

Engineering Specification

Job Name _____

Contractor _____

Job Location _____

Approval _____

Engineer _____

Contractor's P.O. No. _____

Approval _____

Representative _____

LEAD FREE*

Series LF850 Small Double Check Valve Assembly

½" – 2"

⚠ WARNING

Freeze sensor solely provides alerts about a possible freeze event and cannot prevent a freeze event from occurring. User action is required to prevent freeze conditions from causing product and/or property damage.

Series LF850 Small Double Check Valve assembly is designed for non-health hazard applications. This backflow preventer protects against polluted water entering the potable water supply due to backsiphonage and or backpressure. The series features Lead Free* construction to comply with Lead Free* installation requirements. The Lead Free* Double Check Valve assemblies shall comply with state codes and standards, where applicable, requiring reduced lead content.

The series includes a freeze sensor for use with SentryPlus Alert® technology to monitor temperature and alert facility personnel when freeze conditions can cause damage to equipment. (The sensor is installed on the assembly exterior and does not alter assembly functions or certifications.)

NOTICE

An add-on connection kit (sold separately) is required to activate the freeze sensor. Without the connection kit, the sensor is a passive component that does not communicate with any other device. (For more information download RP/IS-F-850S.)

NOTICE

Use of the freeze 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 protection against a freeze event.

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

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

FEBCO product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact FEBCO Technical Service. FEBCO 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 FEBCO products previously or subsequently sold.



LF850 with Freeze Sensor

Features

- Constructed with Lead Free cast copper silicon alloy
- Standard assembly with ball valves
- Optional union ball valves
- Top-mounted test cocks
- Replaceable seats and seat discs
- Two in-line independent positive seating check modules
- Compact modular design facilitates maintenance with a single access cover for in-line repairs
- End connections NPT ANSI/ASME B1.20.1
- Tee handles, sizes ½" to 1"; lever handles, sizes 1¼" to 2"
- Available freeze sensor connection kit to activate a monitoring system that trigger alerts for low and freezing temperatures
 - Built-in Wi-Fi function to communicate freeze alerts directly to the user, eliminating the need for a third-party controller
 - Included standalone sensor to provide flexibility in locating a measuring tool at or near any water-carrying outdoor installation vulnerable to freezing conditions
 - Switched output relay to augment BMS or irrigation management systems with reinforced control of sprinkler systems

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.



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Specification

FEBCO LF850 Small Double Check Valve assembly backflow preventer shall consist of two independently operating, spring-loaded check valves. The pressure drop across the first check valve shall be approximately 1.0 psig with no flow. The pressure drop across the second check valve shall also be 1.0 psig with no flow. A complete assembly shall include two shutoff valves and four test cocks. End connections shall be NPT ANSI/ASME B1.20.1. The assembly shall be a Lead Free construction to comply with Lead Free installation requirements, and shall comply with state codes and standard, where applicable, requiring reduced lead content. The assembly shall be a FEBCO Series LF850 Small, and shall include a freeze sensor mounted to one of the test cocks.

Model/Option

FZ Freeze sensor
U Union ball valve

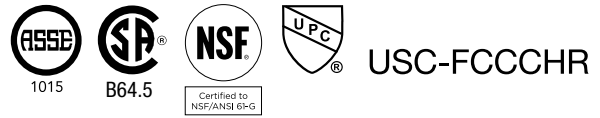
Materials

Valve Body: Lead Free* cast copper silicon alloy
Elastomers: Silicone
Springs: Stainless steel

Pressure – Temperature

Max. Working Pressure: 175 psi (12.1 bar)
Hydrostatic Test Press: 350 psi (24.1 bar)
Temperature Range: 32°F to 140°F (0°C to 60°C)

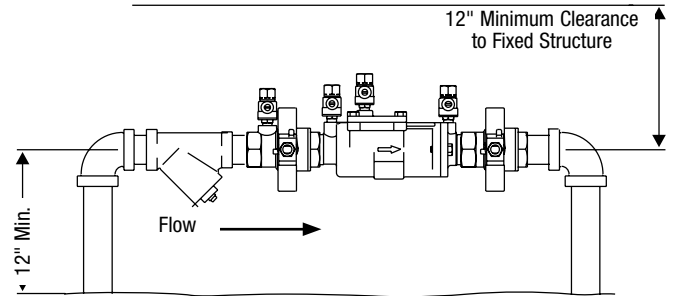
Approvals – Standards



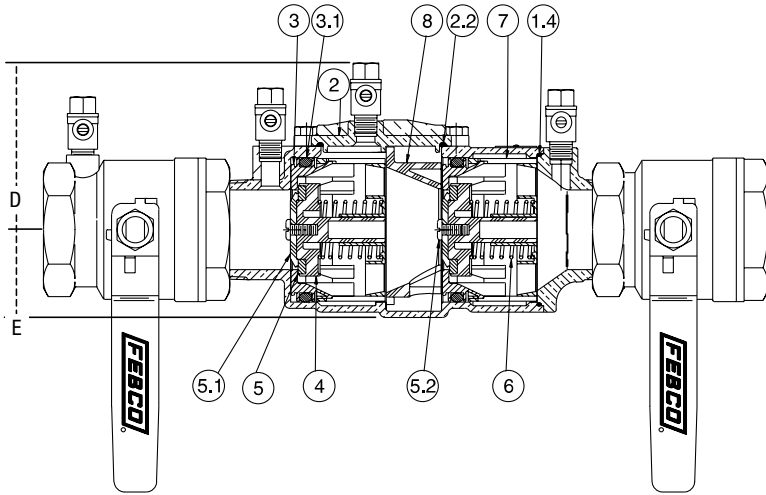
ANSI/AWWA Conformance (C510-92)

Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California
Option FZ not listed

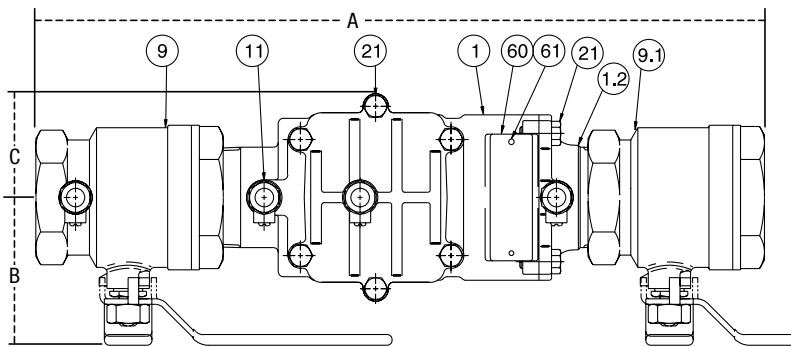
Typical Installation



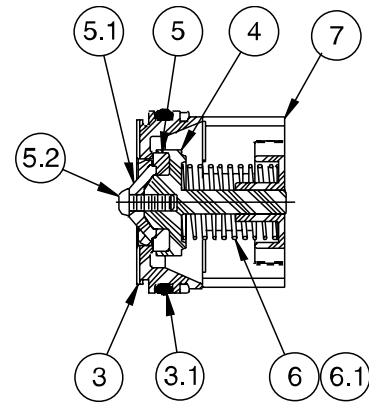
Valve Components



Item	Description	Material
1	Body	Lead Free* cast copper silicon alloy
1.2	Tailpiece	Lead Free* cast copper silicon alloy
1.4	O-ring	Silicone
2	Cover	Lead Free* cast copper silicon alloy
2.2	O-ring	Silicone
3	Seat	Noryl®
3.1	O-ring	Silicone
4	Poppet	Noryl
5	Seat Disc	Silicone
5.1	Disc Retainer	Noryl
5.2	Rnd HD Screw	Stainless steel
6	Spring	Stainless steel
7	Guide	Noryl
8	Retainer Spacer	Noryl
9	Ball Valve (w/tap)	Lead Free* cast copper silicon alloy
9.1	Ball Valve	Lead Free* cast copper silicon alloy
11	Test Cock	Lead Free* cast copper silicon alloy
21	Hex HD Capscrew	Stainless steel
60	Identification Plate	Brass
61	Drive Screw Stick	Stainless steel



Check Assembly



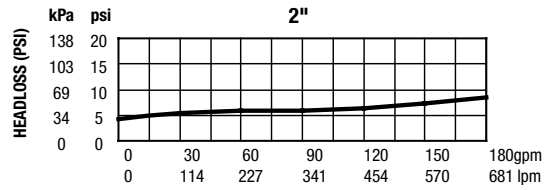
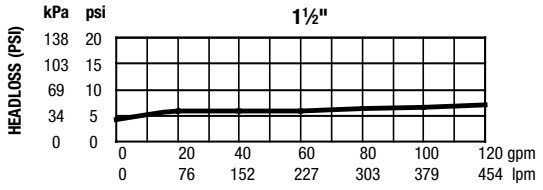
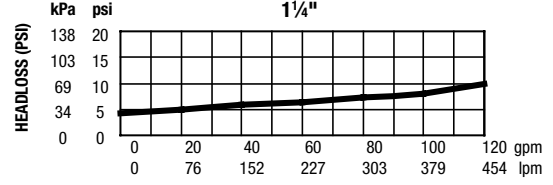
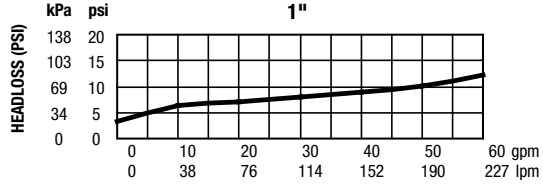
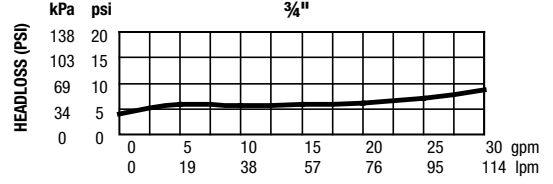
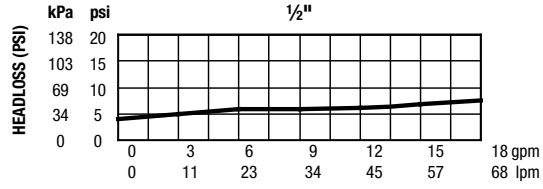
Dimensions and Weights

Call customer service if you need assistance with technical details.

SIZE	DIMENSIONS										WEIGHT		
	A		B		C		D		E		lb	kg	
in.	mm	in.	mm.	in.	mm	in.	mm	in.	mm	in.	mm		
½	15	10	254	1½	38	1½	38	3/8	79	1¼	32	4.2	1.9
¾	20	10¾	273	1½	38	1½	38	3/8	79	1¼	32	4.4	2.0
1	25	12½	318	1⅞	48	1⅝	41	3/8	86	1½	38	6.8	3.1
1¼	32	15⅞	403	3	76	2½	64	4/8	108	2¼	57	15.8	7.2
1½	40	16⅞	416	3	76	2½	64	4/4	108	2¼	57	16.2	7.4
2	50	17⅞	450	3½	89	2½	64	4/4	108	2¼	57	21.1	9.6

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Capacity



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