Engineering Specification

Job Name _____ Contractor _____

Job Location _____ Approval _____

Engineer _____ Contractor's P.O. No. _____

Approval _____ Representative _____

LEAD FREE*

Series LF957RPDA

Reduced Pressure Detector Assembly

2½" – 10"

Series LF957RPDA Reduced Pressure Detector assembly provides 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 includes a flood sensor to detect excessive water discharges from the relief valve. The sensor is installed on the assembly exterior and does not alter assembly functions or certifications. The sensor relays a signal that triggers notification to facility personnel for corrective action, thus limiting flooding and costly damage.

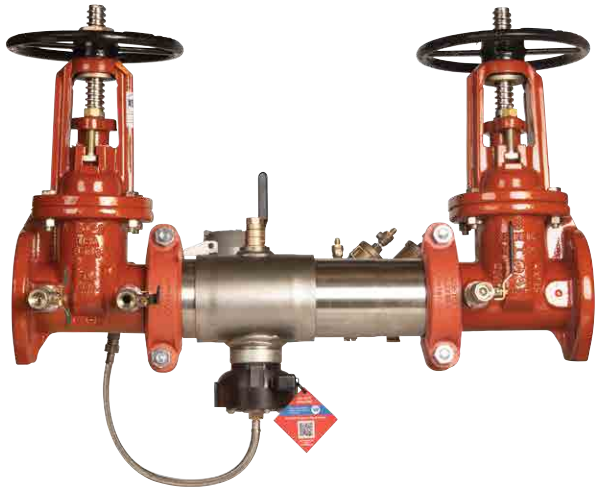
NOTICE

An add-on connection kit is required to activate the flood sensor. Without the connection kit, the sensor is a passive component that has no communication with any other device. (For more information download RP/IS-957/957DCDA.)

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

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



LF957RPDA-OSY with Flood Sensor

- Available with grooved butterfly valve shutoffs
- Bottom mounted cast stainless steel relief valve
- Metered bypass to detect leakage or theft of water from the fire sprinkler system
- Sensor on relief valve for flood detection
- Flood alert feature activated with add-on sensor connection kit, compatible with BMS and cellular network communication

NOTICE

Use of the flood sensor does not replace 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 issues, power outages, or improper installation.

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.

WATTS®

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 assembly 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. The assembly shall be Watts Series LF957RPDA, and shall include a sensor on the relief valve for flood detection.

Model/Option

FS	Sensor on relief valve 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

1047 B64.4 (**BFG & OSY Only)

Materials

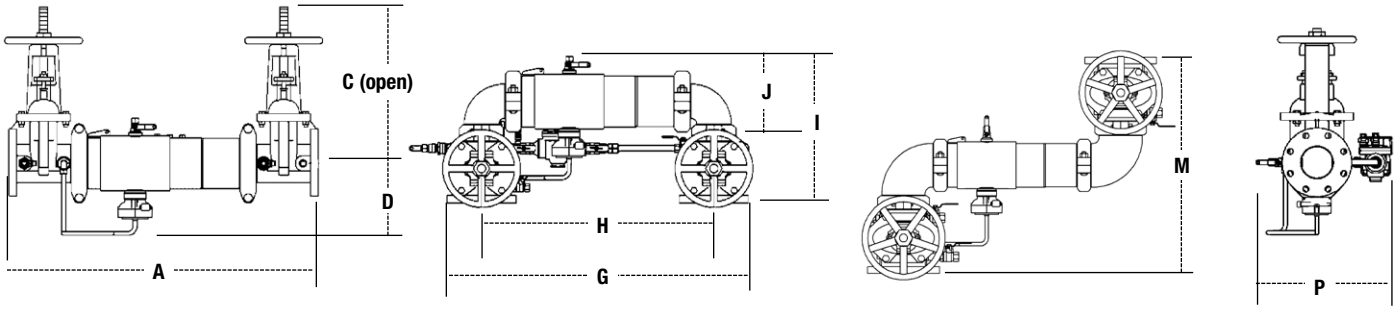
Housing & Sleeve	304 (Schedule 40) stainless steel
Elastomers	EPDM, silicone, and Buna 'N'
Torsion Spring Checks	Noryl®, stainless steel
Check Discs	Reversible silicone or EPDM
Test Cocks	Lead Free* bronze body
Pins & Fasteners	300 Series stainless steel
Springs	Stainless steel

Pressure — Temperature

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

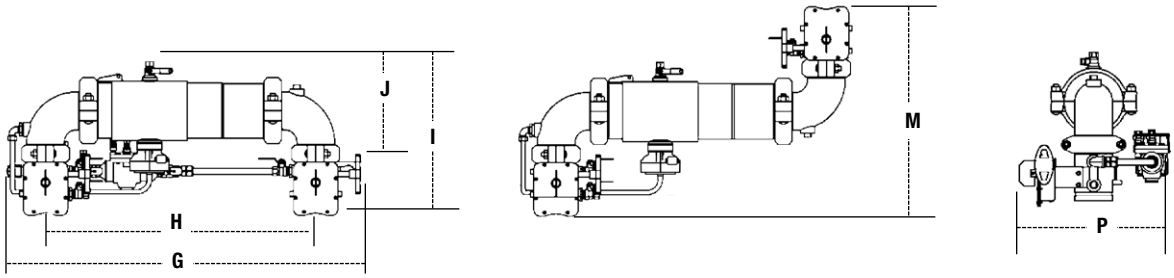
**Options for the gate valve:
– Consult factory for dimensions.
– Available with grooved NRS gate valves; consult factory.
– Post indicator plate and operating nut available; consult factory.

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	16⅜	416	6½	165	29 1/16	738	21½	546	15½	393	8 13/16	223	21¼	540	13 3/16	335	142	64	150	68
3	31¾	806	18⅞	479	6 1/16	170	30¼	768	22¼	565	17⅛	435	9 3/16	233	23	584	14½	368	162	73	175	79
4	33¾	857	22¾	578	7	178	33	838	23½	597	18½	470	9 15/16	252	26¼	667	15 3/16	386	178	81	201	91
6	43½	1105	30⅛	765	8½	216	44¾	1137	33¼	845	23 3/16	589	13 1/16	332	32¼	819	19	483	312	142	353	160
8	49¾	1264	37¾	959	9 1/16	246	54⅛	1375	40⅛	1019	27 7/16	697	15 1/16	399	36⅞	937	21 3/16	538	497	225	572	259
10	57¾	1467	45¾	1162	11 3/16	285	66	1676	49½	1257	32½	826	17 5/16	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	19¾	502	15 13/16	402	81	37
3	34	864	24	610	16 5/16	414	10 1/16	256	21¼	540	16⅛	410	84	38
4	35⅝	905	25½	648	17 3/16	437	10 15/16	279	23½	597	16⅝	422	101	46
6	46½	1181	35¼	895	20½	521	13½	343	27¼	692	19	483	174	79

Capacity

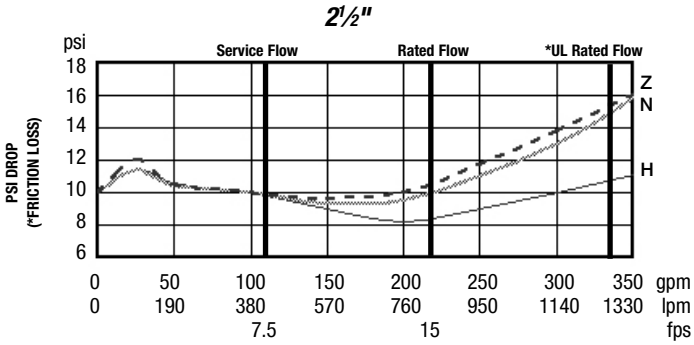
Flow curves as tested by Underwriters Laboratories, excluding 6" Z-pattern configuration.

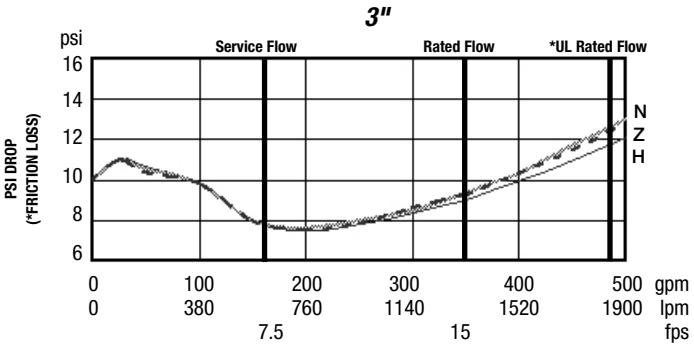
Flow characteristics collected using butterfly shutoff valves.

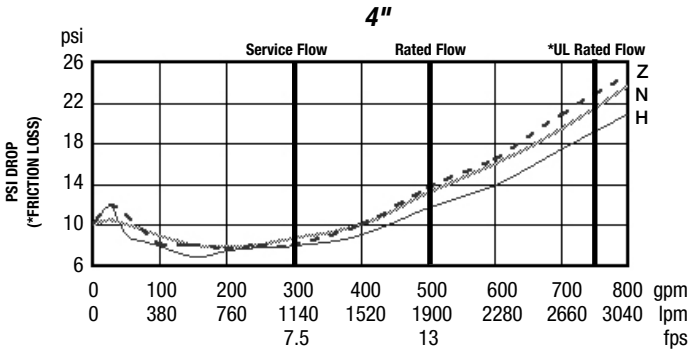
——— Horizontal ——— N-Pattern - - - - - - Z-Pattern

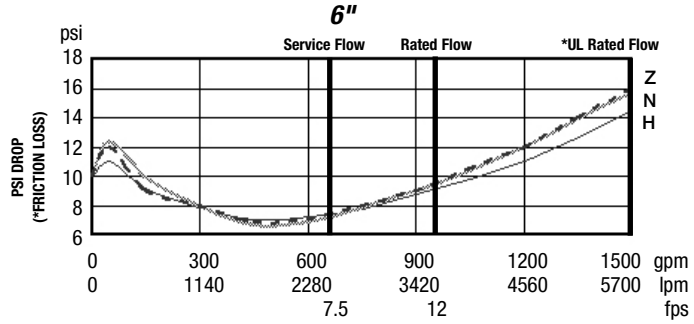
Flow capacity chart identifies valve performance based upon rated water velocity up to 25 fps.

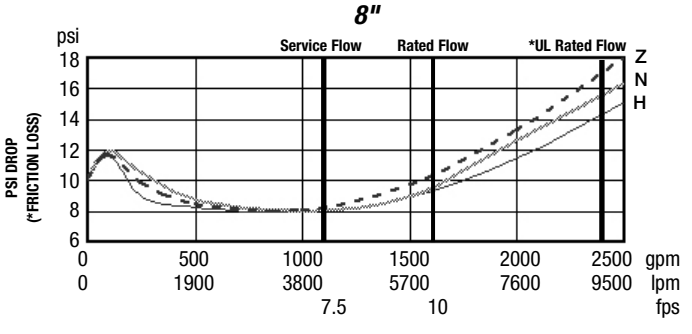
- Service Flow is typically dete.rmined by a rated velocity of 7.5 fps based upon schedule 40 pipe.
- Rated Flow identifies maximum continuous duty performance determined by AWWA.
- UL Flow Rate is 150% of Rated Flow and is not recommended for continuous duty.
- AWWA Manual M22 (Appendix C) recommends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

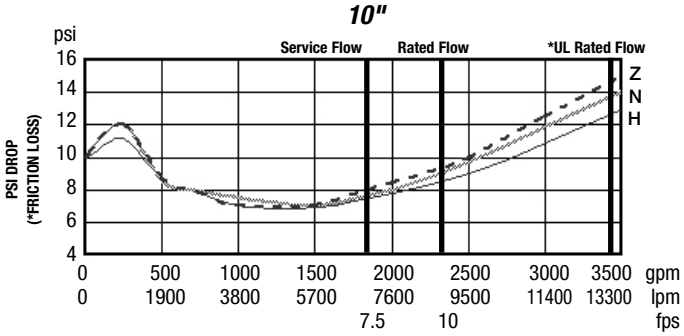












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