

SERIES WD2500 & WD3000N

(See Brochure # 171206-2 for more complete Specifications)

WATER DISPENSING STATIONS

System Overview



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COMMON FEATURES

PAYMENT METHODS

Any combination of the following can be used to suit customers' needs:

- Credit Card
- Account Card
- Stored Value card
- Token payment
- Coin payment



CREDIT CARD

- Includes Visa and MasterCard credit cards and debit cards and Australia Post or similar debit cards.
- Transactions are normally limited to \$200.00 to comply with rules that permit card usage without using a PIN.
- Supports "Tap and Go" (near field proximity cards) and contact chip cards.
- Credit cards can be open sourced or restricted to pre-registered cards.



- Generic or customised cards available.

DROUGHT RELIEF CARDS

Account cards can be used as free or discount rate water access cards.

STORED VALUE CARDS

Effectively a pre-paid account card.



ACCOUNT CARDS

- Allows access to water dispensing with subsequent billing for water consumed, usually on a monthly basis.
- Data for invoicing can be downloaded to a customer's IT system, allowing the customer to create "in house" accounts.



TOKEN PAYMENT

- Tokens can be supplied by Abberfield Industries for use through a purpose built coin/token validator. Standard Abberfield tokens are available or the tokens can be customised with a customer's image.
- Gold, silver and bronze tokens validate for different amounts of water.

COIN PAYMENT

- All coin denominations can be used, accurately checked for metal type as well as physical size.
- A display indicates the credit inserted and water taken.
- Coin **and** tokens payment in one validator.

DESIGN CONCEPTS



gold plated self-aligning chassis mounted plugs. These components of power supply, system controllers, battery, charger and configuration module are held in place by 2 screws.



OPERATING PLATFORM

Operation can be by:

- Mains only.
- Mains with battery backup.
- Solar only.
- Solar with mains back up.

The WD2000, WD2500 and WD3000N series use the same electronic and software platforms and most parts are interchangeable. The physical differences arise from the constraints of housing the plumbing.

MODULAR CONSTRUCTION

The equipment has been designed and built to suit the application and therefore is different to conventional vending machines. In particular, wherever possible self-contained sealed components plug directly into

These captive screws ensure the integrity of the electrical connections and their loosening is all that is required to allow unplugging of each module, by unskilled or untrained persons.

Enclosing each module is to minimise the ingress of insect infestation and the exchange of air. This eliminates water vapour (humidity) and dust that can settle over the circuit boards and with the exclusion of humidity corrosion of circuit board is prevented, providing a much longer product service life with minimal or no maintenance cost.

SYSTEM BYPASS

There are two ways to bypass the card operation.

1. Bypass switch positioned on the configuration module.
2. Mechanical bypass within the plumbing assembly.

It is normal to use the switch bypass for short-term usage and the manual means for extended use.

SWITCHBOARD OPTION

The WD2000, WD2500 and the WD3000N can incorporate a mains switchboard within a separate inbuilt cabinet. This provides overload and residual current device (RCD) protection for maximum safety. Also included is an RCD protected power point, handy for site maintenance.

Space is allowed to include a mains meter and council fuses, but these should never be needed as the Water Filling Station's power consumption is so low.

REMOTE METERING

With the account card or stored value card the machine is connected via 3G/4G to an Abberfield specific back office portal. This enables a considerable amount of reporting and machine control. Critical faults such as mains failure, loss of water pressure and machine faults can be automatically emailed to nominated recipients. Machine interrogation allows a study of operating conditions; battery voltage, solar output etc. Customer complaints can be analysed and user error identified in real time or from historic records.

Control of the machine via the portal can include turning the machine on or off, payment bypass for a single transaction or until returned to payment mode and hours of sleep mode

operation. The configuration of the machine access portal can be tailored to a customer's particular needs.

WD2500 SERIES

With self-contained plumbing within the cabinet there are two standard configurations.

1. Internal back flow prevention (testable double check valves, plus two swing check valves).
2. External back flow protection by Residual Pressure Zone Device (RPZ).

The flow meter, solenoid valve, strainer and isolation tap are within the lower cabinet, easily accessed and removable by way of split union connections.

PLUMBING OPTION

Incoming plumbing is usually 50mm and outlets are 50mm cam lock, plus 25mm ball valve.

Incoming plumbing can be by surface plumbing, however normally and preferred is vertical rising plumbing through the base of the machine, making for a totally concealed plumbing system.





PHYSICAL

WD2500

Width: 750mm wide

Depth: 225mm deep (body)
450mm deep (including heat shield)

Height: 1780mm high

WD3000N

Width: 1100mm wide

Depth: 410mm deep (body)
550mm deep (including heat shield)

Height: 1600mm high

Vandalism and plumbing theft is controlled by only having the outlets protruding from the cabinet. Outlets are usually angled down to ensure contaminants (one hose fitting to another) do not settle in the plumbing.

Whilst 50mm/25mm dual outlets are the standard, some applications need only 25mm plumbing, i.e. boat wash down (boat ramps) or boat filling (marinas), motor home or caravan filling (information centres) or horse wash down (arenas).

WD3000N SERIES

Designed for 80mm or 100mm surface mounted plumbing with external RPZ. Contained within the housing are the flow meter, water valve and solenoid valve. Incoming plumbing can enter from the left or from the right side.

CONSTRUCTION

All equipment is produced in stainless steel powder coated to the customer's choice of colours. Screw fastening throughout are of stainless steel.

Both machines use a time tested "top down" mounting system that provides maximum physical security whilst allowing ease of removal for relocation of equipment.

APPLICATIONS

- **The distribution of water for a rural town, via tanker driver, user tank filling or for motor homes or caravans.**
- Truck wash down at abattoirs and sale yards.
- Weed seed control by vehicle wash down bays.
- Ship water tank filling.
- Boat filling at marinas.
- Boat wash down at boat ramps.
- Horse wash down at arenas.
- Small plane wash down at aerodromes.

OTHER WATER DISPENSING STATIONS

For many years Abberfield have produced coin or token operated water stations, from simple wall mounted systems to the industry standard free standing self-contained systems. Outlet pipe sizes can be 25mm or 50mm or both in the one stand.



Customised or standard tokens



CE10 with separate flow meter and solenoid valve

WD1000 self-contained, free-standing system, includes back flow prevention



WDT10 with enclosed flow meter and solenoid valve



LOGAN CITY COUNCIL'S STORY

Installed 2015

'When the infrastructure that is critical to supplying residents with vital water for everyday living was due to be retired, Logan City Council needed a solution that would fill its existing need, while streamlining its service delivery.

'Logan contains a large rural area, and not all of the city's residents are connected to reticulated (or "town") water supplies, meaning that a large number of residents are dependent on tanker water; either from professional delivery drivers, or self-driven.

'Under the old scheme, customers relied on prepaid tags at the point of delivery. While the system was simple, credit top-ups could only be done during Council customer service hours, including refunds and account closures. The old system no longer had backend IT support, and it was slated for retirement by its owner.

'This left Logan City Council with a gap in its service delivery capability.

'After scoping a replacement, market research began with the following criteria: a small-footprint-utilised credit card, rather than a tag or proprietary card system, which would cater for small volume and large volume customers.

'Using this specification, quotations were invited, with the solution proposed by Abberfield Industries considered to be the best fit.

'It consisted of:

- a stainless-steel, vandal-proof powder-coated box (in council colours), which is easily relocatable and has a relatively small footprint that can be mounted on a concrete pad with bollards around it to prevent damage.
- all plumbing contained within the box, which includes the necessary back-flow requirements and outlets to cater for small and large customers; for instance, 25-millimetre and 50-millimetre outlets.



- a user interface that consists of a digital display; vandal-proof button; a payment facility that accepts debit Visa and MasterCard, and credit cards (including prepaid cards); and PayWave and PayPass facilities.
- back-up facilities to mitigate power outages.
- the ability to be operated via solar power with a battery backup, where mains power is not available (this was important, as we are in the process of identifying new sites to meet the demands of customers).
- transaction management software (via the web) to view transactions, and to allow refunds of disputed / failed transactions.

'The first unit was installed in August 2015, and has been performing smoothly since. Abberfield Industries was placed under very tight time pressures, and fulfilled the brief, including design and development, admirably.

'The end product has been a significant advancement on the preceding implementation, and is a credit to Abberfield Industries' ability as a supplier.'

– Michael Kenyon

Program Leader, Water Business and Customer Management, Logan City Council



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