Engineering Specification

Job Name _____ Contractor _____

Job Location _____ Approval _____

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

Approval _____ Representative _____

LEAD FREE*

Series LF007

Double Check Valve Assembly

2½" – 3"

Series LF007 Double Check Valve assemblies are installed at referenced cross-connections to prevent the backflow of polluted water into the potable water supply. Only those cross-connections identified by local inspection authorities as non-health hazard are allowed the use of an approved double check valve assembly. The iron components of the backflow preventer are coated with ArmorTek®, a patented three-part advanced epoxy system engineered to reduce microbial-induced corrosion (MIC) and protect exposed metal substrate. The series features Lead Free* construction to comply with Lead Free* installation requirements. Check with local authority having jurisdiction regarding vertical orientation, frequency of testing, or other installation requirements.

Smart and Connected technology comes standard on the Series LF007 assembly with NRS gate valves, Model IOT. The model includes sensors integrated at test cocks No. 2, No. 3, and No. 4 to measure pressure fluctuations at the three locations. This technology enables monitoring and assessment of certain aspects of backflow assembly performance and the water supply system.

NOTICE

An add-on monitoring connection kit is required to collect data from the pressure sensors. Without the connection kit, the sensors are passive components that do not communicate with any other device. The add-on connection kit communicates over wired serial (RS-485) interface and is compatible with most Building Management and Building Automation Systems. (The connection kit and pressure sensors are also available for existing installations. For more information, download RP-IS-LF007L.)

NOTICE

Use of integrated pressure sensors and monitoring connection kit with Model IOT does not replace the need to comply with all required instructions, codes, and regulations related to installation, operation, and maintenance of the backflow preventer.

Watts is not responsible for data transmission failures due to power outages, connectivity issues, or improper installation.

LF007-NRS-IOT

Features

- Modular, compact design concept to facilitate maintenance and assembly by retaining the spring load
- ArmorTek coating technology to resist corrosion of internals
- Fused epoxy coated cast iron body
- Top-mounted Lead Free* ball valve test cocks
- Sensors adapted to test cocks on Model IOT for measuring pressure fluctuations; activated with add-on monitoring connection kit (BMS/BAS only)
- Replaceable seats and seat discs
- Easier maintenance through a single, top-entry cover
- No special tools required for servicing
- Low pressure drop

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.

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

WATTS®

Specification

A Double Check Valve assembly shall be installed at each noted location. The assembly shall consist of two positive seating check modules with captured springs and rubber seat discs. The check module seats and seat discs shall be replaceable. Service of all internal components shall be through a single access cover secured with stainless steel bolts. The Double Check Valve assemblies shall be constructed using Lead Free* cast copper silicon alloy. Lead Free* Double Check Valve assemblies shall comply with state codes and standards, where applicable, requiring reduced lead content. The assembly shall also include two resilient seated isolation valves; four top mounted, resilient seated test cocks. The assembly shall meet the requirements of ASSE Standard 1015 and AWWA Standard C510. Iron components of the backflow preventer shall incorporate ArmorTek coating technology, delivering integrated protection against electrochemical corrosion and microbial-induced corrosion. Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California. Assembly shall be Watts Series LF007.

Model/Option

Prefix:

U	Union connections

Suffix:

NRS	Non-rising stem resilient seated gate valves
OSY	UL Classified outside stem and yoke resilient seated gate valves
LF	Without shutoff valves
IOT	With pressure-sensing IoT test cocks and NRS gate valves

Materials

Check Valve Body:	Lead Free* cast iron
Coating:	ArmorTek powder coating, applied to internal and external surfaces
Check Module:	Captured spring and rubber seat disc
Access cover bolts:	Stainless steel

Pressure — Temperature

Temperature Range: 33˚F – 110°F (0.5˚C – 43°C) continuous, 140°F (60°C) intermittent

Maximum Working Pressure: 175 psi (12.1 bar)

Standards

ASSE Standard 1015, AWWA Standard C510

IAPMO PS31, CSA B64.5

Approvals

USC-FCCCHR

ASSE, AWWA, IAPMO, CSA, UPC

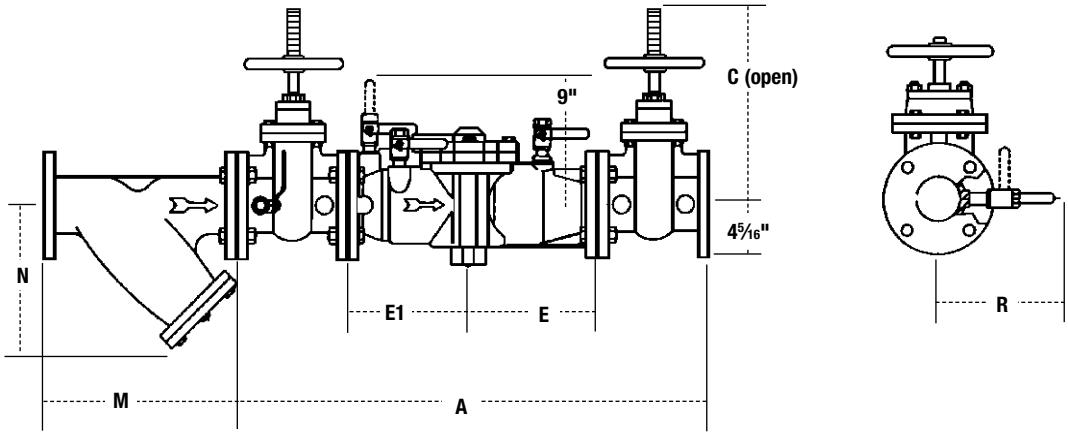
Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California

Option LF not listed

UL Classified with OSY gate valves (horizontal only)

Horizontal and vertical “flow up” approval on all sizes

Dimensions – Weights



Call customer service if you need assistance with technical details.

SIZE		DIMENSIONS								WEIGHT	
		A		B		E, E1		R			
	in.	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lb*	*kg*
LF007-NRS	2 1/2	33 1/8	841	9 3/8	238	9 1/16	230	8 3/4	222	155	70
LF007-OSY	2 1/2	33 1/8	841	16 3/8	416	9 1/16	230	8 3/4	222	158	72
LF007-NRS	3	34 1/4	870	10 1/4	260	9 1/16	230	8 3/4	222	185	84
LF007-OSY	3	34 1/4	870	18 7/8	479	9 1/16	230	8 3/4	222	185	84

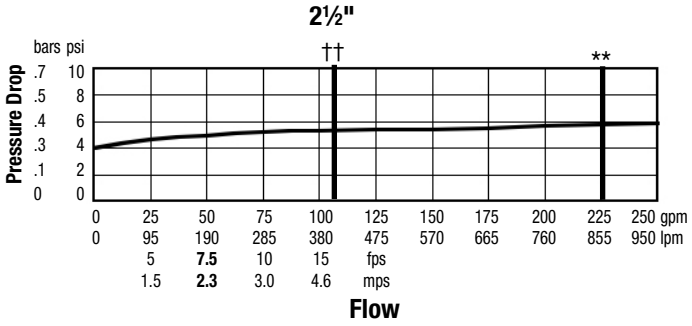
Strainer Dimensions

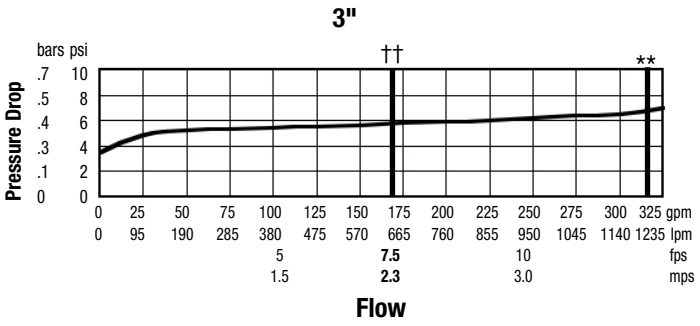
SIZE	DIMENSIONS				WEIGHT	
	M		N			
in.	*in.*	*mm*	*in.*	*mm*	*lb*	*kg*
2 1/2	10	254	6 1/2	165	28	13
3	10 1/8	267	7	178	34	15

Capacity

As compiled from documented Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California lab tests.

†† Typical maximum system flow rate (7.5 ft/s, 2.3 m/s)
** UL rated flow





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