

# SOLARBOX

## Models 1500e RH and 3000e RH

### Accelerated xenon light fastness and weathering test chambers

The worldwide known SOLARBOXe light fastness testers are now available also in the RH series allowing Relative Humidity Control.

SOLARBOXe RH represent a breakthrough in small light fastness testers.

SOLARBOXe RH are the first small testing instruments allowing simulation and control of all weathering parameters like expensive xenon instruments.

Controlled irradiance and spectrum, controlled BST temperature, controlled humidity, flooding system, are features of a top weathering equipment.

Low purchase price, low operating cost, at last an affordable and easy to use xenon weathering testing instrument offering:

- Correlation
- Acceleration
- Repeatability
- Reproducibility

of an advanced weathering test chamber.



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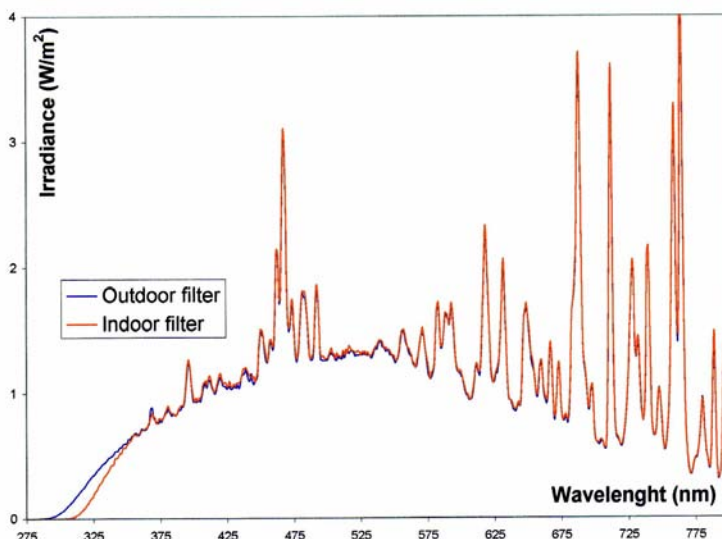
# SOLARBOXe RH

## Features

- Broad band irradiance control sensor (300-400 nm) ensures constant irradiance for the whole life of the lamp.
- Controlled and monitored irradiance up to 1000 W/m<sup>2</sup> (300-800 nm).
- Controlled and monitored temperature at specimen tray level with BST (Black Standard Thermometer).
- Controlled and monitored Relative Humidity. Ultrasonic humidifier ensures reliable functioning for long time.
- Sample flooding system for cyclic sample immersion throughout your test program.
- Microprocessor control with 4 lines LCD display. Friendly and intuitive operating system. Free programming up to 15 different test programs. Complete test report is produced for each test you perform simply connecting your PC to RS 232 interface: press print push button and history of test is printed.



## Spectral power distribution of filtered Xenon



- A complete range of advanced UV filters are available to match sunlight conditions: direct exposure to sunlight (Outdoor); exposure through a window glass (Indoor); Outdoor and Indoor filters with IR coating to reduce infrared radiation on samples.

# SOLARBOXe RH

## Description

A strong structure is the base of SOLARBOXe RH. In the lower part two tanks are installed. The right one is for humidifier supply, the left one is for flooding system (option). Capacity of humidifier and flooding tanks ensures weeks and weeks of continuous functioning. Blinking lights on auxiliary panel inform when water level is low.

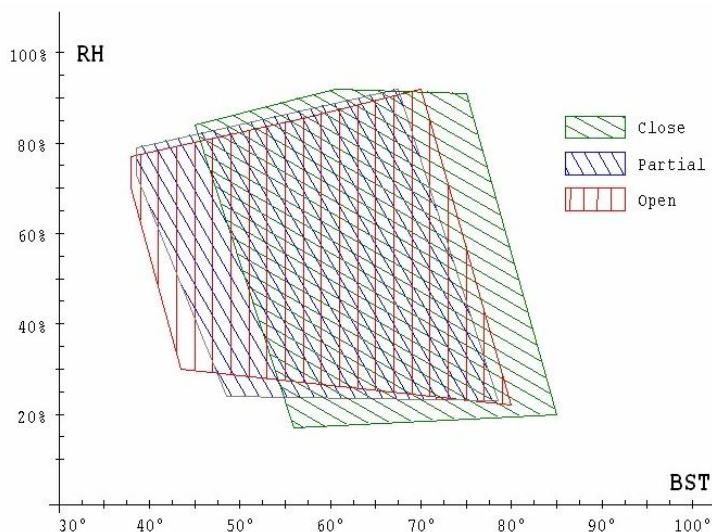
Sample temperature depends on air flow rate in the test chamber. BST temperature control system selects the blower speed by means of an inverter allowing accurate speed control, subsequently we have a high accuracy in BST temperature.

Relative humidity is set on auxiliary panel and displayed on Solarbox control panel.

Ultrasonic humidifier is proportionally controlled so to reach and maintain the programmed test condition. Air circulation may be modified by the user; in full closed circuit mode humidity is obtained in extreme high range with negligible water consumption and BST is in medium high range. In partial air recirculating mode BST temperatures of lower range are possible.



### Operable ranges of humidity control at various test chamber temperatures



Green range is for fully closed air circulating circuit.  
Blue range is for partially closed air circulating circuit.  
Red range is for fully opened air circulating circuit

Laboratory temperature 20 °C

# Technical data

| SOLARBOXe RH MODEL                                         | 1500e RH                   | 3000e RH     |
|------------------------------------------------------------|----------------------------|--------------|
| <b>Electrical connection</b>                               |                            |              |
| Mains connection                                           | 1/N/PE                     |              |
| Mains Voltage                                              | 230 Vac +-10% 50/60 Hz     |              |
| Current consumption                                        | 16 A (max)                 |              |
| <b>Water supply for humidifier</b>                         |                            |              |
| Tank capacity                                              | 50 litres                  | 60 litres    |
| Type of water                                              | demineralized < 2 µSiemens |              |
| <b>Measures and weight</b>                                 |                            |              |
| Dimensions WxDxH (mm)                                      | 810x550x1600               | 950x550x1600 |
| Floor weight (Kg)                                          | 100                        | 125          |
| Exposure area WxD (mm)                                     | 280x 200                   | 420x200      |
| <b>Features</b>                                            |                            |              |
| Air cooled especially designed Xenon lamp (watt)           | 1500                       | 2500         |
| Microprocessor control with 4 lines LCD display            | X                          | X            |
| Free programming of 15 tests                               | X                          | X            |
| Complete test report ready to print                        | X                          | X            |
| RS232 interface for report output                          | X                          | X            |
| Irradiance range: 300-1000 W/m <sup>2</sup> (300-800 nm)   | X                          | X            |
| BST Temperature controlled and displayed                   | X                          | X            |
| BST temperature range up to 100 °C                         | X                          | X            |
| Relative humidity controlled and displayed                 | X                          | X            |
| Relative humidity range                                    | See graph                  |              |
| <b>Options and accessories</b>                             |                            |              |
| Flooding system                                            | X                          | X            |
| Standard borosilicate UV filter for outdoor test condition | X                          | X            |
| Non aging soda lime UV filter for outdoor test condition   | X                          | X            |
| Non aging soda lime UV filter for outdoor with IR coating  | X                          | X            |
| Non aging soda lime UV filter for indoor test condition    | X                          | X            |
| Non aging soda lime UV filter for indoor with IR coating   | X                          | X            |
| Flooding system for specimen                               | X                          | X            |
| Multimeter (radiometer and thermometer)                    | X                          | X            |
| 295-400 nm sensor, wide band total UV                      | X                          | X            |
| 340 nm sensor, narrow band                                 | X                          | X            |
| 420 nm sensor, narrow band                                 | X                          | X            |
| Illuminance sensor, up to 2 MLux                           | X                          | X            |
| Black Standard Thermometer sensor                          | X                          | X            |
| XEN 32 software report level                               | X                          | X            |
| XEN 32 software maintenance level                          | X                          | X            |

## Other products



Vertical and Horizontal Salt spray chambers, 8 Models  
Full range of options for continuous and cycling test.



Solarbox Table top xenon testers  
4 Models

We reserve the right to make changes to equipment and systems in response to advances in technology and modify parameter values accordingly.



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