



RATE-MASTER® POLYCARBONATE FLOWMETERS

Gas Flow from 0.05 to 1800 SCFH, Water Flow to 10 GPM



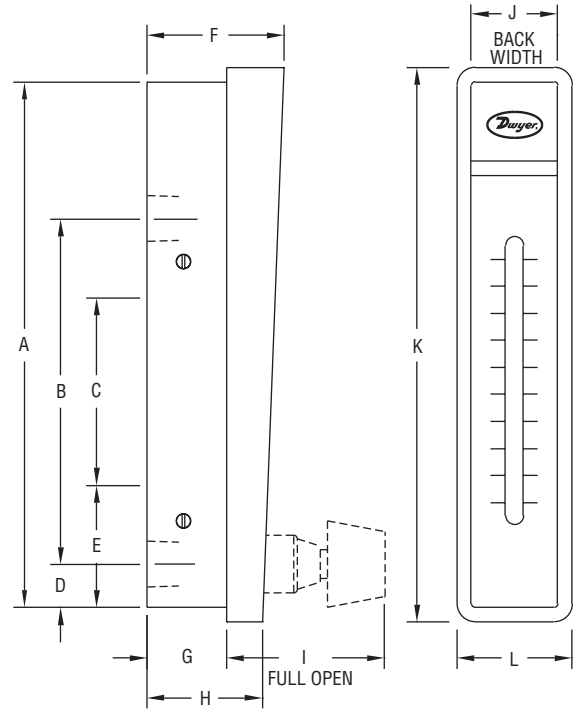
Model RMC
10" scale, 15-3/8" high



Model RMB-SSV
5" scale, 8-3/4" high



Model RMA-TMV
2" scale, 4-13/16" high



DIMENSIONS - FLOWMETER			
	Model RMA	Model RMB	Model RMC
A	4-9/16 [115.90]	8-1/2 [215.90]	15-1/8 [384.20]
B	3 [76.20]	6-7/16 [163.50]	12-1/4 [311.20]
C	1/8 NPT conn. 10-32 mtg. holes	1/4 NPT conn. 1/4-20 mtg. holes	1/2 NPT conn. 3/8-24 mtg. holes
D	3/8 [9.525]	5/8 [15.88]	1 [25.40]
E	1-1/16 [26.99]	1-7/8 [47.63]	2-3/4 [69.85]
F	1-3/16 [30.16]	1-3/4 [44.45]	2-1/2 [63.50]
G	11/16 [17.46]	1 [25.40]	1-7/16 [36.51]
H	61/64 [24.21]	1-7/16 [36.51]	1-31/32 [50.00]
I	1-3/8 [34.92]	1-13/16 [46.04]	2-1/2 [63.50]
J	3/4 [19.05]	1-1/4 [31.75]	2 [50.80]
K	4-13/16 [122.20]	8-3/4 [222.30]	15-3/8 [390.50]
L	1 [25.40]	1-1/2 [38.10]	2-1/4 [57.15]

Flowmeters, Variable Area



Scan here to watch product video

The **SERIES RM** Rate-Master® flowmeter line of direct reading precision flowmeters incorporates many unique user features at moderate cost. These low cost flowmeters are ideal for general use.

EASY TO READ DESIGN — The direct reading scales eliminate troublesome conversions. The scales are brushed aluminum, coated with epoxy and the graduations are on both sides of the indicating tube. Special integral flow guides stabilize the float throughout the range to keep it from hunting or wandering in the bore. The float is highly visible against a white background.

CONSTRUCTION ASSURES ACCURACY — All Rate-Master® flowmeter bodies are injection molded of tough, clear, shatter-proof polycarbonate plastic around a precision tapered pin. The result is accurate and repeatable readings. The single piece plastic body is mounted to a stainless steel back bone into which pipe thread inserts are welded to absorb piping torque. Precision metering valves of brass or stainless steel (specify BV or SSV on order) are available as an optional extra and permit precise flow adjustments. For vacuum applications, Model RMA units are available with top mounted valves (specify TMV). The small Series RMA models are accurate within ±4% of full-scale reading; Series RMB within ±3%; large Series RMC within ±2%.

INSTALLATION IS SIMPLE — The Rate-Master® flowmeter can be neatly panel mounted to keep flow tube centers in the same plane as the panel surface or surface mounted on the panel by means of tapped holes in the backbone. When through-panel mounted, the bezel automatically positions the instrument at the correct depth in the panel cutout. Surface mounted units can also be held in place by the piping. All mounting hardware plus installation and operating instructions are included.

EASY-TO-INTERCHANGE BODIES — Within a given Series Rate-Master® flowmeter bodies can be instantly interchanged. Simply “unplug” the body from backbone and replace it with another. O-rings provide a tight seal on inlet and outlet. Piping remains undisturbed. Interchangeability is useful where different scale ranges are sometimes required at the same location in the laboratory or plant.

CLEANING IS EASY — To release the plastic flowmeter body from the stainless steel backbone, just remove four screws. Pipe thread flow connections remain undisturbed. Remove the slide cover and the plug ball stop, clean the flow tube with soap and water and reassemble. It's that simple.

RATE-MASTER® POLYCARBONATE FLOWMETERS

Gas Flow from 0.05 to 1800 SCFH, Water Flow to 10 GPM

SPECIFICATIONS	
Service: Compatible gases and liquids.	
Wetted Materials: Body: Polycarbonate; O-ring: Neoprene and Buna-N; Metal parts: SS (except for optional brass valve); Float: SS, black glass, aluminum, K monel, tungsten carbide depending on range.	
Temperature Limit: 130°F (54°C).	
Pressure Limit: 100 psi (6.9 bar).	
Accuracy: RMA: 4%; RMB: 3%; RMC: 2% of FS.	
Process Connection: RMA: 1/8"; RMB: 1/4"; RMC: 1/2" female NPT.	
Weight: RMA: 4 oz (113.4 g); RMB: 13 oz (368.5 g); RMC: 39 oz (1105.6 g).	
CAUTION: Dwyer® Rate-Master® flowmeters are designed to provide satisfactory long term service when used with air, water, or other compatible media. Refer to factory for information on questionable gases or liquids. Caustic solutions, anti-freeze (ethylene glycol) and aromatic solvents should definitely not be used.	

MODEL CHART	
Model	Description
RMA-X	Standard RMA
RMA-X-BV+	RMA with brass valve
RMA-X-SSV+	RMA with stainless steel valve
RMA-X-TMV*+	RMA with top mounted valve
RMB-X	Standard RMB
RMB-X-BV+	RMB with brass valve
RMB-X-SSV+	RMB with stainless steel valve
RMC-X	Standard RMC
RMC-X-BV+	RMC with brass valve
RMC-X-SSV+	RMC with stainless steel valve
How To Order: Series-Range No.("X")-Valve-Option	
Example: RMA-2-SSV (Series RMA with .1-1 SCFH air range & stainless steel valve)	
*Provide same precision construction but for vacuum applications. +Valve is designed for flow adjustment only, not intended to be used as an open/shut-off valve.	

RANGE CHART - RMA 2" SCALE - POPULAR RANGES			
Range No.	SCFH Air	Range No.	LPM Air
1	.05 to .4	26	.5 to 5
2	.1 to 1	21	1 to 10
3	.2 to 2	22	2 to 25
4	.5 to 5	23	5 to 50
5	1 to 10	24	5 to 70
6	2 to 20	25	10 to 100
7	5 to 50		
		Range No.	CC/Min. Water
8	10 to 100	32	5 to 50
9	15 to 150	33	10 to 110
10	20 to 200	34	20 to 300
Range No.	CC/Min. Air	Range No.	GPH Water
151*	5 to 50	42	1 to 11
150*	10 to 100	43	2 to 24
11	30 to 200	44	4 to 34
12	50 to 500	45	5 to 50
13	100 to 1000		
14	200 to 2500		

*Accuracy ±8%

OPTIONS	
To order add suffix:	Description
-NIST	NIST traceable calibration certificate
-APF	Adjustable pointer flag for Series RMA
-BPF	Adjustable pointer flag for Series RMB
-CPF	Adjustable pointer flag for Series RMC
Note: Special ranges, scales, mounting arrangements, etc., are available on special order, or in OEM quantities.	

RANGE CHART - RMB 5" SCALE - POPULAR RANGES			
Range No.	SCFH Air	Range No.	SCFH & LPM Air
49*	-5	50D	1.2 to 10/0.6 to 5
50	1 to 10	51D	2 to 20/1 to 9.5
51	3 to 20	52D	4 to 50/2 to 23
52	4 to 50	53D	10 to 100/5 to 50
53	10 to 100	54D	20 to 200/10 to 95
54	20 to 200		
		Range No.	GPH & LPM Water
55	40 to 400	82D	1 to 12/0.06 to 0.76
56	50 to 500	83D	1 to 20/0.065 to 1.25
57	60 to 600	85D	10 to 100/0.8 to 6.2
Range No.	GPH Water		
82	1 to 12		
83	1 to 20		
84	4 to 40		
85	10 to 100		

*Accuracy ±5%

RANGE CHART - RMC 10" SCALE - POPULAR RANGES			
Range No.	SCFH Air	Range No.	GPH Water
101	5 to 50	134	2 to 20
102	10 to 100	135	8 to 90
103	20 to 200		
		Range No.	GPM Water
104	40 to 400	141	.1 to 1
105	60 to 600	142	.2 to 2.2
106	100 to 1000	143	.4 to 4
107	120 to 1200	144	.8 to 7
108	200 to 1800	145	1.2 to 10
Range No.	SCFM Air		
121	1 to 10		
122	2 to 20		
123	4 to 30		



Adjustable pointer flags

Red lined pointer flags provide quick visual reference to a required flow level. Of clear plastic, they snap into place inside bezel and slide to desired level.

ACCESSORIES	
Model	Description
RKA	Regulator kit for Series RMA
RK-RMB	Regulator kit for Series RMB



Regulator Kits

Available as optional extras for both Rate-Master® Flowmeters and Visi-Float® Flowmeters models. This view shows Model VFA Visi-Float® flowmeter with integrally connected constant differential pressure regulator. Recommended for use where inlet air pressure fluctuates widely and constant flow is required. The regulator maintains a constant pressure differential of approximately 3 ±.15 psig. Supply pressure must be at least 3 psig above the flowmeter discharge to operate. The standard regulator may be used with any Dwyer Series RM or VF flowmeter up to 200 scfh. For higher flow rates consult the factory.