

# 9964-053 Sample Cell Outlet Manifold Kit

## Installation Instructions for the LI-6400 Portable Photosynthesis System

The optional 9964-053 Sample Cell Outlet Manifold replaces the standard LI-6400 bottom chamber. The sample cell outlet manifold allows you to isolate the gas analyzer sample cell from the leaf chamber so that the LI-6400 can be used as a stand-alone gas analyzer. This can be useful if you are using the LI-6400 to measure canopy photosynthesis with a custom built chamber, for example. The reference cell of the LI-6400 analyzer measures a portion of the airstream entering the canopy chamber, and the sample cell measures a portion of the airstream leaving the canopy chamber; the leaf chamber is unnecessary in this case, and can be replaced by the Sample Cell Outlet Manifold. This will reduce the gas analyzer sample cell volume, allowing faster measurements, and will also reduce the number of air channels and gaskets where leaks can occur, while still retaining normal match valve functionality.

Follow the steps below to install the Sample Cell Outlet Manifold.

1. Remove the air hose from the underside of the leaf chamber, and remove the male end of the leaf temperature thermocouple connector by pulling straight out.
2. Remove the 2 long screws from the lower half of the leaf chamber using the 3/32" hex key in the spares kit.
3. Install the manifold with the 2 screws provided. Make sure that the large air passage O-ring is in place.
4. To retain the ability to match sample and reference IRGAs, reattach the air hose to the underside of the manifold. Otherwise, you can use this exhaust air for your own purposes.
5. Cover the 3 holes on the top side of the bottom leaf chamber manifold (under the gasket) with adhesive tape (Figure 1), to prevent air from circulating to the top leaf chamber. The finished assembly should look like Figure 2 below.

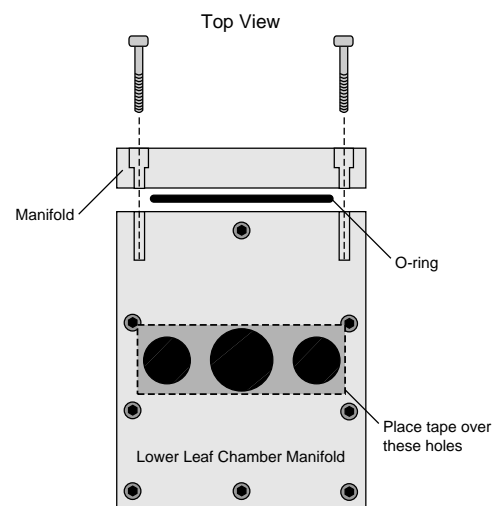


Figure 1. Make sure that the O-ring is in place, and attach with the 2 screws provided. Place tape over the 3 holes shown.

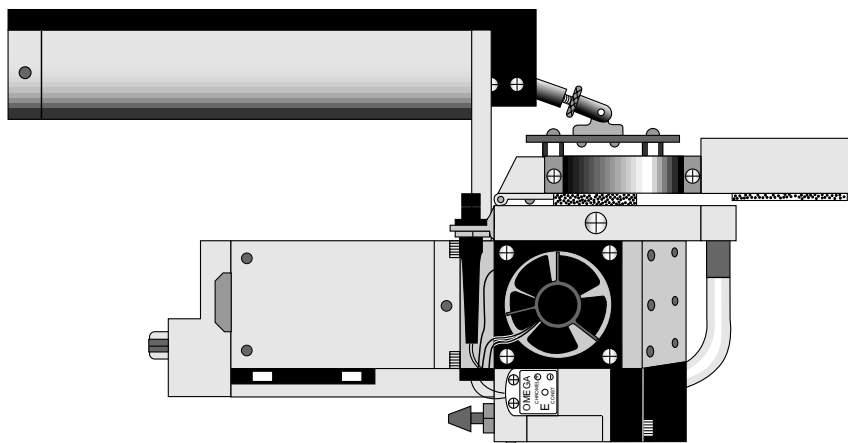


Figure 2. Sample Cell Outlet Manifold attached to LI-6400 sensor head.

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