



# HVAC Business Unit Newsletter

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in hospitals



## SPOTLIGHT ON: Humidity for health: Air humidification in hospitals

CAREL

### Ideal Indoor Humidity for Health

The best indoor humidity level for people's health is between 40% and 60%. When humidity drops below 40%, the air becomes too dry, which can cause discomfort and health problems. When it goes above 60%, the air becomes too damp, which can lead to condensation and create conditions for mould and fungi to grow and spread.

### Humidify for Proper Equipment Operation

Keeping the air humid can help protect electronic equipment from getting damaged by electrostatic discharges (ESD).

#### What is ESD?

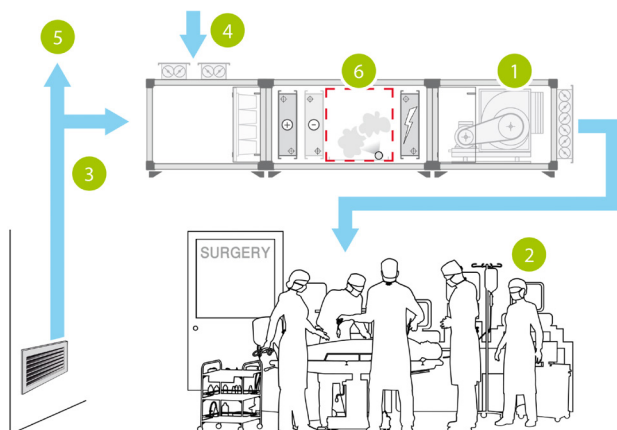
Electrostatic discharge happens when two objects with opposite electrical charges come close together. If the charge is strong enough, the electricity can jump through the air from one object to the other, which can damage sensitive electronics.

#### How does humidity help?

Controlling the air's humidity is an effective way to reduce ESD. Moist air makes it harder for static electricity to build up on our skin or in the air. Water in the air lowers the resistance of air to electric flow, allowing charges to slowly and safely disperse instead of suddenly discharging.

#### Why it matters in hospitals

In hospitals, where equipment performs critical and delicate tasks, even small malfunctions can cause big problems. To prevent issues caused by dry air, it is recommended to keep indoor humidity above 40%.



#### Key:

- 1 - air handling unit
- 2 - operating room
- 3 - recirculated air
- 4 - fresh air
- 5 - exhaust air
- 6 - humidification section

Relative  
humidity  
>40%

Contact your local Eurotec HVAC Sales Engineer or give us a call on 09 579 1990.



## Carel Solutions for air humidification

### Isothermal humidifiers: humiSteam, heaterSteam, gaSteam and ultimateSAM

Isothermal humidification is the most common method used to control air humidity. It works by adding steam directly into the airflow, where it is quickly absorbed, increasing humidity without changing the air temperature much.

Different types of isothermal humidifiers produce steam in different ways — using electrodes, heaters, or gas burners. Each type has its own benefits in terms of performance, reliability, and cost.

CAREL also provides a range of steam distribution systems and accessories to suit different applications.

### Adiabatic humidifiers: humiFog

The humiFog system uses high-pressure water spray to humidify and cool the air. It includes a powerful pump and special nozzles that turn water into a fine mist, which is quickly absorbed into the air.

The pump can deliver up to 1,350 litres per hour at a pressure of 70 bars, creating very fine water droplets (about 10–15 microns in size) for efficient performance.

humiFog can be used for both humidifying in winter and cooling in summer, making it a cost-effective all-in-one solution. The system is VDI6022 certified, ensuring high hygiene and quality standards.

Contact your local Eurotec HVAC Sales Engineer for further information on the products mentioned in this newsletter or to discuss your project requirements.

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