

# STERIL-AIRE®

## UVC for HVAC™

## Model ESEN Series for Enhanced UVC Emitters™

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



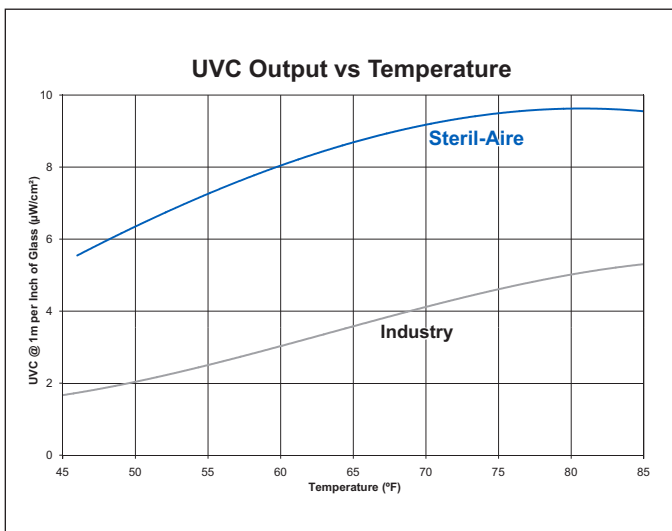
Competitors UVC lamps must be changed every 3-4 months because they quickly lose the output or “killing power” needed to maintain biofilm control. The UVC Emitter, by contrast, has a 12-month service life – and even after a full year, it has more than 3 times greater output than competitive devices deliver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

### Applications

Steril-Aire Enhanced Single-Ended NEMA 4X (ESEN Series) fixtures combine the externally mounted design of the ESE Series with a weather resistant NEMA 4X fixture. Installed from the exterior of rooftop A/C units or ductwork, they provide ideal solutions for rooftop AHUs. By creating two 1” holes in the equipment wall and mounting the fixture, the Emitter may be installed vertically or horizontally. Only the Emitter penetrates the system, while the power supply remains external. The ESEN Series is available in nine lengths (12”, 16”, 20”, 24”, 30”, 36”, 42”, 50” and 61”) with a 120-277 V power supply.

### Benefits

- Supports Emitters up to 61” in length from an easy to install NEMA 4X rated Aluminum fixture that mounts on the outside of the unit.
- Maintenance of the Power Supply and Emitter replacement is simple and accessible without disruption of AC Unit operation.
- Includes a Conditional Lifetime Warranty on the Power Supply and fixture.
- 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.
- Produces no ozone or other secondary contaminants.
- Installs quickly and easily – ideal for small systems and/or ducts.
- Improves Indoor Air Quality (IAQ).



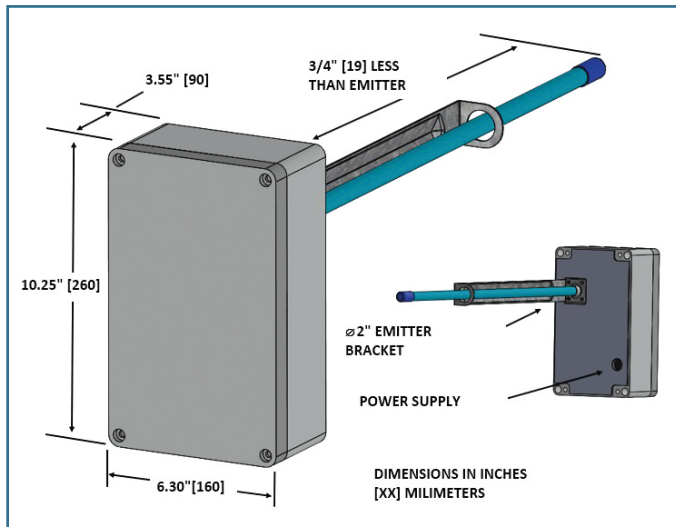
Steril-Aire’s multi-patented UVC Emitter provides the best and longest-lasting UVC performance available. As shown in the comparison graph (above), it has been independently tested to deliver up to 6 times the output of other ultraviolet devices under HVAC operating conditions (50°F @ 400 fpm air velocity).

# Model ESEN Specifications

The **UVC Emitter** and fixture shall be factory assembled and tested. They shall consist of a fixture, power supply, support bracket/reflector, Emitter socket and Emitter.

The **fixture** shall be constructed to NEMA 4X standards to withstand outdoor 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.

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, heavy-duty spring wire fastener and omnidirectional support bracket/reflector. The housing shall include an on-off switch and an indicator light to verify electrical power. 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 - 277 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 Steril-Aire Enhanced® 4 pin type with sufficient wire length to facilitate service.

The **Emitter** shall be a very high output, hot cathode, T5 diameter, Steril-Aire Enhanced® type that produces a germicidal UVC band of 253.7 nm. The EGTS 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  $7.8\mu\text{W}/\text{cm}^2$  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 9001:2015 and ISO 14001:2015 certified facility.

## Ordering Information

Fixture	Part No.	Description	Emitter Length	Electrical
ESEN 1 VO	12004000	Enhanced Single-Ended NEMA Fixture	16"–61"	120-277 V
UVC Emitter				
EGTS 16 VO	21000110	Enhanced UVC Emitter	16"	55 W
EGTS 20 VO	21000210	Enhanced UVC Emitter	20"	64 W
EGTS 24 VO	21000310	Enhanced UVC Emitter	24"	72 W
EGTS 30 VO	21000410	Enhanced UVC Emitter	30"	86 W
EGTS 36 VO	21000510	Enhanced UVC Emitter	36"	100 W
EGTS 42 VO	21000610	Enhanced UVC Emitter	42"	110 W
EGTS 50 VO	21000910	Enhanced UVC Emitter	50"	130 W
EGTS 61 VO	21000810	Enhanced UVC Emitter	61"	155 W

# STERIL-AIRE®

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