

Lake Monitors High Temperature Flow Rate Monitors

FOR 1/8" – 2" PIPE SIZES

STYLE H & J

CHOICE OF THREE MATERIALS OF CONSTRUCTION

Select from aluminum, brass or stainless steel to meet system requirements.

UNRESTRICTED MOUNTING

Allows the designer to install the monitor in any orientation – horizontal, vertical or inverted.

GOOD VISCOSITY STABILITY

A sharp-edged stainless steel orifice provides excellent measurement stability for viscosities ranging from 0-500 SSU.

RUGGED AND RELIABLE

Designed as a hydraulic service tool, this monitor will provide years of maintenance-free performance.

HIGH PRESSURE OPERATION

The magnetically-coupled follower design allows operation to 6000 PSIG and use with opaque liquids.



Enables flow monitoring of barrel heating fluids, thermal transfer fluids such as Syltherm® coolant flows through heat exchangers, as well as flows through hydraulic circuits and sub-circuits with elevated temps.

24 DIFFERENT PORTS AVAILABLE

Standard selection of NPT, SAE and BSP ports reduces the amount of adapters required for installation.

LOW COST ACCURACY

±2.5% of range accuracy in center third of scale; ±4% in upper and lower thirds.

BI-DIRECTIONAL AND REVERSE FLOW OPTION OFFERED

High temperature monitors are also available in bi-directional and reverse flow versions.

Contact Lake Monitors for more information.

ENGINEERING SPECIFICATION

THE HIGH TEMPERATURE IN-LINE FLOW RATE MONITOR SHALL:

- Use the variable annular orifice technique with compression spring recoil.
- Not require inlet or outlet straight plumbing, or require vertical pipe mounting.
- Have a measuring accuracy of ±2.5% of full scale in the center third of the measuring range, and ±4% in upper and lower thirds.
- Have a stainless steel sharp-edged orifice.
- Have a maximum temperature rating of: H-series 400°F (204°C) or J-series 600°F (315°C).
- Have a working pressure rating of 3500 PSIG.
- Be Lake Monitors No. H _ _ _ _ _ for 400°F (204°C) applications or J _ _ _ _ _ for 600°F (315°C) applications.

High Temperature Flow Rate Monitors

MATERIALS OF CONSTRUCTION (WETTED COMPONENTS)

	ALUMINUM	BRASS	STAINLESS STEEL
High-pressure casing, end ports and tapered shaft	Aluminum	Brass	#303 Stainless Steel
Seals			
H-Series (400°F)	FKM w/ PTFE backup	FKM w/ PTFE backup	FKM w/ PTFE backup
J-Series (600°F)	FFKM w/ PTFE backup	FFKM w/ PTFE backup	FFKM w/ PTFE backup
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)

	ALUMINUM	BRASS	STAINLESS STEEL
Window Tube	Pyrex®	Pyrex®	Pyrex®
Window Seals	PTFE	PTFE	PTFE

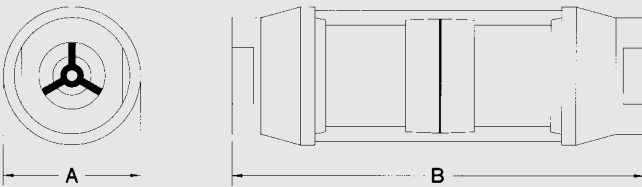
Pyrex is a registered trademark of Corning Incorporated

PERFORMANCE

Measuring accuracy:	±2.5% of full-scale in the center third of the measuring range; ±4% in upper and lower thirds
Repeatability:	±1% of full-scale
Flow measuring range:	0.05-150 GPM (0.2 - 560 LPM)
Pressure differential:	See graphs on the right for typical pressure differentials. For specific differential information, refer to Lake data sheet PDDS-404.
Maximum operating pressure ¹ :	aluminum and brass monitors: 3500 PSIG (240 Bar) stainless steel monitors: 6000 PSIG (410 Bar)
Maximum operating temperature:	H-Series 400°F (204°C) J-Series 600°F (315°C)
Standard calibration fluids:	Oil monitors: DTE 25® @ 110°F (43°C), 0.873 sg Water monitors: tap water @ 70°F (21°C), 1.0 sg Air monitors: air @ 70°F (21°C), 1.0 sg and 100 PSIG (6.8 Bar)
Filtration requirements:	74 micron filter or 200 mesh screen minimum

¹ Note: Consult factory for Temperature/Pressure De-rating Chart
DTE 25 is a registered trademark of Exxon Mobil

MECHANICAL SIZE CODE



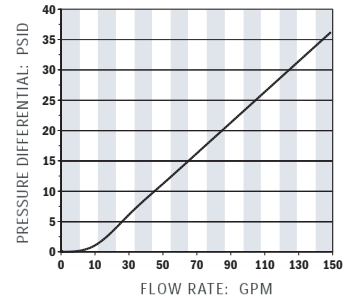
DIM	SERIES 3	SERIES 4	SERIES 5	SERIES 5
A	1-7/8" (48mm)	2-3/8" (60mm)	3-1/2" (90mm)	3-1/2" (90mm)
B	6-9/16" (167MM)	7-5/32" (182mm)	10-1/8" (258mm)	12-5/8" (322mm)
Port Sizes	NPTF: 1/4", 3/8", 1/2" SAE: #6, #8, #10 BSP: 3/8", 1/2"	NPTF: 3/4", 1" SAE: #12, #16 BSP: 3/4", 1"	NPTF: 1-1/4", 1-1/2" SAE: #20, #24 BSP: 1-1/4", 1-1/2"	NPTF: 2" SAE: #32 BSP: 2"

Note: Consult factory for SAE brass monitor requirements.

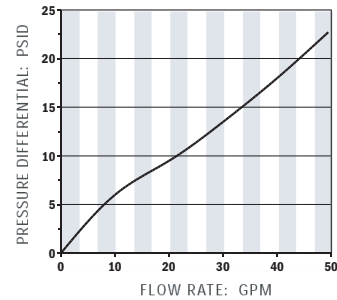
TYPICAL PRESSURE DIFFERENTIALS

For specific differential graphs, refer to Lake data sheet PDDS-404.

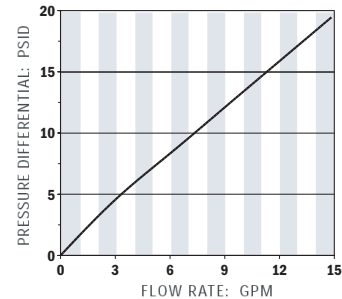
SERIES 5 MONITORS 1-1/4" - 2"



SERIES 4 MONITORS 3/4" - 1"



SERIES 3 MONITORS 1/4" - 1/2"



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