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Comfort Systems USA (Arkansas), Inc.
P.O. Box 16620
Little Rock, AR 72231
Phone 501-834-3320
Fax 501-834-5416

Date: 2/4/2025
Return Request: 2/14/2025
Project: City Of Sherwood Public Works (Site/Washbay/Shooting Range)
Supplier: Falk
Manufacturer: Various
Submittal: Plumbing Piping Specialties
Submittal Number: 22 10 06-01
Drawing # and Installation: Plumbing Drawings

ARCHITECT
Cromwell
1300 East 6th Street
Little Rock, AR 72202
501-372-2900

ENGINEER
Cromwell
1300 East 6th Street
Little Rock, AR 72202
501-372-2900

GENERAL CONTRACTOR
Baldwin & Shell
1000 W. Capitol Ave.
Little Rock, AR 72201
501-374-8677

MECHANICAL SUBCONTRACTOR
Comfort Systems USA (Arkansas), Inc.
9924 Landers Rd.
N. Little Rock, AR 72117
501-834-3320

Notes:

CSUSA PROJECT NO.
24-6084
sean@comfortar.com

Falk
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(501) 321-1231 FAX (501) 321-4015

DATE – DECEMBER 9, 2024

SUBMITTAL FOR MATERIAL

JOB NAME:

SHERWOOD PUBLIC WORKS
SITE, WASH BAY, & SHOOTING RANGE
SHERWOOD, AR

PLUMBING CONTRACTOR:

COMFORT SYSTEMS USA
NORTH LITTLE ROCK, AR

RPZA-1

Engineering Specification

Job Name _____ Contractor _____

Job Location _____ Approval _____

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

Approval _____ Representative _____

LEAD FREE*

Series LF009

Reduced Pressure Zone Assemblies

¼" – 3"

Series LF009 Reduced Pressure Zone assemblies are designed to protect potable water supplies in accordance with national plumbing codes and water authority requirements. These series are used in a variety of installations, including the prevention of health hazard cross-connections in piping systems or for containment at the service line entrance. They are also used in irrigation systems, boiler feed, water lines, and other installations requiring maximum protection. The body construction is fused with ArmorTek™ coating technology to resist corrosion due to microbial induced corrosion (MIC) or exposed metal substrate.* The series also features Lead Free* construction to comply with Lead Free* installation requirements.

The series features two in-line, independent check valves, captured springs, and replaceable check seats with an intermediate relief valve. Its compact modular design facilitates maintenance and assembly access. Sizes ¼" to 1" shutoffs have tee handles.

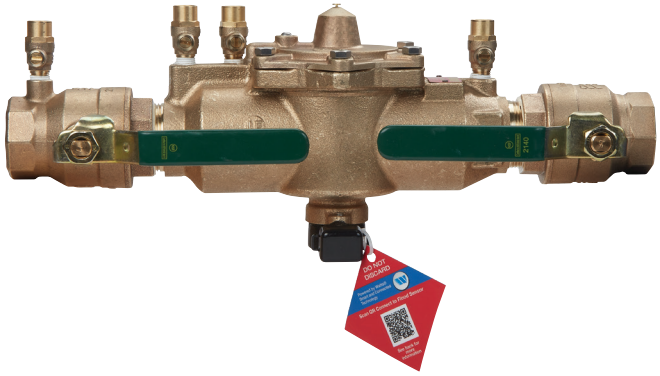
Series LF009 assemblies of sizes ½" to 3" include a flood sensor to detect excessive water discharges from the relief valve. The sensor is installed on the assembly exterior and does not alter assembly functions or certifications. The sensor relays a signal that triggers notification to facility personnel who can take corrective action, thus avoiding the possibility of ruinous flooding and costly damage.

NOTICE

An add-on connection kit is required to activate the flood sensor. Without the connection kit, the sensor is a passive component that has no communication with any other device. (For more information, download RP/IS-009.)

Features

- Single access cover and modular check construction for ease of maintenance
- Top entry to all internals for immediate accessibility
- Captured springs for safe maintenance
- Internal relief valve for reduced installation clearances
- Replaceable seats for economical repair
- ArmorTek™ coating technology to resist internal corrosion†



LF009M2-QT-FS

- Lead Free* cast copper silicon alloy body construction (¼" – 2")
- Fused epoxy coated cast iron body (2½" – 3")
- Ball valve test cocks — screwdriver slotted (¼" – 2")
- Large body passages provides low pressure drop
- Compact, space saving design
- No special tools required for servicing
- Sensor on the relief valve for flood detection (½" – 3")
- Flood alerts feature activated with add-on sensor connection kit, compatible with BMS and cellular communication

NOTICE

Use of the flood sensor does not replicate the need to comply with all required instructions, codes, and regulations related to installation, operation, and maintenance of this product, including

Watts® is not responsible for the failure of alerts due to connectivity or 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.

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

†Amortek coating applied to the 2½" and 3" models only.

WATTS®

Specification

A Reduced Pressure Zone Assembly shall be installed at each potential health hazard location to prevent backflow due to backsiphonage and/or backpressure. The assembly shall consist of an internal pressure differential relief valve located in a zone between two positive seating check modules with captured springs and silicone seat discs. Seats and seat discs shall be replaceable in both check modules and the relief valve. There shall be no threads or screws in the waterway exposed to line fluids. Service of all internal components shall be through a single access cover secured with stainless steel bolts. Body and shutoffs shall be constructed using Lead Free* cast copper silicon alloy materials. Lead Free* reduced pressure zone assembly shall comply with state codes and standards, where applicable, requiring reduced lead content.

The assembly shall also include two resilient seated isolation valves, four resilient seated test cocks, and an air gap drain fitting. The valve body shall utilize a coating system with built-in electrochemical corrosion inhibitor and microbial inhibitor.† The assembly shall meet the requirements of USC; ASSE Std. 1013; AWWA Std. C511; CSA B64.4. Shall be a Watts Series LF009, and shall include a sensor on the relief valve for flood detection on sizes ½" to 3".

Materials

¼" – 2"

Lead Free* cast copper silicon alloy body construction, silicone rubber disc material in the first and second check plus the relief valve. Replaceable polymer check seats for first and second checks. Removable relief valve seats. Stainless steel cover bolts.

Standardly furnished with NPT body connections. Model LF009QT furnished with quarter-turn, full port, resilient seated, Lead Free* cast copper silicon alloy body ball valve shutoffs.

2½" – 3"

- FDA-approved epoxy-coated cast iron unibody with plastic seats
- Relief valve with stainless steel seat and trim
- Lead Free* cast copper silicon alloy body ball valve test cocks

Model/Option

¼" – 2"

Prefix:

U – Union connections

Suffix:

FS – Flood detection sensor (½" – 2")
LF – Without shutoff valves
PC – Internal polymer coating
Press** – Press inlet x press outlet (½" – 2")
QT – Quarter-turn ball valves
S – Strainer

2½" – 3"

Suffix:

FS – Flood detection sensor
LF – Without shutoff valves
NRS – Non-rising stem resilient seated gate valves
OSY – UL Classified and FM Approved outside stem and yoke resilient seated gate valves
S-FDA – FDA epoxy coated strainer

NOTE: The installation of a drain line is recommended. When installing a drain line, an air gap is necessary. (For more information download ES-AG/EL/TC at watts.com.)

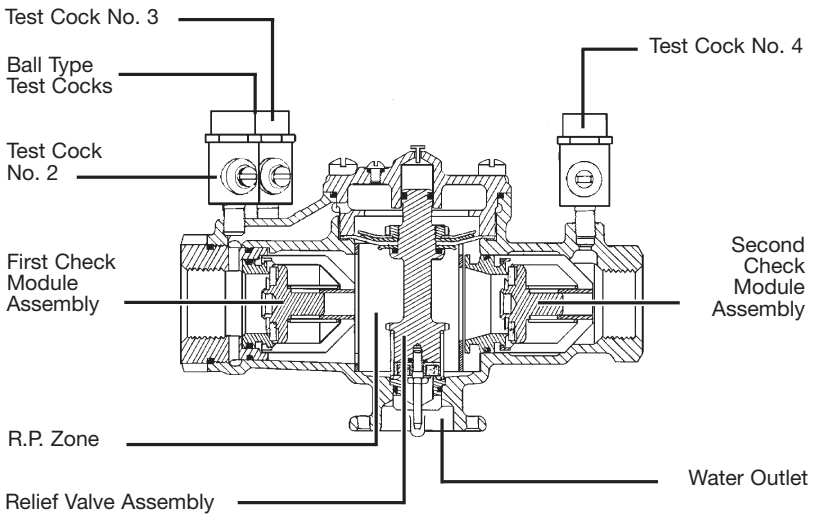
Pressure – Temperature

¼" – 2"

Suitable for supply pressure up to 175 psi (12.1 bar)
Water temperature: 33°F – 180°F (0.5° – 82°C)

2½" – 3"

Suitable for supply pressures up to 175 psi (12.1 bar)
Water temperature: 110°F (43°C) continuous; 140°F (60°C) intermittent



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

Standards

USC
ASSE No. 1013
AWWA C511
CSA B64.4
IAPMO File No. 1563

Approvals

USC-FCCCHR

ASSE, AWWA, CSA, IAPMO

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

Approval models NRS, OSY, PC, QT

UL Classified
2½" – 3" with OSY gate valves

¾" – 2" without shutoff valves (-LF), except LF009M3LF

Insulated Enclosure

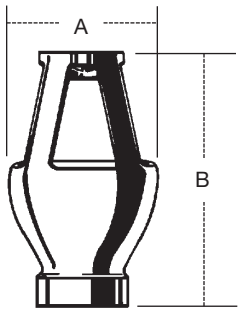
The WattsBox insulated enclosure is available for Series LF009. For more information download ES-WB at watts.com.

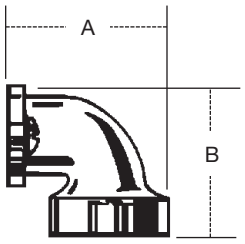
Air Gaps and Elbows

Call customer service if you need assistance with technical details.

MODEL		DRAIN OUTLET		DIMENSIONS				WEIGHT	
				A		B			
	For 909, 009, and 993 sizes	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lb*	*kg*
909AGA	¼"–½" 009, ¾" 009M2/M3	½	13	2⅜	60	3⅛	79	0.625	0.28
909AGC	¾"–1" 009/909, 1"–1½" 009M2	1	25	3¼	83	4⅞	124	1.5	0.68
909AGF	1¼"–2" 009M1, 1¼"–3" 009/909, 2" 009M2, 4"–6" 993	2	51	4⅜	111	6¾	171	3.25	1.47
909AGK	4"–6" 909, 8"–10" 909M1	3	76	6⅜	162	9⅝	244	6.25	2.83
909AGM	8"–10" 909	4	102	7⅜	187	11¼	286	15.5	7.03
909ELA	¼"–½" 009, ¾" 009M2/M3	–	–	–	–	–	–	–	–
909ELC	¾"–1" 009/909	–	–	2⅜	60	2⅜	60	0.38	0.17
909ELF*	1¼"-2" 009M1, 1¼"–2" 009/909, 2" 009M2, 4"–6" 993	–	–	3⅝	92	3⅝	92	2	0.91
909ELH* Vertical	2½"–3" 009/909	–	–	–	–	–	–	–	–

*Epoxy coated

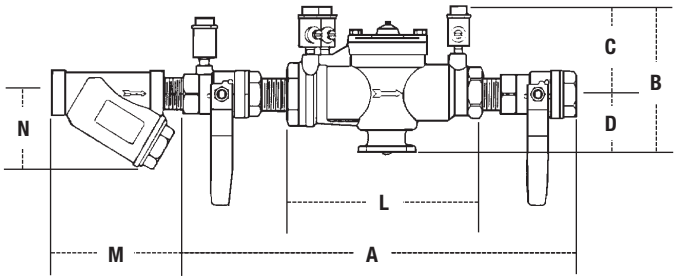




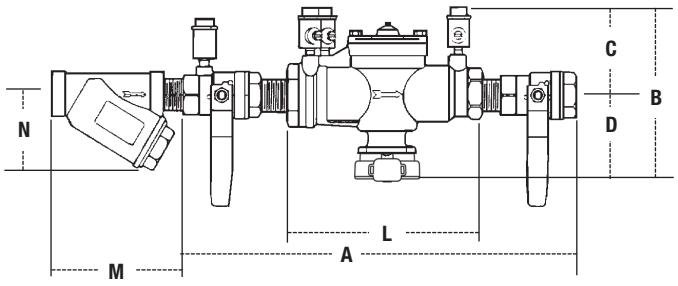
Dimensions – Weight

Call customer service if you need assistance with technical details.

¼" – ⅜"

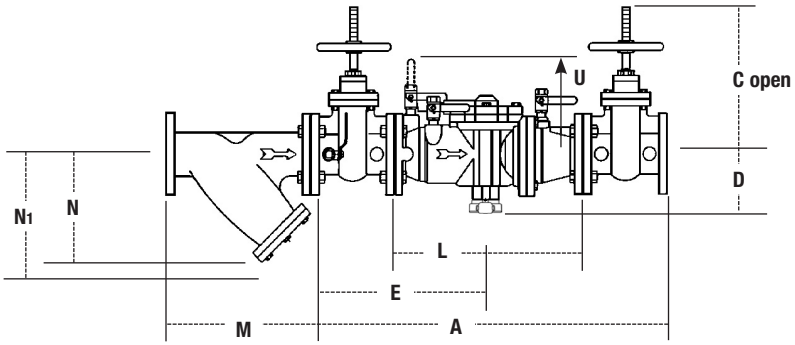


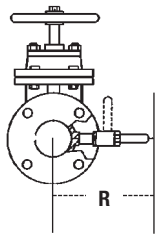
½" – 2"

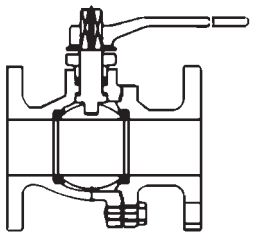


SIZE	DIMENSIONS (APPROX.)														WEIGHT	
	A		B		C		D		L		M		N			
in.	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in*	*mm*	*in*	*mm*	*lb*	*kg*
¼	10	250	4⅝	117	3⅜	86	1¼	32	5½	140	2⅜	60	2½	64	5	2
⅜	10	250	4⅝	117	3⅜	86	1¼	32	5½	140	2⅜	60	2½	64	5	2
½	10	250	5⅞	149	3⅜	86	2½	64	5½	140	2¾	70	2¼	57	5	2
¾	10¾	273	6¼	159	3½	89	2¾	70	6¾	171	3 3/16	81	2¾	70	6	3
1	14½	368	6¼	159	3	76	3¼	83	9½	241	3¾	95	3	76	12	5
1¼	17⅜	441	6¾	169	3½	89	3¼	83	11⅜	289	4 7/16	113	3½	89	15	6
1½	17⅞	454	6¾	169	3½	89	3¼	83	11⅛	283	4⅞	124	4	102	16	7
2	21⅜	543	8¾	222	4½	114	4¼	108	13½	343	5 5/16	151	5	127	30	13

2½" – 3"







Watts G-4000 Series
QT – Ball Valves

STRAINER SIZE		DIMENSIONS (APPROX.)						WEIGHT	
		M		N		N1†			
in.	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lb*	*kg*
2½	65	10	254	6½	165	9¾	248	28	12.7
3	80	10⅛	257	7	178	10	254	34	15.4

†Clearance for servicing

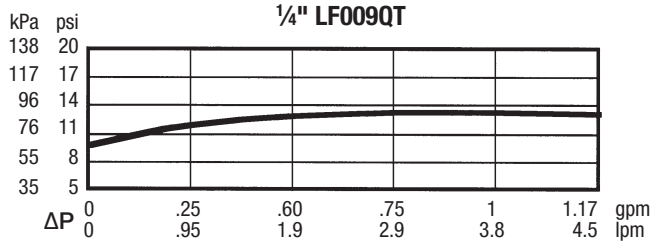
MODEL	SIZE	DIMENSIONS (APPROX.)														WEIGHT	
		A		C		D		E		L		R		U			
	in.	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lb*	*kg*
LF009LF	2½	—	—	—	—	5⅝	143	—	—	18⅛	460	—	—	10⅝	270	76	34.5
LF0090SY	2½	33¼	845	15⅞	403	5⅝	143	16⅜	416	18⅛	460	7¾	197	10⅝	270	166	75.3
LF009NRS	2½	33¼	845	11⅜	289	5⅝	143	16⅜	416	18⅛	460	7¾	197	10⅝	270	161	73.0
LF009LF	3	—	—	—	—	5⅝	143	—	—	18⅛	460	—	—	10⅝	270	76	34.5
LF0090SY	3	34¼	870	18½	470	5⅝	143	16⅝	422	18⅛	460	8¾	222	10⅝	270	198	89.8
LF009NRS	3	34¼	870	12¾	324	5⅝	143	16⅝	422	18⅛	460	8¾	222	10⅝	270	191	86.6

Capacity

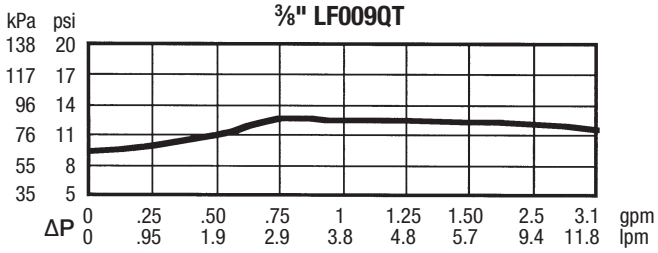
Performance as established by an independent testing laboratory.

The asterisk (*) indicates the typical maximum system flow rate (7.5 ft/s, 2.3 m/s).

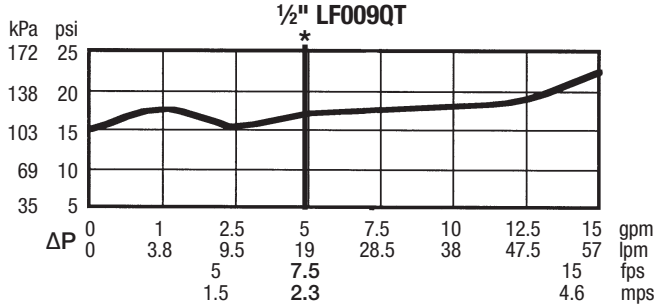
¼" LF009QT



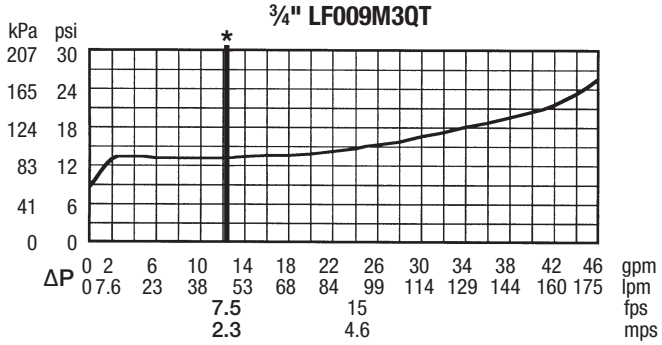
⅜" LF009QT



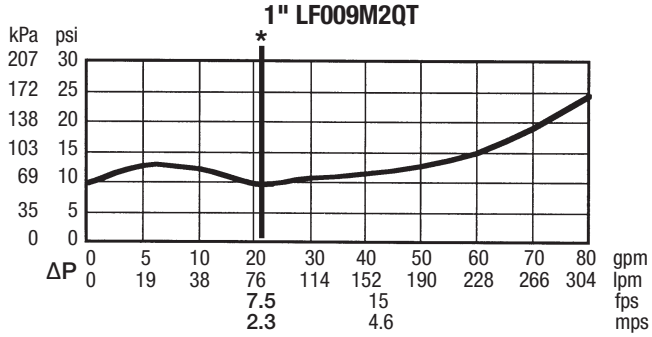
½" LF009QT



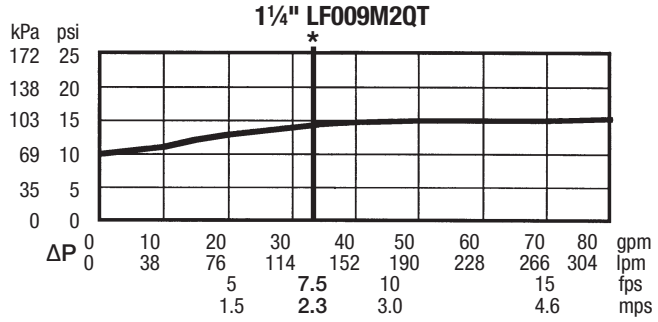
¾" LF009M3QT



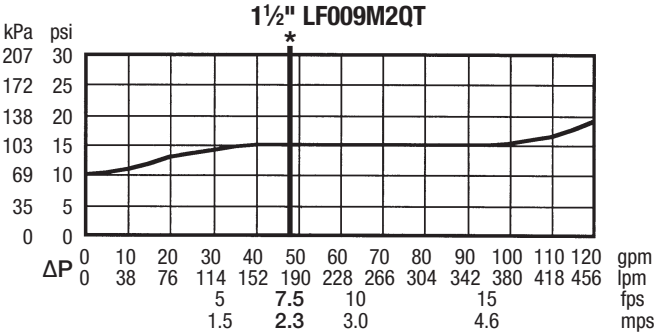
1" LF009M2QT



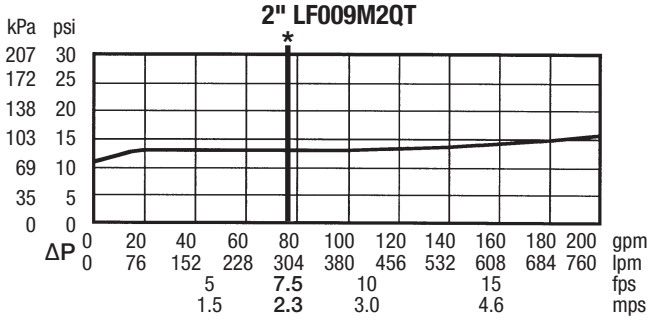
1¼" LF009M2QT



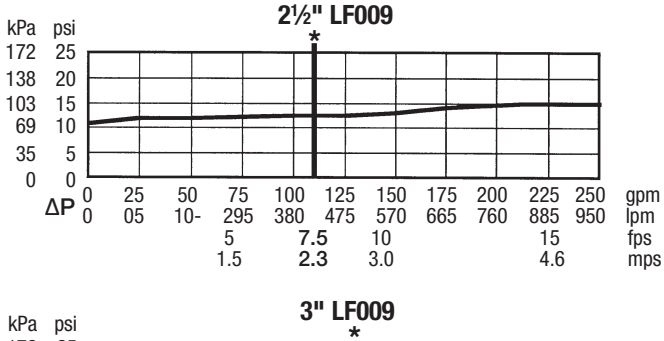
1½" LF009M2QT



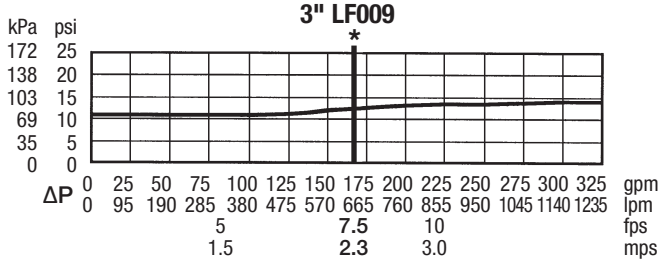
2" LF009M2QT



2½" LF009



3" LF009



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For Liquid and Steam Service

Job Name _____ Contractor _____

Job Location _____ Approval _____

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

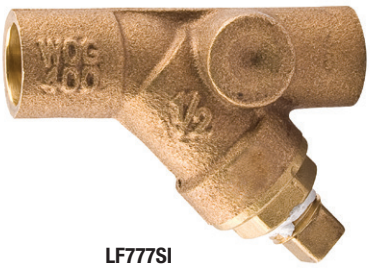
Approval _____ Representative _____

LEAD FREE*

Series LF777SI, LFS777SI

Wye-Pattern, Lead Free Cast Strainers

Sizes: ⅜" – 3"



LF777SI

Series LF777SI, LFS777SI Wye-Pattern, Lead Free* cast strainers are designed to protect plumbing system components from dirt, rust and other damaging debris. The Series LF777SI and LFS777SI feature Lead Free* construction to comply with Lead Free* installation requirements.

Features

- Lead Free* cast copper silicon alloy body and cap
- Wye-pattern
- Tapped retainer cap
- Closure plug
- Special flared screen opening on upstream end to provide unrestricted flow through the strainer

Models

LF777SI – ⅜" – 3" threaded connections

LFS777SI –½" – 2" solder connections†

Specifications

A wye-pattern, Lead Free* cast strainer to be installed as indicated on the plans. The strainer must have a tapped retainer cap and closure plug. Strainer shall be rated to 400psi (27.6 bar) WOG; 125psi (8.6 bar) WSP for sizes ⅜"-2" and 300psi (20.7 bar) @ 210ºF (99ºC); 125psi (8.6 bar) WSP @ 353ºF (178ºC) for sizes 2½"-3". The strainer shall be constructed using Lead Free* cast copper silicon alloy. Lead Free* strainers shall comply with state codes and standards, where applicable, requiring reduced lead content. Strainer shall be a Watts Series LF777SI (threaded ends) or LFS777SI (solder ends).

Materials

Body:	Lead Free* cast copper silicon alloy
Retainer Cap:	Lead Free* cast copper silicon alloy
Plug	Lead Free* brass
Gasket:	EPDM
Standard Screen:	#20 mesh, 304 stainless steel

Pressure – Temperature

Maximum Working Pressure:

⅜"–2"

400psi (27.6 bar) WOG @ 210ºF (99ºC)

125psi (8.6 bar) WSP @ 353ºF (178ºC)

2½"–3"

300psi (20.7 bar) WOG @ 210ºF (99ºC)

125psi (8.6 bar) WSP @ 353ºF (178ºC)

Approvals

NSF Certified to NSF/ANSI/CAN 61-G

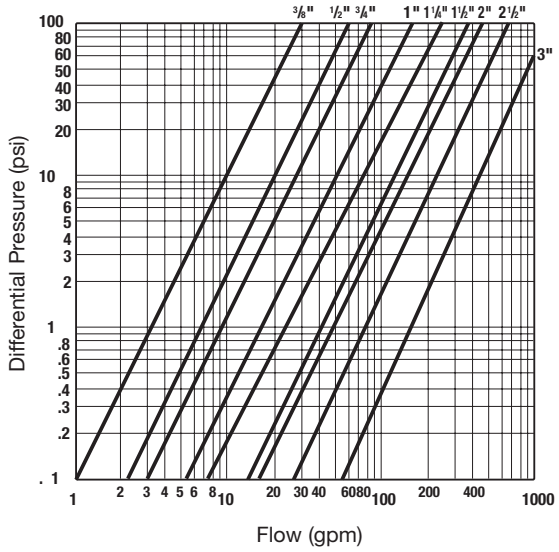
NOTICE

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.

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

WATTS®

Performance Data

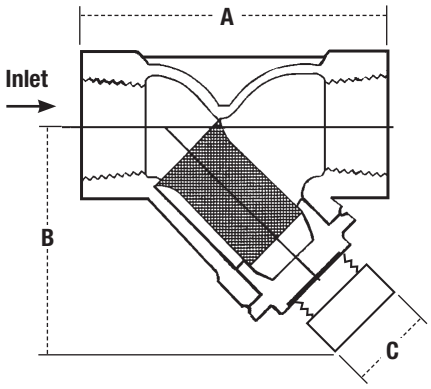


Flow curves show flows (gpm) and pressure drop (psig) through Watts Series 777SI, S777SI using standard 20 mesh screen.

Dimensions — Weights

LF777SI

SIZE	DIMENSIONS						WEIGHT	
	A		B		C			
in.	in.	mm	in.	mm	in.	mm	lbs.	kgs.
3/8	2 3/8	60	15/16	33	1/4	6	0.4	0.18
1/2	2 3/4	70	1 3/8	35	1/4	6	0.5	0.23
3/4	3 3/16	81	1 5/8	42	1/4	6	0.6	0.27
1	3 3/4	95	2 1/8	54	1/2	13	1.1	0.50
1 1/4	4 7/16	113	2 1/2	64	1/2	13	1.9	0.86
1 1/2	4 7/8	124	3	76	3/4	19	2.4	1.09
2	5 15/16	151	3 9/16	91	1	25	4.4	2.00
2 1/2	9 1/16	230	5 7/8	149	1/2	13	9.8	4.44
3	10 3/16	259	6 1/4	159	1/2	13	13.2	5.99



LFS777SI

SIZE	DIMENSIONS						WEIGHT	
	A		B		C			
in.	in.	mm	in.	mm	in.	mm	lbs.	kgs.
1/2	2 3/4	70	1 3/8	35	1/4	6	0.4	0.18
3/4	3 3/8	86	1 5/8	42	1/4	6	0.6	0.27
1	3 3/4	95	2 1/8	54	1/2	13	0.9	0.41
1 1/4	4 9/16	116	2 1/2	64	1/2	13	1.5	0.68
1 1/2	5 5/16	135	3	76	3/4	19	1.9	0.86
2	6 1/8	156	3 9/16	91	1	25	3.3	1.50

USA: T: (978) 689-6066 • F: (978) 975-8350 • Watts.com
Canada: T: (905) 332-4090 • F: (905) 332-7068 • Watts.ca
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COTG/DCOTG

SMITH® JAY R. SMITH MFG. CO.®
MEMBER OF MORRIS GROUP INTERNATIONAL
POST OFFICE BOX 3237
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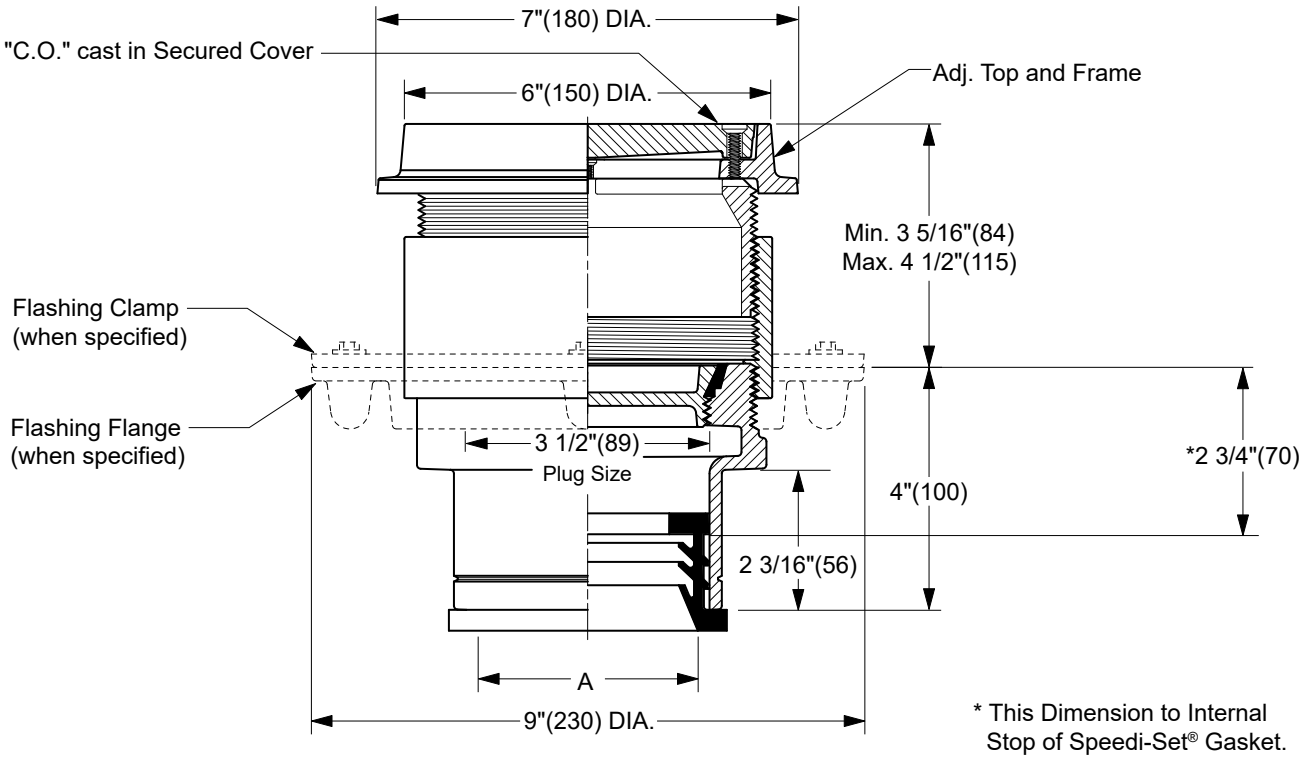
TEL: 334-277-8520 FAX: 888-377-7818 www.jrsmith.com
CUSTOMER DRIVEN SINCE 1926

MEMBER OF:

LOCATION

FLOOR CLEANOUTS WITH "TWIS-TO-FLOOR®" ADJUSTABLE TOPS FOR UNFINISHED AREAS

ROUND EXTRA HEAVY DUTY CAST IRON TOP WITH PUSH-ON SPEEDI-SET® OUTLET



* This Dimension to Internal Stop of Speedi-Set® Gasket.

TWIS-TO-FLOOR® ADJUSTMENT

SPEEDI-SET® OUTLET ▲

"A" (Pipe Size) = 02(50), 03(75) or 04(100)

Conforms to ASME A112.36.2/CSA B79.2

- ☐ Fig. 4231L.....Gasket Seal - ABS Plug
- ☐ Fig. 4232L.....Gasket Seal - Bronze Plug
- ☐ Fig. 4233L.....Taper Thread - Bronze Plug
- ☐ Fig. 4234L.....Taper Thread - ABS Plug

(Twis-to-Floor® design shown with gasketed plug.)

NOTE: Dimensions shown in parentheses are in millimeters.

REGULARLY FURNISHED:
Duco Cast Iron Cleanout with Round Adjustable Scoriated Secured Cast Iron Top. Closure Plug Type as Indicated By Figure Number Selected.

VARIATIONS:
- ☐ Flashing Flange -F
- ☐ Flange with Flashing Clamp -F-C
- ☐ Vandal Proof Top -U

▲ Available in Extra Heavy, Service Weight or NO-HUB.

OPTIONAL MATERIALS:
- ☐ Galvanized Cast Iron -G
- ☐ Ductile Iron Cover -M

REV.	DATE	DESCRIPTION	BY	CKD. BY
S	11-25-24	Revised Description	HS	CL
R	4-11-24	Added ASME Note	HS	CL
Q	8-17-23	Removed Function	HS	CL
P	3-14-23	Added ® to Speedi-Set	KK	CL

WEIGHT POUNDS | VOLUME CUBIC FEET | FIGURE NUMBER **4231 SERIES**

FIGURE NUMBER 4231 SERIES | DRAWN BY: RK | CHECKED BY: BH | APPROVED BY: JM | DATE: 2-16-70 | SCALE: NONE | SIZE A | DRAWING NUMBER S4231 | S

WHA

Precision Plumbing Products

"Specify with Confidence - Install with Pride"®

LEAD FREE

SYSTEM RATED PLUS WATER HAMMER ARRESTORS

PPP WATER HAMMER ARRESTORS ARE SPECIFIED FOR MANY INSTALLATIONS!

ONLY ONE MOVING PART!

SIZED IN ACCORDANCE WITH SERVICE PIPE DIMENSION

SYSTEM-RATED PLUS Water Hammer Arrestors are specified for commercial, industrial and residential uses.

A maintenance-free installation is assured when using this type of arrestor... the only moving part is the free-moving piston furnished with "O"ring seals which have been tested for reliability in excess of normal operating ranges.

FLUID HAMMER IN FLUID TRANSMISSION LINES – a definition:

Fluid Hammer is a series of hydraulic shock waves generated within the confines of a piping system due to the sudden stopping of fluid flow. This condition is caused by fast closing of positive valves incorporated within the system. The effect of fluid hammer is damaging if allowed to exist for any length of time and will result in broken pipes and damage to other components in the system.

40 Years
of outstanding performance

U.S. Patent No. 3,633,627

SPECIFICATIONS & INSTALLATIONS

INSTALLATION:
May be installed in new or existing plumbing systems with a standard pipe tee. No access panel required (Consult Local Code).

MAINTENANCE: Maintenance free – the piston is the only moving part.

TEMPERATURE RANGE: 32°F to + 212°F (0°C to + 100°C)

CONSTRUCTION: Barrel-fabricated of type "L" hard drawn copper.
Cap: Machined of free turning brass, attached to barrel with 95-5 solder.
Threaded Adapter: Machined of C 96300 ECO Brass.
Piston: Made of Composite Material
Seals: "O"rings: EPDM.
Seal Lubricant: Dow-Corning Silicone Compound #111, FDA listed for use in potable water systems.

OPERATING PRESSURE: Designed to operate on all domestic and commercial systems. Max static pressure 250 PSI. Max spike pressure 400 PSI. System Pressures above 80 PSI consult factory.

PDI SIZING AND SELECTION TABLE

PIPE SIZE	FIXTURE UNITS	CROSS REF. PDI
1/2"	1-11	A
3/4"	12-32	B
1"	33-60	C

Extract from: PDI WH201-06

PROJECT SUBMITTAL

Project: _____

Contractor: _____

Engineer: _____

Date Submitted: _____

Prepared By: _____

SIZING INFORMATION

For equipment and fixtures not listed below, size in accordance with load values (WSFU) assigned the same. Extract from: PDI WH201-06

FIXTURE	TYPE OF SUPPLY CONTROL	WEIGHT IN FIXTURE UNITS			
		Public		Private	
		C.W.	H.W.	C.W.	H.W
Water Closet	Flush Valve	8	-	5	-
Water Closet	Flush Tank	5	-	2.5	-
Pedestal Urinal	Flush Valve	4	-	-	-
Stall or Wall Urinal	Flush Valve	4	-	-	-
Stall or Wall Urinal	Flush Tank	2	-	-	-
Lavatory	Faucet	1 1/2	1 1/2	1	1
Bathtub	Faucet	2	3	1 1/2	1 1/2
Shower Head	Mixing Valve	2	3	1	2
Bathroom Group	Flush Valve Closet	-	-	8	3
Bathroom Group	Flush Tank Closet	-	-	6	3
Separate Shower	Mixing Valve	-	-	1	2
Service Sink	Faucet	3	3	-	-
Laundry Tubs (1-3)	Faucet	-	-	3	3
Comb. Fixture	Faucet	-	-	3	3

DIMENSIONAL AND AIR LOADING DATA

A OAL	B NPT	NITROGEN PRELOAD PSI	PART NUMBER
5"	1/2" brass	60	SC-500
6"	3/4" brass	60	SC-750
6 3/4"	1" brass	60	SC-1000

NO ACCESS PANEL REQUIRED

(CONSULT LOCAL CODE)

Precision Plumbing Products
Division of JL Industries, Inc.

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Portland, Oregon 97233

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