

# Air Humidification Practice

- Imprimeries ips, F-13160 Châteaurenard •
- ## Smooth production and reduced energy costs



### New energy-saving high-pressure humidification replaces steam and compressed air humidification at Imprimeries ips.

With five locations and over 700 staff, Imprimeries ips is a French market leader in the segment of free newspapers and printed information. Rapid, smooth production is important to this company to enable it to secure punctual distribution of 17 million newspapers and magazines every week.



TurboFog 8 high-pressure humidifier

### Paper distortion and static charge

„The new high-speed printing presses are very sensitive to deviations from the optimum indoor environment“, says Bernard Rieu (engineer in charge of the project), explaining the need for extra humidification: „If humidity is too low, this can interrupt production for up to an hour.“

The main problems are web breaks caused by driedout glued joints, paper distortion and static charge.“ For many years, Imprimeries ips have been using a steam and compressed air nozzle system for humidification. „However, we had been dissatisfied about the high energy consumption and intensive servicing required by this system for a long time“, says Bernard Rieu in justifying the decision to look for alternatives.

### 90 % less energy

In Lyon and Châteaurenard, Imprimeries ips have now installed DRAABE's „TurboFog“ high-pressure nozzle system. Two benefits were the key for Bernard Rieu: „The high-pressure system requires 90% less energy than compressed air nozzles and the DRAABE „Full Service“ package means that we get fully serviced and cleaned pure water and high-pressure systems every six months. We no longer have to worry about a thing, and can concentrate 100% on the printing – our expectations have been met in full.“

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- Axel Springer AG, D-22926 Ahrensburg •
- ## € 4,000 in costs saved every day



With over 150 newspapers and magazines, Axel Springer AG is Germany's largest newspaper publisher – and with titles in 27 countries, it is also a leading international media corporation.

At the Ahrensburg site, around one million daily papers are produced every weekday. Tight deadlines in the production of daily papers means that Stephan Wellnitz, print



Roll-carrier level with TurboFog 32 high-pressure humidification

engineer in the web print management department, cannot afford any mistakes: „The machines have to get from zero to 42,500 rpm as quickly as possible, any breakdown jeopardizes punctual delivery and causes significant consequential costs.“ Gluing errors during automatic roll-change and web breaks on the glued joint or the external layer of the paper rolls

are the most frequent problems which can cause downtimes of up to 90 minutes.

### Humidity secured

Analysis of the indoor environment showed

that the problems always occurred when relative humidity dropped below 40% in the paper store. In November 2003, a total of 12 TurboFog 32-type atomizers was installed in the 3,000 m<sup>2</sup> paper store and roll-carrier level to maintain the constant ideal humidity of 50–55%. „The energy-saving high-pressure nozzle technology for atomization with absolutely no drips was an important criterion for us in making our decision“, reports Stephan Wellnitz.

### Gluing faults quota reduced

Experience in recent years has shown that the investment in direct-room humidification has made a big contribution to production reliability: the gluing faults quota has dropped from 3% to 0.6%. „When you consider that we handle 200 to 250 rolls a day, this is an outstanding figure, reflected not only in faster production, but above all in costs. Five gluing faults fewer a day correspond to a cost saving of around € 4,000 a day, with the result that the DRAABE humidification system paid for itself within a very short period“, says Stephan Wellnitz, highly satisfied with the result.

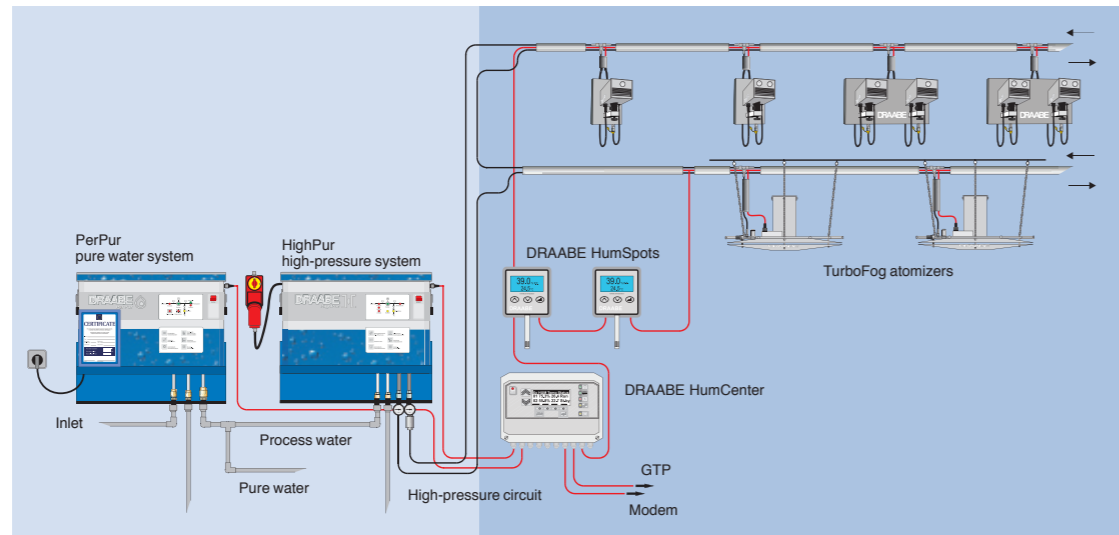
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## DRAABE TurboFog high-pressure humidification

• Axel Springer / Imprimeries ips •

### System schematic DRAABE high-pressure system TurboFog



#### Axel Springer AG

##### Pure water system:

2 DRAABE pure water systems PerPur 120

##### High-pressure system:

2 DRAABE high-pressure systems  
HighPur 200

##### Humidification system:

###### High pressure:

12 atomizers type TurboFog 32 (32 Kg/h)

##### Humidity required:

50 - 55 % relative humidity

##### Installation:

October 2003

#### Imprimeries ips

##### Pure water system:

1 DRAABE pure water system PerPur 200

##### High-pressure system:

1 DRAABE high-pressure system  
HighPur 200

##### Humidification system:

###### High pressure:

2 atomizers type TurboFog 8.2 (8 Kg/h)  
5 atomizers type TurboFog 16 (16 Kg/h)  
2 atomizers type TurboFog 32 (32 Kg/h)

##### Humidity required:

50 % relative humidity

##### Installation:

November 2006

# Air Humidification Practice

• An overview of the systems •

### Humidification systems compared

Users can select from a variety of systems and technologies. In addition to investment and operating costs, selection criteria should include appropriate water treatment, compliance with hygiene standards and ease of maintenance.

Humidification systems	Rating
Steam humidifiers	- Performance drops due to limescale build-up in steam boiler - High electricity consumption, high operating costs - Additional heat source in room
Air washers in air-conditioning units	- Maintenance and cleaning are complex - Hygiene problems result from open water tank - Moisture is not routed to specific areas
Ultrasound atomizers	- Risk from algae and fungi due to open water tank - Ceramic oscillator has short lifespan - Fully-demineralized water required
Compressed air humidification	+ Fine atomization (no drips) - High consumption of compressed air - Noisy in operation
High-pressure humidification	+ Low energy costs + Microfine atomization (no drips) + Quiet in operation

### New international standard for air humidification

#### Trust may be good, testing is better!

DRAABE is the first supplier of humidification systems to be awarded the new international certificate „Optimized Air Humidification“. This is evidence that DRAABE systems have a high level of operational reliability, economy and hygiene, well above that of the current state of the art and of conventional systems. With a system which treats its own water and has a modular exchange system, as well as automatic hygiene and operating functions, DRAABE is setting new standards in health, safety and service.

