

FLMW and FLMH Series

Economical In-Line Liquid Flow Meters



- Direct-Reading Dual Scales
- Ranges from 0.1 GPM to 150 GPM
- High Pressure: 3500 psi (Brass or Aluminum); 6000 psi (Stainless Steel)
- High Temperature: 116 °C (240 °F) Standard, 204 °C (400 °F) Optional
- Mounts in Any Position
- Relay Alarms and Analog Outputs Optional

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

The spring-and-piston type assembly enables these flow meters 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 Vdc to 5 Vdc analog signal, or a 2-wire 4 mA to 20 mA analog signal by connecting the appropriate pins.

Specifications

Measuring Accuracy	±2 % FS over the entire scale range
Repeatability	±1 % FS
Flow Measuring Range	0.4 LPM to 550 LPM (0.1 GPM 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) standard 204 °C (400 °F) high temp (see table on page 3)
Note: For high temperature ("HT"), see chart on page 3.	
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 ⁷ cycles

All models shown smaller than actual size

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



FLMH-3810AL

FLMW-3405BR
5 GPM water meter

Analog Output (Optional)	Supply voltage 12 to 35 Vdc, field selectable for 0 Vdc to 5 Vdc (100 W minimum load), 0 Hz to 2000 Hz square-wave pulse or 4 mA to 20 mA Rmax = 50 (VS-12). VS = supply voltage DC
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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 (Not For Water)	Brass	Stainless Steel
Window tube	Polycarbonate (STD), Pyrex®	Polycarbonate (STD), Pyrex®	Polycarbonate (STD), Pyrex®
Window seals	Buna (STD)	Buna (STD)	Buna (STD)

Port Sizes

Port Sizes	¼ to 1½ FNPT
Installation Dimensions	¼ and ½ Port: 1⅞ OD x 168 mm (6.6 ") length ¾ and 1.0 Port: 2⅞ OD x 183 mm (7.2 ") length 1 ¼ and 1½ Port: 3½ OD x 257 mm (10.1 ") length

Order Guide

Oil Flow Meters

Model No.	Max Rate LPM (GPM)	NPT Conn Size
FLMH-1401(*)	4 (1)	¼
FLMH-1402(*)	8 (2)	¼
FLMH-1405(*)	19 (5)	¼
FLMH-1410(*)	37 (10)	¼
FLMH-1415(*)	58 (15)	¼
FLMH-3801(*)	4 (1)	⅜
FLMH-3802(*)	8 (2)	⅜
FLMH-3805(*)	19 (5)	⅜
FLMH-3810(*)	37 (10)	⅜
FLMH-3815(*)	58 (15)	⅜
FLMH-1201(*)	4 (1)	½
FLMH-1202(*)	8 (2)	½
FLMH-1205(*)	19 (5)	½
FLMH-1210(*)	37 (10)	½
FLMH-1215(*)	58 (15)	½

*Indicate material: **AL** = aluminum, **standard**; **BR** = brass, **SS** = stainless steel for additional cost.

Model No.	Max Rate LPM (GPM)	NPT Conn Size
FLMH-3402(*)	8 (2)	¾
FLMH-3405(*)	19 (5)	¾
FLMH-3410(*)	37 (10)	¾
FLMH-3415(*)	58 (15)	¾
FLMH-3420(*)	74 (20)	¾
FLMH-3425(*)	100 (25)	¾
FLMH-3430(*)	115 (30)	¾
FLMH-3440(*)	150 (40)	¾
FLMH-1002(*)	8 (2)	1
FLMH-1005(*)	19 (5)	1
FLMH-1010(*)	37 (10)	1
FLMH-1015(*)	58 (15)	1
FLMH-1020(*)	74 (20)	1
FLMH-1025(*)	100 (25)	1
FLMH-1030(*)	115 (30)	1
FLMH-1040(*)	150 (40)	1

*Indicate material: **AL** = aluminum, **standard**; **BR** = brass, **SS** = stainless steel for additional cost.

Model No.	Max Rate LPM (GPM)	NPT Conn Size
FLMH-114025(*)	100 (25)	1¼
FLMH-114050(*)	185 (50)	1¼
FLMH-114075(*)	280 (75)	1¼
FLMH-114100(*)	370 (100)	1¼
FLMH-114150(*)	550 (150)	1¼
FLMH-112025(*)	100 (25)	1½
FLMH-112050(*)	185 (50)	1½
FLMH-112075(*)	280 (75)	1½
FLMH-112100(*)	370 (100)	1½
FLMH-112150(*)	550 (150)	1½

*Indicate material: **AL** = aluminum, **standard**; **BR** = brass, **SS** = stainless steel for additional cost.

Note: Minimum flow rate = 10 % of maximum

Order Guide

Water Flow Meters

Model No.	Max Rate LPM (GPM)	NPT Conn Size
FLMW-1401(*)	4 (1)	¼
FLMW-1402(*)	8 (2)	¼
FLMW-1405(*)	19 (5)	¼
FLMW-1410(*)	37 (10)	¼
FLMW-3801(*)	4 (1)	⅜
FLMW-3802(*)	8 (2)	⅜
FLMW-3805(*)	19 (5)	⅜
FLMW-3810(*)	37 (10)	⅜
FLMW-3815(*)	58 (15)	⅜
FLMW-1201(*)	4 (1)	½
FLMW-1202(*)	8 (2)	½
FLMW-1205(*)	19 (5)	½
FLMW-1210(*)	37 (10)	½
FLMW-1215(*)	58 (15)	½

*Indicate material: **AL** = aluminum,
standard; **BR** = brass, **SS** = stainless steel
for additional cost.

Model No.	Max Rate LPM (GPM)	NPT Conn Size
FLMW-3402(*)	8 (2)	¾
FLMW-3405(*)	19 (5)	¾
FLMW-3410(*)	37 (10)	¾
FLMW-3415(*)	58 (15)	¾
FLMW-3420(*)	74 (20)	¾
FLMW-3425(*)	100 (25)	¾
FLMW-3430(*)	115 (30)	¾
FLMW-3440(*)	150 (40)	¾
FLMW-1002(*)	8 (2)	1
FLMW-1005(*)	19 (5)	1
FLMW-1010(*)	37 (10)	1
FLMW-1015(*)	58 (15)	1
FLMW-1020(*)	74 (20)	1
FLMW-1025(*)	100 (25)	1
FLMW-1030(*)	115 (30)	1
FLMW-1040(*)	150 (40)	1

*Indicate material: **AL** = aluminum,
standard; **BR** = brass, **SS** = stainless
steel for additional cost.

Model No.	Max Rate LPM (GPM)	NPT Conn Size
FLMW-114025(*)	100 (25)	1¼
FLMW-114050(*)	185 (50)	1¼
FLMW-114075(*)	280 (75)	1¼
FLMW-114100(*)	370 (100)	1¼
FLMW-114150(*)	550 (150)	1¼
FLMW-112025(*)	100 (25)	1½
FLMW-112050(*)	185 (50)	1½
FLMW-112075(*)	280 (75)	1½
FLMW-112100(*)	370 (100)	1½
FLMW-112150(*)	550 (150)	1½

*Indicate material: **AL** = aluminum,
standard; **BR** = brass, **SS** = stainless steel
for additional cost.

Options

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

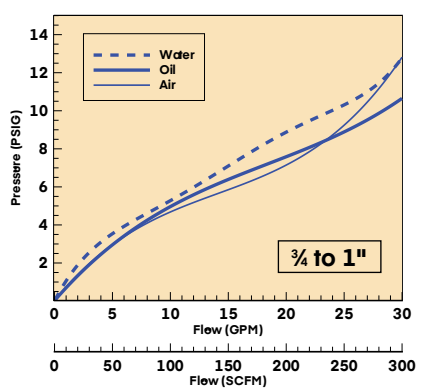
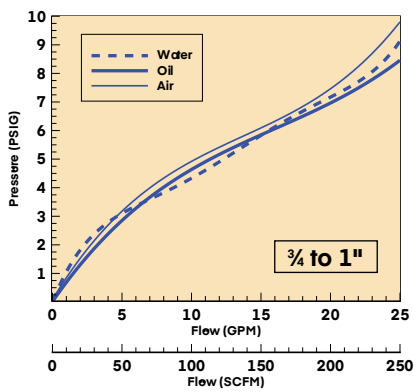
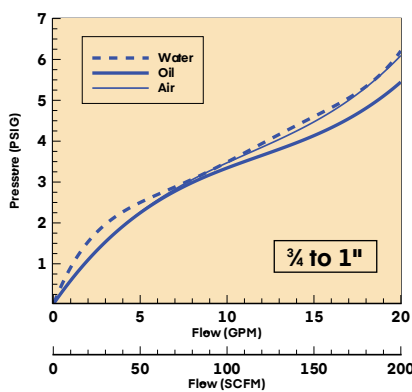
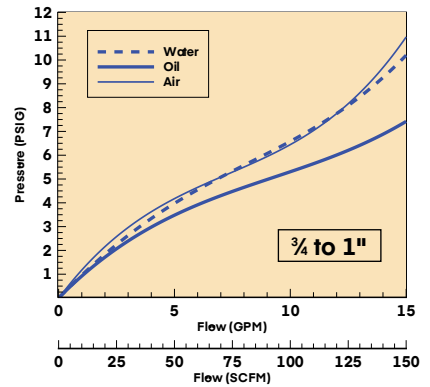
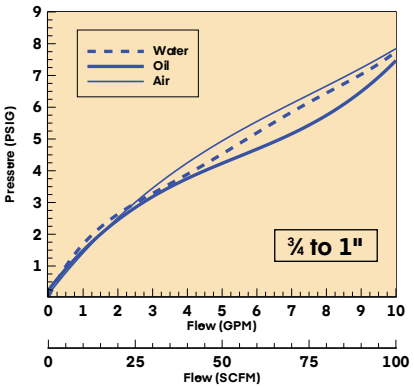
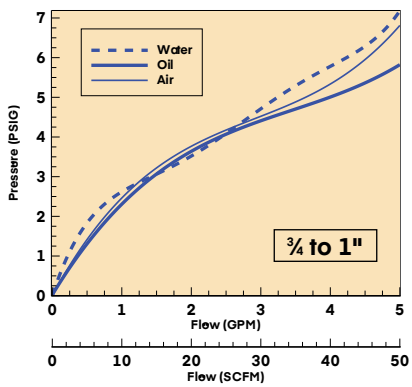
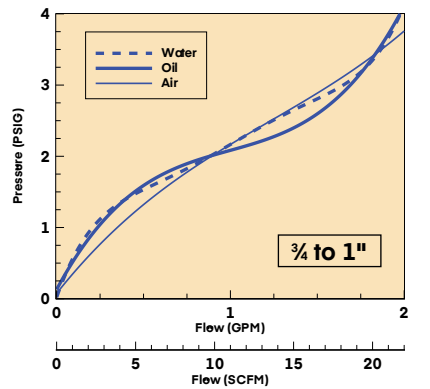
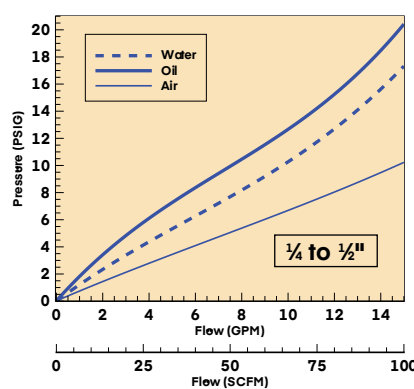
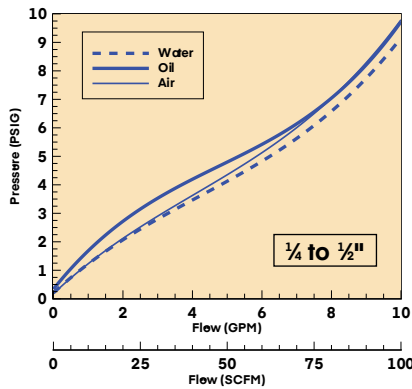
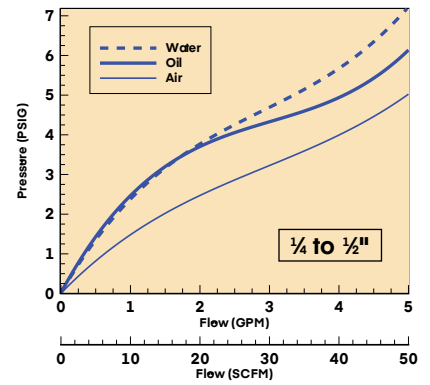
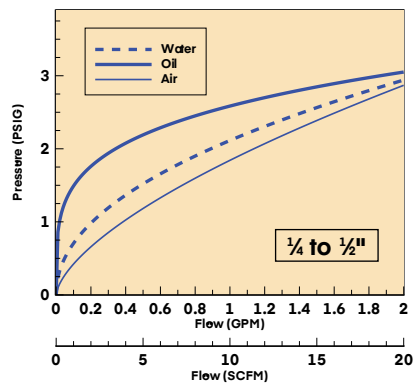
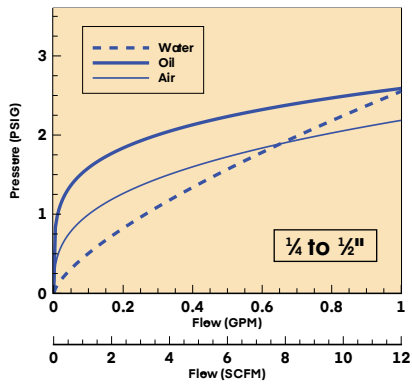
Note: Only one option may be ordered with each unit for additional cost. Options are available for additional cost.

For Bi-directional flow add "-BDF" to model number.

For BSPP threads add "-BSPP" to model number.

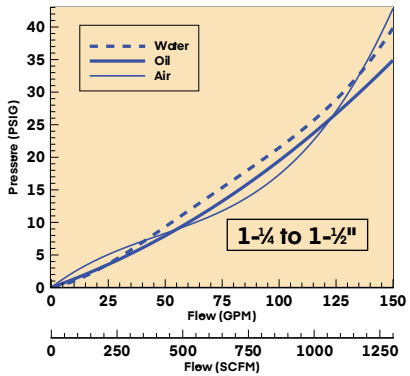
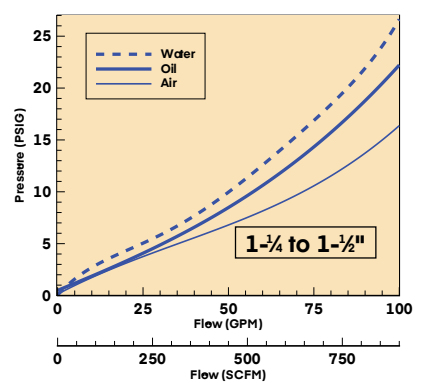
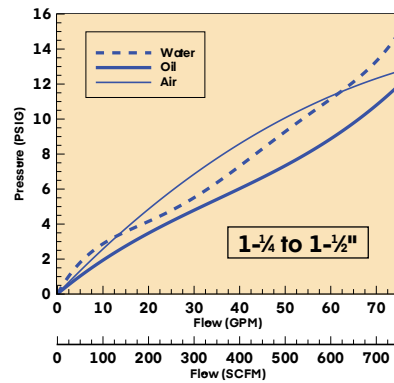
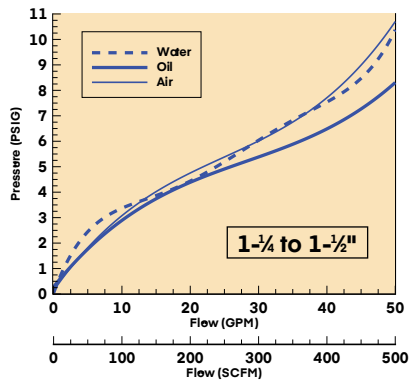
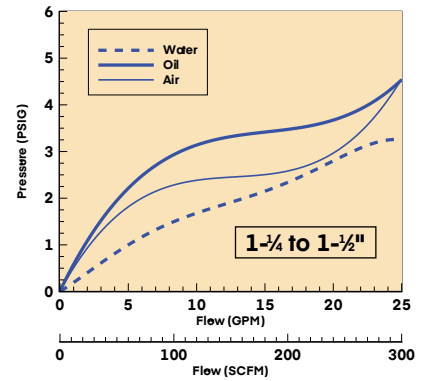
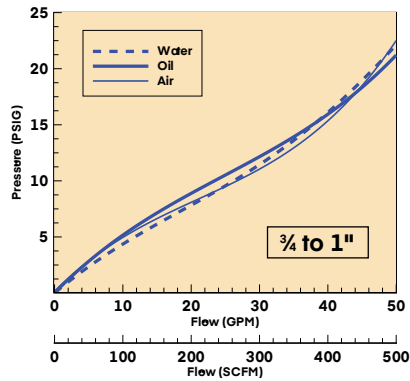
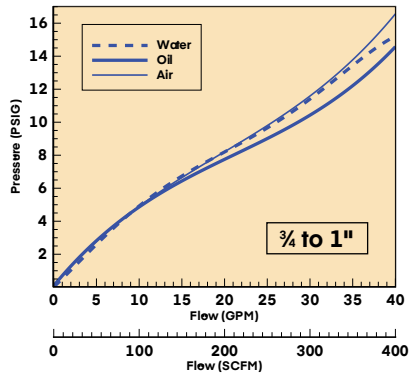
Pressure Drop Graphs

FLMG, FLMW, FLMH



Pressure Drop Graphs

FLMG, FLMW, FLMH



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