

# **AQUAFRESH** WATERMAKERS



**AFDXXX(X)AC Series**

## **Operators Manual**

**Please read this manual thoroughly before attempting to operate your water maker.**

E & O E

**Danger**



**High Voltage**

**AFDXXX(X) Series water makers operate on a 240vAC electricity supply and must not be opened, disassembled or repaired by unauthorised or unqualified service people.**

**Improper Operation Or Repair Of Your Water Maker Could Result In Serious Injury or Death**

# Danger



## Safety Information

**The water maker is a high pressure device operating at up to 1000psi and must not be disassembled or repaired by unauthorised or unqualified service people.**

**Improper Operation Or Repair Of Your Water Maker Could Result In Serious Injury or Death**

**Before attempting to operate your water maker ensure that seawater intake is fully open and that all pre-filters are clean and unblocked.**

**Visually check the unit before running for leaks, loose fittings and corrosion.**

**(Do Not Operate Water Maker If You Are Unsure)**

**Always ensure the water maker is running at the desired pressure for your area of operation and seawater temperatures (refer to full manual). If unsure please set running pressure to 825 psi. The adjustment is made on the water maker, not at the control panel.**

**Never Attempt To Run The Water Maker Above 950psi.**

**AFD Series water makers are not designed for and will be permanently damaged if operated in brackish or freshwater areas.**

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# 1. Screen Operation

## Aquafresh Touchscreen:



## Screen Operation:

Navigating your Aquafresh Touchscreen is very simple.

To move between pages simply use the  and  arrows

To enter times and/or operate functions associated with each function page use the touchscreen.

To STOP the unit at any time press  on the Membrane Panel or touchscreen.

## NOTE:

The screen has a sleep/timeout facility after 10 minutes, you must wake the screen by a single touch to any part of the touchscreen before it will respond to commands.

## 2. Function Page Layout

### Function Page Order



Initialisation Screen



Ready Screen



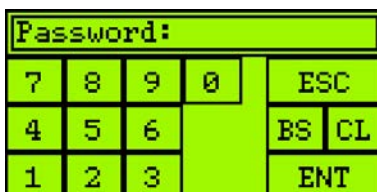
Fresh Water Flush



Maintenance



Screen Settings



Engineering Screen

Password Protected, NOT FOT CUSTOMER USE

## 3 Starting

Start-up screen. during power up



Initialisation Screen



Unit Stopped

Press START ICON to start water maker

The following screens will then appear



SAFI Valve position check

This screen is only visible if the flush option is installed



Low Pressure Pump Started

3 minutes delay before High Pressure pump starts



High Pressure Pump Started

Short delay before Salinity Module Initialises

## Starting (Continued)



### Salinity Module Initialisation

Short delay while salinity module is calibrated



### Unit running but not making water

Short delay while membranes initialise



### Unit running and producing water

Animated screen indicates water production

### CAUTION

Always ensure the watermaker is running at the desired pressure for your area of operation and seawater temperatures (refer to full manual). If unsure please set running pressure to 825 psi.

The adjustment is made on the watermaker, not at the control panel



## 4. Stopping

Unit Running Screen Displayed:



Unit running and producing water

Animated screen indicates water production

Press **STOP ICON** (or  button) to stop watermaker

The unit will stop immediately

The following screens will then appear



Unit Stopped, Restart Inhibited

Short delay while internal pressures equalise.



Unit Stopped, Ready, Press To Start

## 5. Manual Freshwater Flushing (option)

**SPECIAL NOTES:** This systems requires that the vessels pressurised fresh water supply is switched on and that there is plenty of freshwater available to complete the flushing cycle for however long it may be required.

This system will use freshwater from your vessels water tanks and will use approximately 3-7 litres of water per minute.

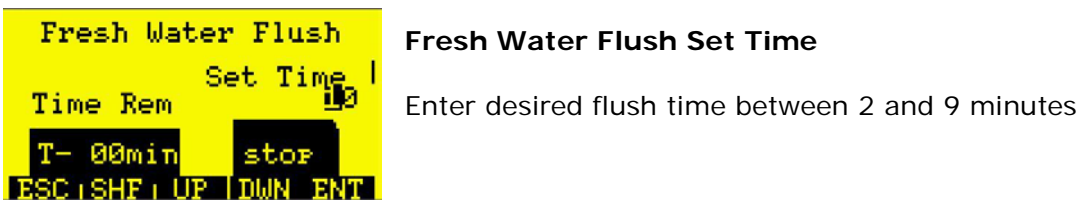
At no time should chlorinated water be allowed to enter the watermaker via the vessels freshwater system and it is essential that the carbon filter is replaced regularly.

If your watermaker is fitted with the optional freshwater flush system it is possible to initiate a timed freshwater flush from the touchscreen

With the machine in the stopped mode:



Press the  ARROW Membrane button

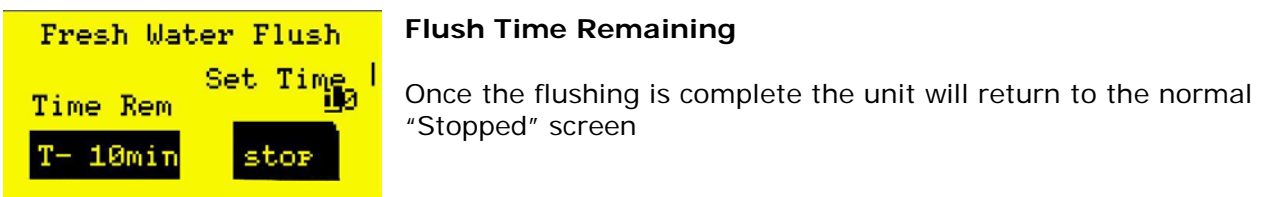


Touch the "Set Time" area on the screen and enter the flush time required using the ESC, SHIFT, UP, DOWN and ENTER buttons on the touch screen

**Note:** The system will not accept less than 2 minutes as a flush time.



Press START FLUSH ICON to initiate the timed flush.



**Note:** The unit flushing can be stopped at any time by pressing STOP

## Manual Freshwater Flushing (continued)



**Unit Stopped, Restart Inhibited**

Short Delay while internal pressures equalise.



**Unit Stopped**

## 6. Setting Up Freshwater Auto Flush (option)

**SPECIAL NOTE:** This systems requires that the vessels pressurised fresh water supply is switched on and that there is plenty of freshwater available to complete the flushing cycle for however long it may be required.

This system will use freshwater from your vessels water tanks and will use approximately 3-7 litres of water per minute

At no time should chlorinated water be allowed to enter the water maker via the vessels freshwater system and it is essential that the inline carbon filter is replaced regularly.

If your water maker is fitted with the optional freshwater flush system it is possible to initiate an automatic freshwater flush from the touchscreen

With the machine in the stopped mode:



Press the  ARROW Membrane button twice



Press OFF ICON



With Auto Flush enabled the unit will automatically flush the water maker upon stopping in normal mode and every 7 days for 4 minutes each time.

**CAUTION!:**

This feature is designed to be used while the boat is occupied but the water maker is not in regularly use i.e when living aboard in harbour

Any unattended automated operation of complex machinery carries a risk. Reliable operation of this feature is dependent on other vessels systems being available and fault free.

Aquafresh Watermakers does not recommend the use of this feature when the boat is left unattended for extended periods

## Setting Up Freshwater Auto Flush (continued)

Should power to the water maker be interrupted at any time Auto Flush Enable feature will be cancelled.

Press the  ARROW Membrane button twice to return to the normal screen



## **7. Winterising**

**Due to the chemicals that are used during winterisation and cleaning it is necessary that someone trained in the handling of chemical preservatives and cleaning substances performs this task.**

**For winterising options please see full service manual for details:**

## 8. De-winterising

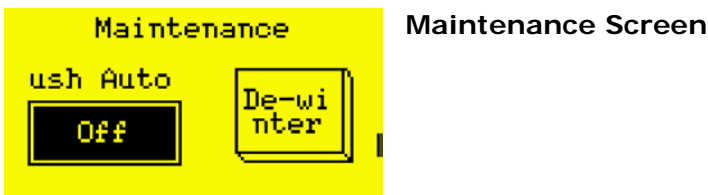
**CAUTION:** Observe all precautions for handling the chemical cleaning or preservatives that may have been used in your system

Ensure the watermakers flushing lever controls are set to normal positions for seawater intake and overboard discharge and that any chemical cartridges are removed and replaced with standard filters.

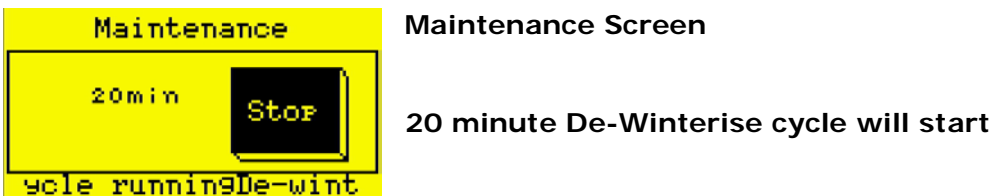
With the machine in the stopped mode:



Press the  Membrane button twice



Press DE-WINTERISE ICON



**Note:** The unit de-winterising can be stopped at any time by pressing STOP



**NOTE:** In this mode the watermaker will run normally for 20 minutes but will not allow any water to enter the vessels tanks

This cycle ensures any preservative or cleaning chemicals present are flushed overboard

## 9. Errors, Faults and Messages

Your watermaker can display various message that can help diagnose maintenance issues including operational errors and faults

### Tank Full (Optional):



#### Tank Full Shutdown

Press ACCEPT to clear

If your watermaker is fitted with the optional tank full switch the unit will automatically stop once your tanks are full.

The above message will be displayed. Press the ACCEPT ICON to clear the message

### Change PLC Battery



#### Change PLC Battery

System warning message, it is very important the PLC internal battery is changed  
Please refer to service manual

### SAFI Valve Failure



#### SAFI Valve Failure

Investigate cause of alarm

Press RESET ALARM to clear

If your watermaker has the optional flush system installed this error will be displayed if a problem occurs with the SAFI valve.

Inspect. Clean. Repair or Replace SAFI valve.



# Errors, Faults and Messages (continued)

## Salinity Probe Error



### Salinity Probe/Module Fault

- Investigate cause of alarm
- Press RESET ALARM to clear

This error indicates a problem with the salinity probe or module. Check probe, clean or replace probe and/or module.

## Low Pressure Alarm



### Low Pressure Alarm

- Investigate cause of alarm
- Press RESET ALARM to clear

This is a common alarm and indicates a loss of pressure in the low pressure circuit of the watermaker.

Common causes:

- Blocked or closed seawater intakes.
- Blocked pre-filters
- Air lock in the low pressure circuit
- Failure of the low pressure pump
- Failure of low pressure sensor
- Incorrect installation
- Shipside watersystem pressure too low (only in flush mode, optional)

## High Pressure Alarm



### High Pressure Alarm (Optional)

- Investigate cause of alarm
- Press RESET ALARM to clear

Indicates over pressure in the high pressure circuit of the watermaker

Common causes:

- Blockage in the high pressure circuit
- Blockage in the overboard discharge
- Operating pressure adjusted to high
- Failure of high pressure sensor

## Errors, Faults and Messages (continued)

### No Fresh Water



### No Fresh Water

Investigate cause of alarm

Press RESET ALARM to clear

Indicates no freshwater was produced for 1 hour

Common causes

Salinity probe failure or dirty

One or more membranes has failed

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