



UVGERMI[®]
ULTRAVIOLETS DE HAUTE TECHNOLOGIE

*Specialist in
dechloramination solutions
using ultraviolet reactors.*

● ○ ● MADE IN FRANCE

WATER FOR **PUBLIC SWIMMING POOLS** AND **WELL-BEING AREAS**

- PUBLIC SWIMMING POOLS
 - WELL-BEING AREAS
 - SPAS
 - WATER THERAPY CENTRES
 -
 - SALT WATER POOLS
- ETC.

REMINDER OF REGULATIONS

Aside from the health considerations, regulations require the combined chlorine level (chloramines) to be kept **below 0.6 mg/l**, and if baby swimmers are present, this level is reduced to **0.4 mg/l** (ANSES report, June 2010).

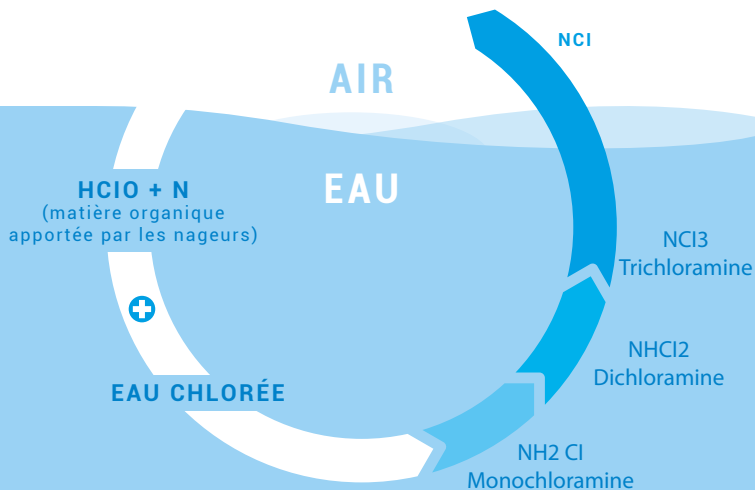
THE ISSUE

The chlorine used to disinfect the water in swimming pools and well-being areas reacts with the nitrogenous pollutants introduced by users (urine, sweat, saliva, hair, etc.). Compounds form. Trichloramine, the most volatile compound, enters the atmosphere, causing irritations of the eyes and nose, and respiratory disorders that are harmful to human health (occupational illness recognised since May 2003).

NEEDS

This concentration is generally maintained by adding large quantities of new water. This is an expensive solution for public authorities and well-being centres, because regulations also stipulate that the water must be renewed by at least 30 litres per day per user, at an average cost of €9 exc. VAT per 1m³ treated, heated water, without having the desired results.

FORMATION DES CHLORAMINES DANS LE BASSIN



THE PRINCIPLE

The dechloramination process using low pressure UV lamps **reduces the level of combined chlorine in pools via photochemical action on all the organochlorine compounds in the water** (monochloramine, dichloramine and trichloramine).

Studies conducted by **Professors BATCHELEY** (USA) and **DE LAAT** (France) and their teams show that low pressure UV technology is **effective on these three types of chloramines**.

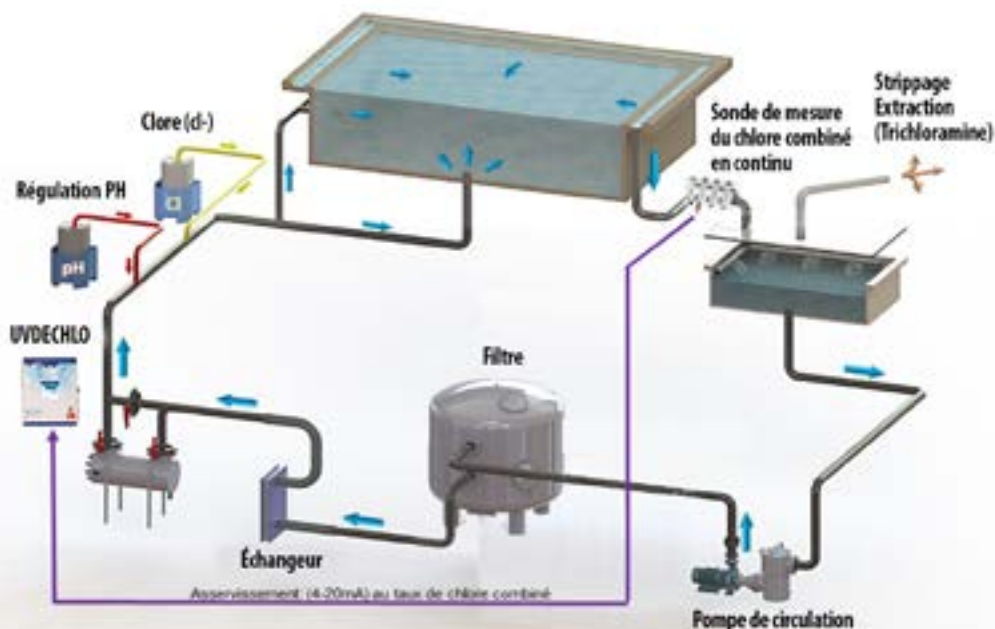
Low pressure UV lamps, widely employed in drinking water processes since 1904, can be used safely because they **do not permit the formation of chlorine subproducts**, such as THMs.

BENEFITS UVGERMI®

- Power modulation: energy savings (EEC option)
- Simple bypass installation
- Low power consumption
- Low maintenance costs
- Guaranteed lamp service life up to 16,000 hours or 2 years
- No byproduct formation
- Comfort for swimmers, improved working conditions for personnel, better management of new water additions
- Optimisation of operating costs for facilities equipped with UV reactors.



To date, more than **2,700 facilities** have been equipped with our **UVDECHLO technology**.



THE SOLUTION

Our low pressure UVDECHLO dechloramination units are known to **reduce the level of chloramines in water by an average 80%, and the rate of nitrogen trichlorides in the air by 50%.**



ACCREDITATION

The **ministerial accreditation** that we have obtained for our **low pressure UV technology** based on drinking water processes, is also based on studies that prove that UVDECHLO has **no impact on THM levels.**

| | NUMBER OF LAMPS/ POWER | FLOW TREATED (m ³ /h) | CONNECTION DN FLANGE (PVC) (mm) | REACTOR DIAMETER (mm) | POWER/FREQUENCY (V/Hz) |
|------------------------|------------------------|----------------------------------|---------------------------------|-----------------------|--------------------------|
| UVDECHLO 20 | 1X200 Watts | 10 to 15 | 50 (63) | 104 | 230/50-60 Hz |
| UVDECHLO 45 | 2X200 Watts | 15 to 50 | 80 (90) | 140 | 230/50-60 Hz |
| UVDECHLO 90 | 4X200 Watts | 50 to 100 | 100 (110) | 220 | 230/50-60 Hz |
| UVDECHLO 150 | 6X200 Watts | 100 to 150 | 150 (160) | 300 | 400 V Tri+N+E / 50-60 Hz |
| UVDECHLO 200 L300 | 6X300 Watts | 150 to 250 | 200 (200-225) | 350 | 400 V Tri+N+E / 50-60 Hz |
| UVDECHLO 300 L300 | 9X300 Watts | 250 to 350 | 300 (315) | 400 | 400 V Tri+N+E / 50-60 Hz |
| UVDECHLO 400 L300 | 13X300 Watts | 350 to 500 | 300 (315) 400 possible | 500 | 400 V Tri+N+E / 50-60 Hz |
| UVDECHLO 300 L600 EEC* | 3X600 Watts | 300 to 450 | 300 | 400 | 400 V Tri+N+E / 50-60 Hz |
| UVDECHLO 400 L600 EEC* | 6X600 Watts | 450 to 1050 | 500 | 500 | 400 V Tri+N+E / 50-60 Hz |

* EEC: Chloramine level indication.

TECHNICAL SPECIFICATIONS

UVDECHLO dechloramination units are made from **stainless steel 316L** or **HDPE**; their low pressure UV lamps have a service life of **16,000 hours** (2 years' operation).

They are **sized to your requirements** to obtain a high level of chloramine destruction and optimal control over the amount of chlorine to be injected. UVDECHLO reactors **are easily integrated into the pool recycling circuit**, after filtration, before the treatment products are injected.



TREATMENT OF **SEA WATER**

Our reactors are also
available in **HDPE**.



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