

## Engineering Specification

Job Name \_\_\_\_\_  
 Job Location \_\_\_\_\_  
 Engineer \_\_\_\_\_  
 Approval \_\_\_\_\_

Contractor \_\_\_\_\_  
 Approval \_\_\_\_\_  
 Contractor's P.O. No. \_\_\_\_\_  
 Representative \_\_\_\_\_

# LEAD FREE\*

## Series LF007 Double Check Valve Assemblies

1/2" – 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 valve body is fused with ArmorTek™ technology to resist corrosion due to microbial induced corrosion (MIC) or 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.

### Features

- Modular, compact design concept to facilitate maintenance and assembly by retaining the spring load
- Advanced ArmorTek™ coating technology to resist corrosion of internals\*\*
- Lead Free\* cast copper silicon alloy body construction — 1/2" to 2"
- Fused epoxy coated cast iron body — 2 1/2" to 3"
- Top-mounted Lead Free\* ball valve test cocks
- Replaceable seats and seat discs
- Easier maintenance through a single, top-entry cover
- No special tools required for servicing
- Tee handles — 1/2" to 1"
- Low pressure drop

### 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. The valve body shall utilize a coating system with built in electrochemical corrosion inhibitor and microbial inhibitor.\*\* Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California. Assembly shall be a Watts Series LF007.

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

\*\* Armortek coating applies to the 2 1/2" and 3" models only.



### NOTICE

For IOT models, an add-on monitoring connection kit is required to collect psi measurements from the integrated pressure sensors. Without the connection kit, the pressure sensors are passive components and will not communicate with any other device. For BMS only. (The connection kit and pressure sensors are also available for existing installations. For more information, download RP-IS-007.)

### NOTICE

Use of integrated pressure sensors on and monitoring connection kit with IOT models does not remove 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 issues.

### 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.

## Model/Option

### Prefix:

U – Union connections

### Suffix:

½" – 2"

S – Copper silicon alloy strainer

LF – Without shutoff valves

W/Press\* – Press inlet x press outlet

2½" – 3"

NRS – Non-rising stem resilient seated gate valves

OSY – UL Classified and FM Approved 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 copper silicon alloy (½" to 2"); cast iron (2½" to 3")

Check Module: Captured spring and rubber seat disc

Access cover bolts: Stainless steel

Coating technology: Armortek (2½" and 3" only)

## Pressure – Temperature

½" – 2"

Temperature Range: 33°F – 180°F (0.5°C – 82°C)

Maximum Working Pressure: 175 psi (12.1 bar)

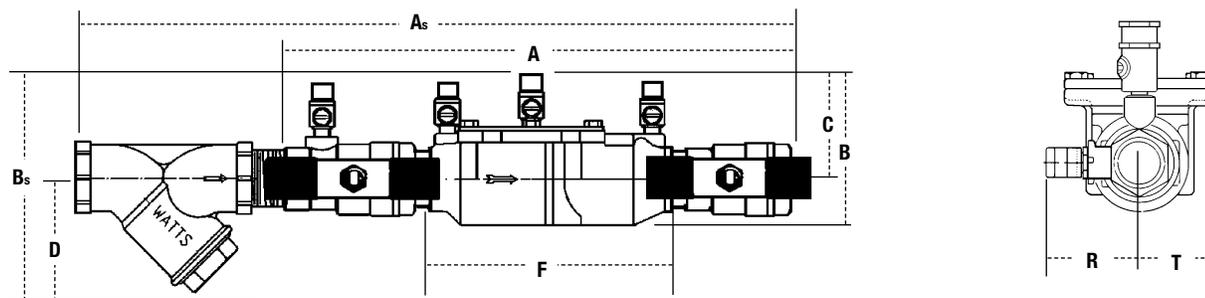
2½" – 3"

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)

## Dimensions – Weights

½" – 2"



Subscript 'S' = strainer model

MODEL	SIZE	DIMENSIONS										WEIGHT							
		A		B		C		D		F		G		R		T		lb	kg
	in.	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		
†▲▼ LF007QT	½	10	254	4⅝	117	2⅞	62	—	—	5	127	3⅞	85	2⅝	59	2⅞	52	4.5	2
†▲▼ LF007M3QT	¾	11⅞	282	4	102	3⅞	79	—	—	6⅞	157	3⅞	87	2⅞	54	1⅝	33	5	2.3
†▲▼ LF007M1QT	1	13¾	337	5⅞	130	4	102	—	—	7½	191	3⅞	85	1⅞	43	1⅞	43	12	5.4
†▲▼ LF007M2QT	1¼	16⅞	416	5	127	3⅞	84	—	—	9½	241	5	127	3	76	2	50	15	6.8
†▲▼ LF007M2QT	1½	16¾	425	4⅞	124	3½	89	—	—	9¾	248	5⅞	148	3⅞	79	2⅞	68	15.9	7.2
†▲▼ LF007M1QT	2	19½	495	6¼	159	4	102	—	—	13⅞	340	6⅞	156	3⅞	87	2⅞	68	25.7	11.7
●▼ LF007QT-S	½	13	330	6	152	2⅞	62	3	76	5	127	3⅞	85	2⅝	59	2⅞	52	5.5	2.5
●▼ LF007M3QT-S	¾	14½	368	6⅞	156	3⅞	79	3	76	6⅞	157	3⅞	87	2⅞	54	1⅝	33	6.7	3.1
●▼ LF007M1QT-S	1	17⅞	456	7¾	197	4	102	3¼	83	7½	191	3⅞	85	1⅞	43	1⅞	43	14	6.4
●▼ LF007M2QT-S	1¼	21½	546	7⅞	179	3⅞	84	3½	83	9½	241	5	127	3	76	2	50	19	8.6
●▼ LF007M2QT-S	1½	21¾	552	7⅞	179	3½	89	3¼	95	9¾	248	5⅞	148	3⅞	79	2⅞	68	19.6	8.9
●▼ LF007M1QT-S	2	25¾	654	8¾	222	4	102	4	102	13⅞	340	6⅞	156	3⅞	87	2⅞	68	33.5	15.2

\* Viega ProPress® connections are optional factory-installed fitting on each end of the approved/certified assembly.

## Standards

ASSE Standard 1015, AWWA Standard C510

IAPMO PS31, CSA B64.5

## Approvals



† ASSE, AWWA, IAPMO, CSA, UPC

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

• Models with suffix LF and suffix S not listed

UL Classified without shutoff valves only (¾" to 2", except 007M3LF)

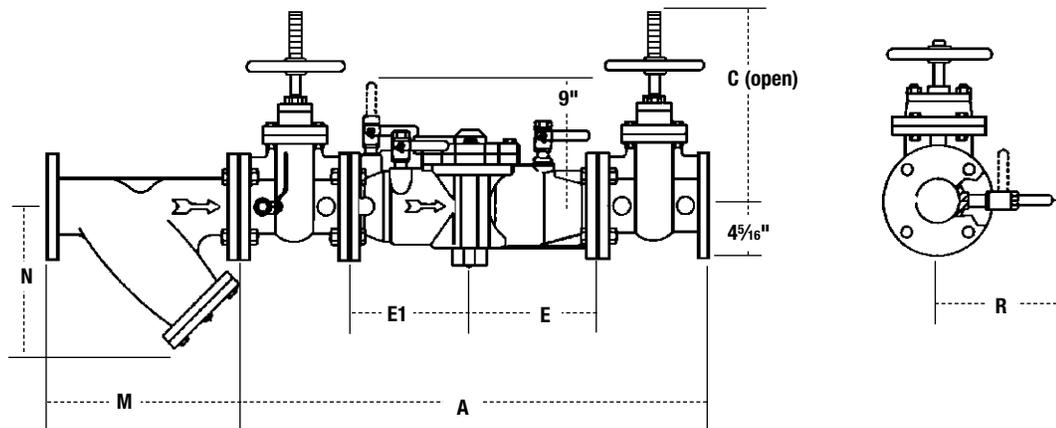
◆ UL Classified with OSY gate valves (2½" and 3" horizontal only)

▼ Lead Free\* ½" to 2" models with strainers

Horizontal and vertical "flow up" approval on all sizes

## Dimensions – Weights

2½" – 3"



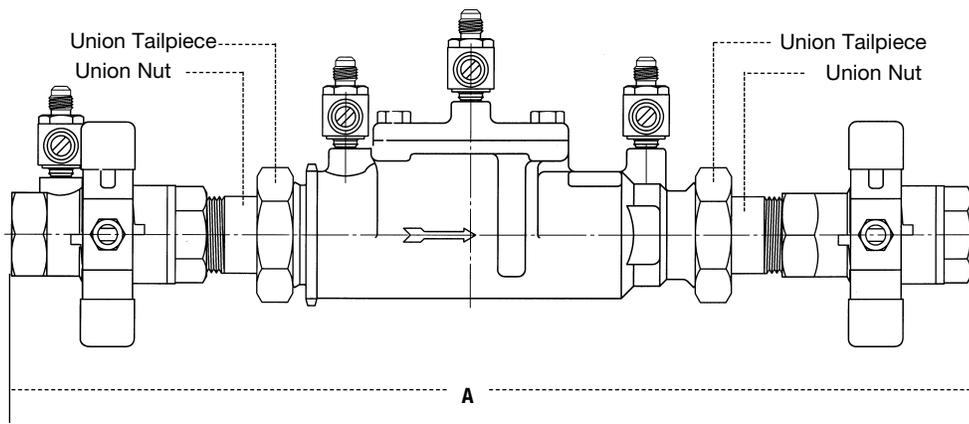
MODEL	SIZE	DIMENSIONS								WEIGHT	
		A		B		E, E1		R		lb	kg
	in.	in.	mm	in.	mm	in.	mm	in.	mm		
▲ LF007-NRS	2½	33⅛	841	9⅜	238	9⅛	230	8¾	222	155	70
▲◆ LF007-OSY	2½	33⅛	841	16⅜	416	9⅛	230	8¾	222	158	72
▲ LF007-NRS	3	34¼	870	10¼	260	9⅛	230	8¾	222	185	84
▲◆ LF007-OSY	3	34¼	870	18⅞	479	9⅛	230	8¾	222	185	84

### Strainer Dimensions

SIZE	WEIGHT					
	M		N		lb	kg
in.	in.	mm	in.	mm		
2½	10	254	6½	165	28	13
3	10⅞	267	7	178	34	15

## LFU007

½" – 2"



MODEL	SIZE	DIMENSIONS	
		A	
	in.	in.	mm
LFU007QT	½	12 <sup>13</sup> / <sub>16</sub>	326
LFU007M2QT	¾	13 <sup>13</sup> / <sub>16</sub>	350
LFU007M2QT	1	16 <sup>5</sup> / <sub>8</sub>	422
LFU007M2QT	1¼	20 <sup>3</sup> / <sub>4</sub>	527
LFU007M2QT	1½	21½	546
LFU007M1QT	2	24½	622

# 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/sec, 2.3 m/sec)

\*\* UL rated flow

