

Flow Banks



The System Studies Flow Bank™ is a mechanical device that joins cables together pneumatically. Designed to be installed at multiple locations in a single feed air pressure system, Flow Banks re-route the existing air supply and provide dual feed cable pressure protection.

Unlike a Flow Finder Manifold™, the Flow Bank is not supplied air from an air pipe or auxiliary air source. It simply distributes air from cables with adequate or higher pressures to those with lower pressures. For example, when a leak develops in a Flow Bank System, the Flow Banks closest to the leak (typically, on opposite sides) draw air from the cables with higher pressure and route it into the cable with the lowest pressure. The combined contribution from the higher pressure cables significantly improves overall pressure protection to the leaking cable.

Flow Banks are equipped with five ports, each containing a 0-.95 SCFH (26.9 LPH) Flow Finder™ and a shutoff valve. The Flow Finders create a slight pressure differential that can be measured and converted to a flow rate using a specially designed Flow Direction Gauge™ (described below). This gauge not only measures individual air flow rates, but also indicates if the air is flowing from the Flow Bank into a cable or from a cable into the bank.

If there are more than five cables at a designated installation location, two or more Flow Banks can be connected together and monitored by one High Resolution Pressure Transducer™ (see section on Flow Bank Assemblies™). Flow Banks can be ordered with the fittings described below to meet most telco requirements.

SPECIFICATIONS

Performance

The Flow Banks and various Flow Bank Assemblies are designed for installation in a utility hole. One Flow Bank will feed up to five cables. Multiple banks grouped together can feed as many cables as necessary at one location.

Each Flow Bank port contains a low range Flow Finder (0-.95 SCFH/26.9 LPH) which creates a small pressure differential that can be measured using a Flow Direction Gauge. The gauge indicates both the direction of flow (either from the cable into the bank or from the bank into the cable) and the flow rate in Standard Cubic Feet per Hour or kilopascals. (Note: it is necessary to specify the kilopascals gauge face when placing an order.)

Material

The Flow Bank housing is constructed of durable nickel-plated brass. Assembly parts and materials are either stainless steel or nickel-plated brass, and all gaskets are made of silicone rubber. Individual flow chamber valve on/off controls are stainless steel.

Operating Range

Flow Banks have been tested and confirmed for reliable operation within the following parameters: Operating Temperature Range: -40° F (-40° C) to +220° F (104.4° C)

Maximum Pressure: will withstand 20 PSI (138 kPa) over the operating temperature range.

Manual Measurement

Readings are made possible by connecting one of the color coded Flow Direction Gauge chucks to the sampler valve on the port to be read and the other to the common sampler on the main flow chamber.

Remote Measurement

A System Studies High Resolution Pressure Transducer (or resistive pressure transducer) can be pneumatically connected to the input port of the Flow Bank's main flow chamber to provide remote delivery pressure readings.

Dimensions

The Flow Bank measures 5.25 inches (13.3 cm) wide, 3 inches (7.6 cm) high, 2.5 inches (6.4 cm) deep (including valves). Mounting holes are centered and placed 3 inches (6.4 cm) apart.

Shipping Weight

Approximately 6 pounds (2.7 kg)

MODEL DESCRIPTIONS

9800-3076-BS Manifold, Flow Bank, 3/8" Brass Fittings



This version of the Flow Bank is supplied with five nickel-plated brass, 1/4" NPT to 3/8" tubing connector fittings. Internal Flow Finders are standard 0-9.5 SCFH. The 3/8" brass fittings are the standard in most U.S. Telcos.

9800-3076-BT Manifold, Flow Bank, 1/4" Brass Fittings

The "BT" designation identifies the nickel-plated brass, 1/4" to 1/4" tube connectors used on each of the Flow Bank ports. These fittings are preferred in many international telco applications.

ASSOCIATED TOOLS AND EQUIPMENT

9800-3105 Tool, Flow Direction Gauge



The Flow Direction Gauge is a manual air flow measurement device that provides both an accurate air flow reading and an indication of the direction of air flow. This critical information is used for leak locating in the Flow Bank System. The gauge is supplied with

two quick connect samplers (that greatly simplify the reading process), a carrying strap, and a case. Two different gauge faces are available to indicate flow direction: one with output displayed in Standard Cubic Feet per Hour (SCFH) and the other in kilopascals (kPa). (Please note that unless specified during ordering, the gauge will be supplied with the SCFH face.)

The words Flow Bank™, Flow Finder Manifold™, Flow Finder™, Flow Direction Gauge™, High Resolution Pressure Transducer™, and Flow Bank Assembly™ are trademarks of System Studies Incorporated.

FLOW BANK

PART NUMBER	FITTINGS*
3076 FLOW BANK (For Five Cables)	BS, BT

Please note that in addition to a part number, it is necessary to specify a Fitting designation when ordering a Flow Bank.

*Fitting:

BS Flow Bank supplied with nickel-plated brass, standard tubing connectors. For use with 3/8 inch plastic tubing.

BT Flow Bank supplied with nickel-plated brass tubing connectors. For use with 1/4 inch plastic tubing.

Ordering Examples:

If you ordered Part Number 3076-BT, for example, you would receive a Flow Bank equipped with 1/4 inch tube to 1/4 inch NPT-M fittings on each of the five flow ports. A 3076-BS would specify a Flow Bank with nickel-plated brass tubing connectors on each of the flow ports.