92	1.39	2.32
1.5	0.29	0.56	0.75	1.28	1.97	3.25
2	0.37	0.70	0.89	1.53	2.38	4.18
2.5	0.44	0.82	1.04	1.80	2.78	5.10
3	0.52	0.96	1.19	2.09	3.25	6.03
3.2	0.56	1.02	1.28	2.26	3.48	6.50
3.4	0.59	1.09	1.39	2.44	3.71	6.96
3.6	0.63	1.16	1.51	2.67	4.06	7.54
3.8	0.67	1.23	1.62	2.90	4.41	8.12
4	0.72	1.31	1.74	3.13	4.76	8.82
4.2	0.77	1.39	1.91	3.42	5.10	9.74
4.4	0.81	1.48	2.09	3.71	5.57	10.70
4.6	0.87	1.58	2.26	4.06	6.03	11.70
4.8	0.93	1.68	2.44	4.41	6.61	12.80
5	1.00	1.80	2.67	4.76	7.19	13.80
5.2	1.07	1.91	2.90	5.16	7.77	15.00
5.4	1.14	2.03	3.19	5.57	8.35	16.00
5.6	1.21	2.16	3.48	5.97	8.93	17.20
5.8	1.28	2.30	3.83	6.38	9.63	18.30
6	1.36	2.44	4.18	6.84	10.30	19.40
6.2	1.44	2.60	4.47	7.25	11.00	20.40
6.4	1.52	2.76	4.76	7.66	11.80	21.50
6.6	1.62	2.96	5.10	8.12	12.50	22.50
6.8	1.74	3.16	5.54	8.58	13.20	23.50
7	1.88	3.36	5.80	9.05	13.90	24.60
7.2	2.06	3.60	6.15	9.51	14.60	25.50
7.4	2.26	3.83	6.50	9.98	15.30	26.40
7.6	2.49	4.06	6.84	10.40	15.90	27.40
7.8	2.73	4.27	7.19	10.80	16.50	28.20
8	2.96	4.47	7.54	11.30	17.10	29.00
8.2	3.13	4.63	7.89	11.70	17.60	29.90
8.4	3.29	4.78	8.24	12.20	18.20	30.70
8.6	3.42	4.93	8.58	12.60	18.80	31.60
8.8	3.54	5.08	8.87	13.00	19.40	32.40
9	3.65	5.22	9.16	13.30	19.80	33.20
9.2	3.77	5.36	9.40	13.70	20.30	33.90
9.4	3.87	5.50	9.63	14.20	20.90	34.60
9.6	3.98	5.64	9.86	14.50	21.50	35.30
9.8	4.06	5.78	10.00	14.80	22.00	36.00
10	4.12*	5.92*	10.2*	15.2*	22.6*	36.5*

* Valve is fully open

Flow Measurement & Accuracy

Determined using the pressure drop diagram that is included in the operating instructions with each HCI Balancing Valve.

The accuracy is highest when the valve is fully open. Therefore, it is recommended to choose a valve that can be opened at least three turns at the calculated pre-setting value. Figure 3 represents the flow measurement deviation in relation to hand-wheel turns.

Correction for Liquids

Applies to liquids other than water. Correct the measured flow (q) by the density (Y) according to this formula. See Figure 4.

Sizing a Balancing Valve

When the differential pressure and design flow are known, use this formula to calculate Cv value. See Figure 5.

Figure 3

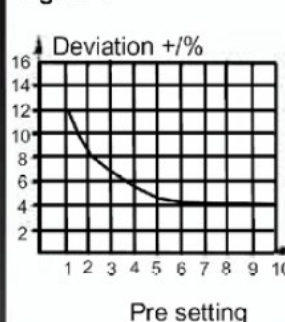


Figure 4

$$\text{Actual Flow} = \frac{q_{CB}}{\sqrt{Y}}$$

Figure 5

$$C_v = 1.52 \frac{q}{\sqrt{\Delta p}}$$

q in GPM, Δp in Ft. of H₂O

$$C_v = \frac{q}{\sqrt{\Delta p}}$$

q in GPM, √p in PSI

Manual Balancing Valve

Variable Orifice, Globe Valve, Memory Stop, 300 WOG

Series TGV 2.50" - 6.00"

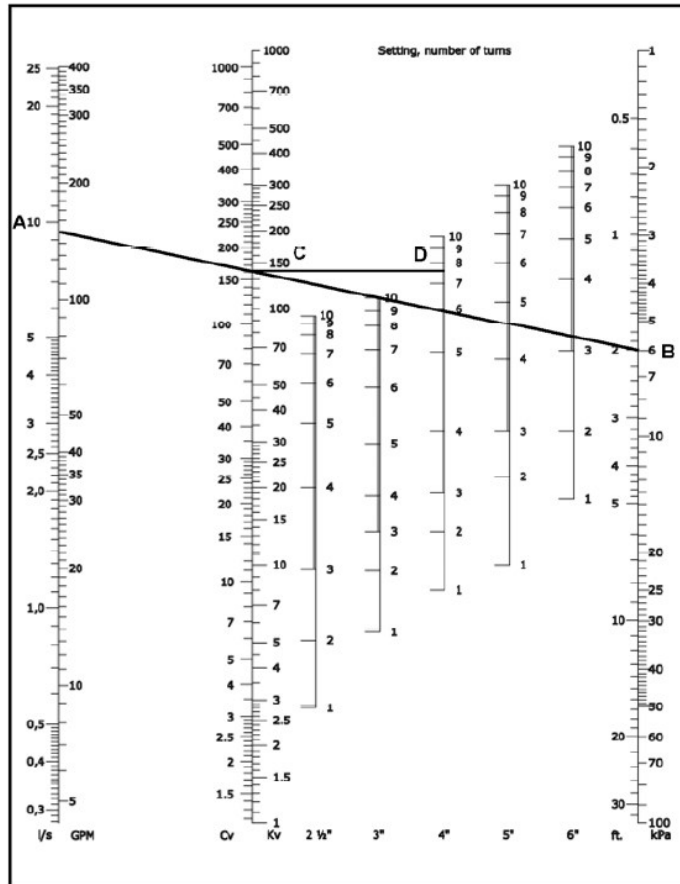
This diagram details the relationship between flow, pressure drop and valve preset points. Use the diagram to select the correct valve size and corresponding handwheel setting to fulfill the application requirements.

Determine the required flow in the circuit (A) and the pressure drop (B). Draw a line between these two values. Read off the corresponding Cv value on the Cv scale.

Determine the valve setting, in handwheel turns, by drawing a horizontal line (D) from the intersection point on the Cv scale to the corresponding valve setting position.

For the highest level of accuracy, it is recommended to choose a valve that has at least 3 open turns.

Example: A 4" valve is required to be open 7.5 turns for a Cv value of 160 at a flow rate of 150 gpm and a pressure drop of 2ft.



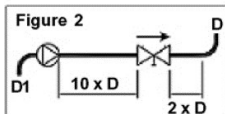
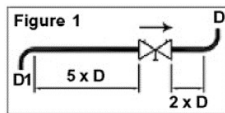
Cv Values

Flow coefficient values (Cv's) at various handwheel settings					
Handwheel Setting	2-1/2" DN 65	3" DN 80	4" DN 100	5" DN 125	6" DN 150
1	3.20	6.40	9.30	11.60	20.90
1.5	4.60	8.70	12.80	19.70	29.00
2	5.90	11.00	15.70	25.50	38.30
2.5	8.50	13.30	19.10	30.20	53.40
3	11.10	15.70	22.00	38.30	78.90
3.2	13.10	16.60	23.80	42.90	90.50
3.4	15.10	17.50	25.50	48.70	103
3.6	17.40	18.60	29.00	55.70	118
3.8	20.30	19.70	33.60	63.80	135
4	23.20	21.50	38.30	73.10	151
4.2	26.80	23.20	45.20	82.40	164
4.4	30.40	24.90	53.40	91.60	176
4.6	34.00	27.30	61.50	102	189
4.8	37.60	30.70	69.60	113	202
5	41.20	34.20	77.70	123	216
5.2	44.80	38.30	85.80	135	231
5.4	48.40	42.90	94.00	146	246
5.6	52.00	47.60	102	157	260
5.8	55.60	52.20	109	166	273
6	59.20	56.80	115	174	285
6.2	62.60	61.50	122	183	298
6.4	66.10	66.10	129	194	311
6.6	69.60	70.80	135	204	322
6.8	73.10	75.40	140	215	332
7	76.60	79.50	145	225	341
7.2	80.00	83.50	151	235	351
7.4	82.90	87.60	157	246	363
7.6	85.80	91.60	162	255	374
7.8	88.70	95.10	168	264	384
8	91.10	98.60	174	274	394
8.2	93.40	102	180	283	406
8.4	95.70	105	186	292	418
8.6	97.40	108	190	302	428
8.8	99.20	111	194	310	437
9	101	114	197	317	447
9.2	103	116	202	324	456
9.4	104	119	206	331	465
9.6	106	123	211	338	474
9.8	107	125	216	343	484
10	108*	128*	220*	349*	493*

* Valve is fully open

Installation Recommendations

Install the valve in the correct flow direction according to the arrow on the valve body and the distance parameters detailed in Figure 1 (Note: D = pipe diameter).



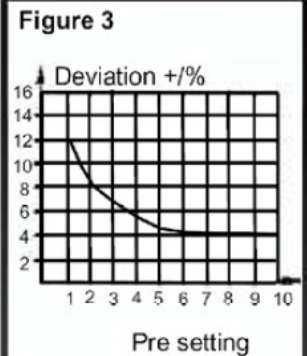
When used with a pump, it is recommended to use a straight length of pipe totaling 10 x D (instead of 5 x D) upstream or downstream to avoid turbulence that will affect the measuring accuracy. See Figure 2.

Turbulence can influence the measurements by up to 20% if this recommendation is not followed.

Flow Measurement & Accuracy

determined using the pressure drop diagram that is included in the operating instructions with each HCI Balancing valve.

The accuracy is highest when the valve is fully open. Therefore, it is recommended to choose a valve that can be opened at least three turns at the calculated pre-setting value. Figure 3 represents the flow measurement deviation in relation to handwheel turns.



Correction for Liquids

Applies to liquids other than water. Correct the measured flow (q) by the density (γ) according to this formula. See Figure 4

Figure 4

$$\text{Actual Flow} = \frac{q_{CBI}}{\sqrt{\gamma}}$$

Figure 5

$$C_v = 1.52 \frac{q}{\sqrt{\Delta p}}$$

q in GPM, Δp in Ft. of H2O

$$C_v = \frac{q}{\sqrt{\Delta p}}$$

q in GPM, √p in PSI

Sizing a Balancing Valve

When the differential pressure and design flow are known, use this formula to calculate Cv value. See Figure 5

GPM Ordering Guide

Select a size and GPM, this will determine the cartridge type

TA-CFM-L-VX 2.0

Desired GPM

1/2"

2-32 PSI	5-60 PSI
C1-L	C1-H
0.33	4.0
0.5	5.0
0.75	
1.0	
2.0	
2.5	
3.0	

3/4" and 1"

2-32 PSI	5-60 PSI
C2-L	C2-H
1.0	9.0
2.0	10.0
3.0	11.0
3.5	12.0
4.0	
4.5	
5.0	
6.0	
7.0	
8.0	

1-1/4" and 1-1/2"

2-32 PSI	5-60 PSI
C3-L	CS-H
9.0	20.0
10.0	22.0
11.0	24.0
12.0	26.0
13.0	
14.0	
15.0	
16.0	
18.0	

2"

2-32 PSI	5-60 PSI
C4-L	C4-H
20.0	52.0
24.0	58.0
28.0	64.0
32.0	70.0
36.0	
40.0	
44.0	
48.0	

Hci

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