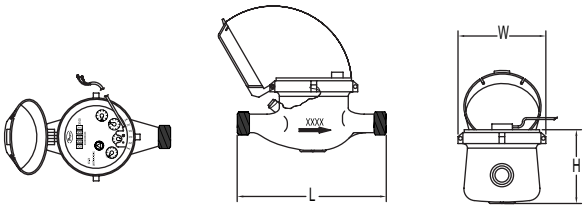
Series WMH Multi-Jet Hot Water Meter

Specifications - Installation and Operating Instructions



Size in (mm)	Spud NPSM (BSPP)	Length 'L' in (mm)	Width 'W' in (mm)	Height 'H' in (mm)	Weight lb (kg)
5/8 x 1/2 (15)	3/4″(3/4″)	6-1/2(165)	3-45/64 (94)	4-15/64(107.5)	3.75(1.7)
5/8 x 3/4	1″(1″)	7-1/2(190)	3-45/64(94)	4-15/64(107.5)	3.97(1.8)
3/4 (20)	1″(1″)	7-1/2(190)	3-45/64(94)	4-15/64(107.5)	4.9(2.2)
1 (25)	1-1/4″(1-1/4″)	10-1/4(260)	3-55/64(98)	4-5/8(117.5)	6.4(2.9)
1-1/4 (32)	1-1/2″(1-1/2″)	10-1/4 (260)	3-55/64(98)	4-5/8(117.5)	8.2(3.7)
1-1/2 (40)	2″(2″)	11-13/16 (300)	4-51/64(122)	5-9/16(141.5)	13.52 (6.17)
2 (50)	2-1/2″(2-1/2″)	11-13/16 (300)	5-45/64(145)	6-31/32(177)	18.74 (8.5)

The **SERIES WMH** High Temperature Multi-Jet Water Meters are a series of mechanical, water totalizing meters that display the total water usage in Gallons with m^3 options. They are available in a range of body sizes and include NPT or BSPT optional couplings. The high temperature resistant brass body is compatible in applications with high temperature water no suitable with standard brass water meters and maintains its accuracy.

FEATURES/BENEFITS

- High temperature threshold of 190ºF (88ºC) ideal for high temperature applications
- Multi-jet design allows for simplicity and accuracy with wide flow ranges, even in low flow applications
- Magnetically driven, hermetically sealed register does not leak or fog and is completely separated from the water
- Designed for long service life and maintenance-free operation
- Integral strainer that protects meter from particulate damage
- Easy installation with included coupling adapters
- Pulsed output proportional to flow allows for remote flow totalization

APPLICATIONS

- HVAC applications
- Measuring total condenser water flow in residential, commercial and industrial applications
- Remote hot water monitoring

Installation Instructions

1. Thoroughly flush the service line upstream of the meter to remove dirt and debris.
2. Remove meter spud thread protectors.

Note: To protect meter spud threads, store the meter with thread protectors in place.

3. Set the meter in the line. Install in a horizontal plane, with the register upright, in a location accessible for reading, service and inspection. Arrows on the side of the meter and above the outlet spud indicate the direction of flow.
4. For accurate measurement, the tap height should be higher than the meter.
5. Do not over-tighten connections; tighten only as required to seal. Do not use pipe sealant tape on meter threads.

With upstream shutoff valve only:

6. Open shutoff valve slowly, to remove air from meter and service line. Open a faucet slowly to allow entrapped air to escape. Close the faucet.

With both upstream and downstream shutoff valves installed:

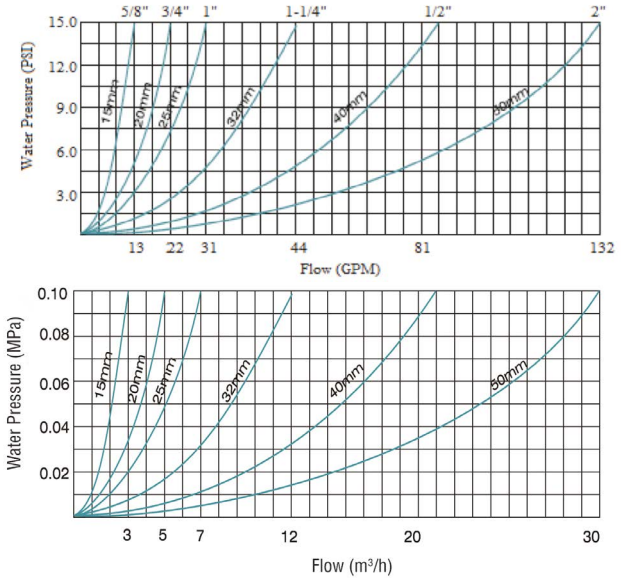
7. Test the installation for leaks: Close the outlet (downstream) shutoff valve. Open the inlet (upstream) shutoff slowly until meter is full of water. Open the outlet (downstream) valve slowly until air is out of the meter and service line. Open a faucet slowly to allow entrapped air to escape. Close the faucet.

SPECIFICATIONS

Service: Water.
Wetted Materials: Body: Brass; Couplings: Brass; Measuring Chamber: Brass.
Flow Range: See model chart.
Accuracy: WMH-A-X-XX: Transitional Flow: ±3%; Nominal Flow: ±1.5%; WMH-B-X-XX*: Transitional Flow: ±5%; Nominal Flow: ±2%. Temperature Limit: 190°F (88°C).
Pressure Limit: 150 psi (10 bar).
Pressure Drop: See pressure drop curve below.
Totalizing Display Maximum: See model chart.
Output Signal: Pulse output with frequency proportional to flow rate.
Pulse Options: 0.1 gal, 1 gal, 10 gal, 100 gal per pulse (1 L, 10 L, 100 L, 1000 per pulse) See model chart*.
Electrical Rating: 0.01A @ 24VAC/DC.
Electrical Connections: Color-coded lead wires, 4.5 (1.5m) long;
Mounting Orientation: Horizontal.
Weight: See dimension chart.

CAUTION Unit must be installed in a horizontal position with the register face pointing up otherwise leakage and/or meter damage will occur.

Pressure Drop



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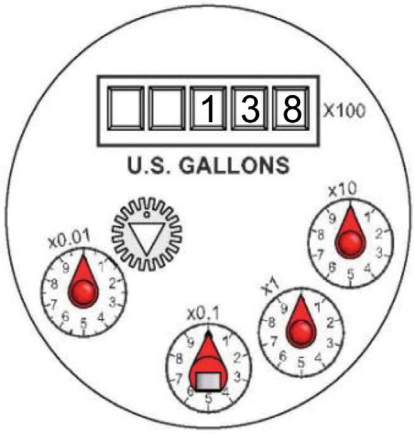
MODEL CHART								
			GPM (Gallons Per Minute)					
Model	Size	Coupling Size	Max Flow	Nominal Flow Range	Transitional Flow	Display Max (Gallons)	Pulse Rate (Gal/Pulse)	Net Weight with Connectors lb (kg)
WMH-A-C-01	5/8″ x 1/2″	1/2″ NPT	20	1 to 20	0.25	9,999,999.99	0.1	3.58 (1.63)
WMH-A-C-02	5/8″ x 3/4″	3/4″ NPT	20	1 to 20	0.25	9,999,999.99	0.1	3.82 (1.73)
WMH-A-C-03	3/4″ SL	3/4″ NPT	30	2 to 30	0.5	9,999,999.99	0.1	4.21 (1.91)
WMH-A-C-04	3/4″	3/4″ NPT	30	2 to 30	0.5	9,999,999.99	0.1	4.5 (2.04)
WMH-A-C-05	3/4 x 1″	1″ NPT	30	2 to 30	0.5	9,999,999.99	0.1	6.02 (2.73)
WMH-A-C-06	1″	1″ NPT	50	3 to 50	0.75	9,999,999.99	0.1	6.02 (2.73)
WMH-A-C-01-1	5/8″ x 1/2″	1/2″ NPT	20	1 to 20	0.25	9,999,999.99	1	3.58 (1.63)
WMH-A-C-02-1	5/8″ x 3/4″	3/4″ NPT	20	1 to 20	0.25	9,999,999.99	1	3.82 (1.73)
WMH-A-C-03-1	3/4″ SL	3/4″ NPT	30	2 to 30	0.5	9,999,999.99	1	4.21 (1.91)
WMH-A-C-04-1	3/4″	3/4″ NPT	30	2 to 30	0.5	9,999,999.99	1	4.5 (2.04)
WMH-A-C-05-1	3/4 x 1″	1″ NPT	30	2 to 30	0.5	9,999,999.99	1	6.02 (2.73)
WMH-A-C-06-1	1″	1″ NPT	50	3 to 50	0.75	9,999,999.99	1	6.02 (2.73)
WMH-A-C-07-1	1-1/2″	1-1/2″ NPT	100	5 to 100	1.5	9,999,999.9	1	12.02 (5.45)
WMH-A-C-08-1	2″	2″ NPT	160	8 to 160	2	9,999,999.9	1	13.23 (6.00)
WMH-A-C-01-10	5/8″ x 1/2″	1/2″ NPT	20	1 to 20	0.25	9,999,999.99	10	3.58 (1.63)
WMH-A-C-02-10	5/8″ x 3/4″	3/4″ NPT	20	1 to 20	0.25	9,999,999.99	10	3.82 (1.73)
WMH-A-C-03-10	3/4″ SL	3/4″ NPT	30	2 to 30	0.5	9,999,999.99	10	4.21 (1.91)
WMH-A-C-04-10	3/4″	3/4″ NPT	30	2 to 30	0.5	9,999,999.99	10	4.5 (2.04)
WMH-A-C-05-10	3/4 x 1″	1″ NPT	30	2 to 30	0.5	9,999,999.99	10	6.02 (2.73)
WMH-A-C-06-10	1″	1″ NPT	50	3 to 50	0.75	9,999,999.99	10	6.02 (2.73)
WMH-A-C-07-10	1-1/2″	1-1/2″ NPT	100	5 to 100	1.5	9,999,999.9	10	12.02 (5.45)
WMH-A-C-08-10	2″	2″ NPT	160	8 to 160	2	9,999,999.9	10	13.23 (6.00)
WMH-A-C-01-100	5/8″ x 1/2″	1/2″ NPT	20	1 to 20	0.25	9,999,999.99	100	3.58 (1.63)
WMH-A-C-02-100	5/8″ x 3/4″	3/4″ NPT	20	1 to 20	0.25	9,999,999.99	100	3.82 (1.73)
WMH-A-C-03-100	3/4″ SL	3/4″ NPT	30	2 to 30	0.5	9,999,999.99	100	4.21 (1.91)
WMH-A-C-04-100	3/4″	3/4″ NPT	30	2 to 30	0.5	9,999,999.99	100	4.5 (2.04)
WMH-A-C-05-100	3/4″ x 1″	1″ NPT	30	2 to 30	0.5	9,999,999.99	100	6.02 (2.73)
WMH-A-C-06-100	1″	1″ NPT	50	3 to 50	0.75	9,999,999.99	100	6.02 (2.73)
WMH-A-C-07-100	1-1/2″	1-1/2″ NPT	100	5 to 100	1.5	9,999,999.9	100	12.02 (5.45)
WMH-A-C-08-100	2″	2″ NPT	160	8 to 160	2	9,999,999.9	100	13.23 (6.00)

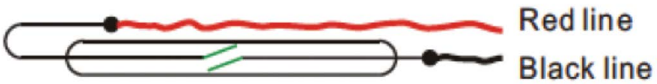
MODEL CHART								
			m^3/h					
Model	Size (mm)	Coupling Size	Max Flow	Nominal Flow Range	Transitional Flow	Display Max m^3/h	Pulse Rate (Liters/Pulse)	Net Weight with Connectors lb (kg)
WMH-B-C-09-1	15	1/2” BSPT	3	0.12 to 1.5	0.03	99,999.9999	1	3.53 (1.6)
WMH-B-C-10-1	20	3/4” BSPT	5	0.2 to 2.5	0.05	99,999.9999	1	3.82 (1.73)
WMH-B-C-11-1	25	1” BSPT	7	0.25 to 3.5	0.07	99,999.9999	1	4.21 (1.91)
WMH-B-C-12-1	32	1-1/4” BSPT	12	.48 to 6	0.12	99,999.9999	1	4.5 (2.04)
WMH-B-C-09-10	15	1/2” BSPT	3	0.12 to 1.5	0.03	99,999.9999	10	3.53 (1.6)
WMH-B-C-10-10	20	3/4” BSPT	5	0.2 to 2.5	0.05	99,999.9999	10	3.82 (1.73)
WMH-B-C-11-10	25	1” BSPT	7	0.25 to 3.5	0.07	99,999.9999	10	4.21 (1.91)
WMH-B-C-12-10	32	1-1/4” BSPT	12	.48 to 6	0.12	99,999.9999	10	4.5 (2.04)
WMH-B-C-13-10	40	1-1/2”BSPT	20	0.8 to 10	0.2	999,999.9999	10	12.02 (5.45)
WMH-B-C-14-10	50	2” BSPT	30	1.2 to 15	0.3	99,999.9999	10	13.23 (6.00)
WMH-B-C-09-100	15	1/2” BSPT	3	0.12 to 1.5	0.03	99,999.9999	100	3.52 (1.6)
WMH-B-C-10-100	20	3/4” BSPT	5	0.2 to 2.5	0.05	99,999.9999	100	3.82 (1.73)
WMH-B-C-11-100	25	1” BSPT	7	0.25 to 3.5	0.07	99,999.9999	100	4.21 (1.91)
WMH-B-C-12-100	32	1-1/4” BSPT	12	.48 to 6	0.12	99,999.9999	100	4.5 (2.04)
WMH-B-C-13-100	40	1-1/2”BSPT	20	0.8 to 10	0.2	999,999.9999	100	12.02 (5.45)
WMH-B-C-14-100	50	2” BSPT	30	1.2 to 15	0.3	99,999.9999	100	13.23 (6.00)
WMH-B-C-09-1000	15	1/2” BSPT	3	0.12 to 1.5	0.03	99,999.9999	1000	3.527 (1.6)
WMH-B-C-10-1000	20	3/4” BSPT	5	0.2 to 2.5	0.05	99,999.9999	1000	3.82 (1.73)
WMH-B-C-11-1000	25	1” BSPT	7	0.25 to 3.5	0.07	99,999.9999	1000	4.21 (1.91)
WMH-B-C-12-1000	32	1-1/4” BSPT	12	.48 to 6	0.12	99,999.9999	1000	4.5 (2.04)
WMH-B-C-13-1000	40	1-1/2”BSPT	20	0.8 to 10	0.2	999,999.9999	1000	12.02 (5.45)
WMH-B-C-14-1000	50	2” BSPT	30	1.2 to 15	0.3	99,999.9999	1000	13.23 (6.00)

Meter Reading

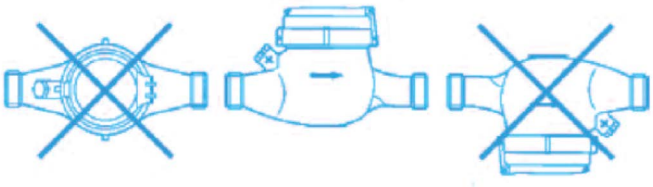
The total flow that has passed through your meter is read by starting at the top of the register with the Five-Digit Totalizer, and then read clockwise around the small dials. In the example below, the Five-Digit Totalizer reads 13800 (138 x 100), and the dials read 0 (0 x 10), 0 (0 x1), and 0 (0 x 0.1) respectively. The total flow is 13800.0



Electrical Installation

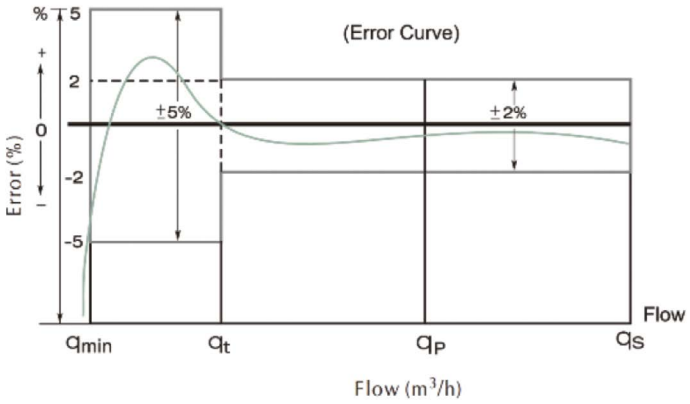


Installation



Incorrect Correct Incorrect

Accuracy Chart



MAINTENANCE/REPAIR

Upon final installation of the Series WMH, no routine maintenance is required. The Series WMH is not field serviceable and is not possible to repair the unit. Field repair should not be attempted and may void warranty.

WARRANTY/RETURN

Refer to “Terms and Conditions of Sale” in our catalog and on our website. Contact customer service to receive a Return Goods Authorization number before shipping the product back for repair. Be sure to include a brief description of the problem plus any additional application notes.

NOTES

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