

Model 81*i* Mercury Calibrators

Standard, high level and low level precision source of mercury for automated calibrations and checks

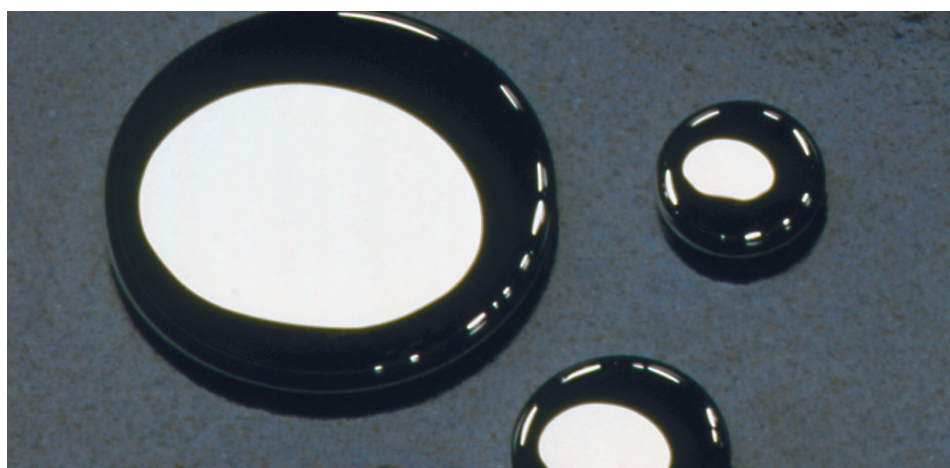
The Thermo Scientific™ Model 81*i* Mercury Calibrator is one of the four major components of the Thermo Scientific™ Mercury Freedom™ System. We also offer high and low mercury ranges with the Thermo Scientific™ High Level Model 81*i*-H and Low Level Model 81*i*-L Mercury Calibrators.

Features

- Choose from three calibrators to meet unique regulatory needs
- NIST-Traceable
- Capable of performing diagnostic calibrations directly to analyzer and probe
- Ideal for periodic linearity testing
- Perform converter efficiency testing in conjunction with the
- Oxidized Mercury Generator

Introduction

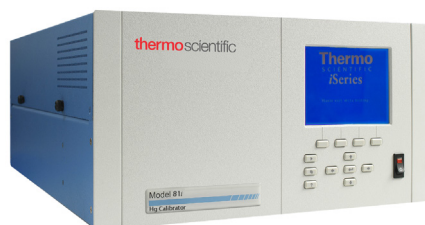
The Thermo Scientific Model 81*i* calibrators utilize a vapor generator that allows standard calibration and calibration through the extraction probe. Available calibration ranges let the user directly calibrate the analyzer at post-dilution concentrations. The calibrators are ideal for daily zero/span checks and routine converter efficiency and linearity testing.



The Mercury Freedom System provides a complete mercury monitoring solution that reports elemental, ionic, and total mercury in exhaust stacks from coal-fired boilers, cement kilns, fossil fuel-burning sources and waste incinerators. The Model 81*i* calibrators are designed to integrate into the Mercury Freedom System to meet the provisions of the U.S. Environmental Protection Agency's (EPA) Utility Mercury and Air Toxics Standards (MATS), as well as the Maximum Achievable Control Technology (MACT) for mercury monitoring.

The Model 81*i* calibrators also offer benefits of the iSeries platform, which includes flexible communications, ease of service, and a simplified interface. Ethernet connectivity provides efficient remote access, allowing the user to download important data from the instrument without having to be on site. Captive hardware and slide-apart modules allow easy access for service and periodic maintenance.

Short-cut keys can be easily programmed to allow you to jump directly to frequently accessed functions, menus or screens. The large interface screen can display up to five lines of measurement information while the primary reporting screen remains visible.

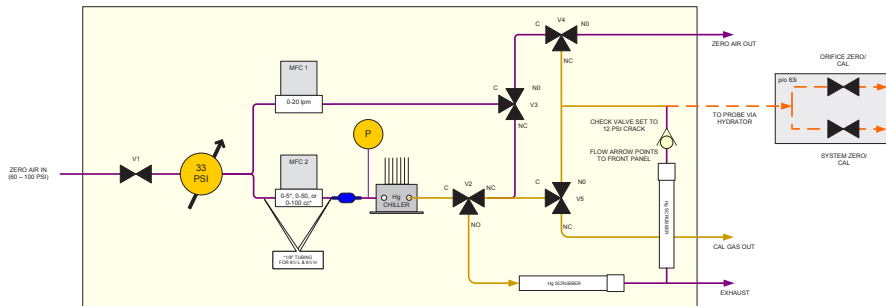


Thermo Scientific™ 81*i*
Mercury Calibrator

Thermo Scientific Model 81i Mercury Calibrators

Model Specific	Standard 81i	High Level 81i-H	Low Level 81i-L
Ranges	5, 10, 20, 30, 40, 50 µg/m ³	20, 30, 50, 300 µg/m ³	1, 2, 5, 10, 20 µg/m ³
Hg Output	1-50 µg/m ³	4-300 µg/m ³	0.2-20 µg/m ³
Hg Source control	6°C	8-18°C	10°C
Gas Dilution			
Accuracy of each mass flow measurement	+2% of reading or 1% of full scale, whichever is less - 20 to 100% full scale		
Linearity of mass flow measurement	0.5% of full scale		
Lower detectable limit	1 ng/m ³ (60 second average)		
Repeatability of mass flow measurement	+2% of reading or 1% of full scale, whichever is less - 20 to 100% full scale		
Mass Flow Controller			
Zero air flow controller	20 slm		
Span gas flow controller	5, 50, or 100 sccm		
Linearity	±2 % full scale		
Operating temperature	68° to 86°F (20° to 30°C)		
Power requirements	250 Watts		
Size and weight	16.75" (W) × 8.62" (H) × 23" (D), 49 lbs. 425 mm (W) × 219 mm (H) × 584 mm (D), 21.8 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		

Flow Diagram: Model 81i Mercury Calibrator



VALVE STATUS PER GAS MODE

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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