DT-2025 Large Flow Low Concentration Smoke and Flue Gas Tester

Product description

The DT-2025 large flow low concentration smoke and flue gas tester is a new generation of smoke and flue gas tester developed by our company. This instrument uses the Pitot tube parallel isokinetic sampling method to collect particulate matter in the exhaust gas of stationary pollution sources, determines the mass of smoke and dust by the filtration and weighing method, and qualitatively and quantitatively determines the components of flue gas by the constant potential electrolysis method. It ensures the reliability of the instrument, improves the stability of the system, and enhances the accuracy of control.

It can be used to measure the emission concentration, conversion concentration, and total emission of particulate matter from various boilers, flue ducts, industrial furnaces, and other stationary pollution sources, as well as the dust removal and desulfurization efficiency of equipment; it can automatically measure parameters such as flue gas dynamic pressure, flue gas static pressure, flow velocity,

pressure before the flowmeter, temperature before the flowmeter, flue gas temperature, moisture content, O2, SO2, CO, NO, NO2, H2S, and CO2 concentration.

Main application

The instrument is widely used in environmental testing companies, industrial and mining enterprises, power plants, steel mills, cement plants, sugar mills, paper mills, smelters, ceramic factories, boiler furnaces, as well as aluminum, magnesium, zinc, titanium, silicon, pharmaceutical industries, including chemical fertilizers, chemicals, rubber, and material factories, and in the fields of health, labor, safety supervision, military, scientific research, and education

Characteristics

1.7.0-inch wide-temperature and high-brightness touch screen, supporting both touch and button operations;
2.With the function of automatic correction of CO to SO2, meeting the requirements of the standard HJ 57-2017;
3.The instrument host can complete the determination of particulate matter with a concentration lower than 20 mg/m3 in the exhaust gas of stationary pollution sources;
4.The electronic flowmeter automatically and accurately controls the flow and automatically compensates for the flow change caused by voltage fluctuation, resistance, and temperature change;
5.Microcomputer-controlled isokinetic tracking sampling, with a proprietary adjustment method and a fast response time;
6.Built-in lithium battery, supporting both AC and DC power supply modes. When powered by AC, sampling and charging can be completed simultaneously;
7.Temperature compensation is made for the flow error caused by temperature change to ensure the accuracy of measurement;
8.Precision sampling pump, corrosion-resistant, with a smoke and dust flow rate of up to 100 L/min and a flue gas flow rate of up to 1 L/min, continuous operation without maintenance, suitable for various working conditions, and with overload protection function;
9.Supporting Chinese pinyin input, automatically memorizing the flue duct working condition configuration information for easy retrieval and use in the later stage;

10.Supporting USB data export and Bluetooth printing functions. USB data export supports Excel and TXT two formats;
11.Real-time recording of the working status data of the equipment, with the function of power failure memory during the sampling process;
12.Equipped with a high-speed and low-noise miniature thermal printer, making it easy to grasp the real-time data.

Technical Parameters

1.Key Parameters

Main Parameters	Parameter Range	Resolution	Accuracy
Smoke and Dust Sampling Flow	(10～100) L/min	0.1 L/min	better than ±2.5%
Flue Gas Dynamic Pressure	(0～4000) Pa	1 Pa	better than±2.0%
Flue Gas Static Pressure	(-35～35) kPa	0.01 kPa	better than±2.5%
Pressure Before Flowmeter	(-100～10) kPa	0.01 kPa	better than±2.5%
Temperature Before Flowmeter	(-55～125)℃	0.01 kPa	better than±2.0%
Flue Gas Temperature	(0～400)℃	0.1℃	better than±2.5%
Flow Velocity	(5～45) m/s	0.1 m/s	better than±5.0%
Dry/Wet Bulb Temperature	(0～125)℃	0.1℃	better than±1.5%
Atmospheric Pressure	(60～120) kPa	0.1 kPa	better than±0.5kPa
Maximum Sampling Volume	999999.9 L	0.1 L	better than±2.5%
Data Storage Capacity	> 100000 groups		
Isokinetic Tracking Response Time	Not more than 20 s		
Sampling Pump Load Capacity	≥60 L/min (when the resistance is 20 kPa)		
Working Power Supply	AC（220±22）V 50Hz		
Continuous Working Time	> 6h		
Noise	< 80dB(A)		
Power Consumption	< 180W		
Overall Weight	About 10 Kg		
Length * Width * Height (mm)	420*240*320		

2.Flue Gas Parameters

Main Parameters		Parameter Range	Resolution	Accuracy
Flue Gas Sampling Flow		1.0 L/min		Indication error: better than ±5.0% Repeatability: ≤2.0% Response time: ≤90 s Stability: the indication change within 1 h is not greater than 5.0% Lifetime: about 2 years in air (except CO2)
Flue Gas Concentration	O_2	(0～25) %	0.1 %	
	SO_2 High	(0～5700) mg/m³	1 mg/m³	
	SO_2 Low	(0～286) mg/m³	1 mg/m³	
	NO	(0～1300) mg/m³	1 mg/m³	
	NO_2	(0～200) mg/m³	1 mg/m³	
	CO	(0～5000) mg/m³	1 mg/m³	
	H_2S	(0～300) mg/m³	1 mg/m³	
	CO_2	(0～20) %	0.01 %	

3.Configuration List

Serial Number	Name	Specification	Unit	Quanti ty	Remarks
1	Instrument Host	DT-2025	Unit	1	Built-in lithium battery
2	Heated Low Concentration Smoke and Dust Sampling Tube	DT-3051	Root	1	
3	Moisture Content Sampling Tube	DT-3056	Root	1	
4	Ordinary Flue Gas Sampling Tube	DT-3055	Root	1	
5	Polytetrafluoroethylene Tube	φ4*6	Root	1	6 meters
6	Power Cord	/	Root	1	
7	Shoulder Strap		Piece	1	
8	Sticky Notes	/	Copy	1	
9	Black Gel Pen	/	Piece	1	
10	Bluetooth Printer		Piece	1	
11	Printing Paper		Roll	10	
12	U Disk		Unit	1	
13	Static Grounding Wire	/	Root	1	
14	Flue Gas Temperature Wire	/	Root	1	
15	Steam-Water Separator	/	Unit	1	
16	Orange and Blue Rubber Tubes	φ4*8	Root	2	One of each color, 6 meters

17	Orange Rubber Tube	φ8*14	Root	1	6 meters
18	Orange Rubber Tube	φ8*14	Root	1	1 meters
19	Orange Rubber Tube	φ12*20	Root	1	0.5 meters
20	Adapter	/	Piece	1	
21	One-Way Valve	/	Piece	1	
22	Accessory Box	/	Piece	1	
23	Factory Inspection Report		Copy	1	
24	Instruction Manual	/	Copy	1	
25	Certificate of Conformity	/	Copy	1	
26	Warranty Card	/	Copy	1	
27	Packing List	/	Copy	1	
28	Multifunctional Smoke and Dust Sampling Tube	DT-3057	Root	1	Optional
29	Heated Sampling Tube	DT-3059	Root	1	Optional
30	Intelligent Flue Gas Preprocessor	DT-3059A	Root	1	Optional

Attention

1) During transportation and use, the tester should avoid strong vibration, collision, and the intrusion of dust, rain, and snow as much as possible.
2) When sampling on site, make sure to use 220V AC power! Prevent damage to the instrument or even personal injury caused by incorrect connection to other industrial power sources.
3) There should be an interval of more than 5 seconds before turning on the instrument again after shutting it down.

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