

**MADE IN THE USA**

**"Apollo" Valves**  
Manufactured by Conbraco Industries, Inc.



**BACKFLOW PREVENTERS**

# TABLE OF CONTENTS

Selection Guide . . . . .3

Double Check Valve (Series 40-100) . . . . .4,5

Double Check Valve (Model DC) . . . . .6-8

Defender Double Check Valve (Model 4D-100) . . . . .9

Reduced Pressure Principle (Series 40-200) . . . . .10-19

Defender Reduced Pressure Principle (Series 4D-200) . . . . .20

Dual Check Valve (Series 4N-300) . . . . .21

Dual Check Valve (Series 40-300) . . . . .22

Carbonated Beverage Backflow Preventer (Series 4C-100) . . . . .23

Spill Resistant Pressure Vacuum Breaker (Series 4W-500) . . . . .24

Continuous Pressure Backflow Preventer (Series 40-400) . . . . .25

Pressure Type Vacuum Breaker (Series 4V-500) . . . . .26-27

Double Check Detector Assembly (Model DCDA) . . . . .28-29

Reduced Pressure Detector Assembly (Series 40-700) . . . . .30-31

Hose Connection Vacuum Breaker (Series 38) . . . . .32

Hose Connection Vacuum Breaker (Series 38-304-02) . . . . .33

Atmospheric Type Vacuum Breaker (Series 38-100) . . . . .34

Atmospheric Type Vacuum Breaker (Series 38-200) . . . . .35

Lab Faucet Vacuum Breaker (Series 38-500) . . . . .36

Freeze Protection Valve (Series 40-000) . . . . .37

Backflow Preventer Test Kits . . . . .38

Test Kit Accessories and Flanged Ball Valve (Series IBVE-125) . . . . .39

Air Gap Drain . . . . .40

Meter Setter . . . . .41

Thermal Expansion Relief Valves . . . . .42

3/4" Hose Connection Pressure Gauge & Thermal Expansion Tank . . . . .43

"Y" Strainers . . . . .44

Approvals . . . . .45

Warranty and Limitations of Liability . . . . .46

Notes . . . . .47

# SELECTION GUIDE

		APPLICATION					SIZE AVAILABLE														
TYPE OF DEVICE	SERIES	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	☺	☺	☺	☺				✓						✓	✓	✓	✓	✓	✓	✓
BACKFLOW PREVENTER DOUBLE CHECK VALVE	4D-100	☺	☺	☺	☺										✓	✓	✓	✓	✓	✓	✓
REDUCED PRESSURE PRINCIPLE	40-200	☺	☺	☺	☺	☺	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
REDUCED PRESSURE DOUBLE CHECK VALVE	4D-200	☺	☺	☺	☺	☺									✓	✓	✓	✓	✓	✓	✓
REDUCED PRESSURE PRINCIPLE (Strn.Steel)	40-200	☺	☺	☺	☺	☺	✓	✓	✓	✓	✓										
REDUCED PRESSURE PRINCIPLE (U & Z Flow)	40-200	☺	☺	☺	☺	☺				✓	✓	✓	✓	✓							
DUAL CHECK VALVE	40-300	☺	☺	☺	☺				✓	✓	✓										
CONTINUOUS PRESSURE	40-400	☺	☺	☺	☺				✓	✓											
PRESSURE TYPE VACUUM BREAKER	4V-500	☺		☺	☺	☺			✓	✓	✓	✓	✓	✓							
SPILL-RESISTANT PRESS. VAC. BREAKER	4W-500	☺		☺	☺	☺	✓	✓	✓												
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	☺	☺		☺		✓	✓													

Customer Service 1-704-841-6000

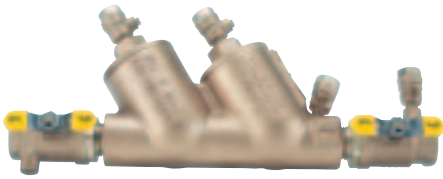
"Apollo" Valves

Backflow Preventers

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

# 40-100 Series

## 40-100-T2 Series



Sizes 3/4", 1", 1-1/4", 1-1/2", 2"

### MATERIALS

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

### TOP ENTRY T2 DOUBLE CHECK VALVE ASSEMBLY

The Conbraco Series 40-100 Top Entry T2 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

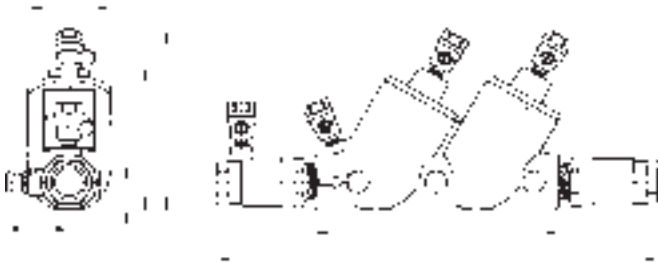
During normal flow conditions, the two check valves are held off their seats, supplying water downstream. Each check valve is designed to maintain a minimum of 1 psi across the valve during normal operation. Should the downstream pressure increase to within 1 psi of supply pressure, both check valves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

### FEATURES

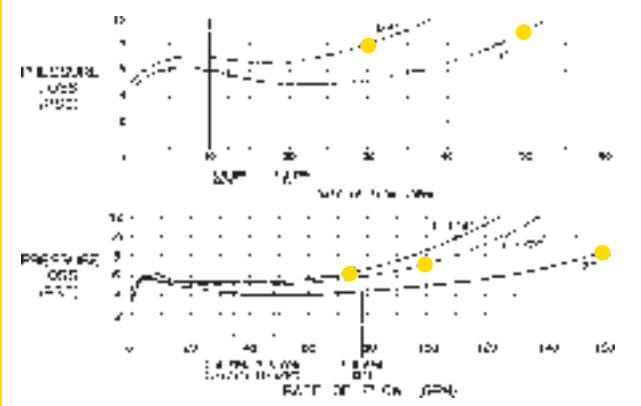
- Top access for testing, repair and maintenance
- Corrosion resistant
- Low head loss
- Interchangeable poppets and springs
- Replaceable seats
- Comes standard with Apollo® full port ball valves with stainless steel handles
- Maximum working pressure 175 psig
- Temperature range 33°F-180°F

## 40 - 1 X X - TX

Y-STRAINER	SIZE	NON UL CLASSIFIED
0-Standard	4-3/4"	1-less ball valves
1-w/ Y-strainer (shipped loose)	5-1"	2-w/ball valves
	6-1-1/4"	4-w/union end ball valves
	7-1-1/2"	
	8-2"	
		<b>FOR UL CLASSIFIED</b>
		FP1-less ball valves
		FP2-w/ball valves



**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

# 40-100 Series

## 40-100-TC2 Series



Sizes 3/4" - 1"

### MATERIALS

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

### TOP ENTRY TC2 DOUBLE CHECK VALVE ASSEMBLY

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

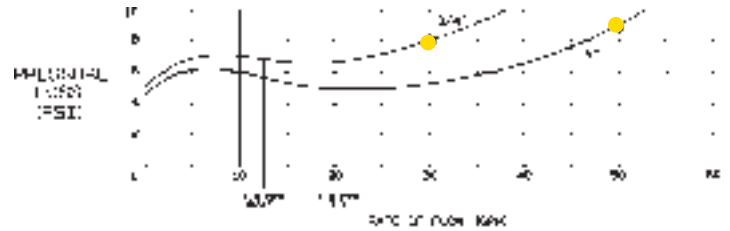
- Top access for testing, repair and maintenance
- Corrosion resistant
- Low head loss
- Interchangeable poppets and springs
- Replaceable seats
- Comes standard with Apollo® full port ball valves with stainless steel handles
- Maximum working pressure 175 psig
- Temperature range 33°F-180°F

## 40 - 1 X X - TC2

Y-STRAINER	SIZE
0-Standard	4-3/4"
1-w/ Y-strainer (shipped loose)	5-1"



**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



# Model DC

## DC Series



Sizes 1/2"

### MATERIALS

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

Contact local water authorities for installation/service requirements.

### TOP ENTRY DOUBLE CHECK VALVE ASSEMBLY

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 with stainless steel handles
- Maximum working pressure 175 psig
- Operating temperature range 33°F-180°F

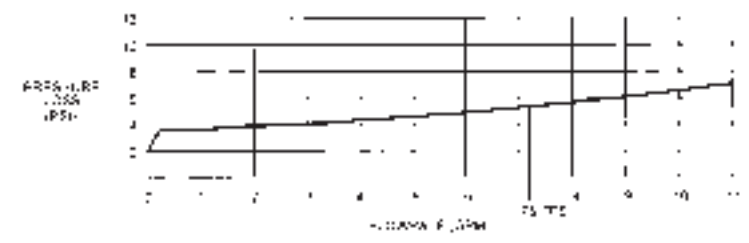
## 4S - 103 - AX

### BALL VALVES

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



### Flow Curves :

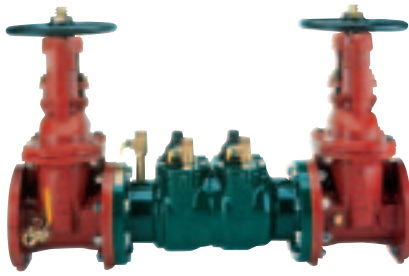


### Dimensions (in.) – Weights (lbs.)

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
Shpg. Wt. (w/o Ball Valves)	3.8
Shpg. Wt. (with Ball Valves)	5.1

# Model DC

## 4S DC Series



Sizes 2-1/2", 3", 4", 6"

### 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

Contact local water authorities for installation/service requirements.

### TOP ENTRY DOUBLE CHECK VALVE ASSEMBLY

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.

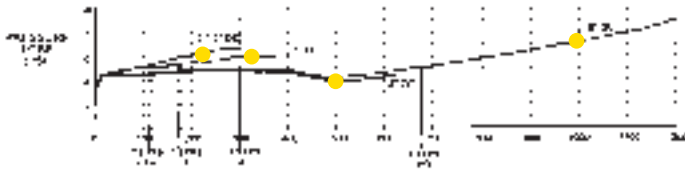
### FEATURES

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

## 4S - 1 X X - 0 X U

Y-STRAINER	SIZE	VALVES	FLOW
0-Standard	9 - 2-1/2"	1 -less gate valves	U - U-Flow
1-w/ Y-strainer (shipped loose)	0 - 3"	2 -w/ NRS gate valves	
	A - 4"	3 -w/ OS&Y gate valves	
	C - 6"	5 -w/ Epoxy coated ball valves	
		6 -w/ OS&Y gate valve on inlet, NRS gate valve w/ post plate and nut on outlet	
		7 -w/ Flanged inlet x Grooved outlet	
		8 -w/ Grooved x Grooved OS&Y gate valves	

**Flow Curves :** (\*) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards.



Dimensions shown are nominal

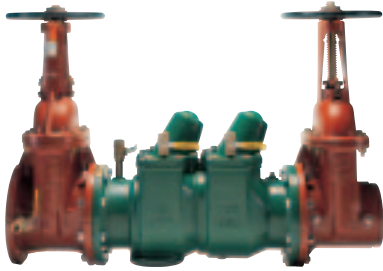


2-1/2" - 6"

Dimensions (in.) – Weights (lbs.)	2-1/2"	3"	4"	6"
<b>Body Size</b>				
A	32-1/4	33-1/4	34-3/4	39-1/4
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	17	19	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)	64	66	74	86
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

## 4S DC Series



Sizes 8", 10"

### MATERIALS

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

*\*Note: Gate valve options 7 and 8 not available in 10" size.*

Contact local water authorities for installation/service requirements.

### DOUBLE CHECK VALVE ASSEMBLIES

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.

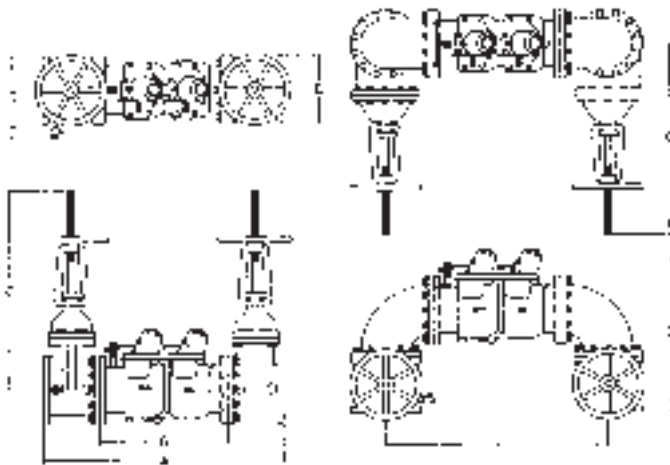
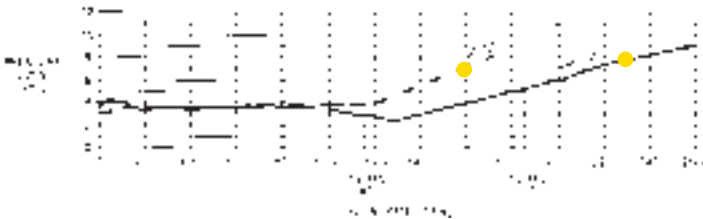
### FEATURES

- Patent #6,343,618
- Replaceable discs
- Corrosion resistant
- Economical
- Low head loss
- Lightweight
- Short lay length
- Designed for easy maintenance
- Check valve assemblies interchangeable
- Maximum working pressure 175 psig
- Operating temperature range 33°F-140°F

## 4S - 1 X X - 0 X X

Y-STRAINER	SIZE	VALVES	FLOW
0-Standard	E - 8"	1 -less gate valves	U - U-Flow
1-w/ Y-strainer (shipped loose)	G - 10"	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 7-w/Flanged inlet x Grooved outlet (OS&Y)* 8 -w/Grooved x Grooved OS&Y gate valves*	

**Flow Curves :** (\*) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards.



8" - 10"

Dimensions (in.) – Weights (lbs.)		
Body Size	8"	10"
A	50-1/4	55-3/4
B	27	29-1/2
C NRS	22-1/2	26-1/2
C (OS&Y) OPEN	38	46
D	17	19-1/2
E	13-1/2	16
F	45-1/4	51-3/4
G	34-3/4	39-1/2
Test Cocks	3/4 NPT	3/4 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)	1085	1548
Net Wt. (With OS&Y Valves & Elbows)	1148	1693
Net Wt. (With Ball Valves)	1105	N/A
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)	1164	1638
Shpg. Wt. (With NRS Valves & Elbows)	1026	1420
Shpg. Wt. (With OS&Y Valves & Elbows)	1254	1793
Shpg. Wt. (With Ball Valves)	1224	N/A
Shpg. Wt. (With Post Indicator)	1017	1390



# 4D-100 Series

## 4D-100 Series



Sizes 2-1/2" - 6"

### 4D SERIES DOUBLE CHECK VALVE ASSEMBLY

The Apollo Valves 4D-100 Double Check Valve Backflow Preventer Defender™ provides non-health hazard backflow protection in a lead free, short lay length, compact package. The assembly consists of two independently acting, spring loaded, poppet type check valves set in a ductile iron body. The all stainless steel check valve modules are easily removed from the ductile iron body via a large access cover. The Defender™ is available with both monitored butterfly valves and gate valves. Ninety-degree elbows are also available within the shut-off valve envelope for compact installations.

### OPERATION

During normal flow conditions, the two poppet style check valves are held off their seats, supplying water downstream. Each check 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

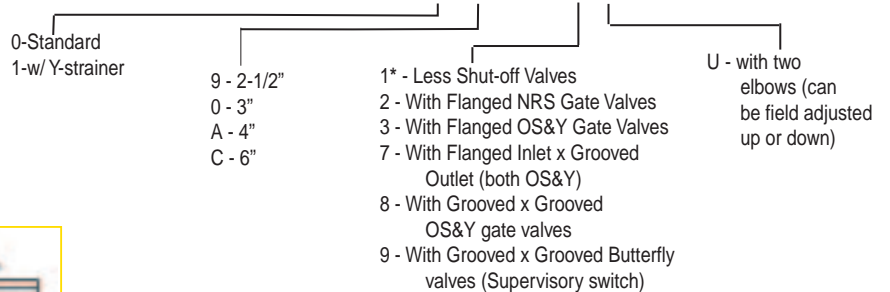
- Lead Free
- Stainless Steel Checks for Superior Durability
- Corrosion Resistant
- Replaceable Silicone Rubber Seat Discs
- Low Head Loss
- Economical
- Short Lay Length
- Light Weight
- Designed for Easy Maintenance
- Maximum working pressure 175 PSI
- Operating temperature range 33°F-140°F
- US Patent #6,443,184 B1 (other patents pending)

### MATERIALS

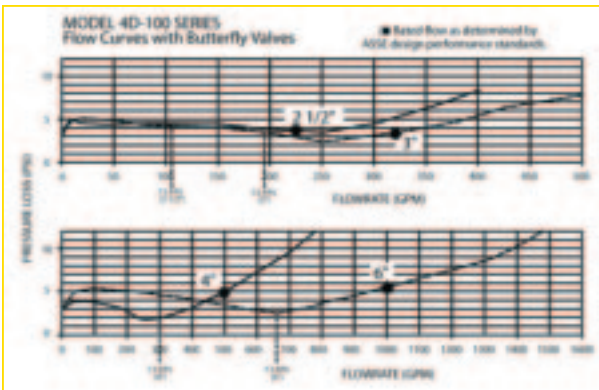
Body and cover	Epoxy Coated (FDA Approved) Ductile Iron
Test Cocks	Stainless Steel
Check Components	Stainless Steel
Springs	Stainless Steel
Seat Discs	Silicone Rubber
Fasteners	Stainless Steel
Elbows	Epoxy Coated (FDA Approved) Ductile Iron

Contact local water authorities for installation/service requirements.

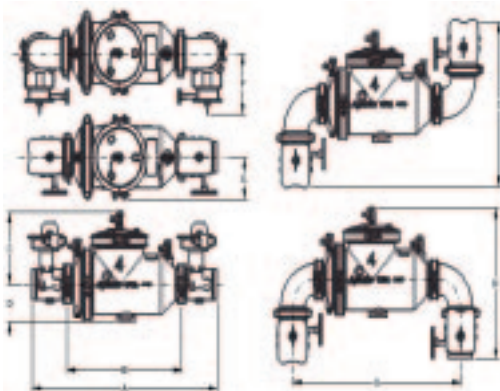
## 4D - 1 X X - 0XX



\*4D Defender valve body is grooved x grooved connections



Size	Dimensions (in) - Weights (lbs.)			
	2 1/2"	3"	4"	6"
A (Butterfly Valves)	33.375	33.875	35.0	38.5
A (Gate Valves)	35.5	37.5	39.875	45.625
B	21.375	21.375	21.375	24.5
C (With Butterfly Valves)	10.625	10.625	10.625	13.0
C (OS&Y Valves Open)	17.0	19.0	22.75	30.125
D	6.5	6.5	6.5	7.5
E (center to edge w/out elbows)	6.5	6.5	6.5	7.75
F (w/Elbows & Butterfly Valves)	9.75	10.5	11.875	13.75
F (w/Elbows & OS&Y Vlvs OPEN)	27.25	28.25	29.75	34.25
G	27.375	28.125	29.75	35.5
H "U" Flow (with Butterfly Valves)	20.375	21.125	22.375	26.5
H "U" Flow (with OS&Y Valves)	21.875	22.875	24.625	30.0
I "Z" Flow (with Butterfly Valves)	19.5	21.0	23.25	27.0
I "Z" Flow (with OS&Y Valves)	22.5	24.5	28.0	34.0
Test Cocks	1/2 NPT	1/2 NPT	1/2 NPT	3/4 NPT
Net Wt. (Less Gate Valves)	99	100	105	188
Net Wt. (w/Butterfly Valves)	122	124	154	251
Net Wt. (w/OS&Y Valves)	209	239	320	511
Net Wt. (w/Elbows & Butterfly Vlvs)	131	136	174	288
Net Wt. (w/Elbows & OS&Y Valves)	218	252	340	549
Shpg. Wt. (Less Gate Valves)	163	164	179	286
Shpg. Wt. (w/Butterfly Valves)	189	191	221	359
Shpg. Wt. (w/OS&Y Valves)	276	306	387	619
Shpg. Wt. (w/Elbows & Butter Vlvs)	198	203	241	396
Shpg. Wt. (w/Elbows & OS&Y Vlvs)	285	349	407	657



# 40-200 Series

## 40-200-TC2 Series



Sizes 3/4"– 1"

### REDUCED PRESSURE PRINCIPLE

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.

### 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

Contact local water authorities for installation/service requirements.

### FEATURES

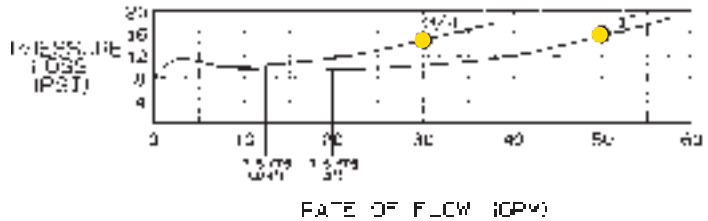
- Maximum protection against back-pressure/back-siphonage
- Removable discs
- Internal sensing passage
- Designed for easy maintenance
- Low head loss
- Economical
- Corrosion resistant
- Comes standard with Apollo® full port ball valves with stainless steel handles
- Maximum working pressure 175 psig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

## 40 - 2 X X - TC2

Y-STRAINER	SIZE
0-Standard	4-3/4"
1-w/ Y-strainer (shipped loose)	5-1"



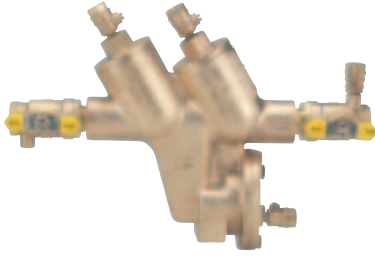
Flow Curves : (\*) Rated flow as determined by USC's FCC&HR and ASSE design performance standards.



Dimensions (in.) – Weights (lbs.)	3/4"	1"
<b>Body Size</b>		
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

# 40-200 Series

## 40-200-T2 Series



Sizes 1/4", 3/8", 1/2", 3/4", 1", 1-1/4", 1-1/2", 2"

### 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

Contact local water authorities for installation/service requirements.

### REDUCED PRESSURE PRINCIPLE

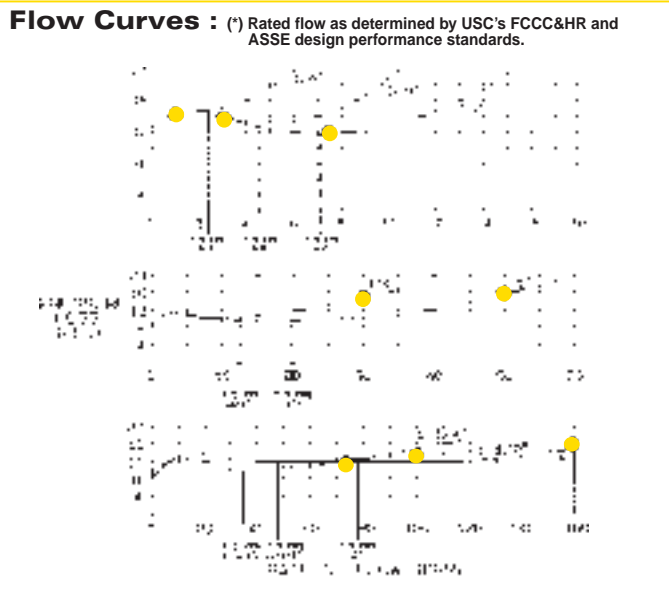
The Conbraco Series 40-200-T2 Reduced Pressure Principle Backflow Preventer is designed to give maximum protection against backflow caused by either back-pressure or back-siphonage. The durable, but economical, device is easily maintained in the line without any special tools. It consists of two independently 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 back-pressure/back-siphonage
- Removable discs
- Internal sensing passage
- Designed for easy maintenance
- Low head loss
- Economical
- Corrosion resistant
- Comes standard with Apollo® full port ball valves with stainless steel handles
- Maximum working pressure 175 psig
- Operating temperature range 33°F-180°F
- Replaceable seats



## 40 - 2 X X - TX

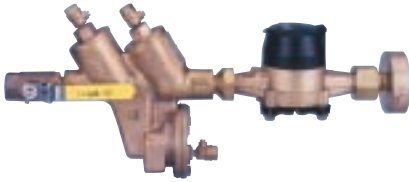
Y-STRAINER	SIZE	NON UL CLASSIFIED
0-Standard	1-1/4"	1-less ball valves
1-w/ Y-strainer (shipped loose)	2-3/8"	2-w/ball valves
	3-1/2"	4-w/union end ball valves
	4-3/4"	
	5-1"	<b>FOR UL CLASSIFIED</b>
	6-1-1/4"	<b>(3/4"-2")</b>
	7-1-1/2"	FP1-Less ball valves
	8-2"	FP2-w/ball valves



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	7	7.4	14	14-1/2	35-1/2	37	39-1/2	
Shpg. Wt. (w/o Ball Valves)	6.6	6.6	6	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	

## 40-200 Series

### 40-205-FHB Series



Size 1"

Contact local water authorities for installation/service requirements.

### FIRE HYDRANT BACKFLOW METER

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 back-pressure 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.

### 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)

## 40-200 Series

### 40-208-FHB Series



Size 2"

Contact local water authorities for installation/service requirements.

### FIRE HYDRANT BACKFLOW METER

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 back-pressure 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

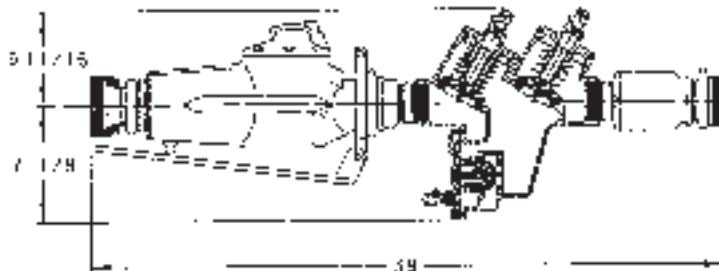
The Fire Hydrant Backflow Meter is connected directly to a fire hydrant with a 2 1/2"-7 1/2" NST fire hose female swivel coupling. The device operates like a standard Reduced Pressure device except the flow through the device is measured by a Fire Hydrant Meter connected to the inlet of the backflow 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.

### 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)



## 40-200 Series

### 40-200-T2S Series



Sizes 1/4", 3/8", 1/2", 3/4", 1"

#### 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

Contact local water authorities for installation/service requirements.

### STAINLESS STEEL T2S REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER

The Conbraco Series 40-200-T2S 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

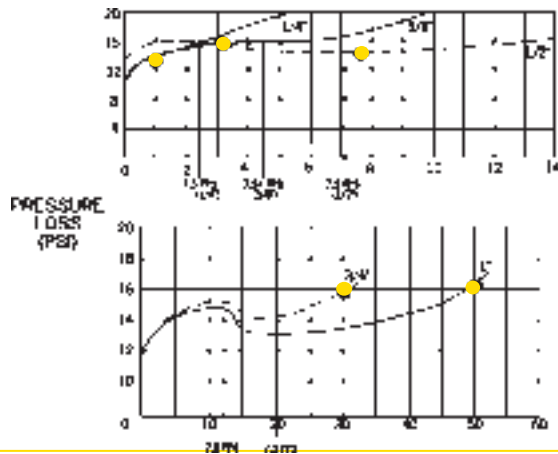
- Stainless steel body and covers
- Easy to install and repair
- Internal sensing passage
- Low head loss
- Removable seat discs
- Replaceable seats
- Comes standard with Apollo® stainless steel full port ball valves with stainless steel handles
- Maximum working pressure 175 psig
- Temperature range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

### 40 - 20 X - T2S

SIZE	FOR UL CLASSIFIED
1-1/4"	(3/4" AND 1")
2-3/8"	FP1S-less ball valves
3-1/2"	FP2S-w/ball valves
4-3/4"	
5-1"	



Flow Curves : (\*) Rated flow as determined by USC's FCC&HR and ASSE design performance standards.



#### 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

## 40-200 Series

### 40-200-TCU Series



Sizes 3/4", 1"

#### 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

Contact local water authorities for installation/service requirements.



#### TCU U FLOW REDUCED PRESSURE PRINCIPLE

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 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
- 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 with stainless steel handles
- Maximum working pressure 175 psig
- Temperature range 33°F-180°F

### 40 - 20 X - TCU

#### SIZES

- 4-3/4"
- 5-1"

**Flow Curves :** (\*) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards.

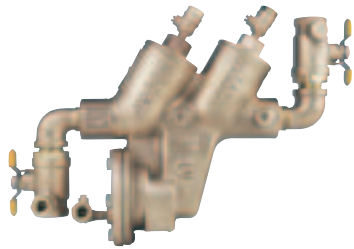


Dimensions (in.) – Weights (lbs.)		
Body Size	3/4"	1"
A	10-1/2	10-11/16
B	8	8
C	4-1/8	5-3/16
D	4-7/16	4-9/16
E	13-7/8	15-1/8
F	4-1/2	4-1/2
G	5-1/8	5-1/8
Test Cocks	1/8 x 1/4 SAE	1/8 x 1/4 SAE
Net Wt. (with Ball Valves)	14.7	15.6
Shipping Wt. (with Ball Valves)	15.7	16.6

"Apollo" Valves

# 40-200 Series

## 40-200 Series



Z-Flow



U-Flow

Sizes 3/4", 1", 1-1/4", 1-1/2", 2"

### U AND Z FLOW REDUCED PRESSURE PRINCIPLE

The Conbraco Series 40-200-T2 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. 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 with stainless steel handles
- Maximum working pressure 175 psig
- Temperature range 33°F-180°F

### MATERIALS

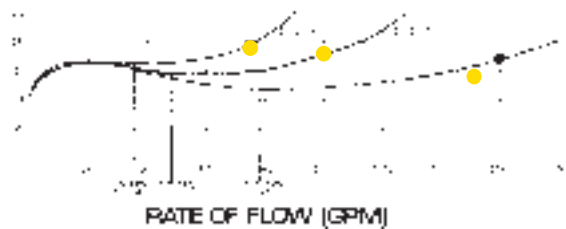
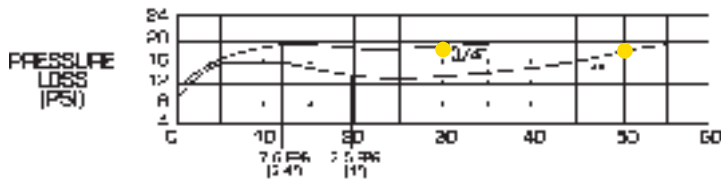
Body, covers & elbows	Bronze
Springs	Stainless Steel
Poppets	Glass-Filled Celcon
Seat Discs	Silicone Rubber
Diaphragm	Nitrile and Nylon
R.V. Stem	Noryl
Fasteners	Stainless Steel
Replaceable Seats	Glass-Filled Noryl

Contact local water authorities for installation/service requirements.

## 40 - 20 X - T2 X

SIZES	FLOW
4-3/4"	U - U-Flow
5-1"	Z - Z-Flow
6-1-1/4"	
7-1-1/2"	
8-2"	

### Flow Curves : (\*) Rated flow as determined by USC's FCC&HR and ASSE design performance standards.

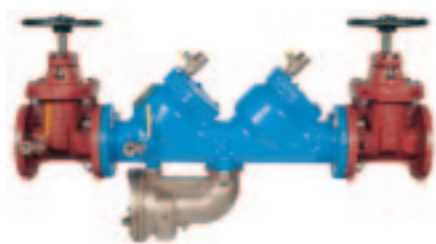


### Dimensions (in.) – Weights (lbs.)

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
Shpg. Wt. (with Ball Valves)	15.7	16.6	40	41.37	45.25

# 40-200 Series

## 40-200 Series



Sizes 2-1/2", 3", 4"

### REDUCED PRESSURE PRINCIPLE

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.

### 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

Contact local water authorities for installation/service requirements.

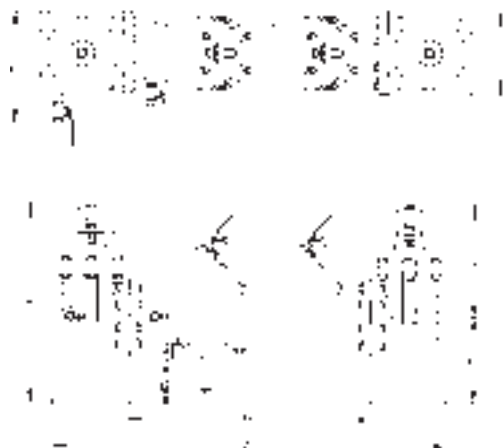
### FEATURES

- 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

## 40 - 2 X X - 0 X

Y-STRAINER	SIZE	VALVES
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

### 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 1/2 NPT	1/2 x 1/2 NPT	1/2 x 1/2 NPT
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
Shpg. Wt. (Less gate Valves)	184	186	260
Shpg. Wt. (With NRS Valves)	283	316	452
Shpg. Wt. (With OS&Y Valves)	293	323	466
Shpg. Wt. (With Ball Valves)	252	262	376

# 40-200 Series

## 40-200 Series



Sizes 6", 8", 10"

### 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

Contact local water authorities for installation/service requirements.



### REDUCED PRESSURE PRINCIPLE

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

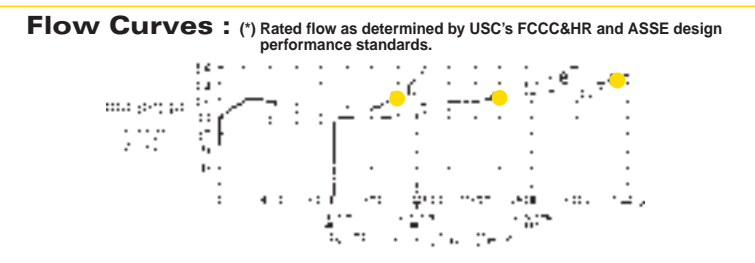
During normal flow conditions, the two check valves are held off their seats, supplying water downstream. The relief valve is held shut by supply pressure acting through the internal sensing passage, on the relief valve diaphragm. In the area between the check valves, called the zone, the pressure is 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

## 40 - 2 X X - 0 X

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

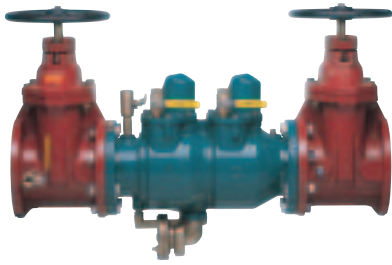


Dimensions (in.) – Weights (lbs.)			
Body Size	6"	8"	10"
A	63	75	88-1/4
B	42	52	62-1/16
C NRS	30-1/2	38-1/2	44
C OS&Y (OPEN)	41-5/8	53-3/4	63-1/4
D NRS	19	22-1/2	26-1/2
D OS&Y (OPEN)	30-1/8	37-3/4	45-3/4
E	11-1/2	16	17-1/2
F	14-5/8	16-3/4	19-1/4
G	11	13-1/2	16
Test Cocks	3/4 x 3/4 NPT	3/4 x 3/4 NPT	3/4 x 3/4 NPT
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
Shpg. Wt. (Less gate Valves)	528	885	1613
Shpg. Wt. (With NRS Valves)	872	1335	2364
Shpg. Wt. (With OS&Y Valves)	890	1390	2502
Shpg. Wt. (With Ball Valves)	836	N/A	N/A



# Model RP

## 4S RP Series



Sizes 6", 8", 10"

### MODEL RP : REDUCED PRESSURE PRINCIPLE

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. Ninety-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.

### MATERIALS

Body and covers	Epoxy Coated (FDA Approved) 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

*\*Note: Gate valve options 7 and 8 not available on 10" size.*

Contact local water authorities for installation/service requirements.

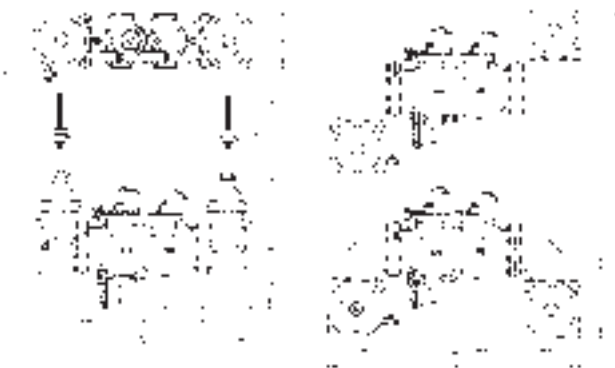
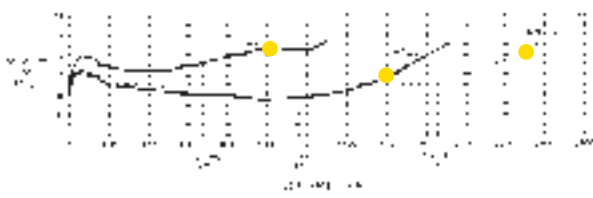
### FEATURES

- 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 #6,343,618

## 4S - 2 X X - 0 X X

Y-STRAINER	SIZE	VALVES	FLOW
0-Standard	C - 6"	1- Less Gate Valves	U - U-Flow
1-w/ Y-strainer (shipped loose)	E - 8"	2- With NRS Gate Valves	Z - Z-Flow
	G - 10"	3- With OS&Y Gate Valves	
		5- With Epoxy-coated Ball Valves	
		6- With Post Indicator	
		7- With Flanged Inlet X Grooved Outlet (OS&Y)*	
		8- With Grooved X Grooved OS&Y Gate Valves*	

**Flow Curves :** (\*) Rated flow as determined by USC's FCC&HR and ASSE design performance standards.



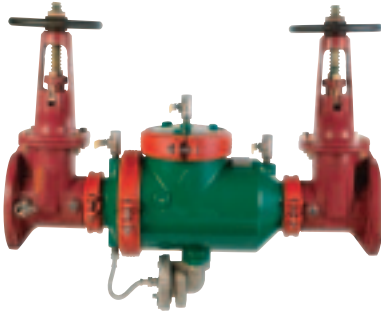
6" - 10"

Dimensions (in.) – Weights (lbs.)			
Body Size (in.)	6"	8"	10"
A	42-5/8	52-5/8	55-5/8
B	21-1/2	29-1/2	29-1/2
C (NRS)	19	22-1/2	26-1/2
C (OS&Y) OPEN	30-1/8	37-3/4	45-3/4
D	10-3/4	15	15
E	16	16-3/4	19-1/4
F	11	13-1/2	16
G	37-5/8	47-5/8	51-5/8
H	50	61-5/8	68-1/8
I	30-3/4	37	41-7/8
J	38	41	49-3/8
K	-	-	-
Test Cocks	3/4 NPT	3/4 NPT	3/4 NPT
Net Wt. (Less Gate Valves)	186	558	585
Net. Wt. (w/NRS Valves)	482	984	1290
Net. Wt. (w/OS&Y Valves)	498	1074	1428
Shpg. Wt. (Less Gate Valves)	284	638	665
Shpg. Wt. (w/NRS Valves)	590	1094	1400
Shpg. Wt. (w/OS&Y Valves)	608	1184	1538

Weights are without elbows.

# 4D-200 Series

## 4D-200 Series



Sizes 2-1/2"-6"

### 4D SERIES DOUBLE CHECK VALVE ASSEMBLY

The Apollo Valves 4D-200 Reduced Pressure Backflow Preventer Defender™ provides maximum backflow protection in a lead free, short lay length, compact package. The assembly consists of two independently acting, spring loaded, poppet type check valves with a differential pressure relief valve located in the zone between the checks. The all stainless steel check valve modules are easily removed from the ductile iron body via a large access cover. The stainless steel relief valve module is also accessible and removable. The Defender is available with both monitored butterfly valves and gate valves. Ninety-degree elbows are also available within the shut-off valve envelope for compact installations.

### OPERATION

During normal flow conditions, the two poppet style check valves are held off their seats, supplying water downstream. The relief valve is held shut by supply pressure acting through the sensing tube. Should a back-pressure or back-siphonage condition occur, the second check will seal, prohibiting the backflow of water. Should the second check become fouled, the pressure in the zone will increase causing the differential relief valve to open to atmosphere, discharging the contents of the zone.

### MATERIALS

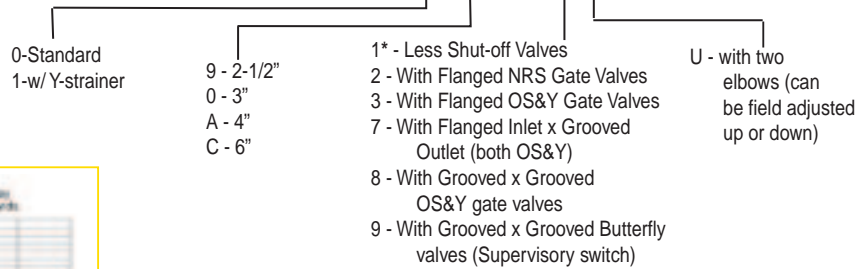
Body and cover	Epoxy Coated (FDA Approved) Ductile Iron
Relief Valve Body and Cover	Stainless Steel
Test Cocks	Stainless Steel
Check Components	Stainless Steel
Springs	Stainless Steel
Seat Discs	Silicone Rubber
Fasteners	Stainless Steel
Elbows	Epoxy Coated (FDA Approved) Ductile Iron
Relief Valve Seat and Stem	Noryl®

Contact local water authorities for installation/service requirements.

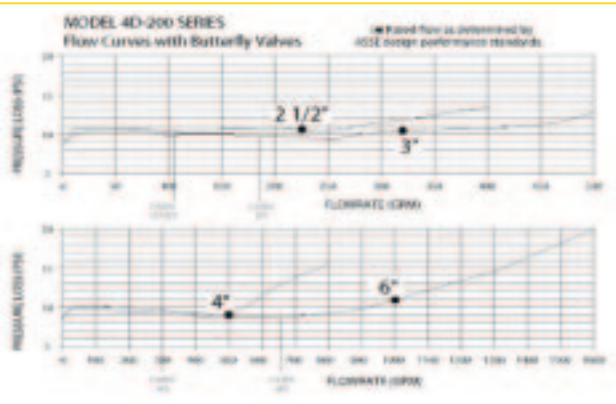
### FEATURES

- Lead Free
- Stainless Steel Checks and Relief Valve for Superior Durability
- Corrosion Resistant
- Replaceable Silicone Rubber Seat Discs
- Low Head Loss
- Economical
- Short Lay Length
- Light Weight
- Designed for Easy Maintenance
- Maximum working pressure 175 PSI
- Operating temperature range 33°F-140°F
- US Patent #6,443,184 B1 (other patents pending)

### 4D - 2 X X - 0XX



\*4D Defender valve body is grooved x grooved connections



Size	Dimensions (in) - Weights (lbs.)			
	2 1/2"	3"	4"	6"
A (Butterfly Valves)	33.375	33.875	35.0	38.5
A (Gate Valves)	35.5	37.5	39.875	45.625
B	21.375	21.375	21.375	24.5
C (With Butterfly Valves)	10.625	10.625	10.625	13.0
C (OS&Y Valves Open)	17.0	19.0	22.75	30.125
D	10.75	10.75	10.75	11.75
E (center to edge w/out elbows)	6.5	6.5	6.5	7.75
F (w/Elbows & Butterfly Valves)	9.75	10.5	11.875	13.75
F (w/Elbows & OS&Y Vlvs OPEN)	27.25	28.25	29.75	34.25
G	27.375	28.125	29.75	35.5
H "U" Flow (with Butterfly Valves)	20.375	21.125	22.375	26.5
H "U" Flow (with OS&Y Valves)	21.875	22.875	24.625	30.0
I "Z" Flow (with Butterfly Valves)	19.5	21.0	23.25	27.0
I "Z" Flow (with OS&Y Valves)	22.5	24.5	28.0	34.0
Test Cocks	1/2 NPT	1/2 NPT	1/2 NPT	3/4 NPT
Net Wt. (Less Gate Valves)	109	110	115	198
Net Wt. (w/Butterfly Valves)	132	134	154	261
Net Wt. (w/OS&Y Valves)	219	249	320	521
Net Wt. (w/Elbows & Butterfly V/ivs)	141	146	174	298
Net Wt. (w/Elbows & OS&Y Valves)	228	262	340	559
Shpg. Wt. (Less Gate Valves)	173	174	179	296
Shpg. Wt. (w/Butterfly Valves)	199	201	221	369
Shpg. Wt. (w/OS&Y Valves)	286	316	387	629
Shpg. Wt. (w/Elbows & Butter V/ivs)	208	213	241	406

# 4N-300 Series

## 4N-300 Series



### DUAL CHECK VALVE

The Apollo 4N-300 Series Dual Check Valve Backflow Preventer is designed to prevent cross-connections of non-potable water (non-hazardous) into safe drinking water systems. It is a compact and economical device that consists of two independently-acting, spring-loaded check valves in a corrosion-resistant material.

### OPERATION

Each of the two spring-loaded check valves is designed to open at 1 psi differential in the direction of flow. The check valves will remain tightly closed until there is a demand for 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 will close to provide protection from a backflow condition.

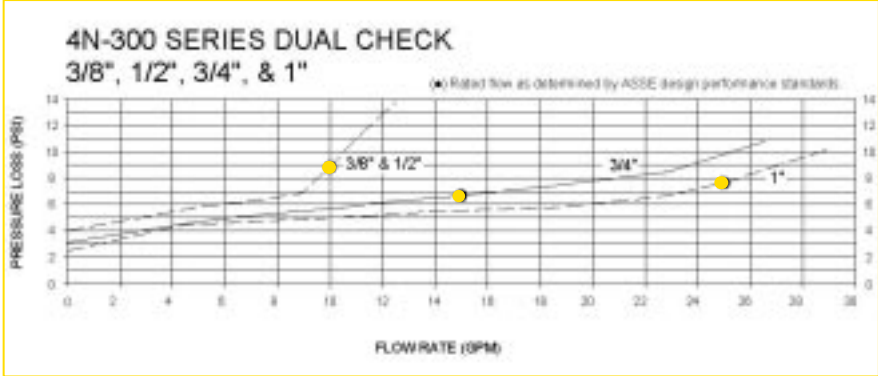
### FEATURES

- Low Head Loss
- Independently-acting Check Valves
- Compact and Lightweight
- Corrosion Resistant
- Replaceable Check Modules
- Available in Standard and Swivel Types
- Maximum Working Pressure 175 psi
- Operating Temperature Range 33°F-180°F

### MATERIALS

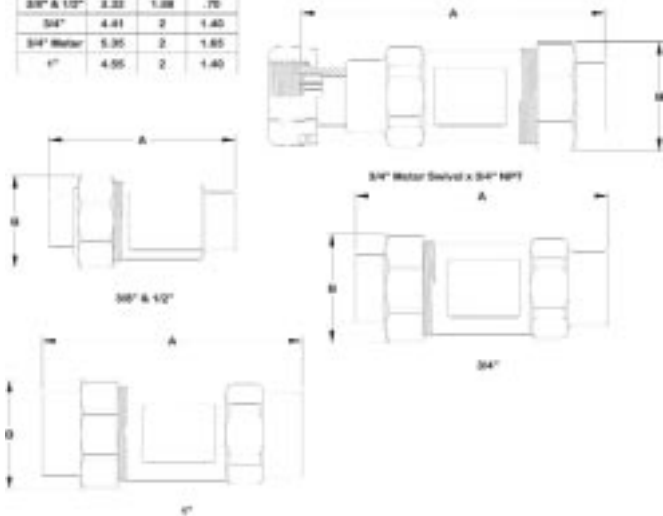
Body	Bronze
Springs	Stainless Steel
Seats, Spring Retainers, Poppets	Glass-filled Noryl® (1/2")
Seats, Spring Retainers, Poppets	Unfilled Acetal (3/4", 1")
Seat Discs	BUNA-N
Union Tail Piece	Brass
Union Nut	Brass

Contact local water authorities for installation/service requirements.



### DIMENSIONS (IN.)-WEIGHTS (LBS.)

SIZE	A	B	WT.
3/8" & 1/2"	3.33	1.88	.70
3/4"	4.41	2	1.40
3/4" Meter	5.35	2	1.85
1"	4.95	2	1.40



### ORDERING NUMBERS

Part Number	Description
4N-3A2-2A	3/8"FNPT x 3/8"FNPT
4N-3A2-2AC	3/8"FNPT x 3/8"FNPT (Rough Chrome Finish)
4N-3A3-3A	1/2"FNPT x 1/2"FNPT
4N-3A4-4A	3/4"FNPT x 3/4"FNPT
4N-3S5-4A	3/4"Meter (1-11 1/2 NPSM) Swivel Inlet x 3/4"FNPT Outlet
4N-3A5-5A	1"FNPT x 1"FNPT

# 40-300 Series

## 40-300 Series



Sizes 1/2", 3/4", 1"

### MATERIALS

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

Contact local water authorities for installation/service requirements.

### DUAL CHECK VALVE

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

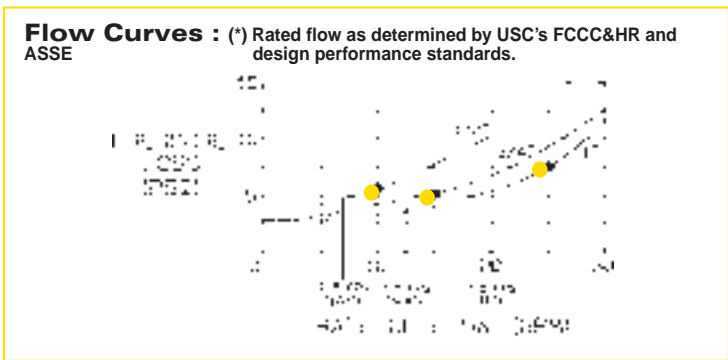
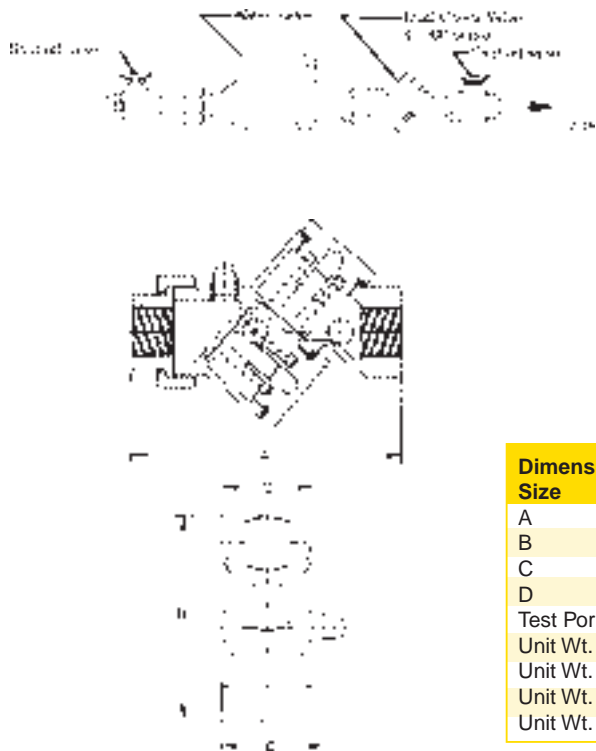
- In-line repairable
- In-line testable
- Low head loss
- Independently acting check valves
- Compact and lightweight
- Ease of repair and installation
- Corrosion resistant
- Almost any inlet and outlet connection combination to fit your needs
- Maximum working pressure 175 psig
- Operating temperature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

## 40 - 3 X X - X X X

INLET CONNECTION	INLET AND OUTLET SIZE	OUTLET CONNECTION	TEST COCKS
A – FNPT	3 – 1/2"	A – FNPT	1 – With Test Cocks
B – MNPT	4 – 3/4"	B – MNPT	2 – With Test Cocks & Ball Valves
C – Female Meter Thread*	5 – 1"	C – Female Meter Thread	3 – With Test Cocks & Outlet Ball Valve
E – Male Meter Thread*		E – Male Meter Thread	4 – With 4 Test Cocks & Inlet & Outlet Ball Valves
S – Female Meter Thread (Swivel)*		F – Female BSPP	
Z – Female BSPP			

\* On meter threads order one size larger than meter size.

### TYPICAL INSTALLATION



Dimensions (in.) – Weights (lbs.)	1/2"	3/4"	1"
Size			
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	2	2.1
Unit Wt. (with test cocks)	2.4	2.4	2.5
Unit Wt. (with T.C.'s & Ball Valves)	4	4.6	6.4
Unit Wt. (with T.C.'s & Outlet Ball Valve)	3.2	3.4	4.4

# Model CBBP

## 4C-100 Series



Sizes 1/4", 3/8"

### CARBONATED BEVERAGE BACKFLOW PREVENTER

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 wetted 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.

### MATERIALS

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

Contact local water authorities for installation/service requirements.

### FEATURES

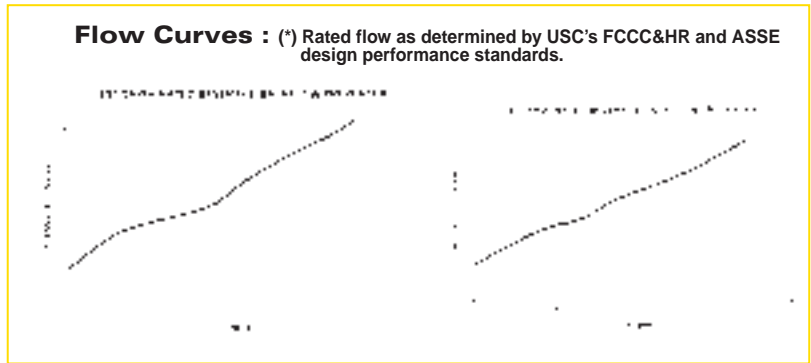
- Compact Design
- Lowest head loss
- Atmospheric vent provides indication of problems
- Integral strainer for equipment protection
- UL Classified to NSF-18
- Repairable check assemblies
- Non-metallic body for corrosion resistance
- CSA Certified to ANSI/NSF-61

**4C - 10X - 01**

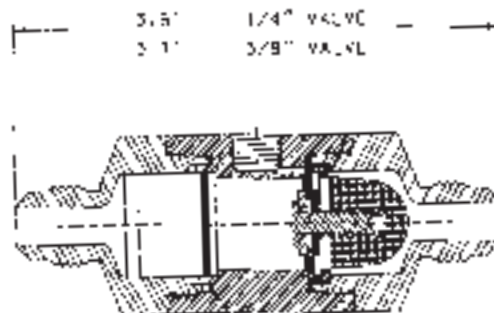
### SIZE

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

**Flow Curves :** (\*) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards.



### DIMENSIONS (IN.)





# Model SVB

## 4W-500 Series



Sizes 1/4", 3/8", 1/2"

### SPILL RESISTANT VACUUM BREAKERS

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.

### MATERIALS

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

### FEATURES

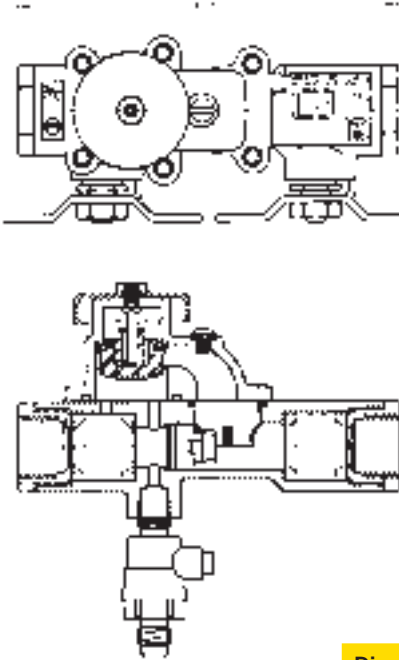
- Corrosion Resistant
- In-Line Flow
- Integral Shut-Off Valves
- Designed For Easy Maintenance
- Low Head Loss
- Economical
- Maximum Working Pressure 150 PSIG
- Operating Temperature Range 33°F-180°F

Contact local water authorities for installation/service requirements.

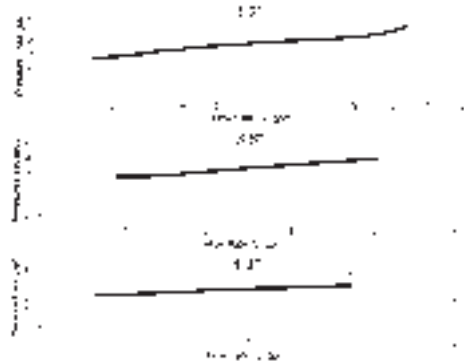
## 4W - 50 X - 0 2

### SIZE

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



Flow Curves : (\*) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards.



### 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

## 40-400 Series



Sizes 1/2", 3/4"

### 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

Contact local water authorities for installation/service requirements.

### CONTINUOUS PRESSURE BACKFLOW PREVENTER

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

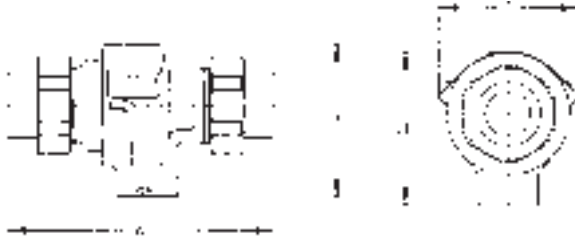
During normal flow operation, the vent valve is closed, and the two check valves are open allowing flow of water through the unit. Each check valve is designed to hold at least 1 psi in the direction of flow. When a back-siphonage condition occurs, both check valves close and the atmospheric vent opens 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

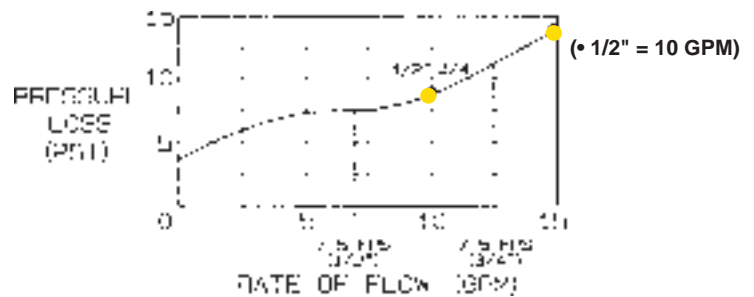
- Corrosion resistant
- Low head loss
- Independently acting check valves
- Ease of repair and installation
- Economical
- Suitable for hot or cold water service
- Durable
- Maximum working pressure 175 psig
- Operating temperature range 33°F-210°F

## 40 - 4 X X - X X M

INLET CONNECTION	INLET AND OUTLET SIZE	OUTLET CONNECTION
A - FNPT	3 - 1/2"	A - FNPT
H - Solder joint	4 - 3/4"	B - MNPT
2 - Female BSPP		F - Female BSPP
		H - Solder joint

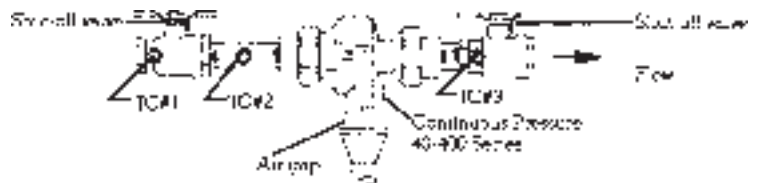


Flow Curves : (\*) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards.



Dimensions (in.) - Weights (lbs.)	
Size	1/2", 3/4"
A	5
B	2-15/16
C	2-5/8
Unit Weight	1.9

### TYPICAL INSTALLATION



# Model PVB

## 4V-500 Series



Sizes 1/2", 3/4", 1", 1-1/4", 1-1/2", 2"

### MATERIALS

Body	Bronze
Canopy	Powder Coated Steel
Cap	Acetal
Check Valve	Acetal
Float	Acetal
Springs	Stainless Steel
Test Cocks	Brass

Contact local water authorities for installation/service requirements.

### FREEZE RESISTANT PRESSURE VACUUM BREAKER

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

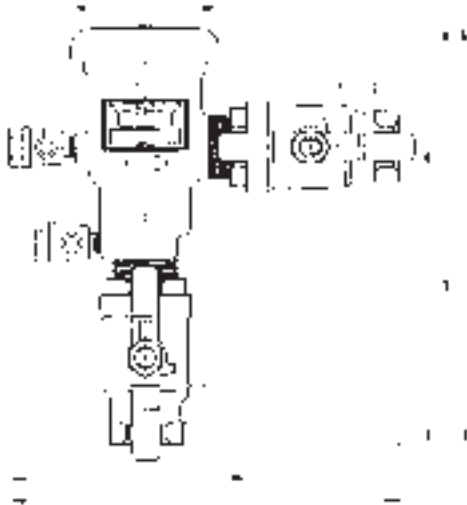
During normal flow conditions, the check valve remains open and the float seals on the cap assembly. As the line pressure falls to 1 psi, the spring loaded atmospheric vent valve opens, breaking the vacuum and thereby preventing back-siphonage. In the event of exposure to freezing temperatures, a spring 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

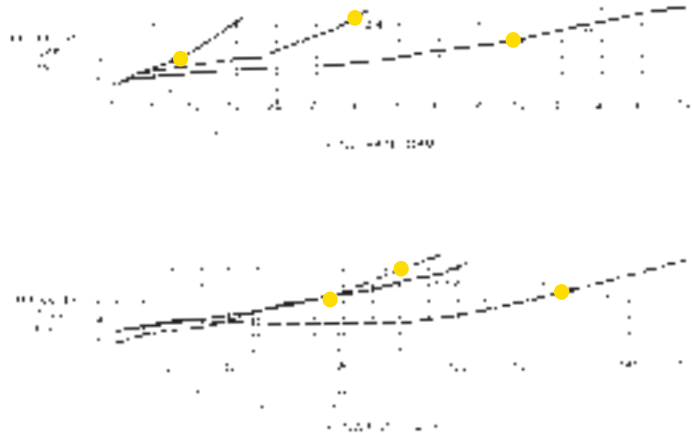
- Removable integral check valve
- One piece cap/float assembly
- Built-in freeze relief valve in cap/float assembly
- Corrosion resistant construction
- Comes standard with Apollo® full port ball valves with stainless steel handles
- Maximum working pressure 150 psig
- Operating temperature range 33°F-180°F
- Easy maintenance

## 4V - 50X - 0X

SIZE	BALL VALVES
3-1/2"	1-less ball valves
4-3/4"	2-w/ ball valves
5-1"	4-w/ union end ball valves
6-1-1/4"	
7-1-1/2"	
8-2"	



**Flow Curves :** (\*) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards.



Dimensions (in.) – Weights (lbs.)	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
<b>Body Size</b>						
A	3	3	3	3-3/4	3-3/4	5-1/4
B (Less Ball Valves)	4-3/4	4-3/4	4-3/4	5-3/8	5-3/8	6-5/8
C	6-3/8	7-1/8	7-1/2	8-3/4	9-1/4	10-1/4
D	7-1/8	7-5/8	8-3/8	10-5/8	10-7/8	12-1/8
E	4-5/8	5-1/8	5-7/8	7-3/8	7-3/8	7-1/8
F (Less Ball Valves)	5-3/8	5-3/8	5-3/8	6-7/8	7-1/4	8-5/8
Test Cocks	1/8 x 1/4 NPT	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 Wt. (Less Ball Valves)	2.2	2.2	2.2	4.3	4.3	8.8
Net. Wt. (With Ball Valves)	3.4	3.9	5.3	9.3	12.2	23.3
Shipping Wt. (Less Ball Valves)	3.2	3.2	3	5.6	5.8	10.3
Shipping Wt. (With Ball Valves)	4.4	4.9	6.3	10.5	13.7	24.8

# Model PVB

## 4V-500-TC2 Series



Sizes 3/4", 1"

### MATERIALS

Body	Bronze
Canopy	Powder Coated Steel
Cap	Acetal
Check Valve	Acetal
Float	Acetal
Springs	Stainless Steel
Test Cocks	Brass

Contact local water authorities for installation/service requirements.

### FREEZE RESISTANT PRESSURE VACUUM BREAKERS

The Conbraco Series 4V-500-TC2 Pressure Vacuum Breaker (PVB) with SAE threaded hose connections make certification testing fast and trouble-free, especially 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.

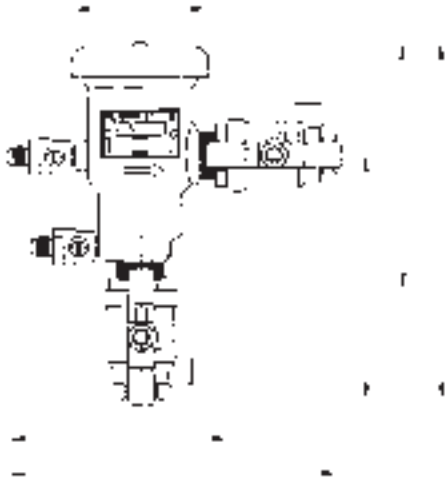
### FEATURES

- Removable integral check valve
- One piece cap/float assembly
- Built-in freeze relief valve in cap/float assembly
- Comes standard with Apollo® full port ball valves with stainless steel handles
- Corrosion resistant construction
- Maximum working pressure 150 psig
- Operating temperature range 33°F-180°F
- Easy maintenance

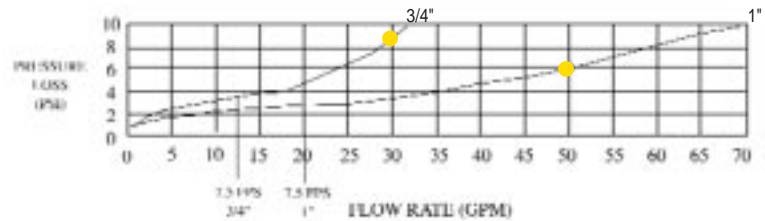
## 4V - 50X - TC2

### SIZE

- 4-3/4"
- 5-1"



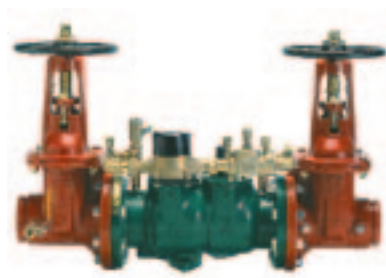
Flow Curves : (\*) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards.



Dimensions (in.) – Weights (lbs.)		
Body Size	3/4"	1"
A	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	5-1/8	5-7/8
F (less ball valves)	5-3/8	5-3/8
Test Cocks	1/8x1/4 SAE	1/8x1/4SAE
Net Wt. (Less Ball Valves)	2.2	2
Net Wt. (With Ball Valves)	3.9	5.3
Shpg. Wt. (Less Ball Valves)	3.2	3
Shpg. Wt. (With Ball Valves)	4.9	6.3

# Model DCDA

## 4S-600



Sizes 2 1/2", 3", 4", 6"

### MATERIALS

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

Contact local water authorities for installation/service requirements.

### DOUBLE CHECK DETECTOR ASSEMBLY

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 cause the main line double check valve to open while water continues to flow at the by-pass at a rate below capacity.

### FEATURES

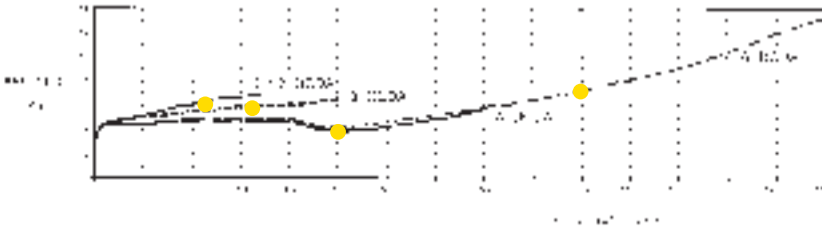
- US Patent 5,711,341
- Corrosion Resistant
- Replaceable Discs
- Low Head Loss
- Economical
- Short Lay Length

- Light Weight
- Designed For Easy Maintenance
- Check Valve Assemblies Interchangeable
- Maximum Working Pressure 175 PSI
- Operating Temperature Range 33°F-140°F

## 4S - 60 X - X X X

SIZE	METER	GATE VALVES	FLOW
9 - 2-1/2"	C — With meter in cubic feet	1 — Less gate valves	U — U-Flow
0 - 3"	E — With meter in gallons	3 — With OS&Y gate valves	
A - 4"	G — Less water meter	6 — w/OS&Y gate valve on inlet, NRS gate valve w/ post plate and nut on outlet	
C - 6"		7 — W/ Flanged inlet x Grooved outlet (OS&Y)	
		8 — w/Grooved x Grooved OS&Y gate valves	

Flow Curves : (\*) Rated flow as determined by USC's FCCC&HR and ASSE design performance standards.



Dimensions (in.) – Weights (lbs.)				
Size	2-1/2"	3"	4"	6"
A	32-1/4	33-1/4	34-3/4	39-1/4
B	17	17	16-1/2	18
C (OS&Y OPEN)	17	19	22-3/4	30-1/8
D	3-1/2	3-3/4	4-1/2	5-1/2
E	9	9	9	9
F	27-1/4	28-1/4	29-3/4	34-1/4
G	22	23	25	29
Test Cocks (Mainline)	1/2 NPT	1/2 NPT	1/2 NPT	3/4 NPT
Test Cocks (Bypass)	1/4 NPT	1/4 NPT	1/4 NPT	1/4 NPT
Net. Wt. (Less Gate Valves)	70	75	83	92
Net. Wt. (w/OS&Y Valves)	176	206	278	404
Net. Wt. (w/Elbows & OS&Y Valves)	212	257	362	539
Net. Wt. (w/Post Indicator)	200	226	293	416
Shpg. Wt. (Less Gate Valves)	123	128	136	145
Shpg. Wt. (w/OS&Y Valves)	243	273	350	514
Shpg. Wt. (w/Elbows & OS&Y Valves)	279	324	434	649
Shpg. Wt. (w/Post Indicator)	267	293	365	526



# Model DCDA

4S-600



Sizes 8", 10"

## DOUBLE CHECK DETECTOR ASSEMBLY

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 cause the main line double check valve to open while water continues to flow at the by-pass at a rate below capacity.

## 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)

Contact local water authorities for installation/service requirements.

## FEATURES

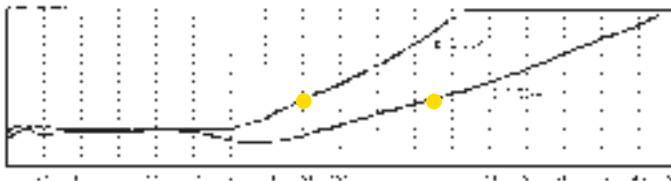
- US Patent #6,343,618
- Corrosion Resistant
- Replaceable Discs
- Low Head Loss
- Economical
- Short Lay Length
- Light Weight
- Designed For Easy Maintenance
- Check Valve Assemblies Interchangeable
- Maximum Working Pressure 175 PSI
- Operating Temperature Range 33°F-140°F

## 4S - 60X - XXX

SIZE	METER	GATE VALVES	FLOW
E - 8"	C - With meter in cubic feet	1 - Less gate valves	U - U-Flow
G - 10"	E - With meter in gallons	3 - With OS&Y gate valves	
	G - Less water meter	6 - w/OS&Y gate valve on inlet, NRS gate valve w/ post plate and nut on outlet	
		7 - W/ Flanged inlet x Grooved outlet* (OS&Y)	
		8 - w/Grooved x Grooved OS&Y gate valves*	

\*Note: Gate Valve options 7 & 8 not available in 10" size.

Flow Curves : (\*) Rated flow as determined by USC's FCC&HR and ASSE design performance standards.



Dimensions shown are nominal

Dimensions (in.) - Weights (lbs.)		
Size	8"	10"
A	50-1/4	55-3/4
B	27	29-1/2
C (NRS)	21-1/4	26-1/2
C (OS&Y OPEN)	38	46
D	6-3/4	8
E	10-3/4	10-3/4
F	45-1/4	51-3/4
G	34-3/4	39-1/2
H	10-1/8	11-1/2
Test Cocks (Mainline)	3/4 NPT	3/4 NPT
Test Cocks (Bypass)	1/4 NPT	1/4 NPT
Net. Wt. (Less Gate Valves)	440	490
Net. Wt. (w/OS&Y Valves)	940	1340
Net. Wt. (w/Elbows & OS&Y Valves)	1169	1714
Net. Wt. (w/Post Indicator)	920	1277
Shpg. Wt. (Less Gate Valves)	530	585
Shpg. Wt. (w/OS&Y Valves)	1046	1440
Shpg. Wt. (w/Elbows & OS&Y Valves)	1275	1814
Shpg. Wt. (w/Post Indicator)	1026	1377



# 40-700 Series

## 40-700 Series



Sizes 3", 4"

### 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)

Contact local water authorities for installation/service requirements.

### REDUCED PRESSURE DETECTOR ASSEMBLY

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.

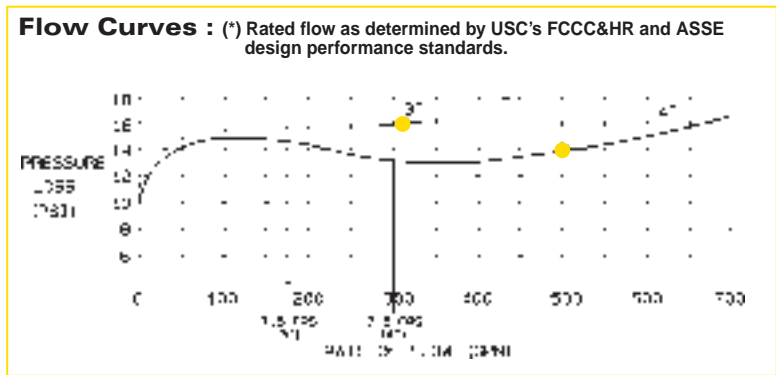
Contact local water authorities for installation/service requirements.

### 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

## 40 - 70 X - X X

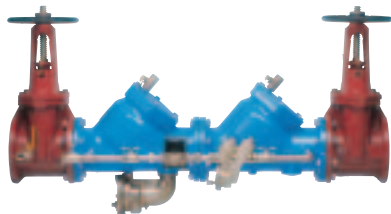
SIZE	METER	GATE VALVES
0 — 3"	C — With meter in cubic feet	1 — Less gate valves
A — 4"	E — With meter in gallons	3 — With OS&Y gate valves
	G — Less water meter	



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

# 40-700 Series

## 40-700 Series



Sizes 6", 8", 10"

### REDUCED PRESSURE DETECTOR ASSEMBLY

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 cause the mainline check valves to open while 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.

### MATERIALS

Body and covers	FDA Approved epoxy-coated ductile iron (main line), 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)

Contact local water authorities for installation/service requirements.

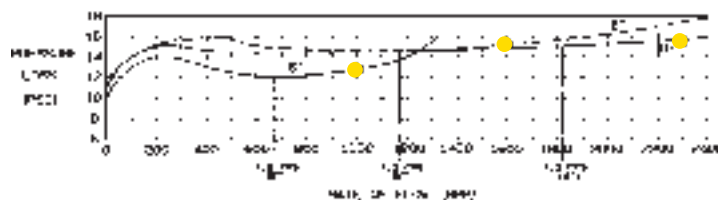
### FEATURES

- 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

## 40 - 70 X - X X

SIZE	METER	GATE VALVES
C — 6"	C — With meter in cubic feet	1 — Less gate valves
E — 8"	E — With meter in gallons	3 — With OS&Y gate valves
G — 10"	G — Less water meter	

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 Wt. (less gate valves)	452	738	1471
Net Wt. (with OS&Y valves)	776	1233	2314
Shipping Wt. (less gate valves)	550	908	1641
Shipping Wt. (with OS&Y valves)	912	1413	2530

## Vacuum Breakers

### 38-300 Series



38-304

### 3/4" HOSE CONNECTION VACUUM BREAKERS

Conbraco's 38-304 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.

#### 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.

#### FEATURES

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

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

38-304 shipped in 12 pcs./box

### 38-404 Series



### 3/4" ANTI-FREEZE HOSE CONNECTION VACUUM BREAKERS

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 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.

#### FEATURES

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

NO.	FINISH	Wt./100
38-404-AS	SATIN BRASS	37
38-404-CS	SATIN CHROME	37

# Vacuum Breakers

## 38-300 Series

38-304-02

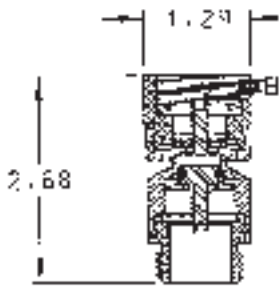


Sizes 3/4"

### MATERIALS

Body	Brass
Seats	EPDM
Check components	Stainless steel
Check guide	Acetal

Contact local water authorities for installation/service requirements.



NO.	Wt./100
38-304-02	46

## 3/4" HOSE CONNECTION VACUUM BREAKERS

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.

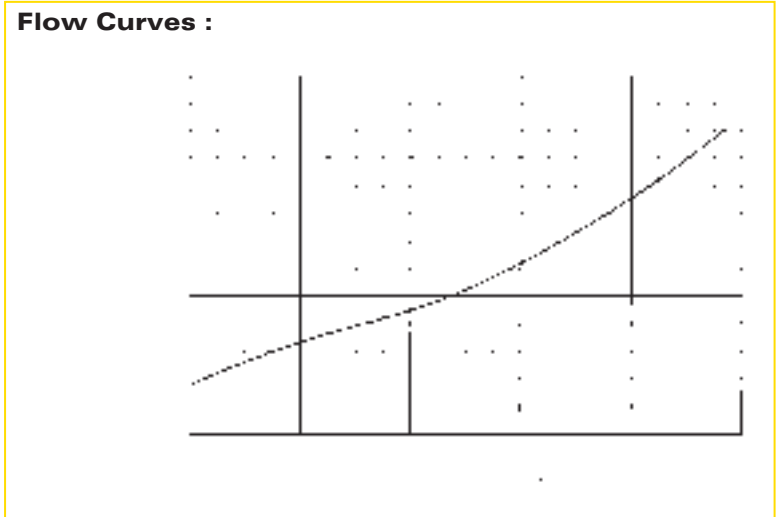
### OPERATION

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

### Flow Curves :





# Vacuum Breakers

## 38-100 Series



Sizes 1/4", 3/8", 1/2", 3/4", 1",  
1-1/4", 1-1/2", 2"

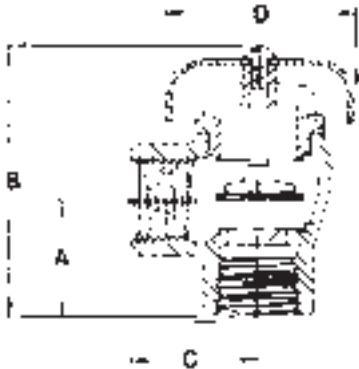
### MATERIALS

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

Contact local water authorities for installation/service requirements.

### SUFFIX NO.

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



## ATMOSPHERIC TYPE VACUUM BREAKERS

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.

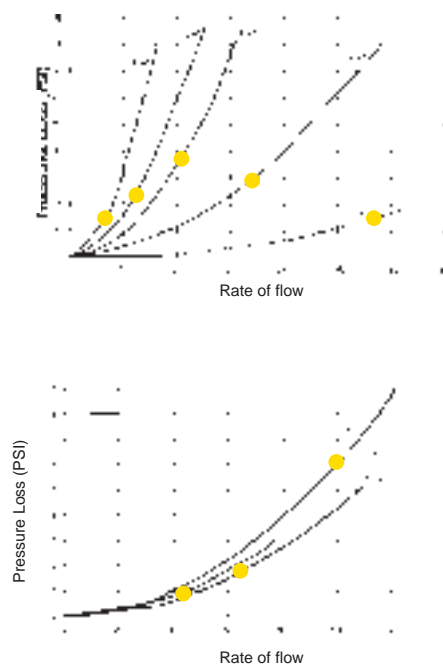
### OPERATION

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"
  - (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

**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	50.96
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
38-106	1-1/4	2	4-3/8	2	3-3/4	316
38-107	1-1/2	2	4-3/8	2	3-3/4	289
38-108	2	2-1/8	4-1/2	2-1/4	3-3/4	369

# Vacuum Breakers

## 38-200 Series



Sizes 1/4", 3/8, 1/2", 3/4"

### ATMOSPHERIC TYPE VACUUM BREAKERS (FORGED BODY)

The Conbraco Series 38-200 Atmospheric 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

### MATERIALS

Body	Forged Brass
Seat Disc	Silicone
Float	Polypropylene
Cap and guide	Noryl®
Canopy	Chrome-Plated Steel
Screw	Zinc-plated steel

Contact local water authorities for installation/service requirements.

### SUFFIX

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

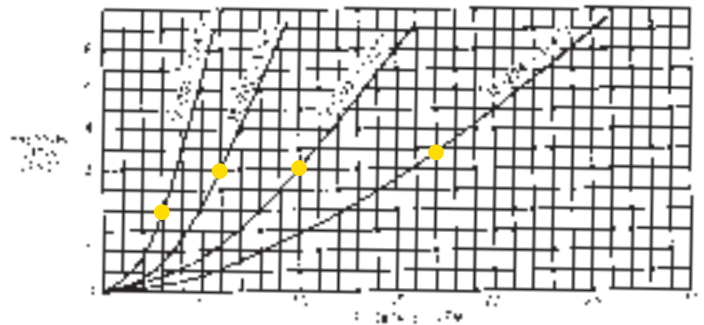


38-230



38-200

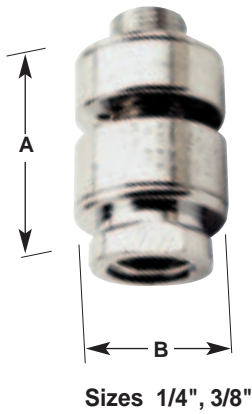
Flow Curves : (\*) Rated flow as determined by ASSE design performance standards.



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

# Vacuum Breakers

## 38-502 Series



### LABORATORY FAUCET VACUUM BREAKER

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. Not suitable for constant pressure conditions.

### OPERATION

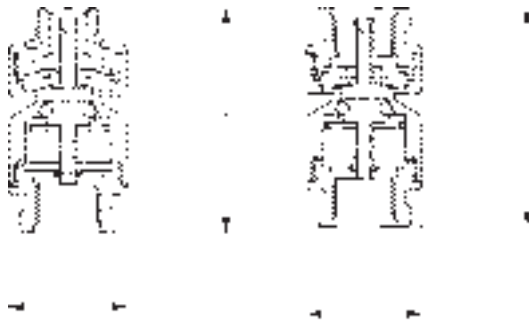
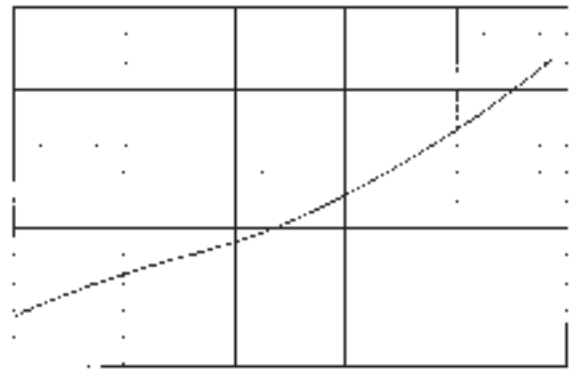
During normal flow conditions, the two checks are held off their seats, supplying water downstream. The vent is held shut by supply pressure acting on the diaphragm. If the supply pressure should fall below atmospheric, the second check will close due to internal spring pressure and the vent will open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

### 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

### Flow Curves :

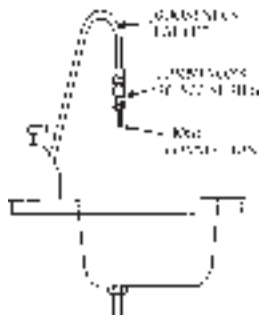


No.	Inlet	Outlet	A(in.)	B(in.)
38-502-01	3/8" MNPSM*	3/8" FNPT	2.33	1.24
38-502-02	3/8" FNPT	3/8" FNPT	2.34	1.24
38-502-03	3/8" FNPT	3/8" MNPSM	2.33	1.24
38-502-CP2**	1/4" FNPT	1/4" FNPT	2.34	1.24
38-502-CP3**	3/8" FNPT	3/8" FNPT	2.34	1.24

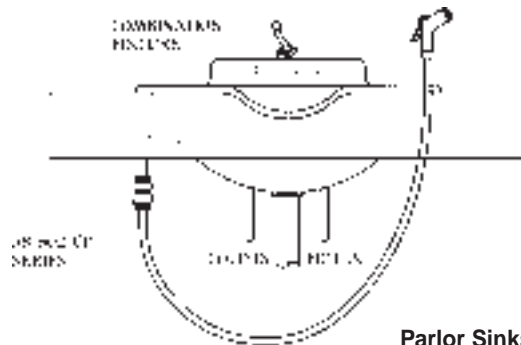
\*American National Standard straight pipe thread for free-fitting mechanical joints (male)

\*\*-CP2 and -CP3 are non-approved devices with a rough brass finish for continuous pressure applications

### TYPICAL INSTALLATIONS



Lab Faucets



Parlor Sinks

## Miscellaneous

### 40-000 Series



#### 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

Contact local water authorities for installation/service requirements.

### FREEZE PROTECTION VALVE

The Conbraco Series 40-000 Freeze Protection Valve protects Conbraco® Backflow Preventers from freezing when installed in accordance with manufacturer's instructions. All internal parts of the Freeze Protection Valve are 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
- Patented design
- IAPMO listed

## 40 - 000 - FPV X

#### OPTIONS

- 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)

#### DIMENSIONS (in.) — Weights (lbs.)

##### NET WEIGHT EACH

Model 40-000-FPV1: .70  
 Model 40-000-FPV2: .77



##### MODEL NUMBERS

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

## Backflow Preventer Accessories

### TEST KITS

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.

#### 40-200-TKU



### DIFFERENTIAL PRESSURE GAUGE TEST KITS

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

- Differential pressure type with a dual scale of 0-15 psid/0-100kPa differential pressure range with a +2% accuracy (full scale).

#### 40-200-TK5U



#### 40-200-TK5U

This is 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 two additional valves that make it possible to bleed lines without disconnecting hoses.

Dimensions (in.) – Weights (lbs.)		
MODEL	APPLICATION	WT./100 (lbs.)
40-200-TKU	ALL DCV, RPZ, PVB & SVB	780
40-200-TK5U	ALL DCV, RPZ, PVB & SVB	650



## Accessories

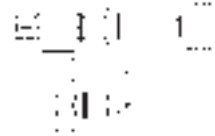
### 40-200-ST SIGHT TUBE

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.



### 40-00X-TFK TEST KIT FITTING

Brass fitting which installs onto Backflow Preventer Test Cocks by hand. No tools required. No messy Teflon® tape to deal with. Provides cleaner, quicker testing. (3 per kit) Sizes 1/4", 1/2", 3/4"



Model #	SIZE
40-000-TFK	1/4"
40-001-TFK	1/2"
40-002-TFK	3/4"

### Series IBVE-125



### EPOXY COATED CAST IRON FULL PORT CLASS 125 FLANGED BALL VALVE

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.

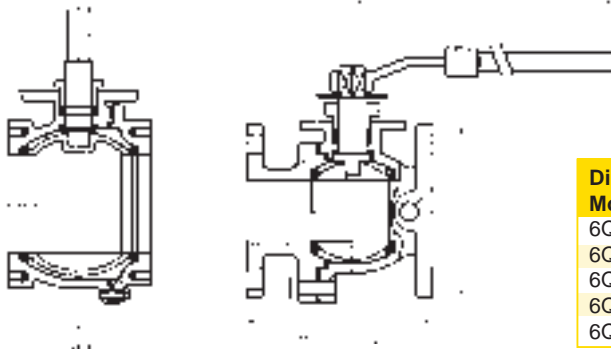
With their full port design, these valves assure an unobstructed, turbulence-free flow that gate and butterfly valves can't match. Low profile handle for easy installation in tight places. Sizes from 2 1/2" to 8". Rated 125 WSP, 200 WOG, with maximum operating temperature of 140°F.

#### 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



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

NOTE: Gear operator standard on 8"

# Accessories

## 40-200, 4D-200 & Model RP(4S-200) Backflow Preventers

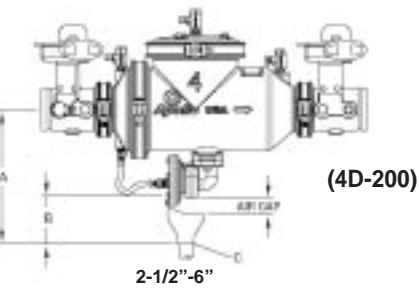
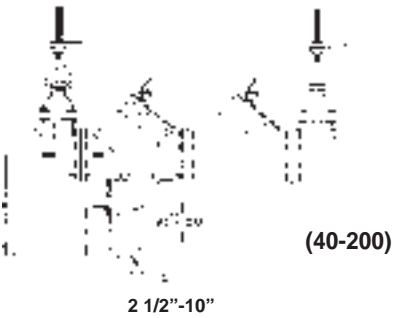


### AIR GAP DRAIN

For installation with Conbraco's 40-200, 4D-200, and 4S-200 Series Reduced Pressure Principle backflow preventers.

The Conbraco Air Gap Drain (AGD) is designed to funnel minor relief valve discharges, due to line pressure fluctuations and /or minor check valve fouling, into the drainage system. Drain piping is easily attached to the drain's threaded bottom.

**Note:** The AGD is **NOT** designed to collect the full discharge capacity of the relief valve.



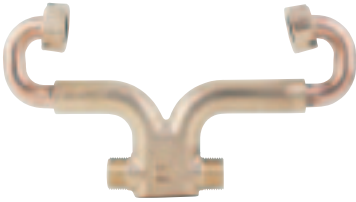
Dimensions (in.) – Weights (lbs.)					
R.P.	AGD				
40 Series	Model No.	A	B	C	Wt./100
1/4", 3/8", 1/2"	40-200-XA	8-7/16	5	1" NPT	230
3/4" & 1"	40-200-X1	9-1/2	5-1/8	1" NPT	340
1-1/4" & 2"	40-200-X1	11-1/4	5-1/8	1" NPT	340
2-1/2" & 3"	40-200-X2	19	9-7/8	2" NPT	1100
4"	40-200-X2	20	9-7/8	2" NPT	1100
6"	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

Dimensions (in.) – Weights (lbs.)					
R.P.	AGD				
4D-200 Series	Model No.	A	B	C	Wt./100
2-1/2" - 4"	40-200-X1	14-3/8	5-1/8	1" NPT	340
6"	40-200-X1	15-7/8	5-1/8	1" NPT	340

Dimensions (in.) – Weights (lbs.)					
R.P.	AGD				
4S Series	Model No.	A	B	C	Wt./100
6"	40-200-X1	14-5/8	5-1/8	1" NPT	340
8" & 10"	40-200-X2	23-3/4	9-13/16	2" NPT	1100

## Accessories

### 40-300-M

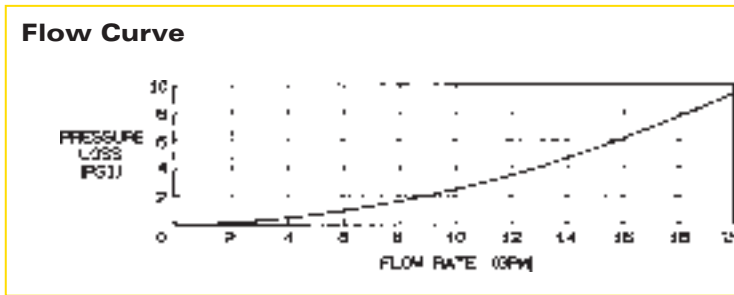


#### METER SETTER

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 degree 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 is 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.

#### 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



### 40 - 300 - M X

#### OPTIONS

- 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 (in.) – Weights (lbs.)	
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

## Accessories

### 78-RV



78-RV



16-601

### THERMAL EXPANSION RELIEF VALVES (SERIES 16-601 & 78-RV)

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.

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	00	0.5 lb.
16-601-04	25	0.5 lb.

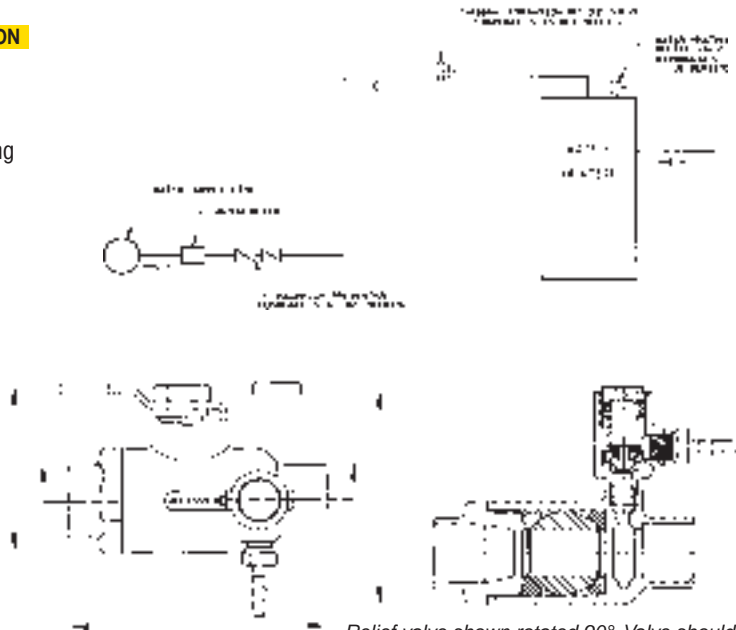


Note: Unit can be mounted on 1/2" thru 1" Copper Tubing.

### 78 - X X X - R V

SIZE	PRESSURE SETTING	RELIEF VALVE CONNECTION
3 - 3/4" SWT	0 - 125 psig	4 - Hose Barb
4 - 3/4" THD	1 - 100 psig	5 - Pex
5 - 1" SWT	2 - 80 psi	6 - Comp. Fitting
6 - 1" THD		7 - 1/2" NPT/SWT Fitting

#### TYPICAL INSTALLATION



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

Dimensions (in.) – Weights (lbs.)			
Series	A	B	C
78-300	2.6	3.9	3.2
78-400	2.5	2.7	3.4

## Accessories

### W-8078-00



#### 3/4" HOSE CONNECTION PRESSURE GAUGE

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

### 40-XT Series



#### THERMAL EXPANSION TANK

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



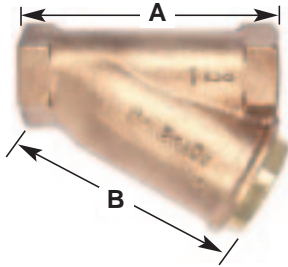
#### Dimensions (in.) – Weights (lbs.)

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



# Accessories

## 59 Series



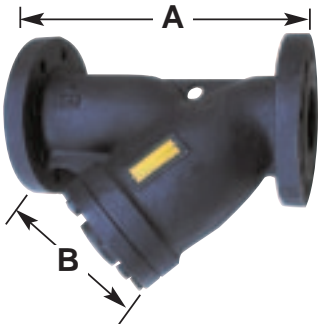
## Y STRAINER

### FEATURES

- Maximum protection capability against foreign particles in piping systems and process equipment.
- Cast bronze (81-3-7-9) 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

Dimensions (in.) – Weights (lbs.)					
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

## FC1



## 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

Dimensions (in.) – Weights (lbs.)					
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

Type of Device	Model/Series	SIZE	APPROVALS						
			USC	ASSE	CSA	IAPMO	AWWA	UL*	FM*
Double Check	40-100	1/2"-2"	YES	1015	B64.5	YES	C-510	N/A	N/A
Double Check (Top Entry)	40-100	3/4"-2"	YES	1015	B64.5	YES	C-510		N/A
Double Check (Top Entry)	40-100-T2	3/4"-2"	YES	1015	B64.5	PENDING	C-510	N/A	N/A
Double Check (Top Entry)	40-100-TC2	3/4"-1"	YES	1015	B64.5	PENDING	C-510	N/A	N/A
Double Check	4D-100	2-1/2"-6"	PENDING	YES	YES	PENDING	YES	YES	YES
Double Check	4D-100	8"-10"	PENDING	PENDING	PENDING	PENDING	YES	YES	YES
Carbonated Beverage Back. Prev.	CBBP/4C-100	1/4"-3/8"	N/A	1022	B64.3.1	YES	N/A	N/A	N/A
Double Check	DC/4S-100	1/2"	YES	1015	B64.5	PENDING	PENDING	N/A	N/A
Double Check	DC/4S-100	2-1/2"-6"	YES	1015	B64.5	YES	C-510	YES	YES
Double Check	DC/4S-100	8"& 10"	YES	1015	B64.5	PENDING	C-510	YES	YES
Reduced Pressure	40-200	1/4"-1/2"	YES	1013	B64.4	N/A	N/A	N/A	N/A
Reduced Pressure	40-200	3/4"-2"	YES	1013	B64.4	YES	C-511	YES	N/A
Reduced Pressure	40-200-T2	1/4"-1/2"	YES	1013	B64.4	N/A	N/A	N/A	N/A
Reduced Pressure	40-200-T2	3/4"-2"	YES	1013	B64.4	PENDING	C-511	N/A	N/A
Reduced Pressure	40-200-TC2	3/4"-1"	YES	1013	B64.4	PENDING	N/A	N/A	N/A
Reduced Pressure	40-200-T2S	1/4"-1"	YES	1013	1/2"-1"	PENDING	N/A	N/A	N/A
Reduced Pressure	40-200-T2U, Z	3/4"-2"	YES	1013	B64.4	PENDING	N/A	N/A	N/A
Reduced Pressure	40-200-TCU	3/4"-1"	YES	1013	B64.4	PENDING	N/A	N/A	N/A
Reduced Pressure	40-200-02	2-1/2"-10"	YES	1013	B64.4	YES	C-511	N/A	N/A
Reduced Pressure	40-200-03	2-1/2"-10"	YES	1013	B64.4	YES	C-511	3"-10"	YES
Reduced Pressure	40-200-05	2-1/2"-6"	YES	1013	B64.4	PENDING	C-511	N/A	N/A
Reduced Pressure	RP/4S-200	6"-10"	PENDING	1013	B64.4	PENDING	YES	YES	YES
Reduced Pressure	4D-200	2-1/2"-6"	PENDING	YES	YES	PENDING	YES	YES	YES
Reduced Pressure	4D-200	8"-10"	PENDING	YES	YES	PENDING	YES	YES	YES
Dual Check	40-300	1/2"-1"	N/A	1024	B64.6	N/A	N/A	N/A	N/A
Dual Check	4N-300	3/8"-1"	N/A	1024	B64.6	N/A	N/A	N/A	N/A
Continuous Pressure B.P.	40-400	1/2"-3/4"	N/A	1012	B64.3	N/A	N/A	N/A	N/A
Pressure Vacuum Breaker	40-500	1/2"-2"	YES	1020	B64.1.2	PENDING	N/A	N/A	N/A
Pressure Vacuum Breaker	PVB/4V-500	1/2"-2"	YES	1020	B64.1.2	YES	N/A	N/A	N/A
Pressure Vacuum Breaker	PVB/4V-500-TC2	3/4"-1"	PENDING	PENDING	PENDING	PENDING	N/A	N/A	N/A
Spill-Resistant PVB	SVB/4W-500	1/4"-1/2"	YES	1056	B64.1.2	YES	N/A	N/A	N/A
Double Check Detector Assy	DCDA/4S-600	2-1/2"-6"	YES	1048	N/A	N/A	N/A	YES	YES
Double Check Detector Assy	DCDA/4S-600	8"& 10"	YES	1048	N/A	N/A	N/A	YES	YES
Reduced Pressure Detector Assy	40-700	3"-10"	YES	1047	N/A	N/A	N/A	YES	YES
Atmospheric Vacuum Breaker	38-100	1/4"-2"	N/A	1001	B64.1.1	YES	N/A	N/A	N/A
Atmospheric Vacuum Breaker	38-200	1/4"-3/4"	N/A	1001	B64.1.1	YES	N/A	N/A	N/A
Hose Conn. Vacuum Breaker	38-304	3/4"	N/A	1011	B64.2	YES	N/A	N/A	N/A
Hose Conn. Backflow Preventer	38-304-02	3/4"	N/A	1052	PENDING	PENDING	N/A	N/A	N/A
Anti-Freeze Hose Conn. V.B	38-404	3/4"	N/A	1011	B64.2	YES	N/A	N/A	N/A
Lab Faucet Vacuum Breaker	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. 4S-100 Series is listed as Model DC and 4S-600 is listed as Model DCDA on USC list.

## 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.

IT IS THE END USER'S RESPONSIBILITY TO CONFIRM THAT ITEMS INTENDED FOR USE SATISFY LOCAL CODES AND STANDARDS.



# "Apollo" Valves

Manufactured by Conbraco Industries Inc.

**SERVICE AND SALES DEPARTMENT**  
**P.O. Box 247 • Matthews, NC 28106**  
**Phone: 704-841-6000 • Fax: 704-841-6020**

			<b>E/Mail Address</b>	<b>Phone</b>	<b>Fax</b>
<b>Southeast Region</b>	<b>B. Lynch &amp; Associates</b>	Florida	sales@blynchandassociates.com	813-901-0992	813-901-8403
	<b>Spotswood Associates</b>	Georgia/Alabama	dlewis@spotswoodassociates.com	770-447-1227	770-263-6899
	<b>Pro Marketing, Inc.</b>	North Carolina/South Carolina/Tennessee-East	sales@promarketinginc.net	864-578-4334	864-578-4889
	<b>Mid South Marketing, Inc.</b>	Virginia/Maryland/Washington, D.C./WV-East	sales@midsouthmktg.com	804-213-3801	804-213-3802
<b>Southern Region</b>	<b>Southern Marketing Group</b>	MS/TN-West/AR/Bowie Cty.-TX	SMG49@bellsouth.net	901-547-0042	901-547-0035
	<b>AVC Mechanical Sales, Inc.</b>	Oklahoma/Texas-North	valvesales@avalve.com	214-201-0100	214-201-0104
	<b>Knox &amp; Associates</b>	Texas-South/Louisiana	knox1@pdq.net	713-462-7766	713-690-6228
<b>Midwestern Region</b>	<b>HEBCO, Inc.</b>	Kansas/Missouri-West	kcwinelvr@aol.com	913-491-0797	913-491-5126
	<b>New Tech Marketing</b>	IL/WI-East/IN-North/MI-Upper Peninsula/IA-/River Counties	ntm012@mcleodusa.net	630-378-4300	630-378-0343
	<b>New Tech Marketing</b>	Eastern Missouri/Southern Illinois	ntm112@aol.com	618-394-0329	618-394-0427
	<b>J.L. Whitfill &amp; Associates, Inc.</b>	Kentucky/Indiana-South/Ohio-South	whitfill@win.net	502-459-4545	502-459-9944
	<b>V.E. Sales Co., Inc.</b>	Michigan (Except Upper Peninsula)	tomv@vesalesinc.com	586-774-7760	586-774-1490
	<b>Northstar Valve &amp; Fitting, Inc.</b>	Minnesota/North & South Dakota/Wisconsin-West	northstarvalve@qwest.net	952-937-0108	952-937-0803
	<b>Willco, Inc.</b>	Nebraska/Iowa (Except River Counties)	bill@willcoinc.com	402-573-7000	402-573-7371
<b>Morrissey Associates, Inc.</b>	Ohio-North/Pennsylvania-West/West Virginia-West	sales@morrisseyassoc.com	330-538-0406	330-538-0410	
<b>Western Region</b>	<b>HARCRO Sales</b>	California-North	info@harcrosales.com	510-786-2480	510-786-0246
	<b>Specification Sales</b>	California-South	specsales@verizonmail.com	909-594-7088	909-594-2798
	<b>Marshall-Rodeno Associated</b>	CO/WY/MT/ID-SE/UT/NV-NE/NM/EI Paso-TX	trodeno@marshallrodeno.com	303-575-6701	303-575-6706
	<b>Bralely-Gray &amp; Associates</b>	Oregon/SW Washington/Western Idaho	sales@bralelygray.com	503-249-6972	503-288-4464
	<b>Commercial Application Sales</b>	Alaska/Washington	sales@commappsales.com	206-405-4370	206-405-4390
	<b>Layden Valve Sales &amp; Solutions</b>	Hawaii	will@laydenvalve.com	808-456-3331	808-455-1064
<b>Southwestern Industrial Sales Co.</b>	Arizona/Nevada-SW	sales@swmech.com	480-813-1313	480-813-2800	
<b>Northeast Region</b>	<b>Urell, Inc.</b>	Massachusetts/New England States	conbraco@urell.com	617-923-9500	617-926-9414
	<b>McMahon Marketing, Inc.</b>	New York-Upstate/New York-West	sales@mcmahonmarketing.com	518-792-3350	518-792-3351
	<b>Continuous Sales Corporation</b>	New York-East/New Jersey-North	csc07@aol.com	516-575-6800	516-349-8411
	<b>Cope-Wardell-Ammon Associates</b>	Pennsylvania-East/Delaware/New Jersey-South	joejr@cwaassociates.com	610-485-2828	610-485-7171
	<b>Keith Engle &amp; Associates</b>	OEM accounts	keith.engle@att.net	610-827-9560	610-827-9561
<b>Canada</b>	<b>Conbraco Industries, Canada</b>	160 Pennsylvania Ave., Unit 3, Concord, Ontario L4K 4A9	conbraco.canada@conbraco.com	905-761-6161	905-761-6666
	<b>Barclay Sales Ltd.</b>	British Columbia	bbarclay@barclaysales.com	604-945-1010	604-945-3030
	<b>Dynamic Agencies, Ltd.</b>	Saskatchewan	doug.dynamicage@sasktel.net	306-343-1901	306-343-1901
	<b>Tom Beggs Agencies Ltd.</b>	Manitoba/NW Ontario	TBA@MB.SYMPATICO.CA	204-953-1900	204-774-6915
	<b>Task Controls, Inc.</b>	Ontario	infotoronto@taskcontrols.com	416-291-3004	416-754-3481
	<b>Agences J. Pierre Sylvain, Inc.</b>	Quebec	agencespsylvain@golden.net	450-655-9588	450-641-2737
	<b>Kern Industries, Ltd.</b>	Alberta-North	kernind@telusplanet.net	780-451-2056	780-454-6687
	<b>Kern Industries Calgary, Ltd.</b>	Alberta-South	kerncalgary@telus.net	403-730-7791	403-239-8179
	<b>J. Levandier Sales, Inc.</b>	Nova Scotia, New Brunswick, Prince Edward Island	jlssales@istar.ca	506-858-1615	506-858-1084
	<b>Smith Agencies</b>	Newfoundland	smithagencies@nl.rogers.com	709-364-8856	709-747-9414
	<b>Key to the North Sales Agency, Inc.</b>	Ontario-North	hmehes@keytothenorth.ca	705-524-6714	705-566-0148
<b>Pelco Sales</b>	Eastern-Ontario/Ottawa	pelco@cyberus.ca	613-839-0114	613-839-0115	
<b>Int'l./ Puerto Rico</b>	<b>Rafael Rodriguez Barril, Inc.</b>	Puerto Rico	raulir@rrbarril.com	787-982-1550	787-982-1570
	<b>Conbraco International Limited</b>	Manchester, England	sales@conbraco.co.uk	44-161-908-2340`	+44-161-908-2359

**For Representatives And Distributors In Your International Area  
Please Contact The Closest Conbraco Industries International Office.**

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