



OUTSIDE AIR OPTIMIZER

Save Energy and Provide More Comfort

75F has reinvented the rooftop package unit (RTU) economizer to make it more energy efficient and comfortable for occupants. Equipped with cloud computing data storage and processing power, this OAO is much more efficient than the standard economizer controller found in existing units. Retrofit your economizer with 75F OAO and save up to 40% of your utility cost! Due to its simplicity and ease of installation, payback is typically only one year.



Key Benefits



Energy Savings

Save up to 40% of utility costs by optimizing the amount of outside air allowed into HVAC package units while maintaining high comfort standards.



Fast Payback

Energy savings and utility rebates typically pay back the cost of installation in one year. Simple, wireless installation can be done with little disruption.



Comfort

Cutting edge technology optimizes outside air to achieve an ideal level of Indoor Air Quality (IAQ) and mixed air temperatures, allowing for maximum comfort.

Product Features

- Save up to 40% utility cost of operation
- Predictive analytics improve comfort and economy
- Online portal provides remote access to system and energy usage / savings
- Enclosure mounts anywhere within the RTU
- Provides both DCV and Enthalpy Economizer functions
- Compatible with most actuators
- Default settings work with most units, so installation is simple
- No enthalpy module needed
- No home-run wiring to central controller needed
- Optional actuator adder available
- Optional differential pressure sensor available
- Optional CO and NO2 gas detectors available

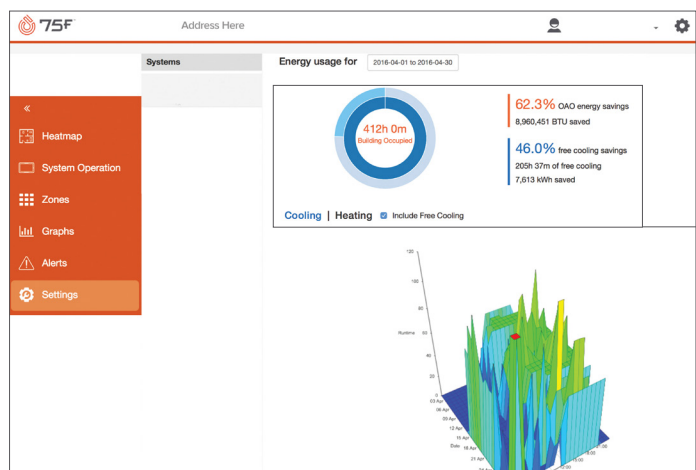
How It Works

Demand Controlled Ventilation (DCV) optimizes the outside air damper position based on IAQ needs by sensing CO2 levels in the return air system. Utility costs are saved when outside air is only admitted when demanded by IAQ needs. 75F DCV also improves fan efficiency via interval modulation for step speed drives and Variable Frequency Drive (VFD) for frequency drives (when equipped).

Differential Pressure Control provides a way for the outside air volume of an RTU to provide some makeup air (MUA) when a dedicated MUA unit is not present as sometimes found in restaurants with exhaust hoods. An optional differential pressure sensor package is installed to compare indoor and outdoor air pressure. 75F OAO will modulate the RTU outside air damper to achieve pressure balance.

Advanced IAQ is available when optional CO and NO2 gas detectors are installed. Threshold values of these gases can trigger evacuation by exhaust equipment when necessary. This feature may be installed on a dedicated MUA unit with synchronized exhaust equipment to maintain both IAQ and air pressure balance.

Comparative Enthalpy Economy optimizes the outside air damper position based on outside enthalpy (a measure of temperature and humidity) compared with calculated indoor enthalpy (the predicted enthalpy of discharge air based on psychometric effects of the RTU). When in the cooling mode, 75F OAO will determine if weather conditions are right to allow outside air in for “free cooling” instead of engaging AC compressors. Cloud computing maximizes free cooling by predicting needs of internal load conditions and obtaining outside enthalpy via live weather data instead of failure-prone hardware on the roof. Furthermore, 75F OAO does not modulate to a fixed mixed air temperature (MAT) such as 55°, but rather calculates the ideal MAT based on the real load of the indoor zones, much like a cooling plant. This strategy significantly improves comfort by optimizing diffuser discharge air temperatures and reducing room temperature variations.



Cooling | Heating Include Free Cooling

62.3% OAO energy savings

8,960,451 BTU saved

46.0% free cooling savings

205h 37m of free cooling

7,613 kWh saved

Our online platform Facilisight enables you to see, in real time, how well your OAO system is performing.