

Case study
HEISCO, Kuwait



Optimizing Shipyard Operations with Munters DryCool™ DuraCase

Overcoming Paint Job Challenges

When Heavy Engineering Industries & Shipbuilding Co (HEISCO) in Kuwait encountered challenges with high humidity and color changes affecting their paint jobs, they turned to their trusted partner Munters for a solution. The answer to their problems came in the form of the Munters DryCool™ DuraCase, offering operators the capability to independently control temperature and humidity within a fully transportable container.

Challenges at HEISCO

HEISCO is a prominent engineering, procurement, and construction contracting company with diverse business interests. Situated in the primary commercial port of Kuwait, Shuwaikh Port, HEISCO operates a substantial shipyard, strategically positioned for ship repairs, rehabilitation, refurbishment, and shipbuilding projects. Over recent years, their operations have expanded significantly, presenting new challenges. The existing Munters MLT1400 dehumidifiers were no longer adequate to meet HEISCO's evolving needs.

Environmental Factors and Operational Implications

Much of Kuwait experiences a desert climate characterized by scorching summers with temperatures often surpassing 40°C or more, and relatively mild winters. The region witnesses notable temperature fluctuations between day and night, as well as across seasons. Along Kuwait's coastline, humidity levels can spike during the summer months due to the proximity to the Arabian Gulf. This heightened humidity, combined with soaring temperatures, posed a critical challenge for HEISCO, particularly during paint and coating applications. Inadequate climate control prolonged drying times, led to color inconsistencies, and compromised the durability of coatings.

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Advantages:

- Rugged shipping container
- Easy to move and install
- Cool, dry supply air
- High COP
- Low maintenance





Inside Munters DryCool™ DuraCase.

The Solution: Munters DryCool™ DuraCase

Addressing HEISCO's requirements, the Munters DryCool™ DuraCase emerged as an innovative solution. This system integrates the advantages of desiccant dehumidifiers with the cooling capabilities of DX air conditioners for treating makeup air. Engineered to efficiently handle 100% makeup air, the DuraCase system regulates humidity as needed. Notably, the system maximizes energy efficiency by recycling energy from cooling components, resulting in substantial cost savings. Its superior Coefficient of Performance (COP) outperforms conventional air conditioning systems, further reducing energy expenditure.



DuraCase is designed for transport with all replaceable components accessible through hinged doors and built in supply air duct ports for quick installation of flexible duct work.

Seamless Installation and Performance

Installing the Munters DryCool™ DuraCase proved seamless. Its mobility and comprehensive packaging, incorporating essential components such as a direct expansion cooling coil, desiccant wheel, integrated condensing package, supply fan, reactivation fan, and condensing fans, facilitated swift deployment. Within days of installation at the shipyard, the system was operational, catering to HEISCO's requirements.



Enhanced Efficiency and Quality

According to Mr. Mohamed Salem Eid, Unit Head at HEISCO, the implementation of Munters DryCool™ DuraCase has already yielded significant improvements in efficiency and productivity. Precise control over humidity and temperature promises to enhance productivity and elevate the quality of workmanship at HEISCO, marking a notable advancement for the company.

Through the adoption of Munters DryCool™ DuraCase, HEISCO has effectively overcome challenges associated with humidity control, ensuring optimal conditions for paint and coating applications. This case underscores the transformative impact of innovative climate control solutions in enhancing operational efficiency and delivering superior quality outcomes.

→ Would you like to find out if Munters has a solution for your company too?
If so, please visit our website, www.munters.com/