



PendoTECH Coriolis Flowmeter

- Response is independent of fluid properties including viscosity & conductivity
- 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.



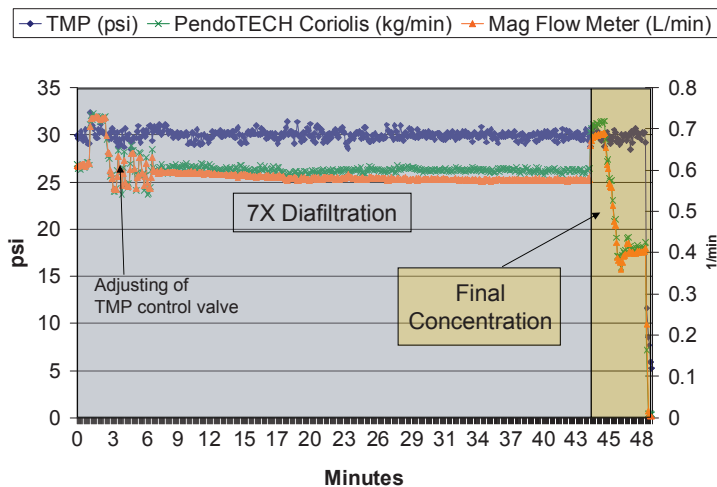
Complete flowmeter shown (model PCFM-32)



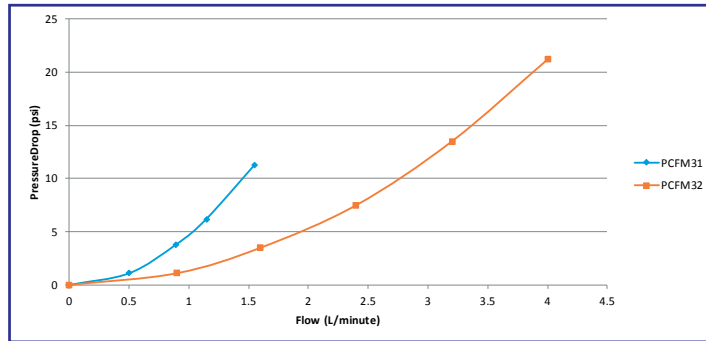
Applications

- 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

Comparison of the Coriolis and a Mag Flow Meter During a Diafiltration/Concentration Process with a Large Shift in Viscosity and Conductivity



Pressure Drop



Measurement Specifications

Model	Model PCFM-31	Model PCFM-32
Mass Flow Range*	12 - 1,500 grams/min	12 - 4,000 grams/min
Zero Offset Stability (Z.O.S.)	0.06 grams/min	0.50 grams/min
Accuracy	+/- {1% of rate + Z.O.S.}	+/- {1% of rate + Z.O.S.}
Inner Diameter	0.15 in (3.81mm)	0.25 inch (6.35 mm)
Outer Diameter	0.25 in (6.35mm)	0.375 inch (9.53 mm)
Hold Up Volume	11 mL	18 mL
Weight (without base)	363 grams	860 grams
Fluid Temperature	15 to 40°C	15 to 40°C
Ambient Temperature	0 to 50°C (Electronic Housing)	0 to 50°C (Electronic Housing)
Operating Pressure	80 psig (Maximum)	80 psig (Maximum)
Sensor Dimensions	H= 7.88 in H= 200.15mm W= 1.55 in W= 39.37mm L= 4.09 in L= 103.88mm	H= 9.69 in H= 246.13mm W= 1.80 in W= 45.72mm L= 5.12 in L= 130.05mm

Each flow sensor comes with removable stabilization base as shown below:



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

Electrical Specifications

Supply Voltage	24 VDC +/- 10%
Power Consumption	Max 6W
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	Available as remote tare
Frequency Output	0 to 10KHZ proportional to max flow rate

Physical Specifications

Wetted Material	Dupont™ Teflon® PFA 450 HP
Transmitter Dimensions (same for all models)	L: 8.3inch(210mm) x W: 2.3inch(58.5mm) x H: 5.3inch(133.5mm)
Weight	Flow sensor: varies by model Transmitter: 2.7 lbs. (1.22 Kg)
Cable Length Between Sensor & Transmitter	6 ft (1.8 m)

Ordering Information

PCFM-31	PendoTECH Coriolis Mass Flowmeter (range 12 - 1,500 grams/min)
PCFM-32	PendoTECH Coriolis Mass Flowmeter (range 12 - 4,000 grams/min)

Design details subject to change without notice. Contact PendoTECH for more details.

For warranty information see our website at <http://www.pendotech.com/warranty>