

| Daikin Tackles Massive Cooling Load for Sporting Goods Retailer

LOCATION

Scheels All Sports, Chandler, Arizona

CONSULTING ENGINEER

RLE Architects, KFI Engineers

INSTALLING CONTRACTOR

Plenium Builders

PRODUCT MANUFACTURER

Daikin Applied, Evapco



Scheels moved into this cavernous mall space in Chandler, Arizona

| HIGHLIGHTS

- A quiet and efficient cooling solution with a discreet footprint
- 220,000 square feet of open-concept, high-ceiling space in a desert climate
- Limited space for cooling equipment, noise concerns for retail operations

| BACKGROUND

Scheels All Sports is a Midwest-based sporting goods retailer that chose an existing retail space in a Chandler, Arizona, mall for its 32nd store nationwide. The store's design would not accommodate packaged cooling equipment, and its only viable location for mechanical equipment was on the roof over its loading dock.

| CHALLENGE:

The Scheels retail area presented a complicated, massive cooling challenge. The space encompasses 220,000 square feet and houses a 16,000-gallon saltwater aquarium, 75 specialty shops, a Ferris wheel, a restaurant, and more within its open-concept, high-ceiling confines.

The climate of the greater Phoenix area is always strenuous on A/C systems, so the final installation would require redundancy and reliability. The retailer was also concerned about noise generation from cooling equipment and keeping mechanical out of eyesight (and earshot) to not disrupt the customer experience.

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| SOLUTION:

SVL's expert sales engineers determined that a modular system could be ideal for Scheels' new location and contacted Daikin's Modular Solutions team to explore their options. Daikin's team had prior experience with similar applications, and together with Scheels' architectural team, all parties met at Daikin's facility in Phoenix to determine the final details.

They decided on a complete Modular Central Plan (MCP) with two 325-ton Magnitude WMC magnetic bearing chillers for redundancy. The advanced compressor design provides increased power with decreased electrical requirements, resulting in up to 40% more energy savings than a fixed-speed centrifugal chiller.

| RESULT:

This elegant MCP solution has met all the project's requirements. Daikin designed the MCP so the cooling towers could be installed on its roof, and the builders collaborated to create a curtain wall to disguise and surround the equipment. The chillers are quiet, with sound pressure ratings as low as 78.6 dBA, and even quieter at reduced loads.

To enhance service safety, Daikin designed and installed a complete set of permanent stairs to improve access to the service platform. Scheels All Sports was thrilled with the result and spoke with Daikin about using MCP solutions on future installations.

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