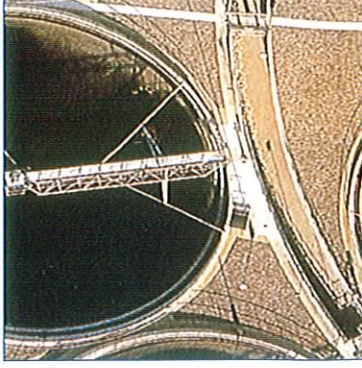
WASTE WATER



BIO-UV has developed sterilizers using the most advanced UV technologies for tertiary treatment by disinfecting municipal or industrial waste water.

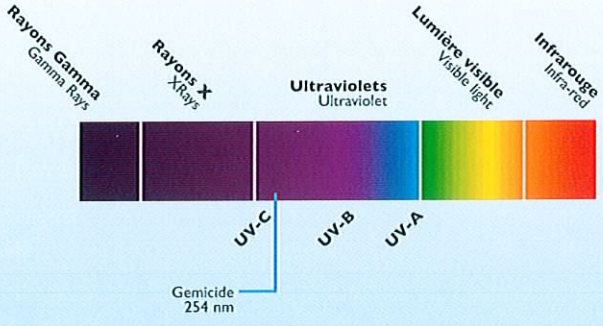
BIO-UV treatment makes it possible to :

- protect the environment downstream of the discharge of treatment plants, particularly when there are bathing areas, white water activities, fishing and aquaculture activities nearby
- reuse the purified waste water for agricultural irrigation, spraying of green open spaces and golf courses, or for industrial processes (washing water etc.)

BIO-UV proposes various technologies (low and medium pressure) and various types of reactors (closed or open channel) in order to adapt to the aims of the treatment and to the installation and maintenance constraints. In certain cases, prior filtration (on a sand bed) may be necessary.

PRINCIPLE

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 desactivated (including ***Legionella*** and ***Cryptosporidium***) and cannot reproduce.



EFFECTIVE DOSE

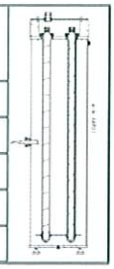
The reactors in the **BIO-UV** ranges are dimensioned according to the flow rate: it is the combination of the contact time in the reactor and the power of the lamp(s), that will ensure that the necessary dose (expressed in millijoules per square centimeter or mJ/cm^2) sufficient to kill 99.9% of the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

BENEFITS

- **Continuous treatment and immediate effectiveness of the disinfection** : the bacteria are destroyed in the reactor. There is therefore no need to provide contact times beyond the disinfection station
- **No disinfection by-products are produced that could pollute the environment or restrict the reuse of the water** (as in the case of chlorine or ozone)
- **Simple technology, economic investment and operation**, particularly compared to systems using membranes.
- **Automatic maintenance and cleaning of quartz sheaths, guaranteeing the efficiency of the BIO-UV equipment**
- **Continuous monitoring of the efficiency of the disinfection with remote management to meet operating requirements**

BIO UV®
ULTRAVIOLET SOLUTIONS

IAM SERIES CLOSED REACTOR - LOW PRESSURE

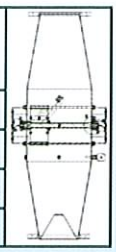
Description	Max.flow rate in m³/h	Performance in millijoules per cm² at actual recommended flow rates	UV lamp: Number Power consumption	Connection DN	Height of reactor in cm	Diameter of reactor in cm	
IAM1150/300	12	40 mJ/cm²	1 x 300 W	DN 80	112	15	
IAM2273/300	27	40 mJ/cm²	2 x 300 W	DN 150	116,5	26,7	
IAM3273/300	41	40 mJ/cm²	3 x 300 W	DN 150	116,5	26,7	
IAM4273/300	55	40 mJ/cm²	4 x 300 W	DN 200	116,5	26,7	
IAM5273/300	70	40 mJ/cm²	5 x 300 W	DN 200	116,5	26,7	

* 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 70%

ADVANTAGES

- UV monitoring sensor complying with German standard DVGW W 294 providing correct continuous operation of the sterilizer LCD display of UV intensity, remote management via a 4-20mA output
- Personalization of reactors according to the installation, operation and maintenance constraints (diameter of flanges, inlet/outlet positioning, vertical/horizontal reactor, etc.)
- Single-base lamps and patented sealing system for an easy maintenance
- Automatic quartz cleaning system without dismantling

BTMP SERIES CLOSED REACTORS - MEDIUM PRESSURE

Description	Max.flow rate in m³/h	Performance in millijoules per cm² at actual recommended flow rates	UV lamp : Number Power consumption	Connection DN	Height of reactor in cm	
MP 140	57	40 mJ/cm²	1 x 4 W	DN 200	124,4	
MP 240	150	40 mJ/cm²	2 x 4 W	DN 250	102	
MP 340	245	40 mJ/cm²	3 x 4 W	DN 300	72	
MP 440	340	40 mJ/cm²	4 x 4 W	DN 300	82,4	

* 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 70%

ADVANTAGES

- Hydraulic "in line" connection and very low pressure loss
- High power medium pressure lamps for reducing the number of installed lamps, for an easy maintenance of the reactor and for reducing the replacement costs
- Automatic quartz cleaning and UV sensor cleaning system
- UV sensor and monitor for remote management
- Modular system for covering a wide range of flow rates (up to several thousand m³/hour)

OPEN CHANNEL EQUIPMENT : PLEASE CONTACT US

BIO-UV®
ULTRAVIOLET SOLUTIONS

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