

# Humidity Chamber / Stability Chamber

PID Based Control System

HMI/PLC Based Control System



## Technical Specification :

**Temperature Range** : 20°C to 60°C  
**Humidity Range** : 40% RH to 95% RH  
**Accuracy** :  $\pm 0.2^{\circ}\text{C}$  &  $\pm 2.0\%$  RH  
**Uniformity** :  $\pm 2.0^{\circ}\text{C}$  &  $\pm 3.0\%$  RH  
**Suitable For** : 25°C & 60%RH, 30°C & 65%RH, 40°C & 75%RH, 30°C & 75%RH & also for low Humidity 25°C & 40%RH, 40°C & 25%RH, 30°C & 35%RH  
**Control System** : PLC or PID Based



Models	Capacity in Liters	Internal Dimension In MM			External Dimension In MM			No. of Trays
		Width	Depth	Height	Width	Depth	Height	
KGOS-72	72 LTR	400	400	450	550	980	1060	2
KGOS-90	90 LTR	450	450	450	600	1030	1060	2
KGOS-120	120 LTR	450	450	600	600	1030	1210	2
KGOS-227	227 LTR	600	630	600	750	1210	1210	2
KGOS-325	325 LTR	600	630	900	750	1210	1510	2
KGOS-400	400 LTR	600	630	1060	750	1210	1670	3
KGOS-500	500 LTR	600	630	1330	750	1210	1940	4
KGOS-600	600 LTR	800	800	950	950	1380	1560	4
KGOS-800	800 LTR	800	800	1250	950	1380	1860	4
KGOS-1000	1000 LTR	800	800	1570	950	1380	2180	4
KGOS-1600	1600 LTR	1600	800	1250	1750	1400	1860	10
KGOS-2000	2000 LTR	1600	800	1570	1750	1400	2180	10

**NOTE :** Other Sizes and Customize models are available on request.

## PHOTOSTABILITY CHAMBER

### Technical Specification :

**Temperature Range** : 20°C to 50°C  
**Accuracy** :  $\pm 0.2^{\circ}\text{C}$   
**Uniformity** :  $\pm 2.0^{\circ}\text{C}$   
**Control System** : PLC or PID Based

### Optional :

**Humidity Range** : 40% RH to 85% RH  
**Accuracy** :  $\pm 2.0\%$  RH  
**Uniformity** :  $\pm 3.0\%$  RH

- As per ICH - Q1B For confirmatory studies, sample should be exposed to light providing an overall illumination of not less than 1.2 million lux hours and an integrated near ultraviolet energy of not less than 200 watt hour/ square meter to allow direct comparison to be made between drug substance & drug product.
- On line and actual study of UV & LUX Exposure.
- Automatic cycle cutoff after complete the study / test of UV & LUX.

Models	Capacity in Liters	Internal Dimension In MM			External Dimension In MM			Nos. of Light Bank
		Width	Depth	Height	Width	Depth	Height	
KGOP-227	227 LTR	600	630	600	790	1070	1210	1
KGOP-325	325 LTR	600	630	900	800	1190	1510	2
KGOP-400	400 LTR	600	630	1060	800	1190	1670	2

**NOTE :** Other Sizes and Customize models are available on request.

Features

Touch Screen



PLC Control



Ethernet



Alarms



Safety



Documents



Software



Mobile Alert



E-mail Alert



## Features :

Low energy and Low water Consumption Equipments.

## Construction :

- Constructed and fabricated on fully automatic CNC machines. Chamber Interior is fabricated of stainless steel with dull/mirror finish & exterior is of stainless steel for GMP Model / G.I. Powder coated for standard Model.
- The inner working chamber is water & vapour tight high-grade stainless steel. All seams are arc-welded & passivity for strength & durability.
- Chambers are provided with effective air circulation system, heating & cooling systems and humidity generator system.
- Double Door : Inner full viewing glass door and outer door insulated with lock and key arrangement. Inner & outer doors are sealed by silicone sponge rubber gasket.
- Control panel with electrical switch gear and refrigeration system mounted on top for easy service accessibility.
- Equipment mounted on heavy castor wheels for easy movement.
- Heavy duty solid stainless steel duly electro polished wire mesh/perforated type trays are provided which are easy to clean, time & efforts saving, also adjustable for convenience.

## Control Systems :

### Option 1 : (PID controller based)

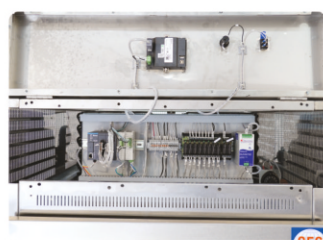
- Microprocessor based PID controller with auto tuning for accurate control of temperature and humidity conditions.
- Rotronic make 4-20mA sensors for better accuracy / Pt100 Sensor for Temperature & Direct % RH electronic capacitance type humidity sensor.
- Data Storage unit facility to store data and to print directly on printer or transfer to software with Date, Time, SV, PV, Door Open/ Close, Power On/Off remarks.
- Safety : Temperature & Humidity High / Low Alarm, Temperature very High / Low cut off, Water level low cut off.
- Software (21 CFR PART-11 Compliance) :  
Log data, Event data, Audit Trail data, E-Records & E-Signatures, Graphical analysis & Data acquisition.

### Option 2 : (HMI + PLC controller based)

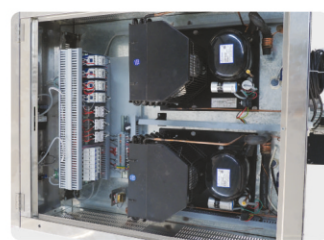
- 7" HMI with TFT LCD Colour touch screen with password protection for all parameter actual status monitoring of utilities like Sensor, Heating & Cooling System, Humidity System)
- Rotronic make 4-20mA sensors for better accuracy.
- PLC with auto tuning facility for accurate control of temperature and humidity conditions.
- PLC system for auto changeover of standby systems.
- Data Storage unit facility to transfer the data to software via Ethernet for web based online remote monitoring with Date, Time, SV, PV, Door Open/ Close, Power On/Off remarks. Direct report printout provision from HMI.
- Safety / Alert :  
Temperature & Humidity High / Low alarm, Temperature & Humidity High / Low cut off, Low water level cut off, Auto change over for standby systems.
- Software (21 CFR PART-11 Compliance) :  
Log data, Event data, Audit Trail data, E-Records & E-Signatures, Graphical analysis & Data acquisition.

## Optional :

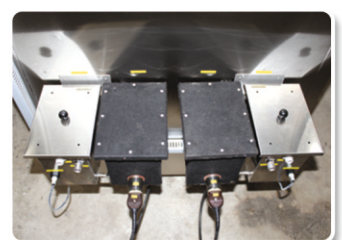
- Software (21 CFR PART-11 Compliance)
- Stand by Cooling System
- Stand by Humidity System
- Scanner (4 Temp. + 4 RH for Online Monitoring Purpose)
- Mobile Alert System
- Security Alarm System



Front Control Panel View



Top Panel View



Reserve Boiler Tank