BFCA9000
5/01

Backflow Preventers

CONBRACO
Industries, Inc.

TABLE OF CONTENTS

WARRANTY & LIMITATIONS OF LIABILITY

Conbraco Industries, Inc. warrants, to its initial purchaser only, that its products which are delivered to this initial purchaser will be of the kind described in the order or price list and will be free of defects in workmanship or material for a period of one year from the date of delivery to you, our initial purchaser.

Should any failure to conform to this warranty appear within one year after the date of the initial delivery to our initial purchaser, Conbraco will, upon written notification thereof and substantiation that the goods have been stored, installed, maintained and operated in accordance with Conbraco's recommendations and standard industry practice, correct such defects by suitable repair or replacement at Conbraco's own expense.

THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHER WARRANTY, WHETHER EXPRESSED OR IMPLIED, EXCEPT THE WARRANTY OF TITLE AND AGAINST PATENT INFRINGEMENT. Correction of non-conformities, in the manner and for the period of time provided above, shall constitute fulfillment of all liabilities of Conbraco to our initial purchaser, with respect to the goods, whether based on contract, negligence, strict tort or otherwise. It is the intention of Conbraco Industries, Inc. that no warranty of any kind, whether express or implied shall pass through our initial purchaser to any other person or corporation.

LIMITATION OF LIABILITY: Conbraco Industries, Inc. SHALL NOT UNDER ANY CIRCUMSTANCES BE LIABLE FOR SPECIAL OR CONSEQUENTIAL DAMAGES SUCH AS, BUT NOT LIMITED TO, DAMAGE TO OR LOSS OF OTHER PROPERTY OR EQUIPMENT, LOSS OF PROFITS OR REVENUE, COST OF CAPITAL, COST OF PURCHASED OR REPLACEMENT GOODS, OR CLAIMS OF CUSTOMERS OF OUR INITIAL PURCHASER. THE REMEDIES OF OUR INITIAL PURCHASER, AND ALL OTHERS, SET FORTH HEREIN, ARE EXCLUSIVE, AND THE LIABILITY OF CONBRACO WITH RESPECT TO SAME SHALL NOT, EXCEPT AS EXPRESSLY PROVIDED HEREIN, EXCEED THE PRICE OF THE CONBRACO GOODS UPON WHICH SUCH LIABILITY IS BASED.

SELECTION GUIDE

TYPE OF DEVICE	SERIES	APPLICATION					SIZE AVAILABLE												
		Back Siphonage	Back Pressure	Continuous Pressure	Low Hazard	High Hazard	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6	8	10
DOUBLE CHECK VALVE	40-100	●	●	●	●				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CARBONATED BEVERAGE BACKFLOW PREVENTER	4C-100	●	●	●	●		✓	✓												
DOUBLE CHECK VALVE	4S-100	●	●	●	●				✓						✓	✓	✓	✓	✓	✓
REDUCED PRESSURE PRINCIPLE	40-200	●	●	●	●	●	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
REDUCED PRESSURE PRINCIPLE (Stn.Steel)	40-200	●	●	●	●	●	✓	✓	✓	✓	✓									
REDUCED PRESSURE PRINCIPLE (U & Z Flow)	40-200	●	●	●	●	●				✓	✓	✓	✓	✓						
DUAL CHECK VALVE	40-300	●	●	●	●				✓	✓	✓									
THERMOPLASTIC DUAL CHECK VALVE	4P-300	●	●	●	●				✓	✓	✓									
CONTINUOUS PRESSURE	40-400	●	●	●	●				✓	✓										
PRESSURE TYPE VACUUM BREAKER	40-500	●		●	●	●			✓	✓	✓	✓	✓	✓						
PRESSURE TYPE VACUUM BREAKER	4V-500	●		●	●	●			✓	✓	✓									
SPILL-RESISTANT PRESS. VAC. BREAKER	4W-500	●		●	●	●	✓	✓	✓											
DOUBLE CHECK DETECTOR ASSEMBLY	40-600	●	●	●	●											✓	✓	✓	✓	✓
DOUBLE CHECK DETECTOR ASSEMBLY	4S-600	●	●	●	●										✓	✓	✓	✓		
REDUCED PRESSURE DETECTOR ASSEMBLY	40-700	●	●	●	●	●										✓	✓	✓	✓	✓
ATMOSPHERIC TYPE VACUUM BREAKER	38-100	●			●	●	✓	✓	✓	✓	✓	✓	✓	✓						
ATMOSPHERIC TYPE VACUUM BREAKER	38-200	●			●	●	✓	✓	✓	✓										
HOSE CONNECTION VACUUM BREAKER	38-304 38P	●			●					✓										
HOSE CONNECTION BACKFLOW PREVENTER	38-304-02	●	●*		●	●				✓										
ANTI FREEZE HOSE CONN. VAC. BREAKER	38-404	●			●					✓										
LAB FAUCET VACUUM BREAKER	38-500	●	●		●		✓	✓												

*Only to be used on systems where the low-head backpressure does not exceed that generated by an elevated hose equal to or less than 3m (10ft) in height

SERIES 40-100

DESCRIPTION

Conbraco Series 40-100 Double Check Valve Backflow Preventers are designed to control cross-connections between potable water lines and objectionable but not hazardous substances. Compact and economical, with easy in-line repair, Series 40-100 models feature two independent spring-loaded poppet check valves in a single bronze body. They're equipped with ball type test cocks; ball type shut-off valves are standard. All parts are made of corrosion resistant materials. To simplify repair and field testing, check valves and springs are interchangeable. They may be installed horizontally or vertically.

OPERATION

During normal flow conditions, the two check valves are held off their seats, supplying water downstream. Each check valve is designed to maintain a minimum of 1 psi across the valve. Should pressure downstream from the assembly increase to within 1 psi of supply pressure, both check valves will close to protect against backflow conditions.

FEATURES

- Corrosion resistant
- Easy to install, repair and maintain
- Low head loss
- Interchangeable poppet and spring
- Replaceable seats*
- Comes standard with Apollo® full port ball valves
- Maximum working pressure 175 psig
- Operating temperature range 33°F-180°F

MATERIALS

Body and covers	Bronze
Springs	Stainless Steel
Poppets	Glass-filled Celcon
Discs	Silicone Rubber
Fasteners	Stainless Steel
Replaceable Seats	Glass-filled Noryl

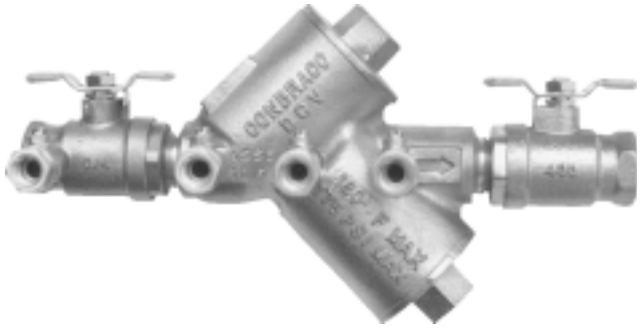
ORDERING NUMBER

40 - 1XX - AX

0-Standard	3-1/2"	1-less ball valves
1-w/ Y-strainer (shipped loose)	4-3/4"	2-w/ ball valves
	5-1"	4-w/ union end ball valves
	6-1-1/4"	0-for 1/2" only
	7-1-1/2"	
	8-2"	

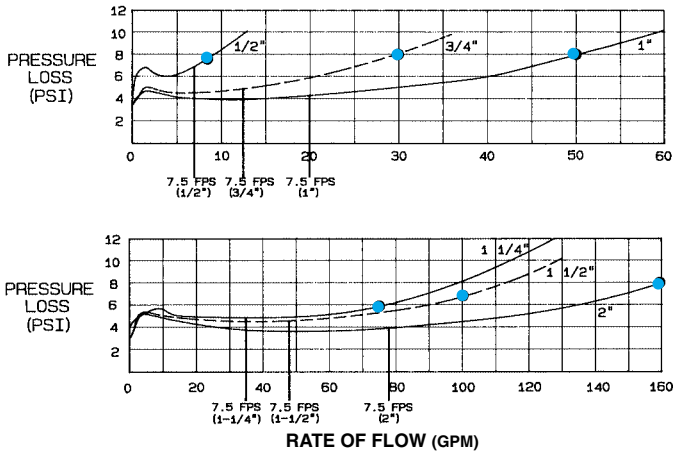
DOUBLE CHECK VALVE ASSEMBLY

SIZES 1/2"–3/4"–1"–1-1/4"–1-1/2"–2"



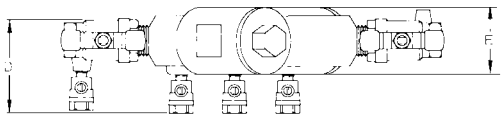
FLOW CURVES

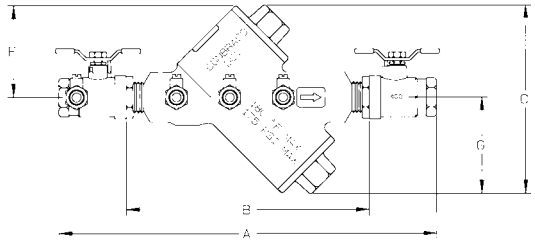
(•) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards.



DIMENSIONS (IN.)—WEIGHTS (LBS.)

Body Size	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
A	9-3/16	12	12-3/4	16-3/4	18	18-5/8
B (w/o Ball Valves)	4-3/8	7	7	10-1/4	10-1/4	10-1/4
C	3-5/8	6-1/4	6-1/4	9	9	9
D	2-1/4	3-5/8	3-5/8	4-1/4	4-1/4	4-1/4
E	1-1/2	2-7/16	2-7/16	3-13/16	3-13/16	3-13/16
F	2-3/32	3-1/8	3-1/8	4-3/4	4-3/4	4-3/4
G	1-17/32	3-1/8	3-1/8	4-1/4	4-1/4	4-1/4
Test Cocks	1/8 x 1/4NPT	1/8 x 1/4NPT	1/8 x 1/4NPT	1/4 x 1/4NPT	1/4 x 1/4NPT	1/4x1/4NPT
Net Wt. (w/o Ball Valves)	2-1/4	5-1/2	6	17-1/2	15	15
Net Wt. (with Ball Valves)	3-3/4	8-1/2	9-1/2	23	24	27
Shpg. Wt. (w/o Ball Valves)	2-1/2	6-1/2	7	19	16-1/2	17
Shpg. Wt. (with Ball Valves)	4-1/4	9-1/2	10-1/2	24-1/2	25-1/2	29





SERIES 40-100

DESCRIPTION

The Conbraco Series 40-100 Top Entry Double Check Valve Assembly is designed to protect against backflow from a cross-connection with a source of non-health hazard pollutant. Within the assembly are two mechanically independent, spring-loaded poppet type check valves set in an integral cast bronze body. Both check valves are designed at an inclined angle upward from the horizontal centerline of the assembly to assure easy access during repair and maintenance.

OPERATION

During normal flow conditions, the two check valves are held off their seats, supplying water downstream. Each check valve is designed to maintain a minimum of 1 psi across the valve during normal operation. Should the downstream pressure increase to within 1 psi of supply pressure, both check valves will close to prevent a backflow condition.

FEATURES

- Corrosion resistant
- Easy to install, repair and maintain
- Low head loss
- Interchangeable poppet and spring
- Replaceable seats
- Comes standard with Apollo® full port ball valves
- Maximum working pressure 175 psig
- Temperature range 33°F-180°F

MATERIALS

Body and covers	Bronze
Springs	Stainless Steel
Poppets	Glass-filled Celcon
Seat discs	Silicone rubber
Replaceable seats	Glass-filled Noryl
Fasteners	Stainless Steel

ORDERING NUMBER

40-1XX-XXT

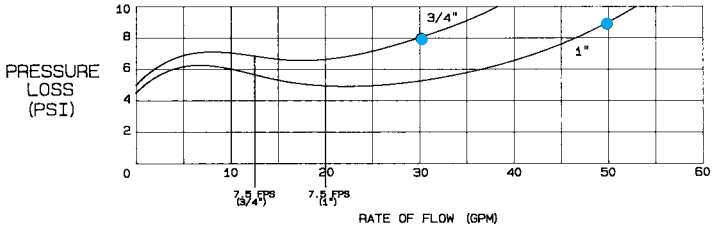
- 0 - Standard
- 1 - w/ Y-strainer (shipped loose)
- 4 - 3/4"
- 5 - 1"
- 6 - 1-1/4"
- 7 - 1-1/2"
- 8 - 2"
- 1 - less ball valves
- 2 - w/ ball valves
- 4 - w/ union end ball valves
- A - replaceable seats
- For UL Classified
- FP1 - less ball valves
- FP2 - w/ ball valves

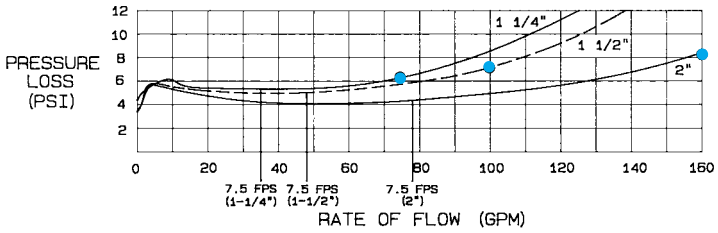
TOP ENTRY DOUBLE CHECK VALVE ASSEMBLY

SIZES 3/4"—1"—1-1/4"—1-1/2"—2"

FLOW CURVES

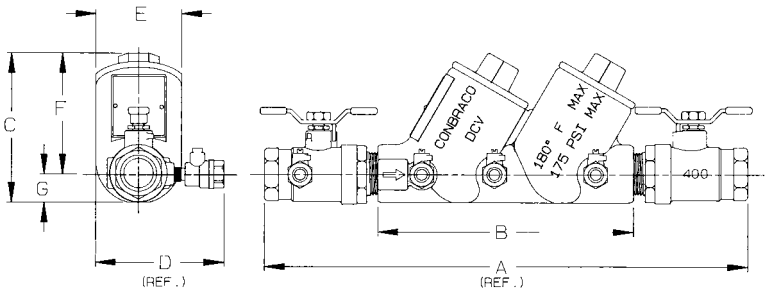
(•) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards.





DIMENSIONS (IN.)—WEIGHTS (LBS.)

Body Size	3/4"	1"	1-1/4"	1-1/2"	2"
A	14-1/4	14-3/4	20-3/4	21-3/8	23-1/8
B (w/o Ball Valves)	7-1/4	7-1/4	12-3/8	12-3/8	12-3/8
C	4-5/16	4-5/16	6-1/8	6-1/8	6-1/8
D	3-5/8	3-5/8	5-1/2	5-1/2	5-1/2
E	2-7/16	2-7/16	3-13/16	3-13/16	3-13/16
F	3-3/16	3-3/16	4-5/8	4-5/8	4-5/8
G	13/16	13/16	1-3/8	1-3/8	1-3/8
Test Cocks	1/8 x 1/4NPT	1/8 x 1/4NPT	1/4 x 1/4NPT	1/4 x 1/4NPT	1/4 x 1/4NPT
Net Wt. (w/o Ball Valves)	6	5.7	17.5	17	16.5
Net Wt. (with Ball Valves)	8.8	9.5	23.2	25.7	31.5
Shpg. Wt. (w/o Ball Valves)	7.2	7.0	19.0	18.5	18.5
Shpg. Wt. (with Ball Valves)	10.1	10.8	25.9	28.8	35.5



SERIES 40-100

DESCRIPTION

The Conbraco Series 40-100 Top Entry 99T Double Check Valve Assembly is designed to protect against backflow from a cross-connection of non-health hazard pollutant. Within the assembly are two mechanically independent, spring-loaded poppet type check valves set in an integral cast bronze body. Both check valves are designed at an inclined angle upward from horizontal centerline of the assembly, and all test cocks are mounted at the top to assure easy access during repair and maintenance when unit is installed in a pit or tight places.

OPERATION

During normal flow conditions, the two check valves are held off their seats, supplying water downstream. Each check valve is designed to maintain a minimum of 1 psi across the valve during normal operation. Should the downstream pressure increase to within 1 psi of supply pressure, both check valves will close to prevent a backflow condition.

FEATURES

- Top access for testing, repair and maintenance
- Corrosion resistant
- Low head loss
- Interchangeable poppets and springs
- Replaceable seats
- Comes standard with Apollo® full port ball valves
- Maximum working pressure 175 psig
- Temperature range 33°F-180°F

MATERIALS

Body and covers	Bronze
Springs	Stainless Steel
Poppets	Glass-Filled Celcon
Seat discs	Silicone Rubber
Replaceable seats	Glass-Filled Noryl
Fasteners	Stainless Steel

ORDERING NUMBER

4 0 - 1 X X - 99T

0 - Standard
1 - w/ Y-strainer (shipped loose)

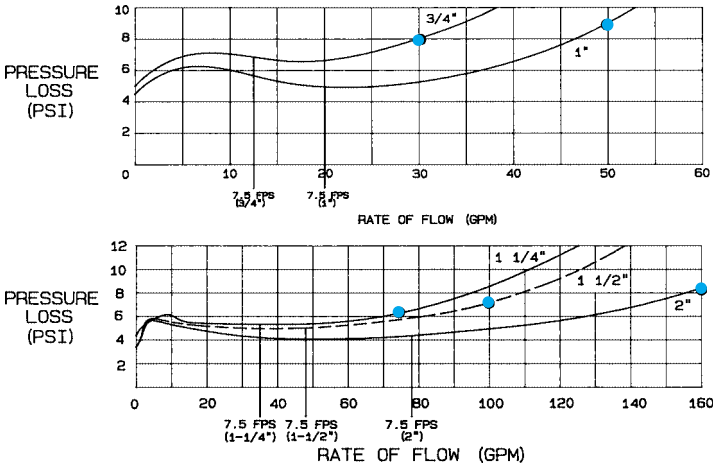
4 - 3/4"
5 - 1"
6 - 1-1/4"
7 - 1-1/2"
8 - 2"

TOP ENTRY 99T DOUBLE CHECK VALVE ASSEMBLY

SIZES 3/4"—1"—1-1/4"—1-1/2"—2"

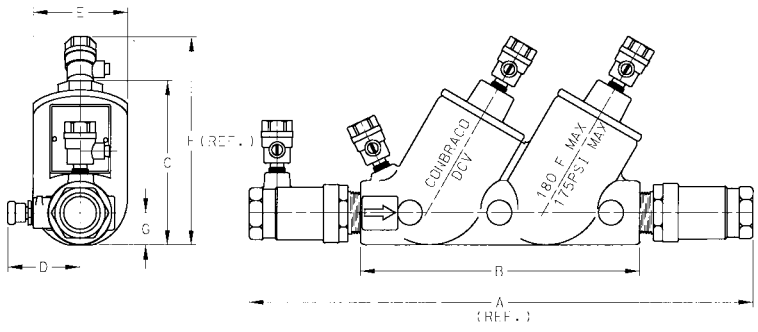
FLOW CURVES

(•) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards



DIMENSIONS (IN.)—WEIGHTS (LBS.)

Body Size	3/4"	1"	1-1/4"	1-1/2"	2"
A	14-1/4	14-3/4	20-3/4	21-3/8	23-1/8
B	7-1/4	7-1/4	12-3/8	12-3/8	12-3/8
C	4-5/16	4-5/16	6-1/8	6-1/8	6-1/8
D	1-5/8	1-7/8	2-3/16	2-5/8	3
E	2-7/16	2-7/16	3-13/16	3-13/16	3-13/16
F	5-7/16	5-7/16	6-3/8	6-3/8	6-3/8
G	13/16	13/16	1-3/8	1-3/8	1-3/8
Test Cocks	1/8 x 1/4 NPT	1/8 x 1/4 NPT	1/4 x 1/4 NPT	1/4 x 1/4 NPT	1/4 x 1/4 NPT
Net Weight	8.8	9.5	23.2	25.7	31.5
Shipping Weight	10.1	10.8	25.9	28.8	35.5



SERIES 40-100

DESCRIPTION

The Conbraco Series 40-100 Top Entry TC2 Double Check Valve Assembly, with SAE threaded hose connections make certification testing fast and trouble-free. It is designed to protect against backflow from a cross-connection of non-health hazard pollutant. Within the assembly are two mechanically independent, spring-loaded poppet type check valves set in an integral cast bronze body. Both check valves are designed at an inclined angle upward from horizontal centerline of the assembly, and all test cocks are mounted at the top to assure easy access during repair and maintenance when unit is installed in a pit or tight places.

OPERATION

During normal flow conditions, the two check valves are held off their seats, supplying water downstream. Each check valve is designed to maintain a minimum of 1 psi across the valve during normal operation. Should the downstream pressure increase to within 1 psi of supply pressure, both check valves will close to prevent a backflow condition.

FEATURES

- Top access for testing, repair and maintenance
- Corrosion resistant
- Low head loss
- Interchangeable poppets and springs
- Replaceable seats
- Comes standard with Apollo® full port ball valves
- Maximum working pressure 175 psig
- Temperature range 33°F-180°F

MATERIALS

Body and covers	Bronze
Springs	Stainless Steel
Poppets	Glass-Filled Celcon
Seat discs	Silicone Rubber
Replaceable seats	Glass-Filled Noryl
Fasteners	Stainless Steel

ORDERING NUMBER

4 0 - 1 X X - TC2

0 - Standard
1 - w/ Y-strainer (shipped loose)

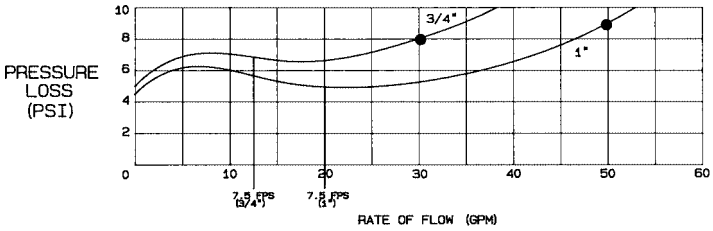
4 - 3/4"
5 - 1"

TOP ENTRY TC2 DOUBLE CHECK VALVE ASSEMBLY

SIZES 3/4"—1"

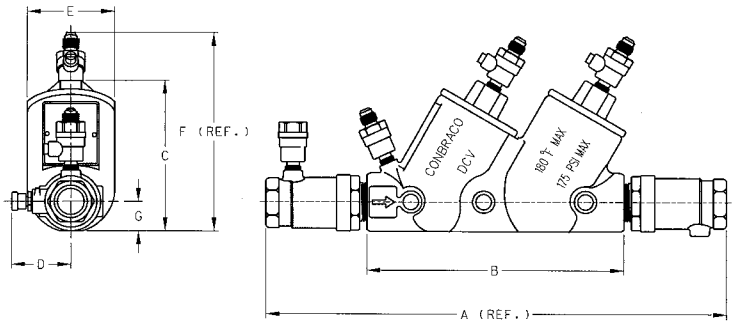
FLOW CURVES

(•) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards.



DIMENSIONS (IN.)—WEIGHTS (LBS.)

Body Size	3/4"	1"
A	13	14-3/4
B	7-1/4	7-1/4
C	4-1/4	4-5/16
D	1-11/16	1-7/8
E	2-7/16	2-7/16
F	5-5/8	5-11/16
G	1-3/16	1-7/8
Test Cocks	1/8 x 1/4 SAE	1/8 x 1/4 SAE
Net Wt.	8-7/8	9-1/2
Shpg. Wt.	10-1/8	11



SERIES 40-100

DESCRIPTION

The Conbraco Series 40-100 Double Check Valve Backflow Preventer is designed to control cross-connections between potable water lines and substances that are objectionable, but not a health hazard. It is an economical device that is easily repaired in the line. The device consists of two independently acting, spring-loaded check valves in a corrosion resistant ductile iron body. The unit is available with inlet and outlet shutoff valves. Four test cocks, three on the check valve body and one on the inlet shutoff valve, complete the assembly.

OPERATION

During normal flow conditions, the two check valves are held off their seats, supplying water downstream. Each check valve is designed to maintain a minimum of 1 psi across the valve during normal operation. If at any time the pressure downstream of the device increases to within 1 psi of supply pressure, both check valves will close to prevent a backflow condition from occurring.

FEATURES

- Corrosion resistant
- Removable bronze seats
- Replaceable discs
- Low head loss
- Economical
- Designed for easy maintenance
- Check valve assemblies interchangeable
- Maximum working pressure 175 psig
- Operating temperature range 33°F-140°F

Contact local water authorities for installation/service requirements.

MATERIALS

Body and covers	Epoxy Coated (FDA Approved) Ductile Iron
Springs	Stainless Steel
Seats	Bronze
C.V. Discs	EPDM
Fasteners	Stainless Steel

ORDERING NUMBER

40-1XX-0X

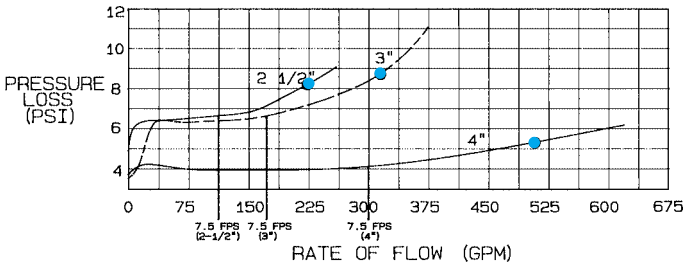
0 - Standard 1 - w/ Y-strainer (shipped loose)	9 - 2-1/2" 0 - 3" A - 4"	1 - less gate valves 2 - w/ NRS gate valves 3 - w/ OS&Y gate valves 5 - w/ Epoxy coated ball valves 6 - w/ OS&Y gate valve on inlet, NRS gate valve w/ post plate and nut on outlet

DOUBLE CHECK VALVE ASSEMBLY

SIZES 2-1/2"—3"—4"

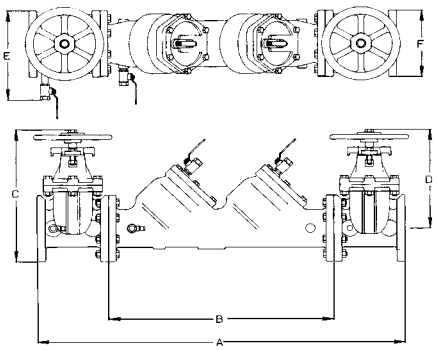
FLOW CURVES

(•) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards.



DIMENSIONS (IN.)—WEIGHTS (LBS.)

Body Size		2-1/2"	3"	4"
A		37-1/16	38-1/16	46-3/4
B		22-1/16	22-1/16	28-1/2
C	NRS	14-7/8	16-1/8	19-1/4
C	OS&Y (OPEN)	19-7/8	22-5/8	27-1/4
D	NRS	11-3/8	12-3/8	14-3/4
D	OS&Y (OPEN)	16-3/8	18-7/8	22-3/4
E		9-5/8	10-3/8	11-7/8
F		7	7-1/2	9
Test Cocks		1/2 x 1/2 NPT	1/2 x 1/2 NPT	1/2 x 1/2 NPT
Net Wt.	(Less Gate Valves)	84	84	146
Net Wt.	(With NRS Valves)	183	214	338
Net Wt.	(With OS&Y Valves)	193	221	352
Net Wt.	(With Post Indicator)	N/A	N/A	355
Net Wt.	(With Ball Valves)	152	160	262
Shpg. Wt.	(Less gate Valves)	148	148	210
Shpg. Wt.	(With NRS Valves)	247	278	402
Shpg. Wt.	(With OS&Y Valves)	257	285	416
Shpg. Wt.	(With Post Indicator)	N/A	N/A	419
Shpg. Wt.	(With Ball Valves)	216	224	326



SERIES 40-100

DESCRIPTION

The Conbraco Series 40-100 Double Check Valve Backflow Preventer is designed to control cross-connections between potable water lines and substances that are objectionable, but not a health hazard. It is an economical device that is easily repaired in the line. The device consists of two independently acting, spring-loaded check valves in a corrosion resistant body. The unit is available with inlet and outlet shutoff valves. Four test cocks, three on the check valve body and one on the inlet shutoff valve, complete the assembly.

OPERATION

During normal flow conditions, the two check valves are held off their seats, supplying water downstream. Each check valve is designed to maintain a minimum of 1 psi across the valve during normal operation. If at any time the pressure downstream of the device increases to within 1 psi of supply pressure, both check valves will close to prevent a backflow condition from occurring.

FEATURES

- Corrosion resistant
- Removable bronze seats
- Replaceable discs
- Low head loss
- Economical
- Designed for easy maintenance
- Check valve assemblies interchangeable
- Maximum working pressure 175 psig
- Operating temperature range 33°F-140°F

Contact local water authorities for installation/service requirements.

MATERIALS

Body and covers	Epoxy Coated/FDA Approved Ductile Iron
Springs	Stainless Steel
Seats	Bronze
C.V. Discs	EPDM
Fasteners	Stainless Steel

ORDERING NUMBER

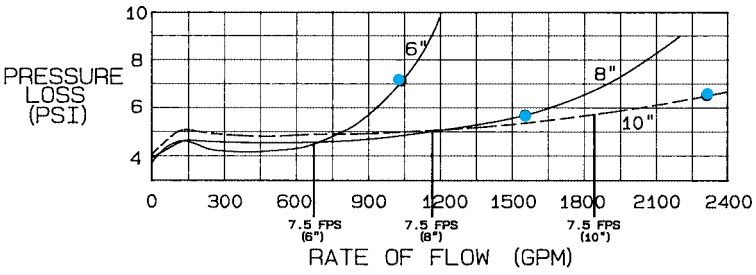
40-1XX-0X

0 - Standard 1 - w/ Y-strainer (shipped loose)	C - 6" E - 8" G - 10"	1 - less gate valves 2 - w/ NRS gate valves 3 - w/ OS&Y gate valves 5 - w/ Epoxy coated ball valves 6 - w/ OS&Y gate valve on inlet, NRS gate valve w/ post plate and nut on outlet

DOUBLE CHECK VALVE ASSEMBLY
SIZES 6"—8"—10"

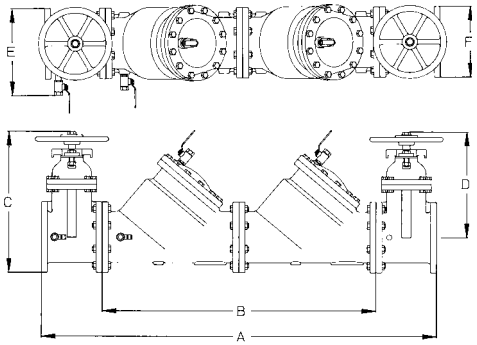
FLOW CURVES

(•) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards.



DIMENSIONS (IN.)—WEIGHTS (LBS.)

Body Size		6"	8"	10"
A		63	75	88-1/4
B		42	52	62-1/16
C	NRS	24-1/2	29-1/4	34-1/2
C	OS&Y (OPEN)	35-5/8	44-1/2	53-3/4
D	NRS	19	22-1/2	26-1/2
D	OS&Y (OPEN)	30-1/8	37-3/4	45-3/4
E		14-5/8	16-3/4	19-1/4
F		11	13-1/2	16
Test Cocks		3/4 x 3/4 NPT	3/4 x 3/4 NPT	3/4 x 3/4 NPT
Net Wt. (Less Gate Valves)		389	625	1339
Net Wt. (With NRS Valves)		695	1065	2044
Net Wt. (With OS&Y Valves)		713	1120	2182
Net Wt. (With OS&Y/Post Indicator)		675	1091	2129
Net Wt. (With Ball Valves)		625	N/A	N/A
Shpg. Wt. (Less Gate Valves)		487	795	1509
Shpg. Wt. (With NRS Valves)		831	1304	2299
Shpg. Wt. (With OS&Y Valves)		849	1359	2437
Shpg. Wt. (With OS&Y/Post Indicator)		811	1271	2345
Shpg. Wt. (With Ball Valves)		795	N/A	N/A



Model DC

DESCRIPTION

The Conbraco Model DC Double Check Valve Backflow Preventer is designed to prevent backflow by either back-pressure or backsiphonage from a cross-connection between potable water lines and substances that are objectionable, but not a health hazard. It is an economical device that is easily repaired in the line. The device consists of two independently acting, spring-loaded poppet type check valves in an integral cast bronze body. Four test cocks and two shut-off valves which are quarter-turn, full-port, resilient-seated and ball type complete the assembly.

OPERATION

During normal flow conditions, the two check valves are held off their seats, supplying water downstream. Each check valve is designed to maintain a minimum of 1 psid across the valve during normal operation. If at any time the pressure downstream of the device increases to within 1 psi of supply pressure, both check valves will close to prevent a backflow condition from occurring.

FEATURES

- Corrosion resistant
- Easy to install, repair and maintain
- Low head loss
- Replaceable check modules
- Comes standard with “Apollo” full-port ball valves
- Maximum working pressure 175 psig
- Operating temperature range 33°F-180°F

Contact local water authorities for installation/service requirements.

MATERIALS

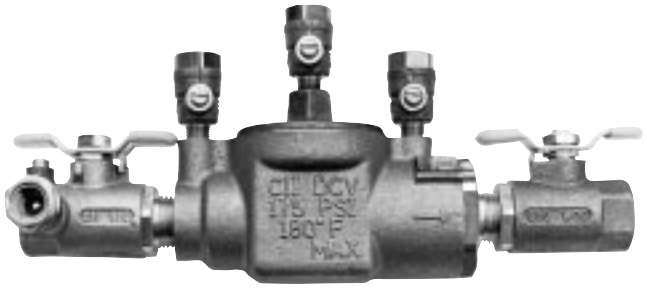
Body and Cover	Bronze
Check Modules	Acetal w/Stainless Steel Springs
Spacer	Stainless Steel

ORDERING NUMBER

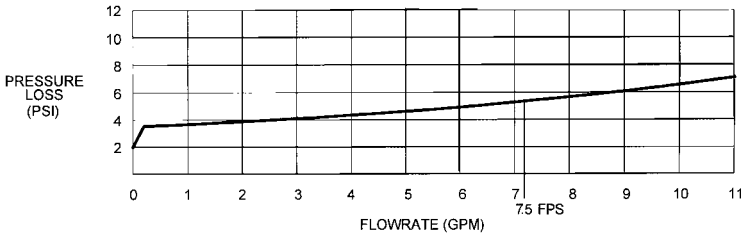
4S-103-AX

1 - less ball valves
2 - w/ ball valves
4 - w/ union end ball valves

TOP ENTRY DOUBLE CHECK VALVE ASSEMBLY
SIZE 1/2"

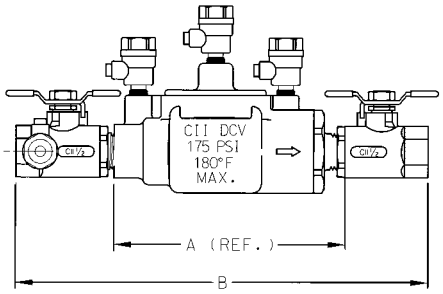


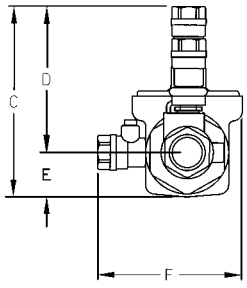
FLOW CURVE



DIMENSIONS (IN.)—WEIGHTS (LBS.)

Body Size	1/2"
A (w/o Ball Valves)	5-5/8
B	9-3/4
C	4-1/2
D	3-1/2
E	1
F	3-5/8
Net Wt. (w/o Ball Valves)	2.68
Net Wt. (with Ball Valves)	4.38
Shipping Wt. (w/o Ball Valves)	3.8
Shipping Wt. (with Ball Valves)	5.1





MODEL DC

DESCRIPTION

The Conbraco Model DC Double Check Valve Backflow Preventer is designed to control cross-connections between potable water lines and substances that are objectionable, but not a health hazard. It is an economical device that is easily repaired in the line. The device consists of two independently acting, spring-loaded swing type check valves in a corrosion resistant ductile iron body. The unit is available with inlet and outlet shutoff valves. Four test cocks, three on the check valve body and one on the inlet shutoff valve, complete the assembly.

OPERATION

During normal flow conditions, the two check valves are held off their seats, supplying water downstream. Each check valve is designed to maintain a minimum of 1 psi across the valve during normal operation. If at any time the pressure downstream of the device increases to within 1 psi of supply pressure, both check valves will close to prevent a backflow condition from occurring.

FEATURES

- Patent # 5,711,341
- Replaceable discs
- Economical
- Lightweight
- Corrosion resistant
- Low head loss
- Short lay length
- Designed for easy maintenance
- Check valve assemblies interchangeable
- Maximum working pressure 175 psig
- Operating temperature range 33°F-140°F

Contact local water authorities for installation/service requirements.

MATERIALS

Body	Epoxy Coated (FDA Approved) Ductile Iron
Covers	Epoxy Coated Steel
Springs	Stainless Steel
Seats	Glass Filled Noryl
C.V. Discs	EPDM
Fasteners	Stainless Steel

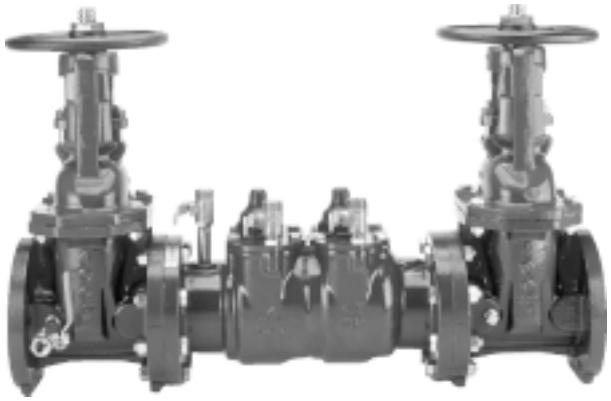
ORDERING NUMBER

4 S - 1 X X - 0 X U

- 4 S - 1 X X - 0 X U — w/Elbows
- 0 - Standard
- 1 - w/ Y-strainer (shipped loose)
- 9 - 2-1/2"
- 0 - 3"
- A - 4"
- C - 6"
- 1 - less gate valves
- 2 - w/ NRS gate valves
- 3 - w/ OS&Y gate valves
- 5 - w/ Epoxy coated ball valves
- 6 - w/ OS&Y gate valve on inlet, NRS gate valve w/ post plate and nut on outlet

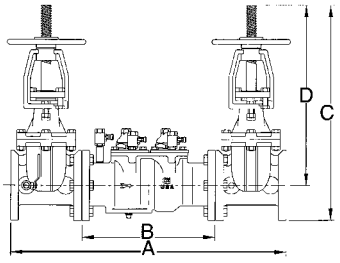
DOUBLE CHECK VALVE ASSEMBLY

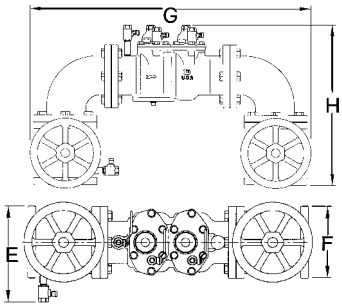
SIZES 2-1/2"—3"—4"—6"



DIMENSIONS (IN.)—WEIGHTS (LBS.)

Body Size	2-1/2"	3"	4"	6"
A	32	33	34-1/2	39
B	17	17	16-1/2	18
C NRS	14-7/8	16-1/8	19-1/4	24-1/2
C OS&Y (OPEN)	19-7/8	22-5/8	27-1/4	35-5/8
D NRS	11-3/8	12-3/8	14-3/4	19
D OS&Y (OPEN)	16-3/8	18-7/8	22-3/4	30-1/8
E	9-5/8	10-3/8	11-7/8	14-5/8
F	7	7-1/2	9	11
G	34-5/8	38-1/8	39-5/8	46-1/8
H	19-7/8	20-7/8	22-7/8	25-7/8
Net Wt. (Less Gate Valves)	58	60	68	80
Net Wt. (With NRS Valves)	153	186	254	376
Net Wt. (With OS&Y Valves)	164	194	266	392
Net Wt. (With NRS Valves & Elbows)	189	237	339	511
Net Wt. (With OS&Y Valves & Elbows)	200	245	351	527
Net Wt. (With Ball Valves)	126	136	184	388
Net Wt. (With Post Indicator)	188	214	281	404
Shpg. Wt. (Less Gate Valves)	122	124	132	178
Shpg. Wt. (With NRS Valves)	221	254	324	484
Shpg. Wt. (With OS&Y Valves)	231	261	338	502
Shpg. Wt. (With NRS Valves & Elbows)	257	305	409	619
Shpg. Wt. (With OS&Y Valves & Elbows)	267	312	423	637
Shpg. Wt. (With Ball Valves)	193	203	254	498
Shpg. Wt. (With Post Indicator)	255	281	353	514





MODEL DC

DESCRIPTION

The Conbraco Model DC Double Check Valve Backflow Preventer is designed to control cross-connections between potable water lines and substances that are objectionable, but not a health hazard. It is an economical device that is easily repaired in the line. The device consists of two independently acting, spring-loaded swing type check valves in a corrosion resistant ductile iron body. The unit is available with inlet and outlet shutoff valves. Four test cocks, three on the check valve body and one on the inlet shutoff valve, complete the assembly.

OPERATION

During normal flow conditions, the two check valves are held off their seats, supplying water downstream. Each check valve is designed to maintain a minimum of 1 psi across the valve during normal operation. If at any time the pressure downstream of the device increases to within 1 psi of supply pressure, both check valves will close to prevent a backflow condition from occurring.

FEATURES

- Replaceable discs
- Economical
- Lightweight
- Corrosion resistant
- Low head loss
- Short lay length
- Designed for easy maintenance
- Check valve assemblies interchangeable
- Maximum working pressure 175 psig
- Operating temperature range 33°F-140°F

Contact local water authorities for installation/service requirements.

MATERIALS

Body	Epoxy Coated (FDA Approved) Ductile Iron
Covers	Epoxy Coated Steel
Springs	Stainless Steel
Seats	Glass Filled Noryl
C.V. Discs	EPDM
Fasteners	Stainless Steel

ORDERING NUMBER

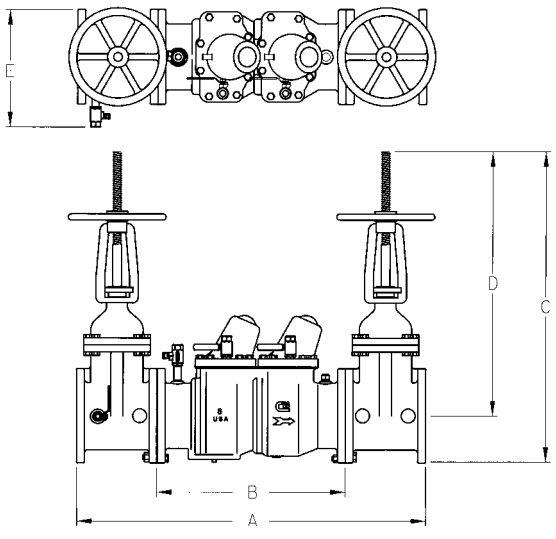
4 S - 1 X X - 0 X U

- 4 S - w/Elbows
- 1 X X - 1 - less gate valves; 2 - w/ NRS gate valves; 3 - w/ OS&Y gate valves; 6 - w/ OS&Y gate valve on inlet, NRS gate valve w/ post plate and nut on outlet
- 0 X U - 0 - Standard; 1 - w/ Y-strainer (shipped loose)
- E - 8"; G - 10"

DOUBLE CHECK VALVE ASSEMBLY
SIZES 8"—10"

DIMENSIONS (IN.)—WEIGHTS (LBS.)

Body Size	8"	10"
A	50	55-1/2
B	27	29-1/2
C NRS	29-1/4	34-1/4
C OS&Y (OPEN)	44-1/2	53-3/4
D NRS	22-1/2	26-1/2
D OS&Y (OPEN)	37-3/4	45-3/4
E	16-3/4	19-1/4
Test Cocks	3/4x3/4 NPT	3/4x3/4 NPT
Net Wt. (Less Gate Valves)	420	470
Net Wt. (With NRS Valves)	856	1175
Net Wt. (With OS&Y Valves)	920	1320
Net Wt. (With NRS Valves & Elbows)	1098	1200
Net Wt. (With OS&Y Valves & Elbows)	1162	1355
Net Wt. (With Post Indicator)	911	1280
Shpg. Wt. (Less Gate Valves)	510	565
Shpg. Wt. (With NRS Valves)	936	1265
Shpg. Wt. (With OS&Y Valves)	1026	1420
Shpg. Wt. (With NRS Valves & Elbows)	1178	1310
Shpg. Wt. (With OS&Y Valves & Elbows)	1268	1465
Shpg. Wt. (With Post Indicator)	1017	1390



SERIES 40-200

DESCRIPTION

The Conbraco Series 40-200 Reduced Pressure Principle Backflow Preventer is designed to give maximum protection against backflow caused by either back-pressure or back-siphonage. The durable, but economical, device is easily maintained in the line without any special tools. It consists of two independently acting spring-loaded check valves with an automatic differential relief valve located between the check valves. The diaphragm and the sensing passage are built into the all bronze body to eliminate possible damage.

OPERATION

During normal flow conditions, the two check valves are held off their seats, supplying water downstream. The relief valve is held shut by supply pressure acting through the internal sensing passage, on the relief valve diaphragm. In the area between the check valves, called the zone, the pressure is maintained at approximately 7 psi lower than supply pressure. Should a back-pressure or back-siphonage condition occur, the second check valve will seal, prohibiting the backflow of water. Should the second check valve become fouled, the pressure in the zone will increase causing the differential relief valve to open to atmosphere. This will maintain the pressure in the zone at least 2 psi lower than supply pressure.

FEATURES

- Maximum protection against backpressure/backsiphonage
- Removable discs
- Internal sensing passage
- Designed for easy maintenance
- Low head loss
- Economical
- Corrosion resistant
- Comes standard with Apollo® full port ball valves
- Maximum working pressure 175 psig
- Operating temperature range 33°F-180°F
- Replaceable seats

.

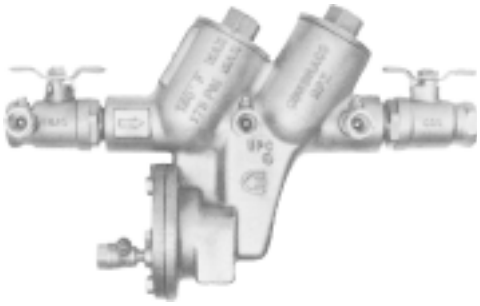
Contact local water authorities for installation/service requirements.

MATERIALS

Body and covers	Bronze
Springs	Stainless Steel
Poppets	Glass-Filled Celcon
Seat Discs	Silicone Rubber
Diaphragm	Nitrile and Nylon
R.V. Stem	Noryl
Fasteners	Stainless Steel
Replaceable Seats	Glass-Filled Noryl

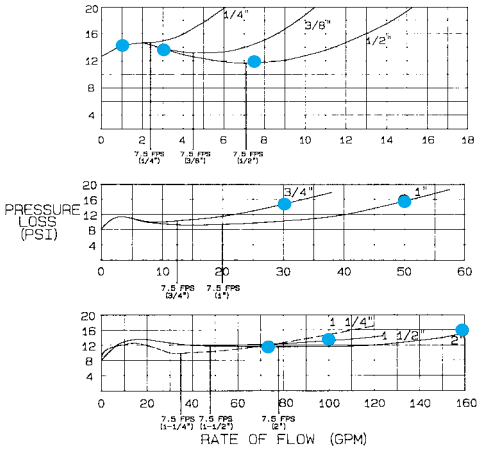
REDUCED PRESSURE PRINCIPLE

SIZES 1/4"–3/8"–1/2"–3/4"–1"–1-1/4"–1-1/2"–2"



FLOW CURVES

(•) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards.



DIMENSIONS (IN.)—WEIGHTS (LBS.)

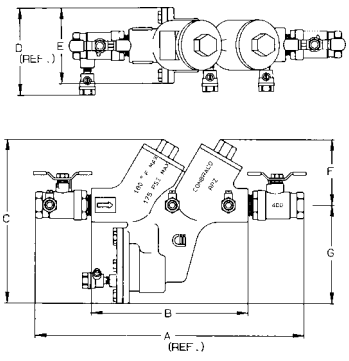
Body Size	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
A	10-3/16	10-1/4	10-3/4	13-3/4	15-3/8	17-1/2	19-1/2	21-1/2
B (w/o Ball Valves)	5-3/4	5-3/4	5-3/4	8	8	11	11	11
C	5-5/8	5-5/8	5-5/8	8-3/8	8-3/8	11-7/8	11-7/8	11-7/8
D	3-3/8	3-3/8	3-3/8	5	5	6-1/8	6-1/8	6-1/8
E	2-5/8	2-5/8	2-5/8	4	4	5-3/8	5-3/8	5-3/8
F	1-7/8	1-7/8	1-7/8	3-1/4	3-1/4	4-3/4	4-3/4	4-3/4
G	3-3/4	3-3/4	3-3/4	5-1/8	5-1/8	7-1/8	7-1/8	7-1/8
Test Cocks	1/8x1/4NPT	1/8x1/4NPT	1/8x1/4NPT	1/8x1/4NPT	1/8x1/4NPT	1/4x1/4NPT	1/4x1/4NPT	1/4x1/4NPT
Net Wt. (w/o Ball Valves)	5.7	5.7	5.1	11-1/2	11	30-1/2	27-1/2	27
Net Wt. (w/ Ball Valves)	7.0	7.0	7.4	14	14-1/2	35-1/2	37	39-1/2
Shpg. Wt. (w/o Ball Valves)	6.6	6.6	6.0	12-1/2	12	32-1/2	29	29
Shpg. Wt. (w/ Ball Valves)	7.9	7.9	8.3	15	15-1/2	38	39	41

ORDERING NUMBER

40-2XX-AX

1 - 1/4"	For UL Classified	
2 - 3/8"	(3/4" thru 2")	
3 - 1/2"	FP1 - less ball valves	
4 - 3/4"	FP2 - w/ ball valves	
5 - 1"		
6 - 1-1/4"	1 - less ball valves	
7 - 1-1/2"	2 - w/ ball valves	
8 - 2"	4 - w/ union end ball valves	

0 - Standard
1 - w/ Y-strainer (shipped loose)



SERIES 40-200

DESCRIPTION

The Conbraco Series 40-200-TC2 Reduced Pressure Principle Backflow Preventer with SAE threaded hose connections make certification testing fast and trouble-free, especially in tight installations. It is designed to give maximum protection against backflow caused by either back-pressure or back-siphonage. The durable, but economical, device is easily maintained in the line without any special tools. It consists of two independently acting spring-loaded check valves with an automatic differential relief valve located between the check valves. The diaphragm and the sensing passage are built into the all bronze body to eliminate possible damage.

OPERATION

During normal flow conditions, the two check valves are held off their seats, supplying water downstream. The relief valve is held shut by supply pressure acting through the internal sensing passage, on the relief valve diaphragm. In the area between the check valves, called the zone, the pressure is maintained at approximately 7 psi lower than supply pressure. Should a back-pressure or back-siphonage condition occur, the second check valve will seal, prohibiting the backflow of water. Should the second check valve become fouled, the pressure in the zone will increase causing the differential relief valve to open to atmosphere. This will maintain the pressure in the zone at least 2 psi lower than supply pressure.

FEATURES

- Maximum protection against backpressure/backsiphonage
- Removable discs
- Internal sensing passage
- Designed for easy maintenance
- Low head loss
- Economical
- Corrosion resistant
- Comes standard with Apollo® full port ball valves
- Maximum working pressure 175 psig
- Operating temperature range 33°F-180°F
- Replaceable seats

Contact local water authorities for installation/service requirements.

MATERIALS

Body and covers	Bronze
Springs	Stainless Steel
Poppets	Glass-Filled Celcon
Seat Discs	Silicone Rubber
Diaphragm	Nitrile and Nylon
R.V. Stem	Noryl
Fasteners	Stainless Steel
Replaceable Seats	Glass-Filled Noryl

ORDERING NUMBER

4 0 - 2 X X - TC2

4 - 3/4"
5 - 1"

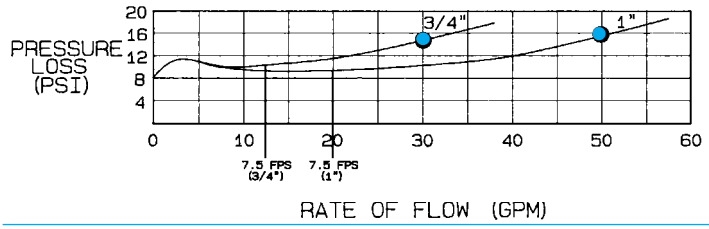
0 - Standard
1 - w/ Y-strainer (shipped loose)

REDUCED PRESSURE PRINCIPLE

SIZES 3/4" – 1"

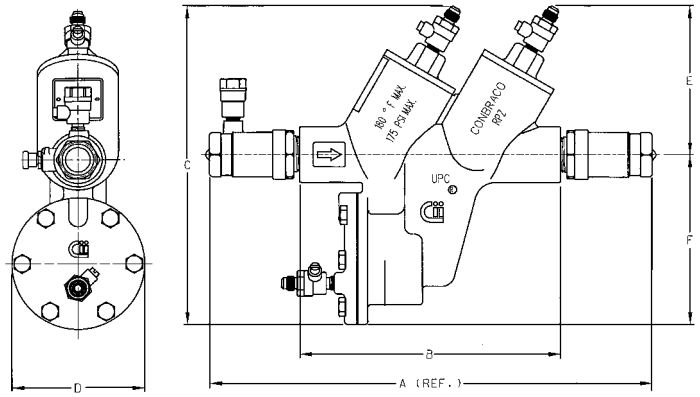
FLOW CURVES

(•) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards.



DIMENSIONS (IN.)—WEIGHTS (LBS.)

Body Size	3/4"	1"
A	13-3/4	15-3/8
B (w/o Ball Valves)	8	8
C	9-7/8	9-7/8
D	4-1/16	4-1/16
E	4-5/8	4-5/8
F	5-1/8	5-1/8
Test Cocks	1/8x1/4 SAE	1/8x1/4 SAE
Net Wt. (w/o Ball Valves)	11-1/2	11
Net Wt. (w/ Ball Valves)	14	14-1/2
Shpg. Wt. (w/o Ball Valves)	12-1/2	12
Shpg. Wt. (w/ Ball Valves)	15	15-1/2



SERIES 40-200

DESCRIPTION

The Conbraco Series 40-200-99T Reduced Pressure Principle Backflow Preventer is designed to give maximum protection against backflow caused by either back-pressure or back-siphonage. The durable, but economical, device is easily maintained in the line without any special tools. It consists of two independently acting spring-loaded check valves with an automatic differential relief valve located between the check valves. The diaphragm and the sensing passage are built into the all bronze body to eliminate possible damage. Three of the testcocks are mounted at the top to assure easy access during repair and maintenance when unit is installed in tight places.

OPERATION

During normal flow conditions, the two check valves are held off their seats, supplying water downstream. The relief valve is held shut by supply pressure acting through the internal sensing passage, on the relief valve diaphragm. In the area between the check valves, called the zone, the pressure is maintained at approximately 7 psi lower than supply pressure. Should a back-pressure or back-siphonage condition occur, the second check valve will seal, prohibiting the backflow of water. Should the second check valve become fouled, the pressure in the zone will increase causing the differential relief valve to open to atmosphere. This will maintain the pressure in the zone at least 2 psi lower than supply pressure.

FEATURES

- Maximum protection against backpressure/backsiphonage
- Removable discs
- Internal sensing passage
- Designed for easy maintenance
- Low head loss
- Economical
- Corrosion resistant
- Comes standard with Apollo® full port ball valves
- Maximum working pressure 175 psig
- Operating temperature range 33°F-180°F
- Replaceable seats

Contact local water authorities for installation/service requirements.

MATERIALS

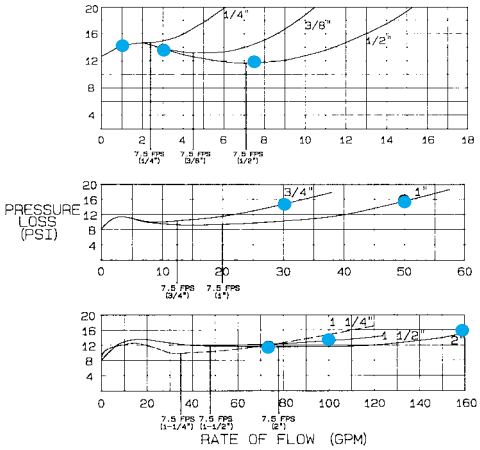
Body and covers	Bronze
Springs	Stainless Steel
Poppets	Glass-Filled Celcon
Seat Discs	Silicone Rubber
Diaphragm	Nitrile and Nylon
R.V. Stem	Noryl
Fasteners	Stainless Steel
Replaceable Seats	Glass-Filled Noryl

REDUCED PRESSURE PRINCIPLE

SIZES 1/4"–3/8"–1/2"–3/4"–1"–1-1/4"–1-1/2"–2"

FLOW CURVES

(•) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards.



DIMENSIONS (IN.)—WEIGHTS (LBS.)

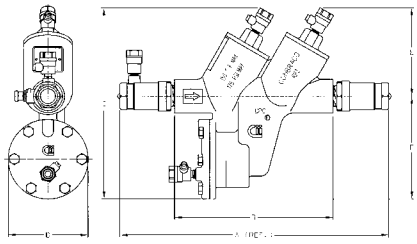
Body Size	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
A	10-3/16	10-1/4	10-3/4	13-3/4	15-3/8	17-1/2	19-1/2	21-1/2
B (w/o Ball Valves)	5-3/4	5-3/4	5-3/4	8	8	11	11	11
C	6-7/8	6-7/8	6-7/8	9-3/4	9-3/4	12-5/8	12-5/8	12-5/8
D	2-5/8	2-5/8	2-5/8	4-1/16	4-1/16	5-3/8	5-3/8	5-3/8
E	3-1/8	3-1/8	3-1/8	4-1/2	4-1/2	5-11/16	5-11/16	5-11/16
F	3-3/4	3-3/4	3-3/4	5-1/8	5-1/8	7-1/8	7-1/8	7-1/8
Test Cocks	1/8x1/4NPT	1/8x1/4NPT	1/8x1/4NPT	1/8x1/4NPT	1/8x1/4NPT	1/4x1/4NPT	1/4x1/4NPT	1/4x1/4NPT
Net Wt. (w/o Ball Valves)	5.7	5.7	5.1	11-1/2	11	30-1/2	27-1/2	27
Net Wt. (w/ Ball Valves)	7.0	7.0	7.4	14	14-1/2	35-1/2	37	39-1/2
Shpg. Wt. (w/o Ball Valves)	6.6	6.6	6.0	12-1/2	12	32-1/2	29	29
Shpg. Wt. (w/ Ball Valves)	7.9	7.9	8.3	15	15-1/2	38	39	41

ORDERING NUMBER

4 0 - 2 X X - 99T

0 - Standard
1 - w/ Y-strainer (shipped loose)

1-1/4"
2-3/8"
3-1/2"
4-3/4"
5-1"
6-1-1/4"
7-1-1/2"
8-2"



SERIES 40-200

DESCRIPTION

The Conbraco Series 40-205-FHB Fire Hydrant Backflow Meter shall measure potable water from a fire hydrant or other non-permanent installation. At the same time it shall protect against backflow by either backpressure or backsiphonage from a cross-connection between potable water system and substances that are non-health and health hazards. The unit shall consist of a 3/4" Short Water Meter, 1" RP device, 1" resilient-seated full port ball valve with locking device, 2 1/2"-7 1/2" NST threaded hose couplings, strainer on inlet of meter and adjustable support rod assembly.

OPERATION

The Fire Hydrant Backflow Meter is connected directly to a fire hydrant with a 2 1/2"-7 1/2" NST fire hose female swivel coupling. The device operates like a standard Reduced Pressure device except the flow through the device is measured by a Water Meter connected to the inlet of the backflow preventer. Support rod assembly is adjustable to accommodate fire hydrants at different heights from the ground.

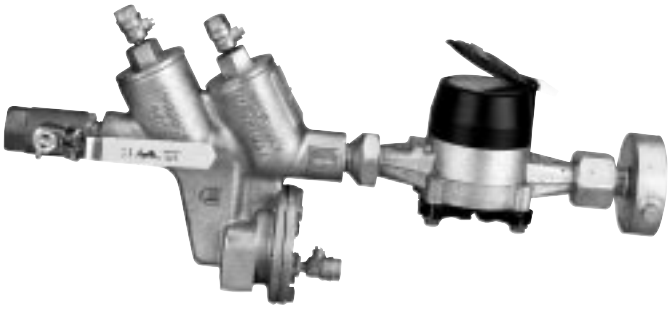
FEATURES

- Normal operating flow range 2-30 gpm
- Accuracy 100% ± 1.5% of actual thruput
- Low flow registration 95% at 1/2 gpm
- Maximum pressure loss 11.0 psi at 30 gpm
- Maximum operating pressure 150 psi
- Measuring element oscillating piston
- Register is straight reading, hermetically sealed magnetic drive
- Meter maincase is bronze, measuring chamber is Rocksyn, a corrosion resistant thermoplastic material, maincase bottom plate is bronze, gears are self-lubricating, molded plastic for long life and minimum friction, magnets are Alnico, trim and casing bolts are stainless steel and strainer is thermoplastic.
- Tamperproof locking system inside the meter
- 2 1/2"-7 1/2" NST fire hose swivel couplings, female inlet, male outlet
- Maximum rate listed is for intermittent flow only. Maximum continuous flow rate as specified by AWWA is 15 gpm.

Contact local water authorities for installation/service requirements.

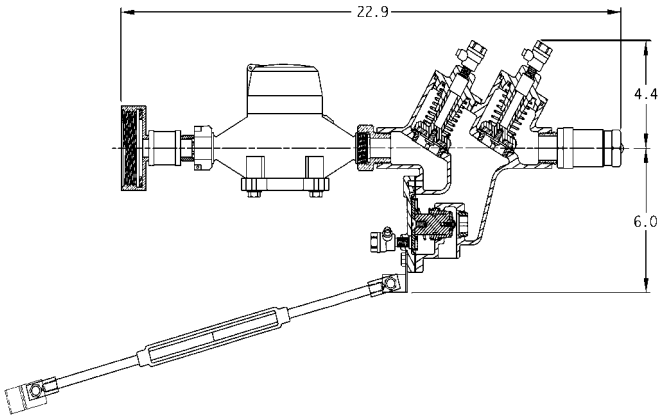
FIRE HYDRANT BACKFLOW METER

SIZE 1"



DIMENSIONS (IN.)—WEIGHTS (LBS.)

NET WEIGHT	24.1
SHIPPING WEIGHT	27.6



MODEL NUMBER

40-205-FHB	(meter in cu. ft.)
40-205-FHBG	(meter in gallons)

SERIES 40-200

DESCRIPTION

The Conbraco Series 40-208-FHB Fire Hydrant Backflow Meter shall measure potable water from a fire hydrant or other non-permanent installation. At the same time it shall protect against backflow by either backpressure or backsiphonage from a cross-connection between potable water system and substances that are non-health and health hazards. The unit shall consist of a 3" Fire Hydrant Meter, 2" RP device, 2" resilient-seated full port ball valve with locking device, 2 1/2"-7 1/2" NST threaded hose couplings, stainless steel internal strainer on inlet connection and adjustable support rod assembly.

OPERATION

The Fire Hydrant Backflow Meter is connected directly to a fire hydrant with a 2 1/2"-7 1/2" NST fire hose female swivel coupling. The device operates like a standard Reduced Pressure device except the flow through the device is measured by a Fire Hydrant Meter connected to the inlet of the backflow preventer. Support rod assembly is adjustable to accommodate fire hydrants at different heights from the ground.

FEATURES

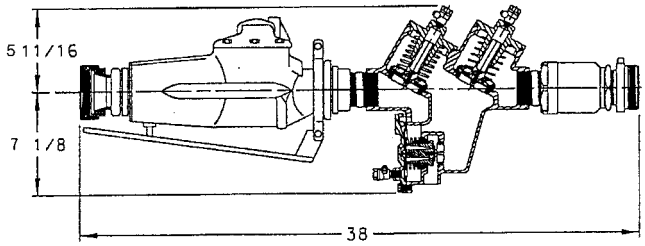
- Operating range for continuous flow 10-350 GPM intermittent flow 400 gpm max.
- Accuracy 100% ± 1.5% of actual thruput
- Low flow 95% at 6 gpm
- Register is hermetically sealed direct reading with low flow indicator.
- Meter maincase is lightweight cast aluminum alloy. Measuring Chamber, Straightening Vanes, Flow Tube and Rotor are thermoplastic. Radial Bearing is graphite. Thrust Bearings are tungsten carbide. Magnets are ceramic. Rotor shaft is chrome plated stainless steel.
- Stainless steel internal strainer on inlet connection
- Meter register lid locking hasp
- Flow restriction limits flow thru meter to 400 gpm at 60 psi.
- Locking device on shut-off valve
- Adjustable support rod assembly
- 2 1/2" - 7 1/2" NST fire hose swivel couplings, female inlet, male outlet.

Contact local water authorities for installation/service requirements.

FIRE HYDRANT BACKFLOW METER
SIZE 2"

DIMENSIONS (IN.)—WEIGHTS (LBS.)

NET WEIGHT	63.3
SHIPPING WEIGHT	70



MODEL NUMBER

40-208-FHB	(meter in cu. ft.)
40-208-FHBG	(meter in gallons)

SERIES 40-200

DESCRIPTION

The Conbraco Series 40-200 Stainless Steel Reduced Pressure Principle Backflow Preventer is designed to give maximum protection against backflow caused by either back-pressure or back-siphonage from a cross-connection wherein a contaminant hazard exists (i.e. a health hazard), or a pollutant hazard exists (i.e. a non-hazard). The assembly is composed of two spring-loaded poppet type check valves and a mechanically independent, hydraulically dependent pressure differential relief valve set in an integral stainless steel body.

OPERATION

During normal flow conditions, the two check valves are held off their seats, supplying water downstream. The relief valve is held shut by supply pressure acting through the internal sensing passage, on the relief valve diaphragm. In the area between the check valves, called the zone, the pressure is maintained at approximately 7 psi lower than supply pressure. Should a back-pressure or back-siphonage condition occur, the second check valve will seal, prohibiting the backflow of water. Should the second check valve become fouled, the pressure in the zone will increase causing the differential relief valve to open to atmosphere. This will maintain the pressure in the zone at least 2 psi lower than supply pressure.

FEATURES

- Stainless steel body and covers
- Easy to install and repair
- Internal sensing passage
- Low head loss
- Removable seat discs
- Replaceable seats
- Comes standard with Apollo® stainless steel full port ball valves
- Maximum working pressure 175 psig
- Temperature range 33°F-180°F

Contact local water authorities for installation/service requirements.

MATERIALS

Body and Cover	Stainless Steel
Springs	Stainless Steel
Fasteners	Stainless Steel
Poppets	Glass-Filled Celcon
Seat Discs	Silicone Rubber
Diaphragm and O-Rings	FDA Fluorocarbon
Replaceable Seats	Glass-Filled Noryl

ORDERING NUMBER

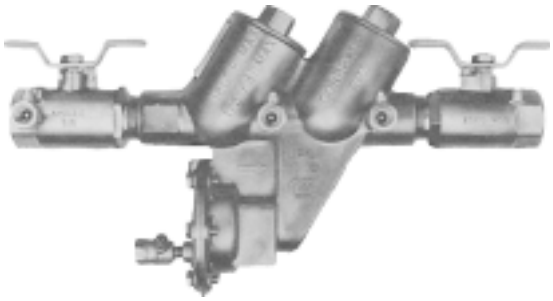
40-20X-AXS

1 - 1/4"
2 - 3/8"
3 - 1/2"
4 - 3/4"
5 - 1"

For UL Classified (3/4" & 1")
FP1S - less ball valves
FP2S - w/ ball valves

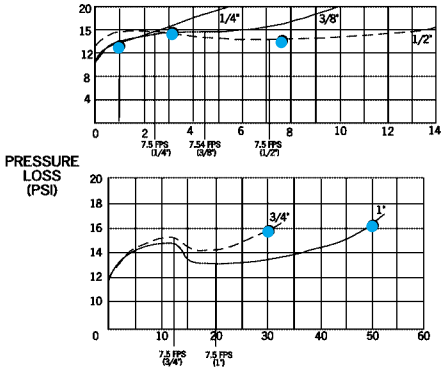
1 - less ball valves
2 - with ball valves

STAINLESS STEEL
REDUCED PRESSURE BACKFLOW PREVENTER
SIZES 1/4"—3/8"—1/2"—3/4"—1"



FLOW CURVES

(•) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards.

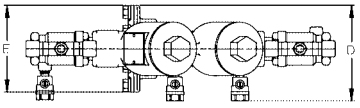


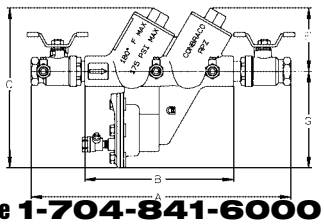
APPLICATION

Whenever an ambient or downstream liquid is of such composition so as to damage bronze material, the Conbraco Stainless Steel Reduced Pressure Backflow Preventer is ideal. Among the applications are: medical diagnostic equipment, pharmaceutical manufacturers, chemical processing plants, pulp and paper mills, food processing equipment, dialysis machines, liquid dispensing equipment and distillers/breweries.

DIMENSIONS (IN.)—WEIGHTS (LBS.)

Body Size	1/4"	3/8"	1/2"	3/4"	1"
A	10-1/2	10-1/2	10-1/2	13-1/2	15-1/4
B	5-3/4	5-3/4	5-3/4	7-15/16	7-15/16
C	5-13/16	5-13/16	5-13/16	8-3/8	8-3/8
D	3-5/8	3-5/8	3-5/8	4-3/4	4-3/4
E	2-5/8	2-5/8	2-5/8	4	4
F	2-1/8	2-1/8	2-1/8	3-1/4	3-1/4
G	3-3/4	3-3/4	3-3/4	5-1/8	5-1/8
Test Cocks	1/8 x 1/4NPT	1/8 x 1/4NPT	1/8 x 1/4NPT	1/8 x 1/4NPT	1/8 x 1/4NPT
Net Wt. (w/o Ball Valves)	4-1/4	4-1/4	4-1/8	8-1/4	8-1/8
Net Wt. (with Ball Valves)	5-1/2	5-1/2	5-3/8	10-3/4	11
Shpg. Wt. (w/o Ball Valves)	5-1/8	5-1/8	5	9-3/4	9-5/8
Shpg. Wt. (with Ball Valves)	6-3/8	6-3/8	6-1/4	12-1/4	12-3/4





SERIES 40-200

DESCRIPTION

The Conbraco Series 40-200-99TS Stainless Steel Reduced Pressure Principle Backflow Preventer is designed to give maximum protection against backflow caused by either back-pressure or back-siphonage from a cross-connection wherein a contaminant hazard exists (i.e. a health hazard), or a pollutant hazard exists (i.e. a non-hazard). The assembly is composed of two spring-loaded poppet type check valves and a mechanically independent, hydraulically dependent pressure differential relief valve set in an integral stainless steel body. Three of the testcocks are mounted at the top to assure easy access during repair and maintenance when unit is installed in tight places.

OPERATION

During normal flow conditions, the two check valves are held off their seats, supplying water downstream. The relief valve is held shut by supply pressure acting through the internal sensing passage, on the relief valve diaphragm. In the area between the check valves, called the zone, the pressure is maintained at approximately 7 psi lower than supply pressure. Should a back-pressure or back-siphonage condition occur, the second check valve will seal, prohibiting the backflow of water. Should the second check valve become fouled, the pressure in the zone will increase causing the differential relief valve to open to atmosphere. This will maintain the pressure in the zone at least 2 psi lower than supply pressure.

FEATURES

- Stainless steel body and covers
- Easy to install and repair
- Internal sensing passage
- Low head loss
- Removable seat discs
- Replaceable seats
- Comes standard with Apollo® stainless steel full port ball valves
- Maximum working pressure 175 psig
- Temperature range 33°F-180°F

Contact local water authorities for installation/service requirements.

MATERIALS

Body and Cover	Stainless Steel
Springs	Stainless Steel
Fasteners	Stainless Steel
Poppets	Glass-Filled Celcon
Seat Discs	Silicone Rubber
Diaphragm and O-Rings	FDA Fluorocarbon
Replaceable Seats	Glass-Filled Noryl

ORDERING NUMBER

4 0 - 2 0 X - 99TS

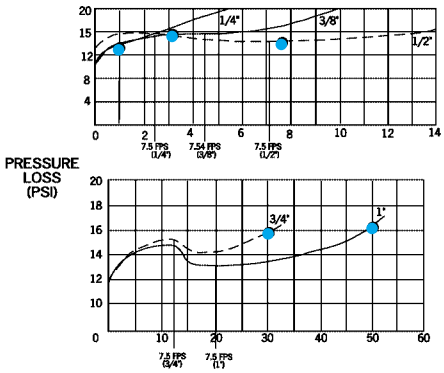
1 - 1/4"
2 - 3/8"
3 - 1/2"
4 - 3/4"
5 - 1"

STAINLESS STEEL

99TS REDUCED PRESSURE BACKFLOW PREVENTER SIZES 1/4"—3/8"—1/2"—3/4"—1"

FLOW CURVES

(•) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards.

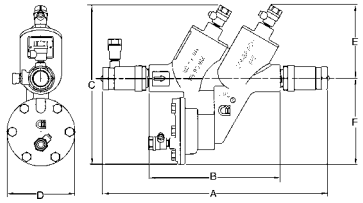


APPLICATION

Whenever an ambient or downstream liquid is of such composition so as to damage bronze material, the Conbraco Stainless Steel Reduced Pressure Backflow Preventer is ideal. Among the applications are: medical diagnostic equipment, pharmaceutical manufacturers, chemical processing plants, pulp and paper mills, food processing equipment, dialysis machines, liquid dispensing equipment and distillers/breweries.

DIMENSIONS (IN.)—WEIGHTS (LBS.)

Body Size	1/4"	3/8"	1/2"	3/4"	1"
A	10-1/2	10-1/2	10-1/2	13-1/2	15-1/4
B	5-3/4	5-3/4	5-3/4	7-15/16	7-15/16
C	6-7/8	6-7/8	6-7/8	9	9
D	2-5/8	2-5/8	2-5/8	4-1/16	4-1/16
E	3-3/16	3-3/16	3-3/16	4-3/8	4-3/8
F	3-3/4	3-3/4	3-3/4	5-1/8	5-1/8
Test Cocks	1/8 x 1/4NPT	1/8 x 1/4NPT	1/8 x 1/4NPT	1/8 x 1/4NPT	1/8 x 1/4NPT
Net Wt. (w/o Ball Valves)	4-1/4	4-1/4	4-1/8	8-1/4	8-1/8
Net Wt. (with Ball Valves)	5-1/2	5-1/2	5-3/8	10-3/4	11
Shpg. Wt. (w/o Ball Valves)	5-1/8	5-1/8	5	9-3/4	9-5/8
Shpg. Wt. (with Ball Valves)	6-3/8	6-3/8	6-1/4	12-1/4	12-3/4



SERIES 40-200

DESCRIPTION

The Conbraco Series 40-200 Reduced Pressure Principle Backflow Preventer is designed to give maximum protection against backflow caused by either back-pressure or back-siphonage. The durable, but economical, device is easily maintained in the line without any special tools. It consists of two independently acting spring-loaded check valves with an automatic differential relief valve located between the check valves. The diaphragm and the sensing passage are built into the all bronze body to eliminate possible damage. The assembly offers installation flexibility by providing inlet and outlet bronze elbows to meet space requirements, adaptability and lower installation cost.

OPERATION

During normal flow conditions, the two check valves are held off their seats, supplying water downstream. The relief valve is held shut by supply pressure acting through the internal sensing passage, on the relief valve diaphragm. In the area between the check valves, called the zone, the pressure is maintained at approximately 7 psi lower than supply pressure. Should a back-pressure or back-siphonage condition occur, the second check valve will seal, prohibiting the backflow of water. Should the second check valve become fouled, the pressure in the zone will increase causing the differential relief valve to open to atmosphere. This will maintain the pressure in the zone at least 2 psi lower than supply pressure.

FEATURES

- Maximum protection against back-pressure/back-siphonage
- Flexibility in installation
- Low installation cost
- Compact
- Internal sensing passage
- Low head loss
- Removable seat discs
- Replaceable seats
- Comes standard with Apollo® full port Ball Valves
- Maximum working pressure 175 psig
- Temperature range 33°F-180°F

Contact local water authorities for installation/service requirements.

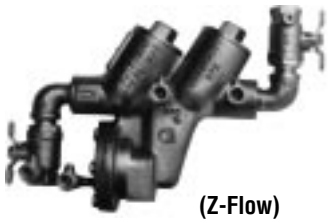
MATERIALS

Body, covers & elbows	Bronze
Springs	Stainless Steel
Poppets	Glass-Filled Celcon
Seat Discs	Silicone Rubber
Diaphragm	Nitrile and Nylon
R.V. Stem	Noryl
Fasteners	Stainless Steel
Replaceable Seats	Glass-Filled Noryl

U AND Z FLOW

REDUCED PRESSURE PRINCIPLE

SIZES 3/4"–1"–1-1/4"–1-1/2"–2"

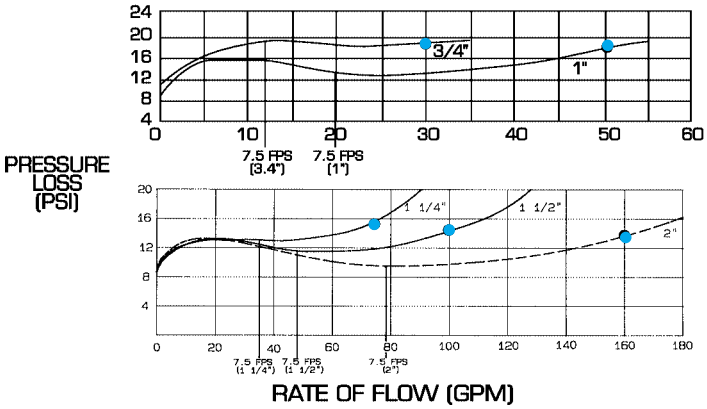


(Z-Flow)

(U-Flow)

FLOW CURVES

(•) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards



DIMENSIONS (IN.)—WEIGHTS (LBS.)

Body Size	3/4"	1"	1-1/4"	1-1/2"	2"
A	10-1/2	10-13/16	14-3/8	15-1/8	15-3/4
B	8	8	11	11	11
C	4-1/8	5-1/4	6	6-5/8	7-5/8
D	5	5	5-3/4	5-7/8	6-1/4
E	13-1/2	15-1/8	18-5/8	20-3/4	22-1/8
F	3-1/4	3-1/4	4-3/4	4-3/4	4-3/4
G	5-1/8	5-1/8	7-1/8	7-1/8	7-1/8
Test Cocks	1/8 x 1/4NPT	1/8 x 1/4NPT	1/4 x 1/4NPT	1/4 x 1/4NPT	1/4 x 1/4NPT
Net Wt. (with Ball Valves)	14.7	15.6	37.5	39.37	43.75
Shipping Wt. (with Ball Valves)	15.7	16.6	40	41.37	45.25

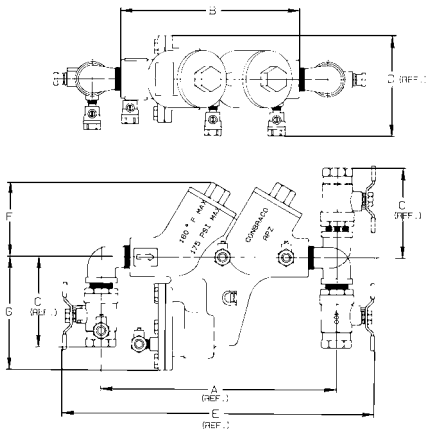
ORDERING NUMBER

40—20X—A2X

- 4 — 3/4"
- 5 — 1"
- 6 — 1-1/4"
- 7 — 1-1/2"
- 8 — 2"

2- with ball valves

- U – U-Flow
- Z – Z-Flow



SERIES 40-200

DESCRIPTION

The Conbraco Series 40-200-TCU Reduced Pressure Principle Backflow Preventer with SAE threaded hose connections make certification testing fast and trouble-free, especially in tight installations. It is designed to give maximum protection against backflow caused by either back-pressure or back-siphonage. The durable, but economical, device is easily maintained in the line without any special tools. It consist of two independently acting spring-loaded check valves with an automatic differential relief valve located between the check valves. The diaphragm and the sensing passage are built into the all bronze body to eliminate possible damage. The assembly offers installation flexibility by providing inlet and outlet bronze elbows to meet space requirements, adaptability and lower installation cost.

OPERATION

During normal flow conditions, the two check valves are held off their seats, supplying water downstream. The relief valve is held shut by supply pressure acting through the internal sensing passage, on the relief valve diaphragm. In the area between the check valves, called the zone, the pressure is maintained at approximately 7 psi lower than supply pressure. Should a back-pressure or back-siphonage condition occur, the second check valve will seal, prohibiting the backflow of water. Should the second check valve become fouled, the pressure in the zone will increase causing the differential relief valve to open to atmosphere. This will maintain the pressure in the zone at least 2 psi lower than supply pressure.

FEATURES

- Maximum protection against back-pressure/back-siphonage
- Designed for easy maintenance
- Low installation cost
- Compact
- Internal sensing passage
- Low head loss
- Removable seat discs
- Replaceable seats
- Comes standard with Apollo® full port Ball Valves
- Maximum working pressure 175 psig
- Temperature range 33°F-180°F

Contact local water authorities for installation/service requirements.

MATERIALS

Body, covers & elbows	Bronze
Springs	Stainless Steel
Poppets	Glass-Filled Celcon
Seat Discs	Silicone Rubber
Diaphragm	Nitrile and Nylon
R.V. Stem	Noryl
Fasteners	Stainless Steel
Replaceable Seats	Glass-Filled Noryl

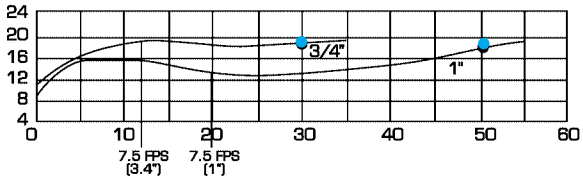
U FLOW

REDUCED PRESSURE PRINCIPLE
SIZES 3/4"–1"

(U-Flow)

FLOW CURVES

(•) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards



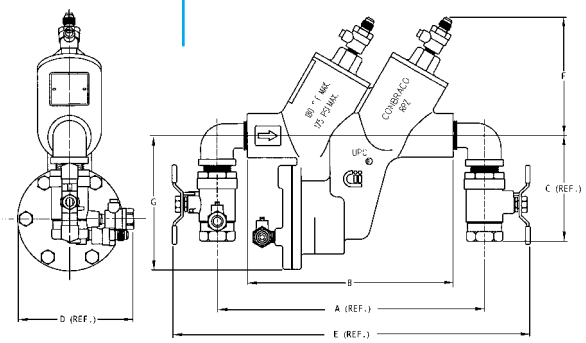
DIMENSIONS (IN.)—WEIGHTS (LBS.)

Body Size	3/4"	1"
A	10-1/2	10-11/16
B	8	8
C	4-1/8	5-3/16
D	4-7/16	4-9/16
E	13-7/8	15-1/8
F	4-1/2	4-1/2
G	5-1/8	5-1/8
Test Cocks	1/8 x 1/4 SAE	1/8 x 1/4 SAE
Net Wt. (with Ball Valves)	14.7	15.6
Shipping Wt. (with Ball Valves)	15.7	16.6

ORDERING NUMBER

4 0 — 2 0 X — TCU

4 — 3/4"
5 — 1"



SERIES 40-200

DESCRIPTION

The Conbraco Series 40-200-99T Reduced Pressure Principle Backflow Preventer is designed to give maximum protection against backflow caused by either back-pressure or back-siphonage. The durable, but economical, device is easily maintained in the line without any special tools. It consist of two independently acting spring-loaded check valves with an automatic differential relief valve located between the check valves. The diaphragm and the sensing passage are built into the all bronze body to eliminate possible damage. The assembly offers installation flexibility by providing inlet and outlet bronze elbows to meet space requirements, adaptability and lower installation cost. The No. 3 and No. 4 test cocks are mounted at the top to assure easy access during repair and maintenance when unit is installed in tight places.

OPERATION

During normal flow conditions, the two check valves are held off their seats, supplying water downstream. The relief valve is held shut by supply pressure acting through the internal sensing passage, on the relief valve diaphragm. In the area between the check valves, called the zone, the pressure is maintained at approximately 7 psi lower than supply pressure. Should a back-pressure or back-siphonage condition occur, the second check valve will seal, prohibiting the backflow of water. Should the second check valve become fouled, the pressure in the zone will increase causing the differential relief valve to open to atmosphere. This will maintain the pressure in the zone at least 2 psi lower than supply pressure.

FEATURES

- Maximum protection against back-pressure/back-siphonage
- Flexibility in installation
- Low installation cost
- Compact
- Internal sensing passage
- Low head loss
- Removable seat discs
- Replaceable seats
- Comes standard with Apollo® full port Ball Valves
- Maximum working pressure 175 psig
- Temperature range 33°F-180°F

Contact local water authorities for installation/service requirements.

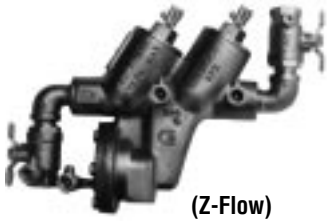
MATERIALS

Body, covers & elbows	Bronze
Springs	Stainless Steel
Poppets	Glass-Filled Celcon
Seat Discs	Silicone Rubber
Diaphragm	Nitrile and Nylon
R.V. Stem	Noryl
Fasteners	Stainless Steel
Replaceable Seats	Glass-Filled Noryl

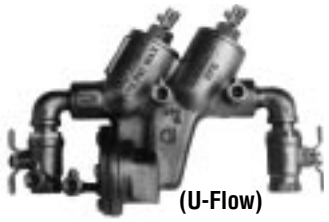
U AND Z FLOW

REDUCED PRESSURE PRINCIPLE

SIZES 3/4"–1"–1-1/4"–1-1/2"–2"



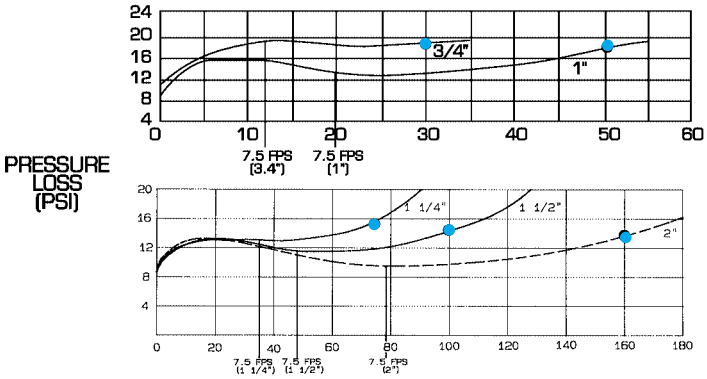
(Z-Flow)



(U-Flow)

FLOW CURVES

(•) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards



DIMENSIONS (IN.)—WEIGHTS (LBS.)

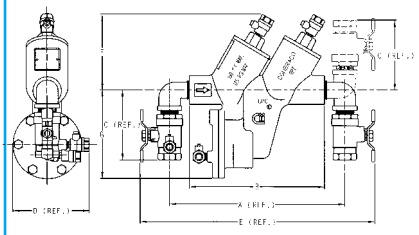
Body Size	3/4"	1"	1-1/4"	1-1/2"	2"
A	10-1/2	10-11/16	14-3/16	15-1/8	15-3/4
B	8	8	11	11	11
C	4-1/8	5-3/16	6	6-5/8	7-5/8
D	4-7/16	4-9/16	5-3/4	5-7/8	6-1/4
E	13-7/8	15-1/8	19	20-3/4	22-1/8
F	4-7/16	4-7/16	5-11/16	5-11/16	5-11/16
G	5-1/8	5-1/8	7-1/8	7-1/8	7-1/8
Test Cocks	1/8 x 1/4NPT	1/8 x 1/4NPT	1/4 x 1/4NPT	1/4 x 1/4NPT	1/4 x 1/4NPT
Net Wt. (with Ball Valves)	14.7	15.6	37.5	39.37	43.75
Shipping Wt. (with Ball Valves)	15.7	16.6	40	41.37	45.25

ORDERING NUMBER

4 0 — 2 0 X — 99T X

4 — 3/4"
5 — 1"
6 — 1-1/4"
7 — 1-1/2"
8 — 2"

U – U-Flow
Z – Z-Flow



SERIES 40-200

DESCRIPTION

The Conbraco Series 40-200 Reduced Pressure Backflow Preventer consists of two independently acting, spring-loaded check valves with a differential pressure relief valve located between the check valves. The all bronze relief valve module is easily removed from the ductile iron check valve body. Pressure sensing passages are built into the bronze relief valve module to prevent possible damage from mishandling or vandalism. The unit is available with inlet and outlet shutoff valves. Four test cocks, three on the backflow preventer valve body and one on the inlet shutoff valve, complete the assembly.

OPERATION

During normal flow conditions, the two check valves are held off their seats, supplying water downstream. The relief valve is held shut by supply pressure acting through the internal sensing passage, on the relief valve diaphragm. In the area between the check valves, called the zone, the pressure is maintained at approximately 7 psi lower than supply pressure. Should a back-pressure or back-siphonage condition occur, the second check valve will seal, prohibiting the backflow of water. Should the second check valve become fouled, the pressure in the zone will increase causing the differential relief valve to open to atmosphere. This will maintain the pressure in the zone at least 2 psi lower than supply pressure.

FEATURES

- Maximum protection against back-pressure/back-siphonage
- Removable bronze seats
- Replaceable discs
- Internal sensing passage
- Designed for easy maintenance
- Low head loss
- Economical
- Corrosion resistant
- Maximum working pressure 175 psig
- Operating temperature range 33°F-140°F

Contact local water authorities for installation/service requirements.

MATERIALS

Body and cover	Epoxy Coated (FDA Approved) Ductile Iron
Springs	Stainless Steel
Seats	Bronze
C.V. Discs	EPDM
R.V. Disc	Silicone
R.V. Diaphragm	Nitrile and Nylon
R.V. Body	Bronze
Fasteners	Stainless Steel

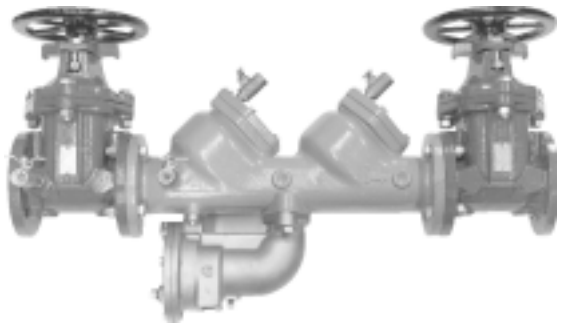
ORDERING NUMBER

40-2XX-0X

0-Standard	9-2-1/2"	1 - less gate valves
1-w/ Y-strainer (shipped loose)	0-3"	2 - w/ NRS gate valves
	A-4"	3 - w/ OS&Y gate valves
		5 - w/epoxy coated ball valves

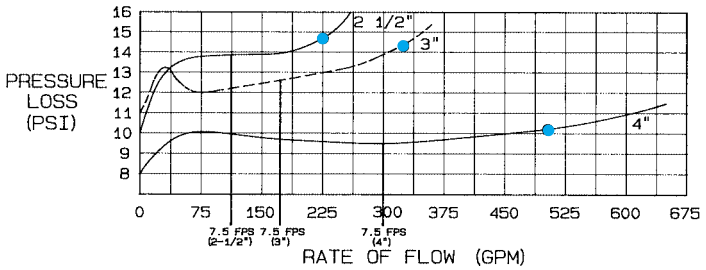
REDUCED PRESSURE PRINCIPLE

SIZES 2-1/2"—3"—4"



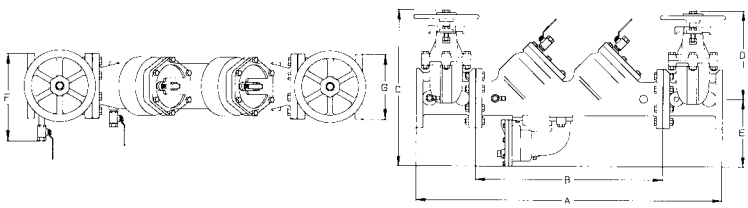
FLOW CURVES

(•) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards.



DIMENSIONS (IN.)—WEIGHTS (LBS.)

Body Size	2-1/2"	3"	4"
A	37-1/16	38-1/16	46-3/4
B	22-1/16	22-1/16	28-1/2
C NRS	20-7/8	21-7/8	25-3/16
C OS&Y (OPEN)	25-7/8	28-3/8	33-3/16
D NRS	11-3/8	12-3/8	14-3/4
D OS&Y (OPEN)	16-3/8	18-7/8	22-3/4
E	9-1/2	9-1/2	10-7/16
F	9-5/8	10-3/8	11-7/8
G	7	7-1/2	9
Test Cocks	1/2 x 1/2NPT	1/2 x 1/2NPT	1/2 x 1/2NPT
Net Wt. (Less Gate Valves)	120	122	196
Net Wt. (With NRS Valves)	219	252	388
Net Wt. (With OS&Y Valves)	229	259	402
Net Wt. (With Ball Valves)	188	198	312
Shipping Wt. (Less Gate Valves)	184	186	260
Shipping Wt. (With NRS Valves)	283	316	452
Shipping Wt. (With OS&Y Valves)	293	323	466
Shipping Wt. (With Ball Valves)	252	262	376



SERIES 40-200

DESCRIPTION

The Conbraco Series 40-200 Reduced Pressure Backflow Preventer consists of two independently acting, spring-loaded check valves with a differential pressure relief valve located between the check valves. The relief valve module is easily removed from the ductile iron check valve body. Pressure sensing passages are built into the relief valve module to prevent possible damage from mishandling or vandalism. The unit is available with inlet and outlet shutoff valves. Four test cocks, three on the backflow preventer valve body and one on the inlet shutoff valve, complete the assembly.

OPERATION

During normal flow conditions, the two check valves are held off their seats, supplying water downstream. The relief valve is held shut by supply pressure acting through the internal sensing passage, on the relief valve diaphragm. In the area between the check valves, called the zone, the pressure is maintained at approximately 7 psi lower than supply pressure. Should a back-pressure or back-siphonage condition occur, the second check valve will seal, prohibiting the backflow of water. Should the second check valve become fouled, the pressure in the zone will increase causing the differential relief valve to open to atmosphere. This will maintain the pressure in the zone at least 2 psi lower than supply pressure.

FEATURES

- Maximum protection against back-pressure/back-siphonage
- Removable bronze seats
- Replaceable discs
- Internal sensing passage
- Designed for easy maintenance
- Low head loss
- Economical
- Corrosion resistant
- Maximum working pressure 175 psig
- Operating temperature range 33°F-140°F

Contact local water authorities for installation/service requirements.

MATERIALS

Body and covers	Epoxy Coated (FDA Approved) Ductile Iron
Springs	Stainless Steel
Seats	Bronze
C.V. Discs	EPDM
R.V. Disc	Silicone
R.V. Diaphragm	Nitrile and Nylon
R.V. Body	Bronze – For 6" only
R.V. Body	Epoxy Coated (FDA Approved) Ductile Iron – For 8" and 10" only
Fasteners	Stainless Steel

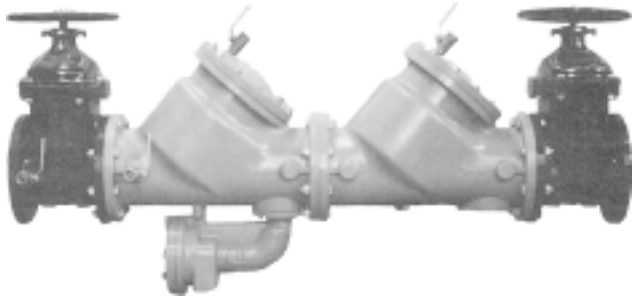
ORDERING NUMBER

40-2XX-0X

0-Standard 1-w/ Y-strainer (shipped loose)	C-6" E-8" G-10"	1-less gate valves 2-w/ NRS gate valves 3-w/ OS&Y gate valves 5-w/ Epoxy coated ball valves

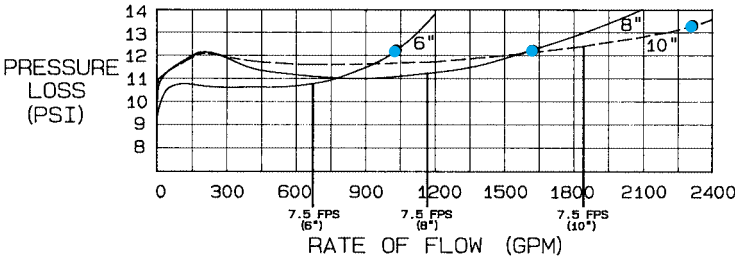
REDUCED PRESSURE PRINCIPLE

SIZES 6"—8"—10"



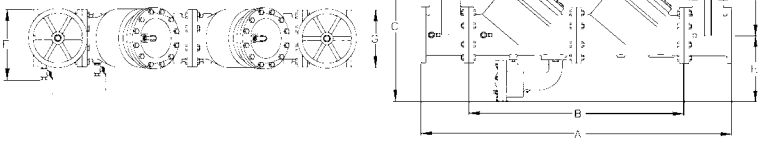
FLOW CURVES

(•) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards.



DIMENSIONS (IN.)—WEIGHTS (LBS.)

Body Size	6"	8"	10"
A	63	75	88-1/4
B	42	52	62-1/16
C NRS	30-1/2	38-1/2	44
C OS&Y (OPEN)	41-5/8	53-3/4	63-1/4
D NRS	19	22-1/2	26-1/2
D OS&Y (OPEN)	30-1/8	37-3/4	45-3/4
E	11-1/2	16	17-1/2
F	14-5/8	16-3/4	19-1/4
G	11	13-1/2	16
Test Cocks	3/4 x 3/4NPT	3/4 x 3/4NPT	3/4 x 3/4NPT
Net Wt. (Less Gate Valves)	430	715	1443
Net Wt. (With NRS Valves)	736	1155	2148
Net Wt. (With OS&Y Valves)	754	1210	2286
Net Wt. (With Ball Valves)	666	N/A	N/A
Shipping Wt. (Less Gate Valves)	528	885	1613
Shipping Wt. (With NRS Valves)	872	1335	2364
Shipping Wt. (With OS&Y Valves)	890	1390	2502
Shipping Wt. (With Ball Valves)	836	N/A	N/A



MODEL RP

DESCRIPTION

The Conbraco Model **RP** Reduced Pressure Principle Backflow Preventer is designed to give maximum protection against backflow caused by either back-pressure or back-siphonage. The unit consists of two independently acting, spring-loaded swing-check valves with a differential pressure relief valve located between the checks. The all-bronze relief valve assembly can be easily removed from the compact ductile iron check valve body. The pressure sensing passage is hard piped to prevent possible damage from mishandling or vandalism. The unit is available with inlet and outlet shut-off valves. 90-degree elbows are also available within the shut-off valve envelope for compact installations. Four test cocks, three on the backflow preventer body and one on the inlet shut-off valve, complete the assembly.

OPERATION

During normal flow conditions, the two check valves are held off their seats, supplying water downstream. The relief valve is held shut by supply pressure acting through the sensing pipe, on the relief valve diaphragm. In the area between the check valves, called the zone, the pressure is maintained at approximately 7 psi lower than supply pressure due to the load on the first check spring. Should a back-pressure or back-siphonage condition occur, the second check valve will seal, prohibiting the backflow of water. Should the second check valve become fouled, the pressure in the zone will increase causing the differential relief valve to open to atmosphere. This will maintain the pressure in the zone at least 2 psi lower than supply pressure.

FEATURES

- Corrosion resistant
- Replaceable EPDM seat discs
- Low head loss
- Economical
- Short lay length
- Light weight
- Damage resistant Sensing Passage
- Designed for easy maintenance
- Maximum working pressure 175 psi
- Operating temperature range 33°F-140°F
- Patent pending

Contact local water authorities for installation/service requirements.

APPROVALS

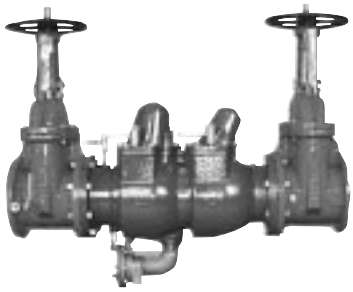
Contact factory for approvals.

MATERIALS

Body and covers	FDA Approved Epoxy Coated Ductile Iron
Relief Valve body	Bronze
Springs	Stainless Steel
Seats	Bronze
C.V. Seat Discs	EPDM
R.V. Seat Discs	Silicone
Fasteners	Stainless Steel
Test Cocks	Bronze

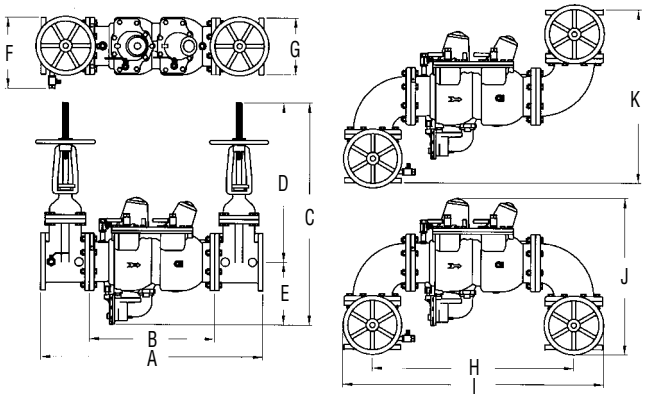
REDUCED PRESSURE PRINCIPLE

SIZES 8"—10"



DIMENSIONS (IN.)—WEIGHTS (LBS.)

Body Size	8"	10"
A	52-1/2	55-3/4
B	29-1/2	29-1/2
C NRS	37-1/2	41-1/2
C (OS&Y) OPEN	52-3/4	60-3/4
D NRS	22-1/2	26-1/2
D (OS&Y) OPEN	37-3/4	45-3/4
E	15	15
F	16-3/4	19-1/4
G	13-1/2	16
H	47-5/8	51-5/8
I	61-5/8	69-5/8
J	37	41-7/8
K	41	48-1/8
Test Cocks	3/4 NPT	3/4NPT
Net Wt. (Less Gate Valves)	558	585
Net Wt. (With NRS Valves)	984	1290
Net Wt. (With OS&Y Valves)	1074	1428
Shipping Wt. (Less Gate Valves)	638	665
Shipping Wt. (With NRS Valves)	1094	1400
Shipping Wt. (With OS&Y Valves)	1184	1538



ORDERING NUMBER

4S-20X-0XX

E-8"
G-10"

U - U flow
Z - Z flow

1-Less gate valves
2-With NRS gate valves
3-With OS&Y gate valves

SERIES 40-300

DESCRIPTION

The Conbraco Series 40-300 Dual Check Valve Backflow Preventer is designed to prevent cross-connections of non-potable water (non-hazardous) into the safe drinking water systems. It is a compact and economical device that is easily installed, serviced and repaired in the line. The device consists of two independently acting, spring-loaded check valves in a corrosion resistant material. It is equipped with three (3) 1/8" NPT test ports for ease of field testing while the valve is in the line.

OPERATION

Each of the two spring-loaded check valves is designed to open at 1 psi differential in the direction of flow. They will remain tightly closed until there is a demand of water downstream. If the downstream pressure of the device increases above the supply pressure or there is a reverse direction of flow, the check valves will close to prevent backflow. If the second check valve is prevented from closing tightly, the first check valve will still provide protection from a backflow condition.

FEATURES

- In-line repairable
- In-line testable
- Low head loss
- Independently acting check valves
- Compact and lightweight
- Ease of repair and installation
- Corrosion resistant
- Almost any inlet and outlet connection combination to fit your needs
- Maximum working pressure 175 psig
- Operating temperature range 33°F-180°F

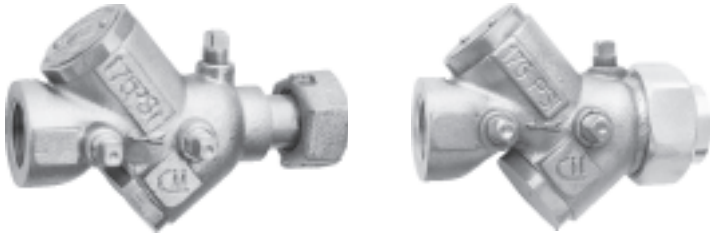
Contact local water authorities for installation/service requirements.

MATERIALS

Body and covers	Bronze
Springs	Stainless Steel
Seat Discs	EPDM
Poppet	Celcon

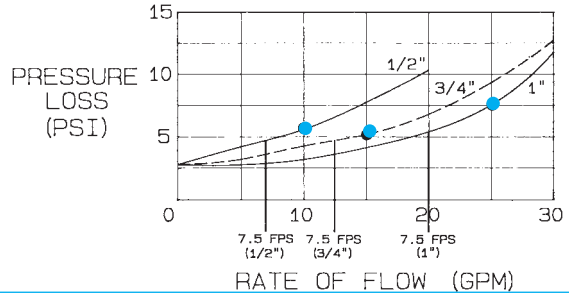
DUAL CHECK VALVE

SIZES 1/2"—3/4"—1"

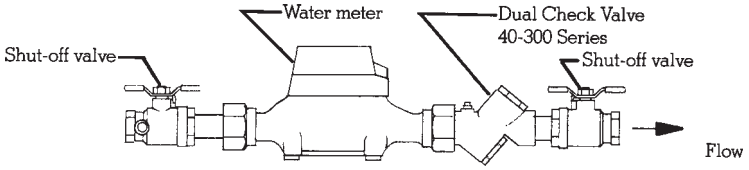


FLOW CURVES

(•) Rated flow as determined by ASSE design performance standards.



TYPICAL INSTALLATION



DIMENSIONS (IN.)—WEIGHTS (LBS.)

Size	1/2"	3/4"	1"
A	4-3/8	4-3/8	4-3/8
B	3-1/2	3-1/2	3-1/2
C	1-1/2	1-1/2	1-1/2
D	1-11/16	1-11/16	1-11/16
Test Port Size	1/8" NPT	1/8" NPT	1/8" NPT
Unit Wt. (with plugs)	2.0	2.0	2.1
Unit Wt. (with test cocks)	2.4	2.4	2.5
Unit Wt. (with T.C.'s & Ball Valves)	4.0	4.6	6.4
Unit Wt. (with T.C.'s & Outlet Ball Valve)	3.2	3.4	4.4

ORDERING NUMBER

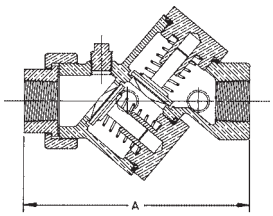
40 – 3 X X – X X X

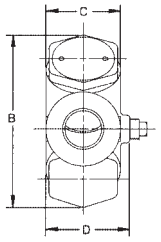
1 – With Test Cocks
2 – With Test Cocks & Ball Valves
3 – With Test Cocks & Outlet Ball Valve
4 – With 4 Test Cocks & Inlet & Outlet Ball Valves

INLET CONNECTION
A – FNPT
B – MNPT
C – Female Meter Thread
E – Male Meter Thread
S – Female Meter Thread (Swivel)
2 – Female BSPP

INLET & OUTLET SIZE
3 – 1/2"
4 – 3/4"
5 – 1"

OUTLET CONNECTION
A – FNPT
B – MNPT
C – Female Meter Thread
E – Male Meter Thread
F – Female BSPP





SERIES 4P-300

DESCRIPTION

The Conbraco Series 4P-300 In Line and Angle Dual Check Valve Backflow Preventer is designed to prevent cross-connections of non-potable water (non-hazardous) into the safe drinking water systems. It is a compact and economical device. The device consists of two independently acting, spring-loaded check valves in a lead-free high density thermoplastic body. It is suitable for supply pressure up to 175 psig and water temperature from 33˚F to 180˚F.

OPERATION

Each of the two spring-loaded check valves is designed to open at 1 psi differential in the direction of flow. They will remain tightly closed until there is a demand of water downstream. If the downstream pressure of the device increases above the supply pressure or there is a reverse direction of flow, the check valves will close to prevent backflow. If the second check valve is prevented from closing tightly, the first check valve will still provide protection from a backflow condition.

FEATURES

- Double union joint for ease of installation and removal for testing or repair
- Low head loss
- Lead free
- Corrosion resistant
- Independently acting check valves
- Compact and lightweight
- Replaceable seats
- Various inlet and outlet connection combinations to fit your needs
- Maximum working pressure 175 psig
- Operating temperature range 33°F-180°F

Contact local water authorities for installation/service requirements.

MATERIALS

Union Nuts	ESBRID
Body, Seats, Spring Retainers	Glass-Filled Noryl
Union Tail Pieces	Glass-Filled Noryl
Springs	Stainless Steel
O-Rings	Nitrile
Seat Discs	Silicone
Poppets	Celcon

ORDERING NUMBER

4 P – 3 X X – X X X

INLET CONNECTION
A – FNPT
C – Female Meter Thread
S – Female Meter Thread (Swivel)

INLET & OUTLET SIZE
3 - 1/2"
4 - 3/4"
5 - 1"

(On Meter Threads Order One Size Larger Than Meter Size)

OUTLET CONNECTION
A – FNPT
E – Male Meter Thread

A – Angle
B – Brass Tailpiece (3/4" and 1")

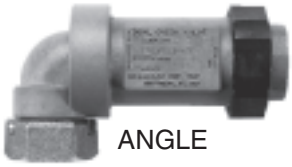
THERMOPLASTIC DUAL CHECK VALVE

SIZES 1/2"—3/4"—1"

100% Lead Free

STANDARD

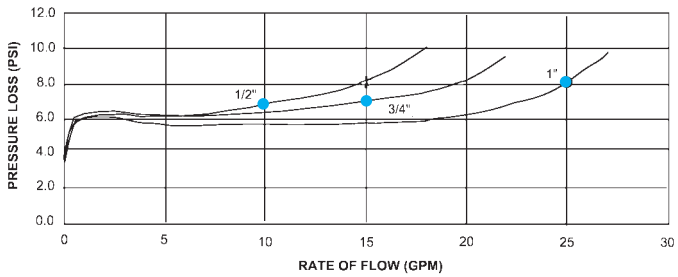
SWIVEL



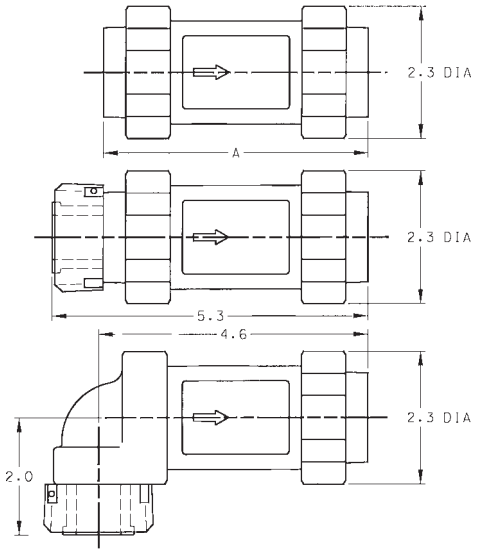
ANGLE

FLOW CURVES

(•) Rated flow as determined by ASSE design performance standards.



DIMENSIONS (IN.)–WEIGHTS (LBS.)



SIZE	1/2" NPT	3/4" & 1" NPT	3/4" F MTR x 3/4" M MTR
A	4.4	4.5	4.8
UNIT Wt.	(Std.) .46	(Swivel) .72	(Angle) .74

SERIES 4C-100

DESCRIPTION

The Conbraco 4C-100 Series Carbonated Beverage Backflow Preventer (CBBP) is designed to prevent the contamination of the potable water supply due to backflow when installed on water distribution lines serving beverage dispensing equipment. The device consists of two independently acting check valves biased to a normally closed position. A normally open atmospheric port is located between the check valves. During backflow conditions, the port vents gases and/or liquids. Additionally, the CBBP is equipped with a 100 mesh integral strainer screen at the inlet. All weted areas of the device are non-toxic, corrosion resistant, and approved for use with potable water. The CBBP is suitable for supply pressures to 150 psig and water temperatures from 33˚ to 130˚ F.

OPERATION

Under static (non-flowing) conditions, the check valves remain in the closed position. When a valve is opened downstream (i.e. a drink is delivered from the beverage dispensing unit), the check valves open and permit the flow of water. Under backflow conditions, the diaphragm seat on the first check lifts and permits flow through the atmospheric port located between the two check valves. The strainer insures debris does not enter the carbonator.

FEATURES

- Compact Design
- Lowest head loss
- Atmospheric vent provides indication of problems
- Integral strainer for equipment protection
- NSF-18 listed
- Repairable check assemblies
- Non-metallic body for corrosion resistance

Contact local water authorities for installation/service requirements.

MATERIALS

End cap	Acetal
Strainer	PVC/Stainless Steel
O-ring	Nitrile
Downstream Check Valve	Nitrile/Stainless Steel/Acetal
Upstream Check Valve	EPDM/Stainless
Body	Acetal

ORDERING NUMBER

4C–10X–01

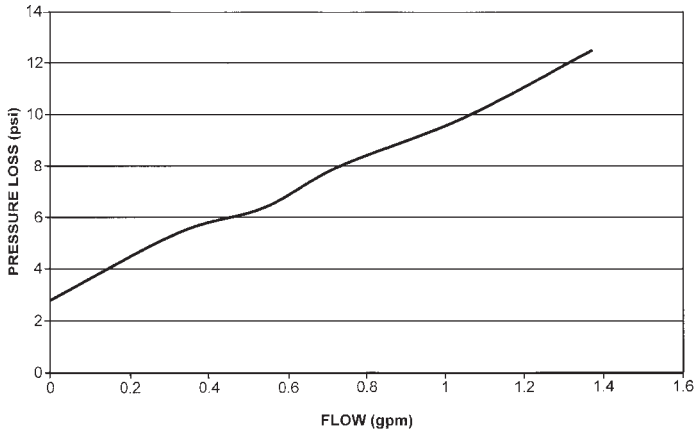
1 – 1/4"
2 – 3/8"

CARBONATED BEVERAGE BACKFLOW PREVENTER

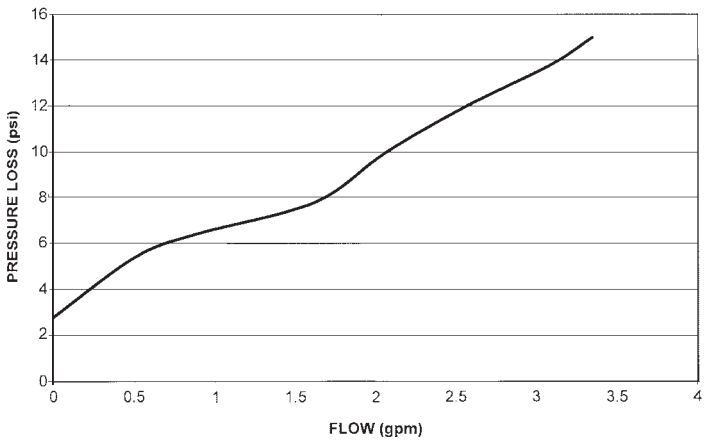
SIZES 1/4" & 3/8"

FLOW CURVES

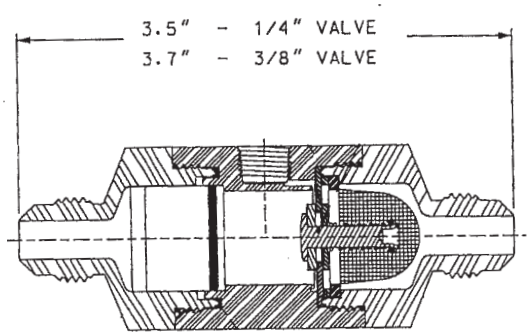
1/4" CARBONATED BEVERAGE BACKFLOW PREVENTER



3/8" CARBONATED BEVERAGE BACKFLOW PREVENTER



DIMENSIONS (IN.)



SERIES 4W-500

DESCRIPTION

The Conbraco Series 4W-500 Spill Resistant Vacuum Breaker (SVB) is designed to prevent contamination of the potable water supply due to back-siphonage. The SVB is ideally suited for continuous pressure, indoor applications where water spillage is undesirable. The device has a straight through flow path for minimal head loss. All components are easily accessible for easy repair and maintenance. All components are made of corrosion resistant materials for years of reliable service.

OPERATION

During normal flow conditions, the check valve remains open and the atmospheric vent seals in the bonnet assembly. As the line pressure falls to 1 psi, the spring loaded atmospheric vent opens and the check valve closes, breaking the vacuum and thereby preventing back-siphonage. Water is not allowed to spill at any time during operation.

Contact local water authorities for installation/service requirements.

FEATURES

- Corrosion Resistant
- In-Line Flow
- Integral Shut-Off Valves
- Designed For Easy Maintenance
- Low Head Loss
- Economical
- Maximum Working Pressure 150 PSIG
- Operating Temperature Range 33-180˚F

MATERIALS

Body	Noryl®
Springs	Stainless Steel
Seat discs	Silicone Rubber
Valve Canopy	ABS Plastic
Float	Acetal
Fasteners	Stainless Steel

ORDERING NUMBER

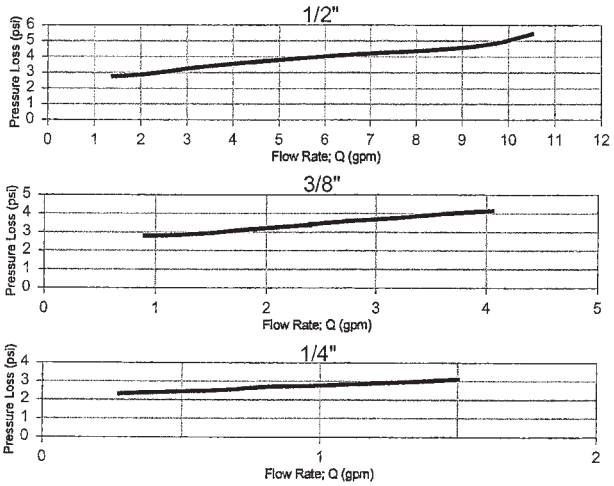
4 W –50X – 02

SIZE
1 – 1/4"
2 – 3/8"
3 – 1/2"

SPILL-RESISTANT PRESSURE VACUUM BREAKER

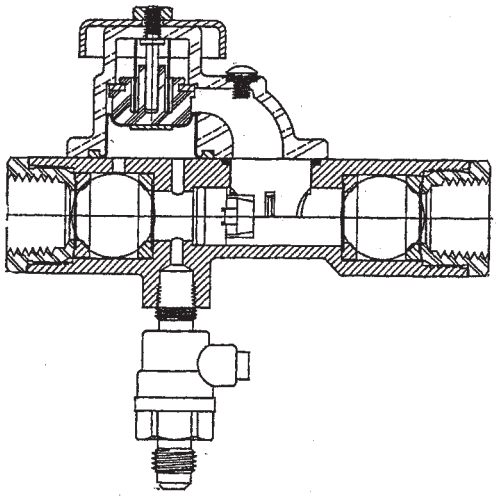
SIZES 1/4"– 3/8"–1/2"

FLOW CURVES



DIMENSIONS (IN.)–WEIGHTS (LBS.)

Size	1/4"	3/8"	1/2"
Test Cock	1/4" Flare	1/4" Flare	1/4" Flare
Net Wt.	1.16	1.16	1.16
Shipping Wt.	1.26	1.26	1.26



SERIES 40-400

DESCRIPTION

The Conbraco Series 40-400 Continuous Pressure Backflow Preventer is designed to protect residential and commercial water supply lines from back-siphonage or back-pressure of non-potable (non-hazardous) substances. It has an intermediate atmospheric vent to insure protection from backflow conditions. It consists of two independently acting and spring-loaded check valves in a corrosion resistant material.

OPERATION

During normal flow operation, the vent valve is closed, and the two check valves are open allowing flow of water through the unit. Each check valve is designed to hold at least 1 psi in the direction of flow. When a back-siphonage condition occurs, both check valves close and the atmospheric vent opens to permit air to enter the intermediate zone. In the event of back-pressure and if the second check valve is prevented from closing tightly, leakage will be vented to the atmosphere through the vent port.

FEATURES

- Corrosion resistant
- Low head loss
- Independently acting check valves
- Ease of repair and installation
- Economical
- Suitable for hot or cold water service
- Durable
- Maximum working pressure 175 psig
- Operating temperature range 33°F-210°F

Contact local water authorities for installation/service requirements.

MATERIALS

Body	Bronze
Springs	Stainless Steel
C.V. Seat Discs	EPDM
Seats	Glass-Filled Noryl
Spring and Seat Retainer	Glass-Filled Noryl
O-Rings	Nitrile/EPDM
Poppets	Glass-Filled Noryl

ORDERING NUMBER

40 – 4XX – XXM

INLET CONNECTION
A – FNPT
H – Solder joint
2 – Female BSPP

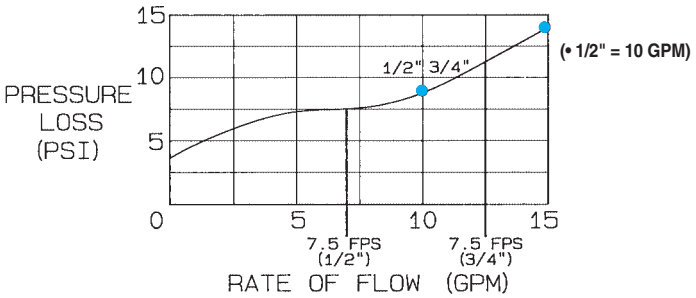
INLET & OUTLET SIZE
3-1/2"
4-3/4"

OUTLET CONNECTION
A – FNPT
B – MNPT
F – Female BSPP
H – Solder joint

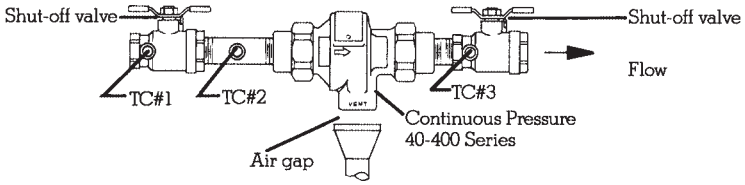
CONTINUOUS PRESSURE
SIZES 1/2"—3/4"

FLOW CURVE

(•) Rated flow as determined by ASSE design performance standards.

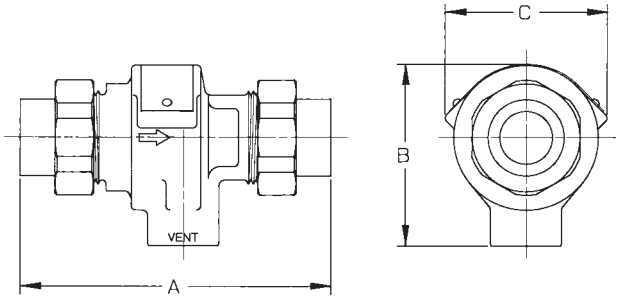


TYPICAL INSTALLATION



DIMENSIONS (IN.)—WEIGHTS (LBS.)

Size	1/2", 3/4"
A	5
B	2-15/16
C	2-5/8
Unit Weight	1.90



(ON METER THREADS ORDER ONE SIZE LARGER THAN METER SIZE)

SERIES 4J-400

DESCRIPTION

The Conbraco Series 4J-400 Continuous Pressure Backflow Preventer is designed to protect residential and commercial water supply lines from back-siphonage or back-pressure of non-potable (non-hazardous) substances. It has an intermediate atmospheric vent to insure protection from backflow conditions. It consists of two independently acting and spring-loaded check valves in a corrosion resistant material.

OPERATION

During normal flow operation, the vent valve is closed, and the two check valves are open to allow flow of water through the unit. Each check valve is designed to hold at least 1 psi in the direction of flow. When a back-siphonage condition occurs, both check valves close and the atmospheric vent opens to permit air to enter the intermediate zone. If a back-pressure condition occurs, and the second check is prevented from closing tightly, leakage will be vented to the atmosphere through the vent port.

FEATURES

- Corrosion resistant
- Low head loss
- Independently acting check valves
- Ease of repair and installation
- Compact and lightweight
- Built-in strainer
- Suitable for hot or cold water service
- Durable
- Replaceable seats
- Various inlet and outlet connection combinations to fit your needs
- Maximum working pressure 175 psig
- Operating temperature range 33-210°F

Contact local water authorities for installation/service requirements.

ORDERING NUMBER

4 J – 4 X X – X X

INLET CONNECTION
A – FNPT
H – Solder joint
2 – Female BSPP

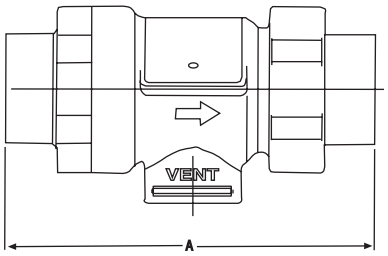
INLET & OUTLET SIZE
3-1/2"
4-3/4"

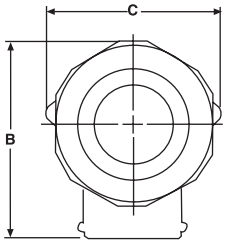
OUTLET CONNECTION
A – FNPT
B – MNPT
F – Female BSPP
H – Solder joint

CONTINUOUS PRESSURE
SIZES 1/2"—3/4"

DIMENSIONS (IN.)—WEIGHTS (LBS.)

Size	1/2", 3/4"
A	4-5/32
B	2-7/32
C	1-15/16
Unit Weight	1.5





MATERIALS

Body	Bronze
Springs	Stainless Steel
Seat Discs	EPDM
Seats	Brass
O-Rings	Nitrile
Poppet	Glass-Filled Noryl
Spring Retainer	Glass-Filled Noryl

SERIES 40-500

DESCRIPTION

The Conbraco Series 40-500 Pressure Type Vacuum Breaker is designed to prevent back-siphonage of contaminated water into a safe drinking water supply. It is ideally suitable for installation in a continuous pressure potable water supply system 12" above the overflow level of the system being supplied. It consists of a spring-loaded float disc and an independently acting check valve in a corrosion resistant material.

OPERATION

Under normal flow conditions, the check valve remains open and the float disc seals the air inlet preventing leakage. When the internal pressure of the device falls to 1 psi or below, the spring-loaded float disc opens the air inlet and the check valve closes the water inlet. This prevents back-siphonage and creation of a vacuum at the discharge line.

FEATURES

- Corrosion resistant
- Durable
- Economical
- Designed for easy maintenance
- Low head loss
- Comes standard with Apollo® full port ball valves
- Maximum working pressure 150 psig
- Operating temperature range 33°F-210°F

Contact local water authorities for installation/service requirements.

MATERIALS

Body	Bronze
Springs	Stainless Steel
Seat Discs	Silicone Rubber
Valve Canopy	Chrome Plated Brass
Float	Polyethylene
Fasteners	Stainless Steel

ORDERING NUMBER

40-50X-0X

3 - 1/2"
4 - 3/4"
5 - 1"
6 - 1-1/4"
7 - 1-1/2"
8 - 2"

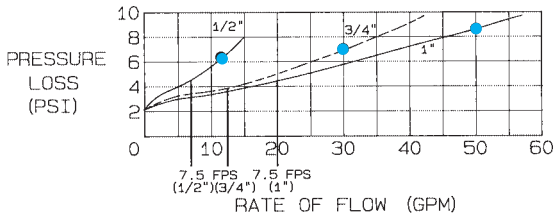
1 - less ball valves
2 - w/ ball valves
4 - w/ union end ball valves

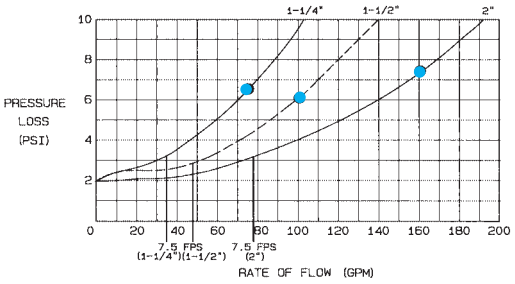
PRESSURE TYPE VACUUM BREAKER

SIZES 1/2"—3/4"—1"—1-1/4"—1-1/2"—2"

FLOW CURVES

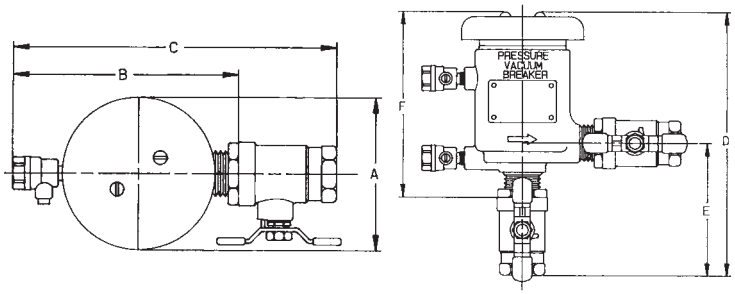
(•) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards.





DIMENSIONS (IN.)—WEIGHTS (LBS.)

Body Size	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
A	3-7/8	3-7/8	3-7/8	6-5/8	6-5/8	6-5/8
B (Less Ball Valves)	5-3/8	5-3/8	5-3/8	8-3/4	8-3/4	8-3/4
C	7	7-1/2	8-3/8	11-7/16	11-7/8	12-1/2
D	7-1/2	8	8-7/8	12-1/2	12-7/8	13-1/2
E	3-1/2	4	4-3/4	6-5/8	7	7-5/8
F (Less Ball Valves)	5-7/8	5-7/8	5-7/8	9-1/8	9-1/8	9-1/8
Test Cocks	1/8 x 1/4NPT	1/8 x 1/4NPT	1/8 x 1/4NPT	1/4 x 1/4NPT	1/4 x 1/4NPT	1/4 x 1/4NPT
Net Wt. (Less Ball Valves)	4.0	4.25	4.5	14.0	14.1	14.2
Net Wt. (with Ball Valves)	5.5	6.25	7.0	20.5	22.3	28.3
Shipping Wt. (Less Ball Valves)	5.0	5.25	5.5	15.2	15.6	15.7
Shipping Wt. (with Ball Valves)	6.5	7.25	8.0	21.7	23.8	29.8



SERIES 4V-500

DESCRIPTION

The Conbraco Series 4V-500 Pressure Vacuum Breaker (PVB) is designed to prevent contamination of the potable water supply due to back-siphonage. The PVB is ideally suited for continuous pressure, outdoor applications such as irrigation equipment, livestock watering systems, swimming pools, etc. The device consists of a unique one piece cap/float assembly and independently acting check valve, all attractively packaged in a rugged yet compact bronze body. All components are made of corrosion resistant materials, guaranteeing years of reliable service.

OPERATION

During normal flow conditions, the check valve remains open and the float seals on the cap assembly. As the line pressure falls to 1 psi, the spring loaded atmospheric vent valve opens, breaking the vacuum and thereby preventing back-siphonage. In the event of exposure to freezing temperatures, a spring loaded relief valve in the cap assembly protects the PVB body and internal components from damage. As the ambient temperature increases above freezing, the relief valve automatically reseats. During normal conditions, the relief valve will not discharge.

FEATURES

- Removable integral check valve
- One piece cap/float assembly
- Built-in freeze relief valve in cap/float assembly
- Corrosion resistant construction
- Maximum working pressure 150 psig
- Operating temperature range 32°F-180°F
- Easy maintenance

Contact local water authorities for installation/service requirements.

MATERIALS

Body	Bronze
Canopy	Chrome Plated Steel
Cap	Acetal
Check Valve	Acetal
Float	Acetal
Springs	Stainless Steel
Test Cocks	Brass

ORDERING NUMBER

4V - 50X - 0X

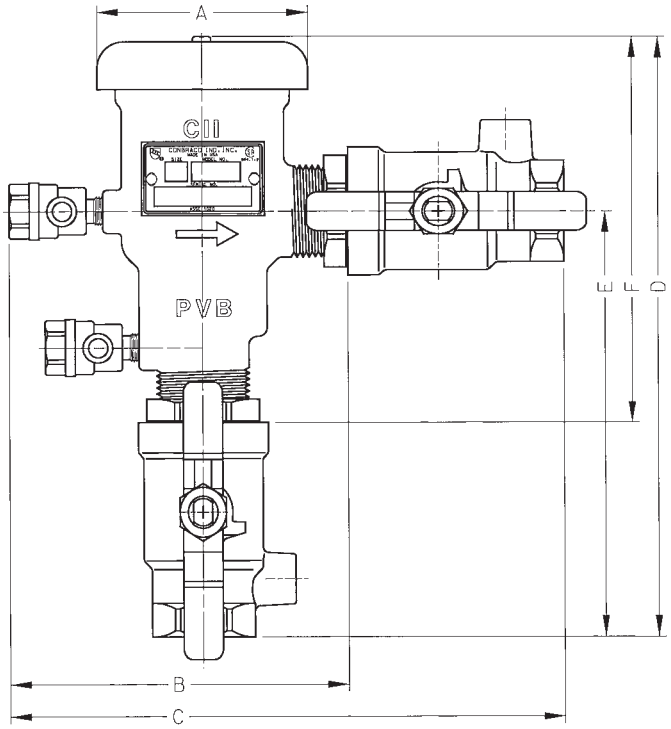
3 - 1/2"	1 - less ball valves
4 - 3/4"	2 - w/ ball valves
5 - 1"	3 - w/ union end ball valves
6 - 1-1/4"	
7 - 1-1/2"	

PRESSURE VACUUM BREAKER

SIZES 1/2"—3/4"—1"—1-1/4"—1-1/2"

DIMENSIONS (IN.)—WEIGHTS (LBS.)

Body Size	1/2"	3/4"	1"	1-1/4"	1-1/2"
A	3	3	3	3-3/4	3-3/4
B (less ball valve)	4-3/4	4-3/4	4-3/4	5-3/8	5-3/8
C	6-3/8	7-1/8	7-1/2	8-3/4	9-1/4
D	7-1/8	7-5/8	8-3/8	10-5/8	10-7/8
E	4-5/8	5-3/8	6-1/8	7	7-3/8
F (less ball valves)	5-3/8	5-1/2	5-11/16	6-7/8	7
Test Cocks	1/8x1/4NPT	1/8x1/4NPT	1/8x1/4NPT	1/4x1/4NPT	1/4x1/4NPT
Net Wt. (Less Ball Valves)	2.2	2.2	2.0	4.3	4.3
Net Wt. (With Ball Valves)	3.4	3.9	5.3	9.3	12.2
Shpg. Wt. (Less Ball Valves)	3.2	3.2	3.0	5.5	5.8
Shpg. Wt. (With Ball Valves)	4.4	4.9	6.3	10.5	13.7



SERIES 4V-500

DESCRIPTION

The Conbraco Series 4V-500-TC2 Pressure Vacuum Breaker (PVB) with SAE threaded hose connections make certification testing fast and trouble-free, espceially in tight installations. It is designed to prevent contamination of the potable water supply due to back-siphonage. The PVB is ideally suited for continuous pressure, outdoor applications such as irrigation equipment, livestock watering systems, swimming pools, etc. The device consists of a unique one piece cap/float assembly and independently acting check valve, all attractively packaged in a rugged yet compact bronze body. All components are made of corrosion resistant materials, guaranteeing years of reliable service.

OPERATION

During normal flow conditions, the check valve remains open and the float seals on the cap assembly. As the line pressure falls to 1 psi, the spring loaded atmospheric vent valve opens, breaking the vacuum and thereby preventing back-siphonage. In the event of exposure to freezing temperatures, a spring loaded relief valve in the cap assembly protects the PVB body and internal components from damage. As the ambient temperature increases above freezing, the relief valve automatically reseats. During normal conditions, the relief valve will not discharge.

FEATURES

- Removable integral check valve
- One piece cap/float assembly
- Built-in freeze relief valve in cap/float assembly
- Corrosion resistant construction
- Maximum working pressure 150 psig
- Operating temperature range 32°F-180°F
- Easy maintenance

Contact local water authorities for installation/service requirements.

MATERIALS

Body	Bronze
Canopy	Chrome Plated Steel
Cap	Acetal
Check Valve	Acetal
Float	Acetal
Springs	Stainless Steel
Test Cocks	Brass

ORDERING NUMBER

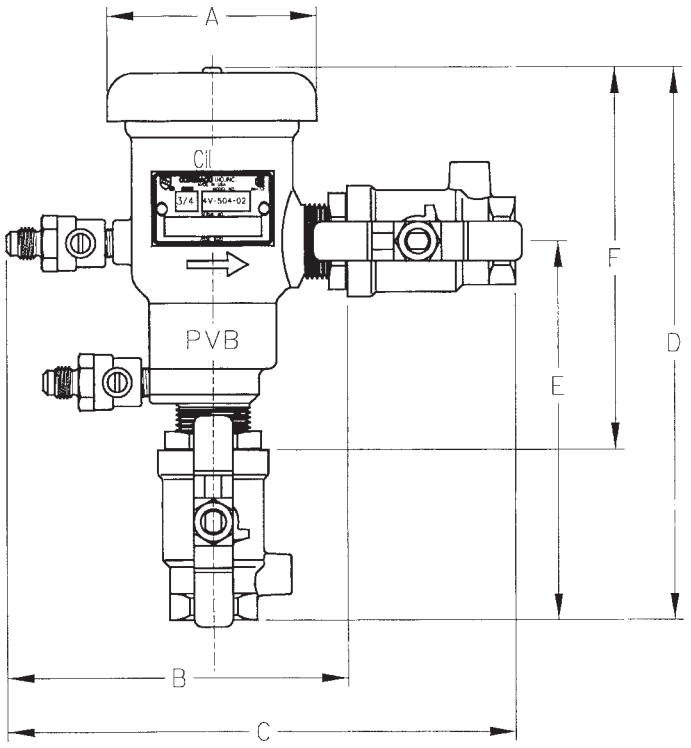
4V-50X-TC2

4 - 3/4"
5 - 1"

PRESSURE VACUUM BREAKER
SIZES 3/4"—1"

DIMENSIONS (IN.)—WEIGHTS (LBS.)

Body Size	3/4"	1"
A	3	3
B (less ball valve)	4-3/4	4-3/4
C	7-5/16	8-1/16
D	7-5/8	8-3/8
E	5-3/8	6-1/8
F (less ball valves)	5-1/2	5-11/16
Test Cocks	1/8x1/4SAE	1/8x1/4SAE
Net Wt. (Less Ball Valves)	2.2	2.0
Net Wt. (With Ball Valves)	3.9	5.3
Shpg. Wt. (Less Ball Valves)	3.2	3.0
Shpg. Wt. (With Ball Valves)	4.9	6.3



SERIES 40-600

DESCRIPTION

The Conbraco Series 40-600 Double Check Detector Assembly is designed to provide double check protection against cross-connection of non-potable (non-hazardous) water into the safe drinking water system; and at the same time offers precise monitoring capability to detect leakage or unauthorized use of water from fire or automatic sprinkler systems. The unit consists of two independently acting, spring-loaded check valves with inlet and outlet resilient wedge gate valves and a by-pass assembly consisting of a water meter, double check valve assembly with shut-off valves and test cocks.

OPERATION

During normal conditions, if the downstream pressure of the assembly increases above the supply pressure or there is a reverse direction of flow; the line and by-pass double check valves will close to prevent backflow. If the second check valve of either the line or by-pass is prevented from closing tightly, the first check valve will still provide protection from a backflow condition. The line and by-pass double check valves will remain closed during the no flow condition. If there is a low flow demand (up to a minimum of 3 gpm) of water downstream, which may be caused by a system leak or unauthorized use, the flow is routed through the water meter to monitor such consumption. Higher flow will tend the main line double check valve to open at which water continues to flow at the by-pass at a rate below capacity.

FEATURES

- Corrosion resistant
- Removable bronze seats
- Replaceable discs
- Low head loss
- Economical
- Designed for easy in-line maintenance
- Test cocks for in-line testing
- Maximum working pressure 175 psig
- Operating temperature range 33°F-140°F

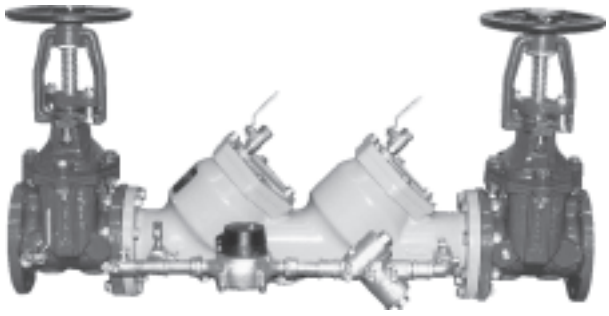
Contact local water authorities for installation/service requirements.

MATERIALS

Body and covers	FDA Approved epoxy coated ductile iron (mainline) Bronze (by-pass)
By-pass components	Bronze
Springs	Stainless Steel (both)
Seats	Bronze (both)
Discs	EPDM (mainline) Silicone (by-pass)
Fasteners	Stainless Steel (both)
Test cocks	Bronze (both)

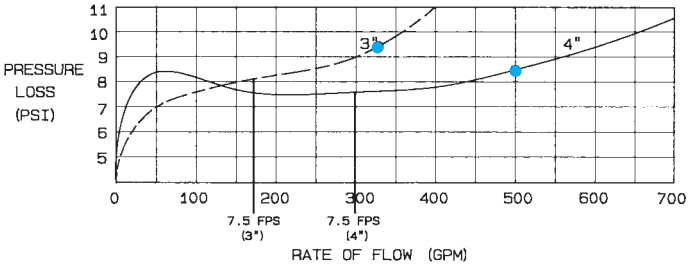
DOUBLE CHECK DETECTOR ASSEMBLY

SIZES 3"—4"



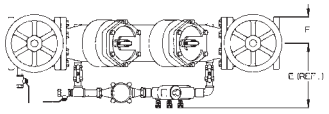
FLOW CURVES

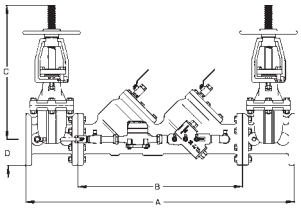
(•) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards.



DIMENSIONS (IN.)—WEIGHTS (LBS.)

Size	3"	4"
A	38-1/16	46-3/4
B	22-1/16	28-1/2
C (OS&Y) OPEN	18-7/8	22-3/4
D	3-3/4	4-1/2
E	9-1/4	10-1/2
F	3-3/4	4-1/2
Test Cocks (line)	1/2 NPT	1/2 NPT
Test Cocks (by-pass)	1/4 NPT	1/4 NPT
Net. Wt. (Less Gate Valves)	97	161
Net. Wt. (with OS&Y Valves)	234	367
Net Wt. (with OS&Y/post indicator)	N/A	370
Shipping Wt. (Less Gate Valves)	161	225
Shipping Wt. (with OS&Y Valves)	298	431
Shipping Wt. (with OS&Y/post indicator)	N/A	434





ORDERING NUMBER

40–60X–XX

- 0 — 3"
- A — 4"

- 1 — Less gate valves
- 3 — With OS&Y gate valves
- 6 — W/OS&Y valve on inlet, NRS gate valve w/ post plate and nut on outlet

- C — With meter in cubic feet
- E — With meter in gallons
- G — Less water meter

SERIES 40-600

DESCRIPTION

The Conbraco Series 40-600 Double Check Detector Assembly is designed to provide double check protection against cross-connection of non-potable (non-hazardous) water into the safe drinking water system; and at the same time offers precise monitoring capability to detect leakage or unauthorized use of water from fire or automatic sprinkler systems. The unit consists of two independently acting, spring-loaded check valves with inlet and outlet resilient wedge gate valves and a by-pass assembly consisting of a water meter, double check valve assembly with shut-off valves and test cocks.

OPERATION

During normal conditions, if the downstream pressure of the assembly increases above the supply pressure or there is a reverse direction of flow, the line and by-pass double check valves will close to prevent backflow. If the second check valve of either the line or by-pass is prevented from closing tightly, the first check valve will still provide protection from a backflow condition. The line and by-pass double check valves will remain closed during the no flow condition. If there is a low flow demand (up to a minimum of 3 gpm) of water downstream, which may be caused by a system leak or unauthorized use, the flow is routed through the water meter to monitor such consumption. Higher flow will tend the main line double check valve to open at which water continues to flow at the by-pass at a rate below capacity.

FEATURES

- Corrosion resistant
- Removable bronze seats
- Replaceable discs
- Low head loss
- Economical
- Designed for easy in-line maintenance
- Test cocks for in-line testing
- Maximum working pressure 175 psig
- Operating temperature range 33°F-140°F

Contact local water authorities for installation/service requirements.

MATERIALS

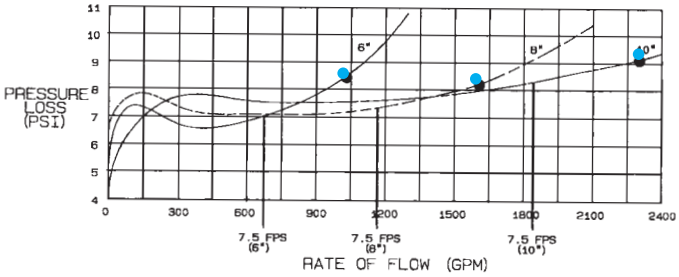
Body and covers	FDA Approved epoxy coated ductile iron (mainline)Bronze (by-pass)
By-pass components	Bronze
Springs	Stainless Steel (both)
Seats	Bronze (both)
Discs	EPDM (mainline) Silicone (by-pass)
Fasteners	Stainless Steel (both)
Test cocks	Bronze (both)

DOUBLE CHECK DETECTOR ASSEMBLY

SIZES 6"—8"—10"

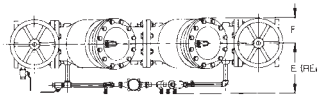
FLOW CURVES

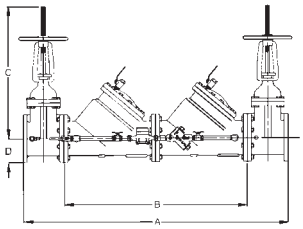
(•) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards.



DIMENSIONS (IN.)—WEIGHTS (LBS.)

Size	6"	8"	10"
A	63	75	88-1/4
B	42	52	62-1/16
C (OS&Y) OPEN	30-1/8	37-3/4	45-3/4
D	5-1/2	6-3/4	8
E	13-1/4	14-3/4	17-1/2
F	5-1/2	6-3/4	8
Test Cocks (line)	3/4"NPT	3/4"NPT	3/4"NPT
Test Cocks (by-pass)	1/4" NPT	1/4"NPT	1/4"NPT
Net Wt. (less gate valves)	409	647	1364
Net Wt. (with OS&Y valves)	733	1142	2207
Net Wt. (w/ OS&Y/post indicator)	733	1113	2154
Shipping Wt. (less Gate Valves)	507	817	1534
Shipping Wt. (with OS&Y valves)	869	1322	2423
Shipping Wt. (w/ OS&Y/post indicator)	869	1293	2370





ORDERING NUMBER

40–60X–XX

C — 6"
E — 8"
G — 10"

1 — Less gate valves
3 — With OS&Y gate valves
6 — W/OS&Y valve on inlet, NRS gate valve w/ post plate and nut on outlet

C — With meter in cubic feet
E — With meter in gallons
G — Less water meter

MODEL DCDA

DESCRIPTION

The Conbraco Model DCDA Double Check Detector Assembly is designed to provide double check protection against cross-connection of non-potable (non-hazardous) water into the safe drinking water system; and at the same time offers precise monitoring capability to detect leakage or unauthorized use of water from fire or automatic sprinkler systems. The unit consists of two independently acting, spring loaded check valves with inlet and outlet resilient wedge gate valves and a by-pass assembly consisting of a water meter, double check valve assembly with shut-off valves and test cocks.

OPERATION

During normal conditions, if the downstream pressure of the assembly increases above the supply pressure or there is a reverse direction of flow; the line and by-pass double check valves will close to prevent backflow. If the second check valve of either the line or by-pass is prevented from closing tightly, the first check valves will still provide protection from a backflow condition. The line and by-pass double check valves will remain closed during the no flow condition. If there is a low flow demand (up to a minimum of 3 gpm) of water downstream, which may be caused by a system leak or unauthorized use, the flow is routed through the water meter to monitor such consumption. Higher flow will tend the main line double check valve to open at which water continues to flow at the by-pass at a rate below capacity.

FEATURES

- Corrosion Resistant
- Replaceable Discs
- Low Head Loss
- Economical
- Short Lay Length
- Light Weight
- Designed For Easy Maintenance
- Check Valve Assemblies Interchangeable
- Maximum Working Pressure 175 PSI
- Operating Temperature Range 33-140˚F

Contact local water authorities for installation/service requirements.

MATERIALS

Body and covers	FDA Approved epoxy coated ductile iron (mainline) Bronze (by-pass)
By-pass components	Bronze
Springs	Stainless Steel (both)
Seats	Bronze (both)
Discs	EPDM (mainline) Silicone (by-pass)
Fasteners	Stainless Steel
Test cocks	Bronze (both)

DOUBLE CHECK DETECTOR ASSEMBLY

SIZES 2 1/2" — 6"

DIMENSIONS (IN.)—WEIGHTS (LBS.)

Size	2½"	3"	4"	6"
A	32	33	34½	39
B	17	17	16-½	18
C (OS&Y) OPEN	16-⅜	18-⅞	22-¾	30-⅛
D	3-½	3-¾	4-½	5-½
E	9	9	9	9
F	3-½	3-¾	4-½	5-½
Test Cocks (line)	½ NPT	½ NPT	½ NPT	¾ NPT
Test Cocks (by-pass)	¼ NPT	¼ NPT	¼ NPT	¼ NPT
Net Wt. (less gate valves)	70	75	83	92
Net Wt. (with OS&Y valve)	176	206	278	404
Net Wt. (with Post Indicator)	200	226	293	416
Shipping Wt. (less gates)	123	128	136	145
Shipping Wt. (with OS&Y)	243	273	350	514
Shipping Wt. (with Post Indicator)	267	293	365	526

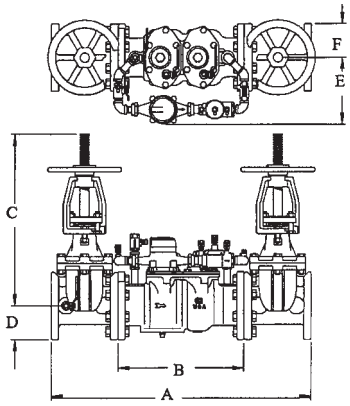
ORDERING NUMBER

4 S – 6 0 X – X X

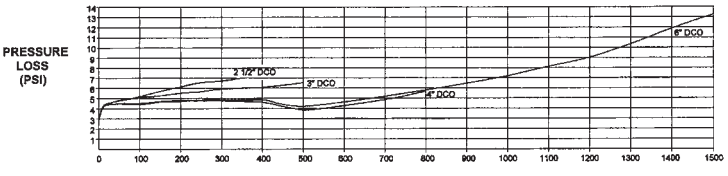
9 — 2-½"
0 — 3"
A — 4"
C — 6"

1 — Less gate valves
3 — With OS&Y gate valves
6 — With post indicator

C — With meter in cubic feet
E — With meter in gallons
G — Less water meter



FLOW CURVES



Curves as Recorded at Underwriters Laboratories

MODEL DCDA

DESCRIPTION

The Conbraco Model DCDA Double Check Detector Assembly is designed to provide double check protection against cross-connection of non-potable (non-hazardous) water into the safe drinking water system; and at the same time offers precise monitoring capability to detect leakage or unauthorized use of water from fire or automatic sprinkler systems. The unit consists of two independently acting, spring loaded check valves with inlet and outlet resilient wedge gate valves and a by-pass assembly consisting of a water meter, double check valve assembly with shut-off valves and test cocks.

OPERATION

During normal conditions, if the downstream pressure of the assembly increases above the supply pressure or there is a reverse direction of flow; the line and by-pass double check valves will close to prevent backflow. If the second check valve of either the line or by-pass is prevented from closing tightly, the first check valves will still provide protection from a backflow condition. The line and by-pass double check valves will remain closed during the no flow condition. If there is a low flow demand (up to a minimum of 3 gpm) of water downstream, which may be caused by a system leak or unauthorized use, the flow is routed through the water meter to monitor such consumption. Higher flow will tend the main line double check valve to open at which water continues to flow at the by-pass at a rate below capacity.

FEATURES

- Corrosion Resistant
- Replaceable Discs
- Low Head Loss
- Economical
- Short Lay Length
- Light Weight
- Designed For Easy Maintenance
- Check Valve Assemblies Interchangeable
- Maximum Working Pressure 175 PSI
- Operating Temperature Range 33-140˚F

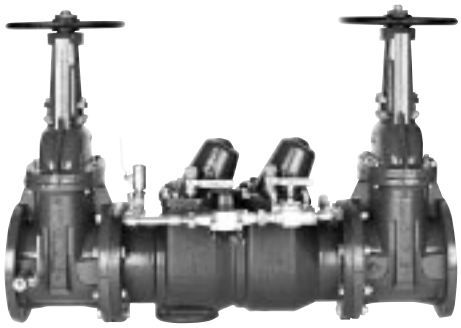
Contact local water authorities for installation/service requirements.

MATERIALS

Body and covers	FDA Approved epoxy coated ductile iron (mainline) Bronze (by-pass)
By-pass components	Bronze
Springs	Stainless Steel (both)
Seats	Bronze (both)
Discs	EPDM (both)
Fasteners	Stainless Steel
Test cocks	Bronze (both)

DOUBLE CHECK DETECTOR ASSEMBLY

SIZES 8" — 10"



DIMENSIONS (IN.)—WEIGHTS (LBS.)

Size	8"	10"
A	50	55-1/2
B	27	29-1/2
C (OS&Y) OPEN	44-1/2	53-3/4
D (OS&Y) OPEN	37-3/4	45-3/4
E	17-1/4	19-1/4
Test Cocks	3/4x3/4 NPT	3/4x3/4 NPT
Net Wt. (less gate valves)	440	490
Net Wt. (with OS&Y valve)	940	1340
Net Wt. (with Post Indicator)	931	1300
Shipping Wt. (less gate valves)	530	585
Shipping Wt. (with OS&Y valves)	1046	1440
Shipping Wt. (with Post Indicator)	1037	1410

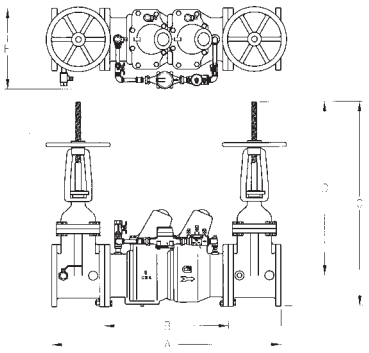
ORDERING NUMBER

4 S – 6 0 X – X X

- E — 8"
- G — 10"

- 1 — Less gate valves
- 3 — With OS&Y gate valves
- 6 — With post indicator

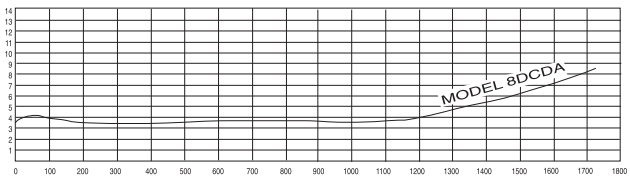
- C — With meter in cubic feet
- E — With meter in gallons
- G — Less water meter



APPROVALS

Contact factory for approvals

FLOW CURVES



Curves as Recorded at Underwriters Laboratories

SERIES 40-700

DESCRIPTION

The Conbraco Series 40-700 Reduced Pressure Detector Assembly is designed to provide reduced pressure principle protection against cross-connections that present a health hazard, and at the same time detect leakage or unauthorized use of water from fire or automatic sprinkler systems. The mainline unit consists of two independent spring-loaded, poppet type check valve assemblies with a diaphragm actuated and spring-loaded, relief valve assembly located between check valves. Two resilient wedge gate valves and four test cocks complete the mainline unit. The by-pass consists of an approved reduced pressure assembly, four test cocks, two shut-off valves and a water meter.

OPERATION

During no flow conditions, the mainline and by-pass check valves will remain closed. Also, both mainline and by-pass relief valves stay closed due to the pressure differential between supply and zone pressure. If there is a low flow demand (up to a minimum of 3 gpm) of water downstream, which may be caused by a system leak or unauthorized use, the flow is routed through the water meter to monitor such consumption. Higher flow will tend to open the mainline check valves at which water continues to flow at the by-pass at a rate below capacity. In the event pressure increases downstream, tending to reverse direction of flow, both check valves in the mainline and by-pass are closed to prevent backflow. If the second check valve in either the mainline or by-pass is prevented from closing tightly, leakage into the reduced pressure zone increases pressure and will cause the relief valves to open. If the supply pressure drops to atmosphere or lower than the reduced pressure zone, the relief valves will open creating an internal air gap in both assemblies.

FEATURES

- Maximum protection against back-pressure/back-siphonage
- Removable bronze seats
- Replaceable discs
- Internal sensing passage
- Corrosion resistant
- Easy in-line maintenance and testing
- Maximum working pressure 175 psig
- Operating temperature range 33°F-140°F

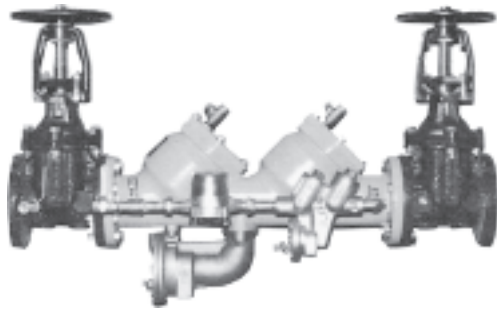
Contact local water authorities for installation/service requirements.

MATERIALS

Body and covers	FDA Approved epoxy-coated ductile iron (mainline), By-pass (bronze)
By-pass components	Bronze
Springs	Stainless Steel (both)
Seats	Bronze (both)
C.V. discs	EPDM (mainline) Silicone rubber (by-pass)
R.V. discs	Silicone rubber (mainline) EPDM (by-pass)
Diaphragm	Nitrile and nylon (both)
R.V. body	Bronze (mainline)
Fasteners	Stainless Steel (both)

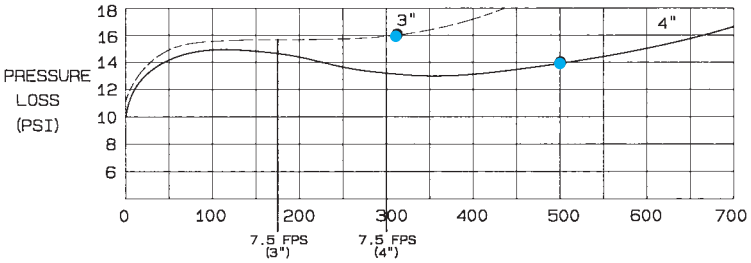
REDUCED PRESSURE DETECTOR ASSEMBLY

SIZES 3"—4"



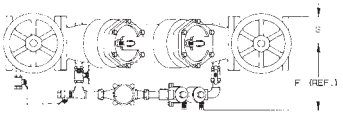
FLOW CURVES

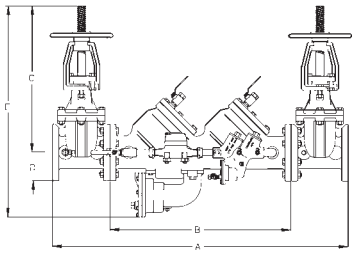
(•) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards.



DIMENSIONS (IN.) - WEIGHTS (LBS.)

Size	3"	4"
A	38-1/16	46-3/4
B	22-1/16	28-1/2
C (OS&Y) OPEN	18-7/8	22-3/4
D	3-3/4	4-1/2
E (OS&Y) OPEN	28-3/8	33-3/16
F	9-1/4	10-1/2
G	3-3/4	4-1/2
Test cocks (line)	1/2" NPT	1/2" NPT
Test cocks (by-pass)	1/4" NPT	1/4" NPT
Net Wt. (less gate valves)	145	217
Net Wt. (with OS&Y valves)	282	423
Shipping Wt. (less gate valves)	209	281
Shipping Wt. (with OS&Y valves)	346	487





ORDERING NUMBER

40–70X–XX

- 0 — 3"
- A — 4"

- 1 — Less gate valves
- 3 — With OS&Y gate valves

- C — With meter in cubic feet
- E — With meter in gallons
- G — Less water meter

SERIES 40-700

DESCRIPTION

The Conbraco Series 40-700 Reduced Pressure Detector Assembly is designed to provide reduced pressure principle protection against cross-connections that present a health hazard, and at the same time detect leakage or unauthorized use of water from fire or automatic sprinkler systems. The mainline unit consists of two independent spring-loaded, poppet type check valve assemblies with a diaphragm actuated and spring-loaded assembly located between check valves. Two resilient wedge gate valves and four test cocks complete the mainline unit. The by-pass consists of an approved reduced pressure assembly, four test cocks, two shut-off valves and a water meter.

OPERATION

During no flow conditions, the mainline and by-pass check valves will remain closed. Also, both mainline and by-pass relief valves stay closed due to the pressure differential between supply and zone pressure. If there is a low flow demand (up to a minimum of 3 gpm) of water downstream, which may be caused by a system leak or unauthorized use, the flow is routed through the water meter to monitor such consumption. Higher flow will tend the mainline check valves to open at which water continues to flow at the by-pass at a rate below capacity. In the event pressure increases downstream, tending to reverse direction of flow, both check valves in the mainline and by-pass are closed to prevent backflow. If the second check valve in either the mainline or by-pass is prevented from closing tightly, leakage into the reduced pressure zone increases pressure and will cause the relief valves to open. If the supply pressure drops to atmosphere or lower than the reduced pressure zone, the relief valves will open creating an internal air gap in both assemblies.

FEATURES

- Maximum protection against back-pressure/back siphonage
- Removable bronze seats
- Replaceable discs
- Internal sensing passage
- Corrosion resistant
- Easy in-line maintenance and testing
- Maximum working pressure 175 psig
- Operating temperature range 33°F-140°F

Contact local water authorities for installation/service requirements.

MATERIALS

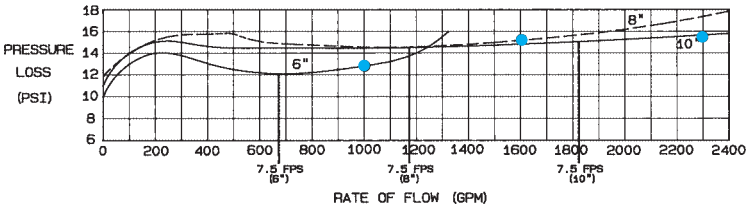
Body and covers	FDA Approved epoxy-coated ductile iron (mainline), By-pass (bronze)
By-pass components	Bronze
Springs	Stainless Steel (both)
Seats	Bronze (both)
C.V. discs	EPDM (mainline) Silicone rubber (by-pass)
R.V. discs	Silicone rubber (mainline) EPDM (by-pass)
Diaphragm	Nitrile and nylon (both)
Mainline R.V. body	Bronze (6" only) FDA Approved epoxy-coated ductile iron (8" & 10")
Fasteners	Stainless Steel (both)

REDUCED PRESSURE DETECTOR ASSEMBLY

SIZE 6"—8"—10"

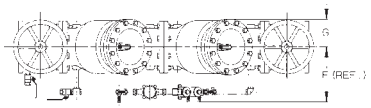
FLOW CURVES

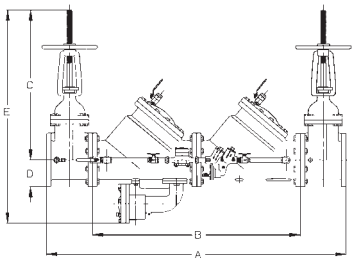
(•) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards.



DIMENSIONS (IN.) - WEIGHTS (LBS.)

Size	6"	8"	10"
A	63	75	88-1/4
B	42	52	62-1/16
C OS&Y (OPEN)	30-1/8	37-3/4	45-3/4
D	5-1/2	6-3/4	8
E OS&Y (OPEN)	41-5/8	53-3/4	63-1/4
F	13-1/4	14-3/4	17-1/2
G	5-1/2	6-3/4	8
Test Cocks (line)	3/4" NPT	3/4" NPT	3/4" NPT
Test Cocks (by-pass)	1/2" NPT	1/4" NPT	1/4" NPT
Net Wgt. (Less Gate Valves)	452	738	1471
Net Wgt. (With OS&Y Valves)	776	1233	2314
Shipping Wgt. (Less Gate Valves)	550	908	1641
Shipping Wgt. (With OS&Y Valves)	912	1413	2530





ORDERING NUMBER

40–70X–XX

C — 6"
E — 8"
G — 10"

1 — Less gate valves
3 — With OS&Y gate valves

C — With meter in cubic feet
E — With meter in gallons
G — Less water meter

SERIES 38

3/4" HOSE CONNECTION VACUUM BREAKER

DESCRIPTION

The Conbraco's 38-304 and 38P Hose Connection Vacuum Breakers are designed to prevent cross-connection caused by back-siphonage. They consist of a single check valve with atmospheric vacuum breaker vent. They feature a break-away set-screw for tamper-proof protection. They are not suitable for continuous pressure applications.

38-304

OPERATION

At no flow situations, the check disc seats against the diaphragm with the atmospheric vent open. This prevents back-siphonage or backflow of water. At flow conditions, the spring-loaded check disc opens, thus allowing flow of water through the device and at the same time the diaphragm seals the atmospheric vent.

INSTALLATION

It should only be installed in areas where spillage of water could not cause damage. For permanent installation, screw device directly into faucet, firmly hand tighten and turn set-screw in until head breaks off.

- Maximum Working Pressure 125 psig
- Maximum Temperature 180°F.

38P

NO.	FINISH	Wt./100
38-304-AS	SATIN BRASS	16.8
38-304-CS	SATIN CHROME	16.8
38P	THERMOPLASTIC	7.0

Note: 38P shipped in 25 pcs./bag
38-304 shipped in 12 pcs./box

3/4" ANTI-FREEZE HOSE CONNECTION VACUUM BREAKER

DESCRIPTION

The Conbraco Series 38-404 Anti-Freeze Hose Connection Vacuum Breaker is especially designed to prevent back-siphonage on wall and yard hydrants. It features a break-away set-screw for tamper-proof protection and manual drain for protection against freezing conditions. It is not suitable for continuous pressure applications.

OPERATION

The principle of operation is basically similar to the 38-304 Series except it has a manual draining feature. To drain, slide water release ring to uppermost position. For use in non-freezing temperatures, slide ring to lowermost position.

INSTALLATION

It should only be installed in areas where spillage of water could not cause damage. For permanent installation, screw device directly into faucet, firmly hand tighten and turn set-screw in until head breaks off.

- Maximum Working Pressure 125 psig
- Maximum Temperature 180°F.

NO.	FINISH	Wt./100
38-404-01	SATIN BRASS	37
38-404-03	SATIN CHROME	37

SERIES 38-304-02

HOSE CONNECTION BACKFLOW PREVENTER
SIZE 3/4"

DESCRIPTION

The Conbraco Series 38-304-02 Hose Connection Backflow Preventer is designed to prevent backflow due to back-siphonage or low head back-pressure. Each device consists of two independent checks, forced loaded in the closed position with an atmospheric vent between the checks. The device is threaded for hose connection at both the inlet and outlet with a break-away set screw on the inlet for tamper proof installations. These devices are not suitable for continuous pressure applications.

OPERATION

During initial pressurization, the inlet check shuttles forward to close the atmospheric vent. As flow is established, both the inlet and outlet check open to allow flow through the device. If a backflow condition is present, then both checks will close and the atmospheric vent opens to introduce air and break the siphon.

FEATURES

- Corrosion resistant body and checks
- Low Head loss
- Easy to install with break-away set screw
- Protects against back siphonage and low-head back pressure

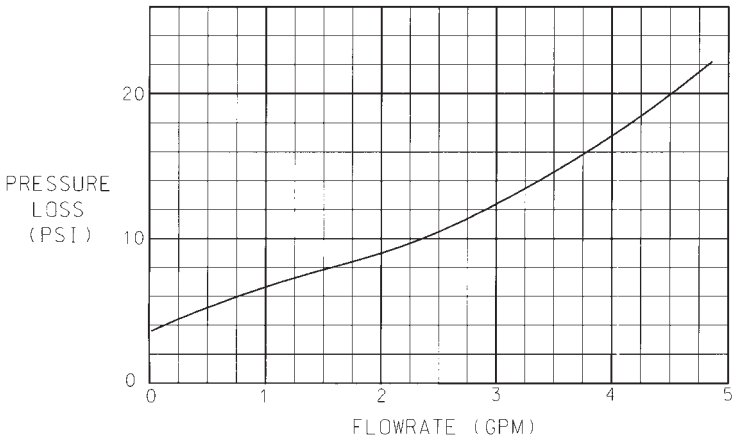
Contact local water authorities for installation/service requirements.

MATERIALS

Body	Brass
Seats	EPDM
Check components	Stainless steel
Check guide	Acetal

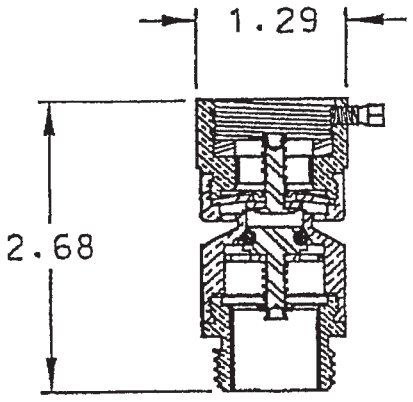
(•) Rated flow as determined by ASSE design performance standards.

FLOW CURVES



DIMENSIONS (IN.) - WEIGHTS (LBS.)

NO.	Wt/100
38-304-02	46



SERIES 38-100

DESCRIPTION

The Conbraco Series 38-100 Atmospheric Type Vacuum Breaker is designed to prevent back-siphonage of polluted water into a potable water system. It should only be installed in areas where spillage of water could not cause damage and where it can be accessible for periodic maintenance. This device is not designed for continuous pressure application.

OPERATION

During flow conditions, the flow of water lifts the float disc and seals the atmospheric vent at all rates of flow, preventing leakage. When a negative pressure is created at the supply line or when the water supply valve upstream of the device is closed, the float disc will fall, thus opening the atmospheric vent. This prevents back-siphonage and creation of vacuum at the discharge line.

FEATURES

- Corrosion resistant
- Bronze body
- Suitable for hot or cold water service:
  (up to 212°F at 125 psig) for 1/4" thru 1"
  (up to 180°F at 125 psig) for 1-1/4" thru 2"
- Heat resistant silicone seat disc
- Rough brass or polished chrome finish
- Easy to maintain
- Compact and lightweight
- Durable

Contact local water authorities for installation/service requirements.

MATERIALS

Valve Body	Cast Bronze
Seat Disc	Silicone
Float & Gasket	Polypropylene
Guide	Brass
Seat	Cast Bronze
Canopy	Chrome-plated Steel
Screw	Zinc-plated Steel

SUFFIX NO.

NO.	FINISH
01	Rough Brass
03	Rough Chrome
04	Polished Brass
06	Polished Chrome

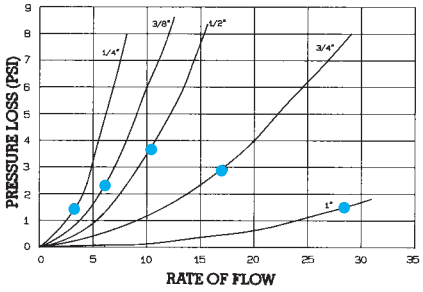
Note: 1-1/4" thru 2" - Rough Brass (01) ONLY, and Nitrile O-Ring in place of gasket.

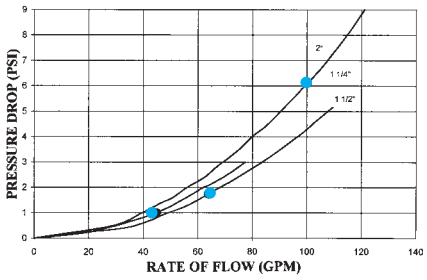
ATMOSPHERIC TYPE VACUUM BREAKER

SIZES 1/4"–3/8"–1/2"–3/4"–1"–1-1/4"–1-1/2"–2"

FLOW CURVES

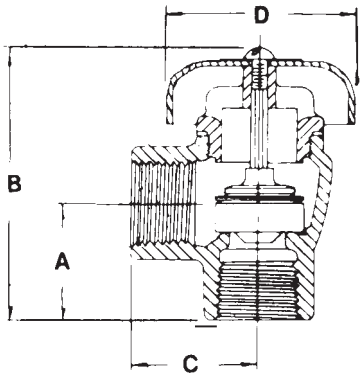
(•) Rated flow as determined by ASSE design performance standards.





DIMENSIONS (IN.) - WEIGHTS (LBS.)

NO.	SIZE	A	B	C	D	Wt/100
38-101	1/4"	29/32	2-3/8	1-1/32	1-13/16	50.6
38-102	3/8"	29/32	2-3/8	1-1/32	1-13/16	47.7
38-103	1/2"	1-3/32	2-1/2	1-3/16	1-3/16	54.7
38-104	3/4"	1-5/16	3-1/16	1-15/32	2-1/8	79.7
38-105	1"	1-3/4	4-1/16	1-7/8	2-7/8	174.0
38-106	1-1/4"	2	4-3/8	2	3-3/4	316.0
38-107	1-1/2"	2	4-3/8	2	3-3/4	289.0
38-108	2"	2-1/8	4-1/2	2-1/4	3-3/4	369.0



SERIES 38-200

DESCRIPTION

The Conbraco Series 38-200 Atmospherc Type Vacuum Breaker is designed to prevent back-siphonage of polluted water into a potable water system. The device should only be installed in areas where spillage of water could not cause damage. This device is not designed for continuous pressure applications.

OPERATION

During flow conditions, the flow of water lifts the float and seals the atmospheric vent, preventing leakage. If a negative pressure is created at the supply line or when the water supply valve upstream of the device is closed, the float will fall. This action opens the atmospheric vent, and prevents back-siphonage in the discharge line.

FEATURES

- Corrosion resistant
- Forged brass body
- Suitable for hot or cold water service up to 212°F and 125 psi
- Rough brass, rough chrome or polished chrome finish
- Easy to maintain
- Compact and lightweight

Contact local water authorities for installation/service requirements.

MATERIALS

Body	Forged Brass
Seat O-ring	EPDM
Float	Polyethylene
Cap and guide	Noryl®
Canopy	Chrome-plated steel
Screw	Zinc-plated steel

SUFFIX NO.

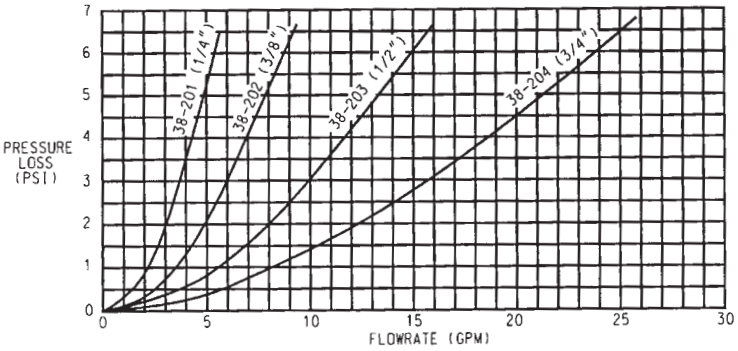
NO.	FINISH
01	Rough Brass
03	Rough Chrome
06	Polished Chrome

ATMOSPHERIC TYPE VACUUM BREAKER

SIZES 1/4"–3/8"–1/2"–3/4"

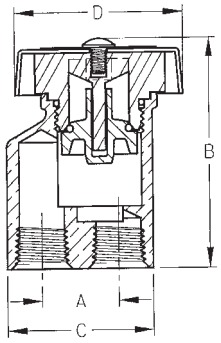
FLOW CURVES

(•) Rated flow as determined by ASSE design performance standards.

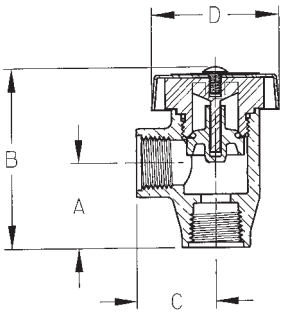


DIMENSIONS (IN.) - WEIGHTS (LBS.)

NO.	SIZE	A	B	C	D	Wt/100
38-201	1/4	1-3/32	2-5/16	1-1/32	21/32	50.6
38-202	3/8	1-3/32	2-5/16	1-1/32	21/32	47.7
38-203	1/2	1-9/32	2-5/8	1-9/32	1-7/8	54.7
38-204	3/4	1-15/32	3	1-15/32	2	63.1
38-231	1/4	3/4	2-7/32	1-7/16	21/32	26.2
38-232	3/8	7/8	2-7/32	1-3/4	21/32	31.2



38-231 / 232



38-201 / 202 / 203 / 204

SERIES 38-500

DESCRIPTION

The Conbraco Series 38-502 Lab Faucet Vacuum Breaker is designed to provide protection against back-siphonage wherever a hose is connected to a faucet. The device consists of two independently acting checks with an intermediate relief port or vent. It is suitable for supply pressure up to 150 psig and a temperature range of 33°F-180°F.

OPERATION

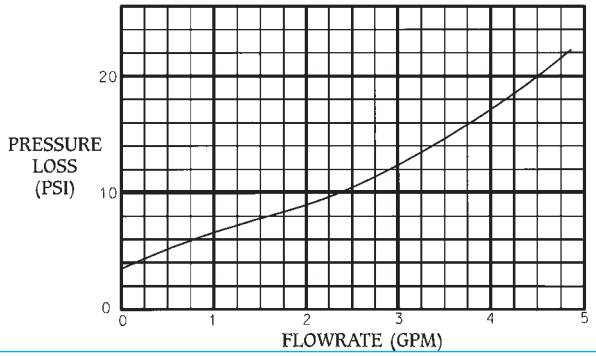
During normal flow conditions, the two checks are held off their seats, supplying water downstream. The vent is held shut by supply pressure acting on the diaphragm. If the supply pressure should fall below atmospheric, the second check will close due to internal spring pressure and the vent will open to introduce air into the supply line and break the siphon.

Note: This device should only be installed where spillage of water could not cause water damage.

LAB FAUCET VACUUM BREAKER

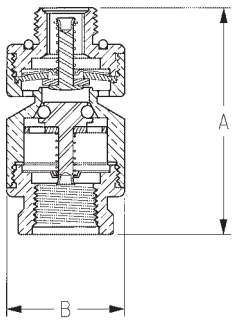
SIZES 1/4" AND 3/8"

FLOW CURVES

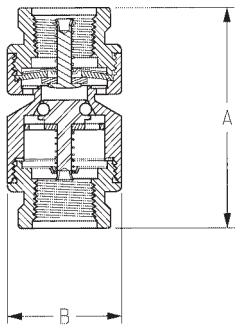


DIMENSIONS (IN.) - WEIGHTS (LBS.)

MODEL NO.	INLET	OUTLET	A	B
38-502-01	3/8" MNPSM	3/8" FNPT	2.33	1.24
38-502-02	3/8" FNPT	3/8" FNPT	2.34	1.24
38-502-03	3/8" FNPT	3/8" MNPSM	2.33	1.24
38-502-CP2	1/4" FNPT	1/4" FNPT	2.34	1.24
38-502-CP3	3/8" FNPT	3/8" FNPT	2.34	1.24

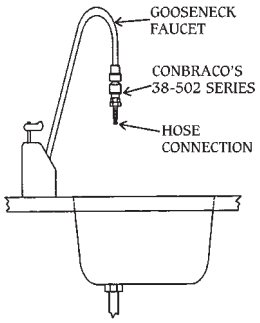


38-502-01

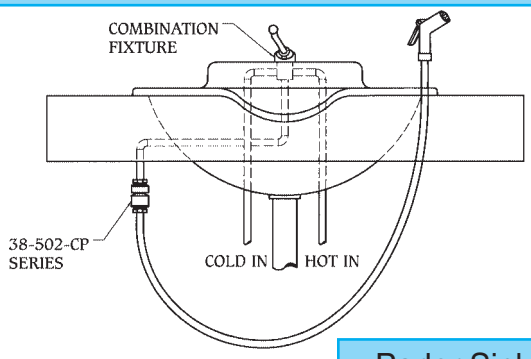


38-502-CP2

TYPICAL INSTALLATIONS



Lab Faucets



Parlor Sinks

SERIES 40-800

DESCRIPTION

The Conbraco Series 40-800 Alleviator Irrigation System Access Valve is designed for through wall installations, suitable for domestic and commercial use. The device will have two individual connections, one providing installation for a backflow device and one for draining or winterizing system.

OPERATION

During flow conditions, a center guided stainless steel stem with a resilient seat provides positive shut-off. A stainless steel key opens and closes the device. The device shall have matching inlet and outlet connections consisting of female NPT pipe threads. The device shall be suitable for supply pressures up to 175 psi and water temperatures from 33°F to 180°F.

FEATURES

- Heavy pattern with excellent metering control
- Corrosion resistant
- Low head loss
- Designed for easy installation
- Available in lengths of 13", 16", & 22"
- Temperature range from 33°F - 180°F
- Pressure rating up to 175 psi
- Available in sizes: 3/4" - 2"
- Cast Brass Finish

Contact local water authorities for installation/service requirements.

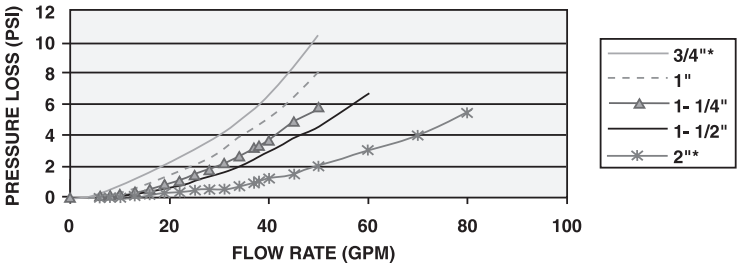
MATERIALS

Cap	Brass, ASTM B16
Set Screw	Steel, Commercial (plated)
Drive Screw	Steel, Zinc plate
Seat Holder	Stainless Steel, 316SS
Seat	Buna – N
Body	Bronze, ASTM B584 - C84400
Guide Plug	Brass, ASTM B16, ASTM B283
Packing Gland	Brass, ASTM B16
Packing Nut	Brass, ASTM B16
Retaining Ring	Stainless Steel, 316SS
Seat Fitting	Brass, ASTM B16
Drive Stem	Stainless Steel, 316SS
Stem	Stainless Steel, 316SS
Adj. Guide	Brass, ASTM B16
O-Ring	Silicone
Extension Tube	Copper Tube
Tee	Bronze, ASTM B584 - C84400
Nameplate	Brass
Key	Stainless Steel, 316SS

APOLLO® ALLEVIATOR-IRRIGATION SYSTEM ACCESS VALVE

SIZE 3/4"—1"—1-1/4"—1-1/2"—2"

FLOW CURVE

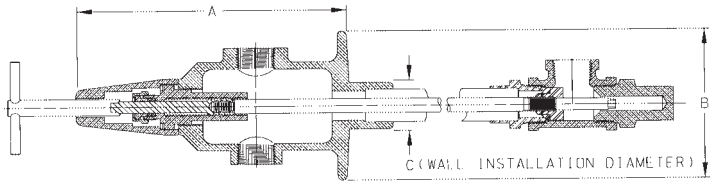


*Data extrapolated for the 3/4" and 2"

DIMENSIONS (IN.) - WEIGHTS (LBS.)

SIZE	3/4"	1"	1-1/4"	1-1/2"	2"
A	7-1/4	7-1/4	10-1/4	10-1/4	10-1/4
B	4	4	4	4	5-1/2
C	1-1/4	1-1/2	2	2-1/4	2-3/4
Inlet/Outlet	3/4	1	1-1/4	1-1/2	2
Drain	3/4	3/4	3/4	3/4	3/4
Net Wgt. (Lbs.)	6	6	7-1/2	8	14
Shipping Wgt. (Lbs.)	7	7	8-1/2	9	15

Note: Weights shown are for 13" Tube Lengths only; other sizes will vary



ORDERING NUMBER

40 – 80X – XX

SIZE	LENGTH
4 – 3/4"	13"
5 – 1"	16"
6 – 1 1/4"	22"
7 – 1 1/2"	
8 – 2"	

SERIES 40-000

DESCRIPTION

The Conbraco Series 40-000 Freeze Protection Valve shall protect Conbraco® Backflow Preventers from freezing when installed in accordance with manufacturer's instructions. All internal parts of the Freeze Protection Valve shall be replaceable.

OPERATION

During flow conditions, the Freeze Protection Valve shall be drip-tight during above-freezing normal operating conditions. The Freeze Protection Valve shall be suitable for normal operating pressures of 20 to 175 psig.

FEATURES

- Installs easily on Conbraco® Backflow Preventers
- Ease of repair with available repair kit
- 175 psig maximum operating pressure
- Corrosion resistant
- 1/4" male pipe thread inlet port
- Available with 1/8" male x 1/4" female Apollo® test cock
- Discharge port accommodates 5/8" I.D. hose
- Mechanical operating principle
- Nominal start to open temperature of 35°F
- Maximum temperature of 180°F
- Compact design
- Patent pending

Contact local water authorities for installation/service requirements.

MATERIALS

Body	Bronze
Cap	Brass
Spring Guide	Brass
Spring	Stainless Steel
Cap O-Ring	Buna-N
Guide O-Ring	Buna-N
Thermal Element	Copper/Stainless Steel/ EPDM

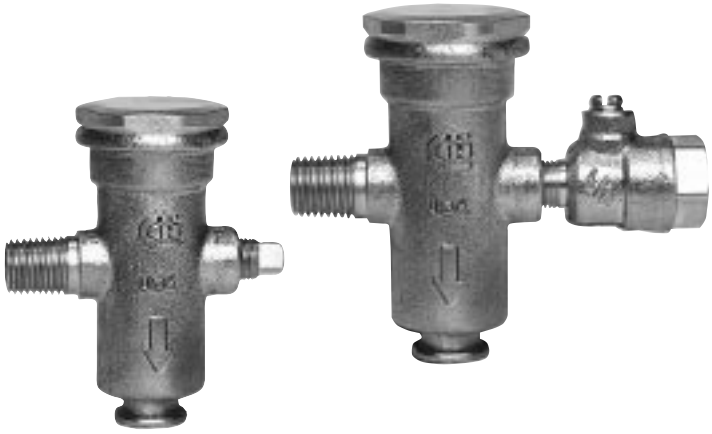
ORDERING NUMBER

40–000–FPVX

1 - w/ 1/8" NPT plug
2 - w/ 1/8" male x 1/4" female Apollo® test cock
R - Repair kit* for FPV1 and FPV2

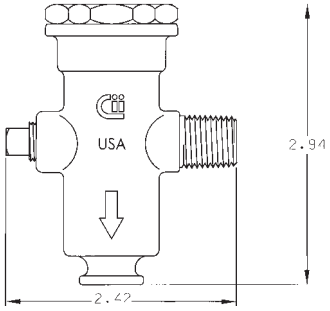
*Repair kit includes: Thermal element, spring, spring guide, two o-rings (all internal parts)

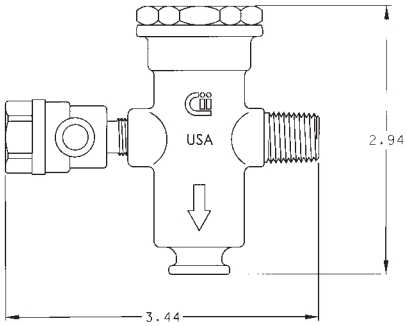
FREEZE PROTECTION VALVE



DIMENSIONS (IN.)—WEIGHTS (LBS.)

NET WEIGHT EACH
Model 40-000-FPV1: .70
Model 40-000-FPV2: .77





MODEL NUMBERS

40-000-FPV1
40-000-FPV2 - w/test cock

BACKFLOW PREVENTER ACCESSORIES

TEST KITS

DESCRIPTION

The Conbraco Backflow Preventer Test Kits are compact, lightweight and portable testing devices. They come equipped with a gauge, hoses and all required adapter fittings. Also included is a flexible or adjustable strap for hanging the gauge, laminated test procedures and a molded plastic carrying case with foam inserts.

DUPLEX GAUGE TEST KIT

40-100TK (ALL DCV)

This test kit is designed exclusively for testing all Double Check Valve backflow preventers.

The gauge is a duplex type with 0-160 psig pressure range with 1 psi graduation.

DIFFERENTIAL PRESSURE GAUGE TEST KITS

40-200-TK & 40-200-TKP

These are three valve test kits used for testing all DCV, RPZ, PVB & SVB backflow preventers.

The gauge is a differential pressure type with a dual scale of 0-15 psid/0-100kPa differential pressure range with a ±2% accuracy (full scale).

40-200-TK5

This a five valve test kit used for testing all DCV, RPZ, PVB & SVB backflow preventers.

The five valve test kit is similar to the three valve kit except it has an additional two valves that make it possible to bleed lines without disconnecting hoses. It also features a line pressure gauge in addition to the differential pressure gauge, a thermoplastic gauge body and adjustable nylon strap.

40-200-TKRC (ALL RPZ, DCV, PVB & SVB)

The test kit is identical to the 40-200-TK5 except it is for non-potable water. The test kit is color-coded, with a purple dial that matches reclaimed water lines in industrial, irrigation and fire service applications.

MODEL	APPLICATION	WT./100 (lbs)
40-100-TK	ALL DCV	780
40-200-TK	ALL DCV, RPZ, PVB & SVB	780
*40-200-TKP	ALL DCV, RPZ, PVB & SVB	700
*40-200-TK5	ALL DCV, RPZ, PVB & SVB	650
*40-200-TKRC	ALL DCV, RPZ, PVB & SVB	650

* Thermoplastic gauge body

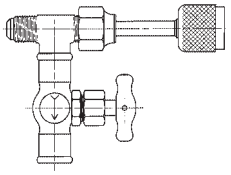
ACCESSORIES

40-200-ST SIGHT TUBE

Used in USC testing procedures. The kit allows for visual inspection during testing, provides an extension to the check valve body and offers quick connection with the 90˚ elbow. Provides means to static test double check backflow preventers.

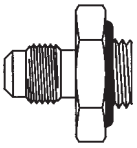
40-200-BV BLEED VALVE

Test valve used to provide accurate readings in field test of the Double Check Valve backflow preventers. Recommended in USC testing procedures. Benefits include quick connections, quick bleed off of testing lines and useful in tight locations.



40-000-TFK TEST KIT FITTING

Brass fitting which installs onto 1/4" NPT Backflow Preventer Test Cocks by hand. No tools required. No messy Teflon tape to deal with. Provides cleaner, quicker testing. (3 per kit)



SERIES IBVE-125

DESCRIPTION

The New Conbraco Series IBVE-125 ball valves feature an FDA-approved, heat fused epoxy coating, making them ideal for corrosive water service as well as food contact applications. They can be used in place of any IBBM gate valve or plug valve.

With their full port design, these valves assure an unobstructed, turbulence-free flow that gate and butterfly valves can't match. Low profile handle for easy installation in tight places. Sizes from 2½" to 8". Rated 125 WSP, 200 WOG, with maximum operating temperature of 140°F.

FEATURES

- Gear operator standard on 8"
- Full port design offers superior flow rate
- No bronze seat rings, disc rings or stems to wear out
- Quarter turn offers instant, positive shutoff with zero leakage
- Stainless steel ball resists corrosion
- Large actuator mounting pad standard
- Optional locking handles available
- Handle indicates valve operation status
- Opens and closes easily, without cheater bar
- Blowout-proof stainless steel stem
- PTFE seats and packing, not Nitrile or EPDM
- For more technical info ask for PHBRIRBV brochure

MATERIALS

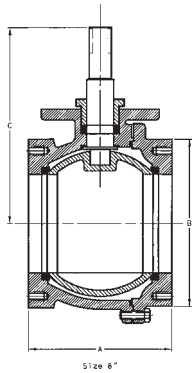
Body	FDA Approved epoxy-coated cast iron
Seats	PTFE

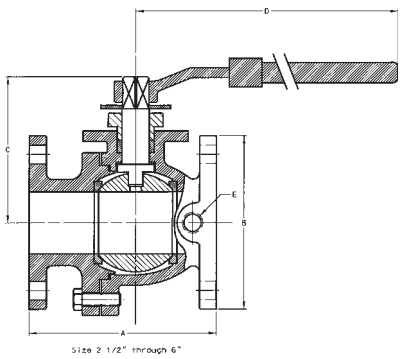
EPOXY COATED CAST IRON FULL PORT CLASS 125 FLANGED BALL VALVE

DIMENSIONS (IN.) - WEIGHTS (LBS.)

MODEL #	SIZE	A	B	C	D	E	WT./LBS
6Q20901	2-1/2"	7.5	7	5.9	16	1/2 NPT	34
6Q20001	3"	8	7.5	6.2	16	1/2 NPT	38
6Q20A01	4"	9	9	7	19.7	1/2 NPT	58
6Q20C01	6"	10.5	11	10.04	26	3/4 NPT	118
6Q20E01	*8"	11.5	13.5	15.85	-	3/4 NPT	345

*Gear operator standard on 8"

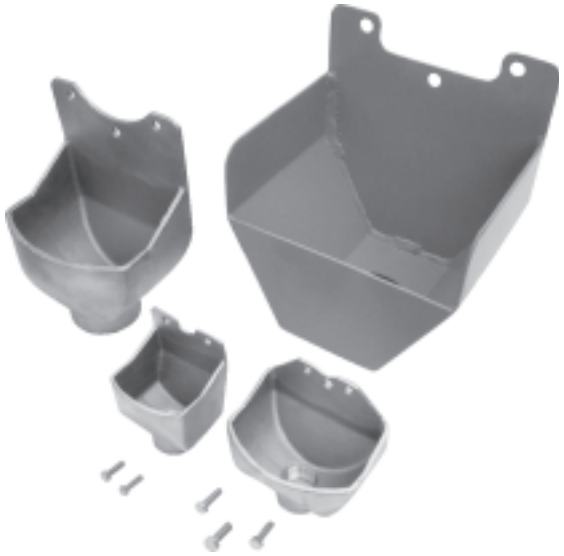




AIR GAP DRAIN

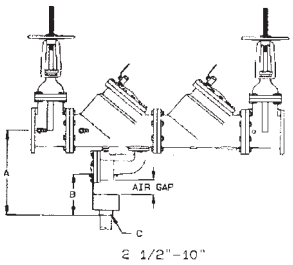
DESCRIPTION

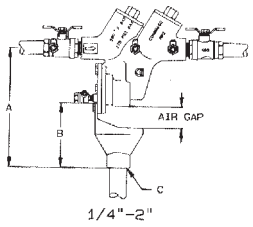
The Conbraco Air Gap Drain (AGD) primarily provides a physical separation between the relief valve discharge on a Reduced Pressure Principle backflow preventer and the drainage system. It will funnel minor relief valve discharges caused by supply pressure fluctuations or minor check valve fouling. Drain piping is easily attached to the air gap drain's threaded bottom. Cast bronze body material for RPZ sizes 1/4" thru 6", and epoxy-coated body for RPZ sizes 8" and 10". RPZ sizes 1/4" to 2" furnished with SS bolts and 2-1/2" to 10" will use existing RPZ relief valve cover bolts.



DIMENSIONS (IN.) - WEIGHTS (LBS.)

R.P. SIZE	AGD MODEL NO.	A	B	C	Wt./100
1/4", 3/8", 1/2"	40-200-XA	8-7/16	5	1 NPT	230
3/4" & 1"	40-200-X1	9-1/2	5-1/8	1 NPT	340
1-1/4" & 2"	40-200-X1	11-1/4	5-1/8	1 NPT	340
2-1/2" & 3"	40-200-X2	19	9-7/8	2 NPT	1100
4"	40-200-X2	20	9-7/8	2 NPT	1100
6"	40-200-X2	21	9-7/8	2 NPT	1100
8"	40-200-X3	22-11/16	12-11/16	3 NPT	1245
10"	40-200-X3	25-11/16	12-11/16	3 NPT	1245



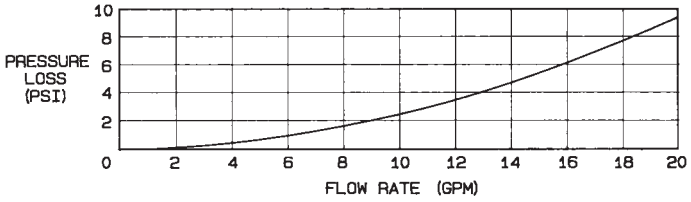


METER SETTER

DESCRIPTION

The Conbraco meter setter, 40-300-M Series is designed to adapt existing water meter installations to include a dual check backflow preventer. This is accomplished without the expense of modifying existing piping or replacing the existing meter box. The standard configuration provides for the 300 Series Dual Check to be installed on the outlet side of the water meter at a 45 angle which makes it easily accessible for testing and repair. The meter setter will accept a standard 5/8" or 5/8" x 3/4" water meter, 7-1/2" face to face. The meter setter shall be constructed of an 85-5-5-5 cast bronze body with a boss to accept other components such as a pressure relief valve, cast bronze union nuts drilled to accept sealing wire for tamper proofing, heavy wall copper tubing bends and lead free solder joints.

FLOW CURVE



FEATURES

- Cast bronze (85-5-5-5) body
- Corrosion resistant
- Lead-free solder joints
- Low head loss
- Easy installation
- Maximum working pressure 175 psig
- Operating temperature range 33°F-180°F

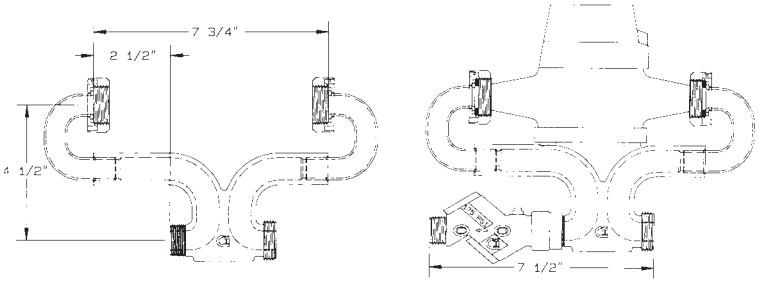
ORDERING NUMBER

4 0 – 300 – M _

1 - 5/8" meter setter
2 - 5/8" x 3/4" meter setter
3 - 5/8" meter setter with dual check
4 - 5/8" x 3/4" meter setter with dual check

DIMENSIONS AND WEIGHTS

MODEL NO.	UNIT WT. (lbs.)
40-300-M1	3.17
40-300-M2	3.36
40-300-M3	5.14
40-300-M4	5.32



SERIES 4S VALVE SETTER

DESCRIPTION

The Conbraco valve setter is a support accessory used for installing the 4S series double check backflow valves. Its purpose is to provide rigid support between the elbows, thus transferring force without the use of thrust blocks or other restraint methods. The valve setter is constructed of ductile iron and features fusion bonded epoxy coating, making it ideal for corrosive water service. It also contains ANSI B16.1 Class 125 flanges and ANSI AWWA C153 A21.53-94 mechanical joints. It is suitable for supply pressures to 175 psig and operating temperatures from 32˚ to 140˚F.

MATERIALS

Valve Setter	Ductile Iron ASTM A536 Grade 65-45-12
Coating	Fusion Bonded Epoxy Coating
Nuts & Bolts*	Zinc Plated Steel

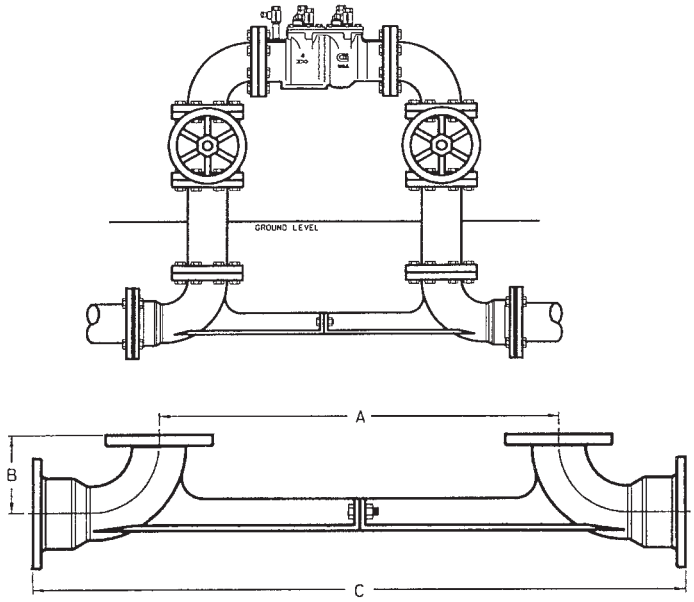
*Center joint nut and bolts only (flange bolts and gaskets not included).

ORDERING NUMBER

4 S – X – V S – X

9 — 2-1/2"	C — 6"	F — Flange by Flange
0 — 3"	E — 8"	M — Flange by Mech. Joint
A — 4"	G — 10"	

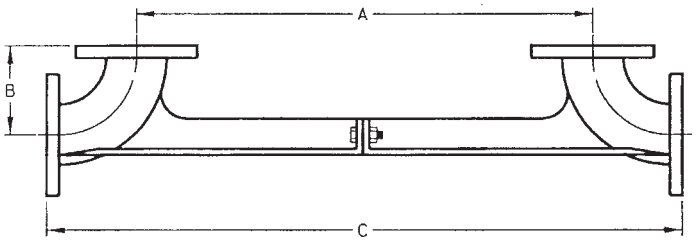
FLANGE-BY-MECHANICAL JOINT
SIZES 3" — 10"



DIMENSIONS AND WEIGHTS
FLANGE X MECHANICAL JOINT

Size	Weight	A	B	C
3"	33.23	28.0	5.5	45.8
4"	59.28	29.5	6.5	48.1
6"	105.1	34.0	8.0	55.6
8"	188	45.0	9.0	68.4
10"	278	51.5	11.0	78.9

FLANGE-BY-FLANGE
SIZES 2 1/2" - 10"



DIMENSIONS AND WEIGHTS
FLANGE X FLANGE

Size	Weight	A	B	C
2-1/2"	44.50	27.0	5.0	37.0
3"	63.06	28.0	5.5	39.0
4"	112.92	29.5	6.5	42.5
6"	200	34.0	8.0	50.0
8"	358.40	45.0	9.0	63.0
10"	530	51.5	11.0	73.5

THERMAL EXPANSION RELIEF VALVES

DESCRIPTION

The Conbraco Thermal Expansion Relief Valves (Series 16-601 and 78-RV) are designed primarily to relieve excessive water pressure build-up caused by thermal expansion.

OPERATION

In a closed hot water piping system, as water is heated, thermal expansion occurs. The increase of pressure will exert unwarranted stress on the system components, which may reach harmful levels well before the emergency setting of the main relief valve is reached. By installing the Series 16-601 or the 78-RV, it will control any amount of expanded water without causing pressure increase to exceed maximum setting.

FEATURES

- Prevents excessive pressure build-up
- Protects plumbing fixtures
- Extends water heater life
- Compact and lightweight design
- Economical
- Easy to install and requires no special tool
- Corrosion resistant

ORDERING NUMBER

16-601 Series

MODEL	SET PRESSURE (PSI)	UNIT WT.
16-601-E6	85	0.5 lb.
16-601-03	100	0.5 lb.
16-601-04	125	0.5 lb.

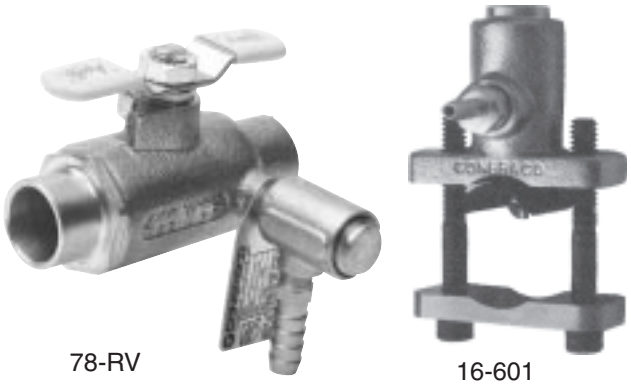
78-RV Series

7 8 - X X X - R V

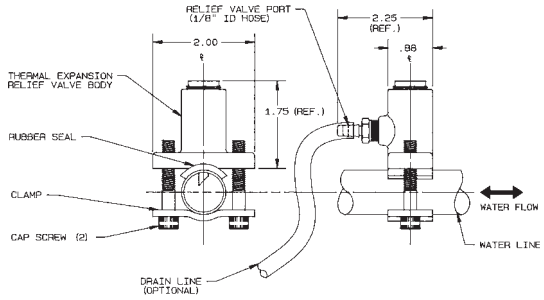
SIZE
3 - 3/4" SWT
4 - 3/4" THD
5 - 1" SWT
6 - 1" THD

Pressure Setting
-0 - 125 psig
-1 - 100 psig
-2 - 80 psig

Relief Valve Connection
4 - Hose barb
5 - Pex
6 - Comp. fitting
7 - 1/2" NPT/SWT fitting

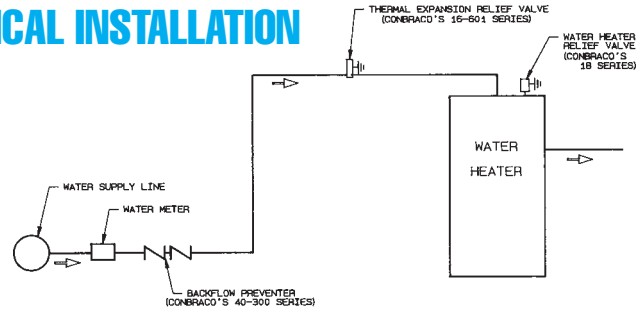


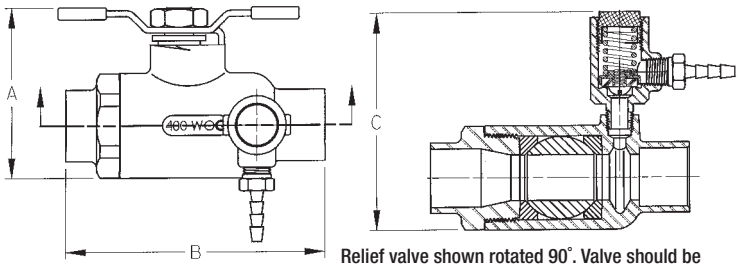
78-RV 16-601



NOTE: UNIT CAN BE MOUNTED ON 1/2" THRU 1" COPPER TUBING.

TYPICAL INSTALLATION





Relief valve shown rotated 90°. Valve should be assembled w/hose barb pointed out of page.

DIMENSIONS AND WEIGHTS

Series	A	B	C
78-300	2.6	3.9	3.2
78-400	2.5	2.7	3.4

3/4" HOSE CONNECTION PRESSURE GAUGE

DESCRIPTION

The Conbraco Hose Connection Pressure Gauge is designed to measure water pressure through a 3/4" hose thread connection. It consists of an indicator needle to determine maximum pressure.

FEATURES

- 2-1/2" face dial
- 0 - 300 psig pressure range
- Swivel type 3/4" hose connection
- Adjustable indicator needle
- Temperature range = 50°F - 130°F

Wt./100
46.0

No.
W-8078-00

SERIES 40-XT

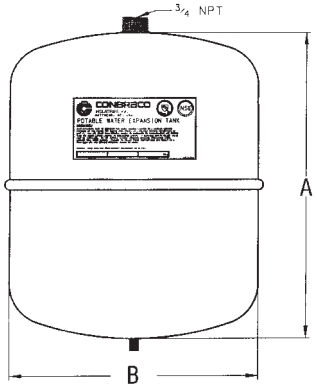
DESCRIPTION

Designed to protect closed water supply systems, appliances and piping from the hazards of thermal expansion, such as premature water heater failure. Installs easily on direct fired gas, oil and electric hot water heaters and storage tanks. Their pre-pressurized steel design includes an expansion membrane that stops any contact between the water and air in the tank.

FEATURES

- Baked on epoxy liner
- Butyl diaphragm
- Designed for easy inline installation
- Pre-charge is adjustable in the field
- For use with storage tanks and water heaters

THERMAL EXPANSION TANK



WEIGHTS & DIMENSIONS

Model No.	Capacity (gal.)	Exp. Vol. (gal.)	Connection	A (in.)	B (in.)	Net Wt. (Lbs.)
40-XT1-01	2.11	1.40	3/4 NPT	10.88	8.00	5.5
40-XT3-01	4.76	3.17	3/4 NPT	13.75	10.75	8.1
40-XT5-01	6.34	4.22	3/4 NPT	15.88	12.00	9.7
40-XT7-01	13.21	8.82	3/4 NPT	20.00	15.00	23.4

"Y" STRAINER

SERIES 59

FEATURES

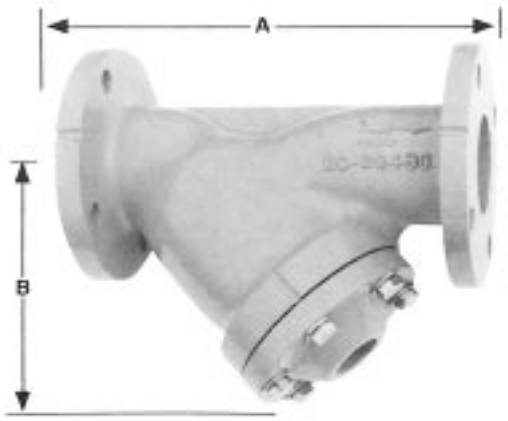
- Maximum protection capability against foreign particles in piping systems and process equipment.
- Cast bronze (85-5-5-5) body
- 304 Stainless Steel screen
- Sizes 1/8" thru 1/2" comes standard with 50 mesh (0.009" wire)
- Sizes 3/4" thru 3" comes standard with 20 mesh (0.016" wire)
- 4" size comes standard with .125" perforated screen
- Operating pressure to 400 psig WOG
- Removable self-aligning screen

MODEL	SIZE	A	B	CAP TAPPING SUFFIX-02	Wt./100
59-000-01	1/8 NPT	2	1-1/4	1/8 NPT	44.5
59-001-01	1/4 NPT	2	1-1/4	1/8 NPT	42.5
59-002-01	3/8 NPT	2-11/16	2	1/4 NPT	78.6
59-003-01	1/2 NPT	2-11/16	2	1/4 NPT	75.1
59-004-01	3/4 NPT	3-7/8	3-1/4	1/2 NPT	185
59-005-01	1 NPT	4-3/4	4	3/4 NPT	276
59-006-01	1-1/4 NPT	5-1/8	4-1/4	3/4 NPT	358
59-007-01	1-1/2 NPT	5-3/4	5	1 NPT	541
59-008-01	2 NPT	6-3/4	6	1-1/4 NPT	747
59-009-01	2-1/2 NPT	7-15/16	5-7/8	1-1/4 NPT	1130
59-010-01	3 NPT	9-1/8	6-7/8	1-1/4 NPT	1580
59-011-01	4 NPT	11-15/16	10-1/8	1-1/2 NPT	3070

FLANGED MODELS, STYLE FC1
CLASS 125

FEATURES

- Maximum protection capability against foreign particles in piping systems and process equipment.
- High tensile ASTM A126 Class B cast iron body coated with FDA Approved epoxy.
- 18-8 stainless steel screen
- Sizes 2-1/2" and 3" come standard with 0.045" perforation screen. Sizes 4" thru 10" come standard with 0.125" perforation screen
- Operating pressure to 200 psig
- Removable self-aligning screen
- Provided with crane hook hole in the vertical fin on 4" and above for ease of lifting and positioning



MODEL	SIZE	A	B	SIZE BLOW-OFF NPT	WEIGHT (LBS.)
6132C9L1	2-1/2"	10-1/2	7	1-1/4	33
6132C0L1	3"	12	8	1-1/4	44
6132CAN1	4"	14-7/8	10-3/4	1-1/4	85
6132CCN1	6"	21	16-1/4	1-1/2	174
6132CEN1	8"	22-1/2	17	2	262
6132CGN1	10"	26-1/2	20-1/4	2-1/2	410

NOTE:
CONBRACO OFFERS A COMPLETE LINE OF THREADED AND FLANGED END STRAINERS.
FOR DETAILS, CONTACT YOUR LOCAL SALES REPRESENTATIVE.

APPROVALS

MODEL	TYPE	SIZE	APPROVALS						
			USC	ASSE	CSA	IAPMO	AWWA	UL*	FM*
DC	40-100	1/2" - 2"	YES	1015	B64.5	YES	C-510	N/A	N/A
TEDC	40-100	3/4" - 2"	YES	1015	B64.5	YES	C-510	YES	N/A
TEDC	40-100-99T	3/4" - 2"	YES	1015	B64.5	PENDING	C-510	N/A	N/A
TEDC	40-100-TC2	3/4" - 1"	YES	1015	B64.5	PENDING	C-510	N/A	N/A
DC	40-100-02	2-1/2" - 10"	YES	1015	B64.5	YES	C-510	N/A	N/A
DC	40-100-03	2-1/2" - 10"	YES	1015	B64.5	YES	C-510	YES	YES
DC	40-100-05	2-1/2" - 6"	YES	1015	B64.5	PENDING	C-510	N/A	N/A
DC	40-100-06	4" - 10"	YES	1015	B64.5	YES	C-510	N/A	N/A
CBBP	4C-100	1/4" - 3/8"	N/A	1022	PENDING	N/A	N/A	N/A	N/A
DC	4S-100	1/2"	YES	1015	B64.5	PENDING	PENDING	N/A	N/A
DC	4S-100	2-1/2" - 6"	YES	1015	B64.5	YES	C-510	YES	YES
DC	4S-100	8"	PENDING	1015	PENDING	PENDING	PENDING	YES	YES
DC	4S-100	10"	PENDING	1015	PENDING	PENDING	PENDING	PENDING	PENDING
RP	40-200	1/4" - 1/2"	YES	1013	B64.4	N/A	N/A	N/A	N/A
RP	40-200	3/4" - 2"	YES	1013	B64.4	YES	C-511	YES	N/A
RP	40-200-99T	1/4" - 1/2"	YES	1013	B64.4	N/A	N/A	N/A	N/A
RP	40-200-99T	3/4" - 2"	YES	1013	B64.4	PENDING	C-511	N/A	N/A
RP	40-200-TC2	3/4" - 1"	YES	1013	B64.4	PENDING	N/A	N/A	N/A
RP	40-200-A25	1/4" - 1"	YES	1013	1/2" - 1"	PENDING	N/A	3/4", 1"	N/A
RP	40-200-99TS	1/4" - 1"	PENDING	1013	1/2" - 1"	PENDING	N/A	N/A	N/A
RP	40-200-A2U, Z	3/4" - 2"	YES	1013	B64.4	PENDING	N/A	N/A	N/A
RP	40-200-99TU, Z	3/4" - 2"	PENDING	1013	B64.4	PENDING	N/A	N/A	N/A
RP	40-200-TCU	3/4" - 1"	YES	1013	B64.4	PENDING	N/A	N/A	N/A
RP	40-200-02	2-1/2" - 10"	YES	1013	B64.4	YES	C-511	N/A	N/A
RP	40-200-03	2-1/2" - 10"	YES	1013	B64.4	YES	C-511	3" - 10"	YES
RP	40-200-05	2-1/2" - 6"	YES	1013	B64.4	PENDING	C-511	N/A	N/A
RP	4S-200	2-1/2" - 6"	PENDING	PENDING	PENDING	PENDING	PENDING	N/A	N/A
RP	45-200	8"-10"	PENDING	YES	PENDING	PENDING	PENDING	N/A	N/A
DUAL CHK.	40-300	1/2" - 1"	N/A	1024	B64.6	N/A	N/A	N/A	N/A
DUAL CHK.	4P-300	1/2" - 1"	N/A	1024	B64.6	N/A	N/A	N/A	N/A
CPBP	40-400	1/2" - 3/4"	N/A	1012	B64.3	N/A	N/A	N/A	N/A
PVB	40-500	1/2" - 2"	YES	1020	B64.1.2	PENDING	N/A	N/A	N/A
PVB	4V-500	1/2" - 1"	YES	1020	B64.1.2	YES	N/A	N/A	N/A
PVB	4V-500-TC2	3/4" - 1"	PENDING	PENDING	PENDING	PENDING	N/A	N/A	N/A
PVB	4V-500	1-1/4" - 1-1/2"	PENDING	1020	PENDING	PENDING	N/A	N/A	N/A
SVB	4W-500	1/4" - 1/2"	YES	1056	PENDING	PENDING	N/A	N/A	N/A
DCDA	40-600	3" - 10"	YES	1048	N/A	N/A	N/A	YES	YES
DCDA	4S-600	2-1/2" - 6"	YES	1048	N/A	N/A	N/A	YES	YES
DCDA	4S-600	8"	PENDING	YES	N/A	N/A	N/A	YES	YES
RPDA	40-700	3" - 10"	YES	1047	N/A	N/A	N/A	YES	YES
AVB	38-100	1/4" - 2"	N/A	1001	B64.1.1	YES	N/A	N/A	N/A
AVB	38-200	1/4" - 1/2"	N/A	1001	PENDING	YES	N/A	N/A	N/A
HCVB	38-304	3/4"	N/A	1011	B64.2	YES	N/A	N/A	N/A
HCVB	38P	3/4"	N/A	1011	B64.2	YES	N/A	N/A	N/A
HCBP	38-304-02	3/4"	N/A	1052	PENDING	PENDING	N/A	N/A	N/A
AFHCVB	38-404	3/4"	N/A	1011	B64.2	YES	N/A	N/A	N/A
LFVB	38-500	1/4" - 3/8"	N/A	1035	B64.7	YES	N/A	N/A	N/A

Approved for horizontal and vertical installation

* Must have indicating type shut-off valves Note: For specific USC approved devices, please see the "FCCCHR" official listing.

CONBRACO

Sales Department
P.O. Box 247
Matthews, NC 28106
Phone: 704-847-9191
Fax: 704-841-6021

Customer Service Department
P.O. Box 247
Matthews, NC 28106
Phone: 704-841-6000
Fax: 704-841-6020

			Phone	Fax
Southeast Region	Five Star Sales	Florida except Panhandle	941-574-1050	941-574-4214
	Valves & Fittings, Inc.	Georgia/Alabama/Florida Panhandle/Tennessee-East	770-483-3057	770-483-3110
	Pro Marketing, Inc.	North Carolina/South Carolina	864-578-4334	864-578-4889
	Mid South Marketing	Virginia/Maryland/Washington, D.C.	804-749-8712	804-749-8717
Southern Region	Southern Marketing Group	Tennessee-West/Arkansas/Mississippi/Bowie Cty.-TX	901-547-0042	901-547-0035
	Advanced Valves and Controls	Oklahoma/Texas-North	817-649-2229	817-649-2225
	Knox & Associates	Texas-South/Louisiana	713-462-7766	713-690-6228
Midwestern Region	HEBCO, Inc.	Kansas/Missouri-West	913-491-0797	913-491-5126
	New Tech Marketing, Inc.	Illinois/Wisconsin-East/Indiana	630-378-4300	630-378-0343
	New Tech Marketing, Inc.	Missouri-East	618-394-0329	618-394-0427
	L.J. Whitfill & Associates, Inc.	Kentucky/Indiana/Ohio	502-459-4545	502-459-9944
	V.E. Sales Company, Inc.	Michigan	810-774-7760	810-774-1490
	Northstar Valve & Fitting, Inc.	Minnesota/North & South Dakota/Wisconsin-West	952-937-0108	952-937-0803
	Willco, Inc.	Nebraska/Iowa	402-573-7000	402-573-7371
	Morrissey Associates, Inc.	Ohio/Pennsylvania/West Virginia	330-538-0406	330-538-0410
Western Region	Specification Sales	California-South	909-594-7088	909-594-2798
	Aqua Products Group	California-North	925-473-1288	925-473-1798
	Southwestern Mechanical Sales Co.	Arizona/Nevada-Southwest	480-813-1313	480-813-2286
	Southwestern Mechanical Sales Co.	Las Vegas & Reno, NV only	702-368-2561	702-368-1784
	Marshall - Rodeno Associated	Colorado/Wyoming/Montana/S.Idaho/Utah/Nevada-N.E./New Mexico	303-575-6701	303-575-6706
	Layden Valve Sales & Solutions	Hawaii	808-456-3331	808-455-1064
	J.P. Harris & Associates, Inc.	Washington/Oregon/Idaho-North/Alaska	360-944-8457	360-944-8459
Northeast Region	Urell, Inc.	Massachusetts/New England States	617-923-9500	617-926-9414
	Pence & Associates	New York-Upstate/New York-West	315-423-0066	315-423-0290
	Continuous Sales Corp.	New York-East/New Jersey-North	516-248-5177	516-248-5187
	J.A. Layden Co.	Pennsylvania-East/Delaware/New Jersey-South	610-353-2311	610-359-1299
Canada	Conbraco Industries, Canada	160 Pennsylvania Ave., Unit 3, Concord, Ontario L4K 4A9	905-761-6161	905-761-6666
	Mechanical Systems 2000, Inc.	Southern Alberta	403-291-1244	403-219-0686
	Barclay Sales Ltd.	British Columbia	604-945-1010	604-945-3030
	Dynamic Agencies, Ltd.	Saskatchewan	306-343-1901	306-343-1901
	Tom Beggs Agencies Ltd.	Manitoba	204-958-1900	204-774-6915
	Key to the North Sales Agency, Inc.	Northern Ontario	705-524-6714	705-566-0148
	Task Controls, Inc.	Southwestern & Central Ontario	416-291-2003	416-754-3481
	Agences J. Pierre Sylvain, Inc.	Quebec	450-655-9588	450-641-2737
	J. Levandier Sales, Inc.	New Brunswick	506-858-1615	506-858-1084
	J. Levandier Sales, Inc.	Nova Scotia	902-443-7728	902-445-2744
	Smith Agencies	Newfoundland	709-364-8856	709-747-9414
	Kern Industries (Ltd.)	Northern Alberta	780-451-2056	780-454-6687
	Pelco Sales	Eastern Ontario - Ottawa	613-839-0114	613-839-0115
International/ Puerto Rico	Conbraco Industries, International	P.O. Box 247, Matthews, NC 28106 USA	704-841-6000	704-841-6020
	Conbraco Industries, Int'l (Europe)	Manchester, England	+44-161-908-2340	+44-161-908-2359
	Rafael Rodriguez Barril, Inc.	Puerto Rico	787-759-8680	787-759-8986