



SELECT PUREWATER 300

OPERATING MANUAL

ISSUE - A
28/10/09

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1 DOCUMENT HISTORY

Issue	Date of Change	Description of Change	Approved by
A		First Issue: 1/09/2009	<i>M. R. Bosley</i>

2 CONTACT DETAILS

We trust the system will meet all your expectations. However, should you have any additional questions concerning the equipment please do not hesitate to contact Purite Ltd at:

Purite Ltd
 Bandet Way
 Thame
 Oxfordshire
 OX9 3SJ
 United Kingdom

For all spares and consumable enquiries contact:

Customer Sales and general enquiries: Tel No. +44(0)1844 217141

For all service enquiries contact:

Service Department: Tel No. +44(0)1844 211555

3 HEALTH AND SAFETY

3.1 Explanation of symbols and references



Danger

This symbol refers to any immediate dangers. Failure to follow the specified procedure could result in serious personal injury. Extreme caution should be observed when conducting any activity where this symbol is shown. Work should be completed by a trained competent person.



Warning

Electrical shock. Do not touch electrical components. Before performing tasks on parts of the electrical system, disconnect the system from the power supply.



This symbol refers to a possible danger. Failure to follow the specified procedure could result in personnel injury. Caution should be observed when conducting any activity where this symbol is shown. It is recommended work should be completed by a trained competent person.



Caution

This symbol refers to a possibly hazardous situation. Failure to observe these references may result in minor injuries and/or damage to property.

I

This symbol points out important information for working with the system in the proper manner. Failure to observe these references may result in malfunctions in the system or impact on the environment.

3.2 Additional safety requirements

Country-specific requirements standards and regulations must be observed.

3.3 Usage in accordance with intended purpose.

The units must only be operated with water supplied in accordance with the quality described and the operating parameters specified in "installation details".

The units must not be operated unless in proper working order. Any malfunctions must be rectified immediately.

3.4 Operating staff

Only persons who have read and understood this Operating Manual should be permitted to operate the unit. When operating the units, it is important to observe all safety information.

3.5 Bringing the system to a stop in the event of an emergency

- Switch off via the display.
- Turn off the electrical supply.
- Shut off the water supply.

After remedying the damage:

- Open the water supply.
- Turn on the electrical supply.
- Restart the unit via the main display.

3.6 Safety information for maintenance tasks

The operator must take care to ensure that all maintenance, inspection and assembly tasks are performed by authorised and qualified professionals who have been sufficiently informed regarding the task at hand (via use of Operating Manual).

The system must be shut down and be protected from further use until all repair and maintenance tasks have been completed. It is essential to observe the shutdown procedure as described in this Operating Manual.

Before beginning tasks relating to electrical equipment/components of this system, a check must confirm that power has been disconnected from the corresponding section of the system. In addition, the system must be secured to prevent it from being turned on again unintentionally.

3.7 Disposing of system parts and operating materials

When they need to be discarded, consumables must be disposed of according to local and National requirements.

3.8 Unauthorised conversion and manufacturing replacement parts

Conversion or modification of the system is only permitted with the approval of the manufacturer. The same applies to making changes in the programming for the control system. Original replacement parts and accessories authorised by the manufacturer enhance safety. Use of other parts will void the warranty.

3.9 Warranty claims and liability

This product has been manufactured in accordance with ISO 9001:2008 procedures, after which it was subjected to a quality control process. If, however, you are unsatisfied with the unit, please contact the manufacturer (Purite Limited).

4 About your water purifier

The Select Purewater 300 purifies potable water. The water is purified by a combination of processes including; ion-exchange, activated carbon and reverse osmosis.

The purified water produced by the unit complies with latest standards for laboratory grade purified water.

4.1 The Select Purewater 300

This Select Purewater 300 is supplied with an integral 20 litre water storage tank, with an output of up to 48 litres per hour.

Please note that the above output is based on an 8 hour working day at 60psi (4 bar) inlet pressure, 25°C and maximum of 400 ppm total dissolved solids.

The unit type is detailed on its serial plate which can be found on the reverse side of the front cover.

The Select Purewater 300 is provided with an installation kit for quick installation.

Both media packs are provided and packaged separately. Refer to Section 9.1 and 9.6.

4.2 Key components of the Select Purewater 300

4.2.1 Touch screen display

Operation of the Select Purewater 300 is controlled solely through the touch screen display. System schematics are displayed for easy understanding of the unit's process.

4.2.2 Close coupled tank

The close coupled tank holds 20 litres of purified water. To dispense water, a bib tap has been provided at the front of the tank, and a high flow outlet on the side of the tank for connection to an external washing machine.

4.2.3 Removable front cover.

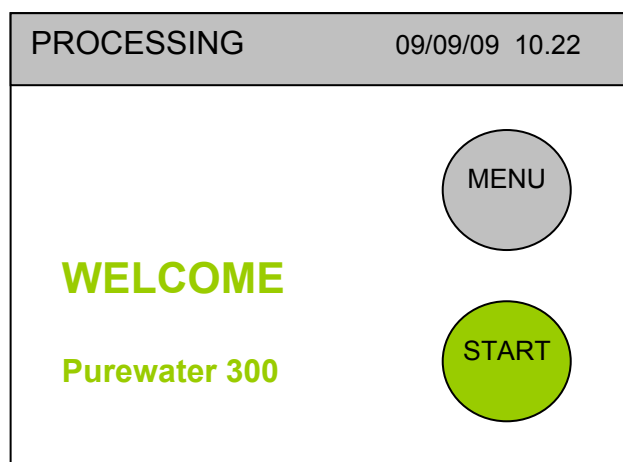
The front cover is easily removed and provides access to the cartridge media packs.

5 Operating your water purifier.

Your Select Purewater 300 is operated via the touch screen display. Buttons are provided on the display to access both the start-up and set-up menus.

5.1 Menu structure (accessed via touch screen display).

5.1.1 Power on screen



When connected to an electrical supply the Power On screen is displayed.

5.1.2 Start up screen

Start

Stop

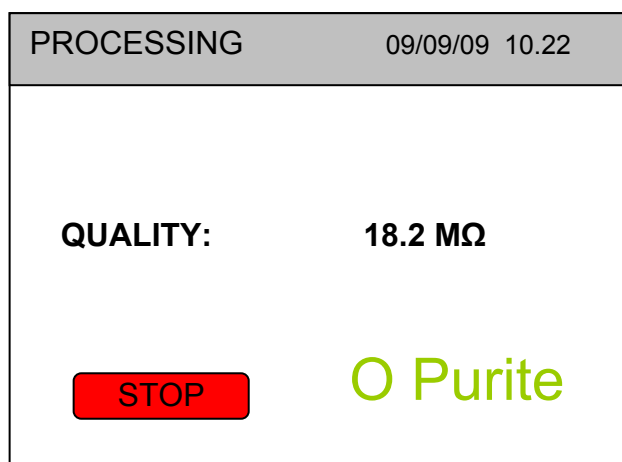
Menu

- Language
- Time and date
 - Set time
 - Set date
 - set format
- Maintenance
 - Pre-treatment cartridge pack date
 - Puripac cartridge pack date
- Product Information
- Engineer Menu
- Auto restart
 - Enable
 - Disable

The unit runs an initialisation for 10 seconds before the unit can be activated. To switch the unit on press the **START** button after the initialisation is complete

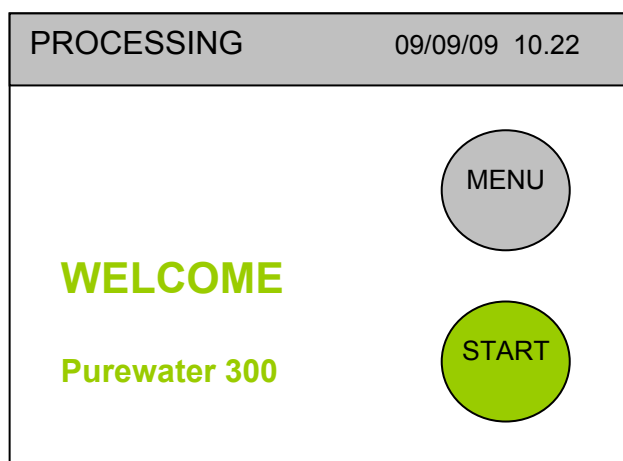
When start is pressed the following screen is displayed to show the unit is in operation and processing water.

5.1.3 Processing screen



- Outlet water quality is displayed on the screen for your information.
- A single red button is featured, **STOP**. When pressed the display reverts to the Power On Screen and all functions are terminated.

5.2 Settings Menu



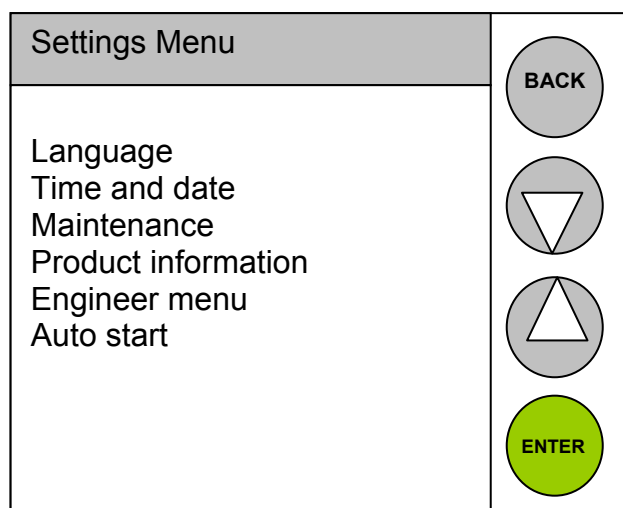
Pressing the **MENU** button takes you to the Settings Menu where system parameters can be set up.

Menu screens feature four buttons **BACK**, **UP**, **DOWN**, **ENTER**.

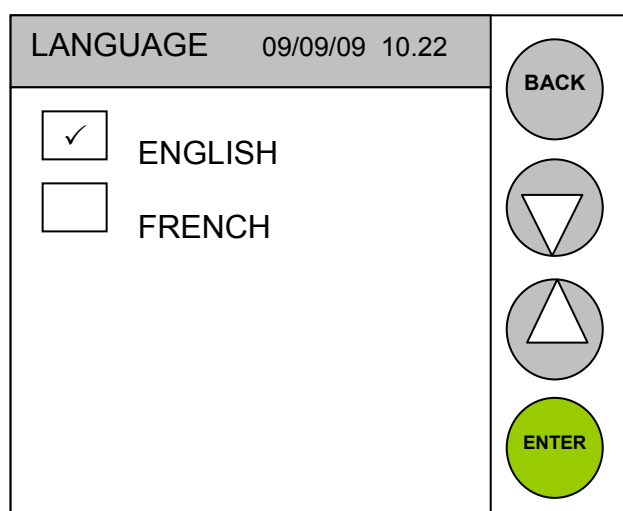
UP and **DOWN** are used to move through the available options and/or to increase/decrease numerical values.

ENTER selects to the option highlighted.

BACK returns to the previous screen.



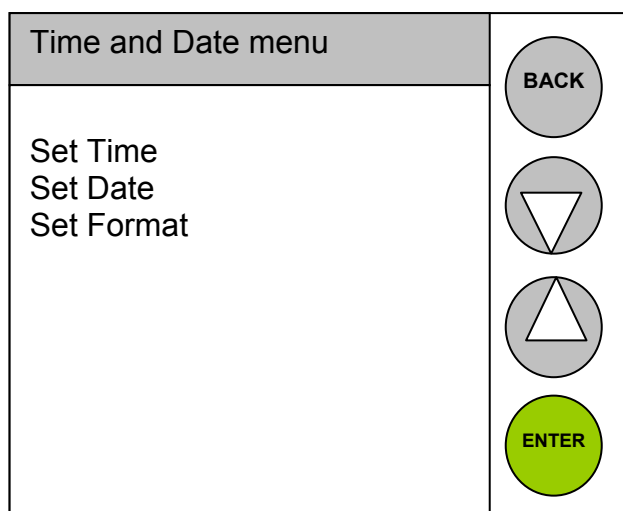
5.2.1 Language



Text displays can be set to be shown in either English or French.

Highlight the appropriate tick box by pressing on the relevant screen area and press enter.

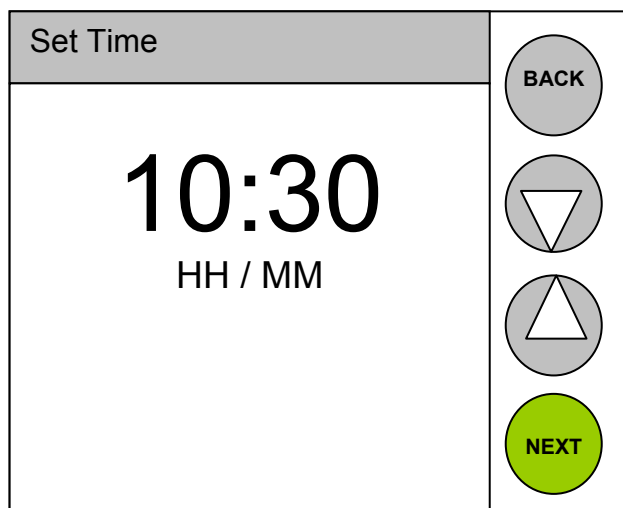
5.2.2 Time and date



The system time and date can be set.

- Set time.

The required time is programmed by using the up and down arrows to select correct values, press enter to confirm.



Set Date

Set Time	
09/07/2009 DD/MM/YYYY	<div>BACK</div> <div>▽</div> <div>△</div> <div>NEXT</div>

Programme current date by using up down arrows to increment digits and then pressing next.

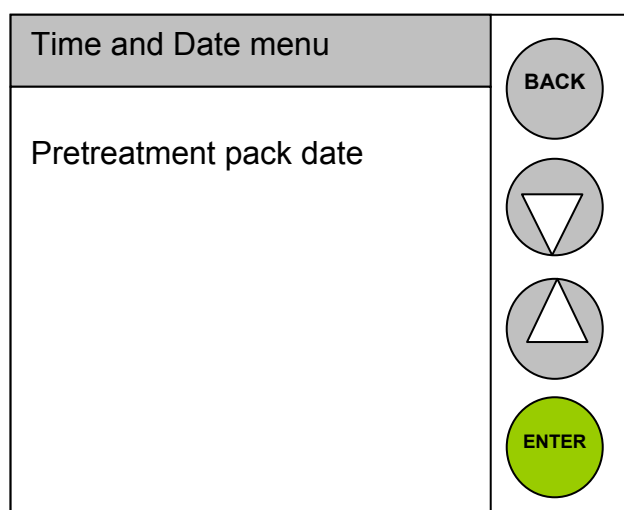
Set Date format

Set Format	
<input checked="" type="checkbox"/> DD/MM/YY	<div>BACK</div> <div>▽</div> <div>△</div> <div>ENTER</div>
<input type="checkbox"/> DD/MM/YYYY	
<input type="checkbox"/> MM/DD/YY	
<input type="checkbox"/> MM/DD/YYYY	

Highlight the appropriate tick box by pressing on it and then pressing enter.

5.3 Maintenance menu

The maintenance menu provides the capability to set defined dates for replacement of media cartridge packs in the device. These dates, when expired, will trigger an alarm which will be displayed on the menu bar.

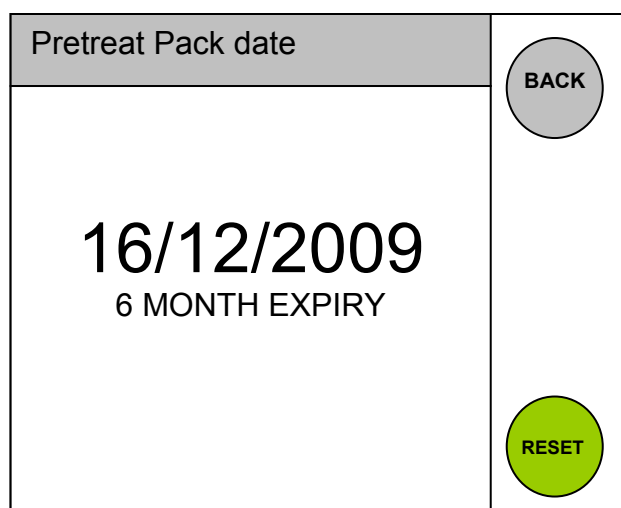


5.3.1 Pretreatment pack date

When the Pretreatment (PT16) media pack is replaced it is necessary to reset the replacement date. This is done via the Pretreatment Pack date menu.



Enter the menu and press reset. Failure to reset and replace media packs will lead to poor water quality.



5.3.2 Product information

Product Information	
BACK	
Type:	Purewater
Serial number:	123456
Unit ID:	00
Unit Version:	R.1.5
Pod Version :	R.1.6
Commissioning Date:	01/01/01
Memory Checksum:	OxFE66
Address	02

5.4 Engineer menu

For Purite service engineers only.

5.5 Auto restart

Returns the unit into operation automatically in the event of a power interruption.

Auto Restart	
<input checked="checked" type="checkbox"/> Disabled	BACK
<input type="checkbox"/> Enabled	
	ENTER

Highlight the appropriate tick box by pressing on it and then pressing enter.

6 MAINTENANCE

6.1 Replacing media pack

Switch the unit off by pressing the **STOP** button.

Leave the unit to stand for 30 seconds to relieve any internal pressure.

Remove the front door cover by pulling it gently from the unit using the hand holds provided to expose the two media cartridge packs.

Press down the lever over the cartridge and pull it away from its retainer.

Discard the exhausted media pack. Remove the new pack from its bag removing the two black plugs from the inlet/outlet ports.

Insert the media pack into the unit locating it securely into its retaining block, push it home until it clicks into position and the retaining lever clicks up.

Press **"START"** and follow the instructions on screen for setting new pack replacement date (see previous section)

After resetting the pack date the unit can be started from the power on screen.

6.2 Cleaning inlet screen filter.

- It is recommended that this filter is cleaned at least once per year.
- The inlet screen filter is located in the right hand side of the unit.
- Switch of the water supply at source
- To relieve any residual water pressure, momentarily switch the unit on then off.
- Remove the side panel of the unit.
 - To do so first remove the front cover by pulling it gently from the unit using the hand holds provided.
 - Pull the pod assembly gently forward to disengage the top cover retaining pin.
 - Remove the top cover by lifting up the front and sliding gently backwards.
 - Remove the four retaining screws holding the side panel in place and slide gently backwards.

- The filter is located in the exposed panel on the right hand side of the unit.
- To obtain access to the filter screen unscrew the black knurled top anti-clockwise. The screen will then be exposed. Pull the screen away from the housing and clean away any debris.
- Once cleaned, replace the screen and black top. Replace the side panel and cover using the reverse procedure and switch on the water supply. Start the unit from the power on screen

6.3 Sanitisation procedure.

Sanitisation of the unit should be carried out at least once every 6 months.

- Switch the unit off by pressing the **STOP** button.
- The unit will now have reverted to the **POWER ON** screen.
- Turn off the water supply to the unit.
- Open the front door cover to reveal the media cartridge packs.
- Remove the media cartridge packs.
- To sanitise the unit insert a cleaning pack adaptor (Purite part number L998549) into each of the media pack locations.
- Turn on the water supply and start the unit.
- Allow the unit to fill the tank. When the tank is full the unit will stop.
- Allow the unit to stand with a full tank for two hours. Drain the tank using the bib tap located on the front of the tank.
- The unit will automatically restart and begin to fill the tank. When the tank is full drain it and allow it to fill once more.
- When full switch the unit off, drain the tank and fit new media packs. Restart the unit and allow it to fill the tank. When filled, switch the unit off and drain the tank again.



Once the tank is drained check for residual sanitising chemicals. Only when you are happy that all chemicals have been flushed from the system should the unit be used. Test kits are available, contact Purite for details.

6.4 Maintenance and service spares

	PART No.	DESCRIPTION
MEMBRANE PACK	M996004	Select 320 RO membrane pack
PRETREAT CARTRIDGE	L991544	PT16 Pretreatment pack
POLISHING CARTRIDGE	L991545	PP16 media cartridge pack
INSTALLATION & WALL MOUNTS	L300900	Select wall mount kit
	PM00901	Installation kit
	L991110	Feed water pressure regulator
EXTERNAL FILTRATION	L991276	10" Filter housing
	R011044	10µm Filter element
OTHERS	L998549	Cleaning pack adaptor
	R041118	Operator's Manual (extra copies)

7 TROUBLE SHOOTING

The touch screen will display various alarms and/or error messages if a fault is identified with the unit. The guide below can be used to rectify common alarms.

Displayed Message	Corrective action	
LHS pack not fitted	Check left hand side media pack is correctly located.	Push into position and listen for a click to ensure it is fully located in it retaining block
RHS pack not fitted	Check right hand side media pack is correctly located.	Push into position and listen for a click to ensure it is fully located in it retaining block
High pressure (BP) variants only	Feed water inlet pressure too high. Blockage in system	Check feed water supply regulation Call service department
Low pressure(BP) variants only	Insufficient feed water pressure	Check feed water supply Check inlet screen
Line cell error	Faulty cable – open circuit	Call service department

8 TECHNICAL SPECIFICATION

8.1 Product output

Product Outputs	Unit Size
	300
@ 10 °C	30
@ 25 °C	48

8.2 Treated water specification

- Inorganics 1-10MΩ.cm
- pH¹ Neutral
- Bacteria >99% rejection
- Organics (TOC) <50 ppb

¹ pH of stored water may decrease due to absorption of free carbon

8.3 Water storage

- 20 litre tank as standard.

8.4 Fuse rating / type

IEC module fuse type: - (2 x 20mm), T5AH250V, conforming to IEC 127

9 INSTALLATION KIT

Your installation kit comprises the following items.



Contents:
 3 metres 1/2" Blue hose,
 7 metres 8mm nylon tubing,
 1 off Jubilee clip.
 3 metres 12mm nylon tubing,
 1 off 12mm stem elbow.
 3 off 8mm stem elbows.

9.1 Media cartridge packs



Your Select Purewater 300 is supplied with pretreatment and media cartridge packs.

The Select Purewater 300 must be fitted with a working pre-treatment pack (PT16) and a PP16 media cartridge pack.

Refer to Section 6.4, Maintenance and service spares, for re-ordering details.

9.2 Feed water supply requirements

The unit has been designed to operate only on potable tap water and should comply with the following limits.

Feed water supply requirements	
Free Chlorine	< 1 ppm as Cl ₂
Total dissolved solids (max)	1000 ppm
Temperature	1-35°C (33.8 – 95° F)
Feed water pressure (max)	90 psi
Feed water pressure (min)	30 psi*
Optimum pressure	60 psi

* If your feedwater pressure is below this minimum value the performance of the unit will be affected

Contact your water supplier if outside these limits.

9.3 Electrical supply

Your Select Purewater 300 will require a single phase electrical supply that meets the requirements below

Electrical Supply	KW Rating	Current Draw (Amps)	External Fuse Rating
Single phase 100-240v \pm 10%, 50 Hz and Earth	0.25	1.0	5 Amps (conforming to BS1362)

Ensure that the mains supply is provided via a convenient switched outlet and is protected with a 5 amp fuse.

9.4 Unit positioning

The Select Purewater 300 has been designed to be bench or wall mounted.

9.4.1 Bench mounted

Locate the unit on a suitable work surface, ensuring access to tank dispense bib tap and sufficient clearance to rear of the machine for all water and electrical connections.

All water feed connections are found on the rear of the unit. Using the installation kit provided attach the water feed, drain and overflow tubing as shown below.

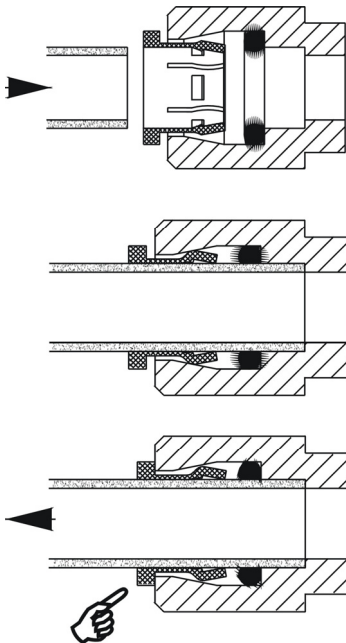
9.4.2 Wall mounting

Use a wall mount bracket (Part Number L300900 shown below)



Secure the bracket to a suitable wall. Careful consideration should be given to the strength and suitability of the wall as the working weight of the select Purewater 300 is 50Kg.

Secure the bracket to the wall. Remove the feet of the Select Purewater 300 by unscrewing them. Place the Select Purewater 300 on the wall bracket and fix to the bracket using screws through the feet mounting points.



All hoses are connected to the unit via its push fit connectors. To make a connection, the hose is simply pushed in by hand; the unique patented locking system then holds the tube firmly in place without deforming it or restricting flow.

Cut the tube square and push in until the tube stops.

Ensure the tube is pushed into the tube stop, securing tube in position.

To remove tubing push collet against body and slide tube out of fitting
Water Inlet connection:

Fit 8mm tubing to the **water inlet** connector found on the rear of the unit and the other end to your water supply.

9.5 Drain connection

Attach a suitable length of 8mm tubing to the two **drain** connections. Ensure that each free end is inserted into an appropriate drain. The tubing must not be kinked or the flow restricted in anyway.

If the drain is to be run over 5 meters and/or rises above the level of the unit then contact our Service Department for advice.

Attach a suitable length of 12mm hose to the **overflow** connection on the unit and run to a suitable drain point.



The overflow tubing **must not** rise above the unit.

9.6 Installation of media cartridge packs

Remove the door of the unit by tugging gently on the hand hold provided in the door.

Remove the cartridge packs from their packaging and remove the black protective caps from the inlet and outlet ports.



Insert the Pretreatment cartridge (PT16) in the left hand retaining block pushing it home until it clicks into position and retaining mechanism clicks up.

Insert the Polishing cartridge (PP16) in the right hand retaining block pushing it home until it clicks into position and retaining mechanism clicks up.

- Replace the door by locating the top of the door under the retaining mouldings and lifting the bottom of the door until it slides home.
- Switch on water supply to the unit.
- Switch on the electrical supply to the unit.
- This touch screen display will illuminate and display the start screen.

9.7 Purewater 300 High Flow Connection Details

Your Purewater 300 is fitted with a high flow pure water outlet. This is fitted to the left hand side of unit directly on the pure water storage tank.

The high flow outlet is fitted with an isolation valve threaded $\frac{1}{2}$ " BSPF for your connection.



Orientation of the high flow outlet may be adjusted by slackening the socket union which then allows the valve assembly to swivel. Adjust the position of the outlet to your preferred position and tighten the socket union.

A variety of connectors (shown below) are provided to allow a means to connect to the most common forms of industrial pure water hoses.



The output from the above connection is gravity fed. The unit must be mounted to a higher level than the process it is supplying.

10 Appendix

10.1 CE declaration



PURITE LIMITED
 BANDET WAY, THAME
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 TEL +44 (0)1844 217141
 FAX +44 (0)1844 218098
 WWW.PURITE.COM

CE DECLARATION OF CONFORMITY

We, the Manufacturer:

Purite Limited, Bandet Way, Thame, Oxon, OX9 3SJ, United Kingdom
 Declare under sole responsibility that the SELECT/PRESTIGE product range
 covered by this declaration, conforms with the essential protection
 requirements of the following Directives:

Applied Council Directives:

2004/108/EC - Electromagnetic Compatibility Directive (EMC).

2006/95/EC - Low Voltage Directive (LVD).

(Standard Applied: EN 61010 1:2001-02, Safety requirements for electrical
 equipment for measurement, control and laboratory use Part 1: General
 requirements).

The **SELECT/PRESTIGE** range covered by this declaration is as follows:

DESCALE 40, 80, 160, 320, 640 with and without BOOST PUMP
ANALYST 40, 80, 160, 320, 640 with and without BOOST PUMP
PUREWATER 300
T50L/T50H/T100L/T100H TANK AND PUMP

Purite Limited's liability under this declaration is limited to that set forth in the
 current Purite Limited Terms and Conditions of Sale.

Signature: 

Full Name: Mr B Stother
 Position: Managing Director
 Date of issue: 28.10.09

Appendix H



Company Registration No. 1454412 Registered office as above



10.2 WEE declaration



Users in the United Kingdom who wish to discard electrical and electronic equipment that was supplied by Purite should contact B2B Compliance on 01691 676 124.

Users in other European Union countries should contact their Producer, who will be the organisation in their country that supplied the product.

Information on disposal in other countries outside the EU

This symbol is only valid in the European Union. If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

10.3 Process flow

(to be read in conjunction with flow diagram)

All external hydraulic and electrical connections are positioned at the rear of the unit, to protect them from accidental damage.

The feed water enters the Select Purewater 300 through an internal feed water strainer to remove any large debris remaining in the feed water supply.

When operated, an inlet solenoid opens and allows water to pass to the pre-treatment pack via the boost pump if fitted(option). Water exiting the pre-treatment pack is fed to the reverse osmosis membrane. (The Pre-treatment pack protects the reverse osmosis membrane from chlorine damage.)

If fitted the boost pump increases the feed water pressure to the level required to enable the reverse osmosis membranes to operate at the best efficiency.

The Pre-filtered, water enters the reverse osmosis module/s. Purified water passes through the membrane and is termed; the permeate (85-95% of salts removed). The water containing the rejected salts passes across the membrane and out of the RO module to drain and is termed, the concentrate.

The concentrate flow rate is controlled by a fixed orifice restrictor located in the drain line.

The permeate water from the reverse osmosis membrane is then passed through the polishing cartridge as a final treatment.

The deionised water then feeds directly into the integral 20 litre storage tank. Water can be dispensed from this tank via the front mounted bib tap.

Flow diagram

