Quality People. Building Solutions.

Comfort Systems USA (Arkansas), Inc.
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Date: 2/4/2025
Return Request: 2/14/2025
Project: City Of Sherwood Public Works (Administration Building)
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.
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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

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.

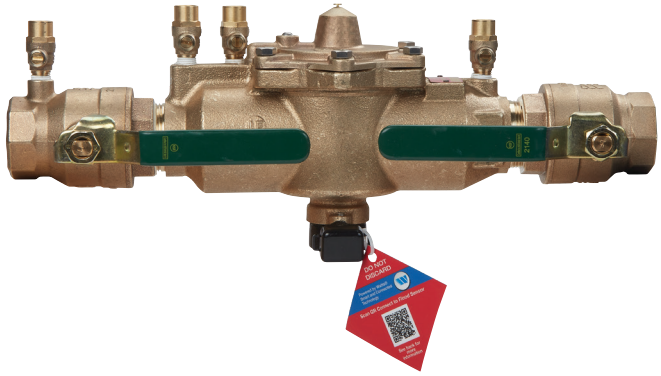
Series LF009 assemblies of sizes ½" to 3" include a flood sensor to detect excessive water discharges from the relief valve. The sensor is installed on the assembly exterior and does not alter assembly functions or certifications. The sensor relays a signal that triggers notification to facility personnel 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.)

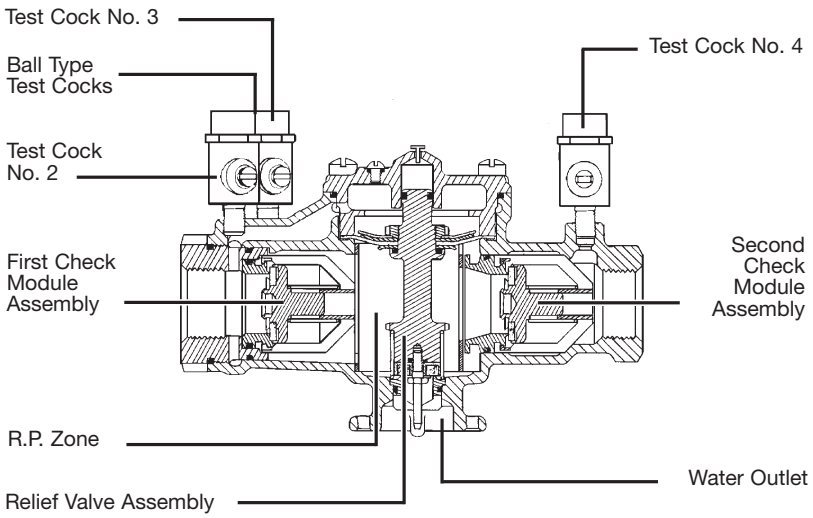
Pressure – Temperature

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

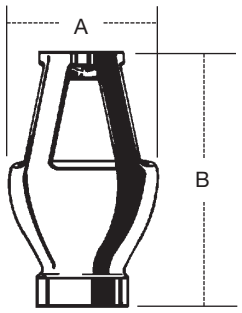
The WattsBox insulated enclosure is available for Series LF009. For more information download ES-WB at watts.com.

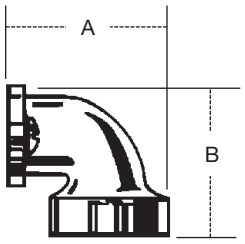
Air Gaps and Elbows

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

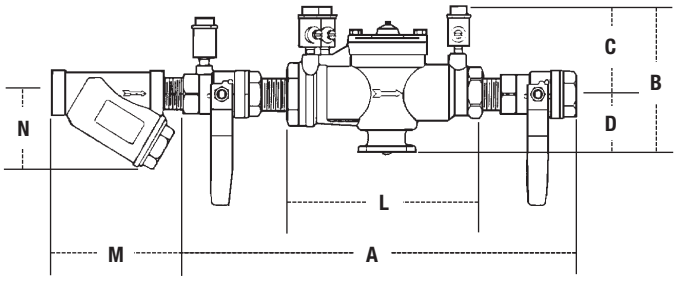




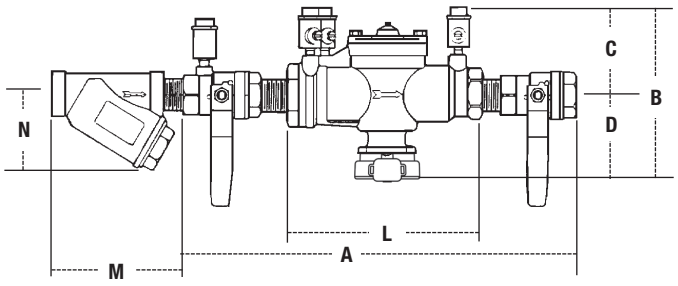
Dimensions – Weight

Call customer service if you need assistance with technical details.

¼" – ⅜"

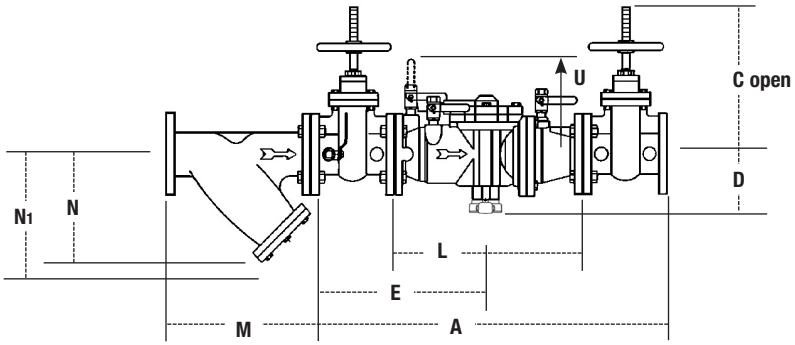


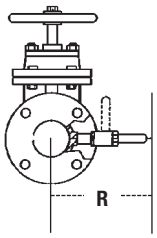
½" – 2"

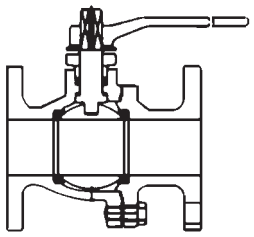


SIZE	DIMENSIONS (APPROX.)														WEIGHT	
	A		B		C		D		L		M		N			
in.	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in*	*mm*	*in*	*mm*	*lb*	*kg*
¼	10	250	4⅝	117	3⅜	86	1¼	32	5½	140	2⅜	60	2½	64	5	2
⅜	10	250	4⅝	117	3⅜	86	1¼	32	5½	140	2⅜	60	2½	64	5	2
½	10	250	5⅞	149	3⅜	86	2½	64	5½	140	2¾	70	2¼	57	5	2
¾	10¾	273	6¼	159	3½	89	2¾	70	6¾	171	3⅜₁₆	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	4⅞₁₆	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	5⅝₁₆	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

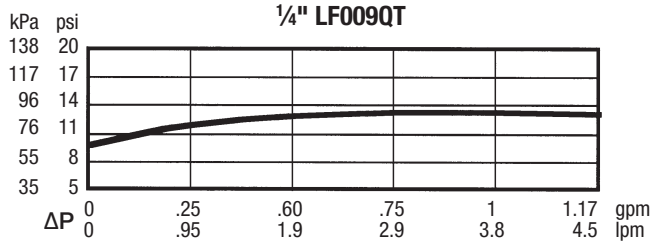
MODEL	SIZE	DIMENSIONS (APPROX.)														WEIGHT	
		A		C		D		E		L		R		U			
	in.	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lb*	*kg*
LF009LF	2½	—	—	—	—	5⅝	143	—	—	18⅛	460	—	—	10⅝	270	76	34.5
LF0090SY	2½	33¼	845	15⅞	403	5⅝	143	16⅜	416	18⅛	460	7¾	197	10⅝	270	166	75.3
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

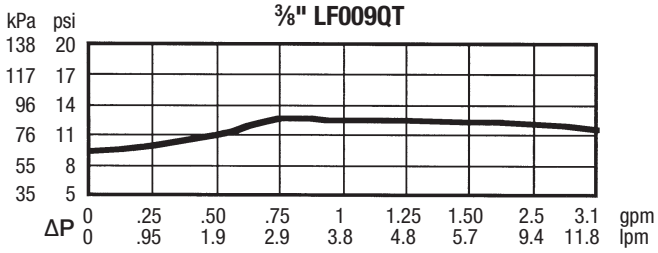
Performance as established by an independent testing laboratory.

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

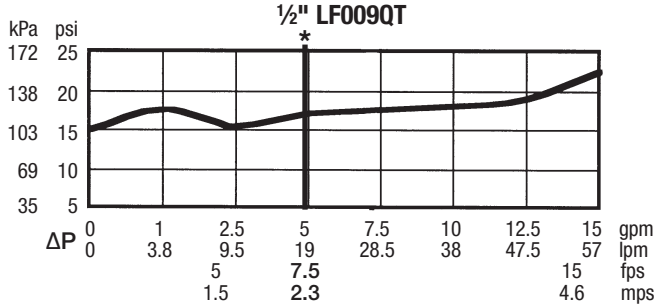
¼" LF009QT



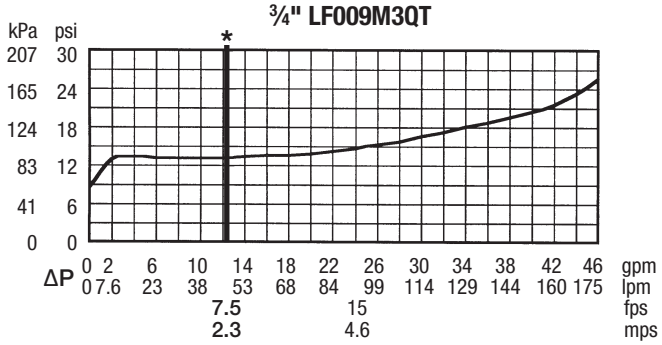
⅜" LF009QT



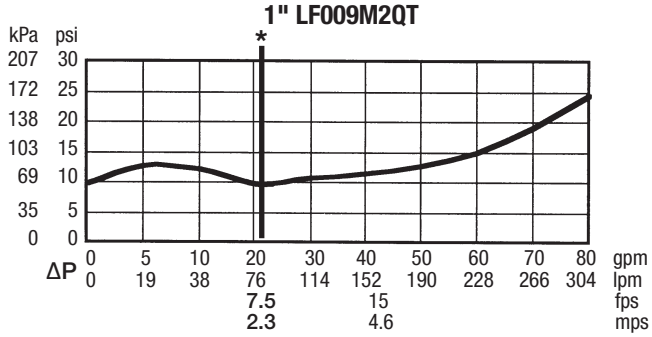
½" LF009QT



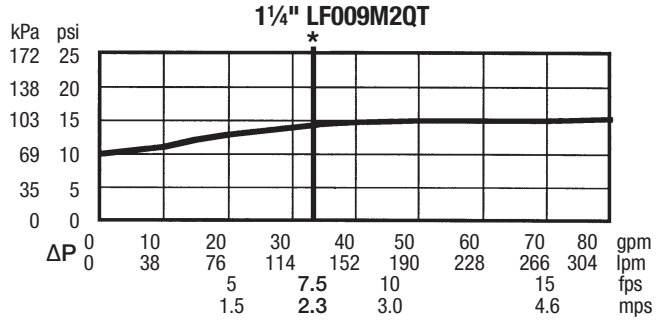
¾" LF009M3QT



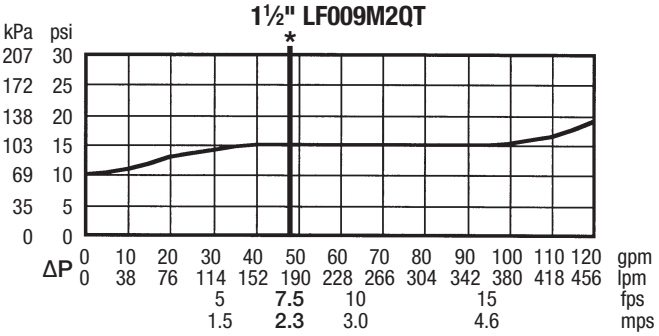
1" LF009M2QT



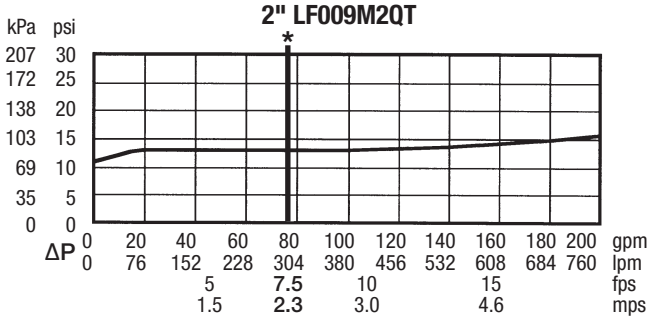
1¼" LF009M2QT



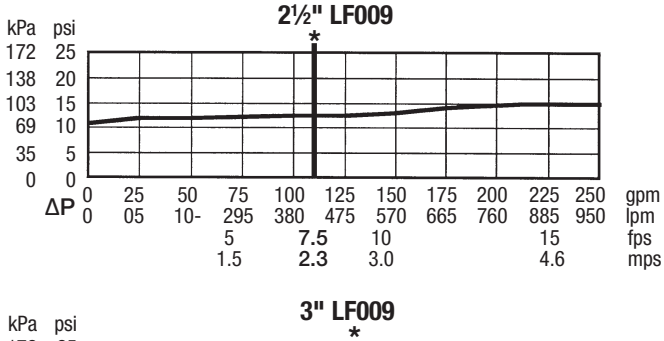
1½" LF009M2QT



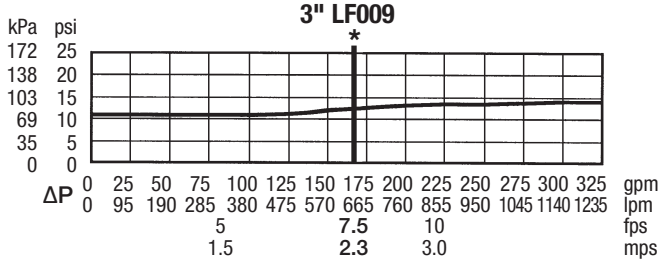
2" LF009M2QT



2½" LF009



3" LF009



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Canada: T: (888) 208-8927 • Watts.ca
Latin America: T: (52) 55-4122-0138 • Watts.com

For Liquid and Steam Service

Job Name _____ Contractor _____

Job Location _____ Approval _____

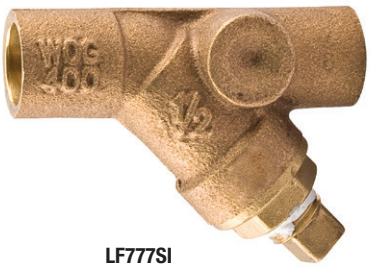
Engineer _____ Contractor's P.O. No. _____

Approval _____ Representative _____

LEAD FREE*

Series LF777SI, LFS777SI

Wye-Pattern, Lead Free Cast Strainers



LF777SI

Sizes: ⅜" – 3"

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

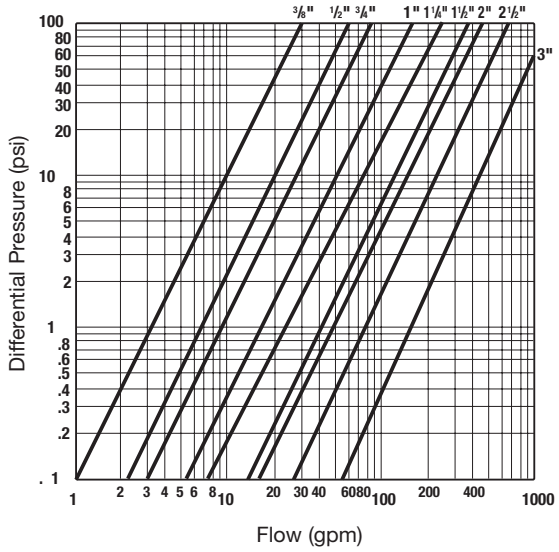
NOTICE

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

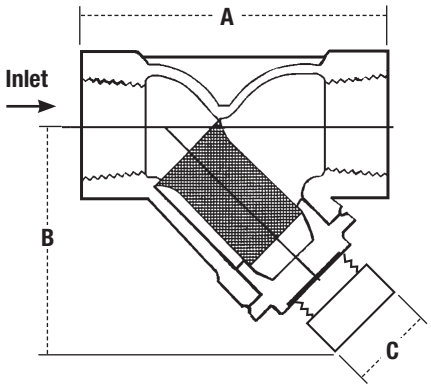


Flow curves show flows (gpm) and pressure drop (psig) through Watts Series 777SI, S777SI using standard 20 mesh screen.

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

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WCO

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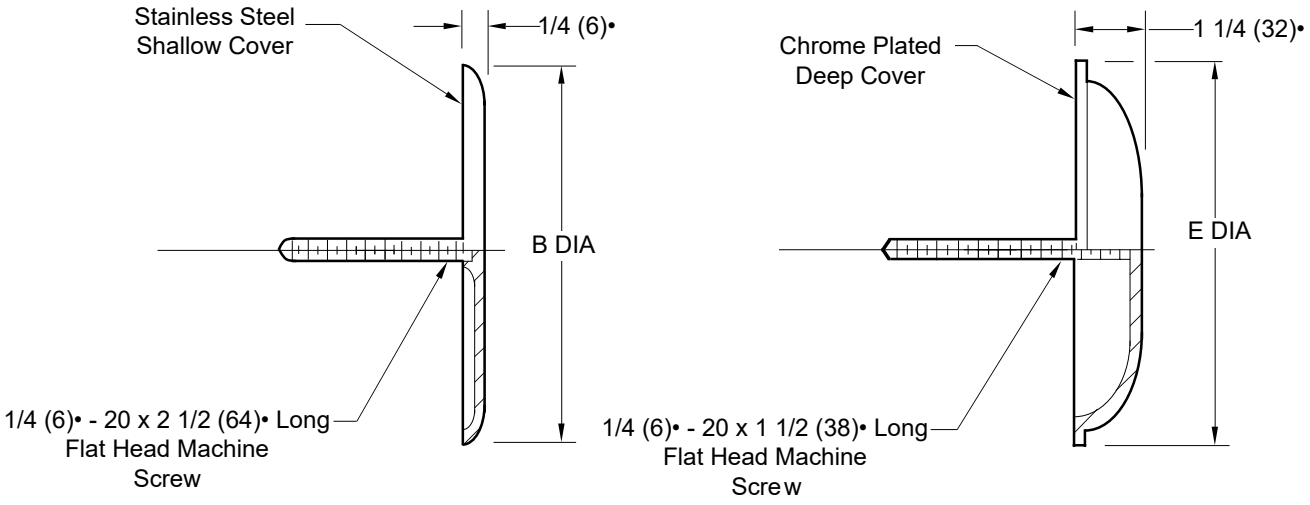
TEL: 334-277-8520 FAX: 888-377-7818 www.jrsmith.com
CUSTOMER DRIVEN SINCE 1926

MEMBER OF:

LOCATION

WALL ACCESS COVERS

ROUND FACE-OF-WALL COVER AND SCREW



☐ Fig. 4710
eg: 4710 (-04)**

☐ Fig. 4715
eg: 4715 (-07)Δ

Plug Size•	Fig. 4710• B Dia.	Specify FIG.	Fig. 4715• E Dia.	Specify FIG.
1 1/2 (38), 2 (51), 2 1/2 (64)	4 1/4 (110)	4710 (-04)	*7 1/4 (185)	4715 (-07)
3 (76), 3 1/2 (89), 4 (100)	5 1/4 (135)	4710 (-05)	*7 1/4 (185)	4715 (-07)
5 (125)	7 (180)	4710 (-07)	*7 1/4 (185)	4715 (-07)
6 (150)	9 1/4 (235)	4710 (-09)	9 1/4 (235)	4715 (-09)
8 (205), 10 (255)	11 1/4 (285)	4710 (-11)	11 1/4 (285)	4715 (-11)

*= Die Formed SS Cover Only.
** Reflects "B" DIA.
Δ Reflects "E" DIA.
•**NOTE:** Dimensions shown in parenthesis are in millimeters.

REGULARLY FURNISHED:
Stainless Steel Shallow Cover or Chrome Plated Bronze Deep Cover with Center Screw as Indicated by Figure Number Selected.

VARIATIONS:
☐ Longer Center Screw (Specify Length)
☐ Vandal Proof Screw -U

OPTIONAL MATERIALS:
☐ Nickel Bronze -NB (Fig. 4715 only)
☐ Polished Bronze Cover -PB
☐ Prime Coated Steel Cover -PC (Fig. 4710 only)

REV.	DATE	DESCRIPTION	BY	CKD. BY
K	8-18-23	Removed Funtion	HS	CL
J	11-6-12	Revised table	TBW	CL
I	1-19-96	Revised table	CMD	BS
H	8-31-95	Chg Table	EMB	BS

WEIGHT POUNDS

VOLUME CUBIC FEET

FIGURE NUMBER **4710, 4715**

FIGURE NUMBER 4710, 4715 | DRAWN BY: RK | CHECKED BY: BH | APPROVED BY: JM | DATE: 2-16-70 | SCALE: NONE | SIZE A | DRAWING NUMBER S4710 | K

FCO

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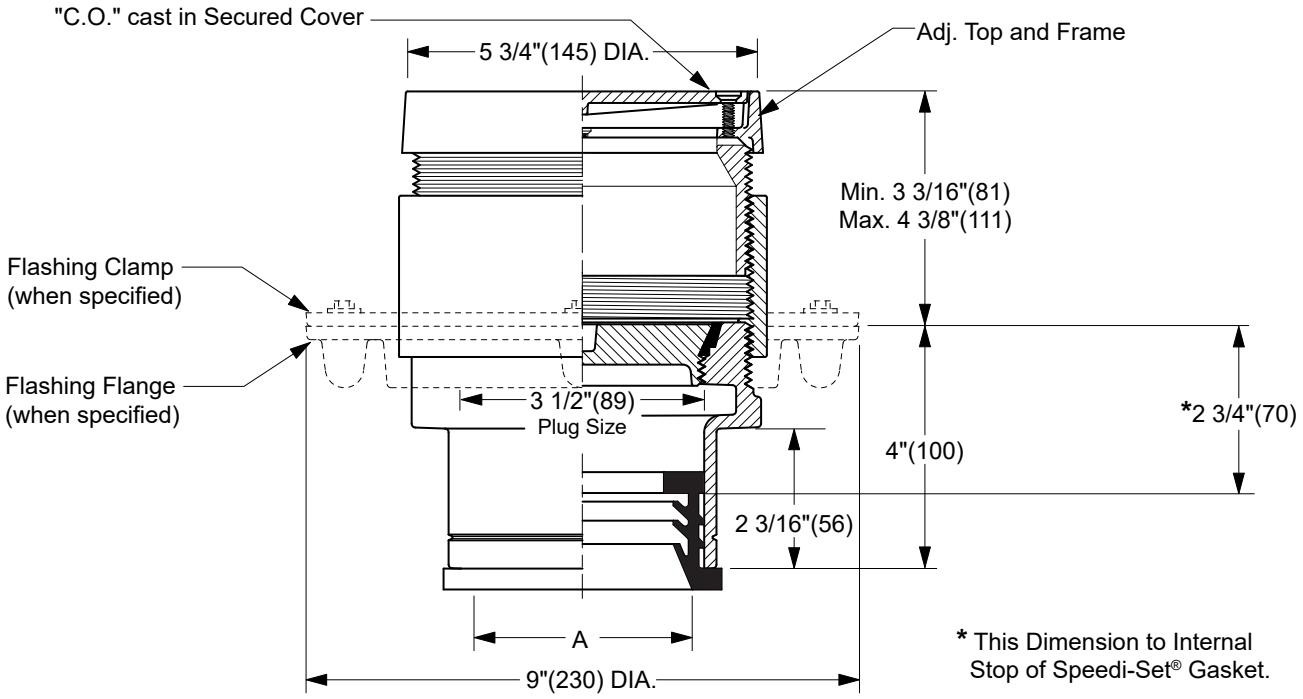
FINISHED FLOOR CLEANOUTS WITH "TWIS-TO-FLOOR®" ADJUSTABLE TOPS

ROUND NICKEL BRONZE TOP WITH PUSH-ON SPEEDI-SET® OUTLET



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

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

NOTE: For applications using core drilling, the largest diameter of the cleanout assembly is 6 5/16"(160).

- ☐ Fig. 4031L.....Gasket Seal - ABS Plug
- ☐ Fig. 4032L.....Gasket Seal - Bronze Plug
- ☐ Fig. 4033L.....Taper Thread - Bronze Plug
- ☐ Fig. 4034L.....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 Nickel Bronze Top. Closure Plug Type as Indicated By Figure Number Selected.

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

VARIATIONS:
- ☐ Flashing Flange -F
- ☐ Flange with Flashing Clamp -F-C
- ☐ Carpet Clamping Type -X
- ☐ Carpet Marker Type -Y
- ☐ Vandal Proof Top -U
- ☐ Wide Flange (DX)

OPTIONAL MATERIALS:
- ☐ Galvanized Cast Iron -G
- ☐ Polished Bronze Top -PB
- ☐ Stainless Steel Top -NBSS

REV.	DATE	DESCRIPTION	BY	CKD. BY
T	11-21-24	Revised Description	HS	CL
S	4-11-24	Added ASME Note	HS	CL
R	8-11-23	Removed Function	HS	CL
Q	3-10-23	Added ® to "Speedi-Set"	KK	CL

WEIGHT POUNDS | VOLUME CUBIC FEET | FIGURE NUMBER 4031 SERIES

FIGURE NUMBER 4031 SERIES | DRAWN BY: RK | CHECKED BY: BH | APPROVED BY: JM | DATE: 2-16-70 | SCALE: NONE | SIZE A | DRAWING NUMBER S4031 | T

DCOTG

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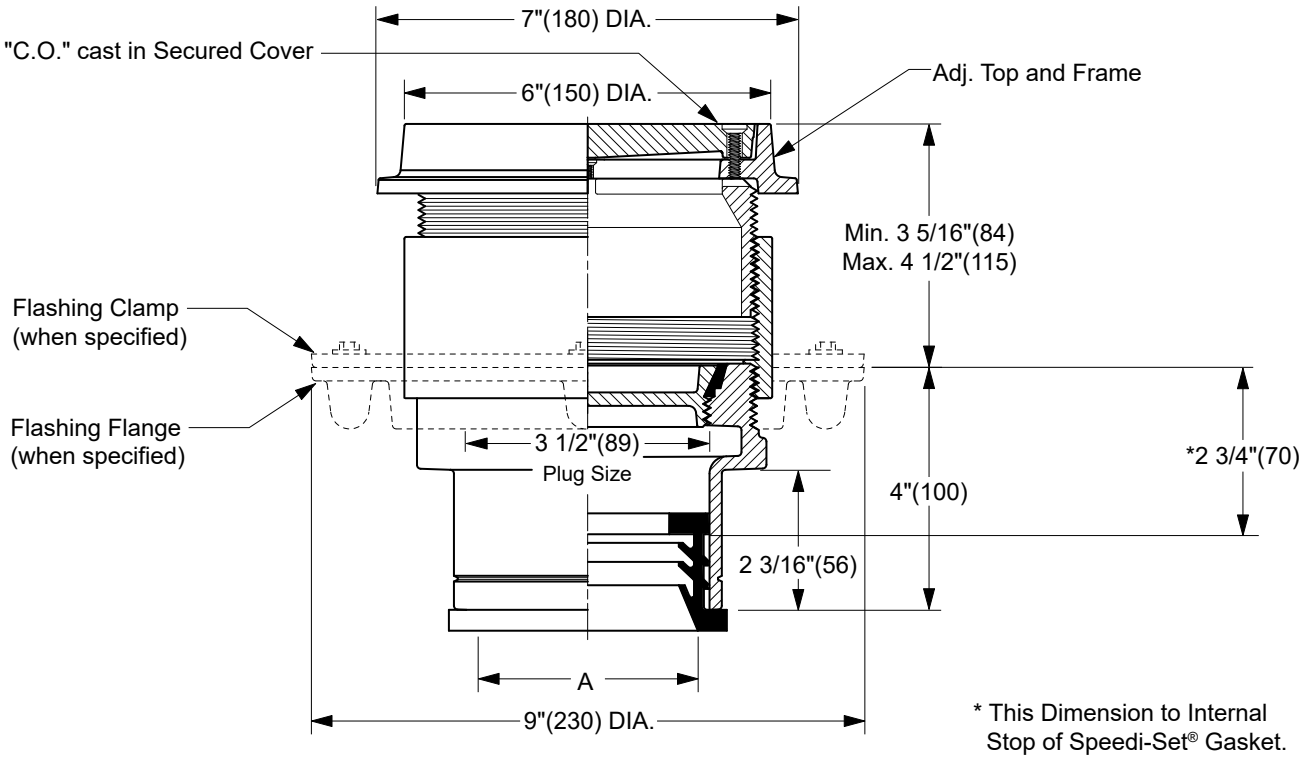
MEMBER OF:

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

TMV-1

For Commercial Applications

Job Name _____

Job Location _____

Engineer _____

Approval _____

Contractor _____

Approval _____

Contractor's P.O. No. _____

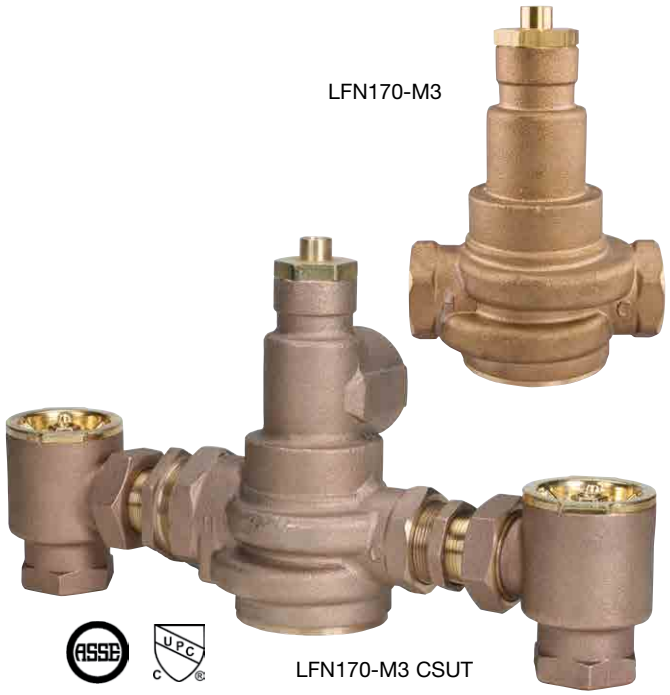
Representative _____

LEAD FREE*

Series LFN170

Hot Water Master Tempering Valves

Watts Series LFN170 hot water master tempering valves are especially designed for use on larger hot water supply systems for mixing hot and cold water for a variety of applications to extend the hot water supply. This series uses paraffin-based thermostat to sense and adjust outlet temperature. The LFN170s feature Lead Free* construction to comply with Lead Free* installation requirements.



Features

- Lead Free* brass body construction
- ASSE 1017 and IAPMO cUPC Listed
- LFN170-M3 uses paraffin-based thermostat to sense and adjust outlet temperature
- Dirt and lime resistant poppet and seat design
- Virtual shutoff if supply pressure fails
- Vandal-resistant locking mechanism to secure temperature setting
- Factory tested

Specifications

Maximum Operating Pressure	125psig (861 kPa)
Maximum Hot Water Temperature	200°F (93°C)
Minimum Hot Water Supply Temperature	5°F (3°C) Above Set Point**
Temperature Adjustment Range***	90 - 180°F (32 - 82°C)
Hot Water Inlet Temperature Range	120 - 180°F (42 - 82°C)
Cold Water Inlet Temperature Range	40 - 80°F (4 - 27°C)
Listing	ASSE 1017, IAPMO CUPC
Approval Standards	ASSE 1017, CSA B125.3

⚠ WARNING

Watts Hot Water Master Tempering Valves cannot be used for tempering water temperature at fixtures. Severe bodily injury (i.e., scalding or chilling) and/or death may result depending upon system water pressure changes and/or supply water temperature changes. ASSE standard 1016, 1069 or 1070 listed devices such as Watts Series LFMMV, LFUSG, or LFL111 valves should be used at fixtures to prevent possible injury.

The Watts Hot Water Tempering Valves are designed to be installed at or near the boiler or water heater. They are not designed to compensate for system pressure fluctuations and should not be used where ASSE standard 1016, 1069 or 1070 devices are required. These Watts valves should never be used to provide "anti-scald" or "anti-chill" service.

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.

NOTICE

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.**

**** With Equal Pressure**

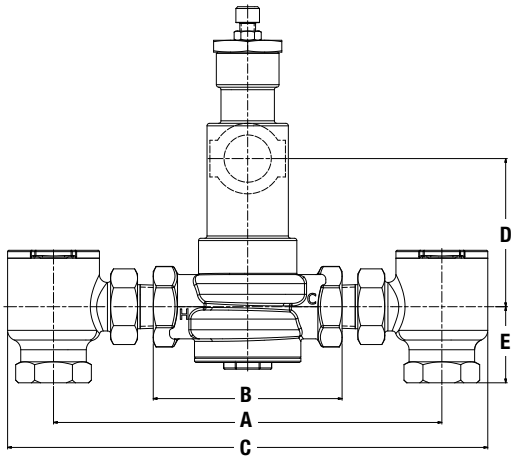
***** Low Limit cannot be less than the cold water temperature. For best operation, hot water should be at least 5°F (3°C) above desired set point.**

WATTS®

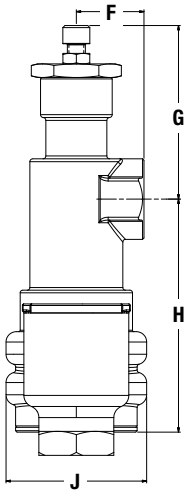
Capacity

Flow Capacity at 50-50 mixed Less Checkstops									
				Pressure Drop Across Valve					
Model	Inlet / Outlet (NPT)	Min. Flow to ASSE 1017	C_v	5psi (34 kPa)	10psi (69 kPa)	20psi (138 kPa)	30psi (207 kPa)	45psi (310 kPa)	60psi (414 kPa)
3/4" LFN170-M3	3/4 x 3/4"	3 gpm 11 lpm	6.70	15 gpm 57 lpm	21 gpm 79 lpm	30 gpm 114 lpm	37 gpm 140 lpm	45 gpm 170 lpm	52 gpm 197 lpm
1" LFN170-M3	1 x 1"	4 gpm 15 lpm	10.13	23 gpm 87 lpm	32 gpm 121 lpm	45 gpm 170 lpm	56 gpm 212 lpm	68 gpm 257 lpm	79 gpm 299 lpm
1 1/4" LFN170-M3	1 1/4 x 1 1/4"	4 gpm 15 lpm	14.16	32 gpm 121 lpm	45 gpm 170 lpm	63 gpm 238 lpm	76 gpm 288 lpm	95 gpm 360 lpm	110 gpm 416 lpm
1 1/2" LFN170-M3	1 1/2 x 1 1/2"	5 gpm 19 lpm	15.65	35 gpm 134 lpm	49 gpm 185 lpm	70 gpm 265 lpm	86 gpm 326 lpm	105 gpm 397 lpm	121 gpm 458 lpm
2" LFN170-M3	2 x 1 1/2 x 2"	7 gpm 26 lpm	18.63	42 gpm 159 lpm	59 gpm 223 lpm	83 gpm 314 lpm	102 gpm 386 lpm	125 gpm 473 lpm	144 gpm 545 lpm

Dimensions



Flow Capacity at 50-50 mixed with Checkstops									
				Pressure Drop Across Valve					
Model	Inlet / Outlet (NPT)	Min. Flow to ASSE 1017	C_v	5psi (34 kPa)	10psi (69 kPa)	20psi (138 kPa)	30psi (207 kPa)	45psi (310 kPa)	60psi (414 kPa)
3/4" LFN170-M3 CSUT	3/4 x 3/4"	3 gpm 11 lpm	6.26	14 gpm 53 lpm	20 gpm 76 lpm	28 gpm 106 lpm	34 gpm 129 lpm	42 gpm 159 lpm	48 gpm 182 lpm
1" LFN170-M3 CSUT	3/4 x 1"	4 gpm 15 lpm	9.54	21 gpm 79 lpm	30 gpm 114 lpm	43 gpm 163 lpm	52 gpm 197 lpm	64 gpm 242 lpm	74 gpm 280 lpm
1 1/4" LFN170-M3 CSUT	1 1/4 x 1 1/4"	4 gpm 15 lpm	13.42	30 gpm 114 lpm	42 gpm 159 lpm	60 gpm 227 lpm	74 gpm 280 lpm	90 gpm 341 lpm	104 gpm 394 lpm
1 1/2" LFN170-M3 CSUT	1 1/4 x 1 1/2"	5 gpm 19 lpm	14.90	33 gpm 125 lpm	47 gpm 128 lpm	67 gpm 254 lpm	82 gpm 310 lpm	100 gpm 379 lpm	115 gpm 435 lpm
2" LFN170-M3 CSUT	1 1/4 x 2"	7 gpm 26 lpm	17.89	40 gpm 151 lpm	57 gpm 216 lpm	80 gpm 303 lpm	98 gpm 371 lpm	120 gpm 454 lpm	139 gpm 526 lpm



MODEL	BODY INLETS NPT	CHECK STOP INLETS NPT	BODY OUTLET NPT	DIMENSIONS																WEIGHT	
				A		B		C		D		E		F		G		H		J			
				in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs
¾ LFN170-M3	¾	N/A	¾	N/A		4½	114	N/A		3½	89	N/A		1 7/16	36	3⅝	92	4⅞	124	2 15/16	75	4.8	2.2
¾ LFN170-M3 CSUT	N/A	¾	¾	9¼	235	4½	114	11 7/16	291	3½	89	1 13/16	46	1 7/16	36	3⅝	92	4⅞	124	2 15/16	75	9.8	4.5
1 LFN170-M3	1	N/A	1	N/A		4 9/16	116	N/A		3½	89	N/A		1 7/16	36	3⅝	92	4⅞	124	2 15/16	75	4.8	2.2
1 LFN170-M3 CSUT	N/A	¾	1	10⅛	264	4 9/16	116	12 9/16	319	3½	89	1 13/16	46	1 7/16	36	3⅝	92	4⅞	124	2 15/16	75	10.3	4.9
1¼ LFN170-M3	1¼	N/A	1¼	N/A		6 1/16	154	N/A		3 7/16	87	N/A		1¾	44	3 11/16	94	5¼	133	4½	114	9.4	4.3
1¼ LFN170-M3 CSUT	N/A	1¼	1¼	12 1/16	306	6 1/16	154	15 1/16	383	3 7/16	87	2½	64	1¾	44	3 11/16	94	5¼	133	4½	114	19.3	8.8
1½ LFN170-M3	1½	N/A	1½	N/A		6 1/16	154	N/A		3 7/16	87	N/A		1¾	44	3 11/16	94	5¼	133	4½	114	9.1	4.1
1½ LFN170-M3 CSUT	N/A	1¼	1½	13¼	337	6 1/16	154	16¼	413	3 7/16	87	2½	64	1¾	44	3 11/16	94	5¼	133	4½	114	19.8	9.0
2 LFN170-M3	2 (Hot) 1½ (Cold)	N/A	2	N/A		6 7/16	164	N/A		3 3/16	81	N/A		2 1/16	52	3⅞	98	5⅜	137	4½	114	10.4	4.7
2 LFN170-M3 CSUT	N/A	1¼	2	13¾	349	6 7/16	164	16¾	425	3 3/16	81	2½	64	2 1/16	52	3⅞	98	5⅜	137	4½	114	21.3	9.7

Typical Specification

Master mixing valve shall feature paraffin-based, thermal actuation technology for precise temperature control. Valve shall be listed to ASSE 1017 and cUPC and shall be approved to ASSE 1017 & CSA B125.3 standards. Master mixing valve shall have an approach temperature of 5°F (3°C). Valve shall have an outlet temperature range from 90 – 180°F (32 to 82°C) with a lockable temperature-setting feature. Valve shall be manufactured of corrosion resistant materials and feature a single-seat design for positive shutoff. It shall have a Lead Free* brass body. Body shall be constructed using Lead Free* brass. Lead Free* master mixing valves shall comply with state codes and standards, where applicable, requiring reduced lead content. Minimum flows to ASSE 1017 shall be 3/4 LFN170-M3 (3.0 gpm, 11 lpm), 1 LFN170-M3 (4.0 gpm, 15 lpm), 1 1/4 LFN170-M3 (4.0 gpm, 15 lpm), 1 1/2 LFN170-M3 (5.0 gpm, 19 lpm), 2 LFN170-M3 (7.0 gpm, 26 lpm).

Master mixing valves shall be of Watts Series LFN170-M3. Any alternate must have a written approval prior to bidding.

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