



® Knowledge Beyond Measure.

Automated Filter Tester

Model 8150



Taking high performance from the lab to the production line.

The Automated Filter Tester 8150 is for 100% quality assurance testing of P100, FFP3/P3 and similar respiratory filters and cartridges directly in the production line. The 8150 is a highly compact automated filter tester that can easily be retrofitted into any existing production lines. Using much of the same technologies, it provides matching results to the model 8130A while being optimized for high-volume throughput and round-the-clock remote operation.

TSI's Automated Filter Testers have been used in quality control and manufacturing for more than 35 years. The model 8130A is used by the leading filter and filter media manufacturers, test laboratories, and government agencies around the world due to its proven performance, durability and reliability.

The model 8150 is an evolution of the 8130A, that has been optimized for demanding in-line production testing applications, giving you faster measurement and cycle times for high throughput. It incorporates two simultaneously measuring photometers - upstream and downstream of the filter - to eliminate measurement uncertainties due to any change in aerosol concentration. The 8150 also utilizes an innovative concept for aerosol delivery that reduces the number of valves and improves uptime. For especially tight spaces, the photometer box can be split from the base unit or two units can be stacked. The 8150 operates through a PLC driven interface and contains a comprehensive set of internal diagnostics to provide you with complete confidence of your filter efficiency measurements.

For maintenance, troubleshooting, or determination of optimal settings during process characterization, the 8150 can be operated outside of the production line environment by the Production Line Simulator 8150-PLS as an optional accessory.

Features and Benefits

- Fast measurement and cycle times for high throughput
- Excellent comparability of results to the model 8130A that is used for certification
- Small footprint for easy integration into existing and new production lines
- Two simultaneously measuring photometers for best performance
- Fast recovery time after detecting defective filters to minimize subsequent false failures
- Supports compliance with standards such as US 42 CFR 84, GB2626, and EN143/EN149
- Intelligent design for increased uptime



Specifications

Automated Filter Tester

Model 8150

Aerosol Detection

Technique Two simultaneously measuring light-scattering laser photometers

Dynamic Range 1.0 µg/m³ to >200 mg/m³

Performance

Operating Range Up to 99.9995% efficiency

Oil-Only Tester Compatible with DOP, Paraffin, PAO & DEHS

Test Time Contact your TSI® representative

Pressure Measurement

Technique Electronic pressure transducer

Range 0 to 250 mm H₂O (0 to 2500 Pa), other ranges available upon request

Accuracy ±1% of full scale

Aerosol Flow (External Vacuum Flow Required)

Volumetric Flow TSI® Mass Flow Meter 4045 with pressure and temperature

Flow Rate Range Adjustable from 10 to 120 L/min

Flow Rate Monitored and adjusted automatically to setpoint

Accuracy ±2% of reading or 0.05 Std L/min, whichever is greater

Operating Range

Ambient Pressure 75 to 110 kPa (absolute)

Ambient Temperature 10°C to 35°C

Operating Humidity 0% to 95%, non-condensing

Automation Interface

- Modbus-based command set via Ethernet

Pump/Filter Holder

Not included, custom designs and considerations are in the hands of the customer/integrator

Utility Requirements and Physical Parameters

Power 90 VAC to 250 VAC, 50 Hz to 60 Hz, 10 A max.

Compressed Air 80 psig, 7 scfm (550 kPa, 200 std. L/min average, 250 std. L/min max.)

Dimensions (L x W x H) 64.5 cm × 55.5 cm × 104.5 cm (25.4 in. × 21.9 in. × 41.2 in.)

Weight 100 kg (220 lbs)

Accessories and Options

- Built-in neutralizer
- Automatic aerosol generator refill
- External pump (110V/220V)
- Control unit with reference filter chuck for operating the 8150 outside the production line

Compliance

CE*, RoHS, North America Safety Mark (NRTL), optional CSA

*Partly completed machinery according to EC – Directive for Machines 2006/42/EC, Annex II, 1. B, requires proper integration into production line especially regarding safety considerations

To Order

Automated Filter Testing

Specify	Description
8150	Automated Filter Tester
8150N	8150 with neutralizer
8150R	8150 with automatic refill
8150NR	8150 with neutralizer & automatic refill

Accessories

Specify	Description
8130A-18631	External pump
8150-P500	Control unit
8150-MKIT	Maintenance parts kit
8150-PLS	Production Line Simulator (PLS)

Service and Support

- Field installation and training (subject to location)
- Training for user-serviceable photometer on-site/at TSI®
- Service contracts
- Field service

Contact your TSI representative for more details

Specifications subject to change without notice.

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