

EXCEEDING EXPECTATIONS

AIR HUMIDIFICATION IN THE PRINTING INDUSTRY

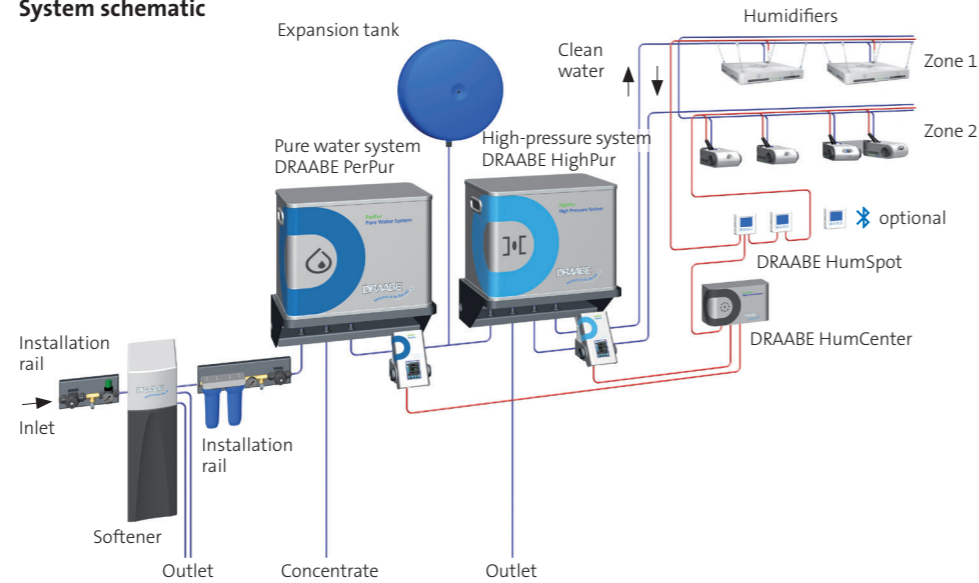
The problem is excessively dry air

KOMORI train their own employees, as well as those of their customers in the showrooms in Utrecht and Paris. However, especially in the winter months, problems with electrostatics and paper deformation arose due to air humidity levels that were too low. Since 2012, six DRAABE TurboFogNeo 8 humidifiers ensure constant air humidity in the KOMORI Graphic Technology Centre Europe, all digitally controlled. "With the DRAABE system and the resulting optimum air humidity of 50 to 55%, we are now able to demonstrate our machines running at full capacity year around", explains Ad Ekelschot, Showroom Manager at KOMORI. Air humidity can be adjusted quickly, as needed, to the requirements of various materials like paper or foils.

Securely

The water is sterilised beforehand using a DRAABE water treatment system and demineralised for hygienic and fault-free operation of the humidification system. The ease of maintenance with the full-service package is valued by KOMORI as one of the special strengths of the DRAABE systems. "DRAABE is the perfect fit for our company mission, KANDO – beyond expectations: Functionality and performance of the air humidification system are far above our expectations. Its implementation can be considered a full success," says the showroom manager.

System schematic



Facts and figures

Humidification:	6 humidifiers type DRAABE TurboFogNeo 8
Pure water/high-pressure system:	1 pure water system DRAABE PerPur 200, 1 high-pressure system DRAABE HighPur 200
Area:	Total showroom volume approx. 4,000 m ³ , height 7 m
Humidity requirement:	50 – 55% relative humidity (also 60 – 65% depending on the material processed)
Installation:	Summer 2012



DRAABE TurboFogNeo 8 ensures optimum humidity all year round



Karin van den Heuvel and Ad Ekelschot show innovation and the highest quality in the showroom in Utrecht

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Air humidification in the printing industry

KOMORI International Europe is one of the largest manufacturers of sheet and web-offset machines. DRAABE air humidification systems ensure the trouble-free use of printing machines in their showrooms.

KOMORI was founded in 1923 in Tokyo. More than 2,000 employees are now working on the success of the company. Even specialised printing machines for printing banknotes and digital printing machines are part of the portfolio. And KOMORI has always upheld the highest standards. "More output and high quality while reducing energy consumption at the same time are the goal," says Karin van den Heuvel, KOMORI Marketing Manager Europe.



KOMORI Graphic Technology Centre Europe

Air humidification practice



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No electrostatic charging

If paper is too dry during processing at low humidity, electrostatic charges are created. The paper sticks together and stops running smoothly through the printing press. This also applies to synthetic materials such as PVC or polypropylene. The friction process within the machine creates electrostatic charges that lead to disruption to production. A constant optimum humidity level ensures a fast, trouble-free production process.

No paper distortion

If the air humidity in the paper store-room or print shop is too low, the material releases moisture into the air. This leads to unwanted changes in the dimensions of the paper. The paper then is no longer perfectly flat and cannot be processed efficiently. Doubling, register differences, wrinkling and distortion are difficulties frequently encountered as a result of low humidity. Only paper processed at optimum humidity can be printed and finished without difficulty.



Humidification ensures trouble-free processing of the paper



DRAABE TurboFogNeo: Constant optimum humidity reduces electrostatic charges

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The water produced for the air humidification can also be used as standardised process water for the printing presses.

Consistent quality

Optimum levels of relative air humidity are assured all year round with direct room air humidification. This helps to standardise the printing process, reduce spoilage, prevent machine stoppages, shorten production times and cut costs. The optimum equilibrium moisture for processing paper is between 50% and 60% of relative humidity.



A constant water hardness and pH value protects against errors and drying problems

Good indoor climate

Direct room air humidification creates a pleasantly fresh indoor climate in production areas and offices. The evaporative cooling reduces the heating of the indoor spaces by 2 to 5 °C. At the same

time, dust is bound in the air and settles more quickly. Employees feel more comfortable and their health is protected.

Added benefits of standardised process water

No toning and blanking

Process water with a constant hardness and pH value prevents errors during ink transfer (toning and blanking) and protects against drying problems.

No corrosion

Chloride, sulphate and nitrate can lead to heavy corrosion of printing cylinders and water-conducting parts of the printing presses. Optimum treatment of the process water extends the life of the print rollers by up to 70%.

Less chemicals

With carefully balanced water treatment, the concentration of isopropanol in the dampening solution can be reduced to 2% to 5%. That reduces costs. Standardised process water ensures consistent ink transfer and reduces corrosion and chemical consumption.

Air humidification practice