Engineering Specification

Job Name _____ Contractor _____

Job Location _____ Approval _____

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

Approval _____ Representative _____

LEAD FREE*

Series LF007

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 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 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 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.)

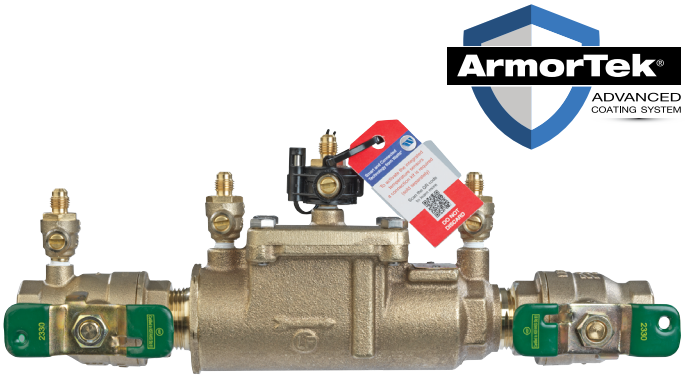
NOTICE

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 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)

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.



LF007 with Freeze Sensor

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
- ArmorTek coating technology to resist corrosion of internals
- Replaceable seats and seat discs
- Easier maintenance through a single, top-entry cover
- No special tools required for servicing
- Tee handles, sizes ½" to 1"; lever handles, sizes 1¼" to 2"
- Low pressure drop
- 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.

* 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.

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. Iron components of the backflow preventer shall incorporate ArmorTek coating technology, delivering integrated protection against electrochemical corrosion and microbial-induced corrosion. 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. The assembly shall be 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
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 – 180°F (0.5°C – 82°C)

Maximum Working Pressure: 175 psi (12.1 bar)

Standards

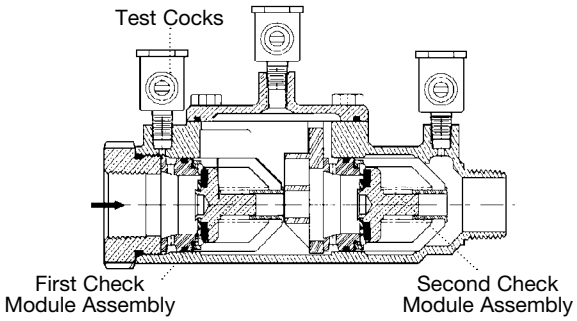
ASSE Standard 1015, AWWA Standard C510

IAPMO PS31, CSA B64.5

Approvals

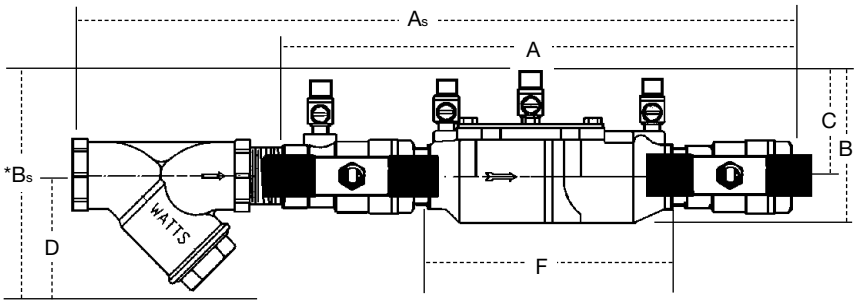
USC-FCCCHR

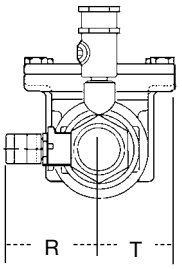
- ASSE, AWWA, IAPMO, CSA, UPC
- Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California
- Options FZ, LF, and S not listed
- UL Classified without shutoff valves only (¾" to 2", except 007M3LF)
- Lead Free* models with strainers
- Horizontal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



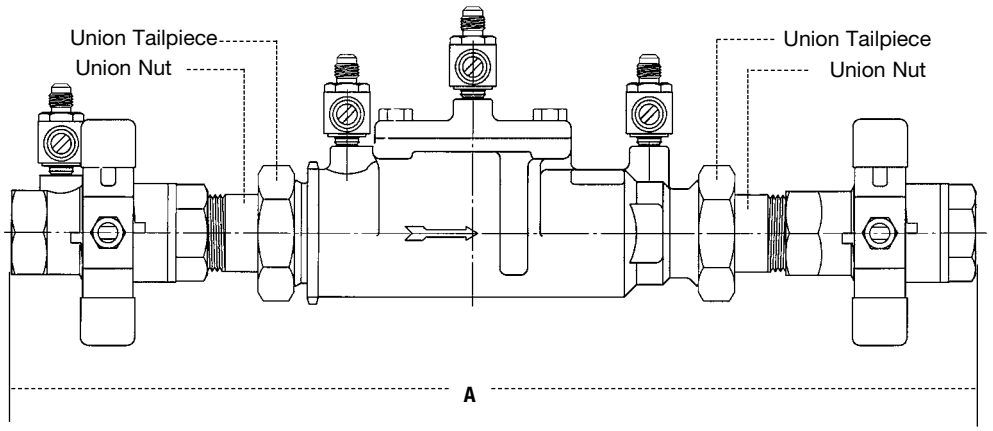


*Subscript 'S' = strainer model

Call customer service if you need assistance with technical details.

SIZE		DIMENSIONS																WEIGHT	
		A		B		C		D		F		G		R		T			
	in.	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lb*	*kg*
007QT	½	10	254	4⅝	117	2 7/16	62	—	—	5	127	3⅜	85	2 5/16	59	2 1/16	52	4.5	2.0
007M3QT	¾	11⅛	282	4	102	3⅛	79	—	—	6 3/16	157	3 7/16	87	2⅛	54	15/16	33	5.0	2.3
007M1QT	1	13¼	337	5⅛	130	4	102	—	—	7½	191	3⅜	85	1 11/16	43	1 11/16	43	12.0	5.4
007M2QT	1¼	16⅜	416	5	127	3 5/16	84	—	—	9½	241	5	127	3	76	2	50	15.0	6.8
007M2QT	1½	16¾	425	4⅞	124	3½	89	—	—	9¾	248	5 13/16	148	3⅛	79	2 11/16	68	15.9	7.2
007M1QT	2	19½	495	6¼	159	4	102	—	—	13⅜	340	6⅛	156	3 7/16	87	2 11/16	68	25.7	11.7
007QT-S	½	13	330	6	152	2 7/16	62	3	76	5	127	3⅜	85	2 5/16	59	2 1/16	52	5.5	2.5
007M3QT-S	¾	14½	368	6⅛	156	3⅛	79	3	76	6 3/16	157	3 7/16	87	2⅛	54	15/16	33	6.7	3.1
007M1QT-S	1	17 15/16	456	7¾	197	4	102	3¼	83	7½	191	3⅜	85	1 11/16	43	1 11/16	43	14.0	6.4
007M2QT-S	1¼	21½	546	7 1/16	179	3 5/16	84	3½	83	9½	241	5	127	3	76	2	50	19.0	8.6
007M2QT-S	1½	21¾	552	7 1/16	179	3½	89	3¾	95	9¾	248	5 13/16	148	3⅛	79	2 11/16	68	19.6	8.9
007M1QT-S	2	25¾	654	8¾	222	4	102	4	102	13⅜	340	6⅛	156	3 7/16	87	2 11/16	68	33.5	15.2

LFU007



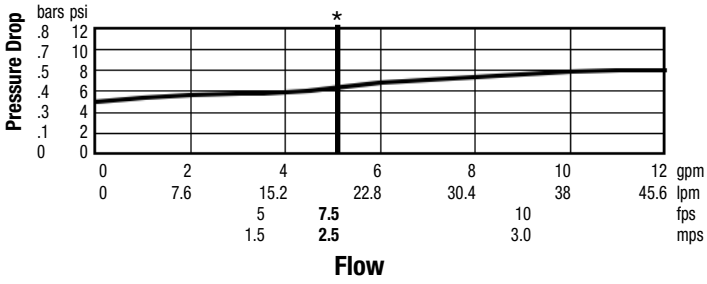
MODEL	SIZE	DIMENSIONS	
		A	
	in.	*in.*	*mm*
U007QT	½	12 13/16	326
U007M2QT	¾	13 13/16	350
U007M2QT	1	16⅝	422
U007M2QT	1¼	20¾	527
U007M2QT	1½	21½	546
U007M1QT	2	24½	622

Capacity

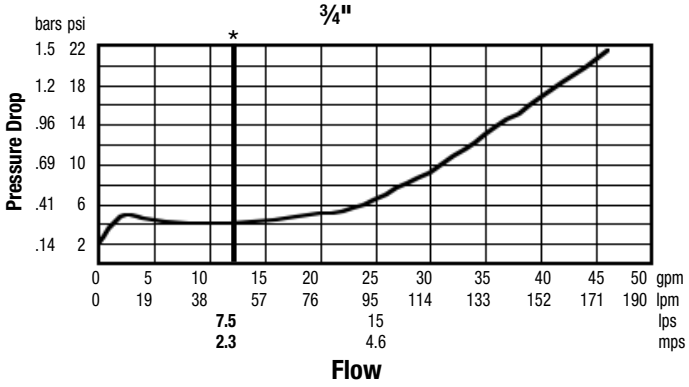
As compiled from documented Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California lab tests.

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

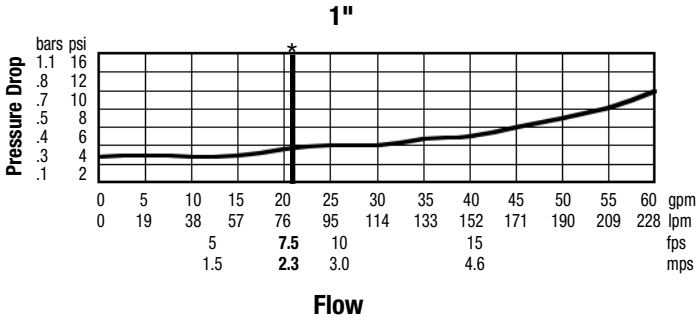
½"



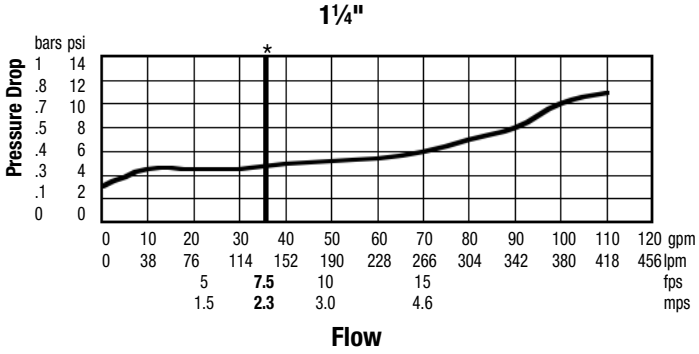
¾"



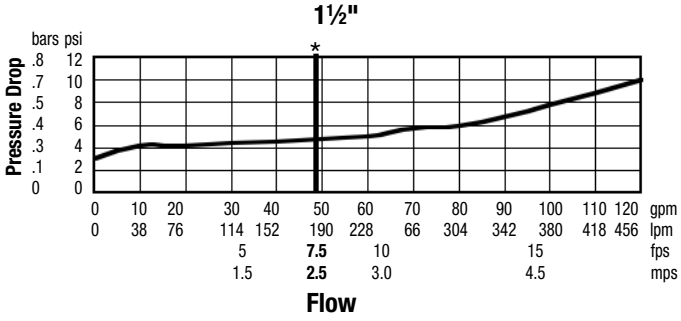
1"



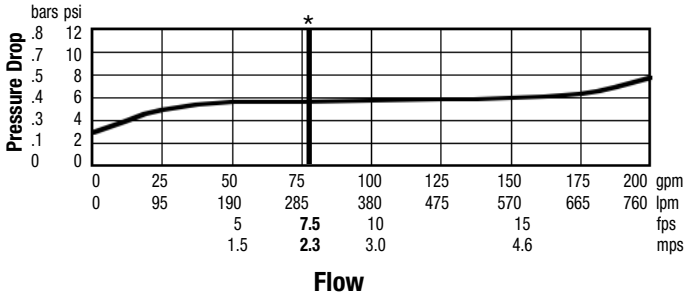
1¼"



1½"



2"



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