

STERIL-AIRE®

UVC for HVAC™

Model SE Series UVC Emitters™

Single-Ended, Very High
Output Germicidal UVC
for HVAC Systems



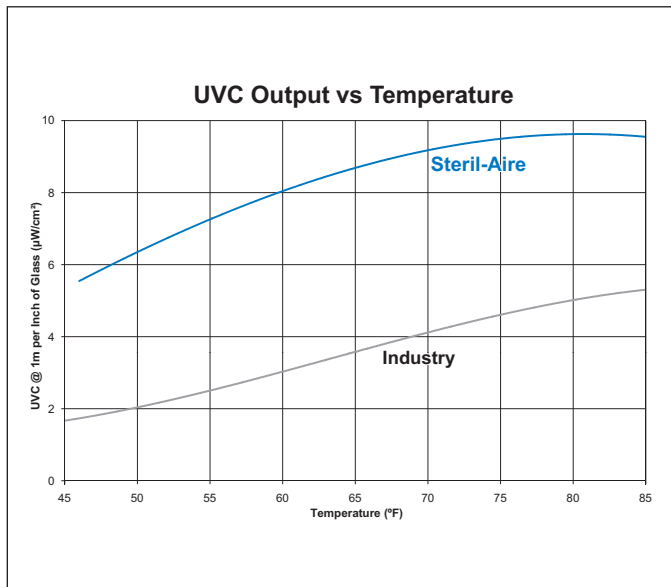
Competitive UVC lamps must be changed every 3-4 months because they quickly lose the output or “killing power” needed to maintain biofilm control. The UVC Emitter, by contrast, has a 12-month service life – and even after a full year, it has more than 3 times greater output than competitive devices deliver on Day 1! As a result, only Steril-Aire can ensure the germicidal performance you need.

Applications

Steril-Aire Single-Ended (SE Series) fixtures are used for new and retrofit fan coils, heat pumps, unit ventilators, terminal units and ductwork. Installed from the exterior of the AHU, they provide easy installation by making a 1” hole in the AHU wall or duct and simply mounting the fixture to the unit exterior. Only the Emitter penetrates into the system, while the power supply remains external. SE Emitters are available in seven lengths (12”, 16”, 20”, 24”, 30”, 36” and 42”) with a universal 120-277 V power supply.

Benefits

- Reduces HVAC energy costs by restoring heat transfer and net cooling capacity.
- Uses germicidal UVC irradiation proven as an effective inactivation method for mold, bacteria and viruses.
- Eliminates costly cleaning programs and the use of harmful chemicals and disinfectants by continuously cleaning coils, drain pans, plenums and ducts.
- Delivers up to 6 times the output of competitive UVC products at HVAC operating temperatures, for longer life and more reliable germicidal control.
- Offers lowest life-cycle cost of any UVC product. Return on investment is often less than one year.
- Uses patented state-of-the-art solid-state electronic power supply for enhanced reliability and performance.
- Produces no ozone or other secondary contaminants.
- Installs quickly and easily – ideal for small systems and/or ducts.
- Improves Indoor Air Quality (IAQ).

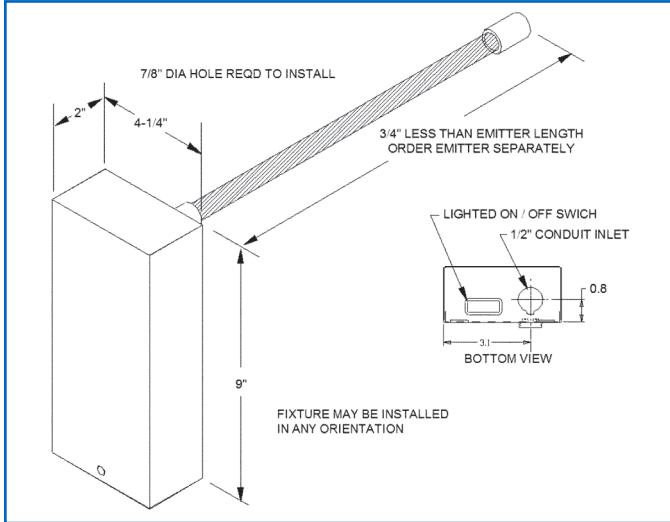


Steril-Aire’s multi-patented UVC Emitter provides the best and longest-lasting UVC performance available. As shown in the comparison graph (*above*), it has been independently tested to deliver up to 6 times the output of other ultraviolet devices under HVAC operating conditions (50 °F @ 400 fpm air velocity).

Model SE Specifications

The UVC Emitter and fixture shall be factory assembled and tested. They shall consist of a fixture, power supply, Emitter socket and Emitter.

The fixture shall be constructed of 304 stainless steel to withstand HVAC environments and shall be equipped with a 1/2" electrical conduit opening to facilitate wiring. All components shall be incorporated into one integral assembly that maximizes serviceability.



This product may be covered by one or more of the following patents, others pending: 5,334,347 / 5,817,276 / 5,866,076 / 6,245,293 / 6,267,924 / 6,280,686 / 6,313,470 / 6,372,186 / 6,423,882 / 6,500,267 / 6,589,476 / 6,627,000 / 6,997,578 / 7,140,749 / 7,282,728 / 7,459,694.

It shall be designed for mounting from outside the airstream with only the Emitter in the conditioned air. Emitter shall be held in place and supported in the airstream by a patented integral collar, o-ring and heavy-duty spring wire fastener. The housing shall include an on-off switch and an indicator light to verify electrical power. Sufficient clearance on the side of the AHU should be allocated to facilitate installation and service (clearance length must be equal to or greater than Emitter length).

The power supply shall be a Class P2, electronic rapid start type with a power factor of >0.98 and a power conversion of >90%. It shall be available in 120-277 V, 50/60 Hz, single phase (will perform satisfactorily @ 100 V and 240 V). It shall be designed to maximize photon production, irradiance and reliability in cold airstreams of 0-140 °F, 100% RH. The design shall include RF and EMI suppression.

The socket shall be a Circline® 4 pin type with sufficient wire length to facilitate service.

The Emitter shall be a very high output, hot cathode, T5 diameter, Circline® cell-base type that produces a germicidal UVC band of 253.7 nm. The SE Emitter shall operate in air velocities of up to 2000 fpm and air temperatures of 35-140 °F. It shall produce no ozone or other secondary contaminants.

Independent testing: The unit shall be tested by an independent test laboratory, and shall be verified to provide output per one inch arc length of not less than 7.8 µW/cm² at 1 meter in a 400 fpm airstream of 50 °F.

Unit shall comply with ANSI/UL Standards 153, 1598, 1995 and CSA and CE Standards. The manufacturer shall be an ISO 9001:2008 certified facility.

Ordering Information

| Fixture | Part No. | Description | Emitter Length | Electrical |
|-------------|----------|----------------------|----------------|------------|
| SE 1 VO | 1100200 | Single-Ended Fixture | N/A | 120-277 V |
| UVC Emitter | | | | |
| GTS 12 VO | 21000700 | UVC Emitter | 12" | 45 W |
| GTS 16 VO | 21000100 | UVC Emitter | 16" | 55 W |
| GTS 20 VO | 21000200 | UVC Emitter | 20" | 64 W |
| GTS 24 VO | 21000300 | UVC Emitter | 24" | 72 W |
| GTS 30 VO | 21000400 | UVC Emitter | 30" | 86 W |
| GTS 36 VO | 21000500 | UVC Emitter | 36" | 100 W |
| GTS 42 VO | 21000600 | UVC Emitter | 42" | 110 W |



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