



PACKAGING HUMIDIFICATION

Increasing profits with
environmental control

Humidification and Evaporative Cooling



TRUSTED TECHNOLOGY

Condair humidifiers are used in packaging facilities around the world. Their use prevents card and paper materials from drying, reduces electrostatic build-up and the

associated problems it causes, and ensures inks and adhesives are delivered to packaging surfaces as the manufacturer intended.

Some of the world's largest brands put their trust in Condair humidification systems to help them improve productivity and maintain their product quality.



GLOBAL EXPERTISE, LOCAL SOLUTIONS

Condair has manufacturing facilities in Asia, Europe and North America as well as sales operations in 15 countries and distributors in over 40 more.

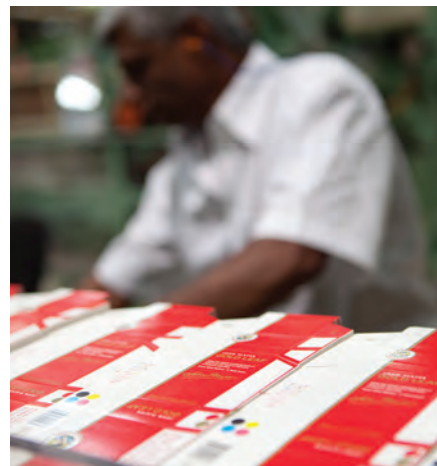
The company has been serving the global packaging industry for more than 60 years and is highly experienced in working with many different climates, packaging and printing processes, and all types of manufacturing and packing facilities.

Humidifier systems are designed for each individual application by packaging humidification experts to create the optimal production environment. If required, Condair's regional R&D departments can work with a client's production team to deliver innovative solutions for specialist packaging and printing processes.

Condair's expert humidifier engineering teams can provide installation, commissioning and maintenance support to ensure improved production efficiencies continue to return on the initial investment for many years.

HUMIDIFICATION AND HUMIDITY CONTROL IN THE PACKAGING INDUSTRY

The correct humidity in a packaging production and processing facility will reduce waste and machine downtime, maintain product quality and ultimately improve overall productivity.



Label printing

Label printing is amongst the finest quality sheet and web based printing. Tight control of register and dot density, especially in multi-pass work, is essential. Humidification to 50-55%RH is recommended in the sheet fed litho press hall to prevent paper curl and issues of electrostatic. In web offset, similar humidity control is needed pre-press and in the press hall, to prevent tight edges on the reels and web breaks.

Foil

For premium products, volumes are lower and very high quality is required, often including metal foils and films applied to paper labels. For foil and film, electrostatic prevention is essential for straightforward handling and adhesion. Whilst the threshold for electrostatic control is 40-45%RH, the conditions required for printing are such that 50-55%RH is commonly maintained throughout the area.

Adhesives

Many adhesives are sensitive to ambient humidity, losing moisture to dry air. This dries the adhesive so that labels fail to stick to the substrate (commonly glass and tin cans) and carton board glue flaps fail to stick. Commonly, glues are in equilibrium with paper and 50-55%RH addresses the matter.

Card, carton and corrugated board

Although less susceptible to curl and electrostatic issues, if thicker papers and board are allowed to lose moisture, they can suffer from cracking on their external face when folded.

Embossing

Paper flexibility and strength are affected by moisture content. Embossing exposes the paper to the risk of cracking and tearing, especially in the newly created thinner areas of dry paper. Whether at the paper supplier or in production, the maintenance of 50-55%RH helps maintain optimum moisture content and counter this problem.

Slitting and rewinding

The slitting and rewinding of web and narrow web label reels can be a source of electrostatic generation.

Humidification to at least 45%RH helps prevent this.

Film processing and printing

Packaging films are particularly susceptible to electrostatic, from extrusion, through printing to rolling. Because the films are commonly not as hygroscopic as paper and board, higher levels of humidity are needed to help disperse static charges. 50-55% is typical but 60%RH is not uncommon.

SOLUTIONS FOR THE PACKAGING INDUSTRY

Condair has a comprehensive range of humidification products to suit any packaging facility. From wall-mounted steam units for a small production room to extensive spray systems for the largest of press halls.

Condair also offers a wide range of associated products such as water treatment systems, air compressors, pumps and humidity monitors.

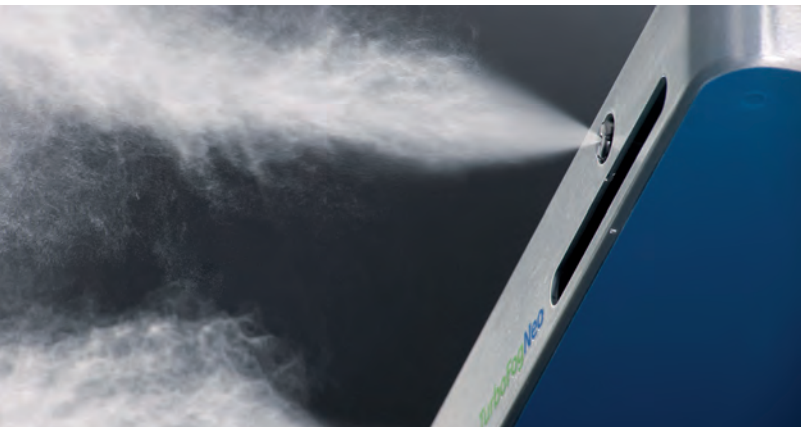
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EXPERT CONSULTATION



JetSpray compressed air & water humidifier



ML Princess high pressure humidifier



Draabe TurboFogNeo high pressure humidifier



Condair EL steam humidifier