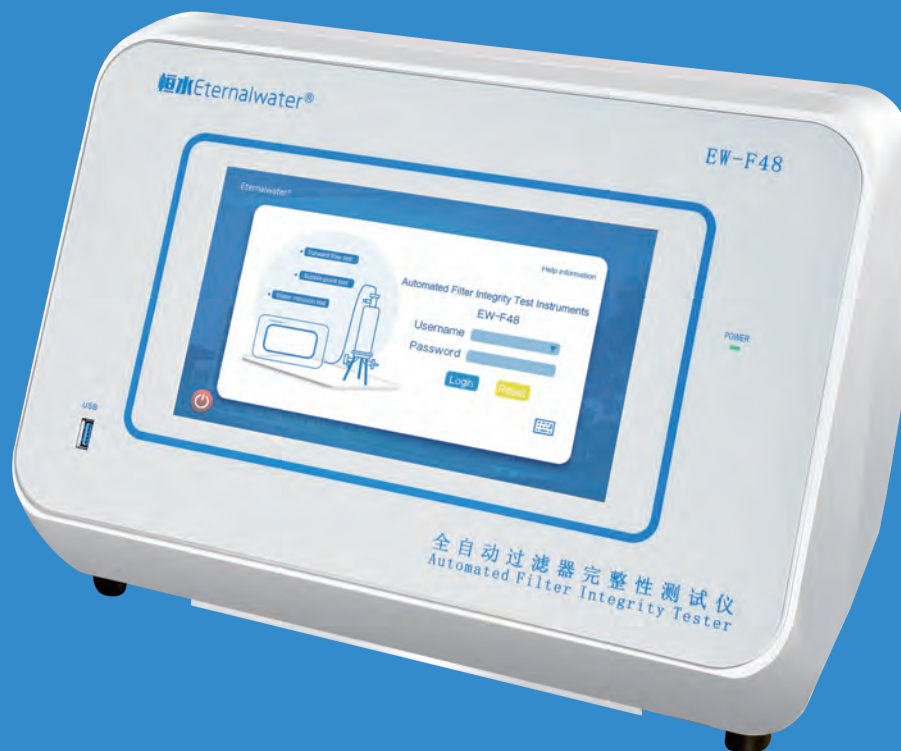


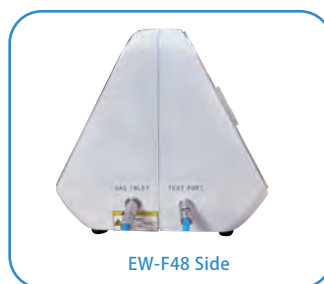
Eternalwater®

EW-F48 Series

Automated Filter Integrity Tester



EW-F48 Front



EW-F48 Side



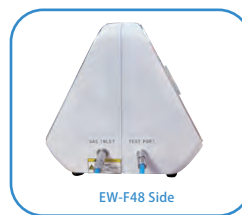
EW-F48 Back

EW-F48 Series Automated Filter Integrity Tester

The EW-F48 automated filter integrity tester is a microcomputerized, intelligent, and high-sensitivity precision analysis instrument independently developed by Hangzhou Eternalwater Filtration Equipment Co., Ltd. It is specially used to test the integrity of filter cartridges or membranes in filtration systems. The instrument enables a variety of standard functions, including forward flow test, bubble point test, water intrusion test, combined test of forward flow and bubble point, etc. At the same time of testing, the instrument can automatically perform self-test, automatically control the stabilization time and test time, store and print the current test results, etc.; historical data is displayed graphically to reflect changes in test time and gas flow rate more intuitively.



EW-F48 Front



EW-F48 Side



EW-F48 Back

Features

- High-performance CPU, touch screen design, simple, fast and reliable operation.
- Powerful storage function, data can be queried at fixed points or under specific conditions, and the built-in printer can quickly print test results, historical data, and real-time data curves.
- The test speed is fast.
- Small size, light weight, low energy consumption and easy to carry.
- Splash-proof technology IP54 specially designed for production environments.

Typical Application

- Pharmaceutical industry: Integrity test of various hydrophilic and hydrophobic filters, including pleated filter cartridges, capsule filters, flat filter membranes, and membrane bags.
- Food industry: filters for alcohol, mineral water and drinking water.

Parameters

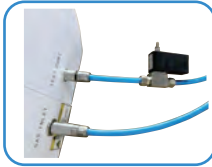
Input Voltage: (100-240) V AC	Test Accuracy (Forward Flow) : ±4% or 0.1mL/min, take the larger value
Input Frequency: 50/60Hz	Test Accuracy (Water Intrusion): ±4% or 0.02mL/min, take the larger value
Input Power: 160W	Test Accuracy (Bubble Point): ±50mbar
Sensitivity (Forward Flow) :0.01mL/min: 0.01mL/min	Test Range (Forward Flow): (0.1-600) mL/min
Sensitivity (Water Intrusion): 0.01mL/min: 0.01mL/min	Test Range (Water Intrusion): (0.01-100) mL/min
Sensitivity (Bubble Point): 1mbar: 1mbar	Test Range (Bubble Point): (100-8000) mbar
Repeatability: ≤3%	Test Range (Pressure Maintenance): (100-8000) mbar
Size: 42cm×30cm×28cm	

External Features



Waterproof and Dustproof Design

The protection level of IP54 prevents the short circuit of the instrument caused by sudden splashing of water during the test.



Anti-Backflow Design of Pipelines

It can be quickly cleaned to prevent liquid backflow and prevent microbial pollution to the upstream of the filter.



Full Touch Screen Operation

10-inch large screen, high resolution, easy to click.



Dust-Free Hi-Fi Printing Technology

Data results can be generated efficiently and quickly and stored for a long time, with a storage period of more than 10 years.



Offline Test

Can be connected to wireless networks, local area networks, and support remote data management and synchronization.

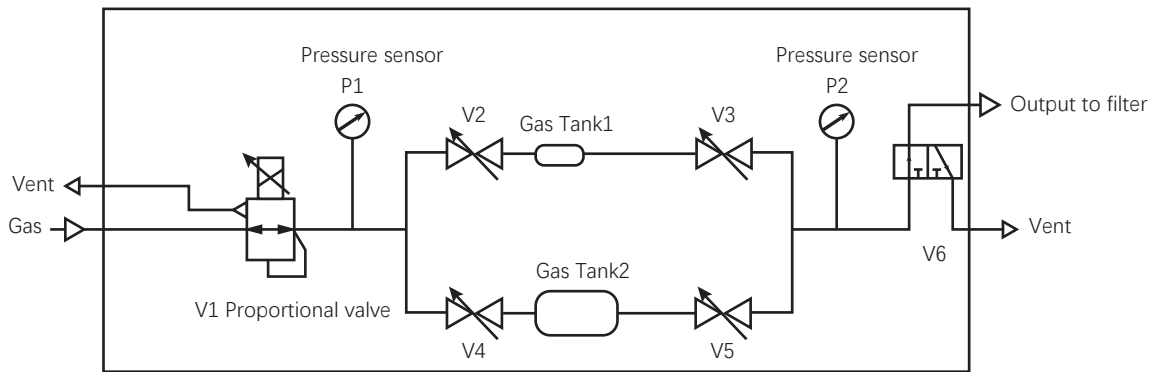


Fully comply with data integrity requirements

Fully comply with GMP and 21 CFR Part 11 requirements for electronic data integrity, 4 levels of password permissions, audit trail function, multiple forms of backup.

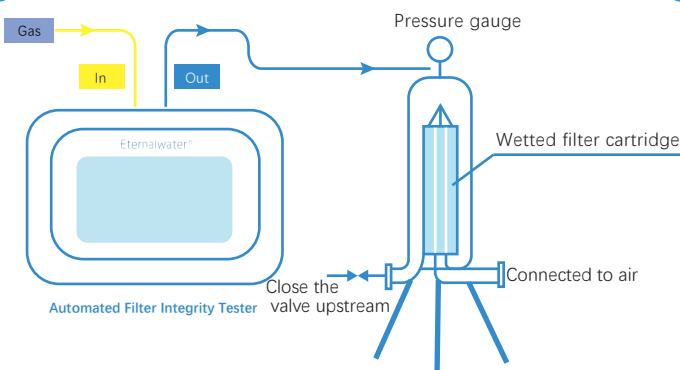
Schematic Diagram of Internal Gas Circuit

- There are two gas circuits running in parallel, and the appropriate gas circuit can be selected for testing according to the test environment.
- There are large and small reference tanks, which can be selected according to the testing needs.
- Four two-way solenoid valves ensure the control of gas, which is a guarantee for completing of the test.
- The closed loop control of two high-precision pressure sensors and proportional valve realizes the pressure control, so that the pressure or pressure difference can be used to calculate accurate values.
- The proportional valve realizes pressure regulation and is the main component.

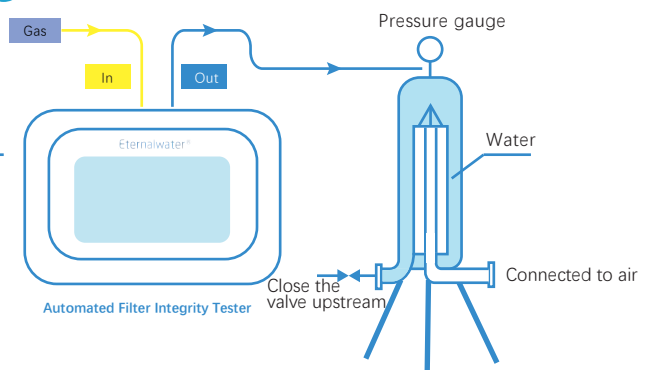


Gas Circuit Connection Diagram of Integrity Tester

01 Test of Bubble Point and Forward Flow

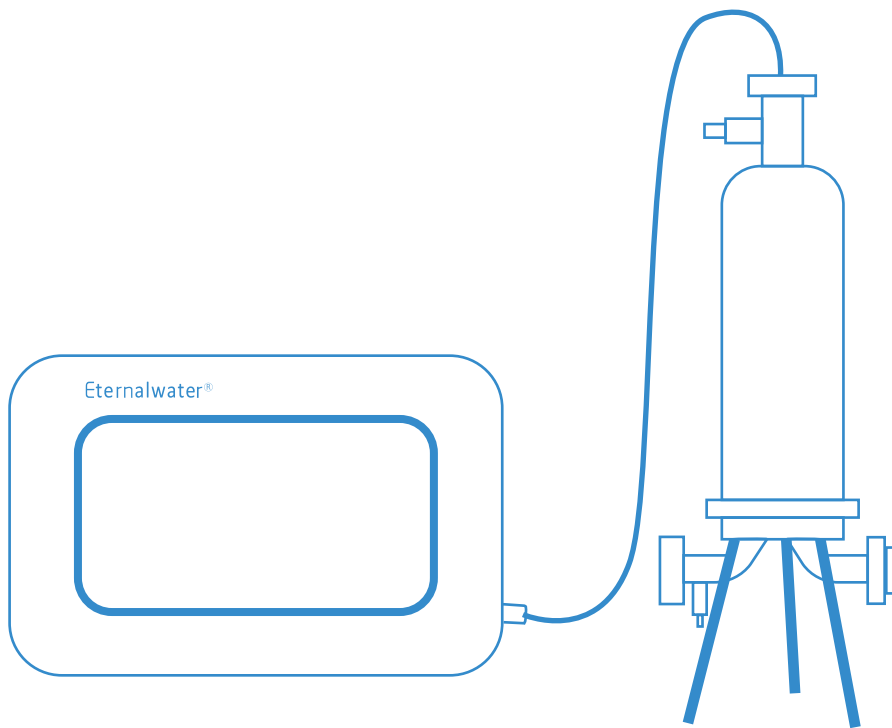


02 Water Intrusion Test



Integrity Tester Precautions

- The gas tightness of the instrument and system.
- The sealing of the filter cartridge end cap and filter socket.
- For bubble point and forward flow, please pay attention to whether the filter cartridge is completely wetted, and water intrusion requires that the filter cartridge is strongly hydrophobic and dry.
- Determine the type of filter cartridge. Only absolute membrane filter cartridges can be tested for integrity, such as PES, PTFE, PVDF, NY66, etc.
- The gas pressure needs to be at least 1000mbar higher than the test bubble point.



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