

# High Capacity Paraffin Dispenser

## User Manual

SI-PWD-LG



StatLab.com | 1-800-442-3573

ON YOUR TEAM



## High Capacity Paraffin Dispenser

Thank you for purchasing StatLab laboratory equipment. To get the best performance from your equipment and for your own safety please read these instructions carefully before use.

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## General Notes

- 1 This product is designed for laboratory use only. Always follow good laboratory practice.
- 2 If this product is not used in accordance with these instructions then basic safety protection may be affected.
- 3 If damaged or in case of failure the power supply unit supplied with this product should be replaced with an equivalent power supply unit.
- 4 Before using any cleaning or decontamination method please refer to the Maintenance and Cleaning section to ensure the proposed method will not damage the unit.
- 5 Connect only to a power supply with the corresponding voltage to that specified on the rating label positioned on the rear of the unit.
- 6 Ensure that the power supply has an earth (*ground*) terminal.

## Specimen Safety

It is the user's responsibility to ensure that the temperature set on the instrument is at a level where no damage is caused to diagnostic specimens used with the equipment. In the event of this instrument malfunctioning, all specimens within the device should be checked to ensure no harm or damage to the specimen has been caused.

### Amendments

Issue 7: Sept 2022

## Symbols



This symbol appears in documents and on equipment to warn the user that there are hot surfaces on the equipment.



This symbol appears in documents and on equipment to warn the user that instructions must be followed to ensure correct or safe operation.

## User Safety

The equipment you have purchased complies with the following European Directives EMC Directive 2014/30/EU Electromagnetic Compatibility and Low Voltage Directive 2014/35/EU as indicated in the EC Declaration of Conformity included in the document. This instrument has been designed and constructed in a manner which minimises the risk of electrical shock to the operator, offers maximum protection from overheating and provides clear and adequate labelling of instrument controls. The instrument requires no regular servicing, but StatLab does recommend an annual inspection, as detailed in the manual which will prolong the life of the instrument to ensure continued safety.



**Do not touch any electrical contacts or open any closure plates. RISK OF ELECTRIC SHOCK!!**

### DO NOT:

- 1 Allow melted paraffin to accumulate on the surface of the paraffin dispenser.
- 2 Use without pelletized paraffin placed in the internal tank.
- 3 Operate the tap while the paraffin is cold as this may dislodge the piston from the seal recess.
- 4 Use metal instruments or scouring agents to clean the surface of the paraffin dispenser or the internal tank.
- 5 Immerse in water.
- 6 Touch the inside of the tank, it can be hot!
- 7 Use without appropriate training.

### DO:

- 1 Maintain the instrument in a reasonably clean condition.
- 2 Switch off before removing the plug.
- 3 Ensure that replacement fuses are of the correct specification.
- 4 Use in a safe and stable location, where the tap cannot be knocked by accident.
- 5 Position tap in locked position when not in use to avoid accidental dispensing of melted paraffin.
- 6 Position the unit so it can be disconnected from the power supply with ease.
- 7 Retain the original packaging over the warranty period.

## Power Lead and Connection to Electrical Supply



**Check the electrical supply is compatible with the rating label. IF IN DOUBT CONSULT AN ELECTRICIAN. THE PRODUCT MUST BE GROUNDED!**

**Where the mains supply or plug connection differs refer to local regulations or consult an electrician.**

## Specification

The High Capacity Paraffin Dispenser is designed for on-demand delivery of melted paraffin. The novel design of the instrument ensures that it takes up a minimum bench space in the laboratory, while still maintaining 2 x 7.5L capacity tank, with each able to melt up to 6kg of pelletized paraffin at a time.

The Slimline Paraffin Dispenser has digital temperature control which provides accurate temperature control of the melted paraffin, and is coupled with an ultra fast heating system for rapid melting of pelletized paraffin. Delivery of melted paraffin is via a non-drip lever tap, which is heated via a dedicated heating system, which prevents blockages due to solidified paraffin and ensures an even flow of paraffin. The inner tank has a filter screen (0.5mm mesh) fitted to prevent coarse particles from blocking the delivery tap. The tank is also fully insulated to prevent heat loss from the tank and to ensure that the outer surfaces of the tank are safe to touch.

**Dimensions:** Width 14in (358mm)  
Depth 16.6in (420mm)  
Height 17.9 in (454mm)

**Tap Height from Bench:** 6.14in (156mm)

**Weight:** 22 lbs (10Kg)

**Display:** Digital Display with 1.0° accuracy

**Power Supply:** 110V/230V a.c. 50-60Hz

**Safety:** Class 1 cut out

**Heater Power:** 900 watts

## Location

The product must be placed on a smooth, level and sturdy work surface. Suitable for use in ambient temperatures 5°C to 40°C with a maximum humidity 80% (temperature 31°C) decreasing to 50% (temperature 40°C).

## Operating Instructions

- 1 Place the High Capacity Paraffin Dispenser on a smooth, level and sturdy work surface.
- 2 Ensure that the power cable is pushed fully into the power supply socket of the paraffin dispenser.
- 3 Connect the mains plug to the electrical supply and switch on (*ensure the power supply is properly grounded*). Each tank can be operated individually.
- 4 Pour the desired quantity of paraffin into the internal tank. Each tank has a maximum capacity of 7.5L which is large enough to melt 6.0Kg of pelletized histology paraffin.
- 5 Turn on the high capacity paraffin dispenser using the mains switch on the front of each tank.



- 6 Set the desired temperature. Users are recommended to set the temperature 3-4°C above the melting point being used.
  - A. Press button **P** then release it (*do not hold down button P for 5 seconds*).
  - B. The display will show **SP** alternating with the current set temperature.
  - C. To change the set temperature press the **UP** key to increase the value or **DOWN** to decrease it. These keys increase or decrease the value one digit at a time, but if the button is pressed

for more than one second the value increases or decreases rapidly, and after two seconds pressed, the speed increases even more to allow the desired value to be reached rapidly.

D. Exiting the Set mode is achieved by pressing the **P** key or automatically if no key is pressed for 15 seconds. After that time the display returns to the normal function mode.

- 7 The heater indicator will illuminate to show heater activity.
- 8 The instrument will then warm up to the desired temperature, you will observe the temperature rise on the display.
- 9 The high capacity paraffin dispenser is designed to melt bulk quantities of pelletized paraffin in as quick a time as possible. When set at 65°C the instrument will take roughly 3-4 hours to fully melt 2.5Kg of pelletized paraffin, with significant quantities of melted paraffin available for use after as little as 30 minutes.
- 10 Paraffin is delivered by pulling the tap lever. This tap has two positions:
  - a. On demand push dispense
  - b. Continuous flow - tap locked open.

**! THE DISPENSING TAP LEVER SHOULD NOT BE OPERATED WHILE THE SLIMLINE PARAFFIN DISPENSER IS COLD AS THIS MAY DISLodge THE PISTON FROM THE SEAL RECESS.**

## Cleaning Instructions

Regular cleaning of the instrument according to the cleaning instructions enclosed in this user manual will ensure that the instrument continues to operate efficiently and safely in normal everyday use. Cleaning or decontamination methods, other than those recommended in this guide, should be checked with your instrument supplier to ensure that the proposed method will not damage the instrument.

- 1 The lower case work of the High Capacity Paraffin Dispenser, including the control panel, may be wiped using small quantities of mild detergent or polishes applied with a soft cloth.
- 2 The internal tank can be emptied by locking the delivery tap into the continuous flow position. Any residual paraffin at the bottom of the tank can be removed using absorbent tissues and wiped clean.
- 3 The filter (*0.5mm mesh*) situated at the bottom of the tank can be cleaned in-situ using a toothbrush or similar brush, or lifted out once the bolts are removed for more thorough cleaning using solvents. (If removing the filter it is recommended that protective gloves are worn).



**SCOURING PADS OR DE-SCALING AGENTS MUST NOT BE USED TO CLEAN THIS INSTRUMENT.**

## Miniature Circuit Breakers

Located at the rear of the instrument. In the event of a fault, push back in to reset. If fault situation continues, please contact your Service Engineer or StatLab.

## Portable Appliance Testing

Portable appliance testing should be carried out by a qualified person.



**THIS EQUIPMENT MUST NOT BE FLASH TESTED!**

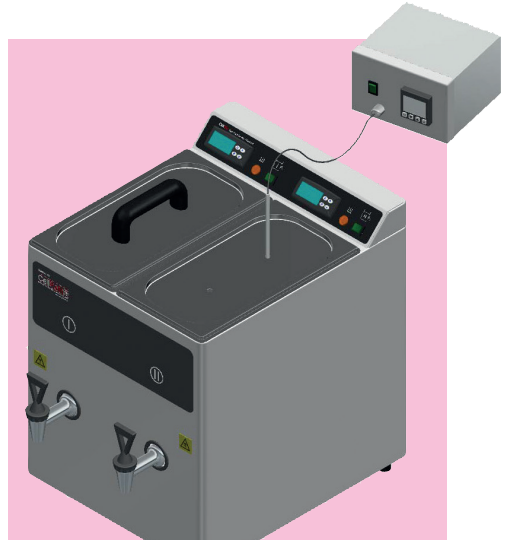
## Calibration and Offset Instructions

Paraffin dispensers have a factory offset value programmed into the temperature controller, this aligns the set temperature with actual factory setting 70°C +/-1°C. To calibrate the instrument for your application:

- 1 Fill tank with pelletized histology paraffin to the ridge in the tank.
- 2 Turn on the Paraffin Dispenser.
- 3 Set the desired temperature following the Operating Instructions.
- 4 Allow the instrument to warm up and melt the paraffin pellets fully.
- 5 Remove one screw securing the handle on the lid. This allows the handle to be twisted aside revealing a hole in the lid. Refit the lid. This hole allows the insertion of the calibrated measuring probe into the melted paraffin. At least half your measuring probe length should be immersed in melted paraffin. We recommend the measuring probe is now left immersed during the following steps to gain uniform probe readings because paraffin responds slowly to temperature change.
- 6 Allow the instrument to settle at least 8 hours or overnight with lid on and probe in place to ensure the melted paraffin is uniformly heated throughout the tank.
- 7 Take a temperature reading from your probe just as the heater indicator illuminates ON at set temperature, this is the lowest reading and then wait to record a maximum reading. The “calibration temperature” is the value mid-point between these two readings.

There are two ways to adjust the set temperature of the melted paraffin being heated in the tank:

- 1 Adjust the set temperature to a new value by reducing or increasing this value until melted paraffin aligns with your desired temperature.
- 2 Entering the difference between current set temperature and calibration value to adjust the offset in the controller. For example if actual measured reading 72°C and set temperature 70°C, the offset value should be increased by 2°C. To adjust the controller offset please follow these instructions.
- 3 Please refit the handle when complete.



# Setting Controller Offset Parameters

- 1 Press and hold the **P** button until **0** is displayed.
- 2 Use the **UP** arrow button to increase the number to **146**.
- 3 When **146** is displayed press the **P** button. **SPLL** is now displayed.
- 4 Press the **DOWN** arrow button to cycle through the sub menus until **OFS** is displayed.
- 5 When **OFS** is displayed, press the **P** button.
- 6 Using the **UP/DOWN** arrow buttons enter the new offset and then press the **P** button.
- 7 Press the **P** button again then press and hold the **UP** arrow to return to the main menu.

## Routine Inspection Recommendations

StatLab recommend that a simple annual inspection be made for all StatLab laboratory equipment in order that any malfunction can be identified and rectified as early as possible. This is to ensure user safety and prolong instrument life span.

### Recommended checks to be made:

- 1 Condition of Power Lead.  
A visual inspection to ensure the insulation is not damaged and that the correct fuse is fitted.
- 2 Functioning of Heater On Lamp.  
Heater lamp should be on when the instrument is warming up.
- 3 Condition of the paraffin dispenser tank and filter (*0.5mm mesh*).  
Both tank and filter should be in good condition with no evidence of corrosion and no damage visible to the filter screen.
- 4 Dispensing Tap Seal.  
The dispensing tap should seal correctly, with no occurrence of constantly dripping paraffin when the tap is not in use.

### NOTE

It is normal for a small quantity of melted paraffin to remain in the tap after it is closed. This residual paraffin will drip out, however it will be short lived and will be in very small quantities.

# Troubleshooting Guide

Symptoms	Possible Cause	Action Required
<p>1. Unit does not operate/ No power to the instrument. (Illuminated On/Off button not lit, temperature controller not lit.)</p>	<p>A: Unit is not switched on. B: Unit not plugged into power supply. C: Circuit breakers have been triggered and need to be re-set. D: Fuse in instrument lead plug has failed. E: Power supply failure.</p>	<p>A: Switch On B: Plug in, and switch on unit. C: Re-set circuit breakers. D: Replace fuse or use a new lead set. E: Check that other electrical instruments on the same circuit are working. Check distribution board for a triggered circuit breaker or blown fuse.</p>
<p>2. Power is supplied to the instrument, but the instrument does not heat (paraffin does not melt)  (Temperature does not rise on the controller and the orange heater light does not operate.)</p>	<p>A: Latching thermal cut out has triggered. B: Temperature of instrument is set too low. C: Heating element has failed. D: Failure of temperature controller.</p>	<p>A: Competent person to re- set the thermal cut-out. B: Check the set temperature of the instrument. C: Instrument should be checked by a competent person. D: Instrument should be checked by a competent person.</p>

Symptoms	Possible Cause	Action Required
<p>4. Paraffin takes longer than expected to melt.</p>	<p>A: Temperature control circuit fault.</p>	<p>A: Check that the voltage selectors at the rear of the instrument are set to the correct voltage for your region</p> <p>B: Temperature of tank should be set at least 5 degrees above the melting point of the paraffin.</p> <p>Example: For a histology paraffin (m.p. 56- 58°C) the recommended set temperature for the tank is 65°C.</p> <p>C: When melting large quantities of pelletized paraffin an extended amount of time will be required to melt the paraffin.</p> <p>Example: 2.5kg of pelletized paraffin (m.p. 56- 58°C) takes between 3 – 4 hours to fully melt when tank set to 65°C.</p> <p>D: When melting a solid tank of paraffin, it is recommended that the temperature of the tank be set to 70°C, to allow paraffin to be melted in a convenient timescale.</p> <p>Example: A solid tank of paraffin m.p. 56-58°C) filled to the ridge of the tank paraffin (takes roughly 6 – 7 hours to fully melt, when tank set to 70°C.</p>

Symptoms	Possible Cause	Action Required
<p>5. Temperature of the instrument shown on the controller, is different to the temperature of that measured by a reference probe.</p>	<p>A: Not enough paraffin has been placed into the tank to be melted.</p> <p>B: External temperature probe being used is not suitable for paraffin temperature measurements or external probe is not calibrated.</p> <p>C: Position of the external temperature probe is not at the calibration point.</p>	<p>A: If a tank is empty, it is recommended that at least 2.0kg of pelletized paraffin is added to the tank for melting.</p> <p>B: Check correct probe is being used for measurement and that the probe is calibrated.</p> <p>C: Measure temperature at the position where the instrument is calibrated, using a calibrated probe.</p> <p>Users should melt paraffin until the paraffin dispenser tank is filled to the ridge of the tank with melted paraffin. Once the tank is filled with melted paraffin the user should wait a minimum 3-4 hours before taking a measurement to allow the temperature of the paraffin in the tank to equilibrate.</p> <p>If the temperature reading is significantly different, the instrument may need to be recalibrated. Follow the calibration instructions.</p>

<p>6: Temperature of the paraffin dispenser continues to rise when not expected.</p>	<p>A: Desired temperature is lower than the set temperature  B: Temperature control circuit fault.</p>	<p>A: Check the set temperature.  B: Instrument should be checked by a competent person.</p>
<b>Symptoms</b>	<b>Possible Cause</b>	<b>Action Required</b>
<p>7. Melted paraffin is not dispensed from tap.</p>	<p>A: Instrument is not operating at the correct voltage for your region.  B: Heated tap has not reached working temperature.  C: Paraffin is not melted in tank.  D: Tap heater failure.  E: Blocked filter  F: Tap failure.</p>	<p>A: Check that the voltage selectors at the rear of the instrument are set to the correct voltage for your region.  B: Allow additional time for the tap to reach its working temperature.  C: Allow additional time for paraffin in the tank to melt.  D: Is the tap hot to touch? If the tap is cold after an hour of the instrument being turned on the heater will need to be replaced by a competent person.  E: Clean filter in the bottom of the tank.  F: Tap will need to be replaced by a competent person.</p>

## Warranty Terms and Conditions

- 1 StatLab warrants to the Customer that the product purchased is free from defects in materials and workmanship.
- 2 Provided the terms of payment are duly complied with, StatLab undertakes to remedy any original defects arising from faulty materials or workmanship, in any goods manufactured/supplied by StatLab, which under proper and normal conditions of use, may develop within a period of twelve months from the date of delivery.
- 3 In the case of components which by their nature of application have an unpredictable life, this guarantee shall only be to the extent of the guarantee given by the manufacturers of these articles.
- 4 StatLab will accept no liability, where in the opinion of the company the defect has been caused by damage due to the Customer's failure to follow operating instructions, correct installation, wear and tear, or damage due to the use of spare parts other than those spare parts of StatLab or which are recommended by StatLab, the defect has been caused by alterations or repairs being undertaken by a person(s) other than an authorized representative of StatLab.
- 5 Any damage claim must be in writing, and give the serial number and description of the goods, order number and date of delivery, and will not apply where any names or serial numbers or other information which may be attached to or inscribed upon the goods have been removed, covered up or defaced in any way.
- 6 Any goods or parts thereof, which may require repair or replacement, shall be repaired or replaced (*at the election of StatLab*) at a StatLab location. The product to be repaired shall be delivered shipping paid back to StatLab by the customer at the Customer's risk and expense. Any such goods or parts will be delivered by StatLab to the Customer free within the US. All faulty parts removed from the equipment will become property of StatLab. Any other repairs or work by StatLab will be carried out under the terms and conditions for specialist engineers currently in force.
- 7 In the event of replacement with a new or reconditioned model, the replacement unit will continue the warranty period of the original equipment.
- 8 If any goods or parts thereof are returned unnecessarily all cost involved, including a charge for inspection, handling and the return shipping must be paid by the sender. In no circumstances shall any of the goods be returned to StatLab without its prior written consent.
- 9 Please retain the original packaging over the warranty period. Any equipment returned under warranty should be in the original packaging. Any damages in transit resulting from using any packaging other than that originally supplied will be the responsibility of the Customer.



# EC Declaration of Conformity

We herewith confirm the following products:

High Capacity Paraffin Dispenser 110V/230V a.c. 50-60Hz -SI-PWD-LG

Conforms with requirements outlined  
by the following European Directives:

Low Voltage Directive 2014/35/EU

EMC Directive 2014/30/EU

RoHS Directive 2011/65/EU

Conforms with requirements outlined  
by the following United Kingdom Directives:

Electromagnetic Compatibility Regulations 2016

Electrical Equipment (Safety) Regulations 2016

RoHS Directive 2011/65/EU

Conforms with the requirements  
of the following standards:

BS EN 61010-1:2010

BS EN 61010-2-010:2014

Safety requirements for electrical equipment  
for measurement, control and laboratory use.

BS EN 61326-1:2013

Electrical equipment for measurement control  
and laboratory use - EMC requirements.

We confirm the declaration:

Nickel Electro Ltd  
Oldmixon Crescent  
Weston Super Mare  
North Somerset  
BS24 9BL  
United Kingdom

## Non Warranty Information

Spare parts shall be made available  
for a period of 5 years after a piece of  
equipment  
is discontinued.

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2090 Commerce Drive  
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