



life
OZONE
eco
clean life aqua
fresh water
aqua MUNICIPAL
clean life WATER
Oxidation
Advanced
RECLAMATION
Ecoset bwt
eco sea
ecology clean life
Leading company
in high-tech
Medium Pressure
water WASTE
reclamation
UV-AOP
ECOSET
Ozone health
Sludge clean life
Environment in high-tech environmental
aqua municipal
water Oxidation
fresh water
eco reclamation
municipal
water treatment
environmental
technology
ozone
eco
ecology
protection
waste water
New Advanced Technology
eco
Leading company
sea
aqua municipal
water Oxidation

MEDIUM PRESSURE UV DISINFECTION / UV-AOP SYSTEM



A leading company in Advanced Environment Technology ECOSET

ECOSET Co., Ltd. has invested over 35 billion KRW in research and development to break into the advanced environmental product sector, which has long been dominated by developed nations. We are proud to be the first Asian company to introduce flow-through ultraviolet (UV) equipment to the U.S. market, earning Title 22 validation according to NWRI guidelines, UVDGM validation under U.S. EPA guidelines, and NSF 50, 60, and 61 certifications. To expand into the European market, we also secured DVGW validation for most of our medium-pressure UV equipment models. This enables us to confidently export to municipal and industrial sectors worldwide, including the U.S. and Europe, where we compete with global leaders.

Our most recent innovation, the UV AOP (Ultraviolet Advanced Oxidation Process) system, was developed after seven years of dedicated research. We successfully implemented this cutting-edge technology at the Ilsan Water Treatment Plant, achieving the world's highest performance (150,000 tons/day) and laying the groundwork for global market expansion.

In Korea, we hold the largest market share, supported by exclusive patents and advanced technologies. Recognized by the Ministry of Environment as an "Excellent Environmental Company," we continue to lead the industry.

NEOTEC is dedicated to ongoing innovation and customer satisfaction. With the collective strength of our skilled team, we promise to develop unique technologies, distribute them globally, and contribute to environmental sustainability and an improved quality of life for all.

FACTORY



1st Factory & Research Lab - Ansan



2nd Factory - Dangjin

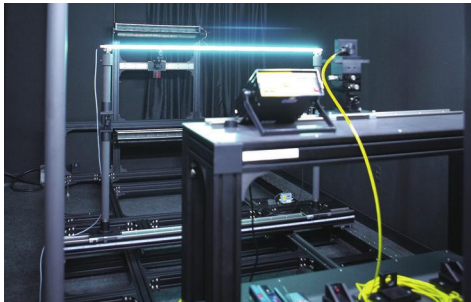


3rd Factory - Daegu



RESEARCH LAB

TEST EQUIPMENT



CERTIFICATION & VALIDATION

UV SAFETY & PERFORMANCE

• Title 22 - NWRI Guidelines, Reuse	PRODUCTS (UVDGM/DVGW)
• DVGW-W294 - Europe, Drinking Water	ECM-I300 12kW
• UVDGM - US EPA Guidelines, Drinking Water	ECM-I450 24kW
• NSF 50 - Recreational Water Facilities	ECM-I600 36kW
• NSF 60 - Drinking Water Treatment	ECM-I750 48kW
• NSF61 & 372 - Drinking Water Components	ECM-I800-8L 64~80kW
	ECM-I800-12L 96~120kW

QUALITY MANAGEMENT

- ISO 9001
- ISO 14001

ELECTRICAL SAFETY

- CE-MD
- KC-EMC



A guide manual for UV Disinfection Equipment for drinking water sourced from surface water in compliance with the LT2 standard set by the US EPA (United States Environmental Protection Agency). UVDGM Validation is required for water treatment plants across the United States.



A certification body in Germany that tests and certifies compliance with technical requirements related to hygiene, safety, and overall functionality. It specializes in the gas and water industries.



The American National Standards Institute (ANSI) certifies various products and components through testing for sanitary function and safety. It currently holds NSF 50, NSF 60, and NSF 61 & 372 certifications.

NSF 50 : Safety Standards Certification for Equipment and Chemicals for Swimming Pools, Spas, Hot Tubs, and Other Recreational Water Facilities

NSF 60 : Safety Standards Certification for Drinking Water Treatment Chemicals

NSF 61 & 372 : Safety standards certification for Drinking Water Components



NSF 50 / NSF 60/ NSF 61 & 372 CERTIFICATES

CERTIFICATION & VALIDATION

DVGW CERTIFICATES

DVGW type examination certificate
DVGW-Baumusterprüfzertifikat

CERT
DW-9184DP288
Registration number

Field of Application
Anwendungsbereich
Produkte der Wasserversorgung
Produkt der Wasserversorgung

Distributor
Hersteller
Embley 1-10 163000-gL, Kfz-Darstellung, Anbau- und, Geringe-Druck

Product Category
Produktkategorie
Drinking water treatment devices and systems, UV devices with medium pressure lamps for disinfection in water supply (0156)

Product description
Produktbeschreibung
UV device with medium pressure lamps for disinfection in water supply

Model
Modell
NCM-I300

Test reports
Prüfberichte
Type testing: 1-0057120 from 19.07.2024 (TZV)

Test basis
Prüfungsbasis
DVGW W 294-2 (01.06.2006)
UBA BVLG-Messliste (10.06.2024)
UBA ELASTOM (19.03.2019)
UBA KTW-BVLG (07.03.2022)

Date of Expiry / File No.
Abkürzung / Aktenzeichen
19.07.2029 / 24-0541-WNE

ECM-I300 (300A, 4kW x 3Lamps)

DVGW-Baumusterprüfzertifikat
DVGW type examination certificate

CERT
DW-9184DP440
Registration number

Anwendungsbereich
Produkte der Wasserversorgung
Produkt der Wasserversorgung

Hersteller
Embley 1-10 163000-gL, Kfz-Darstellung, Anbau- und, Geringe-Druck

Produktkategorie
Produktkategorie
Geräte und Anlagen zur Behandlung von Trinks Wasser: UV-Geräte mit Mitteldrucklampen zur Desinfektion in der Wasserversorgung (0156)

Produktbeschreibung
Produktbeschreibung
UV-Geräte mit Mitteldrucklampen zur Desinfektion in der Wasserversorgung

Modell
Modell
NCM-I450

Prüfberichte
Prüfberichte
Baumusterprüfung: 1-0057120 vom 19.07.2024 (TZV)

Prüfungsbasis
Prüfungsbasis
DVGW W 294-2 (01.06.2006)
UBA BVLG-Messliste (10.06.2024)
UBA ELASTOM (19.03.2019)
UBA KTW-BVLG (07.03.2022)

Abkürzung / AZ
Abkürzung / Aktenzeichen
19.07.2029 / 24-0527-WNE

ECM-I450 (450A, 4kW x 6Lamps)

DVGW type examination certificate
DVGW-Baumusterprüfzertifikat

CERT
DW-9184DP441
Registration number

Field of Application
Anwendungsbereich
Produkte der Wasserversorgung
Produkt der Wasserversorgung

Distributor
Hersteller
Embley 1-10 163000-gL, Kfz-Darstellung, Anbau- und, Geringe-Druck

Product Category
Produktkategorie
Drinking water treatment devices and systems, UV devices with medium pressure lamps for disinfection in water supply (0156)

Product description
Produktbeschreibung
UV device with medium pressure lamps for disinfection in water supply

Model
Modell
NCM-I600

Test reports
Prüfberichte
Type testing: 1-0057120 from 19.07.2024 (TZV)

Test basis
Prüfungsbasis
DVGW W 294-2 (01.06.2006)
UBA BVLG-Messliste (10.06.2024)
UBA ELASTOM (19.03.2019)
UBA KTW-BVLG (07.03.2022)

Date of Expiry / File No.
Abkürzung / Aktenzeichen
19.07.2029 / 24-0519-WNE

ECM-I600 (600A, 6kW x 6Lamps)

DVGW-Baumusterprüfzertifikat
DVGW type examination certificate

CERT
DW-9181DM0544
Registration number

Anwendungsbereich
Produkte der Wasserversorgung
Produkt der Wasserversorgung

Hersteller
Embley 1-10 163000-gL, Kfz-Darstellung, Anbau- und, Geringe-Druck

Produktkategorie
Produktkategorie
Geräte und Anlagen zur Behandlung von Trinks Wasser: UV-Geräte zur Desinfektion in der Wasserversorgung (0156)

Produktbeschreibung
Produktbeschreibung
UV-Geräte zur Desinfektion in der Wasserversorgung, Mitteldruck

Modell
Modell
NCM-I750-R05

Prüfberichte
Prüfberichte
Baumusterprüfung: NCM-I750 vom 04.08.2021 (TZV)
UBA LeitwertBVLG KA 31618 vom 21.11.2018 (TZV)
Mikrobiologische Prüfung: NCM-I750 vom 06.05.2018 (MHN)
UBA LeitwertBVLG KA 31617 vom 20.08.2017 (TZV)
Mikrobiologische Prüfung: NCM-I750 vom 13.07.2017 (TZV)
UBA LeitwertBVLG KA 31617 vom 19.02.2017 (TZV)
Mikrobiologische Prüfung: NCM-I750 vom 17.05.2017 (TZV)

Prüfungsbasis
Prüfungsbasis
DVGW W 294-2 (01.06.2006)
UBA BVLG-Messliste (14.09.2020)
UBA Übergangsprüfung KTW-BVLG (19.07.2020)
UBA ELASTOM (19.03.2019)

Abkürzung / AZ
Abkürzung / Aktenzeichen
04.08.2028 / 21-0852-WNE

ECM-I750 (750A, 8kW x 6Lamps)

DVGW type examination certificate
DVGW-Baumusterprüfzertifikat

CERT
DW-9184DP454
Registration number

Field of Application
Anwendungsbereich
Produkte der Wasserversorgung
Produkt der Wasserversorgung

Distributor
Hersteller
Embley 1-10 163000-gL, Kfz-Darstellung, Anbau- und, Geringe-Druck

Product Category
Produktkategorie
Drinking water treatment devices and systems, UV devices with medium pressure lamps for disinfection in water supply (0156)

Product description
Produktbeschreibung
UV device with medium pressure lamps for disinfection in water supply

Model
Modell
NCM-I800-8L-8

Test reports
Prüfberichte
Type testing: 1-0057120 from 19.07.2024 (TZV)

Test basis
Prüfungsbasis
DVGW W 294-2 (01.06.2006)
UBA BVLG-Messliste (10.06.2024)
UBA ELASTOM (19.03.2019)
UBA KTW-BVLG (07.03.2022)

Date of Expiry / File No.
Abkürzung / Aktenzeichen
19.07.2029 / 24-0519-WNE

ECM-I800-8L-8 (800A, 8kW x 8Lamps)

DVGW type examination certificate
DVGW-Baumusterprüfzertifikat

CERT
DW-9184DP457
Registration number

Field of Application
Anwendungsbereich
Produkte der Wasserversorgung
Produkt der Wasserversorgung

Distributor
Hersteller
Embley 1-10 163000-gL, Kfz-Darstellung, Anbau- und, Geringe-Druck

Product Category
Produktkategorie
Drinking water treatment devices and systems, UV devices with medium pressure lamps for disinfection in water supply (0156)

Product description
Produktbeschreibung
UV device with medium pressure lamps for disinfection in water supply

Model
Modell
NCM-I800-8L-10

Test reports
Prüfberichte
Type testing: 1-0057120 from 19.07.2024 (TZV)

Test basis
Prüfungsbasis
DVGW W 294-2 (01.06.2006)
UBA BVLG-Messliste (10.06.2024)
UBA ELASTOM (19.03.2019)
UBA KTW-BVLG (07.03.2022)

Date of Expiry / File No.
Abkürzung / Aktenzeichen
19.07.2029 / 24-0582-WNE

ECM-I800-8L-10 (800A, 10kW x 8Lamps)

DVGW type examination certificate
DVGW-Baumusterprüfzertifikat

CERT
DW-9184DP458
Registration number

Field of Application
Anwendungsbereich
Produkte der Wasserversorgung
Produkt der Wasserversorgung

Distributor
Hersteller
Embley 1-10 163000-gL, Kfz-Darstellung, Anbau- und, Geringe-Druck

Product Category
Produktkategorie
Drinking water treatment devices and systems, UV devices with medium pressure lamps for disinfection in water supply (0156)

Product description
Produktbeschreibung
UV device with medium pressure lamps for disinfection in water supply

Model
Modell
NCM-I800-12L-8

Test reports
Prüfberichte
Type testing: 1-0057120 from 19.07.2024 (TZV)

Test basis
Prüfungsbasis
DVGW W 294-2 (01.06.2006)
UBA BVLG-Messliste (10.06.2024)
UBA ELASTOM (19.03.2019)
UBA KTW-BVLG (07.03.2022)

Date of Expiry / File No.
Abkürzung / Aktenzeichen
19.07.2029 / 24-0581-WNE

ECM-I800-12L-8 (800A, 8kW x 12Lamps)

DVGW type examination certificate
DVGW-Baumusterprüfzertifikat

CERT
DW-9184DP459
Registration number

Field of Application
Anwendungsbereich
Produkte der Wasserversorgung
Produkt der Wasserversorgung

Distributor
Hersteller
Embley 1-10 163000-gL, Kfz-Darstellung, Anbau- und, Geringe-Druck

Product Category
Produktkategorie
Drinking water treatment devices and systems, UV devices with medium pressure lamps for disinfection in water supply (0156)

Product description
Produktbeschreibung
UV device with medium pressure lamps for disinfection in water supply

Model
Modell
NCM-I800-12L-10

Test reports
Prüfberichte
Type testing: 1-0057120 from 19.07.2024 (TZV)

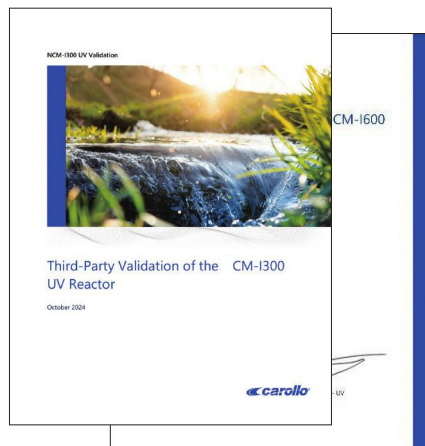
Test basis
Prüfungsbasis
DVGW W 294-2 (01.06.2006)
UBA BVLG-Messliste (10.06.2024)
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Date of Expiry / File No.
Abkürzung / Aktenzeichen
19.07.2029 / 24-0582-WNE

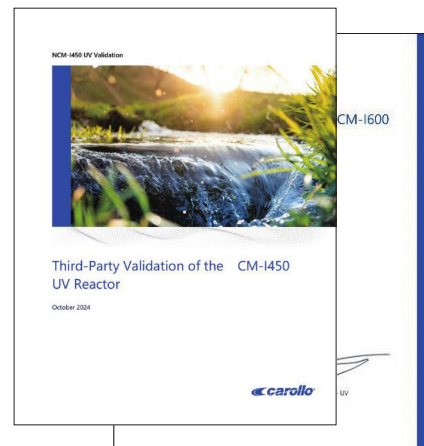
ECM-I800-12L-10 (800A, 10kW x 12Lamps)

CERTIFICATION & VALIDATION

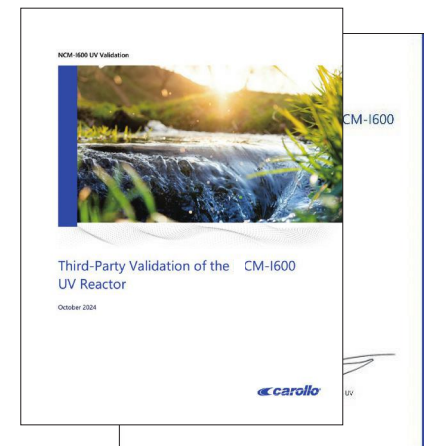
US EPA UVDGM



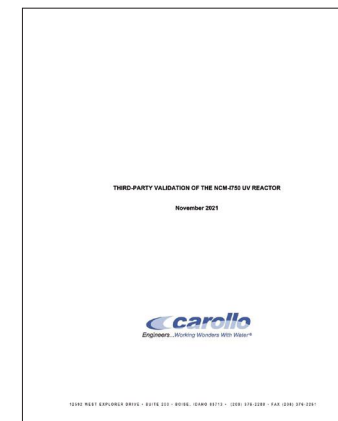
ECM-I300 (300A, 4kW x 3Lamps)



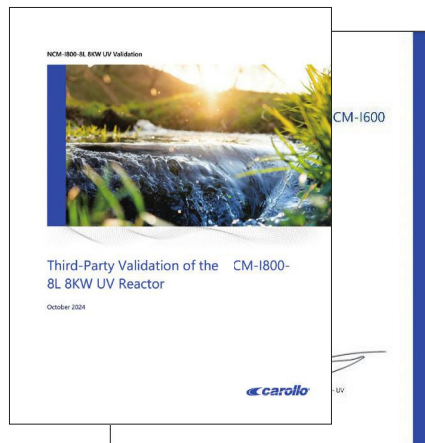
ECM-I450 (450A, 4kW x 6Lamps)



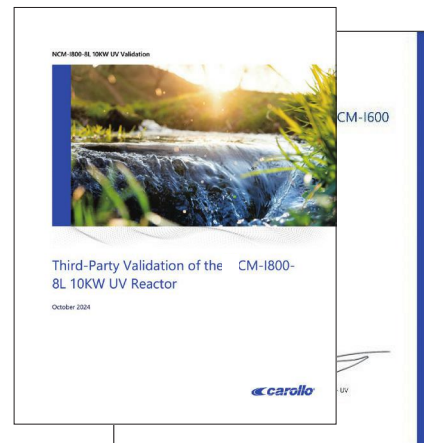
ECM-I600 (600A, 6kW x 6Lamps)



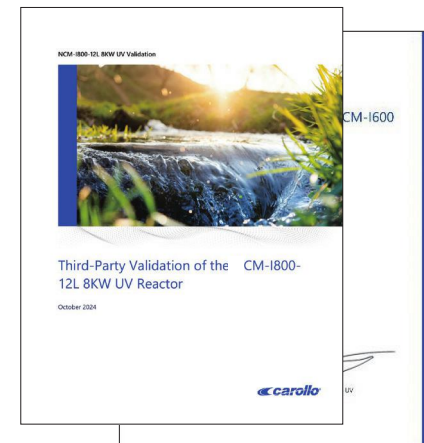
ECM-I750 (750A, 8kW x 6Lamps)



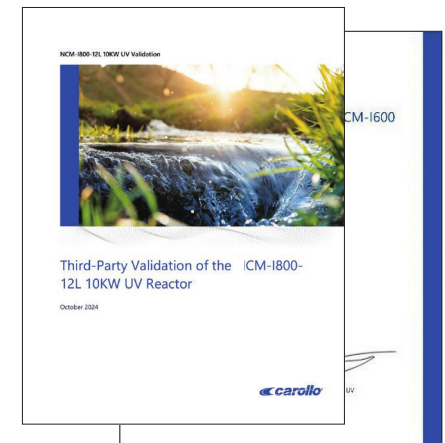
ECM-1800-8L-8 (800A, 8kW x 8Lamps)



ECM-I800-8L-10 (800A, 10kW x 8Lamps)



ECM-I800-12L-8 (800A, 8kW x 12Lamps)



ECM-I800-12L-10 (800A, 10kW x 12Lamps)

MEDIUM PRESSURE UV DISINFECTION

MEDIUM-PRESSURE UV APPLICATION

ECOSET's medium pressure UV disinfection equipment lineup is applied across various fields, ensuring maximum satisfaction for customers. It is used not only in water treatment and wastewater treatment plants at public facilities but also in swimming pools where families can enjoy leisure time together, providing the best water quality.



U Shpe Type UV Reactor



In-Line Type UV Reactor

APPLICATIONS

- ✓ Wastewater Treatment Plant
- ✓ Drinking Water Treatment Plant
- ✓ Food & Beverage, Pharma
- ✓ Industrial Wastewater (UV-AOP)
- ✓ Power Plant Wastewater (UV-AOP)
- ✓ Industrial process water
- ✓ Removal of Micropollutants
- ✓ Swimming Pools, Spas, Recreational Water Facilities
- ✓ Test equipment (Universities and Research Lab)



UV AOP SKID



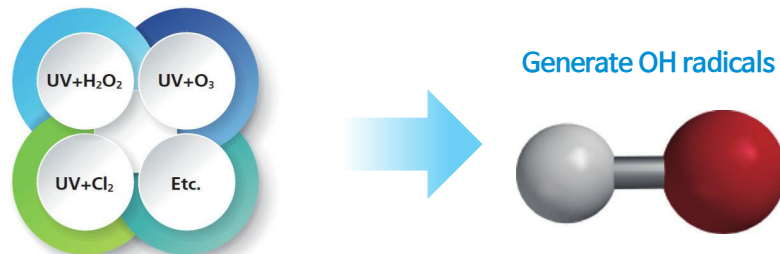
UV AOP PILOT TEST EQUIPMENT

MP UV-AOP (ADVANCED OXIDATION PROCESS) TECHNOLOGY

FEATURES

- Higher Energy Efficiency, Lower Cost and Compact Footprint than Other Technologies
- Ensures Safety for Operators without using Toxic chemicals like Chlorine and Ozone
- No Taste and Odor (2-MIB, Geosmin) due to No DBPs (Disinfection Byproducts)
- Effective Disinfection Performance for removing Pathogens, Viruses and more
- Particularly Effective against Chlorine-tolerant protozoa (e.g., Cryptosporidium, Giardia)
- Excellent Removal Performance for Micropollutants (NDMA, 1,4-dioxane and others)

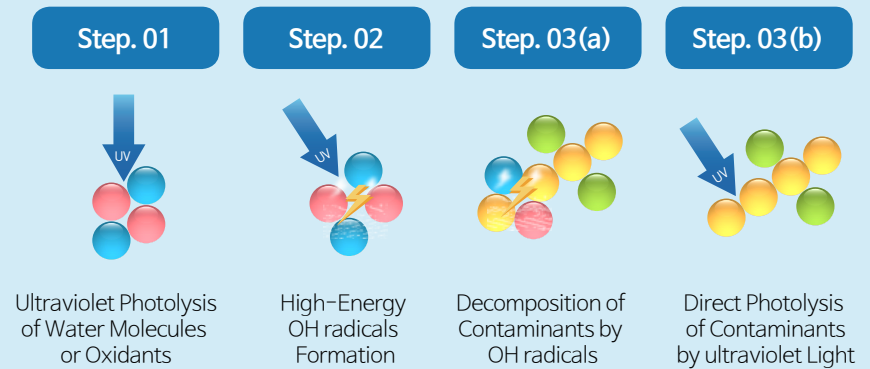
UV-AOP TECHNOLOGY



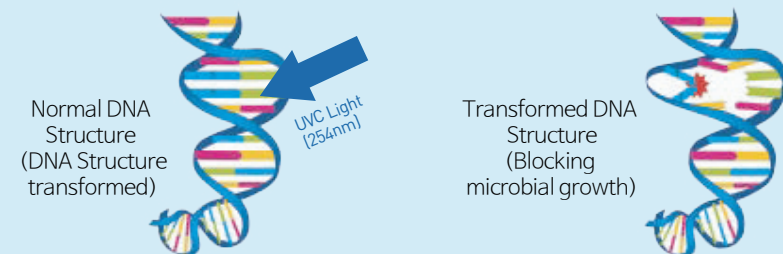
OH radicals $\gg$ O_3 $\gg$ Chlorine

- OH radical : 2000 times more powerful than Ozone, and 180 times than solar Ultraviolet rays
- O_3 : 3600 times faster oxidation speed and 7 times more oxidation power of chlorine
- Chlorine : Sterilization and oxidation power are significantly lower than OH radicals and ozone

OXIDATION PROCESS



DISINFECTION PROCESS



IMP UV-AOP (ADVANCED OXIDATION PROCESS) TECHNOLOGY

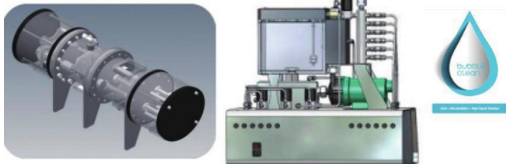
③ Additional equipment (optional)

Online UVT meter

Measuring real-time water quality information and providing it to SCP

Bubble Clean System

Reduction in energy consumption through improved cleanliness of quartz tubes



② Power Supply Unit (low-frequency ballast applied)

Increased the maximum distance between SCP and UV Reactor by using a Low-frequency ballast

①

① System Control Panel (Automatic Control)

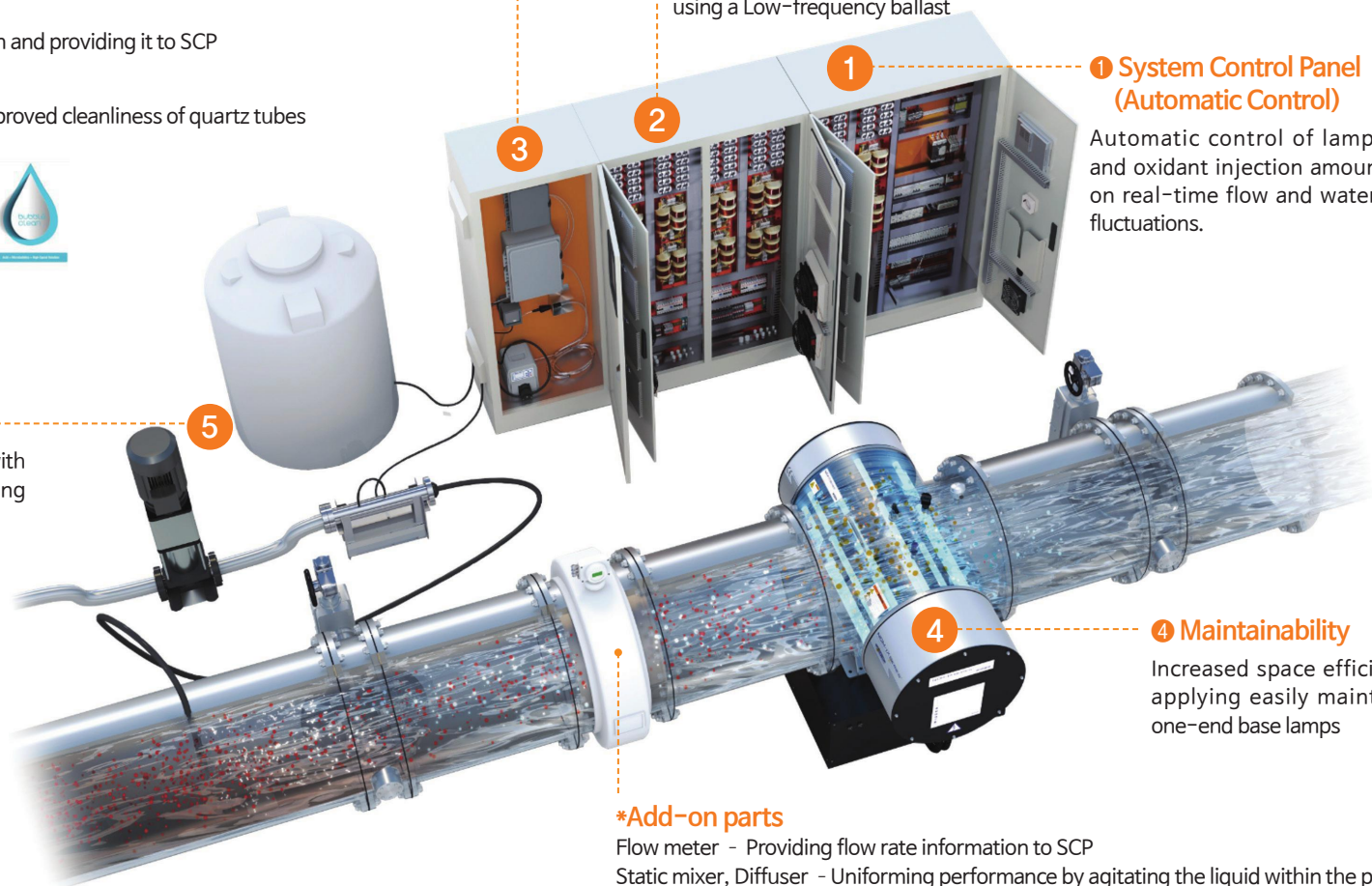
Automatic control of lamp output and oxidant injection amount based on real-time flow and water quality fluctuations.

⑤ AOP Applicable

UV advanced oxidation treatment possible with the addition of an oxidant tank and metering pump

Operating options

- Standard: UV disinfection operation
(No oxidant used)
- AOP: UV advanced oxidation operation
(oxidant injected upon target substance inflow)



④

④ Maintainability

Increased space efficiency by applying easily maintainable one-end base lamps

*Add-on parts

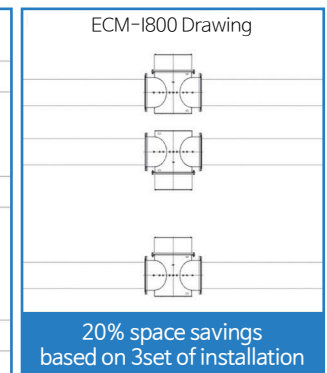
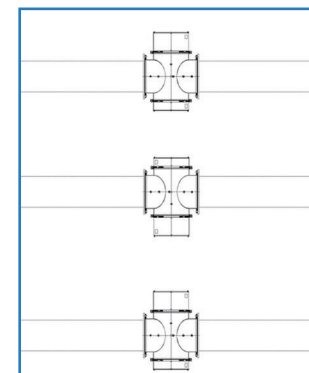
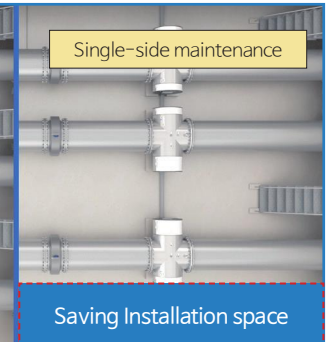
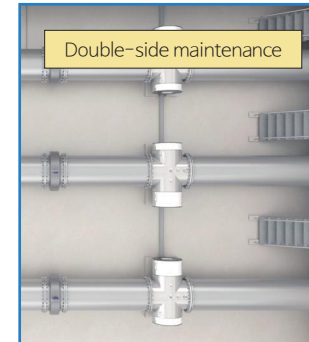
Flow meter - Providing flow rate information to SCP

Static mixer, Diffuser - Uniforming performance by agitating the liquid within the pipe

UV REACTOR DESIGN BASED ON CFD-RED ANALYSIS

UDGM / DVGW VALIDATED PERFORMANCE

- Proven Performance : Obtained USEPA-UVDGM, DVGW-W294, and NSF 50
- Ensured Drinking water Safety : Obtained NSF 60 and NSF 61 & 372
- Flexible Operating Conditions : Capable of treating a wide range of water quality through lamp output operation from a minimum of 25% to a maximum of 100%
- Optimized Design : Optimized disinfection capacity and minimized head loss design through CFD-RED analysis. Both vertical and horizontal installation possible
- Over 10% reduction in maintenance space compared to existing systems
- Maintenance space minimized by using single-end type lamps, resulting in reduced installation costs
- Use of domestically manufactured parts : Eliminates the hassle of importing foreign parts by using domestically developed long-life, high-efficiency UV lamps and ballasts
- Low-frequency ballasts usage : AC square wave ballasts allow for a maximum distance of 100m between the control panel and reactor
- Optimized energy efficiency for equipment operation : Energy savings achieved through the use of high-efficiency, high-power factor ballasts
- Verified parts usage : DVGW-W294 certified UV sensors used
- Various installation fields : Applicable in various areas such as drinking water, wastewater, and industrial water treatment
- Efficient cleaning (Bubble clean, cleaning solution supply system) : Expected to achieve higher cleaning effectiveness compared to existing cleaning mechanisms (mechanical wiper) through the use of micro bubbles and high-speed circulation cleaning system (Optional)



How to install a single-end lamp

MEDIUM PRESSURE UV LAMPS AND BALLASTS

MP UV LAMP SPECIFICATION

Lamp Power (kW)	4	6	8	10	12	24
Arc length (mm)	350	500	800	800	1000	1748
Lamp length (mm)	480	630	930	930	1128	1870
Lamp voltage (V)	400	600	800	1000	1820	2300
Lamp current (A)	10				6.6	10.43
Lifetime (Hrs)	4000				1500	1000

MP ELECTRONIC BALLAST SPECIFICATION

Ballast power (kW)	4	6	8	10	12	24
Dimming range (%)	25 ~ 100	33 ~ 100	25 ~ 100	20 ~ 100	33 ~ 100	33 ~ 100
Max. voltage (V)	500	1000		1100	1800	2700
Max. current (A)	10	12		12	11	15
Input power	220V ϕ 3	380V ϕ 3			400V ϕ 3	400V ϕ 3
Dimension (mm)	475x143x166	669x215x162			270x235x230	270x449x230
Weight (kg)	10	20			8	16
Communication	LAN, RS485, RS232				4-20mA	4-20mA
Certification	KC-EMC				CE	CE

MEDIUM PRESSURE UV LAMPS

The lamp uses a roll sealing type, which applies the best conditions for cooling efficiency, thereby delaying electrode wear and aging. Additionally, it can be applied as a one-end type to reduce the installation space of the UV equipment by up to 10% as needed.



MP ELECTRONIC BALLASTS

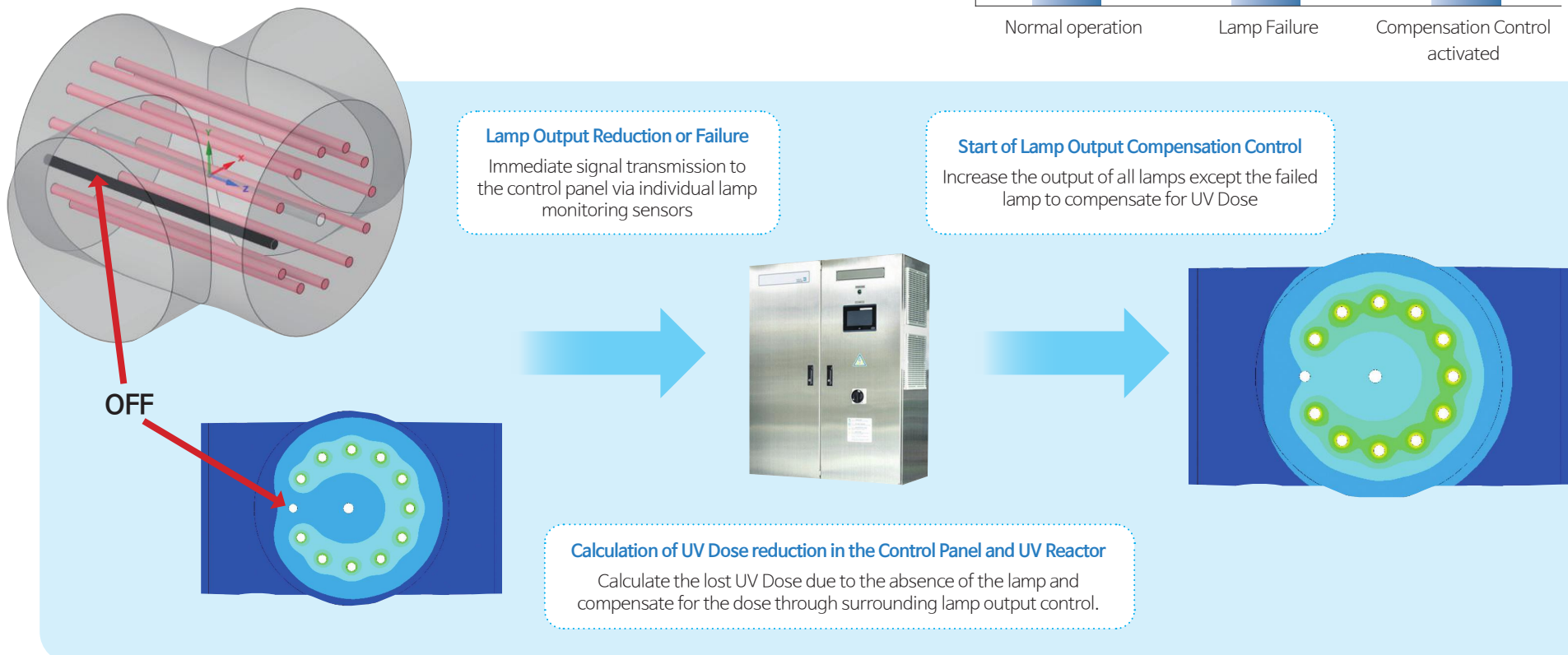
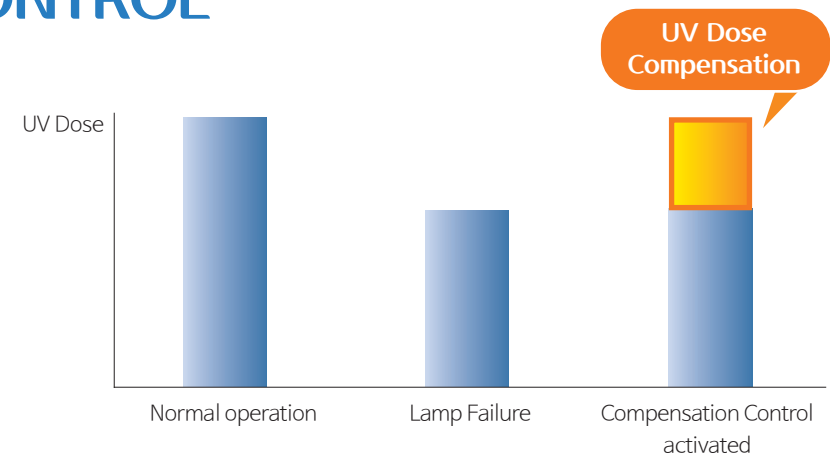
Using a low-frequency AC square wave waveform Ballast allows for stable power supply between the UV reactor and the ballast even over long distances, reducing constraints on the installation locations of the UV reactor and control panel. Additionally, the vertical structure provides excellent space efficiency and cooling efficiency within the control panel. Variable linear output control is implemented to minimize energy loss.



LAMP OUTPUT COMPENSATION CONTROL

What is Lamp Output Compensation Control Technology?

Lamp Output Compensation Control Technology involves programming the control panel to immediately adjust the output of surrounding lamps in the event of a lamp failure. This ensures that the UV Dose delivered to the UV reactor remains sufficient, allowing for prompt action and control. This technology minimizes losses by providing adequate UV exposure until the faulty lamp issue is resolved.



SYSTEM CONTROL PANEL (SCP)

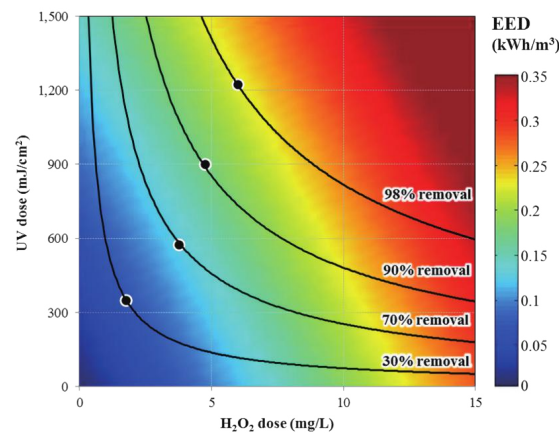
- Through a PLC-based control system, real-time external input values (flow rate, UVT, lamp intensity) are monitored to adjust the required dose
- Variable linear output control maximizes energy consumption efficiency
- High-efficiency, high-power factor, low-frequency AC square wave ballasts ensure power delivery without loss over long distances
- Integrated with online UVT meters for optimal dose calculation and application
- Individual lamp monitoring provides status checks and maintenance timing
- Individual lamp output can be adjusted as needed
- Compensation control functionality prevents disinfection performance degradation in case of lamp faults
- Immediate alarms and notifications to the central control room in case of issues
- Alarm list and data logging capabilities
- Supports remote monitoring and control functionality
- (Option) Automatic UV dose control linked with online UVT meters for optimal performance



Medium pressure UV reactor



System Control Panel (SCP)



시험성적서 (TEST REPORT)

ktl 한국산업기술시험원

1. 시험 목적 (Object) : UV처리 효율 평가

2. 시험 방법 (Method) : UV처리 효율 평가 (UVI, UVI, UVI)

3. 시험 장비 (Equipment) : UV처리 효율 평가 (UVI, UVI, UVI)

4. 시험 결과 (Result) : UV처리 효율 평가 (UVI, UVI, UVI)

5. 시험 일자 (Date) : 2023.01.10

6. 시험 장소 (Location) : 한국산업기술시험원

7. 시험 인력 (Personnel) : 한국산업기술시험원

8. 시험 결과 (Result) : UV처리 효율 평가 (UVI, UVI, UVI)

9. 시험 일자 (Date) : 2023.01.10

10. 시험 장소 (Location) : 한국산업기술시험원

11. 시험 인력 (Personnel) : 한국산업기술시험원

12. 시험 결과 (Result) : UV처리 효율 평가 (UVI, UVI, UVI)

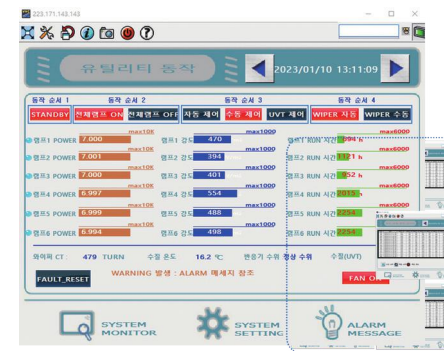
13. 시험 일자 (Date) : 2023.01.10

14. 시험 장소 (Location) : 한국산업기술시험원

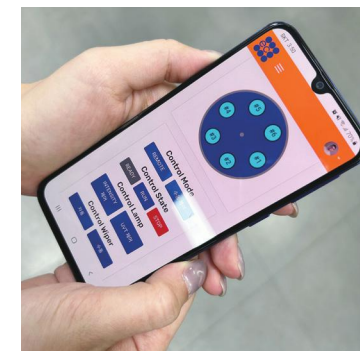
15. 시험 인력 (Personnel) : 한국산업기술시험원

Existing control vs. ECOSSET automatic control – Energy savings rate: 38%
(Results from J STP, KTL testing and evaluation)

control system



PLC screen



Mobile monitoring and control

NCM-I SERIES (SPECIFICATION)

FOR DRINKING WATER & WASTEWATER PLANT

SYSTEM GENERAL FEATURES						
System	ECM-I300	ECM-I450	ECM-I600	ECM-I750	ECM-I800-8L	ECM-I800-12L
Total Lamp Power (kW)	12	24	36	48	64 / 80	96 / 120
Nominal Lamp Number	3	6	6	6	8	12
Nominal Lamp Power (kW)	4	4	6	8	8 / 10	8 / 10
UVT range	70 ~ 98%					
Max, Operating Temp	40°C					
Max Water Temp	30°C					
Maintenance (Cleaning system)	OMC or OMCC (Optional)					
Validation/Certification	DVGW, UVDGM, NSF61, CE, NSF60(Optional)					
CHAMBER GENERAL FEATURES						
Material	SUS 316L					
Lamp Monitoring	DVGW W294 Compliant germicidal UV sensor					
NSF 60, 61	√					
CONTROL PANEL GENERAL FEATURES						
Material	Painted Mild Steel, Stainless Steel					
Separation Distance	Max. 100m					
Power Input	220V Ø3		380V Ø3			
CE Certification	√					

ECM-I series has obtained performance certification for drinking water UV disinfection equipment, specifically DVGW-W294 and USEPA UVDGM validations. It can handle a wide range of UVT conditions and process up to 150,000 tons of water per day. It is suitable for use not only in drinking water but also in industrial water, wastewater, and sewage treatment plants.

- Removes protozoa, E. coli, microorganisms, and viruses
- Cleaning device for efficient maintenance (mechanical, chemical- mechanical)
- Status monitoring with individual sensors for each lamp
- Adjusts lamp output based on flow rate and UVT variations to optimize energy consumption



NCM-US SERIES (SPECIFICATION)

FOR SWIMMING POOLS / SPAS / RECREATIONAL WATER FACILITIES

SYSTEM GENERAL FEATURES							
System	ECM-US152	ECM-US150	ECM-US200			ECM-US320	
Total Lamp Power (kW)	1.5	2.5 / 4	2.5. / 4 / 6			6/12	
Nominal Lamp Power (kW)	1.5	2.5 / 4	2.5	4	6	6	4
Nominal Lamp Number	1						3
UVT range	70 ~ 98%						
Max, Operating Temp	40°C						
Max Water Temp	30°C						
Maintenance (Cleaning system)	OMC or OMCC (Optional)						
Validation/Certification	NSF 50						
Chamber							
Material	SUS 316L						
Lamp Monitoring	DVGW W294 Compliant germicidal UV sensor						
NSF 60, 61	√						
Control Panel							
Material	Painted Mild Steel, Stainless Steel						
Power Input	380V Ø3						
CE Certification	√						

To maintain the cleanliness of existing swimming pool water, chlorine disinfection is the most commonly used method. However, customers often report significant discomfort due to the odors and irritations that can result from chlorine use.

The ECM-US series, which has obtained NSF 50 certification for the safety and performance of aquatic facility equipment, helps to improve the water quality of swimming pools, making them clearer and cleaner for a more pleasant experience.

- Removes protozoa, E. coli, microorganisms, and viruses
- Addresses issues with chlorine odors in pools
- Prevents the formation of chloramines (NH₂Cl), which can occur from chlorine (Cl₂) or ammonia, creating a more pleasant environment
- Produces high-quality pool water and protects metal structures within pool maintenance systems from corrosion
- Effective in removing chlorine-resistant protozoa when applicable.



INDUSTRIAL WASTEWATER UV-AOP SYSTEM (SPECIFICATION)

FOR INDUSTRIAL WASTEWATER APPLICATIONS

SYSTEM GENERAL FEATURES

System	Industrial Wastewater	
Total Lamp Power (kW)	24	96
Nominal Lamp Number	2	4
Nominal Lamp Power (kW)	12	24
UVT range	0 ~ 90%	
Max, Operating Temp	55°C	
Max Water Temp	40°C	
Maintenance (Cleaning system)	OMC or OMCC (Optional)	

CHAMBER GENERAL FEATURES

Material	SUS 316L/Nonmetal	
Lamp Monitoring	DVGW W294 Compliant germicidal UV sensor	

CONTROL PANEL GENERAL FEATURES

Material	Painted Mild Steel, Stainless Steel	
Separation Distance	Max. 30m	
Power Input	380V ϕ 3	380V ϕ 3
CE Certification	√	

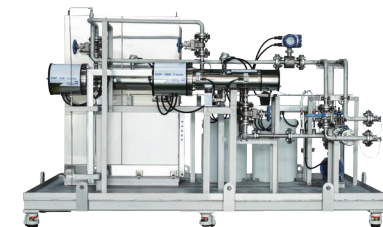
INDUSTRIAL WASTEWATER UV AOP SYSTEM (SKID TYPE)

UV AOP System for Industrial wastewater increases biodegradability, reduces COD and TOC, and remove the toxic contaminants in the industrial wastewater, It also provides compact footprint, easier installation and maintenance due to all-in-one system.



UV AOP PILOT TEST EQUIPMENT

UV AOP PILOT TEST equipment is used for optimizing treatment conditions through batch operation of targeted industrial wastewater and contaminated water before the actual field implementation of UV disinfection and oxidation equipment.

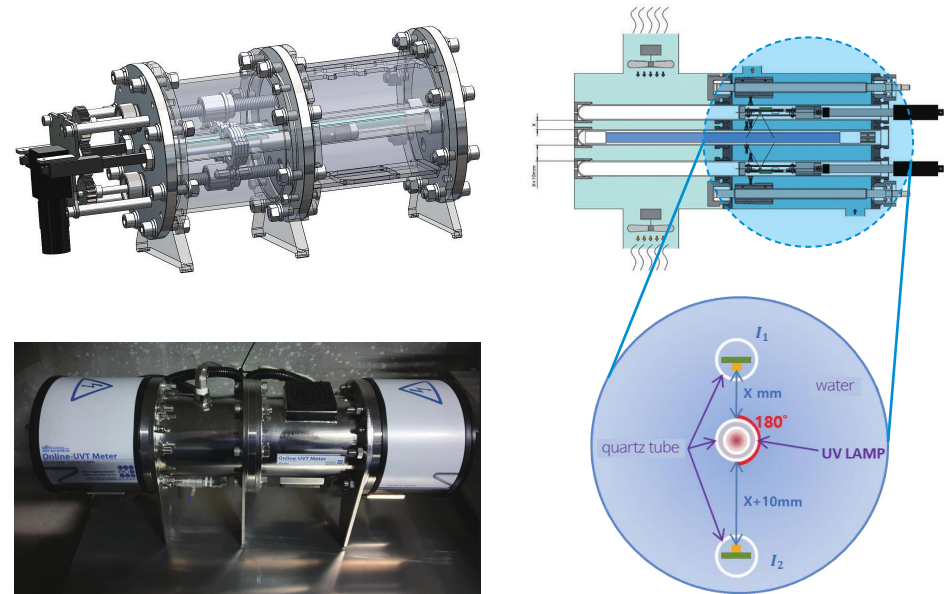


Online UVT meter

SYSTEM GENERAL FEATURES

UVT Measuring range	70~100%
Light Source	LP UV lamp
Operation	Connection to SCP
Self-diagnostic	Detect fault and send alarms to SCP
Measuring time	Initial : ~ 1min Continuous : ~ 10sec
Measuring Type	Dual-sensor detection
Maintenance (Cleaning system)	OMC or Bubble clean (optional)
Cleaning Time	5mins / cycle
Calibration Type	Automatic continuous calibration
Output	0 ~ 5V
Size (mm)	800 x 350 x 250 (L x W x H)
Lamp life	2 years
Water Temp.	0 ~ 60°C

- First developed and patented product in Korea (Smart BB grade)
- Energy savings for UV systems through efficient lamp output control via real-time UVT monitoring
- Automatic calibration of UVT measurement values through self-diagnosis
- Normal UVT measurement possible even if one of the two sensors malfunctions
- Easy maintenance with the application of mechanical or chemical-mechanical cleaning devices
- Optional sharing of cleaning solution in the Bubble Clean System when using a chemical-mechanical cleaning device
- Compact size for easy installation space management
- $\pm 2\%$ error compared to laboratory-grade UV/Vis analytical equipment (certified test report available)



Description		Company A	NEOTEC
Type		Bypass	Bypass
Measurement method		Single sensor measurement by distance	Dual sensor measurement
Measurement time		1~20 min	10 sec
Cleaning method		None	Mechanical or mechanochemical
Issues	Maintenance	Periodic shutdown followed by maintenance needed	Automatic maintenance When selecting mechanochemical, joint use of cleaning solution for the reactor
	Calibration	Periodic offline sensor calibration needed	Automatic calibration through self-diagnosis
	In case of sensor failure	Measurement not possible	Normal measurement possible even with one sensor failure

BUBBLE CLEAN SYSTEM

CLEANING SYSTEM (OPTIONAL)



Online mechanical + chemical + microbubble cleaning device

- ✓ Chemical cleaning solution containing microbubbles rapidly rotates along the outer surface of the sleeve to maximize cleaning efficiency.
- ✓ Safety verified with Bubble Clean Solution made from food additive ingredients (NSF 60 certification obtained).

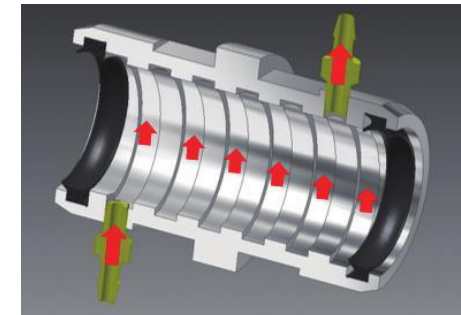
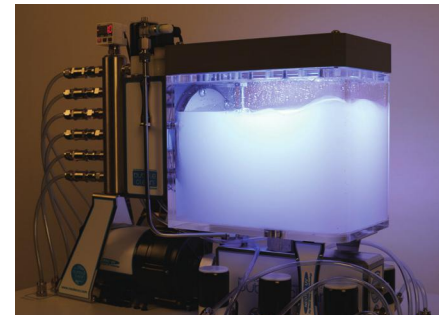
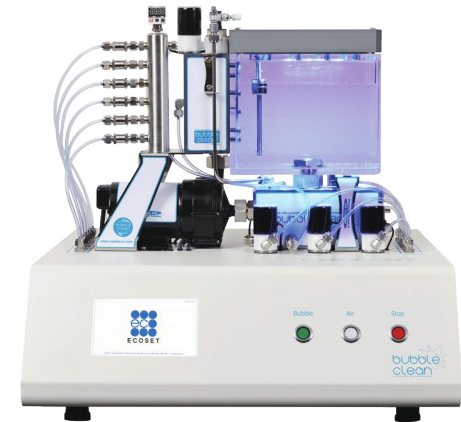
Existing OMCC system	Bubble Clean
Continuous contamination of the injected chemical cleaning solution	Easy confirmation of contamination levels and replacement
When the injected chemical cleaning solution is lost, only the lower part of the quartz tube is cleaned.	No concerns
Even when replacing just one quartz tube, all chemical cleaning solution must be removed before reinjection.	Not necessary
If the wiping seal is damaged, there is a risk of chemical cleaning solution leaking from the reactor.	Automatic monitoring and shutdown for sealing material leakage
The inconvenience of individually lifting each module off the ground for injection. Note: In the case of large-scale wastewater treatment plants, hundreds of modules need to be lifted and cleaning solution replaced (worktime: several days).	Completion of charging after draining one cleaning solution tank on the ground. Note: Replacement is completed within a short time regardless of the number of modules.

Cleaning solution supply device

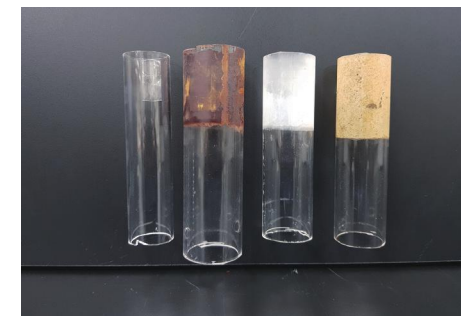
- ✓ Automatic supply and recovery function of the cleaning solution
- ✓ Can supply multiple systems with a single unit
- ✓ Visual confirmation of cleaning solution contamination is possible, and replenishing/replacing the solution is easy
- ✓ Microbubbles generated by the supply device increase cleaning efficiency
- ✓ Leak detection and alarm function within the cleaning device
- ✓ Control panel integration for setting cleaning cycles and replacement timing notifications



Acid + Microbubbles + High-Speed Rotation



Bubble Clean / Before



Bubble Clean / After

May 2024



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