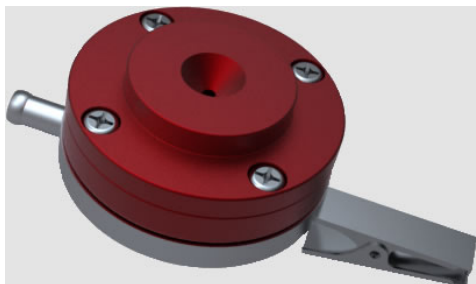
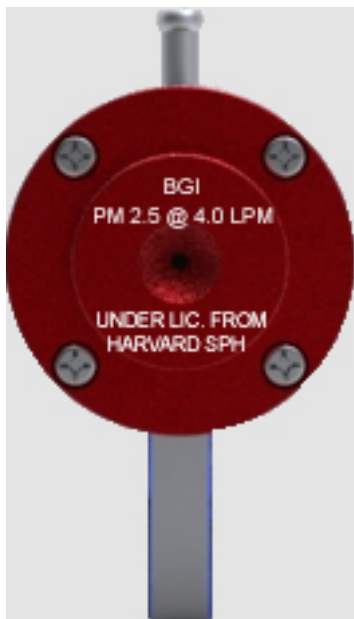


H-PEM PM₁₀ and PM_{2.5} Personal Impactor

Based upon the Harvard University School of Public Health Published Design of P. Demokritou et. al.



Side View of H-PEM



Top View of H-PEM

The BGI H-PEM is a development of the Environmental Science and Engineering Group at the Harvard School of Public Health. It is a group of four impactors designed to be worn on the person in order to closely gage their exposure to PM_{2.5} or PM₁₀ concentrations at 2 different flow rates. This results in four models. What makes this set of instruments so unique and superior to similar devices is the bold use of Silicone grease to capture the unwanted particles. The bias caused by particle bounce and the very questionable results obtained when impacting solid particles upon dry surfaces is completely eliminated. The truth of the superiority of these assertions is borne out by the large numbers in use as demonstrated by over 100 web entries.

The ability to evaluate exposures to PM₁₀ and PM_{2.5} is amply borne out by the emphasis placed upon these two measurands, worldwide. PM₁₀ is important in Air Pollution, IAQ and Industrial Hygiene. PM_{2.5} is the premier measurement when considering Air Pollution exposure as well as IAQ. It is not an official Industrial exposure measurement, but it is increasingly being used because it is viewed as more stringent than a respirable measurement.

Name	Diameter	Field of Interest ¹
PM ₁₀	10µm	Environmental
Thoracic	10µm	Occupational Health
PM _{2.5}	2.5µm	Environmental ²
PM ₁	1µm	Environmental ³

1 All of the diameters are applied to the unofficial area of Indoor Air Quality..

2 This diameter has gained widespread acceptance as a 'critical value' in several fields.

3 This diameter has no official status but is considered important with regard to aerosols of Diesel origin.





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Catalog Number	Color	D₅₀Cut(μm)	Flow Rate (lpm)	Pressure Drop^{A,B} Cm of H₂O
HP1040	Blue	10	4	3.32
HP2540	Red	2.5	4	4.89
HP1018	Blue	10	1.8	1.23
HP2518	Red	2.5	1.8	2.39

^APressure drop is measured with Pall Teflo R2PJ 037 filter installed

^BPrecise laboratory measurement of single specimens

Specifications

Dimensions	O/A
Diameter	2.10 in. (5.34 cm.)
Thickness	0.97 in. (2.46 cm.)
Weight	2.72 oz. (77 grams)
Length of Suction Hose	36 in. (.91 m)
Material of Construction	Anodized Aluminum

Ordering Information

Part Number	Description
HP1040	H-PEM 10 μm @ 4 lpm
HP2540	H-PEM 2.5 μm @ 4 lpm
HP1018	H-PEM 10 μm @ 1.8 lpm
HP2518	H-PEM 2.5 μm @ 1.8 lpm
HP3312	Calibration adaptor f/ above units

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