



Expensive Problem

IKEA is known for its expansive showrooms and innovative home furnishing products. The 280,000 sq ft Portland, Oregon retail location is no different, but they had an expensive problem: heat was being lost through the walls and roof, increasing the amount of energy needed to heat the facility and leaving customers and employees chilly. IKEA needed an energy efficient way to circulate heat down to occupant level in order to increase comfort and decrease energy consumption.

Warming Solution

Two 24-foot diameter Big Ass Fans® were installed in the store's self-service section and loading dock to circulate the air. Destratifying the space creates consistent temperatures from floor to ceiling and reduces the amount of heat lost through the roof.

Year-Round Results

Big Ass Fans thoroughly recycle the air by pushing the heat trapped at the ceiling down to the occupant level, significantly reducing the temperature differential between the floor and ceiling. The result: increased thermal comfort and lower energy bills. Additionally, IKEA benefitted from energy rebates offered by the Energy Trust of Oregon, drastically improving their return on investment. The fans, along with upgrades to the building automation system for lighting and HVAC, helped contribute to a 13.2 % reduction in energy consumption. The facility is now comfortable and, in addition to other green initiatives, energy efficient year-round.

"In the winter we run the fans at just 10 %, to bring heat down [to the floor]. In the summertime we run the fans at 50 % and are able to shut off five of the eight 30-ton rooftop air conditioning units and still maintain the desired 74 F."

Jay Duhl
Facility Manager
IKEA

