BIO UV
Ultraviolet Solutions

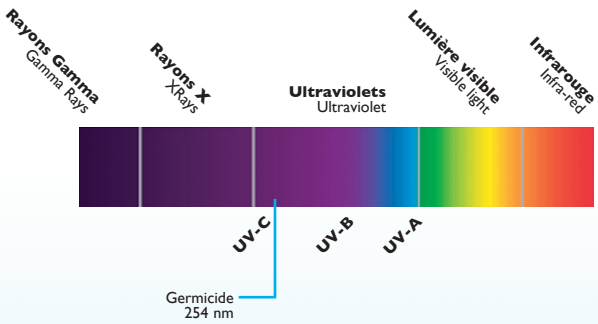
ULTRA-PURE WATER

Pharmacy, Cosmetics, Bottled Water

BIO-UV reactors are designed for the treatment of ultra-pure water in the pharmaceutical and cosmetics industries. They can also be used in the food processing industries, particularly in the told water for human consumption sector.
The main applications are as follows:
- Disinfecting of ultra-pure water
- Disinfecting treatment of purified water loops
- Destruction of residual ozone
- Reduction of traces of TOC in the ultra-pure water

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. At 254 nanometers, the optimum wavelength for destroying micro-organisms (viruses, bacteria, algae, yeasts, mould...),UV-C rays penetrate to the heart of DNA and disturb the metabolism of cells until they are totally destroyed.All germs are thus deactivated (including **Legionella** and **Cryptosporidium**) and cannot reproduce.



EFFECTIVE DOSE

The reactors in the **BIO-UV** HDPE 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 themicro-organisms (bacteria, viruses, algae in suspension,...) is received.

BENEFITS

- **Treatment that is simple to put in place, that does not change the physical or chemical characteristics of the water:** no change of taste or smell, ...
- **No creation of disinfectant sub-products harmful to human health**
- **No risk of underdoses or overdoses**
- **No chemical product monitoring and handling constraints**
- **Can be combined with other treatment processes** (filtration, softening, ...)

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PHARMA SERIES REACTORS (CLAMP CONNECTION)

Description	Max.flow rate in m³/h*	Performance in millijoules per cm² at actual recommended flow rates**	UV lamp : Number Power consumption	Connection	Height of reactor in mm	Diameter of reactor in mm
PHA 1200 HO	8,4	40	1 x 87 W	D 65	1078	219
PHA 2200 HO	15,4	40	2 x 87 W	D 65	1078	219
PHA 3200 HO	23	40	3 x 87 W	D 90	1078	219
PHA 4200 HO	30	40	4 x 87 W	D 90	1078	219
PHA 2200 AM	33,6	40	2 x 170 W	D 100	1078	219
PHA 3200 AM	50,4	40	3 x 170 W	D 125	1078	219
PHA 4200 AM	65	40	4 x 170 W	D 125	1078	219

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

PHARMA FBS SERIES REACTORS (SINGLE CLAMP AND WELDED BOTTOM)

Description	Max.flow rate in m³/h*	Performance in millijoules per cm² at actual recommended flow rates**	UV lamp : Number Power consumption	Connection	Height of reactor in mm	Diameter of reactor in mm
PHA 1200 HO FBS	8,4	40	1 x 87 W	D 65	1074	219
PHA 2200 HO FBS	15,4	40	2 x 87 W	D 65	1074	219
PHA 3200 HO FBS	23	40	3 x 87 W	D 90	1074	219
PHA 4200 HO FBS	30	40	4 x 87 W	D 90	1074	219
PHA 2200 AM FBS	33,6	40	2 x 170 W	D 100	1074	219
PHA 3200 AM FBS	50,4	40	3 x 170 W	D 125	1074	219
PHA 4200 AM FBS	65	40	4 x 170 W	D 125	1074	219

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

ADVANTAGES

- Excellent disinfection performance thanks to careful optimisation of the UV emissions and hydraulic flow
- Designed with clamp type connectors, easy to dismantle and clean
- Optional UV sensor and monitor, providing an alarm by diodes and dry contacts for data transmission
- Clamp Connection
- Reactor in stainless steel 316L. electropolished. A roughness certificate is supplied
- Optimised service life of the lamps: 13,000 hours depending on the number of start-ups

Pharma Series Reactors (clamp connection)

Pharma FBS Series Reactors (single clamp and welded bottom)

Member of siet

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ISO 9001:2008 BUREAU VERITAS Certification

NATATION PARTENAIRES TECHNIQUES