

# Comparative Case Study

Cambridge Space Heaters vs. Direct Fired Recirculation

## Chicago Distribution Centers

### Cambridge Space Heaters



#### Operating Costs

Based on 4,913 Heating Degree Days @ 60°

\$0.11/ft<sup>2</sup> Gas cost @ \$1.00/therm

\$0.01/ft<sup>2</sup> Electric cost @ \$0.08/Kwh

**\$0.12/ft<sup>2</sup> Total cost**

### Direct Fired Recirculation



#### Operating Costs

Based on 4,913 Heating Degree Days @ 60°

\$0.37/ft<sup>2</sup> Gas cost @ \$1.00/therm

\$0.05/ft<sup>2</sup> Electric cost @ \$0.08/Kwh

**\$0.42/ft<sup>2</sup> Total cost**

#### Building Specifications

- 999,700 ft<sup>2</sup> x 35' high
- R-14 Roof / R-10 Wall

#### Heating System

- (8) Cambridge Space Heaters
- 16,192 MBH total
- 81,920 CFM
- 60 HP total - intermittent

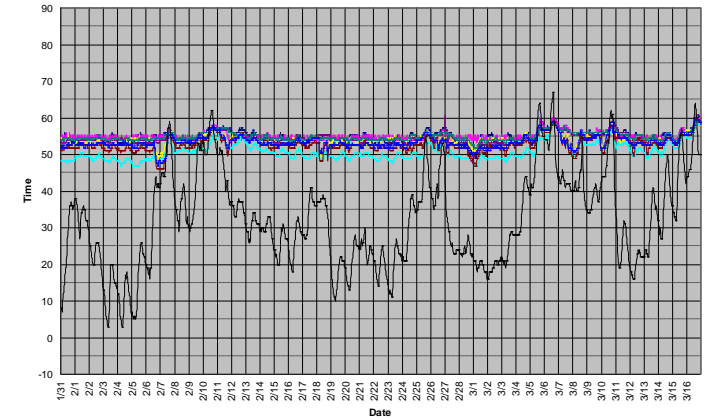
#### Building Specifications

- 814,848 ft<sup>2</sup> x 37' high
- R-14 Roof / R-10 Walls

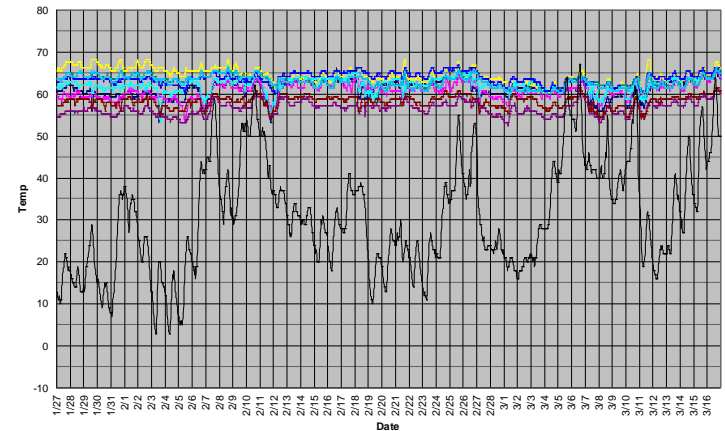
#### Heating Systems

- (4) Direct Fired Recirculation
- 23,548 MBH total
- 215,000 CFM
- 120 HP total – continuous

#### Performance



#### Performance



#### Summary

The Cambridge system used over **71% less** total energy with less temperature variation. If the 814,848 ft<sup>2</sup> facility had installed a Cambridge system they could have saved approximately **\$244,000/year** operating at **\$0.12/ft<sup>2</sup>** vs. **\$0.42/ft<sup>2</sup>**.



760 Long Road Crossing Dr. • Chesterfield MO 63005  
800-899-1989 • www.cambridge-eng.com