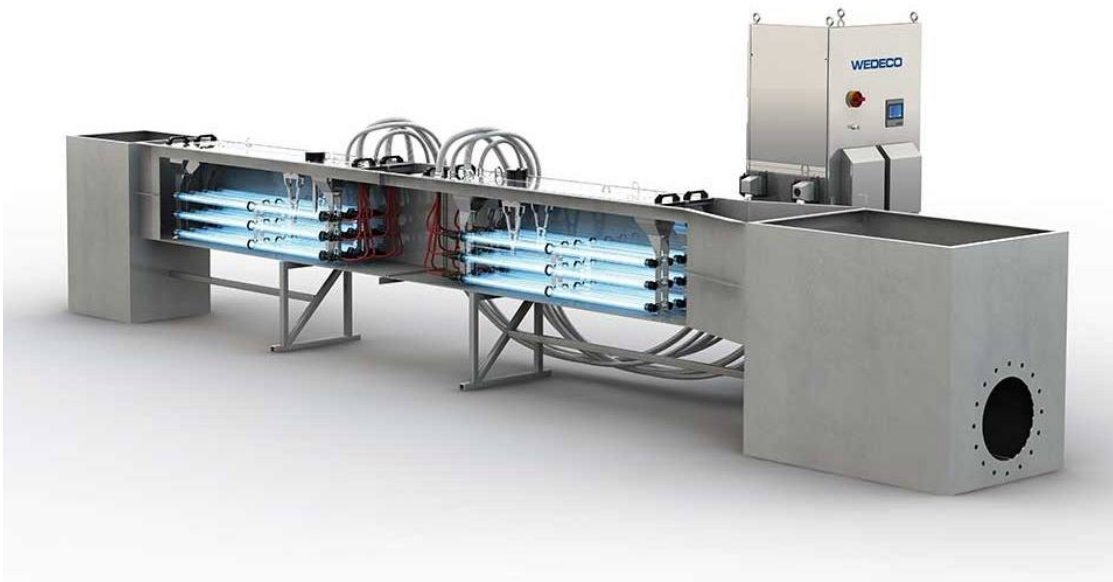


WEDECO · PACKAGED OPEN-CHANNEL UV FOR SMALL TREATMENT PLANTS

WEDECO TAK Smart

Pre-assembled open-channel UV system for small wastewater plants, in seven sizes up to 1,030 m³/h.



Overview

WEDECO TAK Smart brings the TAK 55 lamp configuration to small treatment plants in a ready-to-assemble package. It comes fully pre-assembled with automatic wiping, UV monitoring and controls, either in its own stainless-steel channel with a fixed outlet weir or for installation in a concrete channel. Seven sizes, with one or two UV banks, cover flows up to 1,030 m³/h, from sewer overflows to tertiary wastewater reclamation. The system is validated to the US EPA UVDGM (2006) and NWRI.

Ozone UV Solutions supplies TAK Smart systems as an authorised WEDECO reseller and supports them locally: sizing, installation, commissioning, servicing, lamps and spare parts.

Key features

- Seven sizes from 4 to 32 lamps; single bank, or double bank for duty/duty or duty/standby operation
- Ecoray 315 W low-pressure high-output lamps, third-party tested for ageing and UV-C output
- Validated to the US EPA UVDGM (2006) and NWRI; tested to the IUVA protocol for secondary effluent
- OptiDose dose control with an ÖNORM-certified UV intensity sensor (standard)
- Pneumatic, chemical-free mechanical wiping system
- EcoTouch controller with SCADA connectivity; cabinets for indoor or outdoor use

Design and operation

Packaged design

The stainless-steel channel is part of the TAK Smart scope: fully assembled, with a fixed outlet weir, for quick connection to existing pipework. Alternatively, the UV modules go into a conventional concrete channel. A second UV bank can be added for redundancy or a higher dose.

Lamps and energy

Ecoray low-pressure high-output lamps run on electronic ballasts with constant or variable output. The low lamp count and long lamp life keep maintenance costs down, and dimmed operation matches UV output to the operating conditions.

Controls

The EcoTouch controller brings together UV dose, real-time variable lamp power, lamp status, alarms, SCADA connectivity and closed-loop OptiDose control. It accepts a remote on/off signal and a 4–20 mA flow signal and outputs the UV dose and volt-free alarm contacts.

Installation and maintenance

All wires from the UV module to the cabinet run in flexible stainless-steel tubes, so the cabinet can stand anywhere beside the channel. Outdoor Type 4X / IP56 cabinets [air conditioning] avoid the need for a separate building. Ballast cards are kept apart from the lamp modules.



Typical applications

- Small municipal wastewater treatment plants
- Sewer overflows and tertiary wastewater reclamation
- Water reuse and process water
- Aquaculture water

Supplied and supported by Ozone UV Solutions

System selection and UV dose sizing · Installation and commissioning · PLC/SCADA integration · Planned servicing and lamp changes · Genuine WEDECO lamps, spare parts and consumables · 24/7 technical support line
+61 422 081 913

Model selection

The right size depends on flow rate, UV transmittance (UVT) of the effluent and the dose required. Send us these figures and we will confirm the size and bank arrangement.

TAK Smart sizes

Model	UV lamps	UV modules	Power per lamp	Lamp type	UVT range (1 cm)
TAK Smart 2-1	4	1	315 W	Ecoray LPHO	40–80%
TAK Smart 3-1	6	1	315 W	Ecoray LPHO	40–80%
TAK Smart 2-2	8	2	315 W	Ecoray LPHO	40–80%
TAK Smart 3-2	12	2	315 W	Ecoray LPHO	40–80%
TAK Smart 4-2	16	2	315 W	Ecoray LPHO	40–80%
TAK Smart 4-3	24	3	315 W	Ecoray LPHO	40–80%
TAK Smart 4-4	32	4	315 W	Ecoray LPHO	40–80%

Options are shown in [square brackets]. Flow rates up to 1,030 m³/h (6.5 MGD) across the range; the flow for each size depends on UVT and the required dose and is confirmed at sizing. Single or double bank arrangements available.

Common specifications

UV LAMPS & MONITORING	
Lamp type	Ecoray low-pressure high-output (LPHO), 315 W
Lamp certification	Third-party tested for ageing and UV-C output
UV intensity sensor	Standard
Validation	US EPA UVDGM (2006) and NWRI
UV MODULES & CHANNEL	
UVT range	40–80% (1 cm)
Flow rate	Up to 1,030 m³/h (6.5 MGD)
Number of banks	1 or 2
Module protection class	IP65 (NEMA 4X)
Sleeve cleaning	Automatic mechanical wiping, pneumatic, chemical-free
Water level control	Finger weir
Channel	Stainless-steel channel with fixed outlet weir, or concrete channel
ELECTRICAL CONTROL CABINET	
Ballast	Ecoray electronic, constant or variable power output
Controller	EcoTouch
Outputs	UV dose (4–20 mA) · volt-free contacts: system running, high-priority alarm, low-priority alarm
Inputs	Remote on/off (230 V or volt-free) · water flow rate (4–20 mA)
SCADA	System status, lamp status, alarm messages, process values
Cabinet	Indoor or outdoor · Type 12 / IP55 or Type 4X / IP56 · [air conditioning]
Electrical supply	3-phase, 5-wire, 50/60 Hz
Accessories	[Module stand] · [spare module]

Request sizing or a quote

Send us your flow rate, effluent UV transmittance, the required dose or discharge standard and whether you need a stainless-steel channel or have a concrete channel. We will confirm the size and quote supply, installation and ongoing service.

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Specifications subject to change without notice.