

Size-selective inlets, filter cartridges, & accessories

For Access Sensor Technologies filter samplers

Four interchangeable size-selective particulate matter sampling inlets are available for use with Ultrasonic Personal Air Samplers (UPAS v2, UPAS v2.1, and UPAS v2.1 PLUS) and Home Health Boxes: PM_{2.5} @ 1 LPM, PM_{2.5} @ 2 LPM, respirable @ 2 LPM, and PM₁₀/Thoracic @ 2 LPM. Each inlet can be used with either our 37-mm or 25-mm filter cartridges.

Filter cartridges

37-mm filter



or



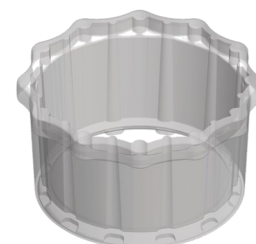
25-mm filter

Size-selective inlets

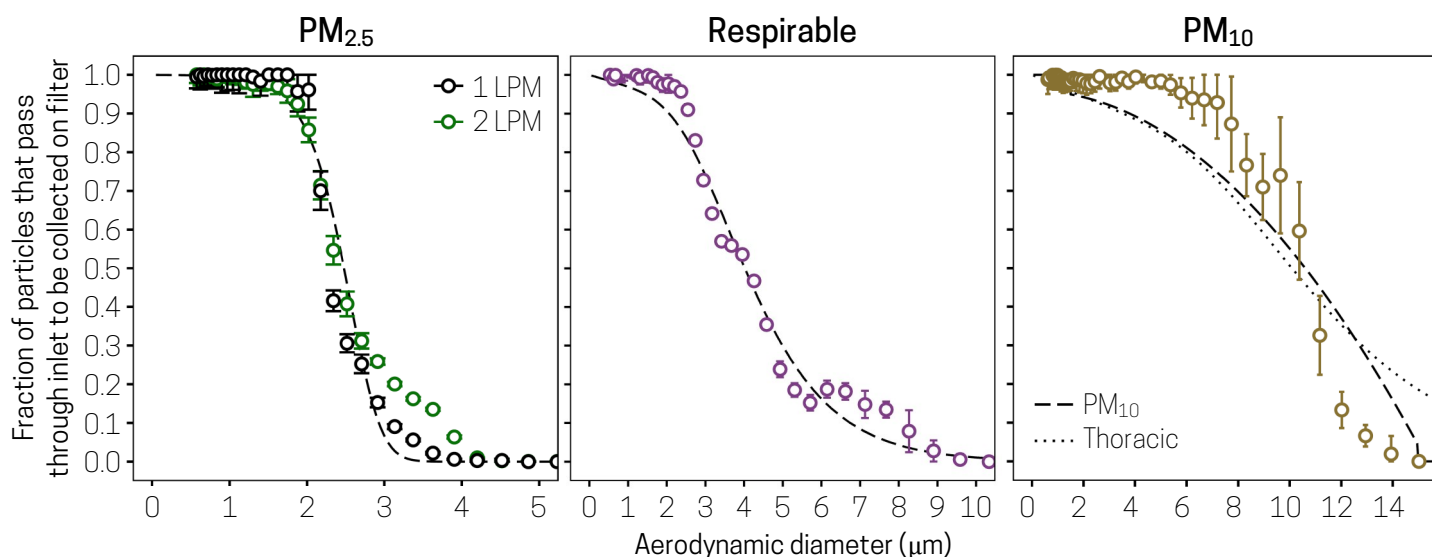


Accessories

Flow check adapter



Inlet tool



Above: Size-specific penetration efficiency of each inlet (points) compared to the US EPA definition of PM_{2.5}, the ACGIH definition of respirable dust, and the US EPA definition of PM₁₀ (dashed lines) as well as the ACGIH definition of the thoracic fraction (dotted line).



Further reading on the development of these inlets

Volckens, J., Quinn, C., Leith, D., Mehaffy, J., Henry C.S., Miller-Lionberg, D. Development and evaluation of an ultrasonic personal aerosol sampler, *Indoor Air*, 2017, 27(2), 409-416, <https://doi.org/10.1111/ina.12318>

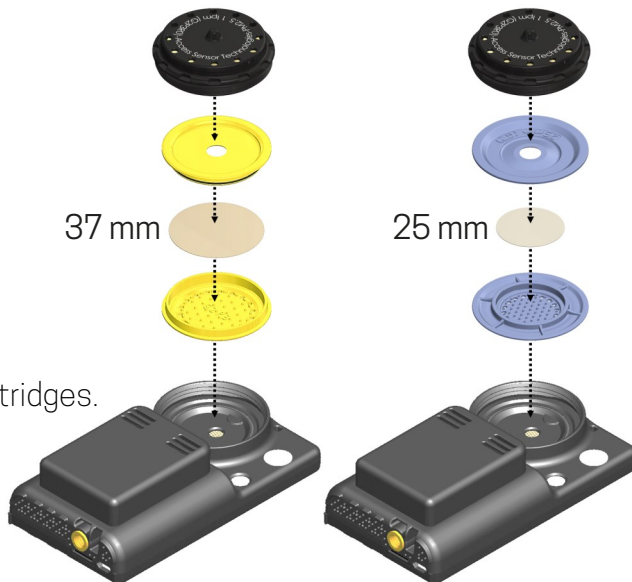
Leith, D., L'Orange, C., Mehaffy, J., Volckens, J. Design and performance of UPAS inlets for respirable and thoracic mass sampling, *Journal of Occupational and Environmental Hygiene*, 2020, 17(6), 274-282, <https://doi.org/10.1080/15459624.2020.1741595>

Filter cartridges

AST filter samplers are designed to be used with 37-mm-diameter filters for optimal battery life.

Need to concentrate more mass per unit area for your desired sample analysis technique? We also offer cartridges for 25-mm-diameter filters.

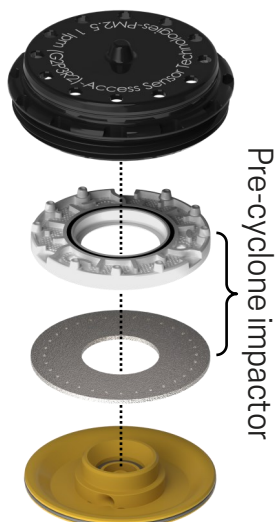
All of our inlets are compatible with both 37- and 25-mm cartridges.



Accessories

Pre-cyclone impactor for PM_{2.5} 1 L min⁻¹ inlet

Install this multi-stage impactor, which has a 5.4- μm cutpoint at the final stage, upstream of the PM_{2.5} cyclone to reduce the likelihood of our 1 L min⁻¹ inlet becoming overloaded, especially in highly-polluted or dusty environments.



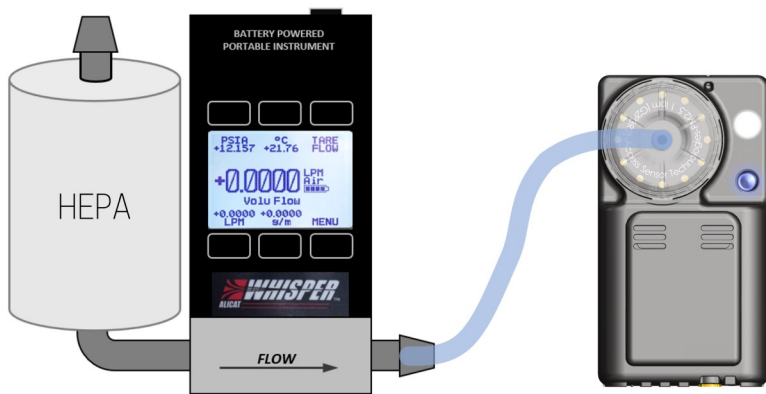
Inlet tool

Use the inlet tool to tighten the inlet during installation and to remove the inlet after sampling.



Flow check adapter

Place this adapter over any of the inlets shown here and connect a flow meter (e.g., Alicat MWB-5SLPM-D) to confirm that the volumetric flow rate through the inlet and filter matches the target value.



Open-faced inlet and filter cartridge

Want to sample onto an open-faced inlet and filter cartridge? The open-faced inlet is also compatible with the flow check adapter.



Access Sensor Technologies

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