

PRI-8601 Smart Chamber for Gas Flux

The PRI-8601 Smart Chamber employs multi-sensor fusion architecture and is used in conjunction with gas concentration and isotope analyzers based on the principle of spectral absorption, enabling portable measurement of soil and water surface gas fluxes. The PRI-8601 connects multiple gas analyzers via Bluetooth. It is powered by a built-in high-density battery, facilitating autonomous operation of the chamber, including chamber movement and data collection of soil temperature, humidity, air temperature, atmospheric pressure, GPS/BDS, and external gas analyzers. Through Wi-Fi connectivity to a tablet or smartphone, the system enables real-time data display and instantaneous gas flux calculations.

The PRI-8601 Smart Chamber features a cylindrical design, a patented pressure balance vent (ZL201420354126.4), a gradual air mixing and sampling mechanism, and a scientifically calibrated chamber driving speed. These features minimize the negative impact of pressure changes between the inside and outside of the chamber, as well as boundary layer disturbances, on flux measurements. This system has broad applications in fields such as ecology, agronomy, forestry, fertilizer science, permafrost studies, seismology research, as well as landfill management and wastewater treatment.



Key Features

- Features a multi-sensor fusion architecture, compatible with analyzers from multiple brands
- Built-in high-density lithium battery allows the chamber to operate autonomously
- Wi-Fi connection to tablets or smartphones for real-time flux calculation
- Patented dynamic pressure vent and progressive sampling improve measurement accuracy
- A scientifically optimized chamber driving speed reduces boundary layer disturbance

Specification

Pressure Vent	Patented	Covered Area by Chamber	314 cm ²
Soil Temp. Measurement Range	-40 ~ +85 °C	Chamber Volume	3718 cm ³
Soil Temp. Precision	± 0.2 °C	Size of the Chamber	220 mm (D) x 120 mm (H)
Soil Water Measurement Range	0 ~ 100%	Whole Size of the Chamber	250 mm (D) x 375 mm (H)
Soil Water Accuracy	± 3%	Memory	16 GB total non-volatile
Battery	12V, 9.6 Ah	Cable length	1.5m Standard
Wi-Fi	2.4 GHz	Weight	4.5 kg
BDS Accuracy	< 1m CEP	Operating Temperature Range	-20 to 50 °C

Specifications subject to change without notice

Manufacturer: PRI-ECO, CHINA