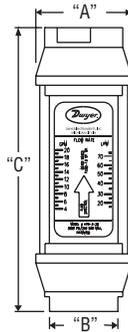


IN-LINE FLOW MONITORS

For Air, Water or Caustic Fluids, $\pm 2.5\%$ Accuracy, Unrestricted Mounting



Connection Size	"A" Reference	"B" Wrench Flats	"C" Reference
1/4" to 1/2" NPT	1-7/8" [48 mm]	1-1/4" [32 mm]	6-9/16" [167 mm]
3/4" to 1" NPT	2-3/8" [60 mm]	1-3/4" [45 mm]	7-1/8" [181 mm]
1-1/2" NPT	3-1/2" [89 mm]	2-5/8" [67 mm]	10-1/8" [257 mm]
2" NPT	3-1/2" [89 mm]	2-5/8" [67 mm]	12-5/8" [321 mm]

The **SERIES HF** In-Line Flow Monitors are ruggedly constructed and ideal for direct measurement for a range of compatible gases, oil or water based liquids. This Series is designed based on a floating orifice disk and variable area flow measurement. Flowing media forces linear motion of the orifice disk and a ring shaped magnet which ride on a tapered center shaft. The transfer magnet drives a clearly visible magnet follower located outside the flow tube, and a ring on the magnet follower indicates flow rate on the direct reading scale.

FEATURES/BENEFITS

- This unique design allows accurate performance with fluid viscosities up to 500 SSU
- All internal wetted parts are contained inside a sealed metal tubular casing assuring a virtually maintenance-free unit
- Increased application versatility with no inlet or outlet straight plumbing requirement and can be mounted horizontally, vertically, or inverted
- Rugged construction allows for high pressure and temperature rating for long operation life

APPLICATIONS

- Setting pressure relief valves
- Fluid handling equipment
- Detecting low-flow rates for lubricating liquids
- Pulp and paper
- Industrial maintenance
- Fluid power
- Heating loop flow

MODEL CHART - ALUMINUM BODY FOR OIL BASED FLUIDS

Model	Connection Size	Range, Oil GPM (LPM)
HFL-2-05	1/2" female NPT	0.5 to 5.0 (1 to 19)
HFL-4-25	1" female NPT	2 to 25 (7.5 to 95)

MODEL CHART - 304 SS BODY FOR HIGH-PRESSURE FLUIDS

Model	Connection Size	Range, Water GPM (LPM)
HFS-2-02	1/2" female NPT	0.2 to 2.0 (0.75 to 7.5)
HFS-2-10	1/2" female NPT	0.5 to 10 (1.9 to 38)

MODEL CHART - ALUMINUM, BRASS, AND STAINLESS STEEL FOR AIR AND OTHER NON-CORROSIVE GASES

Aluminum Model	Brass Model	Stainless Steel Model	Connection (NPT female, dry seal)	Range SCFM (LPS)
HFA-1-001	HFB-1-001	HFS-1-001	1/4"	1.5 to 12 (0.5 to 5.5)
HFA-1-002	HFB-1-002	HFS-1-002	1/4"	4 to 23 (2 to 10)
HFA-1-003	HFB-1-003	HFS-1-003	1/4"	5 to 50 (2.5 to 25)
HFA-1-004	HFB-1-004	HFS-1-004	1/4"	10 to 100 (5 to 45)
HFA-8-001	HFB-8-001	HFS-8-001	3/8"	1.5 to 12 (.5 to 5.5)
HFA-8-002	HFB-8-002	HFS-8-002	3/8"	4 to 23 (2 to 10)
HFA-8-003	HFB-8-003	HFS-8-003	3/8"	5 to 50 (2.5 to 25)
HFA-8-004	HFB-8-004	HFS-8-004	3/8"	10 to 100 (5 to 45)
HFA-2-001	HFB-2-001	HFS-2-001	1/2"	1.5 to 12 (.5 to 5.5)
HFA-2-002	HFB-2-002	HFS-2-002	1/2"	4 to 23 (2 to 10)
HFA-2-003	HFB-2-003	HFS-2-003	1/2"	5 to 50 (2.5 to 25)
HFA-2-004	HFB-2-004	HFS-2-004	1/2"	10 to 100 (5 to 45)
HFA-3-003	HFB-3-003	HFS-3-003	3/4"	5 to 50 (3 to 23)
HFA-3-004	HFB-3-004	HFS-3-004	3/4"	10 to 100 (4 to 48)
HFA-3-005	HFB-3-005	HFS-3-005	3/4"	15 to 150 (8 to 56)
HFA-3-006	HFB-3-006	HFS-3-006	3/4"	30 to 330 (20 to 150)
HFA-4-003	HFB-4-003	HFS-4-003	1"	5 to 50 (3 to 23)
HFA-4-004	HFB-4-004	HFS-4-004	1"	10 to 100 (4 to 48)
HFA-4-005	HFB-4-005	HFS-4-005	1"	15 to 150 (8 to 56)
HFA-4-006	HFB-4-006	HFS-4-006	1"	30 to 330 (20 to 150)
HFA-9-007	HFB-9-007	HFS-9-007	1-1/4"	30 to 470 (15 to 220)
HFA-9-008	HFB-9-008	HFS-9-008	1-1/4"	150 to 900 (75 to 425)
HFA-5-007	HFB-5-007	HFS-5-007	1-1/2"	30 to 470 (15 to 220)
HFA-5-008	HFB-5-008	HFS-5-008	1-1/2"	150 to 900 (75 to 425)

SPECIFICATIONS

Service: Compatible gases or liquids.
Wetted Materials: HFA: Aluminum casing, Buna-N seals, PTFE coated Alnico magnet, SS disk; HFB: Brass casing, Buna-N seals, PTFE coated Alnico magnet, SS disk; HFS: 303 SS casing, FKM seals with PTFE backup, PTFE coated Alnico magnet, SS disk.
Maximum Viscosity: 500 SSU.
Temperature Limits: 240°F (116°C).
Pressure Limits: HFA, HFB, HFL and HFH models: 600 psig (41 bar) for air and gas, 3500 psig (241 bar) for liquids; HFS model: 1000 psig (70 bar) for air and gas, 6000 psig (413 bar) for liquids.
Accuracy: $\pm 4\%$ FS over entire range; $\pm 2.5\%$ over center third of the measuring range.
Repeatability: $\pm 1\%$ of FS.
Shipping Weight: 1/4" to 1/2" female NPT models; 2 lb (0.9 kg); 3/4 to 1" female NPT models: 3.5 lb (1.59 kg); 1-1/2" female NPT models: 11 lb (5 kg); 2" female NPT models: 13.5 lb (6.12 kg).

Note: Series HF monitors are recommended for use with system filtration of at least 74 microns or a 200 mesh screen

MODEL CHART - BRASS BODY FOR WATER BASED FLUIDS (NON-STEAM)

Model	Connection Size	Range, Water GPM (LPM)
HFB-2-05	1/2" female NPT	0.5 to 5.0 (1 to 19)
HFB-3-15	3/4" female NPT	2 to 15 (7.5 to 55)
HFB-3-20	3/4" female NPT	2 to 20 (7.5 to 75)
HFB-4-35	1" female NPT	5 to 35 (19 to 130)
HFB-5-50	1-1/2" female NPT	5 to 50 (19 to 189)
HFB-5-100	1-1/2" female NPT	10 to 100 (38 to 379)
HFB-6-75	2" female NPT	8 to 75 (31 to 284)
HFB-6-150	2" female NPT	20 to 150 (76 to 568)