

For Non-Health Hazard Applications

Job Name _____ Contractor _____
 Job Location _____ Approval _____
 Engineer _____ Contractor's P.O. No. _____
 Approval _____ Representative _____

LEAD FREE*

HydroGuard® Series LM490

Thermostatic Tempering Valves for Hot Water Distribution

Features

- Advanced thermal actuator improves performance at low flow
- Solid brass construction enhances durability
- Adjustable temperature selection with lock down
- Union connections for easy maintenance
- Integral checks and screen prevents cross-flow and contamination
- Available in ½", ¾", 1" (15, 20, 25mm) with NPT, Sweat, PEX, Quick-Connect, and CPVC union connections



Advanced Thermal Activation

Specifications

Temperature Adjustment:

Series LM490 90°F – 160°F (32°C to 71°C)

Series LM490-10 60°F– 120°F (16°C to 49°C)

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

Check Valves: Integral

Maximum Operating Pressure: 125 psi (861 kPa)

Construction: Cast Brass Body

Maximum Hot Water Temperature: 200°F (93°C)

Approval: CSA B125 Certified

Maximum Pressure Differential between Hot and Cold Water Supplies: 25%

Minimum Flow: 0.5 gpm (1.90 lpm) when tested in accordance

Listing: ASSE 1017, IAPMO UPC with ASSE 1017-2003

UNION CONNECTIONS														
Female NPT			Sweat			CPVC			PEX			Quick-Connect		
½"	¾"	1"	½"	¾"	1"	½"	¾"	1"	½"	¾"	1"	½"	¾"	1"
(15)	(20)	(25)	(15)	(20)	(25)	(15)	(20)	(25)	(15)	(20)	(25)	(15)	(20)	(25)
LM490-1	LM491-1	LM492-1	LM490-2	LM491-2	LM492-2	LM490-3	LM491-3	LM492-3	LM490-4	LM491-4	LM492-4	LM490-5	LM491-5	LM492-5
LM490-101	LM491-101	LM492-101	LM490-102	LM491-102	LM492-102	LM490-103	LM491-103	LM492-103	LM490-104	LM491-104	LM492-104	LM490-105	LM491-105	LM492-105

Capacity

PRESSURE DROP ACROSS THE VALVE							
(CV) 1 psi (7 kPa)	5 psi (34 kPa)	10 psi (69 kPa)	15 psi (103 kPa)	20 psi (138 kPa)	30 psi (207 kPa)	45 psi (310 kPa)	60 psi (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)

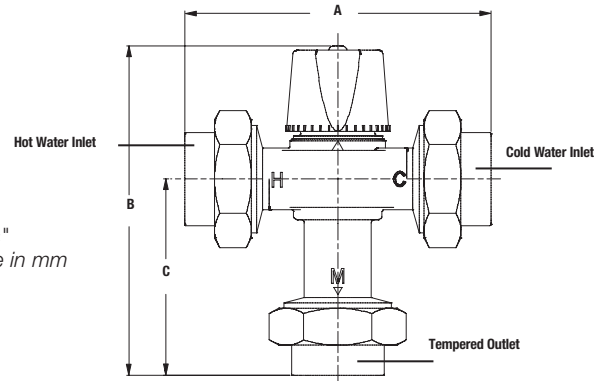
Powers product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Powers Technical Service. Powers reserves the right to change or modify product design, construction, specifications, or materials without prior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

Dimensions

Model	LM490-1 LM490-101	LM491-1 LM491-101	LM492-1 LM492-101	LM490-2 LM490-102	LM491-2 LM491-102	LM492-2 LM492-102	LM490-3 LM490-103	LM491-3 LM491-103	LM492-3 LM492-103	LM490-4 LM490-104	LM491-4 LM491-104	LM492-4 LM492-104
Connections	½" NPT Female	¾" NPT Female	1" NPT Female	½" Sweat	¾" Sweat	1" Sweat	½" CPVC	¾" CPVC	1" CPVC	½" PEX	¾" 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)	5-9/8 (143mm)	5-3/8 (137mm)	5-9/8 (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	LM490-5 LM490-105	LM491-5 LM491-105	LM492-5 LM492-105
Connections	½" Quick-Connect	¾" Quick-Connect	1" Quick-Connect
"A"	6-5/8 (168mm)	6-15/16 (177mm)	7-1/8 (181mm)
"B"	6-1/4 (159mm)	6-7/16 (163mm)	6-1/2 (165mm)
"C"	4 (102mm)	4-3/16 (106mm)	4-1/4 (108mm)

Note:
Dimensions are shown ±1/4"
Dimensions in brackets are in mm



Ordering Information

Model LM49
(90° – 160°F)
(32°C – 71°C)
Model LM49
(60° – 120°F)
(16°C – 49°C)

Valve

½" 0
¾" 1
1" 2

Inlets

Union NPT Female 1
Union Sweat 2
Union CPVC 3
Union PEX 4
Quick-Connect 5

Checkstops (Pairs)*

None 0
½" Straight, NPT (LM490-1 & LM490-101 only) A
½" Straight, Sweat (LM490-1 & LM490-101 only) C
½" Angled, Sweat (LM490-1 & LM490-101 only) D

Cabinet & Piping

0 None
A Stainless Steel, Recessed
B Stainless Steel, Wall Mount
E Stainless Steel, Semi-Recessed
C Paint, Recessed
D Paint, Wall Mount
F Painted, Semi-Recessed

* Checks come standard

Typical Specification

Thermostatic tempering valve shall be constructed of solid brass. 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 CSA B125 certified and ASSE 1017 and IAPMO UPC listed. Capacity of the valve shall be 23.0 gpm (87.0 lpm) at 45 psi (310 kPa) differential. Valve shall perform to a minimum flow of 0.5 gpm (2 lpm) to ASSE 1017-2003. Control temperature shall be adjustable between 90 – 160°F (32 – 71°C) for LM 490 and 60 – 120°F (16 – 49°C) for LM490-10 Series. The valve shall feature a vandal-resistant lockable handle to prevent tampering. The valve shall be a Powers' HydroGuard® Model LM490 (½", 15mm), LM491 (¾", 20mm), LM492 (1", 25mm), LM490-10 (½", 15mm), LM491-10 (¾", 20mm) or LM492-10 (1", 25mm). Any alternate must have a written approval prior to bidding.

POWERS™

A WATTS Brand

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