



# Aerosol Photometer

## MODEL 3990

Model 3990 is a linear digital aerosol photometer for scattered light with advanced technology and scientific design, and serves as the optimum test instrument for testing the integrity of the high efficiency particulate air (HEPA) filter or conducting leakage test. Considering the low concentration of atmospheric dust in the upstream of the HEPA filter under test, the aerosol generator should be used to replenish and generate dust to meet the test conditions. The aerosol photometer should be used to measure the concentration of suspended particulate matter in the upstream of the HEPA filter, and display the actual mass concentration value in  $\mu\text{g/L}$ ; then conduct the scanning test at a constant speed in the downstream to get the leakage rate of the HEPA filter under test. It is easy for spotting the leaking points and quantifying it, which can be used for reference during repairing. The product is compact in structure and easy to carry, and all operations can be completed via the 5.6 inch color touch screen interface. The noise suppression function can be realized by setting the aerosol sampling time constant, which can make the test data more stable. With the built-in thermal printer, real-time test data printing at the test site can be realized.

Scanning probe and the host can be rapidly connected via a 4m cable and air pipe, which is easy to test the long-distance filter; Not only can be operated with the host in sync, but also can scan the one-dimensional code. Then, the test data will be convenient to statistical analysis by automatic identification so that improving working efficiency.



### ■ User Interface of Color Touch Screen and Chinese-English

5.6 inch true color touch screen, rich options, reasonable design, easy to control. With testing, setup, zero-point reconstruction, about and other interfaces. The setup part includes the Reagent, Noise Suppression, Alarm Mode and Date&Time and etc.



### ■ Scanning Probe

The probe with 4M cable as an extension of the base instrument. Multi-function scanning probe, 1.8 inch true color display screen, which can display and operate in sync with the host. All data can be checked by scanning the one-dimensional code.



### ■ Enhanced Features

Upstream data will be displayed by the  $\mu\text{g/L}$ . The product owns the function of AKA noise suppression to avoid the effects of unstable aerosol concentration values.

### ■ Performance Guaranteed

Flow monitoring device and sampling pump with adjustable pulse width are to make sure the instrument operate well under all different or high altitude conditions. With advanced technology and scientific design, meet safety requirements.

### ■ Data Reporting

The built-in thermal printer is available to report the real-time test data with long-lasting thermal printing papers;

The test data by USB, connected with our computer, can be transmitted and stored and made statistical analysis.





ISO9001, ISO14001 approved  
JQA-2790, JQA-EM1628

The high-efficiency filter is put into operation. If there are leaks or gaps due to insufficient installation, the predetermined purification effect will not be achieved. Therefore, the necessary integrity test must be performed on the HEPA filter. Due to the low concentration of atmospheric dust upstream of the tested high-efficiency filter, it is necessary to use an aerosol generator so that conducting dust generation to meet the corresponding testing-conditions. You shall test the concentration of suspended particle matter upstream of the HEPA filter with aerosol generator, and then conduct a uniform-speed scanning test downstream. It does get to know the leakage rate of the tested HEPA filter, which is not only more convenient for the identification and quantification of all leak points, but can be used as a reference for repair accordingly.

## SPECIFICATIONS

Model	3990
Flow Range	0.0001~100.0% LED Screen
Concentration Range	0.0001~600µg/L
Accuracy	reading 1% (0.01~100%)
Repeatability	reading 0.5% (0.01~100%)
Flow Control	1cfm (28.3L/min)±10%
Auto- zero	Establish the zero-point
Alarm	Audible, visual and vibration mode alarms when limit values are exceeded
Report Mode	Continuous, Summary, Monitoring
Print Way	Built-in printer
ID Code	One-dimensional code scanning, automatic classification and traceability
Data Output	USB
Reagent	PAO, DOP, Ondina, PEG, Krydol, Corn Oil, Mineral Oil, Paraffin
Certifications	NSF49, IEST, ISO14644, EN61010-1:2010, EN61326-1:2006
Power Supply	AC 100~240V 50/60Hz
Dimensions	300×155×370mm
Weight	10.7kg(Body)
Essential Accessories	host, scanning probe, sampling tube, manual, certification report, power cord, carrying case

Note: In case of changes in products design, specifications, and parameters, the latest data provided by our company shall prevail without prior notice.

## Carrying Case



The GTI 3990 is equipped with a carrying protective box, which is convenient for transportation and movement. The internal scientific design, reasonable placement of related components, and durable protection of the GTI 3990.



## Applications

- Biological safety cabinet
- HEPA filter validation
- Nuclear Energy and Fuels
- Pharmaceutical industry and electronics industry
- Medical operating room and clean room
- Food processing and scientific experiments



## Features & Benefits

- 5.6inch true color touch display screen & interface in English
- Built-in thermal printer with long-term thermal printing paper and real-time printing
- The scanning probe has a one-dimensional code scanning function, and the data is automatically classified and traceable
- The scanning probe synchronous display and operation with the host, equipped with long cables and sampling tubes
- With aerosol noise suppression function, the test data is more stable
- Advanced technology, scientific design, compact structure and easy to carry

## Service&Training&Maintenance@GTI

- Product calibration, maintenance, fault repair
- Excellent after-sales service by partners certified by GTI service system training
- Attentive service, complete parts production, timely repair

## Easier Maintenance

The annual NIST traceable calibration service is carried out by GTI or a partner certified by the GTI service system training, and can also be carried out by an authoritative certification one. Calibration includes setting zero-point reconstruction and calibration, confirmation of flow rate and voltage, necessary cleaning and maintenance of optical system, replacement of zero count filter, etc. Routine preventive maintenance includes cleaning and inspection of internal sampling pipe fittings, zero-point reconstruction and other checks and confirmations.

## GTI PRECISION INSTRUMENT (SHENYANG) CO., LTD.

[www.gti-test.com](http://www.gti-test.com)  
[www.gti-instruments.com](http://www.gti-instruments.com)

No. 56-39 (2212), North Huanghe Avenue, Huanggu District, Shenyang, Liaoning Province, P. R. China 110034.  
Tel:+86-24-81231386 E-mail: sales@gti-test.com





ISO9001, ISO14001 approved  
JQA-2790, JQA-EM1628

The high-efficiency filter is put into operation. If there are leaks or gaps due to insufficient installation, the predetermined purification effect will not be achieved. Therefore, the necessary integrity test must be performed on the HEPA filter. Due to the low concentration of atmospheric dust upstream of the tested high-efficiency filter, it is necessary to use an aerosol generator so that conducting dust generation to meet the corresponding testing-conditions. You shall test the concentration of suspended particle matter upstream of the HEPA filter with aerosol generator, and then conduct a uniform-speed scanning test downstream. It does get to know the leakage rate of the tested HEPA filter, which is not only more convenient for the identification and quantification of all leak points, but can be used as a reference for repair accordingly.

## SPECIFICATIONS

Model	3990
Flow Range	0.0001~100.0% LED Screen
Concentration Range	0.0001~600µg/L
Accuracy	reading 1% (0.01~100%)
Repeatability	reading 0.5% (0.01~100%)
Flow Control	1cfm (28.3L/min)±10%
Auto- zero	Establish the zero-point
Alarm	Audible, visual and vibration mode alarms when limit values are exceeded
Report Mode	Continuous, Summary, Monitoring
Print Way	Built-in printer
ID Code	One-dimensional code scanning, automatic classification and traceability
Data Output	USB
Reagent	PAO, DOP, Ondina, PEG, Krydol, Corn Oil, Mineral Oil, Paraffin
Certifications	NSF49, IEST, ISO14644, EN61010-1:2010, EN61326-1:2006
Power Supply	AC 100~240V 50/60Hz
Dimensions	300×155×370mm
Weight	10.7kg(Body)
Essential Accessories	host, scanning probe, sampling tube, manual, certification report, power cord, carrying case

Note: In case of changes in products design, specifications, and parameters, the latest data provided by our company shall prevail without prior notice.

## Carrying Case



The GTI 3990 is equipped with a carrying protective box, which is convenient for transportation and movement. The internal scientific design, reasonable placement of related components, and durable protection of the GTI 3990.



## Applications

- Biological safety cabinet
- HEPA filter validation
- Nuclear Energy and Fuels
- Pharmaceutical industry and electronics industry
- Medical operating room and clean room
- Food processing and scientific experiments



## Features & Benefits

- 5.6inch true color touch display screen & interface in English
- Built-in thermal printer with long-term thermal printing paper and real-time printing
- The scanning probe has a one-dimensional code scanning function, and the data is automatically classified and traceable
- The scanning probe synchronous display and operation with the host, equipped with long cables and sampling tubes
- With aerosol noise suppression function, the test data is more stable
- Advanced technology, scientific design, compact structure and easy to carry

## Easier Maintenance

The annual NIST traceable calibration service is carried out by GTI or a partner certified by the GTI service system training, and can also be carried out by an authoritative certification one. Calibration includes setting zero-point reconstruction and calibration, confirmation of flow rate and voltage, necessary cleaning and maintenance of optical system, replacement of zero count filter, etc. Routine preventive maintenance includes cleaning and inspection of internal sampling pipe fittings, zero-point reconstruction and other checks and confirmations.

## Service&Training&Maintenance@GTI

- Product calibration, maintenance, fault repair
- Excellent after-sales service by partners certified by GTI service system training
- Attentive service, complete parts production, timely repair

## GTI PRECISION INSTRUMENT (SHENYANG) CO., LTD.

Office Address: No. 56-39 (2212), North Huanghe Avenue, Hanggu District, Shenyang, Liaoning Province, P.R. China 110034;  
Tel: +86-24-81231386  
E-mail: sales@gti-test.com  
Website: www.gti-test.com; www.gti-instruments.com.

