

Model 80i Mercury Analyzer

A direct measurement cold vapor atomic fluorescence analyzer.



The Model 80i Mercury Analyzer is one of the four major components of the Mercury Freedom System.

The Model 80i utilizes an advanced cold vapor atomic fluorescence technology. This technology enables the Model 80i to provide continuous sample measurement, with no additional gases or pretreatment required - and virtually no interference from SO₂. High sensitivity allows high sample dilution reducing moisture, heat, and interfering pollutants.

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

The Model 80i also offers the benefits of the new iSeries gas analyzer platform.

The iSeries platform features flexible communications, increased serviceability, and an easier to use interface. Ethernet connectivity provides efficient remote access, allowing the user to download measurement information directly from the instrument without having to be on site. Captive hardware and slide-apart modules allows easy access for service and periodic maintenance.

You can easily program soft-keys to allow you to jump directly to frequently accessed functions, menus or screens. The larger interface screen can display up to five lines of measurement information while the primary reporting screen remains visible.

Key Features

- Proprietary cold vapor atomic fluorescence method
- Reports elemental, ionic, and total mercury
- True, real-time monitoring means no batch processing
- Direct measurement eliminates carrier gas
- High sensitivity allows greater dilution ratios
- Method reduces interferences
- Fast intuitive navigation

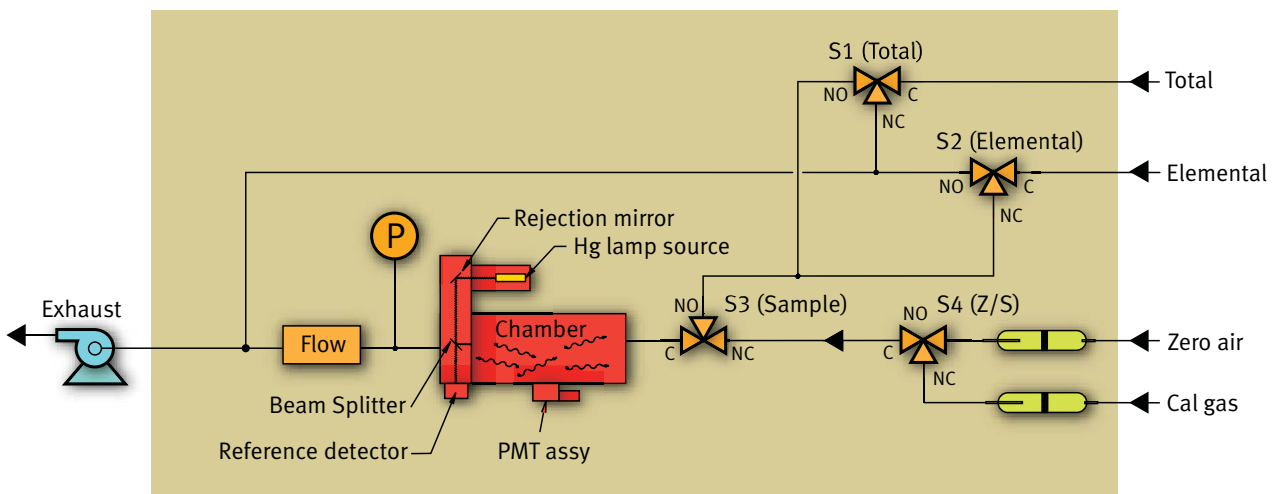
Comprehensive Service Solutions

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. Thermo Electron offers comprehensive, flexible support solutions for all phases of the product lifecycle. Through predictable, fixed-cost pricing, Thermo services help protect the return on investment (ROI) and total cost of ownership of your Thermo Electron air quality products.

Product Specifications

Elemental Hg Measurement Range	0-50 $\mu\text{g}/\text{m}^3$ (effective range before dilution)
Zero Noise	1 ng/m^3 (60 second average)
Lower Detectable Limit	1 ng/m^3 (60 second average)
Zero Drift (24 hour)	2 ng/m^3
Response Time	90 seconds (60 second average time)
Linearity	+/- 1% full scale
Sample Flow Rate	0.5 slpm
Interference Rejection (SO_2)	8.4×10^8 : 1 SO_2 interference below LDL
Interference Rejection (NO_x)	4.2×10^9 : 1 NO interference below LDL
Operating Temperature	5 - 40° C
Power Requirements	100 vac, 115 vac, 220-240 vac +/-10% @ 275W
Size and Weight	16.75"(W) x 8.62"(H) x 23"(D), 49 lbs. 425 mm (W) x 219 mm (H) x 584 mm (D), 22.2 kg
Outputs	Selectable Voltage, RS232/RS485, TCP/IP, 10 Status Relays, and Power Fail Indication. 0-20 or 4-20 mA Isolated Current Output
Inputs	16 Digital Inputs, 8 0-10vdc Analog Inputs

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