

Engineering Specification

Job Name _____

Contractor _____

Job Location _____

Approval _____

Engineer _____

Contractor's P.O. No. _____

Approval _____

Representative _____

LEAD FREE*

Series LF957RPDA-FS

Reduced Pressure Detector Assemblies

2½" – 10"

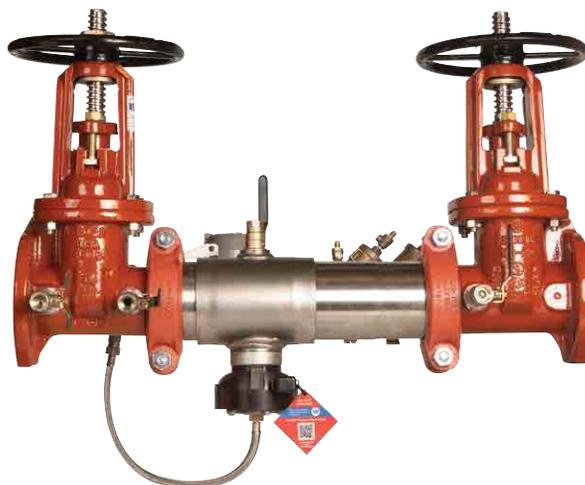
Series LF957RPDA-FS Reduced Pressure Detector Assemblies provide protection to the potable water system from contamination in accordance with national plumbing codes. The assemblies are normally used in health hazard applications to protect against backsiphonage and backpressure, as well as to monitor unauthorized use of water from the fire protection system. The Lead Free* construction to comply with Lead Free* installation requirements.

The series include an integrated flood sensor to detect excessive water discharges from the relief valve. When activated through an add-on sensor connection kit, the flood sensor relays a signal that triggers a multichannel alert (call, email, text) to notify personnel about potential flooding. The add-on sensor connection kit is available for both building management systems, or BMS, and cellular communication. (For more information, refer to *Installation, Maintenance, and Repair Manual, Series 957-FS, 957RPDA-FS, and LF957RPDA-FS.*)

Features

- Lead Free* construction
- Extremely compact design
- 70% lighter than traditional designs
- 304 (Schedule 40) stainless steel housing & sleeve
- Groove fittings allow integral pipeline adjustment
- Patented torsion spring check provides lowest pressure loss
- Unmatched ease of serviceability
- Replaceable check disc rubber
- Available with grooved butterfly valve shutoffs
- Bottom mounted cast stainless steel relief valve

*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.



LF957RPDA-FS-OSY

- Metered bypass to detect leakage or theft of water from the fire sprinkler system
- Integrated sensor for flood detection, activated by add-on sensor connection kit

NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

Inquire with governing authorities for local installation requirements.

NOTICE

Use of the integrated flood sensor does not replicate the need to comply with all required instructions, codes, and regulations related to installation, operation, and maintenance of this product, including the need to provide proper drainage in the event of a discharge.

Watts® is not responsible for the failure of alerts due to connectivity or power issues.

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

Specification

The Lead Free* Reduced Pressure Detector Assembly shall consist of two independent torsion spring check modules, a differential pressure relief valve located between and below the two modules, two drip tight shutoff valves, and required torsion spring check modules and relief valve shall be contained within a sleeve accessible single housing constructed from 304 (Sch 40) stainless steel pipe with groove end connections. Torsion spring checks shall have reversible elastomer discs and in operation produce drip tight closure against reverse flow caused by back pressure or backsiphonage.

The Lead Free* Reduced Pressure Detector Assemblies shall comply with state codes and standards, where applicable, requiring reduced lead content. The bypass assembly consists of a meter registering either gallon or cubic measurements, a double check assembly and required test cocks. Assembly shall be Watts Series LF957RPDA.

Model Suffix

FS	Integrated sensor for flood detection
OSY	UL Classified and FM Approved outside stem and yoke, resilient seated gate valves
N	N-pattern orientation
Z	Z-pattern orientation
BFG	UL Classified and FM Approved grooved gear operated butterfly valves with tamper switch
OSY FxG**	Flanged inlet gate connection and grooved outlet gate connection
OSY GxF**	Grooved inlet gate connection and flanged outlet gate connection
OSY GxG**	Grooved inlet gate connection and grooved outlet gate connection

Approvals

- Approved by the Foundation for Cross-Connection Control and Hydraulic Research at The University of Southern California (FCCCHR-USC), excluding 6", 8", and 10" N- and Z-pattern installations
- AWWA C511-97



Materials

Housing & Sleeve	304 (Schedule 40) stainless steel
Elastomers	EPDM, silicone, and Buna 'N'
Torsion Spring Checks	Noryl®, stainless steel
Check Discs	Reversible silicone or EPDM
Test Cocks	Lead Free* bronze body
Pins & Fasteners	300 Series stainless steel
Springs	Stainless steel

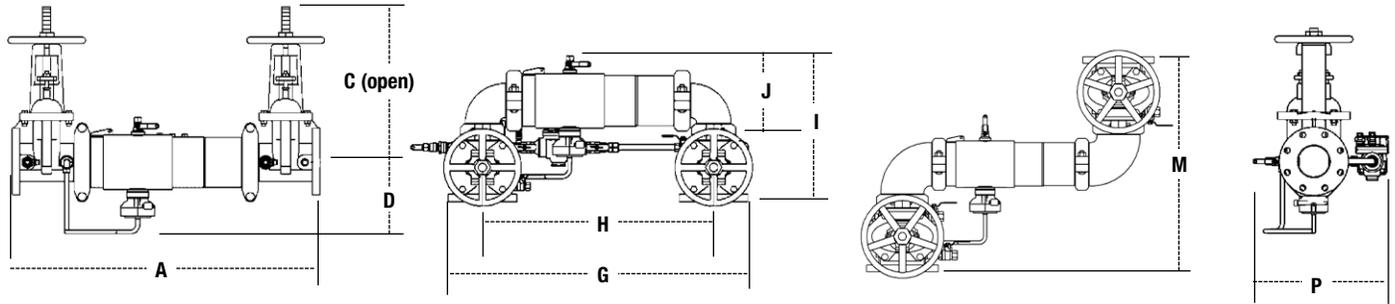
Pressure — Temperature

Temperature Range	33°F – 110°F (0.5°C – 43°C)
Maximum Working Pressure	175 psi (12.1 bar)

**Options for the gate valve:
– Consult factory for dimensions.
– Available with grooved NRS gate valves; consult factory.
– Post indicator plate and operating nut available; consult factory.

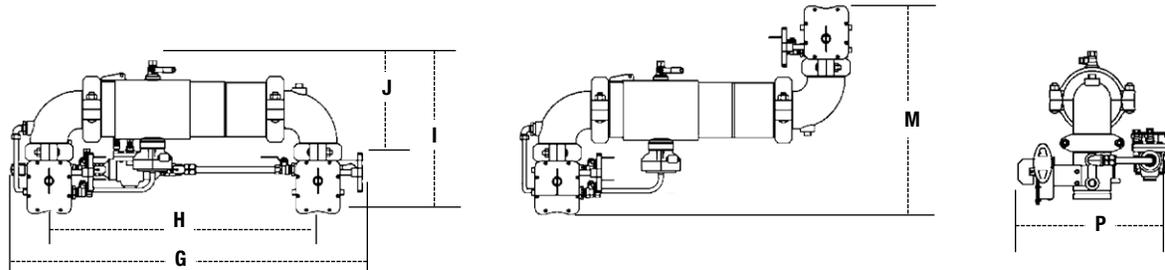
Noryl® is a registered trademark of SHPP Global Technologies B.V.

Dimensions – Weight



LF957RPDA, LF957NRPDA, LF957ZRPDA

SIZE	DIMENSIONS														WEIGHT							
	A		C (OSY)		D		G		H		I		J		M		P		957RPDA		957NRPDA	
in.	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lb	kg	lb	kg
2½	30¾	781	16⅝	416	6½	165	29⅞	738	21½	546	15½	393	8⅞	223	21¼	540	13⅞	335	142	64	150	68
3	31¾	806	18⅞	479	6⅞	170	30¼	768	22¼	565	17⅞	435	9⅞	233	23	584	14½	368	162	73	175	79
4	33¾	857	22¼	578	7	178	33	838	23½	597	18½	470	9⅞	252	26¼	667	15⅞	386	178	81	201	91
6	43½	1105	30⅞	765	8½	216	44¾	1137	33¼	845	23⅞	589	13⅞	332	32¼	819	19	483	312	142	353	160
8	49¾	1264	37¼	959	9⅞	246	54⅞	1375	40⅞	1019	27⅞	697	15⅞	399	36⅞	937	21⅞	538	497	225	572	259
10	57¾	1467	45¾	1162	11⅞	285	66	1676	49½	1257	32½	826	17⅞	440	44½	1124	24	610	797	362	964	437



LF957NRPDABFG, LF957ZRPDABFG

SIZE	DIMENSIONS										WEIGHT			
	G		H		I		J		M		P		957RPDABFG	
in.	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lb	kg
2½	32½	826	23	584	15½	394	9½	241	19⅞	502	15⅞	402	81	37
3	34	864	24	610	16⅞	414	10⅞	256	21¼	540	16⅞	410	84	38
4	35⅞	905	25½	648	17⅞	437	10⅞	279	23½	597	16⅞	422	101	46
6	46½	1181	35¼	895	20½	521	13½	343	27¼	692	19	483	174	79

Capacity

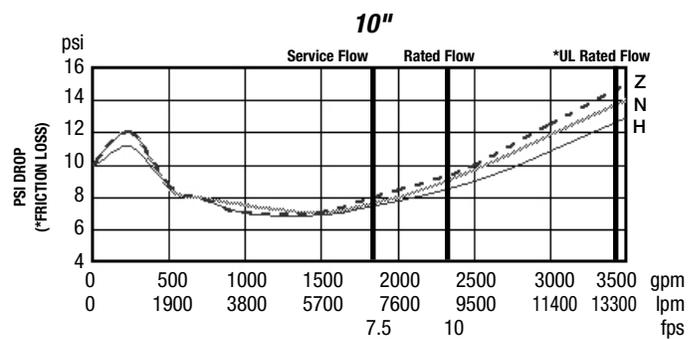
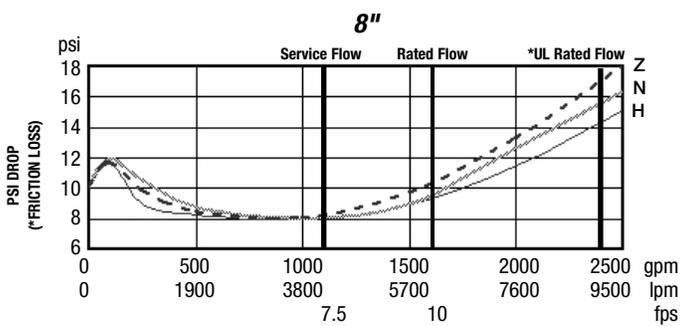
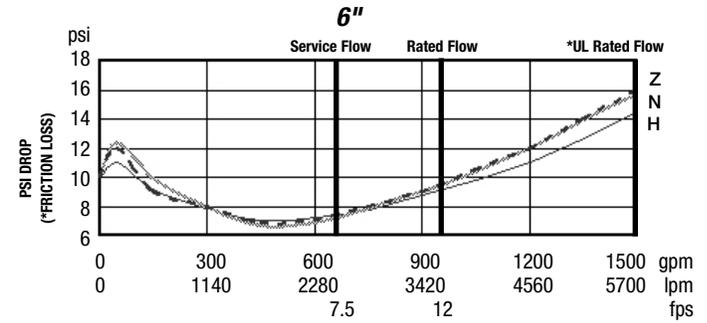
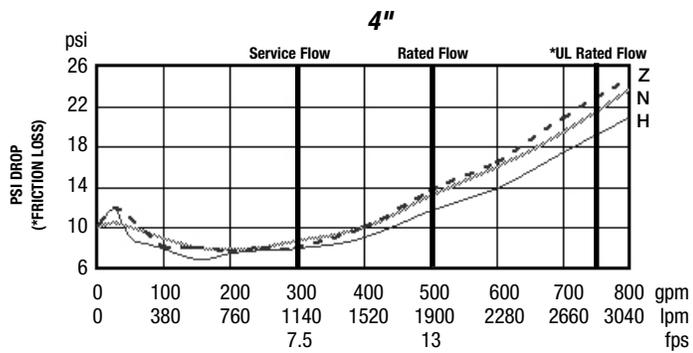
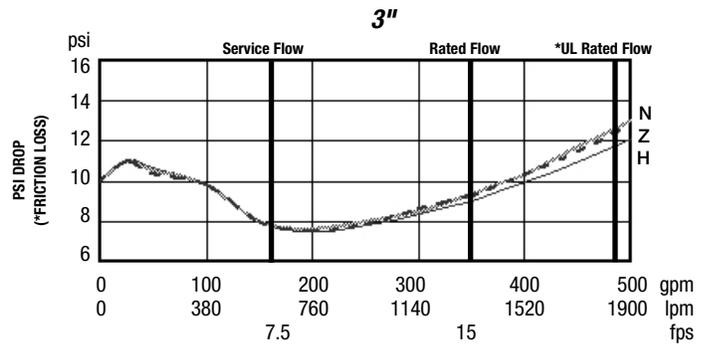
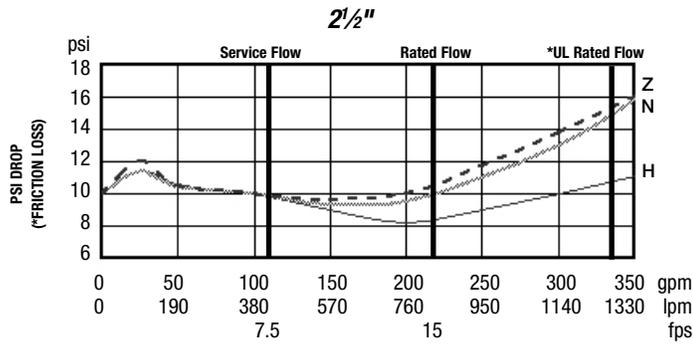
Flow curves as tested by Underwriters Laboratories, excluding 6" Z-pattern configuration.

Flow characteristics collected using butterfly shutoff valves.

— Horizontal — N-Pattern - - - - - Z-Pattern

Flow capacity chart identifies valve performance based upon rated water velocity up to 25 fps.

- Service Flow is typically determined by a rated velocity of 7.5 fps based upon schedule 40 pipe.
- Rated Flow identifies maximum continuous duty performance determined by AWWA.
- UL Flow Rate is 150% of Rated Flow and is not recommended for continuous duty.
- AWWA Manual M22 (Appendix C) recommends that the maximum water velocity in services be not more than 10 fps.



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