

XENOTEST[®] 150 S+

Light Exposure
and Weathering
Testing Instrument



Experience. The Atlas Difference.

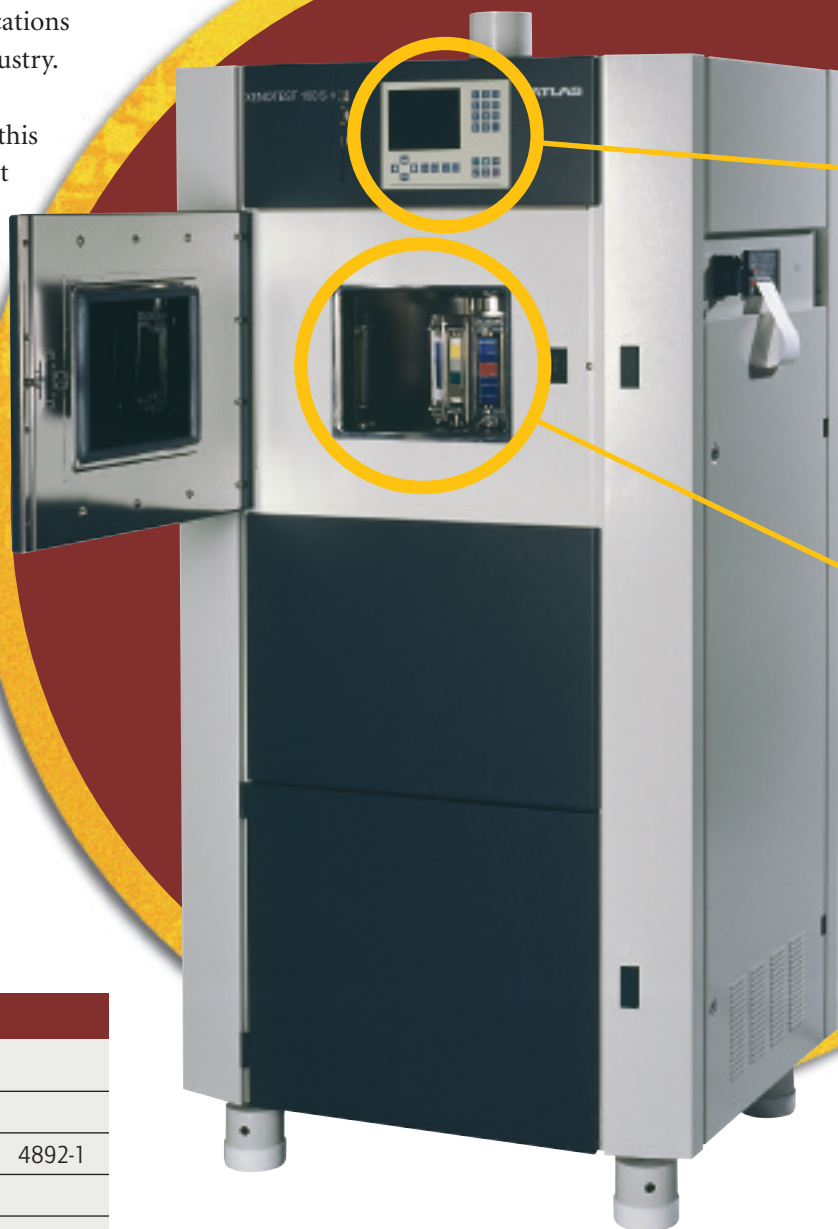
The **Xenotest® 150** was the first xenon test instrument with an air-cooled lamp and, together with its successor, the **Xenotest® 150 S**, has contributed greatly to the improvement of material properties in many applications over the past decades, particularly in the textile industry.

The **Xenotest® 150 S+** is the enhanced version of this proven classic. The instrument offers users the most up-to-date control and regulating technology available while maintaining flexibility user-friendly operation.

The user has the ideal combination of the most modern technology, economical testing, the best possible reproducibility and an outstanding correlation to natural weathering.

The **Xenotest® 150 S+** is an universal test instrument for a wide variety of applications:

- Weatherfastness testing in compliance with ISO 105-B04
- AATCC lightfastness testing of textiles with an air-cooled xenon lamp (TM 16H-1998)



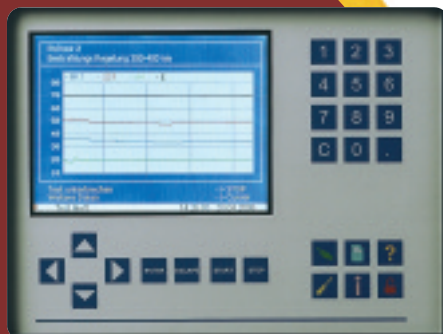
Standards

AATCC	TM 16H-1998		TM 169	
ASTM	G151	G155	D6695	
ISO	105-B02	105-B04	12040	4892-1
JASO	M 346			
Marks & Spencer	C9	C9A		



◉ User-friendly Touch Screen Operation

- Large touch screen with color display to indicate the current test status and the graphic progression of the test parameters
- Dynamic memory with 10 freely programmable as well as preprogrammed weathering test programs, each comprising up to 12 test segments
- SmartMedia™ card interface for direct data transfer to your test equipment (e.g. software enhancements) or to load test parameter data to your computer for further processing
- Test parameter data output via a serial RS232/USB port



◉ Reliable Sensor Technology

- Stationary sensor to measure and control the test chamber temperature
- Lamp power measurement and constant control

◉ Versatile instrument functionality

- Supplemental electric heating device to achieve high temperature values
- Specimen spray system for sample moisture during weather fastness tests
- Integrated water tank for providing ultra-pure water automatically when connected to a supply line



Xenotest® 150 S+ Features

Proven xenon lamp technology with long operating life

Large touch screen with color display for more user friendly operation

Variable adjustment of lamp power

Optional irradiance measurement at sample level with XenoCal sensor

Measurement and control of the test chamber temperature and humidity

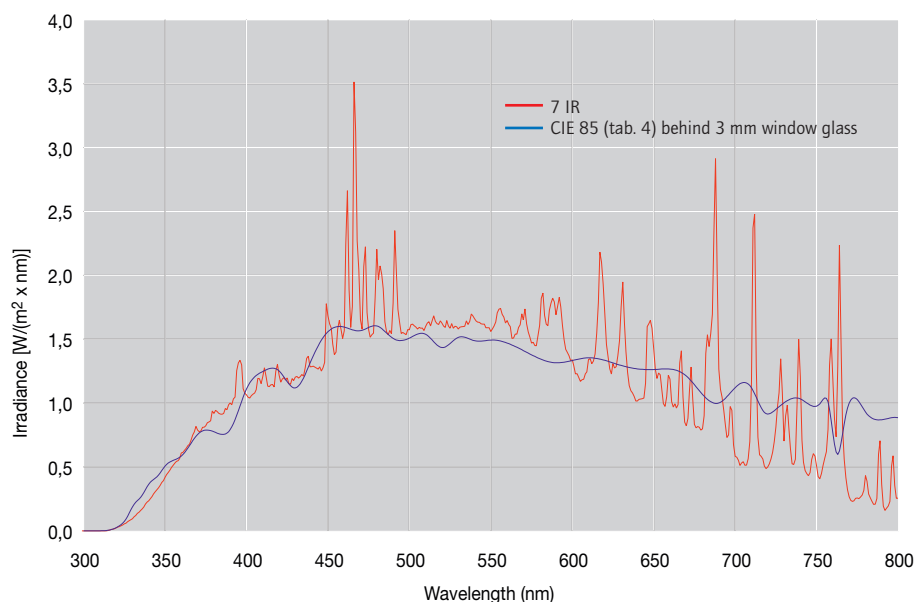
Separate heating of the circulating air for high temperature testing

Data output to a printer, RS232/USB interface and memory card

Optional calibration via XenoCal

Turning and non-turning mode

Spectral Power Distribution from 300 to 800 nm



Irradiance in the Xenotest® 150 S+

- Proven lamp technology with a guaranteed constant radiation resulting in high correlation with regard to previously performed tests
- Long lamp operating life even when switching between turning and non-turning mode



Filter Combinations

Filter system	Application
Combination of absorption filters 7 IR and Suprax cylinder	Simulation of solar irradiation behind window glass
Combination of absorption filters 6 IR + 1 UV and Suprax cylinder	Simulation of outdoor solar irradiation – needed for older standard requirements

Temperature Parameters in the Xenotest® 150 S+

- Control of the test chamber temperature at given values, which is supported by the test chamber heating device.
- By varying the blower speed and hence the air speed in the test chamber, both test chamber as well as Black Standard Temperature can be maintained within very narrow tolerances and within the possible temperature range.
- The Black Standard Temperature is dependent on the test chamber temperature and humidity, the irradiance and the filter system as well as the operating mode (turning or non-turning). It can be altered by varying the fan speed.



XenoCal Irradiance Sensor

to measure irradiance and radiant exposure from 300 to 400 nm. Analysis and graphic display of the measured values of both sensors via an IBM-compatible PC in conjunction with the XenoSoft software program

XenoCal BST

to measure the Black Standard Temperature at sample level

XenoCal WST

to measure the White Standard Temperature at sample level

Thermoprinter

for printout of protocols regarding instrument and program data as well as test parameters at pre-selectable intervals

Regular Specimen Holder

for samples up to a thickness of 3 mm

Special Specimen Holder

for samples up to a thickness of 15 mm such as automotive upholstery materials

Accessory Kit "Textile"

The ideal standard accessories configuration for textile testing



Specimen Holders

Description	Application	Maximum Size	Exposure Size	Rack Capacity
Regular Specimen Holder for samples up to 3 mm thick	Textiles, plastics, coatings, papers	135 x 45 mm	121 x 35 mm	11
Special Specimen Holder for samples up to 15 mm thick	Carpets, plastics, foam-backed materials, thick panels	135 x 45 mm	121 x 35 mm	
Specimen Holder for Blue Scale	Blue scale fabric during weathering tests	135 x 45 mm		

Xenotest® 150 S+ Features

Air-cooled xenon lamp providing a maximum of 2.2 KW	●
Measurement and control of test chamber temperature	●
Measurement and control of test chamber humidity	●
Air volume control to influence the temperature difference between test chamber and Black Standard Temperature	●
Test chamber heating device	●
Ultrasonic humidification system	●
Specimen spray system	●
Integrated water reservoir	●
Turning and non-turning mode operation	●
Parameter check	●
User guided operation by color graphic display	●
Touch screen and I/O board using optical fiber waveguide technology	●
Data output via memory card or RS232 / USB interface	●
Instrument-internal memory chip to store instrument data	●
Thermoprinter	●
XenoCal BST Black Standard Thermometer	●
XenoCal WST White Standard Thermometer	●
XenoCal BB 300-400 irradiance sensor	●
XenoCal WB 300-800 irradiance sensor	●
XenoCal NB 340 irradiance sensor	●

● Standard ● Optional

Utility Requirements

Electrical	230 V ±10 %, 50/60 Hz (1P,N,PE) AC or (2P,PE) AC CEE (32 A, 3-pin 6h)
Amperage	16 A
Maximum power consumption	approx. 5 kVA
Cooling air requirement for xenon lamp	200 m³/h
Cooling air requirement for test chamber	100 m³/h
Water consumption for spray system	0.7 l/min
Water consumption for humidity	max. 0.033 l/min

Xenotest® 150 S+ Specifications

Lamp power is adjustable between 65 and 100%	
Filter Systems	
Absorption filter lantern with 6 IR + 1 UV + Suprax cylinder	
Absorption filter lantern with 7 IR + Suprax cylinder	
Temperature and Humidity Ranges	
Test chamber temperature: 30° C to 70° C*	
Black Standard Temperature: 40° C to 130° C*	
Relative humidity: 10 to 95% relative humidity*	
*Depending on the selected filter combination and irradiance as well as the ambient laboratory condition	
Sample Capacity	
Sample holders	11 *
Sample dimensions L x W (max.)	135 x 45 mm
Exposure area	1320 cm ²
*without additional sensor (22 samples during turning mode)	
Physical Specifications	
Width x Depth x Height	900 x 780 x 1800 mm
Weight	approx. 280 kg