SunChex RH

Tabletop accelerated exposure test chamber for sun and weathering simulation

The SunChex RH allows Relative Humidity control. Humidity is controlled by an ultrasonic device.

SunChex RH represents a breakthrough in xenon small light fastness and weathering testers reproducing in a few days or weeks the damage that occurs over months or years of sun exposure.

SunChex RH is the first small testing instrument allowing simulation and control of all weathering parameters and designed with the user in mind so to become the easiest to use xenon tester available.

It provides precise control of critical test parameters including full-spectrum sunlight, irradiance, Relative Humidity and BST black standard temperature.

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 sun and weathering test chamber.

SunChex RH
Features

- Broad band irradiance control sensor (300-400 nm) ensures constant irradiance for the whole life of the lamp.
- Controlled and monitored irradiance from 25 to 80 W/m² (300-400 nm).
- Controlled and monitored temperature at specimen tray level with BST (Black Standard Thermometer). BST range: from 40°C to 90°C. The BST temperature depends on irradiance level and ambient temperature.
- Controlled and monitored Relative Humidity. Relative Humidity range: approx. 30 RH to 90 RH. The Relative Humidity RH depends on irradiance level and ambient temperature. Ultrasonic humidifier ensures reliable functioning for long time.

Control Panel

1. Display of the conditions in the test chamber.
2. Selector of the displayed value either:
   - Irradiance expressed in W/m²
   - Temperature measured by BST sensor expressed in °C
   - Relative Humidity expressed in %
3. Potentiometer for setting of irradiance.
4. Potentiometer for setting of the BST temperature.
5. Potentiometer for setting of the Relative Humidity.
6. Timer to set the test time.
7. Start button.
8. Stop button.
9. Run warning light.
10. Water warning light.

SunChex RH
Description

The SunChex RH is an equipment to test the fastness of the colour of fabrics, yarns, synthetic and natural leather. This instrument is specifically designed to meet the ISO 105 B02 for fastness testing in the textile sector. In addition SunChex R.H. can also run almost all other international weathering and lightfastness standards so complying with the vast majority of industry specifications.

By means of a 1500W xenon lamp and controlled moisture conditions through an ultrasonic device, this instrument aims to work following all the testing conditions indicated for the colour fastness assessment of goods.

Samples have to be put horizontally on the flat specimen tray, so also 3D specimens can be conveniently mounted horizontally. The xenon lamp irradiation is filtered by an UV filter installed and is uniformly distributed onto the specimens-tray by a parabolic reflector and by a highly
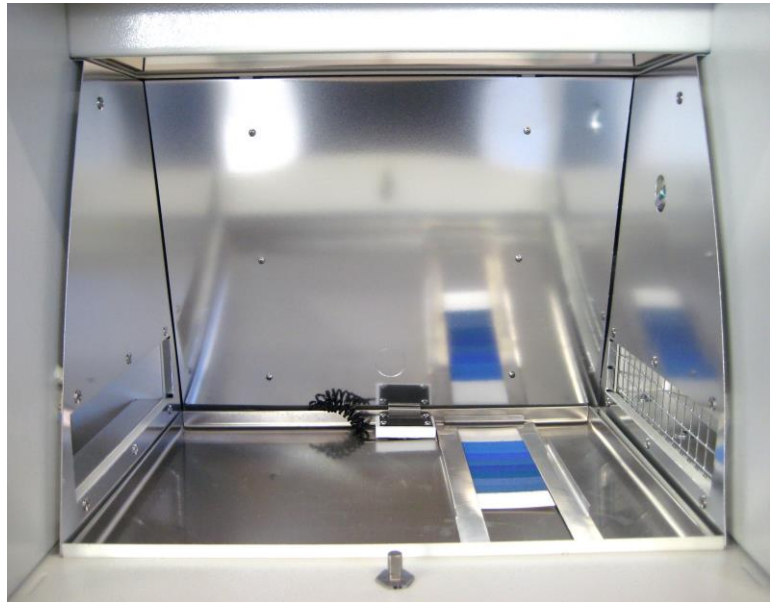
reflecting and opportunely shaped walls. A fan cools the lamp. The BST temperature in the test chamber is continuously measured by a little BST sensor placed on the specimen tray, the control circuit stabilizes the temperature BST in a suitable manner by adjusting the speed of the cooling fan of the chamber by means of an inverter.

RADIOMETER AND BLACK PANEL STANDARD THERMOMETER

The UV MULTIMETER is a battery operated radiometer and thermometer, specially developed for use with the SOLARBOX, but it can control the output of any UV Lamp in many industrial applications.

It is portable and together with its case, can easily be returned to the manufacturer (CO.FO.ME.GRA) for re-certification of calibration to an official national laboratory standard.

The UV MULTIMETER measures either irradiance or temperature using the following easily interchangeable, good cosine response sensor:

- UV 295 - 400 NM large band sensor.
- UV 340 NM narrow band sensor

- UV 420 NM narrow band sensor
- Illuminance sensor spectral response similar C.I.E. photopic luminosity curve.
  Measuring range up to 2 MEGALUX.
- Black Standard Temperature sensor.

Technical data

SunChex RH	
Electrical connection	
Mains connection	1/N/PE
Mains voltage	230 Vac +-10% 50/60 Hz
Current consumption	16 A (max)
Water supply for humidifier	
Built in tank capacity	20 litres
Type of water	demineralised < 5 µ Siemens
Measures and weight	
Dimensions W x D x H (mm)	790x510x780
Floor weight (Kg)	65
Exposure area W x D (mm)	280x200
Features	
Air cooled especially designed xenon lamp (watt)	1500
Irradiance range: 25-80 W/m^2 (300-400 nm)	X
BST Temperature controlled and displayed	X
BST temperature range from 40 °C to 90 °C	X
Relative Humidity controlled and displayed	X
Relative Humidity range approx. 30 RH to 90 RH	X
Options and accessories	
Standard borosilicate UV filter for outdoor test condition	X
Non aging soda lime UV filter for outdoor test condition	X
Non aging soda lime UV filter for outdoor with IR coating	X
Non aging soda lime UV filter for indoor test condition	X
Non aging soda lime UV filter for indoor with IR coating	X
Multimeter (radiometer and thermometer)	X
295-400 nm sensor, wide band total UV	X
340 nm sensor, narrow band	X
420 nm sensor, narrow band	X
Illuminance sensor, up to 2 MLux	X
Black Standard Thermometer sensor	X

Operable ranges of humidity control at various test chamber temperatures
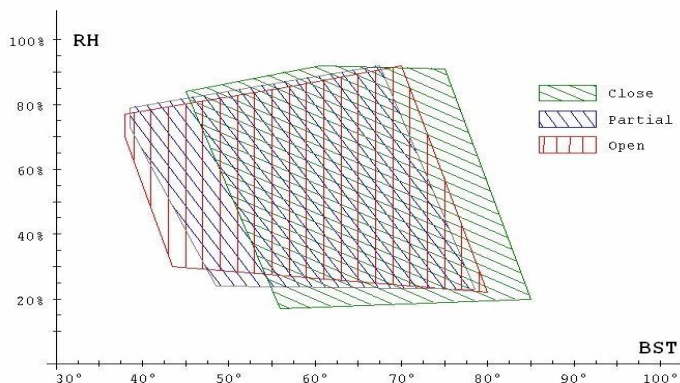
Green range is for fully closed air circulating circuit.

Blue range is for partially closed air circulating circuit.

Red range is for fully opened air circulating circuit

Laboratory temperature 20 °C

Other products

Solarbox 1500e with flooding

Solarbox 3000e: table top xenon testers
4 models

Solarbox RH