

## For Residential, Commercial and Institutional Applications

Job Name \_\_\_\_\_

Contractor \_\_\_\_\_

Job Location \_\_\_\_\_

Approval \_\_\_\_\_

Engineer \_\_\_\_\_

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

Approval \_\_\_\_\_

Representative \_\_\_\_\_

# LEAD FREE\*

## Series LF1170C Hot Water Temperature Control Valves

Sizes: ½" – 1"

Series LF1170C Hot Water Temperature Control Valves are specifically designed for mixing hot and cold water in hot water supply systems. They can be used for a variety of applications to reduce the temperature of the hot water from the water heater 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.

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 LF1170C-M2 series incorporates check valves and filter gaskets in both the hot and cold water inlets to protect against cross flow. Available with threaded (-UT), solder (-US), Pex, (-QC) Quick-Connect or CPVC connections. The LF1170C features Lead Free\* construction to comply with Lead Free\* installation requirements.

### Features

- Lead Free\* cast copper silicon alloy
- Solid wax hydraulic principle thermostat assures dependable mixing of hot and cold water
- Thermostat controls both hot and cold water
- Solder, thread, Pex, Quick-Connect or cpvc end connections available
- Integral check valves
- Locking cap
- Filter gaskets

### 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\* cast copper silicon alloy body. Lead Free\* Thermostatic Valves shall comply with state codes and standards, where applicable, requiring reduced lead content. Include 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, (QC) Quick-Connect or cpvc connections. Valve shall be CSA B125 certified and ASSE Standard 1017 Listed. Valve shall be a Watts Series LF1170C-M2.

#### MINIMUM FLOW REQUIREMENTS TO MAINTAIN SET TEMPERATURE FOR SERIES LF1170C-M2

Valve Size	gpm
½" – 1"	.5

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



#### ⚠ WARNING

**FAILURE TO COMPLY WITH PROPER INSTALLATION AND MAINTENANCE INSTRUCTIONS COULD CONTRIBUTE TO THE VALVE FAILURE.**

**This 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 should be used at fixtures to prevent possible injury.**

These 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 valves should never be used to provide "anti-scald" or "anti-chill" service.

The components of the system must be of materials with a construction capable of withstanding the high limit output temperatures of the water heating source.

#### ⚠ WARNING

**Need for Periodic Inspection and Yearly Maintenance: Periodic inspection and yearly maintenance by a licensed contractor is required. Corrosive water conditions, inlet temperatures over 200°F (93°C), and/or unauthorized adjustments or repair could render the valve ineffective for service intended. Regular checking and cleaning of the valve's internal components and check stops helps assure maximum life and proper product function. Frequency of cleaning and inspection depends upon local water conditions.**

#### 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

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.

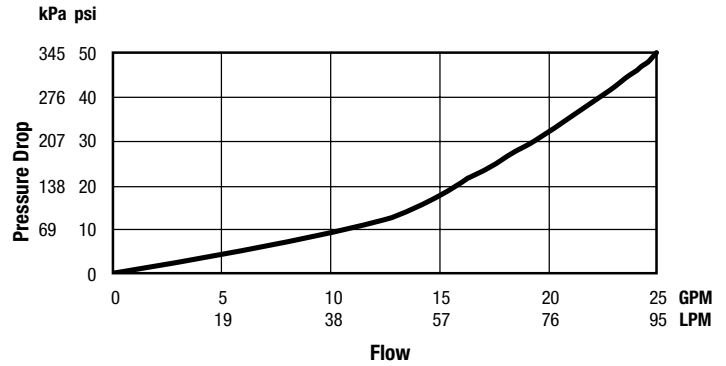
## Material

Body:	Lead Free* copper silicon alloy
Disc and Springs:	Stainless steel
Thermostat Assembly:	Copper
O-Rings:	Buna-N; EPDM
Pistons:	Poly Sulfone

## 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)  
 Minimum Inlet Differential Temperature: 5°F (3°C)  
 1170C-M2 Temperature Out: Field range: 90°F – 120°F (32°C – 49°C), adjustable: Accurate within ±3°F (1.7°C)  
 Maximum Temperature: 200°F (93°C)  
 Maximum Pressure: 150psi (10.3 bar)

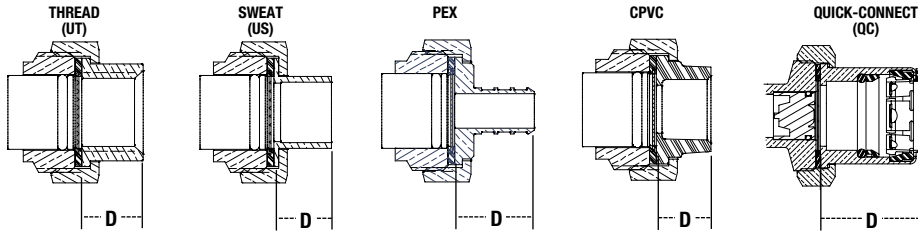
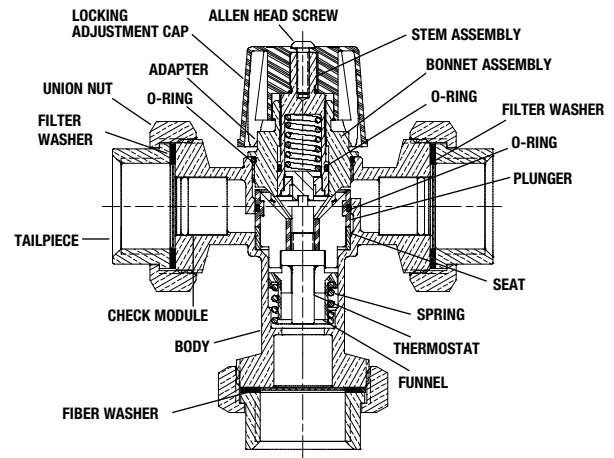
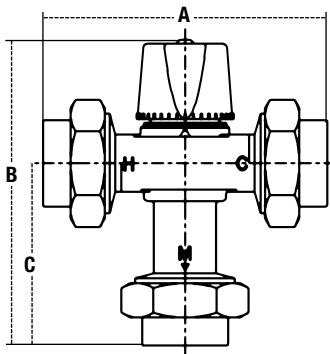
## Capacity\*\*



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

\*\*Flow curve with integral inlet check valves and filters

## Dimensions – Weights



SIZE	MODEL	DIMENSIONS								WEIGHT	
		A		B		C		D		lbs.	kg
in.		in.	mm	in.	mm	in.	mm	in.	mm		
1/2	LF1170C-UT-M2	4 7/8	124	5 1/16	137	3 9/16	80	5/8	16	1.8	0.8
3/4		4 7/8	124	5 1/16	137	3 9/16	80	5/8	16	2.4	1.1
1		5 5/16	135	5 5/8	143	3 3/8	86	3/4	20	3.0	1.4
1/2	LF1170C-US-M2	4 13/16	123	5 3/8	137	3 1/8	80	5/8	15	1.7	0.8
3/4		5 9/16	135	5 5/8	143	3 3/8	86	7/8	22	2.3	1.0
1		5 13/16	148	5 7/8	149	3 5/8	92	1 1/8	28	2.9	1.3
1/2	LF1170C-PEX-M2	5 1/4	133	5 9/16	142	3 5/16	85	13/16	21	1.8	0.8
3/4		5 1/2	140	5 1 1/16	145	3 7/16	88	15/16	24	2.5	1.1
1		5 5/8	149	5 5/8	150	3 5/8	93	1 1/8	29	3.1	1.4
1/2	LF1170C-CPVC-M2	4 3/4	121	5 9/16	136	3 1/16	79	9/16	14	1.6	0.7
3/4		5 1/4	133	5 9/16	142	3 5/16	85	13/16	21	2.2	1.0
1		5 1 1/16	144	5 3 1/16	147	3 3/16	90	1	26	2.6	1.2
1/2	LF1170-QC-M2	6 5/8	168	6 1/4	159	4	102	1 1/2	38	2.1	0.9
3/4		6 3 1/16	177	6 1/16	163	4 3/16	106	1 11/16	42	2.8	1.3
1		7 1/8	181	6 1/2	165	4 1/4	108	1 3/4	44	3.5	1.6

