CONBRACO 40-200/RP-40/ RP-40LF SERIES

SIZE	MODEL NO	SIZE	MODEL NO
1/4"	40-201	2"	40-208
3/8"	40-202	2 1/2"	40-209
1/2"	40-203	3"	40-200
3/4"	40-204	4"	40-20A
1"	40-205	6"	40-20C
1 1/4"	40-206	8"	40-20E
1 1/2"	40-207	10"	40-20G

DESCRIPTION

This is a reduced pressure assembly. Production began approximately 1989. The 1/4"-2" sizes are a bronze bodied plastic poppet style check. In 2010 the RP40LF model was introduced which used lead free bronze. In 1994 a stainless steel body option became available in 1/4"-1". Check covers are screwed into the body in sizes 1/4"-2". The check and relief valve seats are cast in the body and are not replaceable. From 1989-1994 in the 1/4"-2" sizes replaceable seats were available as an option. The replaceable seat version has an "A" in the second to last digit in the model number: e.g. 40-208-A2. In 1994 replaceable seats became the standard. The rubber repair kits are different between the replaceable and non-replaceable seat version. A seat removal tool is needed to change the seats. The check springs are not contained on these sizes. The relief valve spring is contained when the cover is removed and has an internal sensing line. The 2 1/2"-10" sizes utilize a ductile iron body that is fused epoxy coated. Most hardware internal check parts are made of bronze. The 2 1/2"-4" sizes use a single check body while the 6"-10" have a split 2 piece check body design. Check and relief valve seats are replaceable. A seat removal tool is needed to change the seats. All springs are contained upon removal of check and relief covers. This unit utilizes an internal relief valve sensing line. The relief valve is able to be removed from the check body. Note each size has a different model number, but they are all in the 40-200 series.

BASIC REPAIR KIT

Repair kit contains all rubber discs, diaphragm, and O-ring

		AIR GAP			AIR GAP
SIZE	KIT NO	DRAIN	SIZE	KIT NO	DRAIN
1/4"-1/2"	40-003-A4	40-200-XA	4"	40-200-40*	40-200-X2
3/4"-1"	40-004-A4	40-200-X1	6"	40-200-60*	40-200-X2
1 1/4"-2"	40-007-A4	40-200-X1	8"	40-200-80*	40-200-X3
2 1/2"-3"	40-200-30*	40-200-X2	10"	40-200-10*	40-200-X3

IMPORTANT FEATURES

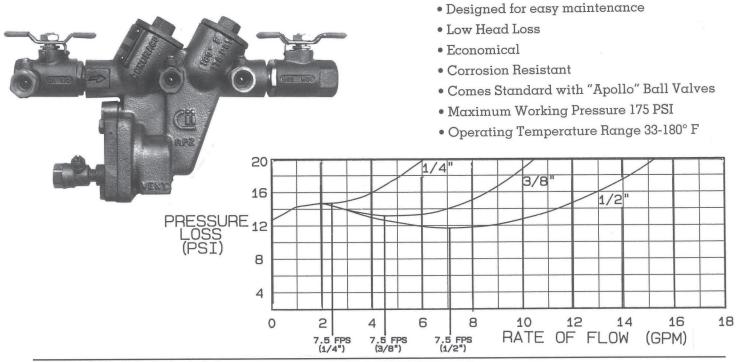
- ~1/4"-2" bronze body
- ~1/4"-2" check springs are not contained
- ~3/4"-2" replaceable check seat
- ~2 1/2"-10" fused epoxy coated ductile iron body
- ~2 1/2"-10" springs are contained
- ~2 1/2"-10" seats are replaceable
- ~2 1/2"-10" detachable RV assembly
- ~1/4"-10" internal RV sensing line
- ~Factory repair information enclosed



SERIES 40-200

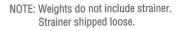
Reduced Pressure Principle

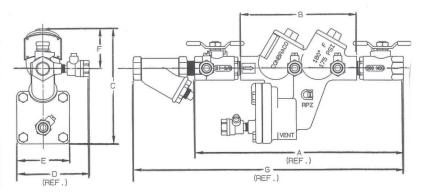
Sizes 1/4" - 3/8" - 1/2"



DIMENSIONS (in.) – WEIGHTS (lbs.)

			The second liverage and the se
Body Size	1/4"	3/8"	1/2"
A	10 3/16	10 1/4	10 3/4
B (w/o Ball Valves)	5 3/4	5 3/4	5 3/4
C	5 5/8	5 5/8	5 5/8
D	3 3/8	3 3/8	3 3/8
Е	2 5/8	2 5/8	2 5/8
F	1 7/8	1 7/8	1 7/8
G	12 7/16	13 3/16	13 13/16
Test Cocks	1/8x1/4 NPT	1/8 x1/4 NPT	1/8x1/4 NPT
Net. Wgt. (w/o Ball Valves)	5.7	5.7	5.1
Net. Wgt. (with Ball Valves)	7.0	7.0	7.4
Shipping Wgt. (w/o Ball Valves)	6.6	6.6	6.0
Shipping Wgt. (with Ball Valves)	7.9	7.9	8.3





FEATURES

Removable discs

 Maximum protection against backpressure/backsiphonage

Internal sensing passage

MATERIALS

1. Body — Bronze

2. Springs —— Stainless Steel
3. Poppets —— Glass filled celcon

4. Seat Discs—— Silicone Rubber

5. Diaphragm — Buna N and Nylon

6. R.V. Stem — Noryl

7. Fasteners — Stainless Steel

8. Seats — Noryl

ORDERING NUMBERS

1/4" - 40-201 **SUFFIX NUMBERS**3/8" - 40-202 —A1 less ball valves
1/2" -40-203 —A2 with ball valves
-A4 with union-end
ball valves

5-13



SPECIFICATIONS

GENERAL SPECIFICATIONS

The backflow preventer shall be a Reduced Pressure Principle and shall include a tightly closing resilient-seated shut-off valve on each end of the body. The assembly shall be fitted with four (4) properly located resilient-seated test cocks.

The assembly shall have two (2) independent and internally loaded check valves and a pressure differential relief valve located between the check valves.

The backflow preventer shall be suitable for **supply** pressure up to 175 psi and water temperatures from 33 to 180° F.

DESCRIPTION

The Conbraco Series 40-200 Reduced Pressure Principle Backflow Preventer is designed to give maximum protection against backflow caused by either back pressure or back siphonage. The durable, but economical, device is easily maintained in the line without any special tools.

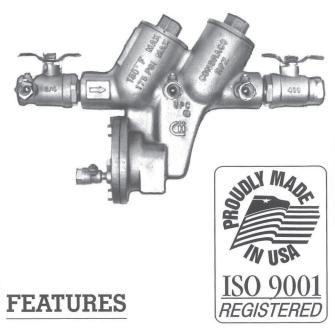
It consists of two independently acting spring loaded check valves with an automatic differential relief valve located between the check valves. The diaphragm and the sensing passage are built into the all bronze body to eliminate possible damage.

OPERATION

During normal flow conditions, the two check valves are held off their seats, supplying water downstream. The relief valve is held shut by supply pressure acting through the internal sensing passage, on the relief valve diaphragm. In the area between the check valves, called the zone, the pressure is maintained at approximately 7 PSI lower than supply pressure. Should a backpressure/backsiphonage 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.

Reduced Pressure Principle

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



- Maximum protection against backpressure/backsiphonage
- Removable discs
- Internal sensing passage
- Designed for easy maintenance
- · Low head Loss
- Economical
- Corrosion resistant
- Comes Standard with "Apollo" Ball Valves
- Maximum Working Pressure 175 PSI
- Operating Temperature Range 33-180° F

APPROVALS

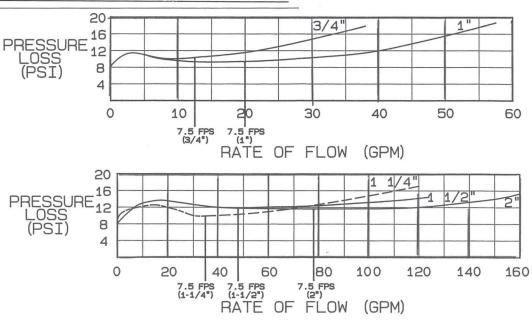
The Series 40-200 is approved under USC's FCCC & HR Manual, Sec. 10, ASSE 1013, AWWA C-511, IAPMO, and CSA B64.4.





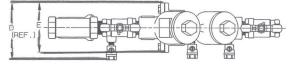


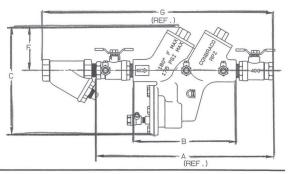
FLOW CURVES WITH BALL VALVES



DIMENSIONS (in.) - WEIGHTS (lbs.)

Body Size	3/4"	1"	1 1/4"	1 1/2"	2"
A	13 3/4	15 3/8	17 1/2	19 1/2	21 1/2
B (w/o Ball Valves)	8	8	11	11	11
С	8 3/8	8 3/8	11 7/8	11 7/8	11 7/8
D	5	5	6 1/8	6 1/8	6 1/8
Е	4	4	5 3/8	5 3/8	5 3/8
F	3 1/4	3 1/4	4 3/4	4 3/4	4 3/4
G	18	20 5/8	23 1/8	25 13/16	28 13/16
Test Cocks	1/8x1/4 NPT	1/8 x1/4 NPT	1/4x1/4 NPT	1/4x1/4 NPT	1/4x1/4 NPT
Net. Wgt. (w/o Ball Valves)	11 1/2	11	30 1/2	27 1/2	27
Net. Wgt. (with Ball Valves)	14	14 1/2	35 1/2	37	39 1/2
Shipping Wgt. (w/o Ball Valves)	12 1/2	12	32 1/2	29	29
Shipping Wgt. (with Ball Valves)	15	15 1/2	38	39	41





MATERIALS

1. Body ----- Bronze

2. Springs — Stainless Steel

3. Poppets — Glass Filled Celcon

4. Seat Discs — Silicone Rubber

5.Diaphragm — Buna N and Nylon

6. R.V. Stem — Noryl 7. Fasteners — Stainless Steel

8. Seats — Noryl

ORDERING NUMBERS

2." -40-208

3/4" - 40-204 **SUFFIX NUMBERS**

1" - 40-205 -A1 less ball valves

1-1/4" -40-206 -A2 with ball valves

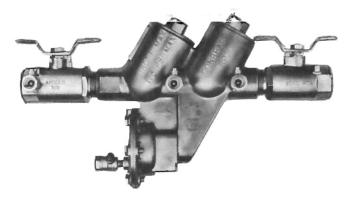
1-1/2" -40-207 -A4 with union-end ball valves

NOTE: Weights do not include strainer. Strainer shipped loose.

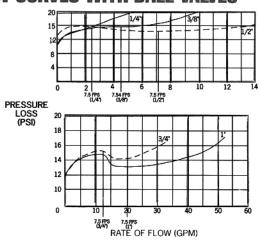
STAINLESS STEEL

Reduced Pressure Principle

SIZES 1/4"—3/8"—1/2"—3/4"—1"



FLOW CURVES WITH BALL VALVES



FEATURES

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

APPLICATION

Whenever an ambient or downstream liquid is of such composition so as to damage bronze material, the Conbraco Stainless Steel Reduced Pressure Backflow Preventer is ideal.

Among the applications are: medical diagnostic equipment, pharmaceutical manufacturers, chemical processing plants, pulp and paper mills, food processing equipment, dialysis machines, liquid dispensing equipment and distillers or breweries.

APPROVALS

The Series 40-200 (Stainless Steel) is approved under ASSE 1013 Standards.

DIMENSIONS (IN.)—WEIGHTS (LBS.)

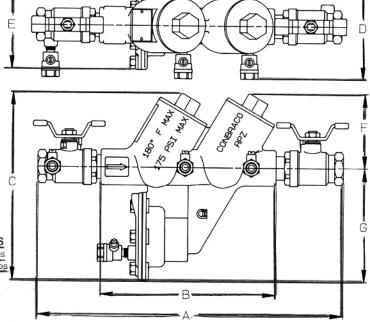
Body Size	1/4"	3/8"	1/2"	3/4"	1"
Α	10-1/2	10-1/2	10-1/2	13-1/2	15-1/4
В	5-3/4	5-3/4	5-3/4	7-15/16	7-15/16
C	5-13/16	5-13/16	5-13/16	8-3/8	8-3/8
D	3-5/8	3-5/8	3-5/8	4-3/4	4-3/4
E	2-5/8	2-5/8	2-5/8	4	4
	2-1/8	2-1/8	2-1/8	3-1/4	3-1/4
G	3-3/4	3-3/4	3-3/4	5-1/8	5-1/8
Test Cocks	1/8 x 1/4NPT				
Net Wt. (w/o Ball Valves)	4-1/4	4-1/4	4-1/8	8-1/4	8-1/8
Vet 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

MATERIALS

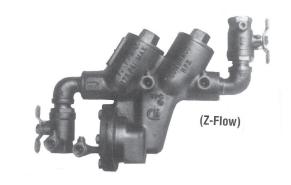
Ι.	Body and covers	– Stainless Steel
2.	Springs	– Stainless Steel
3.	Fasteners	– Stainless Steel
1.	Poppets	 Glass-filled Celcor
5.	Seat discs	– Silicone rubber
ã.	Diaphragm & O-rings	– FDA Viton
7.	Replaceable seats	– Glass-filled Noryl

ORDERING NUMBERS

-	SUFFIX NUMBERS
3/4" - 40-204	– A1S less ball valves
1" - 40-205	 A2S with ball valves

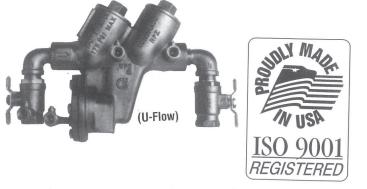


U and Z Flow Reduced Pressure Principle SIZES 3/4"-1"-1-1/4"-1-1/2"-2"

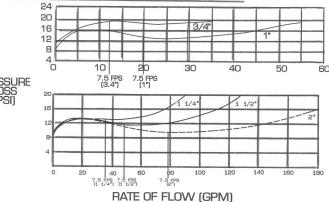


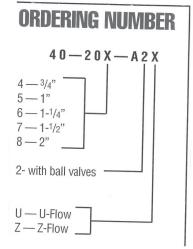


1. Body, covers & elbows	Bronze
2. Springs	Stainless Steel
3. Poppets	Glass-filled Celcon
4. Seat Discs	Silicone Rubber
5. Diaphragm	Buna N and Nylon
6. R.V. Stem	Noryl
7. Fasteners	Stainless Steel
8. Replaceable Seats	Glass-filled Noryl



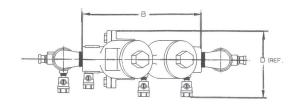
FLOW CURVES WITH BALL VALVES

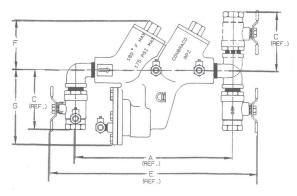


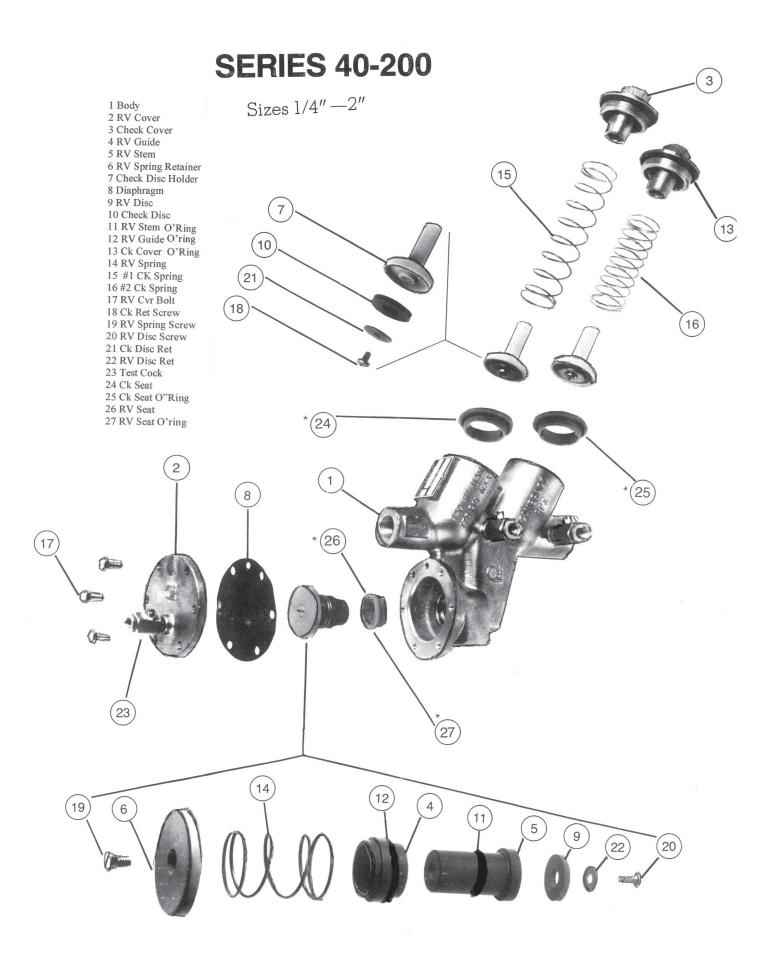


DIMENSIONS (IN.)—WEIGHTS (LBS.)

Body Size	3/4"	1"	1 1/4"	1 1/2"	2"
A	10-1/2	10-13/16	14-3/8	15-1/8	15-3/4
В	8	8	11	11	11
C	4-1/8	5-1/4	6	6-5/8	7-5/8
D	5	5	5-3/4	5-7/8	6-1/4
E	13-1/2	15-1/8	18-5/8	20-3/4	22-1/8
	3-1/4	3-1/4	4-3/4	4-3/4	4-3/4
G	5-1/8	5-1/8	7-1/8	7-1/8	7-1/8
Test Cocks	1/8 x 1/4NPT	1/8 x 1/4NPT	1/4 x 1/4NPT	1/4 X 1/4NPT	1/4 x 1/4NP
Net Wt. (with Ball Valves)	14.7	15.6	37-1/2	39-3/8	43-3/4
Shipping Wt. (with Ball Valves)	15.7	16.6	40	41-3/8	45-1/4









SPECIFICATIONS

GENERAL SPECIFICATIONS

The backflow preventer shall be a Reduced Pressure Principle and shall include a tightly closing resilient-seated gate valve on each end of the body. The assembly shall be fitted with four (4) properly located resilient-seated test cocks.

The assembly shall have two (2) independent and internally loaded check valves and a pressure differential relief valve located between the check valves.

The backflow preventer shall be suitable for **supply** pressure up to 175 psi and water temperatures from 33 to 140° F.

DESCRIPTION

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

OPERATION

During normal flow conditions, the two check valves are held off their seats, supplying water downstream. The relief valve is held shut by supply pressure acting through the internal sensing passage, on the relief valve diaphragm. In the area between the check valves, called the zone, the pressure is maintained at approximately 7 PSI lower than supply pressure. Should a backpressure/backsiphonage 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.

Reduced Pressure Principle

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



- Maximum Protection against Backpressure/ Backsiphonage
- Removal Bronze Seats
- Replaceable Discs
- Internal Sensing Passage
- Designed For Easy Maintenance
- Low Head Loss
- Economical
- Corrosion Resistant
- Maximum Working Pressure 175 PSI
- Operating Temperature Range 33-140° F

APPROVALS

The Series 40-200 is approved under the following standards: USC's FCCC & HR Manual, Sec. 10, ASSE .1013, AWWA C-511, IAPMO, CSA B64.4, UL Classified and FM.

UL, FM approved backflow preventers must include OS&Y gate valves.



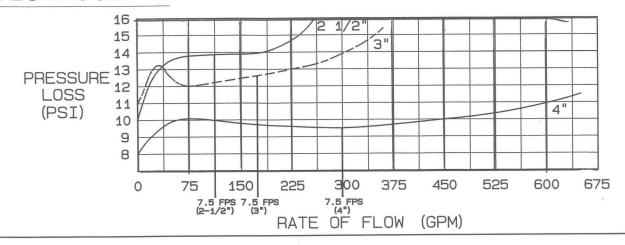






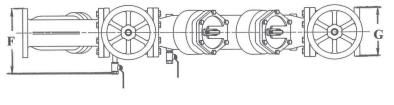


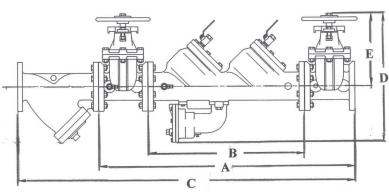
FLOW CURVES



DIMENSIONS (in.) - WEIGHTS (lbs.)

Size	2 1/2"	3"	4"
A*	37 5/16	38 5/16	46 3/4
B* (flanged-end body)	22 1/16	22 1/16	28 1/2
C*	47 15/16	49 15/16	61 3/4
D (NRS)	20 7/8	21 7/8	25 3/16
D(OS&Y Open)	25 7/8	28 3/8	33 3/16
E (NRS)	11 3/8	12 3/8	14 3/4
E (OS&Y Open)	16 3/8	18 7/8	22 3/4
F	9 5/8	10 3/8	11 7/8
G	7 .	7 1/2	9
Test Cocks (NPT)	1/2	1/2	1/2
Net Wt. (Less Valves)	120	122	196
Net Wt. (w/ OS&Y shut-off valves)	229	259	402





^{*} Nominal dimensions are shown. Allowances must be made for manufacturers' tolerances.

MATERIALS

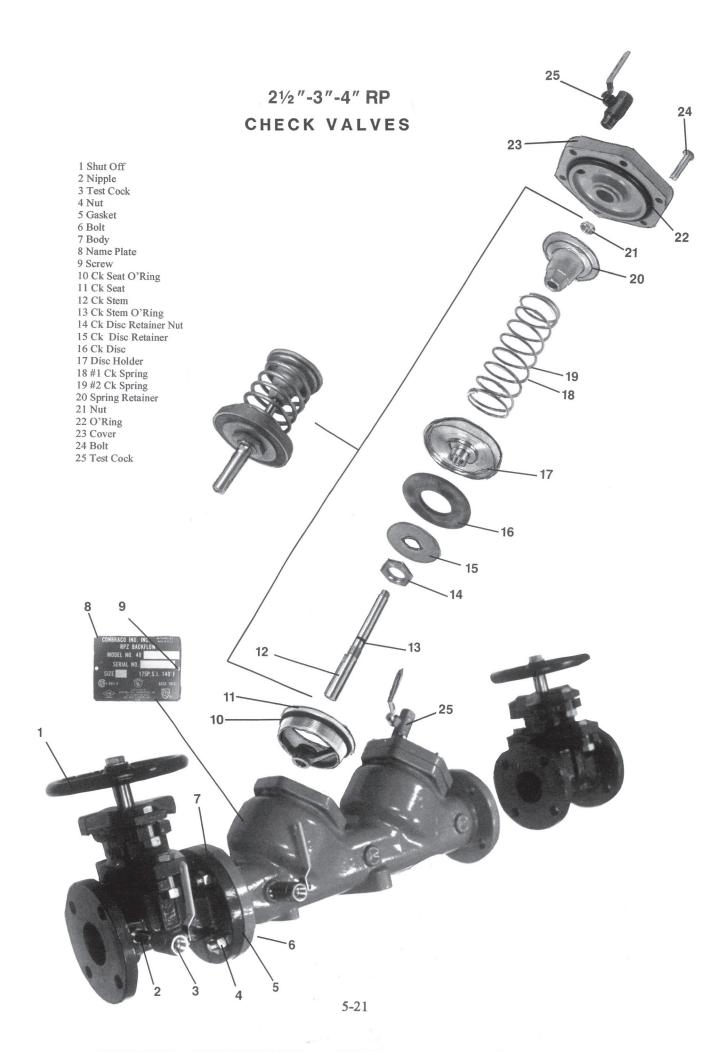
ORDERING NUMBERS

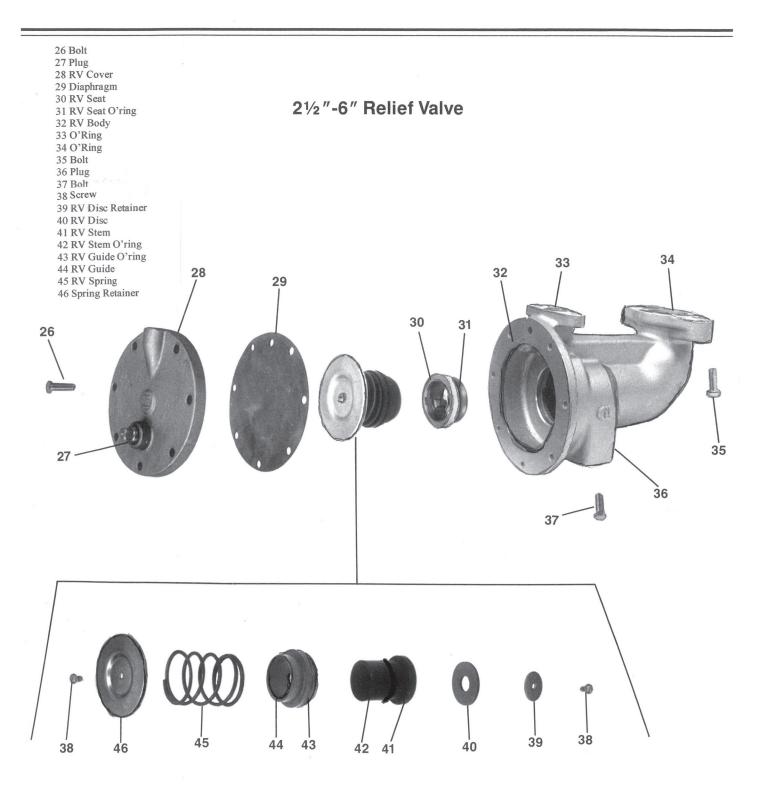
1. Body	Epoxy Coated (FDA Approved)	
	Ductile Iron	2
2. Springs	Stainless Steel	
3. Seats	Bronze	
4. C.V. Discs	EPDM	
5. R.V. Disc	Silicone	
6. R.V. Diaphragm	Buna N and Nylon	
7. R.V. Body	Bronze	
8. Fasteners	Stainless Steel	

2-1/2" - 40-209 **SUFFIX NUMBERS**

3"-40-200 -01 less gate valves

3" – 40-20A –02 with NRS gate valves –03 with OS&Y gate valves

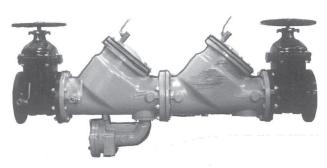




SERIES 40-200

Reduced Pressure Principle

Sizes 6" - 8" - 10"



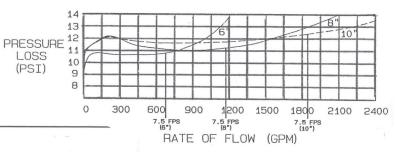
APPROVALS

The Series 40-200 is approved under the following standards: USC's FCCC & HR Manual, Sec. 10, ASSE 1013, AWWA C-511, IAPMO, CSA B64.4, UL Classified and FM.

UL, FM approved backflow preventers must include OS&Y gate valves.

FEATURES

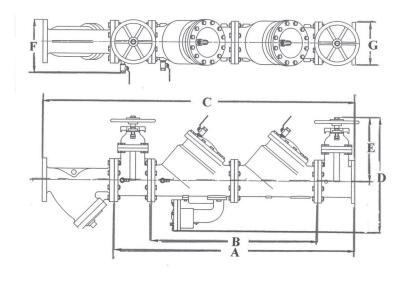
- Maximum Protection against Backpressure/ Backsiphonage
- Removal Bronze Seats
- Replaceable Discs
- Internal Sensing Passage
- Designed For Easy Maintenance
- Low Head Loss
- Economical
- Corrosion Resistant
- Maximum Working Pressure 175 PSI
- Operating Temperature Range 33-140° F



^{*} Nominal dimensions are shown. Allowances must be made for manufacturers' tolerances.

DIMENSIONS (in.) - WEIGHTS (lbs.)

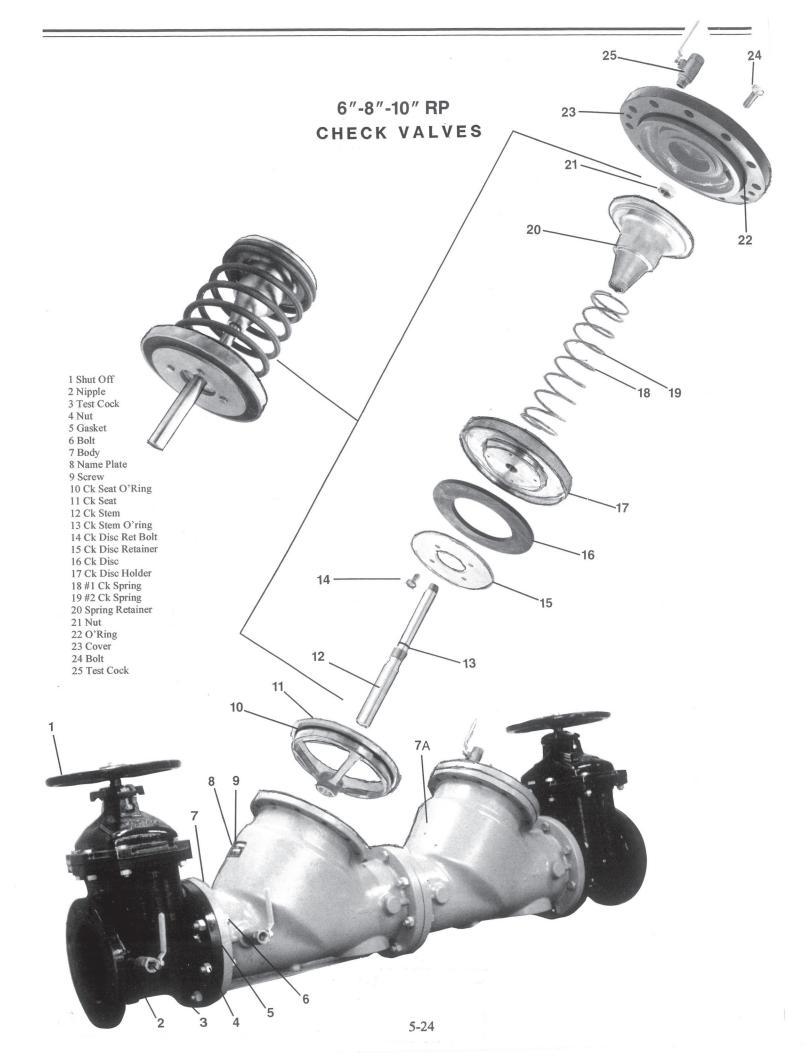
Size	6°	8"	10"
A*	63 3/8	75 3/8	88 3/8
B* (flanged-end body)	42 1/8	52 1/8	62 1/8
C*	84 1/2	96 7/8	114 5/8
D (NRS)	30 1/2	38 1/2	44
D(OS&Y Open)	41 5/8	53 3/4	63 1/4
E (NRS)	19	22 1/2	26 1/2
E (OS&Y Open)	30 1/8	37 3/4	45 3/4
F	14 5/8	16 3/4	19 1/4
G	11	13 1/2	16
Test Cocks (NPT)	3/4	3/4	3/4
Net Wt. (Less Valves)	430	715	1443
Net Wt. (w/ OS&Y shut-off valves)	754	1210	2286

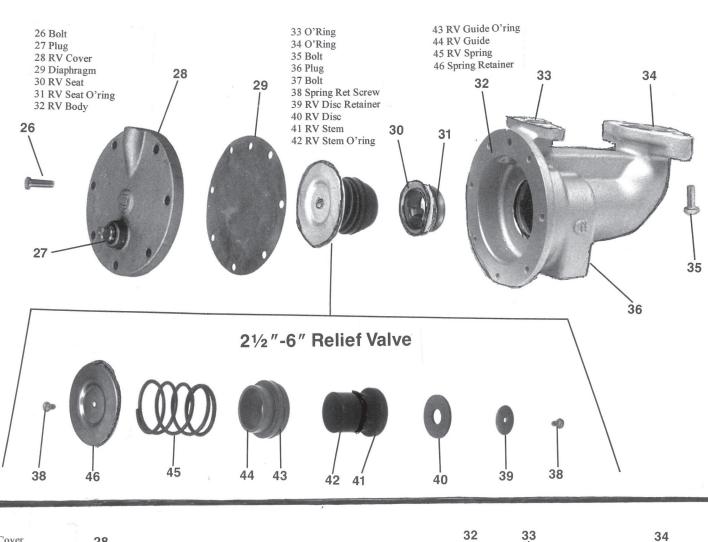


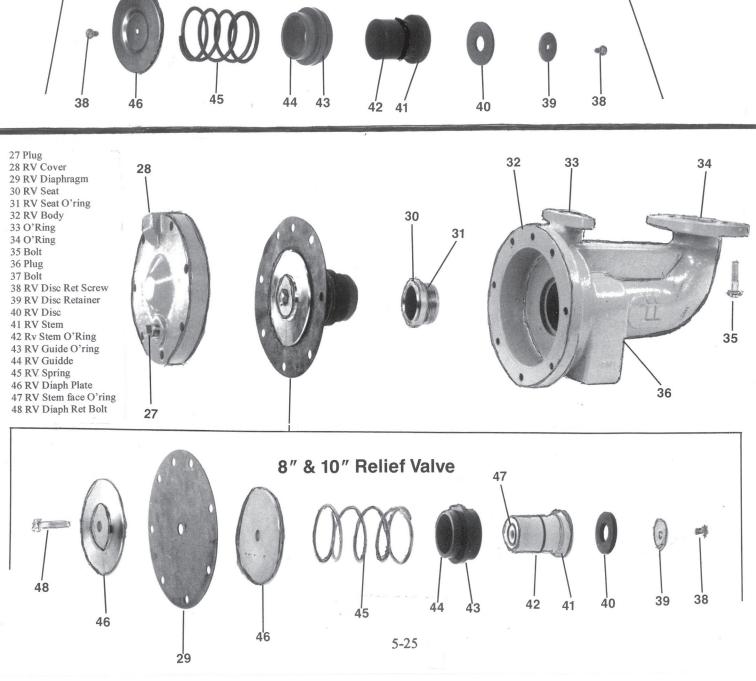
MATERIALS

ORDERING NUMBERS

1. Body	Epoxy Coated (FDA Approved	(b	
	Ductile Iron	6"-40-20C	SUFFIX NUMBERS
2. Springs	Stainless Steel	8"- 40-20E	-01 less gate valves
3. Seats	Bronze	10"-40-20G	–02 with NRS gate valves
4. C.V. Discs	EPDM		-03 with OS&Y gate valves
5. R.V. Disc	Silicone		
6. R.V. Diaphragm	Buna N and Nylon		
7. R.V. Body	Bronze – For 6" only		
8. R.V. Body	Epoxy Coated (FDA Approved	d) Ductile Iron	– For 8" & 10" only
9. Fasteners	Stainless Steel 5-23		









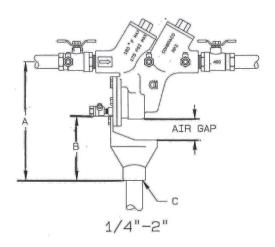


DESCRIPTION

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.

DIMENSIONS(in.)-WEIGHTS(lbs.)

R.P.	AGD				
SIZE	MODEL NO.	A	В	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



AIR GAP DRAIN



