


Case study

Phi Sigma, United Arab Emirates



Overcoming Cold Room Challenges in Pharmaceutical Storage

Chilling Solutions

Phi Sigma General Trading L.L.C, a distinguished partner of Munters in the UAE, specializes in providing solutions and services for highly regulated environments. When Gulf Drug, a prominent storage company for pharmaceuticals and based in the Gulf region, encountered challenges with one of their cold storage, Phi Sigma reached out to Munters for assistance.

The client operates a cold room facility with a capacity of 160 cubic meters, maintaining a constant temperature of 4°C. The cold room primarily serves the purpose of pharmaceutical storage, necessitating stringent control over relative humidity levels to meet regulatory standards set by the Ministry of Health (MOH). Despite existing cooling units, the client faced challenges in maintaining relative humidity below 60%, prompting the exploration of alternative solutions.

Confronting Cold Room Humidity Fluctuations

The critical nature of pharmaceutical storage demands precise control over environmental conditions, particularly relative humidity. Fluctuations in humidity levels jeopardized the integrity of stored medications, triggering alarms and regulatory concerns. The client sought an effective solution to ensure consistent humidity control within the cold room to comply with MOH regulations. Munters was engaged to assess the existing conditions and propose a tailored solution. Through a comprehensive evaluation, Munters recommended the installation of the MLT800, leveraging its expertise in moisture load calculations and environmental control systems. The MLT800 was deemed optimal for its high airflow and low-temperature inlet, offering energy-efficient operation and minimal heat addition to the space.

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Advantages MLT800:

- Advanced control panel– diagnostic fault display
- High airflow capacity
- Minimal energy consumption
- Unique plastic rotor casing is 100% corrosion-resistant
- Efficiently dehumidifies down to -20°C
- Easy-to-install interchangeable panels



Deploying Munters' MLT800 for Optimal Cold Room Efficiency

Following thorough assessment and consultation, the MLT800 unit was installed in the client's cold room. Munters technicians ensured seamless integration with existing cooling systems, optimizing humidity control without compromising temperature stability. The installation process was conducted efficiently to minimize disruption to the client's operations.

Consistent Humidity Control Transforms Pharmaceutical Storage

Post-implementation, the client experienced consistent relative humidity levels below 60% throughout the year, meeting regulatory requirements without triggering alarms or concerns. The MLT800's performance significantly enhanced the stability and reliability of the cold room environment, alleviating the client's anxieties regarding pharmaceutical storage conditions. With the MLT800 in operation, the client continues to maintain optimal storage conditions, ensuring the integrity and efficacy of stored medications.

"The client can now rest assured that with Munters' solution in place, there are no constant alarms triggered and concerns about the humidity levels are alleviated."

Kannan Valmurugan, Sales Manager Phi Sigma





Strategic partnership for customer satisfaction

The collaboration between Phi Sigma and Munters exemplifies the successful implementation of tailored solutions to address specific challenges in pharmaceutical storage. By deploying the MLT800 unit, the client achieved sustained compliance with regula-

tory standards, safeguarding the quality and safety of stored medications. This case underscores the importance of precision environmental control in pharmaceutical facilities and highlights the effectiveness of innovative solutions in meeting industry demands.

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