

SupraFlo MFAM™

ALL METAL FLOW METER DATA SHEET



DESCRIPTION

SupraFlo MFAM All Metal Flow Meters are simple, accurate, meters for use in a wide range of industrial liquid and gas applications. These meters have an excellent tolerance to suspended solids and measure flow to one percent accuracy. With an all metal design, these meters are ideal for high pressures, high temperatures, steam, dirty fluids, and harsh service environments. SupraFlo All Metal Flow Meters use an internal magnet to carry an external indicator in a non-wetted enclosure. And they can be supplied with MFT™ 2-Wire Transmitters for digital flow rate and total indication. Additionally, these meters can be supplied with a high temperature indicator option for service up to 600°F.

FEATURES & BENEFITS

- All metal construction for high pressures & temperatures.
- Ideal for steam service, very dirty fluids, and harsh service environments.
- Internal magnet carries external indicator in a non-wetted enclosure.
- Excellent tolerance to suspended solids.
- Extended flow ranges averaging 30 to 1.
- No springs, cams, or seals to wear out.
- Standard 1/2" to 4" female NPT connections or optional flanges. Pipe adapters may be used for other sizes without affecting accuracy.
- Flows to 500 GPM liquids or 5750 SCFM gases.
- 360° rotation of scale. Special scales for other units or fluids & multiple scaling offered.
- Options include alarms, pressure gauge on meter and oxygen cleaning.
- Economically priced.

TECHNOLOGY

SupraFlo™ MFAM All Metal Flow Meters are patented variable area flow meters using the volumetric principle of flow measurement. These SupraFlo™ meters consist of five main parts including the body/sight tube, core tube, float assembly, scale, and pitot tube. The meter is not a glass tapered tube, rather the media enters the meter vertically at the bottom inlet port and flows upward into the core tube. Then the media flows horizontally through the core tube slot and exits the meter through the side outlet port. During this process the media lifts the float assembly in the core tube in direct proportion to the rate of flow. The slotted core tube design gives the meter an excellent tolerance to suspended solids and there are no springs, cams, or dynamic seals to wear out.

The external indicator displays flow rate. With the optional MFT™ Two-Wire Flow Transmitter, flow rate and total flow is viewed with a digital LCD display. The MFT™ Flow Transmitter has an analog 4-20mA or 0-5, 0-10 VDC output to a remote display, PLC, Recorder, or other customer-supplied receiver.

Using a simple and rugged design, the MEMFlo All Metal Flow Meters measure to 1% accuracy.

SPECIFICATIONS

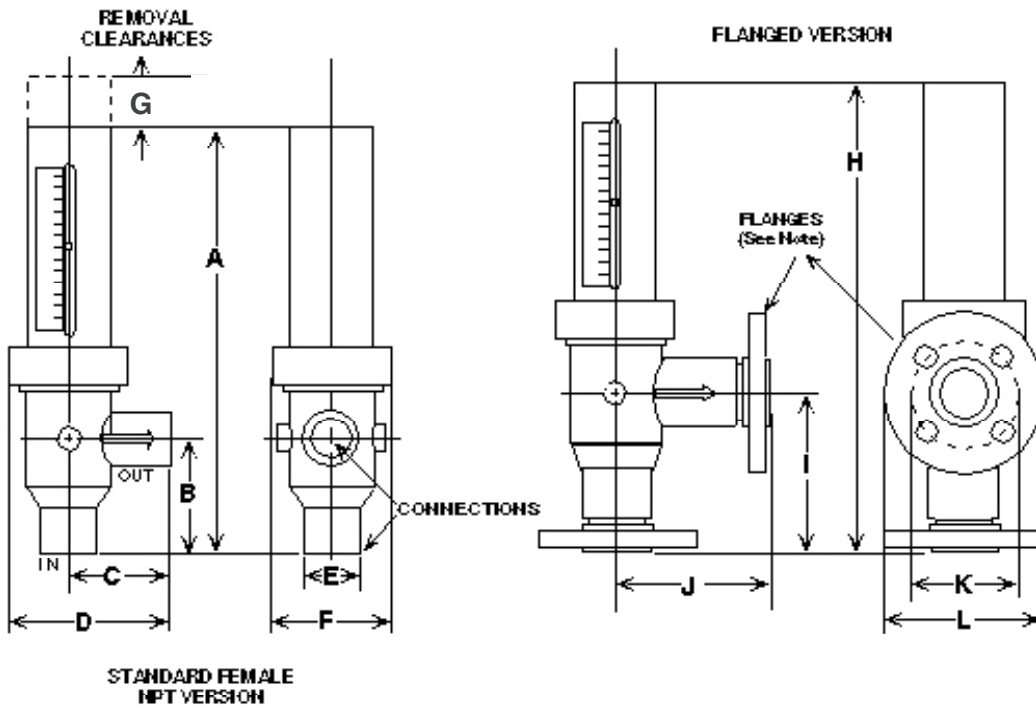
Accuracy	± 1% of 100% flow rate
Repeatability	1/2" to 2": +/- 1/4% of indicated flow rate 2" to 4": +/- 1/2% of indicated flow rate
Rangeability	30 to 1 average
Materials	1/2" to 2" Small Body: T-316 Stainless Steel 2" to 4" Large Body: NI Plated steel with all stainless internals. All stainless construction is optional for large body.
Pressure Rating	Up to 1000 psig

Temperature Rating	Up to 600°F (pressure ratings decrease at higher temperatures).
O-Rings	Buna N standard; Viton, Ethylene-Propylene (EPR), Silicone, Neoprene, Teflon, Geothermal EPR (600° steam), and Kalrez optional.
Scales	Standard direct reading (GPM or LPM Liquid, Sp. Gr. = 1.00 or SCFM Dry Air @ 100 psig, 70°F) or percentage scale. Special scales for other flow units or media conditions, or mylar scales for corrosive environments are available. Scale length is approximately 3.2" for small bodies (1/2" to 2") and 5.2" for large bodies (2" to 4").

DIMENSIONS

Note: Please Consult Factory for Special Requirements

Small Body

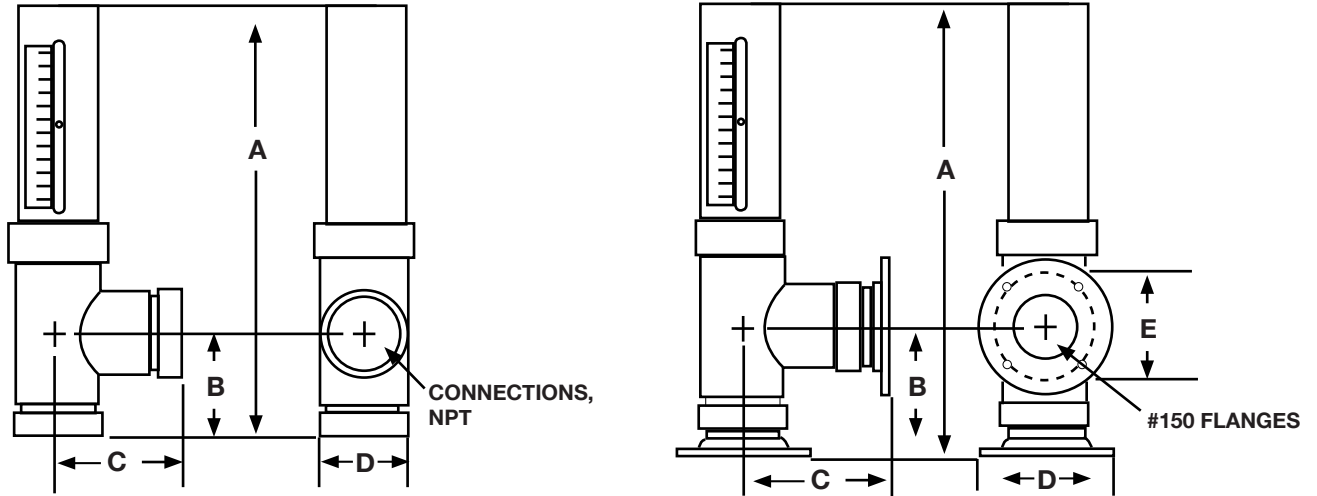


BODY MATERIAL	A	B	C	D	E	F	G	Female NPT
All Stainless	10.76	2.81	2.68	4.03	1.50	2.75	3.00	Up to 3/4"
All Stainless	15.64	4.53	3.71	5.70	2.48	4.01	5.00	Up to 2"

BODY MATERIAL	H	I	J	K	L	150lb Flange
All Stainless	11.64	5.92	3.56	2.75	3.88	Up to 3/4"
All Stainless	17.03	5.92	4.96	3.88	5.00	Up to 2"

Note: All dimensions are in inches, with a tolerance of ±0.03" on threaded models, ±0.20" on flanged units.

Large Body



BODY & SIGHT TUBE DESCRIPTION	A	B	C	D	E	Female NPT
Stainless	20.23	6.38	5.38	3.63	NA	2"
Stainless	20.85	6.38	5.38	3.36	NA	2 1/2"
Stainless (150 GPM/1750 SCFM)	22.35	7.50	6.00	4.25	NA	3"
Stainless (200 GPM/2300 SCFM)	25.35	7.88	6.38	4.50	NA	
Stainless	26.85	8.63	7.13	5.56	NA	4"

BODY & SIGHT TUBE DESCRIPTION	A	B	C	D	E	150lb Flange
Stainless	20.73	6.28	6.88	6.00	4.75	2"
Stainless	21.35	6.88	6.88	7.00	5.50	2 1/2"
Stainless (150 GPM/1750 SCFM)	22.60	7.75	7.75	7.50	6.00	3"
Stainless (200 GPM/2300 SCFM)	25.60	8.13	8.13	7.50	6.00	
Stainless	28.10	9.88	9.88	9.00	7.50	4"

Note: All dimensions are in inches, $\pm 0.05"$. Subject to change without prior notice.

COMPLETE FLOW SYSTEMS AND ACCESSORIES

MFT™ TWO-WIRE FLOW TRANSMITTER

MOUNT TO YOUR FLOW METER FOR DIGITAL DISPLAY OF FLOW RATE & TOTAL ACCUMULATED FLOW.



DESCRIPTION

The MFT two-wire flow transmitter accurately calculates and digitally displays both flow rate and total accumulated flow. Compatible with any MEMFlo meter, MFT™ combines FLO-CORP's time-proven variable area technology with a high tech processor and solid state circuitry. Each device includes an analog output that can be configured for 0-5 VDC, 0-10 VDC, or 4-20 mA current loop. Typical applications include pump flow output, compressed air consumption, cooling flow monitoring, steam flow usage/optimization and combustion gas metering.

FEATURES & BENEFITS

- Non-contact sensor electronic
- Electronic signal conditioning circuit
- Digital flow rate and total indication
- Proportional analog output - two-wire
- Designed to slip over any standard sight tube
- Pre-calibrated from the factory for fast installation and start-up



SPECIFICATIONS

General	
Display Type	LCD, 8-digit
Display Units	Engineering
Process Temperature	F: -20° to 240° C: -29° to 116°
Ambient Temperature	F: -20° to 158° C: -29° to 70°
Environmental	Humidity: 0-90% non-condensing
Accuracy	±1% Full Scale
Repeatability	±0.25% Full Scale
Electrical	
Power Requirements	0.5 VDC Output 10-30 VDC @ 0.75 max. 0-10 VDC Output 12-30 VDC @ 0.75 max. 4-20 mA Output loop-powered, 30 VDC max.
Power Consumption	25 mA maximum
Analog Outputs	0-5 VDC and 0-10 VDC into 10,000 Ohms minimum; 4-20 mA into 1000 Ohms maximum
Resolution	1:4000
Transmission Distance	4-20 mA limited by cable resistance 0-5 VDC 1000 feet (330m) maximum 0-10 VDC 1000 feet (300m) maximum
Circuit Protection	Reverse polarity and current limiting
Isolation	Inherently isolated from the piping system
Transient Over-Voltages	Category 3, in accordance with IEC 64
Operating Modes	Fixed or Toggle
Temperature Drift	50 ppm/°C (Max)
Enclosure Rating	NEMA 4 (IP67) ; NEMA 7



DigaCom™ 2000 Universal Process Display

is a field mount display that provides bright, 6-digit LED

indication, internal DC power supply for transmitter power, 4-20mA repeat output and advanced communications. DigaCom features digital push button configuration, simple programming interface and Ethernet communication. This device is well suited for a variety of process applications. Typical applications include level monitoring, analytical measurements, flow, distance monitoring, pressure monitoring, weight/volume monitoring and temperature monitoring.



DigaLink™ 3.0 Alarm & Monitoring Software

is FLO-CORP's unique Alarm, Configuration and Monitoring

Software. This enables users to receive e-mail alerts, configure, and remotely monitor from the convenience of their PC. DigaLink is unique in its communication protocol that utilizes both TCP/IP Ethernet communication and Modbus/RS485 serial communication simultaneously. This advanced software features e-mail alerts, display configuration, datalogging and real-time monitoring from unlimited devices. With DigaLink you can easily setup, monitor and receive e-mail alerts from practically anywhere.



eXmod™ Relay Expansion Module

is a 4-relay output module that connects to the display via

RS-485 serial communication (4-wire). It is extremely versatile and can be mounted locally or remotely to allow for a purely distributed system. Display(s) can be mounted in the plant or control panel, while the eXmod can be mounted in the motor control cabinet for reduced cost of control wiring. Additionally, the eXmod's BIG 10 AMP AC/DC rated relays bring added value to your control/alarm monitoring systems.

Ordering Information

FLO-CORP MODEL NUMBER BUILDER

For Assistance Call **877.356.5463**

Use the diagram below, working from left to right to construct your FLO-CORP Model Number.
Simply match the category number to the corresponding box number.

Example: MFAM-LT-2924-TCK-N

MEMFlo MFAM Flow Meter for liquid service, stainless steel body, 10-200 GPM Liquid, 3" Connection Size, Female NPT Connection Type, Corrosive Resistant Scale, Kalrez O-Ring with No Additional Options

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MFAM

Service (1)
L) Liquid
G) Gas

Meter Material (2)
S) T-316 Stainless Steel (1/2" to 2" small body)
NI Plated Steel w/ Stainless Internals (2" to 4" Large Body)

Capacity Designator (3)

	GPM Liquid	SCFM Gas
00)	0.04 - 0.8	0.5 - 10.2
01)	0.06 - 1.2	0.6 - 14
02)	0.08 - 1.64	1 - 20
03)	0.1 - 2.6	1 - 26
04)	0.15 - 3.8	1 - 35
05)	0.2 - 5.4	2 - 50
06)	0.2 - 7	3 - 70
07)	0.2 - 10	4 - 85
08)	0.6 - 14	6 - 125
09)	0.5 - 23	6 - 160
10)	0.5 - 11	4 - 260
11)	0.7 - 15	1.5 - 25
12)	1 - 21	1 - 31
13)	0.5 - 35	2 - 40
14)	1 - 50	3 - 70
15)	2 - 70	4 - 100
16)	3 - 90	5 - 140
17)	4 - 120	5 - 175
18)	NA	6 - 250
19)	NA	2 - 310
20)	NA	7.5 - 390
21)	NA	10 - 510
22)	NA	35 - 750
23)	NA	20 - 1000
24)	3 - 70	30 - 750
25)	3 - 100	40 - 1000
26)	6 - 150	50 - 1750
27)	3 - 100	40 - 1000
28)	6 - 150	50 - 1750
29)	10 - 200	100 - 2300
30)	14 - 300	150 - 3500
31)	5 - 100	50 - 1200
32)	10 - 200	100 - 2300
33)	14 - 300	150 - 3500
34)	15 - 400	200 - 4600
35)	20 - 500	230 - 5750

Connection Size (4)

04)	1/2"
06)	3/4"
08)	1"
12)	1 1/2"
16)	2"
16)	2"
20)	2 1/2"
24)	3"
32)	4"

Connection Type (5)
T) Female NPT Threaded
F) ANSI 150lb Flange
W) Socket Weld
X) Special Connection

Scaling Options (6)
C) Corrosion Resistant Mylar
P) Percent of Flow
M) Multiple Scales
X) Other

O-Ring Material
B) Buna-N
E) EPR (Ethylene Propylene)
G) Geothermal EPR
K) Kalrez
N) Neoprene
S) Silicone
T) Teflon
V) Viton

Additional Options
N-) None
GP#) Gauge Port
GS#) T-316 Pressure Gauge
TR-) High-Temp Raceway
MFT) MFT™ Two-Wire Transmitter

MFT OPTION

Flow Meter Size
01) 1/2", 3/4", 1"
02) 1 1/2" - 4"

Enclosure Rating
N4) NEMA 4X (IP67)
N7) NEMA 7

Ordering Notes:

- (1) Select the best configuration based on your requirements.
 - (2) Stainless bodies available in large body sizes. Please consult factory.
 - (3) Sizing is based on GPM Liquid, Sp. Gr. = 1.00 or SCFM Air @ 100 psig 70° F
 - (4) Connection Size is based on Capacity - Colors must match to ensure compatibility.
 - (5) If you require a Special Connection (X), please consult factory with requirements.
 - (6) For digital or custom scaling, select Other (X) and note the following requirements:
Digital Display: Requires MFT Two-Wire Transmitter (See MFT)
Custom Scale: Requires Flow Application (Consult Factory)
- Note: Match color with connection size.**