



环仪仪器科技有限公司
HUANYI INSTRUMENTS CO.,LTD

HYED-5 Potassium chloride aerosol generator

Operating Manual

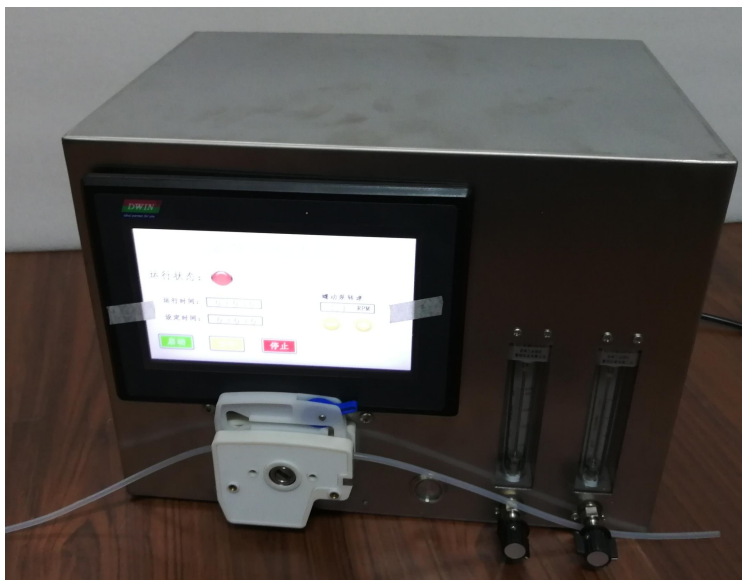
Survival by quality,
Development with integrity,
Efficiency by management.

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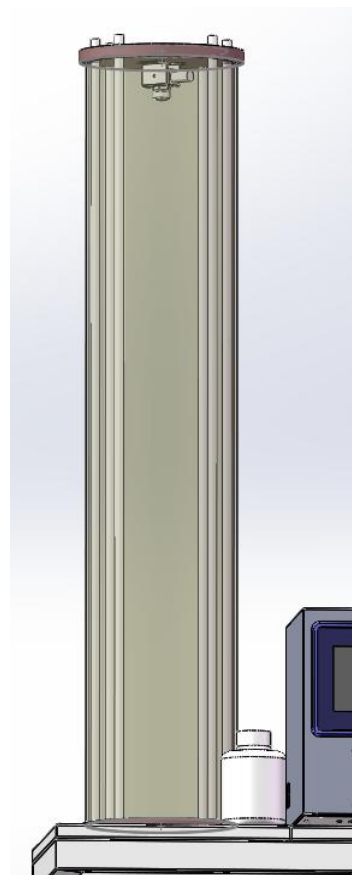
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I、Description

The purpose of this equipment is to provide a large-particle polydisperse solid aerosol for air filter, air cleaner and air purifier efficiency test. The potassium chloride aerosol generator uses potassium chloride solution (sodium chloride solution) to generate aerosol. By controlling the pressure and flow rate of compressed air, the concentration and flow rate of the solution, polydisperse solid aerosol can be generated to meet the requirements of air filter efficiency test for aerosol. Its appearance is shown in Figure 1-1, and its performance indicators are shown in Table 1-1. The equipment can meet the requirements of "Method for Sizing Efficiency of Air Purification Devices for General Ventilation", GB/T 14295-2008 "Air Filter" and JG/T 294-2010 "Determination of Pollutant Purification Performance of Air Purifiers" for aerosol dust sources.



Host machine



Dust column

Table 1-1 Performance index of polydisperse potassium chloride aerosol generator

Item	Performance	Note
Model	HYED-5	---
Dimensions	Main unit: 350×250×270 Dust tower: 320×320×1000	---
Aerosol used	KCl/NaCl (Mass concentration: 1%~23%)	
Particle size	Polydispersed solid particles	
Particle size range	0.1μm~10.0μm	
Concentration	0.3μm ~1.0μm>10 ³ P/L	
	1.0μm ~10.0μm>10 ² P/ L	
Applicable to air volume range	>500m ³ /h	

II、 Structure and principle

1. Equipment structure

The device is mainly composed of a main machine, a dust generating tower, a solution tank, an atomizing nozzle, etc. Its structural diagram is shown in Figure 2-1.

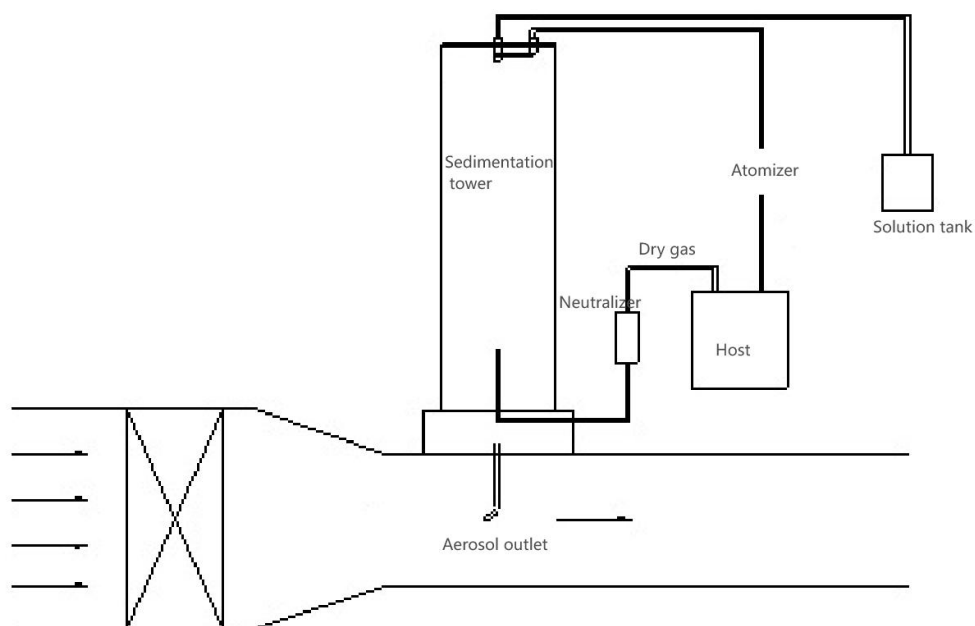


Figure 2-1 Structure diagram

2. Working principle

The compressed air enters the air source controller, and the pressure of the compressed air is adjusted to a certain pressure through the air pressure regulating valve, and then enters the filter for oil and water filtration; part of the filtered compressed air enters the atomizing nozzle as the spray air of the atomizing nozzle, and the other part enters the bottom of the dust generating tower after being heated by the heater and neutralized by the neutralizer. After the solution is atomized by the atomizing nozzle, tiny droplets are formed. The droplets move downward from the top of the drying tower and meet the hot dry air moving upward from the bottom of the dust generating tower, causing the droplets to evaporate, thereby forming a solid aerosol.

3. Operation interface(Can be switched to English interface)

As shown below: The running time and the speed of the peristaltic pump can be set.



III、 Installation and operation

1. Equipment installation

- Install the equipment bracket, fix the main unit and the dust tower (two pieces as shown in Figure 1-1), and install the aerosol outlet into the air duct (the aerosol outlet direction is required to be opposite to the air flow direction);
- Connect the main unit to the power supply, which is located behind the main unit;
- Connect the main unit to the air source (PU tube with an air pipe diameter of 10mm), and the air source input position is behind the main unit.

Factory inspection

Product name: Potassium Chloride Aerosol Generator

Product model: HY-YW-50

Factory number: 240905-001

Manufacture date: Sep,2024

Inspect result: Qualified

Inspector: Fu Deng

Audit: Deng Hongyan

Welcome to use our products. Our company will bring convenience to your work with excellent quality and efficient service. Making you satisfied is our greatest wish!

Dongguan Huanyi Instrument Technology Co., Ltd.

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