



# EMISSION TEST CHAMBER

Emission of VOC (volatile organic compounds), formaldehyde and other harmful substances from raw material such as wood products, furniture, floor, carpet, shoes, plastic runway, building decoration materials, automobile interior materials can be harmful to human health when they are prolonged exposed to these chemicals.

The Emission Test Chamber can provide one or more clean enclosed test spaces, precisely controlling the temperature, humidity, air flow, air pressure and air changes within the chamber. The Emission Test Chamber simulates the process of harmful chemicals released in a model room, and specifies the emission rate of volatile organic compounds (VOC) from samples under pre-defined climate conditions.



- Determine the effects of environmental variables on emission rate and release characteristics of VOC.
- The grades of materials are determined according to the VOC emission characteristics of the sample materials.
- R & D of sample materials and verification of indoor air pollution characteristics from VOC emission.
- Emission rate of VOC in sample experiences time decay in natural environment.
- Assessment of indoor air quality is predicted based on test data analysis.

# Technical Specification / Ordering Info

NAME & MODEL	XD-1VOC-A1-6 VOC
OPERATING CHAMBER VOLUME	60 L x 6
TEST CHAMBER MATERIAL	2 mm thickness SUS 304 Stainless steel plate with Nano materials painted
OPERATING CHAMBERSIZE	W310mm×H415mm×D480m
OVERALL DIMENSION	W1620mm×H1650mm×D1050mm
TEMPERATURE RANGE	+15°C - +80°C
TEMPERATURE FLUCTUATIONS	≤±0.5°C
TEMPERATURE UNIFORMITY	≤2°C
ACCURACY FOR TEMPERATURE	0.1°C
HUMIDITY RANGE	25%~80% RH
HUMIDITY FLUCTUATION	≤±2.5% RH
ACCURACY FOR HUMIDITY	0.5% RH
AIR SPEED IN OPERATING CHAMBER	Air speed of the geometric centre point in the operating chamber is 0.1-0.3m /s. (Adjustable)
AIR CHANGE RATE	1 – 3 times/hour (adjustable) Purge air flow adjustment range should be above than 0.5 - 3 times/hour
FLOWMETER ACCURACY	Air mass flowmeter, tolerance 0.5 grade; 0 - 500L/min Glass rotor flowmeter, tolerance not less than 2.5 grade; 0 - 3m <sup>3</sup> /h
AIR FLOW DISPLAY	Micro air mass flowmeter, online flow display on touch screen(adjustable)
AIRTIGHTNESS	Accuracy 0.5 grade, VL < 5%×Air supply rate Vs., Recovery rate: >80 % Keep relatively positive pressure: 10±5 Pa Air pressure monitoring in the chamber, micro pressure sensor of analog quantity, pressure display on the touch screen
CONDITIONING PERIOD	Takes less than 40 minutes to reach temperature of 23 °, it takes less than 70 minutes to reach humidity of 50%, and the equipment can run continuously throughout the year
VOC CONCENTRATION IN AIR FROM EMPTY CHAMBER	Single VOCs<0.002 mg/m <sup>3</sup> , TVOCs<0.02 mg/m <sup>3</sup>
NOISE	≤50db (Class A), Reasonable structure, Strictly control installation process, No resonance sound
KEY COMPONENTS	Air cooling system: Danish Danfoss, French Castel, American Emerson Measuring system: Finland Vaisals, JIASHANG Electrical control system German Schneider, German Siemens, Taiwan MEAN WELL, XIZI Pneumatic power system: German FESTO, Japanese SMC, Taiwan AirTAC
HUMIDITY CONTROL CHART	



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