



Dry facts

.... From Arctic India Sales

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'Distinguished Visitors at our Plant'

Bry Air management was honoured to receive Shri K.R. Punia, Minister of Industries, Haryana, along with some senior officials, Shri Bhaskar Chatterjee, Director of Industries, Haryana, Shri Dhanendra Kumar, MD, HSIDC and Dr. K.S. Balain, MD, HSEDC at the Bry Air plant on the 27th of May 1989.

Bry Air appreciates the support and cooperation it has received from the Haryana Government in all its projects. During the plant tour, Shri Punia expressed happiness about the working methods and the organized manner in which the plant operated.

MR. DEEPAK PAHWA, MD, BRYAIR WELCOMING SHRI K.R. PUNIA, MINISTER OF INDUSTRIES TO THE PLANT



THE MINISTER AND OTHER OFFICIALS ON A TOUR OF THE PLANT

SH. PUNIA AT THE SHOP FLOOR.

'Comments 'N' Remarks' — — — — — From Our Visitors' Book

"I am highly impressed to visit this unit today. They are doing extremely well with complete dedication to quality work. I wish them all the best".

K.R. Punia,
Industries Minister, Haryana.

"——— One of the few units which have got most excellent understanding and practical arrangement with collaboration".

K.K. Datta — Mgr. IDBI, New Delhi.

"I am impressed by the facilities and particularly the R&D emphasis".

Venu Nallue — G.M. HSIDC.

"I visited the factory in connection with Apprenticeship to know the standard of shop floor training imparted to the Apprentices — — — — — it is an outstanding establishment for apprentices to learn and improve their skill and their trade".

**C.P. Singh, Deputy Apprenticeship
Advisor-Haryana**

"A shining example of partnership between Ohio and India".

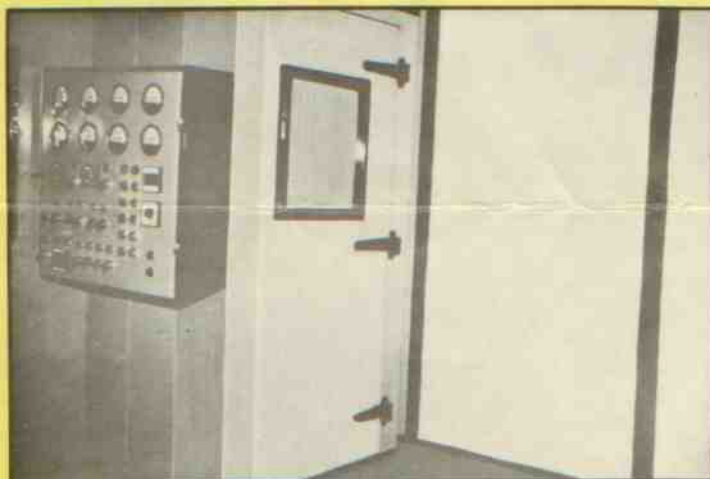
Richard F. Celeste
Governor of Ohio

"HSIDC is proud of the enterprise"

R.R. Kaushik — MD, HSIDC

Dehumidifiers for Clean Rooms

Clean Rooms have become the need of the day for sophisticated manufacturing and assembly of microscopically small sub-assemblies, electronic devices and instruments. It is imperative that a totally clean space has to be created which are totally free of air contaminants. Clean rooms are spaces or work stations within a room which is environmentally controlled with respect to airborne particles, temperature, humidity, air pressure, air flow pattern, air motion, vibration, noise, viable organisms and lighting.

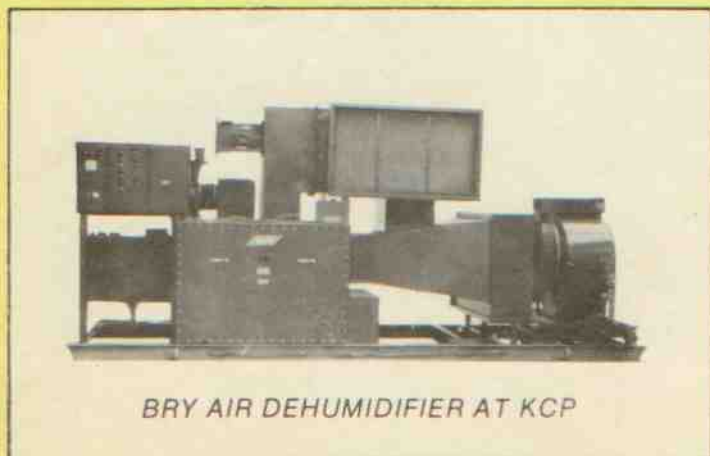


Clean rooms are used for specialised production of electronic components, ICs, PCs and VLSI.

Bry Air dehumidifiers have been incorporated, the world over in several clean room designs for precise control of relative humidity. Recently a MVB 45 D has been shipped out to Malaysia for a Japanese designed clean room for manufacture of electronics, maintaining humidity at 22% RH at 68°F.

Humidity Control In Aluminium Welding Area

KCP Limited, Madras uses a MVB 20 C to control humidity in its Aluminium welding area where dry fresh air requirement is 300 cfm and condition to be maintained is 80°F±3°F at 30% RH. The dehumidifier also takes care of exhausted argon gas generated due to welding.



BRY AIR DEHUMIDIFIER AT KCP

Dry Air for Asian Coffee



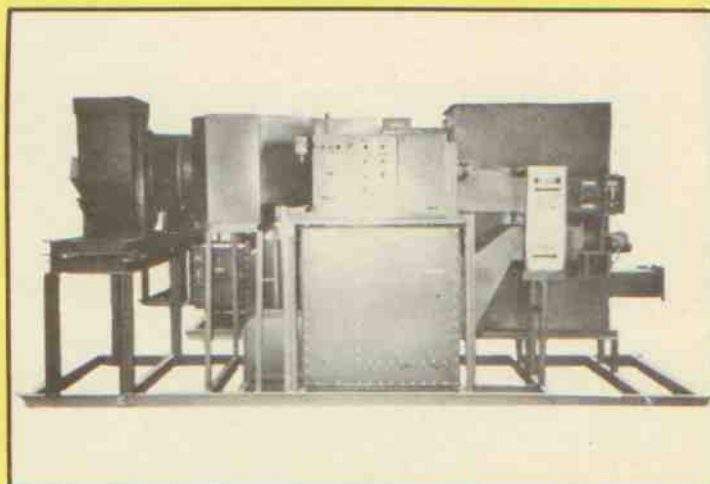
Hot or cold, dry coffee makes the best coffee. Coffee is highly hygroscopic and needs to be processed and packed under very

controlled conditions in order to avoid spoilage and lumping.

Asian Coffee Ltd., the country's first 100% export oriented soluble coffee project, is using three Bry Air dehumidifiers at its Hyderabad plant to maintain the desired conditions in its coffee processing, packaging and testing area.

A 10B dehumidifier supplying 2100 kg/hr of dry air at 20°C and 40% RH keeps the moisture problem under check in the coffee processing room.

The conditions required in the packaging area is 30±5% RH at 68°F to avoid lumping of coffee when being packed. This condition is maintained by 20C MVB dehumidifier.



The third dehumidifier, model 15B is installed in their lab, where coffee is tested for quality.

Dehumidification increases shelf life of packed coffee and also maintains the flavour and aroma for a long time.

CPWD takes Interest In Bry Air Energy Saving Devices.

Bry Air pioneers of Air-to-Air waste heat recovery systems in India, recently presented a seminar on Waste Heat Recovery systems at the request of the CPWD, Delhi. The seminar was conducted with aid of specially prepared technical material and slides.

Bry Air has always been at the forefront of the Heat Recovery programmes. Bry Air maintains a strong research and development programme with the finest lab in the environmental control industry enabling it to constantly upgrade its product lines, incorporating state of the art developments in energy conservation, dehumidification and drying processes.

WHEN MOISTURE IS TORTURE !!!

Industrial Storage — Part II

Dry Air Stories — — — — —

Don't let corrosion eat into your profits!!

Moisture causes corrosion and corrosion causes waste. Moisture in form of water vapour is always present in the air and its handiwork is evident in form of rusty tools, corroded machinery, soggy biscuits, rotten seeds etc.

Bry Air Dehumidification systems safeguards machinery and other products from the moisture menace by removing moisture from the air through the process of physical adsorption.

Bry Air has done hundreds of jobs on Industrial Storage — from machine parts to film reels. We bring you some of our more interesting applications from our long list of storage jobs.

Rust Arrested at 'ABC'

'The Associated Bearing Company' are proud of their quality SKF bearings — 'the solution, to any Purchase Managers' headache'.

However, ABC's own headache over the mammoth corrosion problem at their Pune plant was relieved by the Bry Air dehumidifiers.



The storage area was 18m×10m×7m in size. The condition to be maintained inside was DB 37.8°C+1°C and relative humidity not exceeding 45+5% RH. Bry-Air installed a 12B dehumidifier on the top of the mezzanine above the storage area and prevented increase of relative humidity beyond 45%, thus checking condensation on metal surface and thereby arresting rust and corrosion.

'Spice of Life'

Many a ship were launched in search of Indian spices. It is one product which has maintained its capacity to earn foreign exchange right through the centuries.



Cardamoms to name one of the many variety of spices in India, is an export commodity and to maintain its position in the World market, its flavour and aroma has to be retained even after they are packed and transported.

Pal Foods uses a Bry Air dehumidifier for this purpose while storing cardamoms for further use. The dehumidifier is used in conjunction with a window type air-conditioner to maintain storage condition at 28°C and 25-30% RH.

'Old Is Gold' — — — — —

— especially where our national heritage is concerned. And what can be a better place to conserve it, than Vishwa Bharati, the brain child of Rabindra Nath Tagore.

Keeping with its image as one of the guardians of our heritage, Vishwa Bharati has installed 0.5A Bry Air dehumidifier in its Archives to preserve old books and papers. Moisture has a very adverse effect on paper. Paper yellows with age and disintegrates. To check this negative effect of moisture the dehumidifier maintains conditions at 77°F in the archives.

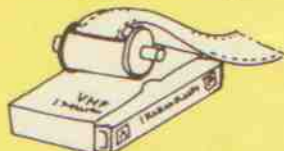


'Ticking to time'

The name — HMT, the product — watches and the subject — time.

HMT watches are famous for their quality and their quality is dependent on quality of their precision components. These components are highly sensitive to atmospheric conditions and need to be stored in very

controlled conditions. A faulty component can result in the watch giving the wrong time. To control the humid conditions at Nainital, HMT has installed a 500 cfm industrial dehumidifier in the component storage area.



D-O-O-R DARSHAN

Door Darshan Kendras, Calcutta and Madras really proved themselves to be far-sighted as far as storage of their video films are concerned.

Processed film reels are very quickly effected by moisture and can be damaged irretrievably over a period of time. High humidity damages its gelatin content, encourages growth of molds, increases dimensional changes, accelerates decomposition of nitrate support and accelerates deterioration of both black and white and colour images.

Medium term storage of photographic film is suitable for preservation for 10 years. The most satisfactory storage relative humidity is between 30-45% with room temperature between 70°-77°F. An airconditioner with desiccant dehumidifier gives the desired conditions.

For archival storage of records, film needs to be preserved at conditions 15-30% RH at temperature below 70°F.

These centres are using a Bry Air dehumidifier in their video film storage room to maintain a steady condition of 45% RH at 77°F, which effectively keeps their pictures bright and clear!



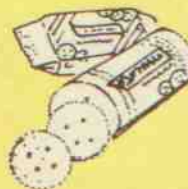
Live Life Kingsize!!!

Benson and Hedges — that famed name in cigarettes could never be famous if its tobacco content was not of high quality.

Tobacco like all other products is highly moisture sensitive. It needs to be stored at condition 67°F and 50% RH in order to retain its

cracking freshness and nerve tingling aroma.

The Malaysian Tobacco company, makers of the Benson and Hedges brand of cigarettes in Malaysia is using a Bry Air dehumidifier to store its tobacco for the cigarettes.



Without the crunch, there is nothing to munch.

Moisture turns this all time favourite snack to a soggy tasteless mass. Biscuits and potato chips are highly hygroscopic and if not stored properly can get spoilt.

Dalmia Biscuits, to give its product the crunching edge over others have rightly used a Bry Air dehumidifiers to maintain 30% to 35% RH at ambient temperature in its biscuit storage area.

No wonder its a delight to munch a Dalmia biscuits.

This lust is not yet exhausted. New Application areas keep cropping up continuously where humidity control becomes imperative or even critical.

Our list of applications also include jobs on rubber storage, electrode storage, seed storage, pharma product storage, electronic components storage, sugar storage and last but not the least, the defence sector, where we have helped to store safely aircrafts to parachutes, ammunition to food stuff.

Write to us for more information on application areas of your interest

SUPER SAVER FROM BRY AIR

RD 50 — The mini resin dryer to tackle the colossal moisture problem.

RD-50 has been especially developed to benefit smaller plastic manufactures, who cannot afford to buy the bigger and costlier plastic dryers. The RD-50 gives a constant dewpoint of -40°F and can dry a large quantity of plastic resin thus enabling the small manufacturer to give a quality product.

What is a Plastic Dryer?

Plastic in resin state is hygroscopic and absorbs moisture from atmosphere either during storage or while being processed, which adversely effects final quality of the moulded part.

Bry Air's RD-50 plastic resin dryer dries the air by dehumidification i.e. by actual removing water/moisture from air stream to lower the relative humidity.

How does it function?

The heart of the Bry-Air's RD-50 is a rotating module incorporating four separate quadrants. At any given point of time, two of these quadrants are used to dry process air, the third to reactivate the desiccant while the fourth's being cooled. After a prespecified time interval, the module rotates one quarter and one of the quadrants which was being used to dry process air moves forward to be reactivated, while the quadrant being reactivated moves for being cooled and the cooled moves to dry process air thus forming continuous cycle.

Process-In the process loop, air returns to the dryer from the hopper and passes through a high efficiency filter and through the two process air quadrants. As the air-stream pass through the quadrant, the desiccant adsorbs moisture to produce air at -40°F or lower dewpoint. After leaving the two process bed quadrants, the dehumidified air moves through a heater box which heats it to the required resin drying temperature and then is delivered back to the hopper by means of a high pressure blower.

Reactivation Stage: Super heated ambient air is passed over the desiccant so that the moisture adsorbed during the process stage is driven out.

Cooling Stage: The desiccant bed dissipates heat to cool the desiccant. This increases adsorbing efficiency of the desiccant.

Special Features:

- **Consistently Low Dewpoints** — RD-50 provides consistent -40°F or lower dewpoint air, year around regardless of the ambient conditions. This assures efficient and thorough drying of even the most demanding thermoplastic material.
- **Unique closed cool down cycle:** increases the adsorption capacity of the desiccant by cooling it without introducing moisture laden air.
- **Counter Flow Design** — The counter air flow design reduces the energy needed to reactivate the desiccant and extends desiccant life.
- **Innovative Bed Design** — The multiple bed design ensures consistent dewpoints throughout each cycle.
- **Reduced Downtime** RD-50 incorporates design features which reduce energy requirements, maintenance and servicing cost thus resulting in reduced down time.



RD 50 PLASTIC DRYER

DRYING RATE CHART

	Drying Temp. Deg. F	Drying Time (Hrs)	Maximum Rate Lbs/Hr
ABS	180-200	2-3	30
Acrylic	170-190	2-3	30
Barex	160	6	30
Nylon 6/6	200-250	4-5	30
Polycarbonate	250	3-4	30
PBT	250-275	3-4	25
PET	325-375	3-4	25
Polysulfone	250-275	4-5	30
Polyurethane	180-200	3-4	35
Noryl	175	2-3	30
SAN	180	2-3	35
Vinyls (PVC)	160	1-2	40