Series 50HC

High Capacity, Flowmeters

Series 50HC flowmeters offer an economical means of measuring gas or liquid flow at flow rates up to 15 standard cubic feet per minute (scfm) of air. Suitable for both plant and laboratory use, these flowmeters have an accuracy of ±10%.

Each flowmeter consists of a replaceable glass metering tube with a Type 316 Stainless Steel float and float stops. Either chrome-plated brass or Type 316 Stainless Steel valves, end blocks and fittings are available. Tubes are calibrated with air and graduated directly in standard cubic feet per minute (scfm) at 70°F and 14.7 psia.

Series 50HC Flowmeter

Standard Features

- Large Diameter Flow Tubes permit flows as high as 15 standard cubic feet per minute (scfm) of air.
- Ribbed Tubes stabilize float and improve accuracy and readability.
- Borosilicate Glass Tubes allow operating temperatures up to 200°F.
- Brass or Stainless Steel Construction permits use in either corrosive or noncorrosive gas service.

Specifications

Maximum Operating Pressure and Temperature: 200 psig at 200°F

Minimum Operating Temperature: 32°F

Accuracy: ± 10% of full scale from 10% to 100% of range

Repeatability: Within 0.5% of full scale

Tube Graduations:
Standard cubic feet per minute of Air

Scale Length: 75 mm

Inlet and Outlet Connections:
3/8" NPT female

Approximate Weight: 2.5 lbs

Materials of Construction

Tube: Borosilicate Glass

Float and Float Stops:
Type 316 Stainless Steel

End Blocks: See Table I

Inlet/Outlet Adaptors: See Table I

Side Plates: Aluminum

Back Plate: White Plastic

Front Plate: Clear Plastic

Seals and Packing: Viton®

Valve: See Table I

Table I, Series 50HC Flowmeters

Part No.	Metering Valve, End Blocks and Inlet/Outlet Adaptor Material
FM4470-( )	Chrome-Plated Brass
FM4480-( )	Type 316 Stainless Steel

Where "( )" is indicated above, complete the part number by inserting applicable tube number from Table II. Example: FM4470-1 which has a flow range of 0.6 to 3.4 scfm. Order by complete part number.

Table II, Tube Selection Table for Series 50HC Flowmeters

Tube No.	Air Flow Rate Range at 70°F and 14.7 psia	Replacement Tubes Part No.
1	0.6–3.4 scfm	FM4471
2	0.6–6.0 scfm	FM4472
3	1.2–12.0 scfm	FM4473
4	1.5–15.0 scfm	FM4474

Table III, Gas Conversion Factors for Series 50HC Flowmeters

To select proper tube for gases other than Air, multiply flow rate values for Air given in Table II (above) by applicable conversion factor shown below. Then use these new flow rate values to select appropriate tube number.

Gas	Factor*	Gas	Factor*
Acetylene	1.04	Helium	2.69
Ammonia	1.30	Hydrogen	3.81
Argon	0.85	Methane	1.35
Butane	0.70	Neon	1.20
Carbon Dioxide	0.81	Nitrogen	1.01
Carbon Monoxide	1.01	Oxygen	0.95
Ethane	0.98	Propane	0.80
Ethylene	1.02	Sulfur Dioxide	0.66

*Conversion factors are approximately equal to square root of the reciprocal of the specific gravity of the gas ($\sqrt{1/SG}$).