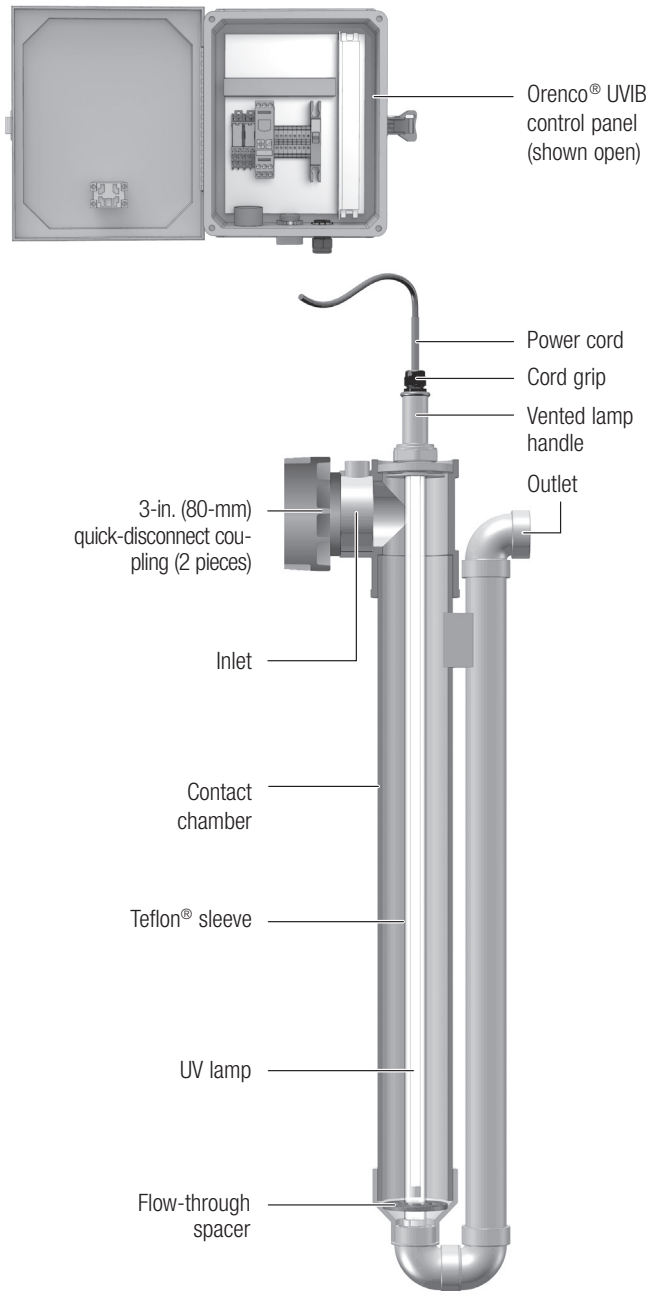


# Orenco<sup>®</sup> UV Disinfection Unit

## Applications

The Orenco<sup>®</sup> UV Disinfection Unit is designed for use in residential applications after advanced secondary treatment (10 mg/L cBOD5 and TSS) when disinfection is required before dispersal.

It requires installation inside a pump or gravity discharge basin or in a separate tank following an advanced secondary treatment system.



Orenco<sup>®</sup> UV Disinfection Unit, Cutaway View

## General

Treated effluent flows by gravity through the contact chamber and around the UV lamp where it is disinfected in a 360-degree contact zone. The unit uses no chemicals and has no moving parts. It requires annual cleaning and lamp replacement.

In side-by-side NSF<sup>®</sup> testing, the Orenco UV Disinfection Unit reduced bacteria by 99.999% (5 logs), meeting or exceeding the performance of other residential UV disinfection units.

The Orenco UV Disinfection Unit comes with a power ballast and a lamp current sensor, housed in an Orenco control panel to protect the UV unit's electronic components. The control panel is installed externally, outside of the wet well.

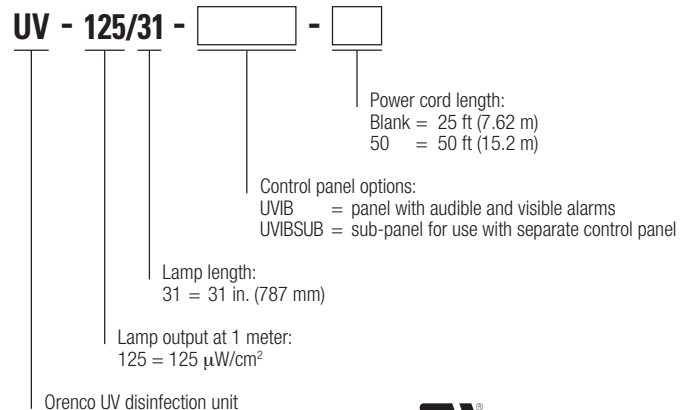
## Features/Specifications

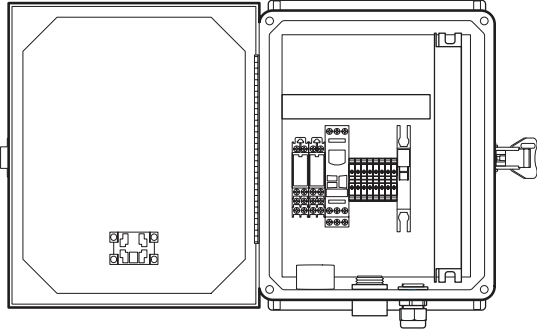
- UL-recognized for US and Canada
- Bacteria reduced by 99.999% (5 logs)
- Flow path designed for maximum contact time between effluent and lamp
- Components designed to work together — no piecemeal disinfection assemblies and wiring
- Teflon sleeve to protect lamp and minimize buildup and service intervals
- Quick-disconnect fitting for easy inspection and unit cleaning
- Power ballast and lamp current sensor housed in a control panel (not in a wet well) to minimize corrosion and failure due to environmental exposure

## Standard Models

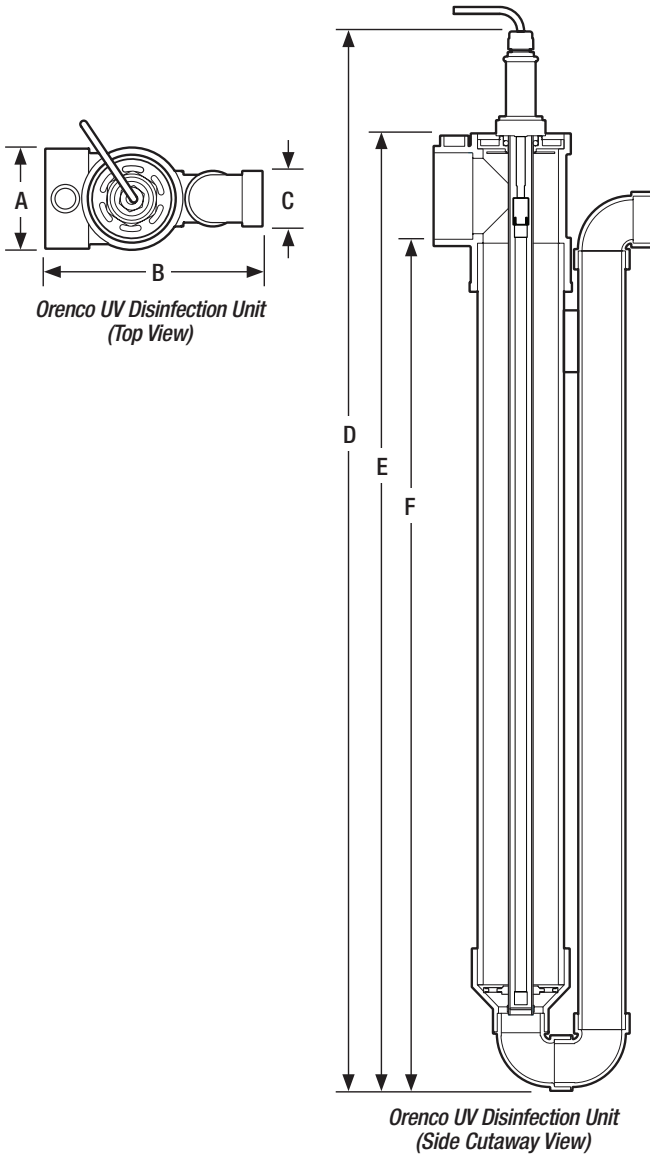
UV-125/31-UVIB, UV-125/31-UVIBSUB

## Product Code Diagram





Orenco UVIB Control Panel  
(Shown Opened)



Orenco UV Disinfection Unit  
(Top View)

Orenco UV Disinfection Unit  
(Side Cutaway View)

## Materials of Construction

Panel enclosure	UV-resistant fiberglass, UL Type 4X rated
Hinges and latches	Stainless steel
Cord grip	Nylon
Contact chamber	3-in. (80-mm) diameter Sch 40 black ABS
Inlet tee	3-in. (80-mm) Sch 40 black ABS
Other fittings	Black ABS
Quick-disconnect coupling	Black ABS
1½-in. IPS outlet	Black ABS
Lamp assembly seal	EPDM rubber
Lamp sleeve	Teflon®

## Specifications

### Panel Dimensions, in. (mm)

Height	11.5 (290)
Width	9.5 (240)
Depth	5.4 (135)

### UV Unit Dimensions, in. (mm)

A	5.63 (143)
B	10.06 (256)
C	1.50 IPS (40 DN)
D	42.25 (1073)
E	38.56 (979)
F	34.50 (876)
Inlet-to-outlet fall	0.50 (13)

### UV Unit Performance

Typical contact chamber UV dose (65% transmittance, 20% lamp degradation)	276,000 $\mu\text{W}\cdot\text{s}/\text{cm}^2$ at 1 gpm (0.06 L/sec) 55,000 $\mu\text{W}\cdot\text{s}/\text{cm}^2$ at 5 gpm (0.32 L/sec) 28,000 $\mu\text{W}\cdot\text{s}/\text{cm}^2$ at 10 gpm (0.63 L/sec)
Minimum target dose	30,000-38,000 $\mu\text{W}\cdot\text{s}/\text{cm}^2$
Lamp	31 inches (787 mm), 92 VAC, 50 or 60 Hz, 425 mA, 38 W; 254 nm UVC intensity at 1 m is 125 $\mu\text{W}/\text{cm}^2$
Power cord	600V, 18/2 UL Type TC
Cord plug	UL listed four-pin connector, lampholder, electric discharge, 1000 V or less
Ballast	120V, AC, 50 or 60 Hz, located in UL listed Orenco® control panel
Audible alarm*	95 dB at 24 in. (610 mm), warble-tone sound
Visual alarm*	7/8-in. (22-mm) diameter red lens, "Push-to-silence." UL Type 4X rated, 1 W LED light, 120 V
Circuit breaker	10 A, OFF/ON switch. Single-pole 120 V*. DIN rail mounting with thermal magnetic tripping characteristics

\* UVIB control panels only