

## Engineering Specification

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

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

# LEAD FREE\*

## Series LF007 Double Check Valve Assembly

1/2" – 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 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 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.

The included freeze sensor can indicate when temperature nears the freezing point. Installed on the assembly exterior, the sensor does not alter assembly functions or certifications. The sensor relays a signal that triggers notification to facility personnel to take preventive action, thus reducing or eliminating equipment replacement or repair.

### NOTICE

An add-on connection kit is required to activate the freeze sensor. Without the connection kit, the sensor is a passive component that has no communication with any other device. The sensor is on the assembly exterior and does not modify functions or certification. (For more information download RP/IS-007S)

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

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.



### Features

- Modular, compact design concept to facilitate maintenance and assembly by retaining the spring load
- Lead Free\* cast copper silicon alloy body construction
- 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, sizes 1/2" to 1"; lever handles, sizes 1 1/4" to 2"
- Low pressure drop
- Sensor included on sizes 1/2" to 2" to indicate temperature at freeze thresholds when activated with an add-on connection kit, compatible with building and irrigation management systems

### 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 the backflow preventer.

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

### 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.

## 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. Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California. Assembly shall be a Watts Series LF007, and shall include a freeze sensor mounted to one of the test cocks.

## Model/Option

### Prefix:

U Union connections

### Suffix:

FZ Freeze sensor  
S Copper silicon alloy strainer  
LF Without shutoff valves  
W/Press\*\* Press inlet x press outlet

## Materials

Check Valve Body: Lead Free\* cast copper silicon alloy  
Check Module: Captured spring and rubber seat disc  
Access cover bolts: Stainless steel

## Pressure — Temperature

Temperature Range: 33°F – 180°F (0.5°C – 82°C)  
Maximum Working Pressure: 175 psi (12.1 bar)

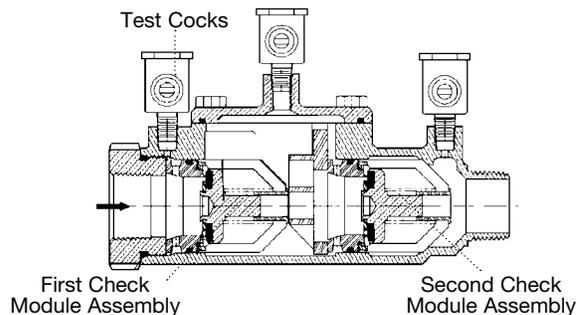
## Standards

ASSE Standard 1015, AWWA Standard C510  
IAPMO PS31, CSA B64.5

## Approvals

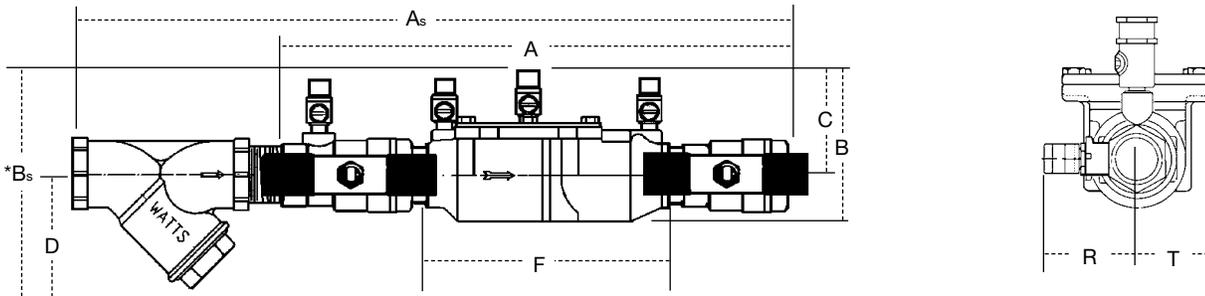


- ASSE, AWWA, IAPMO, CSA, UPC
- Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California
- Options FZ, LF, and S not listed
- UL Classified without shutoff valves only (¾" to 2", except 007M3LF)
- Lead Free\* models with strainers
- Horizontal and vertical "flow up" approval on all sizes



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

## Dimensions – Weights

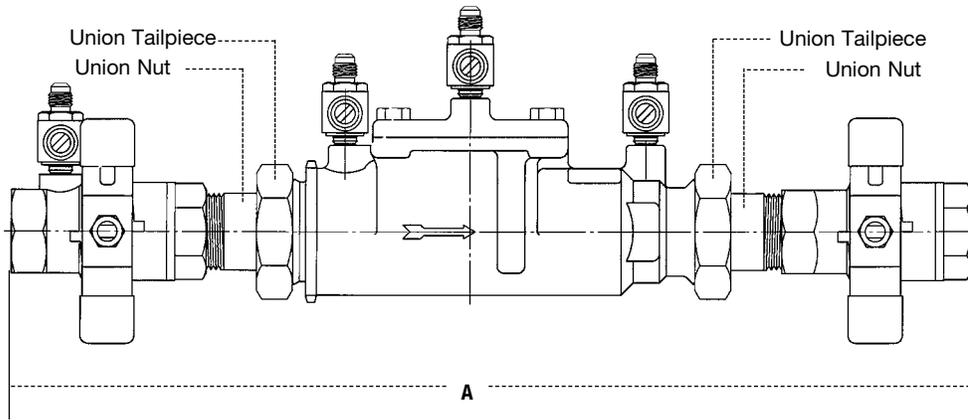


\*Subscript 'S' = strainer model

Call customer service if you need assistance with technical details.

	SIZE		DIMENSIONS										WEIGHT						
	A		B		C		D		F		G		R		T		lb	kg	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm			
007QT	1/2	10	254	4 5/8	117	2 1/16	62	—	—	5	127	3 3/8	85	2 5/16	59	2 1/16	52	4.5	2.0
007M3QT	3/4	11 1/8	282	4	102	3 1/8	79	—	—	6 3/16	157	3 1/16	87	2 1/8	54	1 5/16	33	5.0	2.3
007M1QT	1	13 3/4	337	5 1/8	130	4	102	—	—	7 1/2	191	3 3/8	85	1 11/16	43	1 11/16	43	12.0	5.4
007M2QT	1 1/4	16 3/4	416	5	127	3 5/16	84	—	—	9 1/2	241	5	127	3	76	2	50	15.0	6.8
007M2QT	1 1/2	16 3/4	425	4 7/8	124	3 1/2	89	—	—	9 3/4	248	5 13/16	148	3 1/8	79	2 11/16	68	15.9	7.2
007M1QT	2	19 1/2	495	6 1/4	159	4	102	—	—	13 3/8	340	6 1/8	156	3 7/16	87	2 11/16	68	25.7	11.7
007QT-S	1/2	13	330	6	152	2 1/16	62	3	76	5	127	3 3/8	85	2 5/16	59	2 1/16	52	5.5	2.5
007M3QT-S	3/4	14 1/2	368	6 1/8	156	3 3/8	79	3	76	6 3/16	157	3 7/16	87	2 1/8	54	1 5/16	33	6.7	3.1
007M1QT-S	1	17 15/16	456	7 3/4	197	4	102	3 1/4	83	7 1/2	191	3 3/8	85	1 11/16	43	1 11/16	43	14.0	6.4
007M2QT-S	1 1/4	21 1/2	546	7 1/16	179	3 5/16	84	3 1/2	83	9 1/2	241	5	127	3	76	2	50	19.0	8.6
007M2QT-S	1 1/2	21 3/4	552	7 1/16	179	3 1/2	89	3 3/4	95	9 3/4	248	5 13/16	148	3 3/8	79	2 11/16	68	19.6	8.9
007M1QT-S	2	25 3/4	654	8 3/4	222	4	102	4	102	13 3/8	340	6 1/8	156	3 7/16	87	2 11/16	68	33.5	15.2

### LFU007



MODEL	SIZE	DIMENSIONS	
		A	
	in.	in.	mm
U007QT	1/2	12 13/16	326
U007M2QT	3/4	13 13/16	350
U007M2QT	1	16 3/8	422
U007M2QT	1 1/4	20 3/4	527
U007M2QT	1 1/2	21 1/2	546
U007M1QT	2	24 1/2	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/s, 2.3 m/s)

\*\* UL rated flow

