

# Drinking Water Supply



## WATER PURIFICATION

Tanks > 600 m<sup>3</sup> et 1,500 m<sup>3</sup>

### Great Lakes Population Drinking Water Supply Project

(Democratic Republic of the CONGO)

This drinking water supply project, in a non-electrified territory of the DRC, involved the installation of solar chlorination systems at each collection site. These chlorine injection points were to be located downstream of two storage tanks of **1,500m<sup>3</sup>** et **600m<sup>3</sup>**.

### Drinking water supply with **2,100m<sup>3</sup>** of storage

The sizing of such equipment leads to large systems. For each site, there would be about **30 solar panels** of **1,7m<sup>2</sup>** and a **1200kg** battery park, long cables and control cabinets to work in tropical areas. The harsh climate and operating conditions often lead to many water supply disruptions.

The **DOSATRON** solution is based on the supply of non-electric and self-regulating dosing pumps

	Carbonation D20WL2AF	Chlorination D8WL3000NIEAF
QUANTITY	<b>3 pumps</b> <b>33,4mg/m<sup>3</sup></b> of <b>NA2CO3</b> at <b>95%</b>	<b>5 pumps</b> + <b>1 standby</b> <b>3g/m<sup>3</sup> CaClO</b> at <b>60%</b>
SETTINGS	<b>from 0.2%</b> <b>to 2%</b>	<b>from 0.03%</b> <b>to 0.125%</b>
PRESSION	<b>from 0.12</b> <b>to 10 Bar</b>	<b>from 0.35</b> <b>to 8 Bar</b>
OPTIONS	Aflas seals	Aflas seals External injection to limit engine calcification



In such a project, the continuity of service of water supply must remain **the priority**

Founded in **1974** DOSATRON INTERNATIONAL has been recognized on the **African** continent for more than **20 years** and has many references in the field of chlorine, carbonate, sodium, alumina sulphate and polymer dosage.

## CARBONATION - PH regulation

D20WL 2 AF



## CHLORINATION

D8WL3000 N IE AF



## The Graviwater Solution

The chosen solution allows carbonation and chlorination thanks to the gravitational arrangement of the sources. This solution uses the pressure of water as a driving force. The technology proposed by **DOSATRON** best meets this challenge: a pump with a hydraulic motor activated only by the power of the water.

Installed directly on the pipe, the proportional dosing pumps **DOSATRON** operate by using the water flow rate as energy source. Pressure and flow drive the engine piston which drives the engine piston which is itself connected to a metering piston.

Disinfection additives are dosed **proportionally** and continuously injected with water at the chosen dosage. A carbonation is performed to regulate the Ph and make the water more sensitive to the subsequent chlorination. The dose of **concentrated product** is directly proportional to the volume of water passing through the pump and this independently variations in the pressure flow rate of the catchment.

**Located upstream of the reservoirs**, chlorination effectively protects against the development of bacteria: **protozoa, Escherichia Coli, Salmonella, Giardia intestinalis, Cryptosporidium parvum....**

This positioning upstream of chlorination, combined with a form of adapted tank, allows to respect the contact time essential to the water disinfection.

In less than a year, Graviwater, Dosatron's partner, obtained the contract to design and supply the equipment for a successfully completed project at the end of 2018.

“ The population of the **Great Lakes** region can now consume water in accordance with **WHO** standards. ”

Kévin Ghédini

 **Graviwater**  
www.graviwater.com

www.dosatron.com

