



Series  
RM

# Rate-Master® Flowmeters

Polycarbonate, Gas flow from .1-1800 SCFH, Water Flows to 10 GPM

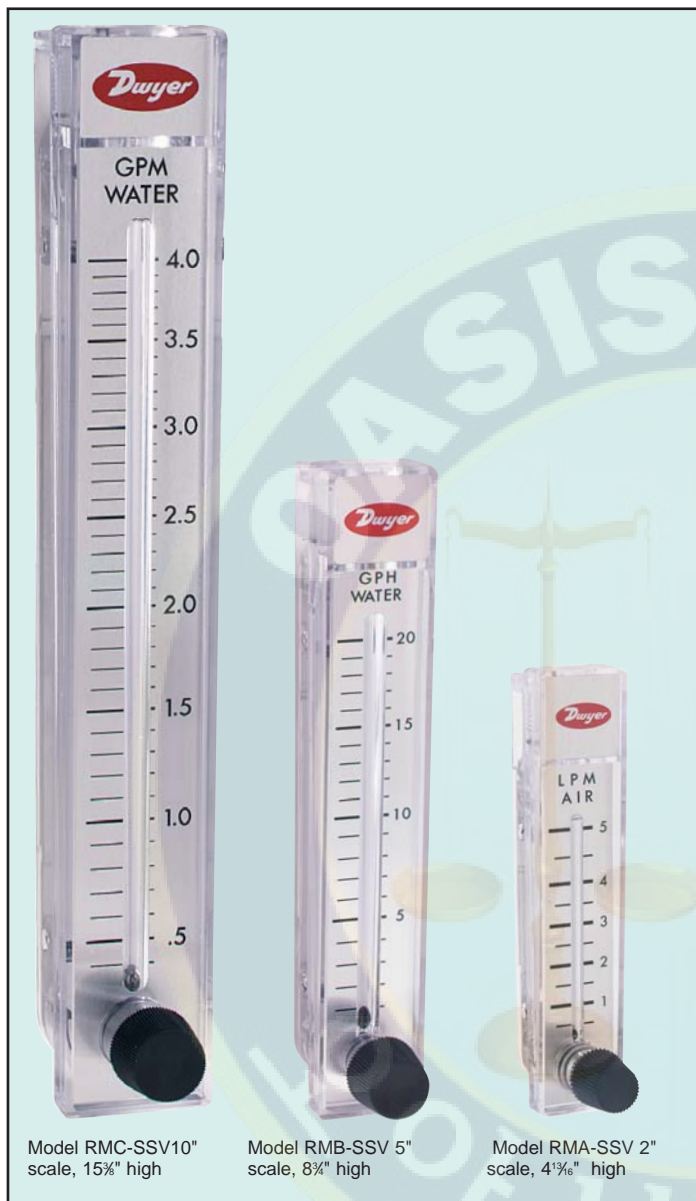
The Dwyer Rate-Master® line of direct reading precision flowmeters incorporates many unique user features at moderate cost. These low cost flowmeters are ideal for general use.

**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  $\pm 4\%$  of full scale reading; Series RMB within  $\pm 3\%$ ; large Series RMC within  $\pm 2\%$ .

**Installation is simple** – The Rate-Master® can be neatly through-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.

**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.



Model RMC-SSV10  
scale, 15" high

Model RMB-SSV 5"  
scale, 8" high

Model RMA-SSV 2"  
scale, 4" high

**Specials** — Special ranges, scales, mounting arrangements, etc., are available on special order, or in OEM quantities.

**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.



**Top Mounted Metering Valves** – Same precision construction for vacuum applications.



**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.

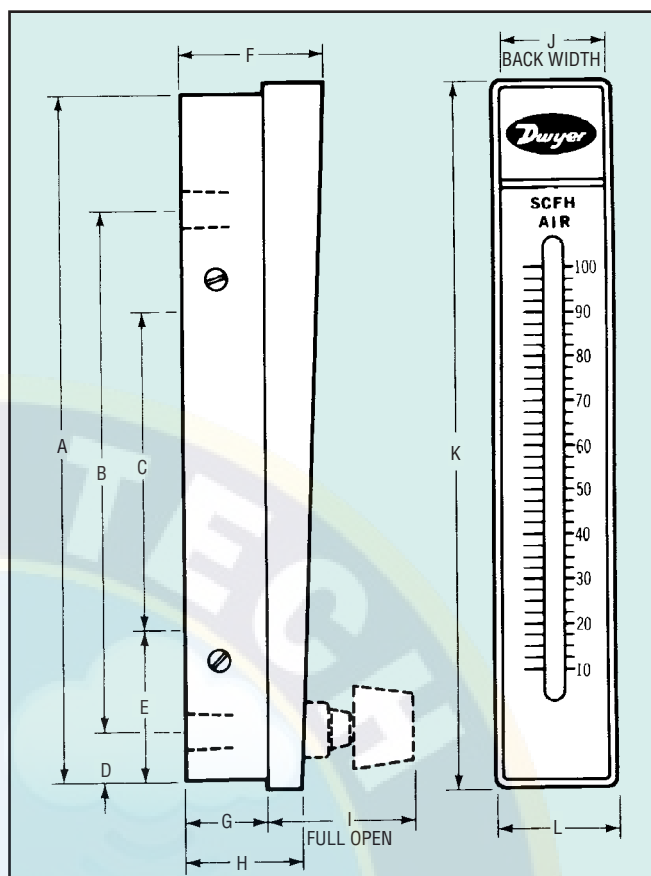
SPECIFICATIONS		
Meter Body, Bezel and Tube	Polycarbonate	
Wetted Metal Parts	Stainless Steel(except for optional brass valves)	
Floats	St. Steel, Bk. Glass, Alum., K Monel, Tung. Carbide	
Float Stops	Polycarbonate	
Pipe Connections	Model RMA, 1/8"; Model RMB, 1/4", Model RMC, 1/2" NPT	
"O" Rings	Neoprene and Buna-N	
Fittings	Stainless Steel brazed to Stainless Steel backbone plate	
Rivets	Stainless Steel, set into slots	
Scale	Brushed Aluminum-Clear Epoxy Coated	
Knobs	ABS Plastic	
Pressure Limits	RMA 100 psi (6.9bar), RMB 70 psi(4.8bar), RMC 35 psi (2.4bar) max	
Temperature Limits	130°F maximum(54.4°C)	
Accuracy	Model RMA, 4%; Model RMB 3% Model RMC, 2% of full scale	
Weight	RMA: 4 oz. (113.4 g); RMB: 13 oz. (368.54 g); RMC: 39 oz. (1105.63 g)	
OPTIONS AND ACCESSORIES		CODE
Metering Valve	Brass Stainless Steel	BV SSV
Top Mounted Valve	Stainless Steel — available only on RMA for air (vacuum applications)	
Pointer Flag	Polycarbonate	TMV PF

### Series RM RATE-MASTER® Models and Ranges STOCKED MODELS in bold

Model RMA-2" Scale		Model RMB-5" Scale		Model RMC -10" Scale	
Range SCFH Air	Ordering No.	Range SCFH Air	Ordering No.	Range SCFH Air	Ordering No.
.05-.5	<b>1</b>	.5-5	<b>49</b>	5-50	<b>101</b>
1-1	<b>2</b>	1-10	<b>50</b>	10-100	<b>102</b>
2-2	<b>3</b>	3-20	<b>51</b>	20-200	<b>103</b>
5-5	<b>4</b>	4-50	<b>52</b>	40-400	<b>104</b>
1-10	<b>5</b>	10-100	<b>53</b>	60-600	<b>105</b>
2-20	<b>6</b>	20-200	<b>54</b>	100-1000	<b>106</b>
5-50	<b>7</b>	40-400	<b>55</b>	120-1200	<b>107</b>
10-100	<b>8</b>	50-500	<b>56</b>	200-1800	<b>108</b>
15-150	<b>9</b>	60-600	<b>57</b>	<b>SCFM Air</b>	
20-200	<b>10</b>	Gal. Water per hour		1-10	<b>121</b>
<b>CC Air/min.</b>				2-20	<b>122</b>
5-50	<b>151*</b>	1-12	<b>82</b>	3-30	<b>123</b>
10-100	<b>150*</b>	1-20	<b>83</b>		
30-240	<b>11</b>	4-40	<b>84</b>	Gal. Water per hour	
50-500	<b>12</b>	10-100	<b>85</b>		
100-1000	<b>13</b>			Gal. Water per minute	
200-2500	<b>14</b>				
<b>LPM Air</b>					
.5-5	<b>26</b>				
1-10	<b>21</b>			.1-1	<b>141</b>
2-25	<b>22</b>			.2-2.2	<b>142</b>
5-50	<b>23</b>			.4-4	<b>143</b>
5-70	<b>24</b>			.8-7	<b>144</b>
10-100	<b>25</b>			1.2-10	<b>145</b>
<b>CC Water/min.</b>					
5-50	<b>32</b>				
10-110	<b>33</b>				
20-300	<b>34</b>				
<b>Gal. Water/hr</b>					
1-11	<b>42</b>				
2-24	<b>43</b>				
4-34	<b>44</b>				
5-50	<b>45</b>				

## 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.



### DIMENSION IN INCHES

	Model RMA	Model RMB	Model RMC
A	4 1/8	8 1/2	15 1/8
B	3 1/8 NPT Conn.	6 1/8 1/8 NPT Conn.	12 1/4 1/2 NPT Conn.
C	1 1/8 10-32 Thds.	3 1/8 1/4-20 Thds.	8 3/8 3/4-24 Thds.
D	3/8	1/2	1
E	1 1/8	1 1/8	2 3/8
F	1 1/8	1 1/8	2 1/4
G	3/4	1	1 1/8
H	1	1 1/8	1 3/16
I	1 1/8	1 1/8	2 1/8
(OPEN)	(BV or SSV MODELS ONLY)		
J	3/8	1 1/8	2
K	4 3/8	8 3/8	15 1/8
L	1	1 1/8	2 1/8

### How To Order

- Select series by letter designation, RMA, RMB or RMC.
- Add ordering number to specify range. Example: RMB-49.
- Add suffix BV for brass valve, SSV for stainless steel valve or TMV for top mounted valve (RMA only). Example: RMB-49-SSV.
- For adjustable pointer flag add -APF (RMA), -BPF (RMB) or -CPF (RMC). Example: RMB-49-SSV-BPF.

RMA .....	RMB-BV .....
RMA-BV .....	RMB-SSV .....
RMA-SSV .....	RMB-body only .....
RMA-TMV .....	-BPF pointer flag .....
RMA-body only .....	RMB Regulator Kits .....
*Add to prices above for -150 and -151 ranges .....	RMC .....
-APF pointerflag .....	RMC-BV .....
RKA Regulator Kits .....	RMC-SSV .....
RMB .....	RMC-body only .....
	-CPF pointer flag .....