

# AUTOMATED FILTER TESTER MODEL 8150

TAKING HIGH PERFORMANCE  
FROM THE LAB TO THE  
PRODUCTION LINE

The Automated Filter Tester Model 8150 is for 100% quality assurance testing of P100, FFP3 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 line. 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.

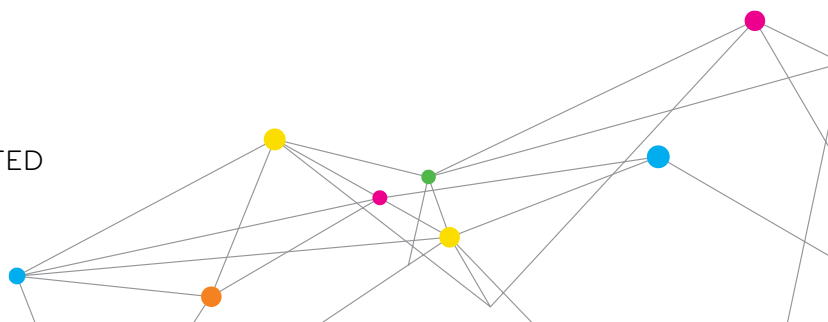
The model 8150 is an evolution of the 8130A, that has been optimized for demanding in-line production testing applications, giving you faster measurement and cycle times for high-throughput. It incorporates two simultaneously measuring photometers - upstream and downstream of the filter - to eliminate 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.

## Features and Benefits

- + Fast measurement & 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



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## 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 H <sub>2</sub> O (0 to 2500 Pa), other ranges available upon request
Accuracy	±1% of full scale

#### Aerosol Flow (external vacuum flow required)

Volumetric flow	TSI Model 4045 flow meter 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
- + Serial commands via RS-232

#### 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

#### 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 are subject to change without notice.

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