



Detect Flow Blockage Directly - Triboelectrically

The **Triboflow*** Model 2200-1 Flow Blockage Detector is the only monitor that detects blockages and flow upsets through Auburn's unique triboelectric technology.

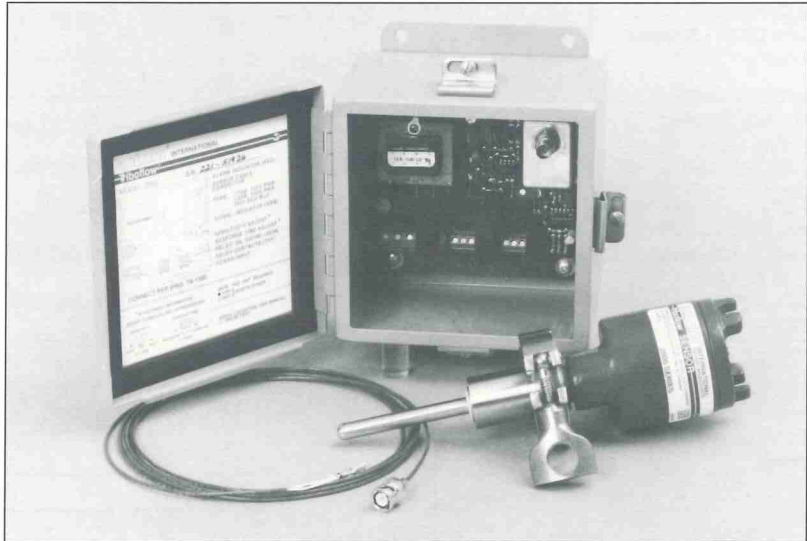
By this method, the particulate flow that contacts and strikes **Triboflow**'s probe (inserted in the flow stream) creates a measurable triboelectric signal due to the friction. This signal is compared with a desired preset and adjustable norm. Any significant loss of this signal, caused by a loss of flow, will trigger a contact closure that activates an alarm.

Triboflow is a true solids flow detector because it monitors particle flow - not merely particle presence. This direct method of flow monitoring allows **Triboflow** to warn you of flow problems as soon as they occur, preventing down-time and avoiding product loss. The **Triboflow** Model 2200-1 can be used for flow blockage detection and flow control in: pneumatic systems, bins and hoppers, cyclones,

additive blending operations, and much more.

And with no moving parts and no maintenance required, **Triboflow** is a more reliable, effective and direct flow monitor than optical, capacitance, microwave or nuclear devices which require high maintenance and merely monitor material presence. **Triboflow** monitors material *flow*!

Model 2200-1



Triboflow Advantages

- ◆ Maintenance-Free
- ◆ Easy Installation
- ◆ No Moving Parts
- ◆ Highly Reliable
- ◆ Direct Monitoring of Material Movement

ELECTRONICS

Temperature Range:

- 10 to 140°F (-23 to 60°C) (Operating)
- 40 to 160°F (-40 to 71°C) (Storage)

Humidity Range:

- 0 to 95% Relative Non-Condensing

Relay Contacts:

- DPDT 5A @ 28 VDC, 250 VAC, 100 VA max

Power:

- 105 to 130 VAC 50/60 Hz (Std)
- 210 to 260 VAC 50/60 Hz (Opt)
- 10-32 VDC (Opt)
- 5 Watts Maximum Load

Response Time: (Maximum Input Change)

- .5 to 20 Seconds, Customer Adjustable

Enclosure:

- NEMA 12 (Std)
- NEMA 4, 4x or 7/9 (Opt)

SENSOR

Temperature Range:

- 40 to 300°F (-40 to 149°C) - Teflon Ins. (Std)
- 40 to 450°F (-40 to 232°C) - Extended High Performance Insulation (Opt)
- 40 to 1000°F (-40 to 538°C) - Ceramic Insulation (Opt)

Pressure Range: 30 psi (2 bar) (Std)

- Up to 5,000 psi (345 bar) (Opt)

Probe: 316 Stainless Steel (Std)

- Tungsten Carbide (Opt)

Other Parts: 303 Stainless Steel (Std)

Insertion Length: 1/2 inch (1.3 cm) (Std)

- 3, 6, 12, 18, 30, 36 inch (7.6, 15.2, 30.5, 45.7, 76.2, 91.4 cm) (Opt)
- Other, including non-intrusive (Special)

Hazardous Rating: Intrinsically Safe for Class I, II, III in Division 1 & 2, Groups A, B, C, D, E, F, G (FM Approved)

Enclosure: NEMA 4x (Std)

CONNECTIONS

Process/Sensor: 1/2 inch NPT Male Fitting or Quick Release Clamp (Std)

Sensor/Electronics: Special Triboelectric Coax Cable 300 feet (91 m) max.

Cable Temperature Range:

- 60 to 400°F (-51 to 204°C) (Std)
- Cable above 400°F - Contact Factory

INSTALLATION

Weld a half coupling or the quick release ferrule over a hole in the side of the pipe or duct. Screw in or clamp the sensor in place. (Please refer to the manual for details.)

*Covered by one or more of the following patents: 4,063,153, 4,074,184, 4,291,273 4,288,741, 4,631,482, 4,619,145, 4,714,890, 4,904,944, 4,774,453, 5,054,325, 5,095,275. Product also covered by patents in countries other than the United States.