



dry facts

...from Arctic India sales

October — November — December 1990

Vol. X No. 4



GEARING UP FOR THE GROWING GLOBAL MARKET

Globalization of markets, emergence of South East Asian markets, rapid development of the Asian countries and increasing international competition is the scenario for the 90s.

The Bry-Air group has restructured its entity as Bry Air Europe, with a larger participation of the parent company in the new entity to meet the challenge of Europe as a single market place.

Bry-Air is well geared to meet the challenges of the decade with strategic locational presence planned in Malaysia to service the South East and Far East markets, with the new product introductions.

The organization is set for unabated growth for the next twenty five years. And that's certainly not building castles in the air".

BRY AIR (INDIA) EXHIBITS MFB COMPACT AT ASHRAE, NEW YORK

First Indian Product displayed at world's largest Aircon Show in USA

The Bry-Air group, world-wide, had participated in the ASHRAE show, in New York from 21st to 23rd January 1991, under the Bry World banner.

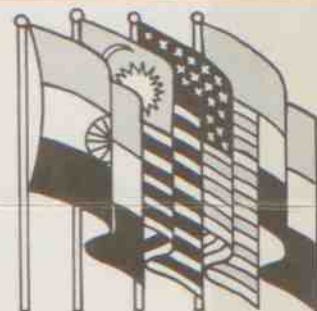
The annual ASHRAE show in New York, USA, which is the world's largest and most prestigious, bringing together the latest technological breakthrough and product advancements, for the first time witnessed the demonstration of an Indian product.

The product was the Bry-Air MFB Compact, a state-of-the-art dehumidifier which almost doubles the air drying efficiency at half the energy cost. This is major

breakthrough in moisture control and is a result of years of R&D work by a dedicated team of engineers at Bry-Air India.

Bry-Air India is a joint venture with Bry-Air Inc., USA, the world leaders in dehumidification. It is a part of the Bry-Air global network with plants in USA, Holland, India and shortly, in Malaysia.

Bry-Air India is already exporting dehumidifiers, seed dryers and plastic dryers. Because of the high quality standards of their products they are able to compete in the international market with similar products manufactured in Europe and USA.



....to meet demands of ASEAN markets. Engineers from South-East Asia on training at BRY-AIR (INDIA) plant.

EXHIBITION SCENE.....

"THE AIRGINEERS & ENERGY CONSERVATION"

The Gulf crisis have once again shaken the world to face the hard fact that energy sources are perishable. Therefore energy conservation has become the top priority for all industries.



The Airgineers at Arctic India Sales, pioneers in the field of air to air heat pipe based heat exchangers in the country, has launched Heat Recovery Wheels, the most current energy recovery device for the HVAC Industry.

The Heat Wheel was on display at the IITF 90, Pragati Maidan, Delhi (14th Nov. 90—23rd Nov.) and ISHRAE Seminar cum exhibition, Ashoka Hotel, New Delhi (14th Dec '90).

The use of the EXCLU-SIEVE HEAT WHEEL slashes aircon plant size and cost, allows for more fresh air, lowers first cost and operating cost. It's ideal for 100% fresh air applications like hospitals, animal research room, hotels, auditoriums etc.

42nd IPC THE PREMIER PHARMA SHOW

42nd IPC held at Manipal this year focussed on the current scene of Indian Pharma industry which is the largest in the world, today, and uses the latest state of the art technologies for the production of medicinal drugs.

Bry-Air's contribution to the Pharma industry, by providing moisture free quality air required for production, testing, packaging and storage makes possible the high quality drugs-being made available by the pharma industry.

Like every year, our engineers participated in the 42nd IPC at Manipal and displayed a wide range of Bry Air range dehumidifiers.

FOOD FOR THOUGHT

Era of fast food in colourful packages



Processed, frozen, dried packaged food have already made their presence felt at every shop counter in the country. An array of attractive sachets, cartons and bottles are at display at almost all general stores. The food packaging industry has expanded by leaps and bounds in the

last five years, with conventional food products such as vegetable oil, spices and even rice coming in branded packages. Packed but fresh is the need of the market and moisture free environment while packaging the product is the need of food packaging.

Familiar foodstuff as potato chips breakfast cereal, energy drinks, coffee, soup concentrates, milk powder, biscuits etc exhibits a great affinity for moisture present in the environment, which unfortunately creates a havoc on the product quality and flavour. Thus humidity control is a must in the packaging areas of the food industry.

Bry-Air offers two types of system designs which can be effectively used in the food industry:—

The process/make up air system

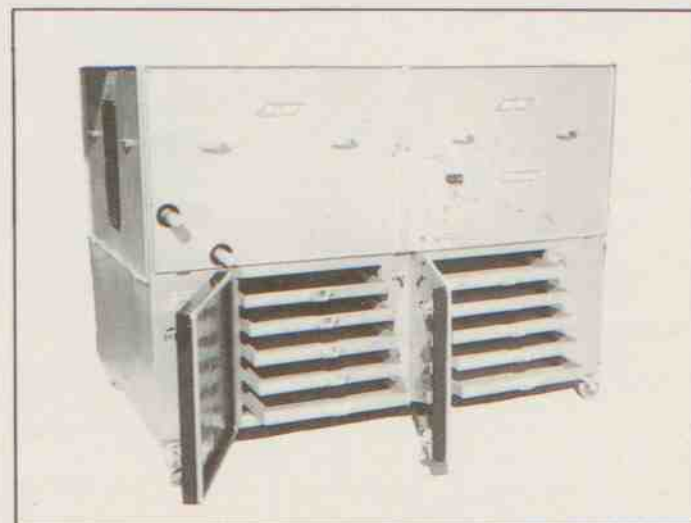
This system is utilized when a known quantity, temperature and moisture content of air is required to be directly applied to a given process.

The recirculating/environmental control system

This system is normally provided when a large space or whole room has to be maintained at a specified conditions. It can be effectively employed in the storage and packaging areas and can also be applied for speedier drying by removing the moisture from the surrounding air by a process of physical adsorption.

Bry Air dehumidifiers are ideal for

* Drying * Processing * Packaging * Storage.



Seed Dryer for F.A.O. Bangladesh

WHEN MOISTURE IS TORTURE !!!

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

Controlled Environment for Clean Rooms

Clean Rooms are workplaces where contamination is controlled. They provide an environment for research, development and manufacturing of equipment or processes which are susceptible to airborne contaminants like dust particles, bacteria etc. With more and more emphasis on zero defect products, the design parameters and manufacturing norms are becoming extremely stringent. Thus the clean room becomes a specially constructed enclosed area environmentally controlled with respect to airborne particles, temperature, humidity, air pressure, air pressure flow patterns, air motion, vibration, noise and viable organisms.



Humidity Control an Important variable

Humidity control is necessary to (1) prevent corrosion (2) prevent condensation on work surfaces (3) reduce static electricity (4) prevent product contamination (5) provide personal comfort (6) compensate for hygroscopic materials and (7) control microbial growth within the clean rooms.

General applications may require humidity levels to be maintained at 35% — 40%. However, critical applications may require lower levels of humidity with closer tolerances.

Applications of Clean Rooms

Major application areas of clean rooms are in the Electronics industry, pharmaceuticals, aerospace, automotive, computers and many others requiring more stringent manufacturing conditions.

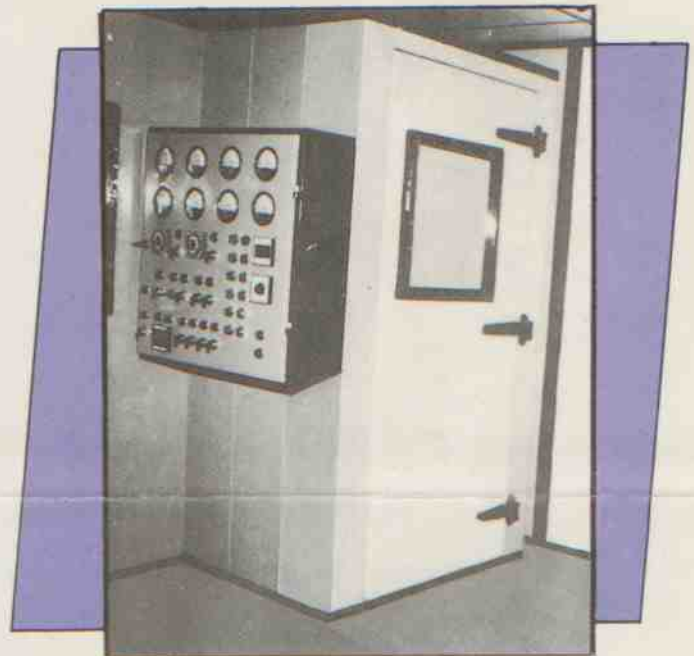
Few exclusive clean room examples where Bry-Air dehumidifiers are effectively employed:

* Semiconductor clean rooms:—

Microcircuits, microchips manufacturing requires, hygroscopic polymers called photo resists to mask circuit lines for etching processes. Because of their hygroscopic nature, they adsorb moisture and therefore microscopic circuit lines are cut or bridged, resulting in circuit failures.

* Pharmaceutical clean rooms:—

In pharmaceutical manufacturing, many powders are highly hygroscopic. When moist they are difficult to process and have limited shelf-life. But if clean rooms are equipped with desiccant dehumidifiers, these problems can easily be nullified and will allow fast manufacturing of high quality products.



Clean room dehumidification is an important area of Bry Air specialization. Bry Air dehumidifiers have been effectively controlling humidity levels in clean rooms for various applications the world over.

Bry-Air dehumidifiers for Cold Chambers

Cold Chambers, are especially designed airconditioned sheet metal chambers in which required temperature and humidity conditions are maintained. These chambers are used for manufacturing of specialised components, storage of electronic items, medicinal components, germplasm etc. A number of Bry-Air dehumidifiers have been installed in cold chambers to maintain the required temperature and humidity conditions of 10 deg. C — 15 deg. C and 30% to 40% RH.

Blue star Madras, L&T, Mysore, Shahkeil. Hosur are some of the places where Bry Air dehumidifiers are maintaining required temperature and humidity conditions in cold chambers.

QUALITY AIR A NECESSITY FOR INSTRUMENTATION

Quality air is no longer a frill but a necessity for instrumentation. The equipment involved is heat sensitive, requiring unvarying temperature, strictly controlled humidity and no air contaminants for all important uptime.

DEHUMIDIFICATION

— A Protection for instruments

All microprocessor based instrumentation or others which require a controlled environment for proper functioning can be categorized as under:—

1. Analytical and Scientific Instruments (including optical, environmental, nuclear, vacuum and cryogenic).
2. Medical equipment (including electro-medical instruments)
3. Process control instruments
4. Testing and measuring instruments (electrical and electronic)
5. Geoscientific instruments.
6. Electronic instruments (including data processing & communication equipment)

All these sophisticated instrumentation requires proper environmental control for its efficient operation.

The basic problem arises from the fact that water vapour condenses on any surface cooler than the dewpoint of the surrounding air. A sudden rise in temperature of air in the instrumentation room, typically on account of a power cut/breakdown at the time of start up and even on shut down of airconditioning equipment result in condensation of water vapour on the cold surface of the instruments, leading to erratic readouts, recurrent break downs, frequent recalibration & thus higher maintenance cost.

Thus temperature & humidity are the two important variables which if controlled can provide ideal working conditions for instrumentation. The general recommendations for temperature and humidity control fall in the following range:—

Temperature	70 deg. F to 80 deg. F
Humidity	40% to 50%

These conditions can easily be achieved by installing a dehumidifier in conjunction with window airconditioners. Bry-Air dehumidifiers are economical and come in 25 different models, out of which the smallest five are in the range of 50 cfm to 300 cfm.



The compact solution for humidity control in labs., and instrumentation.

DRY COMPRESSED AIR

— A necessity for instrumentation

Compressed air is an economical source of energy. How economical that energy proves to be depends on the quality of the compressed air.

Moisture is always present in compressed air system. Wet air combined with compressor oil, scale and dust causes rust, pitting and blockages with resultant component failure. *Specialized instruments like analyzers, relays, integrators, convertors recorders, indicator gauge etc.* needs bone dry compressed air for proper and efficient functioning. Wet and dirty air results in sluggish operation and more frequent repair and replacement of parts. Dry air can eliminate all these problems.

The only positive means of moisture removal is the installation of an air dryer. Water vapour can economically be removed by two methods: one is by cooling the air and the other more efficient method is by adsorption. Delair offers both ranges i.e. refrigeration dryers and adsorption dryers.

Delair refrigeration dryers are ideal for general instrumentation and controls, where pressure dew points of 2 deg. C to 4 deg. C are considered adequate. Adsorption dryers provide a much lower pressure dew point, from -20 deg. C to -40 deg. C, at a relative compressed air humidity of only 0.1%.

For application like specialised instrumentation and controls, where extra dryness of air and pressure dewpoints below -20 deg. C are required, delair heatless adsorption dryers are recommended.

For laboratory usage, where requirement of instrumentation air is small but vital, delair offers specially small wall mounted models handling 6nm to 1100 nm air per hour.



Small wall mounted compressed air dryer for laboratory application.