

Portable Dosing Unit

The purpose of this project is to provide trailer mounted portable hypochlorite dosing units that can be used on Melbourne Water mains where mains pressures are less than 100 MWG or on water storages. The primary function of these units is to perform emergency dosing of a water main or tank following a failure in the existing disinfection process.

Another possible use for these units includes the super-chlorination of a water main or water tank following remedial or new works.

These units are designed with a maximum storage capacity of 400 litres of 12.5% sodium hypochlorite.

JONOCO Pty Ltd were responsible for the design, manufacture and supply of trailer mounted (mobile) disinfection units to meet the necessary requirements. These units are designed for a theoretical operational life of 10 years.



Photo 1 – Portable Dosing Unit (PDU)

This unit is based on a purpose built 2.1m x 1.5m twin axle trailer with lockable canopy housing both sodium hypochlorite and potable water storage and delivery systems. The canopy has sides hinged from the top for easy access while rear doors are hinged on the sides with fitted stays. Two small roof mounted rotating cowls are provided on trailer canopy over the sodium hypochlorite area to help in the ventilation of the trailer.

project profile



Photo 2 – Sodium Hypochlorite Dosing System.

This system consists of Transfer Pump, Transfer Hose, 400Litre Storage Tank, two Chemical Dosing Pumps (one large and one small) Flow-meters, Pressure Relief Valves and Dosing Hose.

Transfer Pump is used to transfer sodium hypochlorite to and from storage tank via valve selection. Transfer Hose is a 10 metre long 40mm braided hose to assist in the transfer of sodium hypochlorite.

The 400 litre storage tank is fabricated from translucent HDPE for storage of sodium hypochlorite.



Photo 3 — Transfer Pump

project profile



Photo 4 – Flow Indicators and Pressure Relief Valves

Photo 5— Dosing Pumps

Two Chemical Dosing Pumps are used in the delivery of sodium hypochlorite to the water main, tanks or reservoirs. Depending on what dosing rate is required is what chemical dosing pump is used.

To confirm the amount of sodium hypochlorite that is used a flowmeter (Rotameter) has been fitted to each pump. This flowmeter provides the operator with a visual indication of the set flow rate of the dosing pump. Also on the discharge of each pump is a pressure relief valve. This relief valve ensures the over pressurisation of the pipe-work does not occur.



Photo 6—Potable Water System

Potable Water System consists of delivery pump, pressure vessel, pressure switch, storage tank, valve and pipework, emergency eye/face wash unit and retractable hose

project profile



Photo 7 – Potable Water Delivery Pump



Photo 8— Potable Water Storage Tank

The delivery pump is used to delivery potable water to the ancillary equipment of the PDU. This is controlled by a pressure switch set to 28MWG. A 240 Litre storage tanks is fabricated from translucent HDPE for the potable water.



Photo 9 - Emergency Eye/Face Wash Unit in deployed position. (Insert) Unit in stored or travel position. (Insert) Retractable Hose unit
Potable water is provided from the storage tank to the unit via the potable water delivery pump/pressure vessel system.
Retractable hose is provided to facilitates the wash down and flushing of equipment.



Photo 10 – Onboard Petrol Generator. (Insert) Generator Control Panel

All of the Portable Dosing Unit equipment is 240 VAC supplied.

This can be supplied via the on-board petrol generator where electrical supply is not available.

An electrical appliance inlet socket on the front of the trailer allows for the connection of electrical supply from either the trailer or any other source of 240 VAC, 50HZ supply.

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