



FOCUS ON EMERGING TECHNOLOGY

COMMERCIAL DRYER MODULATION RETROFIT

Technology Description

A commercial dryer modulation retrofit consists of replacing a single flow rate gas valve on an existing dryer with a two-stage gas valve, temperature sensor, and control unit. These modifications allow the dryer to modulate the gas input between low and high settings based on dryer exhaust temperatures. If the sensor detects a sudden decrease of flue temperatures, the high fire will automatically re-engage. Once the sensor detects the optimal flue gas temperature, the gas valve steps into low or savings mode. Installing the technology does not require modifications other than to the natural gas supply. Total cost with installation is between \$500-\$600 per dryer.

Bio-Therm is currently the only manufacturer of this device and claims it does not bypass any dryer manufacturer safety devices and all parts are UL Certified.

Benefits

1. Reduced natural gas consumption by matching gas input based on exhaust temperature.
2. More consistent heat in the drying process may reduce dryer heat damage to delicate fabrics.
3. Potential for noticeably reduced drying times.

Customer Type

Hotels, water parks, laundromats, healthcare facilities, dry cleaners, gyms, multifamily housing, schools, dairies, etc.

Applications

Commercial dryers between 20 - 250 lbs/cycle.

Market Sectors

Agricultural, schools, and commercial.

Potential Energy Savings

Typical energy savings are 12% for lightly loaded systems, and 25% for high-use systems. Studies showed average savings of 160–350 therms/year (\$90-\$200/yr) of gas savings/dryer. Energy savings will be dependent upon the size of the dryers, current dryer operation, and equipment runtime hours.

Potential Payback Range

2-2.5 years before incentives.

Rebates Available

Prescriptive incentives are available for modulating commercial dryer controls. Download the [HVAC/Plumbing catalog](#) to learn more. Find an [Energy Advisor](#) to help you get started.