

Proactively plan for ASHRAE 241 standard.

Carson Solutions has successfully applied optional Bipolar Ionization (BPI) technology within the QLCI! This combination of technologies proactively ventilates and delivers equivalent clean air flow to meet ASHRAE 241 requirements.

### ABOUT DISPLACEMENT INDUCTION VENTILATION

Displacement induction ventilation within the QLCI is proven to remove space respiratory contaminants in occupied zones. The industry-renowned Herrick Lab at Purdue University has validated stratified air conditions in cooling and heating modes through CFD modeling. With proven year-round displacement ventilation, the QLCI doesn't just dilute spaces with air, it effectively purges contaminants out of the breathing zones.

### ABOUT BIPOLAR IONIZATION

Bipolar ionization (BPI) generates negatively and positively charged ions through an environmentally friendly process. These ions directly attack the DNA of bacteria and viruses, protecting your space's inhabitants from illness and disease. Per UL867 and UL2998 testing, the integrated BPI devices emits no ozone and no harmful byproducts. ASHRAE 241 standard specifically lists ionizing systems as an acceptable cleaning methodology.

## ASHRAE 241 - WHAT IS IT & HOW DOES IT APPLY?

ASHRAE released a standard in 2023 and is set to be formally enacted in 2025. Informally this standard outlines suggested practices for building owners to control HVAC systems in response to a documented high rate of infection, similar to those suggested in response to COVID-19. More formally, the standard defines the amount of "equivalent clean airflow" (ECA) necessary to reduce risk of transmission during an "infection risk management mode", IRMM.

While ASHRAE 62.1 still dictates the required ventilation rates for design and normal operation, if an IRMM is determined for a building site, to maintain full occupancy, for example in a classroom, the required minimum clean air equivalent nearly triples! Owners and designers have multiple costly and impactful paths: increasing OA at air handler, adding some type of sidestream air cleaning device or a portable in-room air cleaning device.

However, with bipolar ionization recognized by ASHRAE, integration of bipolar ionization with Carson Solutions QLCI, designers can deliver the required ECA per code for their clients. Designers can implement proactive measures without upsizing the DOAS or heating and cooling devices and avoid higher pressure drops, electrical draws, and installation costs. This non-invasive design approach helps designers and owners alike deliver the needed ECA while avoiding costly design impacts.

## NEW CONSTRUCTIONS OR RETROFIT - Perfect Solution for Both!

Implement QLCI + BPI for your next design project. Have the QLCI already installed? Integrate a retrofit kit for increased IAQ benefit.

