

Product Specification

Job Name _____
 Job Location _____
 Engineer _____
 Approval _____

Contractor _____
 Approval _____
 Contractor's P.O. No. _____
 Representative _____

LEAD FREE*

HYDROGUARD®

Series LFLM490

Thermostatic Tempering Valves for Hot Water Distribution



LFLM491-6



Features

- Lead Free* Brass body construction for durability and to comply with Lead Free* installation requirements
- Advanced thermal actuator improves performance at low flow
- Adjustable temperature selection with lock down
- Union connections for easy maintenance
- Integral checks and screen prevents cross-flow and contamination
- Available union connection models include threaded, sweat, CPVC, PEX, PEX F1960 cold expansion fittings (CEF), Quick-Connect, or w/press**

Specifications

Temperature Adjustment:

Series LFLM490 90° - 160°F (32°C to 71°C)
Series LFLM490-10 60° - 120°F (16°C to 49°C)

Approach Temperature: 5°F (3°C) above set point

Max. Operating Pressure: 125psi (861 kPa)

Max. Hot Water Temperature: 200°F (93°C)

Max. Pressure Differential between Hot & Cold Water Supplies: 25%

Minimum Flow: 0.5 gpm (2 lpm) when tested in accordance with ASSE 1017

Check Valves: Integral

Construction: Lead Free* Brass body
Standards: ASSE 1017*** Certified
 IAPMO cUPC Certified
 and approved to CSA B125.3
 NSF/ANSI/CAN 61 &
 NSF/ANSI/CAN 372 Certified

Viega Pro-Press™ connections are optional factory installed fitting on each end of the approved/certified assembly

Capacity

PRESSURE DROP ACROSS THE VALVE							
(Cv) 1psi (7 kPa)	5psi (34 kPa)	10psi (69 kPa)	15psi (103 kPa)	20psi (138 kPa)	30psi (207 kPa)	45psi (310 kPa)	60psi (414 kPa)
3.42	7.6 gpm (29 lpm)	11.0 gpm (42 lpm)	13.0 gpm (49 lpm)	15.0 gpm (57 lpm)	19.0 gpm (72 lpm)	23.0 gpm (87 lpm)	27.0 gpm (102 lpm)

*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.
 ** Available with LFLM490 series only
 *** ASSE 1017 listing is for valves used in hot water source applications.

UNION CONNECTIONS	SIZE	MODEL	LOW TEMP MODEL
Female NPT	1/2"	LFLM490-1	LFLM490-101
	3/4"	LFLM491-1	LFLM491-101
	1"	LFLM492-1	LFLM492-101
Sweat	1/2"	LFLM490-2	LFLM490-102
	3/4"	LFLM491-2	LFLM491-102
	1"	LFLM492-2	LFLM492-102
CPVC	1/2"	LFLM490-3	LFLM490-103
	3/4"	LFLM491-3	LFLM491-103
	1"	LFLM492-3	LFLM492-103
PEX (For PEX B)	1/2"	LFLM490-4	LFLM490-104
	3/4"	LFLM491-4	LFLM491-104
	1"	LFLM492-4	LFLM492-104
Quick-Connect	1/2"	LFLM490-5	LFLM490-105
	3/4"	LFLM491-5	LFLM491-105
	1"	LFLM492-5	LFLM492-105
CEF PEX (For PEX A)	1/2"	LFLM490-6	N/A
	3/4"	LFLM491-6	N/A
w/Press	1/2"	LFLM490-1 w/press	N/A
	3/4"	LFLM491-1 w/press	N/A
	1"	LFLM492-1 w/press	N/A

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.

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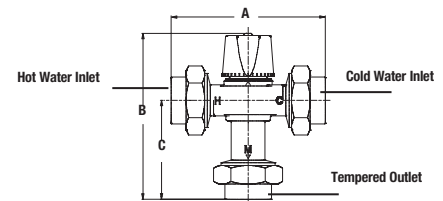
Powers product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Powers Technical Service. Powers reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Powers products previously or subsequently sold.

Dimensions

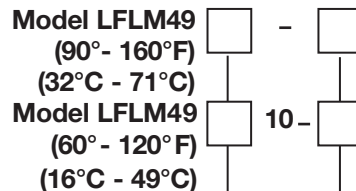
MODEL	LFLM490-1	LFLM491-1	LFLM492-1	LFLM490-2	LFLM491-2	LFLM492-2	LFLM490-3	LFLM491-3	LFLM492-3	LFLM490-4	LFLM491-4	LFLM492-4
CONNECTIONS	LFLM490-101	LFLM491-101	LFLM492-101	LFLM490-102	LFLM491-102	LFLM492-102	LFLM490-103	LFLM491-103	LFLM492-103	LFLM490-104	LFLM491-104	LFLM492-104
	1/2" NPT FEMALE	3/4" NPT FEMALE	1" NPT FEMALE	1/2" SWEAT	3/4" SWEAT	1" SWEAT	1/2" CPVC	3/4" CPVC	1" CPVC	1/2" PEX	3/4" PEX	1" PEX
"A"	4-7/8 (124mm)	4-7/8 (124mm)	5-5/16 (135mm)	4-13/16 (123mm)	5-5/16 (135mm)	5-13/16 (148mm)	4-3/4 (121mm)	5-1/4 (133mm)	5-11/16 (144mm)	5-1/4 (133mm)	5-1/2 (140mm)	5-7/8 (149mm)
"B"	5-7/16 (137mm)	5-7/16 (137mm)	5-5/8 (143mm)	5-3/8 (137mm)	5-5/8 (143mm)	5-7/8 (149mm)	5-5/16 (136mm)	5-9/16 (142mm)	5-13/16 (147mm)	5-9/16 (142mm)	5-11/16 (145mm)	5-7/8 (150mm)
"C"	3-3/16 (80mm)	3-3/16 (80mm)	3-3/8 (86mm)	3-1/8 (80mm)	3-3/8 (86mm)	3-5/8 (92mm)	3-1/16 (79mm)	3-5/16 (85mm)	3-9/16 (90mm)	3-5/16 (85mm)	3-7/16 (88mm)	3-5/8 (93mm)

MODEL	LFLM490-5	LFLM491-5	LFLM492-5	LFLM490-6	LFLM491-6
CONNECTIONS	LFLM490-105	LFLM491-105	LFLM492-105	1/2"	3/4"
	1/2"	3/4"	1"	1/2"	3/4"
	QUICK-CONNECT	QUICK-CONNECT	QUICK-CONNECT	CEF PEX	CEF PEX
"A"	6-5/8 (168mm)	6-15/16 (177mm)	7-1/8 (181mm)	5-1/2 (140mm)	6-1/16 (155mm)
"B"	6-1/4 (159mm)	6-7/16 (163mm)	6-1/2 (165mm)	5-11/16 (144mm)	5-15/16 (151mm)
"C"	4 (102mm)	4-3/16 (106mm)	4-1/4 (108mm)	3-7/16 (87mm)	3-11/16 (94mm)

Note:
Dimensions are shown ±1/4"
Dimensions in brackets are in mm
Consult factory for dimensions w/press



Ordering Information



Valve	
1/2"	0
3/4"	1
1"	2
Inlets	
Union NPT Female	1
Union Sweat	2
Union CPVC	3
Union PEX	4
Union Quick-Connect	5
Union PEX F1960 (CEF)	6
w/press	1-w/press

Typical Specification

Thermostatic tempering valve shall be constructed using Lead Free* brass material which shall comply with state codes and standards, where applicable, requiring reduced lead content. The valve shall feature advanced paraffin-based actuation technology and union connections for ease of maintenance. All internal components shall be corrosion-resistant. Valve shall feature integral checks to prevent cross-flow and inlet screens to filter out debris. The valve shall be ASSE 1017*** certified, IAPMO cUPC certified and approved to CSA B125.3.

Capacity of the valve shall be 23.0 gpm (87.0 lpm) at 45psi (310 kPa) differential. Valve shall perform to a minimum flow of 0.5 gpm (2 lpm) to ASSE 1017***. Control temperature shall be adjustable between 90 - 160°F (32 - 71°C) for LFLM490 and 60 - 120°F (16 - 49°C) for LFLM490-10 Series. The valve shall feature a vandal-resistant lockable handle to prevent tampering. The valve shall be a Powers HydroGuard Model LFLM490 (1/2"), LFLM491 (3/4"), LFLM492 (1"), LFLM490-10 (1/2"), LFLM491-10 (3/4") or LFLM492-10 (1"). Any alternate must have a written approval prior to bidding.

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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.

WARNING

Valve should be installed and adjusted by a licensed contractor in accordance with local codes and ordinances. Valves to be installed in an accessible and visible location (non-destructive and observable) where it is accessible for cleaning, service or adjustment. Inspect device annually, including plumbing connections. PEX B (1806) connections for use with Watts WP14C, copper PEX crimp rings.