

Chicago Midway International Airport



Installing DeltaPValves on each cooling coil controlled the flow precisely at all load conditions, assuring high delta T.



Fast Facts

Location
Chicago, Illinois

Industry
International Airport

Building Type
Central Chilled Water Plant

Complex Size
840 acres

Year Built
1923

BACKGROUND

The Midway Airport Central Heating and Refrigeration Plant is the first district energy plant to be outsourced by the City of Chicago. At the time of installation, the energy plant was capable of providing 3675 tons of refrigeration capacity during peak output hours.

In addition to outsourcing the energy plant, Midway Airport expanded and remodeled its terminal buildings. The chilled water supply was set to 37°F leaving the plant, while chilled water return is designed for 55°F. To ensure optimum performance at all cooling loads, this 18°F delta T design was a prime consideration in configuring the system.

IMPACT

- Delta T meets or exceeds design (18°F) in all cooling load conditions ensuring sufficient flow to all locations in the airport.
- Flow rate is approximately half of design at 89°F
Flow rate is matched precisely to the cooling load.
- Midway Airport maintains design delta T or better in all cooling load conditions and does not suffer from excess flow and low delta T.