

The possibilities are endless...



Our Product Range

- Walk-in Stability Chamber
- Humidity/Stability Chamber
- B.O.D. Incubator
- Bacteriological Incubator
- Cold Chamber
- Deep Freezer
- Hot Air Oven
- Vacuum Oven
- Muffle Furnace
- Photostability Chamber
- Water Chiller
- Auto Clave

AN ISO 9001:2008 CERTIFIED COMPANY

 **KESAR**
CONTROL SYSTEMS
TEMPERATURE & HUMIDITY EXPERT

MANUFACTURER OF PHARMA AND LAB EQUIPMENTS

www.kesarcontrol.com

Walk-in Stability Chamber

For Stability Study as per ICH Q1A(R2), ANVISA, ASEAN, WHO, MCA, USFDA etc...



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CONTROL SYSTEMS
TEMPERATURE & HUMIDITY EXPERT

Technical Specification :

Temperature Range	: 20°C - 60 °C
Humidity Range	: 40 %RH - 95 %RH
Accuracy	: ± 0.2 °C / ± 2.0 %RH
Uniformity	: ± 2.0 °C / ± 3.0 %RH
Suitable for	: 25°C & 60 %RH, 30°C & 65 %RH, 40°C & 75 %RH, 30°C & 75 %RH Specially designed chambers for Low Humidity conditions such as 25°C & 40 %RH, 40°C & 25 %RH, 30°C & 35 %RH

Features :

Low energy and Low water Consumption Equipments.

Construction :

- Pre-fabricated modular panel type construction with PUF insulation to be assembled on site with floor panels having extra reinforcement to sustain the movement and sample load inside the chamber.
- The inner working chamber is water & vapour tight high-grade stainless steel.
- Chambers are provided with effective air circulation system, heating & cooling systems and humidity generator system.
- Multi pane vacuum sealed observation glass window to view the samples without disturbing the test condition & human safety.
- Heavy duty solid stainless steel duly electro polished wire mesh type trays are provided which are easy to clean, time & efforts saving, also adjustable for convenience, along with detachable racks with adjustable angles.



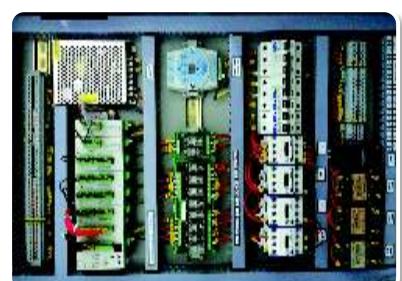
Control Systems :

- 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 an 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.



Alarm & Safety :

- Temperature deviation & RH deviation Alarm,
- Power Failure Alarm,
- Continues open door alarm,
- Very High Temperature & RH cut off,
- Low water level cut off
- Auto change over Facility for RH Generator & Cooling System



Special Features :

- Special door lock is provided which can be opened from inside even if locked from outside.
- Door operation with password Access for Particular USER having the event log Door open **ENTRY USER : XYZ** & Door open **EXIT USER : XYZ** in software.
- Person trapped cut off facility in chamber.

Software (21 CFR PART-11 Compliance)

- Log data, Event data, Audit Trail data, E-Records & E-signatures, Graphical analysis & Data acquisition.

Optional :

- Stand by Cooling System
- Stand by Humidity System
- Scanner (8 Temp. + 8 RH for Online Monitoring Purpose)
- Mobile Alert System
- Security Alarm System
- Extra Trays



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

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 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 capacitor type humidity.
- 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.

Option 2 : (HMI + PLC controller based)

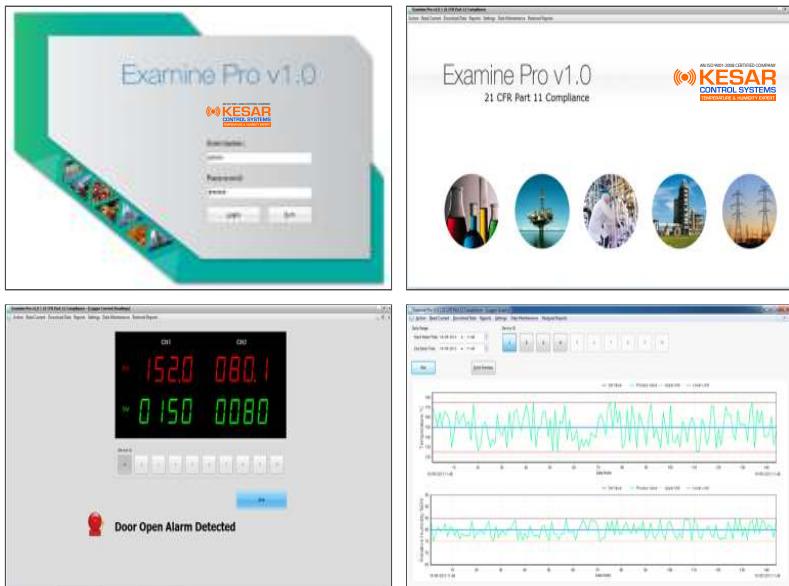
- 4.3" HMI with TFT LCD Colour touch screen with password protection for all parameter actual status monitoring of utilities like Sensor, Heating & Cooling System, Humidity System)
- Rotronic make 4-20mA sensors for better accuracy.
- PLC with auto tuning facility for accurate control of temperature and humidity conditions.
- PLC system for an 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.
- 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
- Extra Trays

Examine Pro Software :

Web based software is complete solution for online monitoring and recording data.



Features :

- 21 CFR Part 11 compliance
- Secured audit trail (User, Equipment, Alarm SMS, Events).
- E-Records and E-Signatures with Date and Time stamp
- MKT (Mean Kinetic Temperature)
- Browser based software
- Real time & Graphical analysis
- First time User Login Change Password.
- Password Encryption.
- Alpha Numeric Password and Password Ageing.
- System Administration.
- Offline analysis (in Tabular and graphical analysis)
- Data generated on PDF report.
- Realtime Parameter Setting.
- Automated Backup Facility.
- Auto logout, account Blocking and reactivating facility
- Log data, event and audit trail data recording

Documentation :

Equipment : Design Qualification (DQ), Installation Qualification (IQ), Operational Qualification (OQ), Performance Qualification (PQ), Supporting Documents.

Software : Installation Qualification (IQ), Operational Qualification (OQ) and User Guide.



and many more...

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Regd. Office :

16 - F, Simandhar Shopping Centre,
Nr. L.I.C. office, Highway Nagalpur,
Mehsana - 384002, Gujarat, INDIA.
Fax : 02762 - 230384
Email : info@kesarcontrol.com

Mfg. Unit :

B/8, Karma Industrial Estate,
Nr. Trikampura Patiya, Vatva,
Ahmedabad - 382445. Gujarat, INDIA.
Tele : 079 - 25890727
Email : service@kesarcontrol.com

Branch Office :

F-23, Center Point,
Nr. G.I.D.C. Police Station,
Ankleshwar - 393002.
Gujarat, INDIA.
Mobile : +91 9427613646

NOTE : In our corporate policy of continuing product improvement, KESAR CONTROL SYSTEM reserve the rights to change product specification without notice.