

Job Name _____

Contractor _____

Job Location _____

Approval _____

Engineer _____

Contractor's P.O. No. _____

Approval _____

Representative _____

LEAD FREE*

Series 957-FS

Reduced Pressure Zone Assemblies

2½" – 10"

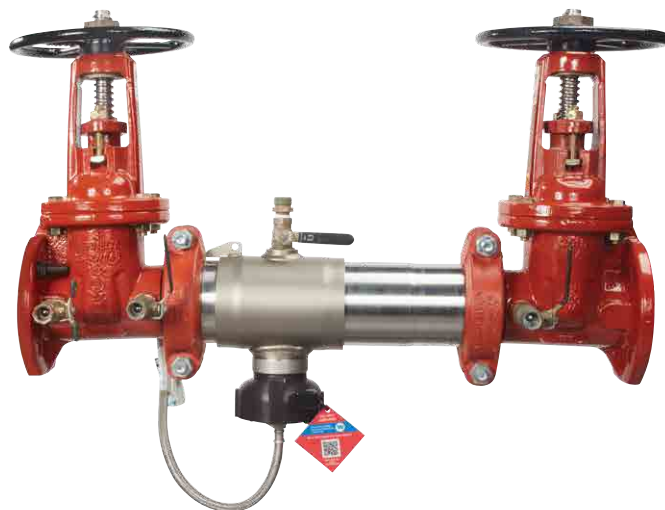
Series 957-FS Reduced Pressure Zone Assemblies provide protection to the potable water system from contamination in accordance with national plumbing codes. The assemblies are normally used in health hazard applications for protection against backsiphonage or backpressure.

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

- Sizes 2½", 3", and 4" available with quarter-turn ball valve shutoffs
- Replaceable check disc rubber
- Extremely compact design
- 70% Lighter than traditional designs
- 304 (Schedule 40) stainless steel housing and sleeve
- Groove fittings allow integral pipeline adjustment
- Patented torsion spring checks provide lowest pressure loss
- Unmatched ease of serviceability
- Bottom mounted cast stainless steel relief valve
- Available with grooved butterfly valve shutoffs
- Integrated sensor for flood detection, activated by add-on sensor connection kit

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



957-FS-OSY

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 Reduced Pressure Zone 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 with a sleeve accessible single housing constructed from 304 (Schedule 40) stainless steel pipe with groove end connections. Torsion spring checks shall have replaceable elastomer discs and in operation produce drip tight closure against the reverse flow of liquid caused by backpressure or backsiphonage. Assembly shall be a Watts Series 957.

Model Suffix

FS	Integrated sensor for flood detection
NRS	Non-rising stem, resilient seated gate valves
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
QT	2½" - 4" quarter-turn ball valves
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

NOTICE

When installing a drain line on Series 957 backflow preventers, use 957AG air gaps. Attach the air gap brackets directly onto the flood sensor. For additional information, refer to ES-AG/EL/TC at watts.com

Approvals

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



For additional approval information, contact the factory or visit watts.com.

**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.

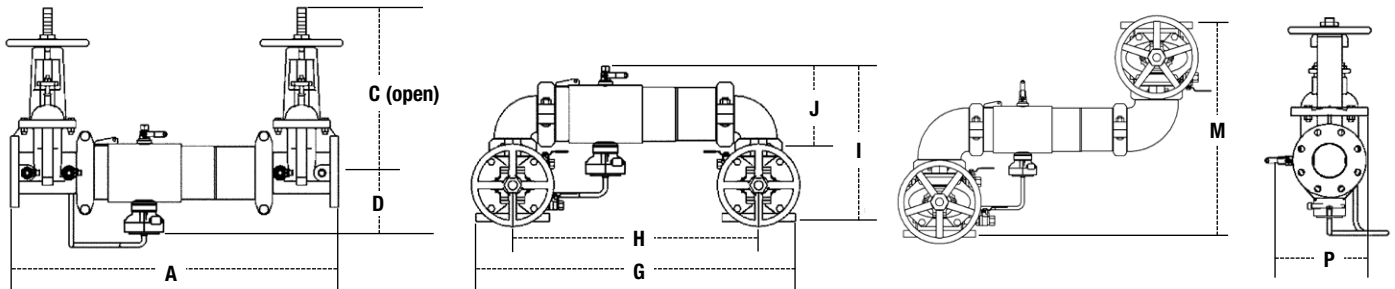
Materials

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

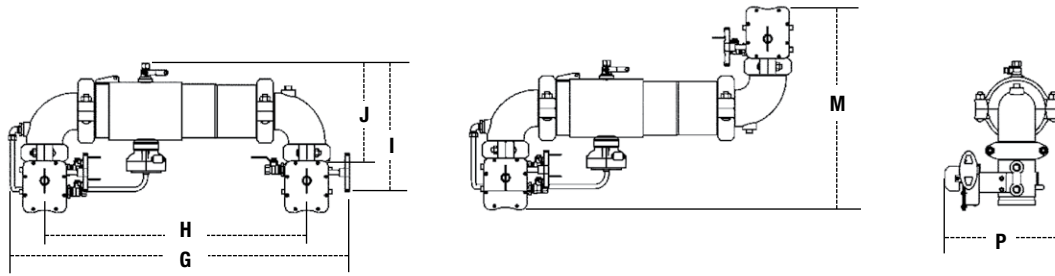
Temperature Range	33°F–140°F (0.5°C – 60°C)
Maximum Working Pressure	175 psi (12.1 bar)

Dimensions - Weight



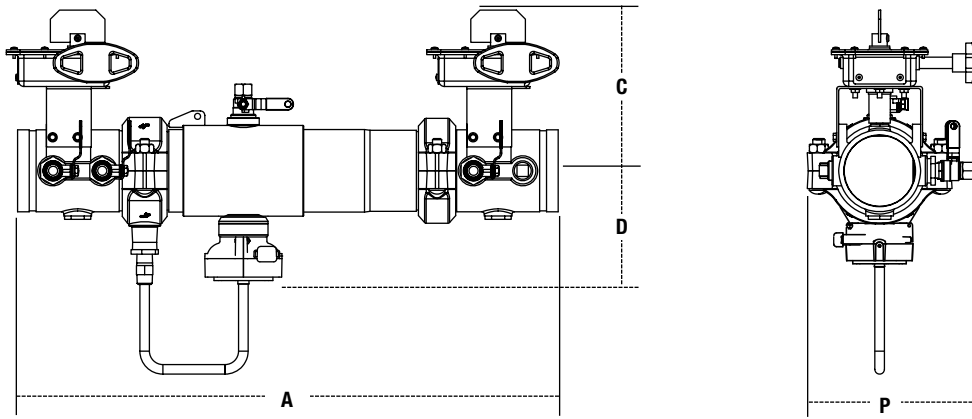
957, 957N, 957Z

SIZE	DIMENSIONS												WEIGHT															
	A		C (OSY)		C (NRS)		D		G		H		I		J		M		P		957NRS		957OSY		957N NRS		957N OSY	
in.	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lb	kg	lb	kg	lb	kg	lb	kg
2½	30¾	781	16⅞	416	9⅞	238	6½	165	29⅞	738	21½	546	15½	393	8⅜	223	21¼	540	9⅞	234	118	54	128	58	126	57	136	62
3	31¾	806	18⅞	479	10¼	260	6⅞	170	30¼	768	22¼	565	17⅞	435	9⅞	233	23	584	10½	267	134	61	148	67	147	67	161	73
4	33¾	857	22¾	578	12¾	310	7	178	33	838	23½	597	18½	470	9⅞	252	26¼	667	11⅞	284	164	74	164	74	187	85	187	85
6	43½	1105	30⅞	765	16	406	8½	216	44¾	1137	33½	851	23⅞	589	13¼	332	34¼	870	15	381	276	125	298	135	317	144	339	154
8	49¾	1264	37¾	959	19⅞	506	9⅞	246	54⅞	1375	40⅞	1019	27⅞	697	15⅞	399	36⅞	937	17⅞	437	441	200	483	219	516	234	558	253
10	57¾	1467	45¾	1162	23⅞	605	11⅞	285	66	1676	49½	1257	32⅞	826	17⅞	440	44½	1124	20	508	723	328	783	355	893	405	950	431



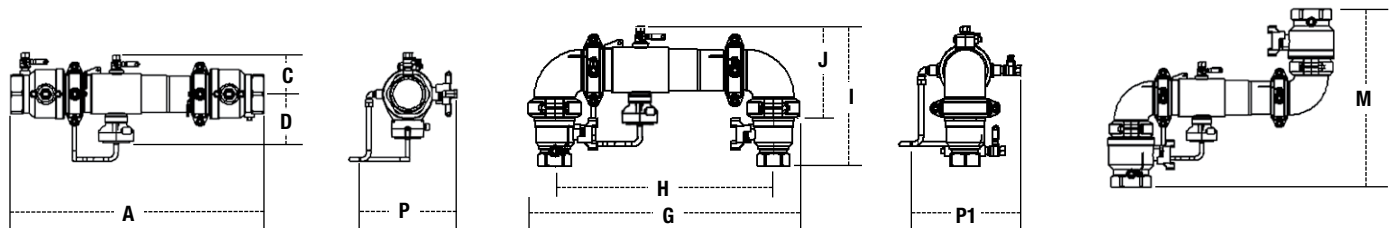
957N/957Z BFG

SIZE		DIMENSIONS										WEIGHT		
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	11⅓/16	300	67	30
3	34	864	24	610	16⅞/16	414	10⅞/16	256	21¼	540	12⅞/8	308	70	32
4	35⅞	905	25½	648	17⅞/16	437	10⅞/16	279	23½	597	12⅞/8	321	87	39
6	46½	1181	35¼	895	20½	521	13½	343	27¼	692	15	382	160	73



957 BFG

SIZE		DIMENSIONS				WEIGHT				
in.	in.	mm	in.	mm	in.	mm	lb	kg		
4	29	737	7¾	197	6⅞	162	9½	241	66	30
6	36½	927	9⅞/16	246	7⅞/16	189	14¼	362	122	55



957QT

SIZE		DIMENSIONS										WEIGHT												
in.	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lb	kg	lb	kg								
2½	27½	698	4⅞/8	124	6⅞/8	175	30¼	768	21½	546	16⅞/16	407	11⅞/8	289	19⅞/8	505	11⅞/16	287	11⅞/16	287	46	21	57	26
3	28	711	4⅞/8	124	6⅞/8	175	30¼	768	22¼	565	16⅞/16	420	11⅞/8	289	20⅞/8	531	11⅞/16	287	11⅞/16	287	56	25	67	30
4	28¾	730	4⅞/8	124	6⅞/8	175	30¼	768	23½	597	18⅞/16	465	11⅞/8	289	24⅞/8	619	11⅞/16	287	11⅞/16	287	76	34	87	39

Capacity

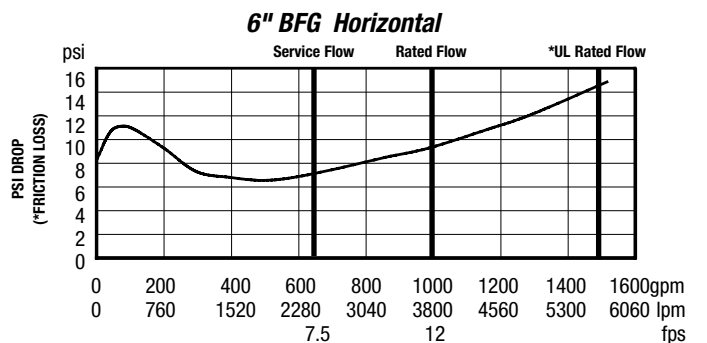
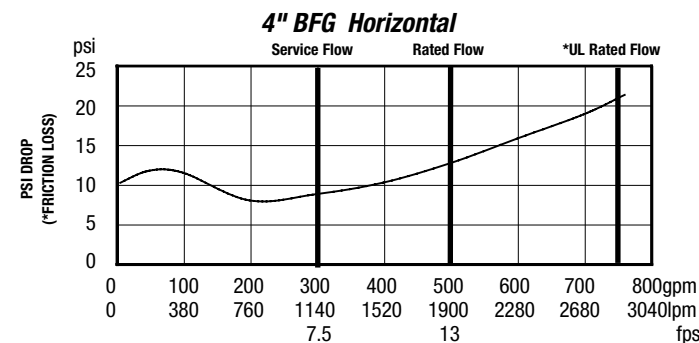
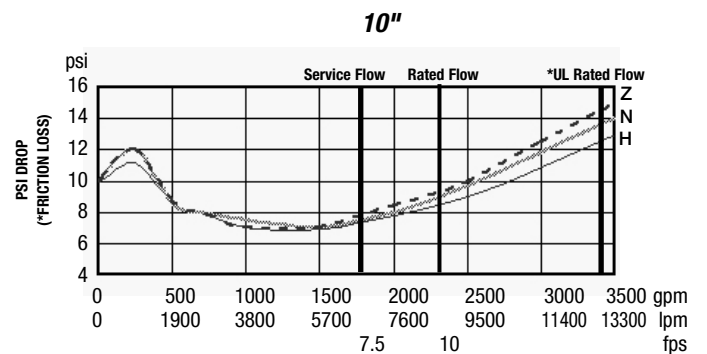
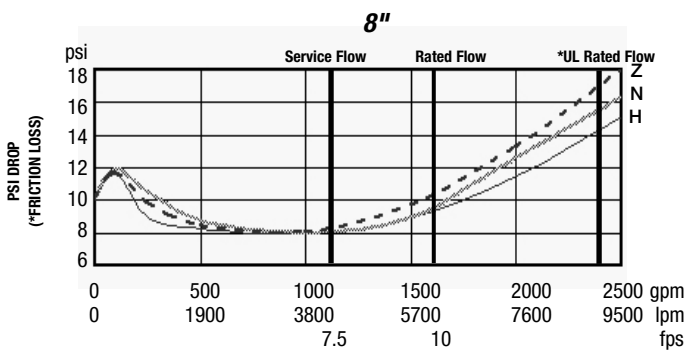
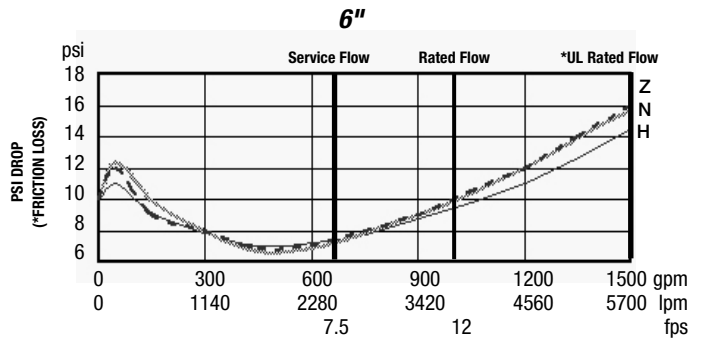
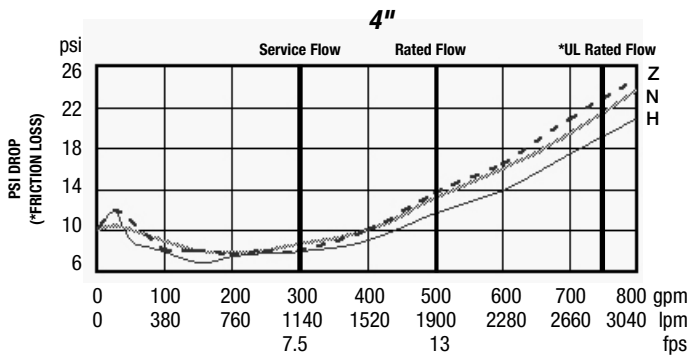
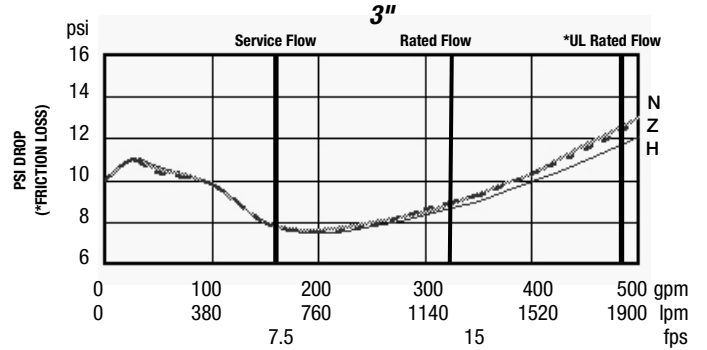
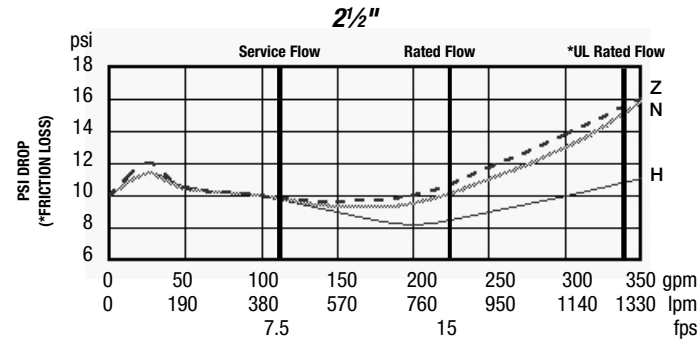
Flow curves as tested by Underwriters Laboratories.

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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