

Flow Direction Gauge

Providing accurate readings for flow measurement and direction

With the growing industry advancements in the protection of cable in single feed systems, the need for accurate flow measurements—as well as knowing which way the flow is going—has become increasingly important.

System Studies has developed an air pressure system that offers single feed systems the same cable protection that is found with dual feed air pipe systems. This is made possible with the Flow Bank™, an outside plant device that solves the problems caused by major leaks in the single feed environment.

Leak locating in the Flow Bank System is based upon flow measurements and flow direction. The Flow Direction Gauge™ (Part No. 3105) makes this task easy.

Here's how it works

The Flow Bank is made up of five cable ports and a flow exchange chamber that allows air to flow from one port to another. Each port contains a calibrated orifice and a pressure testing valve.

Air flows both into and out of the Flow Bank toward the cable(s) with the lowest pressure. As flow increases (either in or out of the cable) the pressure differential over the orifice increases. The greater the pressure differential, the greater the flow.

The Flow Direction Gauge increases this pressure differential and converts it to an air flow reading in Standard Cubic Feet per Hour (SCFH) or Liters per Hour (LPH). The Flow Direction Gauge is “zero central” so the technician can tell whether the flow is coming from the cable being measured or going into the cable.

Because of the unique design of the Flow Direction Gauge, readings can be taken without having to shut off air supply to a cable and reroute the flow, as is the case when taking readings with a portable flow rater. Readings are taken by simply connecting the gauge's snap on flow sampler to the pressure testing

valve on the flow exchange chamber and on each cable port. This simplifies the process of taking flow readings and eliminates the possibility of accidentally leaving the flow to a cable turned off.

Flow measurement range

The flow range reading capability of the Flow Direction Gauge covers the typical flows that will be found in a Flow Bank System. The gauge contains two scales. The top (low flow) scale reads from 0–1.0 SCFH (0–28 LPH) and the bottom (high flow) scale reads from 0–2.5 SCFH (0–70 LPH). The extended range is accessed by simply pressing the button on top of the gauge.

Model specifications

The Flow Direction Gauge is designed to be used exclusively with the Flow Bank. It uses a quick connect, snap on flow sampler to measure the differential pressure across the calibrated orifice. The Flow Direction Gauge converts the pressure differential to a flow reading. Powered by pneumatics, the Flow Direction Gauge requires no batteries, so flow readings will always be accurate and reliable.

Physical Description

The gauge, which is 4 inches (10 cm) in diameter, is housed in a protective rubber case with an adjustable carrying strap. The two-port sampler includes a generous 6 feet (183 cm) of twin hose for connection to a Flow Bank at any location. The twin hose is specially molded from a fluid-resistant, thermoplastic rubber called Santoprene®. This material gives maximum protection from the harmful effects of petroleum products commonly found in utility holes. The hose also retains its flexibility under exposure to extreme temperatures.



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Reading Position For maximum accuracy, the Flow Direction Gauge should be used in either a vertical or horizontal position. For taking precise measurements, it is recommended that the “zero adjustment” screw on the face of the Flow Direction Gauge be used to set the zero reference prior to connecting the sampler fittings to the Flow Bank sampler valves.

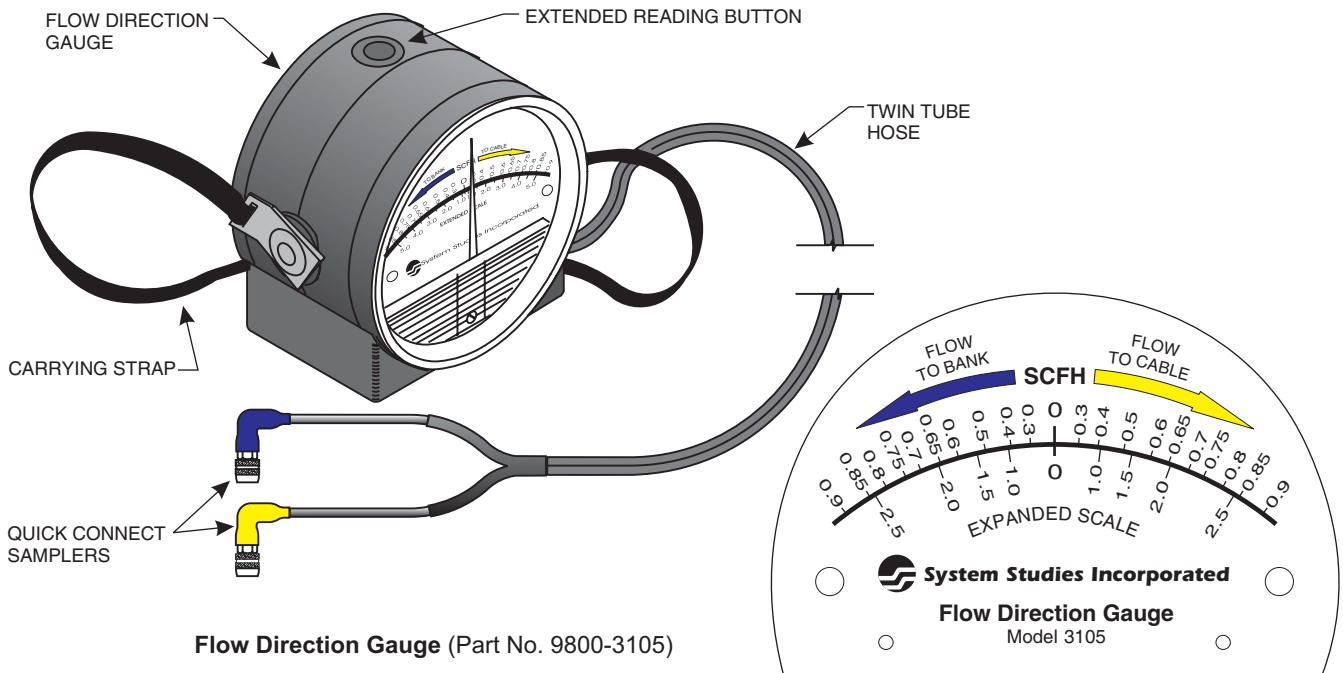
Extended Range The large button located at the top of the Flow Direction Gauge is the extended range button, which allows for over-range readings.

Net Weight 2.75 lbs. (1.25 kgs)

Shipping Weight 3.75 lbs. (1.70 kgs)

Santoprene® is a registered trademark of Montsanto Company.

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