
Particle Filter Performance Test

Model : HJ-C02

Power supply: 220V

Gas source: 1-2 kg

II. OVERVIEW

Particulate filtration performance test bench, suitable for testing 45%-99.9% grade filter material efficiency test, according to international standards to test the filter material. The design structure of the whole test bench is tight and light, and in the process of running the test, only need to provide additional suitable power supply and compressed air (no water, no oil), suitable for laboratory, factory and other occasions. The counting efficiency is determined by particle counting method in filter paper test. single dispersion aerosol is recommended in the test. the measurement of the pressure drop shall be carried out at the specified filter speed. The filter paper is fixed on the fixture, and the test air volume corresponds to the required filter speed. Aerosol produced by the aerosol generator was adjusted, then neutralized (PSL) by static electricity, then mixed evenly with the filtered test air, and then entered the test area to pass through the filter material. In

addition, the filter material resistance should be measured during the test, and the flow rate should be adjusted manually

三、Component:

1. aerosol generator

Mainly used in the test requiring high concentration of aerosol, using 0.3 μm of PSL standard particles, the main particle size range emitted $\geq 0.3 \mu\text{m}$, accounting for more than 70% of the total, can continuously and steadily produce aerosol. upstream to the filter media, providing the tested particles.

2. particle counter

It is mainly used to monitor the upstream and downstream particle concentration of the measured filter material, and to obtain the efficiency of the measured filter material.

3. pressure differential sensor

Mainly used to test the pressure difference (or resistance) of the filter material under certain test flow.

4. stainless steel fixtures

Mainly used for the compression and sealing of the measured filter media.

5. inlet air pump

Mainly used for the test flow through the filter material, the flow rate is stable, green energy saving, small vibration noise.

6. Electrical Control and Software

Circuit control and operation of equipment, software operation and data processing, stability judgment of upstream concentration, operation control, parameter setting.

四、Functional Description

Filtration efficiency test and airflow resistance:

1. The whole test equipment adopts negative pressure system.
2. Air and aerosol through the test bin, flow through the mask according to the standard,
3. The concentration of upstream and downstream is detected by laser particle counter, and the filtration efficiency is calculated. the pressure difference between the upstream and downstream of the outlet hood is detected by the pressure difference meter.
4. by pumping the pump to reach the rated flow rate.
5. through aerosol generators to produce standard aerosol substances.
6. Equipment operation and efficiency resistance calculation by PLC and display screen.

五、Technical parameters

Particle Filter Performance Test	
Model	HJ -C02
Test Efficiency Range	0-99.999% $\geq 0.3 \mu m$ @
Test area	cm ² 100
Test differential range	pa 0-500
Test flow of filter material	10-100 L/min adjustable)
Test aerosol type	NACL, DEHS
Counter sampling flow	2.83 L/min $\pm 5\%$
Particle Size Display	$\geq 0.3 \mu m$, $\geq 0.5 \mu m$, $\geq 0.7 \mu m$, $\geq 1.0 \mu m$, $\geq 2.0 \mu m$, ≥ 5.0
Counter laser light source	Laser diode
Imported air pump	Stable continuous operation
Data memory capacity	1~1000 sets of measurements can be derived
Screen Display	Color 7-inch Touch Screen
Print mode	Built-in thermal printer
Power supply	Exchange V/50Hz 220
Power	kw 1
Data export interface	USB
Environment	Use environment :0~40℃ relative humidity 10~70%
	Storage environment :0℃~45℃ relative humidity 0~70%
Standard Annex	Heat sensitive printing paper, hose (air diameter 8 mm), instruction manual
Dimensions	Length 800 X width 760 X height 1250(mm)
Material	Shell steel plate baking paint, test parts SUS304 stainless steel
Weight	150Kg
Quality assurance	1 year
Physical map	
Use of maintenance manuals	

六、Method of use

Step 1: Plug the device into a triangular socket



Step 2: Provide gas source to equipment (about 1–2 kg)



Step 3: replace the back cover button, take down the aerosol inlet pipe and out of the particle interface, the proportion of aerosol particles, according to the concentration of 2% (30 g sodium chloride and 1470 g purified water ratio, liquid level

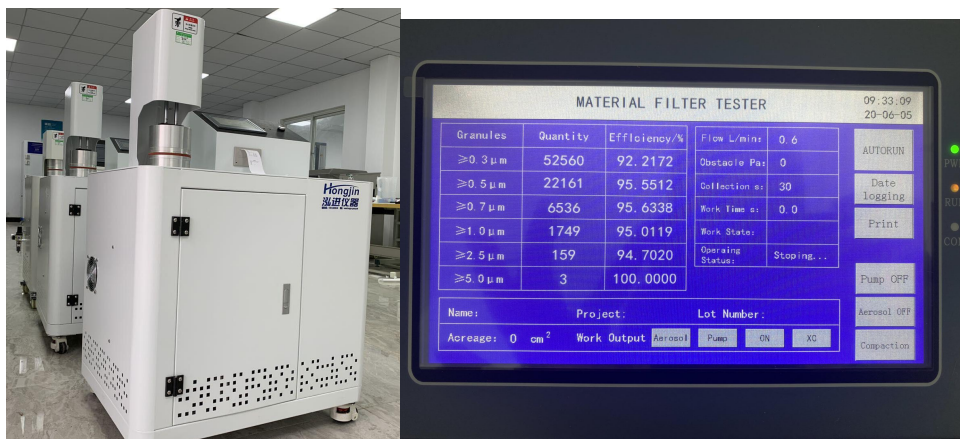
in more than half). Pour the stirred solution into the injection port of the aerosol generator, screw the lid, and insert the corresponding inlet and outlet tubes



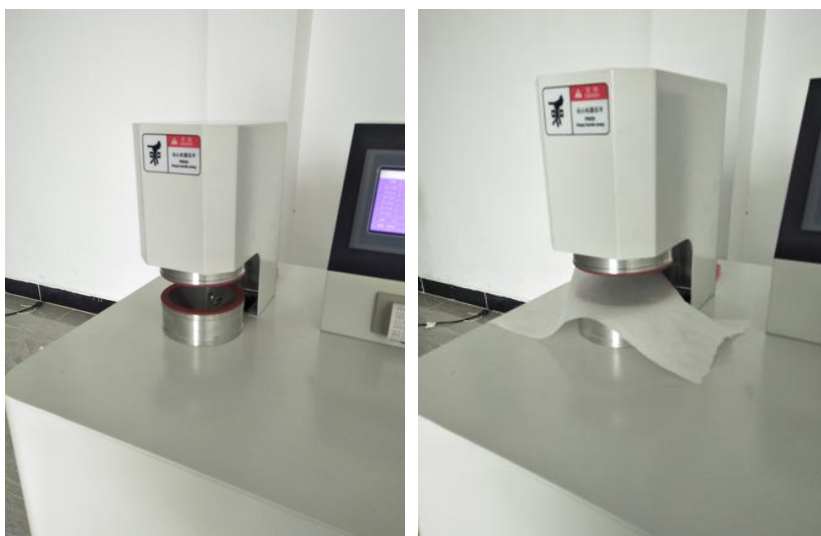
Step 4: Check that the particle water filter meets the requirements. After several tests, the shell of the particle is not heated or pink. If it needs to be replaced, the particle is blue and does not need to be replaced (change mode, remove the water filter, unscrew the nut, the outer tube arrow is mounted up to fit, buckle is placed) The left drawing is normal, and the drawing needs to replace the filter



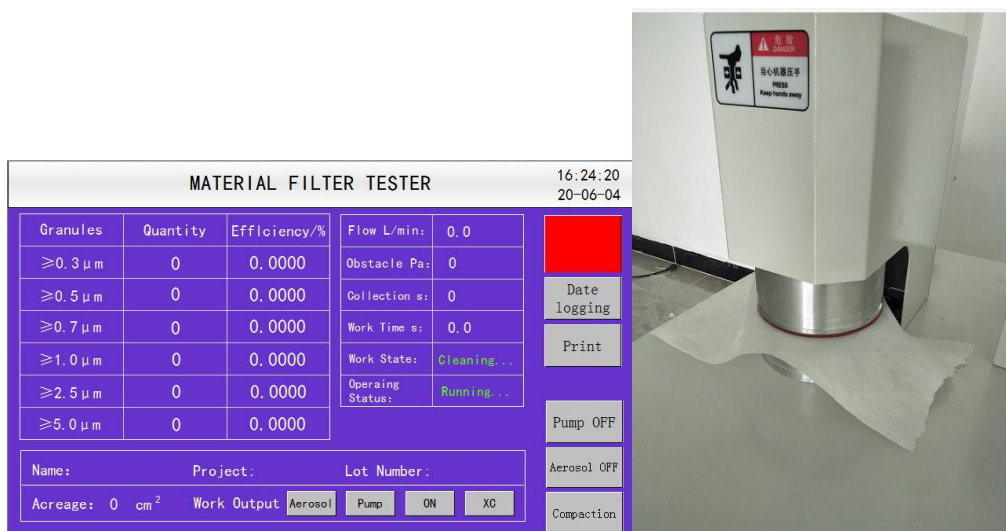
Step 5: Turn on the power switch and the device is in standby state



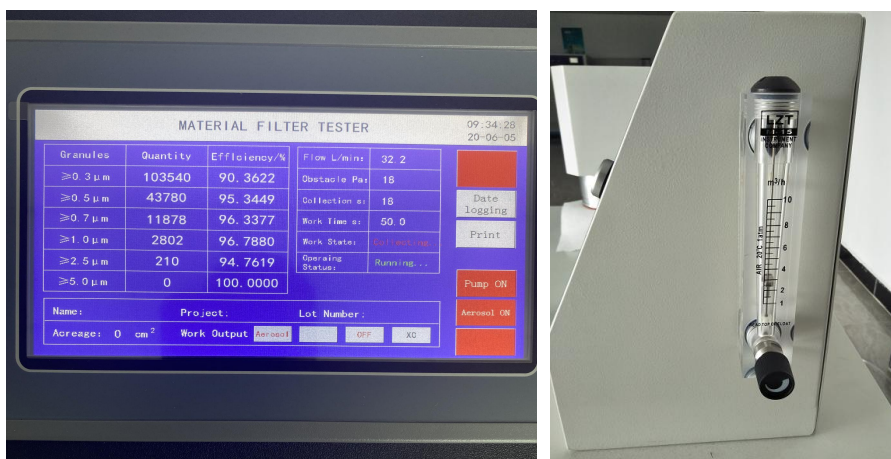
Step 6: Click on the fixture to loosen, put the measured sample flat into the fixture, suggest the operator to wear anti-static gloves.



Step 7: After putting in the flat, click on the operation interface clamp press button, the sample is clamped to be tested state



Step 8: Click the interface aerosol and pump button, if test single layer, adjust the side flowmeter, set to about 32 L/min, test double layer or test finished product adjusted to about 85 L/min.



Step 9: flow adjustment, click on the interface run button, the device starts from standby, converted to running.



Step 10: After the test is completed, the device is in standby, the test results are displayed on the control interface, press the right print button, print the current report (if you need to contact the test, you can continue to click on the automatic run, no need to turn off the aerosol, the air pump switch, and the fixture release).



Step 11: After the test is finished, take down the sample, close the fixture, disconnect the power supply, and complete the whole test

The above is all the operating instructions of the equipment,

if in doubt, contact us directly.