

OXAGRI

ECA Water Generator

ELECTRO-CHEMICALLY ACTIVATED WATER GENERATION WITHOUT USING HAZARDOUS CHEMICALS

Based on years of experience, BlueSense™ is proposing drinking and process water treatment solutions to the agroindustry. OXAGRI by BlueSense™ is an innovative system producing a chlorine concentrate through the conversion of a brine solution, simply using dissolved salt.

Numerous **OXAGRI** units are successfully installed on flower bulbs preservation and post-harvest water systems. Providing hypochlorous acid, they sanitize large volumes of water and drastically limit the risk of product contamination (efficient on mold, fungi, invertebrates such as nematodes or flies, bacteria).

A standard **OXAGRI** unit can generate up to 12 kg of pure chlorine per day (in 1 batch of 2,000 litres) and requires only 3 kWh. Larger demands can also be met by adding a secondary unit to the main one.

On Site ECA Water Generation

OXAGRI is based on APL Bright Spark's technology that offers on site and on-demand production of a consistent chlorine solution.

No sodium is entering into the chemical reaction, the pH increase of the treated water is reduced and no acid injection is required to balance it. Electrical conductivity is also maintained at a lower level than when using other traditional disinfection methods.

OXAGRI uses only natural salt (NaCl) :

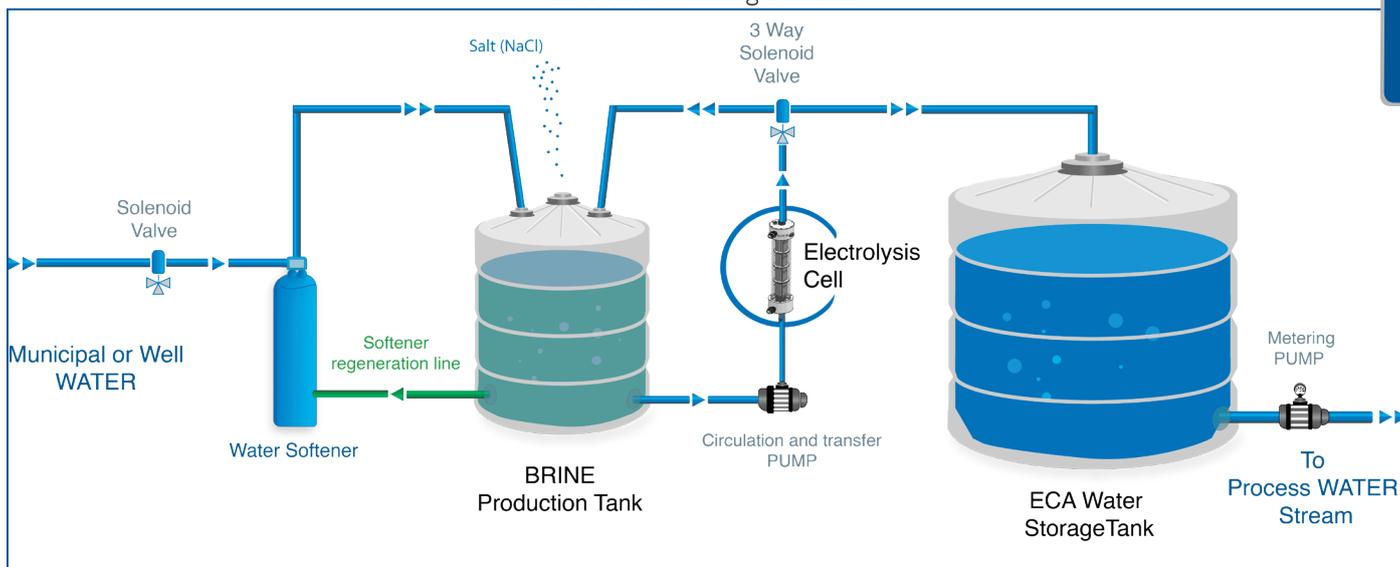
- No use of hazardous chemical is required (less CAPEX to implement)
- No loss of chlorine strength over time
- No vapor corrosion due highly concentrated chlorinating chemicals (Equipment lifetime)
- Improved safety for the operators

Working Principle: (see working scheme on the back page)

1. Softened water is used to prepare a saturated brine (Salt + Water)
2. Water is circulated through the electrolysis cell to produce a 6,000 ppm (0.6%) free chlorine solution.
3. It is then transferred into the ECA Water tank, ready for use.
4. A new brine is produced, softener is regenerated and a new batch is produced.



OXAGRI working Scheme



Examples of application:

- High flow rates of drinking water (poultry, cattle, etc...)
- High needs of chlorine (agriculture)

KEY ADVANTAGES

Advantages	Benefits
No use of Formaldehyde	Respect of the legislation on ban of Formaldehyde for the industry
On-site and on-demand production	No handling of hazardous liquid chemicals
Consistent free chlorine concentration	No loss of chlorine strength, less adjustments of the dosage compared to Sodium Hypochlorite
Limited pH variation	No use of acid or base to balance the pH of the process water
Reduced Electrical Conductivity Increase	Less water consumption for dilution, less energy to reheat fresh water compared to Sodium Hypochlorite
Less vapor corrosion compared to Chlorine Gas	Improved lifetime of the equipment and process lines
Low production of by-products	No discharge of bromates in the environment, less chlorates and THMs compared to Sodium Hypochlorite
No left-over after the campaign	No storage of hazardous chemicals on site (e.g.: Formaldehyde) during inter-season
Using Salt tablets in bags	No handling of empty containers

OXICONTROL I - Water monitoring and dosage:

In addition to OXAGRI, BlueSense™ developed OXICONTROL I specifically for the monitoring and the control of the process water disinfection along the preservation of various types of flower bulbs (both in rinsing and cooking baths), giving a highly accurate, real time analysis of the free chlorine and pH levels, as well as water temperature.

OXICONTROL I, is fully compatible with liquid chlorine based systems and is also able to upgrade your process to the OXAGRI complete disinfecting solution.



OXICONTROL unit

CONTACT INFORMATION :

BlueSense™ (part of Lonza)

Email: bluesense@lonza.com
 Tel: +33 (0) 2 47 23 43 16
 Office: Arch Chemicals S.A.S
 ZI la Boitardiere
 FR - 37402 - Amboise Cedex

Mrs. Karen Wagemaker

Mobile: +31 (0)6 46 23 70 90
 karen.wagemaker@lonza.com

www.bluesense-water.com



Check our OXAGRI web page

Lonza



Always read product information before use. All product information corresponds to Lonza's knowledge on the subject at the date of publication, but Lonza makes no warranty as to its accuracy or completeness and Lonza assumes no obligation to update it. Some products may not be available in all markets or for every type of application. Product and safety information is intended for use by recipients experienced and knowledgeable in the field, who are capable of and responsible for independently determining the suitability of equipment for intended uses and to ensure their compliance with applicable law. Proper use of this information is the sole responsibility of the recipient. This information may not be applicable, complete or suitable for the recipient's finished product or application; therefore republication of such information or related statements is prohibited. Information provided by Lonza is not intended and should not be construed as a license to operate under or a recommendation to infringe any patent or other intellectual property right. All trademarks belong to Lonza or its affiliates, or to their respective third party owners.