

PM Monitor

FPM-377C(S)

FPM-377C is an automatic measuring device that continuously measures particulate matter (PM10 or PM2.5) in the ambient air using the β -ray absorption method. The PM10 can be measured by attaching the PM10 inlet alone to the FPM-377C, and the PM2.5 can be measured by attaching the additional VSCC Inlet.

One hour value, which is important for PM10/PM2.5 monitoring measurement, can be measured with high accuracy and stability. PM2.5 and PM10 are USEPA certified. By meeting the conditions, it can be used for reporting Course PM (PM10-PM2.5).

USEPA Designation Number

PM10 : EQPM-0905-156

PM2.5 : EQPM-1224-264

PM10-2.5 : EQPM-1224-265



Characteristics

○ By adopting our original filter holding structure in the particle collection unit, able to arrange the sample air inlet to the particle collection unit in a vertical line. In addition, since there is no bend in the sample air introduction pipe from the particle sizer to the particle collection unit, it meets the strict structural requirements of PM10/PM2.5 measuring instruments that have no bend in the sample air introduction path.

Using a heater-type dehumidifier to keep the relative humidity of the collecting section constant, the effect of humidity is small and the consistency with the standard measurement method is excellent.

○ Facilitates identification of time and date for collection spots. A user can extend intervals between a collection spot at 00:00a.m. and that 01:00a.m. to a double period. This facilitates identification of the time and date for collection spots. Used filter paper can be used as a reference material when measurement data is defined.

○ A liquid crystal touch panel is used and the operation is interactive. Each data history can be easily displayed on the LCD.

○ Measurement conditions such as the flow rate, temperature, and pressure of the sample air, as well as the calibration information and event history of this device can be recorded on the CF card.

Measurement method	: Beta (β) ray absorption method
Meas. range	: Option (0 to 500 $\mu\text{g}/\text{m}^3$, 0 to 2000 $\mu\text{g}/\text{m}^3$, 0 to 5000 $\mu\text{g}/\text{m}^3$)
Radiation source	: ^{14}C (3.7MBq \pm 10%, radiation source)
Radiation detector	: Semiconductor detector
Sizer	: PM10 Inlet PM10 Inlet + VSCC inlet
Dehumidification method	: By heating the sample air Relative humidity control method
Collection filter	: Filters made of polytetrafluoroethylene (Roll type Available for 70days)
Collection efficiency	: 99.9% or more (0.3 μm DOP particle)
Suction flow rate	: 16.7L/min
Flow control	: Actual flow control
Collecting time	: 59 min. (per hour batch measurement)
Average time	: 1 hour and 24 hours
Minimum detection limit	: $\leq 1.0\mu\text{g}/\text{m}^3$
Repeatability (reproducibility)	: 2%FS or less
Zero drift	: $\pm 2\%$ FS or less/24h
Span drift	: $\pm 3\%$ FS or less/24h
Linearity (indication error)	: $\pm 3\%$ FS or less
Indication value for calibration air	: Within $\pm 10\%$ of standard measurement method
Logging data	: One hour value, flow rate, temperature, humidity, Barometric pressure etc
Ambient temperature	: 0 to 40 $^{\circ}\text{C}$
Power supply	: AC 220V, 50/60Hz
Power consumption	: Max. approx. 250VA, average approx. 150W (including power supply for pump)
Display	: LCD
Analog Output	: 0 to 1V
Digital Output	: RS232 port (TCP/IP/Ethernet with external hardware)
Measurement resolution	: 0.1 $\mu\text{g}/\text{m}^3$

Standard specifications

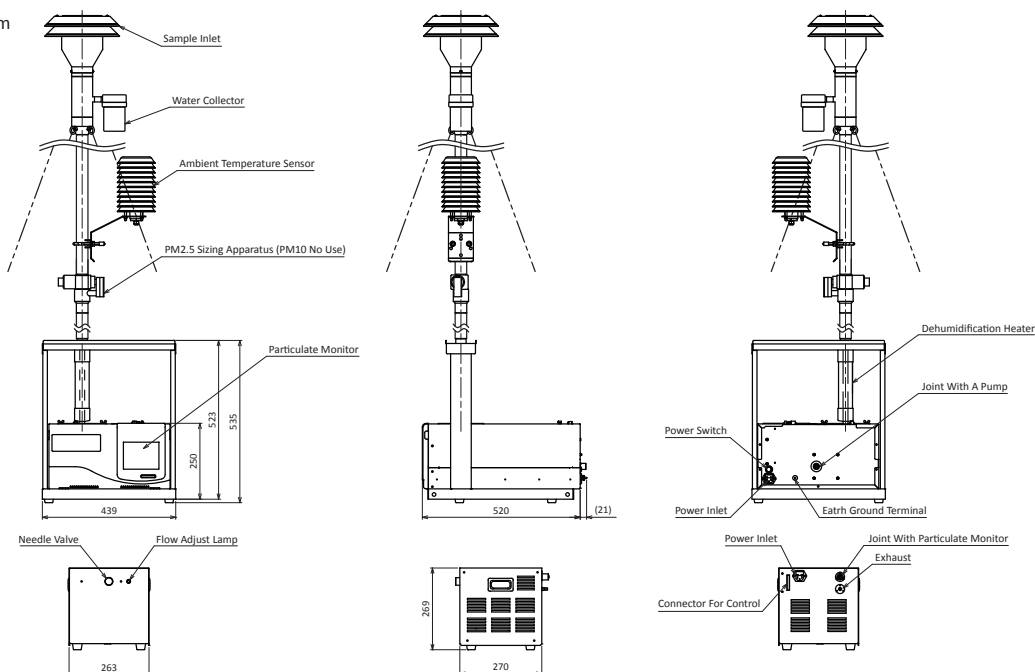
Product name : Particulate Monitor

Model : FPM-377C

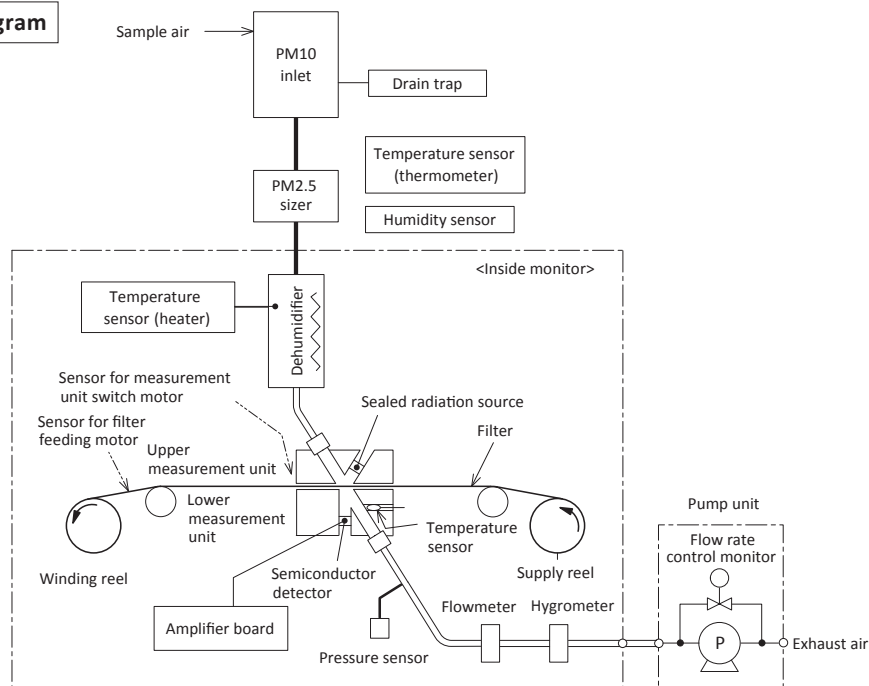
Measurement Object : PM10 or PM2.5 in ambient air (either)

Dimensions

Unit : mm



Measurement system diagram



DKK-TOA CORPORATION



CAUTION

Please read the operation manual carefully before using products.

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