

Reduced Pressure Backflow Preventers

RPDA-4D Series DEFENDER®

4D SERIES REDUCED PRESSURE DETECTOR ASSEMBLY

The Apollo model RPDA-4D Series is designed to provide reduced pressure principle protection against cross-connections that present a health hazard; and at the same time offers precise monitoring capability to detect leakage or unauthorized use of water from the fire or automatic sprinkler system. The RPDA-4D Series is available in sizes 2-1/2" - 10". The unit consists of a mainline 4D Series Reduced Pressure Principle assembly with two independently acting poppet type check valves with a diaphragm actuated and spring loaded relief valve assembly located between the checks. A bronze by-pass line by-passes the 2nd check. The by-pass line consists of a meter, a single check, shut-off isolation valves, and test cocks. The relief valve on the mainline device maintains high hazard protection, as the by-pass is downstream of the reduced pressure zone.



2-1/2" - 10"
Shown w/ Standard Butterfly Shutoffs

MATERIALS

Body and cover Coated	Fusion Bonded Epoxy Ductile Iron (mainline) Bronze (by-pass)
Test Cocks	Stainless Steel (mainline) Bronze (by-pass)
Check Components	Stainless Steel (mainline) Acetal (by-pass)
Relief Valve	Stainless Steel (Noryl™ Seat on 2.5"-6")
Springs	Stainless Steel
Seat Discs	Silicone Rubber
Fasteners	Stainless Steel
Elbows	Fusion Bonded Epoxy Coated Ductile Iron

Contact local water authorities for installation/service requirements.

OPERATION

During normal conditions, the mainline device provides normal reduced pressure backflow protection against back-siphonage or backpressure. If a backflow condition should occur the two mainline poppet style checks along with the by-pass single check will close tight. If there is a low flow demand (up to a minimum of 2 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 flows will open the mainline checks as required.

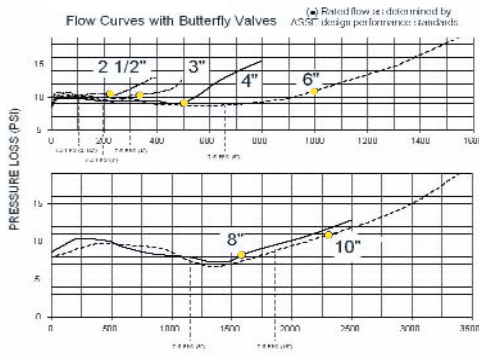
FEATURES

- Low pressure loss characteristics (without high curve spikes)
- 4D Series Mainline Valve Provides Superior Durability
- Low Maintenance By-Pass Line (no relief valve to maintain)
- Reversible/Replaceable Silicone Rubber Seat Discs
- Dependable Neoperl™ Check Module Utilized in Single Check
- Monitored Butterfly Valves are Standard
- Short Lay Length
- Maximum working pressure 175 PSI
- Operating temperature range 33°F-140°F
- UL Classified
- FM approved
- ASSE1047
- CSA
- US Patent #6,443,184 B1 (other patents pending)
- Easy Access for Maintenance
- Designed, manufactured, assembled and tested in South Carolina, USA

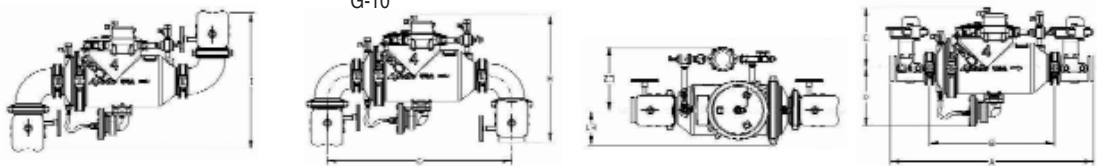
ORDERING CODE - 4D - 7 0 X - X X X

SIZE	METER	GATE VALVES	FLOW (OPTIONAL)
9 - 2-1/2"	C - With Meter in Cubic Feet	1* - Less Shut-off Valves	N - with two elbows (can be field adjusted up or down)
0 - 3"		9 - With Grooved x Grooved Butterfly valves (Supervisory switch)	
A - 4"	E - With Meter in Gallons		
C - 6"	G - Less Meter		
E - 8"			
G - 10"			

*4D Defender valve body has grooved x grooved connections



See page 38 for air gap drain information.



Model No. Ordering No.	Dimensions - in(mm) - Weights - lbs.(kg)					
	RPDA4D212 4D-709	RPDA4D3 4D-700	RPDA4D4 4D-70A	RPDA4D6 4D-70C	RPDA4D8 4D-70E	RPDA4D10 4D-70G
Size	2 1/2" (65)	3" (80)	4" (100)	6" (150)	8" (200)	10" (250)
A (Butterfly Valves)	33 3/8 (848)	33 7/8 (860)	35 (889)	38 1/2 (978)	48 (1219)	52 1/2 (1334)
B	21 3/8 (543)	21 3/8 (543)	21 3/8 (543)	24 1/2 (622)	32 (813)	32 (813)
C (With Butterfly Valves)	10 5/8 (270)	10 5/8 (270)	10 5/8 (270)	13 (330)	15 (381)	15 (381)
D	10 3/4 (273)	10 3/4 (273)	10 3/4 (273)	11 3/4 (298)	15 1/4 (387)	15 1/4 (387)
E1 (center to coupling edge)	6 1/2 (165)	6 1/2 (165)	6 1/2 (165)	7 3/4 (197)	10 (254)	10 (254)
E2 (center to by-pass edge)	11 (279)	11 (279)	11 (279)	11 (279)	14 1/2 (368)	14 1/2 (368)
F (w/Elbows & Butterfly Valves)	8 (203)	8 1/2 (216)	9 1/4 (235)	10 1/4 (260)	12 3/4 (233)	14 1/2 (368)
G	27 3/8 (695)	28 1/8 (714)	29 3/4 (756)	35 1/2 (902)	46 (1168)	50 1/4 (1276)
H "n" Flow (with Butterfly Valves)	20 3/8 (568)	21 1/8 (536)	22 3/8 (568)	26 1/2 (673)	29 3/4 (756)	34 (864)
I "Z" Flow (with Butterfly Valves)	19 1/2 (495)	21 (533)	23 1/4 (591)	27 (686)	30 (762)	38 (965)
Test Cocks	1/2 NPT	1/2 NPT	1/2 NPT	3/4 NPT	3/4 NPT	3/4 NPT
Net Wt. (Less Gate Valves)	118 (54)	119 (55)	124 (56)	207 (94)	429 (195)	434 (197)
Net Wt. (w/Butterfly Valves)	141 (64)	143 (65)	163 (74)	270 (122)	551 (250)	616 (279)
Net Wt. (w/Elbows & Butterfly VlvS)	150 (68)	155 (70)	183 (83)	307 (139)	593 (269)	724 (328)
Shpg. Wt. (Less Gate Valves)	182 (83)	183 (83)	188 (85)	305 (138)	505 (229)	510 (231)
Shpg. Wt. (w/Butterfly Valves)	208 (94)	210 (95)	230 (104)	378 (171)	627 (284)	692 (314)
Shpg. Wt. (w/Elbows & Butter VlvS)	217 (98)	222 (101)	250 (113)	415 (188)	693 (314)	824 (374)