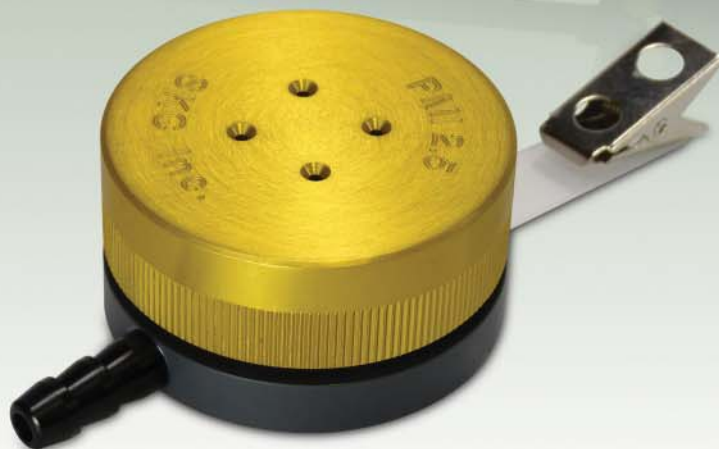


PMI

Personal Modular Impactors

Highly Efficient Personal PM10, PM2.5, or PM Coarse Sampling

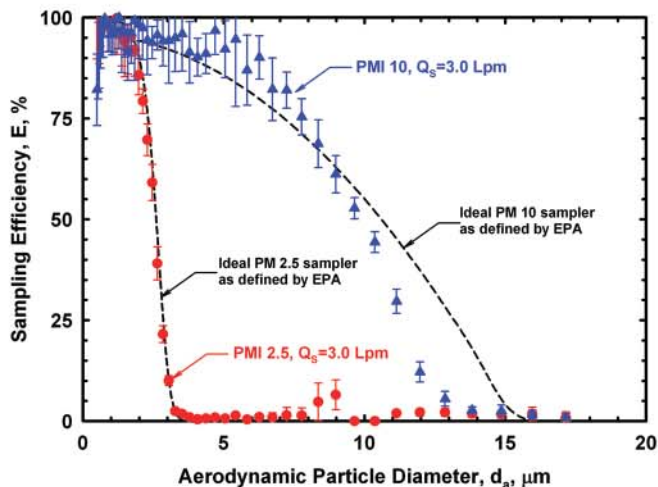
- Available for PM10, PM2.5, or PM Coarse_(PM10-2.5) sampling
- Use with any constant flow pump at 3 L/min
- Closely follows PM2.5 or PM10 as defined by EPA
- Compact and lightweight — only 2.5 ounces!
 - Ideal for personal or micro-environmental sampling
- Convenient modular design for easy operation
 - Removable filter cassette for easy media changes
 - Disposable ready-to-use pre-oiled impaction discs reduce particle bounce for high collection efficiency — no cleaning or greasing
 - Convenient clip for mounting sampler in the breathing zone
- PMI PM10 model is easily converted with accessory ring to measure PM Coarse



Description

The patented* SKC single-stage Personal Modular Impactors (PMIs) are designed for the highly efficient collection of PM10, PM2.5, or PM Coarse_(PM10-2.5). The samplers are easy to use with a removable filter cassette and pre-oiled impaction disc. PMI media changes are as easy as removing the filter cassette and replacing it with one already loaded with a 37-mm final filter. The 25-mm pre-oiled impaction disc mounts directly on top of the filter cassette and reduces particle bounce for high collection efficiency. A 25-mm filter may be used as an alternate impaction substrate for optional gravimetric or chemical analysis of particles. The PMI Coarse model and the Coarse Ring accessory include a second filter cassette to allow collection of particles sized between 2.5 μm and 10 μm .

* U.S. Patent No. 7,334,453



Collection Efficiency of PMI 2.5 and PMI 10 Samplers



Personal Modular Impactors (PMIs)

Highly Efficient Personal PM10, PM2.5, or PM Coarse Sampling

About PMI Coarse_(PM10-2.5)

When using the PMI Coarse (see Figure 2), air is drawn through a PM10 inlet. Particles > 10 µm collect on an oiled impaction disc mounted in the top of the first filter cassette. No filter is loaded inside this cassette. The air proceeds through a PM2.5 impactor (coarse ring). Particles sized between 10 µm and 2.5 µm (10-2.5 µm) collect on a 25-mm filter placed in the impaction substrate position in the top of the second filter cassette. Particles < 2.5 µm collect on the 37-mm final filter inside the second filter cassette. Filters are sent to a laboratory for gravimetric and chemical analyses.

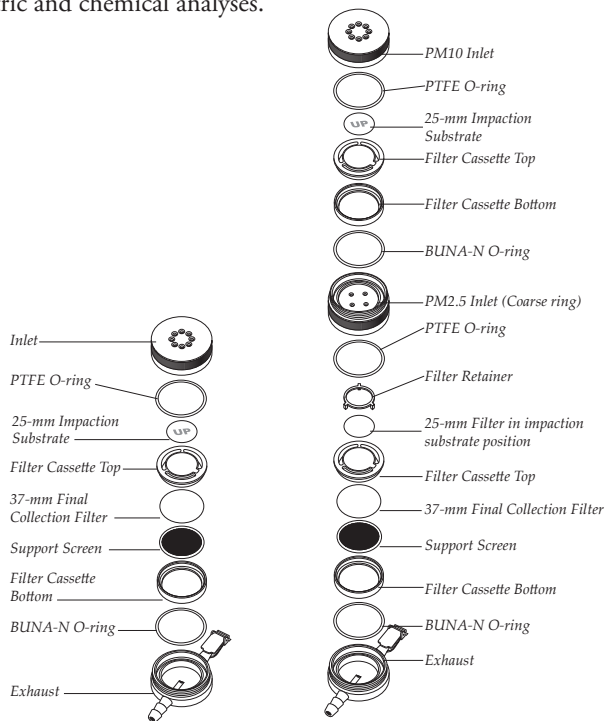


Figure 1. PMI 2.5 exploded

Figure 2. PMI Coarse exploded

Partner AirChek® XR5000 Pump with PMI

The PMI Samplers may be used with any constant flow sample pump capable of maintaining a constant 3 L/min flow rate. However, partnering a PMI Sampler with an AirChek XR5000 Sample Pump creates a highly efficient sampling system. The compact, lightweight XR5000 pump is ideal for personal sampling.



References:

Haynes, E.N., et al., "Assessment of personal exposure to manganese in children living near a ferromanganese refinery," *Science of the Total Environment*, Vol. 427-428, 2012, pp. 19-25

Wang, Z., et al., "Evaluation of Real-time Instruments Used to Monitor PM in a Green Building," *American Association for Aerosol Research (AAAR) Annual Conference Abstracts, Session 3AE.3, 2012*

Performance Profile

Flow Rate:	3 L/min for all models
50% Cut-point:	10 µm or 2.5 µm (model dependent)
Material:	Inlet: Precision-tooled aluminum Exhaust: PVC Filter Cassette: Delrin® with stainless steel support screen O-rings: Inlet - PTFE Exhaust - BUNA-N
Final Collection Filter:	37-mm filter, select based on application
Impaction Substrate:	25-mm pre-oiled, disposable porous plastic disc to reduce particle bounce or 25-mm filter for optional chemical analysis
Analyses:	Gravimetric and chemical
Dimensions (without clip):	Diameter: 2 in (5.1 cm) Height: 1 in (2.6 cm) Weight: 2.5 oz (70.9 gm)
Tubing:	1/4-inch ID

Ordering Information

Description	Cat. No.
Personal Modular Impactor (PMI) includes impactor and filter cassette with support screen, <i>requires impaction substrate and collection media sold separately; see below</i>	
PM2.5 (gold)	225-352
PM10 (silver)	225-350
PM Coarse includes 2 filter cassettes and filter retainer	225-351
Recommended Collection Filters	
Quartz Filters , 37 mm, Tissuquartz™, 432 µm thick, pk/25	225-1822
PTFE Filters ,† 37 mm, 2.0-µm pore size, PTFE with PMP support ring, pk/50	225-1709
PTFE Filters ,† 37 mm, 1.0-µm pore size, PTFE with laminated PTFE support, pk/50	225-2705
Recommended Impaction Substrate, required for sampling. Limited shelf-life.	
Pre-oiled Porous Plastic Discs ,‡ 25-mm, ready to use, disposable	pk/25 225-355 pk/50 225-355A
Accessories	
PM Coarse Ring includes filter cassette, adapts a PMI 10 to a PMI Coarse	225-3512
Replacement Filter Cassette	225-356
PMI Cassette Opener	225-357
Forceps , stainless steel, non-serrated flat tips	225-8371
Filter-Keepers , 37 mm, for filter transport	pk/100 225-8303 pk/10 225-8303A
PMI Calibration Adapter	225-358
Filter Retainer , secures filter in impaction substrate position on top of cassette	225-354

† Back pressure on PTFE filters can vary within the same lot.

‡ A 25-mm filter may be used as an alternative impaction substrate for optional chemical analysis.

SKC Limited Warranty and Return Policy

SKC products are subject to the SKC Limited Warranty and Return Policy, which provides SKC's sole liability and the buyer's exclusive remedy. To view the complete SKC Limited Warranty and Return Policy, go to <http://www.skcinc.com/warranty.asp>.

