

**Product Specification**

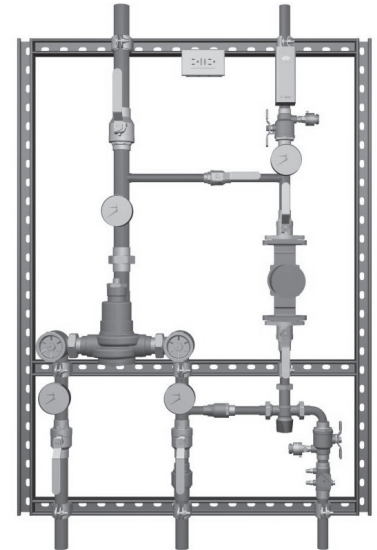
**LEAD FREE\***

**Features ■**

- Features Lead Free\* construction to comply with Lead Free\* installation requirements.
- Paraffin-based advance thermal actuation technology to sense and adjust outlet temperature
- Dirt and lime resistant poppet and seat design
- Virtual shutoff if supply pressure fails
- Vandal-resistant locking mechanism to secure temperature setting
- Mounted on heavy-duty welded struts and factory tested as a complete unit
- Includes Pressure/Temperature Gauges, Ball valves
- Internal bypass loop for quick & easy set-up

**Specifications ■**

Connections .....	See ordering information
Maximum Operating Pressure .....	125psi (861 kPa)
Maximum Hot Water Temperature .....	200°F (93°C)
Minimum Hot Water Supply Temperature** .....	5°F (3°C) above set point
Hot Water Inlet Temperature Range .....	120 – 180°F (49 – 82°C)
Cold Water Inlet Temperature Range .....	40 – 80°F (4 – 27°C)
Minimum Flow*** .....	0.5 gpm (1.89 lpm)
Temperature Adjustment Range**** .....	90 – 160°F (32 – 71°C)
Listing/Compliance–Valve Only .....	ASSE 1017, CSA B125



Advanced Thermal Activation

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

\*\* With equal pressure

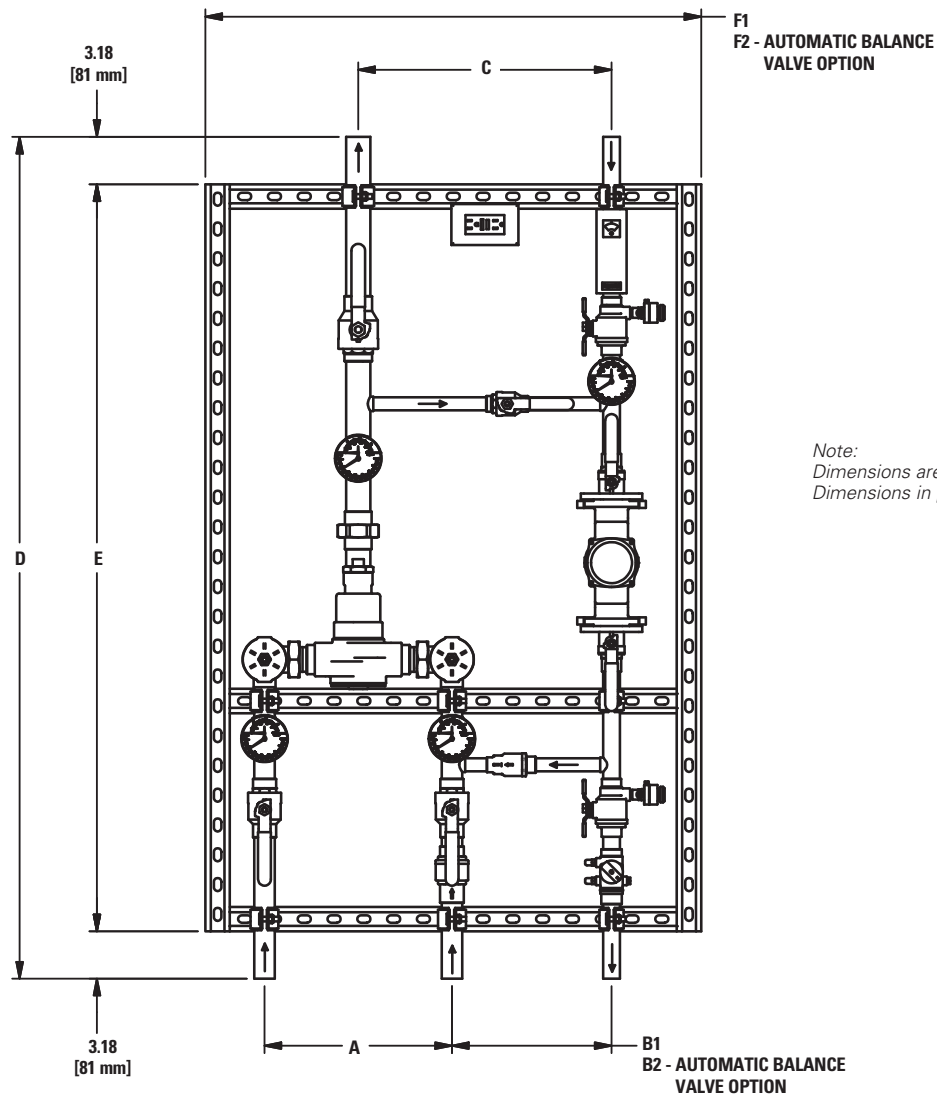
\*\*\* Minimum flow when HiLo valve is installed at or near hot water source recirculating tempered water with a properly sized continuously operating recirculating pump

\*\*\*\* Note: Low limit cannot be less than the cold water temperature. For best operation, hot water should be at least 5°F (3°C) above desired set point.

**Capacity ■**

Flow Capacity at 50-50 Mixed Ratio								
		Pressure Drop Across Valve						
Model	Min. Flow to ASSE 1017	C <sub>v</sub>	5psi (34 kPa)	10psi (69 kPa)	20psi (138 kPa)	30psi (207 kPa)	45psi (310 kPa)	60psi (414 kPa)
LFMM431	3 gpm	6.32	14 gpm	20 gpm	28 gpm	35 gpm	42 gpm	49 gpm
	11 lpm		53 lpm	76 lpm	106 lpm	132 lpm	159 lpm	185 lpm
LFMM432	4 gpm	9.49	21 gpm	30 gpm	42 gpm	52 gpm	64 gpm	74 gpm
	15 lpm		80 lpm	114 lpm	159 lpm	197 lpm	242 lpm	280 lpm
LFMM433	5 gpm	16.44	37 gpm	52 gpm	74 gpm	90 gpm	110 gpm	127 gpm
	19 lpm		140 lpm	197 lpm	280 lpm	341 lpm	416 lpm	481 lpm
LFMM434	7 gpm	21.50	48 gpm	68 gpm	96 gpm	118 gpm	144 gpm	167 gpm
	26 lpm		182 lpm	257 lpm	363 lpm	447 lpm	545 lpm	632 lpm
LFMM435	10 gpm	31.00	69 gpm	98 gpm	139 gpm	170 gpm	208 gpm	240 gpm
	38 lpm		261 lpm	371 lpm	526 lpm	644 lpm	787 lpm	908 lpm
LFSH1432	1 gpm	8.54	19 gpm	27 gpm	38 gpm	47 gpm	57 gpm	66 gpm
	4 lpm		72 lpm	102 lpm	144 lpm	178 lpm	216 lpm	250 lpm
LFSH1434	1 gpm	19.00	42 gpm	60 gpm	85 gpm	104 gpm	127 gpm	147 gpm
	4 lpm		159 lpm	227 lpm	322 lpm	394 lpm	481 lpm	556 lpm
LFSH1435	5 gpm	30.00	67 gpm	95 gpm	134 gpm	164 gpm	201 gpm	232 gpm
	19 lpm		254 lpm	360 lpm	507 lpm	621 lpm	761 lpm	878 lpm

## Dimensions ■



Valve	Inlets	Outlets	A	B1	B2	C	D	E	F1	F2
LFMM431	3/4"	3/4"	9-1/8"	9-3/4"	13-3/4"	14-3/8"	56-1/2"	50-1/8"	29-1/4"	33-1/4"
	20 mm	20 mm	233 mm	247 mm	348 mm	364 mm	1435 mm	1274 mm	744 mm	845 mm
LFMM432	3/4"	1"	9-1/8"	9-3/4"	13-3/4"	14-3/8"	56-1/2"	50-1/8"	29-1/4"	33-1/4"
	20 mm	25 mm	233 mm	247 mm	348 mm	364 mm	1435 mm	1274 mm	744 mm	845 mm
LFMM433	1-1/4"	1-1/4"	12-1/2"	10-3/4"	14-3/4"	17"	56-1/2"	50-1/8"	33-1/4"	37-1/4"
	32 mm	32 mm	320 mm	272 mm	373 mm	432 mm	1435 mm	1274 mm	845 mm	947 mm
LFMM434	1-1/4"	1-1/2"	12-1/2"	10-3/4"	14-3/4"	17"	56-1/2"	50-1/8"	33-1/4"	37-1/4"
	32 mm	40 mm	320 mm	272 mm	373 mm	432 mm	1435 mm	1274 mm	845 mm	947 mm
LFMM435	2"	2"	15-5/8"	11-1/8"	15-1/8"	19"	59-1/4"	52-7/8"	39-1/4"	41-1/4"
	50 mm	50 mm	397 mm	283 mm	385 mm	483 mm	1504 mm	1342 mm	997 mm	1048 mm
LFSH1432	3/4"	1"	9-1/8"	9-3/4"	13-3/4"	14-3/8"	56-1/2"	50-1/8"	29-1/4"	33-1/4"
	20 mm	25 mm	233 mm	247 mm	348 mm	364 mm	1435 mm	1274 mm	744 mm	845 mm
LFSH1434	1-1/4"	1-1/2"	12-1/2"	10-3/4"	14-3/4"	17"	56-1/2"	50-1/8"	33-1/4"	37-1/4"
	32 mm	40 mm	320 mm	272 mm	373 mm	432 mm	1435 mm	1274 mm	845 mm	947 mm
LFSH1435	2"	2"	15-5/8"	11-1/8"	15-1/8"	19"	59-1/4"	52-7/8"	39-1/4"	41-1/4"
	50 mm	50 mm	397 mm	283 mm	385 mm	483 mm	1504 mm	1342 mm	997 mm	1048 mm

# Ordering Information ■

Valve	Inlets (in)	Outlet (in)	Order Code	L	F	P	S						
LFSH1432	3/4 (20mm)	1 (25mm)	A										
LFSH1434	1 1/4 (32mm)	1 1/2 (40mm)	B										
LFSH1435	2 (50mm)	2 (50mm)	N										
LFMM431	3/4 (20mm)	3/4 (20mm)	C										
LFMM432	3/4 (20mm)	1 (25mm)	D										
LFMM433	1 1/4 (32mm)	1 1/4 (32mm)	E										
LFMM434	1 1/4 (32mm)	1 1/2 (40mm)	F										
LFMM435	2 (50mm)	2 (50mm)	G										
<b>Controls</b>													
None			O										
Aquastat			A										
<b>Balancing Valve</b>													
None			O										
Automatic Balancing Valve			B										
<b>Return Pipe Size</b>													
1/2"			A										
3/4"			B										
1"			C										
1-1/4"			D										
1-1/2"			E										
2"			F										
<b>Assigned by Factory</b>													
<b>Pump Information:</b>													
Pump Manufacturer: _____													
Their Part #* _____													

\* If the pump is not selected or if you are using Automatic Balancing Valve (ABV) you must provide the following:  
 System Head Loss \_\_\_\_\_  
 Required Flow to Maintain Recirculating Temperature \_\_\_\_\_

## Recirculation Piping Diagram ■

Please see Piping Diagram Section of this catalog.

## Typical Specification ■

Water temperature control system should include a thermostatic mixing valve capable of maintaining water temperature to 5°F (3°C) above set point within the range of 90°F to 160°F (32 to 71°C). Valve must compensate for temperature fluctuation due to inlet temperature or pressure changes. The valves shall be constructed using Lead Free\* brass. Lead Free\* brass valves shall comply with state codes and standards, where applicable, requiring reduced lead content. Valve should have triple-duty checkstops and must have an advanced, paraffin-based thermal actuator in order to guarantee a precise control when tested in accordance with ASSE 1017 and CSA B125.

Control system should be mounted on a heavy-duty welded strut with corrosion resistance coating and factory tested as a complete unit. System should include an internal bypass loop for fast and easy set up. It should also include GFCI protection engineer specified circulator and combination temperature/pressure gauges. The system should feature optional Aquastat and Automatic Balancing valve to maintain system balance.

The control system shall be a Power's PowerStation™ series PSLF. Any alternate must have a written approval prior to bidding.

### ENGINEERING APPROVAL

Project: \_\_\_\_\_

Contractor: \_\_\_\_\_

Architect/Engineer: \_\_\_\_\_

# POWERS™

A Watts Water Technologies Company



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