Bench Xenon Test Chamber

BGD 864

Product Description

The BGD 864 is a compact, simple and economical xenon test chamber. It uses a low-power, air-cooled xenon lamp to generate high irradiance in a small space. A special reflector system ensures that all samples receive homogeneous irradiance



The BGD 864 is equipped with extended UV filters that transmit UV radiation below the normal cut-on of natural sunlight (equivalent to simulated sunlight that has not passed through the atmosphere). This produces faster and more severe test results. This type of test is known as an “artificial accelerated weathering test”

The operator sets all required test parameters (irradiance, test time, black panel temperature, etc.) via the touchscreen and can check the running status at any time. All running parameters can be exported to a computer via the USB interface

In addition, the chamber can be equipped with various optional modules, such as water spray, humidity control and water immersion, to simulate working conditions during light exposure

Features

- **Cost-effective performance:** a competitive purchase price, low-cost lamps and low operating costs make this weathering chamber highly cost-effective. Even small laboratories can now afford xenon-arc weathering tests.
- **Compact and user-friendly:** small footprint, easy to install and use, and virtually maintenance-free
- **Standardised light source:** the xenon light source complies with international standards, ensuring reproducible and comparable test results
- **Lamp compatibility:** compatible with both domestic and imported xenon lamps. Lamp service life is approximately 1,500 hours, and lamp replacement is simple
- **Fast test results:** outdoors, products are exposed to maximum-intensity direct sunlight for only a few hours per day. This chamber exposes specimens to irradiance equivalent to midsummer noon sunlight 24 hours a day, enabling rapid ageing of samples
- **Accurate irradiance control:** a closed-loop control system automatically compensates for changes in light intensity caused by lamp ageing or other factors
- **Easy calibration:** users can calibrate and adjust the irradiance and black panel temperature themselves.
- **Precise temperature control:** a high-precision Pt100 sensor controls the black panel temperature automatically

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throughout the entire test

- **Safety alarms:** alarms for black panel over-temperature, large irradiance deviations and low air pressure, plus automatic shut-off when the door is opened
- **Touchscreen operation:** a user-friendly touchscreen interface allows the operator to set test parameters and monitor the entire test
- **Real-time data logging:** test data is recorded in real time and can be copied to a USB flash drive via the built-in USB port, allowing unattended operation
- **Optional auxiliary cooling:** an auxiliary cooling air system is available as an option. It lowers the chamber temperature to a minimum of 20 °C, making the chamber suitable for xenon-arc testing at ambient or low temperatures

Technical Specification

Xenon lamp	One 1.8 kW xenon lamp (made in the USA or China)
Filter	Extended UV filter (daylight filter or window glass filter optional)
Irradiance monitoring	340 nm or 420 nm (narrowband), or 300–400 nm (broadband); to be specified at order
Lamp life	Approx. 1,500 hours
Exposure area	1,000 cm² (holds 9 standard samples of 150 × 70 mm)
Adjustable irradiance range	30–100 W/m² (300–400 nm), 0.3–0.8 W/m² @ 340 nm, or 0.5–1.5 W/m² @ 420 nm
Black panel temperature range	RT to 90 °C (depending on ambient temperature and irradiance setting)
Interior material	Stainless steel SUS 304
Exterior material	Powder-coated steel
Power supply	220 V, 50/60 Hz (other voltages optional)

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Main Technical Parameters

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Ordering information

Model	BGD 864	BGD 864/S	BGD 864/SH	BGD 864/WI
Description	Bench Xenon Test Chamber	Bench Xenon Test Chamber (Spray)	Bench Xenon Test Chamber (Spray & Humidity)	Bench Xenon Test Chamber (Immersion)
Exposure cycle	Light, dark	Light, spray, dark	Light (controllable humidity), spray, dark	Light + immersion, dark
Chamber humidity	–	Display only	Controllable, 40–60% RH	–
Max. power	2.5 kW	2.7 kW	5.5 kW	4.5 kW
Max. current	12 A	15 A	25 A	21 A
Dimensions (W × D × H)	93 × 65 × 57 cm	93 × 65 × 80 cm	93 × 65 × 80 cm	93 × 65 × 80 cm
Net weight	65 kg	100 kg	100 kg	100 kg

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Optional accessories

- BGD 866/W-026 – Air-cooled xenon lamp, made in the USA (1.8 kW)
- BGD 866/Z-010 – Air-cooled xenon lamp, made in China (1.8 kW)
- BGD 8170 – Pure water system (50 L/h)
- Xenon calibration radiometer

Disclaimer

The information given in this sheet is not intended to be exhaustive and any person using the product for any purpose other than that specifically recommended in this sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. Whilst we endeavour to ensure that all advice we give about the product (whether in this sheet or otherwise) is correct we have no control over either the quality or condition of the product or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing to do so, we do not accept any liability whatsoever or howsoever arising for the performance of the product or for any loss or damage (other than death or personal injury resulting from our negligence) arising out of the use of the product. The information contained in this sheet is liable to modification from time to time in the light of experience and our policy of continuous product development