

Humidity Control in Hospitals

Good indoor air quality needs to be assured in all hospitals and healthcare facilities. Inappropriate temperature and humidity level in a hospital building with access from wards to waiting rooms can trigger bacterial, fungal and viral infections and allergies to patient, staffs and visitors.

**Effects of Uncontrolled Humidity**

- Corrosion of sensitive equipment
- Uncomfortable environment for surgeon and patients
- Microbiological growth

**Causes of Uncontrolled Humidity**

Inadequate ventilation air and fresh air can promote the build up of chemical and biological contaminants which can further deteriorates the patients health. It is significant to remember that the bacteria travels on water vapor in the gentle wind. This is especially true in warm and humid climate.

**General Recommendations**

Room	Temperature (°C)	Relative Humidity (%)
Operation Theatre	18-20	50-55
Imaging Department: X-ray room, MRI, CT Scanner, Mammography, Ultrasound, Fluoroscopy, Angiology, Tomography	22-24	50
Pathology Department: Dark Room, Biology lab, Chemical lab, Immunology, Hematology	22-24	50

Bry-Air Solutions

Desiccant dehumidifier offers a tested alternative for humidity control at low temperatures. Unlike conventional cooling based equipment, the moisture removal capacity of desiccant systems actually improves at lower temperatures.

It is recommended to integrate compact model (FFB series) into the air conditioning system. This guarantees low cost operation and better heat load control. Ferrous metal is not allowed in MRI and CT Scan room due to changes in magnetic field of MRI and CT Scan machine. The advantage of Bry-Air Dehumidifier is that it can be set up outside the room as well.

Partial Reference List

- Al Seef Hospital, MRI Room, Kuwait
- Aster Hospital, Operation Theatre, Oman
- Magrabi Hospital, Laser Eye Surgery, UAE
- Khalifa Hospital, Operation Theatre, UAE
- Aditya Dispomed Products Pvt. Ltd., Corrosion Prevention during Surgical Blade Storage, India
- HUSM Trauma for OT, Malaysia
- Hospital Shah Alam, Imaging Room, Malaysia
- IIUM Kuantan –for OT, Imaging & Pathology Room, Malaysia
- Kuala Trengganu Specialist for Imaging Room, Malaysia