



OPERATOR'S MANUAL

for the

TDA-D10, D100 Aerosol Diluter

PN: TDL0-1211, TDL0-1212



Air Techniques International
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OPERATING INSTRUCTIONS

TDA-D10/D100 Aerosol Diluter

The ATI D10 & D100 diluters utilize an annular type dilution system. The principle of operation for this unit is that the incoming aerosol is divided into two streams. One stream passes unfiltered through a critical orifice, the other stream bypasses the orifice and goes through a HEPA filter which removes all the remaining particles. Controlling the ratio of the bypass stream to the orifice stream determines the dilution ratio. On exiting the diluter, both streams recombine so that no volume is lost. This design is intended to minimize discrimination as a function of particle size and minimize the pressure drop across the unit.

The TDA-D100 is set at the factory to work at a specific flow rate and dilution ratio. It cannot be adjusted in the field. Typically the unit is intended for operation with a 1 SCFM particle counter

1. To operate, connect the input line from the sampling device to the hose barb fitting on the side of the unit without the handle. Connect the sample line to the manifold assembly hose barb fitting on the other side.
2. The unit is now ready to operate. No other adjustments are necessary.
3. We recommend the unit be operated in the vertical position by hanging it from the handle

MAINTENANCE

No routine maintenance should be required. If necessary the orifice may be inspected and cleaned by removing the two screws holding the manifold assembly in the front of the unit. Slide the assembly out. The orifice is located at the rear of the assembly. To clean it, remove the two flat head screws and take out the orifice. Place the orifice in ultrasonic cleaner or, clean by passing a wire through it.

RECALIBRATION

We recommend the unit be returned to ATI after 300 hours of use for recalibration. The hour-meter is located on the side of the unit.



AIR TECHNIQUES

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*Design and Manufacture of
Custom and Standard Test
Equipment for HEPA Filters,
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Phone 410 . 363 . 9696
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CALIBRATION REPORT

CUSTOMER: _____

P.O. # _____

SERIAL # _____

TYPE

Annular

FLOW RATE (CFM)

1.0

DILUTION RATIO _____

PRESSURE DROP

_____ **“H₂O**

EQUIPMENT

SERIAL #

CAL DUE DATE

FLOWMETER

PHOTOMETER

PRESSURE CALIBRATOR

CALIBRATED BY: _____ **DATE** _____

** NOTE: Standard diluter calibration is for Poly-dispersed oil aerosol*