



Bry-Air

EST. 1964

Moisture & Humidity Control

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**Upgrade your
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Presenting, Bry-Air Dehumidiers for all scale printing facilities.

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Humidity Control in Printing Industry

Paper is made of fibres (cellulose) and by nature is hygroscopic, which means that it is very sensitive towards changes in relative humidity. For optimum printing and paper storage conditions, the relative humidity should be kept between 35-45%.



Advantages of Humidity Control in printing facilities

A correct and stable level of humidity can assure better quality prints, can boost productivity, increases efficiency, minimizing costs for machinery downtime and wasted materials. A humidity control system:

- Reduces printing misalignments due to dimensional variations of the paper
- Avoids paper cracking during automatic feeding
- Avoids paper curling and waving
- Eliminates electrostatic damage, adhesion and dust attraction
- Optimizes ink absorption.



Advantages of humidity control in printing facilities

Platemaking

Humidity and temperature control are important in making lithographic (offset) and colotype plates; photo engravings and gravure plates and cylinders. The moisture content and temperature of the plates affect the sensitivity of the coatings. The coatings increase in light sensitivity with increasing relative humidity and temperature, requiring adjustments in light intensity or length of exposure to give uniformity.

Maintaining constant dry bulb temperature and relative humidity in platemaking room provides a plate, at a known control point. Additionally, special attention should be given to air cleanliness and ventilation in platemaking to eliminate chemical fumes and dust errors in the plates.

Darkroom Conditions:
Temperature 20°C
Humidity 45%

Printing

The four basic methods of printing are as follows:

- Digital Printing
- Lithography - (offset printing)
- Gravure - (intalgis printing)
- Letterpress - (relief printing)

Digital Printing

Digital printing refers to a method of printing from a digital based image directly to a variety of media. It usually refers to professional printing where small run jobs from desktop publishing and other digital sources are printed using large format and/or high volume laser or inkjet printers. In digital printing, the moisture content can affect the toner adhesion, paper jams and the fuser roller temperature. All digital printing manufacturers like Xerox, HP etc. recommend that optimum printing performance of machines and print quality, the Relative Humidity needs to be maintained at suitable level.

Lithography (offset) Printing

In the offset printing process the pressroom for sheet multicolour printing has more exacting humidity requirements than other printing processes. In offset, it can affect the interaction between the ink and the press, the paper and the press, and the ink and paper.

Gravure Printing

Expansion, contraction and distortion in sheetfed gravure printing, as in offset printing, should be prevented because of the importance of correct register. The temperature and humidity control is exacting as in offset printing.

Letterpress Printing

For letterpress printing, air-conditioning alone minimizes problems caused by static electricity, ink mist and expansion or contractions of paper during printing. This method of printing is now becoming obsolete.



Paper storage & Shipping

Paper is normally received at the printing plant in moisture proof wrappers. However, once the paper is exposed to temperature substantially below the room temperature, it rapidly absorbs moisture from the air, resulting distortion.

Another interesting application of humidity control is for 'newsprint transportation'. When the newsprint is imported from paper producing countries through sea, the temperature and humidity levels changes frequently during transportation. This leads to condensation on the massive paper reels, hence paper quality is affected. The solution lies in blowing dry air into the hold of the cargo ship keeping the cargo dry.



Solution is with Bry-Air

Adsorption dehumidifying equipment manufactured by Bry-Air for independent humidity control with provisions for cooling provides an ideal solution to handle the moisture menace in the printing industry.

Today, Bry-Air has become synonymous with moisture/ humidity control. With over 25000 installations and nearly 50 years of application engineering experience, we are universally recognized as a company that delivers when it comes to providing solutions for Humidity Control, Gas phase filtration, Plastic auxiliaries and complete environment control solutions.



Bry-Air Dehumidifiers

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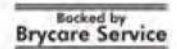
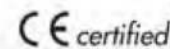
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