

For Residential, Commercial and Institutional Applications

Job Name _____

Contractor _____

Job Location _____

Approval _____

Engineer _____

Contractor's P.O. No. _____

Approval _____

Representative _____

LEAD FREE*

Series LF1170 and LFL1170

Hot Water Temperature Control Valves

Sizes: 1/2" – 1" (15 – 25mm)

Series LF1170, LFL1170 Hot Water Temperature Control Valves are specifically designed for mixing hot and cold water on hot water supply systems. They can be used for a variety of applications to reduce the temperature of the hot water from the system and are ideal for radiant heat applications. This series features a "double throttling" design which combines the control of the hot and cold water to provide a sensitive response to changes in water temperature passing through the mixing chamber.

The LF1170-M2 can be set to any temperature between 90°F and 160°F (60°F and 120°F for model LFL1170-M2) with flow rates as low as 0.5 gpm and as high as 23 gpm (refer to capacity chart on the back). The superior flow characteristics of this valve provide accurate temperature control to the requirements of ASSE 1017** across the rated flow range. The LF1170 and LFL1170 feature Lead Free* construction to comply with Lead Free* installation requirements.

These valves also provide additional safety as they restrict mixed water out to a drip upon loss of cold water supply to the valve.

As an added feature, the LF1170-M2 and LFL1170-M2 incorporate integral check valves and filter washers in both the hot and cold water inlets to protect against cross flow. Available with threaded (-UT), solder (-US), PEX (-PEX), Quick-Connect (-QC) or CPVC (-CPVC) connections.

Features

- Lead Free* Brass body construction
- Solid wax hydraulic principle thermostat assures dependable mixing of hot and cold water
- Thermostat controls both hot and cold water
- Models available with solder, thread, PEX, Quick-Connect or CPVC end connections
- Integral filter washers and check valves
- Adjustment cap with locking feature
- ASSE 1017 listed** and IAPMO UPC



LF1170-US-M2



LF1170-QC-M2

Minimum flow requirements to maintain set temperature for Series LF1170-M2

VALVE SIZE	GPM
1/2" – 1"	.5

WARNING

Watts Hot Water Temperature Control Valve Series LF1170 are designed to be installed at or near the boiler or water heater. They cannot be used by themselves for tempering water temperatures at fixtures where ASSE Standard 1016 or ASSE Standard 1070 listed devices are required. To comply with ASSE Standard 1016 or ASSE Standard 1070, listed devices such as Watts Series LFL111, LFUSG or LFMMV should be used at fixtures to prevent possible injury.

Watts Hot Water Temperature Control Valve Series LF1170 are not designed to compensate for system pressure fluctuations. Such use may result in severe bodily injury (i. e. scalding or chilling) and/or death.

Specifications

A Hot Water Temperature Control Valve shall be installed on water heating equipment to provide tempered water to supply piping. Valve shall have a Lead Free* brass body. Body shall be constructed using Lead Free* brass materials. Lead Free* thermostatic valves shall comply with state codes and standards, where applicable, requiring reduced lead content. The valve shall have integral check valves and operate so the thermostat controls the cold and hot water ports. The valve shall be provided with solder (-US), threaded (-UT), PEX (-PEX), Quick-Connect (-QC) or CPVC (-CPVC) connections. Valve shall be ASSE Standard 1017** Listed. Valve shall be a Watts Series LF1170-M2 or LFL1170-M2.

*The wetted surface of this product contacted by consumable water contains less than one quarter of one percent (0.25%) of lead by weight.

**ASSE 1017 listing is for valves used in hot water source applications.

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.

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Material

Body:	Lead Free* Brass
Springs:	Stainless steel
Thermostat Assembly:	Copper
O-Rings:	EPDM
Pistons:	Udel-P1700

Pressure — Temperature

Minimum Supply Pressure (Static): 30psi (207 kPa)

Inlet Temperatures: hot inlet, 120°F – 200°F (49°C – 93°C),
cold inlet, 40°F – 85°F (4°C – 29°C)

Hot Water Inlet to Outlet Temperature Differential: 5°F (3°C)
above set point

LF1170-M2 Temperature Out: Field range: 90°F – 160°F (32°C – 71°C),
adjustable: Accurate within ±3°F (1.7°C)

LFL1170-M2 Temperature Out: Field range: 60°F – 120°F (16°C – 49°C),
adjustable: Accurate within ±3°F (1.7°C)

Maximum Temperature: 200°F (93°C)

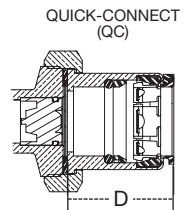
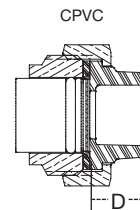
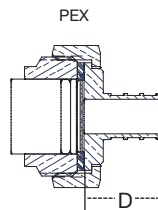
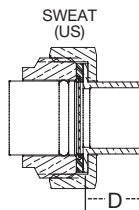
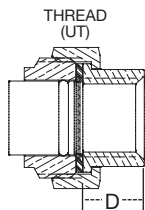
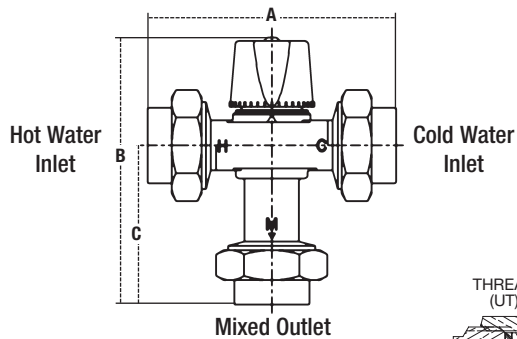
Maximum Pressure: 150psi (10.3 bar)

Maximum Pressure Differential Between Hot and Cold Water Supplies: 25%.

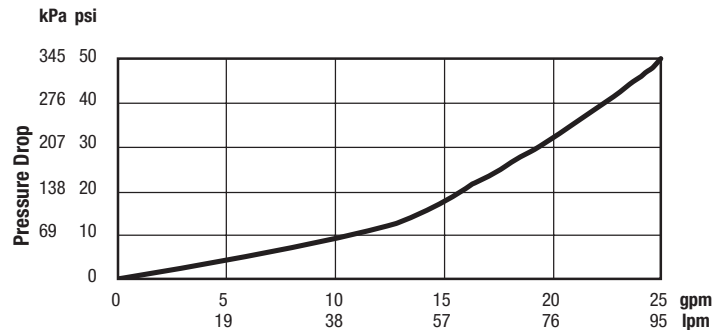
Approval: CSA B125 certified

Listing: ASSE 1017 and IAPMO UPC

Dimensions — Weights



Capacity***

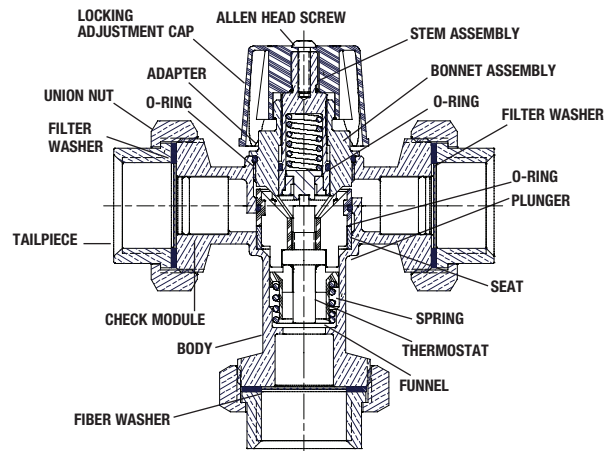


Flow

Flow curves are for reference. Actual flows may vary depending on system temperatures and/or pressures.

***Flow curve with integral inlet filters check valves

Basic Construction



SIZE (DN)		MODEL	WEIGHT									
in.	mm.		A		B		C		D		lbs.	kg.
			in.	mm.	in.	mm.	in.	mm.	in.	mm.		
1/2	15	1170-UT-M2	4 7/8	124	5 7/16	137	3 3/16	80	1 1/2	13	1.5	.68
3/4	20		4 7/8	124	5 7/16	137	3 3/16	80	9/16	14	1.6	.73
1	25		5 5/16	135	5 5/8	143	3 3/8	86	1 1/16	17	1.6	.73
1/2	15	1170-US-M2	4 13/16	123	5 3/8	137	3 1/8	80	1 1/2	14	1.5	.68
3/4	20		5 5/16	135	5 5/8	143	3 3/8	86	3/4	19	1.6	.73
1	25		5 13/16	148	5 7/8	149	3 5/8	92	1 5/16	24	1.6	.73
1/2	15	1170-PEX-M2	5 1/4	133	5 9/16	142	3 5/16	85	5/8	16	1.5	.68
3/4	20		5 1/2	140	5 11/16	145	3 7/16	88	5/8	16	1.6	.73
1	25		5 7/8	149	5 7/8	150	3 5/8	93	1 3/16	21	1.6	.73
1/2	15	1170-CPVC-M2	4 3/4	121	5 3/16	136	3 1/16	79	1 1/2	13	1.5	.68
3/4	20		5 1/4	133	5 9/16	142	3 5/16	85	3/4	19	1.6	.73
1	25		5 11/16	144	5 13/16	147	3 9/16	90	1 5/16	24	1.6	.73
1/2	15	1170-QC-M2	6 5/8	168	6 1/4	159	4	102	1 1/2	38	2.17	.98
3/4	20		6 15/16	177	6 7/16	163	4 3/16	106	1 11/16	42	2.88	1.31
1	25		7 1/8	181	6 1/2	165	4 1/4	108	1 3/4	44	3.65	1.66

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A Watts Water Technologies Company



**ISO 9001-2000
CERTIFIED**

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