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CASE STUDY
Dubai International Airport Expansion
Concourse 2 and Concourse 3 Fresh Air Cooling Coils

Dubai is one of seven sovereign states comprising the United Arab Emirates. Strategically located on the Arabian Peninsula directly across the Arabian Gulf from Iran, it has become a regional business center and tourist destination featuring state-of-the-art architecture and infrastructure. Dubai is known for its liberal economic and social policies, which has resulted in a varied and vibrant local culture.

An important part of Dubai's strategic development plan has included the modernization and expansion of the Dubai International Airport. As with any large occupied building, the airport terminals must take in and cool large amounts of outdoor (fresh) air. The warm summertime temperatures and high humidities in the Gulf region make cooling sufficient amounts of fresh air for the airport terminals a challenge.

In 2007, Colmac Coil was selected to provide the custom cooling coils for the fresh air cooling system for Concourse 2. Work was completed and the system successfully started and commissioned in 2008.

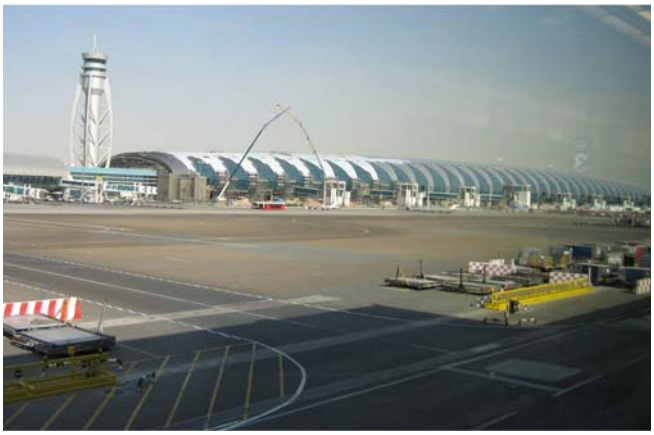
Based on the success of the design and execution of the Concourse 2 cooling coils, Colmac was selected to provide the fresh air cooling coils for the next phase of the airport expansion, Concourse 3.

When Concourse 3 is complete, the Dubai International Airport is expected to be able to accommodate as many as 80 million passengers per year, making it one of the largest airports in operation in the world.

Project Details:

Concourse 2
Year completed: 2008
(16) x fresh air cooling plant rooms
(68) x custom design chilled water cooling coils featuring:
- Copper Tubes
- Polyester Coated Aluminum Fins
- Self-supporting, self-stacking, 304 stainless steel casing
- Integral 304 stainless steel drainpan
- Integral 99% efficiency mist eliminator section

Total Airflow Rate: 2,500,000 CFM (1,176 m3/s)
Design Ambient Temperature, db/wb: 95/86F (35/30C)
Total Design Cooling Load: 18,800 TR (66 MW)



Dubai International Airport Concourse 2

Concourse 3
Anticipated completion date: 2012
(4) x fresh air cooling plant rooms
(34) x custom design chilled water cooling coils featuring:
- Copper Tubes
- Polyester Coated Aluminum Fins
- Self-supporting, self-stacking, 304 stainless steel casing
- Integral 304 stainless steel drainpan
- Integral 99% efficiency mist eliminator section

Total Airflow Rate: 1,322,000 CFM (624 m3/s)
Design Ambient Temperature, db/wb: 95/86F (35/30C)
Total Design Cooling Load: 9,400 TR (33 MW)