WELGO

UV SYSTEM
OZONE GENERATOR
AOP DISINFECTION SYSTEM

GUANGZHOU WELGO ENVIRONMENTAL EQUIPMENT CO.,LTD

GUANGZHOU WELGO ENVIRONMENTAL EQUIPMENT CO.,LTD

+86 13580386804

+86 20 3469 8181

sales@uvc.com.cn

Factory 2, No.22, 1st Street, Daban Industrial Zone, TinggenVillage,Shatou Street, Panyu District,Guangzhou,China

www.uvc.com.cn/www.welgo.com.cn

Guangzhou WELGO is a high-tech enterprise and an excellent environment-friendly enterprise integrated with R & D, design, manufacturing, sales and post-sales service of main products UV sterilizer,ozone generator and AOP system; It is one of the first batch of professional manufacturers of introducing the development and manufacturing of UV and ozone sterilization equipment. In sterilization fields such as reuse of drinking water, swimming pool water, water for aquaculture&aquarium, municipal wastewater, oilfield reinjection water, reclaimed water and spatial sterilization, the Company has accumulated over 20 years of successful application experience and a great deal of engineering cases. By virtue of its outstanding quality and perfect pre-sales, in-sales and post-sales services, WELGO took the lead to become one of the appointed brands of many swimming pool recreational water sterilization projects.

The company has a strong technical team with years of water processing experience to guarantee standard, safe and e□cient water sterilization.

We will adhere to the philosophy of "profession, focus, quality and service" to provide broad customers with the best equipment and the perfect post-sales services.

PRODUCT CATALOGUE

• Ultraviolet Disinfection System

- Medium Pressure UV Sterilize
- Lower Pressure UV Sterilizerr

• TOC Reduction System

• Ozone Generator

- B3 series ozone generator (including air compressor &PSA oxygen concentrator)
- Micro Ozone Integrated Disinfection Machine
- PSA Oxygen Concentrator

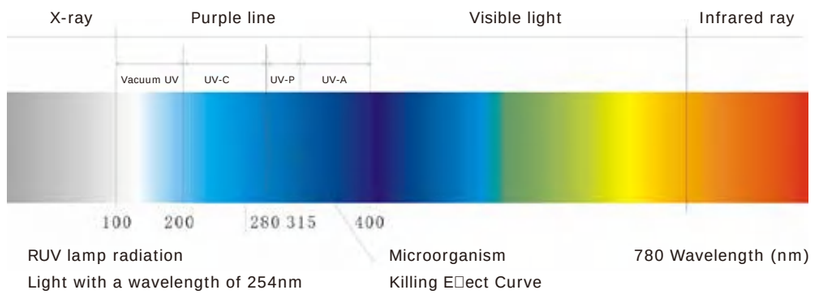
• Advanced Oxidation Process(AOP)

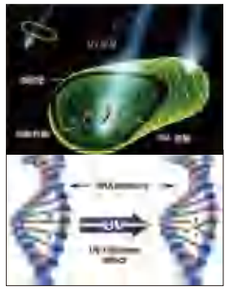
- AOT Series UV/O3 AOP Disinfection System
- CDO3 Series UV/O3 AOP Disinfection System

UV DISINFECTION TECHNOLOGY

ULTRAVIOLET DISINFECTION PRINCIPLE

UV radiates microorganisms to realize the purpose of water sterilization. After the protein, RNA and DNA of microorganisms absorb the energy of UV, the UV (254nm) can polymerize the base pair of DHA of microorganisms to prevent protein synthesis and reproduction of microorganisms, and as a result cells will die and the sterilization purpose is realized. During the sterilization process, UV will not produce any by-products.





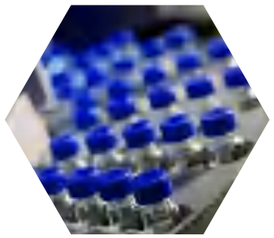
Applications

Drinking Water

Food & Beverage

Aquaculture & Aquarium

Horticulture



Pharmaceutical

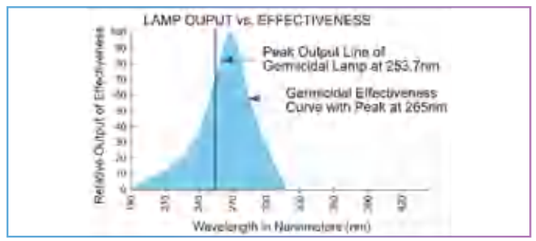
Swimming pool & Spa

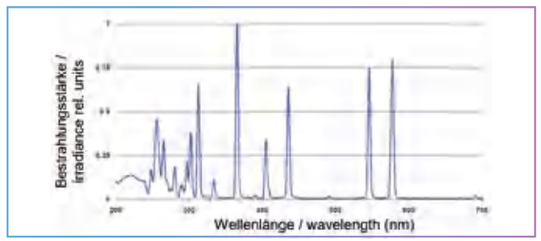
Electronics

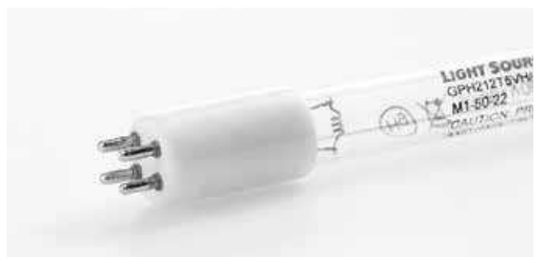
Waste & Reuse

CLASSIFICATION OF UV LAMP

Low Pressure UV lamp	Medium Pressure UV lamp
Internal air pressure <10^3Pa, narrow band output, power of a lamp tube < 500W.	Internal air pressure 10^4 ～ 10^6Pa,multispectral continuous UV output, maximum power of a lamp tube 12000W.
Requirement of water temperature: ≤40℃	Requirement of water temperature: ≤ 50℃
Penetrate and damage DNA of bacteria, virus and various microorganisms to realize an ideal sterilization e□ect.	The sterilization e□ect is stronger than low voltage and chloramines and urea can be decomposed e□ectively
Life-span of lamp tube: 9000-16000 hours.	Life-span of lamp tube: 5000-7500 hours
Costs are low. It is widely applied to air purification, water purification and sewage sterilization.	Costs are high. Characterized by a high power and strong UV, it is especially applicable to the sterilization of a large flow of water







MEDIUM PRESSURE UV STERILIZER

WELGO

Product Features

- Lamp life: 5000-7500 hours
- UV intensity is 20-200 times higher compared to traditional low pressure high intensity lamps.
- Lamp output power can be adjusted manually from 50-100% (except MPUV-0.5KW-1).
- Air-cooled, heat-dissipating electronic ballasts.
- Automatic quartz tube cleaning system.
- Touch HMI.
- Perfect online monitoring and protection features.

CONTROL SYSTEM

Standard Functions	PLC controller + touch screen. HMI displays the operating parameters of each lamp (including operating status, current, power, current and cumulative operating hours) Manual/automatic mode (remote start-up and shutdown of lamps in automatic mode). Fault alarm passive signal output. Set lamp output power manually or remotely. Manual calibration of the UV intensity value is required when replacing the lamp with a new one.
Optional Function	Modbus remote communication
Case Material	Painted carbon steel (Option:SS304/SS316L)
Mounting Method	Wall-mounted,floor standing
Cooling Method	Cooling Method

ONLINE MONITORING

UVIntensity Monitoring	On-line monitoring of UV intensity.
Water temperature monitoring	Online monitoring of water temperature in the reactor.

UV REACTOR

Material	SS316L(Option: SS304)

OPERATING ENVIRONMENT

Ambient Temperature/ Humidity	Indoor use Temperature 5℃-40℃, humidity＜80%
Water temperature	Recommended 5°C - 50°C
Working Pressure	0.7MPa

MEDIUM PRESSURE UV STERILIZER

WELGO

Technical Parameters

Model	Flow Rate (m^3/Hr)	Power Supply	Lamp Power (KW)	Working Pressure (MPa)	Water Temperature (^{0}C)	Inlet / Outlet (Flange)	Reator Size(mm)		
							L	W	H
MPUV-0.5KW-1	18	220VAC,50/60Hz	0.5KW×1	0-0.7	5-50	DN100	550	380	419
MPUV-1.0KW-1	40	220VAC,50/60Hz	1.0KW×1	0-0.7	5-50	DN100	620	380	419
MPUV-2.0KW-1	85	380VAC,50/60Hz	2.0KW×1	0-0.7	5-50	DN150	720	380	419
MPUV-3.0KW-1	145	380VAC,50/60Hz	3.0KW×1	0-0.7	5-50	DN150	720	380	419
MPUV-2.0KW-2	200	380VAC,50/60Hz	2.0KW×2	0-0.7	5-50	DN200	730	435	543
MPUV-3.0KW-2	300	380VAC,50/60Hz	3.0KW×2	0-0.7	5-50	DN250	730	485	595
MPUV-3.0KW-3	475	380VAC,50/60Hz	3.0KW×3	0-0.7	5-50	DN300	730	516	585
MPUV-3.0KW-4	650	380VAC,50/60Hz	3.0KW×4	0-0.7	5-50	DN350	780	570	585
MPUV-3.0KW-5	825	380VAC,50/60Hz	3.0KW×5	0-0.7	5-50	DN350	780	570	585
MPUV-3.0KW-6	1000	380VAC,50/60Hz	3.0KW×6	0-0.7	5-50	DN400	780	630	586

Note: Medium pressure UV sterilizer can be customized with larger flow rate as required.

LOW PRESSURE UV STERILIZER

ONE LAMP

- Ideal choice for smaller flows.
- Simple installation, operation and maintenance
- Material of UV reactor: SS304 (Option: SS316)
- Surface treatment of UV reactor: polishing or sandblasting.
- Lamp life:9000-12000 hours of operation
- Working Pressure: 0.7Mpa
- Voltage: AC210-240V,50-60Hz.

F SERIES

TECHNICAL PARAMETERS

Model	Flow Rate	Lamp Watts	Quartz tube size	Inlet/Outlet port	Reator Size(mm)		
					L	W	H
WGUV-F01	1GPM(0.23m³/Hr)	11W	245mm	G¼"F Inner Thread	270	51	67
WGUV-F02	2GPM(0.45m³/Hr)	14W	330mm	G½"F Inner Thread	360	51	67
WGUV-F06	6GPM(1.35m³/Hr)	21W	485mm	G½"M Outer Thread	510	63	88
WGUV-F12	12GPM(2.7m³/Hr)	40W	950mm	G¾"M Outer Thread	975	63	95
WGUV-F24	24GPM(5.5m³/Hr)	80W	950mm	G1¼"M Outer Thread	975	76	108
WGUV-F44	44GPM(10m³/Hr)	155W	1640mm	G1½"M Outer Thread	1664	76	108

K SERIES

TECHNICAL PARAMETERS

Model	Flow Rate	Lamp Watts	Quartz tube size	Inlet/Outlet port	Reator Size(mm)		
					L	W	H
WGUV-K01	1GPM(0.23m³/Hr)	11W	245mm	G¼"F Inner Thread	270	51	67
WGUV-K02	2GPM(0.45m³/Hr)	14W	330mm	G½"F Inner Thread	354	51	67
WGUV-K06	6GPM(1.35m³/Hr)	21W	485mm	G½"M Outer Thread	510	63	88
WGUV-K12	12GPM(2.7m³/Hr)	40W	940mm	G¾"M Outer Thread	964	63	95
WGUV-K24	24GPM(5.5m³/Hr)	80W	940mm	G1¼"M Outer Thread	964	76	108
WGUV-K44	44GPM(10m³/Hr)	155W	1640mm	G1½"M Outer Thread	1664	76	108

L SERIES

TECHNICAL PARAMETERS

Model	Flow Rate	Lamp Watts	Quartz tube size	Inlet/Outlet port	Reator Size(mm)		
					L	W	H
WGUV-L02	2GPM(0.45m³/Hr)	14W	330mm	G½"M Outer Thread	370	51	67
WGUV-L06	6GPM(1.35m³/Hr)	21W	485mm	G½"M Outer Thread	523	63	71
WGUV-L12	12GPM(2.7m³/Hr)	40W	950mm	G1"M Outer Thread	992	63	93
WGUV-L24	24GPM(5.5m³/Hr)	80W	950mm	G1¼"M Outer Thread	1002	76	106

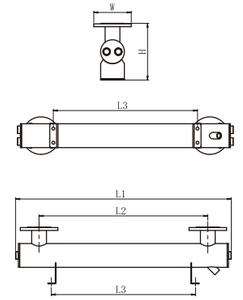
LOW PRESSURE UV STERILIZER

MULTI-LAMPS

CONFIGURATION TABLE FOR EACH SERIES OF UV STERILIZER

Product Name	S Series	SQ Series	AC Series	KD Series	T Series	HDPE Series	PVC Series
Type of UV lamp	High-performance low-pressure high-strength / amalgam UV lamp imported with original packaging						
Service life of the lamp tube	9000-16000 hours						
Connection method	Flange connection						
Connection diameter of the inlet/outlet	Designed according to the water flow rate and site conditions.						
Extremity of the processing capacity of a single unit	⩽500m³/h						
Working pressure	0.7MPa	0.7MPa	0.7MPa	0.7MPa	0.7MPa	0.4MPa	0.4MPa
UV Reactor Material	SS304 (Option: SS316L)	SS304 (Option: SS316L)	SS304 (Option: SS316L)	SS304 (Option: SS316L)	SS304 (Option: SS316L)	HDPE	PVC
Service life of UV Reactor	Over 20 years Optional	Over 20 years Optional	Over 20 years Optional	Over 20 years Optional	Over 20 years Optional	10 years	5 years
UV Intensity Sensor	Optional	Optional	Optional	Yes	Optional	Optional	None
Methods of cleaning	None	Manual mechanical cleaning	Automatic mechanical cleaning	Optional	Optional	None	None
The maximum distance between the UV chamber & ballast	⩽5m	⩽5m	⩽5m	⩽5m	⩽5m	⩽5m	⩽5m
Control Cabinet Function	Display of accumulated lamp tube operating time, operating status display, audible/visual system fault alarm		Equipped with PLC and touch screen control system. It can monitor the operating status of the equipment, control the automatic cleaning frequency, display the accumulated operating time of the lamp, operating status, system failure alarm and UV intensity value. Optional function:temperature control sensor.	Display of accumulated lamp tube operating time, operating status display, audible/visual system fault alarm			
Supply voltage	220V 50/60Hz; 380V 50/60Hz						
Energy control	Ballast specially designed for preheat-type lamp tubes						

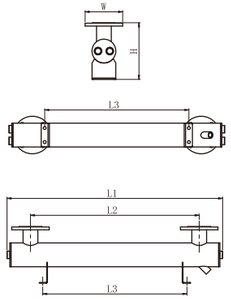
S SERIES



TECHNICAL PARAMETERS

Model	Flow Rate (m³/Hr)	Power Supply	Lamp Power (KW)	Working Pressure (MPa)	Water Temperature (°C)	Inlet / Outlet (Flange)	Reator Size(mm)				
							L1	L2	L3	W	H
WGUV-40W-1U	2.7	220VAC,50/60Hz	40W×1	0-0.7	5-40	Thread DN40	960	760	615	145	276
WGUV-40W-2U	6	220VAC,50/60Hz	40W×2	0-0.7	5-40	Thread DN40	960	760	615	145	276
WGUV-40W-3U	10	220VAC,50/60Hz	40W×3	0-0.7	5-40	DN50	960	720	615	160	319
WGUV-80W-2U	12	220VAC,50/60Hz	80W×2	0-0.7	5-40	DN50	960	720	615	160	242
WGUV-80W-3U	18	220VAC,50/60Hz	80W×3	0-0.7	5-40	DN65	960	700	615	180	319
WGUV-80W-4U	25	220VAC,50/60Hz	80W×4	0-0.7	5-40	DN80	960	690	615	195	329
WGUV-80W-5U	30	220VAC,50/60Hz	80W×5	0-0.7	5-40	DN80	960	690	615	159	329
WGUV-80W-6U	35	220VAC,50/60Hz	80W×6	0-0.7	5-40	DN80	960	690	615	219	389
WGUV-120W-4U	35	220VAC,50/60Hz	120W×4	0-0.7	5-40	DN80	1240	950	615	195	329
WGUV-120W-5U	43	220VAC,50/60Hz	120W×5	0-0.7	5-40	DN100	1240	930	615	219	419
WGUV-120W-6U	51	220VAC,50/60Hz	120W×6	0-0.7	5-40	DN100	1240	930	615	219	419
WGUV-120W-7U	59	220VAC,50/60Hz	120W×7	0-0.7	5-40	DN100	1240	930	615	219	419
WGUV-155W-5U	55	220VAC,50/60Hz	155W×5	0-0.7	5-40	DN150	1660	1300	900	280	419
WGUV-155W-6U	66	220VAC,50/60Hz	155W×6	0-0.7	5-40	DN150	1660	1300	900	280	419
WGUV-155W-7U	77	220VAC,50/60Hz	155W×7	0-0.7	5-40	DN150	1660	1300	900	280	419
WGUV-320W-4U	90	220VAC,50/60Hz	320W×4	0-0.7	5-40	DN150	1660	1300	900	280	419
WGUV-320W-5U	110	220VAC,50/60Hz	320W×5	0-0.7	5-40	DN150	1660	1300	900	280	419
WGUV-320W-6U	130	220VAC,50/60Hz	320W×6	0-0.7	5-40	DN150	1660	1300	900	273	473
WGUV-320W-7U	150	220VAC,50/60Hz	320W×7	0-0.7	5-40	DN200	1660	1240	900	340	473
WGUV-320W-8U	175	220VAC,50/60Hz	320W×8	0-0.7	5-40	DN200	1660	1240	900	340	473
WGUV-320W-9U	200	220VAC,50/60Hz	320W×9	0-0.7	5-40	DN200	1660	1240	900	340	565
WGUV-320W-11U	250	220VAC,50/60Hz	320W×11	0-0.7	5-40	DN250	1660	1200	900	390	580
WGUV-320W-12U	275	380VAC,50/60Hz	320W×12	0-0.7	5-40	DN250	1660	1200	900	390	580
WGUV-320W-15U	350	380VAC,50/60Hz	320W×15	0-0.7	5-40	DN250	1660	1200	900	390	617

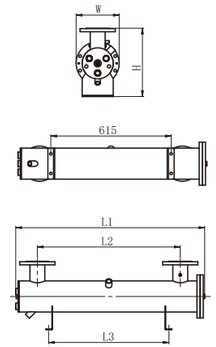
SQ SERIES



TECHNICAL PARAMETERS

Model	Flow Rate (m³/Hr)	Power Supply	Lamp Power (KW)	Working Pressure (MPa)	Water Temperature (°C)	Inlet / Outlet (Flange)	Reator Size(mm)				
							L1	L2	L3	W	H
WGUV-SQ-40W-1U	2.7	220VAC,50/60Hz	40W×1	0-0.7	5-40	Thread DN40	1030	770	615	194	313
WGUV-SQ-40W-2U	6	220VAC,50/60Hz	40W×2	0-0.7	5-40	Thread DN40	1030	770	615	194	313
WGUV-SQ-40W-3U	10	220VAC,50/60Hz	40W×3	0-0.7	5-40	DN50	1030	750	615	220	329
WGUV-SQ-40W-4U	12	220VAC,50/60Hz	40W×4	0-0.7	5-40	DN50	1030	750	615	220	329
WGUV-SQ-80W-2U	12	220VAC,50/60Hz	80W×2	0-0.7	5-40	DN50	1030	750	615	194	313
WGUV-SQ-80W-3U	18	220VAC,50/60Hz	80W×3	0-0.7	5-40	DN65	1030	730	615	220	349
WGUV-SQ-80W-4U	25	220VAC,50/60Hz	80W×4	0-0.7	5-40	DN80	1030	720	615	220	349
WGUV-SQ-80W-5U	30	220VAC,50/60Hz	80W×5	0-0.7	5-40	DN80	1030	720	615	280	419
WGUV-SQ-80W-6U	35	220VAC,50/60Hz	80W×6	0-0.7	5-40	DN80	1030	720	615	280	419
WGUV-SQ-120W-4U	35	220VAC,50/60Hz	120W×4	0-0.7	5-40	DN80	1280	970	615	280	349
WGUV-SQ-120W-5U	43	220VAC,50/60Hz	120W×5	0-0.7	5-40	DN100	1280	950	615	280	419
WGUV-SQ-120W-6U	51	220VAC,50/60Hz	120W×6	0-0.7	5-40	DN100	1280	950	615	280	419
WGUV-SQ-120W-7U	59	220VAC,50/60Hz	120W×7	0-0.7	5-40	DN100	1280	950	615	280	419
WGUV-SQ-155W-5U	55	220VAC,50/60Hz	155W×5	0-0.7	5-40	DN100	1660	1390	900	280	419
WGUV-SQ-155W-6U	66	220VAC,50/60Hz	155W×6	0-0.7	5-40	DN150	1660	1320	900	280	419
WGUV-SQ-155W-7U	77	220VAC,50/60Hz	155W×7	0-0.7	5-40	DN150	1660	1320	900	280	419
WGUV-SQ-320W-4U	90	220VAC,50/60Hz	320W×4	0-0.7	5-40	DN150	1660	1320	900	280	419
WGUV-SQ-320W-5U	110	220VAC,50/60Hz	320W×5	0-0.7	5-40	DN150	1660	1320	900	280	419
WGUV-SQ-320W-6U	130	220VAC,50/60Hz	320W×6	0-0.7	5-40	DN150	1660	1320	900	334	473
WGUV-SQ-320W-7U	150	220VAC,50/60Hz	320W×7	0-0.7	5-40	DN200	1660	1270	900	334	473

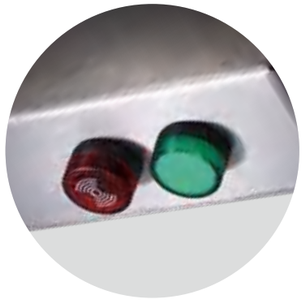
AC SERIES

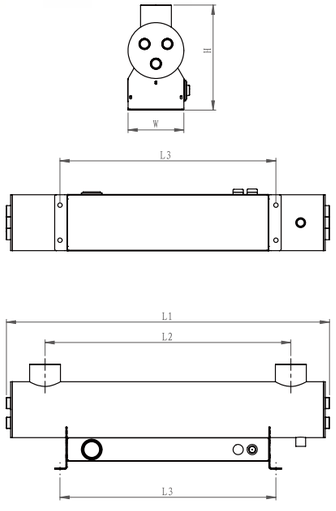


TECHNICAL PARAMETERS

Model	Flow Rate (m³/Hr)	Power Supply	Lamp Power (KW)	Working Pressure (MPa)	Water Temperature (°C)	Inlet / Outlet (Flange)	Reator Size(mm)				
							L1	L2	L3	W	H
WGUV-A-40W-2U	6	220VAC,50/60Hz	40W×2	0-0.7	5-40	Thread DN40	1030	770	615	220	349
WGUV-A-40W-3U	10	220VAC,50/60Hz	40W×3	0-0.7	5-40	DN50	1030	750	615	220	349
WGUV-A-40W-4U	12	220VAC,50/60Hz	40W×4	0-0.7	5-40	DN50	1030	750	615	220	349
WGUV-A-80W-2U	12	220VAC,50/60Hz	80W×2	0-0.7	5-40	DN50	1030	750	615	220	349
WGUV-A-80W-3U	18	220VAC,50/60Hz	80W×3	0-0.7	5-40	DN65	1030	730	615	220	349
WGUV-A-80W-4U	25	220VAC,50/60Hz	80W×4	0-0.7	5-40	DN80	1030	720	615	220	349
WGUV-A-80W-5U	30	220VAC,50/60Hz	80W×5	0-0.7	5-40	DN80	1030	720	615	280	419
WGUV-A-80W-6U	35	220VAC,50/60Hz	80W×6	0-0.7	5-40	DN80	1030	720	615	280	419
WGUV-A-120W-4U	35	220VAC,50/60Hz	120W×4	0-0.7	5-40	DN80	1280	970	615	220	349
WGUV-A-120W-5U	43	220VAC,50/60Hz	120W×5	0-0.7	5-40	DN100	1280	950	615	280	419
WGUV-A-120W-6U	51	220VAC,50/60Hz	120W×6	0-0.7	5-40	DN100	1280	950	615	280	419
WGUV-A-120W-7U	59	220VAC,50/60Hz	120W×7	0-0.7	5-40	DN100	1280	950	615	280	419
WGUV-A-155W-5U	55	220VAC,50/60Hz	155W×5	0-0.7	5-40	DN100	1725	1390	900	280	419
WGUV-A-155W-6U	66	220VAC,50/60Hz	155W×6	0-0.7	5-40	DN150	1725	1320	900	280	419
WGUV-A-155W-7U	77	220VAC,50/60Hz	155W×7	0-0.7	5-40	DN150	1725	1320	900	280	419
WGUV-A-320W-4U	90	220VAC,50/60Hz	320W×4	0-0.7	5-40	DN150	1725	1320	900	280	419
WGUV-A-320W-5U	110	220VAC,50/60Hz	320W×5	0-0.7	5-40	DN150	1725	1320	900	280	419
WGUV-A-320W-6U	130	220VAC,50/60Hz	320W×6	0-0.7	5-40	DN150	1725	1300	900	334	473
WGUV-A-320W-7U	150	220VAC,50/60Hz	320W×7	0-0.7	5-40	DN200	1725	1260	900	334	473
WGUV-A-320W-8U	175	220VAC,50/60Hz	320W×8	0-0.7	5-40	DN200	1725	1260	900	334	473
WGUV-A-320W-9U	200	220VAC,50/60Hz	320W×9	0-0.7	5-40	DN200	1725	1260	900	395	565
WGUV-A-320W-11U	250	220VAC,50/60Hz	320W×11	0-0.7	5-40	DN250	1725	1210	900	395	565
WGUV-A-320W-12U	275	380VAC,50/60Hz	320W×12	0-0.7	5-40	DN250	1725	1210	900	395	565
WGUV-A-320W-15U	350	380VAC,50/60Hz	320W×15	0-0.7	5-40	DN250	1725	1210	900	480	691

KD SERIES

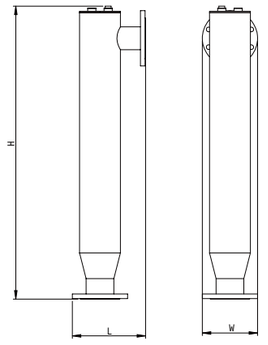




TECHNICAL PARAMETERS

Model	Flow Rate (m³/Hr)	Power Supply	Lamp Power (KW)	Working Pressure (MPa)	Water Temperature (°C)	Inlet / Outlet (Flange)	Reator Size(mm)				
							L1	L2	L3	W	H
WGUV-KD-40W-2U	6	220VAC,50/60Hz	40W×2	0-0.7	5-40	Thread DN40	960	760	615	145	276
WGUV-KD-40W-3U	10	220VAC,50/60Hz	40W×3	0-0.7	5-40	DN50	960	720	615	160	319
WGUV-KD-80W-2U	12	220VAC,50/60Hz	80W×2	0-0.7	5-40	DN50	960	720	615	160	242
WGUV-KD-80W-3U	18	220VAC,50/60Hz	80W×3	0-0.7	5-40	DN65	960	700	615	180	319
WGUV-KD-80W-4U	25	220VAC,50/60Hz	80W×4	0-0.7	5-40	DN80	960	690	615	195	329
WGUV-KD-80W-5U	30	220VAC,50/60Hz	80W×5	0-0.7	5-40	DN80	960	690	615	159	329
WGUV-KD-80W-6U	35	220VAC,50/60Hz	80W×6	0-0.7	5-40	DN80	960	690	615	219	389
WGUV-KD-120W-4U	35	220VAC,50/60Hz	120W×4	0-0.7	5-40	DN80	1240	950	875	195	329
WGUV-KD-120W-5U	43	220VAC,50/60Hz	120W×5	0-0.7	5-40	DN100	1240	930	900	220	469

T SERIES



T SERIES UV STERILIZER

Model	Flow Rate (m³/Hr)	Power Supply	Lamp Power (KW)	Working Pressure (MPa)	Water Temperature (°C)	Inlet / Outlet (Flange)	Reator Size(mm)		
							L	W	H
WGUV-T-40W-2U	6	220VAC,50/60Hz	40W×2	0-0.7	5-40	Thread DN40	134	145	960
WGUV-T-40W-3U	10	220VAC,50/60Hz	40W×3	0-0.7	5-40	DN50	229	160	1090
WGUV-T-80W-2U	12	220VAC,50/60Hz	80W×2	0-0.7	5-40	DN50	152	160	960
WGUV-T-80W-3U	18	220VAC,50/60Hz	80W×3	0-0.7	5-40	DN65	319	180	960
WGUV-T-80W-4U	25	220VAC,50/60Hz	80W×4	0-0.7	5-40	DN80	229	195	1150
WGUV-T-80W-5U	30	220VAC,50/60Hz	80W×5	0-0.7	5-40	DN80	229	159	1150
WGUV-T-80W-6U	35	220VAC,50/60Hz	80W×6	0-0.7	5-40	DN80	289	219	1150
WGUV-T-120W-4U	35	220VAC,50/60Hz	120W×4	0-0.7	5-40	DN80	239	195	1420
WGUV-T-120W-5U	43	220VAC,50/60Hz	120W×5	0-0.7	5-40	DN100	319	219	1420
WGUV-T-120W-6U	51	220VAC,50/60Hz	120W×6	0-0.7	5-40	DN100	319	219	1420
WGUV-T-120W-7U	59	220VAC,50/60Hz	120W×7	0-0.7	5-40	DN100	319	219	1420

HDPE SERIES

TECHNICAL PARAMETERS

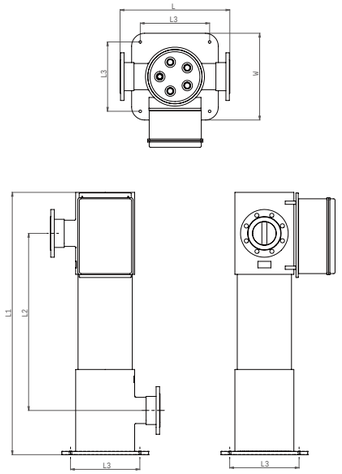
Model	Flow Rate (m³/Hr)	Power Supply	Lamp Power (KW)	Working Pressure (MPa)	Water Temperature (°C)	Inlet / Outlet	Reator Size(mm)		
							L	W	H
WGUV-HDPE-40W-1U	2.7	220VAC,50/60Hz	40W×1	0-0.4	5-40	1.5"	980	225	310
WGUV-HDPE-40W-2U	6	220VAC,50/60Hz	40W×2	0-0.4	5-40	2"	980	225	310
WGUV-HDPE-40W-3U	10	220VAC,50/60Hz	40W×3	0-0.4	5-40	2"	980	225	310
WGUV-HDPE-80W-2U	12	220VAC,50/60Hz	80W×2	0-0.4	5-40	2.5"	980	225	310
WGUV-HDPE-80W-3U	18	220VAC,50/60Hz	80W×3	0-0.4	5-40	2.5"	980	225	310
WGUV-HDPE-80W-4U	25	220VAC,50/60Hz	80W×4	0-0.4	5-40	3"	980	225	310
WGUV-HDPE-80W-5U	30	220VAC,50/60Hz	80W×5	0-0.4	5-40	3"	980	280	400
WGUV-HDPE-80W-6U	35	220VAC,50/60Hz	80W×6	0-0.4	5-40	4"	980	280	400
WGUV-HDPE-120W-4U	35	220VAC,50/60Hz	120W×4	0-0.4	5-40	4"	1210	225	310
WGUV-HDPE-120W-5U	43	220VAC,50/60Hz	120W×5	0-0.4	5-40	4"	1210	280	400
WGUV-HDPE-120W-6U	51	220VAC,50/60Hz	120W×6	0-0.4	5-40	4"	1210	280	400
WGUV-HDPE-120W-7U	59	220VAC,50/60Hz	120W×7	0-0.4	5-40	6"	1210	285	400
WGUV-HDPE-155W-5U	55	220VAC,50/60Hz	155W×5	0-0.4	5-40	6"	1670	285	400
WGUV-HDPE-155W-6U	66	220VAC,50/60Hz	155W×6	0-0.4	5-40	6"	1670	285	400
WGUV-HDPE-320W-4U	90	220VAC,50/60Hz	320W×4	0-0.4	5-40	6"	1670	285	400
WGUV-HDPE-320W-5U	110	220VAC,50/60Hz	320W×5	0-0.4	5-40	6"	1670	285	400
WGUV-HDPE-320W-6U	130	220VAC,50/60Hz	320W×6	0-0.4	5-40	6"	1670	580	630
WGUV-HDPE-320W-7U	150	220VAC,50/60Hz	320W×7	0-0.4	5-40	8"	1670	580	630
WGUV-HDPE-320W-8U	175	220VAC,50/60Hz	320W×8	0-0.4	5-40	8"	1670	580	630
WGUV-HDPE-320W-9U	200	220VAC,50/60Hz	320W×9	0-0.4	5-40	8"	1670	580	630
WGUV-HDPE-320W-11U	250	220VAC,50/60Hz	320W×11	0-0.4	5-40	10"	1670	700	700
WGUV-HDPE-320W-12U	275	380VAC,50/60Hz	320W×12	0-0.4	5-40	10"	1670	700	700

PVC-W SERIES

TECHNICAL PARAMETERS

Model	Flow Rate (m³/Hr)	Power Supply	Lamp Power (KW)	Working Pressure (MPa)	Water Temperature (°C)	Inlet / Outlet	Reator Size(mm)		
							L	W	H
WGUV-W-40W-1U	2.7	220VAC,50/60Hz	40W×1	0-0.4	5-40	1.5"	980	150	280
WGUV-W-40W-2U	6	220VAC,50/60Hz	40W×2	0-0.4	5-40	2"	1040	160	385
WGUV-W-40W-3U	10	220VAC,50/60Hz	40W×3	0-0.4	5-40	2"	1040	160	385
WGUV-W-80W-2U	12	220VAC,50/60Hz	80W×2	0-0.4	5-40	2.5"	1040	185	385
WGUV-W-80W-3U	18	220VAC,50/60Hz	80W×3	0-0.4	5-40	2.5"	1040	185	385
WGUV-W-80W-4U	25	220VAC,50/60Hz	80W×4	0-0.4	5-40	3"	1080	220	439
WGUV-W-80W-5U	30	220VAC,50/60Hz	80W×5	0-0.4	5-40	3"	1125	280	535
WGUV-W-80W-6U	35	220VAC,50/60Hz	80W×6	0-0.4	5-40	4"	1020	270	540
WGUV-W-120W-4U	35	220VAC,50/60Hz	120W×4	0-0.4	5-40	4"	1340	220	492
WGUV-W-120W-5U	43	220VAC,50/60Hz	120W×5	0-0.4	5-40	4"	1340	220	492
WGUV-W-120W-6U	51	220VAC,50/60Hz	120W×6	0-0.4	5-40	4"	1280	280	540
WGUV-W-120W-7U	59	220VAC,50/60Hz	120W×7	0-0.4	5-40	6"	1325	285	610
WGUV-W-155W-5U	55	220VAC,50/60Hz	155W×5	0-0.4	5-40	6"	1780	285	570
WGUV-W-155W-6U	66	220VAC,50/60Hz	155W×6	0-0.4	5-40	6"	1780	285	570
WGUV-W-320W-4U	90	220VAC,50/60Hz	320W×4	0-0.4	5-40	6"	1780	285	570
WGUV-W-320W-5U	110	220VAC,50/60Hz	320W×5	0-0.4	5-40	6"	1750	285	570
WGUV-W-320W-6U	130	220VAC,50/60Hz	320W×6	0-0.4	5-40	6"	1750	285	570
WGUV-W-320W-7U	150	220VAC,50/60Hz	320W×7	0-0.4	5-40	8"	1860	345	670
WGUV-W-320W-8U	175	220VAC,50/60Hz	320W×8	0-0.4	5-40	8"	1860	345	670
WGUV-W-320W-9U	200	220VAC,50/60Hz	320W×9	0-0.4	5-40	8"	1860	345	670
WGUV-W-320W-11U	250	220VAC,50/60Hz	320W×11	0-0.4	5-40	10"	1920	420	750
WGUV-W-320W-12U	275	380VAC,50/60Hz	320W×12	0-0.4	5-40	10"	1920	420	750

PVC-Y SERIES



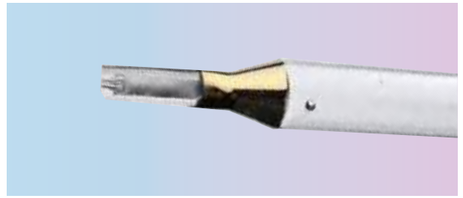
TECHNICAL PARAMETERS

Model	Flow Rate (m^3/Hr)	Power Supply	Lamp Power (KW)	Working Pressure (MPa)	Water Temperature (^{0}C)	Inlet / Outlet	Reator Size(mm)		
							L	W	H
WGUV-Y-40W-2U	6	220VAC,50/60Hz	40W×2	0-0.4	5-40	2"	485	400	1120
WGUV-Y-40W-3U	10	220VAC,50/60Hz	40W×3	0-0.4	5-40	2"	485	400	1120
WGUV-Y-80W-2U	12	220VAC,50/60Hz	80W×2	0-0.4	5-40	2.5"	485	400	1120
WGUV-Y-80W-3U	18	220VAC,50/60Hz	80W×3	0-0.4	5-40	2.5"	485	400	1120
WGUV-Y-80W-4U	25	220VAC,50/60Hz	80W×4	0-0.4	5-40	3"	525	400	1120
WGUV-Y-80W-5U	30	220VAC,50/60Hz	80W×5	0-0.4	5-40	3"	525	400	1120
WGUV-Y-80W-6U	35	220VAC,50/60Hz	80W×6	0-0.4	5-40	4"	510	525	1120
WGUV-Y-120W-4U	35	220VAC,50/60Hz	120W×4	0-0.4	5-40	4"	525	400	1370
WGUV-Y-120W-5U	43	220VAC,50/60Hz	120W×5	0-0.4	5-40	4"	525	400	1370
WGUV-Y-120W-6U	51	220VAC,50/60Hz	120W×6	0-0.4	5-40	4"	510	525	1370
WGUV-Y-120W-7U	59	220VAC,50/60Hz	120W×7	0-0.4	5-40	6"	550	600	1370

UV STERILIZER SPARE PARTS

WELGO

Low Pressure UV lamp



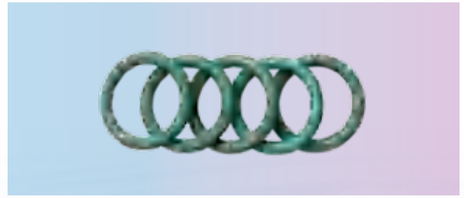
Medium Pressure UV lamp

Quartz Sleeve

Ballast for Low Pressure UV lamp

Ballast for Medium Pressure UV lamp

Nut (S.S. /Aluminium/Plastic)



O-ring

Bracket (Aluminium Alloy/Plastic)

UV Intensity Sensor

Temperature Sensor

TOC REDUCTION SYSTEM

Technical Parameters

Model	04CHO	05CHO	07CHO	05PHA	07PHA	09PHA	12PHA	15PHA	18PHA	12HHA	15HHA
Flow Range											
Flow Rate	2.0M³/h-36.0M³/h										
Electrical Specifications											
Power Supply	220VAC,50Hz								380VAC,50Hz		
Power	380	460	630	845	1175	1500	2000	2480	2900	3750	4750
Reactor Chamber											
Material	SS316L										
Surface Treatment	RA＜0.20										
Lamp Length	843			1554							
Connection Diameter	DN50		DN100						DN150		

OZONE GENERATOR

Principle of Ozone Generation

Ozone generation methods based on principle can be classified into photochemical function, electrochemical function, atomic radiation and corona discharge. Wherein, corona discharge is widely applied to ozonator. The basic principle of generating ozone with the corona discharge method is the ozonator which consists of one pair of electrodes, dielectric and discharging gap. When AC high voltage is imposed to two electrodes, high-speed electrons and oxygen molecules impact with each other, corona discharge occurs in the gap under the action of external high energy, oxygen gases are ionized, concentration of oxygen ions in the gap increases significantly, oxygen ions and oxygen molecules react with each other to generate ozone. The generation process is also a process of thermal reaction where heat energy is released.

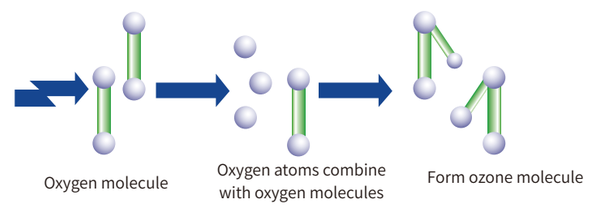
Corona discharge is the widely used ozone generation mode in ozonators. It mainly consists of the following components: Inner electrode, outer electrode, discharging gap, power supply and cooling elements.

Performance of ozonator mainly depends on the following key factors:

- **Discharging gap:** The energy consumption will be lower if the discharging gap is smaller
- **Dielectric material:** Dielectric coe□cient and corrosion resistance performance are two key indicators of selecting dielectric materials
- **Motor material:** It is better when the conductivity is higher, so is the mechanical strength
- **Discharging area / shape:** Under the premise of evenly discharging, the large discharging area helps improve the yield of ozone and the cooling e□ciency.

Reaction Process

Ozone generation prnciple in the electric field



The ozone reactor with a high-voltage discharging unit is a micro-gap corona discharging structure composed of imported ceramic-Ti alloy material and applies mobile module design, enabling more convenient maintenance.

B3 SERIES

Configuration

- Built-in PSA oxygenerator
- Oil-free air compressor
- Stainless steel or coated carbon steel shell
- Air cooling Ti-ceramic ozone generation unit
- Standard high-frequency high-voltage power supply module
- Standard control module
- Air cooling heat dissipation

Control

- Yield adjustment 0-100%
- Reaction chamber pressure gauge -1~1.5kgf/cm2
- 4~20mA interface control (optional)
- Ozone operation instruction
- High-voltage power supply automatic protection (overheat, overcurrent)
- Oxygen flow control

Options

- One-way valve
- Ejector
- Refrigerated dryer
- Ozone destruction device
- Pipeline mixer
- Ozone leakage alarm device

- Ozone production: 5-500g/h
- Cooling mode: Built-in air cooling
- Air inlet dew point: -60℃
- Power supply: AC220V/380V TN-S
- Resistance to earth: ⩽4Ω
- Ozone concentration: 0-105mg/L
- Ambient relative humidity: ⩽85%
- Ambient temperature: 1℃-38℃
- Yield adjustment: 0-100%
- Leakage concentration: ⩽0.02ppm

TECHNICAL PARAMETERS

Model	Ozone Output (g/hr)	Ozone Concentration (mg/L)	Oxygen Flow Rate (L/min)	Power Supply v/Hz (TN-S)	Power (w)	Inlet/Outlet Size (mm)	Dimension (mm)	Weight (kg)
B3-5	5	0-50	1-2	220/50	550	Ø 6	600*300*1030	53
B3-10	10	0-50	2-4	220/50	650	Ø 6	600*300*1030	53
B3-15	15	0-80	3-5	220/50	700	Ø 6	600*300*1030	53
B3-20	20	0-100	3-6	220/50	850	Ø 6	600*300*1030	55
B3-30	30	0-105	4-7	220/50	950	Ø 6	600*300*1030	55
B3-45	45	0-105	7-10	220/50	1500	Ø 8	600*500*1300	80
B3-60	60	0-105	8-12	220/50	1700	Ø 8	600*500*1300	90
B3-90	90	0-105	10-18	220/50	2700	Ø 8	700*700*1300	120
B3-120	120	0-105	15-24	220/50	3900	Ø 8	785*700*1300	135
B3-150	150	0-105	25-30	220/50	4450	Ø 10	780*700*1590	150
B3-200	200	0-105	34-40	380VAC,50Hz	6300	ϕ12	1560*700*1350	200
B3-250	250	0-105	41-50	380VAC,50Hz	8100	ϕ12	1600*700*1640	260
B3-300	300	0-105	50-60	380VAC,50Hz	9000	ϕ12	1600*700*1640	300

Remark: Ozone generator with larger production can be customized.

MICRO OZONE INTEGRATED DISINFECTION MACHINE

Product features

- Adopt IGBT high frequency ozone power supply
- Built-in air filter
- Built-in air dryer
- Dissolves efficiently in water to maintain continuous disinfection and antibacterial effect in the water tank
- Built-in stainless steel circulation pump
- Negative pressure injector mixing method to improve ozone utilization efficiency
- Manual, timer and remote control modes
- No air compressor, no ozone leakage
- Air-cooled cooling, energy saving and silent, safe and reliable
- Quartz ozone discharge tube
- Optional snap-in fittings for water inlet and outlet

SJ SERIES

WG SERIES

TECHNICAL PARAMETERS

Model	Ozone Output g/hr)	Power	Inlet/Outlet Size (mm)	Dimension (mm)	Weight (kg)
SJ-01G	1	500	1"	500*380*870	30
SJ-02G	2	600	1"	500*380*870	35
WG-05G	5	800	1"	550*350*1280	45

PSA OXYGEN GENERATOR

WELGO

Product features

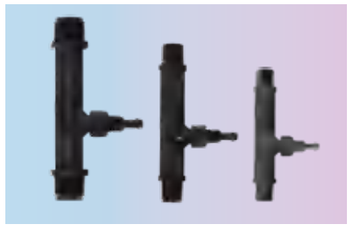
- High safety and long service life
- Low cost
- High oxygen concentration, up to 90% or more.
- Simple operation and continuous operation
- The purity of the treated air source is close to 100K (i.e. less than 0.3 microns per cubic meter, less than 100,000 particles).

TECHNICAL PARAMETERS

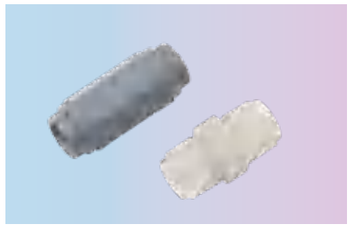
Model	Oxygen Output (L/min)	Oxygen purity(%)	Output pressure (Mpa)	Power Supply (V/Hz)	Power (KW)	Oxygen outlet (mm)	Dimension (mm)
WG-Y-5L	5	92±2	0.01-0.05	220V/50Hz	0.7	Φ8	420*360*695
WG-Y-10L	10	92±2	0.01-0.05	220V/50Hz	1.4	Φ8	480*420*765
WG-Y-15L	15	92±2	0.01-0.05	220V/50Hz	2.1	Φ8	660*405*985
WG-Y-30L	30	92±2	0.01-0.05	220V/50Hz	2.4	Φ10	450*450*1500
WG-Y-40L	40	92±2	0.01-0.05	380V/50Hz	3.2	Φ10	450*450*1500
WG-Y-50L	50	92±2	0.01-0.05	380V/50Hz	4.0	Φ12	650*450*1500
WG-Y-70L	70	92±2	0.01-0.05	380V/50Hz	5.6	Φ12	650*450*1500
WG-Y-90L	90	92±2	0.01-0.05	380V/50Hz	7.2	Φ12	1100*450*1500

OZONE GENERATOR SPARE PARTS

WELGO



Check Valve



Injector

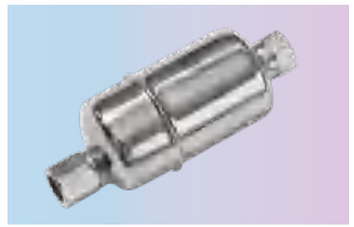
Ozone Leakage Monitor

Ozone Destroyer

Pipeline Mixer

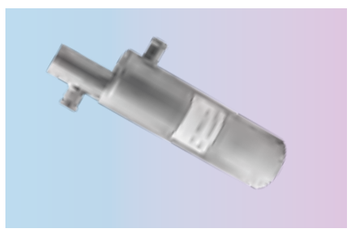
Ail-free Air Compressor

Booster Pump



Automatic Exhaust Valve

Reaction Tank



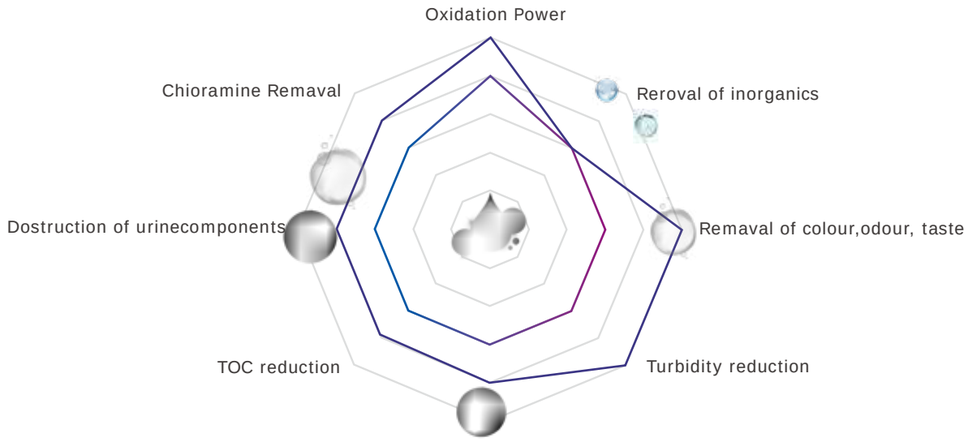
Water Collector

ADVANCED OXIDATION PROCESS(AOP)

Advanced Oxidation Processes(AOP) & Hydroxyl Radicals(·OH)

Advanced Oxidation Processes, characterised by the generation of hydroxyl radicals (·OH) through the reaction, the free radicals have a strong oxidative property, which produces a strong catalytic degradation e□ect, e□ectively degrading toxic and harmful organic substances in water, killing harmful microorganisms such as bacteria and viruses, and releasing toxins from bacteria or fungi. Decomposition. The hydroxyl radical (·OH) can also e□ectively decompose organic pollutants in water, and even completely convert them into carbon dioxide and water.

Hydroxyl radical (·OH) AOP disinfection system, make up for the shortcomings of the traditional disinfection process, can be said to be the most e□cient, safe and healthy swimming pool pool water treatment and disinfection process.



The e□ectiveness of di□erent solutions

●Extremely strong oxidising power: the standard electrode potential of hydroxyl radical (·OH) is 80V (much higher than the 1.50 of ClO_2), making it an oxidant with extremely strong oxidising power;

●Fast reaction: hydroxyl radical (·OH) is very active and the chemical reaction with organic matter can be completed in an instant;

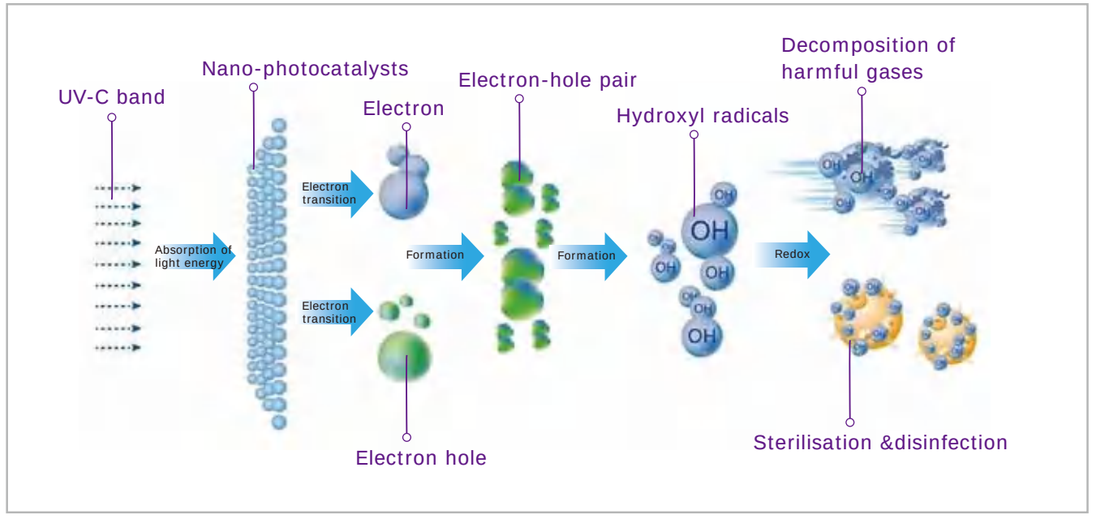
●Broad action: oxidative decomposition of organic matter, bacteria, viruses and parasites and other micro-organisms, ultimately decomposing into CO_2, H_2O, O_2, N_2 and inorganic salts without leaving harmful residues;

●Short lifetime: hydroxyl radicals (·OH) have an extremely short lifetime in various environmental media and their lifetime is generally less than 10^{-4}S;

DISINFECTION SYSTEM OF PHOTOCATALYTIC ADVANCED OXIDATION PROCESS (AOP)

Photocatalysis is based on the strong oxidising ability of photocatalysts under light conditions. As a catalyst, the photocatalyst is not directly involved in the degradation reaction. As long as it does not degrade, it does not cause any loss and can remain e□ective for a long time.

This photocatalyst advanced oxidation system is divided into two series according to the reactor structure.



Product Features

●Built-in nanoscale photocatalyst.

●Adopts high power and long life UV lamps.

●Under the irradiation of UV light, the surface of high e□ciency photocatalyst generates more active groups of hydroxyl radicals (-OH).

●UV irradiation of oxygen molecules in water, the formation of active oxygen and trace dissolved ozone.

●Vertical installation takes up less space and is easier to connect to pipework.

●Innovative Internal structure avoids hydrodynamic short flow, installation is more beautiful and simple.

●The inlet and outlet port adopt a live flange.

DISINFECTION SYSTEM OF PHOTOCATALYTIC ADVANCED OXIDATION PROCESS (AOP)

CONTROL CABINET	
Standard Configuration	Control panel functions: power switch, lamp operation indication, alarm indication, cumulative running time display.
Optional Functions	● Manual/Automatic mode（Remote start-up and shutdown of UV lamps in automatic mode) ● Lamp failure alarm signal output. ● Touch screen display. ● Water flow switch, UV lamps can be automatically started or switched off according to the flow of water in the pipeline.
Case Material	Painted carbon steel (Option: SS304)
Cooling Method	Forced air-cooling
Mounting Method	Wall-mounted (Optional: fixed to reactor chamber)

Installation method Wall-mounted (optional fixed in the cavity)
Automatic cleaning
Standard configuration None
Optional function quartz casing ultrasonic automatic cleaning function

UVAOT-A SERIES

Adoption of integrated photocatalytic AOP reactor

MODEL	AOT-A80	AOT-A160	AOT-A320	AOT-A480
Flow rate (m^3/h)	12	20	35	50
Connection Diameter	DN50	DN50	DN80	DN80
Dimemsion W*D*H,mm	350*360*1350	350*360*1350	380*400*1350	380*400*1585
Connection type	Live flange/standard flange (optional)			
ELECTRICAL SPECIFICATIONS				
Power requirements	220VAC, 50Hz			
Equipment power	110W	200W	370W	550W
UV Lamp				
Lamp type	Amalgam lamp / Low pressure high intensity lamp			
Lamp Life	16000 hours (Amalgam lamp); 9000 hours (Low pressure high intensity lamp)			
UV CHAMBER				
Material	SS304 (Option:SS316L)			
OPERATING ENVIRONMENT				
Ambient Temperature/Humidity	Indoor use,Temperature 5℃-40℃, humidity＜80%			
Water temperature	5℃-40℃			

NOTES
Flow values are recommended values based on the premise that water quality UV transmittance (TUVC) is 95% or greater at 1cm.

UVAOT-B SERIES

Adoption of an innovative tandem independentphotocatalytic AOP reactor.

MODEL	AOT-B480	AOT-B720	AOT-B960	AOT-B1200
Flow rate (m^3/h)	52	70	90	110
Connection Diameter	DN80	DN100	DN100	DN150
Dimemsion W*D*H,mm	700*400*1350	800*450*1585	800*450*1585	900*500*1585
Connection type	Live flange/standard flange (optional)			
ELECTRICAL SPECIFICATIONS				
Power requirements	220VAC, 50Hz			
Equipment power	560W	820W	1080W	1320W
UV Lamp				
Lamp type	Amalgam lamp / Low pressure high intensity lamp			
Lamp Life	16000 hours (Amalgam lamp); 9000 hours (Low pressure high intensity lamp)			
UV CHAMBER				
Material	SS304 (Option:SS316L)			
OPERATING ENVIRONMENT				
Ambient Temperature/Humidity	Indoor use, Temperature 5℃-40℃, humidity＜80%			
Water temperature	5℃-40℃			

Hydroxyl Radical (·OH) CDO3 Series UV/O3 AOP System

The system adopts the principle of high-voltage corona discharge, in which oxygen is split into oxygen atoms under the action of a high-voltage electric field and then recombined to produce high-concentration ozone gas.
The system adopts a segmented AOP reactor and internal circulation ozone injection process, and has a built-in jet booster pump.

ProcessAdvantages

●Combines all the benefits of high concentrations of dissolved ozone, UV light and hydroxyl radicals.

●Uses O3 as the oxidant and produces hydroxyl radicals (·OH) under high intensity UV radiation.

●Rapidly breaks down organic contaminants in water that are di□cult to remove by a single process of chlorine, ozone or UV light.

●E□ectively kills chlorine-resistant microorganisms in water (e.g. Cryptosporidium, Giardia, etc.).

●Reduces levels of chloramines and trihalomethanes, reduces irritation to skin, eyes and respiratory system.

CONTROL CABINET	
Standard Configuration	• Manual/automatic mode (Remote start/stop in automatic mode). • Fault alarm switching passive signal output. • Power on/off, alarm indication, lamp running indication, lamp accumulated running time display. • Booster pump operation indication. • Ozone production adjustment, ozone gas flow indication, ozone fault alarm indication.
Optional Functions	• PLC controller + touch screen display. • PLC controller + touch screen display + Modbus remote communication
Case Material	Painted carbon steel (Optional: SS304)
Cooling Method	Forced air-cooling

Hydroxyl Radical (·OH) CDO3 Series UV/O3 AOP System

Technical parameters

MODEL	WG-AOP180	WG-AOP300	WG-AOP300-2	WG-AOP300-3
Pool volume(m^3)	180	300	600	900
Flow rate (m^3/h)	7-10	12-15	24-30	36-45
Dimemsion W*D*H,mm	700*1800*900	800*1950*1050	1600*1950*1050	2400*1950*1050
Connection Diameter	DN50	DN50	DN50,multiple-connection	
Connection type	Flange			
ELECTRICAL SPECIFICATIONS				
Power Requirements	380VAC, 50Hz			
Equipment Power(W)	1720	1950	3900	5850
UV LAMP				
Lamp type	Low Pressure UV lamp			
OZONE				
Production Method	Air-cooled corona discharge			
Ozone Output （G/H）	10	15	30	45
Output Adjustmen	Included, manual adjustment of ozone gas flow and concentration			
Air Source	Built-in PSA oxygen concentrator			
Mixing Method	Negative Pressure Injection Mixing			
Jet Booster	Built-in booster pump			
OPERATING ENVIRONMENT				
Ambient Temperature/Humidity	Indoor use, Temperature 5℃-40℃, humidity＜80%			
Water temperature	5℃-40℃			