GROUP BARCHEMICALS®

THE PERFECT FORMULA

BARCHEMICALS PROFESSIONAL LINE LEGIONELLA CATALOGUE 2025-1

BIOSAFETY

40 ANNI 1984-2024 BARCHEMICALS

BARCHEMICALS®

ENGLISH

This catalogue cancels all previous ones and will remain valid until the replacement - even partially - with new versions.

Issue date: January 2025

GROUP BARCHEMICALS®
THE PERFECT FORMULA

BIOSECURITY: The Barchemicals solution

This Brochure is the result of more than forty years of experience by a Large Italian Group: Barchemicals Group.

Barchemicals Group is an all-Italian business currently consisting of 3 companies which share projects, visions and values, including client and collaborator Safety and the protection and respect for Environmental Resources.

The companies operate in the primary water treatment sector (industrial, drinking, recreational, agricultural) both in Italy and abroad, ranging at 360 ° on every management problem, with particular regard to the sectors:

- disinfection and water treatment,
- environmental disinfection and sanitization,
- control and automation.

Founded and directed by Dr Corrado Barani, the Group holds multiple patents and invests heavily in Research and Innovation resources.

Barchemicals is the parent company; it manufactures chemical products for the treatment and conditioning of every kind of water. Its thirty years of experience is condensed into four product ranges: Swimming pool, cleaners, Ti line, "I Sali della Vita", Agri line, Vet line and Legionella line.

Thanks to an innovative and efficient production system, the company designs and produces high quality and reliable chemical specialties internally.

The products - rigorously "Made in Italy" - meet strict quality criteria and are developed through a rigid path of research and safety tests.

The LEGIONELLA Line catalogue is aimed at the most qualified operators who work in the service of Water and Air Treatment.

The constant attention to Research and Development has allowed the creation of innovative products, the products of the Legionella Line respond to the main requirements of the most important Biosecurity protocols.

The balanced formulations between the various components and the use of active ingredients normally used in the food sector are the guarantee that these products, after their detergent and disinfectant action, do not leave toxic residues for humans.

Legionella Line products are particularly suitable for the prevention of biofilm formation; fighting against the most common bacterial agents toxic to humans and animals, such as legionellosis, they fully comply with workplace safety regulations (law 81/2008).

For disinfection in the health sector, for the protection of the health of operators and potentially exposed subjects, products are highlighted that are PMC certified (Medical Surgical Presidium), or with BPR registration (European Biocides Standard) in progress.

BARCHEMICALS® CORPORATION ENGINEERING BARCHEMICALS biopharma

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BIOSAFETY

Barchemicals believes in Biosecurity.

Barchemicals introduces the fundamental concept of Biosecurity in the Water Disinfection and Treatment sector. By addressing the many variations of the reference sectors, we will no longer operate in watertight compartments, but we will deal holistically and at 360 ° with all aspects concerning safety. We at Barchemicals will no longer dedicate ourselves only to water and the plant engineering part, but we will take care of the environment in general (air, confined spaces, production areas and / or activities, public areas, reserved spaces).

We will no longer take care only of customers' health, but also that of anyone who uses the structure's supply chain, whether they are a customer or a technical operator of the plant. Biosecurity does not only mean taking a 360 ° interest in the spaces of activity, but also worrying about the surrounding environment, for example avoiding the discharge of polluting products or avoiding that through the technical equipment of the structures - such as the air that comes out of the AHUs or evaporative towers - diseases (Legionellosis in primis) can also spread in the areas surrounding the plants themselves.

Biosecurity also means preventing all those phenomena which, in the short or long term, can cause direct or indirect diseases to people who have frequented or will frequent production, work and activity environments.

Precisely for this reason, the Barchemicals R&D department, together with universities and private or public research institutes, finances and supports the research of new less polluting and more effective materials. In particular, Barchemicals pays considerable attention to the development of biocides, effective even at low dosages, which are less dangerous for people's health and which do not present phenomena of acquired resistance.

Barchemicals also studies the design of new filtration materials that are able to self-sterilize and reduce the toxic pollutants present in process water, production or sanitary or drinking water, as well as carrying out research on how to reduce pollutants present in the air of the plants.

Barchemicals supports the research and development of new purification systems, but also promotes everything that, in the short or long term, can help mankind to live in health and happiness. Barchemicals is aware of having a very important social role as in the first 35 years of its life it gave work and dozens and dozens of people, it helped to raise many young people who spent, for more or less long periods, in its laboratories and at its offices or production departments. Barchemicals has contributed, through the competitive stimulus of free competition, to raising the quality of water treatment systems in Italy and abroad.

Barchemicals is - and will always be - at the forefront, because the development of research and the promotion of people's health and well-being are intrinsic in its DNA and in its Fundamental Values. Biosecurity is the latest goal that Barchemicals is now trying to achieve for the good of all.

WHAT DOES THE COMMITMENT TO BIOSECURITY MEAN IN GOOD SUBSTANCE FOR BARCHEMICALS GROUP?

1. First of all, carry out the registration of the products that contain the active biocidal ingredients, present in the authorized lists at European level (BPR) and at local level, if outside Europe.
2. Carry out the registration of PMC in Italy when the Ministry of Health requests it.
3. Avoid using unauthorized products or products lacking technical equivalence as required by the BPR.
4. Select suppliers based on strict ethical and moral criteria and based on the quality of raw materials.
5. Carry out R&D in collaboration with Universities and Research Institutes.
6. Promote conferences and continuous training of its staff and customers.
7. Promote R&D scholarships.
8. Develop new systems for water and air treatment (biomaterials, chemical-physical systems, UV, etc.)
9. Join and organize conferences and events that promote Biosecurity.
10. To broaden the fields of application of Biosecurity, to help the transfer of one's skills in various sectors: drinking water for human and animal use, sanitary water, industrial water, thermal water, waste water, water for food use and water for washing and food processing.
11. Promote the expansion of the concept of Biosecurity also in developing countries.

Castelnuovo Rangone, 29 September 2021

BARCHEMICALS GROUP

Barani dr. Corrado

CIRCUITS OF DOMESTIC HOT WATER AND DRINKING WATER

The cold and domestic hot water circuits offer the ideal habitat for the formation of Biofilm and the proliferation of Legionella

EVAPORATIVE TOWERS

The ability to disperse aerosols even over important distances makes these systems potentially very dangerous in terms of risk for human health

THERMAL WATERS

Line of chlorine-free products to preserve the multiple healing characteristics of the different types of thermal water while still guaranteeing the health of users

AERAULIC SYSTEMS

The aeraulic systems present in the closed environments, if polluted by Legionella, are the most difficult to treat for good and effective sanitization

HIGHLIGHTED **PRODUCTS**

MEDICAL AND SURGICAL DEVICES (PMC) AND **BIOCIDES** (BPR)

The introduction of EU Biocides Regulation 528/2012 to protect human health has urged producers and distributors of disinfecting agents to implement dramatic changes in their products, whose active ingredients are now required to be registered at European level (calcium hypochlorite, sodium hypochlorite, trichloroisocyanuric acid, etc.). Each chemical substance contained in formulations and products must be entered in a special European register, which includes a report demonstrating its effectiveness, harmfulness and areas of use.
The purpose of the Regulation is to improve the quality of biocides circulating in the European Union, whilst ensuring at the same time a high level of safety for people and the environment.
Each biocide is subject to a marketing authorisation and its active ingredients must be approved first.
Each active ingredient must first obtain EU approval, and the authorisation of biocides is obtained from each EU Member State.
Generic products will disappear from the market, as will non-certified active ingredients lacking equivalence with reference raw materials (Reference Source).
Barchemicals complies directly with the Biocides BPR Regulation, is included in Art. 95 of the Regulation itself as supplier of active ingredients and has already applied for pre-registration of its formulations in Italy, in accordance with the Regulation deadlines.
Barchemicals also manufactures many products registered as PMC (Medical and Surgical Device) in Italy. These actions imply the automatic issue of a marketing authorisation in Italy, including a temporary one prior to the issue of the final license.

ACCREDITED LABORATORY 01748

The Barchemicals Analysis Laboratory is accredited by UNI CEI EN ISO / IEC 17025: 2018 with the number 01748.

ACCREDIA assesses the technical competence and professional suitability of conformity assessment operators, ascertaining their compliance with mandatory rules and voluntary standards, to ensure the value and credibility of the certifications.

HIGHLIGHTED **PRODUCTS**

Accreditation by ACCREDIA relates to the tests for which the Laboratory has requested and obtained accreditation and for these it ensures: the technical competence, the impartiality of the staff, the adequacy of the equipment and the structure in which they are performed , the adequacy of the quality management system.
These skills are periodically verified through random checks on the tests subject to accreditation and on the quality management system.

ACCREDIA guarantees that the laboratory is able to perform the accredited tests in accordance with the relevant standards or test methods but cannot be responsible for the results of the tests themselves.

The accreditation of the laboratory aims to protect the interest of customers by guaranteeing the technical competence and professional reliability of the testers, including compliance with specific technical standards or regulations. This guarantee is based on compliance with "good management" practices of the test activities, through the adoption of documents of external origin to the laboratory such as the Official Test Methods, Quality Standards and by means of internal documents such as the Quality Manual, Management Procedures, Technical Procedures.

The tests for which the laboratory is accredited are the following:
- **Legionella**
- **Cryptosporidium** (to date this is the only Italian private laboratory that has obtained this accreditation)
- **Giardia** (to date this is the only Italian private laboratory that has obtained this accreditation)
- **Conta Vitali Microorganisms at 22 ° C**
- **Conta Vitali Microorganisms at 36 ° C**
- **Escherichia Coli**
- **Total Coliforms**
- **Enterococchi**
- **Pseudomonas aeruginosa**
- **Stafilococcus aureus**
- **Clostridium perfrigens**
- **pH**

Their application concerns the following matrices:
- **water intended for human consumption**
- **bathing water**
- **thermal waters**
- **mineral waters**
- **cooling tower waters**
- **natural waters**
- **surface waters**
- **water intended for air humidification**

Special analysis service on request.

Index

Barchemicals' Professional Line - Legionella Catalogues

Legionella - The Barchemicals Solution ..... pages 13 - 14

Domestic Hot Water Circuits and

Drinking Water..... pages 15 - 20

Evaporative Towers ..... pages 21 - 24

Thermal waters ..... pages 25 - 28

Aeraulic systems ..... pages 29 - 32

Dosing Systems ..... pages 33 - 40

Analytical Service ..... pages 41 - 42

LEGEND

BO = Bottle

DR = Drum

BU = Bucket

IBC = Tank

Alphabetical Index

A

AERAULIC SYSTEMS 29
ANALYSIS – LEGIONELLA COUNT 42
ANALYSIS – YEASTS AND FUNGI 42

B

BIOALPHA 17
BIOCHLOR 17 - 23 - 28
BIODUE 18
BIOERGIC 27
BIOGLAYD 18
BIOQUARK 24
BIOSAN DL 24
BIOSHIELD 20
BIOTRE 28
BIOUNO 27
BIOZONO Ag+ DL 19 - 23
BIOZONO Ag+ DL P 19

C

CHLORINE /pH DROPS TEST KIT 35
CHLORINE/pH TABLETS POOL TESTER 35
CONSULTING SERVICE 41
COOLING TOWERS 21

D

DDS EVOLUTION 37
DDS 3000 INDUSTRIAL 38
DDS 3000 GRANULAR 39
DOSERS ACCESSORIES 40
DOSING SYSTEMS 33

E

ENG CHRONO PERISTALTIC PUMP 35
ERGOSAN PROFUMATO 31

F

FJ 3/8 PNEUMATIC PUMP 40

G

GRADUATED TANKS 34

H

HOT WATER AND DRINKING WATER CIRCUITS 15

L

LEGIONELLA, THE BARCHEMICALS SOLUTION 13

M

MD110 6 IN 1 PHOTOMETER 36
MEASUREMENT AND ANALYSIS 35
MEMBRANE DOSING PUMP ENG – EM 40

O

OTO REPLACEMENT DROPS 35

Q

QUANTOFIX 35

R

REPLACEMENT TABLETS - KIT TESTING 35

S

SEPTISOL 31
SMART MEDICAL SYTSTEM 34

T

THERMAL WATER 25

LEGIONELLA

THE BARCHEMICALS SOLUTION

Legionella is an aerobic gram-negative bacterium belonging to the legionelliaceae family. More than 50 species have been identified, divided into 71 serogroups. The most dangerous, which has been linked to about 90% of cases of legionellosis in humans, is L. pneumophilia.

WHERE IS IT?

It can be present in both natural and artificial aquatic environments such as: springs, rivers, lakes, vapors and humid places in general. Following the natural paths it reaches human and community environments such as sanitary water circuits, swimming pools, spas, humidified air conditioning circuits, pipes, tanks, fountains and industrial cooling towers

It reproduces at temperatures between 20-60 ° C and resists up to 65 ° C. Legionella, while being found in freely floating water, prefers biofilm. It is also associated with other factors such as a condition of stagnation, the presence of encrustations and amoebas.

WHAT SYMPTOMS CAN IT CAUSE?

The contagion can manifest itself with two different clinical pictures, an acute form not particularly severe with fever (Pontiac fever) and a pulmonary form known as Legionnaires' disease particularly severe and with mortality rates of 10%, which can rise up to 50% in hospital infections.

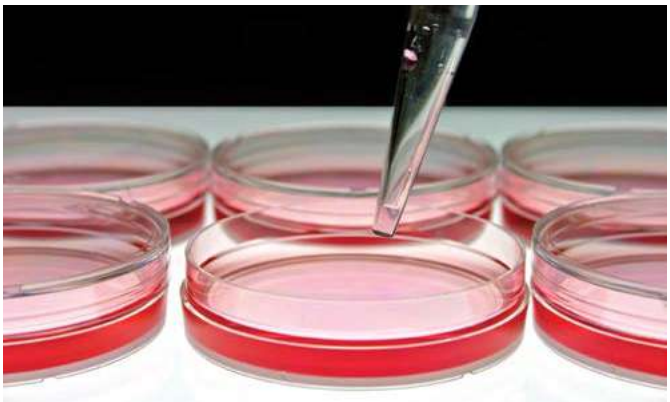
LEGIONELLA

Legionella reproduces at temperatures between 20-60 ° C

WHAT DANGER EXISTS TO GET INFECTED?

Infection is a frequent occurrence, about 10% of the population have antibodies to the more frequent strains in the environment, but fortunately the onset of disease remains rare.

Epidemiological data in recent years have recorded a strong increasing of cases. In the last five years, in Italy, the cases registered and published by the Istituto Superiore di Sanità have reached an average of eight hundred a year. The disease is fatal in 5-15% of cases.



WHO IS MORE PREDISPOSED?

The recognized risk factors are represented by age with a significant increase around 60 years old and by chronic degenerative diseases (diabetes, bronchopathies), but also male sex, smoking and immunodeficiency.

WHERE ARE YOU AT RISK OF CONTRACTING?

The greatest risk factor is the inhalation of aerosolized contaminated water particles. Therefore, inhalation systems, showers, whirlpools and anything capable of generating an aerosol can certainly be a vehicle for contagion.

In recent times there has been a significant increase in the incidence of contagion in dental patients: the phenomenon has been related to the use of high pressure water.

For completeness of information it should be noted that subclinical forms of legionellosis have been identified by the specific antibody response.

HOT WATER AND DRINKING WATER CIRCUITS

HOT WATER AND DRINKING WATER CIRCUITS

Domestic hot water is certainly one of the main development areas for Legionella pneumophila colonies.

Temperatures between 20 - 60 ° C, the presence of accumulation points such as boilers or branches used under the circuit, but above all the presence of calcareous encrustations alternating with organic mucilaginous deposits, are the ideal place for the development of Legionella.

The aerosolization of these colonies through, for example, the shower, which nebulizes the water itself, exposes people to a very high risk of contagion.

The Barchemicals treatment philosophy starts from the assumption that first of all it is necessary to eliminate the conditions predisposing the proliferation of Legionella, that is the areas where Legionella tends to "hide" and multiply. For this reason, the Barchemicals treatment provides, in addition to the use of Biocide (Biochlor or Biozono Ag + DL / DL P), also the use of products to prevent or eliminate encrustations of a mixed nature, both inorganic and organic.

Then the use of the **Smart Medical System**, thanks to the catalyzing action of the reactor into which the biocides are injected, that enhances and amplifies their disinfectant power.

LEGIONELLA

PRODUCTS

PMC (MEDICAL DEVICE SURGICAL)

BIOCHLOR

ECHA EUROPEAN CHEMICALS AGENCY

Medical Surgical Unit PMC registration of the Ministry of Health No. 19916. BPR (Biocides) registration in progress for use PT 2, 3,4,5. VIRUCID (EN16777 EN14476)

It is a concentrated disinfectant solution titrated in free chlorine, intended for the disinfection of Gram positive and Gram negative bacteria, including Legionella spp., Of sanitary water circuits, cooling towers and the food, feed and agro-livestock and surfaces industries.

Main uses:

- Disinfection of surfaces or pipes of water systems used for the production, distribution, transport, storage and consumption of food, feed and beverages for the control of contamination by Gram positive and Gram negative bacteria including Legionella spp.
- Chlorine coverage of water in sanitary and cooling tower circuits.

Code	Description	Conf.	Pieces / Cart	Pallet Qty
860202018	**BIOCHLOR** - PMC n° 19916	BO 1 L	20	300 pieces
860202017	**BIOCHLOR** - PMC n° 19916	DR 10 L	-	400 L

BIOALPHA

It is a bio-conditioner for water systems created to meet and solve the various problems related to the daily use of of biofilm in accumulations, recirculations and pipes, the reduction of energy efficiency, the danger of biological contamination are just some of the problems associated with the management of a plant.

This product was designed for two treatment lines:

- Hydraulic systems; due to the presence continuous water treatments in order to control the deposition of inorganic material in the circuits.
- Shock treatments aimed at eliminating organic film-forming deposits.

BIOALPHA is characterized by its non-corrosivity and contains active substances included in the GRAS (Generally Recognized As Safety) status by the US FDA. It can be used together with BIODUE for a combined peroxidation action of the Biofilm in plumbing systems.

Code	Description	Conf.	Pieces / Cart	Pallet Qty
860202010	BIOALPHA	FU 10 L	-	400 L

BIODUE

It is a peroxide-based bioxidant, Cleansing action with sanitizing effect. Ready to use with modulated release; the use of new stabilizers for regulatory reasons led to the creation of a liquid solution of peroxides stabilized in the absence of heavy metals. The bioxidant potential ready to use derives exclusively from peroxides and substances natural organic.

BIODUE can be used alone or in combination with other products of the Biopharma line.
On its own it is suitable for treatment in of the water circuits, for use in food industries. Combined with BIOALPHA it offers an action combined for the peroxidation of biofilm that accumulates in hydraulic plants.

Code	Description	Conf.	Pieces / Cart	Pallet Qty
860202018	BIODUE	FU 10 L	-	400 L

BIOGLAYD

It is a bioconditioner, with detergent action with sanitizing effect specially formulated for removal of the biofilm in the circuits and dispensers of sanitary water.

BIOGLAYD development originates primarily from the risk factor represented by the presence of biofilm in accumulations, recirculations, pipes and dispensers that causes the danger of microbiological contamination of devices.

The use of specifically formulated designed for inspection and removal of subflorescences and saline formations it contains the degradation and eliminates the risk of biofilm, with significant and beneficial pre-sanitizing and reconditioning action damp surfaces.

With regard to the inorganic fraction of biofilm (limestone, metal deposits) it is removed by the acids of the fruit contained in the formulation (acid Glycolic) all of which exhibit a remarkable chemical affinity for alkaline earth ions (Calcium, Magnesium) and in general for metals that are frequently found in biofilm (Iron, Manganese).

BIOGLAYD is characterized by the reduced dangerousness of use and for the total eco compatibility than others products formulated with mineral acids (hydrochloric, phosphoric) or sulfamic acid.

BIOGLAYD is also indicated for descaling (SCALE REMOVING) of hard surfaces located in humid environments.

The special formulation in addition to the obvious advantages of environmental compatibility and rinsing operation eliminates re-opacification phenomena typical of scale remover with surfactant activity determined by the deposition of soaps insoluble calcium and magnesium on surfaces.

Code	Description	Conf.	Pieces / Cart	Pallet Qty
860202034	BIOGLAYD	FU 10 L	-	400 L

LEGIONELLA

BIOZONO (35%)

UFI Code: 22N0-E0MW-7002-S4GN

Oxidant product based on stabilized hydrogen peroxide for treating water in swimming pools and hot tubs. It has anti-scale agents to prevent limescale formation, as well as a powerful anti-corrosion action in metal pipes.

Product compliant with EN 902/2016 "Chemicals used for treatment of water intended for human consumption – Hydrogen peroxide".

Code	Description	Conf.	Pieces / Cart.	Pallet Qty
220640008	BIOZONO*	CA 20 L	-	480 L

***Sold in complete pallets only**

BIOZONO Ag+ DL

Bio-oxidant with sanitizing effect a base of active oxygen and Ag + ions for the control of Legionella pneumophila e of bacterial proliferation in the circuits of sanitary water and in closed circuits subject to bacterial pollution.
Not foaming.

Property
Special formulation that thanks to the synergistic action of active oxygen and silver exerts a strong hygienic action in sanitary water circuits, cooling water circuits and in general in water circuits where there is contamination due to Legionella pneumophila and other bacterial forms and pathogens normally present in the Biofilm.

Code	Description	Conf.	Pieces / Cart.	Pallet Qty
220643006	BIOZONO Ag+ DL	FU 10 L	-	400 L

BIOZONO Ag+ DL P

Bio-oxidant with sanitizing effect a base of active oxygen and Ag + ions for the control of Legionella pneumophila e of bacterial proliferation and prevention in the circuits of sanitary water and in closed circuits subject to bacterial pollution. Thanks to the presence of 'antiscale' agents it prevents the formation of limestone deposits and has a strong anticorrosive action.
Not foaming.

Property
Special formulation that thanks to the synergistic action of active oxygen and silver exerts a strong hygienic action in sanitary water circuits, cooling water circuits and in general in water circuits where there is contamination due to Legionella pneumophila and other bacterial forms normally present in the Biofilm.

Code	Description	Conf.	Pieces / Cart.	Pallet Qty
220645006	BIOZONO Ag+ DL P	FU 10 L	-	400 L

BIOSHIELD

It represents innovation on the subject of **pipeline protection** of sanitary water and is characterized by its effectiveness in high conditions and oxidative potential of conductive waters.
BIOSHIELD, thanks to peculiar action of natural tannins contained in it, amplifies the kinetics deposition of inert material e totally non-toxic in the presence of high redox values of the waters.

The amphoteric characteristics of the solution guaranteed by the formulation biphasic which includes both a nucleophilic character that extracts of **tannin** electrophilic in nature, allow to prevent corrosive phenomena induced by redoximetric variations of the waters.

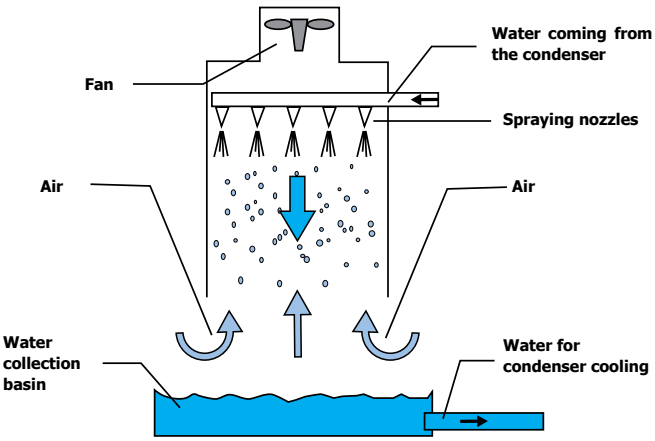
Code	Description	Conf.	Pieces/ Cart.	Pallet Qty
860202060	BIOSHIELD	FU 10 LT	-	400 lt

COOLING TOWERS

COOLING TOWERS

The term **"Cooling TOWERS"** indicates any type of evaporative equipment (open circuit cooling tower, closed circuit evaporative tower, evaporative condenser, evaporative cooler, scrubber) used in **air conditioning of buildings** (residential or for productive use), in industrial processes, in refrigeration plants or in energy production systems, characterized by **the use of water with aerosol production and liquid evaporation.**

In fact, they use the natural law according to which the forced evaporation of a minimum quantity of water causes a lowering of the temperature of the main fluid mass.



Therefore, in the case of evaporative towers, while air enters from below, induced to rise by the fan or by the difference in density, the water to be cooled is sprayed from above. This will have a high temperature at the entrance, as it has previously received heat from an environment, from an engine or from any component. In contact with colder air, the liquid sprayed into the tower releases energy, partially evaporating and cooling according to the principle set out above.
However, most of the water does not evaporate, but falls towards the bottom of the tower, where it is collected in a basin and sent back to the users.
Due to the characteristics of the water, the temperatures involved and the way it operates, there are strong microbiological risks associated with its operation.
Above all, given the ability to disperse aerosols over even significant distances, it is strongly connected to risks for human health.

Inside the tower a series of conditions can easily occur which favor the development of the Legionella bacterium. In fact, the water can remain in the collection basin even for long periods and precisely at the ideal temperature for the development of the germ. The same cooling process then involves the formation of an aerosol (dispersion of drops of water in a stream of air), which, despite special shielding, can accidentally be released into the atmosphere and spread the germ.

WINNING STRATEGY

It is necessary to introduce products capable of preventing bacterial fallout phenomena and preventing encrustations on the exchange surfaces which reduce the thermal efficiency and favor the adhesion of a thick biofilm to the walls.
The products to be used must therefore be effective against bacteria, algae and encrustations, but at the same time harmless to people and non-corrosive to the materials that make up the evaporative towers.

LEGIONELLA

PRODUCTS

BIOCHLOR

ECHA EUROPEAN CHEMICALS AGENCY

PMC (MEDICAL DEVICE SURGICAL)

Medical Surgical Unit PMC registration of the Ministry of Health No. 19916. BPR (Biocides) registration in progress for use PT 2, 3,4,5. VIRUCID (EN16777 EN14476)

It is a concentrated disinfectant solution titrated in free chlorine, intended for the disinfection of Gram positive and Gram negative bacteria, including Legionella spp., Of sanitary water circuits, cooling towers and the food, feed and agro-livestock and surfaces industries.

Main uses:

- Disinfection of surfaces or pipes of water systems used for the production, distribution, transport, storage and consumption of food, feed and beverages for the control of contamination by Gram positive and Gram negative bacteria including Legionella spp.
- Chlorine coverage of water in sanitary and cooling tower circuits.

Code	Description	Conf.	Pieces / Cart	Pallet Qty
860202018	**BIOCHLOR** - PMC n° 19916	BO 1 L	20	300 pieces
860202017	**BIOCHLOR** - PMC n° 19916	DR 10 L	-	400 L

BIOZONO Ag+ DL

Bio-oxidant with sanitizing effect a base of active oxygen and Ag + ions for the control of Legionella pneumophila e of bacterial proliferation in the circuits of sanitary water and in closed circuits subject to bacterial pollution.
Not foaming.

Property
Special formulation that thanks to the synergistic action of active oxygen and silver exerts a strong hygienic action in sanitary water circuits, cooling water circuits and in general in water circuits where there is contamination due to Legionella pneumophila and other bacterial forms and pathogens normally present in the Biofilm.

Code	Description	Conf.	Pieces / Cart.	Pallet Qty
220643006	BIOZONO Ag+ DL	FU 10 L	-	400 L

BIOSAN DL

Bioconditioning based on salts of Polymeric quaternary ammonium with strong sanitizing effect for the treatment water from cooling circuits and cooling towers and for the treatment of closed circuits subject to pollution bacterial and Legionella contamination
pneumophila. **Thanks to its action non oxidizing prevents phenomena of corrosion. It prevents and controls the proliferation of algae.**
Guarantees Biofilm removal.
Not foaming.

Property
BIOSAN DL maintains bacterial and algal load under control.
In particular it prevents and counteracts the proliferation of Legionella pneumophila in the water circuits and prevents phenomena of corrosion due to Biofilm.

Code	Description	Conf.	Pieces / Cart.	Pallet Qty
220614030	BIOSAN DL	FU 10 L	-	400 L

PMC (MEDICAL DEVICE SURGICAL)

BIOQUARK

ECHA EUROPEAN CHEMICALS AGENCY

Medical Surgical Unit PMC registration of the Ministry of Health n ° 20149.
BPR (Biocides) registration in progress for use PT 2, 3, 4, 5, 11

Concentrated disinfectant product for the treatment of water systems, for the chlorination of drinking water, waste water, process and industrial additives with antiprecipitating agents capable of preventing the unwanted effects of precipitation
of calcium salts and to activate properties of hypochlorous acid disinfectants.

Property
- Disinfection of water circuits of domestic hot water and cooling towers for bacterial contamination control of Gram positive and Gram negative included Legionella spp.
- Disinfection of surfaces, tanks and water pipes.
- Chlorination of hot sanitary water and tower circuits of cooling down.

Code	Description	Conf.	Pieces / Cart.	Pallet Qty
220648004	BIOQUARK past 7 g - PMC n° 20149	SE 10 KG	-	360 KG
220648006	BIOQUARK past 7 g - PMC n° 20149	SE 25 KG	-	450 KG
220649004	BIOQUARK Granular - PMC n° 20149	SE 10 KG	-	360 KG
220649006	BIOQUARK Granular - PMC n° 20149	SE 25 KG	-	450 KG

THERMAL WATER

THERMAL WATER

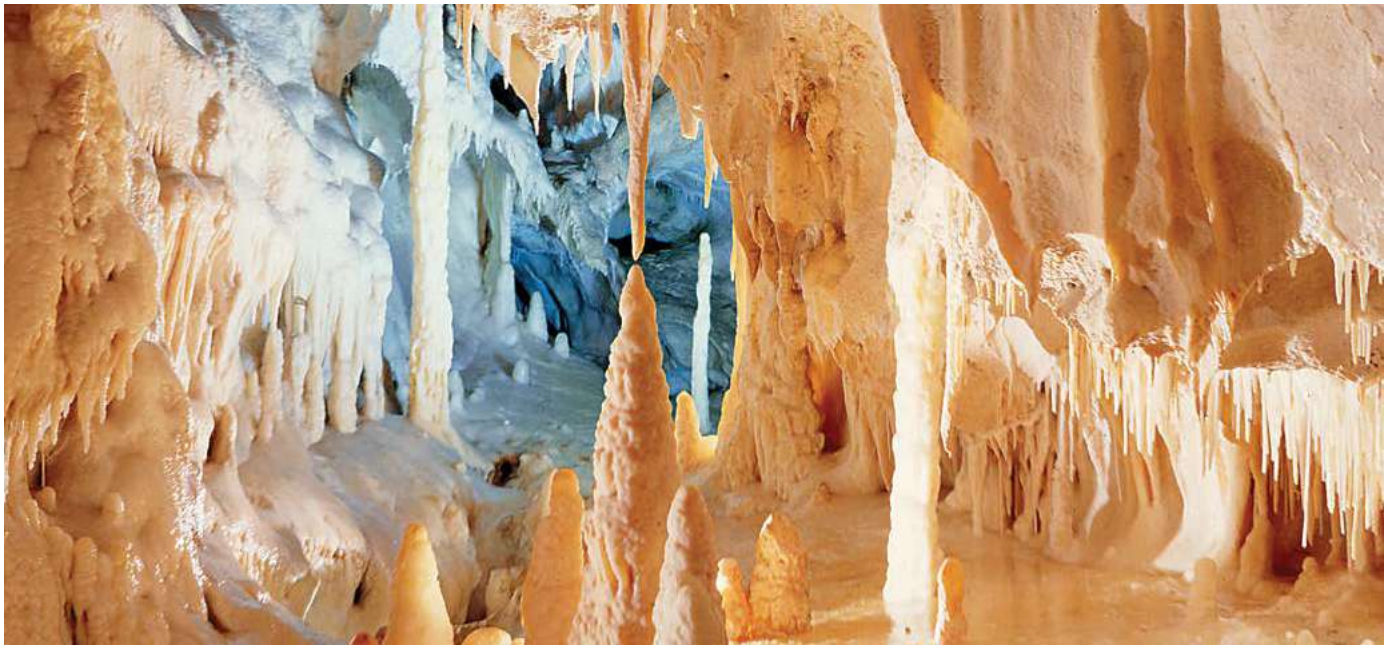
In SPAs, the Biosecurity of water is a critical element for services dedicated to Wellness.
The characteristics of thermal waters are extremely heterogeneous, depending on the mineral salts and trace elements that over the centuries have enriched the waters themselves, giving it unique qualities, capable of enhancing its peculiarities at the service of health and well-being.
Due to this enrichment through specific natural elements, each water acquires unique characteristics, making them suitable for different types of therapies, and identifying, by way of example, the type:

- salsobromoiodic waters
- sulphurous waters
- bicarbonate sulphated - magnesium waters
- bicarbonate waters
- sulphated waters
- chloride-sodium waters

The countless benefits and advantages of using these types of water have been known since ancient times and their effectiveness lies precisely in the chemical and chemical-physical components that characterize them.

It is therefore of vital importance to preserve the characteristics of the different thermal waters, mitigating and preventing the side effects related to the presence of bacteria and pathogenic microorganisms that proliferate inside them.

Precisely with this in mind, Barchemicals has developed a line of products totally free of chlorine, aimed at the specific treatment of thermal waters and whose main purpose is to eradicate the conditions predisposing the formation of Biofilm, the main site for the development of pathogens (Legionella above all) insidious for the health of the waters and therefore of those who use them.



LEGIONELLA

PRODUCTS

BIOUNO

It is a formulation containing hydrated stabilized oxygen. BIOUNO was made for the treatment of thermal waters, as it does not cause alterations of the beneficial properties of the same and not contains halogen derivatives such as Chlorine, Bromine etc.
BIOUNO is also an indicator for the prevention of contamination by Legionella spp. in the sanitary water circuits.
BIOUNO contains active ingredients and stabilizers included in the provisional annex one of the Biocides Directive for use in the waters.

BIOUNO owes its hygenic action to the release of oxygen when diluted. The release of oxygen interferes with sulfuric groups and disulfide bridges that make up the bacterial membrane causing its lysis.
The action of BIOUNO is completed with interference on the respiratory chain of prokaryotes, due to the oxidation of the prokaryotes.
In the thermal baths the use of BIOUNO it is synergized by use of the BIOTRE product which thanks to its very high redox potential oxidizes integrally the organic substance present in the tubs.

Code	Description	Conf.	Pieces / Cart.	Pallet Qty
860202066	BIOUNO	FU 10 L	-	600 L

BIOERGIC

For prevention and control of algae, it is a highly concentrated non-foaming agent with a broad spectrum of action, particularly suitable for towers evaporative and thermal pools.

BIOERGIC acts in an energic way, without giving rise to phenomena of acquired resistance.

Thanks to its microflocculating action, it favors the elimination of those pollutants organic responsible for proliferation of algae and bacteria, keeping at the same perfectly clear weather the waters.

Code	Description	Conf.	Pieces / Cart.	Pallet Qty
860202062	BIOERGIC	FU 10 L	-	600 L

BIOTRE

It is a super oxidant formulation in solution based on potassium monopersulfate purified. BIOTRE is specially made for the treatment of thermal waters, as it does not cause alterations of the beneficial properties of the same and does not contain halogen derivatives such as Chlorine, Bromine etc. BIOTRE contains active ingredients included in provisional annex one of the directive biocides for use in the waters of bathing.
BIOTRE realizes, with the same amount of concentration, higher redox values compared to those of other based preparations of oxygen and halogens.

BIOTRE at concentrations of use realizes redox potentials higher than 900mV ensuring complete oxidation of the organic substances present in the bath.
The treatments of the thermal baths with BIOTRE do not generate by-products that may compromise tolerability for users and / or induce adverse effects for the environment.

Code	Description	Conf.	Pieces / Cart.	Pallet Qty
860202070	BIOTRE	FU 10 L	-	600 L

BIOCHLOR

ECHA EUROPEAN CHEMICALS AGENCY

PMC (MEDICAL DEVICE SURGICAL)

Medical Surgical Unit PMC registration of the Ministry of Health No. 19916.
BPR (Biocides) registration in progress for use PT 2, 3, 4, 5,11. VIRUCID (EN16777 EN14476)

It is a concentrated disinfectant solution titrated in free chlorine, intended for the disinfection of Gram positive and Gram negative bacteria, including Legionella spp., Of sanitary water circuits, cooling towers and the food, feed and agro-livestock and surfaces industries.

Main uses:

- Disinfection of surfaces or pipes of water systems used for the production, distribution, transport, storage and consumption of food, feed and beverages for the control of contamination by Gram positive and Gram negative bacteria including Legionella spp.
- Chlorine coverage of water in sanitary and cooling tower circuits.

Code	Description	Conf.	Pieces / Cart	Pallet Qty
860202018	**BIOCHLOR** - PMC n° 19916	BO 1 L	20	300 pieces
860202017	**BIOCHLOR** - PMC n° 19916	DR 10 L	-	400 L

AERAULIC
SYSTEMS

AERAULIC SYSTEMS

The aeraulic systems present in the premises, if polluted by Legionella, are the most difficult to treat for good and effective sanitization.
The guidelines issued by the Ministry of Health highlight why, as in this case, the design according to the recommendations of the guidelines themselves can avoid serious phenomena of infestations in the ducts after or during use.
Whether it is a heating system or a cooling system, it must be avoided that stagnation of water may form inside the system (AHU or canalization). It is necessary to avoid that the Legionella bacterium can rest in these stagnations and proliferate.
Therefore, both the collection points, both the filters used for filtering the air itself, and the internal surfaces of the system must be treated to prevent Legionella clusters from developing, which then from here can infest the entire circuit to the adjacent rooms.

LEGIONELLA

PRODUCTS

PMC (MEDICAL DEVICE SURGICAL)

PRODUCT PAR EXCELLENCE!

ERGOSAN PROFUMATO

PMC Medical Surgical Unit registered by the Ministry of Health n. 18129

Disinfectant based on quaternary ammonium salts. Ideal for washing and disinfecting filters in air circuits

Code	Description	Conf.	Pieces/Cart.	Pallet Qty
034001	ERGOSAN PROFUMATO PINO MENTOLATO 20	BO 1 L	20	300 pieces
034011	ERGOSAN PROFUMATO PINO MENTOLATO 20	FU 10L	-	600 L
035011	ERGOSAN PROFUMATO LIGHT 20	FU 10 L	-	600 L
035L11	ERGOSAN PROFUMATO LIMONE 20	FU 10 L	-	600 L

PRODUCT PAR EXCELLENCE!

SEPTISOL

75% w / w hydroalcoholic solution in isopropyl alcohol and 0.1% w / w benzalkonium chloride, for quick cleaning and hygiene of fan heaters.

Code	Description	Conf.	Pieces /Cart.	Pallet Qty
116003008	SEPTISOL	BO 1 L Refill	4	288 pieces
116003006	SEPTISOL	BO 1 L With Trigger	4	288 pieces
116003004	SEPTISOL	FU 10 L	-	400 L

DOSING SYSTEMS

DOSING SYSTEMS

SMART MEDICAL SYSTEM

Continuous prevention
An aid to the Legionella prevention and control programme. Continuous dosing systems developed in accordance with the MIN. OF HEALTH DECREE OF 7 February 2012. The devices are supplied through rental and assistance agreements.

SMART MEDICAL SYSTEM
Special equipment for the proportional dosing of disinfecting agents such as BIOZONO Ag+ DL or BIOCHLOR.
BIOVITRUM Ag+ and its catalytic action boost the disinfecting action of the active ingredient. Easy to install and user friendly.

Code	Description
280202008	SMART MEDICAL SYSTEM - 1" or the microdosing of Anti Legionella biocides (Biozono Ag+ DL / Biozono Ag+ DL P / Biochlor)

GRADUATED TANKS

Graduated tanks for chemical products

Polyethylene graduated tank with sleeve for chemical products, designed to allow a direct use of either vertical and horizontal dosing pumps.

Code	Description
0123055070	GRADUATED TANK WITH SAFETY SLEEVE
0123055062	GRADUATED TANK 120 LT - FOR DOSING GROUP

LEGIONELLA

ENG CHRONO PERISTALTIC PUMP

Pump with programmable monthly or daily timer for feeding biocide products (Biozono Ag+DL, Biozono Ag+ DL P , Biosan DL, Biochlor).

G

Code	Description	L/hour	Bar
061216074	ENG CHRONO PERISTALTIC PUMP	5.4	1

MEASUREMENT AND ANALYSIS

F

Code	Description
440402646	QUANTOFIX - BOX INDICATING PEROXIDES 100PPM PACKAGE. 100
440402035	QUANTOFIX- BOX INDICATING PEROXIDES 25PPM PACKAGE. 100

F

Code	Description
075002	CHLORINE/pH TABLETS POOL TESTER
076020	REPLACEMENT TABLETS DPD1- RAPID- 250 PIECE FOR POOL TESTER
076023	REPLACEMENT TABLETS DPD3- RAPID- 250 PIECE FOR POOL TESTER
076027	REPLACEMENT TABLETS RED pH- RAPID- 250 PIECE FOR POOL TESTER
076025	REPLACEMENT TABLETS DPD4- RAPID- 250 PIECE FOR POOL TESTER
076021	REPLACEMENT TABLETS DPD 1 - for Photometrics - 250 pc. package.
076022	REPLACEMENT TABLETS DPD 3 - for Photometrics - 250 pc. package.
0760026	REPLACEMENT TABLETS PHENOL RED - for Photometrics - 250 pc. package.
076038	REPLACEMENT TABLETS ALKA-M for Photometrics - 100 pc. package
076034	COMBI-PACK CALCIUM - for Photometrics - 100 pc. package
076030	BLISTER PACK REPLACEMENT DPD4 OXYGEN+pH (30+30 tablets)
0123056073	CHLORINE /pH DROPS TEST KIT
0123056072	REPLACEMENT OTO + RED PHENOL DROPS
079001	OTO REPLACEMENT DROPS
079002	REPLACEMENT RED DROPS 15 cc
0123056076	TEST KIT TABLETS pH/OXYGEN
0123056084	TEST KIT TABLETS pH/BROMINE/CHLORINE
050402006	MINIKIT CYANURIC ACID
050502004	REPLACEMENT TABLETS CYANURIC ACID pc. 250

MD110 6 IN 1 PHOTOMETER

Chlorine, bromine, pH, cyanuric acid, alkalinity M, calcium hardness.

The strengths of the MD110 make it a reliable companion for all users.

• Waterproof design
With a protection level of IP 68, the MD110 is waterproof for up to one hour to a depth of 0.1 m, so there is no need to worry if you drop the device into the water - it will float.

• Accurate and repeatable measurement results
LEDs and noise filters are used on the MD110. This guarantees good results at any time.

• User calibration
Single point calibration is possible. In addition, all variations of the MD110 display the measurement results directly in ABS or %T form.

• One Time Zero (OTZ)
No need to waste time with a new zero adjustment after each test. Once executed, the zero value remains valid for all tests with the same sample.

• Automatic measurement storage with optional data transmission
The MD110 automatically stores the last 16 measurements with indication of the time and date. These results can be transferred to a table using the IRiM module.

• Ergonomic design
Regardless of whether you use the MD110 in the laboratory or directly at the sample collection site, it is designed to offer easy management and unlimited viewing on the display at any time. In the laboratory, the instrument has rubber feet on the bottom to prevent it from slipping accidentally.

• Ex-factory programming
The MD110 instrument is programmed in the factory with up to 6 pre-calibrated measurement methods. So, all you need to do after receiving your instrument is: Select the test, prepare the sample and perform the test!

• Memory scrolling
When the instrument is switched on, it automatically displays the last method selected before it was switched off. This provides fast access to your favourite methods.

APPLICATION
Boiler water | Cooling water | Pool water check | Disinfectant check | Pool water treatment | Drain water treatment | Non-purified water treatment | Drinking water treatment.

SUPPLY
- Instrument in a plastic case with 4 micro batteries (AAA)
- 100 DPD No.1 reagent tablets
- 100 DPD No.3 reagent tablets
- 100 Phenol Red reagent tablets Photometer
- 100 CyA-Test reagent tablets
- 100 Alka-M reagent tablets Photometer
- 100 Calcio-H No.1 reagent tablets
- 100 Calcio-H No.2 reagent tablets
- 3 round cuvettes (glass) with caps
- Sealing rings
- 1 stirring rod
- 1 dosing syringe (5 ml)
- Instructions for use
- Method Manual
- Certificate (COC)
- Warranty statement

Test Name	Measurement range	Chemical method
Alkalinity M T	5 – 200 mg/l CaCO3 A	Acid/indicator
Bromine T	0.05 – 13 mg/l Br2	DPD
Chlorine HR T	0.1 – 10 mg/l Cl2	DPD
Chlorine L	0.02 – 4.0 mg/l Cl2	DPD
Chlorine T	0.01 – 6.0 mg/l Cl2	DPD
CYA T	10 – 160 mg/l CyA	Melamine
Calcium hardness 2T	20 – 500 mg/l CaCO3	Murexide
pH L	6.5 – 8.4 pH	Phenol red
pH T	6.5 – 8.4 pH	Phenol red

Code	Description
050219001	MD110 6 IN 1 PHOTOMETER (Chlorine-Bromine-pH-CyA-Alkalinity-Hardness)

LEGIONELLA

DDS EVOLUTION

CALCIUM HYPOCHLORITE IN TABLETS

Diluting and measuring system for biocides in tablets

Patented system of dilution and measuring of calcium hypochlorite in tablets or briquettes (max. 20g) with or without sequestrant.

- Easy installation and use.
- Possibility to automate the dosages by combining the QTC-Evo (electrical panel with digital timer) or to automate the dosages by connecting it to a chlorine dosing unit.
- Low maintenance due to the lack of electrical and electronic parts.
- Complete dilution of the product.
- No smell.
- High hourly chlorination capacity.
- Works at atmospheric pressure; it does not need a dosing pump, but uses a venturi system.
- Water circulation can be obtained using a by-pass before and after the filter or a by-pass after the filter, or by using an auxiliary booster pump where the system requires it.

DDS-EVOLUTION

For swimming pools with maximum capacity of 400 m^3
Capacity of the product hopper approx. 25 kg
PEV-Evo panel with flow meter 30/350 l/h max
Venturi System Ø 1”
Measurements: H 90 cm x D. 50 cm
Weight: 10.5 Kg
Material: polyethylene.

DDS-EVOLUTION PLUS

For swimming pools of up to 1000 m^3
Capacity of the product hopper approx. 40 kg
PEV-Evo panel with flow meter 100/1,000 l/h max
Venturi System Ø 1” ½
Measurements: H 110 cm x D. 50 cm
Weight: 13 Kg
Material: polyethylene

SYSTEM PARTS

DDS EVOLUTION
Equipment where the product is diluted
SOLENOID VALVE PANEL
Device for controlling the flow of water
VENTURI UNIT
Hydraulic vacuum system

OPTIONAL

BOOSTER PUMP

Code	Description
120202027	DDS EVOLUTION + PEV 24V + VENTURI UNIT (Except booster pump)
120202025	DDS EVOLUTION PLUS + PEV 24V + VENTURI UNIT (Except booster pump)
8023406022	LUCAS PUMP 0.5 HP Single phase (booster pump). (0.33 Kw)
8023406002	LUCAS PUMP 0.75 HP Single phase (booster pump). (0.55 Kw)

* 220 V electrovalves on request.

DDS-3000 INDUSTRIAL

CALCIUM HYPOCHLORITE IN TABLETS

Diluting and measuring system for biocides in tablets

Patented system fore the dilution and measuring of Calcium Hypochlorite in tablets.
Special model for obtaining highly diluted chlorinated solutions.

- It works under atmospheric pressure.
- Floating level sensor.
- It is possible to manage up to 4 pools simultaneously using a single DDS 3000 INDUSTRIAL and two DSC in series.
- DSC controls 2 pools and manages the measuring and preparation of the chlorinated solution.
- Capacity of the product drum approx. 50 kg.
- Sizes: maximum height 140 cm, maximum diameter 110cm.
- Weight: approx. 20 kg.

DDS 3000 INDUSTRIAL

Capacity of the product drum more than 50 kg
Sizes: maximum height 140 cm,
maximum diameter 110 cm
Weight: approx. 20 kg

SYSTEM PARTS

DDS 3000 INDUSTRIAL
Equipment where the product is diluted. It is made up of: cistern, drum for the product, shaker, ultrasound sensor, outlets for the chlorinated and drainage solution.

PEV 3000 INDUSTRIAL SOLENOID VALVE PANEL
Device for controlling the flow of water. It is activated when the ultrasound sensor detects the absence of chlorinated solution.

DSC NEW
Double Station Controller. Electronic control unit capable of managing up to two pools simultaneously. Oversee the preparation of the solutions and their dosing.

Code	Description
120202059	DDS 3000 INDUSTRIAL +DSC+PEV 3000-24V

LEGIONELLA

DDS-3000 GRANULAR

GRANULE CALCIUM HYPOCHLORITE BIOQUARK

Diluting and measuring system for BIOQUARK

Dilution and dosage system for highly soluble granular biocides: SDIC (Dichloro) and Calcium Hypochlorite.

- Work at atmospheric pressure
- Float level sensor
- It is possible to manage up to 4 tanks simultaneously using a single DDS 3000 Granular and two DSCs in series
- DSC controls 2 tanks and manages the dosage and preparation of the chlorinated solution
- Loading hopper capacity approx.25 kg
- New lid with anti-odor closure
- Avoid product packing
- Dimensions: maximum height 125 cm, maximum diameter 110 cm
- Weight about 25 kg

DDS 3000 GRANULAR
Loading hopper capacity approx.25 kg
12 V electric motor
Safety lock during loading
Dimensions: H 125 cm (maximum h including green hopper) x D 110 cm
Weight about 25 kg

NEW!

SYSTEM PARTS

DDS 3000 GRANULAR
Equipment where the preparation and dilution of the chlorinated solution takes place.
It consists of: tank, product loading hopper, agitator, float, outlets for the chlorinated solution and unloading.

PEV 3000 SOLENOID VALVE PANEL
Water flow control device. It is activated when the electronic float for level control detects the absence of chlorinated solution.

DSC NEW
Electronic control unit capable of managing up to two tanks at the same time. He supervises the preparation of the solutions and their dosage.

SCU - SECURITY CONTROL UNIT
Security Control Unit
Device for dosing the granular product inside the DDS.

Code	Description
120202098	DDS 3000 GRANULAR + PEV 3000 + SCU

DOSERS ACCESSORIES

FJ 3/8 PNEUMATIC PUMP

Dosing pump for public and private swimming pools

- Dosing pump for solutions containing main drain and abrasive elements.
- Flow rate: from 50 L/hr up to 1200 L/hr with pressure delta 6 atmospheres
- Viton membrane.

Code	Description
061402003	FJ 3/8 PNEUMATIC PUMP
061499122	AIR REGULATION GROUP
165620008	CRISTAL TUBE 8 x 12 um MT
302450012	POLYETHYLENE 8x12 um MT

MEMBRANE DOSING PUMP ENG - EM

Dosing pump for public and private swimming pools

- Flow rate: 10 ÷ 90 l / h
- Maximum pressure: 5 bar
- Motor: 0.06 kW - 3ph (IP55)
  0.06 kW - 1ph (IP55)
- Frequency from 26 to 144 rpm
- Diaphragm diameter 70 mm
- Pump head: SS 316 PVDF
- Maximum temperature:SS 316 40°C
  PVDF 40°C
- Ambient dosage temperature +5 ÷ +45 °C
- Storage temperature -10 ÷ +50 °C
- Small size - to facilitate installation
- Rugged plastic outer housing - ensures ease of installation and durability
- Simple yet robust construction - providing ideal value for money
- 0.06 kw high efficiency motor with high flow rate 10-90 l / h

Code	Description
061220066	POMPA DOS. MEMB. 90L/H-5 BAR - ENG-EM
165620008	CRISTAL TUBE 8 x 12 um MT
302450012	POLYETHYLENE 8x12 um MT
0901050701	300 mm BRACKET FOR WALL SUPPORT

CONSULTING SERVICE

ACCREDITED ANALYSIS AND CONSULTING SERVICE

The Barchemicals Analysis Laboratory is ACCREDIA accredited since 22/01/2021 with the accreditation number **01748**.

The Barchemicals laboratory offers an analysis and consulting service for water intended for human consumption, bathing water, thermal water, mineral water, cooling tower water, natural water, surface water and water intended for air humidification.

Carried out by qualified personnel at the Barchemicals Internal Laboratory (ISO 9001) with reference to the provisions of Table A of the State Regions Agreement; countersigned by Qualified Qualified Personnel enrolled in the Professional Orders (Order of Doctor of Chemists and Order of Doctor of Biologists).

SPECIFIC ANALYSES FOR WATER MATRICES (A - B - C)

Reference legislation: LLGG 07/05/2015 and regional transposition UNI EN ISO 11731:2017

Code	Description
370000030	ANALYSIS - LEGIONELLA COUNT

ANALYSIS SPECIFICATIONS FOR HARD SURFACES

Code	Description
370000044	ANALYSIS - YEASTS AND FUNGI

POTABILITY ANALYSIS

Code	Description
370000010	ANALYSIS - INTEGRATED (C+B+T) DL 31/01

GENERAL SALES CONDITIONS

Pursuant to Art. 1469 bis c.c., the parties, after ample discussion and negotiations, declare to regulate the ongoing rapport as in the past according to the following terms and conditions, which will be applied equally to all supplies and/or commercial interaction entered into between the parties in the future.

1. ORDERS - BUYER INSOLVENCY – 1.1.) The purchaser's order has the value of an irrevocable purchase offer and is not binding for the seller, which reserves the right to accept it in writing directly or through a legal representative. The sales agreement will be considered fulfilled only upon receipt by the purchaser of the order confirmation by the seller's legal representative. 1.2) Upon the seller's acceptance of the order, the agreement is considered closed and, in the event that the goods are not collected, the purchaser will be considered insolvent and, as a result, will be liable to pay a fee equal to 50% the amount of the invoice, without prejudice to greater damages. The agreement will be considered fulfilled even in the event of partial acceptance of the order, so that the failed collection of the goods will entitle the seller to demand the fee described in the above paragraph, to be calculated on the lower amount of the invoice. 1.3) Any specific agreement relative to the supply mentioned in this order and under the terms of delivery, even if with the participation of agents or those appointed by the seller, cannot bind the latter unless expressly accepted in writing by their legal representative. 1.4) The total and/or partial fulfilment of the order by the seller implies acceptance of the order. 1.5) The purchaser has absolutely no right to withdraw unilaterally from the order or contract. 1.6) If, once the order has been confirmed, the seller becomes aware of unpaid bills, confiscations, restraint orders or any judicial acts in general in the name of the purchaser, or if the seller learns that the purchaser is in financial difficultly, the seller can, if they wish, suspend the contract and demand certain guarantees, or dissolve the contract due to its breach by the purchaser, under art. 1456 of the civil code, communicating this in writing with return receipt or telegram. The exercise of this faculty does not give the purchaser any right to claim reimbursement of damages or other. 1.7) The minimum order accepted is of € 250.00 + V.A.T.

2. PRICES AND PAYMENTS – 2.1.) The sales price, where unspecified, is the one found in the seller's price list in vigour on the date the contract is finalised. 2.2) Should the purchaser fail to receive the products when they are ready for delivery, or their preparation and delivery were not possible for reasons of no fault of the seller, the prices, if not already foreseen in the order, will be subject to variations in the seller's price list and, in any case, to the variation of the cost of material and manual labour used from the time the goods have been prepared up until the moment of collection by the buyer or acceptance of the delivery. 2.3) Taxes, duties and expenses relative to the emission of bills of exchange or any regularisation of the contract, are at the purchaser's expense. 2.4) Payments must always be made in accordance with the terms and conditions agreed upon, in Euro, in cash and at the seller's headquarters. It is at the seller's discretion whether or not to accept promissory notes and cheques, or authorise drafts or issue bank receipts. This, however, does not bring about under any circumstances, either novation of the original credit, nor any prejudices towards any title retention agreement, nor territorial change in the event of a legal dispute. 2.5) Payments made to seller's agents will not be accepted unless previously authorised by the seller in writing. 2.6) Late payment sees interest mature at a rate foreseen under art. 5 of the Legislative Decree 231/2002 effective pursuant to art. 4 of the same Leg. Decree. 2.7) Any amounts unpaid by the purchaser authorise the seller to instruct immediately a legal representative to proceed to the collection of the outstanding balance, plus legal fees.

3. DELIVERY – 3.1.) The delivery terms are indicative and apply from the moment when all the points in the contract have been supplied and defined irrevocably, provided that the purchaser has punctually paid the instalments due. 3.2) If there are any outstanding payments, even ones relating to previous supplies, the seller has the right to suspend the implementation of the contract until payment has been made and sufficient guarantee has been given on payments due. 3.3) Delivery is carried out on weekdays and can be sufficiently postponed due to events beyond the seller's control such as strikes, trade union action, lockouts, fires, flooding, rejection of material or work, delayed delivery by third party suppliers, lack of driving force and other unforeseen events. Whatever the situation, delays caused in delivery cannot lead to any form of legal claim. 3.4) The seller has the right to make partial deliveries. 3.5) Delivery is regarded as having been completed in all its terms at the seller's headquarters on the twentieth day after delivery of the return receipt in which the seller notifies the purchaser that the products are ready. From that moment onwards, all risks to the goods become the responsibility of the purchaser and they will also be charged for storage, safekeeping, maintenance and insurance. After twenty days have elapsed since delivery of the above mentioned return receipt and if the client has not picked up the products, or the seller has been unable to deliver them, the seller has the right to sell the goods at the purchaser's expense, under art 1515 of the Civil Code.

4. CHANGES TO THE PRODUCTS – 4.1.) All the data and characteristics contained in the seller's catalogues, price lists, illustrations, drawings, offers and advertising material in general are entirely approximate and do not bind the seller in any way. All the photographs that appear in the catalogue are only explanatory and so no compensation will be paid for delivered material that is different from the images. 4.2) The seller reserves the right to make changes to the products where necessary, without any obligation to warn the purchaser, as long as the product's functions remain the same. 4.3) After the order has been placed, the seller is not obliged to make any changes to goods already produced, or in the course of production, that are destined for the purchaser.

5. PROHIBITED ACTION – 5.1.) Under no condition can the purchaser take legal action against the seller unless all the payments foreseen in the contract have been met. 5.2) From the outset, the purchaser hereby declares that no request for damages or expenses incurred from improper use of the goods, or damage that occurred during the period of time they were waiting for an authorised replacement of the goods, for the goods themselves or for their replacement, can be made.

6. SHIPPING AND LOGISTICS – 6.1.) Goods travel at the purchaser's risk. 6.2) Goods are intended always as sold at the seller's facility and delivered via a customer's means of transport or appointed courier. Any search for a means of transport undertaken by the seller is meant to be on behalf and in the interest of the purchaser, with no liability and/or cost for the seller. Any inclusion in the sales price of transport costs or the agreement "collection at source" does not constitute an exception to this clause. Any losses, faults, alterations of the goods and packaging for any reason are the responsibility of the customer, including in the event that, upon the logistics operator's request, the seller has to issue warranty statements. 6.3) The customer may not refuse to release the goods in transit for any reason. 6.4) When the purchaser does not specify the transport means in time, this will be selected by the seller without any responsibility being incurred by the latter. 6.5) Any delivery carried out by the purchaser for contested goods, to be replaced on prior authorisation, must be done carriage free to the seller's factory and where the contrary occurs, the

seller will have the right to refuse reception with no responsibility incurred.

7. TESTS - PRODUCT FAULTS – WARRANTY – 7.1.) The purchaser will be responsible for any damage or harm to the seller's testers or third-parties, while tests are being carried out, unless testing is carried out at the seller's factory. 7.2) The test will be carried out on delivery; if it should be delayed due to the fault of the purchaser, the subsequent test will have to be paid for in advance covering travel, labour and transfer costs. On completion of the test, the purchaser is obliged to issue the seller with a written declaration showing the results obtained. In the absence of this declaration, the goods sold will be regarded as having been accepted unconditionally and without reserve. 7.3) If the goods do not have to be subject to testing, when the goods are delivered, the purchaser will have to diligently check that there are no faults. 7.4) Any faults should be reported to the seller via registered mail with return receipt within eight days, which start from a) when the test is carried out; b) if no test has to be carried out, from the delivery date; c) if they are faults that were not detectable at the moment of testing or when the above mentioned checks were run, from the moment they are discovered. Failure to comply with the above mentioned terms will result in the warranty becoming null and void. 7.5) All the seller's products are guaranteed free from manufacturing faults, according to current European and Italian regulations, or according to the additional warranties acknowledged by the producer. The seller's product warranty includes only and exclusively the repair or replacement of faulty parts at the seller's factory, without granting any refunds or other expenses; the warranty becomes null if the faults are found to be due improper use of the goods, or if the seller's products have been handled, repaired or altered outside the seller's factory, or if they have been installed with materials or procedures that do not comply with REGULATIONS. 7.6) The party that declares the existence of a factory fault will have to provide proof that the product has been used properly and, in this case, that it has been correctly installed. 7.7) The cost of replacement and re-sending of faulty material will be at the purchaser's expense. 7.8) It is understood by the parties that in any case the communication of faults of the seller's products do not authorise in any way the purchaser to suspend payment of the seller's invoices.

8. TITLE RETENTION AGREEMENT – 8.1.) In the case of a hire purchase sale, the goods will remain the property of the seller until the purchaser has completed all the payments and will be able to be claimed wherever it may be, even if it is combined with other goods belonging to the purchaser or third parties, in compliance with art. 1523 and subsequent amendments to the civil code. 8.2) During the said period, the purchaser shall assume the obligations and responsibilities of keeper of the items supplied, and shall not be entitled to transfer, lend, pledge or move them, or allow them to be confiscated or distrained, without declaring that they are the property of the vendor and without immediately notifying the vendor by registered letter with return receipt.

9. NON FULFILMENT BY PURCHASER - DISSOLUTION OF THE CONTRACT – 9.1.) Failure to make two payments, even if not consecutively, of the price agreed at the time established, will lead to the purchaser forfeiting the benefit of the term and the seller exercising the right to suspend all deliveries not yet completed and/or take measures to obtain the entire outstanding sum, or the dissolution of the agreement and/or of any other sales agreement in force between the parties, under art. 1456 of the civil code, to be notified in writing via registered letter with return receipt. 9.2) Under the second hypothesis, the purchaser will need to immediately return the goods, and will have to pay a penalty of €50 per day for each day of delay in returning the goods. 9.3) The compensation for the greater damage is without prejudice and the seller will also be entitled to withhold the payments already made as a form of compensation, with the exception of larger damages incurred.

10. TRANSFER OF CREDIT – 10.1.) The purchaser declares that they accept from the outset, under art. 1264 of the civil code, any transfer of credit owed by the seller to the factoring agency or similar, expressly exonerating them from any other burden of notification, except to confirm that transfer has occurred, via registered letter with return receipt.

11. COMPLAINTS - COMMUNICATION – 11.1.) Any complaints must be made at the seller's headquarters. For the purposes of the order and subsequent contract, the purchaser declares their residence at the address shown on the front cover of the order itself and all communication will be sent to this address, or to a different legal headquarters, at the seller's discretion. 11.2) In any case, the purchaser will have to communicate to the seller any other change of contact details and addresses within 15 days of the change.

12. APPLICABLE LAW AND COMPETENT COURT OF JURISDICTION – 12.1.) Regardless of the purchaser's nationality and residency, this agreement is subject to the jurisdiction of the Italian Judge. 12.2) The sole competent authority in the event of any dispute shall be the Justice of the Peace or the Court of Modena, according to value. 12.3) It will, however, be the seller's right to elect of their choice, other legally recognised, competent Forums.

13. PERSONAL DATA HANDLING – 13.1.) Pursuant to Art. 10 of law No. 675 of 31/12/1996, your personal data may be subject to handling, meaning the collection, entering, organisation, storage, processing, modification, selection, extraction, comparison, use, interconnection, block, communication, distribution, deletion and destruction or any combination of two or more of the above. 13.2) These personal data will be handled for the following purposes: Administration, accounting, taxation, statistics, commercial, marketing, protection/management/transfer of credit, and to meet all requirements of the regulations in force and for the financial evaluation related to the proper fulfilment of the agreement. 13.3) Personal data will be handled with tools that ensure their safety and confidentiality, either in hard copy or digital format. Please be informed that with reference to the above mentioned handling, you are entitled to exercise the rights described in Art. 13 of law No. 675/96 as follows. 13.4) Your data may be communicated and distributed to the following: § Sales agents, suppliers, customers, couriers and logistics operators, collaborators, commercial and marketing companies and organisations; § Credit institutions, financing institutions, leasing companies, credit collectors, factoring companies, insurance companies, intermediation companies; § Professional firms (legal and commercial), organizations of consulting processing, statistics company; § Our subsidiary, partner or companies associated in any way. 13.5) The personal data may be communicated and Transferred even abroad, in accordance with the provisions of the law. 13.6) The company declares to have viewed the information contained herein and in Art. 13 of law No. 675/96 and to express its consent to the handling of personal data for the purposes indicated in the same. 13.7) It also declares to express its consent to the communication and distribution of data for the purposes described above, including for the commercial and marketing purposes of undetermined parties.

Notes

Note

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