

AdvanTex® AX20-RTUV Treatment Systems

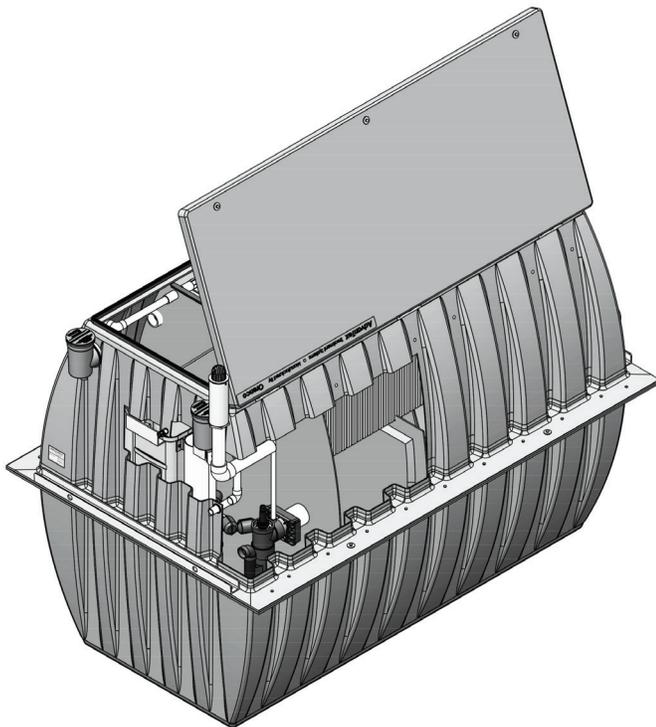
Applications

Orenco's AdvanTex AX20-RTUV Treatment System is a single, complete, self-contained module that treats residential-strength septic tank effluent to better-than-secondary standards, along with nitrogen reduction and ultraviolet disinfection, before discharging it by means of pump or gravity. It is ideal for new home construction and also well suited for the following circumstances:

- Greywater applications
- Repairs and retrofits
- Sites that require shallow burial
- Small sites and poor soils
- Strict discharge limits, including disinfection*

For sites requiring antibuoyancy measures, Orenco offers antibuoyancy beam kits.

* AX-RT treatment systems may be suitable for National Pollutant Discharge Elimination System (NPDES) applications, depending on the permit criteria.



Orenco AX20-RTUV (product image for illustrative purposes only)

Features/Specifications

To specify this product, require the following:

- Non-skid lid surface
- Easily removable and serviceable fixed-film textile media (a polyester plastic), operated in an unsaturated condition
- Consistent media quality
- Completely serviceable manifold
- Watertight construction and corrosion-proof materials
- Foam-core lid with insulation value of R-6 (RSI-1.1)

For more information on AX20-RTUV treatment systems, see the following Orenco technical documents:

- [AdvanTex Air Vents Technical Data Sheet, NTD-ATX-VENT-1](#)
- [AXUV Disinfection Unit Technical Data Sheet, NTD-TRT-UVD-2](#)
- [ClickTight Products Technical Data Sheet, NTD-GOP-SBX-3](#)
- [External Splice Box Technical Data Sheet, NTD-SBEX-1](#)
- [Float Switch Assemblies Technical Data Sheet, NTD-GOP-FSA-1](#)
- [HV-Series Pump Discharge Assemblies Technical Data Sheet, NTD-GOP-HVA-1](#)
- [PF-Series 60Hz, 1-Phase Effluent Pumps Technical Data Sheet, NTD-GOP-PMP-1](#)
- [PF-Series Submersible Effluent Pumps: 50Hz, 100mm \(4in\) Technical Data Sheet, NTD-PU-PF-4](#) (for international markets)
- [VeriComm AX20A Control Panels Technical Data Sheet, NTD-CP-VCOM-2*](#)
- [VeriComm AX20B Control Panels Technical Data Sheet, NTD-CP-VCOM-3*](#)

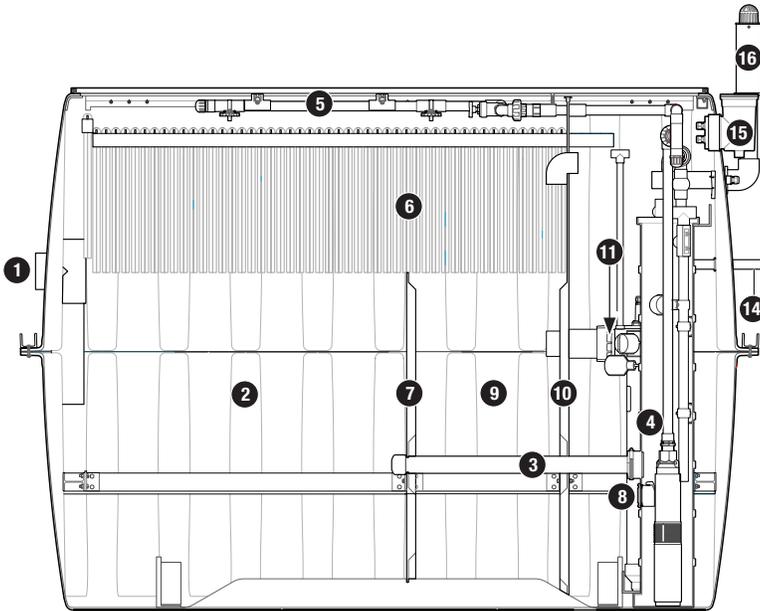
* Control panels ordered separately; also available in a Most Versatile Panel (MVP) version.



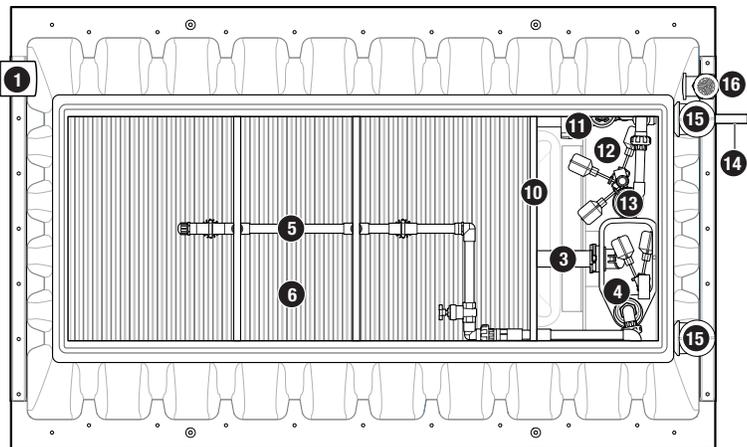
AdvanTex® Treatment Systems are listed to NSF-ANSI Standards 40 and 245 for Class I Systems. Visit www.nsf.org to view our Certified Products.



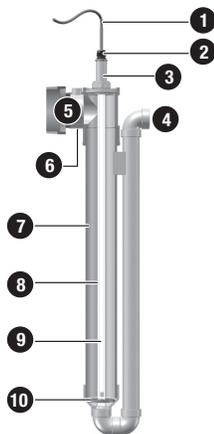
UL-recognized Orenco AXUV Disinfection Unit.



AdvanTex AX20-RTUV side cutaway view (pump discharge model shown)



AdvanTex AX20-RTUV top view (pump discharge model shown)



Orenco AXUV Disinfection Unit cutaway view

AX20-RTUV Components

1. Inlet
2. Recirc/blend chamber
3. Recirc transfer line
4. Recirc pumping system
5. Manifold and spin nozzles
6. Treatment media
7. Tank baffle
8. Recirc return valve
9. Recirc/filtrate chamber
10. Divider wall
11. Orenco AXUV ultraviolet disinfection unit
12. Disinfection/discharge chamber
13. Discharge pumping system
14. Outlet
15. Connection system (external splice box shown)
16. Passive air vent
17. Control panel (not shown)

AXUV Disinfection Unit Components

1. Power cord
2. Cord grip
3. Vented lamp handle
4. Outlet
5. 3in (80mm) quick-disconnect coupling
6. Inlet
7. Contact chamber
8. PTFE sleeve
9. UV lamp
10. Flow-through spacer

Specifications

AX20-RTUV Nominal Dimensions*	
Length, in (mm)	102 (2591)
Width, in (mm)	62 (1575)
Height, in (mm)	72 (1829)
Overall unit footprint, ft ² (m ²)	44 (4.09)
Visible footprint after installation, ft ² (m ²)	20 (1.86)
Lid insulation value	R-6 (RSI-1.1)

AX20-RTUV Dry Weight, lb (kg)	
Gravity discharge model	908 (412)
Pump discharge model	948 (430)

AXUV Disinfection Unit Performance†	
Typical contact chamber UV dose (65% transmittance, 20% lamp degradation)	270,000µW·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)
Minimum target dose	30,000-38,000µW·s/cm ₂
Lamp	31in (787mm), 92VAC, 50 or 60Hz, 425mA, 38W; 254nm UVC intensity at 1m is 125µW/cm ₂
Power cord	600V, 18/2 UL Type TC, 25ft (7.62m) length (50ft cord also available)
Cord plug	UL-listed four-pin connector, lamp holder, electric discharge, 1000V or less
Ballast	120V, AC, 50 or 60Hz, located in UL-listed Orenco control panel

*See AdvanTex Treatment System drawings for exact dimensions.

† For additional information and specifications, see [Orenco AXUV Disinfection Unit Technical Data Sheet, NTD-TRT-UVD-2](#).

Antibuoyancy Beams

Antibuoyancy beams help prevent the unit from floating out of the ground under saturated soil conditions.

Standard Model

AX-RT-AF BEAM KIT

Materials of Construction

Beams	Fiber-reinforced polymer (FRP)
Hardware	Fiberglass, stainless steel, and galvanized steel

Specifications

Dimensions, in (mm)	
Beam length	79.875 (2029)
Width	8 (203)
Height	2.5 (64)

Product Code Diagram

AX 20 RT UV - - - / -

Power:
 Blank = 120V (60Hz)
 230 = 230V (60Hz)
 220 = 220V (50Hz)

Discharge pump:
 Blank = no discharge pump 30 = 30gpm (1.9L/s) pump
 10 = 10gpm (0.6L/s) pump 50 = 50gpm (3.2L/s) pump
 20 = 20gpm (1.3L/s) pump

Cold weather:
 Blank = standard configuration
 UCW = ultra-cold weather package

Connection system:
 Blank = external splice box
 CLK60 = ClickTight™ with 62ft (19m) cable
 CLK95 = ClickTight with 96ft (29m) cable

Treatment mode (Mode 1 = standard configuration; Mode 3 = pre-anoxic return line, enhanced nitrogen reduction):
 MODE1A = mode 1, gravity discharge MODE3A = mode 3, gravity discharge
 MODE1B = mode 1, pump discharge MODE3B = mode 3, pump discharge

UV disinfection unit

AX-20RT series treatment unit

Nominal treatment area:
 20 = 20ft² (1.9m²)

AdvanTex® Treatment System

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