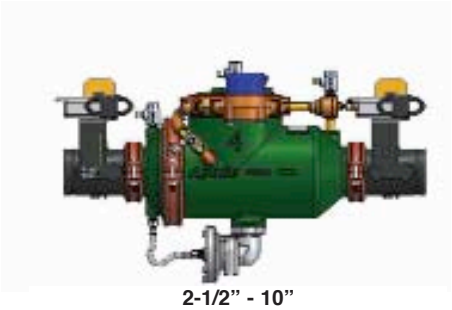
RPDA-4D Series DEFENDER®

4D SERIES REDUCED PRESSURE DETECTOR ASSEMBLY



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

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.

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

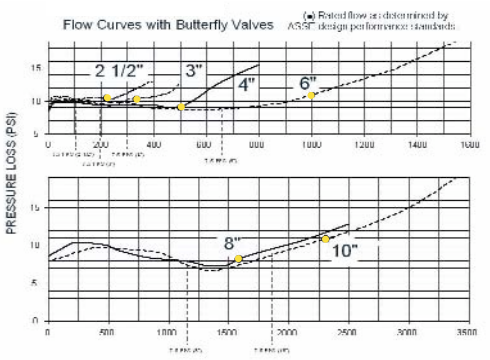
Contact local water authorities for installation/service requirements.

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

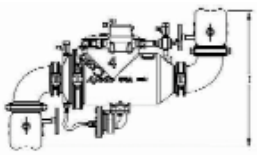
- Low pressure loss characteristics (without high curve spikes)
- 4D Series Mainline Valve Provides Superior Durability
- Low Maintenance By-Pass Line (no relief valve to maintain)
- Reversible/Replaceable Silicone Rubber Seat Discs
- Dependable Neoperl™ Check Module Utilized in Single Check
- Monitored 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

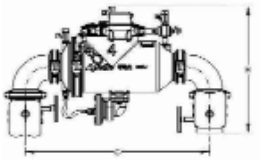


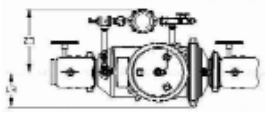
ORDERING CODE - 4D - 7 0 X - X X X

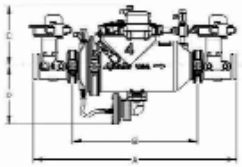
SIZE	METER	GATE VALVES	FLOW (OPTIONAL)
9 -2-1/2" 0 -3" A -4" C -6" E -8" G-10"	C - With Meter in Cubic Feet E - With Meter in Gallons G - Less Meter	1* - Less Shut-off Valves 9 - With Grooved x Grooved Butterfly valves (Supervisory switch) **4D Defender valve body has grooved x grooved connections*	N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

See page 38 for air gap drain information.









Dimensions - in(*mm*) - Weights - lbs.(*kg*)

Model No.	RPDA4D212	RPDA4D3	RPDA4D4	RPDA4D6	RPDA4D8	RPDA4D10
Ordering No.	4D-709	4D-700	4D-70A	4D-70C	4D-70E	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*)