

FOR ACCURATE AND ECONOMICAL MEASUREMENT & CONTROL OF FLUID FLOW.

GLASS TUBE ROTAMETER



SPINK CONTROLS offer an Industrial flowmeter used to measure flowrate of liquids and gases. It operates on the Variable Area Principle, where the fluid flow raises a float in a taper tube, increasing the area of passage of fluid. The greater the flow, the higher the float is raised. The height of the float is raised by a combination of the buoyancy of the liquid and velocity head of the fluid. With gases, the buoyancy is negligible, and the float responds to the velocity head alone.

The taper glass tube is formed of Borosilicate glass of extremely high accuracy of bore, obtained by collapsing the taper tube while in a hot and plastic state on a precision ground and polished mandril. The tubes are then annealed in a furnace to relieve the stress formed during manufacturing.

Floats of various configurations and materials are used for a wide range of applications depending upon flowrate, viscosity, and turbidity of the fluid. The float has a sharp metering edge where the reading is observed by means of a scale mounted along the side of the tube. The scale of the rotameter is calibrated to directly read the fluid flow. The flowrate for any variable area flowmeter can be expressed as

$$Q = C D_f \sqrt{F/Y}$$

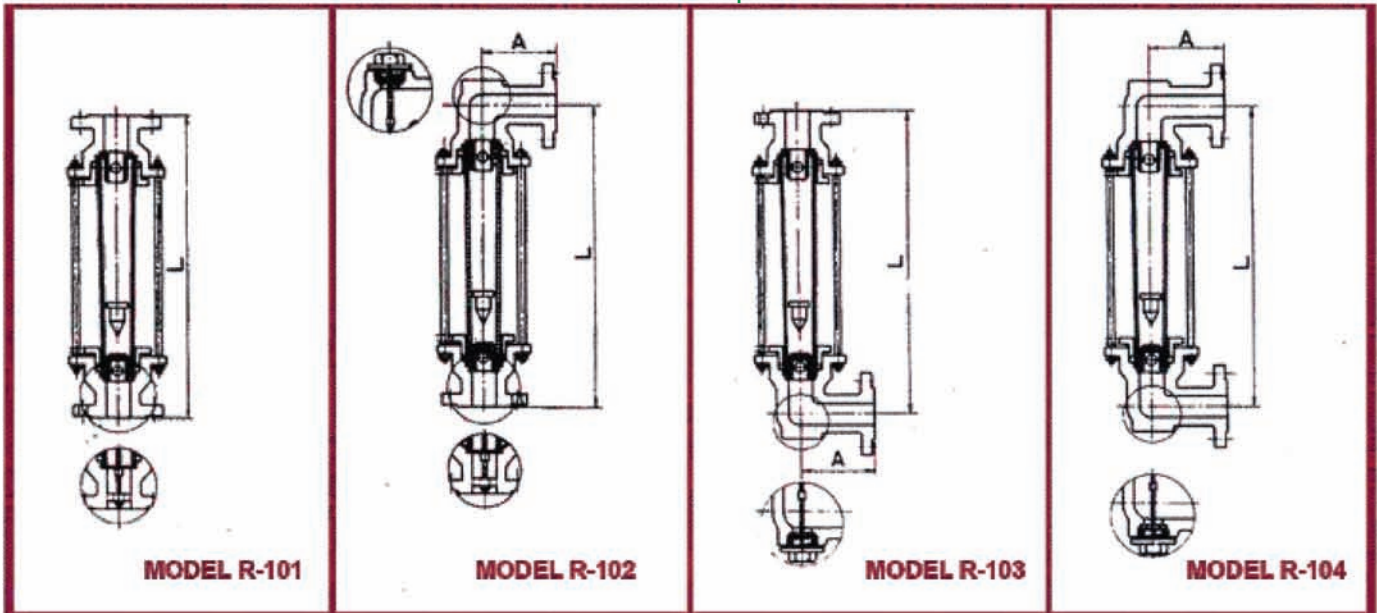
Q: Volumetric flowrate D : Diameter of float

C: Flow co-efficient : Density of Liquid.

F: Downward force of float

Technical Data

Accuracy	: +/- 2% of FSR
Repeatability	: +/- 0.25% of FSR
Rangeability	: 10:1
Maximum Operating Temperature	: 150 C
Body	: MS Powder Coated.
Flow Direction	: From Bottom to Top
End Connection	: Flanged / Screwed as per Customers Specification.
Material Of Wetted Parts	: C.S. / S.S. 304 / S.S. 316 / P.P. / P.V.C. / Teflon.
Metering tube	: Borosilicate Glass, Resistant to high temperature.
Float	: SS304/SS 316 and others depending Upon type of Fluid.
Mounting Position	: Vertical
Elastomers	: Neoprene / Silicon / Viton / PTFE.



Flow and dimension table by size Model R-101, 102, 103, 104

Standard Size	20°C water Maximum flow and pressure loss				0° C 1atm air maximum flow and pressur loss			Dimensions		
	Flow l/h			Approx Pressure loss mm. Aq (Float SS)	Flow Nm³/h			Approx Pressure loss mm. Aq (Float SS)	L mm	A mm
	Float material				Float material					
	SS	PVC	Teflon		SS 316	PVC	Teflon			
1/2"(15A)	430	250	250	200-300	—	7.1	6.51	50-150	500	75
3/4"(20A)	1100	740	740	220-370	11-35	20.50	26	120-200	500	100
1"(25A)	1890	1200	1250	200-550	540	32	37	120-200	500	100
	2500	2100	2100	250-550	75	44	56	160-210	500	100
1 1/2"(40A)	4400	3500	3500	250-600	145	83	100	160-210	500	120
2"(50A)	9100	7000	7000	250-650	299	168	260	160-210	500	120
	12100	10100	10100	350-700	415	230	340	140-220	500	140
2 1/2"(65A)	15000	13200	13200	350-950	520	440	500	140-250	500	140

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