

# **SELECT** Dosing System

## **640-Auto**



Not specific screen details

# Instructions for Use

Ref: IFU 26 Mar10

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### Description

The 640-Auto dosing system is a peristaltic pump designed to pump at a specific rate from microlitres to litres per hour. With the pump activated, a constant output of product will be given at the rate chosen from on-screen choices. The output rates are given in 5 ranges. The actual rates offered will be those specified by the customer at the time of ordering and covered by accompanying documentation.

There are no user serviceable parts inside the 640-Auto.

### Installing / Changing Pump Tubes

ENSURE EITHER THE POWER SUPPLY OR FLOW SENSOR LINE IS DISCONNECTED BEFORE  
CHANGING THE PUMP TUBE.  
OTHERWISE ROTOR TURNING IS POSSIBLE

Removal of pump tube – Remove the black pump cover (3 screws). Unclip the pump tube at the inlet. Lift out the pump tube whilst rotating the pump rotor by hand in a clockwise direction (or use Load Tube facility). When the pump tube is clear of the rotors, completely remove the tube. Pull the old (soft) pump tube from the tube connectors.

Push the new pump tube onto the tube connectors WITH THE BLACK TUBE RESTRAINT (CABLE TIE) ON THE INLET SIDE.

Ensure that all connectors between the pump tube and delivery tubes are securely fitted. If necessary warm the delivery tube with warm air or water to soften it to make fitting more easy.

### Pump Tube Life

The life of the pump tube will depend on many factors including the product being dosed, the back pressures under which the pump is working, and the amount of time the pump needs to run to perform correctly. It is suggested that, in order to maintain dosing accuracy, the pump tube is replaced on a BI-MONTHLY BASIS or sooner if wear or disfiguration of the tube is apparent. Spare tubes are available from your pump supplier. Note: Only tubes supplied by Dosing Solutions Ltd are recommended for use in the 640-Auto dosing system to ensure accuracy of operation.

### Safety

The 640-Auto is an extremely safe unit. However, the following points should be observed:

Normal electrical safety precautions apply. Avoid water contact with any pump parts apart from the pump tube in normal working. Do not immerse the 640-Auto.

Take precautions to ensure the 640-Auto can not fall into the stock solution. Consider extra tethering if necessary. Cover stock solution at all times. If immersion does happen accidentally, isolate the 640-Auto from the electrical supply immediately.

The use of safety circuit breakers is recommended. If in doubt seek advice from a qualified electrician.

### Accuracy

The 640-Auto is factory set to give accurate dosing. If, during normal operation, the output needs to be increased or decreased slightly, this can be achieved via the screen command "Adjust %".

### Electrical Supply

The 640-Auto uses a 12V DC power supply. This can either be supplied from a 12V battery or via a transformer power supply from the mains electricity supply.

A 3.8A maximum current power supply is recommended. The 640-Auto normally runs below 2A although starting currents are larger and dependant on the pumping conditions encountered.

### The Screen Control System

All options available to the user of the 640-Auto are displayed via the control screen. Once the 640-Auto is attached to a power supply the following Welcome Screen appears:

<p>All options available to the user of the 640-Auto are displayed via the control screen. Once the Select doser is attached to a power supply the following Welcome Screen appears:</p> <p>Press the Adjust button to see the following:</p>	<div> <div>Select Auto</div> <div>Press Adjust</div> </div>
<p>There are five ranges of pumped flow rates available, each range has 15 choices of flow rates. Accompanying documentation will describe the choices available. Press Adjust until the correct Range is shown. Then press Set. If a Range is selected that is not programmed, "Invalid sensor!" will be shown on-screen.</p>	<div> <div>Range Number?</div> <div>1</div> </div>
<p>Information will be supplied with the Select pump to indicate the units of dosing. Press Adjust until the correct flow rate is shown. Then press Set</p>	<div> <div>Flow Req?</div> <div>3</div> </div>
<p>Install the correct tube colour as indicated on-Screen. Then press Set.</p>	<div> <div>Flow 1</div> <div>Use Brown tube</div> </div>
<p>It may be necessary to compensate for any slight variation in the manufacturing tolerances of the pump tube. The Tube Adjust factor is shown on the label of the pump tube as supplied. If necessary press Adjust repeatedly until the correct Tube Adjust factor is shown. Then press Set. The following screen appears:</p>	<div> <div>Adjust %</div> <div>-10%</div> </div>
<p>If the delivery line is already full of product, press No.</p> <p>If it is necessary to fill the delivery line with product press Yes, the pump will run continuously. During pumping the second screen will be shown. Press Stop when the delivery tube is full.</p>	<div> <div>Prime pump?</div> <div>NoYes</div> <div> <div>Priming...</div> <div>Stop</div> </div> </div>
<p>This is the active dosing screen. The rate is 3 (see chart supplied with doser), the Brown tube is fitted with a Tube Adjust of -10%</p> <p>Press the Adjust button to return to the Welcome Screen.</p>	<div> <div>3 Brn-10</div> <div>Dosing...R1</div> </div>

#### Water Line Pressure

The Select doser will operate against a water line pressure in of up to 2 bar. (2 bar = 28psi = 66ft H<sub>2</sub>O = 20.4m H<sub>2</sub>O). Fit a pressure reduction device if necessary. The flow sensor is rated to 6 bar.

#### Constant Pumping

If the priming option is selected from the menu on the control screen (see above) the pump rotor will turn continuously regardless of the flow in the drinking line. This can be useful for filling the suction and delivery lines prior to proportional dosing. It can also be used if a particular product needs to be dosed quickly within a given period.

It is not recommended to use the Select doser for more than 2 hours at a time in the priming mode, as tube and motor life will be reduced.

#### Rotor Adjustment

The rotors in the Select-640 pump-head are not adjustable.

#### Installation

The Select 480 Auto doser can be powered from a 12V DC battery or via a transformer from the mains electricity supply. Position the doser so as to be convenient for a power source if power is to be taken via a transformer from the mains. Ensure that the doser is properly secured to prevent it becoming immersed in water or stock additive solution.

Connect the Select doser to either battery or transformer. Choose program options from the control screen. Ensure pump tube fitted and connected to inlet and outlet delivery tubes. Place inlet tube weight into additive liquid. Connect delivery outlet tube into its designated addition point. Commence dosing.

Note: The pump will self prime. The pump can also be run dry without damaging any parts although it is not recommended to run the pump dry for extended periods.

#### Pumping Problems / Errors

If the Select doser fails to operate correctly, check the following: (If the problem can not be resolved – contact your Distributor)

Problem	Solution
Incorrect dosing	<ol style="list-style-type: none"> <li>1. Check for low battery power If external battery is in use)</li> <li>2. Pump tube should be replaced at least monthly. Replace if necessary</li> <li>3. Is correct pumping rate selected?</li> <li>4. Water pressure in a dosed water line should not exceed 2 bar. Fit pressure reduction device if necessary.</li> <li>5. Incorrect Tube Factor entered on the control screen. Check and re-enter.</li> <li>6. Incorrect pump tube fitted. Are screen details correct?</li> </ol>
Product not being pumped from stock container	<ol style="list-style-type: none"> <li>1. Check all tube connections are firmly in place.</li> <li>2. Inlet tube could be blocked. Clear as necessary.</li> <li>3. If a knife has been used to free a tube connector on the inlet side of the pump, the connector could be damaged and letting air into the suction line.</li> </ol>
Sudden loss of pumping pressure (with possible return of fluid into stock container)	<ol style="list-style-type: none"> <li>1 Check if there is any lateral movement in the rotor. It is possible the rotor shaft bearings may have worn. Consult Distributor.</li> <li>2 Check for physical damage to pump head fixing screws.</li> <li>3 Check that non-return valve is fitted in delivery line.</li> </ol>
Error message "pump error"	A failure of the motor or data encoder is indicated. Check that connections to circuit board from motor are in place. Consult Distributor.

#### Maintenance

##### **Weekly**

Inspect the pump tube for signs of wear.

Check doser output. Adjust as necessary via the control screen.

##### **Monthly**

Replace pump tube monthly or sooner if any of the following occur:

- Sharply increased rate of dosing
- Split tube

##### **Each 6 Months**

After disconnecting from electric supply, remove cover from Select doser and inspect interior of pump enclosure. Ensure no ingress of moisture or other contaminant. In case of difficulty, contact your supplier.

There are no user-serviceable parts within the Select doser case. Any maintenance of working parts within the pump case should be carried out by an authorised service agent.

#### Spare Parts and Accessories

Item		Code
Select Auto doser	Unit	010CA80
Replacement pump tube	Brown	011CA16
Delivery tube (low pressure)	30m	155CA48
Delivery tube (3m) plus end weight	unit	152CA05
Quick-fit male/female connector	unit	153CA02
Power supply 12V-DC 3.8A UK style	unit	019CA00
Power supply 12V-DC 3.8A EU style	unit	019CA10