

# Chemical Free Chlorination System for Bottling Plants

## A Unique Technology

The Hydro-dis® system is a unique water disinfection technique that uses the electro-catalytic break down of water to instantly destroy water borne pathogens including bacteria, viruses and algae, simultaneously converting chloride ions into chlorine leaving a desirable disinfectant in the treated water giving a secondary disinfection ensuring sustained safety. The Hydro-dis® system is specifically designed to be energy efficient, allowing isolated and remote applications to utilize on-site generated power from solar, wind or pipe Power, if required. As there are no moving parts, minimal maintenance and operator input is required. Unlike many other disinfection techniques, the Hydro-dis® system uses less power and reusable components, therefore making it eco-friendly green technology.

## Dual Disinfection

During the Hydro-dis® process, Hydroxyl Radicals (a short life powerful oxidizing sanitizer) are generated from the water itself, destroying microorganisms and instantly providing a primary disinfection. Produced simultaneously with the Hydroxyl Radicals, is a measured concentration of chlorine present as hypochlorous acid, also a powerful sanitizer, to produce a residual disinfection in the water. This residual disinfection protects water system by destroying bacteria, algae, viruses and fungi therefore protecting the water circuit from the formation of biofilms and algal deposits commonly present in water. This residual protection can persist within the treated water for several days. The Hydro-dis® technology is an approved dual disinfection system under AS/NZ Standard 3666 and the Public and Environmental Health (Legionella) Regulations.

## Low Maintenance

The Hydro-dis® system can be fully automated significantly reducing maintenance inputs. Through its innovative design the cell is constantly being cleaned by the action of the water passing through the cell.

## Self-Cleaning Technology

The development of the self-cleaning design has enabled Hydro-dis® to increase the operational efficiency of the cells and ensure cell life is extended. The combination of improved efficiency & long service life of the cells significantly reduces the lifecycle cost of the equipment

### Hydrodis vs Traditional Disinfection Technologies

| Disinfection             | Hydro-dis® **                                                 | Liquid Hypo                                        | Ultra Violet                                | Ozone                                                                       |
|--------------------------|---------------------------------------------------------------|----------------------------------------------------|---------------------------------------------|-----------------------------------------------------------------------------|
| Disinfecting Effect      | Rapid disinfection & Algae removal                            | Rapid disinfection & limited Algae control         | Disinfection only                           | Rapid disinfection & limited Algae Control. Foul smell and unpleasant taste |
| Cost of Operation        | Low / Low maintenance cost                                    | High                                               | High                                        | High                                                                        |
| Residual Effect Duration | Hours to Days **                                              | Few Hours                                          | None                                        | None                                                                        |
| Safety                   | Very Low, no chemicals used                                   | High Risk                                          | High Risk                                   | Hazardous                                                                   |
| Environmental Impact     | None                                                          | Negative Impact                                    | Low                                         | High                                                                        |
| Additional Side effects  | Legionella mitigation No organic chlorine derivative produced | Generates chloramines and cancer-causing compounds | High cost due to frequent lamp replacements | Creates carcinogenic brominated compounds if bromine is present             |

\* Power Consumption of 0.08 to 0.1 Kw per 1000 Ltrs.

\*\* Until the bottles remain sealed.

## Benefits of Hydro-dis®

- Destroys all photogenes (Bacteria, Viruses, Algae, etc.)
- Removes foul odor and bad taste from drinking water.
- Eco-friendly, Innovative & Green Technology.
- 100% reliable to keep Water Disinfected up to 48 hours or until the bottles remain sealed.
- Complete Disinfection + 100% Retention of Essential Minerals: **Pure & Safe Drinking Water.**

