

PendoTECH Coriolis Flowmeter

- Response is independent of fluid properties including viscosity
- Mass flow pre-calibration eliminates need to calibrate on different fluids
- Accuracy unaffected by flow regime (e.g., laminar or turbulent flow)
- All plastic flow path that meets USP Class VI



Description

The PCFM Series is a family of advanced flow meters based on the Coriolis measurement principle. The flow meters are comprised of two assemblies: one containing the sensor, the other containing the supporting electronics. The PCFM sensors are specially designed for measuring liquids in high-purity applications such as bio-pharmaceutical production and process development

The measurement is made as fluid flows into the sensor consisting of two flow sensitive elements which are vibrated relative to one another - similar to the tines of a tuning fork. Fluid interacts with the sensor dynamically in such a way that the sensor's response is immune to the fluid's chemical and physical properties flow regime, or variations in flow velocity profile. Fluid mass flow rate is determined by measuring the relative motion and frequency of the flow-sensitive elements.



Applications

1 - Tangential Flow Filtration

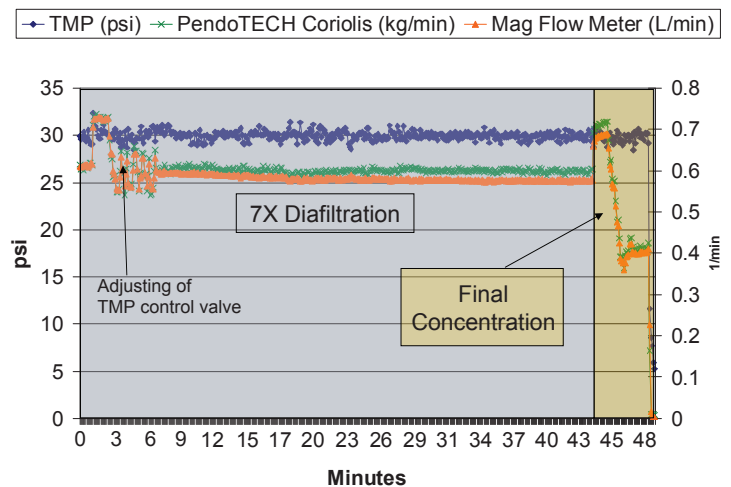
- Accurately measure retentate flow even as viscosity changes during concentration processes
- Chemical resistant to cleaning and sanitizing solutions

2 - Depth Filtration

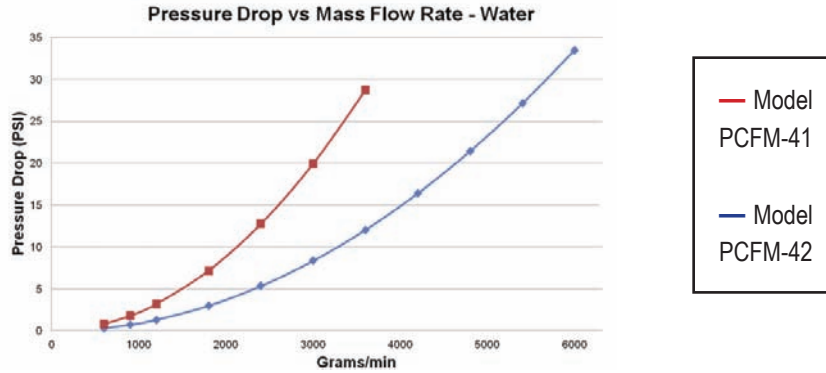
- Measure flow rate during the process
- Flowmeter can also measure total flow

3 - Chromatography

- Accurately measure flow rate in order to control column flux
- Chemical resistant to cleaning and sanitizing solutions



Pressure Drop



Measurement Specifications

Model	Model PCFM-31	Model PCFM-32	Model PCFM-41	Model PCFM-42	Model PCFM-62
Mass Flow Range*	5 - 1,500 grams/min	5 - 4,000 grams/min	30 - 2,000 grams/min	60 - 5,000 grams/min	≈ 200 - 9,500 grams/min
Zero Offset Stability (Z.O.S.)	0.06 grams/min	0.50 grams/min	1.50 grams/min	10.0 grams/min	
Accuracy	+/- {1% of rate + Z.O.S.}	+/- {1% of rate + Z.O.S.}	+/- {1% of rate + Z.O.S.}	+/- {1% of rate + Z.O.S.}	
Inner Diameter	0.25 inch (6.35 mm)	0.25 inch (6.35 mm)	0.25 inch (6.35 mm)	0.25 inch (6.35 mm)	
Outer Diameter	0.375 inch (9.53 mm)	0.375 inch (9.53 mm)	0.375 inch (9.53 mm)	0.375 inch (9.53 mm)	
Internal Flow Cell ID	3 mm	3 mm	4 mm	4 mm	
Fluid Temperature	15 to 40°C	15 to 40°C	15 to 40°C	15 to 40°C	
Ambient Temperature	0 to 50°C (Electronic Housing)	0 to 50°C (Electronic Housing)	0 to 50°C (Electronic Housing)	0 to 50°C (Electronic Housing)	
Operating Pressure	80 psig (Maximum)	80 psig (Maximum)	80 psig (Maximum)	80 psig (Maximum)	

* 10 psi pressure loss on water @ maximum flow rate (higher flows possible)

Electrical Specifications

Supply Voltage	24 VDC +/- 10%
Power Consumption	Max 6W
Programming	Operator Parameter configuration through USB interface with a PC
Output Interfaces	4-20 mA Current Loop, Digital I/O
LCD Display	2 lines; 16 characters per line
Analog Output Module	4-20 mA; 500 Ohms max load
Digital Input/Output Module	Configurable as Frequency or Digital I/O
Frequency Output	0 to 10KHZ proportional to max flow rate

Physical Specifications

Process Connections	3/8" OD tube connection
Wetted Material	Dupont™ Teflon® PFA 450 HP
Sensor Dimensions	L: 10inch(254mm) x W: 2.87inch(73mm) x H: 4.53inch(115mm)
Transmitter Dimensions	L: 8.3inch(210mm) x W: 2.3inch(58.5mm) x H: 5.3inch(133.5mm)
Weight	Sensor: 1.9 lbs. (0.86 Kg); Transmitter: 2.7 lbs. (1.22 Kg)
Cable Length Between Sensor & Transmitter	Standard 6 ft (1.8 m), custom up to 9.8 ft. (3m) max

Ordering Information

PCFM-31	PendoTECH Coriolis Mass Flowmeter with 0.25" /6.35 mm ID (range 5 - 1,500 grams/min)
PCFM-32	PendoTECH Coriolis Mass Flowmeter with 0.25" /6.35 mm ID (range 5 - 4,000 grams/min)
PCFM-41	PendoTECH Coriolis Mass Flowmeter with 0.25" /6.35 mm ID (range 30 - 2,000 grams/min)
PCFM-42	PendoTECH Coriolis Mass Flowmeter with 0.25" /6.35 mm ID (range 60 - 5,000 grams/min)