

# PARAGON HVAC

CAPTIVEAIRE'S SUPERIOR HVAC SOLUTION

## CASE STUDY APPLICATION

### COMMERCIAL DINING HVAC

## PRODUCT SPOTLIGHT

### ONE CHAIN, TWO LOCATIONS – PARAGON RTU VS. TRADITIONAL RTU

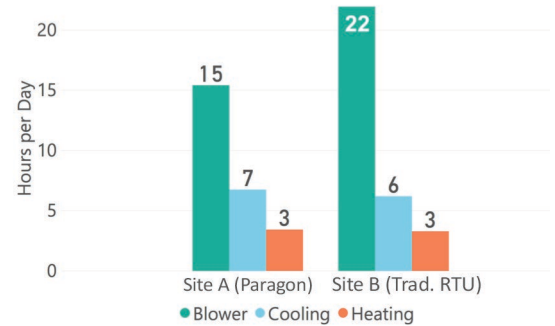
CaptiveAire serves and monitors a restaurant chain with two locations in Kansas City. One of the locations, **Site A**, utilizes CaptiveAire **Paragon HVAC** to handle the HVAC demands and the other location, **Site B**, utilizes traditional (non-modulating) On/Off rooftop units (**Trad. RTU**). The restaurants have nearly identical building design parameters and operation patterns. CaptiveAire analyzed the space condition and equipment usage data at each site and compared a full year of performance.

Data trends over the full year suggest Paragon HVAC as the superior solution:

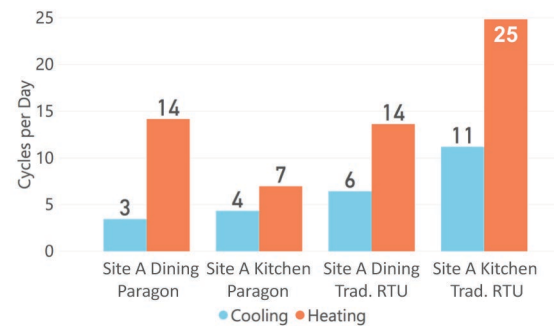
- **More precise space temperatures show improved comfort**
- **Lower overall utility costs**
  - Despite fully conditioning the kitchen's make-up air (MUA)
- **Proper runtime from superior controls and overnight setbacks**
  - 32% reduction by eliminating excess overnight HVAC usage
- **Less equipment cycling from full modulation extends unit lifetime**
  - 59% fewer cooling equipment cycles
  - 46% fewer heating equipment cycles
- **Reduced need to mix return air to condition outside air**
  - Met the same conditioning demands with 57% less total air movement and significantly cut blower energy demands
  - Less total air allows for downsized, reduced-cost ductwork

## Conclusion

As demonstrated by the data gathered throughout a full year, CaptiveAire's Paragon HVAC offers a vastly superior solution for handling outside air precisely, cost-effectively, and in a manner that protects component lifetimes when compared to a traditional RTU.



Average Equipment Use per Day



Average Equipment Cycles per Day



Space Temperature Ranges When Occupied

Location	Customer Volume	Electricity	Natural Gas
Site A (Paragon)	156,575	\$24,884	\$5,257
Site B (Trad. RTU)	148,175	\$25,675	\$6,242
<b>Comparison</b>	<b>6% Busier</b>	<b>3% Savings</b>	<b>16% Savings</b>

Utility Comparison: Site A (Paragon) vs. Site B (Trad. RTU)