

Laminar Flow Elements for NPT Thread Connections



Laminar Flow Elements (LFEs) from Meriam Process Technologies accurately measure gas flow in applications where precision counts. Each LFE includes NIST traceable calibration data certified by Meriam's ISO 9001 Flow Lab. Standard accuracy is $\pm 0.72\%$ of Reading.

LFE models for pipe connections mate to rigid piping using NPT tapered threads. The LFE / supply pipe threads should be sealed using Teflon tape or pipe dope.

Tapered thread connections are available for pipe sizes from $\frac{1}{4}$ " (6 mm) to 2" (50 mm).

Quick Selection Chart - Tapered Thread Process Connections

Pipe Size	Model No.	Nominal Air Flow Range (29.92" Hg. Abs. & 70° F)		DP @ Flow in H ₂ O	Nominal Air Flow Range (760 mm Hg. Abs. & 21.1° C)			DP @ Flow mm H ₂ O
		SCFM	PPM		CC/MIN	LPM	kg/MIN	
1/4"	50MK10-8	0.00019	1.42×10^{-5}	4	5.38	0.00538	6.44×10^{-6}	101.6
1/4"	50MK10-7	0.00062	4.64×10^{-5}	4	17.5	0.0175	2.10×10^{-5}	101.6
1/4"	50MK10-6	0.00124	9.28×10^{-5}	4	35.1	0.0351	4.21×10^{-5}	101.6
1/4"	50MK10-5	0.0025	1.87×10^{-4}	4	70.8	0.0708	8.48×10^{-5}	101.6
1/4"	50MK10-4	0.0046	3.45×10^{-4}	4	130	0.130	1.56×10^{-4}	101.6
1/4"	50MK10-3	0.0081	6.07×10^{-4}	4	229	0.229	2.75×10^{-4}	101.6
1/4"	50MK10-2	0.0149	0.00112	4	422	0.422	5.06×10^{-4}	101.6
1/4"	50MK10-1	0.046	0.00344	4	1300	1.300	1.56×10^{-3}	101.6

Pipe Size	Model No.	Nominal Air Flow Range (29.92" Hg. Abs. & 70° F)		DP @ Flow in H ₂ O	Nominal Air Flow Range (760 mm Hg. Abs. & 21.1° C)			DP @ Flow mm H ₂ O
		SCFM	PPM		CC/MIN	LPM	kg/MIN	
1/2"	50MJ10-14	0.10	0.00749	8	2830	2.83	0.00339	203.2
1/2"	50MJ10-13	0.18	0.0135	8	5100	5.10	0.0061	203.2
1/2"	50MJ10-12	0.38	0.0285	8	10700	10.70	0.0129	203.2
1/2"	50MJ10-11	0.70	0.0524	8	19800	19.80	0.0237	203.2
1/2"	50MJ10-10	1.60	0.120	8	45300	45.30	0.0543	203.2
3/4"	50MJ10-9	3.00	0.225	8	85000	85.00	0.102	203.2

Pipe Size	Model No.	Nominal Air Flow Range (29.92" Hg. Abs. & 70° F)		DP @ Flow in H ₂ O	Nominal Air Flow Range (760 mm Hg. Abs. & 21.1° C)			DP @ Flow mm H ₂ O
		SCFM	PPM		CC/MIN	LPM	kg/MIN	
1"	50MW20-1	7.5	0.562	8	2.12×10^5	212	0.254	203.2
1½"	50MW20-1½	22.0	1.65	8	6.23×10^5	623	0.746	203.2
2"	50MW20-2	40.0	3.00	8	1.13×10^6	1130	1.357	203.2

Inlet filters are available for all models listed above. Add suffix "F" to model number, ex: 50MJ10-9F

For sizing guidelines consult Meriam's Technical and Sizing Bulletin F/N 501TECH:215.

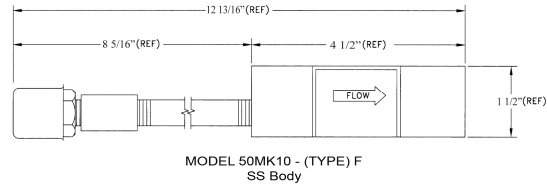
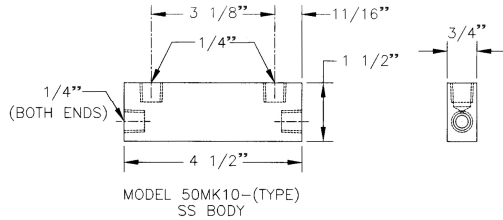
For information on other LFE model options consult Meriam's LFE Brochure, F/N 501:215.



Typical Applications

- Leak detection and quantification
- Calibration standards
- Flow measurement
 - Actual volumetric flow rate
 - Standard volumetric flow rate
 - Mass flow rate
- Flow control
- Respiration measurement

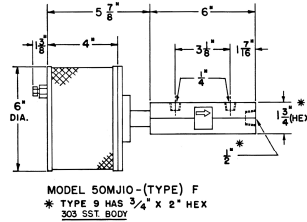
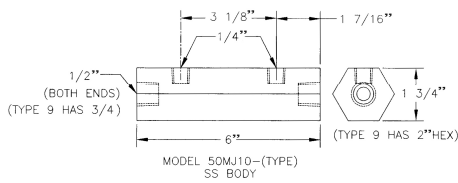
- Solvent recovery measurement
- Discrete parts testing
 - Maximum allowable leak testing
 - Minimum flow through testing
- Engine testing (combustion air flow)
- Engine emissions testing (dilution air flow)
- Synthetic material quenching applications
- Door and window leak testing
- Architectural material leak testing



50MK10 Series Specifications

± 0.72% of Reading traceable to NIST
 20:1 turndown
 0.1% Repeatability
 16 ms Response time
 303SS body material

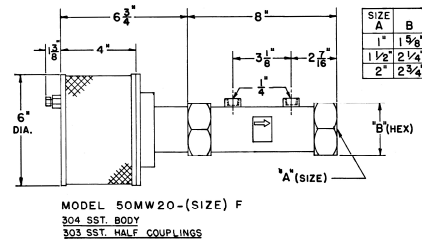
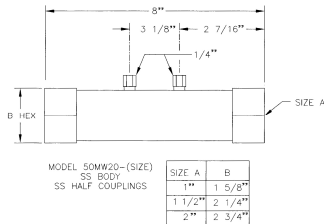
304SS capillary tube material
 Epoxy potting
 Maximum working pressure: 100 PSIG
 Process connections: 1/4" NPT (F)
 Instrument connections: 1/4" NPT (F)



50MJ10 Series Specifications

± 0.72% of Reading traceable to NIST
 20:1 turndown
 0.1% Repeatability
 16 ms Response time

304SS matrix material
 303SS body material
 Maximum working pressure: 100 PSIG
 Process connections: 1/2" - 3/4" NPT (F)
 Instrument connections: 1/4" NPT (F)



50MW20 Series Specifications

± 0.72% of Reading traceable to NIST
 20:1 turndown
 0.1% Repeatability
 16 ms Response time
 304SS body material

304SS matrix material
 Maximum working pressure: 200 PSIG
 Process connections: 1/4" - 2" NPT (F)
 Instrument connections: 1/4" NPT (F)

