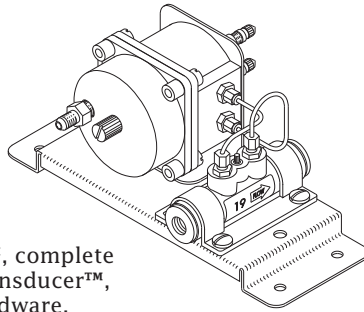


Flow Measurement Assemblies

The Flow Finders™ described previously are also available as Flow Measurement Assemblies™, complete with a High Resolution Transducer™, mounting bracket, and hardware.



The Flow Measurement Assembly is the ideal component for all manifold locations where Flow Finders or Flow Finder Manifolds™ have not been previously installed. It is also used for small-office monitoring. The assembly can be ordered with a High Resolution Flow or Dual (pressure/flow) Transducer. Additionally, you can also select one of the available six Flow Finder ranges for the assembly: either 0-9.5 SCFH (270 LPH), 0-19 SCFH (540 LPH), 0-47.5 SCFH (1350 LPH), 0-95 SCFH (2700 LPH), 0-190 SCFH (5380 LPH) or 0-475 SCFH (13,500 LPH). This last two Flow Finders are used in 1" air pipe systems.

The transducer is equipped with a removable wire cover assembly that provides access to device pairs for splicing. Two product numbers (explained below) distinguish between the type of conductor tube fitting supplied on the wire cover assembly. One version is equipped with a standard nickel-plated brass fitting for 3/8 inch (1 cm) plastic tubing; the other has a 37° flared, stainless steel fitting for braided stainless steel tubing. The pneumatic connection between the transducer and the Flow Finder is achieved by using 1/8 inch (0.3 cm) preformed stainless steel tubing.

Because of the Flow Measurement Assembly design, manual flow (and pressure) readings are totally accessible. Simply connect a Flow Gauge Sampler™ (or C pressure gauge) to the sampler valves on top of the transducer to obtain a reading. Remote readings are available from PressureMAP™/PressureWEB™ via a 289H LSS™, 289H-M LSS™ monitor or uM260 Micro Monitor™. Using the integrated software/hardware monitoring system, you can obtain all the information you need about delivery pressure (dual transducer only) and flow rates at the device installation.

SPECIFICATIONS

Material

Mounting Bracket: Constructed of stainless steel (0.062 inches/.15 cm thick).

Flow Finder: Molded, thermoplastic nylon with 1/4" (0.6 cm) NPT female threads. Stainless steel protective end caps (0.020 inches/.05 cm thick) and internal orifice. Mechanical parts (tank valves and flow sampler locking stud) are nickel-plated brass. The 0-190 SCFH (5380 LPH) and 0-475 SCFH (13,500 LPH) Flow Finders are nickel plated brass with 3/4 inch (1.9 cm) NPT female threads.

Transducer: Constructed of nickel-plated brass and equipped with two 1/8" (0.3 cm) stainless steel tubes for pneumatic connection to Flow Finder. Middle barrier plate is ABS plastic. Transducer contains a removable nickel-plated brass wire cover assembly to provide access to the device pairs for installation and troubleshooting. Primary and backup conductor pairs provided for most models.

Performance

The pressure drop across Flow Finders (all ranges) is 0.188 PSI (1.3 kPa) at full air flow, and 0.05 PSI (.34 kPa) at half flow. Accuracy of air flow reading is +/- 1% of full scale reading.

The transducer uses strain gauge design to measure the slight pressure differential created by the Flow Finder's internal orifice. Pressure differential is converted to a flow reading in Standard Cubic Feet per Hour for each of the six flow ranges; 0-9.5 SCFH (270 LPH), 0-19 SCFH (540 LPH), 0-47.5 SCFH (1350 LPH), 0-95 SCFH (2700 LPH), 0-190 SCFH (5380 LPH), and 0-475 SCFH (13,500 LPH). Provides accurate readings up to two times the indicated Flow Finder range. Margin of error for repeatability is less than 1 percent.

Remote Reading Resolution

Air Flow: Zero to two times indicated range in 1 SCFH/28.32 LPH increments.

Pressure: Zero to 30 PSI (207 kPa) in 0.1 PSI (69 kPa) increments.

Manual Measurement

Transducer supplied with two tank (sampler) valves to permit manual flow reading using Flow Gauge. Pressure reading possible using C pressure gauge.

Electrical

Powered by voltage (in the range of 12 to 40 VDC) supplied over copper conductor pairs by the 289H LSS or uM260 Micro monitor.

Dimensions

Measures 8-3/8 inches (21 cm) long by 6 inches (15 cm) wide by 6 inches (15 cm) high. Bracket contains two mounting flanges each with two 1/4 inch (0.6 cm) anchor holes.

Shipping Weight

With 0-475 SCFH Flow Finder: 6 lbs/2.7 kg; with all other Flow Finder ranges: 3 lbs/1.4 kg.

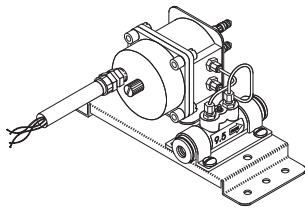
MODEL DESCRIPTIONS

There are numerous ordering options for the Flow Measurement Assemblies. Most of the variations pertain to Flow Finder ranges, the type of fittings supplied for the Flow Finder, and the type of transducer offered. These variables are defined by the last four characters of the model number (W-BS-1 or Y-PP-A, for example).

There is another distinction that needs to be made when ordering Flow Measurement Assemblies. The middle group of numbers in the model designation (3063 and 3066 denotes the type of conductor tube fitting supplied on the assembly's transducer. All model 3063 assemblies use a 1/8" NPT to 3/8" plastic tube fitting; 3066 models use a 37° flared, stainless steel fitting. These designations are **not** referenced in the model description.

Please refer to the ordering chart at the end of this catalog section for a quick reference of assembly ordering possibilities.

- 9800-3063-W-NN-1** Flow Finder, Assembly, 0-9.5 SCFH, No Fittings, Flow Transducer
- 9800-3063-W-NN-2** Flow Finder, Assembly, 0-9.5 SCFH, No Fittings, Dual Transducer



These assemblies are equipped with either a High Resolution Flow or Dual Transducer and 0-9.5 SCFH Flow Finder. The assembly's Flow Finder is supplied without air pipe or tubing connectors.

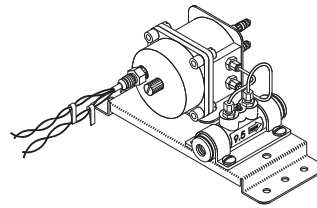
The next six models described below have the same components as described above, but different range Flow Finders are supplied.

- 9800-3063-X-NN-1** Flow Finder, Assembly, 0-19 SCFH, No Fittings, Flow Transducer
- 9800-3063-X-NN-2** Flow Finder, Assembly, 0-19 SCFH, No Fittings, Dual Transducer
- 9800-3063-Y-NN-1** Flow Finder, Assembly, 0-47.5 SCFH, No Fittings, Flow Transducer
- 9800-3063-Y-NN-2** Flow Finder, Assembly, 0-47.5 SCFH, No Fittings, Dual Transducer
- 9800-3063-Z-NN-1** Flow Finder, Assembly, 0-95 SCFH, No Fittings, Flow Transducer
- 9800-3063-Z-NN-2** Flow Finder, Assembly, 0-95 SCFH, No Fittings, Dual Transducer
- 9800-3063-XBS-1** Flow Finder, Assembly, 0-19 SCFH, 3/8" Brass Fittings, Flow Transducer
- 9800-3063-XBS-2** Flow Finder, Assembly, 0-19 SCFH, 3/8" Brass Fittings, Dual Transducer
- 9800-3063-YBS-1** Flow Finder, Assembly, 0-47.5 SCFH, 3/8" Brass Fittings, Flow Transducer
- 9800-3063-YBS-2** Flow Finder, Assembly, 0-47.5 SCFH, 3/8" Brass Fittings, Dual Transducer

Please note that the "BS" designations in these part numbers indicates that the Flow Measurement Assemblies are supplied with two nickel-plated brass 3/8" plastic tubing connectors.

What distinguishes the 3066 designation from the 3063 described above is the type of conductor tube fitting supplied on transducer's wire cover assembly. The 3063 models (described above) have a 1/8" NPT to 3/8" plastic tube fitting; the 3066 models below use a 37° flared, stainless steel fitting (for braided tubing). These designations are not referenced in the model descriptions.

- 9800-3066-W-NN-1** Flow Finder, Assembly, 0-9.5 SCFH, No Fittings, Flow Transducer
- 9800-3066-W-NN-2** Flow Finder, Assembly, 0-9.5 SCFH, No Fittings, Dual Transducer



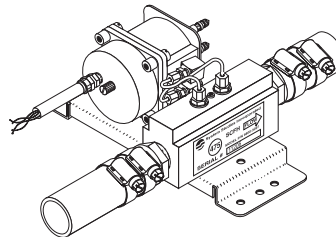
These assemblies are equipped with either a High Resolution Flow ("1" designation) or Dual ("2" designation) Transducer and 0-9.5 SCFH Flow Finder. The assembly's Flow Finder is supplied without air pipe or tubing connectors.

The next six models described on the following page have the same components as described above, but with different range Flow Finders.

- 9800-3066-X-NN-1** Flow Finder, Assembly, 0-19 SCFH, No Fittings, Flow Transducer
- 9800-3066-X-NN-2** Flow Finder, Assembly, 0-19 SCFH, No Fittings, Dual Transducer
- 9800-3066-Y-NN-1** Flow Finder, Assembly, 0-47.5 SCFH, No Fittings, Flow Transducer
- 9800-3066-Y-NN-2** Flow Finder, Assembly, 0-47.5 SCFH, No Fittings, Dual Transducer
- 9800-3066-Z-NN-1** Flow Finder, Assembly, 0-95 SCFH, No Fittings, Flow Transducer
- 9800-3066-Z-NN-2** Flow Finder, Assembly, 0-95 SCFH, No Fittings, Dual Transducers

HIGH RANGE FLOW MEASUREMENT ASSEMBLIES

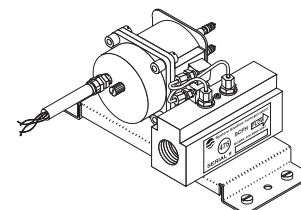
- 9800-3063-XX-PP-1** Flow Finder, Assembly, 0-190 SCFH, 1" Pipe Fittings, Flow Transducer
- 9800-3063-XX-PP-2** Flow Finder, Assembly, 0-190 SCFH, 1" Pipe Fittings, Dual Transducer



These assemblies include a High Resolution Flow ("1" designation) or Dual ("2" designation) Transducer, which is pneumatically connected to a 0-190 SCFH Flow Finder using two 1/8" preformed stainless steel tubes. To

provide the coupling to the 1" air pipe, two 3/4" NPT male to 1" pipe connectors are provided.

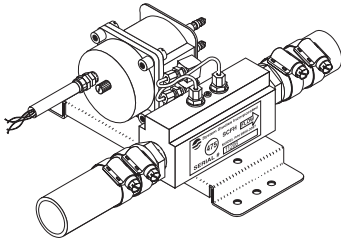
- 9800-3063-XX-NN-1** Flow Finder, Assembly, 0-190 SCFH, No Pipe Fittings, Flow Transducer
- 9800-3063-XX-NN-2** Flow Finder, Assembly, 0-190 SCFH, No Pipe Fittings, Dual Transducer



The Flow Finder on the "NN" high range Flow Measurement Assemblies are not supplied with air pipe connectors. They consist of a stainless steel mounting bracket with either a High Resolution Flow or Dual Trans-

ducer pneumatically connected to a 0-190 SCFH Flow Finder.

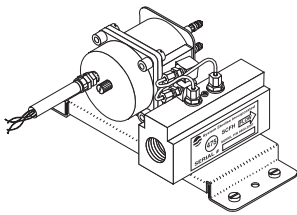
- 9800-3063-YY-PP-1** Flow Finder, Assembly, 0-475 SCFH, 1" Pipe Fittings, Flow Transducer
- 9800-3063-YY-PP-2** Flow Finder, Assembly, 0-475 SCFH, 1" Pipe Fittings, Dual Transducer



These assemblies include a High Resolution Flow ("1" designation) or Dual ("2" designation) Transducer, which is pneumatically connected to a 0-475 SCFH Flow Finder using two 1/8" preformed stainless steel tubes. To provide the coupling to

the 1" air pipe, two 3/4" NPT male to 1" pipe connectors are provided.

- 9800-3063-YY-NN-1** Flow Finder, Assembly, 0-475 SCFH, No Pipe Fittings, Flow Transducer
- 9800-3063-YY-NN-2** Flow Finder, Assembly, 0-475 SCFH, No Pipe Fittings, Dual Transducer



The Flow Finder on the "NN" high range Flow Measurement Assemblies are not supplied with air pipe connectors. They consist of a stainless steel mounting bracket with either a High Resolution Flow or Dual Transducer pneumatically connected to a 0-475 SCFH Flow

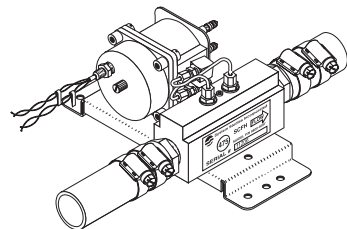
Finder.

- 9800-3063-YY-PP-3** Flow Finder, Assembly, 0-475 SCFH, 1" Pipe Fittings, Dual Bi-Directional Transducer

This unique Flow Measurement Assembly is used in the Recovery Air Protection System (RAPS). It consists of a 0-475 SCFH Flow Finder with 1" pipe fittings and a bi-directional High Resolution Dual Transducer on a stainless steel mounting bracket. The "3" designation identifies the bi-direction dual transducer, which measures both flow consumption and direction.

The High Range Flow Measurement Assemblies described below are only slightly different from the ones listed above. Like the model 3066 assemblies previously described, the transducers on these assemblies are supplied with 37° flared stainless steel conductor tube fittings. The transducers on the 3063 models are supplied with a nickel-plated brass fitting for standard 3/8" plastic tubing.

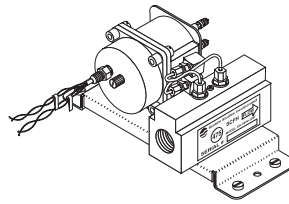
- 9800-3066-XX-PP-1** Flow Finder, Assembly, 0-190 SCFH, 1" Pipe Fittings, Flow Transducer
- 9800-3066-XX-PP-2** Flow Finder, Assembly, 0-190 SCFH, 1" Pipe Fittings, Dual Transducer



These assemblies include a High Resolution Flow ("1" designation) or Dual ("2" designation) Transducer, which is pneumatically connected to a 0-190 SCFH Flow Finder using two 1/8" preformed stainless steel tubes. To

provide the coupling to the 1" air pipe, two 3/4" NPT male to 1" pipe connectors are provided.

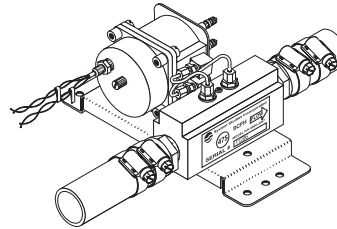
- 9800-3066-XX-NN-1** Flow Finder, Assembly, 0-190 SCFH, No Pipe Fittings, Flow Transducer
- 9800-3066-XX-NN-2** Flow Finder, Assembly, 0-190 SCFH, No Pipe Fittings, Dual Transducer



The Flow Finder on the "NN" high range Flow Finder Monitoring Assemblies are not equipped with air pipe connectors. They consist of a stainless steel mounting bracket with either a High Resolution Flow ("1"

designation) or Dual ("2" designation) Transducer pneumatically connected to a 0-190 SCFH Flow Finder.

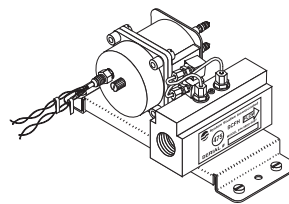
- 9800-3066-YY-PP-1** Flow Finder, Assembly, 0-475 SCFH, 1" Pipe Fittings, Flow Transducer
- 9800-3066-YY-PP-2** Flow Finder, Assembly, 0-475 SCFH, 1" Pipe Fittings, Dual Transducer



Like the 0-190 SCFH versions above, these assemblies includes a High Resolution Flow ("1" designation) or Dual ("2" designation) Transducer, which is pneumatically connected to a 0-475 SCFH Flow Finder using

two 1/8" preformed stainless steel tubes. To provide the coupling to the 1" air pipe, two 3/4" NPT male to 1" pipe connectors are provided.

- 9800-3066-YY-NN-1** Flow Finder, Assembly, 0-475 SCFH, No Pipe Fittings, Flow Transducer
- 9800-3066-YY-NN-2** Flow Finder, Assembly, 0-475 SCFH, No Pipe Fittings, Dual Transducer



This version of the high range Flow Finder Monitoring Assembly is not equipped with air pipe connectors. The assemblies consist of a stainless steel mounting bracket with either a High Resolution Flow ("1"

designation) or Dual ("2" designation) Transducer pneumatically connected to a 0-475 SCFH Flow Finder.

The words Flow Measurement Assembly™, Flow Finder™, Flow Gauge Sampler™, PressureMAP™, PressureWEB™, 289H LSS™, 289H-M LSS™, uM260 Micro Monitor™, High Resolution Flow Transducer™, and High Resolution Dual Transducer™ are trademarks of System Studies Incorporated.

FLOW MEASUREMENT ASSEMBLY

PART NUMBER	RANGE*	FITTING**	TD TYPE***
3063 (transducer supplied with brass,nickel-plated conductor tubing connector)	W, X, Y, Z, XX, YY	BS, SS, NN, PP, PB	1, 2, 3, U
3066 (transducer supplied with 37° stainless steel conductor tubing connector)	W, X, Y, Z, XX, YY	BS, SS, NN, PP, PB	1, 2, 3, U

Please note that a part number, range, fitting and TD type must be specified for each Flow Measurement Assembly when ordering.

***Flow Finder Ranges**

- W** 0-9.5 SCFH
- X** 0-19 SCFH
- Y** 0-47.5 SCFH
- Z** 0-95 SCFH
- XX** 0-190 SCFH
- YY** 0-475 SCFH (for Power Pipe System™)

****Fitting**

These fittings pertain to the pneumatic connections on the incoming and outgoing ports of the Flow Finder.

- BS** Nickel-plated brass tubing connectors (not available for XX, YY)
- SS** Stainless steel, 37° flared tubing connectors (not available for XX, YY)
- NN** No pipe or tubing connectors
- PP** Pipe fittings on both ends
- PB** Pipe fitting on one end, tubing connector on other end (not available for XX, YY)

*****TD Type**

- 1** High Resolution Flow Transducer
- 2** High Resolution Dual Transducer
- 3** Bi-Directional High Resolution Dual Transducer
- U** Resistive Flow Transducer (United Electric)

Ordering Examples:

If you ordered a 3063-X-NN-2 Flow Measurement Assembly, you would receive a bracket with a 0-19 SCFH Flow Finder and a High Resolution Dual Transducer with a nickel-plated brass conductor tube fitting. The Flow Finders would not be supplied with pneumatic connectors.

