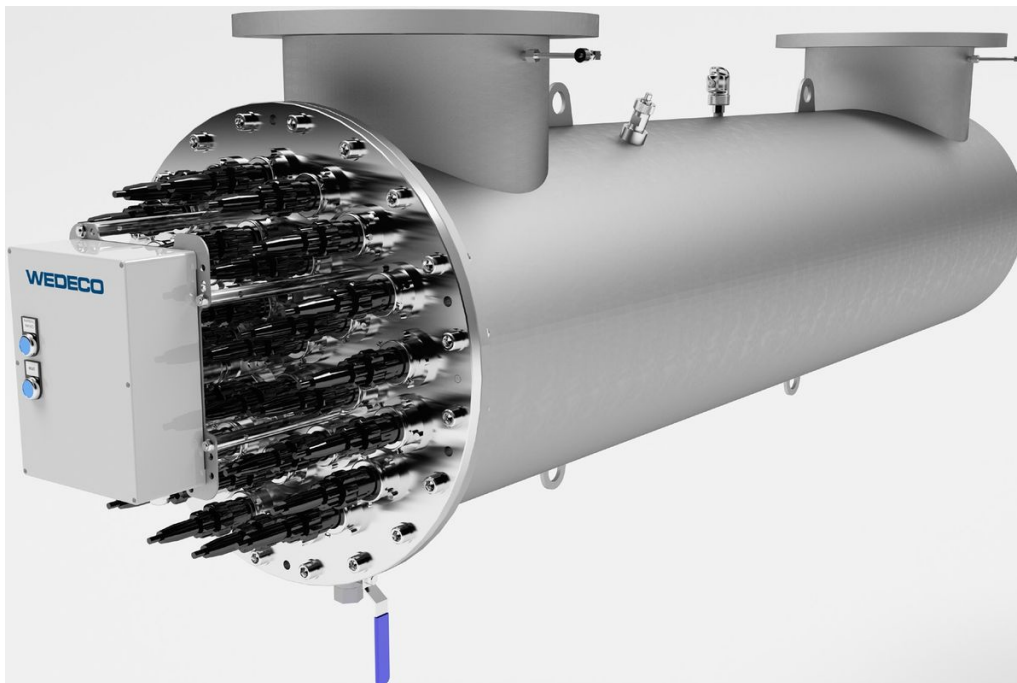


WEDECO · UV DISINFECTION FOR WASTEWATER, REUSE AND LOW-UVT WATER

WEDECO LBX Series

Closed-vessel UV systems for pressurised wastewater, reuse water, surface water and other liquids with low UV transmittance.



Overview

WEDECO LBX is a closed-vessel UV range for water that is under pressure and has low UV transmittance: treated wastewater, water for reuse, surface water and industrial process water. It is the choice wherever a pipe-mounted UV system is preferred to an open channel. Bioassay validation to the US EPA UVDGM and NWRI guidelines covers a wide UVT range and target organisms including adenovirus, meeting California Title 22 water reuse requirements.

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

Key features

- Performance validated by bioassay to USEPA UVDGM (2006), IUVA protocol (2011) and NWRI guidelines (2003/2012) on validated models
- Suitable for water with UV transmittance from 20 to 98%
- Ecoray low-pressure high-output amalgam lamps, 315 W, with a rated lamp life of 14,000 hours
- OptiDose closed-loop dose pacing with an ÖNORM-compliant UV intensity sensor [variable power]
- Chemical-free automatic mechanical wiping [optional]
- U, Z or L-shaped reactors with DN or ANSI flanges; patented OptiCone flow diverter on L-shaped units

Design and operation

Hydraulics and installation

Alternative U, Z and L reactor shapes and DN or ANSI flanges fit the system to site pipework. On L-shaped units the OptiCone flow diverter makes the effect of inlet piping negligible. Reactors can be installed indoors or outdoors, horizontally or vertically, with the outlet flange rotated as needed.

Lamps and dose

Ecoray amalgam lamps with matched ballasts deliver high efficiency and good dimming behaviour. With variable power, OptiDose measures flow, UV transmittance and UV intensity in real time and adjusts lamp output to the dose required, avoiding over-dosing.

Controls

Larger models use an EcoTouch controller or a PLC with outputs for system status, lamp status, alarms and process values, plus bus communication to SCADA. The control cabinet can stand indoors or outdoors, even at high ambient temperatures [stainless-steel enclosure with air conditioning].

Maintenance

The optional automatic wiper keeps the quartz sleeves clean without cleaning chemicals, which holds sleeve transmittance and energy use steady. Individual lamp monitoring is standard.



Typical applications

- Disinfection of municipal and industrial wastewater in pressurised lines
- Water reuse, including California Title 22 applications
- Surface water, drinking water and industrial process water with low UV transmittance

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
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Model selection

The right model depends on flow rate, UV transmittance (UVT) of the water and the dose or validation required. Send us these figures and we will confirm the model and configuration.

LBX models

Model	Max. flow (m ³ /h)*	UV lamps	Power per lamp	Flange	Reactor shape	Reactor length (mm)	Max. pressure	Power (approx.)	Bioassay validated**
LBX 10	10.2	3	80 W	DN50	U or Z	930	16 bar	0.34 kW	–
LBX 20	21.7	6	80 W	DN80	U or Z	930	16 bar	0.60 kW	–
LBX 33	29.3	8	80 W	DN80	U or Z	930	16 bar	0.76 kW	–
LBX 90e	83	4	315 W	DN150 / 6"	U or Z	1,530	16 bar	1.72 kW	Yes
LBX 120e	127	6	315 W	DN150 / 6"	U or Z	1,530	10 bar	2.38 kW	–
LBX 200e	216	10	315 W	DN200 / 8"	U or Z	1,540	10 bar	3.70 kW	–
LBX 400e	347	16	315 W	DN250 / 10"	U or Z	1,540	10 bar	5.69 kW	Yes
LBX 550e	536	24	315 W	DN300 / 12"	U or Z	1,540	10 bar	8.33 kW	–
LBX 850e	717	32	315 W	DN400 / 16"	L	2,400	10 bar	11.19 kW	Yes
LBX 1000e	911	40	315 W	DN400 / 16"	U or Z	2,400	10 bar	13.84 kW	Yes
LBX 1500e	1,346	60	315 W	DN500 / 20"	L	2,400	10 bar	20.57 kW	Yes

Options are shown in [square brackets]. * Flow at a UV dose of 40 mJ/cm² (point source summation) and 65% UVT (1 cm) at end of lamp life. ** Compliant with NWRI and UVDGM protocols. Further sizes are available on request.

Common specifications

UV LAMPS & MONITORING	
Lamp type	Low-pressure high-output amalgam: 80 W (LBX 10, 20, 33) · Ecoray 315 W (90e–1500e)
Rated lamp life	14,000 hours (Ecoray lamps)
Lamp certification	Third-party tested for ageing and UV-C output (90e–1500e)
UV monitoring	Germicidal UV intensity sensor, ÖNORM compliant · individual lamp monitoring
Dose pacing	90e–1500e: [variable power with OptiDose]
UV REACTOR	
UVT range	20–98% (1 cm)
Reactor material	Stainless steel 1.4404 / 1.4435 (ASTM 316L)
Protection class	IP65 (10, 20, 33) · IP65 / NEMA 4X (90e–1500e)
Sleeve cleaning	[Automatic mechanical wiping, chemical-free]
Installation	Indoor or outdoor · horizontal or vertical · rotatable outlet flange
CONTROL CABINET	
Controller	Microprocessor (10, 20, 33) · EcoTouch or PLC (90e–1500e)
Outputs / SCADA	System status, lamp status, alarm messages, process values · bus communication (90e–1500e)
Cabinet protection	IP54 (10, 20, 33) · IP54 / cUL Type 12 [Type 4X] (90e–1500e) · [stainless-steel enclosure, air conditioning]
Electrical standards	CE (10, 20, 33) · CE, UL, cUL (90e–1500e)
Power supply	10, 20, 33: 230 V, 50–60 Hz (TN-S / TN-C net) · 90e–1500e: 400/230 V ±10%, 50 Hz (TN-S net); UL/cUL: 480/277 V ±10%, 60 Hz (5-wire WYE)

Request sizing or a quote

Send us your flow rate (average and peak), UV transmittance, the required dose or reuse standard and your pipe size and layout. We will recommend the model and reactor shape and quote supply, installation and ongoing service.

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Specifications subject to change without notice.