

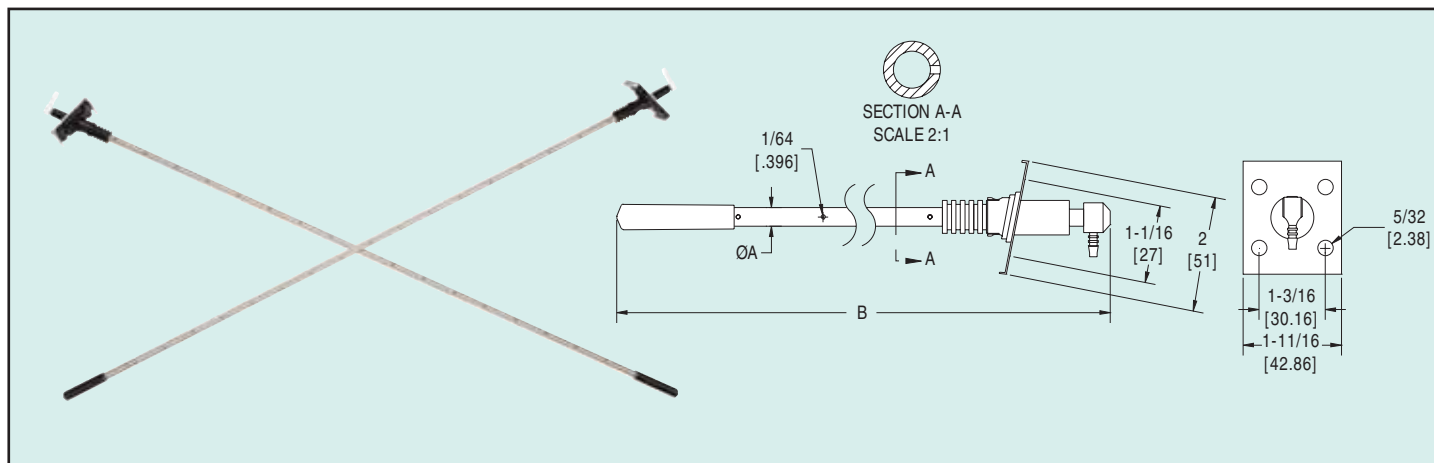


Series  
AFG

## Averaging Flow Grid

Cost Effective Air Flow Station for Ducts up to 60"

Air Velocity



The **Series AFG Flow Grid** is an outstandingly simple yet accurate and cost effective alternative to other duct mounted pressure sensors. Once installed and connected to a suitable measuring instrument, the device will provide years of trouble free monitoring of both air and gas flow. Installing the AFG Flow Grid is quick and easy, the AFG is supplied in kit form to allow both workshop and on-site installation into a wide range of square and circular ducts up to approximately 60".

The AFG Flow Grid is a fundamental pressure-sensing device designed to transmit a continuous differential pressure signal. When this output is connected to a suitable measuring instrument (i.e. manometer, pressure transducer, etc.) it may be used to determine air velocity and volume flow rate.

### HOW THE AFG FLOW GRID WORKS

The AFG Flow Grid consists of two tubes mounted diagonally across a square or rectangular duct, or diametrically across a round duct. The tubes are drilled with a series of equi-spaced holes.

The holes in one tube face directly upstream and sense total pressure, while the pairs of holes in the second tube also face forward but at an included angle of 79 degrees, sensing static pressure.

The total and (sub) static pressures are averaged along the length of each tube and provide pressure signals at connectors outside the duct wall. The pressure differentials across these connectors constitute the output signal.

### SPECIFICATIONS

**Service:** Monitor air or compatible gas flow.

**Wetted Materials:** 304 SS, PVC, Polyurethane, acetyl plastics, and neoprene rubber.

**Accuracy:**  $\pm 5\%$ .

**Maximum Temperature:** 176°F (80°C).

**Velocity Range:** 295.2 ft/min to 5904 ft/min (1.5 to 30 m/sec).

**Diameter of Tubes:** 5/16" (8 mm) or 5/8" (16 mm).

**Max Duct Diagonal:** 60.4" (153.4 cm).

**Max Duct Diameter:** 59.4" (150.9 cm).

**Process Connections:** 5/16" barbed.

**Weight:** AFG-1: 1 lb (454 g); AFG-2: 3 lb (1361 g).

### APPLICATIONS

The AFG Flow Grids will give useful and reliable readings in a wide variety of 'in duct' locations often where other flow rate measuring devices are found to be unsatisfactory.

The signal from an AFG Flow Grid can be used in a variety of ways, for example:

- To display differential pressure, velocity or volume flow using a micro manometer, gage or transmitter.
- To give a warning of over or under flow rate using a pressure switch.
- To control air supply in a system by connecting the grid to a pressure transmitter with an electrical output which can be used to feed into a control system.
- To display differential pressure on a simple fluid manometer to give visual indication of changes in volume flow rate in the duct.

### MODELS

Model	Diameter Tube "A"	Length "B"
AFG-1	5/16" (8 mm)	27" (688 mm)
AFG-2	5/8" (16 mm)	59-4/5" (1518 mm)