



# ElveFlow Flow Rate Sensors

## Which Flow Rate Sensor Should You Choose?



WPI offers two types of ElveFlow flow rate sensors:

- One based on thermal conductivity technology (Microfluidic Flow Sensor - MFS)
- One based on Coriolis principles (Bronkhorst Flow Sensor - BFS).

Both sensors have pros and cons based on your application, summarized in the table below. This table will help guide your choice of sensor(s) depending on your application and your budget.

FLOW SENSORS COMPARISON	BFS	MFS
Accuracy	0.2% of measured value <sup>1</sup>	5% of measured value
Range	One sensor for 1.6 L/min to 3 mL/min	Five sensors from 10 L/min to 5 mL/min
Negative flow measurement	Yes	Yes
Supported fluid types	All without calibration	All with calibration
Response time	35 ms (2)	From 1 to 70 ms (3)
Flow sensor size	65 x 32 x 144 mm	58 x 53 x 23 mm
Internal diameter	250 µm	From 25 µm to 1.8 mm (4)
Weight	3 kg	100 g
Connectors	1/16" OD tubing	1/16" OD tubing
Internal volume	13 µL	From 1 µL to 80 µL
Wetted material	Stainless steel 316L or comparable	Silicium
Principle	Coriolis	Thermal
Computer connection	Directly via USB to the computer	Directly on the OB1 and the AF1 or with the Sensor reader MSR
Additional features	Temperature and density measurement	

Non-contractual information, may be changed without notice.

- 1
- Available upon request. 2 % accuracy for the regular model
- 2
- 0.2 s at 98% (spec) to fill the tubing then 35 ms with temperature measurement
- 3
- Depending on chosen digital resolution
- 4
- Depending of the sensor range

