SPECIFICATION SHEET

FEBCO® MASTER series®

LEAD FREE*

MasterSeries® LF866

Reduced Pressure Zone Detector Backflow Prevention Assemblies (Type-II)

Size: 2½" - 10" (65mm - 250mm)

The FEBCO MasterSeries LF866 Reduced Pressure Zone Detector Assembly is specifically designed to protect against possible backpressure and backsiphonage conditions for high hazard [i.e., toxic] application in accordance with Local Governing Water Utility Codes. This Backflow Assembly is primarily used on potable drinking water systems where Local Governing Codes mandate protection from non-potable quality water being pumped or siphoned back into the potable water system.

The LF866 features Lead Free construction to comply with low lead installation requirements. The Lead Free Reduced Pressure Zone Detector Assemblies shall comply with state codes and standards, where applicable, requiring reduced lead content.

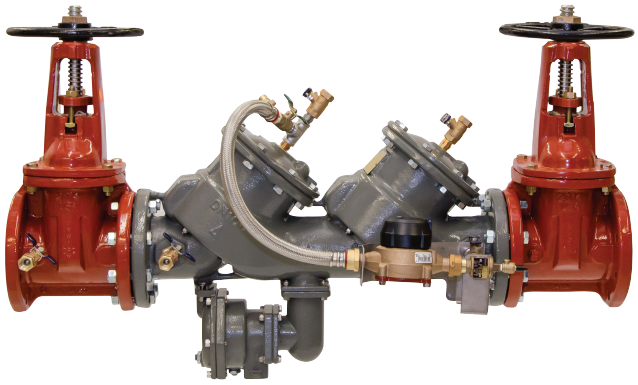
Features

Main Valve:

- Inline Serviceable Assembly
- No Special Tools Required for Servicing
- Captured Modular Spring Assembly
- Reversible & Replaceable Discs
- Field Replaceable Seats
- Ductile Iron Valve Body Design
- Stainless Steel Check Components
- Modular Pressure Differential Relief Valve
- Repairable Pressure Differential Relief Valve
- Clapper Check Assembly
- Captured O-ring Design

Auxiliary Bypass:

- Compact Bypass Design; Remains within Main Valve Assembly Profile
- Inline Serviceable ¾" Backflow Assembly
- No Special Tools Required for Servicing
- Field Replaceable Seats & Discs
- Detect Potential Underground Water Leaks
- Detect Unauthorized Water Usage



Model LF866-OSY

Specifications

The FEBCO MasterSeries LF866 Reduced Pressure Zone Detector Assembly shall be installed on the potable water supply and at each point of cross-connection to protect against possible backpressure high hazard and backsiphonage conditions for (i.e., toxic) applications. The assembly shall consist of a main line valve body composed of two (2) independently acting approved clapper style check modules with replaceable seats and disc rubbers. Servicing of both check modules does not require any special tools and are accessed through independent top entry covers. This assembly shall be fitted with approved UL/FM inlet/outlet resilient seated shutoff valves and contain four (4) properly located resilient seated test cocks as specified by AWWA Standard C511. The auxiliary bypass line contains a ⅝"x ¾" (16 x 19mm) Water Meter that complies with ANSI/AWWA Standard C700 coupled with an approved check assembly compliant to AWWA Standard C511. The bypass line is designed to detect leaks or unauthorized water usage of the water system while protecting against possible backpressure and backsiphonage conditions in high hazard (i.e., toxic) applications. Flow and pressure loss performance parameters shall meet the requirements of AWWA Standard C511.

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.

NOTICE

Inquire with governing authorities for local installation requirements

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

Job Name _____ Contractor _____

Job Location _____ Approval _____

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

Approval _____ Representative _____

Options - Suffix

OSY: UL/FM Approved OS&Y Gate Valves (ANSI/AWWA C515 Compliant)

CFM: Totalizing Cubic feet/min 5/8" x 3/4" Water Meter (ANSI/AWWA C700 Compliant)

GPM: Totalizing Gallons/min 5/8"x 3/4" Water Meter (ANSI/AWWA C700 Compliant)

LG: Less Shutoff valves; This is NOT an APPROVED ASSEMBLY

Example Ordering Descriptions:

4" LF866V-OSY-GPM - Valve Assembly fitted with OS&Y Shutoff Valves & Gallon Feet per Minute Water Meter

4" LF866V-OSY-CFM - Valve Assembly fitted with OS&Y Shutoff Valves, Cubic feet per Minute Water Meter

Assembly Flow Orientation:

- Horizontal (2½" – 10") - Approved by FCCCHR-USC, ASSE, cULus, FM, IAPMO

Materials

All sizes (2-1/2" through 10") are similar in materials and construction. Please contact your local FEBCO Representative if you require further information.

Main Valve Body:	Ductile iron Grade 65-45-12
Relief Valve Body:	Ductile iron Grade 65-45-12
Coating:	Fusion epoxy coated internal and external AWWA C550-90
Shutoff Valves:	OSY resilient wedge gate valve AWWA C515 (UL/FM)
Check Seats:	Stainless Steel
Disc Holder:	Stainless Steel
Elastomer Disc:	Silicone
Spring:	Stainless Steel
Clamp:	AWWA C606 (10" Only)

Approvals – Standards:

- Foundation for Cross-Connection Control and Hydraulic Research at The University of Southern California [FCCCHR-USC]
- ASSE 1047
- **UL Classified [US & Canada]
- **FM
- IAPMO/cUPC

1047

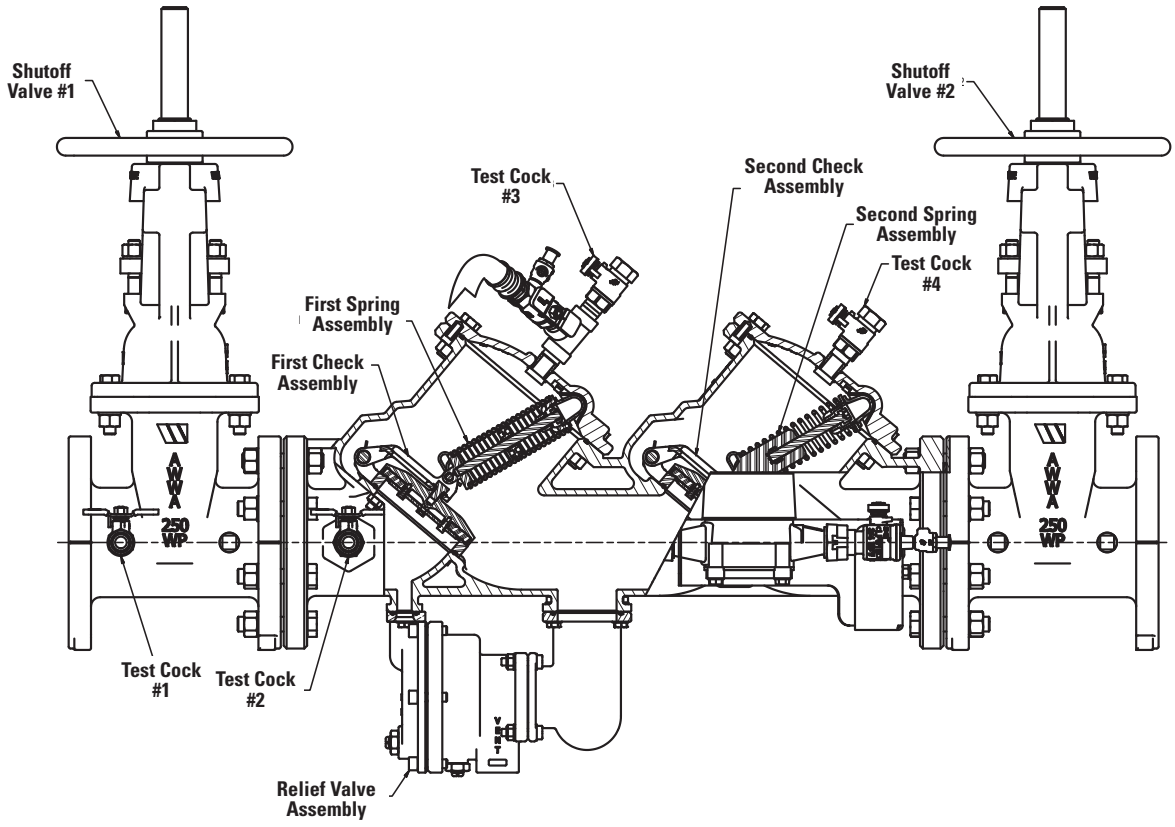
**Assembly configured with UL/FM Approved OS&Y RW Gate Valves. Less gate valve assemblies are not UL/FM approved configurations.

Standards:

- AWWA Standard C511 Compliant
- End Connections: Compliant to ASME B16.1 Class 125 & AWWA Class D Flange

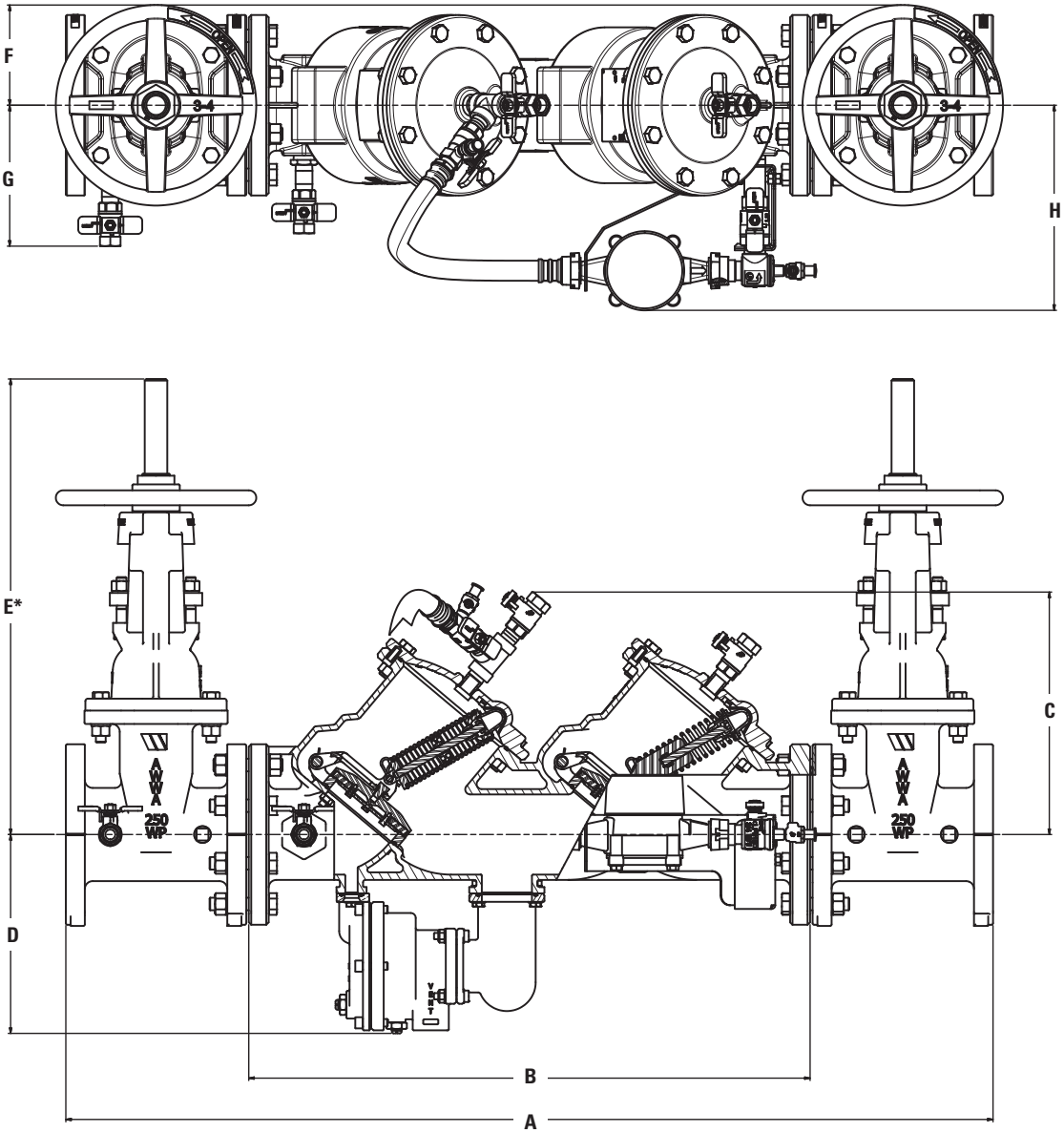
Pressure - Temperature

Max. Working Pressure:	175 psi (12.1 bar)
Min. Working Pressure:	20 psi (1.4 bar)
Hydrostatic Test Pressure:	350 psi (24.1 bar)
Hydrostatic Safety Pressure:	700 psi (48.3 bar)
Temperature Range:	33°F-140°F [0.5°C- 60°C] Continuous



Dimensions & Weights

Below are the nominal dimensions and physical weights for the Series LF866 size 2-1/2" through 10". Allowances must be made for normal manufacturing tolerances. Please visit our website to download a copy of this product's installation instructions, or contact your local FEBCO Representative for more information.



MODEL LF866 ASSEMBLIES

SIZE (DN)		DIMENSIONS																WEIGHT**	
		A		B		C		D		E*		F		G		H		OSY	
in.	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lbs.*	*kg.*
2½	65	40¾	1035	25½	648	12⅛	308	10	254	16⅜	416	4½	114	7⅛	181	5⅞	150	218	99
3	80	41⅞	1064	25⅝	651	12⅛	308	10	254	22⅛	565	4½	114	7⅜	187	6¼	159	245	111
4	100	46¼	1175	28	711	12½	318	10⅛	257	23¼	591	5½	140	8⅛	206	7	178	324	147
6	150	56	1422	34¾	883	15	384	11⅛	283	30⅛	765	6½	165	9⅞	251	9	229	520	236
8	200	65	1651	41¾	1061	17⅛	434	12¼	311	37¾	959	7	178	11⅛	283	9½	241	835	379
10	250	72⅝	1845	46⅜	1178	17⅛	434	12⅜	314	48	1219	9	229	12⅜	314	10½	267	1240	562

Note:

* Indicates nominal dimensions with OSY Gate Valves (Full Open Position)

** Indicates weight of complete Backflow Assemblies with specified Gate Valves

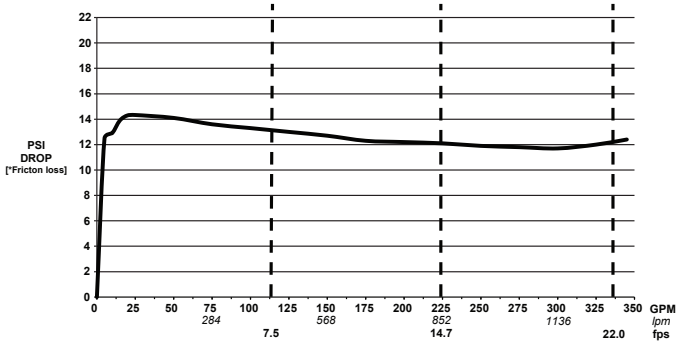
The gap drain is not designed to catch the maximum discharge possible from the relief valve. The installation of the FEBCO air gap with the drain line terminating above a floor drain will handle any normal discharge or nuisance spitting through the relief valve. However, floor drain size may need to be designed to prevent water damange caused by a catastrophic failure condition. Do not reduce the size of the drain line from the air gap fitting.

Performance

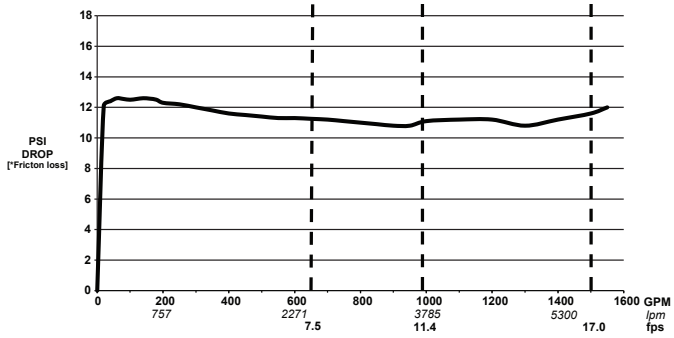
Flow capacity chart identifies valve performance based upon rated water Velocity up to 20fps

- Maximum service flow rate is determined by maximum rated Velocity of 7.5fps.
- AWWA Manual M-22 (Appendix C) recommends that the maximum water Velocity in the services be not more than 10fps.
- UL flow rate is determined by typically rated Velocity of 15 feet/sec.

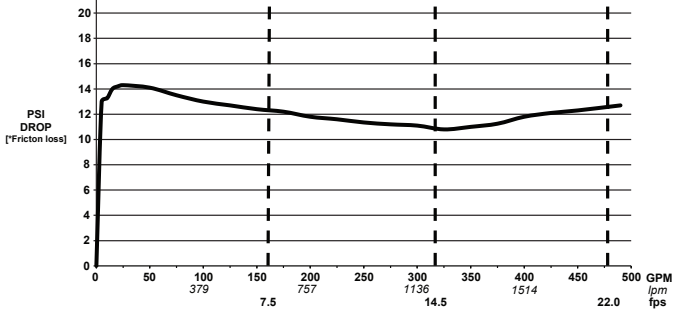
2.5" (LF866)



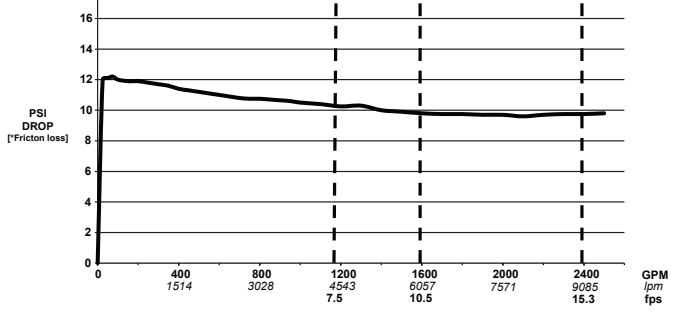
6" (LF866)



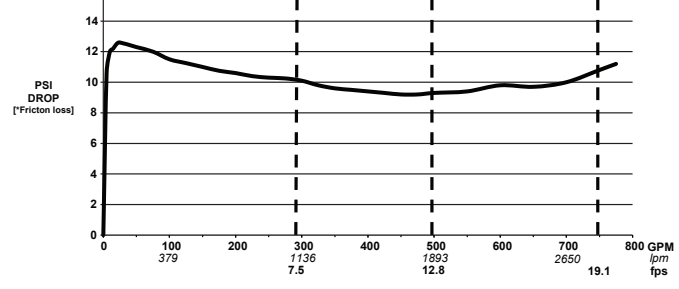
3" (LF866)



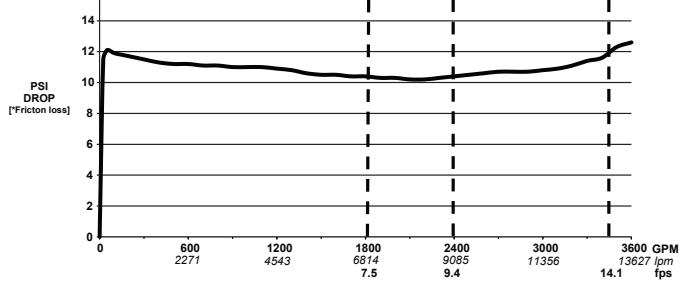
8" (LF866)



4" (LF866)



10" (LF866)



A Watts Water Technologies Company

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