

# COMPARATIVE CASE STUDY

## Cambridge Space Heaters vs. Direct Fired Recirculation Warehouses

### Cambridge Space Heaters



#### Operating Costs

Based on 5,682 Heating Degree Days @ 65°

\$0.17/ft<sup>2</sup> Gas cost @ \$1.00/therm

\$0.02/ft<sup>2</sup> Electric cost @ \$0.08/kWh

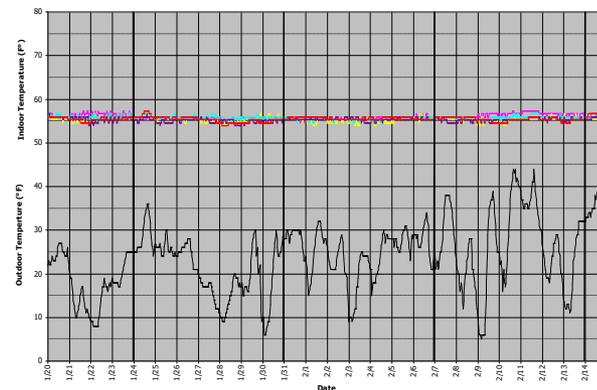
**\$0.19/ft<sup>2</sup> Total cost**

#### Building Specifications

- R-14 Roof / R-10/R1.5 Walls
- 579,000 ft<sup>2</sup> x 38' high
- 88 doors
- Located in Bethlehem, PA

#### Heating System

- (7) Cambridge Space Heaters
- Thru wall mounting
- 11,300 MBH total
- 63,500 CFM total
- 43.5 HP total - intermittent



± 3° indoor temperature variation  
from 55° setpoint

### Direct Fired Recirculation



#### Operating Costs

Based on 5,750 Heating Degree Days @ 65°

\$0.23/ft<sup>2</sup> Gas cost @ \$1.00/therm

\$0.16/ft<sup>2</sup> Electric cost @ \$0.08/kWh

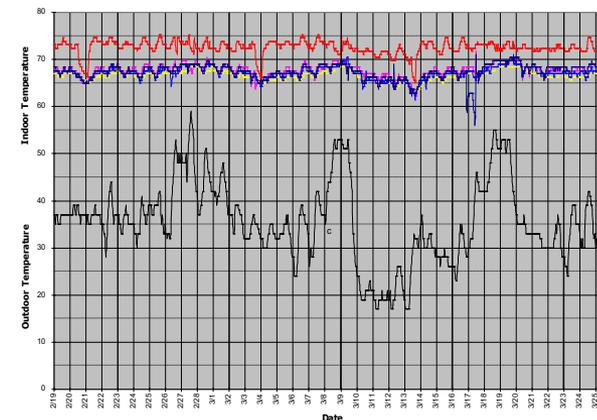
**\$0.39/ft<sup>2</sup> Total cost**

#### Building Specifications

- R-19 Roof / R-19/R-2 Walls
- 361,200 ft<sup>2</sup> x 40' high
- 56 doors
- Located in Dayton, Ohio

#### Heating System

- (2) Direct-fired Recirculation Heaters
- Roof top mounting
- 8,250 MBH total
- 210,000 CFM total (.87 AT/Hr)
- 150 HP total - continuous



± 8° indoor temperature variation  
from 65° setpoint

### Summary

The Cambridge system used **51% less** total energy with more even temperatures.

If the 361,200 ft<sup>2</sup> facility had installed a Cambridge system they could have saved approximately

**\$72,000/year** operating at \$0.19/ft<sup>2</sup> vs. \$0.39/ft<sup>2</sup>.