

GQ-300 Modified Atmosphere Refrigerator



Function

GQ-300 Modified Atmosphere Refrigerator, with microelectronics technology, is for making preservation experiment on fruits, vegetables, flowers and plants in modified atmosphere conditions, and keeps them fresh by controlling concentration of O₂, N₂, CO₂, and C₂H₄ and the temperature and humidity in the boxes. It is widely used in industries of microorganisms, environmental, food, research institute and so on.



Configuration

Main machine body, built-in ARM arithmetic system, humidification module, temperature controlling system, ethylene removal device.

Optional:

Option 1: Distant controlling system (automatically records parameters and curves; with image capturing and recording function) and a computer.

Option 2: Gas inlet/outlet port (inlet port: can input external gas; output port: can connect to gas chromatography analyzer)

User provide: gases, gas supply cylinder, pressure releasing valve.



Features

- Scroll compressor refrigeration system.
- PID algorithm with the solid state relays control the heating tube and no rigid mechanical contacts, long service life, average temperature of heating, the temperature is constant.
- Mass flow controller, the resolution of 0.01ml/min.
- High frequency atomization humidifier for humidification, large humidification range, long time humidification without getting fever.



Technical Specification

Items	Technical Parameters	Items	Technical Parameters
Test range	O ₂ : 0%~100%; CO ₂ : 0%~20%; C ₂ H ₄ :0~200ppm (optional); the rest is N ₂	Humidification power	2000W
Resolution ratio	O ₂ : 0.01%; CO ₂ : 0.01%; C ₂ H ₄ : 0.01ppm(optional)	Lighting power	10W
Gas flow control	O ₂ : 0~3000ml/min, CO ₂ : 0~1000ml/min; N ₂ : 0~3000ml/min	Capacity	120L, 120L, 120L
Temperature control range	-5°C~50°C	Material	color steel
Temperature deviation	±1°C	Power supply	AC 220V, 50Hz
Temperature accuracy	±0.1%	Weight	70kg
Humidity range	normal~ 98%RH	Environment temperature	0 ~ 40°C
Humidity deviation	±3%RH	Refrigeration Power	2000W
		Size	1100mm x 1150mm x 1960mm
		Gas purity	≥99.9%



Product Advantages

Hardware and software

- The product consists of controlling section, implementing section and workroom. The control section can set a variety of parameters (including temperature, humidity, gas concentration, etc.), to meet the growth requirement of different animals and plants and the preservation needs of various living things.
- Three test chambers. Each chamber independent controlling system, illumination system and sterilization system (With ultraviolet disinfection and ozone sterilization function).
- Imported precise sensors ensure wide test range and high accuracy.
- Configured with: transparent window, sterilization system, built-in headlight and self-occlusive design cabinet.

Temperature

- Adopts quartz tube to heat up and scroll compressor to cooling down, so the temperature can be risen and lowered quickly, with high performance and little noise.

- PID algorithm works together with solid relay to control the heating tube, controls the temperature precisely, evenly and constantly, without rigid mechanical contacts and with long lifetime.
- Automatically adds water.

Humidity control

- High frequency atomization humidification provides large humidification range and stable humidity. Can humidify for a long time without getting hot.
- The humidifying system of each chamber works independently. Automatically humidifies after setting the humidity parameters, reach the set humidity and stay at that humidity constantly.

Gas control

- Automatically control the concentration, temperature and humidity of the gases.
- Accurate flow controller (resolution ratio: 0.01ml/min) controls the gas flow exactly.
- With ethylene eliminating device and gas substituting pump, controls the concentration of ethylene effectively