

Operating Instructions

ZEFON 10MM CONDUCTIVE NYLON CYCLONE CATALOG NO. ZA0080

The Zefon Conductive Nylon Cyclone is to be used for collecting air samples in environments where large particulates might otherwise clog a cassette filter. The cyclone is designed to separate respirable dust particles so they can be collected onto a filter and analyzed. Larger particles fall into a grit pot and are discarded.

The Zefon Conductive Nylon Cyclone, when properly calibrated, will achieve a cut-point of $4.0\mu\text{m}$ or $3.5\mu\text{m}$ depending on the flow rate selected for the specific application.

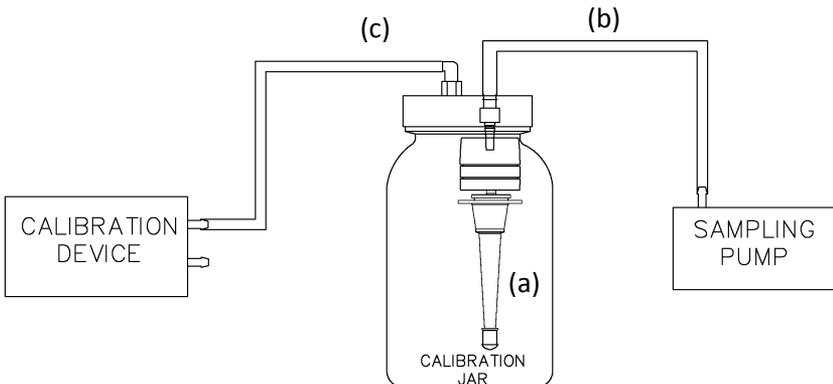
Flow Rate (L/min.)	Application	Nominal Particle Dia. (μm)
1.7	ISO/ACGIH/CEN Convention	4.0
2.0	Other applications	3.5

Note: Make sure the grit pot is in place during calibration and sampling.

Calibration - with calibration jar

1. Install the filter cassette/cyclone assembly (a) onto the luer fitting on the inside of the calibration jar lid (see **Sampling** section for cassette/cyclone assembly procedure).
2. Screw the lid onto the jar.
3. Attach tubing (b) from the same fitting to the sampling pump.
4. Attach tubing (c) from the other fitting on the jar lid to a calibration device
5. Follow the instructions for the calibration device and adjust airflow on the sampling pump to achieve flow rate for the desired application.
6. After completing the calibration procedure, discard the filter cassette. Use a new cassette for sampling.

Note: Alternate calibration methods are available. Follow the instructions with the calibration device.



Sampling

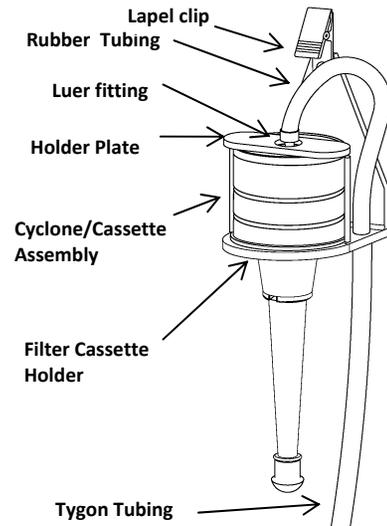
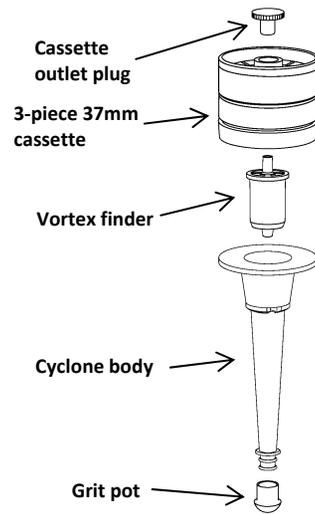
1. Install the vortex finder into the cyclone body until it is fully seated.
2. Install the cyclone assembly into the filter cassette holder. Orient the cyclone so the integrated lobe fits into the notch in the holder.
3. Remove the inlet and outlet plugs from a 3-piece 37mm cassette and install it onto the luer of the vortex finder (inlet side down).
4. Pull the holder plate up and over the cassette to secure the assembly into the holder.

Flow rate must be calibrated prior to sampling. Complete calibration steps on front page now, and then return to this section.

5. Insert the luer fitting on the rubber tubing into the cassette outlet port.
6. Connect the clear Tygon tubing to the inlet of the sampling pump.
7. The cyclone/cassette holder assembly is then clipped to the collar, lapel, or a shirt pocket near the breathing zone.
8. Start the sampling pump and commence normal activity for the required sampling period.

Important: Do not invert the cyclone/cassette holder assembly at any time during the sampling procedure.

- When sampling is finished, stop the pump and record the finish time.
- **Without inverting the cyclone/cassette holder assembly,** remove the cyclone/cassette assembly from the cassette holder. Separate the cassette from the cyclone, then reinstall the inlet and outlet plugs. The cassette can now be sent to a lab for analysis.
- Between sampling procedures, clean the cyclone and grit pot with mild soap and water and rinse thoroughly. The cyclone can be left to air dry, blow dried with compressed air, or rinsed with isopropyl alcohol to displace the water. Store in a sealed, dust-free bag.



Sampling

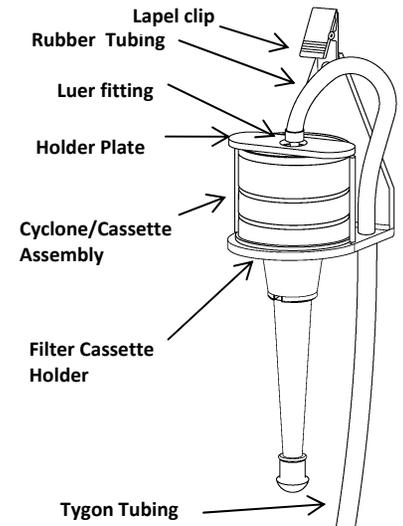
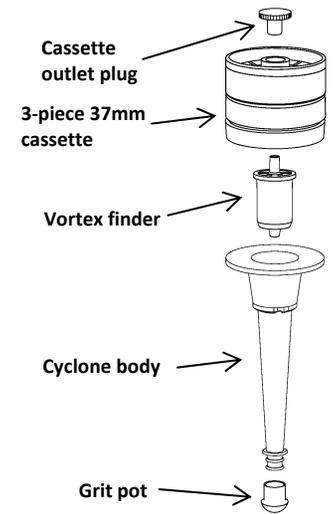
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