XENOTEST®

150 S+

Light Exposure and Weathering Testing Instrument

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

<table>
<thead>
<tr>
<th>AATCC</th>
<th>TM 16H-1998</th>
<th>TM 169</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTM</td>
<td>G151</td>
<td>G155</td>
</tr>
<tr>
<td>ISO</td>
<td>105-B02</td>
<td>105-B04</td>
</tr>
<tr>
<td>JASO</td>
<td>M 346</td>
<td></td>
</tr>
<tr>
<td>Marks &amp; Spencer</td>
<td>C9</td>
<td>C9A</td>
</tr>
</tbody>
</table>
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
Filter Combinations

<table>
<thead>
<tr>
<th>Filter system</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combination of absorption filters 7 IR</td>
<td>Simulation of solar irradiation behind window glass</td>
</tr>
<tr>
<td>7 IR and Suprax cylinder</td>
<td></td>
</tr>
<tr>
<td>Combination of absorption filters 6 IR + 1 UV</td>
<td>Simulation of outdoor solar irradiation needed for older standard requirements</td>
</tr>
<tr>
<td>and Suprax cylinder</td>
<td></td>
</tr>
</tbody>
</table>

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

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

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

**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 cm²
- **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**

**Physical Specifications**

- **Width x Depth x Height**: 900 x 780 x 1800 mm
- **Weight**: approx. 280 kg

---

**Atlas Material Testing Technology GmbH**

(p) +49.60 51.707.140
(f) +49.60 51.707.149

www.atlas-mts.com

We reserve the right to make technical changes to the instruments and systems.

© 2006 Atlas Material Testing Technology GmbH
All rights reserved. Printed in Germany.
BV Pub. No. 56352320
US Pub. No. 2026