

## 253 | UVC Ozone Aging Tester



Model PPM-S (High concentration model)



Control panel (High concentration model)

### ■ RELATED STANDARDS

ISO 1431-1	Rubber, vulcanized or thermoplastic — Resistance to ozone cracking Part 1: Static and dynamic strain testing
JIS K 6259-1	Rubber, vulcanized or thermoplastic-Determination of ozone resistance- Part 1: Static and dynamic strain testing

## ■ APPLICATION

The UVC Ozone Aging Tester is used to test the aging properties of rubber due to ozone.

A microcomputer calculation system is employed in the UV (253.7nm) absorption method to control the display of ozone concentration.

Concentration control is highly accurate, and this labor-saving testing equipment does not require time-consuming tasks such as chemical analysis.

## ■ LINEUP




PPHM line	20 to 200pphm
PPM line	20 to 200pphm / 10 to 200ppm

## ■ FEATURES & BENEFITS


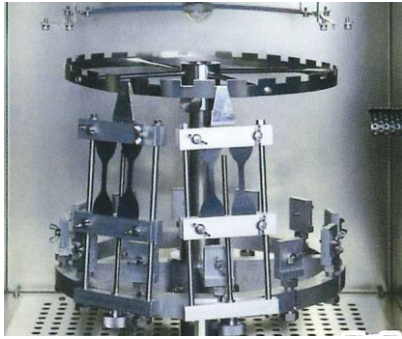
- Ozone concentration can be read directly on the digital display
- Ozone concentration setting is easy because of the digi-switch system, and because of the PID control system, it is accurate and recovery is fast and stable.
- The test chamber is made of Stainless steel SUS304 and coated with fluorine resin, so there is no ozone decomposition.
- If the UV illuminance for ozone detection falls below a certain level, an error message is displayed, allowing for safe use.
- The exhaust and air inlet ports are equipped with decomposition tanks that decompose ozone and interfering gases that may affect the test, so the test can be performed safely and without polluting the environment.

**■ SAMPLE ROTATING RACK**


**Model S (PPHM-S, PPM-S)**

Sample rack for static test		
Tension holder		Bending holder
		
Standard specification	Optional 90° inverse holder	

**Model D (PPHM-D, PPM-D)**

Sample rack for static test	Sample rack for dynamic test
	

**Model SD (PPHM-SD, PPM-SD)**

Sample rack for static/dynamic dual use


## ■ SPECIFICATIONS

### Standard model (PPHM line)

Model	PPHM-S	PPHM-D	PPHM-SD
Test method	Static	Static & Dynamic (Holder need to be exchanged when changing test method)	Static & Dynamic (Dual use type)
Ozone concentration range	20 to 200pphm (Option: maximum 250pphm)		
Ozone concentration control	Auto control by ultraviolet rays absorption method, with recorder (Concentration recording)		
Ozone concentration accuracy	±5pphm		
Ozone generating system	Ozone lamp (Low pressure mercury lamp)		
Temperature range	RT+10°C to 40°C		
Temperature control system	PID fuzzy control		
Temperature control accuracy	40±2°C		
Method of circulating air inside the chamber	One direction flow from bottom to top, 12 to 16mm/s		
Static test	5 pcs. of tension holders & bending holders are provided as standard accessory  Maximum number of holders that can be mounted: <ul style="list-style-type: none"> <li>● For model S: 11 standard tension holders or 13 bending holders</li> <li>● For model D: 8 standard tension holders or 12 bending holders</li> <li>● For model SD: 5 standard tension holders or 8 bending holders</li> </ul> However, it may vary depending on the shape and size of the sample.		
Dynamic test	<div style="display: flex; align-items: center;"> <div style="flex: 1; border-right: 1px solid black; position: relative;"> <div style="position: absolute; top: 0; right: 0; bottom: 0; left: 0; border-left: 1px solid black; border-right: 1px solid black; border-bottom: 1px solid black;"></div> </div> <div style="flex: 2; padding-left: 10px;"> <p>Vertical tensile stretching method</p> <ul style="list-style-type: none"> <li>● Elongation ratio: 0 to 100%</li> <li>● Stretching C/S: 0.5Hz</li> </ul> <p>Dimensions of sample</p> <ul style="list-style-type: none"> <li>● JIS No.1 or No.3 dumbbell</li> <li>● Length 40 to 120mm, width 15mm</li> </ul> <p>Number of sample: 12 samples (standard) 24 samples (optional)</p> <p><b>(Note: Please select at the time of order )</b></p> </div> </div>		
Sample rotating rack	Revolutions 1.5 rpm		
Test chamber material	Stainless steel SUS 304 fluorine resin coating		
Power requirement	Single-phase, AC100V, 50Hz or 60Hz, 1.5kVA		
Ozone test chamber	W500 x D500 x H500mm	W500 x D500 x H750mm	
Dimensions	W1110 x D690 x H1700mm		W1110 x D690 x H1950mm
Weight	Approx. 210kg	Approx. 270kg	Approx. 300kg

## High concentration model (PPM line)

Model	PPM-S	PPM-D*1	PPM-SD*1
Test method	Static	Static & Dynamic (Holder need to be exchanged when changing test method)	Static & Dynamic (Dual use type)
Ozone concentration range	20 to 200pphm, 10 to 200ppm (Two-stage switching)		
Ozone concentration control	Auto control by ultraviolet rays absorption method, with recorder (Concentration recording)		
Ozone concentration accuracy	±5pphm		
Ozone generating system	Low concentration: Ozone lamp (Low pressure mercury lamp) High concentration: Creeping discharge		
Temperature range	RT+10°C to 40°C		
Temperature control system	PID fuzzy control		
Temperature control accuracy	40±2°C		
Method of circulating air inside the chamber	One direction flow from bottom to top, 12 to 16mm/s		
Static test	5 pcs. of tension holders & bending holders are provided as standard accessory  Maximum number of holders that can be mounted: <ul style="list-style-type: none"> <li>● For model S: 11 standard tension holders or 13 bending holders</li> <li>● For model D: 8 standard tension holders or 12 bending holders</li> <li>● For model SD: 5 standard tension holders or 8 bending holders</li> </ul> However, it may vary depending on the shape and size of the sample.		
Dynamic test	Vertical tensile stretching method <ul style="list-style-type: none"> <li>● Elongation ratio: 0 to 100%</li> <li>● Stretching C/S: 0.5Hz</li> </ul> Dimensions of sample <ul style="list-style-type: none"> <li>● JIS No.1 or No.3 dumbbell</li> <li>● Length 40 to 120mm, width 15mm</li> </ul> Number of sample: 12 samples (standard) 24 samples (optional) <b>(Note: Please select at the time of order )</b>		
Sample rotating rack	Revolutions 1.5 rpm		
Test chamber material	Stainless steel SUS 304 fluorine resin coating		
Power requirement	Single-phase, AC100V, 50Hz or 60Hz, 2.0kVA		
Ozone test chamber	W500 x D500 x H500mm		W500 x D500 x H750mm
Dimensions	W1110 x D690 x H1700mm		W1110 x D690 x H1950mm
Weight	Approx. 290kg	Approx. 340kg	Approx. 350kg


\*1: Oxygen concentrator (installed separately, W300 x D390 x H640mm, approx. 45kg) included.

## ■ OPTIONS

Name	Model	Remarks
Recorder (Paper-less model)	PLSREC	
Ozone concentration maximum 250pphm	PPHM25	
Optional sample holder for static test, Tension holder, 90° inversion	SHN90	Maximum number of holders to be mounted: <ul style="list-style-type: none"> <li>● For model S: 27 holders</li> <li>● For model D: 19 holders</li> <li>● For model SD: 11 holders</li> </ul>
Optional sample rotating rack for dynamic test, Number of specimens: 24 pcs.	SP-24	
Ozone control stop timer	OCST	
Chamber light	LB	

## ■ CONSUMABLE PARTS (Main unit)

	Name	Model	Part No.	Replacing period
1	Ozone generating tube (Low-pressure mercury lamp for ozone generation)	LP-03	9507790	Every 5000 hours (6 months)
2	Activated charcoal for ozone inspiration (2kg)	4GS-S	-----	Every 5000 hours (6 months)
3	Activated charcoal for ozone exhaust (6kg)	KR-650	-----	Every 5000 hours (6 months)

			
1. Ozone generating tube Model LP-03			

■ **CONSUMABLE PARTS (UV ozone monitor, EG-3000LR)**

	<b>Name</b>	<b>Model</b>	<b>Replacing period</b>	<b>Remarks</b>
1	Low-pressure mercury lamp for ozone monitor	BZ105A	1 year	Mercury lamps have a limited life span and may lose light intensity or stop emitting light.
2	<b>Zero gas cartridge for ozone monitor</b>	<b>BZ004A</b>	<b>1 year</b>	<b>With use, the product may deteriorate and no longer produce zero gas, and the value may deviate from the normal value.</b>
3	<b>Three-way solenoid valve for ozone monitor</b>	<b>BZ140A</b>	<b>1 year</b>	<b>When the three-way solenoid valve wears out, the inside of the cylinder where the sensor is located does not refresh properly and ozone remains, causing the reading to deviate from the normal value.</b>
4	Flow-meter seal for ozone monitor	N0016A	1 year	Deterioration reduces sealing performance.
5	PTFE Filter element for ozone monitor (20pcs/set)	NF010A	Appropriately	The filter becomes clogged with debris and the specified flow rate cannot be maintained. If dirty, ozone will decompose and accurate measurement will not be possible.

*Specifications are subject to change without notice.*

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20240902 (2022.8.010 JP)