

Job Name \_\_\_\_\_  
 Job Location \_\_\_\_\_  
 Engineer \_\_\_\_\_  
 Approval \_\_\_\_\_

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

# LEAD FREE\*

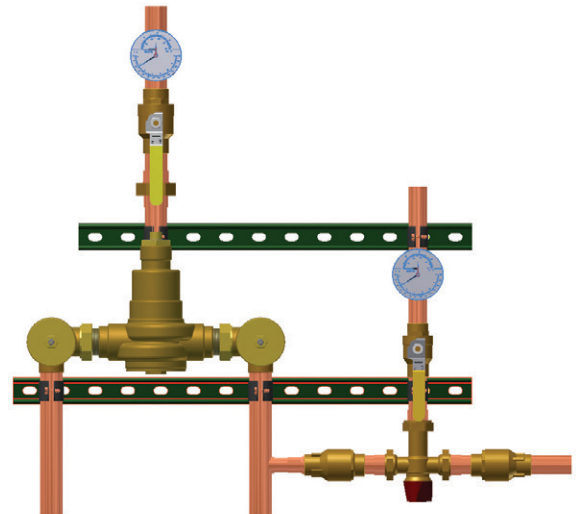
## HydroGuard® Lead Free\*

### Water Tempering

#### with Automatic Balancing System

#### Features

- Paraffin-based advanced thermal actuation technology to sense and adjust outlet temperature
- Dirt & lime resistant poppet and seat design
- Virtual shutoff if supply pressure fails
- Vandal-resistant locking mechanism to secure temperature setting
- Mounted on a heavy-duty struts and factory tested
- Includes Pressure/Temperature gauges and Ball Valves



#### Specifications

Maximum Operating Pressure . . . . . 125 psi (861 kPa)  
 Maximum Hot Water Temperature . . . . . 200°F (93°C)  
 Minimum Hot Water Supply Temp. . . . . 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)  
 Temperature Adjustment Range\*\*\*  
     Standard . . . . . 90 – 160°F (32 – 71°C)  
     Low . . . . . 60 – 90°F (16 – 32°C)  
 Listing — Valve Only . . . . . ASSE 1017  
 Certified — Valve Only . . . . . CSA B125

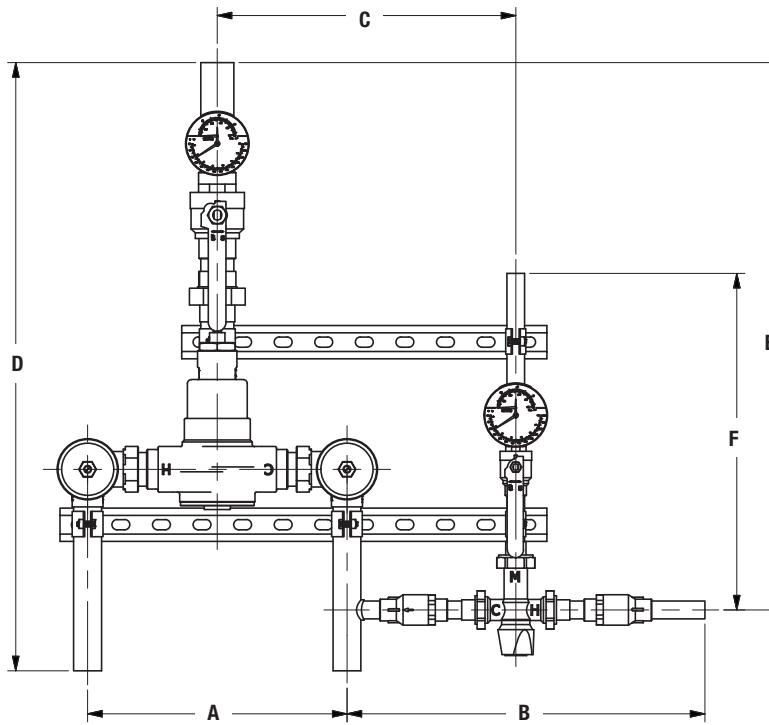
\* The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.  
 \*\* With Equal Pressure  
 \*\*\* Note: Low limit cannot be less than the cold water temperature. For best operation, hot water should be at least 5°F (3°C) above desired set point.

#### Capacity

Flow Capacity at 50-50 Mixed Ratio								
Model	Min. Flow to ASSE 1017	C <sub>v</sub>	Pressure Drop Across Valve					
			5 psi (34 kPa)	10 psi (69 kPa)	20 psi (138 kPa)	30 psi (207 kPa)	45 psi (310 kPa)	60 psi (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

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	Inlets	Outlets	Return Size	A	B	C	D	E	F
LFRMM431ABSO	3/4"	3/4"	3/4"	9-5/8" (245)	17-1/8" (435)	22-7/8" (581)	25-1/4" (637)	22-1/4" (565)	14-5/8" (371)
LFRMM431ACSO	3/4"	3/4"	1"	9-5/8" (245)	18-1/2" (470)	13-7/8" (352)	25-1/4" (637)	22-1/4" (565)	14-5/8" (371)
LFRMM431ABWO	3/4"	3/4"	3/4"	9-5/8" (245)	21-1/8" (537)	15-1/4" (387)	28-1/4" (718)	25-1/2" (648)	19-7/8" (505)
LFRMM431ACWO	3/4"	3/4"	1"	9-5/8" (245)	18-1/2" (470)	13-7/8" (352)	25-1/8" (638)	22-1/4" (565)	14-5/8" (371)
LFRMM432ABSO	3/4"	1"	3/4"	9-5/8" (245)	17-1/2" (445)	12-7/8" (327)	25-1/2" (648)	22-1/2" (572)	14-1/2" (368)
LFRMM432ACSO	3/4"	1"	1"	9-5/8" (245)	18-3/8" (467)	13-3/4" (349)	25-1/2" (648)	22-1/2" (572)	14-5/8" (371)
LFRMM432ABWO	3/4"	1"	3/4"	9-5/8" (245)	17-1/2" (444)	12-7/8" (327)	25-3/8" (645)	22-3/8" (568)	14-3/8" (365)
LFRMM432ACWO	3/4"	1"	1"	9-5/8" (245)	18-1/2" (470)	13-7/8" (353)	25-3/8" (645)	22-3/8" (568)	14-5/8" (371)
LFRMM433ABSO	1-1/4	1-1/4	3/4"	12-3/4" (324)	17-5/8" (448)	14-5/8" (372)	31" (787)	28" (711)	16-5/8" (422)
LFRMM433ACSO	1-1/4	1-1/4	1"	12-3/4" (324)	19" (483)	16" (406)	31" (787)	28" (711)	17" (432)
LFRMM433ABWO	1-1/4	1-1/4	3/4"	12-3/4" (324)	19" (483)"	16" (406)	31" (787)	28" (711)	17" (432)
LFRMM433ACWO	1-1/4	1-1/4	1"	12-3/4" (324)	19" (483)	16 (406)	31" (787)	28" (711)	17" (432)
LFRMM434ABSO	1-1/4	1-1/2	3/4"	12-3/4" (324)	17-5/8" (448)	14-3/4" (375)	30" (762)	27" (686)	16-5/8" (422)
LFRMM434ACSO	1-1/4	1-1/2	1"	12-3/4" (324)	18" (457)"	14-7/8" (378)	30" (762)	27" (686)	16-7/8" (429)
LFRMM434ABWO	1-1/4	1-1/2	3/4"	12-3/4" (324)	17-5/8" (448)	14-3/4" (375)	30" (762)	27" (686)	16-5/8" (422)
LFRMM434ACWO	1-1/4	1-1/2	1"	12-3/4" (324)	18" (457)	14-7/8" (378)	30" (762)	27" (686)	16-7/8" (429)
LFRMM435ABSO	2	2	3/4"	15-5/8" (397)	18-3/8" (467)	16-7/8" (429)	38" (965)	35" (889)	22-5/8" (575)
LFRMM435ACSO	2	2	1"	15-5/8" (397)	18-1/2" (470)	16-7/8" (429)	38" (965)	35" (889)	22-5/8" (575)

## Dimensions (cont.)

Model	Inlets	Outlets	Return Size	A	B	C	D	E	F
LFRMM435ABW0	2	2	3/4"	15-5/8" (397)	18-1/2" (470)	16-7/8" (429)	38" (965)	35" (889)	22-5/8" (575)
LFRMM435ACW0	2	2	1"	15-5/8" (397)	18-1/2" (470)	16-7/8" (429)	38" (965)	35" (889)	22-5/8" (575)
LFRSH1432ABS0	3/4"	1"	3/4"	9-5/8" (245)	17-1/4" (438)	12-5/8" (321)	26-1/8" (664)	23-1/2" (597)	14-3/8" (365)
LFRSH1432ACS0	3/4"	1"	1"	9-5/8" (245)	18-3/8" (467)	13-1/2" (343)	25-1/8" (638)	22-1/2" (572)	14-3/4" (375)
LFRSH1432ABW0	3/4"	1"	3/4"	9-5/8" (245)	17-1/4" (438)	12-5/8" (321)	26-1/8" (664)	23-1/2" (597)	14-3/8" (365)
LFRSH1432ACW0	3/4"	1"	1"	9-5/8" (245)	18-3/8" (467)	13-1/2" (343)	25-1/8" (638)	22-1/2" (572)	14-3/4" (375)
LFRSH1434ABS0	1-1/4	1-1/2	3/4"	12-3/4" (324)	17-3/4" (451)	14-3/4" (375)	30-1/4" (768)	27-1/4" (692)	16-5/8" (422)
LFRSH1434ACS0	1-1/4	1-1/2	1"	12-3/4" (324)	17-1/2" (445)	14-1/2" (368)	30" (762)	27" (686)"	16-7/8" (429)
LFRSH1434ABW0	1-1/4	1-1/2	3/4"	12-3/4" (324)	17-3/4" (451)	14-3/4" (375)	30-1/4" (768)	27-1/4" (692)	16-5/8" (422)
LFRSH1434ACW0	1-1/4	1-1/2	1"	12-3/4" (324)	17-1/8" (435)	14-1/2" (368)	30" (762)	27" (686)	16-7/8" (429)
LFRSH1435ABS0	2	2	3/4"	15-5/8" (397)	18-3/8" (467)	16-7/8" (429)	38" (965)	35" (889)	22-5/8" (575)
LFRSH1435ACS0	2	2	1"	15-5/8" (397)	21-3/4" (552)	19-1/4" (489)	38" (965)	35" (889)	22-5/8" (575)
LFRSH1435ABW0	2	2	3/4"	15-5/8" (397)	18-3/8" (467)	16-7/8" (429)	38" (965)	35" (889)	22-5/8" (575)
LFRSH1435ACW0	2	2	1"	15-5/8" (397)	21-3/4" (552)	19-1/4" (489)	38" (965)	35" (889)	22-5/8" (575)

## Ordering Information

LFR

### Valve Capacity @ 45 gpm Order Code

42 gpm (159 lpm)	MM431
64 gpm (242 lpm)	MM432
110 gpm (416 lpm)	MM433
144 gpm (545 lpm)	MM434
208 gpm (787 lpm)	MM435
57 gpm (216 lpm)	SH1432
127 gpm (481 lpm)	SH1434
201 gpm (761 lpm)	SH1435

### Valve & Piping Finish

Rough Bronze A

### Return Size

3/4" B  
1" C

### Temperature Range

Standard (90 – 160°F) S  
Low (60 – 90°F) W

### Alarm System

None	0
Aqua Sentry® 2 Alarm For LFRMM431	1
Aqua Sentry® 2 Alarm For LFRMM432	2
Aqua Sentry® 2 Alarm For LFRMM433	3
Aqua Sentry® 2 Alarm For LFRMM434	4
Aqua Sentry® 2 Alarm For LFRMM435	5
Aqua Sentry® 2 Alarm For LFRSH1432	6
Aqua Sentry® 2 Alarm For LFRSH1434	7
Aqua Sentry® 2 Alarm For LFRSH1435	8

## Recirculation Piping Diagram

Please see Piping Diagram Section of this catalog.

## Typical Specification

Lead Free\* Recirculating loop shall feature HydroGuard® master tempering valve and automatic balancing or ball valve. System shall be mounted on a heavy-duty welded struts, fully assembled and factory tested. Master tempering valves shall be constructed of solid brass with triple duty checkstops. Master tempering valves shall have temperature range of 90 – 160°F (32 – 71°C) or 60 – 90°F (16 – 32°C). Valves shall feature temperature locking mechanism to deter vandalism or unintended adjustment.

Recirculating loop shall feature temperature/pressure gauge for diagnostics, and inline checks to prevent cross-flow. System shall be Powers' LFRMM\_ \_ \_ \_ \_ or LFRSH\_ \_ \_ \_ \_ \_ \_ \_ . Any alternate must have written approval prior to bidding.

# POWERS™

A WATTS Brand

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