

# ECONOMICAL IN-LINE LIQUID FLOWMETERS

FLMW and FLMH Series  
Starts at



Optional †

- ✓ Direct-Reading Dual Scales
- ✓ Ranges from 0.05 to 150 GPM
- ✓ High Pressure: 3500 psi (Brass or Aluminum); 6000 psi (Stainless Steel)
- ✓ High Temperature: 116°C (240°F) Standard, 204 or 316°C (400 or 600°F) Optional
- ✓ Mounts in Any Position
- ✓ Relay Alarms and Analog Outputs Optional

The FLMW and FLMH flowmeters can be installed directly in the fluid line without flow straighteners or special piping.

The spring-and-piston type assembly enables these flowmeters to be mounted in any position and protects them against changes in viscosity.

The FLMW or the FLMH Series with the optional analog output (-MA) are typically used to transmit a signal proportional to the flow rate to a process controller, a PLC, a recorder, or a panel-mount display. With the -MA options the user can choose between reading a 0 to 2000 Hz square-wave pulse, a 0 to 5 Vdc analog signal, or a 2-wire 4 to 20 mA analog signal by connecting the appropriate pins.

## SPECIFICATIONS

**Measuring Accuracy:** ±2.5% FS in the center third of the measuring range; ±4% FS over the entire scale range

**Repeatability:** ±1% FS

**Flow Measuring Range:** 0.2 to 560 LPM (0.05 to 150 GPM)

**Max Operating Pressure:**  
Aluminum and Brass Monitors: 240 bar (3500 psig)  
Stainless Steel Monitors: 410 bar (6000 psig) up to 116°C (240°F)

**Max Operating Temperature:** 116°C (240°F)

[Note: For high temperature (“-HT”, “-UHT”), see chart on page B-62.]

† Refers to footnote on page B-62 for NIST calibration ordering information.



FLMW-1205BR-MA  
5 GPM oil meter with  
4 to 20 mA output,

All models shown  
smaller than  
actual size.

### Standard Calibration Fluids:

#### Oil Monitors:

DTE 25 @ 43°C (110°F), 0.873 sg

#### Water Monitors:

Tap water @ 21°C (70°F), 1.0 sg

### Maximum Particle Size:

76 microns

### Relay (Optional): 1 or 2 form “C”

relays, rated 10 A @ 125 or 250 Vac or 0.25 A @ 250 Vdc

### Mechanical Life:

>10<sup>7</sup> cycles

### Analog Output (Optional):

Supply voltage 12 to 35 Vdc, field selectable for 0 to 5 Vdc (100 W minimum load), 0 to 2000 Hz square-wave pulse or 4 to 20 mA  
R<sub>max</sub> = 50 (V<sub>S</sub>-12). V<sub>S</sub> = supply voltage DC



FLMH-3810AL,



FLMW-3405BR  
5 GPM water meter,

### Materials of Construction (Wetted Components)

Description	Aluminum (Not for Water)	Brass	Stainless Steel
High-pressure casing, end ports and tapered shaft	Aluminum	Brass	304 SS
Seals	Buna (STD), EPR, FKM or Perfluoroelastomer	Buna (STD), EPR, FKM or Perfluoroelastomer	FKM with PTFE backup (STD) Buna, EPR or Perfluoroelastomer
Transfer magnet	PTFE-coated Alnico	PTFE-coated Alnico	PTFE-coated Alnico
Floating orifice disk	Stainless steel	Stainless steel	Stainless steel
All other internal parts	Stainless steel	Stainless steel	Stainless steel

### Materials of Construction (Non-Wetted Components)

Description	Aluminum	Brass	Stainless Steel
Window tube	Polycarbonate (STD), Pyrex®	Polycarbonate (STD), Pyrex	Polycarbonate (STD), Pyrex
Window seals	Buna (STD), PTFE	Buna (STD), PTFE	Buna (STD), PTFE

Port Sizes	¼ to 1½ FNPT
Installation Dimensions	¼ and ½ Port: 1¼ OD x 168 mm (6.6") length ¾ and 1.0 Port: 2¼ OD x 183 mm (7.2") length 1¼ and 1½ Port: 3¼ OD x 257 mm (10.1") length

Note: Minimum flow rate = 10% of maximum.

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**B**

**Oil Flowmeters**

Model No.	Max Rate GPM	Conn Size
FLMH-1401(*)	1	¼ NPT
FLMH-1402(*)	2	¼ NPT
FLMH-1405(*)	5	¼ NPT
FLMH-1410(*)	10	¼ NPT
FLMH-1415(*)	15	¼ NPT
FLMH-3801(*)	1	⅜ NPT
FLMH-3802(*)	2	⅜ NPT
FLMH-3805(*)	5	⅜ NPT
FLMH-3810(*)	10	⅜ NPT
FLMH-3815(*)	15	⅜ NPT
FLMH-1201(*)	1	½ NPT
FLMH-1202(*)	2	½ NPT
FLMH-1205(*)	5	½ NPT
FLMH-1210(*)	10	½ NPT
FLMH-1215(*)	15	½ NPT

\* Indicate material: **AL**=aluminum, **standard**; **BR**=brass, add ; **SS**=stainless steel, add

**Oil Flowmeters**

Model No.	Max Rate GPM	Conn Size
FLMH-3402(*)	2	¾ NPT
FLMH-3405(*)	5	¾ NPT
FLMH-3410(*)	10	¾ NPT
FLMH-3415(*)	15	¾ NPT
FLMH-3420(*)	20	¾ NPT
FLMH-3425(*)	25	¾ NPT
FLMH-3430(*)	30	¾ NPT
FLMH-3440(*)	40	¾ NPT
FLMH-1002(*)	2	1 NPT
FLMH-1005(*)	5	1 NPT
FLMH-1010(*)	10	1 NPT
FLMH-1015(*)	15	1 NPT
FLMH-1020(*)	20	1 NPT
FLMH-1025(*)	25	1 NPT
FLMH-1030(*)	30	1 NPT
FLMH-1040(*)	40	1 NPT

\* Indicate material: **AL**=aluminum, **standard**; **BR**=brass, add ; **SS**=stainless steel, add

**Oil Flowmeters**

Model No.	Max Rate GPM	Conn Size
FLMH-114025(*)	25	1¼ NPT
FLMH-114050(*)	50	1¼ NPT
FLMH-114075(*)	75	1¼ NPT
FLMH-114100(*)	100	1¼ NPT
FLMH-114150(*)	150	1¼ NPT
FLMH-112025(*)	25	1½ NPT
FLMH-112050(*)	50	1½ NPT
FLMH-112075(*)	75	1½ NPT
FLMH-112100(*)	100	1½ NPT
FLMH-112150(*)	150	1½ NPT

\* Indicate material: **AL**=aluminum, **standard**; **BR**=brass, add ; **SS**=stainless steel, add

**Water Flowmeters**

Model No.	Max Rate GPM	Conn Size
FLMW-1401(*)	1	¼ NPT
FLMW-1402(*)	2	¼ NPT
FLMW-1405(*)	5	¼ NPT
FLMW-1410(*)	10	¼ NPT
FLMW-3801(*)	1	⅜ NPT
FLMW-3802(*)	2	⅜ NPT
FLMW-3805(*)	5	⅜ NPT
FLMW-3810(*)	10	⅜ NPT
FLMW-3815(*)	15	⅜ NPT
FLMW-1201(*)	1	½ NPT
FLMW-1202(*)	2	½ NPT
FLMW-1205(*)	5	½ NPT
FLMW-1210(*)	10	½ NPT
FLMW-1215(*)	15	½ NPT

\* Indicate material: **BR**=brass, **standard**; **SS**=stainless steel, add

**Water Flowmeters**

Model No.	Max Rate GPM	Conn Size
FLMW-3402(*)	2	¾ NPT
FLMW-3405(*)	5	¾ NPT
FLMW-3410(*)	10	¾ NPT
FLMW-3415(*)	15	¾ NPT
FLMW-3420(*)	20	¾ NPT
FLMW-3425(*)	25	¾ NPT
FLMW-3430(*)	30	¾ NPT
FLMW-3440(*)	40	¾ NPT
FLMW-1002(*)	2	1 NPT
FLMW-1005(*)	5	1 NPT
FLMW-1010(*)	10	1 NPT
FLMW-1015(*)	15	1 NPT
FLMW-1020(*)	20	1 NPT
FLMW-1025(*)	25	1 NPT
FLMW-1030(*)	30	1 NPT
FLMW-1040(*)	40	1 NPT

\* Indicate material: **BR**=brass, **standard**; **SS**=stainless steel, add

**Water Flowmeters**

Model No.	Max Rate GPM	Conn Size
FLMW-114025(*)	25	1¼ NPT
FLMW-114050(*)	50	1¼ NPT
FLMW-114075(*)	75	1¼ NPT
FLMW-114100(*)	100	1¼ NPT
FLMW-114150(*)	150	1¼ NPT
FLMW-112025(*)	25	1½ NPT
FLMW-112050(*)	50	1½ NPT
FLMW-112075(*)	75	1½ NPT
FLMW-112100(*)	100	1½ NPT
FLMW-112150(*)	150	1½ NPT

\* Indicate material: **BR**=brass, **standard**; **SS**=stainless steel, add

**Options**

Order Suffix	Description
-HT	High temperatures, 204°C (400°F) max
-UHT	Ultra high temperatures, 315°C (600°F) max
-R1	Single SPDT relay, 10 A @ 220 Vac
-R2	Dual SPDT relays, 10 A @ 220 Vac
-MA	4 to 20 mA output (12 to 35 Vdc powered)
-BDF	Bidirectional flow (not available with 1½" size units, or with UHT, R1, R2, or MA options) additional for ¼ to ½" sizes additional for ¾ to 1" sizes additional for 1¼" size

Note: Only one option may be ordered with each unit.

**Flowmeter Pricing With Options**

Port Size	Aluminum					Brass					Stainless Steel				
	-HT	-UHT	-R1	-R2	-MA	-HT	-UHT	-R1	-R2	-MA	-HT	-UHT	-R1	-R2	-MA
¼ to ½"															
¾ to 1"															
1¼ to 1½"															

Comes complete with operator's manual.

Note: Units over 400 SCFM cannot be NIST-calibrated.

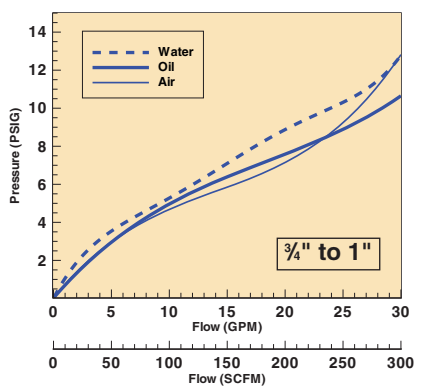
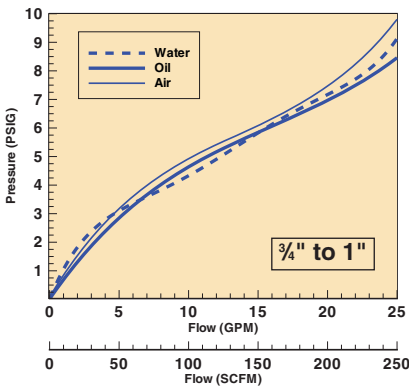
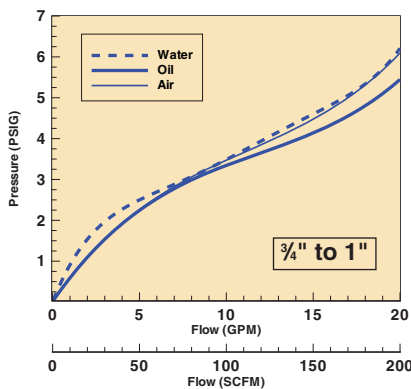
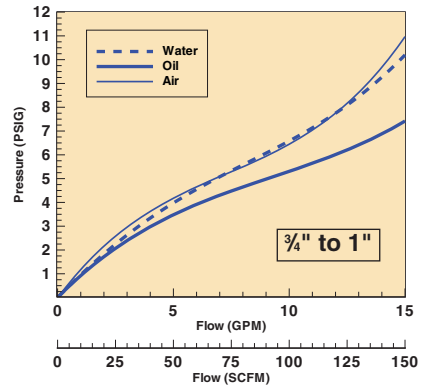
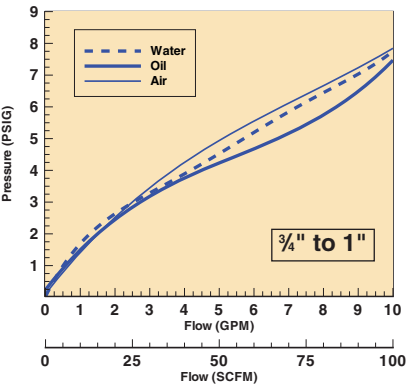
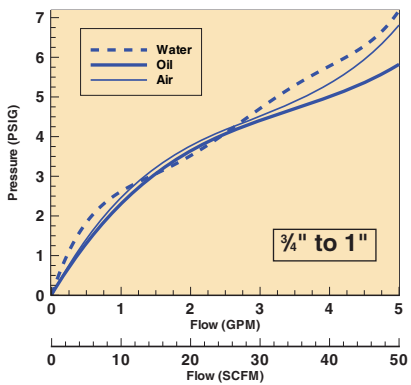
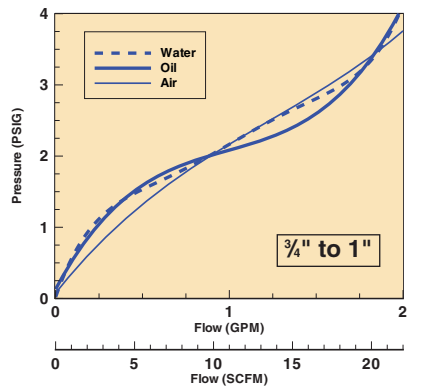
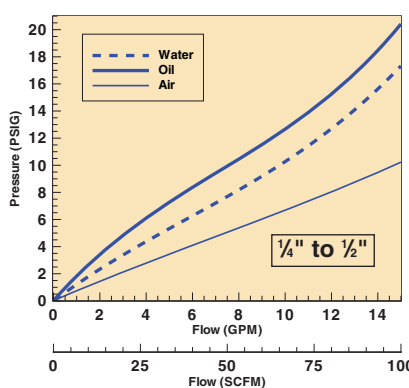
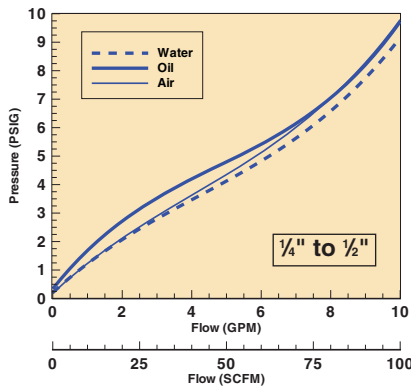
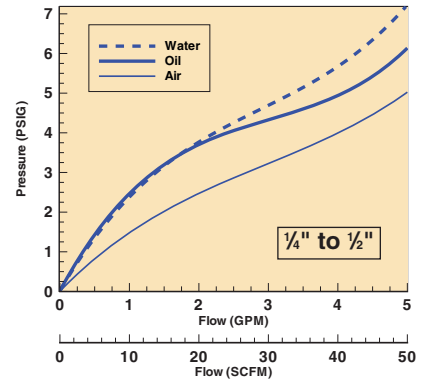
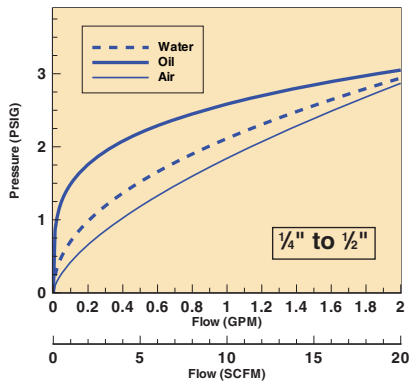
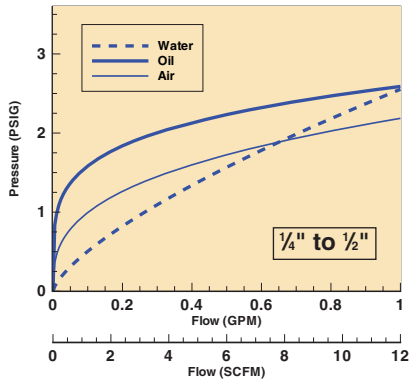
† For NIST traceable certificate, add suffix "-NIST" to model number and add to price.

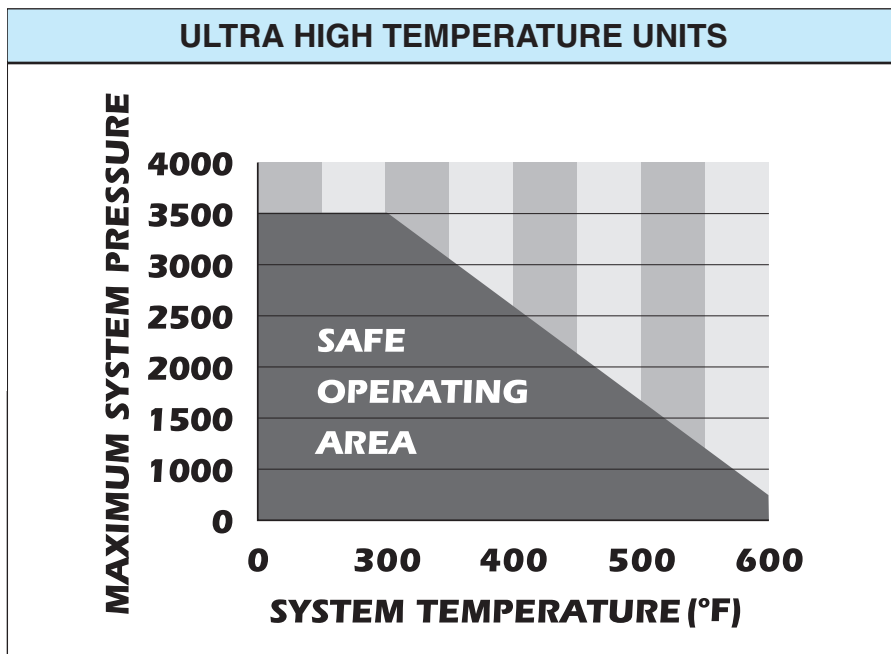
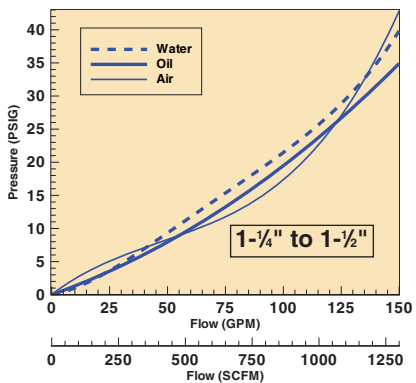
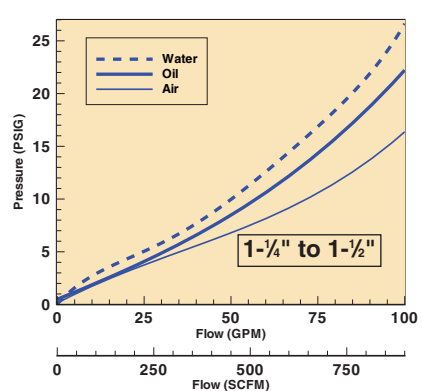
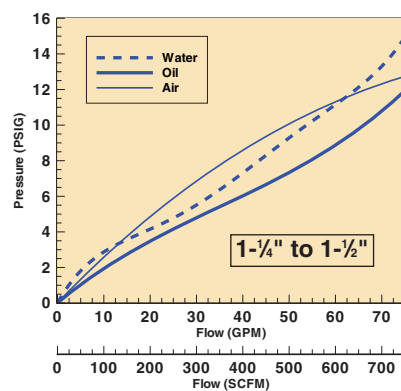
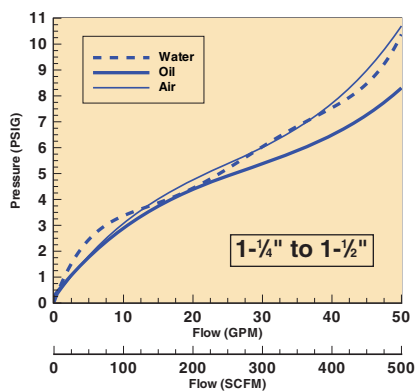
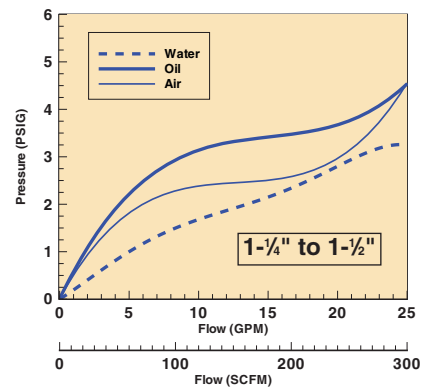
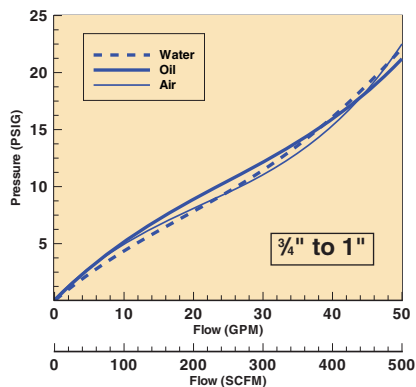
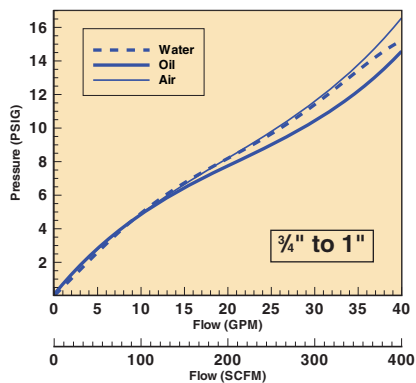
Ordering Examples: FLMW-1202BR-R1, ½", 2 GPM water flowmeter (brass) with relay,

FLMH-1401AL, ¼" oil meter (aluminum), 1 GPM,

# PRESSURE DROP GRAPHS

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