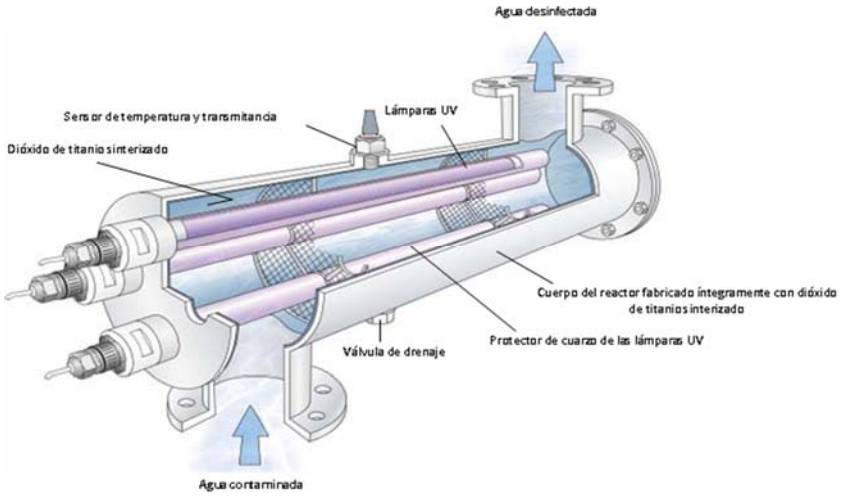
h2o.TITANIUM_INDUSTRIAL

h2o.TITANIUM
Fresh Radicals

What the *h2o.TITANIUM is*?

It is World's unique reactor manufactured in a whole block of titanium dioxide, with a high disinfection and organic matter elimination potential. The reactors are easy to install and have a minimum maintenance.

Manufactured in the UE, certificate of conformity, CE, WRAS certificate (product suitable for drinking water treatment).



How it works?

The method is based on the titanium dioxide (TiO_2) activation as a catalyst. Causing, with it, a series of chemical reactions which result is a huge quantity of hydroxyls radicals (•OH) generation. These radicals will immediately oxidize all the microorganisms and will mineralize (more slowly) the organic matter contained in the water. This process is known as an advanced oxidation photo-catalysis (AOP).

What is it for?

The h2o.TITANIUM has been specially designed to disinfect any kind of water (even extremely level of infected water), achieving the **99.99% of microorganisms inactivation,** without using any chemical product and, therefore, removing the biocide or UV radiation often existing.

Due the oxidation power of the hydroxyl radicals, is able to mineralize any kind of molecule contained on it C-C structure links until to transform it in CO_2 and H_2O.

Which are its benefits?

- Minimum energetic consumption.
- Important space needed reduction.
- Easy installation. Minimum maintenance.
- It does not require specialized staff.
- Useful life over 25 years.
- Very few and economic consumables and very easy to replace.

"The most and effective world's water treatment technology now at your fingertips"

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What do we compare?

	h2o.TITANIUM	UV TRADITIONAL	OZONE
Microorganisms photo-reactivation	NO	YES	NO
Byproducts generation	NO	NO	YES
Corrosion	NO	NO	YES
Community risks	NO	NO	YES
Efficacy fighting Cryptosporidium	YES	YES	YES
Efficacy fighting Giardia	YES	YES	YES
Efficacy with turbidity and suspended solids presence	VERY GOOD	NONE	GOOD
Disinfection time	NANOSECONDS	< 1 SEC.	MINUTES
Carcinogen	NO	NO	NO
Needed infrastructure	MINIMUM	MINIMUM	HIGH
Implementation costs	VERY LOW	VERY LOW	VERY HIGH
Maintenance costs	VERY LOW	VERY LOW	VERY HIGH
Energy consumption	INSIGNIFICANT	LOW	VERY HIGH
Specialized staff needed	NO	NO	YES

Models and dimensions

	Flow (m3/h)	Head loss (bar)	Consumpt. (W)	Lamps 80/105W (nº)	Diameter (mm)	Length (mm)
AOP 05	0.5	< 0.1	20	1	45	222
AOP 1	1	< 0.1	30	1	76	472
AOP 3	3	< 0.1	110/130	1	60	883
AOP 5	5	< 0.1	110/130	1/1	76	894
AOP 10	10	< 0.1	200/250	2/2	120	891
AOP 20	20	< 0.1	385/490	4/4	160	956
AOP 50 MULTI	50	< 0.1	765/720	8/6	224	954
AOP 100 MULTI	100	< 0.1	1.320/1.200	14/10	304	954
AOP 200 MULTI	200	< 0.1	2.140	---/18	405	1.070
AOP 300 MULTI	300	< 0.1	3.320	---/28	455	1.132
AOP 400 MULTI	400	< 0.2	4.500	---/38	505	1.138
AOP 500 MULTI	500	< 0.2	5.680	---/48	605	1.163
AOP 700 MULTI	600-700	< 0.2	7.820	---/66	706	1.246
AOP 900 MULTI	800-900	< 0.2	9.980	---/84	756	1.316
AOP 1.000 MULTI	1.000	< 0.2	11.120	---/94	806	1.327

By-pass installation for all the models.

Flows valid for on line installations. In recirculation, flows to pass through the reactor could be much higher depending on the goal to achieve.