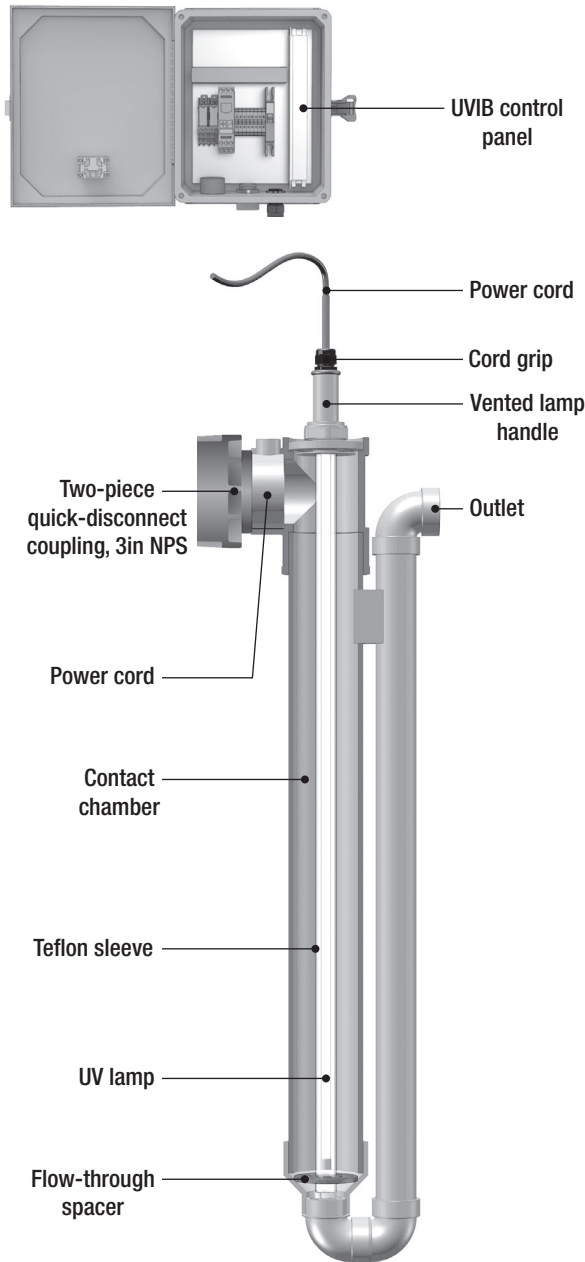


UV Disinfection Unit

Applications

The Orenco UV Disinfection Unit is designed for use in residential applications after advanced secondary treatment (10mg/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 UV Disinfection Unit

General

Orenco's UV disinfection unit uses ultraviolet light to disinfect effluent without chemicals or moving parts. Treated effluent flows by gravity through the contact chamber and around the UV lamp, where it is disinfected in a 360-degree contact zone. It requires annual cleaning and lamp replacement.

In side-by-side NSF® testing, Orenco's UV disinfection unit reduced bacteria by 99.999% (5 logs), meeting or exceeding the performance of other residential UV disinfection units.

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

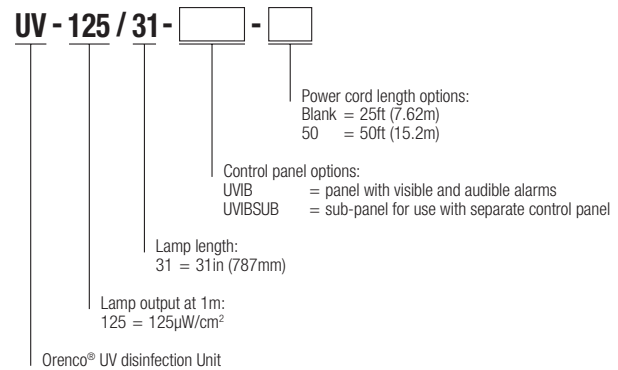
Features

- UL recognized for US and Canada
- Reduces bacteria by 99.999% (5 logs)
- Flow path maximizes effluent-to-lamp contact time
- All components designed to work together; no piecemeal parts or wiring
- Fluorinated ethylene propylene sleeve protects the UV lamp from buildup; maximizes service intervals
- Quick-disconnect fitting for easy inspection and cleaning
- Ballast has an end-of-life-feature to protect the UV lamp and cord
- Type 4X, UV-resistant fiberglass control panel houses the ballast and lamp current sensor outside of the wet well to minimize failures due to environmental exposure

Standard Models

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

Product Code Diagram



Not all product code configurations may be available as standard products.



Materials of Construction

Contact chamber	Schedule 40 black ABS
Cord grip	Nylon
Hinges and latches	Stainless steel
Inlet tee	Schedule 40 black ABS
Lamp assembly seal	EPDM rubber
Lamp sleeve	Fluorinated ethylene propylene
Other fittings	Black ABS
Outlet	Black ABS
Panel enclosure	UV-resistant fiberglass
Quick-disconnect couplings	Black ABS

Specifications

Dimensions, in (mm)	
Panel height	11.5 (290)
Panel width	9.5 (241)
Panel depth	5.4 (137)
A	5.63 (143)
B	10.06 (256)
C	1 1/2 NPS
D	42.25 (1073)
E	38.56 (979)
F	34.50 (876)
G Inlet-to-outlet fall	0.50 (13)

UV Unit Performance

Alarm, audible*	95dB at 24in (610mm), warble-tone sound
Alarm, visual*	7/8in (22mm) diameter red lens, "push-to-silence;" UL Type 4X rated, 1W LED light, 120V
Ballast	120V, AC, 50 or 60Hz; end-of-life-feature protects UV lamp and cord; housed in UL-listed Orenco control panel
Circuit breaker	10A, OFF/ON switch; single-pole 120V*; DIN rail mounting with thermal magnetic tripping characteristics
Cord plug	UL-listed four-pin connector, lampholder, electric discharge, 1000V or less
Lamp	31in (787mm), 92VAC, 50 or 60Hz, 425mA, 38W; 254nm UVC intensity at 1m is 125mW/cm ²
Power cord	600V, 18/2 UL Type TC
Target dose, minimum	30,000-38,000µW·s/cm ²
Typical contact chamber UV dose (65% transmittance, 20% lamp degradation)	276,000µW·s/cm ² at 1gpm (0.06L/sec) 55,000µW·s/cm ² at 5gpm (0.32L/sec) 28,000µW·s/cm ² at 10gpm (0.63L/sec)

*Available only in UVIB control panels.

