X-Treme Series

AUTO DRY CABINETS

# The Best Solution for

## Drying, Baking, Testing, Storing

www.x-tremeseries.com

Internal
Humidity Ratio
**0.5%Rh - 95%Rh(4)**

Internal
Temperature
**15°C(2) - 45°C(3) - 60°C(3) up to 100°C(5)**

# The best place for your product

- 1 % Rh(1) Humidity attainable in 7 minutes!
- Heating options for 45°C, 60°C and Up to 100°C!
- Homogenous humidity throughout the Cabinet!
- Real time monitoring at a glance!
- Low energy consumption!
- Adjust all settings within seconds!
- Customizable Modern & Ergonomic design!
- Cooling options down to 15°C!
- Silent operation!
- Automatic door locks!
- Datalogger for in depth analysis!

XTreme Series
AUTO DRY CABINETS

**INDEX**
1- When double dryer unit is used
2- When cooling unit is used
3- When heating unit is used
4- When humidifier unit is used
5- When 100 °C heating unit is used

# Standard Volumes

XTreme Series
AUTO DRY CABINETS

## XL Line (1840 lt)

| | | |
|---|---|---|
| **External Dimensions (WxHxD)** | 1200 x 1990 x 1050 mm | |
| **Internal Dimensions (WxHxD)** | Non Insulated | Insulated |
| | 1197 x 1654 x 930 mm | 1178 x 1634 x 930 mm |
| **Net Volume** | Non Insulated | Insulated |
| | 1840 lt | 1790 lt |
| **Weight (Depends on Configuration)** | 280 Kg | |

## XT Line (1250 lt)

| | | |
|---|---|---|
| **External Dimensions (WxHxD)** | 1200 x 1990 x 750 mm | |
| **Internal Dimensions (WxHxD)** | Non Insulated | Insulated |
| | 1197 x 1654 x 630 mm | 1178 x 1634 x 630 mm |
| **Net Volume** | Non Insulated | Insulated |
| | 1250 lt | 1215 lt |
| **Weight (Depends on Configuration)** | 190 Kg | |

## XS Line (300-600-900 lt)

| | | | |
|---|---|---|---|
| **External Dimensions (WxHxD)** | | | |
| **XS Line Cabinets** | XS-300 | 606 x 1128 x 750 mm | |
| | XS-600 | 606 x 1990 x 750 mm | |
| | XS-900 | 606 x 1990 x 1050 mm | |
| **Internal Dimensions (WxHxD)** | | Non Insulated | Insulated |
| **XS Line Cabinets** | XS-300 | 603 x 792 x 630 mm | 584 x 772 x 630 mm |
| | XS-600 | 603 x 1654 x 630 mm | 584 x 1634 x 630 mm |
| | XS-900 | 603 x 1654 x 930 mm | 584 x 1634 x 930 mm |
| **Net Volume** | | Non Insulated | Insulated |
| **XS Line Cabinets** | XS-300 | 300 lt | 285 lt |
| | XS-600 | 625 lt | 600 lt |
| | XS-900 | 925 lt | 890 lt |
| **Weight (Depends on Configuration)** | | | |
| **XS Line Cabinets** | XS-300 | 90 Kg | |
| | XS-600 | 134 Kg | |
| | XS-900 | 160 Kg | |

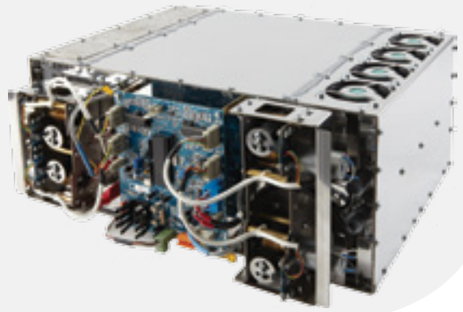
# Dehumidification Methods

## Auto Dry Cabinets

Auto Dry Dehumidification cabinets are the latest technology solution in the fight against moisture. The main advantage they bring is their plug-and-play nature and the fact that once you plug in the cabinets they virtually work by themselves after that point without the need for consumables.

If you choose to install two dryer units in your Cabinet it will be dehumidifying non-stop as our software makes sure that the dryer units never go to regeneration at the same time. Your products are too valuable to be left in undesirable conditions.

Stop worrying about your products, your time is too valuable. Let us take care of the products and material you store while you continue to do your work.



## Smart Nitrogen Cabinets

Use of nitrogen for dehumidification purposes is one of the earliest methods. Nitrogen purging is an effective method especially where oxidation is a concern as nitrogenous environments are ideal for preventing moisture adsorption and corrosion.

Our Smart Nitrogen System adjusts the utilized gas to minimize the consumption levels while keeping the humidity levels at the set values, saving you money while never waiving on protection.

## Hybrid Cabinets

X-Treme Series Auto Dry Cabinets offer you a solution where you can have the best of both worlds.

Our Hybrid Cabinets which have a Dryer Unit installed alongside with our Smart Nitrogen System saves cost by alternating between nitrogen and the dryer to ensure the fastest, oxidation free storage environment.

When the desired levels are reached the Smart Nitrogen System cuts off the gas and hands over the complete operation to the Dryer Unit.

They are the fastest dry cabinets in the world!

# Humidity Management

**Ultra-Fast Dehumidification Rate**
Recovery times are the fastest you can find in the industry. 1% RH in under 7 minutes!

**Low Levels of Humidity**
X-Treme Series Cabinets can go as low as 0,5% RH.

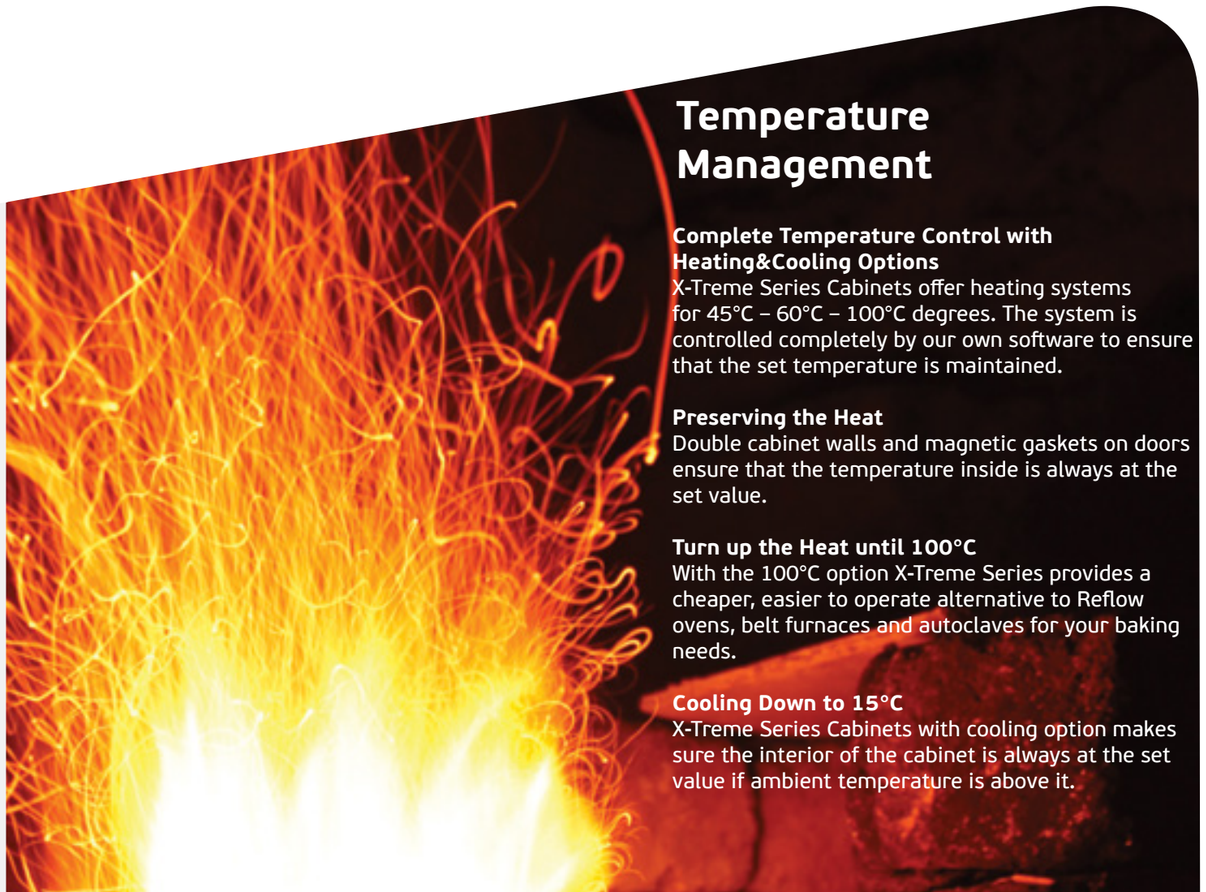
**Minimizing the Threat**
Multidoor configuration ensures minimal ambient conditions penetrate the cabinet.

**Homogenous Dispersion**
Our unique ductwork provides a homogenous dispersion all around the Cabinet.

**Built to last**
Maintenance free, self sustainable sturdy systems operating for over 10 years around the globe.

**Redundant Protection**
With two dryer units installed X-Treme Series Cabinets provide uninterrupted protection.

**A Moist Environment**
In case you require a humid environment X-Treme Series Cabinets can provide up to 95%RH.



# Temperature Management

**Complete Temperature Control with Heating&Cooling Options**
X-Treme Series Cabinets offer heating systems for 45°C – 60°C – 100°C degrees. The system is controlled completely by our own software to ensure that the set temperature is maintained.

**Preserving the Heat**
Double cabinet walls and magnetic gaskets on doors ensure that the temperature inside is always at the set value.

**Turn up the Heat until 100°C**
With the 100°C option X-Treme Series provides a cheaper, easier to operate alternative to Reflow ovens, belt furnaces and autoclaves for your baking needs.

**Cooling Down to 15°C**
X-Treme Series Cabinets with cooling option makes sure the interior of the cabinet is always at the set value if ambient temperature is above it.

# Accuracy

**Pinpoint Accuracy**
We know that your products are important and valuable, so we strive to create the perfect environment for your needs within our cabinets. In order to do so we use the best sensors the industry offers to create the exact conditions you require.

**What You See Is What You Get**
The sensors in X-Treme Series have an accuracy of ±0,3 % Rh for humidity and ±0,5 °C for temperature and are shipped in a perfectly calibrated condition. So that you always get what you are asking for.

**Ambient Conditions**
Our cabinets can operate in any environment and the inside values will always be at the set values regardless of ambient conditions, however we offer Outdoor Sensors as well in case you need to monitor and log these values.

# Monitoring & Control

**Complete Control**
Our user friendly in-house software is specifically coded for our cabinets and can monitor and control each and every aspect of the operation to the tiniest detail.

**Know What Happened and When with Datalogger Option**
Our datalogger option allows users to track and store data by keeping track of 16 parameters. These can be exported to your computer for more detailed analysis.

**Never Far Away with Remote Monitoring Option**
With the additional Remote Monitoring System you can check up on the cabinets and monitor humidity & temperature even when you are away from them.

**Details Matter**
We provide a real time clock for accurate time stamps, alarms for temperature and humidity and interior illumination options.

# Security & Protection

**Selective Permission with Solenoid Door Locks**
With our software you can assign up to 8 security levels and assign permission to these as you see fit.

**Unauthorized Access**
In order to prevent unwanted individuals to gain access to the material and products stored X-Treme Series Cabinets are protected by solenoid door locks and are operated without keys.

**Eliminating Errors**
The status of the doors is monitored with magnetic switches. The Door Ajar Alarm goes off to inform the user when the door is left open or isn't closed properly.

**ESD**
X-Treme Series Cabinets are completely ESD safe. Our Cabinets are painted with Electrostatic paint and the whole system is grounded.

**Independent Systems Working As One**
Each system is protected by their own fuses to prevent damage to affect the others. This design prevents large scale damage in a rare case of malfunction.

# Customization

**Especially for You**
Let us know your requirements so we can help in choosing the right solution for you. we aim to provide you with a cabinet that will satisfy all your needs, so it should be configured just for you.

X-Treme Series provides many storage systems such as shelves, sliding shelves, dividers, feeder storage and so much more. Also many accessories such as PCB racks, HEPA filters, UV Lights, alarm bars are available.

This is a process which simply cannot be explained in full detail here as it is different with each customer. Contact us so we can discuss all the combinations and come up with the perfect solution to satisfy all your needs together.

# Features & Standards

X-Treme Series
AUTO DRY CABINETS

√ Standart ● Optional ● Not Available

| X-Treme Series Auto Dry Cabinets Models | Stainless S. Shelves | Dryer Unit | Second Dryer Unit | Smart Nitrogen Unit | Solenoid Door Locks | Indoor Light | Heater Kit 45° C | Heater Kit 60° C | Heater Kit 100° C | Outside Humidity & Temperature Sensor | Datalogger | External Alarm | Stainless Steel Sliding Shelves | Reel Holders | Stainless Steel U Divider I Divider | Humidifier Unit | Cooler Unit 15 ° | Hepa Filter Option | Remote Monitoring System | Feeder Storage Solutions | PCB Holder |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| XTC-510-01 | 10 | ✓ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| XTC-520-01 | 10 | | ✓ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| XTC-510-S1 | 10 | ✓ | ● | ● | ● | ✓ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| XTC-510-S2 | 10 | ✓ | ● | ● | ● | ✓ | ✓ | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| XTC-510-S3 | 10 | ✓ | ● | ● | ● | ✓ | | ✓ | | ✓ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| XTC-510-S4 | 10 | ✓ | ● | ● | ✓ | ✓ | | ✓ | | ✓ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| XTC-520-S5 | 10 | | ✓ | ● | ● | ✓ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| XTC-520-S6 | 10 | | ✓ | ● | ● | ✓ | ✓ | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| XTC-520-S7 | 10 | | ✓ | ● | ● | ✓ | | ✓ | | ✓ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| XTC-520-S8 | 10 | | ✓ | ● | ✓ | ✓ | | ✓ | | ✓ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| XTC-N2 | 10 | ● | ● | ✓ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| XTC-510-DN2 | 10 | ✓ | ● | ✓ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| XTC-520-DN2 | 10 | | ✓ | ✓ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| XSC-300-01 | 2 | ✓ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| XSC-600-01 | 5 | ✓ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| XSC-900-01 | 5 | ✓ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| XSC-300-N2 | 2 | ● | ● | ✓ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| XSC-600-N2 | 5 | ● | ● | ✓ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| XSC-900-N2 | 5 | ● | ● | ✓ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| XSC-300-DN2 | 2 | ✓ | ● | ✓ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| XSC-600-DN2 | 5 | ✓ | ● | ✓ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| XSC-900-DN2 | 5 | ✓ | ● | ✓ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| XLC-01 | ● | ✓ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| XLC-02 | ● | | ✓ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| XLC-N2 | ● | ● | ● | ✓ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| XLC-510-DN2 | ● | ✓ | ● | ✓ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| XLC-520-DN2 | ● | | ✓ | ✓ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

# Reference Conditions for Drying SMD Packages and Components

| | | | Drying at 1% Rh | | Drying at 5% Rh IPC J-STD-033C | |
|---|---|---|---|---|---|---|
| **Body Thickness** | **Level** | **25° C** | **40° C** | **60° C** | **40° C** | **90° C** |
| ≤ 1.4 mm | 2 | 3 Days | 36 Hours | 10 Hours | 8 Days | 17 Hours |
| | 2a | 5 Days | 2 Days | 12 Hours | 9 Days | 23 Hours |
| | 3 | 8 Days | 3 Days | 18 Hours | 13 Days | 33 Hours |
| | 4 | 9 Days | 4 Days | 24 Hours | 15 Days | 37 Hours |
| | 5 | 10 Days | 5 Days | 30 Hours | 17 Days | 41 Hours |
| | 5a | 10 Days | 6 Days | 36 Hours | 22 Days | 54 Hours |
| > 1.4 mm ≤ 2.0 mm | 2 | 18 Days | 8 Days | 2 Days | 25 Days | 63 Hours |
| | 2a | 22 Days | 10 Days | 2 Days | 29 Days | 3 Days |
| | 3 | 23 Days | 11 Days | 2 Days | 37 Days | 4 Days |
| | 4 | 28 Days | 14 Days | 3 Days | 47 Days | 5 Days |
| | 5 | 35 Days | 16 Days | 4 Days | 57 Days | 6 Days |
| | 5a | 56 Days | 18 Days | 4 Days | 79 Days | 8 Days |
| > 2.0 mm ≤ 4.5 mm | 2 | 67 Days | 20 Days | 5 Days | 79 Days | 10 Days |
| | 2a | 67 Days | 20 Days | 5 Days | 79 Days | 10 Days |
| | 3 | 67 Days | 22 Days | 5 Days | 79 Days | 10 Days |
| | 4 | 67 Days | 22 Days | 5 Days | 79 Days | 10 Days |
| | 5 | 67 Days | 22 Days | 5 Days | 79 Days | 10 Days |
| | 5a | 67 Days | 22 Days | 5 Days | 79 Days | 10 Days |

The information given above is only for general guide and advise. There are several parameters like Moisture levels, Moisture gains of components, Ambient conditions, Package types etc involved in moisture absorbtion and drying.

## Some of our references

and many more

smartTec
smart technology products and solutions

www.smarttec.dk

# X-Treme Series

## AUTO DRY CABINETS

Compliance with IPC/JEDEC-J-STD-033C standards

Compliance with CE and Rohs