

DCDALF4A/DCDA2LF4A Series

Double Check Detector Assembly

LEAD FREE



| | |
|-----------------|--|
| Job Name: | |
| Job Location: | |
| Engineer: | |
| Contractor: | |
| Tag: | |
| PO#: | |
| Rep: | |
| Wholesale Dist: | |

DESCRIPTION

The 2-1/2" - 12" Double Check Detector Assembly shall be an Apollo Model DCDALF 4A or DCDA2LF 4A. The assembly shall be manufactured in America and carry a 5-year Apollo factory warranty. The TriForce™ center-stem guided check valves shall feature reversible silicone rubber seat discs. The check valves shall be held in place by SS snap-in retainers (2-1/2" - 6") or SS studs & nuts (8" - 12"). Access to the check valves shall be by an Apollo quick-connect SS coupling (2-1/2" - 6") or grooved couplings (8" - 12"). The bodies shall be domestic SS in 2-1/2" - 8" sizes and FDA epoxy-coated ductile iron in 10" & 12" sizes. The assembly consists of a mainline double check valve with a Type 2 bypass (Type 1 optional) consisting of a lead free* single check (SCV) and meter bypassing the mainline second check to prevent backflow while accurately measuring all flows up to 2 gpm while the mainline 2nd check remains closed. Assemblies with the optional Type 1 bypass consist of a lead free* double check valve and meter which bypass both mainline checks and accurately meter all flows up to 2 gpm with the mainline checks closed. The Apollo lead free* ball valve test cocks shall have SS handles. The pressure drop across the assembly shall be documented by an independent laboratory. The assembly shall prevent contamination of the potable water supply due to back-siphonage or backpressure from substances that are non-health hazards.

FEATURES

- Domestic Stainless steel body: 2-1/2" - 8"
- FDA Epoxy-Coated Ductile Iron Body: 10" & 12"
- Easy Maintenance - No Special Tools Required
- Snap-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 (2-1/2"-12") and Vertical Flow Up (2-1/2" - 8")
- US Patent Nos. 6,443,184; 7,025,085; 7,533,699
- Made in the USA (D option)

PERFORMANCE RATING

- Maximum Working Pressure: 175 psi
- Temperature Range: 33° F - 140° F
- Hydrostatic Test Pressure: 350 psi

APPROVALS

- ASSE 1048*, CSA B64.5, FM, UL*, cUL*
- NSF/ANSI 61 - Water Quality
- NSF/ANSI 372 - Lead Free
- Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California (2-1/2" - 8" Type 1 & Type 2)

**ASSE, UL, and cUL installations must include indicating-type shut-off valves*

STANDARD MATERIALS LIST

| | |
|------------------------------------|--|
| BODY (2-1/2" - 8") | 304 Stainless Steel |
| BODY (10" & 12") | FDA Epoxy Coated Ductile Iron |
| COVERS (2-1/2" - 6") | Glass-Filled PPO/Stainless Steel |
| COVERS (8") | 304 Stainless Steel |
| COVERS (10" & 12") | FDA Epoxy Coated Ductile Iron |
| CHECK VALVES (2-1/2" - 12") | Glass-filled PPO/Bronze (C89836 Lead-Free*)/SS |
| BYPASS | Lead Free Bronze C89836 |
| SPRINGS | Stainless Steel |
| SEAT DISCS | Chloramine-Resistant Silicone |
| TEST COCKS | Lead Free Bronze C89836 w/ SS Handles |

PART NUMBER MATRIX

| 4ALF | 6 X | X | X | XX | X |
|------------------|---------------------------------------|------------|------------------|---|---|
| | BYPASS SUB-ASSEMBLY OPTIONS | SIZE | METER OPTION | SHUT-OFF VALVES (INLET x OUTLET) | OPTIONS |
| 4ALF - LEAD FREE | 0 - TYPE 1 W/ 1/2" DOUBLE CHECK | 9 - 2-1/2" | C - CUBIC FT/MIN | 01 - LESS SHUT-OFF VALVES | D - DOMESTIC ASSEMBLY |
| | 2 - TYPE 2 W/ 1/2" SINGLE CHECK (STD) | 0 - 3" | E - GALLONS/MIN | 03 - OS&Y FLANGE X OS&Y FLANGE | |
| | 3 - TYPE 1 W/ BYPASS ON LEFT* | A - 4" | G - LESS METER | 04 - OS&Y FLANGE X MONITORED (MON.) BUTTERFLY VALVE GROOVE ¹ | R1 - RETROFIT* |
| | 4 - TYPE 2 W/ BYPASS ON LEFT* | C - 6" | | 06 - OS&Y FLANGE X POST INDICATOR FLANGE | R2 - RETROFIT* |
| | | E - 8" | | 07 - OS&Y FLANGE X OS&Y GROOVE | R3 - RETROFIT* |
| | | G - 10" | | 08 - OS&Y GROOVE X OS&Y GROOVE | |
| | | H - 12" | | 09 - MON. BUTTERFLY VALVE GROOVE X MON. BUTTERFLY VALVE GROOVE ¹ | |
| | | | | 10 - OS&Y FLANGE X POST INDICATOR GROOVE | *CUSTOM LENGTH RETROFIT |
| | | | | 13 - POST INDICATOR FLANGE X MON. BUTTERFLY VALVE GROOVE ¹ | ORDERS MUST BE ACCOMPANIED WITH SIGNED FROM #OFBRETRO WITH EXACT LENGTH REQUIRED. |
| | | | | 14 - POST INDICATOR FLANGE X POST INDICATOR FLANGE | |
| | | | | 16 - MON BUTTERFLY VALVE GROOVE X POST INDICATOR FLANGE ¹ | |
| | | | | 17 - POST INDICATOR FLANGE X OS&Y GROOVE | |
| | | | | 18 - OS&Y GROOVE X POST INDICATOR GROOVE | |
| | | | | 19 - MON. BUTTERFLY VALVE GROOVE X POST INDICATOR GROOVE | |
| | | | | 20 - POST INDICATOR FLANGE X OS&Y FLANGE | |
| | | | | 21 - POST INDICATOR GROOVE X OS&Y GROOVE | |
| | | | | 22 - POST INDICATOR GROOVE X MON. BUTTERFLY VALVE GROOVE ¹ | |
| | | | | 23 - MON. BUTTERFLY VALVE GROOVE X OS&Y FLANGE | |

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.

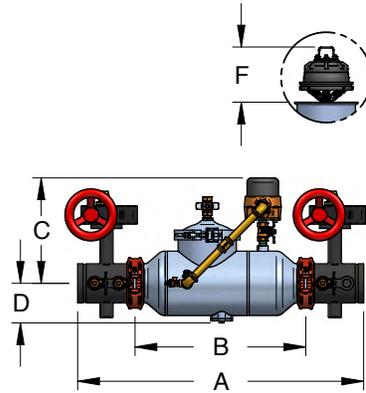
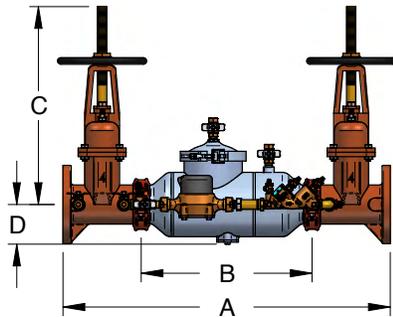
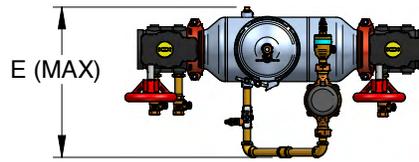
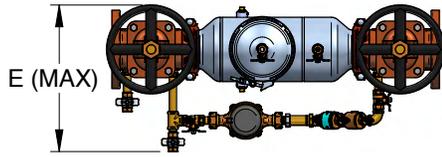
*Orientation of bypass looking downstream. Standard is right hand side. Left hand is on opposite side

¹Butterfly valves not available in 12" size.

*LEAD FREE: The wetted surfaces of this product shall contain no more than 0.25% lead by weighted average. Complies with Federal Public Law 111-380. ANSI 3rd party approved and listed.

DCDALF4A/DCDA2LF4A Series

Double Check Detector Assembly
LEAD FREE



**INTERNAL COMPONENT
REMOVAL SPACE
REQUIREMENTS**

TYPE 1 BYPASS
4" DCDALF4A W/ OS&Y GATES SHOWN

TYPE 2 BYPASS
4" DCDA2LF4A W/ BUTTERFLY VALVES SHOWN

DIMENSIONS

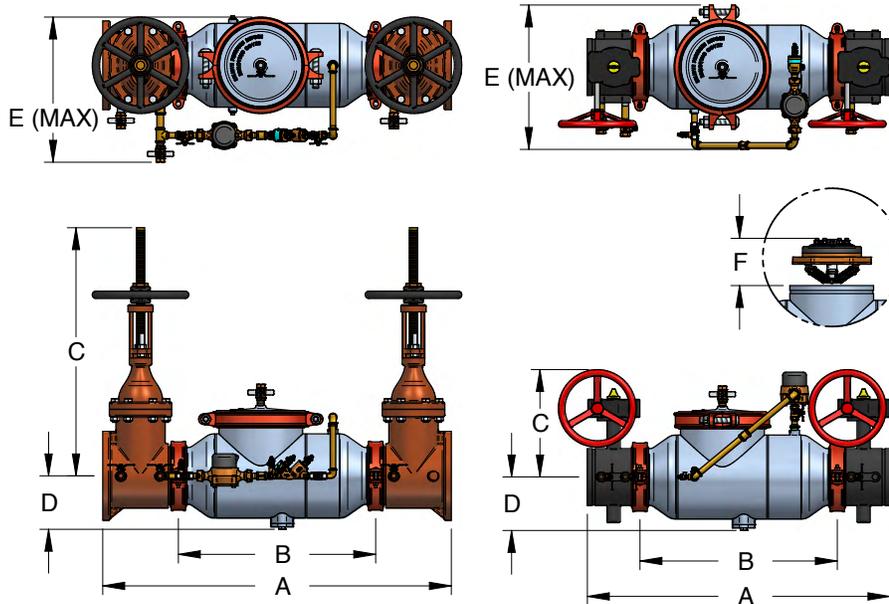
2-1/2" - 6" TYPE 1 & TYPE 2 BYPASS

| SIZE | 2-1/2" | 65 MM | 3" | 80MM | 4" | 100MM | 6" | 150MM |
|---|------------|-----------|------------|-----------|------------|-----------|------------|-----------|
| A (Butterfly Valves) | 28 | 711 | 28.5 | 724 | 33 | 838 | 38.5 | 978 |
| A (Gate Valves) | 31 | 787 | 32 | 813 | 37.6 | 955 | 45.5 | 1156 |
| B (Less Shut-off Valves) | 16 | 406 | 16 | 406 | 19.8 | 503 | 24.5 | 622 |
| C (Butterfly Valves - Type 1) | 8.6 | 218 | 9.6 | 244 | 10.9 | 277 | 13 | 330 |
| C (Butterfly Valves - Type 2) | 13.3 | 338 | 13.3 | 338 | 12.1 | 307 | 13.8 | 351 |
| C (NRS/PI Gate Valves - Type 1) | 11.8 | 300 | 13 | 330 | 14 | 356 | 17.8 | 452 |
| C (NRS/PI Gate Valves - Type 2) | 13.3 | 338 | 13.3 | 338 | 14 | 356 | 17.8 | 452 |
| C (OS&Y Open) | 16.4 | 417 | 20.5 | 521 | 22.8 | 579 | 27.3 | 693 |
| D (Centerline to Bottom) | 3.9 | 99 | 3.9 | 99 | 4.6 | 117 | 5.9 | 150 |
| E (Max w/Gate or Butterfly Valves - Type 1) | 15.5 | 394 | 15.5 | 394 | 16.6 | 422 | 19.4 | 493 |
| E (Max w/Gate or Butterfly Valves - Type 2) | 14.1 | 358 | 14.1 | 358 | 17.4 | 442 | 18.4 | 467 |
| F (Check Removal Clearance) | 4.8 | 122 | 4.8 | 122 | 6.5 | 165 | 7.5 | 191 |
| Test Cocks (NPT) | 1/2" | 15 | 1/2" | 15 | 1/2" | 15 | 3/4" | 20 |
| WEIGHTS | LB. | KG | LB. | KG | LB. | KG | LB. | KG |
| Net Wt. (Less Valves) | 22 | 10 | 23 | 10 | 39 | 18 | 75 | 34 |
| Net Wt. (w/ Butterfly Valves)** | 96 | 44 | 102 | 46 | 128 | 58 | 189 | 86 |
| Net Wt. (w/ NRS Gate Valves)** | 94 | 43 | 109 | 49 | 149 | 68 | 273 | 124 |
| Net Wt. (w/ OS&Y Gate Valves)** | 109 | 49 | 125 | 57 | 180 | 82 | 333 | 151 |

Notes:
Nominal dimensions are shown. Allowances must be made for manufacturers' tolerances.
Internal body connections are grooved on 2-1/2" - 10" sizes.

DCDALF4A/DCDA2LF4A Series

Double Check Detector Assembly
LEAD FREE



**INTERNAL COMPONENT
REMOVAL SPACE
REQUIREMENTS**

TYPE 1 BYPASS
8" DCDALF4A W/ OS&Y GATES SHOWN

TYPE 2 BYPASS
8" DCDA2LF4A W/ BUTTERFLY VALVES SHOWN

DIMENSIONS 8" TYPE 1 & TYPE 2 BYPASS

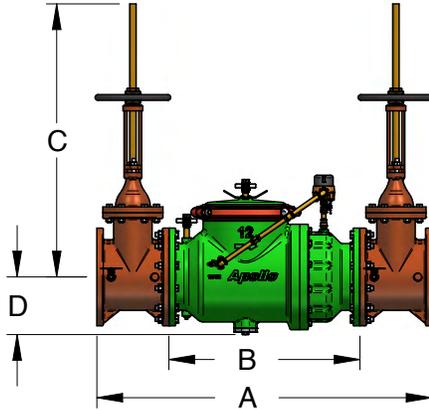
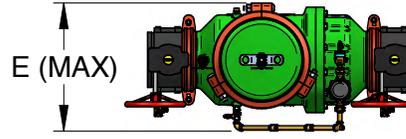
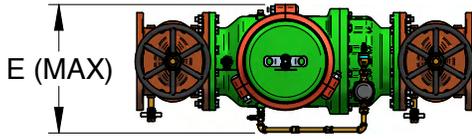
| SIZE | 8" | 200MM |
|---|------|-------|
| A (Butterfly Valves) | 46 | 1168 |
| A (Gate Valves) | 53.1 | 1349 |
| B (Less Shut-off Valves) | 30 | 762 |
| C (Butterfly Valves - Type 1) | 16.5 | 419 |
| C (Butterfly Valves - Type 2) | 16.5 | 419 |
| C (NRS/PI Gate Valves - Type 1) | 21 | 533 |
| C (NRS/PI Gate Valves - Type 2) | 21 | 533 |
| C (OS&Y Open) | 37.8 | 960 |
| D (Centerline to Bottom) | 8.3 | 211 |
| E (Max w/Gate or Butterfly Valves - Type 1) | 22.4 | 569 |
| E (Max w/Gate or Butterfly Valves - Type 2) | 22 | 559 |
| F (Check Removal Clearance) | 7.5 | 191 |
| Test Cocks (NPT) | 3/4" | 20 |
| WEIGHTS | LB. | KG |
| Net Wt. (Less Valves) | 208 | 94 |
| Net Wt. (w/ Butterfly Valves)** | 399 | 181 |
| Net Wt. (w/ NRS Gate Valves)** | 540 | 245 |
| Net Wt. (w/ OS&Y Gate Valves)** | 615 | 279 |

Notes:
Nominal dimensions are shown. Allowances must be made for manufacturers' tolerances.
Internal body connections are grooved on 2-1/2" - 10" sizes.

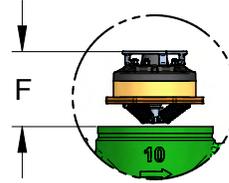
DCDA2LF4A Series

Double Check Detector Assembly

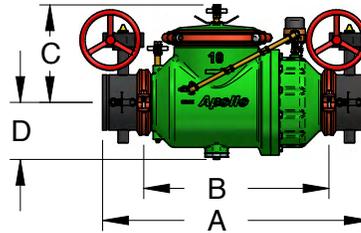
LEAD FREE



TYPE 2 BYPASS
12" DCDA2LF4A W/ OS&Y GATES SHOWN



**INTERNAL COMPONENT
REMOVAL SPACE
REQUIREMENTS**



TYPE 2 BYPASS
10" DCDA2LF4A W/ BUTTERFLY VALVES SHOWN

DIMENSIONS

10" - 12" TYPE 2 BYPASS

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

| SIZE | 10" | 250MM | 12" | 300MM |
|---|------|-------|------|-------|
| A (Butterfly Valves) | 52 | 1321 | N/A | N/A |
| A (Gate Valves) | 62.3 | 1582 | 65.4 | 1661 |
| B (Less Shut-off Valves) | 36 | 914 | 37 | 940 |
| C (Butterfly Valves - Type 2) | 19 | 483 | N/A | N/A |
| C (NRS/PI Gate Valves - Type 2) | 24.5 | 622 | 30 | 762 |
| C (OS&Y Open) | 45.8 | 1163 | 53.1 | 1349 |
| D (Centerline to Bottom) | 11.1 | 282 | 11.4 | 290 |
| E (Max w/Gate or Butterfly Valves - Type 2) | 24.9 | 632 | 25 | 635 |
| F (Check Removal Clearance) | 10 | 254 | 10 | 254 |
| Test Cocks (NPT) | 3/4" | 20 | 3/4" | 20 |
| WEIGHTS | LB. | KG | LB. | KG |
| Net Wt. (Less Valves) | 702 | 318 | 805 | 365 |
| Net Wt. (w/ Butterfly Valves)** | 985 | 447 | N/A | N/A |
| Net Wt. (w/ NRS Gate Valves)** | 1229 | 557 | 1685 | 764 |
| Net Wt. (w/ OS&Y Gate Valves)** | 1343 | 609 | 1800 | 816 |

Notes:

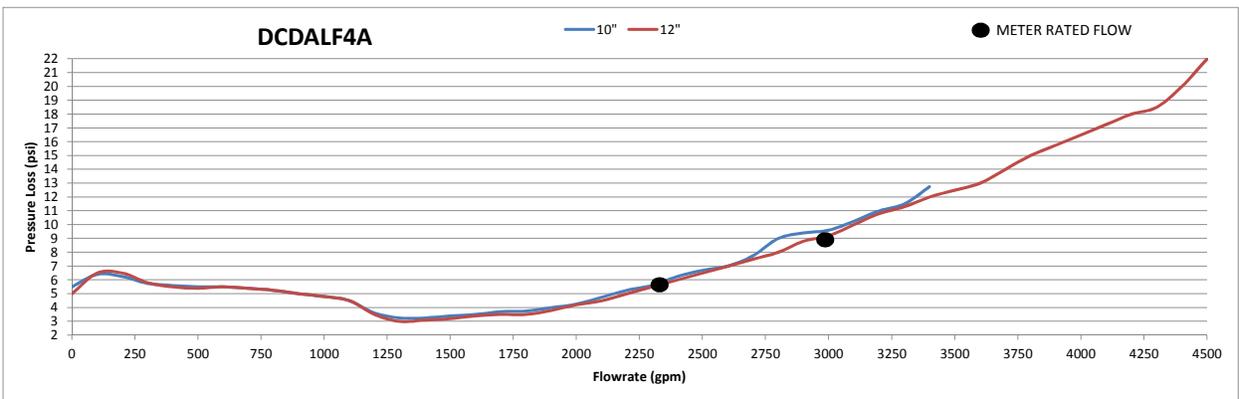
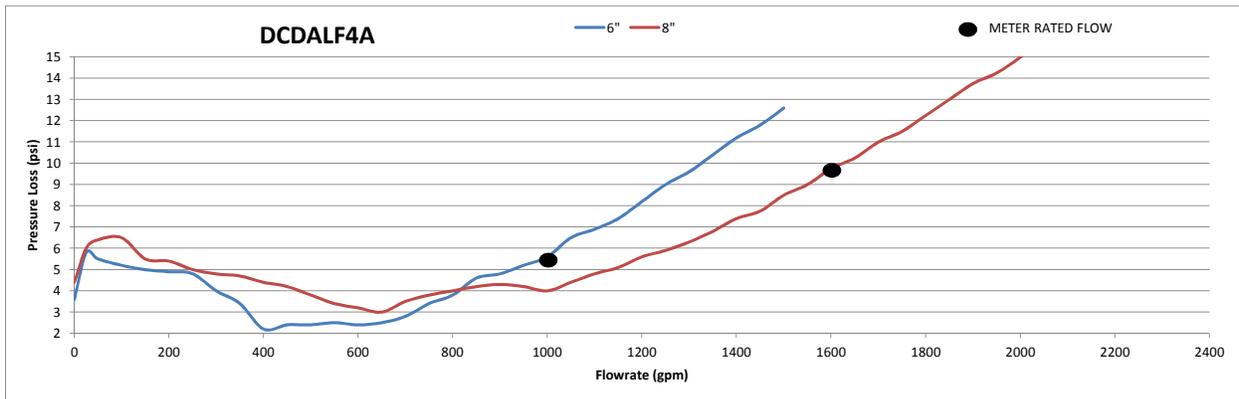
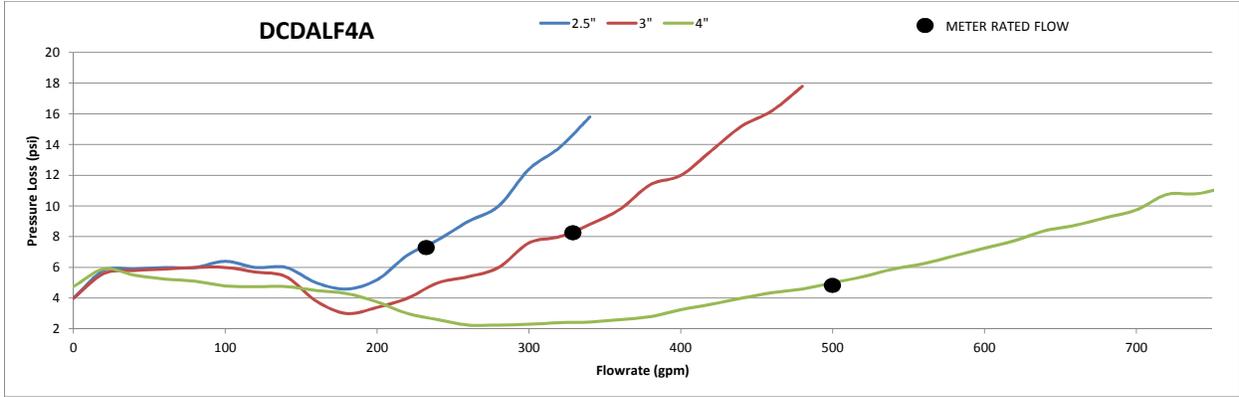
Nominal dimensions are shown. Allowances must be made for manufacturers' tolerances.
Internal body connections are flanged on 12" size.

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Double Check Detector Assembly

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FLOW CURVES



Notes:
 Flow curves directly reflect data collected by an independent laboratory.
 Flow curves shown were recorded with gate shut-off valves. Contact factory for more information.
 All data points are based on ASSE increasing flow data, from zero GPM to rated flow (opening curve).
 For high flow rates/pressure loss information - contact factory.