



Xenon Chamber

ASTM G155, ASTM 04459, ISO 4892-1, ISO 16474-2

<https://www.worldoftest.com/xenon-test-chamber>

Best Application:

Controlled product degradation

General Summary

The xenon test chamber uses a xenon arc lamp as a light source. It is used for the study of weathering and accelerated aging testing by closely emulating true environmental conditions.

Controlled product degradation study (weathering), using varying light spectrum, temperature and moisture. Used to evaluate the weather resistance of the test material or samples.

The weathering test is an important way to optimize the composition of your product in the process of scientific research and production. It is also an important part of the product quality inspection. Industries such as coatings, plastic, aluminum-plastic plate and automobile safety glass are all required to do this kind of weather ability test.



QT-WTH-500

Theory

The main factors that cause the aging of materials is sunlight and moisture. The Xenon Test Chamber can simulate the degradation caused by sunlight, rain and dew. The Xenon Test Chamber uses the xenon lamp to simulate the damage of sunlight, and uses condensed moisture to simulate the rain and dew.

Application

The test samples placed at a certain temperature, light and moisture at alternating cycles using a set program can replicate months or years of damage caused by outdoor weathering in a matter of days or weeks.

Some commonly used methods our chambers can be used for are the following:

- ASTM G155: Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials.
- ASTM 04459: Standard Practice for Xenon-Arc exposure of plastics intended for indoor applications.
- ISO 4892-1 Plastics - Methods of exposure to laboratory light sources.
- ISO 16474-2 Paints and varnishes - Methods of exposure to laboratory light sources - Part 2



Features

- Cost effective.
- Wide spectral range.
- Offered in both flatbed and circular drum configurations.
- SOLAR EYE™, automatic monitoring and control of internal conditions.
- S1 high-purity quartz transparent film, gold-plated silicon corrosion-resistant reflector, high temperature linear photosensitive components to ensure that the measurement accuracy is not affected by changes in high and low temperatures.

Advantages

Provides a more realistic study of degradation than conventional UV chamber testing. Wider spectral range and optional ultra wide spectrum yields more real-world results.

Limitations

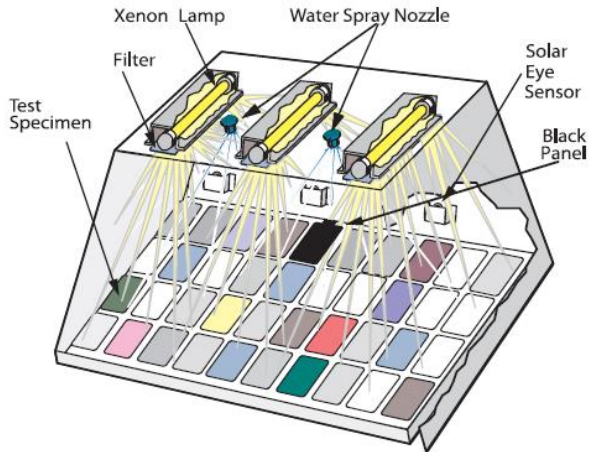
Flammables, volatiles and explosives are not recommended to be used in Xenon chambers.

Technical Specifications

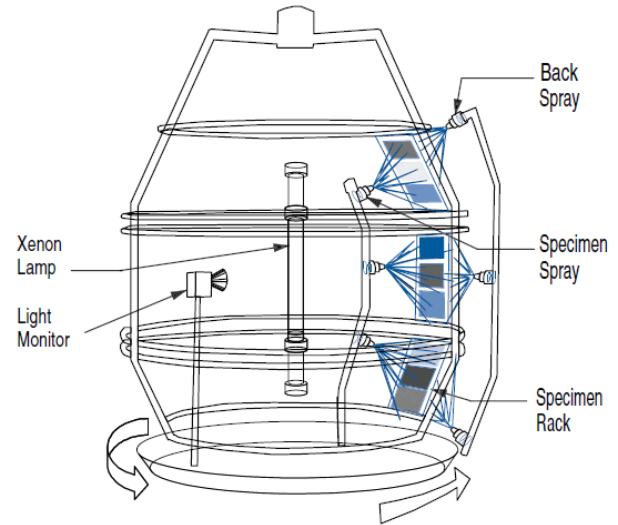
Model	QT-WTH-80	QT-WTH -175	QT-WTH -500
Test Volume	80L	175L	500L
Test Chamber Type	Flat Bed	Flat Bed	Revolving Drum
Inter Dimensions (WDXH)	500 × 400 × 400mm	700 × 500 × 500mm	800 × 800 × 800mm
Outer Dimensions (WDXH)	700 × 1100 × 1950mm	900 × 1150 × 1950mm	1350 × 1350 × 1950mm
Cooling System	Air Cooling		Water Cooling
Temperature Range	RT+10°C to 65°C	RT+10°C to 85°C	
Humidity Range (brightness)	20% to 70%RH		20% to 78%RH
Humidity Range (darkness)	20% to 95%RH		20% to 98%RH
Spraying Period	1 to 240 minutes	Interval (cut-off)	
Spectral Wavelength	Standard: 290 to 800nm upgradable to 290 to 3000nm		
Power Consumption	9KW, (Temperature in +25.C, Without Sample Load)		
Irradiance	35-70 W/M2 (at 300-400nm); 0.3-0.57@340nm, 300-800 W/M2 (at 200-800nm); 650-1200 W/M2 (at 200-3000nm)		



Flat Bed Configuration



Rotating Drum Configuration



Selection guide

Selection of chamber is predominantly based on whether flat bed or revolving drum is required. If flatbed is the preferred chamber type, then sample size and or number will determine which size flatbed chamber is best suited.

Installation Requirements

Water, 3-Phase 220V/60Hz
Transformers are sold separately.



Price

Part #	Description	Unit Price in USD
QT-WTH -80	QT-WTH-80 Xenon Chamber Flat Bed Type Test Volume: 80L	\$ 26,000.00 US
QT-WTH -175	QT-WTH-175 Xenon Chamber Flat Bed Type Test Volume: 175L	\$ 34,000.00 US
QT-WTH-SPEC3K	Broad spectrum upgrade: 290 – 3000nm	\$ 4,400.00 US

QUALITEST USA Price Book 2021 (Rev01, Feb, 34735--37, QTMPS-347-03)



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Please Note:

Qualitest is always dedicated to the innovation and improvement of product performance and function. Therefore, technical specifications are subject to change without further notice. Please visit our website at www.worldoftest.com for the latest updates. Qualitest reserves the rights of final interpretation and revision

Note : Prices for accessories are valid only when ordered with the main unit
Prices : Ex Works Plantation FL, USA / Richmond Hill, ON, CA /
or nearest Distribution Center – depending upon availability
Delivery : Approx. 12-16 weeks depending on stock availability
Warranty : 12 months limited. Extended warranty available for a fee

PO Financing available for a fee

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