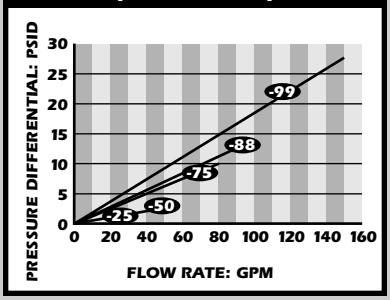
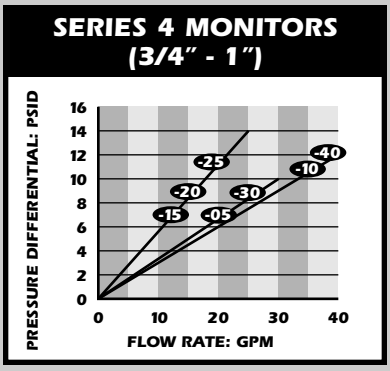
FLOW RATE TRANSMITTERS

PRESSURE DIFFERENTIAL VS FLOW RATE

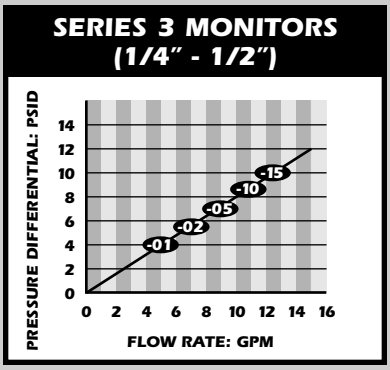
SERIES 5 MONITORS (1-1/4" - 2")



SERIES 4 MONITORS (3/4" - 1")



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



LAKE MONITORS

MATERIALS OF CONSTRUCTION (WETTED COMPONENTS)

	ALUMINUM	BRASS	STAINLESS STEEL
High-pressure casing, end ports and tapered shaft	Aluminum	Brass	#304 Stainless Steel
Seals	Buna-N (STD), EPR, Viton® or Kalrez®	Buna-N (STD), EPR, Viton® or Kalrez®	Viton® with Teflon® backup (STD), Buna-N, EPR or Kalrez®
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
Enclosure & Cover	Aluminum	Aluminum	Aluminum
Seals	Buna-N	Buna-N	Buna-N
Window	Pyrex	Pyrex	Pyrex
Din Connector	Polyamide	Polyamide	Polyamide

MONITOR PERFORMANCE

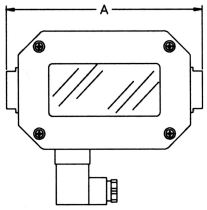
Measuring accuracy:	±2.5% of full-scale in the center third of the measuring range; ±4% of full-scale over the entire scale range
Repeatability:	±1% of full-scale
Flow measuring range:	0.05-150 GPM (0.2-560 LPM); 1.5-1300 SCFM (0.75-610 SLPS)
Maximum operating pressure:	aluminum and brass monitors: 3500 PSIG (240 Bar) stainless steel monitors: 6000 PSIG (410 Bar)
Maximum operating temperature:	media: 240ºF (116ºC), ambient: 180ºF (82ºC)
Pressure differential:	Liquid: see graphs. Gases: see Pneumatic data sheet
Standard calibration media:	Oil monitors: DTE 25® @ 110ºF (43ºC), 0.873 sg Water monitors: tap water @ 70ºF (21ºC), 1.0 sg Air monitors: air @ 70ºF (21ºC), 1.0 sg and 100 PSIG (6.8 Bar)

DTE 25 is a registered trademark of Exxon Mobil

ELECTRONIC TRANSMITTER PERFORMANCE

Power requirements:	12-35 Vdc
Load driving capacity:	4-20mA: Load resistance is dependent on power supply voltage. Use the following equation to calculate maximum load resistance: Max Loop Load (Ω) = 50(Power supply volts – 12). 0-5 VDC: Minimum load resistance 1000 Ω 1-5 VDC: Minimum load resistance 25 KΩ Square Wave Pulse: Minimum load resistance 1000 Ω
Transmission distance:	4-20mA and 1-5 VDC are limited only by wire resistance and power supply voltage. <200 feet recommended for 0-5 VDC and square wave pulse.
Over-current protection:	self limiting at 35mA
Resolution:	10 bit (0.1%)
Isolation:	Inherently isolated from the process
Response time:	<100 milliseconds

MECHANICAL



DIM	SERIES 3	SERIES 4	SERIES 5	SERIES 5
A	6-9/16" (167mm)	7-5/32" (182mm)	10-1/8" (258mm)	12-5/8" (322mm)
B	2-3/16" (56mm)	2-15/16" (75mm)	3-13/16" (97mm)	3-13/16" (97mm)
C	4" (101mm)	4-1/2" (114mm)	5-5/16" (135 mm)	5-5/16" (135mm)
D	1-7/8" (47mm)	1-7/8" (47mm)	1-7/8" (47mm)	1-7/8" (47mm)
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.

LAKE MONITORS

FLOW TRANSMITTER

Data Sheet No. T-502

FLOW RATE TRANSMITTERS

FOR 1/4 – 2 INCH PIPE SIZES

SIMPLE TO INSTALL

All transmitters are factory calibrated and ship fully assembled. Simply install the transmitter into your system and apply power.

INDUSTRY STANDARD OUTPUTS

Transmitters provide proportional analog outputs of 4-20mA, 0-5 Vdc and 1-5 Vdc[1]. These outputs will drive popular data acquisition devices, meters and analog input cards.

DIRECT READING OR OPTIONAL DIGITAL DISPLAY

All transmitters provide a visual indication of flow rate integral to the transmitted output.

WEATHER-TIGHT CONSTRUCTION

The rugged cast aluminum NEMA type 4X enclosure allows installation in outdoor applications and in environments where liquid tight seals are required.

RUGGED AND RELIABLE

Without delicate internal components to break, abrade or corrode, the Lake flow transmitter will provide many years of low maintenance service.

COMPATIBLE WITH LAKE MONITOR'S R/T100 AND R100

This Lake flow rate transmitter combines with these Lake analyzers to make a powerful flow instrument capable of remote monitoring of rate and total flows.

[1] The 1-5Vdc output requires an external 250 ohm resistor (not included with transmitter) to be wired at the receiving device.



ENGINEERING SPECIFICATION

THE IN-LINE FLOW RATE MONITOR/TRANSMITTER SHALL:

- be factory calibrated for 4-20mA, 0-5Vdc, 1-5Vdc, and square wave pulse outputs.
- use the variable annular orifice technique with compression spring recovery.
- 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% of full scale accuracy over the entire flow measuring range.
- have a stainless steel sharp-edged orifice.
- have a working pressure rating of 3500 or 6000 PSIG for liquids.
- have a working pressure rating of 600 or 1000 PSIG for gasses.
- have a weather-tight external construction.
- be Lake Monitors No. R _ _ – _ _ _ – _ _.