GR-1350D Ambient air comprehensive sampler

Product introduction

The GR-1350D environmental air comprehensive sampler (hereinafter referred to as the sampler) is used to collect various harmful gases in ambient air and indoor air using the solution absorption method; it also uses the filter membrane weighing method to collect total suspended particulates (TSP), inhalable particulates (PM10) or (PM2.5), fluorides, heavy metals, SVOCs, etc., in ambient air. It can be used by environmental protection, health, labor, safety supervision, military, scientific research, and education departments for routine and emergency monitoring of gaseous substances and aerosols.

Executive standard

HJ 618-2011 "Determination of PM10 and PM2.5 in Ambient Air - Gravimetric Method"
HJ 656-2013 "Technical Specification for Manual Monitoring Method of Ambient Air Particulate Matter (PM2.5) (Gravimetric Method)"
HJ 93-2013 "Technical Requirements and Test Methods for Ambient Air Particulate Matter (PM10 and PM2.5) Samplers"
GB/T 18883-2022 "Indoor Air Quality Standard"
HJ/T 374-2007 "Technical Requirements and Test Methods for Total Suspended Particulate Matter Samplers"
HJ/T 375-2007 "Technical Requirements and Test Methods for Ambient Air Samplers"
HJ/T 376-2007 "Technical Requirements and Test Methods for 24-Hour Constant Temperature Automatic Continuous Ambient Air Samplers"
JJG 956-2013 "Atmospheric Samplers"
JJG 943-2011 "Total Suspended Particulate Matter Samplers"
HJ 955-2018 "Determination of Fluorides in Ambient Air - Filter Membrane Sampling/Fluoride Ion Selective Electrode Method"
HJ 657-2013 "Determination of Lead and Other Metal Elements in Particulate Matter in Air and Waste Gas - Inductively Coupled Plasma Mass Spectrometry"
HJ 644-2013 "Determination of Volatile Organic Compounds in Ambient Air - Adsorption Tube Sampling-Thermal Desorption/Gas Chromatography-Mass Spectrometry"
HJ 583-2010 "Determination of Benzene Series Compounds in Ambient Air - Solid Adsorption/Thermal Desorption-Gas Chromatography"

Functional features

- Multi-functional device, allowing for flexible combinations of medium-flow sampling, low-flow heating, low-flow constant temperature, and micro-flow sampling methods, with independent control and flexible configuration.
- Features a 7.0-inch wide-temperature, high-brightness color touch screen display, clearly visible in sunlight, with a beautiful interface and convenient operation.
- Dual operation modes (button and touch) to suit various user preferences.
- Optional built-in rechargeable lithium battery, providing over 4 hours of operation on a single charge.
- Massive data storage capacity, storing over 100,000 sets of data.
- Particulate matter sampling flow rate (10~130) L/min is adjustable; with corresponding sampling heads, it can be used for sampling fluorides, heavy metals, SVOCs, etc.
- Uses an imported sampling pump with high load capacity, low noise, stable flow rate, and long service life.
- Automatically measures pre-meter temperature and pressure, and automatically calculates the standard volume of sampled air.
- Small size and lightweight, making it easy to carry.
- Automatic data protection in case of power failure during sampling; sampling resumes after power is restored.
- Dual data output modes: data can be printed via Bluetooth or exported to a USB drive.
- Aluminum alloy sampling head, resistant to electrostatic adsorption.
- The entire device features excellent dustproof and waterproof design, ensuring normal operation in rainy and snowy weather.
- The entire device is designed with electromagnetic compatibility in mind, possessing strong anti-interference and anti-radiation capabilities.
- Technical indicators

Main parameters		Parameter range	Resolution	Accuracy
GR1350D (Dual-channel low flow rate) (Dual-channel very low flow rate)	Particulate matter sampling flow rate	(10～130）L/min	0.01L/min	Better than ±2.0%
	A-channel and B-channel maintain constant temperature.	(0.100～1.000）L/min	0.001L/min	Better than ±2.5%
	C-channel and D-channel	(0.020～0.300）L/min	0.001L/min	Better than ±2.5%
Traffic stability				Better than ±2.0%
Traffic repeatability				Better than ±2.0%
Pre-calculation pressure		(-60～60)kPa	0.01kpa	Better than ±2.5%
atmospheric pressure		(30～130)kPa	0.001kpa	Not exceeding ±500 Pa
Sampling time		1min～99h59min	1min	Better than ±0.2%
Built-in battery (optional)		29.4V 10.4AH		
Equally spaced sampling time		Can be set to any value within 99 hours and 59 minutes.		
Number of equally spaced samples		1 to 99 times		
noise		<60db(A)		
Overall dimensions (WxDxH) mm		165x330x275		
weight		Approximately 4.0 kg		
power supply		AC220V±10% 50Hz or DC29.4V/5A		
Power consumption		<100W		
Sampling head	PM2.5 cutting characteristics	Da50=（2.5±0.2）um & g=（1.2±0.1）um		
	PM10 cutting characteristics	Da50=（10±0.5）um & g=（1.5±0.1）um		
	Entry speed	0.3m/s		
	b/a	0.625		
	ective filter membrane diameter	φ80mm		
	connector	M20x1.5		

Standard configuration

1. Host 2. TSP/PM10 sampling head 3. glass fiber filter membrane 4. Drying cylinder 5. Triangular bracket 6. Protective case

Optional configuration

1. Bluetooth printer 2. TSP/PM10/PM2.5 sampling head 3. Fluoride sampling head 4. Medium-flow polycyclic 5. aromatic hydrocarbons Adsorption tube 6. Battery pack