

Thermo Scientific Model 83i Mercury Probe/Converter

Low maintenance, dilution probe converts mercury and scrubs sample gas

The Thermo Scientific™ Model 83i Mercury Probe/Converter is one of the four major components of the Mercury Freedom System.

- Dilution system for wet basis measurement
- High flow inertial filter to reduce particulate matter contamination
- Glass coated components to prevent reactions with mercury
- Conversion at the stack to prevent loss of elemental mercury
- Proprietary dry converter/scrubber requires no wet chemistry or water supply



The Thermo Scientific Model 83i probe/converter consists of a dilution probe, inertial filter, and a proprietary dry converter/scrubber housed in an insulated NEMA 4X stainless steel enclosure. The probe has been specifically designed for monitoring mercury emissions from coal-fired power plants and waste incinerators. Artifacts due to interactions with the fly ash are minimized using a high-flow, sintered-metal inertial filter to provide a particle-free, vapor-phase sample for analysis.

Automated blow-back helps to ensure trouble-free continuous operation, and all components exposed to sample gas are glass-coated to prevent reactions with mercury.

To prevent sample condensation, all key components (inertial filter, eductor, dilution module, and venturi) are further enclosed in a heated aluminum cabinet. The converter/scrubber converts oxidized forms of mercury to elemental mercury while removing

interfering gases from the sample stream. Weighing only 92 pounds, the probe has been designed for easier maintenance and service. Latched panels are easily removed from three sides of the probe allowing quick access to the interior. Inside, the components are so easily accessed that they can be serviced or removed in a matter of minutes.

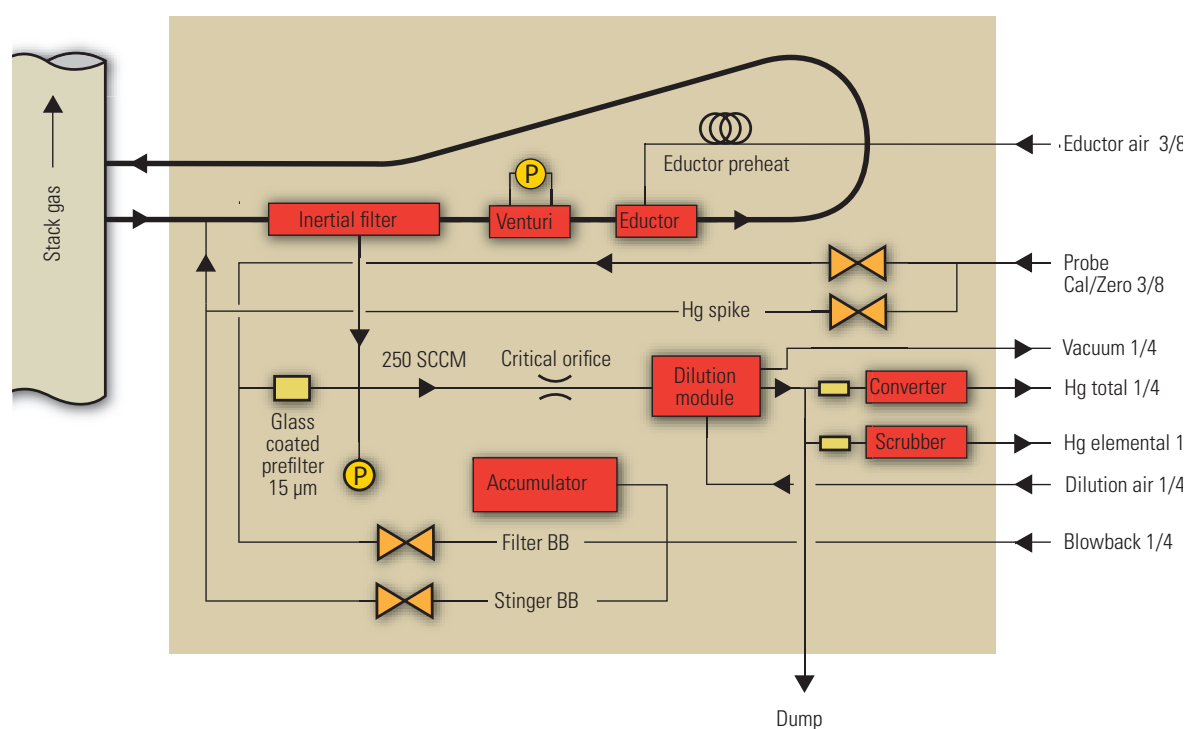
Designed to meet the provisions of 40CFR Parts 60 and 75, the Mercury Freedom System provides a complete mercury monitoring solution that measures elemental, ionic, and total mercury in exhaust stacks from both coal-fired boilers and waste incinerators.



Thermo Scientific Model 83i Mercury Probe/Converter

Operating Temperature	41° to 104°F (5° to 40°C)
Power Requirements	120 VAC, 15 amp circuit 220 VAC, one 15 amp circuit 220 VAC, one 30 amp circuit for <200' line 220 VAC, two 30 amp circuits for >200' line
Size and Weight	16.75" (425 mm) W x 8.62" (H) x 23" (D), 48lbs. 425 mm (W) x 219 mm (H) x 584 mm (D), 21.8 kg
Air Requirements	10 lpm zero air 4 CFM dry air

Flow Diagram: Model 83i Mercury Probe/Converter



To maintain optimal product performance, you need immediate access to experts worldwide, as well as priority status when your air quality equipment needs repair or replacement. We offer comprehensive, flexible support solutions for all phases of the product life cycle. Through predictable, fixed-cost pricing, our services help protect the return on investment and total cost of ownership of your Thermo Scientific products.

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This product is manufactured in a plant whose quality management system is ISO 9001 certified.

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