

# Dual Port High/Low Flow Manifold

**Enabling Simultaneous High and Low Flow Personal Sampling Methods**

**Dual air sampling using the GilAir Plus  
Reduces air sampling time and costs  
Increases worker comfort**

Monitoring worker exposures to airborne particulates, gases, and vapors often requires Industrial Hygiene and Occupational Health & Safety professionals to take multiple air samples from the environment of one worker. Such sampling may require a worker wearing multiple air sampling pumps or returning to sample on a different day. Setting up and deploying multiple air sampling pumps or returning to sample on a different day can be expensive, inconvenient, and uncomfortable.

The Gilian Dual Port High/Low Flow Manifold enables connection of two different sampling media thus eliminating the need for multiple sampling pumps. Two manifold adjustments enable the setting of separate flow rates for each media connection. A single tube connects the Gilian Dual Port High/Low Flow Manifold to the GilAir Plus providing an efficient method for obtaining two samples from a worker during a single shift.

The Dual Port High/Low Flow Manifold capitalizes on the unique high-flow constant pressure capabilities of GilAir Plus. High-flow constant pressure, one of four sampling modes available on GilAir Plus, maintains a constant negative pressure in the sampling train between the pump and manifold. In constant pressure sampling, adjusting the flow rate of either media connection will not affect the other. Similarly, sample media loading on one side does not affect the second side.

The Dual Port High/Low Flow Manifold is designed for use in applications for sampling of heavy metals or asbestos fibers using two filter cassettes at the same flow rate or simultaneous sampling using a filter cassette and sorbent tube. In addition, sampling methods that do not create significant backpressure changes from start to finish may be accomplished using this manifold accessory.

*Refer to the Dual Port High/Low Flow Manifold and GilAir Plus user manuals and the technical paper, GilAir Plus QuadMode<sup>SM</sup> – Split Sampling in the High-Flow Mode for additional information.*

*See reverse for setup instruction and technical specifications.*

# Gilian<sup>®</sup>



Top Access Model Shown with  
Two Filter Cassettes



Bottom Access Model Shown with  
Sorbent Tube Holder and Filter Cassette

## Dual Port High/Low Flow Manifold

### Setting up the Dual Port High/Low Flow Manifold with GilAir Plus:

1. Connect sampling media to each port of the manifold and connect the manifold to the inlet of the GilAir Plus pump using 1/4 ID inch tubing.
2. Set the GilAir Plus to operate in the constant pressure high-flow mode (CPH).
3. Using a Gilibrator-2 (or equivalent air flow calibrator with low pressure drop), measure the flow rate at each port through the sampling media.
4. Adjust the flow rate to the required flow for each port through the needle valve.
5. Connect the Dual Port High/Low Flow Manifold to the worker's lapel in the breathing zone and start the sample.

### Ordering Information:

#### Kits

Dual Port High/Low Flow Manifold Kit, Top Access*	911-0902-01-R
Dual Port High/Low Flow Manifold Kit, Bottom Access*	911-0901-01-R

#### Spares for Dual Port High/Low Flow Manifold

Dual Port High/Low Flow Manifold Assembly only, Top Access	811-0919-01-R
Dual Port High/Low Flow Manifold Assembly only, Bottom Access	811-0918-01-R
Sorbent tube adapter nipple	800165
Sorbent tube adapter nipple, Pack of 10	800165-10
Charcoal Tube Sorbent Tube Holder, 6 x 70 mm	800149
1/4 inch ID Flexible Vinyl Tubing, 3 feet	200484
1/4 inch ID Flexible Vinyl Tubing, 1.5 inch	6667-6206
Replacement Valve Caps, Pack of 2	811-0920-01
Luer Fittings, Pack of 6	200156-6

\*Dual Port High/Low Flow Manifold kits include: One Dual Port High/Low Flow Manifold, two Sorbent tube adapter nipples for Dual Port High/Low Flow Manifold, one Sorbent Tube Holder (6 x 70 mm) for Standard Charcoal Tubes, six Luer Fittings, two pieces of 1/4 inch ID Flexible Tubing 1.5 inch length, and one piece of 3 feet 1/4 inch Tubing.

The Dual Port High/Low Flow Manifold is available in two orientations; Top Access or Bottom Access. Top Access orientation allows tubing connected to the sampling pump to be positioned over the worker's shoulder while Bottom Access orientation allows tubing to be under the shoulder.

*Note: Due to backpressure characteristics and possible changes in resistance, sampling for dust using the Dual Port High/Low Flow Manifold is generally not recommended. For further information refer to the Dual Port High/Low Flow Manifold and GilAir Plus user manuals and the technical paper, GilAir Plus QuadMode<sup>SM</sup> – Split Sampling in the High-flow Mode.*

### Specifications

#### Size (mm)

Top Access Model..... 58 x 42 x 23

Bottom Access Model..... 58 x 63 x 16

**Weight (grams)** ..... 53

**Flow range** ..... 1 to 4000 cc/min  
each port

#### Example Applications

Two Filter Cassettes.....

NIOSH 7400 for Asbestos and

NIOSH 7300 for Heavy Metals

Filter Cassette and Sorbent Tube.....

NIOSH 7082 for Lead

NIOSH 1501 for Benzene



Bottom Access Model Shown with GilAir Plus and Two Filter Cassettes

