

# dry facts<sup>®</sup>

from **Bry-Air** <sup>®</sup> [www.bryair.com](http://www.bryair.com)

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## **Bry-Air** <sup>®</sup> Tapping the World's Fastest Growing Market – "CHINA"

China is the world's fastest growing and perhaps the most dynamic economy of the world. It is considerably the most favorite market place for the global investors to invest – All eyes are on China now.

**Bry-Air**, recognising the potential of the Chinese market, entered it 13 years ago. **Bry-Air** expanded its Company's base from Shanghai to cities like Beijing, Wuhan and Guangzhou.

Today, **Bry-Air** China has more than 2000 successful installations across the country and has witnessed the Chinese growth all together. At present, the Company's presence is in almost all major sectors of China, most importantly food, pharmaceutical, lithium battery, laboratories, etc.

*"Since year 2009, our company has been using FVB and FLB series dehumidifiers of Bry-Air. These dehumidifiers are mostly used in our battery manufacturing workshop and labs. These areas have high humidity conditions, which needs to be controlled below 1% RH. The machines are running from last 3 years. It has not only achieved our requirement of product technology but also with a good performance. Compare with other products, it has low fault rate, simple maintenance and a good after sales service. Our company is satisfied with Bry-Air dehumidifiers. We appreciate Bry-Air sincerely for providing high quality products and attentive after sales service."*  
Mr. Wang Zhen, Engineering Supervisor, SVB Factory of BYD, July 23th, 2012

**Bry-Air** China, with its fast initiative has recently tapped three big companies of the world :

★ **Nokia-Siemens Networks** ★ **AstraZeneca China** ★ **Tektronix China**



### ★ **Nokia-Siemens Networks – Mobile Broadband**

Among Forbes global 500 strong companies, "Nokia-Siemens Networks" the world leading mobile broadband company, has recently installed **Bry-Air** dehumidifiers at its Shanghai R&D center, which is amongst their largest R&D centers in the world.

### ★ **AstraZeneca China – Biopharmaceutical**

**Bry-Air** China, recently, associated with the world's leading biopharmaceutical company. **Bry-Air** provided them with a humidity control solution by installing a **Bry-Air** dehumidifier at their drug production unit in Wuxi.



### ★ **Tektronix China – Test and Measurement Equipment**

**Bry-Air** China, holding a grip on the testing and measurement equipment industry, recently installed dehumidifiers in Tektronix (China) Co. Ltd. at their Shanghai factory.

Despite many challenges in the Chinese market, **Bry-Air** China, has so far been successful in catering to the market demands. **Bry-Air** China firmly believes that as demand increases in future, they are ready to meet it with their best efforts and attention.

# Get protection from air contamination at your semiconductor manufacturing facility!



The growing concern and need for gas phase filtration in the semiconductor industry is not only for keeping electronic equipment safe from corrosive and toxic gases, but also to ensure the safety of working personnel and the community surrounding the facility. Contaminants such as silane, arsine, phosphine, diborane, hydrogen chloride, nitric acid, sulphuric acid, lead sulphonic acid, ammonia, propanol, and in some cases, cyanide compounds, are chemically active and are present in high concentrations in production areas in semiconductor industry, and must, therefore, be carefully controlled, so that there are no dangerous emissions and no air contamination.

## Problems faced in manufacturing process due to air contamination:

- From outside untreated air
- Emission of acid vapors / corrosive and toxic gases during manufacturing processes

## Effects of Contaminant Gases in manufacturing area:

- Corrosion of silver contacts due to strong oxidizing properties of S compounds, especially  $H_2S$
- Corrosion of Cu / Al by  $SO_4^{2-}$
- Crystals formed by neutralization with  $SO_4^{2-}$  and  $NO_3^-$  with  $NH_4^+$

## Effects of Ammonia:

- Defects in the chemical amplified resist process
- Defects in exposure / pattern generation processes (T-topping)
- Lower illuminance resulting from lens contamination
- Crystal formation by neutralization with dissolved acid on wafer surface, after de-ionized water cleaning

## Effects of Boron, Ozone and other volatile organic compounds:

- Current leakages and abnormal circuit voltage resistance
- Defects due to formation of oil film on wafer surface due to presence of high molecular weight organics
- Low molecular weight siloxane chemically reacts with ozone to form silica particles
- Defects in electric properties in the LSI and diffusion properties
- Defects in LCD – low temperature poly-silicone

## **Bry-Air** EcoScrub™ Solution for Semiconductor Industry

Bry-Air EcoScrub gas phase filtration system is ideal for human and hardware health. It removes contaminants and eliminates downtime by removing corrosive gases through the process of adsorption and chemisorption. Contaminated air passes through pre-filters which retain dust and particles. The chemical media stages (combination of activated carbon and activated alumina impregnated with proprietary chemicals) then chemically destroy remaining gaseous contaminants. Bry-Air EcoScrub is designed to maintain the ISA Standard 71.04, IEC Standard and Environmental Standards followed by electronics manufacturers.



Check for other interesting, unique application notes on our website [www.bryairfiltration.com](http://www.bryairfiltration.com)



# When *moisture* is Torture!

In this column, we share with you regularly our experience in major application areas where usage of dehumidification is both extensive and essential.

## Humidity can Hamper Accuracy of Test Results in your Laboratory:

What may seem to be a small amount of variation in humidity around us in homes and offices, may completely alter sensitive test results in indoor environment of laboratories. Expensive and sensitive instrument used in R&D labs, Pharma and Biotech Labs, Medical testing Labs, Engine testing labs and Educational institutional labs can have errors in computation and analysis of mission critical test results. Many laboratories running experiments and using sensitive measurement devices need humidity control that is more critical than standard human comfort.



Sometimes inaccuracy in test results may lead to defeating the purpose of the experiment. Laboratory managers cannot overlook the recommendations of the manufacturers and suppliers of such equipment in terms of environment control of humidity.

In many laboratories temperature control is achieved through air-conditioning, but the importance of humidity is often overlooked. This causes the atmospheric water vapor to condense on the surface of the equipment during power cuts causing corrosion, micro corrosion and related damages among others.

### Desired Environmental Conditions:

The easiest way of achieving desired environmental conditions required in analytical instrument rooms is use of standard room air-conditioners along with dehumidifiers. Used together, these provide temperature and humidity control.

### General recommendations for laboratory equipments:

Temperature Dry Bulb	75°F to 80°F
Humidity (relative)	40% to 50%

### Uncontrolled humidity results in:

- Corrosion and micro-corrosion of mission critical equipments
- Reduced life cycle time of the expensive equipment
- Frequent replacement and increased maintenance costs
- Recurrent breakdowns
- Frequent recalibration
- Inaccurate reading, defeating the purpose of the experiment

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**CSR** **Bry-Air**

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### 3Rs

Bry-Air's CSR team organized a seminar on 3Rs – Reuse, Reduce, Recycle. Main focus of the event was to spread awareness to save water, electronic waste, paper by understanding the 3Rs principle. Topics covered were: ■ Water conservation through rain water harvesting ■ Managing of electronic waste ■ Reuse and recycling paper ■ Donate waste paper for recycling.



### Energy Saving Technology and Equipment

Another seminar on Energy Saving Technology and Equipment was organized. Prominent people from various fields participated in this event and covered the following topics: ■ Climate change ■ Energy audits : schemes and incentives ■ Understating the Green Factory Code ■ Cooling large areas more economically ■ Energy saving through innovative lighting.



### 16<sup>th</sup> Eye camp

Bry-Air, in partnership with Venu Eye Institutes & Research Center arranged its 16<sup>th</sup> volunteer eye camp at its corporate office in Gurgaon. The eye camp was for the workforce of Pahwa Enterprise as well as the people in and around Gurgaon for those suffering from poor eyesight or any other eye ailment. Free spectacles and medicines were distributed. More than 200 people from and around Gurgaon were successfully treated for eye ailments.



Exhibition Updates



Grain Tech 2012, India, August 25-27, 2012

We bring you a  
snapshot of our  
latest events!



Pharmac India 2012, India, September 8-10, 2012

*Thank you  
for your  
response*



International Food Tec 2012, India, September 11-13, 2012