

Rotameter :

Description:

A rotameter is a device that measures the flow rate of fluid in a closed tube. It belongs to a class of meters called variable area meters, which measure flow rate by allowing the cross-sectional area the fluid travels through, to vary, causing a measurable effect.

Principle of Operation :

The rotameter's operation is based on the variable area principle: fluid flow raises a float in a tapered tube, increasing the area for passage of the fluid. The greater the flow, the higher the float is raised. The height of the float is directly proportional to the flow rate. With liquids, the float is raised by a combination of the buoyancy of the liquid and the velocity head of the fluid. The float moves up or down in the tube in proportion to the fluid flow rate and the annular area between the float and the tube wall. The float reaches a stable position in the tube when the upward force exerted by the flowing fluid equals the downward gravitational force exerted by the weight of the float. A change in flowrate upsets this balance of forces. The float then moves up or down, changing the annular area until it again reaches a position where the forces are in equilibrium. To satisfy the force equation, the rotameter float assumes a distinct position for every constant flowrate. However, it is important to note that because the float position is gravity dependent, rotameters must be vertically oriented and mounted.

Materials of rotameter parts:

- Joint Fittings: PVC
- Male & Female thread: PVC
- Taper tube: PC
- Floats: ABS

Connection mode of rotameter :

- Intubation connection
- Internal & external thread
- Panel mounting



Technical Data:

Model	DN(mm)	Range		Accuracy	°C	MPa
		LPH	CUM			
FM 15	15	10-100		±4%	0-60	≤1.0
		20-200				
		50-500				
		200-1200				
CWC 15	15	25-250				
		40-400				
		60-600				
		120-1200				
CWC 25	25	100-1000	0.1-1.0			
		160-1600	0.16-1.6			
		250-2500	0.25-2.5			
		300-3000	0.3-3.0			
CWC 32	32	400-4000	0.4-4.0			
		600-6000	0.6-6.0			
CWC 40	40	600-6000	0.6-6.0			
		800-8000	0.8-8.0			
		1000-10000	1.0-10.0			
CWC 50	50	1000-10000	1.0-10.0			
		1600-16000	1.6-16.0			
CWC 65	65	5-25				
		8-40				
		12-60				

Installation dimensions:

Model	L	D	L3	E	L4	F	G
FM 15	100	40	145	½" BSP	155	40	33
CWC 15	160	50	210	½" BSP	230	56	27
CWC 25	170	59	225	¾" BSP	275	71	28
CWC 32	225	72	290	1" BSP	345	86	35
CWC 40	225	78	320	1 ½" BSP	390	100	35
CWC 50	290	98	370	2" BSP	440	109	40
CWC 65	325	120	420	2 ½" BSP			

Intubation connection, internal and thread and panel mounting.

