



Introduction

The Nixon NFX Glass tube Variable Area Flowmeter is available in a full range of lengths and is available scaled for liquid or gas measurement. Customised scales match the meter to specific conditions. There is a choice of three scale lengths for optimum readability or compact installation. Repeatability is better than 0.5% of reading to improve process control. An optional needle valve is available for precise control at reduced cost. The tubes are removable from the frame for easy cleaning/ replacement. Angled or straight connections allow for flexible pipe layout. The meters can be simply mounted to reduce installation costs. The instruments have a retained polycarbonate cover to ensure operator safety in the event of a breakage. The units are aesthetically styled to suit integration into original equipment.



Technical data

Flow ranges - gas range 20 cc/min—115 l/min
(air equivalent)

Liquid ranges 2.0 cc/min-4.6 l/min
(water equivalent)

Scale length options - 140 mm / 100 mm / 30 mm

Accuracy Class - % 1.6 / 2.5 / 4 VDI/VDE

Temperature range - -15°C to +20°C

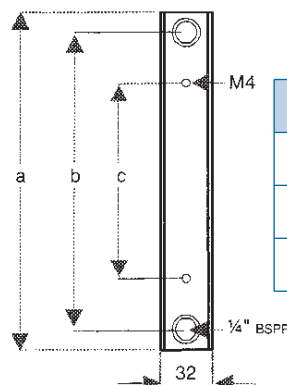
Maximum pressure - 20 Bar Non shock

Connections - Stainless Steel or Nickel plated brass
1/4" BSP Female

Seals- Viton

Flow tube - Borosilicate glass

Float- Stainless Steel, Anodised Aluminium



mm	Compact	Standard	Long
a	133	210	250
b	108	184	226
c	65	121	121



Operating principle

Fluid flowing vertically through a tapered tube exerts an upward force on the float such that the float takes up a point of equilibrium where the downward weight is balanced by the upward thrust of the fluid. This point then represents a specific flowrate. Increase in fluid velocity will cause the float to rise again until the next equilibrium point is reached, and this represents a higher specific flowrate. The tube may thus be scaled in terms of flowrate in an almost linear manner.

Ranging and scaling depends on three main factors -

- Shape and density of the float
- Taper of the tube
- Fluid density and viscosity

Several special versions of the NFX flowmeter are available. The long series provide maximum readability and extended flow ranges, suitable for laboratory and calibration applications. Accuracy of 1% of reading to fully traceable standards is available on request. An infrared alarm can be fitted which can be user Set to provide a switched output on safety critical applications. Units can be fitted with a bench stand for laboratory applications. Anaesthetic flow tubes for use in medical equipment are available for air, oxygen and nitrous oxide.

Units	Long Series Scales		Compact Series	
	Water H ₂ O	Air	Water H ₂ O	Air
cc/min	2-80	-	10-80	-
cc/min	-	-	25-250	20-200
cc/min	10-350	-	100-700	40-400
l/min	-	-	0.2-1	0.2-1
l/min	0.05-1.5	0.05-1.8	-	0.5-3
l/min	0.2-4.6	0.25-4.5	-	1-6
l/min	-	1-30	-	2-12
l/min	-	4-100	-	4-24



Sizing table

Standard Series Scales @ 20°C and 1.013 bar reference									
Units	Water H ₂ O	Air AIR	Oxygen O ₂	Nitrogen N ₂	Carbon Dioxide CO ₂	Argon Ar	Hydrogen H ₂	Methane CH ₄	Propane C ₃ H ₈
cc/min	2-25	-	-	-	-	-	-	-	-
cc/min	4-60	5-100	5-90	5-100	10-100	5-80	20-250	10-150	10-140
cc/min	30-280	20-250	20-220	20-250	20-250	20-200	40-600	40-360	40-300
cc/min	40-480	60-600	40-600	60-600	60-600	60-560	-	-	100-750
cc/min	50-750	50-750	50-700	50-800	50-750	40-660	100-2000	100-1100	100-850
l/min	0.1-1.2	0.1-1.2	0.1-1.1	0.1-1.2	0.1-1.1	0.1-1.0	0.2-3.4	0.1-1.7	0.1-1.2
l/min	0.3-3	0.3-3	0.4-2.8	0.3-3	0.3-2.8	0.2-2.6	-	-	-
l/min	0.4-4.4	0.6-5	0.4-4.4	0.6-5	0.6-4.4	0.4-4	1-15	1-7	0.8-4.8
l/min	-	1-13	1-12	1-13	1-11	1-8	-	-	-
l/min	-	2-26	2-25	2-28	2-20	1-22	-	-	-
l/min	-	4-50	4-50	4-50	4-40	4-44	10-180	5-70	4.40
l/min	-	10-100	10-100	10-100	10-80	10-90	40-400	-	-

Customised scales can also be supplied to suit any more specific fluids and operating conditions