

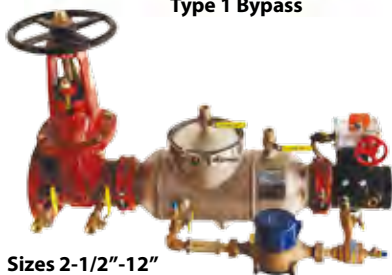
# BACKFLOW PREVENTION CATALOG

## Double Check Detector Backflow Preventers

### DCDALF 4A SERIES



Type 1 Bypass



Sizes 2-1/2"-12"



TriForce™ Check

### DCDALF 4A DOUBLE CHECK DETECTOR ASSEMBLY

The Apollo® MODEL DCDALF 4A Double Check Detector Assembly is designed to prevent contamination of the potable water supply due to back-siphonage or backpressure from substances that are objectionable, but non-health hazards. The TriForce™ center stem guided check valves feature replaceable and reversible silicone seat discs. The by-pass assembly serves to measure accurate water use of up to 2 GPM. Available in a wide variety of shut-off options.

The Type 2 bypass uses the first check of the mainline assembly as the first check of the bypass. The second check of the bypass is a single check valve with a model number and serial number for test recording. This arrangement complies with the National Backflow Standards. The arrangement provides the same level of protection as the standard Type 1 bypass and the testing procedure is the same.

#### FEATURES

- Domestic Stainless steel body: 2-1/2"-8"
- FDA epoxy coated ductile iron body: 10" & 12"
- Easy maintenance - no special tools required
- Drop-in check retainers: 2-1/2"-6"
- Bolted-in checks: 8"-12"
- Low pressure loss as documented by an independent laboratory
- Center stem guided TriForce™ check valves
- Approved for horizontal and vertical up flow\*
- Chloramine-resistant elastomers
- **Lead-Free** standard
- ASSE 1048 (with meter)
- UL, ULC Classified
- FM approved
- CSA B64.5
- Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California (DCDALF 4A 2-1/2" - 8")
- Maximum working pressure 175 psi
- Temperature range 33°F - 140°F, 180°F intermittent
- US Patent Nos. 6,443,184; 7,025,085; 7,533,699
- Made in the USA
- 5 year, domestic warranty
- Optional mounting of bypass on either side for ease of installation

#### MATERIALS

Part	Material
Body (2-1/2"-8")	304 Stainless Steel
Body (10 & 12")	FDA Epoxy Coated Ductile Iron
Covers (2-1/2"-6")	Glass Filled PPO/SS
Covers (8")	304 Stainless Steel
Covers(10 & 12")	FDA Epoxy Coated Ductile Iron
Check Valves	Bronze/Glass-filled PPO/SS
Springs	Stainless Steel
Seat Discs	Chloramine-resistant Silicone

#### FACTORY CODE

4ALF	6 X	X	X	[X]
	BY-PASS SUB-ASSEMBLY OPTIONS	SIZE	METER OPTION	SHUT-OFF VALVES (Inlet X Outlet)
4ALF = Lead Free	0 = Type 1 w/ 1/2" Double Check 2 = Type 2 w/ 1/2" Single Check 3 = Type 1 w/ bypass on left* 4 = Type 2 w/ bypass on left*	9 = 2-1/2" 0 = 3" A = 4" C = 6" E = 8" G = 10" H = 12"	C = Cubic feet/min E = Gallons/min G = Less meter	1 = Less Shut-off Valves 3 = OS&Y Flg x OS&Y Flg 4 = OS&Y Flg x Monitored (Mon.) Butterfly Vlv Grv† 6 = OS&Y Flg x Post indicator Flg** 7 = OS&Y Flg x OS&Y Grv 8 = OS&Y Grv x OS&Y Grv 9 = Mon. Butterfly Vlv Grv x Mon. Butterfly Vlv Grv† 10 = OS&Y Flg x Post Indicator Grv** 13 = Post Indicator Flg x Mon. Butterfly Vlv Grv† 14 = Post Indicator Flg x Post Indicator Flg 16 = Mon Butterfly Vlv Grv x Post Indicator Flg† 17 = Post Indicator Flg x OS&Y Grv 18 = OS&Y Grv x Post Indicator Grv 19 = Mon. Butterfly Vlv Grv x Post Indicator Grv 20 = Post Indicator Flg x OS&Y Flg

Example:  
**4ALF 60A E3** = 4" size Lead Free Double Check Detector Assembly with OS&Y flanged inlet x OS&Y flanged outlet shut-off valves w/ meter in gallons.

\* Orientation of bypass looking downstream. Standard is right hand side. Left hand is on opposite side

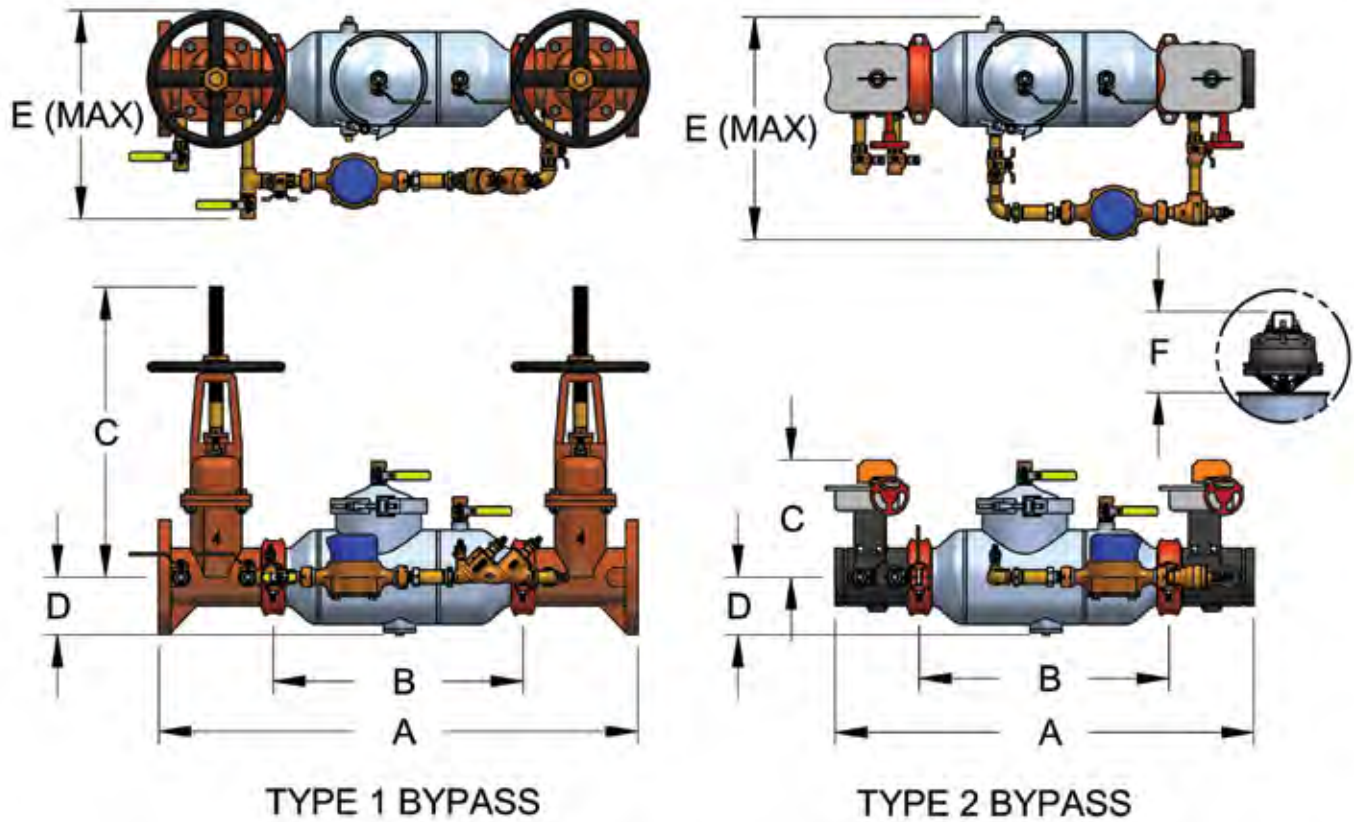
\*\* Post indicator with plate & nut option not available in 2-1/2" size.

† Butterfly valves not available in 12" size.

# BACKFLOW PREVENTION CATALOG

## Double Check Detector Backflow Preventers

### DCDALF 4A SERIES



TYPE 1 BYPASS

TYPE 2 BYPASS

### DIMENSIONS

Nominal dimensions are shown. Allowances must be made for manufacturers' tolerances ( $\pm 1/8"$  (3 mm) per joint)

See Page 59 For Flow Curves

DIMENSIONS	2-1/2"	60mm	3"	75mm	4"	100mm	6"	150mm	8"	200mm	10"	250mm	12"	300mm
A (Butterfly Valves)	28 ±	711 ±	28-1/2 ±	724 ±	33-1/4 ±	845 ±	38-7/8 ±	987 ±	46-3/8 ±	1178 ±	52-1/4 ±	1378 ±	N/A	N/A
A (Gate Valves)	31 ±	787 ±	32 ±	813 ±	38 ±	965 ±	45-7/8 ±	1165 ±	53-3/8 ±	1356 ±	62-1/4 ±	1581 ±	65-1/2 ±	1664 ±
B (Less Shut-off Valves)	15-7/8 ±	403 ±	15-7/8 ±	403 ±	19-5/8 ±	498 ±	24-1/2 ±	622 ±	30 ±	762 ±	36 ±	914 ±	37 ±	940 ±
C (Butterfly Valves)	8	203	8-3/8	213	9-1/8	233	10-1/8	257	12	306	13-3/8	340	N/A	N/A
C (NRS/PI Gate Valves)	11-3/8	289	12-3/8	314	14-3/4	375	19	483	22-1/2	572	26-1/2	673	30	762
C (OS&Y Open)	16-3/8	416	18-7/8	479	22-3/4	578	30-1/8	765	37-3/4	959	45-3/4	1162	53-1/8	1348
D (Centerline to bottom)	3-7/8	98	3-7/8	98	4-5/8	117	6	152	8-1/8	206	11-3/4	298	12	305
E (Width Max)	17	432	17	432	17	432	20	508	21-1/2	546	26-1/2	673	26-1/2	673
F (Check Removal Clearance)	4-3/4	121	4-3/4	121	6-1/2	165	7-1/2	191	7-1/2	191	10	254	10	254
Test Cocks (NPT)	1/2"	13	1/2"	13	1/2"	20	3/4"	20	3/4"	20	3/4"	20	3/4"	20
<b>WEIGHTS</b>	<b>lb.</b>	<b>kg</b>	<b>lb.</b>	<b>kg</b>	<b>lb.</b>	<b>kg</b>	<b>lb.</b>	<b>kg</b>	<b>lb.</b>	<b>kg</b>	<b>lb.</b>	<b>kg</b>	<b>lb.</b>	<b>kg</b>
Net Wt. (Less Shut-offs)	37	17	38	17	54	25	90	41	223	101	722	327	825	374
Net Wt. (w/ Butterfly Valves)	64	29	68	31	98	45	158	72	354	161	940	426	N/A	N/A
Net Wt. (w/ OS&Y Gate Valves)	133	60	159	72	209	95	339	154	700	318	1608	729	2017	915

Notes:

1. Internal body connections are grooved on 2-1/2" to 10" sizes.
2. Internal body connections are flanged on 12" size.



For additional information, submittal sheets and manuals, visit [www.apollovalves.com](http://www.apollovalves.com)

Customer Service (704) 841-6000

# BACKFLOW PREVENTION CATALOG

## Double Check Detector Backflow Preventers

### DCDALF 4An SERIES



Sizes 2-1/2"-12"



Optional Valve Setter (see pg 50)

### n STYLE DOUBLE CHECK DETECTOR ASSEMBLY

The Apollo® MODEL DCLF 4An Double Check Valves are designed to prevent contamination of the potable water supply due to back-siphonage or backpressure from substances that are objectionable, but non-health hazards. The TriForce™ center stem guided check valves feature replaceable and reversible silicone seat discs. The by-pass assembly serves to measure water use of up to 2 GPM. The normally vertical up/vertical down oriented body incorporates an internal swivel connection providing the ability to pivot the second check. The grooved connections on the bodies from 2-1/2" to 10" allow for easy connection to butterfly or gate shut-off valves. The 12" DCDA 4An has flanged connections for gate shut-off valves.

The Type 2 bypass uses the first check of the mainline assembly as the first check of the bypass. The second check of the bypass is a single check valve with a model number and serial number for test recording. This arrangement complies with the National Backflow Standards. The arrangement provides the same level of protection as the standard Type 1 bypass and the testing procedure is the same.

#### FEATURES

- Domestic Stainless steel body: 2-1/2"-8"
- FDA epoxy coated ductile iron body: 10" & 12"
- Easy maintenance - no special tools required
- Drop-in check retainers: 2-1/2"-6"
- Bolted-in checks: 8"-12"
- Low pressure loss as documented by an independent laboratory
- Center stem guided TriForce™ check valves
- 5 year, domestic warranty
- Small installation space required - small footprint
- Chloramine-resistant elastomers
- **Lead-Free** standard
- ASSE 1048 (with meter)
- UL, ULC Classified
- CSA B64.5
- Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California (DCDALF 4AN 2-1/2" - 8")
- FM approved
- Maximum working pressure 175 psi
- Temperature range 33°F - 140°F, 180°F intermittent
- Optional valve setters eliminate need for thrust blocks below grade
- US Patent Nos. 6,443,184; 7,025,085; 7,533,699
- Made in the USA
- Optional mounting of bypass on either side for ease of installation

#### MATERIALS

Part	Material
Body (2-1/2"-8")	304 Stainless Steel
Body (10 & 12")	FDA Epoxy Coated Ductile Iron
Covers (2-1/2"-6")	Glass Filled PPO/SS
Covers (8")	304 Stainless Steel
Covers(10 & 12")	FDA Epoxy Coated Ductile Iron
Relief Valve	Bronze C84400/LF C89836
Check Valves	Bronze/Glass-filled PPO/SS
Springs	Stainless Steel
Seat Discs	Chloramine-resistant Silicone

#### FACTORY CODE

4AnLF	6 X	X	X [X]	
	BY-PASS SUB-ASSEMBLY OPTIONS	SIZE	METER OPTION	SHUT-OFF VALVES (Inlet X Outlet)
4AnLF = Lead Free	0= Type 1 w/ 1/2" Double Check 2= Type 2 w/1/2" Single Check 3= Type 1 w/ bypass on left* 4= Type 2 w/ bypass on left*	9= 2-1/2" 0= 3" A= 4" C= 6" E= 8" G= 10" H= 12"	C= Cubic feet/min E= Gallons/min G= Less meter	1 = Less Shut-off Valves 3 = OS&Y Flg x OS&Y Flg 4 = OS&Y Flg x Monitored (Mon.) Butterfly Vlv Grv <sup>†</sup> 6 = OS&Y Flg x Post indicator Flg** 7 = OS&Y Flg x OS&Y Grv 8 = OS&Y Grv x OS&Y Grv 9 = Mon. Butterfly Vlv Grv x Mon. Butterfly Vlv Grv <sup>†</sup> 10 = OS&Y Flg x Post Indicator Grv** 13 = Post Indicator Flg x Mon. Butterfly Vlv Grv <sup>†</sup> 14 = Post Indicator Flg x Post Indicator Flg 16 = Mon Butterfly Vlv Grv x Post Indicator Flg <sup>†</sup> 17 = Post Indicator Flg x OS&Y Grv 18 = OS&Y Grv x Post Indicator Grv 19 = Mon. Butterfly Vlv Grv x Post Indicator Grv 20 = Post Indicator Flg x OS&Y Flg

Example:  
**4AnLF 62A E7** = 4" size Lead Free Double Check Detector Assembly with OS&Y flanged inlet x OS&Y grooved outlet shut-off valves with Type 2 bypass w/ meter in GPM

\* Orientation of bypass looking downstream. Standard is right hand side. Left hand is on opposite side

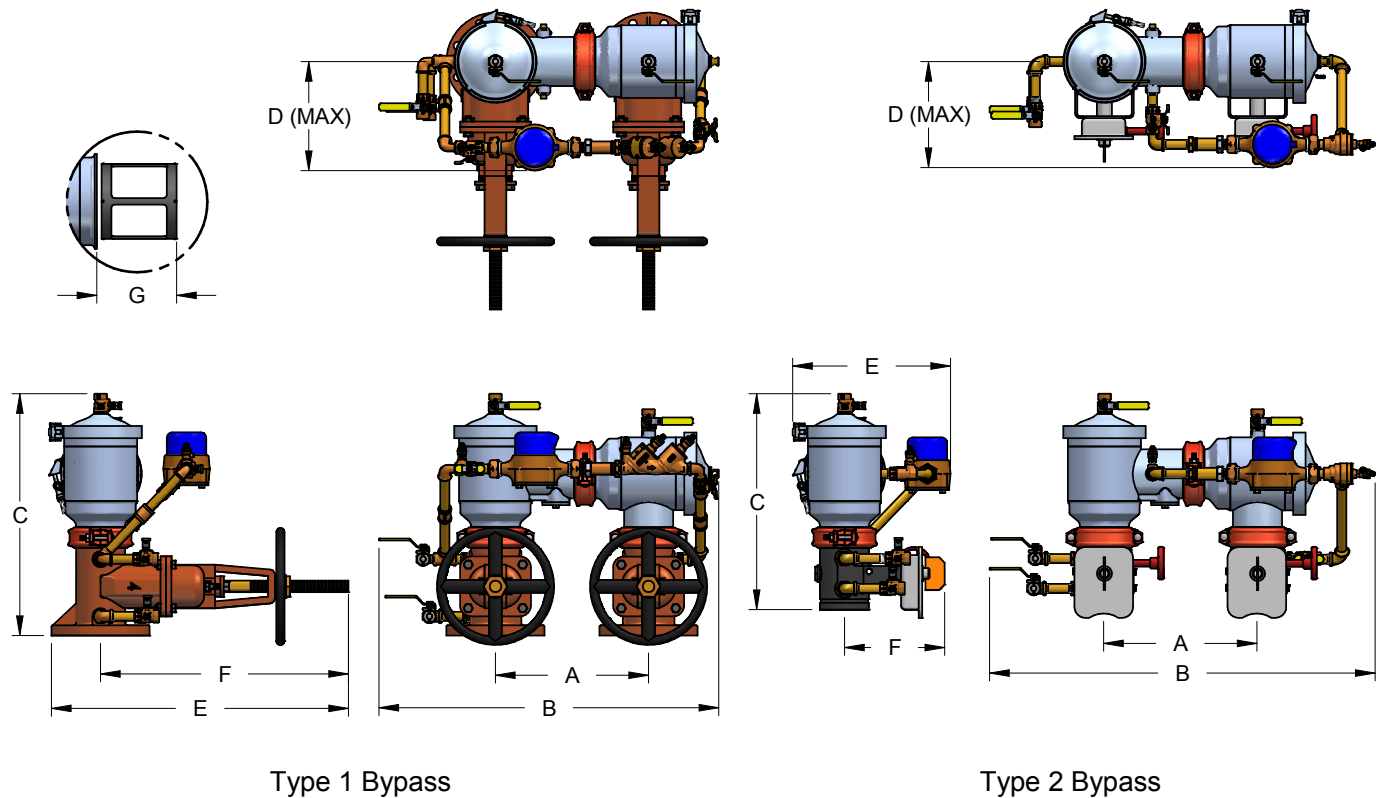
\*\* Post indicator with plate & nut option not available in 2-1/2" size.

† Butterfly valves not available in 12" size.

# BACKFLOW PREVENTION CATALOG

## Double Check Detector Backflow Preventers

### DCDALF 4An SERIES



Type 1 Bypass

Type 2 Bypass

## DIMENSIONS

Nominal dimensions are shown. Allowances must be made for manufacturers' tolerances ( $\pm 1/8"$  (3 mm) per joint)

See Page 60 For Flow Curves

DIMENSIONS	2-1/2"	60mm	3"	75mm	4"	100mm	6"	150mm	8"	200mm	10"	250mm	12"	300mm
A (Centerline to Centerline)	12-1/2 $\pm$	318 $\pm$	12.5 $\pm$	318 $\pm$	14 $\pm$	356 $\pm$	16 $\pm$	406 $\pm$	18-1/2 $\pm$	470 $\pm$	21 $\pm$	533 $\pm$	26-3/4 $\pm$	679 $\pm$
B (Butterfly Valves)	32-3/4 $\pm$	832 $\pm$	32-3/4 $\pm$	832 $\pm$	35-1/4 $\pm$	895 $\pm$	40 $\pm$	1016 $\pm$	44 $\pm$	1118 $\pm$	54 $\pm$	1372 $\pm$	N/A	N/A
B (Gate Valves)	31 $\pm$	787 $\pm$	31 $\pm$	787 $\pm$	31-3/4 $\pm$	806 $\pm$	36-1/4 $\pm$	921 $\pm$	41-1/2 $\pm$	1054 $\pm$	49 $\pm$	1245 $\pm$	55-3/4 $\pm$	1416 $\pm$
C (Butterfly Valves)	18-1/4	464	18-1/2	470	20	508	24-3/4	629	28-1/2	724	35	889	N/A	N/A
C (Gate Valves)	19-5/8	498	20	508	22-1/2	572	27-3/4	705	32-1/8	816	40	1016	44	1118
D (Centerline to max bypass)	10	254	10	254	10-1/8	257	11-1/4	286	12-1/2	318	14-3/8	365	15-1/4	387
E (Butterfly Valves)	11-1/2	292	12-1/8	308	12-7/8	327	15-7/8	403	22-1/4	565	23-1/8	591	N/A	N/A
E (OS&Y Open)	19-7/8	505	24-1/4	616	27-1/4	692	32-3/4	832	44-1/2	1130	54	1372	62-3/4	1594
E (NRS/PI)	14-7/8	378	16-1/8	410	19-1/4	489	24-1/2	622	29-1/4	743	36-3/8	924	40	1016
F (Check Removal Clearance)	6	152	6	152	6	152	8	203	8-1/2	206	12	305	12	305
Test Cocks (NPT)	1/2"	13	1/2"	13	1/2"	13	3/4"	20	3/4"	20	3/4"	20	3/4"	20
<b>WEIGHTS</b>	<b>lb.</b>	<b>kg</b>	<b>lb.</b>	<b>kg</b>	<b>lb.</b>	<b>kg</b>	<b>lb.</b>	<b>kg</b>	<b>lb.</b>	<b>kg</b>	<b>lb.</b>	<b>kg</b>	<b>lb.</b>	<b>kg</b>
Net Wt. (Less Shut-offs)	45	20	45	20	54	25	89	40	320	145	805	365	930	422
Net Wt. (w/ Butterfly Valves)	72	33	75	34	99	45	157	71	451	205	983	446	N/A	N/A
Net Wt. (w/ OS&Y Gate Valves)	141	64	166	75	209	95	338	153	797	362	1473	668	2121	962

### Notes:

1. Internal body connections are grooved on 2-1/2" to 10" sizes.
2. Internal body connections are flanged on 12" size.



For additional information, submittal sheets and manuals, visit [www.apollovalves.com](http://www.apollovalves.com)

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# BACKFLOW PREVENTION CATALOG

## Double Check Detector Backflow Preventers

### DCDA 4SG SERIES



Sizes 2-1/2", 3", 4", 6", 8", 10"

### DCDA 4SG SERIES DOUBLE CHECK DETECTOR ASSEMBLY

The Apollo® DCDA 4SG Series Double Check Detector Assembly is designed to prevent contamination of the potable water supply due to back-siphonage or backpressure from substances that are non-health hazards. The device consists of a mainline double check valve with resilient seated shut-off valves. The by-pass serves to measure water use of up to 3 gpm. Grooved connections on an epoxy-coated ductile iron body allow for easy connection to butterfly valves or gate valves.

#### FEATURES

- Lightweight
- Short lay length
- Low pressure loss
- Modular check valves
- Individual access to check valves
- Reversible/replaceable seat discs
- Approved for vertical and horizontal installations
- **Lead-Free** option (2-1/2" - 6" only)
- Gate valves epoxy coated (FDA)
- Corrosion resistant FDA epoxy-coated ductile iron body
- UL Classified
- FM approved
- Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California (2-1/2" - 10" Non Lead Free Only)
- ASSE 1048 (with meter)
- CSA
- US Patents #5,711,341 and #6,343,618

#### MATERIALS

Part	Material
Body (mainline)	Epoxy-coated (FDA) Ductile Iron
Bypass DC	Bronze (C84400, LF C89836)
Covers (2-1/2" - 6")	Epoxy-coated (FDA) Steel
Covers (8")	Epoxy-coated (FDA) Ductile Iron
Check Valves (2-1/2" - 6")	Glass-Filled PPO
Check Valves (8")	Bronze (C84400, LF C89836)
Springs	Stainless Steel
Seat Discs	Chloramine-Resistant EPDM
Test Cock Handles	Stainless Steel

#### FACTORY CODE

4SG [X]	60 X	X	[X]	X
	SIZE	METER OPTION	SHUT-OFF VALVES (Inlet x Outlet)	FLOW (OPTIONAL)
4SG = Standard	9 = 2-1/2"	C = Cubic feet/min	1 = Less Shut-off Valves (grooved-end body)	N = n Flow
4SGLF = Lead Free (2-1/2"-6" only)	0 = 3"	E = Gallons/min	3 = OS&Y Flg x OS&Y Flg	
4S = 10"	A = 4"	G = Less meter	4 = OS&Y Flg x Monitored Butterfly Valve Grv	
	C = 6"		6 = OS&Y Flg x Flg Post Indicator**	
	E = 8"		7 = OS&Y Flg x OS&Y Grv	
	G = 10"#		8 = OS&Y Grv x OS&Y Grv	
			9 = Mon. Butterfly Vlv Grv x Mon. Butterfly Vlv Grv	
			10 = OS&Y Flg x Grv Post Indicator**	

\*\*Post indicator option not available in 2-1/2" size  
# 10" body is flanged internal connections only (Model 4S)

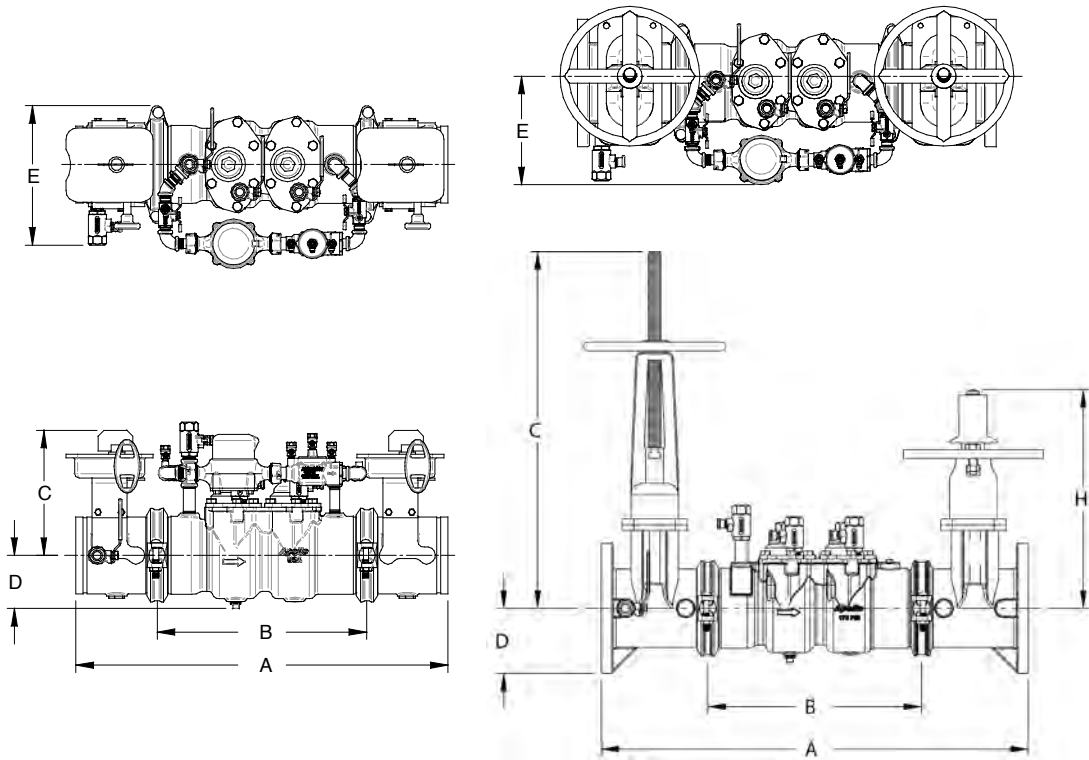
Example:

**4SG 60A E7** = 4" size Double Check Detector Assembly with meter in gpm and OS&Y flanged inlet x OS&Y grooved outlet shut-off valves

# BACKFLOW PREVENTION CATALOG

## Double Check Detector Backflow Preventers

### DCDA 4SG SERIES



### DIMENSIONS

See Page 58 For Flow Curves

Model No. Factory No. Size	DC4SG212 4SG-109 2 1/2"	DC4SG212 4SG-109 65 mm.	DC4SG3 4SG-100 3"	DC4SG3 4SG-100 80 mm.	DC4SG4 4SG-10A 4"	DC4SG4 4SG-10A 100 mm.	DC4SG6 4SG-10C 6"	DC4SG6 4SG-10C 150 mm.	DC4SG8 4SG-10E 8"	DC4SG8 4SG-10E 200 mm.	DC4S10 4S-10G 10"	DC4S10 4S-10G 250 mm.
A (Butterfly Valves)*	29	737	29-1/2	749	29-3/4	756	32-1/2	815	43	1092	N/A	N/A
A (Gate Valves)*	32	813	33	838	34-1/2	876	39	991	50-1/4	1276	55-3/4	1416
B (Grooved End Body)	17	432	17	432	16-1/2	419	18	457	27	686	29-1/2	750
C (Butterfly Valves)	8	200	8-1/2	216	9-1/4	235	10-1/4	260	12	300	N/A	N/A
C (OS&Y Open)	16-3/8	416	18-7/8	479	22-3/4	578	30-1/8	765	37-3/4	959	46	1168
D (Butterfly Valves)	4-1/2	114	4-1/2	114	4-1/2	114	4-1/2	114	6-1/2	165	N/A	N/A
D (Gate Valves)	3-1/2	89	3-3/4	95	4-1/2	114	5-1/2	140	6-3/4	171	8.0	203
E	9	229	9	229	9	229	9	229	10-3/4	273	13.0	330
H (Post Indicator Valve)	14.75	375	14.80	376	14.80	376	18.75	476	24.42	595	11-1/2	292
Test Cocks (NPT)	1/2	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	3/4
<b>WEIGHTS</b>	<b>lbs.</b>	<b>kg.</b>	<b>lbs.</b>	<b>kg.</b>	<b>lbs.</b>	<b>kg.</b>	<b>lbs.</b>	<b>kg.</b>	<b>lbs.</b>	<b>kg.</b>	<b>lbs.</b>	<b>kg.</b>
Net Wt. (Less Valves)	65	29	65	29	65	29	72	33	395	179	490	222
Net Wt. (w./Butterfly Valves)	92	42	95	42	109	49	140	64	526	239	N/A	N/A
Net Wt. (w./OS&Y Valves)	161	73	186	84	220	100	321	146	872	397	1340	607

\*Nominal dimensions are shown. Allowances must be made for manufacturers' tolerances.