

## Chemical Dosing Station

### Introduction

The idea of making a universal chemical dosing station has been entertained by Osorno for quite some time. Numerous dosing systems of known and unknown brands exist in the market, but to the best of our knowledge, none of them can be used for the injection of any drinking water chemical at any given concentration.

The concept of Osorno's ControLogic™ that was initially introduced by its predecessor over 20 years ago and has been successfully developed by Osorno for the last 15 years has also been implemented into the design of the universal chemical dosing station named DozOs™ - UNI.

This station is the second Intelligent chemical dosing system designed and built by Osorno, the first being the DozOs™-DIO chlorine dioxide generator. The system combines the user friendly features provided by the OSCADA process visualisation software on the touch screen PC with sophisticated electronic control, capable of performing all calculations for the plant operator and allows for operations to be performed in a variety of modes. The system has a pre-recorded list of chemicals in its database and is also capable of using chemicals unknown by the system.

As with all Osorno Intelligent devices, the DozOs™-UNI chemical dosing station has the capabilities of secure remote access and monitoring via Internet, along with four levels of secure access (local and remote). In addition, the system can communicate with other devices, record and store received information in the database, and transmit these data.



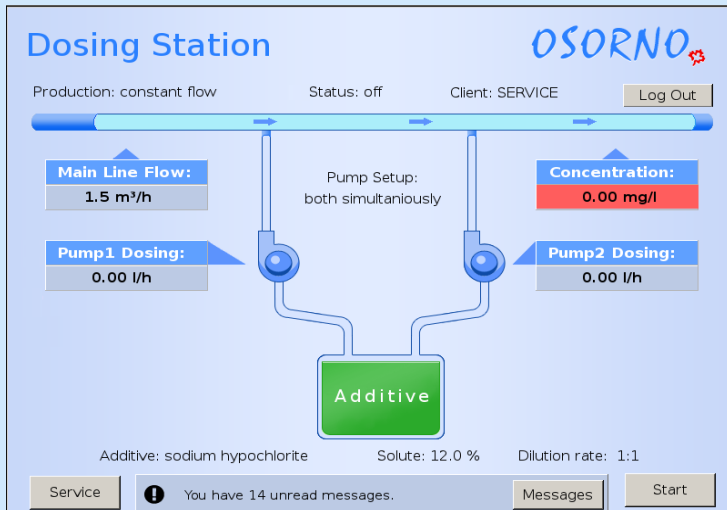
***A prototype of the universal chemical dosing station manufactured by Osorno (not all components are shown)*** ➤

*The DozOs™-UNI is still in the development stage. The development is associated with the physical design and implementation of the Smart control feature that will allow for automatic chemical dosing adjustments in order to minimise a need of human interaction.*

### Advanced Features of OSORNO Dosing Station

- Set-up and operation via human machine interface (HMI) – touch screen computer.
- SCADA with process visualization software.
- SCADA screen is password protected.
- Two modes of operation - constant dosage for constant flow, flow-proportional dosage for changing flow conditions.
- Internet connection capability.
- Optional remote access and monitoring (requires Internet connection).
- Potential to include other monitoring devices to the system IO and their potential addition to the visualisation software.

# OSORNO Chemical Dosing Station



Main SCADA screen of Osorno Chemical Dosing Station

## Customer Advantages

- Simplicity of programming
- Easy monitoring
- Inherently safe
- Continuous process control
- High operational safety



Access SCADA screen of Osorno systems

## Technical Details

- Operating pressure: up to 6 bar (100 psi);
- Operating temperature: 5 to 45°C;
- Electrical connections: 1 ph, 110 VAC, 60 Hz, CSA certified;
- Chemically resistant fittings;
- Mode of communication is via Ethernet TCP/IP;
- Preferred Internal protocol is OSAUT, a protocol registered with IANA. OSAUT is an open documentation protocol.
- Additional digital and analogue inputs and outputs (configurable as per customer request);
- One year manufacturer warranty.

Type	Max capacity		Dimensions LxWxD, m	Weight kg
	l/h	Bar		
DozOs™-UNI 2	2.2	6.0	1.0x0.7x0.5	30
DozOs™-UNI 4	4.4	6.0	1.0x0.7x0.5	30
DozOs™-UNI 7	7.2	6.0	1.0x0.7x0.5	30
DozOs™-UNI 14	14.2	6.0	1.0x0.7x0.5	30

## System Features

- Specially designed software that calculates any chemicals at any concentration (universal set up);
- System operates in all possible settings: one pump, dual pumping, alternate;
- Metering pumps with dosing monitors (controls chemical injection);
- PLC control that manages precise chemical production;
- Possibility to add in-line monitoring - pH-ORP-DO-T sensors (data will be shown in the system SCADA);
- 10" touch screen PC with process control and visualisation (includes system set up, calibration, chemical dosing, main flow, etc.) and recording (records data into a permanent database);
- SecureWall™ (installed inside control cabinet) – firewall that provides superior protection from Internet intruders and allows for secure remote communication to the system (in real time) via encrypted VPN connection;
- MAC address is assigned according to IEEE standard;
- The system is configured as local network maintained and supervised by the built-in DHCP server.

The R&D associated with the implementation of Intelligent Universal control of chemical dosing continues. We see our goal in making systems capable of receiving and analysing feedback from any of the combined sensors (pH-ORP-DO) or ion specific sensors (chlorine, chlorine dioxide), depending on the application, and adjust the corresponding chemical dosing rate automatically.

Do you require additional information? Can we give a presentation to YOUR council about our Disinfection Technology? Are you interested in an evaluation of the feasibility to use chlorine dioxide in YOUR community?



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