

**HYDROGUARD® Series LFLM490 Thermostatic Tempering Valves for Hot Water Distribution**

**Product Specification**

**LEAD FREE\***

**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 in 1/2", 3/4", 1" (15, 20, 25mm) with NPT, Sweat, PEX, Quick-Connect, and CPVC union connections



Advanced Thermal Activation

**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:**

125 psi (861 kPa)

**Max. Hot Water Temperature:**

200°F (93°C)

**Max. Pressure Differential between**

**Hot & Cold Water Supplies:**

25%

**Minimum Flow:**

0.5 gpm (1.90 lpm) when tested in accordance with ASSE 1017-2003

**Check Valves:**

Integral

**Construction:**

Lead Free\* Brass body

**Approval:**

CSA B125 Certified

**Listing:**

ASSE 1017, & IAPMO UPC

| UNION CONNECTIONS |              |             |              |              |             |              |              |             |              |              |             |               |              |             |
|-------------------|--------------|-------------|--------------|--------------|-------------|--------------|--------------|-------------|--------------|--------------|-------------|---------------|--------------|-------------|
| Female NPT        |              |             | Sweat        |              |             | CPVC         |              |             | PEX          |              |             | Quick-Connect |              |             |
| 1/2"<br>(15)      | 3/4"<br>(20) | 1"<br>(25)  | 1/2"<br>(15) | 3/4"<br>(20) | 1"<br>(25)  | 1/2"<br>(15) | 3/4"<br>(20) | 1"<br>(25)  | 1/2"<br>(15) | 3/4"<br>(20) | 1"<br>(25)  | 1/2"<br>(15)  | 3/4"<br>(20) | 1"<br>(25)  |
| LFLM490-1         | LFLM491-1    | LFLM492-1   | LFLM490-2    | LFLM491-2    | LFLM492-2   | LFLM490-3    | LFLM491-3    | LFLM492-3   | LFLM490-4    | LFLM491-4    | LFLM492-4   | LFLM490-5     | LFLM491-5    | LFLM492-5   |
| LFLM490-101       | LFLM491-101  | LFLM492-101 | LFLM490-102  | LFLM491-102  | LFLM492-102 | LFLM490-103  | LFLM491-103  | LFLM492-103 | LFLM490-104  | LFLM491-104  | LFLM492-104 | LFLM490-105   | LFLM491-105  | LFLM492-105 |

**Capacity ■**

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

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

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##### Construction:

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CSA B125 Certified

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| UNION CONNECTIONS |              |             |              |              |             |              |              |             |              |              |             |               |              |             |
|-------------------|--------------|-------------|--------------|--------------|-------------|--------------|--------------|-------------|--------------|--------------|-------------|---------------|--------------|-------------|
| Female NPT        |              |             | Sweat        |              |             | CPVC         |              |             | PEX          |              |             | Quick-Connect |              |             |
| 1/2"<br>(15)      | 3/4"<br>(20) | 1"<br>(25)  | 1/2"<br>(15) | 3/4"<br>(20) | 1"<br>(25)  | 1/2"<br>(15) | 3/4"<br>(20) | 1"<br>(25)  | 1/2"<br>(15) | 3/4"<br>(20) | 1"<br>(25)  | 1/2"<br>(15)  | 3/4"<br>(20) | 1"<br>(25)  |
| LFLM490-1         | LFLM491-1    | LFLM492-1   | LFLM490-2    | LFLM491-2    | LFLM492-2   | LFLM490-3    | LFLM491-3    | LFLM492-3   | LFLM490-4    | LFLM491-4    | LFLM492-4   | LFLM490-5     | LFLM491-5    | LFLM492-5   |
| LFLM490-101       | LFLM491-101  | LFLM492-101 | LFLM490-102  | LFLM491-102  | LFLM492-102 | LFLM490-103  | LFLM491-103  | LFLM492-103 | LFLM490-104  | LFLM491-104  | LFLM492-104 | LFLM490-105   | LFLM491-105  | LFLM492-105 |

#### Capacity ■

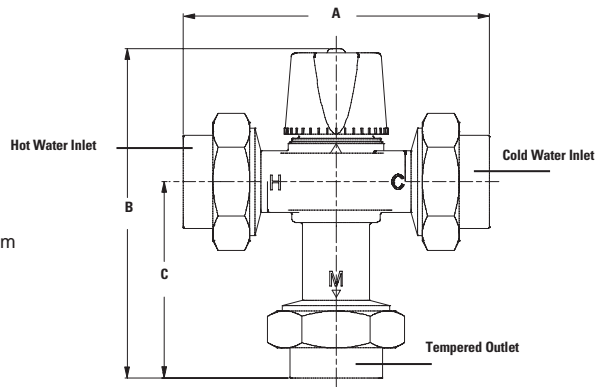
| PRESSURE DROP ACROSS THE VALVE     |                     |                      |                      |                      |                      |                      |                       |
|------------------------------------|---------------------|----------------------|----------------------|----------------------|----------------------|------------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

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

**Dimensions ■**

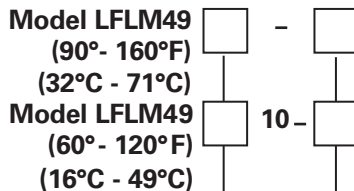
| Model       | LFLM490-1<br>LFLM490-101 | LFLM491-1<br>LFLM491-101 | LFLM492-1<br>LFLM492-101 | LFLM490-2<br>LFLM490-102 | LFLM491-2<br>LFLM491-102 | LFLM492-2<br>LFLM492-102 | LFLM490-3<br>LFLM490-103 | LFLM491-3<br>LFLM491-103 | LFLM492-3<br>LFLM492-103 | LFLM490-4<br>LFLM490-104 | LFLM491-4<br>LFLM491-104 | LFLM492-4<br>LFLM492-104 |
|-------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Connections | 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<br>(124mm)         | 4-7/8<br>(124mm)         | 5-5/16<br>(135mm)        | 4-13/16<br>(123mm)       | 5-5/16<br>(135mm)        | 5-13/16<br>(148mm)       | 4-3/4<br>(121mm)         | 5-1/4<br>(133mm)         | 5-11/16<br>(144mm)       | 5-1/4<br>(133mm)         | 5-1/2<br>(140mm)         | 5-7/8<br>(149mm)         |
| "B"         | 5-7/16<br>(137mm)        | 5-7/16<br>(137mm)        | 5-5/8<br>(143mm)         | 5-3/8<br>(137mm)         | 5-5/8<br>(143mm)         | 5-7/8<br>(149mm)         | 5-5/16<br>(136mm)        | 5-9/16<br>(142mm)        | 5-13/16<br>(147mm)       | 5-9/16<br>(142mm)        | 5-11/16<br>(145mm)       | 5-7/8<br>(150mm)         |
| "C"         | 3-3/16<br>(80mm)         | 3-3/16<br>(80mm)         | 3-3/8<br>(86mm)          | 3-1/8<br>(80mm)          | 3-3/8<br>(86mm)          | 3-5/8<br>(92mm)          | 3-1/16<br>(79mm)         | 3-5/16<br>(85mm)         | 3-9/16<br>(90mm)         | 3-5/16<br>(85mm)         | 3-7/16<br>(88mm)         | 3-5/8<br>(93mm)          |

| Model       | LFLM490-5<br>LFLM490-105 | LFLM491-5<br>LFLM491-105 | LFLM492-5<br>LFLM492-105 |
|-------------|--------------------------|--------------------------|--------------------------|
| Connections | 1/2" Quick-Connect       | 3/4" Quick-Connect       | 1" Quick-Connect         |
| "A"         | 6-5/8<br>(168mm)         | 6-15/16<br>(177mm)       | 7-1/8<br>(181mm)         |
| "B"         | 6-1/4<br>(159mm)         | 6-7/16<br>(163mm)        | 6-1/2<br>(165mm)         |
| "C"         | 4<br>(102mm)             | 4-3/16<br>(106mm)        | 4-1/4<br>(108mm)         |



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

**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
- Quick-Connect ..... 5

**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 CSA B125 certified and ASSE 1017 and IAPMO UPC listed. 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 1017-2003. 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", 15mm), LFLM491 (3/4", 20mm), LFLM492 (1", 25mm), LFLM490-10 (1/2", 15mm), LFLM491-10 (3/4", 20mm) or LFLM492-10 (1", 25mm). Any alternate must have a written approval prior to bidding.

| ENGINEERING APPROVAL |       |
|----------------------|-------|
| Project:             | _____ |
| Contractor:          | _____ |
| Architect/Engineer:  | _____ |



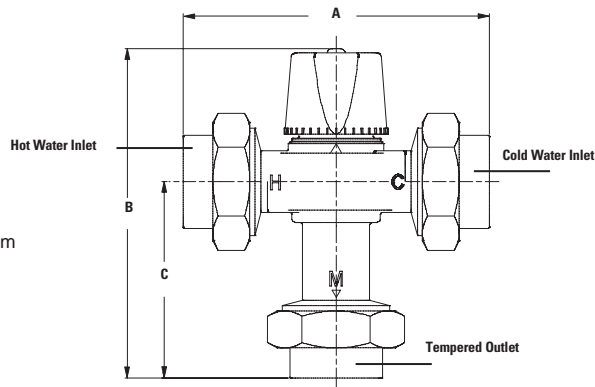
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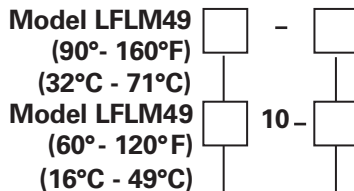
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|-------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Connections | 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                   |
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