

# enVerid Air Purifier

Ceiling Mounted Air Filtration System



## Peace of Mind for COVID-19 Mitigation

The enVerid Air Purifier is a ceiling mounted, high efficiency air filtration system with an ultraviolet germicidal irradiation (UVGI) sterilization lamp that has been shown to capture 99.99% of viruses including a surrogate for the COVID-19 virus. Suitable for offices, classrooms, retail stores, and other commercial applications, the product delivers a low cost, easy to install, ultra-quiet, and energy efficient alternative to costly HVAC system upgrades. Units can be mounted below the ceiling where their visibility provides peace of mind, or out of sight in the ceiling plenum. Each unit comes with a wall-mounted LCD-display controller for easy monitoring and control.



## enVerid Air Purifier Benefits

The enVerid Air Purifier offers a cost-effective way to remove virus particles from indoor air without the significant expense of upgrading HVAC systems and the “energy penalty” associated with conditioning higher volumes of outside air. The filter and fan are matched to maximize removal of airborne virus particles with quiet, energy efficient operation. Compared to portable air filters, the ceiling mounted system saves valuable floor space, avoids clutter, and allows for more flexible placement to minimize noise and optimize air flow.

 <span>⊗ ELIMINATE VIRUSES</span>	 <span>⊗ REMOVE PM2.5</span>	 <span>⊕ CLEAN AIR</span>	 <span>⊕ SAVE ENERGY</span>
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Third-party tests conducted by **LMS Technologies**, a US-based independent air media and filter testing company, showed that the enVerid Air Purifier removes 99.99% of viruses from air passing through the filter. Testing was done using MS-2-bacteriophage, a surrogate for SARS-CoV-2. Viral efficiency testing was performed according to ASTM F2101-19, the testing standard for medical face mask materials. Testing by LMS also showed a single pass efficiency of 99.95% for particles whose diameter is equal to 0.3-0.5 μm, the lower end of the size range generally attributed to bioaerosols that can carry viruses. The UVC sterilization lamp installed in the return air box kills bacteria and viruses adsorbed on the filters. The enVerid Air Purifier can also be used without the UVC sterilization lamp.

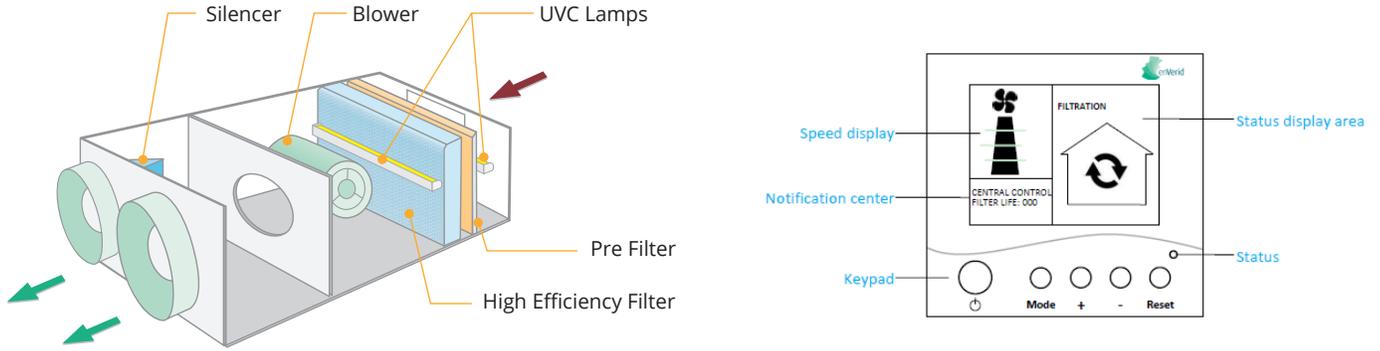
**EXAMPLE ENVERID AIR PURIFIER SIZING**

Building Type	Floor Area (sq ft)	Ceiling height (ft)	enVerid Air Purifiers	Current Ventilation	OA Ventilation ACH	enVerid Air Purifier ACH	Total ACH	% ACH Increase
Classroom	900	10	1	Low ventilation	1	3.3	4.3	333%
Classroom	900	10	1	Typical school	1.5	3.3	4.8	222%
Classroom	900	10	1	Good ventilation	3	3.3	6.3	111%
Retail Store	2,500	10	3	Low ventilation	1	3.6	4.6	360%
Retail Store	2,500	10	3	Typical store	1.5	3.6	5.1	240%
Retail Store	2,500	10	3	Good ventilation	2	3.6	5.6	180%
Office Floor	20,000	8	20	Low ventilation	1	3.7	4.7	375%
Office Floor	20,000	8	20	Typical office	1.5	3.7	5.2	250%
Office Floor	20,000	8	20	Good ventilation	2	3.7	5.7	187%

## How it Works

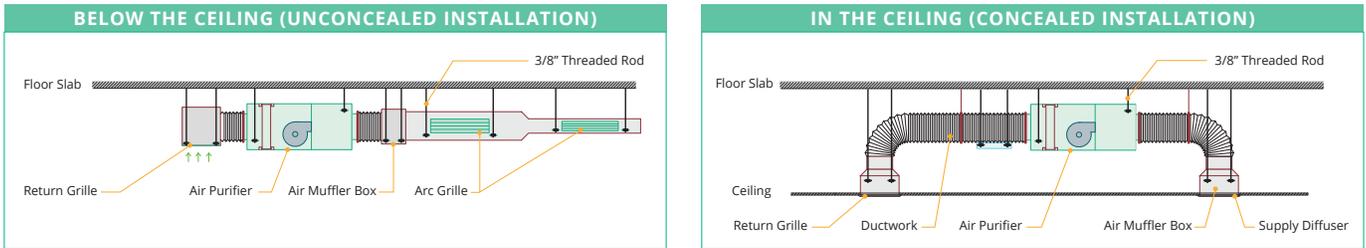
Each enVerid Air Purifier unit is mounted from the ceiling, quietly pulling air from the occupied space and running it through a multi-stage series of high-performance filters. Cleaned air is then sent back into the space. Each unit treats up to 1,000 ft<sup>2</sup> of space, cleaning the entire air volume every 20 minutes. Multiple units can be installed to meet the requirements of any size space.

The diagram below shows the components within the enVerid Air Purifier and the wall-mounted control panel. The control panel is connected to the unit using a hard-wired connection and can be mounted in the space or in a nearby IT or electrical/mechanical room.



## Installation and Maintenance

The enVerid Air Purifier's slim profile and ducted design allows for easy installation and wide coverage area.



The enVerid Air Purifier can be installed below the ceiling or in the ceiling plenum. Four hanging brackets are included with the unit. Duct connections and ceiling return may be required depending on the installation. The unit requires access to 110V or 220V power and is connected to the controller with an 18-gauge stranded shielded communication wire (not included). Side access is required for safe and easy filter replacement. The filter display on the control panel shows the number of days until the next high efficiency filter replacement, which is required every six-months if the UVC lamps are in use and twelve months if they are not in use. The washable pre-filter should be cleaned every time the high efficiency filter is changed and replaced every 1-2 years. The UVC lamp bulbs should be replaced every 9,000 hours and cleaned whenever the high efficiency filter is replaced.

PRODUCT SPECIFICATIONS								
L x W x H	WEIGHT	COLOR	MAX SPACE	SPEEDS	VOLTAGE	POWER (WATTS)	AIR FLOW (CFM)	NOISE (DB)
32" x 20" x 13"	50 lbs.	Gray or white	1,000 SQFT	4	110V or 220V	388/325/283/245	500/400/300/200	51/45/41/38

[www.enverid.com](http://www.enverid.com) · 1.617.795.4000 · [info@enverid.com](mailto:info@enverid.com)

Energy Savings. Air Quality.

enVerid helps buildings achieve ESG (Environmental, Social, and Governance), healthy building, and cost saving goals by improving indoor air quality while saving money and reducing energy consumption and carbon emissions. For new HVAC systems, enVerid's award-winning HVAC Load Reduction (HLR) Modules enable immediate capital cost savings. HLR Modules also deliver up to 30% energy savings and superior indoor air quality in new and existing buildings. enVerid's air filtration products remove particulate and microorganism contamination from indoor air without the significant cost of upgrading mechanical systems and increasing mechanical ventilation rates. enVerid's products are deployed in commercial, academic and government buildings globally. enVerid's HLR Modules are ASHRAE Standard 62.1, LEED, and WELL compliant and eligible for utility rebates. For more information visit <http://www.enverid.com>.