

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

TYPICAL PRESSURE DIFFERENTIALS

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

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)	Viton® w/Teflon® backup	Viton® w/Teflon® backup	Viton® w/Teflon® backup
J-Series (600°F)	Kalrez® w/Teflon backup	Kalrez® w/Teflon backup	Kalrez® w/Teflon® backup
Transfer Magnet	Teflon® coated Alnico	Teflon® coated Alnico	Teflon® coated Alnico
Floating Orifice Disk	Stainless Steel	Stainless Steel	Stainless Steel
All other internal parts	Stainless Steel	Stainless Steel	Stainless Steel

Teflon is a registered trademark of DuPont de Nemours & Co.

Viton and Kalrez are registered trademarks of Dow DuPont Elastomers.

MATERIALS OF CONSTRUCTION (NON-WETTED COMPONENTS)

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

Teflon is a registered trademark of DuPont de Nemours & Co.

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 2	SERIES 3	SERIES 4	SERIES 5	SERIES 5
A	1-1/4" (32mm)	1-7/8" (48mm)	2-3/8" (60mm)	3-1/2" (90mm)	3-1/2" (90mm)
B	4-13/16" (122MM)	6-9/16" (167MM)	7-5/32" (182mm)	10-1/8" (258mm)	12-5/8" (322mm)
Port Sizes	NPTF: 1/8", 1/4"	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.

