

**Monitor description:**

The Pro Am Ammonia monitor comprises of an Ion Selective Electrode (ISE), reaction vessel, pump unit, and a microprocessor. The analyser is an automated system that draws in a constant sample and reagent mixture, and incorporates a two point calibration and wash cycle. The reagent is a sodium hydroxide (Caustic) solution with EDTA (Ethylenediaminetetraacetic acid), the caustic raises the pH of the sample to 12pH at which point all the Ammonium in the sample is changed to Ammonia, and the EDTA prevents a build up of salt deposits in the instrument. The sample, reagents, and standard are drawn into the analyser via a peristaltic pump and pass through a heater coil and into the reaction vessel. Mixing of the solutions is achieved by the introduction of air. The readings are continuous, and the analyser is set to automatically calibrate every 24 hours.

**Sample delivery to analyser:**

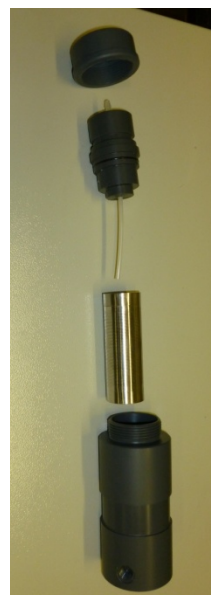
The sample is delivered by one of four means: -

1. Rotorflush pump and filter pot (no filter fitted)
2. Standard submersible pump and filter pot
3. Peristaltic pump and filter pot
4. Surface mount pump (mono) and filter pot

*There is a separate sheet applicable to the different sample pumps, and the pertinent sheet will be left at each site. The filter pot is described in this information sheet*



Analyser



Filter/sample pot showing component parts

### Keypad description



Up key, moves forward in the sub menu, or increases the digital value.



Down key moves back in the sub menu or decreases the digital value.



Enter key for entering the highlighted submenu or confirming a value



Escape key for exiting a sub menu

### Analyser Maintenance:

The analyser will be covered by the Servitech maintenance framework, and each one will be visited on a fortnightly basis, if there are problems between these visits then a call out visit can be requested on our normal number (24 hours a day) 01234 744700. There are, however, a number of troubleshooting steps that site personnel can take in the event of an instrument failure, either to rectify a problem, or to provide the call out recipient with details of the problem. These are as follows: -

1. Are there any error codes on the display? P (probe), F (flow), S (sample), H (Hi-cal solution), L (Lo-cal solution) followed by an \*. If so press enter and down keys, simultaneously, to clear the alarm, if the alarm remains active the fault needs further investigation – Contact Servitech
2. Do the reagent containers contain liquid? – Visual check, if not Call Servitech
3. The sample cell should be 2/3rds to 3/4s full of liquid, if it isn't there is a sample flow problem – Visual check
4. What is the condition of the electrode? This is checked by looking at the OP span (the amount of millivolts generated by a decade shift in standards) on the instrument. – Press the enter button followed by escape button, this will access the sub menus, press the up or down key until DATA is flashing then press the enter key, move to OP span and press enter and note the number, which should be >30mV, and advise Servitech
5. Does the filter pot contain sample? – Remove lid of pot to inspect, if not call Servitech

### Filter Pot Maintenance:

The filter pot, and metal filter when used, may become blocked on sites with high solids, they are cleaned by Servitech during each visit however if in the interim they become blocked the procedure to clean them is as follows: -

1. Isolate the flow to the pot, using the valve.
2. Unscrew the top lock nut and pull the cover upwards.
3. If there is a filter pull it out and rinse it, if there is no filter then wipe out the inside of the pot with a cloth, or suitably sized bottle brush. (dispose of rinsing safely)
4. Refit filter, if present, screw lock nut back on to pot, turn flow back on.

This document is for reference purposes only and is to be used in conjunction with the training session and appropriate site and activity risk assessment and method statements.