LONYING | 劳应

PRODUCT CATALOGUE

ENVIRONMENTAL MONITORING INSTRUMENT


LONYING
劳应
Lonying, Always a Friend

COMPANY PROFILE

BASIC PROFILE

Qingdao Laoying Haina Opto-electronic Environmental Protection Group Co., Ltd. stands as a pioneering manufacturer and comprehensive service provider in China's environmental monitoring and analytical instrumentation industry. Founded in 1988, one of the earliest in the field in China, we have established a leading market position through decades of dedication and innovation. We offer over ten product series, encompassing hundreds of instruments. We prioritize R&D, continuously cultivating cutting-edge technologies to provide advanced and accurate monitoring solutions. Our skilled production team ensures the manufacture of reliable and durable instruments. A strict QC team guarantees that every product meets the highest standards of performance and accuracy. We are dedicated to providing high-quality products and ensuring prompt delivery to support our clients' critical environmental protection efforts.

2

Lonying operates two major industrial parks: the Lonying Photoelectric Environmental Protection Industrial Park and the National Artificial Intelligence and Ecological Environmental Protection Industrial Park. The total combined floor area is approximately 165,000 square meters.

10

The Lonying R&D team develops products across more than ten series, spanning fields such as Ambient Air Monitoring, Industrial Waste Gas Monitoring, Environmental Emergency Monitoring, Ambient Water Quality Monitoring, and Technical Metrology & Testing.

200

Lonying has participated multiple times in the drafting and verification of national, industry, and local standards. The company holds over two hundred national patents, including invention patents, copyrights, utility model patents, and design patents. Its product technology and quality enjoy a high reputation within the industry.

ISO 9001 ISO 14001 ISO 27001 ISO 45001

31

With 31 local customer service stations established across the country, Lonying has built a mature nationwide service network, always ready to provide customers with professional technical support and solutions.

Catalogue

077/LY-2050 Ambient Air Sampler- Model QQ
079/LY-2050 Ambient Air Sampler (Constant Temperature)
081/LY-2091 Ozone Analyzer
083/LY-2092 Ambient Air Quality Monitor (Single-channel/dual-channel)
087/LY-2092 Ambient Air Quality Monitor (Laser scattering method)
090/LY-2193 Automatic Environmental Noise Monitor

04 Gas Stations/Vehicle Exhaust Monitoring

093/LY-7003 Vapor Recovery Multi-Parameter Tester（Model 24）
096/LY-7005 Gasoline Transport Vapor Recovery Efficiency Analyzer
099/LY-7004 Transmission-type Smoke Meter

05 Water Quality Monitoring

103/LY-5008B Portable Multi-purpose Vacuum Filter
104/LY-5008C/D/E Portable Multi-purpose Vacuum Filter
105/LY-5032 Fully Automatic Permanganate Index Analyzer
107/LY-5033 Intelligent Water Sample Evaporation Concentrator
109/LY-5034 Fully Automatic CODcr Analyzer
111/LY-5040 Intelligent Samplin g and Monitoring Unmanned Surface Vehicle (USV)

06 Calibrator and Others

117/LY-7020A Multi-range Orifice Flow Calibrator
119/LY-7030 Intelligent Soap Film Flow Meter
121/LY-7050B Portable Pressure Flow Temps Calibrator
123/LY-7061 Ozone Calibrator
124/LY-8030A Intelligent Multi-channel Gas Dilution Calibrator
126/LY-8032 Dynamic Olfactometry System
128/LY-8040 Intelligent Flow/Pressure/Temperature/Humidity Calibrator
131/LY-1030 Flue Gas Pre-treatment System
133/LY-1062C Resistance-capacitance Method Flue Gas Moistur Detector
135/LY-1062E Multifunctional Meter
137/LY-1087A Oil Fume Sampling Probe
139/LY-1089A Multi-functional Exhaust Sampling Probe
141/LY-1089T Multi-functional Condensed Flue Gas Sampling Probe
142/LY- 9020A Intelligent Automatic Laminator

FIXED POLLUTION SOURCE EXHAUST GAS MONITORING

Background Information

Boilers, chimneys, industrial kilns, and other installations emit significant amounts of smoke and flue gas during operation, constituting a major pollution source affecting the atmospheric environment. Strengthening the monitoring of smoke and flue gas from coal-fired boilers is therefore of paramount importance.

Solution

Our range of fixed pollution source exhaust gas monitoring products is designed for use by environmental protection systems, scientific research institutions, universities and colleges, industrial and mining enterprises, quality supervision and inspection authorities, testing services, disease control, military technology, and numerous other fields. These products are utilized for measuring the emission concentration/total volume of various pollutants—including smoke and flue gas from boilers and kilns, oil fumes, and asphalt smoke—as well as the efficiency of dust removal and desulfurization equipment.

The measurable parameters include: flue gas dynamic pressure, flue gas static pressure, pressure before the flowmeter, humidity before the flowmeter, flue gas temperature, moisture content, flow velocity, O_2, SO_2, CO, NO, NO_2, H_2S, CO_2, and more.

LY- 3012H-C
Intelligent Stack Dust（Gas）Tester

- **Ultra small size**
- **Real time protection**
- **Optional Dust Direct Reading**

Overview

This instrument employs the Pitot tube parallel isokinetic sampling method to collect particulate matter from exhaust gases of fixed pollution sources. It measures soot mass using the filtration weighing method and determines flue gas components through the potentiometric electrolysis method. The device is widely used for measuring emission concentrations, converted concentrations, and total emissions of particulate matter from various fixed pollution sources such as boilers, flues, and industrial furnaces, while also evaluating dust removal and desulfurization efficiency of equipment.

The product finds extensive applications in environmental protection agencies, testing laboratories, and industrial enterprises (including power plants, steel mills, cement plants, sugar refineries, paper mills, smelters, ceramic factories, boiler kilns, as well as aluminum, magnesium, zinc, titanium, silicon, pharmaceutical industries, along with fertilizer, chemical, rubber, and material processing plants), as well as sectors like public health, labor safety, military operations, scientific research, and education.

Standards

- EN13284-1;
- US EPA M5; US EPA M17
- ISO 9096; GB 16157-1996

Main Features

- The fixed parallel velocity sampling method was used to collect particulate matter in the exhaust gas of fixed pollution sources;
- Real-time monitoring of dynamic pressure, static pressure, gas temperature, flow velocity and other parameters;
- Precise electronic flowmeter control, real-time monitoring of temperature and pressure to ensure the accuracy of flow;
- It has an electrochemical sensor module, which can be independently selected according to the need to realize simultaneous measurement of various gases;
- Highlighted, with strong adaptability to the environment; The operation interface is simple and friendly,

and the data presentation is intuitive;

- It has the function of fault self-test, which can detect the function of the instrument and prompt the fault, so as to facilitate the maintenance and use of users;
- Efficient sampling pump, corrosion-resistant, maintenance free continuous operation, suitable for various working conditions;
- According to the need, various sampling probes can be matched to achieve dust sampling and flue gas monitoring;

Technical Indicators

Main Parameter		Parameter Range
Sampling Flow		(0 ~ 80) L/min
Flue Gas Pneumatic Pressure		(0 ~ 2000) Pa
Flue Gas Static Pressure		(-30 ~ + 30) kPa
Inlet Pressure		(-30 ~ 0) kPa
Inlet Temperature		(-55 ~ 125)℃
Atmospheric Pressure		(50 ~ 130) kPa
Flue gas Temperature		(0~500) ℃ Scalable
Dry and wet bulb temperatures (optional)		(0 ~ 100)℃
Isokinetic sampling flow rate		(1 ~ 45) m/s
Gas Concentration	O_2 (optional)	(0 ~ 30)%
	SO_2 (optional)	(0 ~ 5700)mg/m^3
	NO (optional)	(0 ~ 1300)mg/m^3
	NO_2 (optional)	(0 ~ 200)mg/m^3
	CO (optional)	(0 ~ 5000)mg/m^3
	CO_2 (optional)	(0 ~ 20) %

Standard Configuration

Main Unit

High-Efficiency Steam-Water Separator

Portable Bluetooth Printer

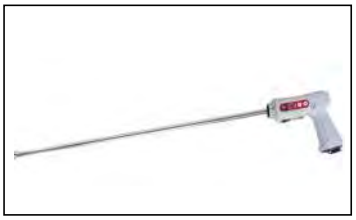
Optional Configuration

LY-1089K
β -ray Dust Direct Reading Tester
Implement the direct reading function for dust

LY-1030
Flue Gas Pretreatment System
Filtration, heating, condensation, dehumidification, and automatic drainage of wet process flue gas function for dust

LY-1080D
Flue Gas Preprocessor
Pretreatment before determining the harmful gas components from stationary pollution sources

LY-1060A
Flue Gas Sampler
Determine the harmful gas components in emissions from stationary pollution sources



LY-1062C
Resistance-capacitance Flue Gas Moisture Detector
Measure the moisture content in flue gas from stationary pollution sources

LY-1085A
Multi-Function Dust Sampling Probe
Measure the concentration of particulate matter from stationary pollution sources

LY-1085W
Multi-Function Dust Sampling Probe
Measure particulate matter from stationary pollution sources

LY-1087A/B
Oil Fume Sampling Probe
Extract and measure gases within oil fume exhaust ducts function for dust

LY-9030
Wireless Flow Velocity Monitoring Module

24V Power Adapter

Smart Power Bank

LY- 3012H-D
Intelligent Stack Dust（Gas）Tester (Model 18)

- Compact size
- Simultaneous dust and gas sampling
- Built-in lithium battery
- Optional on-site dust concentration direct reading

Overview

This instrument employs the Pitot tube parallel isokinetic sampling method to collect particulate matter from exhaust gases of fixed pollution sources. It measures soot mass using the filtration weighing method and determines flue gas components through the potentiometric electrolysis method. The device is widely used for measuring emission concentrations, converted concentrations, and total emissions of particulate matter from various fixed pollution sources such as boilers, flues, and industrial furnaces, while also evaluating dust removal and desulfurization efficiency of equipment.

The product finds extensive applications in environmental protection agencies, testing laboratories, and industrial enterprises (including power plants, steel mills, cement plants, sugar refineries, paper mills, smelters, ceramic factories, boiler kilns, as well as aluminum, magnesium, zinc, titanium, silicon, pharmaceutical industries, along with fertilizer, chemical, rubber, and material processing plants), as well as sectors like public health, labor safety, military operations, scientific research, and education

Standards

- EN13284-1;
- US EPA M5; US EPA M17
- ISO 9096; GB 16157-1996

Main Features

- Capable of measuring ultra-low concentrations of particulate matter in stationary pollution source exhaust gas
- It collects particulate matter from stationary pollution source emissions using the Pitot tube parallel isokinetic sampling method
- It monitors operating parameters in real-time, such as dynamic pressure, static pressure, flue gas temperature, and flow velocity
- It features precise electronic flowmeter control, with real-time monitoring of temperature and pressure at the meter to ensure flow accuracy
- It is equipped with an electrochemical sensor module. Users can optionally configure sensors as needed to achieve simultaneous measurement of multiple gases

- It has a built-in self-diagnostic function that tests instrument functionality and indicates faults, facilitating user maintenance and operation
- It incorporates a high-efficiency sampling pump that is corrosion-resistant, maintenance-free during continuous operation, and adaptable to various working conditions
- As required, it can be paired with various sampling probes to achieve functions such as dust sampling, flue gas analysis, flue gas sampling, and on-site dust concentration direct reading

Technical Indicators

Dust Sampling Parameter	
Main Parameter	**Parameter Range**
Sampling Flow	(0 ~ 110) L/min
Flue Gas Dynamic Pressure	(0 ~ 2000) Pa
Flue Gas Static Pressure	(-30 ~ ＋30) kPa
Inlet Pressure	(-30 ~ 0) kPa
Inlet Temperature	(-55 ~ 125)℃
Atmospheric Pressure	(50 ~ 130) kPa
Flue gas Temperature	(0 ~ 500)℃ (Scalable)
Dry and wet bulb temperatures (optional)	(0 ~ 100)℃
Velocity	(1 ~ 45） m/s
Maximum Sampling Volume	999999.9 L

Technical Specifications for Flue Gas Analysis		
Main Parameter		**Parameter Range**
Gas Sampling Flow Rate		Not less than 1L/min
Flue Gas Concentration	O_2 (Optional)	(0 ~ 30)%
	SO_2 Low (Optional)	(0 ~ 286)mg/m^3
	SO_2 High (Optional)	(0 ~ 5700)mg/m^3
	NO (Optional)	(0 ~ 1300)mg/m^3
	NO_2 (Optional)	(0 ~ 200)mg/m^3
	H_2S (Optional)	(0 ~ 300)mg/m^3
	CO (Optional)	(0 ~ 5000)mg/m^3
	CO_2 (Optional)	(0 ~ 20)%

Standard Configuration

Main Unit

Portable Bluetooth Printer

High-Efficiency Steam-Water Separator

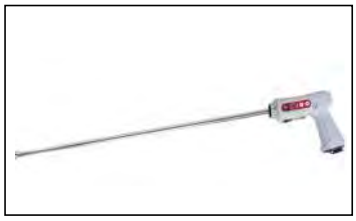
Optional Configuration

LY-1089K
β -ray Dust Direct Reading Tester
Implement the direct reading function for dust

LY-1030
Flue Gas Pretreatment System
Filtration, heating, condensation, dehumidification, and automatic drainage of wet process flue gas function for dust

LY-1080D
Flue Gas Preprocessor
Pretreatment before determining the harmful gas components from stationary pollution sources

LY-1060A
Flue Gas Sampler
Determine the harmful gas components in emissions from stationary pollution sources



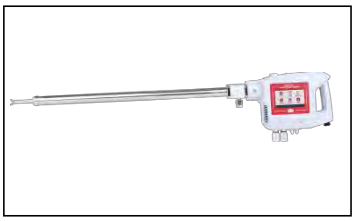
LY-1062C
Resistance-capacitance Flue Gas Moisture Detector
Measure the moisture content in flue gas from stationary pollution sources.

LY-1085A
Multi-Function Dust Sampling Probe
Measure the concentration of particulate matter from stationary pollution sources

LY-1085W
Multi-Function Dust Sampling Probe
Measure particulate matter from stationary pollution sources

LY-1087A/B
Oil Fume Sampling Probe
Extract and measure gases within oil fume exhaust ducts function for dust

LY-1061A
Flue Gas Moisture Detector
Measure the moisture content in flue gas from stationary pollution sources.



LY-1062E
Multifunctional Meter
Measure parameters such as flue gas moisture content, gas flow velocity, dynamic pressure, static pressure, and flue gas temperature within the emission ducts of stationary pollution sources

LY-1081A
Asphalt smoke sampling probe
Determine the asphalt fume concentration from stationary pollution sources

LY- 3012H-D
Intelligent Stack Dust（Gas）Tester (Model 21)

- **Integrates various flue gas sampling and analysis methods:**

  EC; UV-DOAS; NDIR; Solution Absorption

- **Combines multiple particulate matter sampling and analysis methods：**

  Dust Sampling； Dust Direct-reading

Overview

This instrument employs the Pitot tube parallel isokinetic sampling method to collect particulate matter from exhaust emissions of stationary pollution sources. It utilizes the filtration and weighing method to determine dust mass, while applying the static potential electrolysis method, UV differential method, or non-dispersive infrared method for qualitative and quantitative analysis of flue gas components. The device is widely used to measure emission concentrations, converted concentrations, total emissions, and dust removal efficiency of particulate matter from various fixed pollution sources including boilers, flues, and industrial furnaces,while also evaluating dust removal and desulfurization efficiency of equipment.

Widely applied in environmental protection agencies, testing laboratories, industrial and mining enterprises (power plants, steel mills, cement plants, sugar refineries, paper mills, smelters, ceramic factories, boiler furnaces, as well as aluminum, magnesium, zinc, titanium, silicon, pharmaceutical industries, along with fertilizer, chemical, rubber, and material production facilities), healthcare, labor, occupational safety supervision, military, scientific research, and education.

Standards

- EN13284-1;
- US EPA M5; US EPA M17
- ISO 9096; GB 16157-1996

Main Features

- It can be used to measure ultra-low concentration of particulate matter in waste gas from fixed pollution sources
- Collect particulate matter from exhaust gas of fixed pollution sources using pilot tube parallel isokinetic sampling method;
- Real-time monitoring of dynamic pressure, static pressure, gas temperature, flow rate and other parameters in operating condition;
- Precise electronic flowmeter control, real-time monitoring of temperature and pressure, to ensure the accuracy of flow;
- There are sensors with various principles such as fixed potential electrolysis, ultraviolet differential method

and non-dispersive infrared method. The sensors can be selected independently according to the needs to realize simultaneous measurement of various gases;

- Highlighted, with strong adaptability to the environment; The operation interface is simple and friendly, and the data presentation is intuitive.
- It has the function of fault self-test, which can detect the function of the instrument and prompt the fault, so as to facilitate the maintenance and use of users;
- Optional built-in lithium battery pack or AC power adapter for power supply
- High efficiency sampling pump, corrosion resistant, maintenance-free continuous operation , adapt to a variety of operating conditions;
- According to the need, various sampling probes can be matched to achieve stack dust sampling, flue gas analysis, flue gas sampling, stack dust direct reading and other functions;

Technical Indicators

Parameters of Stack Dust Sampling	
Main Parameter	**Parameter range**
Sampling Flow	(0 ~ 120) L/min
Vapour Pneumatic Pressure	(0 ~ 2000) Pa
Flue Gas Static Pressure	(-30 ~ + 30) kPa
Inlet Pressure	(-60 ~ 0) kPa
Inlet Temperature	(-55 ~ 125)℃
Atmospheric Presssure	(50 ~ 130) kPa
Flue-gas Temperature	(0 ~ 500) ℃ (scalable)
Dry and Wet Bulb Temperatures (optional)	(0 ~ 100)℃
Flow rate	(1 ~ 45) m/s
Maximum sampling volume	999999.9 L

Parameters of Flue Gas Analysis		
Main Parameter		**Parameter Range**
Flue gas sampling flow		Not less than 0.5L/min
Electrochemical Method	O_2 (optional)	(0 ~ 30)%
	SO_2 (optional)	(0 ~ 5700)mg/m^3
	NO (optional)	(0 ~ 1300)mg/m^3
	NO_2 (optional)	(0 ~ 200)mg/m^3
	CO (optional)	(0 ~ 5000)mg/m^3
	H_2S (optional)	(0 ~ 300)mg/m^3
Ultraviolet Differential Method	SO_2 (optional)	(0 ~ 429) mg/m^3
		(0 ~ 4290) mg/m^3

	NO (optional)	(0 ~ 1340) mg/m^3
	NO_2 (optional)	(0 ~ 1025) mg/m^3
Non-dispersive Infrared Method	SO_2 (optional)	(0 ~ 2860)mg/m^3
	NO (optional)	(0 ~ 1300)mg/m^3
	CO_2 (optional)	(0 ~ 20) %
	CO (optional)	(0 ~ 5000)mg/m^3

Sampling technical indicators of solution absorption method (optional)	
Main Parameter	**Parameter range**
Flue gas sampling flow	(0.1 ~ 2.0) L/min
Pressure before flowmeter	(-30 ~ 0) kPa
Temperature before flowmeter	(-55 ~ 125) ℃

Standard Configuration

Main Unit

High-Efficiency Steam-Water Separator

Portable Bluetooth Printer

Backpack

Power Adapter

Optional Configuration

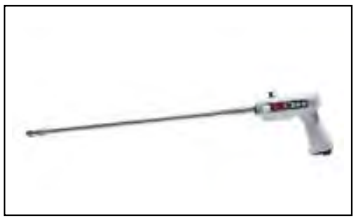
LY-1089K
β -ray Dust Direct Reading Tester
Implement the direct reading function for dust

LY-1030 Flue Gas Pretreatment System
Filtration, heating, condensation, dehumidification, and automatic drainage of wet process flue gas function for dust

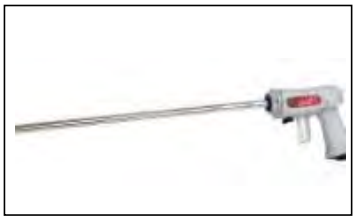
LY-1080C Flue Gas Preprocessor
Pretreatment before determining the harmful gas components from stationary pollution sources

LY-1060A
Flue Gas Sampler
Determine the harmful gas components in emissions from stationary pollution sources

LY-1062C
Resistance-capacitance Flue Gas Moisture Detector
Measure the moisture content in flue gas from stationary pollution sources.



LY-1080C
Flue Gas Preprocessor Pretreatment before determining the harmful gas components from stationary pollution sources



LY-1061A Flue Gas Moisture Detector
Measure the moisture content in flue gas from stationary pollution sources.

LY-1080D
Flue Gas Preprocessor
Pretreatment before determining the harmful gas components from stationary pollution sources

LY-1081A
Asphalt smoke sampling probe
Determine the asphalt fume concentration from stationary pollution sources

LY-1085A
Multi-Function Dust Sampling Probe
Measure the concentration of particulate matter from stationary pollution sources

LY-1085W
Multi-Function Dust Sampling Probe
Measure particulate matter from stationary pollution sources

LY-1087A/B
Oil Fume Sampling Probe
Extract and measure gases within oil fume exhaust ducts function for dust

LY-1085K
Butt-Connect Multi-Function Dust Sampling Probe
Measure the concentration of particulate matter from stationary pollution sources

LY-9030
Wireless Flow Velocity Monitoring Module

Lithium Battery Group

Battery Power Adapter

LY- 3012K

Multifunction Stack Dust/Gas Tester β-ray Dust Direct-Reading

- **Integrated β-ray Dust Direct-Reading**

Overview

This instrument employs the Pitot tube parallel isokinetic sampling method to collect particulate matter from exhaust gases of fixed pollution sources. It measures soot mass using the filtration weighing method and determines flue gas components through the potentiometric electrolysis method. The device is widely used for measuring emission concentrations, converted concentrations, and total emissions of particulate matter from various fixed pollution sources such as boilers, flues, and industrial furnaces, while also evaluating dust removal and desulfurization efficiency of equipment.

The product finds extensive applications in environmental protection agencies, testing laboratories, and industrial enterprises (including power plants, steel mills, cement plants, sugar refineries, paper mills, smelters, ceramic factories, boiler kilns, as well as aluminum, magnesium, zinc, titanium, silicon, pharmaceutical industries, along with fertilizer, chemical, rubber, and material processing plants), as well as sectors like public health, labor safety, military operations, scientific research, and education

Standards

- EN13284-1;
- US EPA M5; US EPA M17

Main Features

- Adopting an integrated design, it integrates stack dust sampling pump, β ray stack dust detection unit, flue gas sampling pump, flue gas pretreatment unit, flue gas sensor, flue gas temperature sensor, humidity sensor, and S-shaped pilot tube into one, without the need for an external main unit, to achieve simultaneous measurement of flue gas, dust, and operating conditions
- Stack dust detection adopts the principle of β ray absorption, and automatically detects the concentration and emission of dust on site.
- Using a low activity 14C β ray exemption source, the decay process is stable, the radiation dose is low, and it is safe and reliable
- Adopting a filter belt type segregated sampling and measurement station structure design, the sampling and measurement processes are separated to avoid contamination of key components and ensure detection accuracy.
- Adopting high-precision β ray detector with a minimum detection limit of 0.1mg/m^3, it can meet the monitoring requirements of ultra-low operating conditions.
- Built in constant potential electrolytic sensing module, integrated with intelligent anti-interference

compensation algorithm, realizing real-time and accurate monitoring of multiple components in flue gas

- Built in high-efficiency flue gas pre-treatment device to cope with high humidity conditions and improve the accuracy of flue gas detection
- Equipped with timed automatic drainage function, it can automatically complete drainage according to preset time intervals without manual intervention
- Capable of monitoring gas temperature, flow rate, pressure, moisture content, and oxygen content under all working conditions
- Equipped with a 5.5-inch touch controller, the instrument can be controlled wireless, making operation and use more convenient
- Supports input in both Chinese and English, making it convenient for users to input information such as sampling locations, achieving good human-computer interaction

Technical Indicators

Parameters of Stack Dust Sampling	
Main Parameter	**Parameter Range**
Flow Range	(0 ~ 60)L/min
Concentration Range	(0 ~ 50)mg/m3
Sampling Probe Heating Temperature	130℃ (100℃~160℃ optional)
Membrane Heating Temperature	105℃ (100℃ ~ 160℃ optional)
Flue Gas Dynamic Pressure	(0 ~ 2000)Pa
Flue Gas Static Pressure	(-30 ~ +30)kPa
Atmospheric Pressure	(50 ~ 130) kPa
Inlet Temperature	(-55 ~ 125)℃
Flue Gas Temperature	(0 ~ 500)℃
Isokinetic Sampling Velocity	(1 ~ 45)m/s
Moisture Content	(0 ~ 40)%

Parameters of Flue Gas Analysis	
Main Parameter	**Parameter Range**
Flue Gas Flow	Not less than 0.5L/min
O_2	(0 ~ 30) %
SO_2	(0 ~ 5700) mg/m^3
NO	(0 ~ 1300) mg/m^3
NO_2	(0 ~ 200)mg/m^3
CO	(0 ~ 5000)mg/m^3
CO_2 (Infrared)	(0 ~ 20) %
Access Port Diameter	≥φ60mm
Sampling Nozzle Diameter	Standard φ4.5, φ6, φ7, φ8, φ10, φ12

Length of Sampling Probe	The total length is 1.5m, and the effective length is 1.3m (the length can be customized)
Main Unit Weight	About 6.5kg
Pilot Tube Coefficient	0.84±0.01
Filter Specifications	It is 30mm wide and 3.5m long
Calibration method	Standard film calibration
Working Power Supply	DC24V

Standard Configuration


Main Unit

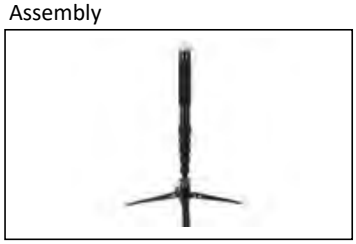

Sampling Probe


Handheld Controller


Standard Filter Membrane Assembly


Glass Fiber Filter Bag


Sampling Nozzle

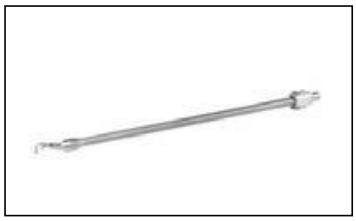

Tripod Stand

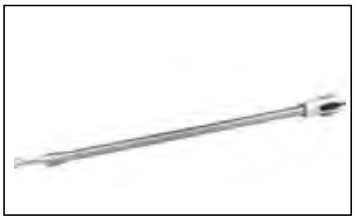

High-Efficiency Steam-Water Separator


Power Adapter


Backpack

Optional Configuration


Detachable Elbow Sampling Probe


Positive Pressure Sampling Probe


High-Temperature Resistant Sampling Probe

LY- 1089K
β-ray Dust Direct Reading Tester

- β-ray Absorption Method
- Heating both before and after the filter membrane
- Ideally suited for ultra-low emission working conditions
- Paired with LY-3012H-D & LY-3012H-C

Overview

This instrument operates on the β-ray absorption principle, enabling on-site monitoring of particulate matter concentration in exhaust gases from stationary pollution sources. It provides direct data readings and is unaffected by variations in particle size, shape, or other physicochemical properties. Not only does it offer high measurement accuracy, but it is also lightweight, portable, and features flexible disassembly and assembly, making it particularly suitable for ultra-low emission applications

Main Features

- Utilizes the beta-ray absorption principle to enable on-site monitoring of particulate matter concentration in exhaust gases from stationary pollution sources.
- Provides direct, on-site readings of particulate mass, unaffected by variations in particle size, shape, or other physicochemical properties
- Employs a low-activity Carbon-14 (14C) beta-ray source, ensuring safety and reliability
- Features a seamless and fully automated sampling and measurement process, resulting in high operational efficiency.
- When used in conjunction with Lonying Series Smoke/Dust Testers, it enables direct, on-site reading of particulate concentration.

Technical Indicators

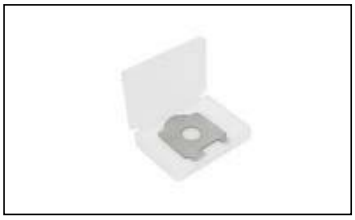
Main Parameters	Range
Concentration	(0 ~ 50)mg/m^3
Sampling Probe Heating Temperature	130℃（100℃ ~ 160℃ configurable）
Filter Heating Temperature	105℃（100℃ ~ 160℃ configurable）
Flue Gas Dynamic Pressure	(0 ~ 2000)Pa
Flue Gas Static Pressure	(-30 ~ +30)kPa
Flue Gas Temperature	(0 ~ 500)℃

Standard Configuration

Main Unit

Sampling Probe

Power Adapter



Standard Filter Membrane Assembly

Glass Fiber Filter Bag

Sampling Nozzle

Tripod Stand

Backpack

LY- 2086
Portable FTIR Gas Analyzer (Model A)

- FTIR Technology
- Stationary pollution source exhaust gas & greenhouse gas monitoring

Overview

This instrument is applied in fields such as stationary pollution source exhaust gas and greenhouse gas monitoring. Based on Fourier Transform Infrared (FTIR) spectroscopy technology, it can simultaneously analyze and measure various inorganic and organic gases, providing precise quantitative analysis for multiple gases including H_2O, CO_2, CO, SO_2, NO, NO_2, N_2O, NH_3, HCl, CH_4, C_3H_8. Equipped with an infrared spectral absorption database, it can perform qualitative analysis of unknown gases through their absorption spectra.

Main Features

- It adopts the Fourier Transform Infrared (FTIR) spectroscopy analysis principle, enabling simultaneous and precise quantitative analysis of various inorganic and organic gases such as H_2O, CO_2, CO, SO_2, NO, NO_2, N_2O, NH_3, HCl, CH_4, and C_3H_8
- The interferometer employs a dual-pyramid mirror pendulum structure, which is robust, highly shock-resistant, and suitable for portable field applications.
- The sample gas cell is corrosion-resistant, and the mirrors are gold-coated.
- The system features an integrated design that is compact and lightweight, significantly reducing the complexity of field operations.
- It incorporates advanced built-in analysis algorithms that effectively eliminate cross-interference in gas measurements, making it suitable for qualitative and quantitative analysis of various inorganic and organic gases.
- It allows for real-time viewing of spectra, automatic analysis of spectral data, and retrieval of concentrations for various pollutants.

Technical Indicators

Main Parameter	Parameter range
Quantitative Components	Inorganic and organic gases such as H_2O、CO_2、CO、SO_2、NO、NO_2、N_2O、NH_3、HCl、CH_4、C_3H_8
Gas Cell Temperature	180℃
Light Source	SiC
Power Supply	AC(220±22)V，50Hz

Standard Configuration

Main Unit

Sampling Probe

Power Adapter

LY- 2086
Portable FTIR Gas Analyzer (Model B)

- **FTIR Technology**
- **Emergency response for environmental incidents & greenhouse gas monitoring**

Overview

This This instrument is applied in fields such as emergency response for environmental incidents and greenhouse gas monitoring. Based on Fourier Transform Infrared (FTIR) spectroscopy technology, it can perform simultaneous and precise quantitative analysis of dozens of inorganic and organic gases, including but not limited to H_2O, CO_2, CO, SO_2, NO, NO_2, N_2O, NH_3, HCl, CH_4, C_3H_8, and benzene series substances. Additional target components can be added as required. Equipped with an infrared spectral absorption database, the analyzer is capable of conducting qualitative analysis of unknown gases through their characteristic absorption spectra.

Main Features

- It adopts the Fourier Transform Infrared (FTIR) spectroscopy principle, enabling simultaneous and precise quantitative analysis of dozens of inorganic and organic gases including H_2O, CO_2, CO, SO_2, NO, NO_2, N_2O, NH_3, HCl, CH_4, C_3H_8, and benzene series substances. The list of measurable components can be expanded as required.It adopts the Fourier Transform Infrared (FTIR) spectroscopy principle, enabling simultaneous and precise quantitative analysis of dozens of inorganic and organic gases including H_2O, CO_2, CO, SO_2, NO, NO_2, N_2O, NH_3, HCl, CH_4, C_3H_8, and benzene series substances. The list of measurable components can be expanded as required.
- The interferometer features a dual-pyramid mirror pendulum structure, offering robust construction, high shock resistance, and suitability for portable field applications.
- The sample gas cell is corrosion-resistant, and its mirrors are gold-coated.
- The system boasts an integrated design that is compact and lightweight, significantly reducing the complexity of on-site operation.
- It incorporates advanced built-in analysis algorithms that effectively eliminate cross-interference in gas measurements, making it suitable for qualitative and quantitative analysis of various inorganic and organic gases.
- It allows for real-time spectral viewing, automatic analysis of spectral data, and retrieval of the concentration for each pollutant.

Technical Indicators

Main Parameter	Parameter range
Quantitative Components	Inorganic and organic gases such as H_2O、CO_2、CO、SO_2、NO、NO_2、N_2O、NH_3、HCl、CH_4、C_3H_8
Gas Cell Temperature	50℃
Light Source	SiC
Power Supply	AC(220±22)V，50Hz or Built-in Lithium Battery

Standard Configuration

Main Unit

Sampling Probe

Power Adapter

LY- 3012B
Exhaust Particulate Detector

Overview

This instrument is designed for monitoring particulate emissions from stationary pollution sources. It features lightweight construction, accurate concentration detection, and eliminates the need for subsequent laboratory weighing. This product is widely used in environmental protection, testing companies, industrial and mining enterprises, public health, labor, safety supervision, military, scientific research, education, and other fields.

Main Features

- Employs laser scattering method for real-time monitoring of particulate matter emission concentrations
- Enables real-time direct reading of particulate matter concentration, eliminating the need for cumbersome manual sampling and sample processing
- Measures operational parameters such as flue gas temperature, moisture content, dynamic pressure, and static pressure in real time
- Features a high-resolution touchscreen with high sensitivity and an intuitive interface for simple operation
- Supports data storage, query, printing, and export functions
- Includes a dedicated protective carry case for lightweight portability and easy storage

Technical Indicators

Main Parameters	Parameter Range
Sampling Flow Rate	(0.2 ~ 1.0）L/min
Flue Gas Dynamic Pressure	(0 ~ 2000) Pa
Flue Gas Static Pressure	(-35 ~ ＋35) kPa
Flue Gas Temperature	(0 ~ 200)℃
Atmospheric Pressure	(50 ~ 130）kPa
Dust Concentration	(0 ~ 30）mg/m³
Flue Gas Velocity	(1 ~ 45）m/s
Sampling Probe Heating Temperature	30℃（30℃ ~ 50℃ adjustable）

Standard Configuration

Main Unit

Portable Bluetooth Printer

Power Adapter

LY- 3023Y
UV DOAS Method Flue Gas Analyzer

Overview

This integrated flue gas analyzer, developed using the thermal wet method based on UV differential absorption spectroscopy technology, is specifically designed for on-site detection and analysis of pollutant concentrations including SO_2, NO, NO_2, NH_3, CO (electrochemical), CO_2 (infrared), and O_2 (electrochemical) in emissions from stationary sources. It is particularly suitable for analyzing flue gas components and monitoring ammonia slip emissions in high-humidity environments, including boilers, flues, and industrial kilns with low-concentration emissions.

Products are widely used in environmental protection, testing companies, industrial and mining enterprises (power plants, steel plants, cement plants, sugar plants, paper mills, smelting plants, ceramic plants, boilers and kilns, as well as aluminum, magnesium, zinc, titanium, silicon, pharmaceuticals, including fertilizer, chemical, rubber, material plants, etc.), health, labor, safety supervision, military, scientific research, education and other fields.

Main Features

- It can realize the detection of oxygen content and SO_2, NO, NO_2, H_2S, CO, CO_2, NH_3 and other harmful gases in fixed pollution sources
- Using ultraviolet differential absorption spectroscopy technology, it has strong anti-interference ability and is not affected by moisture and dust
- The thermal wet method is used to measure the whole process with heat supply to avoid the absorption loss of liquid water to the detection gas and ensure the measurement accuracy
- Real-time measurement shows the flue gas humidity, and displays and records the dry base concentration and wet base concentration
- The pressure pipe is used to measure dynamic pressure, static pressure, smoke temperature and flow rate
- Built-in lithium battery to meet the needs of field sampling
- The integrated design and highly integrated functions make it easy for users without complicated pipeline connections
- It has an independent hand controller and a wireless control host, which is more convenient to carry and use
- It has the function of instrument fault detection and alarm, which is convenient for users to maintain and use

Technical Indicators

Main Parameter	Parameter Range

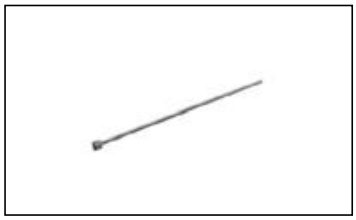
Main Parameter		Parameter Range
Flue-gas Temperature		(0 ~ 500) ℃ (scalable)
Flue gas Velocity		(1 ~ 45) m/s
Vaporous Pneumatic Pressure		(0 ~ 2000) Pa
Flue Gas Static Pressure		(-30 ~ ＋30) kPa
Atmospheric Pressure		(50 ~ 130) kPa
Flue Gas Concentration	SO_2	Low range: (0 ~ 150) μmol/mol or (0 ~ 430) mg/m^3 High range: (0 ~ 1500) μmol/mol or (0 ~ 4300) mg/m^3
	NO	(0 ~ 1000) μmol/mol or (0 ~ 1340) mg/m^3
	NO_2	(0 ~ 500) μmol/mol or (0 ~ 1030) mg/m^3
	O_2	(0 ~ 30)%
	CO (optional)	(0 ~ 4000) μmol/mol or (0 ~ 5000) mg/m^3
	CO_2 (optional)	(0 ~ 20)%
	NH_3 (optional)	(0 ~ 263) μmol/mol or (0 ~ 200) mg/m^3
	H_2S (optional, UV)	(0 ~ 200) μmol/mol or (0 ~ 300) mg/m^3
Flue Humidity		(0 ~ 40) %

Standard Configuration

Main Unit

Handheld Controller

Power Adapter



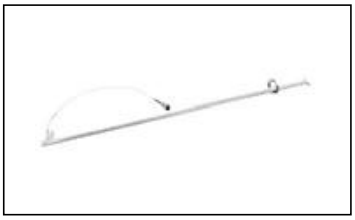
High-temperature Extension

Filter

Backpack

Optional Configuration

Tripod Stand



Gas temperature Pitot tube assembly
Can be directly nested onto the sampling probe of the UV flue gas analyzer to achieve the measurement of flue gas temperature and flow velocity

Ranging Module

LY- 3025
Portable Laser Ammonia Analyzer

- NH3 Test
- TDLAS Technology

Overview

This instrument, built around Tunable Diode Laser Absorption Spectroscopy (TDLAS) technology and utilizing a heated wet-measurement principle, is a newly developed device specifically for ammonia detection. It is suitable for monitoring ammonia slip and ammonia emissions during the desulfurization and denitrification processes in stationary pollution sources. Its primary applications include environmental monitoring, process debugging, and emission self-inspection. It is particularly suited for on-site analysis of ammonia slip and emissions in various high-moisture, low-concentration scenarios, such as boilers, flues, and industrial furnaces undergoing desulfurization and denitrification.

The product is widely used across numerous fields, including Environmental Protection, testing companies, and industrial & mining enterprises (e.g., power plants, steel plants, cement plants, sugar refineries, paper mills, smelters, ceramic factories, boilers, and furnaces, as well as aluminum, magnesium, zinc, titanium, silicon, and pharmaceutical industries, including fertilizer, chemical, rubber, and materials plants). It also finds application in Public Health, Labor, Safety Supervision, Military, Scientific Research, and Education sectors.

Main Features

- Employs Tunable Diode Laser Absorption Spectroscopy (TDLAS) for ammonia measurement, eliminating gas cross-interference.
- Utilizes a heated wet measurement method with fully heated sample lines to prevent ammonia dissolution loss, ensuring high measurement accuracy.
- Simultaneously measures flue gas parameters such as humidity and oxygen content.
- Features an integrated, highly compact design that eliminates complex tubing connections, offering true user-friendly operation.
- Supports the optional process sampling probe for measuring real-time process parameters and calculating emission rates.
- Equipped with a precision corrosion-resistant core pump that ensures stable, maintenance-free continuous operation across various conditions, and includes overload protection.
- Incorporates a built-in fault alarm system for easy maintenance and reliable operation.

Technical Indicators

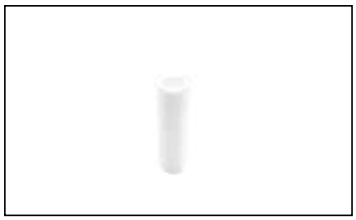
Main Parameters	Parameter Range
NH_3	（0～200）mg/m^3
O_2 (Electrochemical)	（0～30）%

Standard Configuration

Main Unit

Handheld Controller

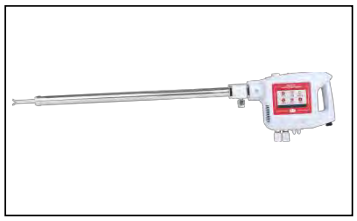
Power Adapter



Filter

Backpack

Optional Configuration



LY-1062E Multifunctional Meter
Measure parameters such as flue gas moisture content, gas flow velocity, dynamic pressure, static pressure, and flue gas temperature within the emission ducts of stationary pollution sources

LY- 3072
Intelligent Dual-channel Flue Gas Sampler (Model 23)

Overview

The instrument adopts the solution absorption method to collect harmful gases such as SO_2 and NO_x from pollution sources. It is widely used in various fields including environmental protection, testing companies, and industrial and mining enterprises (such as power plants, steel plants, cement plants, sugar mills, paper mills, smelters, ceramic factories, boilers, and kilns, as well as aluminum, magnesium, zinc, titanium, silicon, and pharmaceutical industries, including fertilizer, chemical, rubber, and material plants). Additionally, it finds applications in public health, labor, work safety, military, scientific research, and education.

Main Features

- Dual-channel flexible sampling, with each channel independently controllable.
- Simultaneously measures dynamic pressure, static pressure, total pressure, flue gas temperature, flue gas velocity, flue gas flow rate, and standard dry flow rate.
- Excellent flow stability and high load capacity ensure long-term and reliable operation.
- Features functions for measured data storage, query, printing, and export.
- Built-in lithium battery allows for extended operation without an external power source.
- The optimized user interface is more aligned with user habits.

Technical Indicators

Main Parameters	Range
Sampling Flow Rate	(0.2 ~ 1.5) L/min
Inlet Temperature	(—55 ~ 125)℃
Inlet Pressure	(—25 ~ 0)kPa
Atmospheric Pressure	(50 ~ 130)kPa
Flue Gas Dynamic Pressure	(0 ~ 2000)Pa
Flue Gas Static Pressure	(-30 ~ +30)kPa
Flue Gas Temperature	(0 ~ 500)℃
Flue Gas Velocity	(1 ~ 45)m/s

Standard Configuration

Main Unit

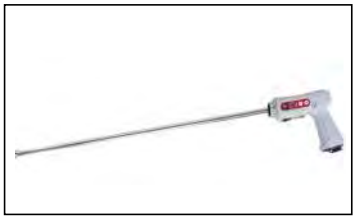
Absorption Bottle Holder

三脚架

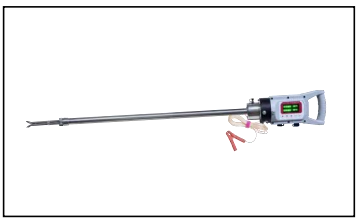
Power Output Cable

Drying Tube

Optional Configuration



LY-1062C
Resistance-capacitance Flue Gas Moisture Detector
Measure the moisture content in flue gas from stationary pollution sources.



LY-1080E
Flue Gas Multi-function Preprocessor
Filtering and heating of flue gas

LY-1082A Type S Pitot Tube
Determine flue gas velocity

Portable Bluetooth Printer

LY- 3030B

Integrated Exhaust Gas Dioxins/Heavy Metals/Organic Compounds Analyzer

- **Integrates various sampling methods:**

  Exhaust Gas Dioxins/Heavy Metals/Organic Compounds

- **Integrates various flue gas sampling and analysis methods:**

  EC; UV-DOAS; NDIR; Solution Absorption

Overview

This instrument is used in conjunction with the Lonying Multi-functional Sampling Probe for Exhaust Gas Dioxins/Heavy Metals/Organic Compounds to collect samples of pollutants such as dioxins, heavy metals, and organic compounds from exhaust gas pollution sources. Dioxins sampling is applicable for: Hazardous waste incineration facilities; Medical waste incineration treatment facilities; Cement kilns co-processing hazardous waste; Environmental protection acceptance checks for completed construction projects; Dioxins monitoring during supervisory inspections; Dioxins emission detection in municipal solid waste incineration facilities; Other applicable scenarios. Heavy metals sampling is applicable for: Exhaust gas detection in non-ferrous metal smelting industries; Exhaust gas detection in lead-acid battery manufacturing; Exhaust gas detection in leather and leather product industries; Exhaust gas detection in chemical raw materials and chemical products manufacturing; Other stationary pollution sources emitting heavy metals in exhaust gases.

Main Features

- When paired with a sampling probe, it can complete the collection of dioxins, heavy metals, and organic compounds from the exhaust gas of stationary pollution sources.
- It performs isokinetic tracking sampling, monitors temperature and pressure in real-time, automatically regulates flow, maintains stable flow rates, and has a fast response time.
- It monitors operational parameters such as dynamic pressure, static pressure, flue gas temperature, and flow velocity in real-time.
- Equipped with potentiostatic electrolysis method flue gas sensors, it allows for the autonomous selection and configuration of sensors as needed to achieve simultaneous measurement of multiple gases.
- It features a high-brightness display and strong environmental adaptability; the operation interface is simple and user-friendly, with intuitive data presentation.
- It possesses a self-diagnostic function that can test the instrument's functions and prompt for faults, facilitating convenient maintenance and use for the user.
- An internal lithium battery pack is available as an optional accessory, or it can be powered by an AC power adapter.
- The high-efficiency sampling pump is corrosion-resistant, maintenance-free during continuous operation, and adaptable to various working conditions.

- Depending on requirements, it can be paired with various types of sampling probes to achieve functions such as flue gas analysis and flue gas sampling.

Technical Indicators

Technical Indicators for Pollutant Sampling	
Main Parameters	**Range**
Sampling Flow Rate	(0 ~ 120) L/min
Flue Gas Dynamic Pressure	(0 ~ 2000) Pa
Flue Gas Static Pressure	(-30 ~ ＋30) kPa
Inlet Pressure	(-60 ~ 0) kPa
Inlet Temperature	(-55 ~ 125)℃
Atmospheric Pressure	(50 ~ 130） kPa
Flue Gas Temperature	(0 ~ 500)℃ extendable
Dry-bulb and Wet-bulb Temperature (Optional)	(0 ~ 100)℃
Maximum Sampling Volume	99999.9 L

Flue Gas Analysis Technical Parameters		
Main Parameters		**Range**
Electrochemical	O_2 (Optional)	(0 ~ 30)%
	SO_2 (Optional)	(0 ~ 5700)mg/m^3
	NO(Optional)	(0 ~ 1300)mg/m^3
	NO_2 (Optional)	(0 ~ 200)mg/m^3
	CO (Optional)	(0 ~ 5000)mg/m^3
	H_2S (Optional)	(0 ~ 300)mg/m^3
Non-Dispersive Infrared (NDIR)	CO_2 (Optional)	(0 ~ 20) %

Solution Absorption Sampling Specifications (Optional)	
Main Parameters	**Range**
Flue Gas Sampling Flow	（0.1~2.0）L/min
Inlet Pressure	（-30~0） kPa
Inlet Temperature	（-55~125）℃

Standard Configuration

Main Unit

Portable Bluetooth Printer

High-Efficiency Steam-Water Separator

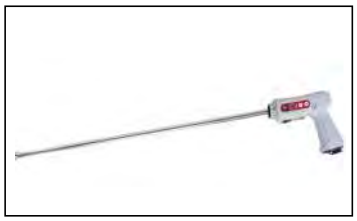
Power Adapter

Backpack

Optional Configuration

LY-1086C
Dioxins/Heavy Metals/Organic Compounds Analyzer

LY-1061A
Flue Gas Moisture Detector
Measure the moisture content in flue gas
from stationary pollution sources.



LY-1062C
Resistance-capacitance Flue Gas Moisture Detector
Measure the moisture content in flue gas from stationary pollution sources.

LY-1080C Flue Gas Preprocessor
Pretreatment before determining the harmful gas components from stationary pollution sources

Lithium Battery Group

Battery Power Adapter
25.2V/2A

LY-9030
Wireless Flow Velocity Monitoring Module

02

VOLATILE ORGANIC COMPOUNDS (VOCS) MONITORING

Background Information

Volatile Organic Compounds (VOCs) possess strong carcinogenic, teratogenic, and reproductive toxicities, making them a category of characteristic pollutants prioritized for monitoring and control both domestically and internationally. They originate from a wide range of sources, primarily falling into three categories: industrial stationary sources, motor vehicle exhaust emissions, and daily life activities.

Solution

Our VOCs monitoring products are designed for collecting VOC samples from waste gas pollution sources.

LY- 2061
Dual-Channel VOCs/Gas Sampler

- **Ultra small size**
- **Dual-Channel Sampling**
- **Dual flow range design**
- **Multi-function capability of a single unit**

Overview

This instrument is a versatile sampling device capable of collecting VOCs from ambient air and stationary pollution sources via solid-phase adsorption, as well as performing solution absorption-based sampling for various environmental pollutants such as SO_2 and NOx in ambient or indoor air. It supports multi-condition and multi-gas sampling, catering to the diverse and customized needs of different clients.

The instrument is suitable for environmental protection, public health, occupational safety, emergency management, military, scientific research, education, and other sectors. It can be used for sampling VOCs in ambient air and stationary pollution sources, as well as for routine or emergency monitoring of gaseous substances.

Main Features

- Versatile and multi-purpose, it adopts a dual-flow range design. The flow ranges can be freely combined, making it suitable for multi-condition and multi-gas sampling.
- Equipped with a unique Lonying system, it enables various sampling modes such as instant sampling, timed sampling, and interval sampling.
- Sampling can be set based on either time or volume, meeting the diverse needs of different customers.
- It is compatible with adsorption tubes of various specifications, different packing materials, and lengths, and can also be used for activated carbon tube sampling.
- Utilizing an original flow control algorithm, it automatically compensates for flow changes caused by voltage fluctuations, resistance, and temperature variations, precisely controls minute flows, and greatly enhances flow stability and accuracy.
- Sampling can be performed using three flow modes: standard flow at 0°C, standard flow at 20°C, or actual flow, catering to different customer requirements.
- The use of an air-ducted ambient temperature detection module significantly reduces ambient temperature measurement errors, further improving flow accuracy.
- Featuring a wide-temperature, high-brightness TC-OLED display, it operates normally in severely cold regions. The interface is simple and clear, providing an excellent human-computer interaction experience.
- The exterior employs an L-Ergo design, making it compact, lightweight, and easy to carry, offering significant advantages for fieldwork.
- With an enhanced external waterproof design, it effectively protects against rain and snow during outdoor sampling.

- It provides a USB interface for exporting sampling data files and also supports upgrading the instrument's mainboard program.
- A built-in Bluetooth module interface allows connection to a portable Bluetooth printer for easy access to real-time data.
- A reserved IoT module interface enables the expansion of networking capabilities.
- Equipped with a built-in electronic tag, it can work with the instrument inventory management platform software to achieve intelligent instrument management.

Technical indicators

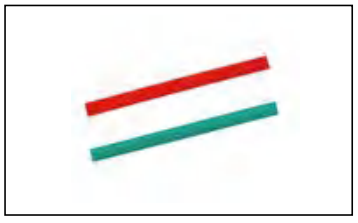
Parameter	Range	Resolution	Accuracy
Sampling Flow Rate	(10 ~ 500) mL/min	0.1mL/min	Within±5%
(Freely Combinable)	(0.2 ~ 2) L/min	0.01 L/min	Within±2%
Inlet Temperature	(-55 ~ 125) ℃	0.1℃	Within±2.5℃
Inlet Pressure	(-20 ~ 0) kPa	0.01kPa	Within±2.5%
Atmospheric Pressure	(50 ~ 130) kPa	0.01kPa	Within±500Pa
Flow Repeatability	/	/	Within2%
Flow Stability	/	/	Within5%
Sampling Time Setting	Adjustable within 999min	1min	Within±0.1%
Sampling Volume Setting	Adjustable within 9999mL	1mL	Within±2%
Load Capacity	Capable of overcoming resistance ≥ -20 kPa at 200 mL/min flow rate		
Data Storage	5000 sets		
Main Unit Weight	≤2.5Kg		
Dimensions (L × W × H)	248mm×130mm×140mm		
Power Supply	Built-in lithium battery (14.8 V / 2.6 Ah) or external 20 V / 3.25 A power adapter		
Operating Time	Not less than 10 hours (no load, flow rate 200 mL/min)		
Standby Time	Not less than 13 hours		
Charging Time	Approx. 3 hours		
Power Consumption	≤10W		

Standard Configuration


Main Unit


Power Adapter


Drying Tube

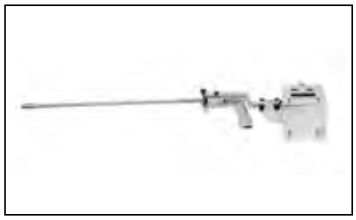

Connecting Tube


Tripod Stand


Sorbent Tube Holder

Absorption Bottle Holder

Optional Configuration



LY-1086F
Sorbent Tube Sampling Probe
for Waste Gas VOCs

Portable Bluetooth Printer

Sorbent Tube

LY- 2080B
Intelligent Vacuum Chamber Gas Sampler

Overview

This instrument utilizes the passive sampling method to collect various gases, making it particularly suitable for sampling Volatile Organic Compounds (VOCs). It offers advantages such as simple operation and excellent sealing performance. Compared to traditional gas samplers, it provides improved monitoring efficiency and sample quality for VOCs. It is applicable for the collection of various air samples by departments engaged in environmental protection, public health, occupational safety, security inspection, military, scientific research, and education.

Main Features

- The sampling bag passive sampling method ensures the collected sample is free from process contamination
- It has passed the national intrinsic safety explosion-proof certification, holding an Ex ib Ⅱ A T3 Gb explosion-proof certificate.
- It offers multiple sampling modes to meet various sampling control requirements.
- It features real-time pressure monitoring and automatic protection when the gas bag is fully filled.
- The entire unit is produced using molds, resulting in an aesthetically pleasing, lightweight, and portable design.
- It is equipped with a rechargeable high-performance lithium battery that supports extended sampling duration.
- It features an automatic gas bag cleaning function and comes with an adjustable-height tripod stand.
- It has a wide-temperature LCD display with a Chinese menu interface, making operation simple and providing a user-friendly human-machine interface.
- It incorporates a specially developed sampling pump with a long lifespan and high reliability, featuring graded control of sampling speed.
- With a built-in electronic tag (RFID), it can integrate with instrument inventory management platform software to enable intelligent instrument management.

Technical indicators

Main Parameter	Parameter Range	Resolution

Main Parameter	Parameter Range	Resolution
Sampling Duration	Adjustable within 99h 59min	1 min
Timed Sampling	24-hour system	
Sampling Speed	1 ~ 4 (grades)	
Cleaning Cycles	1 ~ 4 (times)	
Applicable Bag Volume	1L ~ 3L	
Pressure	Sampling & Suction: （-1 ~ -6）kPa (Adjustable)	0.01kPa
	Cleaning & Exhaust: （+1 ~ +6）kPa (Adjustable)	
	Cleaning & Suction: （-1 ~ -6）kPa (Adjustable)	
	Limit & Suction: -8kPa (Protection Pressure)	
Ambient Temperature	(-55 ~ 125)℃	0.1℃
Dimensions (L×W×H)	395mm×170mm×270mm	
Weight (Main Unit)	2.0kg	
Explosion-Proof Type	Intrinsically Safe	
Explosion-Proof Mark	Ex ib ⅡA T3 Gb	
Power Supply	Lithium battery (11.1V/2.6Ah) or external 12.6V/1A Lithium battery Charger	
Continuous Operation Time	Not less than 10 hours	
Standby Time	Not less than 15 hours	
Charging Time	Approx. 3 hours	

Standard Configuration

Main Unit

Tripod Stand

Power Charger

1L Sampling Bag

Optional Configuration

Oil and Gas Emissions Detection and Sampling Head Kit

LY- 2083
High Capacity Vacuum Chamber Gas Sampler (Model 25)

Overview

This instrument utilizes the passive sampling method to collect various gases, particularly suitable for sampling volatile organic compounds. It offers advantages such as simple operation and excellent airtight performance. Compared to traditional gas samplers, it improves monitoring efficiency and quality for volatile organic compounds. It can be used by environmental protection, health, labor, public security, military, scientific research, education, and other departments for the collection of various gas samples.

Main Features

- The system employs a vacuum negative pressure method to collect gaseous samples without direct contact with the sampler, achieving zero cross-contamination during sampling.
- The transparent design of the vacuum chamber allows real-time monitoring of the gas bag filling status.
- It features simple operation and real-time display of sampling parameters.

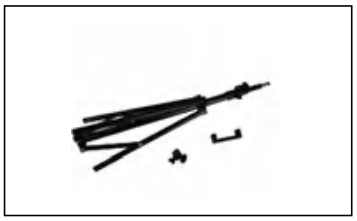
Technical indicators

Main Parameters	Parameter Range
Flow Rate	Continuous sampling: (10 ~ 100) mL/min Rapid sampling: Maximum 4.0 L/min
Chamber Pressure	(-20 ~ 20）kPa
Inlet Pressure	(-40 ~ 0）kPa
Atmospheric Pressure	(50 ~ 130）kPa
Atmospheric Temperature	(-40 ~ 85) ℃
Operating Power Supply	12V/2.6AhBuilt-in Lithium Battery
Operating Time	≥ 8 hours
Main Unit Dimensions (L × W × H)	265 mm×185 mm×70 mm

Standard Configuration

Main Unit

Vacuum Chamber



Selfie Sticker

1L Sampling Bag

(PTFE) Tube

Power Charg

Optional Configuration

Heated Hose

Portable Bluetooth Printer

LY-1080C Flue Gas Preprocessor
Pretreatment before determining the harmful gas components from stationary pollution sources

LY- 2083
High Capacity Vacuum Chamber Gas Sampler (Model Basic)

Overview

This instrument utilizes the passive sampling method to collect various gases, particularly suitable for bag sampling of volatile organic compounds (VOCs). It offers advantages such as simple operation and reliable sealing performance. It can be used by environmental protection, health, labor, safety inspection, military, scientific research, education, and other departments for the collection of various gas samples.

Main Features

- Passive sampling with gas bags ensures contamination-free sample collection.
- Compatible with a wide range of gas bag capacities, accommodating multiple models.
- The main unit and vacuum chamber feature a separate design for more flexible configuration.
- Equipped with a high-load, large-flow sampling pump allowing adjustable flow rates.
- Built-in rechargeable high-capacity lithium battery supports extended operation.

Technical indicators

Main Parameter	Parameter Range
Applicable Gas Bag Volume	1L ~ 12L
Weight (Complete Unit)	7.5 Kg
Sampling Flow Rate	(0 ~ 7) L/min
Dimensions of Sampling Case (L×W×H)	460mm × 360mm × 330mm
Pump Loading Capacity	≥ 4 L/min (at a resistance of 15 kPa)
Ambient Temperature	(-20 ~ 50) °C
Ambient Humidity	(0 ~ 95) %RH
Power Supply	Built-in lithium battery (22.2V / 5.2Ah) or external 25.2V / 2A lithium battery charger
Continuous Operation Time	Not less than 7 hours
Standby Time	Not less than 5 days
Charging Time	Approx. 3 hours

Standard Configuration

Main Unit

Vaccum Chamber

Power Charger

1L Sampling Bag

Optional Configuration

Tripod Stand

Heated Hose

LY-1080C Flue Gas Preprocessor
Pretreatment before determining the harmful gas components from stationary pollution sources

LY- 3033
Portable THC Analyzer FID

Overview

This gas detector employs the FID principle for VOCs fugitive emission monitoring. It enables rapid and accurate identification of leaks in various pipe valves, discharge ports, and enclosed facility systems. By helping users detect leaks promptly for timely repairs, it ensures smooth operation of equipment and related production activities. Furthermore, it assists environmental agencies in enhancing monitoring and management of VOCs fugitive emissions from enterprises.

The instrument has been certified by the authority department with explosion-proof certificate, and has explosion-proof safety, so it can be used and operated in the environment requiring explosion-proof.

Main Features

- The instrument has been certified by the authority department with explosion-proof certificate, and has explosion-proof safety, so it can be used and operated in the environment requiring explosion-proof
- High sensitivity, multi-range hydrogen flame ionization detector
- Explosion-proof display controller, wireless control, easy to use
- The main configuration is equipped with a shoulder strap, which can be carried on the back or carried diagonally for easy carrying
- Fully molded design, light weight, small size
- The optional Lonying LDAR leakage and repair data platform can realize the systematization of detection process
- It has the function of self-test, which can detect the function of the instrument and prompt the fault, so as to facilitate the maintenance and use of users

Technical indicators

Main Parameter	Parameter Range
Measuring Range	FID: (1.0 ~ 50,000) ppm methane PID: (0.5 ~ 2,000) ppm isobutylene
Response Time	FID: ≤ 3.5 s to reach 90% of final value using 10,000 ppm methane PID: ≤ 3.5 s to reach 90% of final value using 500 ppm isobutylene
Repeatability	FID: ±2% at 500 ppm methane PID: ±2% at 100 ppm isobutylene
Accuracy	FID: ±10% of reading or ±0.1 ppm, whichever is greater, from 1.0 to 10,000 ppm PID: ±20% of reading or ±0.5 ppm, whichever is greater, from 0.5 to 2,000 ppm
Linearity Range	Full scale
Warm-up Time	< 20 min

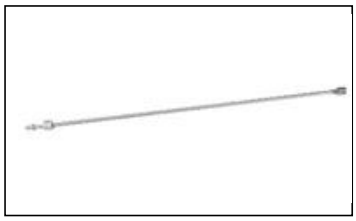
Main Parameter	Parameter Range
Lower Detection Limit	FID: 0.5 ppm methane PID: 0.5 ppm isobutylene
Operating Conditions	Ambient temperature: (-10 ~ 50) °C; Relative humidity: ≤ 90%; Atmospheric pressure: (86 ~ 106) kPa
Sampling Flow Rate	Approx. 0.8 L/min
Gas Duration	≥ 10 h
Battery Life	≥ 10 h
Communication	Bluetooth or Wi-Fi
Power Consumption	< 4 W
Dimensions (L×W×H)	258 mm × 191 mm × 82 mm
Weight	< 3.1 kg

Standard Configuration

Main Unit

Sampling Probe Assembly

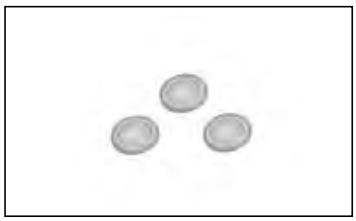
Power Charger



Extension Tube

Gas Charging Line

Stylus Pen



Moisture Removal Filter

Optional Configuration

Portable Bluetooth Printer

LY- 3035
Portable CH_4 and NMHC Analyzer FID

Type A： Catalytic Oxidation + FID

Determination of THC, CH_4 and NMTHC

Type B： Gas Chromatography Separation + FID

Determination of THC, CH_4 and Benzene series substances

- **Integrated sampling system**
- **Fully heated path**
- **Automatic continuous sampling**
- **Continuous monitoring**

Overview

Type A: This instrument is a Total Hydrocarbons (THC), Methane (CH_4), and Non-Methane Total Hydrocarbons (NMTHC) monitor based on catalytic oxidation and FID technology. It is designed to measure total hydrocarbons and methane in ambient air and stationary pollution source exhaust gases, featuring automatic continuous sampling, real-time monitoring, and rapid response. The entire sampling and analysis system is maintained under controlled high-temperature conditions, effectively preventing sample condensation or loss. The catalytic oxidation oven converts organic compounds other than methane into carbon dioxide and water, enabling the accurate determination of THC, CH_4 and NMTHC.

Type B: This instrument is a Total Hydrocarbons (THC), Methane (CH_4), Non-Methane Total Hydrocarbons (NMTHC), and Benzene Series Substances monitor based on Gas Chromatography (GC) and Flame Ionization Detection (FID) technology. It is designed to measure THC, CH_4, and Benzene Series Substances (including Benzene, Toluene, Ethylbenzene, m/p-Xylene, o-Xylene, Styrene, and Isopropylbenzene) in both ambient air and stationary pollution source exhaust gases. The system features automatic continuous sampling and real-time monitoring with fast response. The entire sampling and analytical pathway is maintained under controlled, elevated temperature conditions to effectively prevent sample condensation or loss.

The instrument has been certified by the authority department with explosion-proof certificate, and has explosion-proof safety, so it can be used and operated in the environment requiring explosion-proof.

Main Features Type A

- It is equipped with a built-in solid-state metal hydride hydrogen storage cylinder. The plug-in design is safe and reliable, ensures normal operation at low temperatures, and provides over 8 hours of continuous use
- It features a built-in carrier gas cylinder that, with a single fill, allows for over 8 hours of continuous operation.
- The instrument employs a fully molded design, resulting in a compact size, light weight, and excellent portability.
- It incorporates a built-in lithium battery, enabling extended operation without an external mains power

supply.

- It includes a built-in oxygen sensor for the direct measurement of oxygen content in flue gas.
- The built-in wireless module allows it to pair with devices such as the Lonying Model 1062B Capacitive-Resistive Flue Gas Moisture Multi-Function Detector and the Lonying Model 3060-A Integrated Flue Gas Flow Velocity Monitor for real-time monitoring of flue gas conditions.
- It features a uniquely designed heated hose and an integrated hybrid electrical connector, making operation more convenient.
- The built-in electronic tag (RFID) enables intelligent instrument management by integrating with inventory management platform software.

Main Features Type B

- Employs the principle of Gas Chromatography (GC) Separation + Flame Ionization Detection (FID) for measuring total hydrocarbons and methane in ambient air and stationary source emissions.
- Equipped with a wireless display controller for convenient remote operation and ease of use
- Fully molded design, compact and lightweight, offering high portability.
- Built-in lithium battery supports extended operation without external AC power supply.
- Compatible with process sampling probes for real-time monitoring of flue gas conditions.
- Equipped with quick-connect heated sample lines to ensure the entire sample gas path remains heated.

Technical indicators

Main Parameter	Parameter Range
Measuring Range	NMHC: (0 ~ 30,000) mg/m³ Type B: Benzene series substances 0-25ppm
Analysis Cycle	NMHC:1 min; Type B: Benzene series substances≤7min, ≤10min (tailored)
Sampling Probe Temperature	(120 ~ 180) °C
Repeatability	RSD ≤ 2%
Detection Limit	≤ 0.07 mg/m³
Conversion Efficiency	≥ 99.9% (propane equivalent)
Warm-up Time	≤ 20 min
Zero Drift	≤ 0.5% F.S. / 24h
Span Drift	≤ 1.0% F.S. / 24h
Linearity Error	≤ ± 2.0% F.S.
Oxygen Concentration (Optional)	Range（0 ~ 30）% Resolution0.1% Indication Error±5%， Repeatability：≤2%
Operating Conditions	Ambient Temp.: (-10 ~ 50) °C Relative Humidity: ≤ 90% Atmospheric Pressure: (70 ~ 106) kPa
Purge Flow Rate	Approx. 1 L/min
Gas Duration	≥ 8 h
Power Supply	DC 24V input or built-in lithium battery
Power Consumption	< 350 W
Dimensions (L×W×H)	(270 × 365 × 205) mm
Weight	Approx. 9 kg (without lithium battery) Approx. 11.5 kg (with lithium battery)

Standard Configuration

Main Unit

Display and Control Unit

Waste Gas Sampling Probe

Air Sampling Probe

Portable Bluetooth Printer

Gas Charging Line

Rotameter Assembly

Metal Hydride Hydrogen Storage Unit

Power Adapter

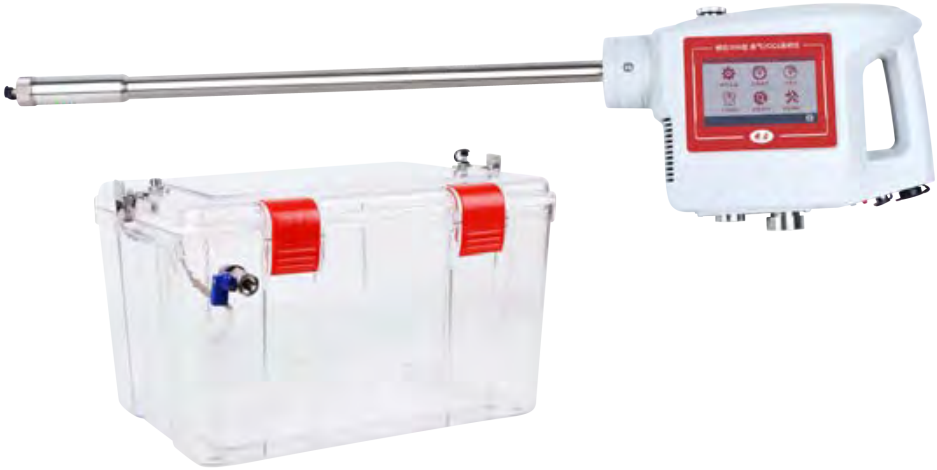
Main Unit Case

Accessory Bag

Hydrogen Pressure Regulator

LY- 3036

Vacuum Bag Sampler for Fixed Pollution Sources and Ambient Air



Overview

This instrument performs gas bag sampling of VOCs (Volatile Organic Compounds) from stationary pollution source exhaust gas. It employs a high-precision, corrosion-resistant electronic flowmeter and a built-in imported brushless diaphragm pump, ensuring precise control of micro flow rates. With excellent reliability and comprehensive functionality, it guarantees the long-term and reliable operation of the instrument.

Main Features

- Bag method is used to sample VOCs in the exhaust gas of fixed pollution sources
- It has dual pump and dual mode sampling, continuous sampling mode flow (0.1-1) L/min, and rapid sampling mode maximum suction flow of 3L/min.
- The sampling probe is integrated with the main engine for simple operation and good portability
- It has a 5.0-inch color touch display and supports input
- The sampling probe is heated throughout the whole process, and the heating temperature can be adjusted to control the temperature stably and accurately
- It has continuous sampling and rapid sampling modes
- Passive sampling method is adopted, and the sample gas does not pass through the sampling pump, so there is no process pollution
- The vacuum box is transparent and the state of the air bag can be checked at any time
- It has the function of sampling data storage, query, print and export

Technical indicators

Main parameter	Parameter range

Main parameter	Parameter range
Sampling Flow	Continuous sampling: (0.1 ~ 1.0) L/min Fast sampling and suction: up to 3.0L/min
Atmospheric Pressure	(50 ~ 130）kPa
Sampling probe heating temperature	(80 ~ 160) ℃, default 120℃
Cooling Temperature	(0 ~ 4) ℃
Bag Capacity	(1 ~ 10) L
Data Storage	10,000 sets
Load Capacity	≤15kPa
Dimension	Sampling Probe:1200*106*245mm Vacuum Chamber:430*318*260mm
Weight	≤4kg

Standard Configuration

Main Unit

Vacuum Chamber

Connection Pipe

Power Adapter

Orange Sample Bottle

Tripod Stand

Optional Configuration

Portable Bluetooth Printer

LY- 3038C
Smart VOST (VOCs) Sampler

Overview

This instrument is capable of sampling VOCs (Volatile Organic Compounds) in waste gas from stationary pollution sources using solid-phase adsorption methods, as well as conducting solution absorption-based sampling for various polluting gas components such as SO_2 and NO_x in stationary source emissions. It can also function as a flue gas pretreatment unit paired with a flue gas analyzer for concentration measurements. The product is widely used in environmental protection, testing companies, industrial and mining enterprises, public health, labor, work safety supervision, military, scientific research, education, and other fields.

Main Features

- Versatile and multi-purpose, it adopts a dual-flow range design. The flow ranges can be freely combined, making it suitable for multi-condition and multi-gas sampling.
- Compatible with three operational modes: adsorptive tube-based VOCs sampling, flue gas sampling, and flue gas pretreatment.
- Electronic flow meter ensures stable and accurate flow control.
- High-precision diaphragm pump offers strong load capacity, extended service life, and adaptability to various working conditions.
- Automatically measures ambient temperature, atmospheric pressure, gauge pressure, and gauge temperature, with converted display of standard volume/reference volume.
- Built-in large-capacity storage enables sampling data to be saved, reviewed, exported, and printed.
- Compact and lightweight design for easy portability and comfortable handheld operation.

Technical indicators

Main Parameters	Range	Resolution	Accuracy
Sampling Flow	（20~200）mL/min	0.1mL/min	Within±5%
	（0.02~1）L/min（Customizable）	0.01 L/min	Within±5%
	（0.2~2）L/min（Customizable）	0.01 L/min	Within±2%
Inlet Temperature	（-55~125）℃	0.1℃	Within±2℃
Inlet Pressure	（-40~0）kPa	0.01kPa	Within±2.5%
Atmospheric Pressure	（50~130）kPa	0.01kPa	Within±500Pa

Main Parameters	Range	Resolution	Accuracy
Sampling Duration Setting	Adjustable within 9999 min	1min	Within±0.1%
Sampling Volume Setting	Adjustable within 999999 mL	1mL	Within±2%
Heating Temperature	120℃（80℃ ~ 160℃ adjustable）	1℃	Within±10℃
Refrigeration Temperature	（0 ~ 5）℃	1℃	Within±2℃
Load Capacity	Capable of overcoming a resistance greater than -20 kPa at a flow rate of 50 mL/min		
Data Storage	5000 sets		
Sampling Probe Length	Standard: 1.2 m (Effective length 0.8 m); Customizable		
Power Supply	DC 24V, 10A		
Weight (Main Unit)	3.5 kg		

Standard Configuration


Main Unit


Power Adapter


Tripod Stand


PP Bottle

Optional Configuration


Portable Bluetooth Printer


Sorbent Tube


Absorption Bottle Holder


Anti-Suckback Drying Tube


Connection Tube

LY- 3039

Photoionization Gas Chromatograph (GC-PID) Monitor

Overview

This instrument is capable of sampling VOCs (Volatile Organic Compounds) in waste gas from stationary pollution sources using solid-phase adsorption methods, as well as conducting solution absorption-based sampling for various polluting gas components such as SO_2 and NO_x in stationary source emissions. It can also function as a flue gas pretreatment unit paired with a flue gas analyzer for concentration measurements. The product is widely used in environmental protection, testing companies, industrial and mining enterprises, public health, labor, work safety supervision, military, scientific research, education, and other fields.

Main Features

- Versatile and multi-purpose, it adopts a dual-flow range design. The flow ranges can be freely combined, making it suitable for multi-condition and multi-gas sampling.
- Compatible with three operational modes: adsorptive tube-based VOCs sampling, flue gas sampling, and flue gas pretreatment.
- Electronic flow meter ensures stable and accurate flow control.
- High-precision diaphragm pump offers strong load capacity, extended service life, and adaptability to various working conditions.
- Automatically measures ambient temperature, atmospheric pressure, gauge pressure, and gauge temperature, with converted display of standard volume/reference volume.
- Built-in large-capacity storage enables sampling data to be saved, reviewed, exported, and printed.
- Compact and lightweight design for easy portability and comfortable handheld operation.

Technical indicators

Main Parameters	Parameter Range
Detection Limit	0.1 mg/m³ (Benzene)
Linear Range	10^5
Zero Drift	< 1% F.S. / 24H
Span Drift	< 1% F.S. / 24H
Repeatability	≤ 1%
Power Supply	Built-in lithium battery, 4-hour endurance
Weight	5 kg
Dimensions (L×W×H)	(400 × 130 × 315) mm

LY- 3040
Direct-Reading Oil Fume Detector

Overview

This instrument is primarily used for detecting the oil fume emission concentration in flues and chimneys. It features stable performance, user-friendly operation, compact portability, and steady flow rate, allowing for on-site direct measurement of oil fume-related data, which significantly reduces labor intensity. It is suitable for measuring oil fume concentration from stationary pollution sources, as well as flue gas parameters such as temperature, dynamic pressure, and static pressure, thereby enabling the assessment of organized oil fume emission concentrations.

Main Features

- It employs the laser scattering method for real-time monitoring of oil fume emission concentration in flues and chimneys. The fully automatic measurement ensures high detection accuracy and good data repeatability, eliminating the need for cumbersome manual sampling and analysis procedures.
- The sampling probe is heated along its entire length, effectively reducing oil fume condensation and adsorption.
- The main gas path utilizes a PTFE (Polytetrafluoroethylene) tube, which can be easily replaced, effectively minimizing the adsorption of the measured gas.
- It enables real-time measurement of flue gas temperature, moisture content, and other operating condition parameters.
- The oil fume sensor features a modular design, allowing for sensor replacement without disassembling the instrument.
- It is equipped with a high-resolution touchscreen that is highly responsive, features an intuitive interface, and is simple to operate.
- It offers large-capacity data storage, capable of storing up to 8000 data files.
- It comes with a built-in lithium battery and has a dedicated battery compartment for easy replacement.
- It supports both AC and DC power supply. The power adapter serves the dual function of supplying power and charging the battery.
- It incorporates a Bluetooth high-speed, low-noise micro thermal printer, supporting both wireless Bluetooth and wired printing modes for easy access to real-time data.
- It provides a USB port for exporting data files and also supports instrument software upgrades.
- It features a detachable transparent filter observation window for convenient filter cartridge replacement.
- The replaceable Pitot tube design effectively reduces maintenance costs.
- It supports various sampling modes including single sampling and continuous sampling. Parameters like interval time and number of cycles can be customized for easy monitoring task setup.
- A dedicated protective case is included as standard, making the entire unit more portable.
- The built-in electronic tag (RFID) enables intelligent instrument management by integrating with an inventory management platform software.

Technical indicators

Main Parameters	Range	Resolution	Accuracy
Sampling Flow Rate	(0.2 ~ 1.0) L/min	0.1 L/min	Not exceeding ±2%
Sampling Duration	(1 ~ 99) min	1 min	Not exceeding ±0.2%
Oil Fume Measuring Range	(0 ~ 30) mg/m^3	0.1 mg/m^3	Oil Fume Concentration • (≤ 4.0 mg/m^3): ≤ ±0.2 mg/m^3 • (> 4.0 mg/m^3): ≤ ±5% F.S.
Dynamic Pressure	(0 ~ 2000) Pa	1 Pa	Not exceeding ±1% F.S.
Static Pressure	(-35 ~ +35) kPa	0.01 kPa	Not exceeding ±1% F.S.
Atmospheric Pressure	(50 ~ 130) kPa	0.1 kPa	Not exceeding ±500 Pa
Flue Gas Temperature	(0 ~ 200) °C	0.1 °C	Not exceeding ±3 °C
Moisture Content	(0 ~ 40) %	0.01%	Absolute error not exceeding ±2.0%
Flow Velocity	(5 ~ 45) m/s	0.1 m/s	Not exceeding ±5%
Operating Temperature	(-10 ~ +40) °C		
Power Supply	Built-in lithium battery (24V/3Ah) or DC 24V input (via power adapter)		
Battery Operating Time	Approx. 2.5 hours		
Battery Standby Time	Not less than 15 hours		
Battery Charging Time	Approx. 2 hours		
Dimensions	1200mm × 200mm × 105mm (Sampling probe length: 800mm)		
Weight (Main Unit)	Approx. 3.0 kg		

Standard Configuration

Main Unit

Power Adapter

Portable Bluetooth Printer

LY- 3062
Duct Flow Velocity Monitor

Overview

This instrument is designed based on the Pitot tube flowmeter principle and is capable of measuring the cross-sectional average flow velocity. The entire unit features an explosion-proof design, making it suitable for measuring parameters such as gas flow velocity, flow rate, dynamic pressure, static pressure, and temperature inside ducts under both conventional and hazardous (flammable and explosive) operating conditions.

Main Features

- It is used to measure the cross-sectional average flow velocity in ducts.
- It can simultaneously display parameters such as dynamic pressure, static pressure, total pressure, temperature, flow velocity, and flow rate inside the duct.
- The entire unit features an explosion-proof design, allowing for use in both conventional and hazardous (flammable and explosive) environments.
- The pressure tapping tube can be switched to tubes of different lengths to accommodate various duct sizes.
- It provides a USB port for exporting collected data files.
- The built-in Bluetooth module allows for connection to a portable Bluetooth printer for easy access to real-time data.
- It is equipped with a built-in explosion-proof lithium battery, enabling extended operation without an external power source.

Technical indicators

Main Parameters	Range	Resolution	Accuracy
Flow Velocity	(2 ~ 5) m/s	0.1m/s	Within±10%
	(5 ~ 20) m/s	0.1m/s	Within±5%
Atmospheric Pressure	(50 ~ 130) kPa	0.01 kPa	Within ±500 Pa
Dynamic Pressure	(0 ~ 1200) Pa	1 Pa	Within ±1.5% F.S.
Static Pressure	(-30 ~ +30) kPa	0.01 kPa	Within ±1% F.S.
Measured Temperature	(-20 ~ 50) °C	0.1 °C	Within ±3 °C
Data Storage	9999 sets		
Power Consumption	< 3 W		
Power Supply	Built-in 7.4 V explosion-proof lithium battery		

Main Parameters	Range	Resolution	Accuracy
Weight (Main Unit)	Approx. 1.3 kg		
Continuous Operation Time	Not less than 24 hours		
Standby Time	Not less than 25 hours		
Charging Time	Approx. 3.5 hours		
Explosion-Proof Mark	Ex ib IIB T4 Gb		

Standard Configuration

Main Unit

Power Adapter

Grounding Cable

Butt Weld Flange

Optional Configuration

Portable Bluetooth Printer

LY- 3233
ATEX Cooled OGI Camera

Overview

This instrument utilizes a high-precision cooled infrared detector, enabling remote non-contact infrared imaging. It is primarily used for VOC gas leakage detection, allowing for rapid identification and localization of leakage points. The instrument is certified with an explosion-proof certificate from authorities. It has explosion-proof safety and can be used and operated in explosion-proof environments.

Main Features

- The instrument is explosion-proof certified (with a rating not less than Ex ic nC op is IIC T6 Gc) and approved for use in environments requiring explosion-safe operation.
- It incorporates a high-precision cooled infrared detector for high-resolution imaging.
- Equipped with laser indication and laser range finding function，with the distance value displayed on the screen.
- Supports manual, electric, and automatic focusing modes.
- Features a rotatable handle for easy multi-angle observation.
- Offers multiple imaging modes including IR, visible light, picture-in-picture, and partial magnification, along with an enhanced mode for trace gas leak detection with clearer imaging.
- Chinese operation interface with both touch screen and physical button control.
- Equipped with positioning, recording, and voice annotation functions, it is convenient for supervising law enforcement and collecting evidence on site.
- Provides interfaces such as HDMI, memory card and Type-C.
- Capable of adapting to hydrogen flame ionization detector for gas concentration analysis, can synchronize with the equipped detector through wireless transmission, and display real-time gas concentration values on the same screen

Technical indicators

Main Parameter	Parameter Range
Minimum Focus Distance	≤0.5m
Camera Lens	The standard lens is 14.5° x 10.8°, and other lenses can be customized
Digital Zoom	Continuous zoom (1.0X ~ 32.0X)
Thermal Sensitivity (NETD)	≤10mK@25℃
Frame Rate	30Hz
Detector	The refrigerated (T2SL) type II superlattice detector, resolution of 320 x 256
Working Band	（3.2 ~ 3.5）μm
Start-up Time	≤5min
Measuring Temperature Range	（-20 ~ +350）℃
Temperature Measurement Accuracy	±1°C (below 100 °C), ±2% (> 100 °C)
Temperature Measurement Mode	Maximum temperature, minimum temperature, central temperature; can track the maximum temperature, Support movable points, lines, and polygon areas, where the highest and lowest temperatures can be set within the area
Temperature Measurement Correction	Radiation rate, ambient temperature, ambient humidity, distance, atmospheric transmittance correction
Laser Indication	Level 2, wavelength 635nm, red laser, power 1mw
Laser Ranging	It has the function of distance measurement, the distance is more than 1.5km, and the distance value can be displayed on the screen
Touch Screen	Rotatable color touch display 5.5 inches (1920 x 1080 pixels)
Viewfinder	OLED (1920 x 1080 pixels)
Visible Light	Built-in 16 megapixel visible light camera
Color Palettes	There are 12 preset color schemes such as white heat, black heat, iron red and rainbow, and 6 custom color palettes
Image Mode	Visible light mode, standard infrared mode, dual light fusion mode, edge enhancement mode
Removable Memory Card	TF card, 512G, expandable, support hot plug and unplug
Positioning	Location information can be displayed on the screen
Weight	2.6kg
Battery	The built-in lithium battery can be replaced. A single battery can be used for no less than 4 hours at normal temperature
Charge	Supports direct charging of the main unit and battery charging, and supports dual-position charging with fast charging protocol
Hand Shank	Rotatable Angle 270°
Detectable Gases	Methane, Benzene, Toluene, Xylene, Ethylbenzene, Methanol, Ethanol, Ethane, Propane, Butane, Pentane, Hexane, Heptane, Octane, Ethylene, Propylene, 1-Pentene, Isoprene, Butanone, Methyl Isobutyl (Methyl) Ketone, Methyl Isobutyl Ketone, etc

03

AMBIENT AIR MONITORING

Background Information

With the rapid development of human social activities and economic production, energy consumption simultaneously releases large amounts of waste gas into the atmosphere. The solid and liquid particles suspended in the air, with particle sizes ranging from several nanometers to one hundred micrometers, severely impact ambient air quality and endanger human health.

Solution

Our ambient air monitoring products are primarily used for sampling or monitoring harmful gases and particulate matter (TSP/PM10/PM2.5) in ambient air or pollution source exhaust gas, meeting the diverse needs of different users.

LY- 2022
Portable Odor Detector

Overview

This instrument is a high-precision device designed for detecting odor pollutants in ambient air. It can measure the concentrations of "8+1" odor substances in the standard as well as other malodorous gases, enabling effective monitoring of odor emissions. It supports comprehensive odor pollution monitoring through point, line, area, and emergency assessments.

The product is widely used in environmental protection, testing companies, industrial and mining enterprises (power plants, steel mills, cement plants, sugar refineries, paper mills, smelters, ceramic factories, boilers, and furnaces, as well as aluminum, magnesium, zinc, titanium, silicon, and pharmaceutical industries, including fertilizer, chemical, rubber, and material plants, etc.), public health, occupational safety, work supervision, military, scientific research, education, and other fields.

Main Features

- The instrument enables monitoring, tracking, and traceability of air quality.
- Portable design with compact size and light weight.
- Capable of detecting "8+1" odor substances in the standard as well as other malodorous gases.
- Equipped with a built-in sampling pump offering strong load capacity and long service life.
- Supports storage, query, printing, and export of sampling data for easy access to real-time information.
- Features a built-in high-capacity lithium battery for extended operation without external power supply.
- According to the need, various sampling probes can be matched to achieve dust sampling and flue gas monitoring.

Technical Indicators

Main Parameters		Range
Odor Concentration	OU	0~500
Ammonia	NH_3	（0 ~ 10）μmol/mol
Trimethylamine	C_3H_9N	
Hydrogen Sulfide	H_2S	
Methyl Mercaptan	CH_4S	
Dimethyl Sulfide	C_2H_6S	
Dimethyl Disulfide	$C2H_6S_2$	
Carbon Disulfide	CS_2	
Styrene	C_8H_8	
Volatile Organic Compounds	VOCs	（0 ~ 20）μmol/mol

Standard Configuration

Main Unit

Power Adapter

Stainless Steel Sampling Probe

Positioning Antenna

Optional Configuration

Positioning Antenna

LY- 2026
Handheld Gas Detector

Overview

This instrument is a high-precision device designed for detecting odor pollutants in ambient air. It can measure the concentrations of "8+1" odor substances in the standard as well as other malodorous gases, enabling effective monitoring of odor emissions. It supports comprehensive odor pollution monitoring through point, line, area, and emergency assessments.

The product is widely used in environmental protection, testing companies, industrial and mining enterprises (power plants, steel mills, cement plants, sugar refineries, paper mills, smelters, ceramic factories, boilers, and furnaces, as well as aluminum, magnesium, zinc, titanium, silicon, and pharmaceutical industries, including fertilizer, chemical, rubber, and material plants, etc.), public health, occupational safety, work supervision, military, scientific research, education, and other fields.

Main Features

- The instrument is available in explosion-proof and non explosion-proof versions for users to choose from.
- CO, CO2, formaldehyde, methane, ozone, PID and other types of sensors can be optional
- The optional laser particle sensor can detect the concentration of PM_1, $PM_{2.5}$, PM_{10} and TSP particles in real time
- The optional intake nozzle extension tube makes sampling and measurement more flexible and convenient.
- Built-in large-capacity lithium battery, portable use, quick deployment of sampling work
- Precision centrifugal pump, corrosion resistant, large and stable flow, continuous operation without maintenance, adapt to a variety of working conditions
- The instrument has large storage capacity, can be used for data storage, query, printing and export, easy to grasp real-time data
- Instrument fault alarm function, convenient for users to maintain and use
- Realize the measurement of atmospheric pressure, ambient temperature, ambient relative humidity and other parameters.
- It can set the limit value of different kinds of toxic and harmful gases independently: TWA, STEL and MAC
- Handheld, small size, light weight, easy to carry

Technical Indicators

Main parameter			Parameter range
Emergency detection module	Volatile organic compoundsPID（apolegamy）	VOCs	（0 ~ 20）μmol/mol
			（0 ~ 2000）μmol/mol
	Formaldehyde (optional)(Default pump suctionCustomizable diffusion)	HCHO	（0 ~ 2）μmol/mol
			（0 ~ 10）μmol/mol
Particle detection module	$PM_{1.0}$		（0 ~ 1000）$\mu g/m^3$
	$PM_{2.5}$		（0 ~ 1000）$\mu g/m^3$
	PM_{10}		（0 ~ 1000）$\mu g/m^3$
	TSP		（0 ~ 1000）$\mu g/m^3$
Greenhouse gas detection module	Carbon monoxide (optional)	CO	（0 ~ 1000）μmol/mol
	Carbon dioxide (optional)	CO_2	（0 ~ 5000）μmol/mol
			（0 ~ 2）%
			（0 ~ 5）%
			（0 ~ 20）%
	Methane (optional)	CH_4	（0 ~ 100）%LEL
	Ozone (optional)	O_3	（0 ~ 5）μmol/mol
Odor detection module			（0 ~ 500）OU

Standard Configuration

Main Unit

Power Adapter

Packing Case

Optional Configuration

Detection Module

Portable Bluetooth Printer

Intake Extension Tube Assembly

LY- 2027B
Portable Infrared CO/CO2 Analyzer

Overview

This instrument uses the non-dispersive infrared principle to detect the concentration of CO and CO_2 in the ambient air. It can be used for the measurement of CO and CO_2 concentration in the ambient air monitoring, public places, workplaces, labor protection, civil air defense system, epidemic prevention and health, tunnels and other occasions, as well as for the rural environmental air quality monitoring and online monitoring instrument comparison.

Main Features

- The instrument enables monitoring, tracking, and traceability of air quality.
- Non-dispersive infrared optical method is used to measure CO and CO_2 with high accuracy and low detection limit
- CO multi-range is optional, CO_2 range can be customized to meet different requirements.
- It has the function of over-limit alarm, can set the concentration of alarm point, and automatic sound and light alarm when over-limit.
- Built-in large-capacity lithium battery, continuous working time: CO (20-200ppm) +CO_2 configuration working time is not less than 6h, CO (20-200) ppm or CO configuration working time is not less than 10h, CO (0-50) ppm+CO_2 configuration working time is not less than 8h, CO (0-50ppm) configuration working time is not less than 20h.
- Precision core pump, corrosion resistant, large and stable flow, continuous operation without maintenance, adapt to a variety of working conditions.
- The instrument has large capacity storage, can carry out data storage, query, print, export, easy to grasp real-time data
- Real-time measurement of atmospheric pressure, ambient temperature, ambient relative humidity and other parameters.
- It has the function of self-test, which can detect the function of the instrument and prompt the fault, so as to facilitate the maintenance and use of users;

Technical Indicators

Main Parameter	Parameter range	
Gas	CO	CO_2
Range	(0 ~ 50) μmol/mol or (20 ~ 200) μmol/mol	(0 ~ 5000) μmol/mol (expandable to 1%)
Response Time	≤50s	≤20s
Extraction Flow	1.0L/min	
Indicating Error	≤±2%Fs	
Repetitiveness	≤1.0%	

Standard Configuration

Main Unit

Tripod Stand

Sampling Probe Assembly

Portable Bluetooth Printer

LY- 2028
Portable Comprehensive Gas Analyzer

- **Ultra small size**
- **Built-in Lithium Battery**
- **Split-type design**

Overview

This instrument is designed for emergency detection in sudden environmental air incidents, suitable for routine monitoring, fire safety scenarios, and flammable/explosive environments with concentration limit alarms. It performs toxic gas detection in occupational health facilities and is particularly effective for monitoring unidentifiable pollution sources. The device can be mounted on drones to complete data collection, transmission, and display. Capable of rapid detection and source identification across large-scale sites, it serves as an emergency law enforcement tool for environmental protection, public health, labor safety, military operations, scientific research, and educational institutions.

Main Features

- The instrument is available in explosion-proof and non-explosion-proof models. Explosion-proof rating: ATEX Certified: Zone 2.
- More than 20 gas sensors such as methane, PID, combustible gas and chlorine can be selected
- Laser particulate matter sensor is optional, which can detect PM_1, $PM_{2.5}$, PM_{10} and TSP particle concentration in real time
- Built-in large capacity lithium battery, portable use, fast work
- Precision core pump, corrosion resistant, large and stable flow, continuous operation without maintenance, adapt to a variety of working conditions
- The instrument has large capacity storage, can be used for data storage, query, printing and export, easy to grasp real-time data
- Instrument fault alarm function, convenient for users to maintain and use
- Real-time measurement of atmospheric pressure, ambient temperature, ambient relative humidity and other parameters.
- Different types of toxic and harmful gas limits can be set independently: TWA, STEL, MAC
- Handheld, small size and light weight, easy to carry
- It can be used for aerial detection with UAV or independently

Technical Indicators

Technical indicators of commonly used sensors		
Main Parameter	**Chemical Formula**	**Parameter range**
oxygen	O_2	（0 ~ 30）%
nitrogen dioxide	NO_2	（0 ~ 20/100*）umol/mol
carbon dioxide	CO_2	（0 ~ 5/20*）%
carbon monoxide	CO	（0 ~ 200/1000*）umol/mol
ammonia	NH_3	（0 ~ 100）umol/mol
chlorine	CL_2	（0 ~ 10/50*）umol/mol
combustible gas	-	（0 ~ 100）%LEL
Volatile organic compounds	VOCs	（0 ~ 20*/2000*）umol/mol

Some sensor metrics are scalable		
Main Parameter	**Chemical Equation**	**Parameter range**
Fluorine gas	F_2	(0 ~ 1) umol/mol
nitric oxide	NO	(0 ~ 25/100*/250*/500*) umol/mol
sulfur dioxide	SO_2	(0 ~ 20/100*) umol/mol
methane	CH_4	（0 ~ 100）% LEL
hepatic gas	H_2S	(0 ~ 50/200*/500*) umol/mol
chlorine hydride	HCL	（0 ~ 20*/50）umol/mol
hydrogen fluoride	HF	（0 ~ 10）umol/mol
hydrogen cyanide	HCN	（0 ~ 30/100*）umol/mol
phosphine	PH_3	（0 ~ 5）umol/mol
ozone	O_3	（0 ~ 5/50*）umol/mol
chlorine dioxide	CLO_2	（0 ~ 1/20*）umol/mol
arsenic hydride	AsH_3	（0 ~ 1）umol/mol
germane	GeH_4	（0 ~ 50）umol/mol
ethylene	C_2H_4	（0 ~ 20200）umol/mol
silane	SiH_4	（0 ~ 50）umol/mol
epoxyethane	C_2H_4O	（0 ~ 20/100*）umol/mol
formaldehyde	HCHO	（0 ~ 2/10*）umol/mol
alcohol	C_2H_6O	（0 ~ 200）umol/mol
ethanethiol	C_2H_6S	（0 ~ 1200）umol/mol
carbon dichloride	C_2CL_4	（0 ~ 1120）umol/mol
phosgene	$COCL_2$	（0 ~ 1）umol/mol
carbon disulfide	CS_2	（0 ~ 100）umol/mol
alcohols	-	（0 ~ 200）umol/mol
methanethiol	CH_3SH	（0 ~ 10）umol/mol
hydrogen	H_2	（0 ~ 1000）umol/mol
$PM_{1.0}$	-	（0 ~ 1000）ug/m^3
$PM_{2.5}$	-	（0 ~ 1000）ug/m^3
PM_{10}	-	（0 ~ 1000）ug/m^3
TSP*		（0 ~ 1000）ug/m^3

Standard Configuration

Control Module

Detection Module

Smart Display Terminal

Charger and Charging Cable

Instrument Protective Bag

Optional Configuration

Portable Bluetooth Printer

UAV (Unmanned Aerial Vehicle)

IoT (Internet of Things)

Positioning Antenna

LY- 2029
UV-DOAS Multi-Gas Detector

- **Emergency Monitoring**

Overview

This instrument is based on the characteristic absorption spectra in the ultraviolet region of gases such as ammonia (NH_3), trimethylamine, hydrogen sulfide (H_2S), methanethiol, dimethyl sulfide, dimethyl disulfide, carbon disulfide (CS_2), styrene (odorant gases), and sulfur dioxide (SO_2), nitric oxide (NO), nitrogen dioxide (NO_2), benzene, toluene (pollutant gases). Utilizing the Ultraviolet Differential Optical Absorption Spectroscopy (UV-DOAS) principle, it is a multi-component gas monitor.

The analyzer can perform real-time monitoring of the instantaneous concentrations of the aforementioned gases emitted from fugitive emission sources in industrial and mining enterprises as well as in residential spaces. It is also capable of calculating the odor concentration. The monitoring results can be transmitted in real-time to a data management and control platform via a wireless network.

Main Features

- It uses a pulsed xenon lamp light source with a service life of up to 10^9 pulses, allowing for continuous use of not less than 2.5 years.
- The gas cell adopts an integrated multi-pass reflection design with an optical path length ≥ 12 m, significantly improving detection sensitivity.
- It runs on the Windows 10 operating system, making operation simple.
- It features a 7-inch color display in a horizontal orientation, facilitating on-site data viewing.
- It displays the concentration of tested gases via dynamic curves.
- It incorporates single Beidou positioning. Continuously monitored data is transmitted wirelessly, with communication supporting the HJ212 protocol. The integration of measurement data with location information facilitates analysis and positioning.
- The built-in DC power supply supports continuous operation for not less than 5 hours.
- The case features a wheeled structure with a telescopic handle, making it portable and suitable for emergency response and mobile monitoring.

Technical indicators

Quantitative Components (Standard)	Chemical Formula	Quantitative Components (Optional)	Chemical Formula
Ammonia	NH_3	Benzene	C_6H_6
Trimethylamine	C_3H_9N	Toluene	C_7H_8
Hydrogen Sulfide	H_2S	Sulfur Dioxide	SO_2
Methanethiol	CH_4S	Acrylonitrile	C_3H_3N
Dimethyl Sulfide	C_2H_6S	Nitrogen Dioxide	NO_2
Dimethyl Disulfide	$C_2H_6S_2$	Nitric Oxide	NO
Carbon Disulfide	CS_2	Carbon Monoxide	CO
Styrene	C_8H_8	Carbon Dioxide	CO_2
Odor Concentration	-	Methane	CH_4

LY- 2030
Medium Flow TSP/PM10/PM2.5 Sampler (Model 22)

Overview

This instrument is a versatile sampler designed for collecting a range of airborne particulate pollutants, including fluorides, heavy metals, TSP (Total Suspended Particulates), PM_{10}, and $PM_{2.5}$. It is suitable for use by various departments and institutions involved in environmental pollutant sampling, such as those for environmental protection, public health, labor, safety supervision, military, disease control and prevention (CDC), scientific research, and education.

Main Features

- It is a multi-function unit capable of collecting various airborne particulate pollutants such as fluorides, heavy metals, TSP (Total Suspended Particulates), PM_{10}, and $PM_{2.5}$.
- It features a wide sampling flow range and high load capacity, meeting diverse sampling requirements.
- It incorporates a precision core pump that offers high load capacity, long service life, low noise, corrosion resistance, and maintenance-free continuous operation. With overload protection, it adapts to various complex working conditions.
- The sampling heads for fluorides/heavy metals/TSP/PM_{10}/$PM_{2.5}$ are made of aluminum alloy material, providing anti-static adsorption properties.
- An electronic flowmeter provides automatic and precise flow control, ensuring stable sampling flow rates.
- It has a built-in high-capacity memory, allowing sampling data to be stored, reviewed, exported, and printed.
- It is equipped with a self-diagnostic function that tests instrument functionality and indicates faults, facilitating user maintenance and operation.

Technical Indicators

Main Parameter			Parameter Range
Sampling Flow Rate			Maximum no-load flow rate: 120 L/min Working point flow rates: 16.7 L/min, 50.0 L/min, 100.0 L/min
Sampling Duration			Adjustable within 99h 59min
Inlet Temperature			(-55 ~ 125) °C
Inlet Pressure			(-40 ~ 0) kPa
Atmospheric Pressure			(50 ~ 130) kPa
TSP/PM_{10}/ $PM_{2.5}$ Sampling Head	Cutting Characteristics	TSP	Collection grain size: < 100 μm
		PM_{10} Sampling Head	δg = 1.5 ± 0.1
		$PM_{2.5}$ Sampling Head	δg = 1.2 ± 0.1
	Inlet Velocity		0.3 m/s
	Effective Filter Diameter		Φ80 mm
	Connection		M20 × 1.5
Fluoride Sampling Head	Filter Diameter		Φ90 mm (Effective filter diameter: Φ80 mm)
	Connection		M20 × 1.5

Standard Configuration

Main Unit

Tripod Stand

LY- 1073A TSP/PM10 Sampling Head

Optional Configuration

Portable Bluetooth Printer

Geological Tripod Stand

LY-1071 Medium-flow TSP/PM10/PM2.5/PAHs Sampling Head

LY-1073B TSP/PM10/PM2.5 Sampling Head

LY- 1073C Fluoride Sampling Head

LY- 2030D
Intelligent Low Flow TSP/PM10/PM2.5 Sampler

- **Unique system design, achieving integration of multiple functions**
- **Microbial aerosol sampling**
- **Environmental air TSP/PM10/PM2.5 sampling**
- **Indoor air quality monitoring sampling**

Overview

This instrument is a multifunctional device designed to sample TSP, PM_{10}, $PM_{2.5}$, and microbial aerosols in the ambient atmosphere, as well as indoor inhalable and fine particulate matter, including benzopyrene. It features a high-load precision core pump, which provides strong load-carrying capacity. An optional large-capacity lithium battery enables long-term sampling without external power. This instrument is suitable for use by environmental protection, health, labor, safety supervision, military, disease control centers, research, and educational institutions for monitoring aerosols and particulate matter.

Main Features

- Unique design of Lonying system, multi-function in one machine:Supports a variety of sampling modes such as Anderson sampling, impact sampling and filter sampling. It can be used for microbial aerosol sampling by impact method Anderson level 2, level 6 and level 8 sampling head and impact absorption bottle. It can be connected to the particulate matter sampling head for ambient air TSP/PM10/PM2.5 particulate matter sampling. It can be used for indoor air quality monitoring and sampling of inhalable particulate matter and fine particulate matter including benzopyrene.
- Equipped with precision core pump, it has strong load overcoming ability and is suitable for high load sampling.
- It is optional to be equipped with built-in lithium battery and built-in flash charging module, which supports fast charging without external charger. The standby time is not less than 38 hours.
- The dual power supply interface of AC and DC can be powered by 220V/50Hz AC mains or 24V DC. It can be connected to a mobile power supply, which makes the power supply more flexible and adaptable to working conditions.
- The wind-guiding ambient temperature detection module is adopted to greatly reduce the measurement error of ambient temperature and further improve the flow accuracy.
- It can acchive four kinds of sampling methods: immediate sampling, timed sampling, non-interval sampling and equal interval sampling. It supports timed, fixed volume and delayed sampling, and can program the sampling process.
- The electronic flowmeter automatically and accurately controls the flow, and the sampling flow is automatically controlled to stabilize the flow.

- Power-off memory function,continue to sample procedure when recovery.
- High quality dust filter screen, with overload and low flow self-protection program, can effectively protect the air circuit and sampling pump.
- Provides USB interface to export the sampling data file, and supports U disk to upgrade the instrument motherboard program.
- Automatically calculate the cumulative sampling volume, and can also convert the reference sampling volume (25℃,101.325kPa the volume of the reference state by default) and standard sampling volume according to the air pressure and temperature.
- The module interface of the reserved Internet of Things is provided to expand the networking function.
- Built-in sensor, atmospheric pressure can be input and measured, to ensure normal use in low pressure environment.
- Wide temperature and high brightness TC-OLED display screen, suitable for cold areas, popular software display interface, to achieve good man-machine interaction.
- If the sampler does not reach the set flow rate within a certain time due to excessive resistance, the sampler will automatically stop to protect itself.
- Intelligent software calibration function
- Built-in large-capacity memory, can store no less than 50,000 sets of data, sampling data can be stored, viewed, exported and printed.
- The appearance adopts L-Ergo design, the style is novel, the unique sealing structure can effectively prevent rain and snow, more suitable for field operation.
- Built-in Bluetooth module, can be connected to portable Bluetooth printer to easily grasp real-time data.
- Built-in electronic tag can be combined with the instrument in and out of storage management platform software to realize intelligent management of instruments.

Technical Indicators

Main parameter	Parameter range	Resolution ratio	Accuracy
Sampling flow	（0 ~ 50）L/min Working point flow: 10.0 L/min, 16.67 L/min, 28.30 L/min	0.01 L/min	The working point shall not exceed ±2%, Off-work point does not exceed ±5%
Sampling time	Set at any time within 99hr59min	1min	The timing error within 20min shall not exceed ±1s
Inlet Temperature	(-55 ~ 125) ℃	0.1 ℃	Not exceeding ±2.5℃
Inlet Pressure	(-55 ~ 0) kPa	0.01 kPa	Not exceeding ±2.5%
Flow Repetition	—	—	No more than 2%
Flow Stability	—	—	No more than 5%
Atmos	(50 ~ 130)kPa	0.01kPa	Not more than ±500Pa
Load Capacity	At 28.3 L/min, the resistance can be overcome by 22kPa		
Noise	≤62dB(A)		
External dimensions (length x width x height)	334mm×186mm×254mm		
Weight	Without lithium battery: about 4.5kg. With lithium battery: about 4.7kg		
Power dissipation	<50W		
Working power supply	AC (220±22) V, 50Hz; built-in lithium battery (22.2V/3.5Ah, optional) or DC24V		
Operate time	No less than 8 hours (when powered by built-in lithium battery)		
Stand-by time	No less than 38 hours (when powered by built-in lithium battery)		
Charging interval	About two hours		

Standard Configuration

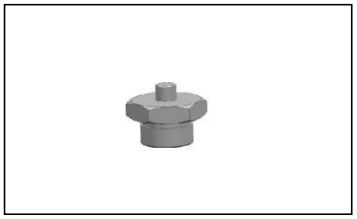
Main Unit

AC Power Cord

Aerosol Adaptor

Silicone Rubber Tubing 6*10mm

Tripod Stand



Tripod EL-80 Adapter Thread

Optional Configuration

LY- 1070A Low-flow
TSP/PM10/PM2.5 Sampling Head

LY-1070B Low-flow PM10/PM2.5
Sampling Head

LY-1070D Indoor Air Particulate
Sampling Head

Y-1074A Two-Stage Andersen Sampler

LY- 1074B Six-Stage Andersen Sampler

LY- 1074C Eight-Stage Andersen Sampler

47mm Glass Fiber Filter Membrane

Microbial Impinger

Portable Bluetooth Printer

LY- 2031
High Flow Ambient Air Particulate Matter Sampler

Overview

This instrument employs the filter membrane weighing method to capture total suspended particulates (TSP), optional PM_{10}, and optional $PM_{2.5}$ in ambient air. Utilizing advanced technologies from computer science, sensor engineering, and new materials, it features a brushless sampling pump. Designed for routine aerosol monitoring, it serves various sectors including environmental protection, public health, labor safety, military applications, scientific research, and education.

Main Features

- Instantaneous, timed sampling and various sampling modes such as equal interval can be set
- Multi-functional design for TSP and PM_{10}/$PM_{2.5}$ sampling, featuring a tipping bucket rainproof structure for easy transportation and carrying
- The cutter is made of aluminum alloy and has a compact structure to effectively prevent static electricity adsorption
- Real-time monitoring of pressure and temperature, automatic compensation of flow deviation, further optimization of flow accuracy
- Equipped with brushless DC sampling pump, no spark, low noise, long service life, greatly improve stability, easy maintenance
- The dot matrix wide-temperature, high-brightness VFD display features a broad operating temperature range, enabling excellent human-machine interaction.
- Automatically calculate the sampling volume and convert it to standard conditions based on air pressure and temperature.
- Automatically detect AC power failure, save operation data, and automatically resume sampling after power supply
- Sampling is complete. The sampled data is stored according to user requirements and can be queried or printed at any time (optional).
- The preset parameters of the last sampling are automatically saved and used in the next sampling; 40 sets of sampling data can be saved for users to query
- The built-in electronic tag enables intelligent management of instruments by integrating with the instrument inventory management platform software.

Technical Indicators

Main parameter	Parameter range	Resolution ratio	Scope of parameters
Sampling flow	(0.8 ~ 1.2) m^3/min, working point flow rate is 1.05 m^3/min	0.01m^3/min	±2%
Dwell time	Set within 99 minutes and 59 seconds	1min	The timing error within 20 minutes should not exceed ±1s
Inlet temperature	(—55 ~ 125)℃	0.1℃	Not exceeding ± 2.5℃
Repeatability of flow	—	—	No more than 2%
Stability of flow	—	—	No more than 5%
Atmospheric Pressure	(50 ~ 130)kPa	0.01kPa	Not more than ±500Pa
Effective membrane size	(230×180)mm		
$PM_{2.5}$ cut-off characteristics	Da50=(2.5±0.2)μm σg=1.2±0.1		
PM_{10} Cutting Characteristics	Da50=(10 ±0.5)μm σg=1.5±0.1		
Dimensions (L×W×H)	552mm×454mm×1244mm		
Weight of the main body	Approximately 29.0kg		
Working power supply	AC(220±22)V, 50Hz		
Power dissipation	＜1kW		

Standard Configuration

Main Unit

Optional Configuration

Standard Filter Membrane

LY-1075A High-flow PM10 Cutter

LY-1075B High-flow PM2.5 Cutter

Dot Matrix Printer

LY- 2036
Environmental Air Particulate Matter Sampler

6 Membrane

16 Membrane

Overview

This instrument is mainly used for air automatic station PM_{10}/$PM_{2.5}$/PM_1 data comparison quality control. It is equipped with PM_{10}/$PM_{2.5}$/PM_1 cutter, which is mainly used for sampling of PM_{10}/$PM_{2.5}$/PM_1 particulate matter in the environment, and can realize automatic filter membrane replacement and unattended automatic sampling all day long.

Main Features

- The whole machine adopts the filter membrane clamping module with self-locking vibration damping function, which has the characteristics of low vibration, good sealing and easy operation, and guarantees the effectiveness of samples to the maximum extent
- Multi-membrane continuous sampling, realize automatic filter membrane replacement, safe and reliable (this machine is 16 membranes)
- The whole machine has excellent waterproof, dustproof and impact resistance, which can ensure normal operation in rain, snow, dust and heavy haze weather
- The use of high precision, corrosion resistant and high humidity resistant electronic flowmeter ensures high reliability and high accuracy of sampling volume
- Built-in large capacity data memory, with instantaneous data storage function, support USB data export
- Real-time measurement of ambient atmospheric pressure, temperature and humidity

Technical Indicators

Main Parameter	Parameter Range
Sampling Flow	16.67 L/min
Sampling Time Tolerance	6h
Ambient Temperature	（-30 ~ 55）℃
Ambient Atmospheric Pressure	（80 ~ 130）kPa
Lift Capacity	16.67L/min When the flow rate is over 15kPa,the resistance is overcome
Filter Membrane Diameter	47mm
Number of Filter Membranes	6 or 16

LY- 2040C
Ultra-High Flow Intelligent Air Dioxin Sampler

- **Integrated design**
- **Ultra-high flow**
- **Auto memory function**

Overview

This instrument is designed in accordance with the Chinese environmental standard HJ 77.2-2008 "Determination of polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs) in ambient air and waste gas - Isotope dilution HRGC-HRMS". It is primarily suitable for sampling dioxins in conventional ambient air, the ambient air within and around waste incineration power plants, and other environmental sites containing POPs (Persistent Organic Pollutants) and suspended dust

Main Features

- It employs a new proprietary structure flowmeter with a wide usable flow range, low system resistance, and lower noise.
- It incorporates a 32-bit microcontroller for fast processing speed and stable operation.
- It features a power-off memory function during sampling to preserve data.
- It automatically calculates the cumulative volume and standard condition volume, and simultaneously converts the sampled volume to standard conditions based on pressure and temperature.
- The precision core pump can achieve a flow rate of up to 900 L/min. It offers maintenance-free continuous operation, adapts to various working conditions, and includes an overload protection function.
- The sampling head and main unit are integrated into one design for convenient operation.
- An RS232 serial port is configured with a high-speed, low-noise micro thermal printer for easy access to real-time data.
- The 4H-VFD display is suitable for high-cold and field areas. Its user-friendly human-machine interface makes work easier.
- The intelligent software calibration function allows for automatic zero calibration of pressure, flow, and other sensors, simplifying operation.
- The sampler automatically stores sampling data, which can be queried and printed at any time.
- The real-time clock provides accurate sampling dates for data files.
- It adopts a professional industrial structural design that effectively protects against rain and snow, making it more suitable for field work.
- The high-quality and stable geological tripod stand is suitable for sampling in harsh weather conditions such as high winds.
- The built-in electronic tag (RFID) enables intelligent instrument management by integrating with inventory management platform software.

Technical Indicators

Main parameter	Parameter range	Resolution ratio	Accuracy
Sampling Flow Rate	(200 ~ 900) L/min	1 L/min	Not exceeding ±5%
Rated Flow	700 L/min		
Sampling Duration	Adjustable within 99h 59min	1 min	Not exceeding ±1 s
Temperature before Flowmeter	(-55 ~ 125) °C	0.1 °C	Not exceeding ±2.5 °C
Atmospheric Pressure	(50 ~ 130) kPa	0.01 kPa	Not exceeding ±500 Pa
Ambient Temperature	(-55 ~ 125) °C	0.1 °C	Not exceeding ±1 °C
Data Storage	40 sets of data (standalone)		
Instrument Noise	< 65 dB (at 700 L/min)		
Dimensions (L×W×H)	420 mm × 335 mm × 895 mm		
Weight	Main Unit: 18.5 kg Tripod Stand: 7 kg		
Power Supply	AC (220 ± 22) V, 50 Hz		

Standard Configuration

Main Unit

Tripod Stand

Portable Bluetooth Printer

LY- 2050
Ambient Air Sampler (Model QQ)

- **Five gas lines simultaneous sampling**
- **Constant flow control**
- **Ultra-compact size**

Overview

This instrument employs the filter membrane gravimetric method to collect total suspended particulates (TSP), inhalable particulate matter (PM_{10}), or fine particulate matter ($PM_{2.5}$, optional) from ambient air. It utilizes solution absorption method to sample various gaseous pollutants (such as SO_2, NOx) in ambient and indoor air. Additionally, it can be applied for solid-phase adsorption sampling of volatile organic compounds (VOCs) in ambient air. It is suitable for routine or emergency monitoring of particulate matter, gaseous substances, and aerosols by departments involved in environmental protection, public health, labor, work safety, military, scientific research, and education.

Main Features

- It is a multi-purpose unit capable of simultaneous sampling through five gas paths. The sampling flow rate for each path can be set individually and is maintained by independent constant flow control.
- It can function simultaneously as a four-channel ambient air sampler and a TSP/PM_{10}/($PM_{2.5}$ optional) particulate matter sampler.
- It can be used for solid-phase adsorption sampling of Volatile Organic Compounds (VOCs) in ambient air.
- The sampling flow is automatically controlled using high-precision, corrosion-resistant electronic flow meters.
- It is equipped with precision core pumps that are corrosion-resistant, produce ultra-low noise, and are maintenance-free for continuous operation. They are adaptable to various working conditions and feature overload protection.
- It has a built-in lithium battery and supports dual power supply (AC and DC).
- With a built-in large-capacity memory, sampling data can be stored, reviewed, exported, and printed.
- It can measure parameters such as atmospheric pressure and ambient temperature in real-time.
- It features a self-diagnostic function that checks the instrument's status and indicates faults, facilitating user maintenance and operation.

Technical Indicators

Main Parameters	Range
Particulate Matter Sampling Flow Rate	Maximum no-load flow rate of 150 L/min, operating point flow rate customizable.
Ambient Air Sampling Flow Rate	Standard configuration (0 ~ 1.0) L/min. Channels C/D customizable within (10 ~ 200)mL/min.
Sampling Duration	Arbitrarily set within 99 hours 59 minutes
Inlet Temperature	（-55 ~ 125）℃

Main Parameters	Range
Inlet Pressure	（-45~0）kPa
Atmospheric Pressure	（50~130）kPa

Standard Configuration

Main Unit

LY- 1073A TSP/PM10 Sampling Head

Tripod Stand

Anti-Suckback Drying Tube

Power Adapter

Optional Configuration

PM2.5 Cutter

Geological Tripod Stand

Portable Bluetooth Printer

Universal Multi-Block Thermostat

90mm Glass Fiber Filter Membrane

LY- 2050
Ambient Air Sampler (Constant temperature)

- **Five gas lines simultaneous sampling**
- **Constant temperature & flow control**
- **Software Auto-Calibration Function**

Overview

This instrument employs the filter membrane gravimetric method to capture total suspended particles (TSP) and inhalable particulate matter (PM_{10}), with optional $PM_{2.5}$ detection. It utilizes solution absorption technology for collecting various pollutants in ambient and indoor air, including sulfur dioxide (SO_2) and nitrogen oxides (NOx). The device is also suitable for sampling VOCs in environmental air. Designed for routine and emergency monitoring of particulate matter, gaseous substances, and aerosols, it serves multiple sectors such as environmental protection, public health, labor safety, military operations, scientific research, and education.

Main Features

- It can be used for multiple purposes and has the function of simultaneous sampling with 5 gas paths. The sampling flow rate of each path is set separately and the constant flow control is independent
- It can be used as a four-way ambient air sampler and TSP/PM_{10}/($PM_{2.5}$ optional) particle sampling
- It can be used for solid phase adsorption sampling of VOCs in ambient air
- The integrated constant temperature box design can be built in 4 absorption bottles
- Automatic control of sampling flow: high precision, corrosion resistant electronic flowmeter is adopted
- Precision core pump, corrosion resistant, ultra-low noise, continuous operation maintenance free, adapt to a variety of working conditions, with overload protection function
- Built-in lithium battery, with AC and DC dual power supply function
- Built-in large capacity memory, sampling data can be stored, viewed, exported and printed
- Real-time measurement of atmospheric pressure, ambient temperature and other parameters.
- It has the function of fault self-test, which can detect the function of the instrument and prompt the fault, so as to facilitate the maintenance and use of users

Technical Indicators

Main Parameter	Parameter range
Particulate matter sampling flow	Maximum no-load flow 150L/min, working point flow can be customized
Atmospheric sampling flow	2 paths are regular (0 ~ 1.0) L/min 2 paths are customizable (10 ~ 200) mL/min
Sampling Time	Set at any time within 9:59
Inlet Temperature	（-30 ~ 99）℃
Inlet Pressure	（-45 ~ 0）kPa
Thermostatical Control	（15 ~ 30）℃
Atmospheric Pressure	（50 ~ 130）kPa
Weight	5 kg（11.1v/15.6Ah battery include）
Load Capacity	When the flow is 100L/min, the load capacity is > 6kpa
Power Supply	AC（220±22）V，（50±1）Hz
Size	380mm*186mm*254mm
Battery	6h(without Thermostatical Control)
Memory	10000 sets data

Standard Configuration

Main Unit

LY- 1073A TSP/PM10 Sampling Head

Tripod Stand

Anti-Suckback Drying Tube

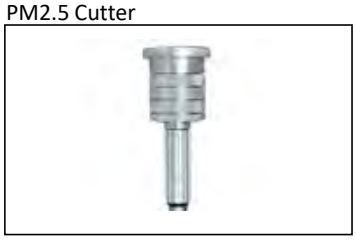
Holder

Optional Configuration

PM2.5 Cutter

Geological Tripod Stand

Portable Bluetooth Printer



LY- 1070A Low-flow
TSP/PM10/PM2.5 Sampling Head

LY- 2091
Ozone Analyzer

- **Ozone Instantaneous measurement**
- **High measurement accuracy, nmol/mol grade**
- **Built-in Lithium Battery, working hour ≥ 48 hours**

Overview

Based on the principle of ultraviolet spectrophotometry, this instrument employs an LED light source and a long-path absorption chamber to achieve high-precision measurement of ozone in ambient air. Featuring compact size, lightweight design, zero warm-up period, low detection limit, high sensitivity, and rapid response, this portable device is ideal for both instantaneous measurement and continuous automatic monitoring of atmospheric ozone.

Main Features

- Portability & Built-in Battery
- Compact and lightweight with integrated lithium battery, supporting 48 hours of continuous operation without AC power
- Instant Operation without preheating
- Innovative UV-LED light source requires no preheating, offering low power consumption and long lifespan
- Low Detection Limit, High Precision & Wide Range
- Capable of nmol/mol-level detection with extended measurable range up to 1000 nmol/mol.
- Rapid Response & High Stability
- Embedded adaptive filtering algorithm ensures fast response. Free of moving parts, with real-time temperature, pressure, and humidity compensation for accurate and stable results across varying environmental conditions.apid Response & High Stability
- Multiple Measurement Modes
- Supports manual/scheduled measurements, meeting both portable and online monitoring needs.
- Multi-thread Operation & Bluetooth Printing
- Allows data query, print, and USB export without interrupting ongoing measurements. Compatible with Bluetooth printers for real-time printing.
- Minimal Maintenance
- Particulate filter requires replacement every 7 days; scrubber maintenance every 6 months. No additional maintenance needed.
- Built-in Electronic Tag
- Integrated electronic tag enables intelligent instrument management when paired with inventory management software.

Technical Indicators

Main Parameters	Parameter Range	Resolution Ration	Accuracy
Range	（0 ~ 500）nmol/mol，which can be extended to1000nmol/mol	0.1nmol/mol	1nmol/mol
Reading Error	≤±6%FS		
Repetitiveness	≤1%		
Four-hour Zero-Point Drift	≤±2nmol/mol		
4-hour Range Drift	≤±4nmol/mol		
Flow Rate	1L/min		
Data Export	USB port、RS232 port		
Main unit dimension (L×W×H)	335mm×186mm×283.5mm		
Main Unit Wight	About 5.0kg		
Power Adapter	AC(220±22)V，50Hz		
Lithium Battery Capacity	25.2V 13.2Ah（Operating time is not less than 48h）		
Power Consumption	＜10W		

Standard Configuration

Main Unit

Tripod Stand

Portable Bluetooth Printer

Air Filter

LY- 2092
Ambient Air Quality Monitor(Single-channel/dual-channel)

- Beta Ray Attenuation Method
- Outdoor real-time monitoring
- Modular design

Single Channel

Dual Channel

Overview

This instrument is an all-weather outdoor automatic monitoring terminal capable of real-time automatic monitoring of parameters including PM10, PM2.5, O_3, SO_2, CO, NO_2, TVOC, as well as the five meteorological parameters (temperature, humidity, atmospheric pressure, wind direction, wind speed). For particulate matter monitoring, it employs the dual-channel Beta Ray Attenuation Method, which, compared to a single-channel system, enables simultaneous monitoring of PM10 and PM2.5 concentrations. Gaseous pollutants are monitored using the electrochemical method. Constructed from steel materials, the instrument features an Electromagnetic Compatibility (EMC) Class A design and an IP55 rating for dust and water splash protection. It is robust, durable, and capable of reliable operation in various complex environments.

Main Features

- The entire unit is highly integrated. Different analytical factor modules can be arbitrarily combined, making it suitable for large-scale grid deployment.
- Particulate matter monitoring employs the Beta Ray Attenuation Method, which is unaffected by seasonal changes, requires no correction, and provides accurate data in real-time, all-weather
- It utilizes a DHS (Dynamic Heating System) to heat the inlet sampling gas and features dynamic temperature and humidity compensation, ensuring precise measurement of semi-volatile nitrates and organic compounds.
- PM_{10} and $PM_{2.5}$ monitoring adopts a one-pump dual-path sampling method with two sets of high-quality detectors installed, enabling simultaneous monitoring of PM_{10} and $PM_{2.5}$.
- Particulate matter sampling and detection occur at the same location, fundamentally eliminating measurement errors caused by moving filter tapes.
- Gaseous pollutant monitoring uses the electrochemical method, employing four-electrode high-precision sensors and imported PID sensors for high measurement accuracy.

- The gaseous pollutant pathway features a sealed gas cell that allows for on-site calibration using standard gases. It includes a zero-air calibration module for both automatic and manual zero calibration
- The gaseous pollutant detection module uses an advanced temperature and humidity compensation algorithm to correct for their effects on measurement, ensuring accurate results
- The built-in 4G data transmission module (DTU) enables data upload. Data transmission complies with the "Data Transmission Standard for Pollution Source Online Monitoring (Control) Systems" (HJ 212-2017).
- It enables remote reading of system status information, remote control, remote modification of instrument parameters, and fault diagnosis.
- The instrument can remotely upgrade its terminal application via an FTP server to update system functions promptly.
- Constructed from stainless steel, it can adapt to all-weather complex environments, featuring an EMC design as well as dustproof and waterproof design.
- The circuit section uses an industrial-grade embedded processor, suitable for severe cold weather, with an operating temperature range of (-40 to 70) °C.
- The instrument has a built-in small lithium battery that enables monitoring of on-site power failures and other abnormalities, reporting them to the platform.
- Sampling data is automatically memorized; current data is automatically saved after a power outage, and the instrument can resume sampling once power is restored.
- It has massive data storage capacity, capable of storing up to 365 days' worth of data, and supports export via USB drive.

Technical Indicators

Technical Specifications for Particulate Matter	
Main Parameter	**Range**
Measuring Range	(0 ~ 10,000) μg/m³
Indication Error	±10%
Sampling Flow Rate	16.67 L/min
Detection Limit	1 μg/m³
Particle Separator	Impactor Cutter, Cyclone Cutter (for $PM_{2.5}$)
Resolution	0.1 μg/m³
Linearity Compliance with Reference Method	Slope：1±0.15
	Intercept：（0±10）μg/m3
	Correlation Coefficient (R)：≥0.95
Calibration Method	Standard Filter Calibration
Temperature Control	(0 ~ 60) °C adjustable, control accuracy ±1 °C
Data Storage	Capable of storing one year of data; supports USB drive export
Filter Tape	Glass Fiber Filter Tape
Power Supply	AC (220 ± 22) V, 50 Hz
Ambient Temperature	(-30 ~ 50) °C

Ambient Humidity	(0 ~ 95) %RH
Main Unit Dimensions (L×W×H)	Single-channel:400 mm × 220 mm × 350 mm Dual-channel:470 mm × 280 mm × 400 mm
Pump Box Dimensions (L×W×H)	350 mm × 300 mm × 210 mm
Main Unit Weight	20 kg
Pump Box Weight	15 kg

Technical Specifications for Gaseous Pollutants			
Main Parameter	**Range**	**Resolution**	**Accuracy**
SO_2 (Electrochemical)	（0~1000）ppb	1ppb	Indication Error: Within ±5% Repeatability: Within ±2% Stability: Within ±5%
NO_2 (Electrochemical)	（0~1000）ppb	1ppb	
CO (Electrochemical)	（0~20000）ppb	1ppb	
O_3 (Electrochemical)	（0~1000）ppb	1ppb	
TVOC (PID)	(0~40000)ppb	1ppb	Indication Error: Not exceeding ±1% Repeatability: Not exceeding ±1% Zero Drift: Not exceeding ±0.5% F.S. Span Drift: Not exceeding ±1% F.S.

Meteorological Parameters			
Main Parameter	**Range**	**Resolution**	**Accuracy**
Temperature	(-50 ~ 100) °C	0.1 °C	±0.5 °C
Humidity	(0 ~ 100) %RH	0.1 %RH	±3 %RH
Wind Direction	(0 ~ 360) °	±0.1 °	±3 °
Wind Speed	(0 ~ 70) m/s	0.1 m/s	±(0.3 + 0.03V) m/s
Atmospheric Pressure	(10 ~ 1100) hPa	0.1 hPa	±0.3 hPa

Standard Configuration

Main Unit

PM2.5/10 Cutter

Temperature and Humidity Sensor

Optional Configuration

Wind Vane / Wind Direction Sensor

Anemometer / Wind Speed Sensor

Compass

Wind Vane Mounting Plate

Anemometer Mounting Plate

LY- 2092
Ambient Air Quality Monitor（Laser Scattering Method）

- Laser Scattering Method
- Outdoor real-time monitoring
- Modular design

Overview

This instrument is designed in accordance with the basic ambient air pollutant parameters specified in GB3095-2012 Ambient Air Quality Standards, which include sulfur dioxide (SO_2), nitrogen dioxide (NO_2), carbon monoxide (CO), ozone (O_3), particulate matter (PM10), and particulate matter ($PM_{2.5}$). It is additionally capable of measuring extended parameters such as ambient atmospheric pressure, temperature, humidity, and other pollutant gases. The instrument can be equipped with IoT (Internet of Things) functionality, enabling real-time integration into a grid-based monitoring platform via network connectivity. It supports configuration with a 4G IoT module to ensure synchronous real-time data transmission with a backend server. The data backend stores historical monitoring data from all stations, supports visualized data presentation, and allows for customized software development based on user requirements. A mobile app can also be configured, providing features such as real-time data querying and monitoring on mobile devices.

Main Features

- This instrument employs a laser particle sensor for real-time monitoring of PM_1, $PM_{2.5}$, PM_{10}, and TSP concentrations. It utilizes imported four-electrode, high-precision gas sensors
- Featuring a modular design, it allows for flexible configuration and is ideal for large-scale, grid-based deployment.
- The housing is finished with advanced environmental coating technology, resulting in a smooth, clean appearance. It is designed for harsh outdoor environments with protection against rain, snow, lightning, and electromagnetic interference.
- The instrument uses a cloud-based data chain for stable and reliable transmission, supporting standard MODBUS and TCP/IP protocols, and complies with the HJ212 standard. It provides open network interfaces for integration with various network devices. Monitoring data can be pushed to designated platforms via 4G wireless networks.
- Optional accessories include a five-parameter meteorological sensor.
- Outdoor LED screen (optional) for real-time, on-site data display.
- A data service platform is provided for real-time data and status monitoring, report generation, and can be customized to meet specific client needs.
- Multiple installation options are available (e.g., bracket mount, pole mount) to suit site conditions, all ensuring secure and reliable fixation.

- The unit is equipped with a ground wire and leakage protection switch for operator safety.
- It features power-off memory, automatically saving data during transmission interruptions and resuming transmission once power is restored to ensure data integrity.
- It can be configured with solar panels for independent power supply, supported by a built-in, long-endurance lithium battery pack that eliminates the need for grid power and ensures continuous operation for up to a week in cloudy/rainy weather.
- A unique protective design prevents large particles like insects and cottonwood from entering and interfering with measurements.
- A built-in electronic tag enables intelligent instrument management when used with compatible inventory management software.

Technical Indicators

Main Parameter	Range	Resolution	Tolerance
TSP (Optional)	(0 ~ 10000) ug/m³	1ug/m³	≤±10%FS
PM_{10} (Optional)	(0 ~ 10000) ug/m³	1ug/m³	≤±10%FS
$PM_{2.5}$ (Optional)	(0 ~ 10000) ug/m³	1ug/m³	≤±10%FS
PM_1 (Optional)	(0 ~ 10000) ug/m³	1ug/m³	≤±10%FS
CO (Optional)	(0 ~ 20)ppm	0.01ppm	≤±10%FS
SO_2 (Optional)	(0 ~ 1)ppm	0.001ppm	≤±10%FS
NO_2 (Optional)	(0 ~ 1)ppm	0.001ppm	≤±10%FS
O_3 (Optional)	(0 ~ 1)ppm	0.001ppm	≤±10%FS
VOCS(PID) (Optional)	(0 ~ 40)ppm	0.001ppm	≤±10%FS
Ambient Temperature (Optional)	(-40 ~ 60)℃	0.1℃	±0.2℃
Ambient Moisture (Optional)	(0 ~ 100)%RH	0.1%RH	±3%RH
Atmospheric Pressure (Optional)	(50 ~ 130)kPa	0.01kPa	≤±500Pa
Wind Direction (Optional)	Eight Wind Directions(0 ~ 360°)	1°	±2.5°
Wind Speed (Optional)	(0 ~ 60)m/s	0.1 m/s	±0.2 m/s
Main Unit Dimensions (L×W×H)	320 mm × 194 mm × 400 mm		
Enclosure Protection Rating	IP55		

Standard Configuration

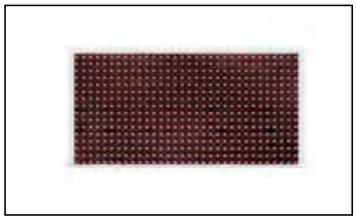
Main Unit

Optional Configuration

Gas sensors (SO_2, NO_2, CO, O_3, VOCs via PID)

Wind Direction Sensor

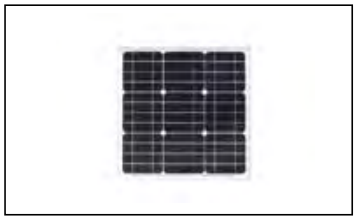
Wind Speed Sensor



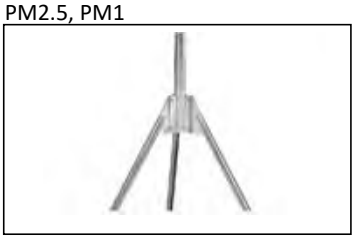
Outdoor LED Display

Particulate Matter Extension: PM10, PM2.5, PM1

4G IoT (Internet of Things) Functionality



Solar Panel



Tripod or Pole Mounting

Cloud Platform Data Service

Mobile App

LY- 2193
Automatic Environmental Noise Monitor

- **Outdoor real-time monitoring**
- **Constant temperature control**
- **Modular design**

Overview

This instrument is an all-weather outdoor noise automatic monitoring terminal, composed of a data acquisition platform and a data transmission platform. Constructed with steel materials, it is capable of adapting to complex all-weather environments. It features a dust-proof and splash-proof design, complete functionality, compact size, high system integration, and robust durability, ensuring reliable operation in various challenging conditions.

Main Features

- The fully automatic noise monitoring system features overall value analysis, integrated measurement capability, and statistical analysis functions.
- Equipped with multiple data communication interfaces and protocols, it facilitates seamless integration into data platforms and supports customization of specialized protocols.
- Offering versatile installation options adaptable to site conditions: smart poles, traffic poles, street light poles, etc.
- Designed with electromagnetic compatibility, dust resistance, and splash-proof construction, it delivers comprehensive functionality, compact size, high system integration, and robust durability for reliable operation in diverse complex environments.

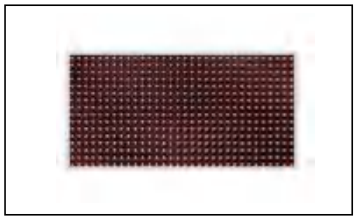
Technical Indicators

Main Parameters	Parameter Range
Measuring Range	(30 ~ 130) dB(A)
Frequency Range	10 Hz ~ 20 kHz
Sampling Frequency	48KHz
Main Measurement Indicators	Instantaneous Sound Level: LXYp, Xpeak (XCpeak measurement lower limit is the upper limit minus 70 dB)
	Customizable sampling time (0.1–1) s. X: A, C, Z. Y: F, S, I

Main Parameters	Parameter Range
	Equivalent Sound Level: LXeq1s, LXeqT (Equivalent sound level for customizable time period, T=1 min ~ 60 min), LXeqh (Hourly equivalent sound level, on the hour), LXeqd (Daily integrated data). X: A, C, Z
	Statistical Sound Levels: Leq, L5, L10, L50, L90, L95, Lmax, Lmin, Ld, Ln, Ldn, SD
Data Communication	Wired: RS232, RS485 serial communication, RJ45 Ethernet port communication
	Wireless: 2G/3G/4G GPRS communication
	Communication Protocols: HJ 212-2017 protocol, HJ 660-2013 protocol (Customizable), Special protocols can be customized

Meteorological Technical Specifications	
Main Parameter	**Parameter Range**
Air Temperature	(-40 ~ 80) ℃
Relative Humidity	(0 ~ 100) %RH
Atmospheric Pressure	(10 ~ 1100) hPa
Wind Speed	(0 ~ 60) m/s
Wind Direction	(0 ~ 360) °
Rainfall Intensity	(0 ~ 200) mm/h

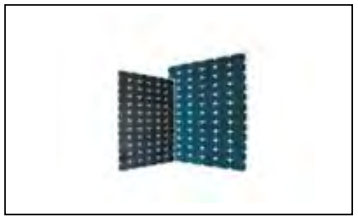
Optional Configuration



Outdoor LED Display

Camera

Vehicle Traffic Detection Module



Solar Power Supply System

Sound Source Identification System

GAS STATION /VEHICLE EXHAUST MONITORING

Background Information

The rapid development of the automotive industry and the swift growth in vehicle ownership have brought convenience to daily life, but have also led to increasingly severe air pollution. This impacts people's health and damages the ecological environment. Volatile Organic Compounds (VOCs) emitted during gas station operations are a significant contributor to rising ozone concentrations. Furthermore, motor vehicle pollution has become a major source of air pollution in China and a key factor in haze and photochemical smog.

Solution

Our gas station and vehicle exhaust monitoring series products can be used for various applications. These include gasoline vapor emission management at existing gas stations, vapor emission management for gasoline transport using vapor recovery tanker trucks, as well as roadside inspections of diesel vehicle exhaust and emission testing for non-road diesel mobile machinery.

LY- 7003
Vapor Recovery Multi-Parameter Tester (Model 24)

Overview

This instrument possesses a nationally certified explosion-proof qualification and is suitable for detecting parameters such as tightness, liquid resistance, and air-to-liquid ratio in vapor recovery systems at gas stations. It can also be used for comparing the air-to-liquid ratio and system pressure indicators in online vapor recovery monitoring systems at gas stations. Additionally, it is applicable for managing gasoline vapor emissions at existing gas stations, as well as for environmental impact assessments, design, completion acceptance, and post-construction vapor emission management in new, modified, or expanded gas station projects.

Main Features

- The instrument has obtained an explosion-proof certificate certified by authoritative authorities, ensuring explosion-proof safety and enabling operation in environments requiring explosion-proof measures.
- It is used for detecting parameters such as tightness, liquid resistance, and air-to-liquid ratio in vapor recovery systems at gas stations.
- Equipped with large-capacity storage, the instrument allows data storage, query, printing, and export, facilitating real-time data management.
  It features a self-diagnostic function that checks the instrument's status and alerts users to any malfunctions, simplifying maintenance and operation.

Technical Indicators

Main parameter	Parameter range	Resolution ratio	Accuracy
Flow Range	（0 ~ 130）L/min	0.1L/min	＜10L/min，within ±2L/min；≥10L/min，within±2%
Pressure	（-2500 ~ 2500）Pa (other ranges customizable)	1Pa	Within ±0.25% FS
Explosion-Proof Rating	Ex ib IIB T5 Gb		
Handheld Controller Explosion-Proof Rating	Ex ic IIB T4 Gc		
Data Storage	>100,000 sets		
Power Consumption	＜3.0W		
Main Unit Operating Power	Built-in lithium battery (7.4V/3400mAh) or external 20V/3.25A power adapter		
Charging Time	About 3 hours		
Main Unit Operating Time	No less than 40 hours		
Main Unit Weight	About 5.0kg		
Dimensions (L×W×H)	280mm×330mm×196mm		

Standard Configuration


Detector


Handheld Terminal / Operator Unit


Trolley Case


Drum Connection Hose


Spring PU (Polyurethane) Hose


Fuel Nozzle Adapter Hose


Argon Pressure Regulator


Explosion-Proof Wrench


Bluetooth Printer

Vaseline / Petroleum Jelly

Grounding Cable

Power Adapter

Optional Configuration

Liftable Drum (80L)

Wheeled Drum (80L)

Main Unit Support Stand (for 80L Drum)

Liftable Drum (50L)

Wheeled Drum (50L)

Main Unit Support Stand (for 50L Drum)

LY- 7005
Gasoline Transport Vapor Recovery Efficiency Analyzer

Overview

This instrument is suitable for the vapor emission management of vapor recovery tanker trucks used in gasoline transport. It is primarily used for leak tightness testing of the tank bodies, recovery pipelines, and valves on these recovery-type tanker trucks.

Main Features

- The device is explosion-proof and can be used in both hazardous and non-hazardous areas.
- It integrates both positive and negative pressure testing, which can be performed in sequence or independently.
- The built-in extraction pump facilitates operation.
- It features an integrated self-leak tightness test function for the instrument itself.
- It includes an open storage compartment for convenient storage of power cables.
- The analyzer is equipped with brake casters at the bottom for easy movement, transportation, and securing in place.
- It comes with a wide variety of tank truck adapters to accommodate transport vehicles from different manufacturers.
- The 5.7-inch large screen displays extensive information, with key data presented in large, clear, and prominent fonts.
- It has a vehicle information input function for easily entering details of the vehicle to be tested.
- The real-time clock function eliminates the need for manual timekeeping during tests.
- It can measure atmospheric pressure, ambient temperature, and relative humidity in real-time.
- The built-in large-capacity rechargeable explosion-proof lithium battery supports at least 12 hours of continuous operation.
- It features power management functionality, making the analyzer more energy-efficient.
- The built-in electronic tag (RFID) enables intelligent instrument management by integrating with inventory management platform software.

Technical Indicators

Main parameter	Parameter range	Resolution rati	Accuracy
Flow	Max. 70 L/min		
Pressure	(-6 ~ +10) kPa	0.01 kPa	Not exceeding ±2.0% F.S. (at 10 kPa)
Current	300 mA		
Dimensions (L×W×H)	450 mm × 500 mm × 700 mm		
Weight (Main Unit)	Approx. 35.0 kg		
Explosion-Proof Mark	Ex d ib IIA T3 Gb		
Power Consumption	< 5 W		
Power Supply	Built-in lithium battery (11.1V/2.6Ah) or external 12.6V/1A lithium battery charger		
Continuous Operation Time	Not less than 8 hours		
Standby Time	Not less than 10 hours		
Charging Time	Approx. 3 hours		

Standard Configuration

Main Unit

Accessory Case

Exhaust Pipe

Tank Truck Connection Hose Assembly

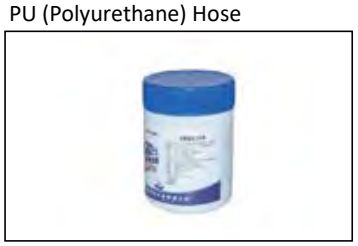
Argon Pressure Regulator

Explosion-Proof Wrench

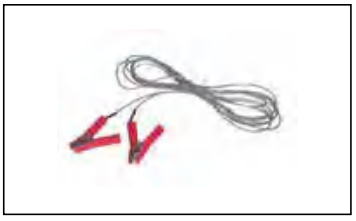
PU (Polyurethane) Hose

Main Unit Charger

Thermal Printer



Vaseline / Petroleum Jelly



Grounding Cable

Optional Configuration

40L Nitrogen Gas Cylinder
(Connection: QF-2)

LY- 7004
Transmission-type Smoke Meter

Overview

This instrument is a high-performance, self-developed smoke meter based on the bypass principle. It complies with the requirements of the new national standard GB 3847-2018, as well as the technical specifications of JJF 1482-2014, GB 36886-2018, and JJG 976-2010. It provides three reading modes: Opacity (N), Absorption Coefficient (k), and Standard Optical Path Length Absorptance (Ns). It is widely applicable at motor vehicle inspection stations, automobile manufacturers, auto repair shops, and environmental protection agencies. It is particularly suitable for roadside inspections of diesel vehicle exhaust and emission testing of non-road diesel mobile machinery.

Main Features

- The optical path employs an "air curtain" protective wall to prevent channel contamination. The measurement unit uses bypass sampling technology, and the detection chamber features constant temperature control to prevent condensation of the measured gas.
- It has an integrated portable design with a total weight not exceeding 7 kg.
- The built-in lithium battery supports up to 6 hours of continuous operation, making it particularly suitable for outdoor inspections.
- It features wireless control via a handheld terminal for easier operation. The terminal and main unit connect via Wi-Fi communication, offering stronger anti-interference capability.
- It offers large-capacity storage and supports data export via a USB data cable.
- It displays in real-time the instantaneous and maximum values of the three parameters: Opacity (N), Absorption Coefficient (k), and Standard Optical Path Length Absorptance (Ns).
- It provides real-time display of measurement curves for easy user review.
- It has a built-in free acceleration test procedure. Upon completion, it automatically determines a pass/fail result and can print reports as needed, with selectable print content.
- Emission limits can be automatically determined by selection, eliminating the need to consult standards manually.
- It features a full Chinese display and includes functions for vehicle information entry, data storage, data query, data export, and wireless printing.
- It has a license plate recognition function; after taking a photo of the plate, it automatically imports the plate number, eliminating manual entry.
- It features manual/automatic zero and span point calibration functions.

- It includes device check and response time test functions.
- It supports dual power supply modes (mains via adapter and lithium battery), with display functions for battery level and operational status.
- It features instrument status detection and abnormal information alert functions.
- It offers real-time measurement of oil temperature and engine speed (Optional).
- It features IoT functionality, supporting remote data transmission and remote viewing of measurement data (Optional).
- It supports A4 size test report printing (Optional).
- The built-in electronic tag (RFID) enables intelligent instrument management by integrating with inventory management platform software.

Technical Indicators

Main parameter	Parameter range	Resolution ratio	Accuracy
Opacity (N)	(0 ~ 99.9) %	0.1%	±2.0%
Absorption Coefficient (k)	(0 ~ 16.08) m^{-1}	0.01 m^{-1}	≤ 0.05 m^{-1}
Flue Gas Temperature	(0 ~ 150) °C	1 °C	≤ ±2 °C
Oil Temperature (Optional)	(-40 ~ 150) °C	1 °C	≤ ±2 °C
Engine Speed (Optional)	(360 ~ 10000) r/min	1 r/min	≤ ±50 r/min
Opacity Drift	Not exceeding 1.0% (within 30 minutes)		
Opacity Repeatability	1.0%		
Response Time	Not exceeding (1.0 ± 0.1) s		
Effective Optical Path Length	0.215 m		
Sampling Probe Length	3 meters (Custom lengths available)		
Power Supply	AC (220 ± 22) V, 50 Hz or DC 24V		
Main Unit Weight	Approx. 7.0 kg		
Power Consumption	< 80 W		
Dimensions (L×W×H)	402 mm × 240 mm × 140 mm		
Note: The measurement range, indication error, drift, and repeatability specifications are all stated as absolute values.			

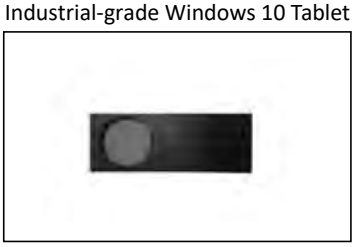
Standard Configuration


Main Unit


Industrial-grade Windows 10 Tablet


Power Adapter


Sampling Probe


Standard Filter (30% Absorptance, with certificate)


Portable Bluetooth Printer

Optional Configuration

Oil Temperature and Engine Speed Tester:For oil temperature and engine speed measurement

Standard Filters (10%, 50%, 70%, 90% Absorptance, with certificates)

A4 Paper Printer

Sampling Probe Holder

WATER QUALITY MONITORING

Background Information

Over the years, China's water resource quality has been continuously declining, and the water environment has been persistently deteriorating. Pollution-induced water shortages and incidents occur frequently. These events not only force factory shutdowns and cause reductions or even total loss of agricultural output but also create negative social impacts and significant economic losses. They pose a serious threat to sustainable social development and human survival.

Solution

Our water quality monitoring instrument series products can automatically collect ambient precipitation and automatically measure parameters such as precipitation amount, pH value, and conductivity.

LY- 5008B
Portable Multi-purpose Vacuum Filter

Overview

It is primarily used for filtering dissolved heavy metals such as lead, copper, zinc, cadmium, iron, and manganese in water samples, as well as for chlorophyll-a filtration, total dissolved solids filtration, and the removal of particulate impurities like sediment. It is widely applied in environmental monitoring systems, petroleum and chemical industries, hydrology and water resources, water supply companies, wastewater treatment plants, thermal power plants, steel enterprises, university research and teaching, agricultural environmental monitoring, railway environmental monitoring, automotive manufacturing, marine environmental monitoring, transportation environmental monitoring, environmental research institutions, and other sectors.

Main Features

- Features a corrosion-resistant, high-vacuum, highly reliable multi-purpose air pump.
- Incorporates specially designed tubing and seals to minimize sample contact with the instrument, ensuring highly efficient operation.
- Offers high integration, with the entire sample collection and filtration process completed with a single button.
- Equipped with a vacuum filtration cylinder, allowing samples to flow directly into the collection container. This improves workflow efficiency and effectively prevents cross-contamination.
- Includes a power level indicator for real-time monitoring of the remaining battery charge.
- Powered by a built-in high-capacity lithium battery, supporting extended operation time.
- The instrument is suitable for filtering various water types, including freshwater, seawater, and wastewater.
- Supports both AC and DC power sources and can be directly powered by 220V AC.

Technical Indicators

Main Parameter	Parameter Range
Sampling Flow（Unload）	12L/min
Loading Capacity	≤-90kPa
Working Temperature	（0 ~ 50）℃

LY- 5008C/D/E
Portable Multi-purpose Vacuum Filter

Type C

- Single-channel vacuum filtration
- Compact and lightweight
- Serves multiple purposes with one unit

Type D

- No external tubing
- Simple operation
- Avoid cross-contamination

Type E

- Specially designed for river suspended sediment
- All-plastic body contains no metal ions

LY- 5032
Fully Automatic Permanganate Index Analyzer

Overview

This instrument is specifically designed for determining the permanganate index (COD_{Mn} value) in water samples. The principle involves oxidizing reducing substances with potassium permanganate in an acidic or alkaline solution. The excess potassium permanganate is then reduced by back-titration with sodium oxalate solution. The permanganate index is expressed based on the amount of potassium permanganate consumed.

It can be utilized by environmental protection, public health, occupational health, work safety, military, scientific research, education, and other sectors for the determination of the permanganate index.

Main Features

- Employs fully automated, integrated technology to achieve automated sample digestion, one-button detection, and unattended operation, with titration results directly output.
- Utilizes an intelligent robotic arm for precise and stable transfer of sample cups, replacing manual intervention. It enables high-temperature grasping and titration, achieving complete automation from digestion to titration.
- Incorporates high-precision visual sensors that simulate the human eye's recognition system. It automatically determines the titration endpoint based on color change, ensuring accurate and reliable endpoint identification.
- Features independent metering for various reagents, along with reagent consumption monitoring. It provides early warnings and alerts for low reagent levels, ensuring experimental validity.
- The data workstation displays a schematic diagram corresponding to the sample positions. It allows samples to be freely canceled, added, or replaced during operation without needing to stop or pause the process, enabling more user-friendly operation.

Technical Indicators

Main Parameters	Parameters Range
Sample Tray	54 positions
Heating Method	Water bath heating, 9 digestion positions, intelligent multi-stage temperature control
Titration Channels	Dual channels

Main Parameters	Parameters Range
Titration Determination	RGB color recognition
Precision	RSD ≤ 3.0% (using 3.0 mg/L glucose standard solution, n=3)
Measurement Range	(0 ~ 6.0) mg/L (without dilution, with 100 mL sample volume)
Analysis Speed	≤ 4 minutes per sample
Temperature Control Accuracy	±1°C
Reagent Safety Monitoring	Monitors four reagents, displays real-time reagent levels
Robotic Arm Drive	Electronic Control
Dimension (L×W×H)	1070mm× 240 mm × 140 mm
Power Consumption	≤ 2000W
Power Supply	AC (220±22)V, 50Hz

Standard Configuration

Main Unit (with tubing)

Sample Rack / Sample Holder

Magnetic Stir Bar

Reagent Bottle

Analysis Workstation

Optional Configuration

Brand-name Computer

Printer

LY- 5033
Intelligent Water Sample Evaporation Concentrator

Overview

This instrument enables automated evaporation, concentration, sulfation, and ignition of water samples. It automates the laborious process of water sample evaporation and features adjustable heating power, constant-temperature heating, and quantitative control over the evaporation and concentration process. It is suitable for the evaporation, concentration, sulfation, and ignition of collected water samples including freshwater, seawater, and wastewater-following sample collection.

Main Features

- Constructed with high-borosilicate glass for the panel and sample dispensing tubes, offering excellent resistance to acid and alkali corrosion, which minimizes erosion and reduces long-term maintenance costs.
- Offers both automatic quantitative concentration and non-quantitative concentration modes, enabling automated, unattended sample concentration.
- Incorporates intelligent weight auto-zeroing upon startup, preventing detection errors during water replenishment.
- Includes an overtime detection function for water addition to avoid overflows from excessive filling.
- Utilizes far-infrared radiation heating with corrosion-resistant carbon fiber heating elements. It automatically detects the crucible status and will stop heating/water supply if no crucible is present, ensuring high heating efficiency.
- Equipped with an audible and visual alarm located on the front panel for easy observation.
- Features an automatic ignition function, reducing the need for manual operation.

Technical Indicators

Parameter	Specification / Range
Evaporation Temperature	(90 ~ 100) °C, default 95 °C
Sulfation Temperature	(0 ~ 400) °C, default 350 °C
Ignition Temperature	(0 ~ 400) °C, default 350 °C
Weighing Capacity	(0 ~ 5000) g
Heating Time	Adjustable up to 60 minutes
Maximum Water Intake per Channel	60 L

Standard Configuration

Main Unit

Handheld Terminal

Power Cord

Evaporating Dish

Main Water Pipe

Water Bucket / Pail

Crucible Tongs

Optional Configuration

8-Channel Automatic Acid Addition

8-Channel (No Acid Addition)

12-Channel Automatic Acid Addition

12-Channel (No Acid Addition)

LY- 5034
Fully Automatic CODcr Analyzer

- **No external tubing**
- **Simple operation**
- **Avoid cross-contamination**

Overview

This instrument is specifically designed for determining the chemical oxygen demand (COD value) in water samples. The principle involves adding a known amount of potassium dichromate solution to the sample. In a strong acid medium with silver salt as a catalyst, after boiling under reflux, ferroin is used as an indicator. The remaining, unreacted potassium dichromate is then titrated with ammonium ferrous sulfate. The mass concentration of oxygen consumed is calculated from the amount of potassium dichromate consumed. It is suitable for use by environmental protection, public health, occupational health, work safety, military, scientific research, education, and other departments for the determination of chemical oxygen demand (COD value).

Technical Indicators

Parameter	Specification / Range
Dimensions (L × W × H)	1100 mm × 650 mm × 1600 mm
Power Consumption	≤ 2200 W
Operating Power Supply	AC (220 ± 22) V, 50 Hz
Number of Sample Positions	40
Titration Determination	RGB Color Recognition
Measurement Range	(16 ~ 700) mg/L (without dilution, with 10 mL sample volume)
Tolerance Range	≤ 5.0%
Precision	RSD ≤ 3.0%
Temperature Control Accuracy	±1°C
Detect Limit	4mg/L

Standard Configuration

Main Unit (with tubing)

Sample Rack / Sample Holder

Magnetic Stir Bar

Reagent Bottle

Analysis Workstation

Optional Configuration

Brand-name Computer

Printer

LY- 5040B

Intelligent Sampling and Monitoring Unmanned Surface Vehicle (USV)

Overview

This equipment features a catamaran hull design, representing a new type of multi-functional USV. It is capable of integrating equipment such as a single-beam depth sounder, side-scan sonar, ADCP, water quality monitors, and water samplers. The USV can execute pre-planned sampling routes and perform fixed-point sampling. It is primarily used for routine sampling cruises and environmental emergency water sampling in lakes, reservoirs, and river basins, as well as for hydrological surveys.Utilizing a modular design, it is divided into three mission systems: the water quality monitoring module, water sampling module, and survey module. These three task system modules can be easily and quickly swapped out or can operate simultaneously to conduct sampling, online monitoring, and surveying tasks. The system enables effective data acquisition, reliable long-distance transmission, and online monitoring. From the ground control station, operators can perform path planning for the USV and conduct fixed-point water quality sampling, thereby allowing the vessel to cruise more efficiently. It effectively addresses challenges such as long-distance inspections and the inability to perform in-situ water sampling and testing. Compared to traditional monohull USVs, this multi-functional catamaran USV operates with greater stability on lakes and rivers, can carry more equipment and payload, and execute more complex missions.

Main Features

Durable & Portable

- Constructed from a new high-strength composite carbon fiber material, offering excellent corrosion resistance, wear resistance, impact resistance, and microwave penetration.
- Modular design allows for disassembly. Its compact size and light weight enable easy storage in an SUV trunk, solving transportation, handling, and operation difficulties.
- ★ Features ducted propulsors. The entire unit meets the IP67 waterproof standard.

Communication System

- Integrated communication system supporting 2.4GHz, public 4G network (4G is an optional configuration), and a 2km range.
- The communication base station and remote controller are integrated into one device.Communication System

Autonomous Mission Planning & Protection Control System

- Direction Control: Supports both differential steering and servo steering.
- Status Monitoring: Displays real-time USV status information and alarm prompts.
- Mission Planning: Supports planning for water sampling, surveying, hydrological measurement, and patrol missions.
- Automatic Return: Automatically returns to the starting point upon mission completion.
- Fail-safe Features: Automatic return on communication loss and automatic return on low battery

Autonomous Navigation & Control System

- Fully Automatic Navigation: Follows pre-planned routes from the ground control station for fully autonomous operation.
- Speed Cruise: Maintains a set speed while allowing directional control via the remote.
- Route Planning & Monitoring: Enables real-time monitoring, planning, and modification of the navigation path via the ground station.

Sampling System

- Supports water sampling using a single-point sampler.
- Sampling capacity ≥ 6L, meeting environmental protection industry standards.
- Supports both manual and automatic sampling modes.079625111715369549

Monitoring System

- Can be optionally equipped with various multi-parameter water quality sensors, sonar systems, and depth sounders. Measures parameters including pH, temperature, conductivity, turbidity, ammonia nitrogen, COD, dissolved oxygen, blue-green algae, chlorophyll, and water depth. Enables effective multimodal data collection (text, image, audio) from below and on the water surface.
- ★Supports real-time monitoring and display of Total Phosphorus (TP) and Total Nitrogen (TN).
- Water quality sensor probe is an integrated, composite type with all sensing units on the same plane for easy cleaning.

Flexible Configuration

- Configurable for single functions (sampling only or monitoring only) or multi-functional setups combining sampling, monitoring, and surveying.
- Streamlined catamaran hull with a low center of gravity ensures stable navigation.

Technical Indicators

Hull Parameters	
Parameter	**Specification**
★ Hull Dimensions	1.1 m (L) × 1 m (W, width can be narrowed according to equipment size) × 0.57 m (H)
Hull Weight	⩽ 28 kg (excluding payload equipment)
Load Capacity	⩾ 20 kg
Hull Material	New high-strength composite material, featuring excellent corrosion resistance, wear resistance, impact resistance, and microwave penetration
★ Hull Type	Streamlined catamaran design

Waterproof Rating	Entire unit ⩾ IP67
Full Load Draft	Approx. 0.15 m
Wind & Wave Resistance	Level 3 wind, 0.5 m wave height
Power System	
Parameter	**Specification**
Endurance	3 hours at economic speed (1.5 m/s)
Maximum Speed	Not less than 3.2 m/s (under standard displacement)
Propulsor Motor Type	Brushless DC Motor
Propulsors	Two ducted propulsors, supporting both differential steering and servo steering. Feature anti-clogging (weeds/debris) and impact protection. Detachable for easy installation and maintenance.
Battery	8s22Ah × 2 Lithium Batteries (29.6V), semi-solid state technology, easily detachable and replaceable.
Communication System	
Parameter	**Specification**
★ Modes	Integrated communication supporting 2.4GHz, public 4G network (4G is optional), 2km range, with integrated communication base station and remote controller
Data Capabilities	Enables data transmission and monitoring within range, remote monitoring of vessel status and operation, real-time transmission of USV data and video/images to the ground station
Communication Range	Base station range ⩾ 2 km (in open areas)
Hardware Configuration	Compatible with mainstream laptops / tablet computers (optional)
Base Station OS	Windows 10 or above
Base Station Software	Supports USV mission management, route planning, status display, data management, logging, and other functions
Handheld Remote Controller	Water and dust resistance rating ⩾ IP64, 2 joysticks, weight ⩽ 1 kg; 1080P HD video transmission, high-brightness HD display for video viewing, abundant ground interface ports
Steering Control System	
Parameter	**Specification**
Direction Control	Supports differential steering and servo steering
Status Monitoring	Receives, saves, and executes mission commands from ground control station; displays USV operational status and alarm prompts
Mission Planning	Supports mission planning for water sampling, surveying, hydrological measurement, and patrol; receives and executes manual commands from smart handheld remote controller; transmits USV data to the controller in real time

★Multi-channel Motor Drive	Drive controller with 4 PWM signals, expandable to include fail-safe protection
Fully Automatic Navigation	USV master control software plans routes via ground station; control system executes routes automatically for fully autonomous operation
Speed Cruise	Maintains set speed while allowing directional control via remote
Route Planning & Monitoring	Enables real-time monitoring, planning, and modification of navigation path via ground station
Automatic Return	Automatic return upon mission completion, communication loss, or low battery
Camera	Standard 360° pan-tilt HD camera
Navigation	GPS or BeiDou satellite positioning, high-sensitivity gyroscope; horizontal position accuracy ⩽ 1.5 m, velocity accuracy ⩽ 0.1 m/s
Status Display	Screen displays: remaining battery, speed, latitude/longitude, communication channel, remote controller battery, real-time operational status (sampling/moving), and mission completion progress
Ground Base Station	USV control system software capable of downloading, storing, and managing satellite maps of work areas
	Features task editing, automatic planning, generation of waypoints (>256) and work boundaries, with manual/automatic route planning and task assignment at any waypoint
	Allows saving, modifying, managing, and loading configured missions
	Displays USV position, heading, status, coordinates, track, battery level, base station power, speed, and low-battery alerts on satellite map; optional obstacle distance detection
	Data storage system for organizing and saving USV operation logs
	Enables interactive transfer of control between base station and remote controller; stores and recalls routine missions and historical data
★ Monitoring Data Geolocation	Exports monitoring data synchronized with real-time coordinates and timestamp, ensuring authenticity and reliability
★ Photo Geotagging	Geotagged photos retain location coordinates for activity verification
Safety	USV safety protection prevents contact with components or insulation specified in GB4943.1 clause 2.1.1.1 within operator access area
Sampling System	
Parameter	**Specification**
Functionality	Supports single-point and multi-point sampling (expandable), with no less than 3 independent sampling channels. Capable of designated location sampling and quantitative sampling.
Sampling Capacity	Manual or automatic sampling; features pipeline self-cleaning function. Total capacity: 3 × 2 L; Number of samples (bottles) per mission: 3; ▲Sampling depth: 50 cm.

LY- 5040A

Intelligent Sampling and Monitoring Unmanned Surface Vehicle (USV)

- Trimaran design

LY- 5040C

Intelligent Sampling and Monitoring Unmanned Surface Vehicle (USV)

- Inflatable hull for easy portability

CALIBRATORS AND OTHER PRODUCTS

Background Information

Flow calibration equipment has long been plagued by technical challenges in quality control: it is typically bulky, inconvenient to carry, and demands high working environments and conditions, making on-site calibration at user locations difficult.

Solution

Our calibrator series products feature high accuracy, compact size, and light weight. They are widely suitable for applications such as metrological verification, environmental monitoring, occupational health and safety, scientific research institutes, and other settings requiring gas flow calibration.

LY- 7020A
Multi-range Orifice Flow Calibrator

- **(10-1500)L/min Flow Calibration**

Overview

This instrument employs the orifice flow measurement principle to determine gas flow rates. Utilizing microcontroller and sensor technology, it integrates multirange gas flow calibration into a single unit. It offers high calibration accuracy and portability, capable of meeting the flow calibration requirements for most sampling instruments. It is widely applicable in metrological verification, environmental monitoring, occupational health and safety, scientific research institutes, and other settings requiring gas flow calibration.

Main Features

- It features a wide flow calibration range, capable of meeting the calibration requirements for most sampling instruments.
- It employs segmented flow calibration for higher accuracy.
- It is compact, portable, multifunctional, and features simple and convenient operation.
- The built-in high-performance rechargeable lithium battery offers strong endurance.
- Each calibrator is calibrated by the national metrology department and comes with a calibration certificate to ensure measurement accuracy.
- It can directly display the working condition flow rate and automatically convert it to the standard condition flow rate.
- Atmospheric pressure and temperature can be inputted and measured, allowing for normal use even in low-pressure environments.
- The addition of a self-diagnostic function facilitates maintenance and ensures safer operation.
- The built-in high-capacity memory allows calibration data to be stored, queried, and printed at any time.
- The built-in Bluetooth module enables connection to a Bluetooth printer for printing data reports.

Technical indicators

Main parameter	Parameter range	Resolution ratio	Accuracy
Flow Range	(10 ~ 30)L/min	0.01L/min	Within±1% Repeatability: ≤0.3%
	(30 ~ 80)L/min	0.1L/min	
	(80 ~ 150)L/min		
	(200 ~ 500)L/min (Optional)	1L/min	
	(600 ~ 1500)L/min (Optional)		
Temperature	(-40 ~ 85）℃	0.1℃	Within±1℃

Main parameter	Parameter range	Resolution ratio	Accuracy
Ambient Atmospheric Pressure	(50 ~ 130）kPa	0.01kPa	Within±500Pa
Ambient Temperature	(-20 ~ 50) °C		
Measurement Method	External orifice differential pressure type		
Dimensions (L×W×H)	240 mm × 100 mm × 45 mm		
Weight (Main Unit)	Approx. 0.5 kg		
Power Consumption	< 6 W		
Power Supply	Built-in lithium battery (7.4V/3Ah) or external 12V/2A power adapter		
Continuous Operation Time	Not less than 20 hours		
Standby Time	Not less than 3 days		
Charging Time	Approx. 3 hours		

Standard Configuration

Main Unit

Power Adapter

7020A Resistance Module

Adapter Nozzle

Optional Configuration

Portable Bluetooth Printer

High-flow Orifice Flowmeter

(200-500) L/min Calibration Adapter Kit

Φ90mm Glass Fiber Filter Membrane

LY- 7030
Intelligent Soap Film Flow Meter

- **Infrared detection technology**
- **Built-in lithium battery**
- **Medium and small gas flow rates**

Overview

This instrument is based on the soap film principle, used for the measurement and calibration of gas flow rates. It is widely applicable in metrological verification, environmental monitoring, occupational health and safety, scientific research institutes, and other settings requiring gas flow calibration.

Main Features

- It features a wide flow calibration range, capable of meeting the calibration requirements for most sampling instruments.
- It is compact, portable, multifunctional, and features simple and convenient operation.
- The built-in high-performance rechargeable lithium battery offers strong endurance.
- The addition of a self-diagnostic function facilitates maintenance and ensures safer operation.
- The built-in high-capacity memory allows calibration data to be stored, queried, and printed at any time.

Technical indicators

Main parameter	Parameter range
Flow Rate	(100 ~ 6000)mL/min
	(5 ~ 500)mL/min
Ambient Atmospheric Pressure	(50 ~ 130) kPa
Ambient Temperature	（-40 ~ 60）℃
Charging Time	(4 ~ 5)h
Charger	Input: AC (100-240) V, 50/60 Hz Output: DC 20V, 3.25A
Battery Operating Time	>16h
Total Power Consumption	<2.5W
Weight	2000g
Dimensions (L×W×H)	180mm×200mm×420mm

Standard Configuration

Main Unit

Power Adapter

Syringe

Silicone Hose

Soap Solution Bottle

Optional Configuration

Portable Bluetooth Printer

LY- 7050B
Portable Pressure Flow Temps Calibrator

- **Multi-function capability of a single unit**
- **Built-in lithium battery**
- **Roots / Diaphragm Flowmeter (Optional)**
- **（5-150)/L Flow Calibration**

Overview

This instrument integrates the calibration of micro-pressure, gauge pressure, temperature and flow rate, with high precision and portability, which can be used for the full function calibration of the smoke and dust tester and other sampling instruments. It is widely used in environmental protection, measurement, health, labor, safety supervision, military, scientific research, education and other fields.

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Main Features

- Certified by the national metrology authority, ensuring high measurement accuracy
- Integrates pressure, temperature, and flow calibration into a single system, delivering high-precision calibration.
- Scalable high-flow Roots and soap film flowmeters, adaptable to diverse applications
- The device is portable, multi-functional, and easy to operate.
- Built-in high-performance rechargeable lithium battery with strong endurance
- Add fault self-check to simplify maintenance and enhance safety
- Built-in high-capacity storage allows calibration data to be stored, queried, printed, and exported at any time.

Technical indicators

Host technical specifications		
Main parameter		**Parameter range**
Rate of flow		(5～150) L/min
Micropressure	Standard Version	(0～2500) Pa
	Custom Edition	(-2500 ~ +2500) Pa
Gage pressure		(-60～60) kPa
Ambient atmospheric pressure		(50～130) kPa
Ambient temperature		(-40～80) ℃
Smoke temperature calibration (PT100)		0℃、44℃、80℃、120℃、195℃、200℃、300℃、400℃

Host technical specifications	
Main parameter	**Parameter range**
Weight	6000g
Dimensions (L×W×H)	303mm×277mm×312mm

Technical specifications of soap film flowmeter (optional)	
Rate of flow	(10 ~ 500) mL/min
	(0.1 ~ 6.0) L/min
Ambient temperature	(0 ~ 40) ℃
Ambient atmospheric pressure	(50 ~ 130) kPa
Technical specifications of external Roots flowmeter (optional)	
Rate of flow	Customizable flow rates: (0.4 ~ 16) m^3/h and (0.5 ~ 100) m^3/h, plus other flow ranges

Standard Configuration

Main Unit

Manual Soap Film Generator

Power Adapter

Optional Configuration

Portable Bluetooth Printer

External Roots Flowmeter

Soap Film Flowmeter

LY- 7061
Ozone Calibrator

- **Built-in high-precision photometer**

Overview

Ozone is a highly reactive gas that readily undergoes decomposition reactions. As a result, it cannot be stored in cylinders and must be generated and used on-site. This instrument is based on the principle of the photochemical method - UV ozone generator for ozone production. It integrates an ozone photometer to provide real-time feedback and correction of the generated ozone concentration,achieving low-concentration, high-precision ozone generation. The instrument can be applied to calibrate various low-concentration ozone analyzers and ozone transfer standards (ozone calibrators), including settings such as metrology institutes, environmental protection departments, third-party testing agencies, public health, scientific research, and education.

Main Features

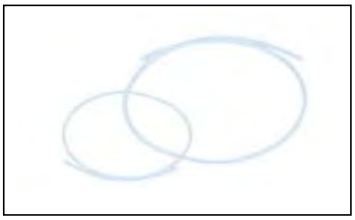
- It can generate ozone at the corresponding concentration based on the set requirement.
- The built-in high-precision photometer provides real-time feedback and correction to the ozone generator for higher accuracy.
- It has a built-in rapid ozone generator.
- It features parameter calibration functions for temperature, pressure, flow rate, etc.
- It is equipped with a unit switching function.
- It features a concentration moving average function.

Technical indicators

Main Parameter	Parameter Range
Range	(0 ~ 5000) ppb
Zero Noise	≤ 1 ppb RMS
Output Flow Rate	(1 ~ 3) L/min
Linearity	± 1% F.S. (Full Scale)
Warm-up Time	≤ 30 min
Power	< 150 W
Dimensions (L×W×H)	570 mm × 485 mm × 222 mm
Weight	≤ 16 kg

Standard Configuration

Main Unit



Polytetrafluoroethylene (PTFE) Tub

LY- 8030A
Intelligent Multi-Channel Gas Dilution Calibrator

- **Mass Flow Controller (MFC)**
- **Intelligent Multi-Channel**
- **Intelligent Alert Function**

Overview

This instrument is a portable and precise intelligent multi-channel gas dilution calibrator. Based on the mass flow control principle, it proportionally mixes standard gases with dilution gas according to set ratios, ensuring the accurate preparation and output of gases at specified concentrations.

The gas dilution calibrator is characterized by simple operation, reliable quality, stable performance, long service life, and flexibly adjustable dilution ratios. It meets various stringent testing and calibration requirements and is widely used for multi-point calibration, linearity verification, cross-interference testing, and performance audits of gas analyzers, including laboratory chromatographs, portable GC-MS, ambient air automatic stations, continuous emission monitoring systems (CEMS), and gas alarms.

Main Features

- It features a large color touchscreen with clear display, sensitive touch response, and easy operation.
- It allows for storage and pre-setting of multiple gas mixing parameters, enabling multi-channel gas dilution.
- It supports gas mixing with various types of gases, meeting different user requirements.
- It employs high-precision Mass Flow Controllers (MFCs) for accurate control of gas flow rates.
- It offers fast response and high dilution ratios, covering diverse application needs.
- It is compact, lightweight, and highly portable.

Technical indicators

Main Parameter	Parameter Range
Gas Mixing Method	Mass Flow Dynamic Dilution Method (MFC)
Gas Mixing Channels	2 or 3 channels controlled by MFCs
Dilution Gas	Clean Air or Nitrogen
Power Consumption	< 30 W
Inlet Pressure Resistance	< 0.5 MPa
Dilution Ratio	1:1 - 1:2000 (Maximum)
Repeatability	Not exceeding 1/3 of the maximum permissible error
Configuration Options	Basic Model: Dilution Gas 5 L/min - CH_1 2 L/min

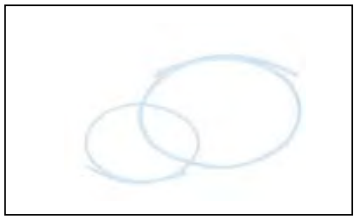
Main Parameter	Parameter Range
	Standard Model: Dilution Gas 5 L/min - CH_1 2 L/min - CH_2 2 L/min Comprehensive Model: Dilution Gas 5 L/min - CH_1 2 L/min - CH_2 200 mL/min
Note	There are 3 models in total: Basic, Standard, and Comprehensive (selected based on the number of dilution/standard gas channels and their flow rate ranges).

Standard Configuration

Main Unit

Power Adapter

Nut and Ferrule



Polytetrafluoroethylene (PTFE) Tube

Optional Configuration

Stainless Steel Two-Stage
Pressure Regulator

LY- 8032
Dynamic Olfactometry System

- **Dynamic dilution**
- **Automatic calculation**

Overview

This instrument operates in compliance with "Ambient Air and Waste Gas—Determination of Odor—Dynamic Dilution Olfactometry." It utilizes high-precision MFCs (Mass Flow Controllers) to regulate odor gas flow, combined with a Venturi mixing structure to ensure homogeneous blending of odor gas and purified air. This enables precise dynamic dilution of odor concentration. Integrated with host computer software, it automatically calculates odor concentration values and generates data reports.

Main Features

- Employs high-precision, anti-adsorption MFC (Mass Flow Controller) to significantly improve gas distribution accuracy.
- Utilizes computer-based data processing to automatically generate data tables, facilitating traceable measurements and record-keeping.
- Features a multi-station design that eliminates the need for assessors to take turns sniffing, greatly improving work efficiency.
- Includes a dedicated display at each station to enhance human-machine interaction and user-friendly operation.

Technical indicators

Main Parameters	Parameter Range
MFC Flow Rate	(0 ~ 10)mL/min
	(0 ~ 500)mL/min
	(0 ~ 10)L/min
	(0 ~ 100)L/min
Noise (Optional)	(30 ~ 130)dB
Ambient Temperature	（-40 ~ 80）℃
Internal System Temperature	（-40 ~ 80）℃
Ambient Humidity	（0 ~ 100）%RH
Atmospheric Pressure	（50 ~ 130）kPa
Outlet Flow Rate	10L/min
Dilution Ratio	10 ~ 100000 times
Facial Velocity	The airflow velocity at the sniffer cup outlet is

Main Parameters	Parameter Range
	between（0.2 ~ 0.5）m/s
Dimensions (L×W×H)	490 mm × 425 mm × 405 mm
Power Supply	AC(220±22)V,50Hz
Power Consumption	<300W

Standard Configuration

Main Unit

Odor sampling cup unit

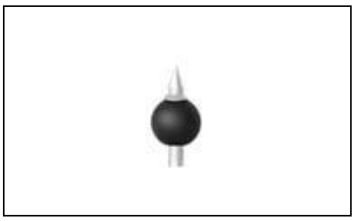
Sample bucket

Oil-free air compressor

Optional Configuration

Brand-name computer

6-position olfactometry table



Noise meter

LY- 8040

Intelligent Flow/Pressure/Temperature/Humidity Calibrator

- **Built-in lithium battery**
- **Extra-large color touchscreen**

Overview

This instrument integrates micro pressure, gauge pressure, temperature and flow calibration into one, with high calibration accuracy and portable design, meeting the full-function calibration requirements of dust detectors and other sampling instruments. The product is widely used in environmental protection, metrology, sanitation, labor, safety supervision, military, scientific research, education and other fields.

Main Features

- It features a wide flow calibration range, capable of meeting the calibration requirements for most sampling instruments.
- Specially equipped with the national metrology department calibration certificate, high measurement accuracy;
- Horizontal design, ergonomic, more convenient to use;
- With voice broadcast function, operation is more convenient;
- One machine can be used for multiple purposes, and can complete the measurement of micro, low, medium and high flow, with a wide range of flow;
- Multi channel flow can run simultaneously and be calibrated synchronously. Instruments that comply with the protocol can be calibrated with one click;
- It has PT100 flue temperature calibration and verification function;
- (including 0℃,44℃,80℃,120℃,195℃,200℃,300℃,400℃), and has dry and wet bulb calibration function;
- 8-inch touch screen design, large display area, more data, simple operation, convenient for users to use;
- It has the function of flow temperature and pressure measurement, and can automatically carry out flow conversion under standard condition, reference condition, environment and other conditions;
- With the function of measuring ambient temperature and atmospheric pressure;
- It can realize automatic pressure increase within the range of micro pressure and gauge pressure measurement, with maximum allowable tolerance of automatic pressure increase not more than ±1pa for micro pressure and not more than ±0.1kpa for gauge pressure;
- The dynamic pressure, static pressure, flue temperature, flow rate of the dust sampler and the pressure and flow rate of the oil and gas recovery detector can be calibrated;
- Equipped with high energy lithium battery, can work without external power supply;
- It has the functions of data storage, query, printing and export, and can accurately query historical data;
- Select Bluetooth high-speed low-noise micro thermal printer, wireless connection, easy to grasp real-time data;
- Provides USB interface, can export data files, and supports instrument software upgrade;

- The calibration operation is protected password by and provides the ability to restore the initial settings;
- The whole machine production is through molds. Light in weight, small in size and easy to carry;
- The instrument is equipped with electronic tag, which can be combined with the instrument in and out of storage management platform software to realize intelligent management of the instrument.

Technical indicators

Main Parameter	Parameter Range	Resolution Ratio	Tolerance
Micro Flow	(10 ~ 200)mL/min	0.1mL/min	Within ±1%
	(10 ~ 200) mL/min (optional)	0.1mL/min	Within ±1%
Low Flow	(200 ~ 2000)mL/min	0.1mL/min	Within ±1%
	(200 ~ 2000) mL/min (optional)	0.1mL/min	Within ±1%
	(2 ~ 20)L/min	0.1L/min	Within ±1%
Mid Flow	(20 ~ 230)L/min	0.1L/min	Within ± 1%
Big Flow	(200 ~ 1500)L/min	0.1L/min	Within ±1%
Soap Film Flowmeter	(100 ~ 6000) mL/min (optional)	0.01 mL/min	Within ±1%
Soap Film Flowmeter	(5 ~ 500) mL/min (optional)	0.01 mL/min	Within ±1%
Roots Type Flowmeter	(5 ~ 150) L/min (optional)	0.01 L/min	Within ±1%
Micro pressure	(-2500 ~ 2500) Pa (optional)	0.1Pa	±0.1%FS
	(-5000 ~ 5000) Pa (optional)	0.1Pa	±0.05%FS
Gage Pressure	(-60 ~ 60)kPa	0.001kPa	±0.5%FS
Ambient Atmospheric Pressure	(50 ~ 130)kPa	0.01kPa	Within ±500Pa
Ambient Temperature	(-40 ~ 80)℃	0.1℃	Within ±2℃
Flue Gas Temperature Calibration (PT100)	0℃、44℃、80℃、120℃、195℃、200℃、300℃、400℃	\	Within ±1℃
Working Power Supply	Built-in lithium battery (14.8V/3Ah)/external 20V/3.25A power adapter		
Power Consumption	＜6W		
Operating Time	Not less than 8 hours		
Main Unit Weight	Approximately 1.5kg (with a pressure of 2.5kg)		
External Dimensions (L×W×H)	282mm×240mm×100mm		

Standard Configuration

Main Unit

Main Unit Case

Power Adapter

Resistance Module

Adapter Nozzle

Optional Configuration

Portable Bluetooth Printer

LY- 9032 Flow Regulator

Φ90mm Glass Fiber Filter Membrane

High-flow Orifice Flowmeter

Soap Film Flowmeter

Roots Flowmeter

LY- 1030
Flue Gas Pretreatment System

- **Filtration, Heating, Condensation, and Dehumidification**

Overview

This instrument can be used in conjunction with analyzers such as the LY-3026 Infrared Flue Gas Analyzer, LY-3023 UV-DOAS Flue Gas Analyzer, LY-3022 Flue Gas Analyzer, and the LY- 3012H Dust/Gas Testers Series. It is designed for the filtration, heating, condensation, dehumidification, and automatic drainage of wet process flue gas, effectively improving the measurement accuracy of the host analyzer and extending the service life of its sensors. When used with the Laoying Model 3026 Infrared Flue Gas Analyzer, an optional NO_2 Converter can be equipped for more accurate NOx measurement results.

The system utilizes a high-performance microcontroller and a large OLED display, featuring convenient operation, rapid dehumidification, and minimal loss of flue gas components. It complies with national standards for flue gas sampling. It is suitable for use in non-explosive environments with properly grounded power supplies. During field operation, measures should be taken to protect against rain, snow, and other elements.

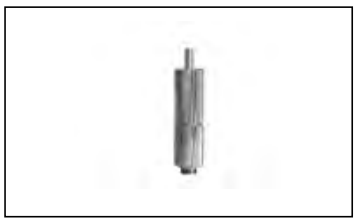
Main Features

- It uses a 2.9-inch OLED display to show the main unit status in real-time.
- It employs high-power semiconductor two-stage refrigeration, and the cooling temperature is flexibly adjustable.
- It features an automatic cold chamber rinse function to prevent the adsorption of flue gas by condensate on the tube wall.
- The sampler and heated hose are integrated into one design, and the heating temperature is adjustable.
- A 0.1μm filter is used to effectively protect the downstream analyzer.
- It can be equipped with a built-in NO_2 Converter.
- The entire unit is lightweight with strong portability.
- An optional Lonying specially designed straight extension tube is available to adapt to working conditions with temperatures from (200~900) °C and flues with thick walls.
- The built-in electronic tag (RFID) enables intelligent instrument management by integrating with inventory management platform software.

Technical indicators

Main Parameter	Parameter Range	Accuracy
Heating Temperature	(80 ~ 180) °C	Not exceeding ±10 °C
Refrigeration Temperature	(0 ~ 9) °C, default 2 °C	
Total Length of Sampler and Heated Hose	3.5 m (Heated hose length customizable, ≤ 3 m)	
Outlet Dew Point	≤ 5 °C (@ 25 °C)	
Filter Particle Retention	0.1 μm	
Main Unit Weight	8 kg	
Main Unit Power Supply	AC (220 ± 22) V, 50 Hz	
Sampling Probe Operating Voltage	DC 24 V	
Flue Gas Temperature	≤ 200 °C	

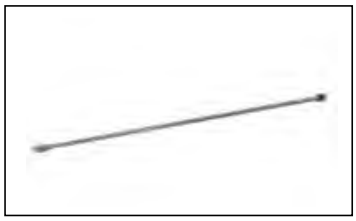
Standard Configuration



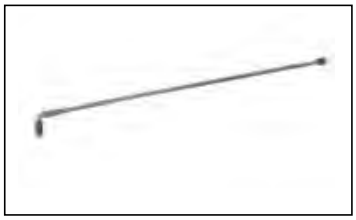
Flue Gas Calibration Adapter Nozzle

Titanium Filter Cartridge

Optional Configuration



Straight Extension Tube



Straight Extension Tube with Conversion Elbow Kit

LY- 1062C
Resistance-capacitance Flue Gas Moisture Detector

Overview

This instrument utilizes a Capacitive-Resistive method humidity sensor to achieve real-time measurement of flue gas moisture content. It features an extraction-type integrated design that combines the sampling probe, moisture module, and main unit into one system. It also incorporates a communication function for transmitting measurement data externally. The detector can be used in conjunction with instruments such as the Model 3012H Series Dust/Gas Tester. This product is widely applicable for detecting the moisture content in process flue gas from various boilers, industrial kilns, and other stationary pollution sources.

Main Features

- The extraction-type integrated design combines the sampling probe, moisture module, and main unit into one system, offering simple operation and good portability.
- The moisture measurement module is positioned at the rear for direct reading of moisture data within the flue. It can adapt to high temperatures and other complex conditions while ensuring the sensor's service life.
- It uses an imported industrial-grade temperature and humidity sensor with strong anti-interference capability, automatic temperature compensation, high accuracy, and long service life.
- The sampling probe is heated along its entire length with adjustable temperature. A special uniform heating design reduces the risk of condensation on the tubing and sensor surface, enhancing service life and measurement accuracy.
- The sampling probe can be equipped with an optional extension tube for sampling in higher temperature conditions.
- It meets the requirement for ultra-small diameter measurement ports, with a minimum port diameter of φ30 mm.
- It employs a wireless transmission module to communicate data wirelessly with the main unit, while also providing a reserved wired interface.
- The heating isolation design incorporates an isolation module to separate the sampling probe from the control system, ensuring operational reliability.
- A thermocouple detects the heating temperature, enabling real-time monitoring and more precise temperature control during heating.
- The built-in electronic tag (RFID) enables intelligent instrument management by integrating with inventory management platform software.

Technical indicators

Main Parameter	Parameter Range	Resolution Ratio	Accuracy
Moisture Content	(0 ~ 40) %	0.01 %	For (0 ~ 5) %: Absolute error ≤ ±0.75% For (5 ~ 40) %: Relative error ≤ ±15%
Length	Standard 1.0 m (Customizable)		
Main Unit Weight	Approx. 0.6 kg		
Power Supply	External 24V/10A desktop power adapter		

Standard Configuration

Power Adapter

LY- 1062E
Multifunctional Meter

Overview

This instrument is based on resistance capacitance method to measure the moisture content of flue gas in real time. It integrates the measurement of moisture content, gas flow rate, dynamic pressure, static pressure, and flue temperature. This device can be used alone or combined with other relative devices. The length of the probe could be customized.

Main Features

- It can be used for multiple purposes, which can not only detect the temperature and flow rate of flue gas but also detect the moisture content of flue gas. Oxygen content measurement can be selected.
- Built in high-precision sensor. The original imported temperature and humidity sensor is used, with high measurement accuracy, corrosion resistance, long service life and response time less than 30 seconds.
- The sampling probe is heated throughout the whole process, and the heating temperature can be set to effectively prevent freezing and blocking the pipeline in extremely cold weather.
- The heating has "automatic" mode, and the instrument automatically closes the loop to control the heating temperature of the humidity sensor and the heating temperature of the sampling probe, so as to improve the measurement accuracy.
- Built-in temperature and pressure correction compensation algorithm to eliminate the influence of flue temperature and pressure on measurement results, higher measurement accuracy.
- It has the function of flue gas distribution point, and automatically recommends the number of measurement points and the distance between measurement points.
- It has the function of reverse blowing cleaning, which can not only clean the humidity sensor, but also realize zero calibration of the flue gas measurement unit without taking out the sampling probe.
- It has high temperature warning and high temperature protection function to prevent the instrument from being damaged by high temperature.
- Special protection for the measuring probe can adapt to the complex and harsh measuring environment of high temperature, high humidity, high dust, high corrosion, static electricity and so on, ensure the measurement accuracy and effectively extend the service life of the measuring probe.
- 4.3-inch high resolution touch screen, high sensitivity, intuitive interface, simple operation.
- The sampling data is automatically remembered and historical data query is supported.
- Built-in lithium battery, easy to view and print data at any time.
- Optional Bluetooth printer to print related data reports.
- Provides USB interface, which can export data from U disk for convenient later data recording and processing.
- Built-in electronic tag can be combined with the instrument in and out of storage management platform software to realize intelligent management of instruments.

Technical indicators

Parameter	Parameter range	Resolution ratio	Tolerance
Moisture content	(0 ~ 40)VOL%	≤10%，0.01VOL% ＞10%，0.1VOL%	Less than 5.00%, absolute error not more than ±0.75%; >5.00%, the relative error does not exceed ±15%
Oxygen content (optional)	(0 ~ 30)%	0.01%	Not exceeding ±5.0%
Pressure	(50 ~ 130)kPa	0.01kPa	Not more than ±500Pa
Flue gas dynamic pressure	(0 ~ 2000) Pa	0.1 Pa	Not exceeding ±1%FS
Flue gas static pressure	(-30 ~ ＋30) kPa	0.01 kPa	Not exceeding ±1%FS
Chimney temperature	(0 ~ 500) ℃ scalable	0.1℃	Not exceeding ±3℃
Flue gas velocity	(1 ~ 45)m/s	0.1 m/s	Not exceeding ±5%
Heating temperature	(50 ~ 120)℃	0.1℃	Not exceeding ±10℃
Working smoke temperature	The smoke temperature is less than 500℃, and the smoke temperature exceeds 180℃ requires an extension tube		
Working power supply	Built-in lithium battery (22.2V/6Ah) or external DC24V power adapter		
Total length	1.5m (effective length 1.1m), customizable		
Weight	About 5.0kg		
Heating power	≤100W		

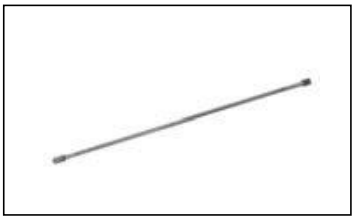
Standard Configuration

Main Unit

Power Adapter

Optional Configuration

Portable Bluetooth Printer



Straight Extension Tube

LY- 1087A
Oil Fume Sampling Probe

- **Integrated collector and sampling nozzle**

Overview

This instrument extracts gases from oil fume exhaust ducts using the isokinetic sampling method and employs a combination of methods such as adsorption, centrifugal separation, and impaction to capture oil mist. The sampling probe features an aesthetic design, is convenient to use, and easy to carry. It is now widely used by environmental protection monitoring departments at various levels for oil fume collection. It can be used in conjunction with Laoying's series of dust/gas testers and other related products.

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Main Features

- It employs a combination of sampling adsorption, centrifugal separation, and impaction to capture oil mist, featuring low resistance, high efficiency, and easy cleaning.
- The collector and sampling nozzle are integrated into one unit, ensuring that oil mist adsorbed by the nozzle is fully collected, resulting in high capture efficiency.
- It is equipped with a series of sampling nozzles to meet the requirements of sampling at different flow velocities.
- Both the probe body and sampling nozzles are meticulously crafted from high-quality stainless steel, making them neat and durable.
- It has an aesthetic appearance, is user-friendly, and easy to carry.
- The Pitot tube is modular, easily detachable, and replaceable.
- The new industrially designed handle is more ergonomic. It has a reserved interface for a wireless transmission module, allowing for the addition of a wireless module to transmit flue conditions (temperature, flow velocity) wirelessly.
- The built-in electronic tag (RFID) enables intelligent instrument management by integrating with inventory management platform software.

Technical indicators

Main Parameter	Parameter Range
Collection efficiency for oil fume	≥ 95%
Pitot tube coefficient	0.84 ± 0.01
Sampling probe length	Standard 1.0 m (Customizable)

Main Parameter	Parameter Range
Requirement for measurement port diameter	≥ Φ90 mm
Temperature resistance of the sampling probe	≤ 200 °C

Standard Configuration

Oil fume dedicated sampling nozzle

O-ring / Sealing gasket

Oil fume filter cartridge

Sample cartridge

LY- 1089A
Multi-functional Exhaust Sampling Probe

- **Multi-function capability of a single unit**
- **Fully heated path**

Overview

This instrument is designed for collecting pollutants such as hydrogen chloride, sulfuric acid mist, fluoride, hydrogen fluoride, and hydrogen bromide from fixed emission sources. It features continuous heating with temperature control throughout the process, equipped with dedicated interfaces for flow rate and flue gas temperature measurement. The system can be connected to external host units (Item LY3012H series, LY-3072) to achieve precise monitoring of these parameters. Widely used in environmental protection, public health, labor safety, occupational safety supervision, military applications, scientific research, and educational institutions, this equipment serves multiple sectors across various industries.

Main Features

- It employs a combination of sampling adsorption, centrifugal separation, and impaction to capture oil mist, featuring low resistance, high efficiency, and easy cleaning.
- The filter membrane or filter cylinder and sampling tube are heated in the whole process. The system automatically controls the temperature with a wide temperature control range, uniform and accurate temperature control
- It has heating function, the heating temperature can be set, and the sampling tube has independent temperature control
- It has the refrigeration function of cold water mechanism and is used for column condensation
- The sampling tube is designed in a combined and integrated way. The S-type pyrometer, platinum resistance and sampling tube are organically combined to make the structure compact. The parameters such as flow velocity and smoke temperature can be measured while sampling.
- Customize the length of sampling tube according to customer requirements

Technical indicators

Main Parameter	Parameter range
Heating temperature	(100 ~ 160) ℃, can be set (default 120℃)
Sampling nozzle model	Φ4.5、Φ6、Φ7、Φ8、Φ10、Φ12
Pitot coefficient	0.84±0.01
Filter membrane specifications	Φ47mm

Main Parameter	Parameter range
Filter cylinder type	3# (φ28×70) filter cartridge, customizable
Length	Effective 1.3m, total length 1.72m, customizable
Test hole diameter requirements	≥Φ70mm

Standard Configuration


Anti-suckback dryer


Temperature control cable

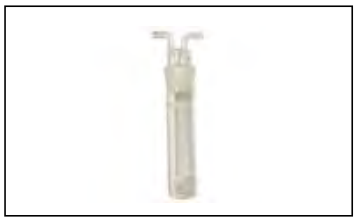

Blue ice / Reusable ice pack


Sampling nozzle (Titanium)


Intelligent dual-channel temperature controller


75 mL impinger

Optional Configuration


75 mL fritted bubbler


75 mL / Amber fritted bubbler


250 mL impinger


75 mL PTFE (Polytetrafluoroethylene) bubbler


Absorber bottle sample aluminum case (9-hole)

LY- 1089T
Multi-functional Condensing Flue Gas Sampling Probe

Overview

This instrument employs the heated path principle and a Capacitive-Resistive method humidity sensor to achieve real-time measurement of flue gas moisture content. It integrates the measurement of parameters including moisture content, gas flow velocity, dynamic and static pressures, and flue gas temperature. The product is widely used for process monitoring and moisture content measurement in various boilers, industrial kilns, and other stationary pollution sources.

Main Features

- Utilizing the heated path principle and a Capacitive-Resistive method humidity sensor, it achieves real-time measurement of flue gas moisture content.
- The extraction-type integrated design combines the sampling probe, moisture module, and main unit, offering simple operation and good portability.
- The Capacitive-Resistive moisture measurement module allows for direct reading of moisture data within the flue and can adapt to high temperatures and other complex conditions.
- The sampling probe is fully heated, with adjustable temperature. A special uniform heating design enhances service life and measurement accuracy.
- During moisture content detection, it simultaneously measures parameters such as dynamic pressure, static pressure, flue gas temperature, flow velocity, and atmospheric pressure.

Technical indicators

Main Parameter	Parameter range
Moisture Content	(0 ~ 40) %
Atmospheric Pressure	(50 ~ 130) kPa
Dynamic Pressure	(0 ~ 2000) Pa
Static Pressure	(-30 ~ +30) kPa
Flue Gas Temperature	(0 ~ 500) °C (Extendable)
Flow Velocity	(5 ~ 45) m/s
Maximum Heating Temperature	(50 ~ 120) °C
Pitot Tube Coefficient	0.84 ± 0.01

LY- 9020A
Intelligent Automatic Laminator

- **Integrated sampling head**
- **Built-in lithium battery**
- **Automatic filter pressing**
- **User-friendly**

Overview

This instrument is suitable for the integrated sampling probe filter membrane pressing operation during low-concentration dust sampling. It enables automatic membrane pressing, offering simple and convenient operation. It significantly reduces labor intensity, improves operational efficiency, and decreases the rate of defective products.

Main Features

- Multiple self-protection mechanisms to reduce the instrument failure rate.
- A high-quality reduction motor, featuring a long service life, low noise operation, and overload protection.
- Ergonomically designed, it is lightweight, aesthetically pleasing, and simple to operate. It ensures high membrane-pressing efficiency and can be used single-handedly.
- Equipped with a built-in, high-capacity lithium battery for portable operation.
- The finished sampling probes demonstrate exceptional consistency, a low defect rate, an elegant form, and excellent sealing performance.

Technical indicators

Main Parameters	Parameter Range
Applicable Filter Membrane Size	Φ47mm
Weight	2.5kg
Alarm Type	Audio-Visual Alarm
Dimension(Diameter×Height)	180mm×185mm
Power Consumption	≤5W
Number of filters that can be pressed/clamped consecutively	>3000 pieces
Working Power	Built-in Lithium Battery (DC7.4V/3.2Ah or external 8.4V/1A Power Adapter

Standard Configuration

Main Unit

Power Adapter

Dust Cover

Brush

www.hbyq.net

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