

Energy-Efficient Ventilation

Beating COVID-19 with Smarter HVAC

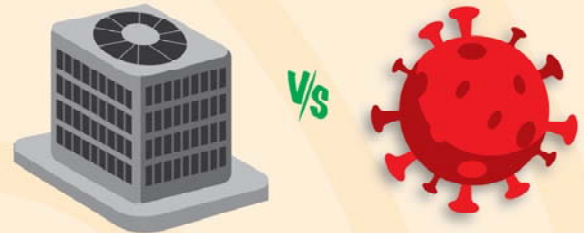
The Challenge COVID-19 is Airborne



SARS-CoV-2 is:

- extremely transmissible via indoor air
- likely to require ongoing mitigation

The Solution HVAC against COVID



HVAC can reduce transmission through:

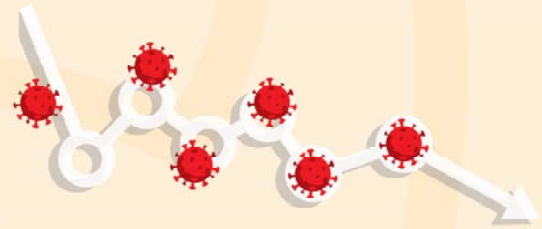
- ventilation • filtration
- air temperature & pressure control
- air disinfection

The Tools How Can HVAC Combat COVID-19?



- software for IAQ monitoring and HVAC control
- setpoint optimization • humidity control
- high-efficiency air filters • heat-recovery ventilation
- IAQ sensors • ultraviolet germicidal irradiation

The NIADE Metric How Much Ventilation Do I Need?



Introducing **NON-INFECTIOUS AIR DELIVERY EQUIVALENT**.
It calculates the effects of outdoor air, filtration, deposition, and inactivation on airborne pathogens.

Proof of Concept NIADE in Action



In a commercial building, software to optimize HVAC monitoring and control was installed, along with MERV 13 filters. Benefits:

- ventilation and NIADE reporting • energy savings
- improved occupant comfort • healthier indoor air

Driving Uptake Incentive Program Components



A utility-sponsored incentive program should:

- foster education and training
- encourage investment in equipment & controls
- ensure monitoring and compliance

The Payoff Safer & More Efficient Indoor Air

By making intelligent changes to the way we monitor and control HVAC infrastructure, building operators can decrease the risk of COVID-19 transmission while saving energy and reducing costs.

