

## **“DRI-GAS” Gas Sampling System**

A Gas Sampling System shall be supplied for the purpose of extracting gas samples from air ducts, vent stacks, enclosed spaces or other areas where direct gas detection and measurement might be difficult. The Gas Sampling System shall remove excess humidity from the sample to prevent moisture from condensing on the gas sensor. The Gas Sampling System shall be ATI Series C21 as described below.

The sampling system shall contain 3 main elements, a long life diaphragm sample pump, a gas drying module, and a condensate removal pump. An internal rotameter provides operator adjustment of pump flow rate and a flow sensor provides an alarm in the event of loss of sample flow.

The gas sampling system shall be designed to continuously draw samples through tubing at a flow rate up to 800 cc/min and to be adjustable at rates between 200 – 800 cc/min via a rotameter located inside the enclosure. The gas sampling system shall pump against a maximum 10” Hg. on the inlet or 4 PSIG pressure on the outlet for 500 cc/min and provide a response through 1/8” tubing at 29 seconds/100 feet, 3/16” tubing at 65 seconds/100 feet and 1/4” tubing at 116 seconds/100 feet.

The gas sampling system shall contain a differential pressure switch that detects sample line blockage in the inlet or problems in the outlet line that cause a large backpressure on the pump outlet. Should one of these low flow conditions occur, a red alarm indicator light on the front of the system will illuminate and an internal relay will activate. One set of contacts on that relay shall be provided for external alarm indicators. The contacts shall be unpowered SPDT and can be connected to remote alarm indicators, PLC inputs, or other devices accepting a dry contact input.

An optional inlet filter shall be available for use with the gas sampling system. The filter shall remove particulate in the gas sample and serve to reduce water droplets from being pulled into the sample tubing. This assembly shall provide filtration down to less than 5 microns.

The gas sampling system shall be powered by 115 or 230 VAC (specify one power source only).

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