

Comparative Case Study

Cambridge Space Heaters vs. Draw Thru Make-up Air

Large Retailer Northeast

Cambridge Space Heaters



Operating Costs

Based on 6,149 Heating Degree Days @ 60°

\$0.17/ft² Gas cost @ \$1.00/therm

\$0.02/ft² Electric cost @ \$0.08/kWh

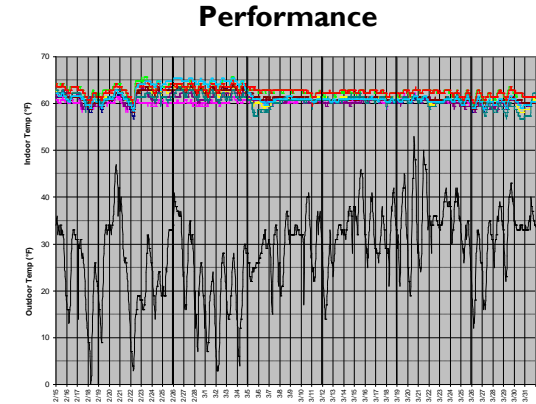
\$0.19/ft² Total cost

Building Specifications

- R-14 Roof / R-10 Walls
- 1,400,000 ft² x 36' high
- Designed for 55° @ -7°
- Located in Upstate NY

Heating System

- (17) Cambridge Space Heaters
- Roof top mounting
- 2200 MBH each
- 11,600 CFM average
- 197,150 CFM total - intermittent
- 162.5 HP total - intermittent



± 6° indoor temperature variation from 60° setpoint

Draw Thru Make-up Air Heaters



Operating Costs

Based on 5,658 Heating Degree Days @ 60°

\$0.42/ft² Gas cost @ \$1.00/therm

\$0.03/ft² Electric cost @ \$0.08/kWh

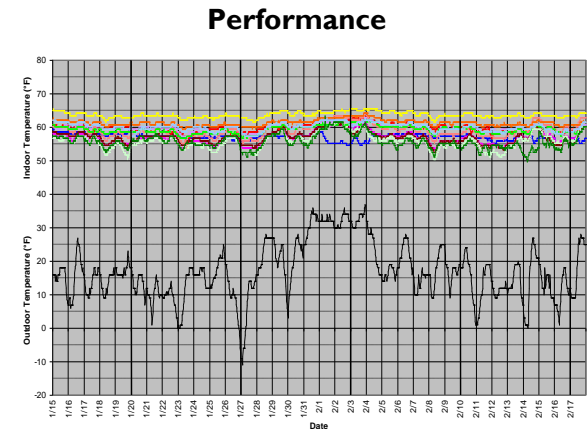
\$0.45/ft² Total cost

Building Specifications

- R-19 Roof / R-10 Walls
- 1,400,000 ft² x 36' high
- Designed for 55° @ 0°
- Located in Kalamazoo, MI

Heating System

- (15) Draw Thru Make-up Air Heaters
- Roof top mounting
- 2200 MBH each
- 18,000 CFM each
- 270,000 CFM total - intermittent
- 225 HP total - intermittent



± 10° indoor temperature variation from 60° setpoint

Summary

The Cambridge system used **58% less** total energy with more even temperatures in a colder climate with less roof insulation. If the 1,400,000 ft² facility had installed a Cambridge system they could have saved approximately **\$350,000/year** operating at **\$0.19/ft² vs. \$0.45/ft²**.



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