BIO UV
Ultraviolet Solutions

WATER IRRIGATION PROCESS

Agriculture, horticulture, green spaces, seed producers

The **BIO-UV Group** has developed and patented in 2000 a range of special reactors for disinfecting, able to meet the most stringent requirements of professionals and thus optimize their operation in total safety.
The **BIO-UV** reactors treat these various applications and many sites on a daily basis and their operators swear by them and are totally satisfied with their performance.

Principle

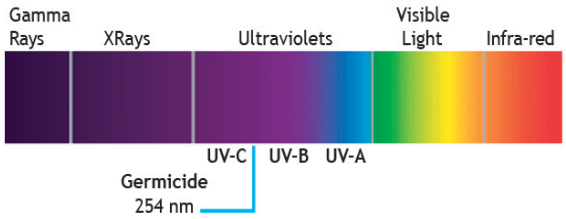
The sun emits invisible light : ultraviolet light. This natural phenomenon is reproduced inside the reactors in the BIO-UV Group's product ranges using powerful lamps, the result of leading-edge technology, that emit UV-C rays.

Benefits

- **Treatment simple to use** which does not modify the physico-chemical characteristics of the water: no change in the taste, smell, etc.
- **No disinfection by-products** created that are harmful to human health
- **No risk of under or over-dosing**
- **No chemical product** monitoring and handling constraints
- May be combined with other treatment processes (filtration, softening, etc.)

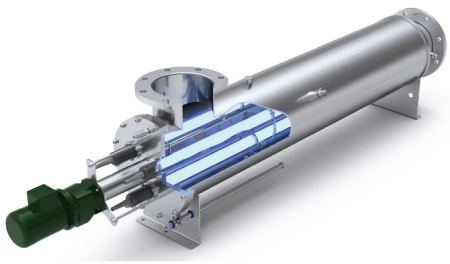
Action

At the wavelength 254nm, the UV-C penetrate to the DNA heart and **eradicate micro-organism** (virus, bacteria, algae, yeasts, mould, including Legionella, Cryprosporidium, Giardia and Toxoplasma that are not destroyed by ozone or chlorine at standard doses), destroying cell metabolism until they are completely destroyed. **Thus all germs are deactivated and cannot reproduce.**



Effective dose

The reactors in the **BIO-UV** ranges are dimensioned according to the flow rate: it is the combination of the contact time in the reactor, the power of the lamp(s). The consideration of the specific transmission factor of the salt water (85%), less than that of fresh water, that will ensure that the necessary dose (expressed in millijoules per square centimeter or mJ/cm^2) sufficient **to kill 99.9% of the micro-organisms** (bacteria, viruses, algae in suspension,…) is received.



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IBP SERIES REACTORS certified ACS Food Industry

Description	Number of UV lamps per system x Power consumption	Max. flow rate* in m^3/h for $40mJ/cm^2$	Max. flow rate* in m^3/h for $120mJ/cm^2$	Max. flow rate* in m^3/h for $240mJ/cm^2$
Example of desinfection		4 LOG reduction Coliforms, E. Coli, Enterocoques	2 LOG reduction Clavibacter	3 LOG reduction Fusarium
IBP 10 HO +	1 x 87 W	4,6	NC	NC
IBP 30 HO +	1 x 87 W	6,6	2	NC
IBP 40 HO +	1 x 105 W	9,3	3	NC
IBP 2150 HO +	2 x 87 W	13	4	2
IBP 3150 HO +	3 x 87 W	22	7	3,5
IBP 4205 HO +	4 x 87 W	39	13	6,5
IBP 5205 HO +	5 x 87 W	54	18	9
IBP 5 AM +	1 x 40 W	3,5	NC	NC
IBP 10 AM +	1 x 120 W	8,5	2,5	NC
IBP 30 AM +	1 x 120 W	10,5	3,5	NC
IBP 2150 AM +	2 x 120 W	25	8	4
IBP 3150 AM +	3x 120 W	41	13,5	7
IBP 4205 AM +	4 x 120 W	80	26,5	13,5

DW SERIES REACTORS certified ACS Potable Water (decree from 09/10/2012)

Description	Number of UV lamps per system x Power consumption	Max. flow rate* in m^3/h for $40mJ/cm^2$	Max. flow rate* in m^3/h for $120mJ/cm^2$	Max. flow rate* in m^3/h for $240mJ/cm^2$
DW 2150/120	2 x 120 W	30	10	5
DW 4205/120	4 x 120 W	70	23	11
DW 3323/400	3 x 400 W	186	62	31
DW 5355/500	5 x 500 W	437	145	72
DW 10508/500	10 x 500 W	695	231	115

** The performance of these devices have been calculated at the end of the lamps' life with a transmission of 98%.*
Contact us for other flow rates

Advantages

- Excellent disinfecting performance by optimisation of UV emissions and of the hydraulic flow
- Compact reactors, easy to install
- Use of single-base lamps, patented sealing system and vertical design for an easy maintenance
- Optional UV sensor and monitor offering data reporting by a LED and contact type alarm
- Personalization of connection possible; DN flanges, clamps, etc.
- Lamp life optimized: 13 000 hours depending on the number of switchings on

Non-contractual visuals.

BIO-UV Group
850 avenue Louis Médard - CS 90022
34403 LUNEL Cedex - FRANCE
Tel. +33(0)4 99 133 911 - Fax. +33(0)4 99 133 919
export@bio-uv.com - www.bio-uv.com

Membre du