

Environmental Monitoring & Gas Analysis Solutions

Continuous Emission Monitoring System & Gas Analyzer

Shandong Sinzen instrument co., LTD



Enterprise introduction

Based in Jinan, Shandong Province, Shandong Xinze Instrument Co., Ltd. is a high-tech enterprise integrated with the R&D, production, sales and after-sales services of environmental online monitoring devices, gas analyzers, process analysis systems, pretreatment components, operation and maintenance services, and supporting parts.

As a member of the China Association of Environmental Protection Industry, the company has obtained ISO9001, ISO14001, ISO45001 system certifications, as well as CCEP China Environmental Protection Product Certification and CES China Environmental Service Certification. Focusing on nationally supported environmental monitoring and industrial process gas analysis fields, we supply a full range of high-quality related instruments and system products.

Equipped with a professional R&D team, solid technical strength, continuous innovation capability and standardized management, the company owns over 60 independent intellectual property rights, including 20+ utility model patents, 30+ software copyrights and 3 trademarks. We have also formulated 2 group standards and more than 10 enterprise standards. In the past three years, we have achieved 36 technical achievements with a 100% conversion rate, delivering reliable application performance and winning wide recognition from customers.

Moving forward, the company will cultivate professional talents, prioritize independent innovation and intellectual property protection to strengthen core competitiveness. By increasing R&D investment and adhering to premium technology, standardized management, sincere service and a pragmatic work style, we strive to build ourselves into a benchmark enterprise in the environmental monitoring and industrial gas analysis industry.

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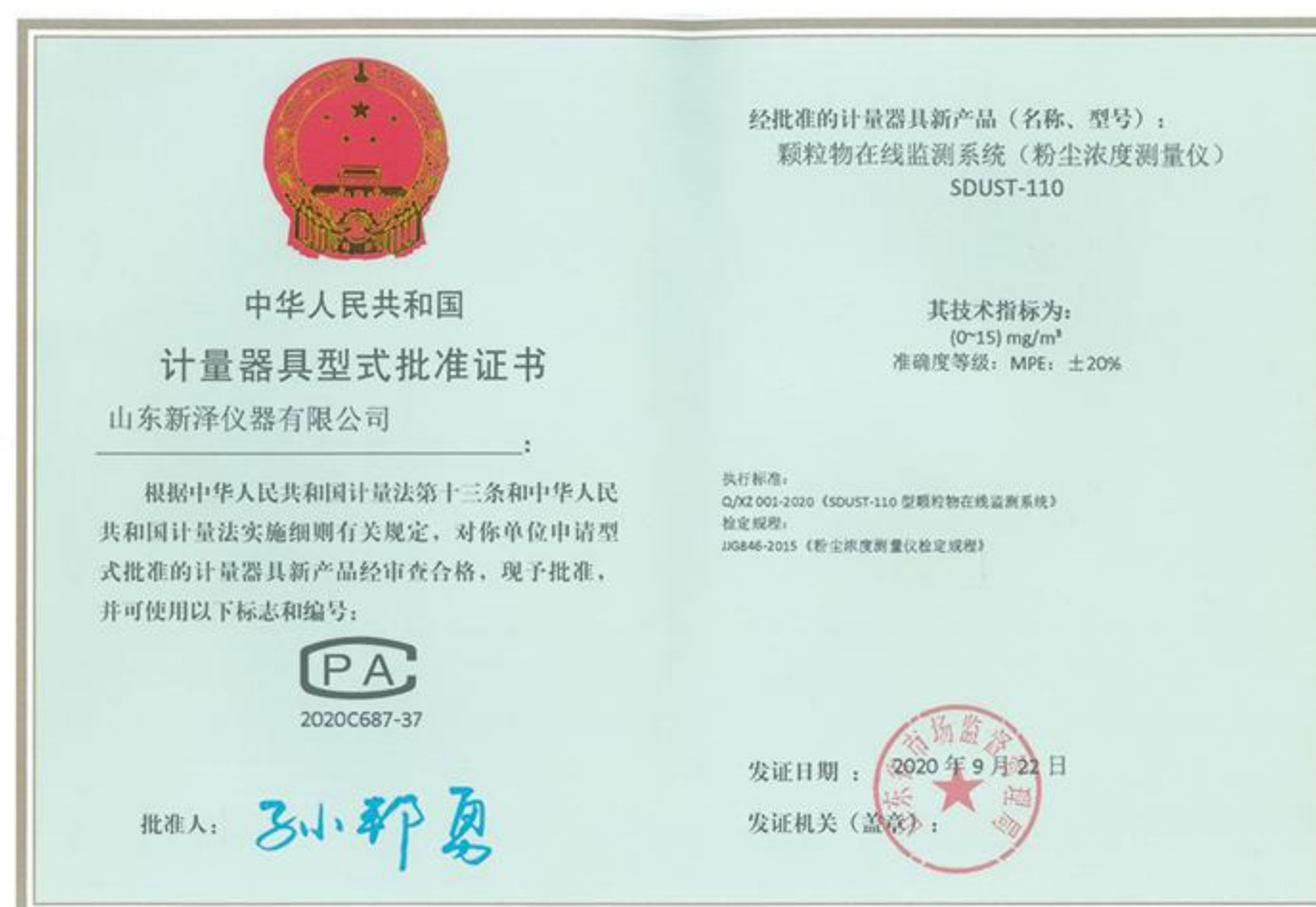
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Process Gas & Environmental Monitoring Service Provider



Application Industries



Environmental Applications

Continuous emission monitoring for flue gas in power, steel, metallurgical and other industries
Online flue gas measurement for desulfurization and denitrification processes
Continuous emission monitoring for waste incineration flue gas
Continuous emission monitoring for biomass power generation flue gas
Portable and vehicle-mounted flue gas emission monitoring
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Applications for Brick and Wall Material Enterprises

Desulfurization Efficiency Monitoring for Brick Plants
Online Monitoring for Environmental Acceptance Inspection of Brick Plants
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Chemical Applications

Coal Chemical Process Analysis
Ammonia Synthesis Process Analysis
Urea Process Analysis
Methanol Process Analysis
Polysilicon Process Analysis
Coal-to-Liquids (CTL) Process Analysis
.....



Power Industry Applications

CO and CO₂ Safety Monitoring for Coal Pulverizing Bin
CO and CO₂ Safety Monitoring at Coal Mill Outlet
CO and CO₂ Safety Monitoring after Electrostatic Precipitator (ESP)
Dust Leakage Monitoring and Alarm after Baghouse / Bag Filter
Combustion Efficiency Control System
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Cement Industry Applications

Safety Control for Coal Pulverizing Bin
Safety Monitoring for Coal Mill
Electrostatic Precipitator (ESP)
Safety Monitoring for Kiln Inlet Electrostatic Precipitator (ESP)
High-Temperature Gas Analysis at Kiln Inlet Smoke Chamber
High-Temperature Flue Gas Analysis at Five-Stage Cyclone / Preheater
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Petrochemical Industry Applications

Fluid Catalytic Cracking (FCC) Process Analysis
MTBE Process Analysis
PSA Hydrogen Production Process Analysis
Natural Gas Processing Process Analysis
Polyethylene (PE) Process Analysis
.....



Air Separation Industry Applications

Online Gas Analyzer for Air Separation Process Control
Laboratory Gas Analyzer for Air Separation
.....



Environmental Applications

Fuel Gas Calorific Value Analysis
Blast Furnace Gas Analyzer
Converter Gas Analyzer
Coke Oven Gas Analysis
Sulfuric Acid Production Gas Analysis
Gas Analysis at Blast Furnace Inlet and Outlet
.....

【OTHER INDUSTRIES】

Energy, Scientific Research, Food, Medicine, Paper-making.....

1 Continuous Emission Monitoring System(CEMS, Cold-dry Method)

【PRODUCT DESCRIPTION】

The TK-1000 Cold-dry CEMS is a fully extraction flue gas continuous monitoring system. It integrates four core subsystems for particulate matter, gaseous pollutants, flue gas parameters, as well as system control and data acquisition.

It realizes real-time online monitoring of flue gas particulate matter, SO2, NOx, temperature, pressure, flow rate, humidity and oxygen content. The system automatically calculates pollutant emission rate and total emissions, and supports wired and wireless data upload to designated monitoring platforms.



【 PRODUCT FEATURES 】

- Equipped with PLC intelligent control and LCD flow display. It fully records operating data for reliable data audit.
- Dual-compressor condensation quickly removes water and heat to reduce SO2 loss. Multi-stage filtration and automatic back-blowing effectively avoid blockage, suitable for high-dust, high-humidity and corrosive harsh environments.
- Standard modular design ensures stable and simple operation. Fewer moving parts improve equipment reliability. All self-developed instruments feature high integration and perfect compatibility.

【TECHNICAL PARAMETERS】

Item		Parameter	
Measuring Principle	Gaseous Pollutant Analyzer (SUV-100)	SO ₂ , NO, NO ₂ , UV Differential Optical Absorption Spectroscopy (DOAS)	
		O ₂ : Electrochemical method	
	Particulate Matter Monitor (SDUST-100)	Laser backscattering / forward scattering	
	Temperature, Pressure & Flow Monitor (SVPT-100)	S-type Pitot tube	
	Humidity Monitor (SSD-100)	Limiting Current Method	
Data Acquisition and Processing	External Output Interfaces	Serial Port	3 RS232 interfaces
		3-channel RS232 Interfaces	8-channel analog output, 5-channel digital switch output, customizable expansion available as required
	System Software		SINZEN Online Monitoring Software
Cabinet Size (W×D×H)		(800x600x2000)mm	
Working Power Supply		220V AC, >8kW	
Working Air Source		Compressed air (0.6–0.8 MPa), clean and oil-free	
Operating Environment		Temperature: 15–30°C, relative humidity ≤60%	

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Continuous Emission Monitoring System
(Hot-wet)

【PRODUCT DESCRIPTION】

TK-1000H Extractive Hot-wet CEMS is an all-in-one monitoring system built for harsh industrial environments. With modular design, it accurately measures SO₂, NO_x, particulate matter and flue gas parameters, and supports expansion for CO, CO₂ and other indicators. Compliant with the latest national standards, it delivers reliable online monitoring for stationary pollution sources.

【PRODUCT FEATURES】

- Reliable Sampling

High-temperature positive-pressure pump prevents air leakage and ensures authentic samples.
- Accurate Oxygen Measurement

Supports multiple detection methods and directly outputs standard dry oxygen values.
- Flexible Expansion

Modular design allows easy upgrades and supports infrared analyzers.
- Efficient Calibration

Internal gas circulation improves standard gas utilization and cuts consumption.
- Uniform Temperature Control

Heating cabinet plus air bath system keeps steady temperature and avoids condensation.

【TECHNICAL PARAMETERS】

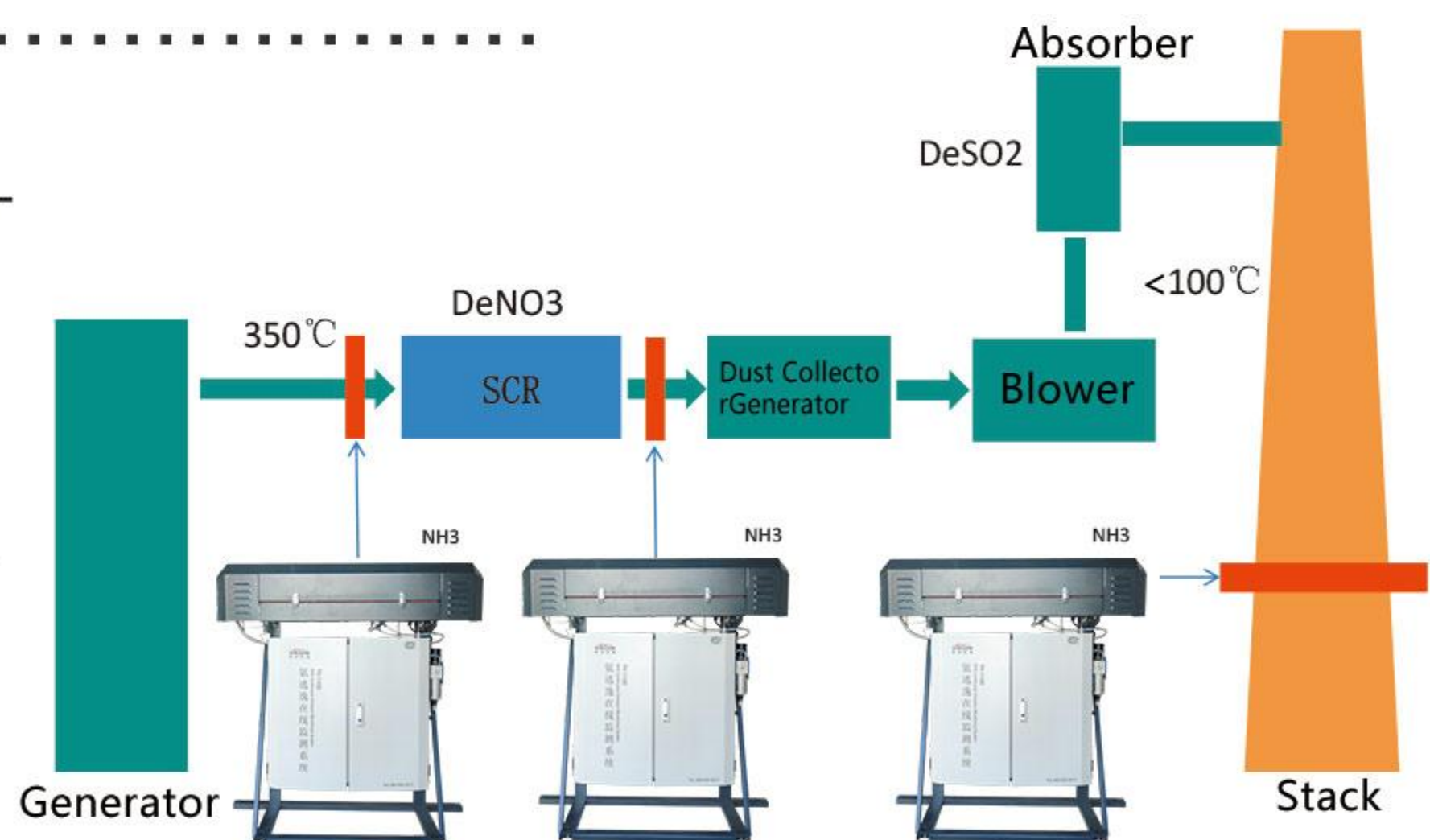
Item		Specification	
SUV-100 Flue Gas Analyzer for Gaseous Pollutants	Measurement Principle	NO, SO ₂ UV Differential Absorption Spectroscopy (DOAS) / O ₂ Electrochemical	
	SO ₂ Range	Measuring ranges (0 ~ 75, ..., 200) mg/m ³ are customizable.	
	NO, NO ₂ Range	Measuring ranges from 0-75 up to 0-200 mg/m ³ are customizable.	
	O ₂ Range	0 ~ 25vol%	
	Zero and Span Drift	≤±2.5%F.S.	
	Indication Error	±2.5%F.S.	
	Detection Limit	≤0.5% F.S.	
	Response Time	(T90) ≤75s	
SDUST Series Particulate Matter Monitor		Measuring Range	Measuring ranges (0 ~ 100, ..., 800) mg/m ³ , configurable.
		Zero Drift	±2%F.S./24h
		Span Drift	±2%F.S./24h
SVPT-100 Temperature, Pressure and Flow Monitor	Temperature	Measuring Span	(0 ~ 300)°C, Optional(0 ~ 500)°C
		Accuracy	±3°C
	Pressure	Measuring Range	±5kPa Optional (±2kPa, ±10kPa)
	Flow velocity	Measuring Range	(0 ~ 40)m/s, Optional(0 ~ 15)m/s, (0 ~ 30)m/s
		Accuracy	When velocity > 10 m/s, relative error is ±10%. Relative error ±12% for velocity ≤10 m/s
Model SSD-100 Humidity Monitor	Humidity	Measuring Range	(0 ~ 40) vol%
		Accuracy	When the concentration ≤5%, the absolute error ≤±1.5%
			When concentration > 5%, relative error ≤±2.5%



3 Ammonia Slip Online Monitoring System (High-temperature Extraction Laser)

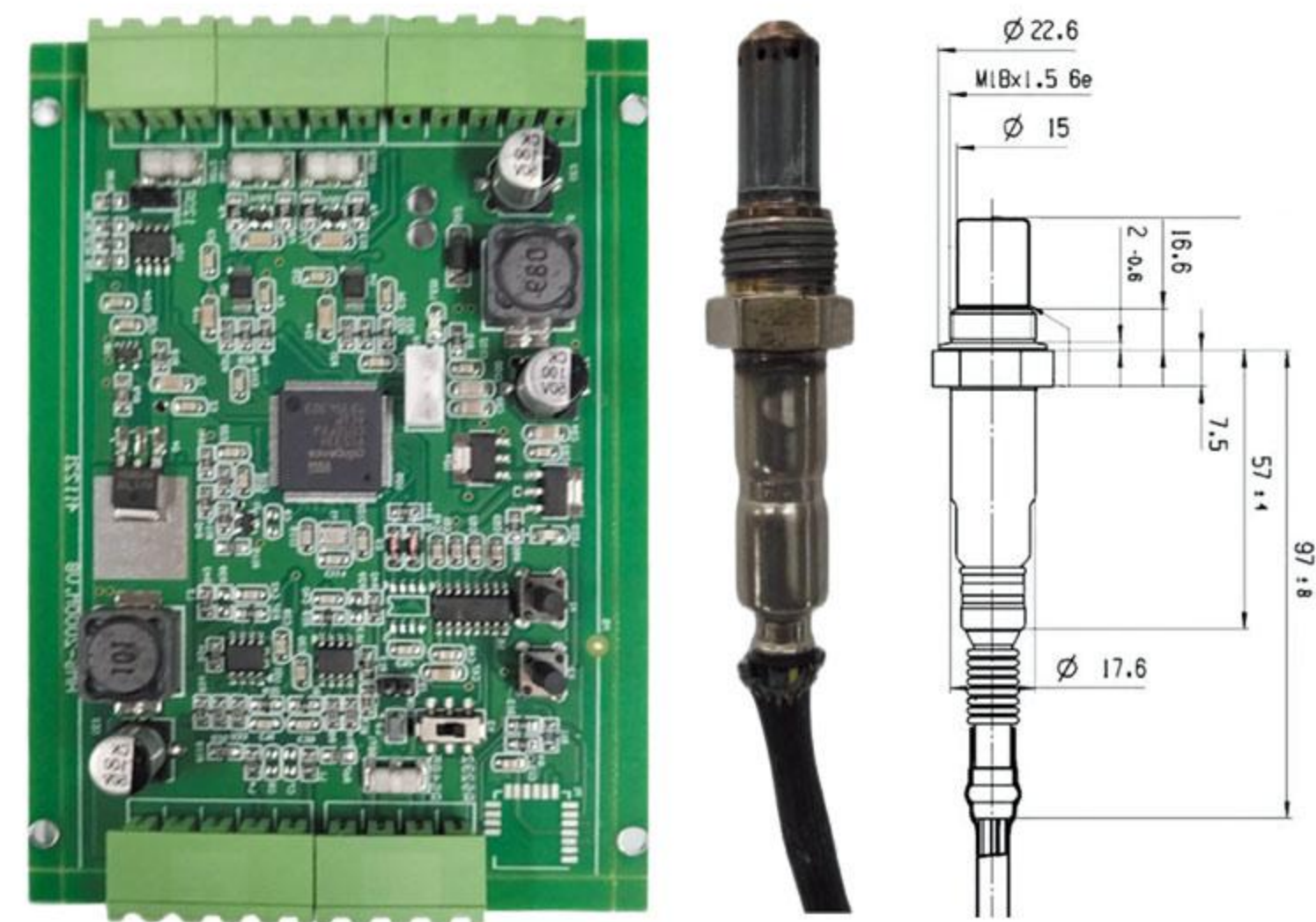
【PRODUCT DESCRIPTION】

The TK-1100 ammonia slip online monitoring system comprises three core units: sampling and transmission, pretreatment and control, and analysis. It adopts full-process high-temperature heat-tracing extraction technology for continuous online flue gas monitoring. Equipped with TDLAS (Tunable Diode Laser Absorption Spectroscopy), it delivers high-precision and stable gas detection.



【PRODUCT FEATURES】

- Adopts double-cell thick-film zirconia. Optional simultaneous detection of NH₃, NO_x and O₂.
- Standard modular design, simple and reliable.
- Mechanical jet pump for sampling, high stability.
- TDLAS technology applied, long service life.



【TECHNICAL PARAMETERS】

Item	Specification
Measuring Range	0~10/20 ppm/mg/m ³ , range customizable
T90 Response Time	< 120S
Indication error	≤±2%F.S.
Repeatability	≤±2%F.S.
Zero/span drift in 24h	≤±2%F.S.
Min resolution	0.1ppm
Analog output	1×RS485, backflush, system/temp alarms, customizable
Analog Output	4~20mA loop, max load 500Ω, isolated
Digital output	Load capacity: AC/DC24V/1A (high/low concentration alarm)
Warm-up time	120min
Heating temperature	180°C~200°C
Sampling flow	2~3L/min
Gas source	0.4~0.8Mpa (Oil-free & water-free)
Ambient temperature	-30°C~55°C
Protection class	IP65
Power requirement	AC220V, 50Hz
Power consumption	≤3KW
Overall dimension	1220H*1200L*500W (mm)
Weight	100kg

Measurement Principle	Current-type NO _x sensor
Detection Range	NO _x 0~3000ppm O ₂ 0~21%vol
Measurement Precision	NO _x ±2%F.S. O ₂ ±1%F.S.
Repeatability	±2%F.S.
Response time	T90<60s
Sampling Method	Diffusion type
Flue Gas Temperature	0~500°C
Power Supply	12VDC36W
Output Interface	RS485/RS232/4-20mA
Communication Protocol	Modbus RTU

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In-Situ Continuous Emission Monitoring System for Flue Gas



【PRODUCT DESCRIPTION】

The In-Situ CEMS for flue gas uses DOAS technology with in-situ extractive sampling, enabling online real-time monitoring of SO₂, NO_x, humidity, O₂, etc. Widely used in thermal power, industrial, and civilian boilers.

【PRODUCT FEATURES】

- In-situ measurement: No gas extraction, eliminates pipeline loss and condensation, suitable for humid, dusty and corrosive flue gas.
- Quick response: Direct gas contact without sampling delay.
- Low maintenance: Less consumables than extractive CEMS.
- Durable probe: Heat & corrosion resistant, triple filtration (2/0.5/0.1μm) for harsh conditions.
- Small & light: Probe cabinet 480×230×490mm (20kg), control cabinet 480×160×490mm (10kg); no analyzer house required.

【TECHNICAL PARAMETERS】

Measurement Method	High-temperature in-situ extractive measurement		
Analysis Principle	UV DOAS technology; Humidity/Oxygen: Zirconia sensor		
Measuring Ranges			
NH3	0-100mg/m3(customizable)	SO ₂	0-50-7000mg/m3(customizable)
NO	0-50-1000mg/m3(customizable)	H ₂ O	0-40%(customizable)
NO2	0-100-1000mg/m3(customizable)	O ₂	0-25%(customizable)
Detection Limit	1mg/m3	Linear Error	≤±2%F.S.
Response Time T90	≤10s	Drift	≤±2%F.S.
Calibration Method	Span gas calibration, automatic zero calibration with clean air	Power Supply	220V±10%,50Hz

5 VOCs Online Monitoring System

【PRODUCT DESCRIPTION】

TK-1200 VOCs Online Monitoring System has three subsystems: VOCs monitoring, flue gas parameter monitoring, control and data acquisition.

It detects methane, total hydrocarbons, NMHC, benzene series, halogenated hydrocarbons and flue gas parameters. After dust removal and heat tracing, flue gas is analyzed by GC-FID module. The system calculates emission data and uploads it via wired or wireless network.

It is widely used in petrochemical, pharmaceutical, coating, rubber, plastic, metallurgy, electronics, printing and coating industries.



【PRODUCT FEATURES】

Adopts on-line gas chromatography, a globally recognized method for VOCs detection. Full-process high-temperature heat tracing eliminates cold points to prevent sample loss. The unique fast bypass exhaust technology ensures rapid sampling response and reliable data. Equipped with multi-stage precision dust removal and low-adsorption pipelines with self-cleaning function, it backflushes impurities to avoid pipeline blockage. Suitable for harsh environments with high temperature, high humidity, high concentration and heavy dust.

【TECHNICAL PARAMETERS】

Item		Specification Index	
Measurement Principle	Gas Chromatograph (S7060)	Gas Chromatography with Flame Ionization Detection (GC-FID) principle	
	Temperature, Pressure & Flow Monitor (SVPT-100)	S-type Pitot tube differential pressure principle	
	Humidity & Oxygen Monitor (SSD-100)	O ₂ : Zirconia oxide principle; Humidity: Limiting current principle	
Data Acquisition & Processing	External Output Interface – Serial Port	Serial port	2-channel RS232 interfaces, expandable
	External Output Interface – Switch & Analog Ports	Switching & analog I/O	6-channel analog outputs, 4-channel digital switch outputs
	System Software	SINZEN Online Monitoring & Management Software	
Cabinet Dimensions (W×D×H)		(812×812×2000) mm	
Operating Power Supply		220V AC, >5kW (adjustable based on heat tracing pipeline length)	
Operating Gas Source		Clean, oil-free compressed air, 0.6–0.8 MPa	
Operating Environment		Temperature: 15–30°C; Relative Humidity ≤85%	

6 Ambient Air NMHC Continuous Automatic Detection System

【PRODUCT DESCRIPTION】

TK-1200A Ambient Air NMHC Continuous Automatic Monitoring System consists of three subsystems for pollutant detection, meteorological parameter monitoring, control and data acquisition.

It monitors NMHC, methane, expandable benzene series and meteorological parameters in real time, and generates daily, monthly and annual emission reports. Data can be uploaded via wired or wireless means.

Suitable for environmental monitoring in coal, petroleum, steel, chemical, textile, waste incineration and other industrial sites.



【PRODUCT FEATURES】

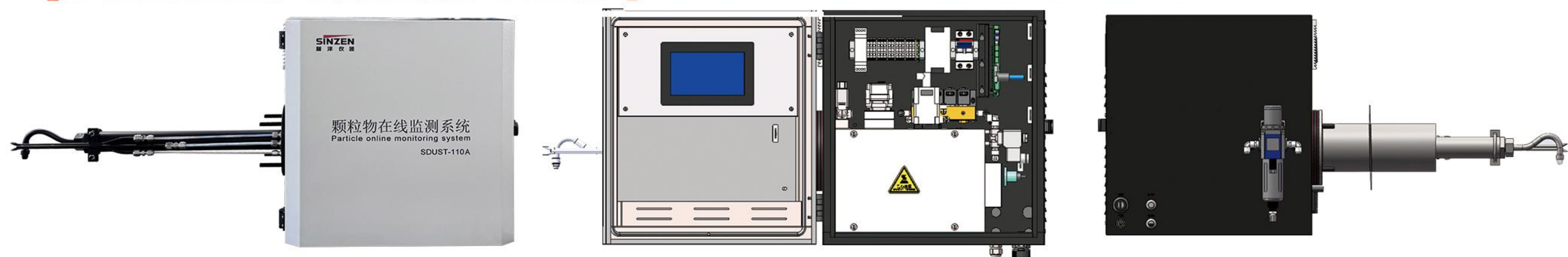
- Complies with requirements of China National Environmental Monitoring Centre Document Qizi [2021] 61.
- EPC controls flow of carrier gas, zero gas and hydrogen with high precision and repeatability.
- Adopts cold trap and intelligent purging, adjustable enrichment ratio for lossless adsorption of C2-C12 components.
- Built-in self-diagnosis function for automatic fault detection and recording.
- Standard and outdoor compact cabinets optional for diverse applications.

【TECHNICAL PARAMETERS】

Item	Specification Index
Measurement Principle	Cold Trap Enrichment + GC-FID (Direct Measurement Method)
Measuring Range	NMHC: 0-5ppm; CH4: 0-5ppm
20%/80% Range Drift	$\leq \pm 2\%$ F.S.
Linearity Error	$\leq \pm 1\%$ F.S.
Detection Limit	< 25ppb
Repeatability	$\leq 5\%$
Output Interface	2-channel RS232 interfaces, 1-channel RS485 interface, expandable
Cabinet Dimensions	615W × 755D × 1900H (mm)
Power Requirement	AC220V, 50Hz
Power Consumption	> 2KW
Operating Gas Source	Oil-free and water-free compressed air, 0.6~0.8MPa
Operating Environment	Operating Temperature: 15~30°C; Relative Humidity $\leq 60\%$

7 Ultra-Low Concentration Particulate Continuous Emission Monitor

【PRODUCT DESCRIPTION】



Model SDUST-110A Ultra-Low Particulate Monitor is designed in compliance with HJ75, HJ76 and other standards to meet latest environmental protection requirements.

Suitable for saturated wet flue gas measurement at outlets of wet desulfurization and wet electrostatic precipitators. It maintains high sensitivity and stability under low particulate concentration, widely used in power, cement, steel and other industries.

【PRODUCT FEATURES】

- Complies with full optical path span calibration requirements of HJ 75-2017.
- Full-process high-temperature tracing heating vaporizes water mist and droplets to prevent dust agglomeration and pipeline blockage, ideal for high-humidity conditions.
- Adopts pitot tube parallel isokinetic sampling, conforming to HJ/T48-1999.
- Auto zero, manual zero and standard calibration sheet as full set configuration.
- Auto dual-range switching and automatic back purge for gas circuit cleaning.
- Noise cancellation technology delivers ultra-low detection limit.

【TECHNICAL PARAMETERS】

Item	Specification
Measuring Range	0-10mg/m ³ , customizable dual range
Detection Limit	0.01mg/m ³
Repeatability	≤2%
24h Drift	±2% F.S.
Response Time	≤30s
Protection Level	IP65
Probe Length	Standard 0.5m, 1.0m, customizable length
Probe Heating Temperature	150~200°C
Measuring Cell Heating Temperature	120~150°C
Sampling Flow Rate	0.3m ³ /h~1m ³ /h
Measurement Output	2 channels 4-20mA, 1 channel RS485
Power Supply Voltage and Power	AC220V 50Hz, > 1.5kW
Ambient Temperature	-20~55°C

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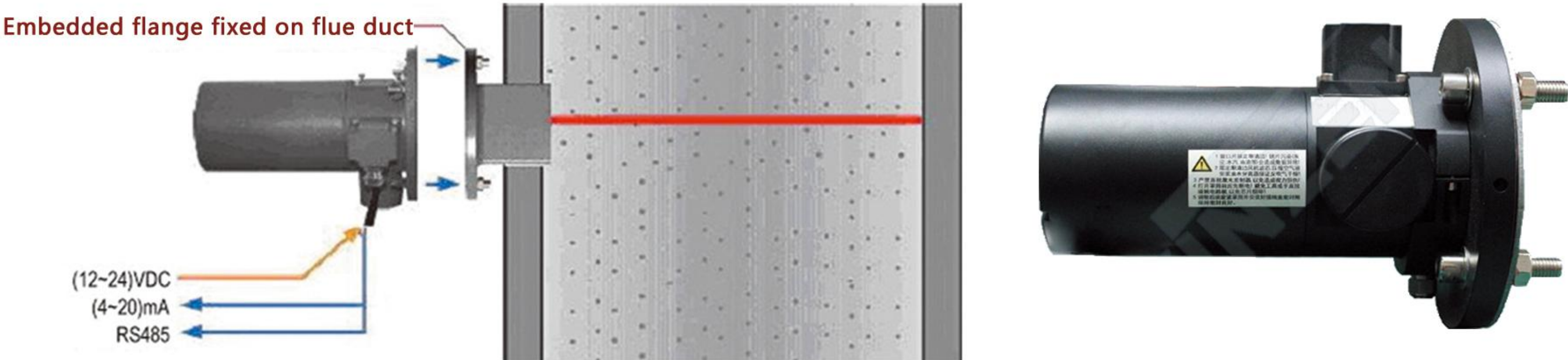
Particulate Dust Monitor

【PRODUCT DESCRIPTION】

SDUST-100 Particulate Matter Online Monitor measures particulate concentration in flue gas from stationary pollution sources. It consists of electrical, optical and structural systems.

A purging system keeps lenses clean with continuous airflow to ensure accurate optical signals. The device operates stably in harsh weather and dusty conditions for long-term continuous monitoring.

It applies to CEMS particle detection, dedusting efficiency testing, combustion efficiency analysis, industrial dust monitoring, occupational health protection and laboratory tests. Widely used in cement, power, steel, metallurgy, oil refining, aluminum, petrochemical, papermaking and glass industries.



【PRODUCT FEATURES】

- Integrated design, easy single-side flue installation. Buckle split structure for easy maintenance.
- Black anodized aluminum prevents light interference; corrosion-resistant.
- Advanced control system features adaptive optical power, low zero drift and strong environmental adaptability.

【TECHNICAL PARAMETERS】

Item	Specification Index
Operating Principle	Laser Backscattering
Mechanical Structure	Overall size: 186×200×182 mm (L×W×H)
	Weight: 3 Kg
	Protection grade: IP65
Optical Characteristics	Operating wavelength: (650 ±20) nm
Measurement Performance	Measuring range: (0 ~ 60,...,700) mg/m³, configurable
	Zero drift: ±2% F.S./24h
	Span drift: ±2% F.S./24h
	Response time: ≤ 10 s
	Flue diameter: (0.7 ~ 20) m
Power Supply Requirement	DC 24V ±10% / 0.5A
Operating Environmental Conditions	Operating temperature: -20℃ ~ +55℃
Signal Output	Analog output: (4 ~ 20) mA
	Digital interface: RS485

9 / UV DOAS Gas Analyzer

【PRODUCT DESCRIPTION】

SUV-100 UV Gas Analyzer is independently developed by Shandong Xinze Instruments. Based on UV absorption spectroscopy and chemometric algorithms, it measures SO₂, NO, NO₂, O₂, NH₃, Cl₂, O₃, H₂S and other gases. It features high accuracy, reliability and fast response, and performs better than mainstream similar products. Widely used in environmental monitoring, industrial control and safety detection.



【PRODUCT FEATURES】

- Adopts DOAS for SO₂, NO_x analysis. Higher precision, lower detection limit and less temperature drift than NDIR. 10:1 dual range with auto-switching.
- Modular structure ensures reliable performance, easy expansion and maintenance.
- Pulsed xenon cold light source lasts over 5 years, no preheating required and highly stable.
- Simultaneous NO & NO_x measurement calculates total NO_x, eliminating the need for NO_x converter.

【TECHNICAL PARAMETERS】

Item	Specification Index
Measurement Principle	NO, SO ₂ , NO ₂ : Ultraviolet Differential Optical Absorption Spectroscopy (DOAS)
	O ₂ : Electrochemical
Measurement Range	SO ₂ , NO _x : (0–200, ..., 2000) mg/m ³ , range customizable
	O ₂ : Electrochemical
Zero Drift	≤ ±2% F.S.
Span Drift	≤ ±2% F.S.
Linearity Error	≤ ±2% F.S.
Repeatability	≤ 2%
Communication Interfaces	RS232, RS485, digital inputs, digital outputs, 4–20 mA analog outputs
Power Supply	AC 180–240 V, 50 Hz, 60 W
Operating Environment	15 °C – 30 °C; ≤ 60% RH
Overall Dimensions	482.6 mm (19") × 177 mm (4U) × 347 mm

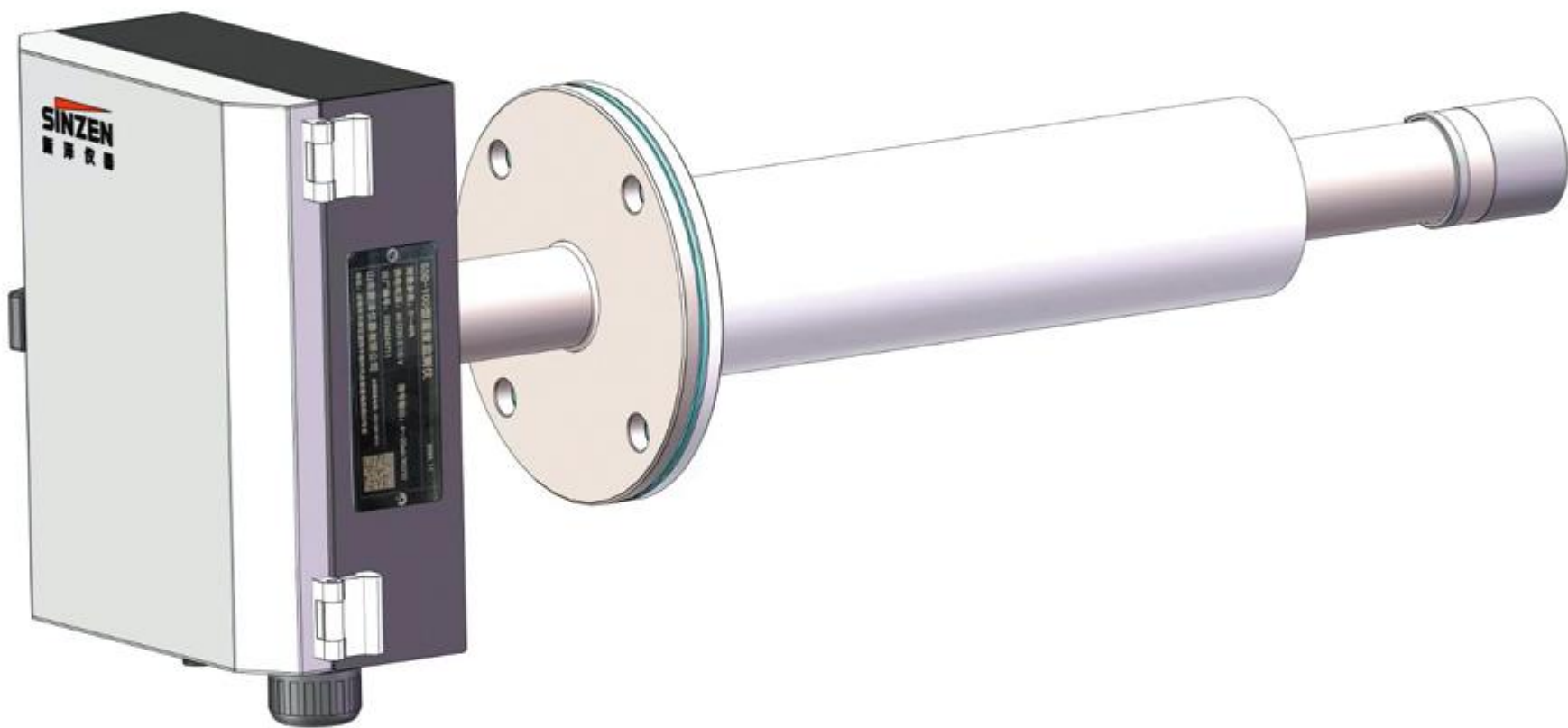
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Probe-style moisture analyzer

【PRODUCT DESCRIPTION】

SSD-100 Humidity Monitor adopts advanced solid electrolyte ceramic sensing technology. Its high-temperature resistant sensor works steadily up to 250°C.

It features high precision, corrosion resistance, fast response and stable performance, suitable for harsh working conditions. It complies with HJ 75-2017 and HJ 76-2017 standards.



【PRODUCT FEATURES】

- Special cavity material provides excellent corrosion resistance.
- Resists dust, high temperature and acid corrosion.
- Fast response and high sensitivity.
- Stable and reliable measurement data.

【TECHNICAL PARAMETERS】

Item	Specification
Measurement Range	0~40%
Accuracy	For flue gas humidity exceeding 5.0%, the relative error is $\leq \pm 25\%$
	For flue gas humidity $\leq 5.0\%$, the absolute error is $\leq \pm 1.5\%$
Response Time (T_{90})	High-to-low humidity transition: $< 150\text{ s}$; low-to-high humidity transition: $< 15\text{ s}$
Output Signal	4-20mA RS232

11 Pitot tube temperature-pressure-flow monitor

【PRODUCT DESCRIPTION】

SVPT-100 Temperature-Pressure-Velocity Monitor consists of control box, electric module and pitot tube. It integrally measures flue gas temperature, pressure and flow velocity. Designed for high-temperature, humid, dusty and corrosive conditions, it complies with national standards. Widely used for exhaust monitoring and process control in cement, metallurgy, coal chemical, waste incineration, power and petrochemical industries.



【PRODUCT FEATURES】

- Integrated compact design, easy to install.
- Real-time temp, pressure and flow measurement via 4-20mA and RS485.
- Auto backflush protects pitot tube from dust.
- Optimized S-type pitot tube avoids water buildup, ideal for low flow.
- Patented design for easy maintenance.

【TECHNICAL PARAMETERS】

Item	Specification
Measurement Principle	S-type Pitot tube differential pressure principle
Measurement Range	Flow velocity: 0 – 30 m/s
	Differential pressure: 0 – 500 Pa
	Temperature: 0 – 300 °C
	Pressure: -5 – +5 kPa
	All above ranges are customizable
Accuracy	Flow velocity accuracy:
	When velocity > 10 m/s: relative error ≤ ±10%
	When velocity ≤ 10 m/s: relative error ≤ ±12%
	Temperature accuracy:
	Temperature linear error ≤ ±3°C
Response Time	≤ 30 s (T90)
Communication Interfaces	1 RS485 digital I/O, 4 analog outputs (4-20 mA)
Power Supply	AC 220 ± 22 V, 50 Hz, 30 W
Operating Environment	Temperature: Main unit: -20 °C – 50 °C; Probe: < 180 °C
	Humidity: Main unit: < 90% RH
Overall Dimensions	Main unit: 381.5 mm × 245 mm × 265.5 mm
	Pitot tube: 0.6 m, 1.0 m, 1.2 m, 1.5 m (standard lengths; other sizes customizable)
Instrument Weight	< 10 kg

◎ Oxygen Analyzer Series

12 / S1000 Series Online Oxygen Analyzer



【PRODUCT DESCRIPTION】

S1000 oxygen analyzers use multiple sensors with fast response and long service life, covering various oxygen concentration ranges.

Powered by ARM system, it suits diverse gas environments. Integrated flow, temperature and pressure control ensures stable performance and easy operation.

【PRODUCT FEATURES】

- Air separation: Oxygen detection in nitrogen, argon and inert gas
- Metallurgy: Oxygen analysis for coke oven gas, blast furnace gas, converter gas and shielding gas
- Petrochemical & fermentation: Oxygen monitoring in process gas
- Semiconductor & electronics: Oxygen detection for welding shielding gas
- Food & beverage: Oxygen analysis in CO₂
- Coal chemical industry: Oxygen testing in coal gas and workshop atmosphere

【TECHNICAL PARAMETERS】

Item	Specification
Measurement Range (customizable)	Trace oxygen: 0.01–10 ppm; 0.01–100 ppm; 0.01–1000 ppm; 0.01–10000 ppm
	Constant oxygen: 0.01–4%; 0.01–10%; 0.01–25%; 0.01–100%
	High-purity oxygen: 85–100%
Sensor Type	Electrochemical, paramagnetic, ion flow, etc.
Minimum Resolution	0.1 ppm / 0.01%
Measurement Accuracy	≤ ±1% F.S.
Zero Drift	Absolute zero, zero output in oxygen-free environment
Span Drift	< 0.5% of range per month
Sample Gas Flow Rate	0.5–1.0 L/min
T90 Response Time	≤ 5 s
Signal Output	4–20 mA current signal, max load 750 Ω
Communication Interface	RS232 interface; RS485 optional data interface
Operating Environment	–5 °C – +45 °C
Power Supply Requirements	220 V AC ± 10%, 50 Hz ± 5%

13 / In-situ Laser Gas Analyzer

【PRODUCT DESCRIPTION】



The SLAS-100 Laser Gas Analyzer uses TDLAS technology for accurate, interference-free measurement. It offers fast response, high reliability, low maintenance and cost.

With in-situ installation, it enables real-time concentration monitoring for process control and safety interlock. Widely used in steel, petrochemical, power and waste-to-energy plants.

【PRODUCT FEATURES】

The SLAS-100 is directly installed in gas pipelines without complex sampling systems. It has a simple, moving-part-free design. The OLED display ensures low power consumption, wide viewing angle, and reliable operation even at -40°C. It resists interference from background gases, dust and window contamination, and automatically compensates for gas temperature and pressure.

【TECHNICAL PARAMETERS】

Item	Specification Index
Measured Components	CO ₂ , H ₂ S, HCl, NH ₃ , C ₂ H ₂ , O ₂ , CO, etc.
Measuring Range	0~100% (adjustable range)
Linearity Error	≤±1% F.S. / 6 months
Repeatability	≤±1%
Explosion-proof Grade	EXd II CT6
Protection Grade	IP66
Warm-up Time	≤15min
Response Time	T90≤1s
Interface Signals	Analog Output: 2 channels 4~20mA (isolated, maximum load 750Ω)
	Dual Relay Output: 3 channels output (24V, 1A)
	Analog Input: 2 channels 4~20mA (for temperature and pressure compensation)
	Communication Interface: RS485, RS232
Power Consumption	24VDC, < 20W
Operating Environment	Temperature: -30°C ~ +60°C; Humidity: ≤90% RH
Operating Gas Source	0.3~0.8 MPa industrial nitrogen or purified instrument air, etc

Infrared Gas Analyzer Series

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S2000 Infrared Gas Analyzer

【PRODUCT DESCRIPTION】

S2000 Infrared Gas Analyzer is independently developed for environmental protection, carbon emission monitoring and industrial gas analysis.

Adopts GFC and NDIR technologies, equipped with self-developed long optical path gas cell and high-precision circuit for precise gas detection.

【PRODUCT FEATURES】

- Detect up to 3 gases via dual infrared channels and one oxygen channel.
- Adopt MEMS infrared light source to match pyroelectric detectors perfectly.
- Equip atmospheric pressure compensation to avoid pressure interference.
- Apply high-precision constant temperature control to weaken temperature drift.
- Adopt dual-channel detector design to enhance overall instrument stability.
- Support isolated signal outputs to effectively resist external interference.
- Conduct daily automatic calibration to guarantee high data reliability.

【TECHNICAL PARAMETERS】

Item	Specification
Measurement Principle	Non-Dispersive Infrared (NDIR)
Measurement Range	CO: 0–10000 ppm, CO2: 0–20%
	(customizable upon request)
Measured Gas	IP65
Linearity Error	≤2% F.S.
Zero Drift	≤2% F.S.
Span Drift	≤2% F.S.
Repeatability	≤2% F.S.
Response Time	≤120s (T ₉₀)
Voltage Influence	≤2%F.S.
Power Supply Requirements	AC180 ~ 240V, 50Hz, 60W
Operating Humidity	< 60%RH
Operating Temperature	15℃ ~ 35℃
Overall Dimensions	480mm (19") * 175mm (4U) * 349mm



15 / SIC-100 Multi-Component Gas Analyzer

【PRODUCT DESCRIPTION】

SIC-100 Multi-component Gas Analyzer integrates infrared, thermal conductivity, magnetic oxygen and electrochemical sensors.

With advanced digital processing technology, it realizes fast continuous online detection of various gases.



【TECHNICAL PARAMETERS】

- Suitable for complete equipment matching and laboratory use.
- Features linear output of measurement signals.
- Supports multi-alarm outputs including sound, light, screen, relay and communication.
- Built-in digital temperature compensation for accurate measurement.
- Optional multi-channel display for various gas components detection.

【TECHNICAL PARAMETERS】

Item	Specification
Measured Components	O ₂ , H ₂ , SO ₂ , CH ₄ , CO, CO ₂ , etc. (up to 3 components optional)
Measurement Range	0–100% (range adjustable)
Zero Drift	≤ ±1% F.S./7d
Span Drift	≤ ±1% F.S./7d
Linearity Error	≤ ±1% F.S.
Signal Output	Isolated current: 0/4–20 mA (500 Ω); Isolated communication: RS232, RS485 (optional)
Power Supply Requirements	220 V AC ± 10%, 50 Hz ± 5%
Operating Environment	Ambient temperature: –5 °C – 45 °C; Humidity: 0–85% RH

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Thermal Conductivity Gas Analyzer Series



【PRODUCT DESCRIPTION】

S3000 Hydrogen Analyzer adopts imported micro-flow thermal conductivity sensor and latest microcomputer technology, for online hydrogen content detection in mixed gas.

【PRODUCT FEATURES】

- ◆ Thermal power plant: Hydrogen cooling system

◆ Fertilizer plant: Ammonia synthesis process
- ◆ Laboratory: Gas for combustion tests

◆ Gas plant & water electrolysis: Hydrogen and oxygen production

【TECHNICAL PARAMETERS】

Item	Specification
Measured Components	H ₂ , Ar
Measurement Range	0–100% (range adjustable)
Accuracy	≤ ±1% F.S.
Stability	Zero drift: ≤ ±1% F.S./7d; Span drift: ≤ ±1% F.S./7d
Repeatability	≤ ±1%
Response Time	T90 ≤ 15 s
Sample Gas Pressure	0.05 MPa ≤ Inlet pressure ≤ 0.25 MPa
Output Signal	4–20 mA standard signal
Contact Output	Dual relay output: 220 V AC, 1 A or 24 V DC, 2 A
Operating Environment	Temperature: –10 °C – +45 °C; Humidity: ≤ 90% RH
Power Supply Requirements	220 V AC ± 10%, 50 Hz ± 5%

17 Dew Point Analyzer Series (Trace Moisture in Gas)

【PRODUCT DESCRIPTION】

S5000 Online Dew Point Meter is ideal for low dew point and dry-point control scenarios.

It applies multiple sensing principles for full-range accurate measurement, featuring great stability and strong anti-pollution performance.



【PRODUCT FEATURES】

Petrochemical industry/Natural gas/Industrial gas/Semiconductor industry/Drying industry/Food industry/Power industry/Machinery manufacturing/Air separation industry/Pharmaceutical industry.

【TECHNICAL PARAMETERS】

Item	Specification
Measurement Range	-100.0 °C – 0 °C; -80.0 °C – +20 °C
Maximum Permissible Error	±1.5 °C (above -60 °C); ±2.0 °C (below -60 °C)
Repeatability	±1.0 °C
Warm-up Time	≤ 5 min
Sample Gas Flow Rate	2500–3000 mL/min
Sample Gas Pressure	0.05 MPa ≤ Inlet pressure ≤ 0.50 MPa
Resolution	0.1 °C
Output Signal	4–20 mA
Contact Capacity	220 V AC, 1 A or 24 V DC, 2 A
Power Supply	220 V AC ± 10%, 50 Hz ± 5%
Operating Environment	Temperature: -15 °C – +45 °C; Humidity: ≤ 90% RH
Weight	Approx. 2.3 kg

18 Portable Gas Analyzer Series

【PRODUCT DESCRIPTION】

SICM-100 Portable Gas Analyzer adopts electrochemical and thermal conductivity principles. It detects O2, dew point, CO, CO2, NH and other gases.

Equipped with aluminum alloy housing, blue LCD and Chinese menu, it displays various data and supports easy operation, calibration and alarm setting.

【PRODUCT FEATURES】

Widely used in petroleum, chemical, fertilizer, air separation, metallurgy, cement, research, pharmaceutical and environmental protection fields. It serves as a reliable tool for production control, energy saving, quality improvement and safety guarantee.

【TECHNICAL PARAMETERS】

Item	Specification
Measurement Range	0.00–100% (range optional)
Accuracy	≤ ±2% F.S.
Stability	Zero/Span drift: ≤ ±1% F.S./7d
Repeatability	≤ ±1%
Operating Environment	Temperature: -5 °C – +45 °C; Humidity: ≤ 90% RH
Charging Power Supply	220 V AC ± 10%, 50 Hz ± 5%



19 Explosion-Proof Gas Analyzer Series

【PRODUCT DESCRIPTION】

SICEX-100 Explosion-proof Gas Analyzer enables precise continuous gas measurement in hazardous areas. It detects O₂, dew point, CO, CO₂, NH₃, CH₄, H₂ and more.

Fitted with imported sensors and high-performance ARM processor, it complies with ICT6 explosion-proof standards. Featuring strong anti-interference capability and high safety, it is widely applied in energy, chemical, metallurgy and power industries with excellent stability and reliability.



【PRODUCT FEATURES】

SICEX-100 Explosion-proof Gas Analyzer is widely used for real-time gas concentration monitoring in hazardous areas of industry, agriculture, power electronics, energy and chemical sectors.

【TECHNICAL PARAMETERS】

Item	Specification
Analysis Principle	Electrochemical, paramagnetic, zirconia, infrared, thermal conductivity, laser, etc
Range	0–1000 ppm / 0–100% (range adjustable)
Resolution	0.01%
Measurement Accuracy	≤ ±1% F.S.
Response Time	T ₉₀ ≤ 20 s
Explosion-Proof Rating	Ex d II C T6
Operating Environment	Temperature: –20 °C – +50 °C; Humidity: ≤ 90% RH
Signal Output	4–20 mA; RS232/485 (Modbus) optional
Operating Voltage	220 V AC ± 10%, 50 Hz ± 5%
Overall Dimensions	490 mm (W) × 325 mm (H) × 245 mm (D)
Weight	Approx. 20 kg

20 / S4000 Gas Detector Alarm

【PRODUCT DESCRIPTION】

S4000 Combustible Gas Detector uses catalytic combustion and electro-chemical sensors for continuous leakage monitoring of flammable gas.

Widely applied in power, chemical, metallurgy, pharmaceutical and other industries for gas detection and alarm.



【PRODUCT FEATURES】

- Adopts imported high-performance sensors with strong anti-interference and 3-year service life.
- Equipped with advanced microprocessor for fast response, high precision and good repeatability.
- Built-in audible and visual alarm triggers immediately when gas concentration exceeds limit.
- Large backlit LCD displays gas concentration, type, status and other parameters clearly.

【TECHNICAL PARAMETERS】

Item	Specification	
Measured Gas	O ₂ , combustible gases, CO, H ₂ S, H ₂ , NH ₃ , Cl ₂ , etc.	
Supply Voltage	DC 24 V ± 15%	Power consumption < 1 W
Signal Output	3-wire 4–20 mA; one passive switching output (optional, contact capacity: DC 30 V, 3 A)	
Alarm Mode	Sound and light alarm (optional, sound intensity > 95 dB at 1 m)	Display mode: LCD display
		Detected gas: combustible, toxic
Detection Principle	Catalytic combustion, electrochemical, semiconductor, infrared	Catalytic combustion: T90 < 30 s
		Electrochemical & semiconductor: T90 < 30 s
		Infrared: T90 < 30 s
Error	≤ ±5% F.S.	Repeatability: ≤ 2%
Operating Temperature	–40 °C – +70 °C	Protection rating: IP65
Material	Die-cast aluminum	Explosion-proof rating: Ex d II C T6 Gb
Explosion-Proof Connection Thread	G 3/4"	Dimensions: 190 mm × 130 mm × 75 mm
Mounting Method	Wall-mounted, pipe-mounted, bracket-mounted, conduit-mounted	
Installation Cable	≥ RVV 3 × 1.5 mm ²	

Industrial Process Analysis System

21 / Online Analysis System for the Metallurgical Industry

【PRODUCT DESCRIPTION】

TK-2000 Series Metallurgical Gas Analysis System is designed for oxygen content and calorific value measurement in coal pulverizing, gas producer, blast furnace and converter gas.

Adapted to high-dust working conditions, it features high stability and safety, supporting single-point and multi-point automatic sampling analysis.



【PRODUCT FEATURES】

- Equipped with dual high-efficiency sampling probes and regular nitrogen backblowing, the system handles humid and dusty blast furnace top gas steadily. The pretreated sample gas is delivered to analyzers. Adopting full-automatic PLC control with LCD display and 4~20mA analog output, it supports synchronization and interlock with industrial controllers.
- For coke oven gas containing tar, dust, benzene and naphthalene, multi-stage filtration, tar removal and dehumidification purify sample gas before analysis. This PLC-based system also features LCD display and 4~20mA output for industrial interlock. It is applicable in flammable gas hazardous areas.

【TECHNICAL PARAMETERS】

Converter gas recovery is a typical energy-saving project. Converter steelmaking operates in short dynamic cycles. CO content (up to 70%) determines gas recovery, while O₂ detection guarantees operational safety. Real-time monitoring and rapid response are core technical requirements. These are the analysis and detection points for converter gas recovery.

Monitoring Point	Measured Component	Process Purpose	Typical Range	
Cold End	Before ID Fan	CO	Recovery Control	0 – 100%
	After ID Fan	O ₂		0 – 3%
Before Gasholder		O ₂	Safety Control	0 – 3%
Gasholder Top		CO		0 – 300 ppm
After Gasholder Before Electrostatic Precipitator		O ₂		0 – 3%
Hot End	Before Primary Pipe	CO, O ₂	Recovery Control	Same as Cold End

22 / Kiln Online Gas Analysis System
(Closed Calcium Carbide Furnace)

【PRODUCT DESCRIPTION】

TK-3000 Calcium Carbide Furnace Tail Gas Analysis System is a safety interlock monitoring device dedicated to calcium carbide furnace operation. It consists of sampling probe, pretreatment, analysis, control and calibration units. Optimized for high dust and high temperature working conditions.

Widely used in closed submerged arc furnace, calcium carbide furnace, annealing furnace, lime kiln, rotary kiln, carburizing furnace, ferroalloy furnace and electric arc furnace.



【PRODUCT FEATURES】

- The system adopts cabinet or room-style layout for turnkey project delivery, simplifying on-site installation and commissioning while boosting overall reliability. Combining domestic and overseas technologies, it reaches advanced standards in performance, applicability, reliability and safety.
- It uses specially made sintered stainless steel fiber filters derived from aerospace technology, replacing traditional ceramic and silicon carbide filters. Featuring high strength, 2mm thin filter layer, good air permeability, excellent regeneration and high filtration efficiency, it requires less frequent on-site maintenance.
- Equipped with PLC as the control core, the system realizes automatic pipeline and probe purging, timed sampling and fault self-diagnosis. It delivers strong anti-interference, high reliability, flexible programming and easy operation.
- Fitted with imported high-performance diaphragm gas pump with anti-corrosion wetted parts, it offers large flow rate, long service life and low maintenance needs.

【TECHNICAL PARAMETERS】

Measurement Range	0–15% O2; 0–20% H2; 0.00–100% (user-customizable)
Repeatability	±1%F.S.
System Response Time	T90 < 40 s (sampling line outside analyzer cabinet < 3 m)
Filtration Precision	< 0.1μm
Output Signal	4-20mA (Optional)
Alarm Setting	Alarm set point: adjustable within range (based on operating conditions)
Normal Maintenance Cycle	Generally no less than 90 days

23 / Cement Kiln Gas Analysis System

【PRODUCT DESCRIPTION】

Large amounts of gas are produced in cement production. Gas analysis helps optimize production, save energy and ensure safety and environmental compliance.

Developed for harsh working conditions, TK-4000 series features automatic sampling, pretreatment and self-purging. It is essential for efficient and safe cement production.



【PRODUCT FEATURES】

- The system consists of sampling probe, pretreatment unit and gas analyzer for online gas component concentration measurement. It features fully automatic PLC control, LCD display and standard 4~20mA analog output, enabling synchronization and interlock with industrial computers for non-stop monitoring.
- Fitted with imported electrochemical and infrared sensors, it continuously detects different gases. An imported vacuum pump draws sample gas, which is filtered by the probe. The probe filter is regularly cleaned via PLC-controlled pulse backblowing. Teflon pipes with electric heat tracing prevent gas component loss and condensate formation during delivery.

【TECHNICAL PARAMETERS】

Monitoring Point	Measured Component	Range	Purpose
High-temperature chamber at kiln inlet	CO	0-2%	Optimization Control
	O ₂	0-10%	
	NO _x	0-2000 ppm	
Decomposing furnace inlet & outlet	CO	0-2%	
	O ₂	0-10%	
Preheater outlet or high-temperature fan outlet	CO	0-2%	
	O ₂	0-10%	
Kiln inlet electrostatic precipitator inlet	CO	0-2%	Safety Monitoring
Coal mill electrostatic precipitator outlet	CO	0-2000 ppm	
Kiln inlet baghouse outlet	CO	0-2%	
Coal mill electrostatic precipitator outlet & inlet	CO	0-2000 ppm	
Wet-process cement electrostatic precipitator	CO	0-2%	Safety Monitoring
Coal pulverizing bin	CO	0-2000 ppm	

24 / Online Gas Analysis System for the Chemical Industry

【 PRODUCT DESCRIPTION 】

Online gas analysis is critical for chemical production, affecting product quality, efficiency, profitability, safety and emission compliance.

TK-5000 series adopts mature control technology and advanced pre-treatment solutions. Customized configurations of probes, pipelines, valves, pumps and analyzers are available to meet diverse process requirements.



【 PRODUCT FEATURES 】

- Calorific value analysisGas analyzers measure the calorific value of natural gas to ensure stable production.
- Gas gathering and transmissionOnline dew point monitors are deployed at ground stations to check dehydration performance of raw natural gas.
- Natural gas purificationRaw gas undergoes desulfurization, decarbonization, dehydration and dehydrocarbon treatment. Online hydrogen sulfide and dew point analyzers are installed at corresponding units. Real-time monitoring keeps final gas compliant with GB/T17820-2012.
- Long-distance transmission stationsDew point and hydrogen sulfide are continuously monitored at pipeline terminals, compressor stations and city gate stations along transmission routes.

【 TECHNICAL PARAMETERS 】

Item	Specification
Detection Process Point	Designated process sampling point
Measured Components (Max. Permissible Error)	CO, H ₂ , CH ₄ , O ₂ , CO ₂ , NH ₃ , DP, calorific value; hydrocarbons, etc. (ranges customizable upon request)
System Response Time	≤ 15 s
Measurement Range	Customizable according to customer requirements
Measurement Accuracy	≤ 1% F.S.
Stability	Zero drift: 0.5% of range per month; Span drift: 0.5% of range per month
Repeatability	≤ 1% F.S.
Solids Filtration Precision	1 μm
Signal Output	4–20 mA isolated current signal
Alarm Output	Contact capacity: 3 A / 220 V, function customizable

25 / Online Calorific Value Analysis System for Fuel Gas / Natural Gas

【PRODUCT DESCRIPTION】

The TK-6000 online coal gas calorific value analyzer applies component analysis instead of combustion method for accurate calorific value measurement.

It calculates gas calorific value by analyzing gas components via mathematical models. With traceable calibration based on national standard gas, it meets national metrology requirements.

Specially designed for steel plants, it detects H₂, CO and CH₄ to calculate coal gas calorific value, suitable for calorific value compensation of various combustion control systems.

【PRODUCT FEATURES】

- Dust holding capacity: <200 g/Nm³, low maintenance
- System response time: <10 s, analyzer response time: <1.5 s, pump flow: 6 L/min
- filtration accuracy: ≤0.1 μm
- MTBF: over 3 years
- Cost-effective, supports simultaneous multi-component online detection
- Full dry filtration ensures authentic sampling and accurate analysis

【TECHNICAL PARAMETERS】

Measurement Range	(Component optional) (Range optional)
Maximum Permissible Error	±0.1%F.S.
Resolution	0.01%
Stability	Zero drift :±1%F.S./7d
	Span drift: ±1%F.S./7d
Repeatability	0.1%
Preheat Time	10min
Sample Gas Flow Rate	(0.3 ~ 0.5) L/ min
Sample Gas Port Size	G1/2
Electrical Port Size	1/2NPT
Operating Power Supply	AC220V±10%, 50HZ
Operating Environment	Temperature - 5°C ~ +45°C
	Humidity≤90%RH
Explosion-Proof Rating	ExdIICT6
Analog Output	4 ~ 20mA
Sample Gas Pressure	0.05 MPa ≤ Inlet pressure ≤ 0.1 MPa



26 / Coal Mill CO Monitoring System

【PRODUCT DESCRIPTION】

This coal mill CO monitoring system provides early fire alarm for coal mills and coal bunkers by detecting CO generated from smoldering coal.

An imported sampling pump draws gas via probes. After pretreatment, the S2000 infrared analyzer measures CO concentration. Rising CO levels trigger early fire alarms.

The TK-2000 system consists of sampling, back-purging, pretreatment, analysis, calibration, PLC control and signal output modules. We offer one-stop services including customized design, supply, training and on-site commissioning, ideal for process monitoring, safety and environmental protection.



【PRODUCT FEATURES】

- Dust filtration capacity: < 200 g/Nm³, low maintenance
- System response time: < 10 s, instrument response time: < 1.5 s, pump flow: 6 L/min
- Filtration accuracy: 0.1 μm
- MTBF: > 3 years
- Cost-effective, supports simultaneous multi-component online detection
- Full dry filtration guarantees undistorted sampling and accurate analysis

【TECHNICAL PARAMETERS】

Measurement Range	CO: 0–400 ppm; O2: 0–25% (range optional)
Maximum Permissible Error	±2%F.S.
Resolution	0.01%
Zero/Span drift over 24 hours	Zero drift: ≤ ±1% F.S./7d
	Span drift: ≤ ±1% F.S./7d
Repeatability	0.1%
Preheat Time	10min
Sample Gas Flow Rate	(0.3 ~ 0.5) L/ min
Power Supply	AC220V±10%, 50HZ
Operating Environment	Temperature: –5 °C – +45 °C
	Humidity: ≤ 90% RH
Signal Output	4 ~ 20mA

27 / Online Oxygen Content Analysis System for Fuel Gas

【PRODUCT DESCRIPTION】

Oxygen monitoring is vital for coke oven gas and producer gas purification. Oxygen over 1.2%VOL may trigger explosions in electrostatic tar precipitators.

Tar, naphthalene and other impurities often clog sampling units, causing detection errors. Nearly 80% of faults stem from flawed sampling designs.

Developed for high-viscosity, corrosive and easily crystallized gas media, TK-6000 features anti-blocking, corrosion resistance, fast response, high accuracy and easy maintenance. It is widely used in gas industry.



【PRODUCT FEATURES】

- Dust filtration capacity: <200 g/Nm³, low maintenance
- System response <10 s, analyzer response <1.5 s, pump flow: 6 L/min
- Filtration accuracy: ≤0.1 μm
- MTBF: >3 years
- Cost-effective, supports simultaneous multi-component detection
- Full dry filtration for undistorted sampling and precise analysis
- Fully automatic and unattended operation

【TECHNICAL PARAMETERS】

Measurement Range	CO: 0 ~ 400ppm O ₂ : 0 ~ 25%
Maximum Permissible Error	≤0.1%F.S.
Resolution	0.01%
Zero/Span Drift over 24h	Zero drift: ≤ 1% F.S./7d
	Span drift: ≤ 1% F.S./7d
Repeatability	0.1%
Preheat / Warm-up Time	10min
Sample Gas Flow Rate	(0.3 ~ 0.5) L/ min
Sample Gas Flow Rate	AC220V±10%, 50HZ

28 / Continuous Emission Monitoring System for Greenhouse Gases

【PRODUCT DESCRIPTION】

The TK-1000 continuous greenhouse gas emission monitoring system is developed for stationary emission sources, providing reliable data support for carbon peaking and carbon neutrality.

It directly monitors CO2, CH4, N2O concentration, flue gas flow rate and humidity to calculate accurate gas emissions. With modular design, it is easy to operate and owns prominent advantages.

The system realizes real-time, accurate and automatic carbon emission accounting. Compared with traditional material balance calculation, it adopts real-time monitoring data to improve the accuracy and timeliness of carbon emission accounting results.



【PRODUCT FEATURES】

- Flexible configuration: available as a complete set, or compatible with existing CEMS systems by adding CO2, CH4 ,N2O analysis modules.
- All components have passed long-term operational tests with stable and durable performance.
- Communication protocol complies with HJ/T 212-2017 transmission standard.
- High resolution, easy maintenance.
- Modular design, intelligent operation, long service life and low maintenance workload.

【TECHNICAL PARAMETERS】

Measurement Parameter	Measurement Method	Measuring Range	Linearity Error/Accuracy
Carbon Dioxide (CO ₂)	Non-Dispersive Infrared (NDIR) Method	0-30%	≤±2.0% F.S.
Methane (CH ₄)	Tunable Diode Laser Absorption Spectroscopy (TDLAS)	0-500ppm	≤±2.0% F.S.
Nitrous Oxide (N ₂ O)	Infrared Wavelength Filtering Technology (GFC)	0-50ppm	≤±2.0% F.S.
Oxygen (O ₂)	Zirconia / Electrochemical Method	0~25%	≤±2.0% F.S.
Temperature	Platinum Resistance Method	0~350℃	≤±3℃
Pressure	Silicon Piezoresistive Method	-4k~+4kPa	≤±2.0% F.S.
Flow Velocity	Pitot Tube Method / Ultrasonic Method	4~40m/s	≤±2.0%
Humidity	Resistance-Capacitance Measurement Method	40Vol%	≤±15%

Application Cases



After-Sales Service



Team Guarantee

We have built a tiered technical service team that responds quickly to customer needs, offering high-quality technical solutions, consulting, and reliable after-sales support.



Organizational Guarantee

With dedicated staff and local offices nationwide, we ensure fast response and timely service to enhance our product reputation.



Management Guarantee

Technical service shall be a core duty for all relevant departmental staff.



Capability Guarantee

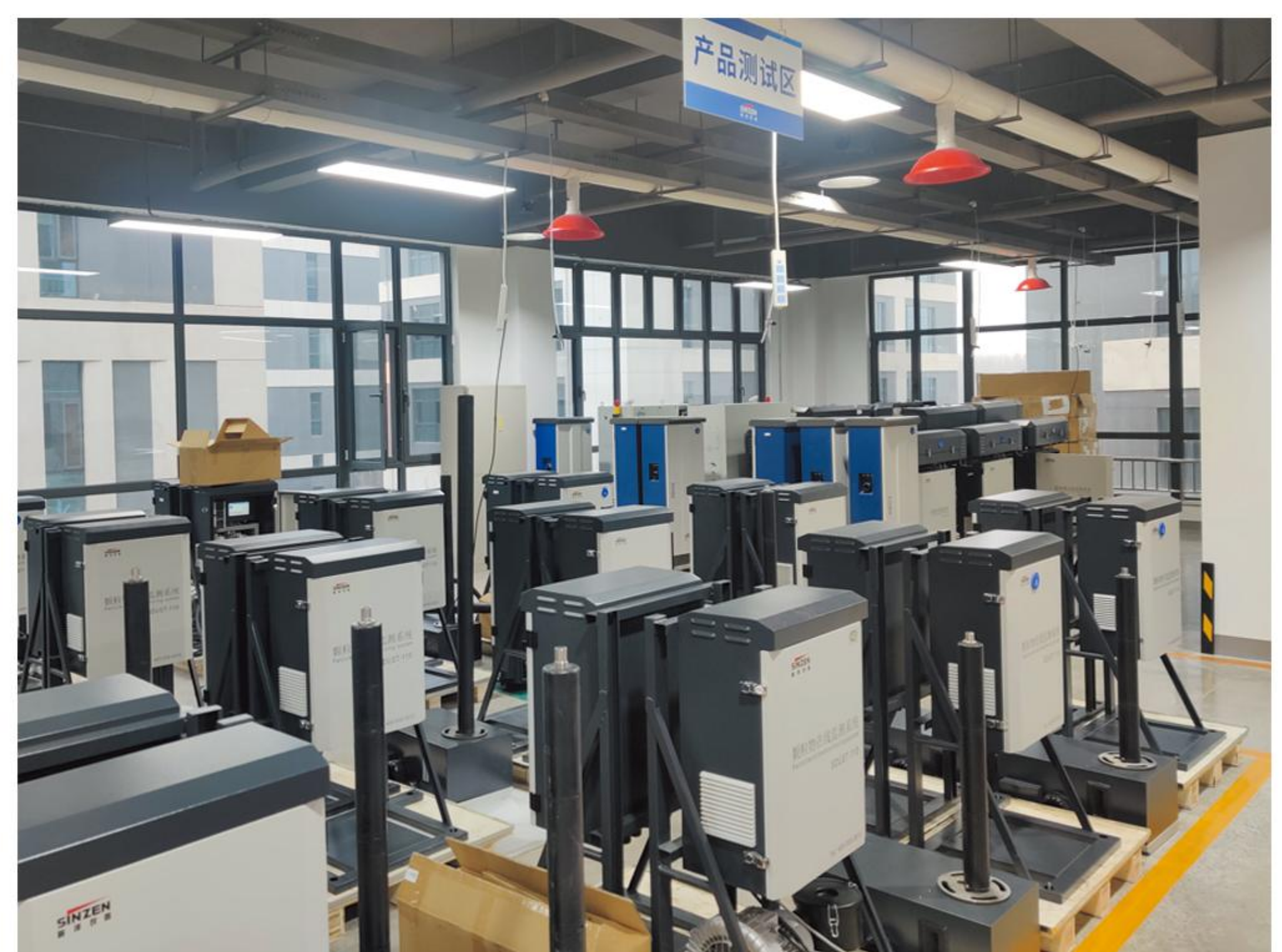
Strengthen the technical support system at all levels and improve training for sales and after-sales teams.

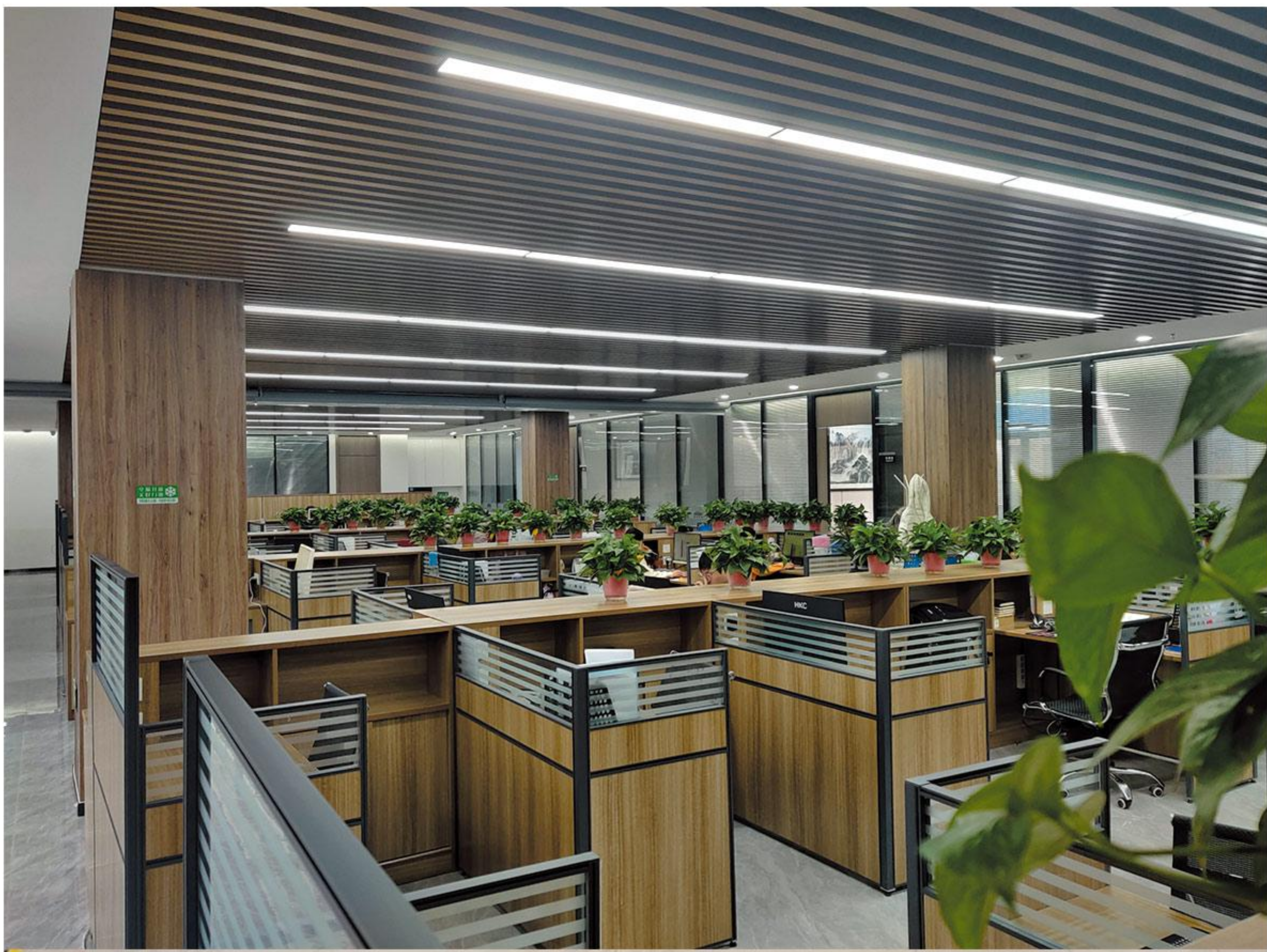


Institutional Guarantee

Strengthen the technical support system at all levels and improve sales and after-sales service.

Factory Tour





SINZEN

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For more information, please visit the official website of SINZEN Instrument.

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