

PRODUCT BULLETIN

VERY SHARP CUT CYCLONE (VSCC) PM-2.5 FRACTIONATOR

The PM-2.5 Very Sharp Cut Cyclone™ is designed to reduce the maintenance requirements involved in operating USEPA-designated PM-2.5 manual samplers. The USEPA has reviewed the performance of the PM-2.5 VSCC™ separator, and has approved its use with R&P's reference designated (FRM) PM-2.5 Partisol Samplers as Federal Equivalent Methods.

For regulatory PM-2.5 sampling, the VSCC device requires cleaning only every 30 days of actual operation (a 90 day interval for one-in-three sampling). It does not require any kind of impactor oil, such as is used with the WINS Impactor. The separator operates at a flow rate of 16.7 l/min (1 m³/h), and is "plug-in compatible" with the PM-2.5 WINS Impactor.

The PM-2.5 Very Sharp Cut Cyclone is being introduced to the market jointly by Rupprecht & Patashnick and the fractionator's manufacturer, BGI, Inc. The two firms collaborated closely in the development of the original PM-2.5 Sharp Cut Cyclone, and BGI continued the fractionator development with the Health & Safety Laboratory (HSL) of Sheffield, UK, that resulted in the new PM-2.5 Very Sharp Cut Cyclone.

To convert an Thermo USEPA reference-designated PM-2.5 Partisol Sampler to a PM-2.5 Federal Equivalent Method (FEM) using the Very Sharp Cut Cyclone, the device must be sourced from Thermo together with its supplementary operating manual and designation label. The VSCC PM-2.5 fractionator for Thermo Systems (part number 57-008740) converts the following R&P PM-2.5 FRM samplers into PM-2.5 FEM samplers:

Partisol-FRM Model 2000 PM-2.5 Air Sampler:

FRM Designation: RFPS-0498-117

FEM Designation: EQPM-0202-143

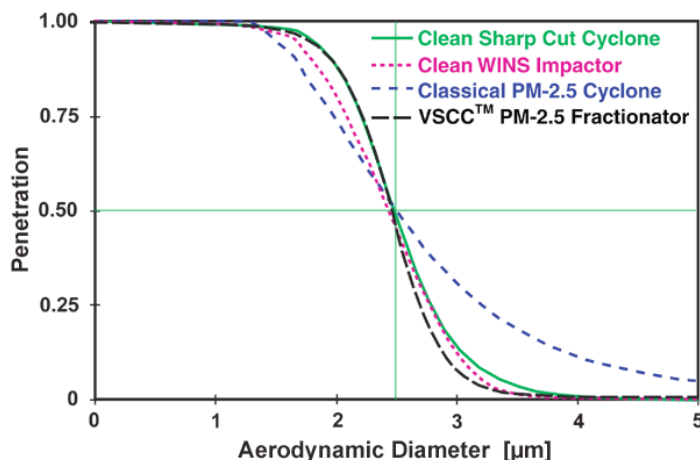
Partisol-Plus Model 2025 PM-2.5 Sequential Air Sampler:

FRM Designation: RFPS-0498-118

FEM Designation: EQPM-0202-145

Thermo is also offering the VSCC PM-2.5 fractionator for RAAS Samplers as part number 57-008739. Please note that in this case paperwork will be required to be submitted to the USEPA to gain approval for the use of the RAAS air sampler with the VSCC device under the "User Modification to Reference and Equivalent Methods" rules. Thermo will provide the documents required for the submission of the user modification request.

The performance of the PM-2.5 VSCC device is shown below, as determined by the HSL, Sheffield, UK:



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