

February 26, 2014

**NOTICE OF APPROVED BACKFLOW
PREVENTION ASSEMBLIES FOR SOUTH CAROLINA**

Enclosed is the revised list of approved backflow prevention assemblies and a list of backflow equipment representatives.

The following should be considered before selecting a particular assembly:

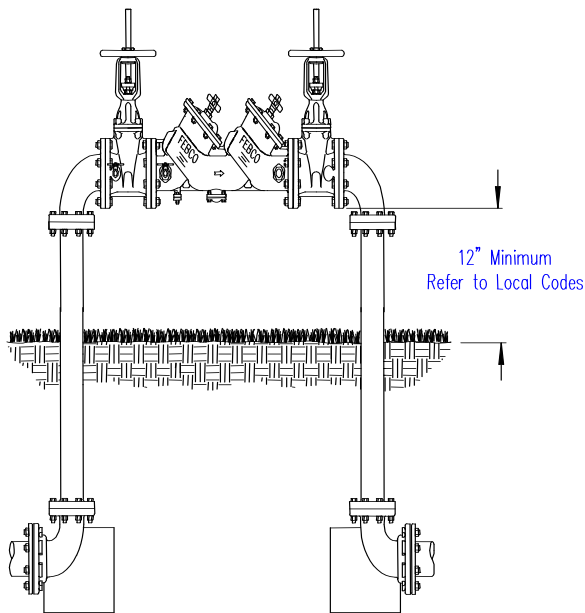
1. All local plumbing laws and regulations must be adhered to.
2. Manufacturer's installation instructions shall be strictly adhered to.
3. Reduced pressure principle assemblies shall be installed so that the relief port will never become submerged. This prohibits installation in a pit that cannot be drained by gravity to the surface of the ground. Also, RPPA are not acceptable for the vertical orientation unless approved by the University of Southern California's Foundation for Cross Connection Control & Hydraulic Research.
4. The operating performance of these assemblies varies among manufacturers; therefore, it suggested that local water authorities be contacted to assist in selecting an assembly which is best suited for that particular system.
5. The South Carolina Department of Health and Environmental Control reserves the right to add or to remove from the approved list any reduced pressure principle assembly, pressure vacuum breaker, or double check valve assembly.
6. It is a requirement that backflow prevention assemblies be tested immediately after installation and at least once a year thereafter. If a serious defect is discovered at the time of the first (immediate inspection after installation) inspection or after any subsequent inspections, it is requested that the Department of Health and Environmental Control be notified so prompt action can be taken to review the approved status of the assembly.
7. By-pass piping is not permitted unless the by-pass piping is equipped with an approved backflow prevention assembly similar to the main line assembly. In many instances it will be desirable, or necessary to install two approved backflow prevention assemblies in order that water service will not be interrupted during the testing or repair of the assembly.
8. Some manufacturers market, as non-standard equipment, assemblies capable of withstanding elevated temperatures. The high temperature assemblies should be ordered from the manufacturer to include documentation certifying their ability to withstand high temperatures.
9. Any reduced pressure principle assembly, pressure vacuum breaker, or double check

valve assembly on this list of approved assemblies must be equipped with either resilient seated ball valves or resilient wedged gate valves. Butterfly valves are acceptable on backflow assemblies as long they are approved by the University of Southern California's Foundation for Cross Connection Control & Hydraulic Research.

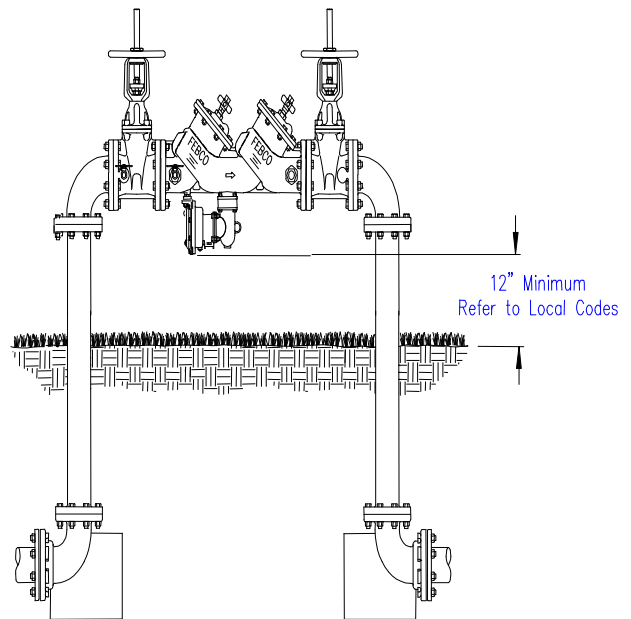
10. If a manufacturer markets a prefabricate "manifold" series it will be approved as long as both of the assemblies in the manifold are from the approved list.

11. If a manufacturer markets a double detector check valve assembly or a reduced pressure principle detector assembly it will be approved as long as both assemblies are from the approved list. Both assemblies (main line assembly and by-pass assembly) must be assembled by the manufacturer and shipped as a complete assembly. Any alterations of this assembly in the field must meet manufacturer's specifications and/or the USCFC&HR.

All assemblies on this approval list must be equipped with resilient seated ball valves or resilient wedged gate valves. Butterfly valves are acceptable on backflow assemblies as long as they are approved by (USCFCCC&HR).



Double Check Assembly
Outdoor Installation –OS&Y Gates



Reduced Pressure Assembly
Outdoor Installation –OS&Y Gates

LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES

DOUBLE CHECK VALVE ASSEMBLIES

DCVA's are approved for use when protecting the potable water system from backflow when a low degree of hazard is involved. A low degree of hazard is one which may cause an actual or potential threat to the physical properties of the water system or the potability of the public or consumer's potable water system. However, a low degree of hazard would not constitute a health or system hazard. The maximum degree or intensity of pollution to which the potable water system could be degraded under this definition would cause a nuisance or be aesthetically objectionable.

<u>COMPANY</u>	<u>MODEL</u>	<u>SIZE</u>
Ames	2000B	½", ¾", 1", 1¼", 1½", 2"
	2000 (Epoxy)	4", 6", 8", 10"
	2000SS	¾", 1", 1¼", 1½", 2", 2½", 3", 4", 6", 8", 10", 12"
	2000SE	2½", 6", 8"
	2001SS	3", 4", 6", 8"
	2001SSN	3", 4", 6", 8"
	2001SSZ	3", 4", 6", 8"
	Colt200	2½", 3", 4", 6", 8", 10"
	Colt200A	2½", 3", 4", 6", 8", 10"
	Colt200N	2½", 3", 4", 6", 8", 10"
	Colt200Z	2½", 3", 4", 6", 8", 10"
	Maxim200	2½", 3", 4", 6", 8"
	Maxim200A	2½", 3", 4", 6", 8"
	Maxim200N	2½", 3", 4", 6", 8"
	Maxim200Z	2½", 3", 4", 6", 8"
	Beeco-Hersey	#2
FDC		¾", 1", 1½", 2"
HDC		¾", 1", 1½", 2"
Buckner	24100 thru 24104	¾", 1", 1¼", 1½", 2"
Cash Acme	DC 100	¾", 1", 1 ½", 2"
	DC 500	¾", 1"
Cla-Val	D2	¾", 1", 1¼", 1½"
	D4	2", 2½", 3", 4", 6", 8", 10"
	DC6LB	¾", 1", 1½", 2"
	DC6LW	¾", 1", 1½", 2"
	DC7LW	2½", 3", 4", 6", 8", 10"

DOUBLE CHECK VALVE ASSEMBLIES CONTINUED:

<u>COMPANY</u>	<u>MODEL</u>	<u>SIZE</u>
Cla-Val	DC7LY	2½", 3", 4", 6", 8", 10"
	DC8LW	2½", 3", 4", 6", 8", 10"
	DC8LY	4", 6", 8"
	DC8NW	2½", 3", 4", 6", 8", 10"
	DC8NY	2½", 3", 4", 6", 8"
	DC8VW	2½", 3", 4", 6"
	DC8VY	2½", 3", 4", 6"
	Conbraco/Apollo	4S
40-100 Series		½", ¾", 1", 1¼", 1½", 2", 2½", 3", 4", 6", 8", 10"
40-104 A2T thru		
40-108 A2T		¾", 1", 1¼", 1½", 2"
4S-100 Series		2½", 3", 4", 6", 8", 10"
4SG-100		2½", 3", 4", 6", 8"
DC4A		½", ¾", 1", 1¼", 1½", 2", 2½", 3", 4", 6", 8"
DCLF4A		½", ¾", 1", 1¼", 1½", 2", 2½", 3", 4", 6", 8"
DC4AN		2½", 3", 4", 6", 8"
DCLF4AN		2½", 3", 4", 6", 8"
Febco		805
	805Y	¾", 1", 1½", 2", 2½", 3", 4", 6", 8", 10"
	805YB & YR	¾", 1"
	805YD	2½", 3", 4", 6", 8", 10"
	850	¾", 1", 1½", 2", 2½", 3", 4", 6", 8"
	LF850	½", ¾", 1", 1¼", 1½", 2", 2½", 3", 4", 6", 8", 10"
	LF850U	½", ¾", 1", 1¼", 1½", 2"
	870	2½", 3", 4", 6", 8", 10"
	870V	2½", 3", 4", 6", 8", 10"
	LF870V	2½", 3", 4", 6", 8"
	830	4", 6", 8"
	830H	4", 6"
	Flomatic	DCV
DCVE		¾", 1", 1½", 2"

DOUBLE CHECK VALVE ASSEMBLIES CONTINUED:

<u>COMPANY</u>	<u>MODEL</u>	<u>SIZE</u>	
Watts	709QT	3/4", 1", 1 1/2", 2", 2 1/2", 3", 4", 6", 8", 10"	
	709	2 1/2", 3", 4", 6", 8", 10"	
	719QT	3/4", 1", 1 1/4", 1 1/2", 2"	
	007	1/2", 3/4", 1", 1 1/4", 1 1/2", 2", 3"	
	007M1&M2QT	3/4", 1", 1 1/4", 1 1/2", 2"	
	007M3QT	3/4"	
	770	4", 6", 8"	
	772	4", 6", 8", 10"	
	774	3/4", 1", 1 1/4", 1 1/2", 2", 2 1/2", 3", 4", 6", 8", 10"	
	774X	2 1/2", 6", 8"	
	Wilkins	775QT	1/2", 3/4", 1", 1 1/4", 1 1/2", 2"
		775	3", 4", 6", 8"
		N775	3", 4", 6", 8"
		757A	2 1/2", 3", 4", 6", 8", 10"
757N		2 1/2", 3", 4", 6", 8", 10"	
767A		2 1/2", 3", 4", 6", 8"	
767N		2 1/2", 3", 4"	
350		3/4", 1", 1 1/4", 1 1/2", 2", 2 1/2", 3", 4", 6", 8", 10", 12"	
350A		2 1/2", 3", 4", 6", 8", 10"	
350AR & ARXL		2 1/2", 3", 4", 6", 8", 10"	
350AST		2 1/2", 3", 4", 6", 8", 10"	
350 ASTR		2 1/2", 3", 4", 6"	
350XL		3/4", 1", 1 1/4", 1 1/2", 2", 2 1/2", 3", 4", 6", 8", 10", 12"	
350AXL		2 1/2", 3", 4", 6", 8", 10"	
450 & XL		2 1/2", 3", 4", 6", 8", 10"	
950		3/4", 1", 1 1/4", 1 1/2", 2", 2 1/2", 3", 4", 6", 8", 10"	
950A		3/4", 1", 1 1/4", 1 1/2", 2"	
950XLT		3/4", 1", 1 1/4", 1 1/2", 2"	
950XLTU		3/4", 1"	
950XL		3/4", 1", 1 1/4", 1 1/2", 2"	
950XLD		3/4", 2"	
950XLU		3/4", 1", 1 1/2", 2"	
950XLTDA & XLTDABF		2"	
950XLT2		3/4", 1", 1 1/2", 2"	
950XLT2U	3/4"		

The following assemblies are Double DETECTOR Check Valve Assemblies and Reduced

Pressure Principle DETECTOR Assemblies. These assemblies are made up from DCVA's and RPPA's which are approved elsewhere on this list. These assemblies are designed for FIRE LINE use. If a Double Detector Check Valve Assembly or Reduced Pressure Principle Detector Assembly is prescribed, it should be done with an understanding that its meter will have to be read periodically in order to be of any value. Don't forget that when the annual testing is done, both of these assemblies are required to be tested (mainline dcva and by-pass dcva). Lastly, both assemblies (main line assembly and by-pass assembly) must be assembled by the manufacturer and shipped as a complete assembly. Any alterations of this assembly in the field must meet manufacturer's specifications and/or the USCFCCC&HR.

DOUBLE DETECTOR CHECK VALVE ASSEMBLIES ARE:

AMES - 3000SS, 3000SE, (3001SS & 3001SSN & 3001SSZ 3"-8"), (Colt300 2½"-10") (Colt300A 2½"-10"), (Colt300N 2½"-10"), (Maxim300 2½"-8"), (Maxim300N 2½"-8")
BEECO-HERSEY - DDCII
CLAVAL - DD7LY, DD8LY, DD8NY
CONBRACO/APOLLO - 40-600, 40-60A, 40-60C, 40-60E, 40-60G, (4SG-600 2½"-8"), DA4S 10", (4A-600 2½"-8"), (4AN-600 2½"-8")
FEBCO - 806YD, 856, (856ST 2½"-10"), 876, 876V, (876VST 2½"-8"), (831 4"-8"), (831H 4"-6")
WATTS - 007DCDA, 709DCDA, 770DCDA, 772DCDA, 774DCDA, and 774XDCDA, (775DCDA & N775DCDA 2½"-10"), (757DCDA 2½"-10") (757NDCDA 2½"-10"), (767NDCDA 2½"-4")
WILKINS – (950DA 2½"-10"), (350DA 2½"-12"), (350ADA & 350ADAR 2 ½"-10"), (350ASTDA 2 ½"-10"), (450DA 4"-10")

REDUCED PRESSURE PRINCIPLE DETECTOR ASSEMBLIES ARE:

AMES- 5000SS, (5001SS & 5001SSN & 5001SSZ 3"-6"), (Colt500 2½"-10") (Colt500A 2½"-10"), (Colt500N 2½"-10"), (Maxim500 2½"-8") (Maxim500A 2½"-8"), (Maxim500N 2½"-8")
BEECO-HERSEY- 6CMDA
CLAVAL- RD7LY
CONBRACO/APOLLO- 40-700, 40-70A, 40-70C, 40-70E, 40-70G, (4A-700 2½"-8), (4AN-700 2½"-8")
FEBCO- 826YD
WATTS- 009RPDA, 909RPDA, 990RPDA, 992RPDA, (957RPDA 2½"-10"), (957NRPDA 2½"-10"), (967NRPDA 2½"-3")
WILKINS- (975DA 2½"-10"), (375DA 2½"-10"), (375ADA & 375ADAR 2 ½"-10"), (375ASTDA 2 ½"-4), (475DA 4"-8"), (475DAV 4"-8")

LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES

REDUCED PRESSURE PRINCIPLE ASSEMBLIES

Approved for use to protect the potable water system from backflow when there is an actual or potential health hazard. The terms "health hazard" shall mean an actual or potential threat of contamination or pollution of a physical or toxic nature to the public potable water system or the consumer's potable water system to such a degree of intensity that there would be a danger to health.

<u>COMPANY</u>	<u>MODEL</u>	<u>SIZE</u>	
Ames	4000B	½", ¾", 1", 1¼", 1½", 2"	
	4000-RP	4", 6", 8", 10"	
	4000SS	¾", 1", 1¼", 1½", 2", 2½", 3", 4", 6", 8", 10"	
	4001SS	3", 4", 6"	
	4001SSN	3", 4", 6"	
	4001SSZ	3", 4", 6"	
	Colt400	2½", 3", 4", 6", 8", 10"	
	Colt400N	2½", 3", 4", 6", 8", 10"	
	Colt400Z	2½", 3", 4", 6", 8", 10"	
	Maxim400	2½", 3", 4", 6", 8", 10"	
	Maxim400N	2½", 3", 4", 6", 8"	
	Maxim 400Z	2½", 3", 4", 6", 8"	
	Beeco-Hersey	6CM	2½", 3", 4", 6", 8", 10"
		6CM-Bronze	2½", 3", 4", 6", 8"
FRP-II		¾", 1", 1¼", 1½", 2"	
Buckner	24000 thru 24004	¾", 1", 1¼", 1½", 2"	
Cash Acme	RP 100	¾", 1", 1½", 2"	
	RP 200	½", ¾"	
	RP 500	¾", 1"	
Cla-Val	RP-2	¾", 1", 1¼", 1½"	
	RP-4	2", 2½", 3", 4", 6", 8", 10"	
	RP-4V	4"	
	RP6LW	¾", 1", 1¼", 1½", 2"	
	RP6VW	¾", 1", 1½", 2"	
	RP7LW	2½", 3", 4", 6", 8", 10"	
	RP7LY	2½", 3", 4", 6", 8", 10"	
	RP8LW	2½", 3", 4", 6", 8", 10"	
	RP8LY	2½", 3", 4", 6", 8"	

REDUCED PRESSURE PRINCIPLE ASSEMBLIES CONTINUED:

<u>COMPANY</u>	<u>MODEL</u>	<u>SIZE</u>
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Cla-Val	RP8NW	2½", 3", 4", 6", 8", 10"
	RP8NY	2½", 3", 4", 6", 8"
	RP8VW	2½", 3", 4", 6", 8", 10"
	RP8VY	2½", 3", 4", 6"
Conbraco/Apollo	40-200 Series	¼", ⅜", ½", ¾", 1", 1¼", 1½", 2", 2½", 3", 4", 6", 8", 10"
	Stainless {40-204-A2S	¾"
	Steel {40-205-A2S	1"
	RP4A	½", ¾", 1", 1¼", 1½", 2", 2½", 3", 4", 6", 8"
	RPLF4A	½", ¾", 1", 1¼", 1½", 2", 2½", 3", 4", 6", 8"
	RP4AN	2½", 3", 4", 6", 8"
	RPLF4AN	2½", 3", 4", 6", 8"
Febco	825	2½", 3", 4", 6", 8", 10"
	825D	2½", 3", 4", 6", 8", 10"
	825Y	¾", 1", 1¼", 1½", 2", 2½"
	LF825Y	¾", 1", 1½", 2"
	825YD	2½", 3", 4", 6", 10"
	825YA & YR	¾", 1", 1½", 2"
	LF825YA	¾", 1", 1½", 2"
	835B	¾", 1", 1½", 2"
	860	¾", 1", 1½", 2", 2½", 3", 4", 6", 8"
	LF860	½", ¾", 1", 1¼", 1½", 2", 2½", 3", 4", 6", 8", 10"
	LF860U	½", ¾", 1", 1¼", 1½", 2"
	880	2½", 3", 4", 6", 8", 10"
	880V	2½", 3", 4", 6", 8", 10"
	LF880V	2½", 3", 4", 6", 8"
Flomatic	RPZ	¾", 1", 1½", 2", 2½", 3", 4", 6", 8"
	RPZII	½", ¾"
	RPZE	¾", 1", 1½", 2"
Watts	909	2½", 3", 4", 6", 8", 10"
	909QT	¾", 1", 1¼", 1½", 2"
	919QT	½", ¾", 1", 1¼", 1½", 2"
	009	2½", 3", 4", 6"
	009QT	¼", ⅜", ½", ¾", 1", 1¼", 1½", 2"
	009M1 & M2QT	¾", 1", 1¼", 1½", 2"
	009M3QT	¾"

REDUCED PRESSURE PRINCIPLE ASSEMBLIES CONTINUED:

<u>COMPANY</u>	<u>MODEL</u>	<u>SIZE</u>
Watts	990	4", 6", 8"

	992	4", 6", 8", 10"
	994	¾", 1", 1½", 2", 2½", 3", 4", 6", 8", 10"
	995	¾", 1", 1¼", 1½"
	957	2½", 3", 4", 6", 8", 10"
	957N	2½", 3", 4", 6", 8", 10"
	957Z	2½", 3", 4", 6", 8", 10"
	967	2½", 3", 4", 6", 8"
Wilkins	375	¾", 1", 1¼", 1½", 2", 2½", 3", 4", 6", 8", 10"
	375XL	½", ¾", 1", 1¼", 1½", 2", 2½", 3", 4", 6", 8", 10"
	375XLB	¾", 1", 1½", 2"
	375A, AR, AXL, & ARXL	2½", 3", 4", 6", 8", 10"
	375AST	2½", 3", 4", 6", 8", 10"
	375ASTR	2½", 3", 4", 6"
	375ST	½", ¾", 1"
	375MS & XLMS	2½", 3", 4", 6", 8", 10"
	475	2½", 3", 4", 6", 8", 10"
	475XL, XLV, XLMS	2½", 3", 4", 6", 8", 10"
	475V, VMS, MS, & XLVMS	2½", 3", 4", 6", 8", 10"
	575	¾", 1", 1¼", 1½", 2", 2½", 3", 4", 6", 8", 10"
	975	¾", 1", 1¼", 1½", 2", 2½", 3", 4", 6", 8", 10"
	975A	¾", 1", 1¼", 1½", 2"
	975XLST	3/8", ½"
	975XL	¼", 3/8", ½", ¾", 1", 1¼", 1½", 2", 2½", 3", 4", 6", 8", 10"
	975XL2	¼", 3/8", ¾", 1", 1¼", 1½", 2"
	975XL2V	¾", 1"
	975XL2MS & XL2BMS	¾", 1", 1¼", 1½", 2"
	975XL2TCU & XL2U	½", ¾", 1", 1¼", 1½", 2"
	975XL2SE & XL2SEU	¾", 1", 1½", 2"
	975XLD	¾"
	975XLV	¾", 1"
	975XLU	¾", 1", 1½", 2"
	975XLSE & XLSEU	¾", 1", 1¼", 1½", 2"
	975XLTCU & XLBMS	½", ¾", 1", 1¼", 1½", 2"
	975MS & BMS	2½", 3", 4", 6", 8", 10"
	975XLMS	¾", 1", 1¼", 1½", 2"

SCDHEC

LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES

PRESSURE VACUUM BREAKERS

PVB's are approved for use when protecting the potable water system from backsiphonage only when a health hazard or non-health hazard is involved. The term "health hazard" shall mean an actual or potential threat of contamination or pollution of a physical or toxic nature to the potable water system or the consumer's potable water system to such a degree of intensity that there would be a danger to health. It is very important to understand that the PVB is **not** designed for backpressure. Also, the PVB must be installed 12" above any downstream plumbing.

<u>COMPANY</u>	<u>MODEL</u>	<u>SIZE</u>
Ames	A200	1/2", 3/4", 1", 2"
Buckner	24199 thru 24204	1/2", 3/4", 1", 1 1/4", 1 1/2", 2"
	24199/25 thru 24204/25	1/2", 3/4", 1", 1 1/4", 1 1/2", 2"
Conbraco/Apollo	40-503-02 thru 40-508-02	1/2", 3/4", 1", 1 1/4", 1 1/2", 2"
	PVB4V	1/2", 3/4", 1", 1 1/4", 1 1/2", 2"
	PVB4A	1/2", 3/4", 1", 1 1/4", 1 1/2", 2"
Febco	765	1/2", 3/4", 1", 1 1/4", 1 1/2", 2"
	745	3/4", 1"
	LF767FR	1/2", 3/4", 1", 1 1/4", 1 1/2", 2"
Flomatic	PVB	3/4", 1"
Rain Bird	PVB-075-R thru 200-R	3/4", 1", 1 1/4", 1 1/2", 2"
Watts	800QT	3/4", 1", 1 1/4", 1 1/2", 2"
	800MQT	1/2", 3/4"
	800CMQT	1/2", 3/4"
	800M2QT	1/2", 3/4", 1", 1 1/4", 1 1/2", 2"
	800M3QT	1/2", 3/4"
	800M4FR	1/2", 3/4", 1", 1 1/4", 1 1/2", 2"
800M4QT	1/2", 3/4", 1", 1 1/4", 1 1/2", 2"	
Wilkins	720A	1/2", 3/4", 1", 1 1/4", 1 1/2", 2"
	420	1/2", 3/4", 1"
	420XL	1/2", 3/4"
	460	3/8", 1/2", 3/4", 1"
	460XL	3/8", 1/2", 3/4", 1"

BACKFLOW EQUIPMENT REPRESENTATIVES

Conbraco / Apollo
Mr. Larry Castleberry / Mr. Joey Smith
Pro Marketing, Inc
110 Corporate Dr / Suite L

Febco
Mr. M. C. Sorrell / Mr. Bob Buddo
Lewis Marketing
1511 Ameron Drive

Spartanburg SC 29303
864-578-4334 / 864-415-8696

Charlotte, NC 28206
704-376-0262

TMS

Mr. Rick Wade / Mr. Donnie Johnson
3540 Rutherford Rd
Taylors SC 29687
864-268-2891
800-476-2212

Watts & Ames

Mr. Joel Golmont / Mr. Mike Davis
Smith & Stevenson
P. O. Box 240009
Charlotte, NC 28224
800-225-9895 / 704-525-3388

BAVCO

Mr. Jim Purzycki
20435 South Susana Rd
Long Beach, CA 90810
800-458-3492
310-639-5231

Wilkins

Mr. Craig Birchfield
Quality Marketing
3500-C Woodpark Blvd
Charlotte, NC 28206
704-599-9407

Beeco - Hersey

Mr. Tod Little
Mueller Company
1437 Heins Rd
Blythewood SC 29016
803-691-9431

Flomatic

Mr. Josh Amon / Mr. John Amon
Preferred Sources
930 Culp Road
Pineville NC 28134
704-504-3111

American Backflow Products

Mr. Mark Inman
7580-A West Tennessee Street
Tallahassee, FL 32303
800-575-9618 / 850-576-1814

Cash-Acme / Flomatic

Mr. Dan Hunt / Mr. Allen Scott
3401 Woodpark Blvd Suite B
Charlotte NC 28206
704-921-8422

If you should have any questions concerning this list or need any assistance concerning backflow prevention or cross connection control, please call or write:

Mr. John Watkins, Cross Connection Control Program Coordinator
SCDHEC / Bureau of Water
2600 Bull Street
Columbia, SC 29201
803-898-3567 phone
803-898-3795 fax

SCDHEC backflow web page: www.scdhec.net/environment/water/dwbflow.htm